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Office of Legacy Management

Rocky Flats Site

Annual Report of Site Surveillance and Maintenance Activities Calendar Year 2007

April 2008

U.S. Department of Energy

Office of Legacy Management

Work Performed Under DOE Contract No. DE–AM01–07LM00060
for the U.S. Department of Energy Office of Legacy Management.
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Appendixes

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2007 Ecology Data for the Rocky Flats Site—DVD

End of current text

Acronyms

ac-ft	acre-feet
Ag	silver
Am	americium
ANOVA	Analysis of Variance
AOC	Area of Concern
As	arsenic
B	boron
Ba	barium
Be	beryllium
BMP	best management practice
BOA	Basic Ordering Agreement
BZ	Buffer Zone
CAD	Corrective Action Decision
Cd	cadmium
CDPHE	Colorado Department of Public Health and Environment
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act – "Superfund"
CFR	*Code of Federal Regulations*
cfs	cubic feet per second
cm/s	centimeters per second
CNHP	Colorado Natural Heritage Program
COU	Central Operable Unit
Cr	chromium
CY	calendar year
D&D	decontamination and decommissioning
DCA	dichloroethane
DCB	dichlorobenzene
DCE	dichloroethene
DER	duplicate error ratio
DG	Discharge Gallery
DO	dissolved oxygen
DOE	U.S. Department of Energy
DQA	data quality assessment
EPA	U.S. Environmental Protection Agency
ERP	*Emergency Response Plan for Rocky Flats Site Dams*
ETPTS	East Trenches Plume Treatment System
FC	Functional Channel
ft/yr	feet per year
g	gram
GIS	Geographic Information System
gpm	gallons per minute
GPS	Global Positioning System
GWIS	Groundwater Intercept System
Hg	mercury
HR ICP/MS	high-resolution inductively coupled plasma/mass spectrometry
HRC	Hydrogen Release Compound®

IA	Industrial Area
IHSS	Individual Hazardous Substance Site
IMP	Integrated Monitoring Plan
IRA	Interim Remedial Action
ITPH	Interceptor Trench Pump House
ITS	Interceptor Trench System
K-H	Kaiser-Hill Company, LLC
L	liter
LANL	Los Alamos National Laboratory
LCS	laboratory control sample
LM	Office of Legacy Management
M&M	monitoring and maintenance
m^3	cubic meter
MCL	maximum contaminant level
MDA	minimum detectable activity
µg	microgram
µg/L	micrograms per liter
mg/L	milligrams per liter
mL	milliliter
mL/min	milliliters per minute
Mn	manganese
µm	micron
MS	matrix spike
MSD	matrix spike duplicate
MSPTS	Mound Site Plume Treatment System
NA	not applicable
NOID	Notice of Intent to Delete
NPL	National Priorities List
NSQ	nonsufficient quantity
OBP	Oil Burn Pit
OLF	Original Landfill
OU	Operable Unit
PA	Protected Area
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
pCi	picocurie
pCi/L	picocuries per liter
pCi/µg	picocuries per microgram
PIP	Public Involvement Plan
PLF	Present Landfill
PLFTS	Present Landfill Treatment System
PMJM	Preble's meadow jumping mouse
POC	Point of Compliance
POE	Point of Evaluation
POU	Peripheral Operable Unit
PQL	practical quantitation limit
Pu	plutonium

PU&D	Property Utilization and Disposal
PVC	polyvinyl chloride
QA	quality assurance
QC	quality control
RAO	Remedial Action Objective
RCRA	Resource Conservation and Recovery Act
RFCA	*Rocky Flats Cleanup Agreement*
RFETS	Rocky Flats Environmental Technology Site
RFLMA	*Rocky Flats Legacy Management Agreement*
RFP	Rocky Flats Plant
RFS	Rocky Flats Site
RFSOG	*Rocky Flats Site Operations Guide*
RI/FS	Remedial Investigation/Feasibility Study
RMRS	Rocky Mountain Remediation Services
ROD	Record of Decision
RPD	relative percent difference
Se	selenium
SED	Sitewide Ecological Database
SEEPro	Site Environmental Evaluation for Projects
SEP	Solar Evaporation Pond
SID	South Interceptor Ditch
S-K	Seasonal-Kendall
SOP	standard operating procedure
SPP	Solar Ponds Plume
SPPTS	Solar Ponds Plume Treatment System
SVOC	semivolatile organic compound
TCA	trichloroethane
TCE	trichloroethene
TIMS	thermal ionization mass spectrometry
Tl	thallium
TM	temporary modification
TPU	total propagated uncertainty
TSS	total suspended solids
U	uranium
UHSU	upper hydrostratigraphic unit
USFWS	U.S. Fish and Wildlife Services
V&V	validation and verification
VC	vinyl chloride
VOC	volatile organic compound
WQCC	Water Quality Control Commission
WQP	water-quality parameter
WWTP	Waste Water Treatment Plant
yr	year
ZVI	zero-valent iron

End of current text

Executive Summary

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action selected in the Final Corrective Action Decision/Record of Decision (CAD/ROD) issued September 29, 2006, for the Rocky Flats Site (Site).

Under the CAD/ROD, two Operable Units (OUs) were established within the boundaries of the Rocky Flats property: the Peripheral OU (POU) and the Central OU (COU). The COU consolidates all areas of the Site that require additional remedial/corrective actions, while also considering practicalities of future land management. The POU includes the remaining, generally unimpacted portions of the Site and surrounds the COU. The response action in the Final CAD/ROD is no action for the POU, and institutional and physical controls with continued monitoring for the COU. The CAD/ROD determined that conditions in the POU were suitable for unrestricted use. The U.S. Environmental Protection Agency (EPA) subsequently published a Notice of Partial Deletion from the National Priorities List for the POU on May 25, 2007.

DOE, EPA, and the Colorado Department of Public Health and Environment (CDPHE) have chosen to implement the monitoring and maintenance requirements of the CAD/ROD under, and as described in, the *Rocky Flats Legacy Management Agreement* (RFLMA), executed March 14, 2007. RFLMA Attachment 2 defines the COU remedy surveillance and maintenance requirements. The requirements include environmental monitoring; maintenance of the erosion controls, access controls (signs), landfill covers, and groundwater treatment systems; and operation of the groundwater treatment systems.

The *Rocky Flats Site Operations Guide* was prepared by DOE-LM to serve as the primary internal document to guide work to satisfy the requirements of RFLMA and implement best management practices at the Site.

This report addresses all surveillance and maintenance activities conducted at the Site during Calendar Year 2007 (January 1 through December 31). Highlights of the surveillance and maintenance activities are as follows:

- RFLMA references the use of contact records to document CDPHE approvals of field modifications to implement approved response actions. RFLMA Attachment 2 also references the use of contact records to document the outcome of consultation related to addressing any reportable conditions. This report discusses RFLMA contact records issued in 2007 and their status as of December 31, 2007. Because the status of RFLMA contact records issued in 2006 has not previously been reported, these are also included in the discussion.
- The second Comprehensive Environmental Response, Compensation, and Liability Act 5-year review of remedial actions implemented at Rocky Flats was performed, and concluded that the COU remedy continues to be protective of human health and the environment.
- In July 2007 DOE transferred approximately 4,000 acres of Rocky Flats POU land to the U.S. Department of Interior for management by the U.S. Fish and Wildlife Service as the Rocky Flats National Wildlife Refuge.

- Several Colorado Water Quality Control Commission (WQCC) proceedings related to Rocky Flats surface-water standards occurred in 2007. The WQCC accepted DOE's petition for a rulemaking hearing, set for January 2009, to eliminate the site-specific uranium (U) surface-water standard and allow the statewide surface-water standard, which is the drinking water standard, to apply to the Site. The WQCC also ruled in December 2007 that the current surface-water temporary modifications did not require change or elimination and the current expiration date of December 31, 2009, remains in effect. DOE also submitted information at the WQCC's October 2008 issues identification hearing for the triennial review of the South Platte River Basin surface-water standards, set for June 2009.
- A fence was constructed around the DOE-retained COU and RFLMA-required signage was posted.
- A geophysical study was begun at the Original Landfill (OLF) to gather information for a stability analysis to evaluate causes for and appropriate responses to surface conditions at the OLF including slumping and the formation of depressions.
- A slump that had formed on a hillside south of former Building 991 was regraded and excess soil was spread over the 903 Pad/Lip areas to aid in revegetation. An area near former Building 371 was also regraded to improve surface-water drainage.
- Access roads through the COU were maintained and in some locations improved, and several areas were revegetated.
- Surface-water flow volumes show expected reductions resulting from land configuration changes and removal of impervious surfaces.
- All surface-water Points of Compliance showed acceptable water quality for the entire year.
- Point of Evaluation (POE) location GS10 continued to show reportable values for total U. Evaluation has suggested that these reportable values are due to changes in hydrologic conditions resulting in groundwater with naturally occurring U making up a larger proportion of streamflow at GS10. All other POEs and all other analytes at GS10 showed acceptable water quality for the entire year.
- Surface-water monitoring at the Present Landfill Treatment System showed two analytes as periodically above applicable standards. RFLMA party consultation regarding these results was conducted and additional monitoring was performed as documented in contact records.
- All other surface-water monitoring showed acceptable water quality.
- The groundwater treatment systems at the Site continued to successfully remove contaminant loading to surface water from groundwater plumes.
- Groundwater quality and flow at the Site were generally consistent with previous years. Several groundwater flow models that were constructed prior to Site closure were updated and indicated groundwater flow conditions are consistent with the general predictions that had been made.
- A reportable condition was encountered at Area of Concern (AOC) well B206989 due to elevated concentrations of nitrate in groundwater samples. Concentrations were consistent with previous data, but upon implementation of RFLMA this well was reclassified from a

Sentinel well to an AOC well, with the associated reporting requirements. RFLMA party consultation regarding these results was conducted as documented in contact records. A decreasing trend in nitrate concentrations is suggested by the data.

- All RFLMA-required ecological data collection, analysis, and reporting were completed as scheduled.
- The annual data quality assessment showed that the Site continues to collect high-quality data sufficient for decision making.

End of current text

1.0 Introduction

The U.S. Department of Energy (DOE) Office of Legacy Management (LM) is responsible for implementing the final response action selected in the *Final Corrective Action Decision/Record of Decision* (CAD/ROD) (DOE 2006f) issued September 29, 2006, for the Rocky Flats Site (RFS). Prior to the CAD/ROD, cleanup and closure activities were completed in accordance with the requirements of the *Rocky Flats Cleanup Agreement* (RFCA) (CDPHE et al. 1996). Under the CAD/ROD, two Operable Units (OUs) were established within the boundaries of the Rocky Flats property: the Peripheral OU (POU) and the Central OU (COU). The COU consolidates all areas of the site that require additional remedial/corrective actions, while also considering practicalities of future land management. The POU includes the remaining, generally unimpacted portions of the site and surrounds the COU. The response action in the Final CAD/ROD is no action for the POU, and institutional and physical controls with continued monitoring for the COU. The Offsite Areas at Rocky Flats, known as OU 3, were addressed under a separate no-action CAD/ROD dated June 3, 1997.

The CAD/RODs for OU 3 and the POU determined that conditions in those OUs were suitable for unrestricted use. As such, the U.S. Environmental Protection Agency (EPA) published a Notice of Intent for Partial Deletion (NOID) of the Rocky Flats Site (Plant) from the National Priorities List (NPL) on March 13, 2007 (72 Federal Register [FR] 11313, March 13, 2007) to delete the POU and OU 3 from the NPL. The NOID was based on the results of the remedial investigations leading to the CAD/ROD no-action remedies being selected for these OUs. The NOID states that because no hazardous substances occur in the OUs above levels that allow for unlimited use and unrestricted exposure, no 5-year review was required for these OUs. EPA subsequently published a Notice of Partial Deletion from the NPL for the POU and OU 3 on May 25, 2007 (72 FR 29276, May 25, 2007).

On July 12, 2007, most of the property outside the COU was transferred to the U.S. Department of the Interior for establishment of a National Wildlife Refuge managed by the U.S. Fish and Wildlife Service (USFWS). EPA certified that cleanup and closure of Rocky Flats was complete and the COU remedy was operating properly and successfully, in accordance with requirements for DOE to transfer land to USFWS for establishing the Refuge. DOE retained the COU and is responsible for implementing the CAD/ROD final response action and ensuring that it remains protective of human health and the environment. The monitoring, surveillance, and maintenance activities for which quarterly, annual, and 5-year review reports are issued are included in the *Rocky Flats Legacy Management Agreement* (RFLMA).

RFLMA, signed March 14, 2007, superseded RFCA. RFLMA is a Federal Facility Agreement and Consent Order under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the Resource Conservation and Recovery Act (RCRA), and the Colorado Hazardous Waste Act, between DOE, EPA Region 8, and the Colorado Department of Public Health and Environment (CDPHE). The purpose of RFLMA is to establish the regulatory framework for Attachment 2, “Legacy Management Requirements.”

RFLMA Attachment 2, Section 7.0 requires DOE to provide reports pertaining to the surveillance and maintenance of the remedy prescribed in the CAD/ROD on a calendar quarter and annual basis. The fourth quarterly report information is to be included in the annual report.

The *Rocky Flats Site Operations Guide* (RFSOG) was prepared by DOE-LM as a document to guide work at the Site. The RFSOG provides details on the surveillance and maintenance needed to satisfy the requirements of the CAD/ROD as well as best management practices (BMPs) at the Site. As a "desktop procedure," the RFSOG explains how DOE will fulfill its long-term surveillance and maintenance obligations at the Site.

1.1 Purpose and Scope

The purpose of this report is to inform the regulatory agencies and stakeholders of the surveillance, monitoring, and maintenance activities being conducted at the Site. DOE-LM provides periodic communications such as this report and through other means such as web-based tools and public meetings.

This annual report focuses on routine surveillance, maintenance, and monitoring activities that were conducted during calendar year (CY) 2007 and also includes information for fourth quarter CY 2007. Topics covered include site operations and maintenance (Section 2.0), and environmental monitoring including water, air, and ecological monitoring (Section 3.0). Data management, validation, and an assessment of data quality are also included in Section 3.0. References cited in this report are included in Section 4.0.

Supporting information is provided in a series of appendices. Appendix A provides the hydrologic data, while Appendix B provides the water-quality data. The fourth quarter CY 2007 landfill inspection forms for the Present Landfill (PLF) and Original Landfill (OLF) are included in Appendix C. RFLMA and RFSOG data evaluation flowcharts that were used are provided in Appendix D. Appendix E contains the Los Alamos National Laboratory (LANL) report titled "Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters." The three hydrologic modeling reports generated for the site in 2007 are included in Appendix F. Appendix G contains the report "Treatability Studies for the Solar Ponds Plume at Rocky Flats, Phase 2," and the RFLMA contact records issued during CY 2007 are included in Appendix H.

1.2 Background

Surveillance, maintenance, and monitoring activities are conducted according to RFLMA. RFLMA incorporates the following plans:

- Final Landfill Monitoring and Maintenance Plan, Rocky Flats Environmental Technology Site, Original Landfill (DOE 2006a); and
- Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan (DOE 2006b).

RFLMA Attachment 2 stipulates that DOE employ administrative procedures to control activities in accordance with the institutional controls and to meet quality assurance and control program requirements. Other Site procedures are established to guide work and implement BMPs. These procedures are referenced in the RFSOG and include:

- *Operations and Maintenance Plan for Rocky Flats Surface Water Control Project* (DOE 2008d)—in production;
- *Operations and Maintenance Manual for the Rocky Flats Ground Water Plume Treatment Systems* (DOE 2007c);

- *Rocky Flats Site, Colorado, Site Revegetation Plan* (DOE 2005b);
- *Erosion Control Plan for the Rocky Flats Property Central Operable Unit* (DOE 2007b);
- *Rocky Flats, Colorado, Site Vegetation Management Plan* (DOE 2005c);
- *Ecological Monitoring Methods Handbook* (DOE 2008c); and
- *Annual Rocky Flats Site Ecological Field Sampling Plan* (DOE 2008b); and
- LM CERCLA Sites Quality Assurance Project Plan.

1.3 RFLMA Contact Records

This section provides a summary of the status of activities addressed by RFLMA contact records issued during 2007. RFLMA references the use of contact records to document CDPHE oral approvals of field modifications to implement approved response actions (see RFLMA paragraph 34). RFLMA Attachment 2 also references the use of contact records to document the outcome of consultation related to addressing any reportable conditions (see RFLMA Attachment 2, Section 6.0). Finally, the Rocky Flats Site Legacy Management Public Involvement Plan, RFLMA Appendix 2 (PIP), also provides that a contact record of consultative process discussions between the RFLMA Parties will be made available to the Rocky Flats Stewardship Council and other interested stakeholders as early in the process as is practicable following signature approval by the parties. The PIP process to make contact records available is implemented by posting contact records on the Rocky Flats public website, and providing timely notice to stakeholders that the contact record is posted by an e-mail message.

The RFLMA Parties agreed, as documented in RFLMA Contact Record 2007-08, that the status of actions or activities in RFLMA contact records will be documented by DOE from time to time, and included in RFLMA quarterly and/or annual surveillance and maintenance reports for tracking purposes. The RFLMA Parties also agreed that to facilitate the status reporting contact records should include a short discussion of the anticipated actions or activities to close out the RFLMA contact record. Thus, RFLMA Contact Record 2007-08 and subsequent contact records will include the closeout discussion.

Table 1-1 lists the RFLMA contact records issued in 2007 and their status as of December 31, 2007. Because the status of RFLMA contact records issued in 2006 has not previously been reported, these are also included in Table 1-1. Appendix H contains copies of the contact records.

Table 1-1. Status of RFLMA Contact Records Issued in 2007

Contact Record No.	Purpose	Date Posted on Rocky Flats LM Website	Status as of December 31, 2007
2006-01	Disposition December 2005−May 2006 monitoring results for manganese at the Present Landfill (PLF) Treatment System (PLFTS)	3/15/2007	Actions completed—closed
2006-02	Disposition December−July 2006 monitoring results for boron at the PLFTS	3/15/2007	Actions completed—closed
2006-03	Disposition February−July 2006 monitoring results for arsenic at the PLFTS	3/15/2007	Actions completed—closed
2007-01	Notification of adverse biological condition, March 27, 2007, Central Operable Unit boundary fence wildlife deaths	4/11/2007	Actions completed—closed
2007-02	Discussion and approval of exploratory excavations to greater than 3 feet below grade around the former Interceptor Trench Pump House	6/7/2007	Actions completed—closed
2007-03	Discussion and approval of excavation greater than 3 feet below grade in FC-1 soil borrow area and placement of soil south of former Building 371 to eliminate ponding around well heads	6/7/2007	Actions completed—closed
2007-04	Discussion and approval of soil disturbance for Phase III road improvement work involving the construction of roadside drainage ditches that will not return excavation to preexisting grade	8/17/2007	Actions completed—closed
2007-05	Grading of the slump area south of FC-4 and former B991	10/1/2007	Actions completed—closed
2007-06	Evaluation of elevated nitrate in groundwater samples from AOC well B206989	10/16/2007	Continuing monitoring and evaluation
2007-07	Replacement of monitoring well 45605 (B991 slump)	12/10/2007	Open
2007-08	Changes to PLF inspection and monitoring frequencies and modification of the PLF Monitoring and Maintenance Plan	12/26/07	Open

2.0 Site Operations and Maintenance

2.1 Annual Site Inspection

The RFLMA-required annual inspection of the COU was performed on March 19, 2007 (refer to DOE 2007g). The inspection team included 12 personnel from the Rocky Flats office. The inspection focused on the areas other than the OLF, PLF, and treatment systems, which are routinely inspected as described in the quarterly report. The team was briefed prior to the inspection regarding the specific items of inspection, including indication of adverse biological effects, any violation of the remedy-required institutional controls, evidence of erosion, evidence of differential settlement or subsidence, and the presence of large pieces of demolition debris that might indicate erosion. There were no major findings or concerns. Observations and disposition of the observed items were entered into the Site Log.

2.2 CERCLA 5-Year Review

In 2007, DOE-LM conducted the second 5-year review of remedial actions implemented at Rocky Flats. Because remaining contamination in the COU does not allow for unlimited use and unrestricted exposure, periodic reviews are required by CERCLA to be conducted at least every 5 years to determine whether the COU remedial actions remain protective of human health and the environment.

The first 5-year review at Rocky Flats was conducted for the period May 1997 through April 2002 and was performed when cleanup and closure activities were ongoing under RFCA. The second 5-year review covered the period May 2002 through April 2007 and evaluated the performance of the remedy implemented under the final CAD/ROD.

The review was conducted in accordance with EPA's *Comprehensive Five-Year Review Guidance,* dated June 2001. DOE, as the CERCLA federal lead agency under Executive Order 12580, conducted the review, using a team composed of knowledgeable DOE, DOE's contractor, CDPHE, and EPA staff. Community notification and involvement activities included posting information about the review on the Rocky Flats website, publication of a notice of the review in the local newspaper on March 4, 2007, and public briefings.

The review assessed the performance of the final remedy in relation to remedy objectives and implementation requirements. Note that remedy selection decisions are not reopened but are evaluated against new requirements, if any.

The review addressed three questions to assess the protectiveness of the remedy, with the following approach and conclusions:

- Question A: Is the remedy functioning as intended? The technical performance of the remedy, including monitoring data, system performance, and conduct and results of operation and maintenance, was determined to be consistent with that intended by the remedy. The required physical and institutional controls were determined to be in place and successfully preventing exposure. In addition to ongoing inspections of remedy components in accordance with RFLMA requirements, a COU inspection was also

conducted on March 19, 2007. No significant items were found that would call into question the protectiveness of the remedy. The answer to this question is "yes."

- Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) still valid? The Comprehensive Risk Assessment underlying exposure scenarios and parameters remain valid and no changes have occurred in reference doses or slope factors, or applicable or relevant and appropriate requirements that would change the protectiveness of the remedy. The remedy RAOs also remain valid. The RAOs for contaminated groundwater are to prevent adverse impacts to surface-water quality, prevent exposure to groundwater above maximum contaminant levels (MCLs), and restore groundwater to meet surface-water standards. The RAO for surface water is to meet surface-water standards, and the RAOs for contaminated soil are to prevent adverse impacts to groundwater and surface water and to prevent unacceptable risks from exposure. The answer to this question is "yes."
- Question C: Has any other information come to light that could call into question the protectiveness of the remedy? No new information not addressed or anticipated in the CAD/ROD was identified that could call into question the protectiveness of the remedy. The answer to this question is "no."

Based on the answers to Questions A, B, and C, the 5-year review assessment concluded that the COU remedy continues to be protective of human health and the environment. The following issues, recommendations, and follow-up actions were identified.

<u>GS10 Uranium (U) Concentrations (see Section 3.1.2.2)</u>

Issue: Samples from GS10, the surface-water monitoring Points of Evaluation (POE) in South Walnut Creek at the Pond B-1 bypass, contained total U concentrations above the surface-water standard in 2006. Surface water discharged from the COU meets surface-water standards. Evaluation suggests that the GS10 levels are due to changes in hydrologic conditions, resulting in groundwater with predominantly naturally occurring U making up a larger proportion of stream flow at GS10.

Recommendation: Continue to monitor in accordance with RFLMA requirements. Employ special analytical methods to determine whether natural U isotopic signatures have significantly changed from the levels prior to closure.

<u>U Concentrations at OLF Wells (see Sections 3.1.2.9 and 3.1.5.4)</u>

Issue: U analytical results are higher than the surface-water standard in one of three downgradient wells.

Recommendation: Continue to monitor the OLF groundwater in accordance with RFLMA requirements. Employ special analytical methods to determine whether isotopic signatures indicate the results are predominantly natural U.

Sentinel Well 45605 (see Sections 2.7.2 and 3.1.5.4)

Issue: Sentinel well 45605 is located within a hillside slump south of former Building 991, which has moved the well casing out of vertical, and the serviceability of the well is uncertain.

Recommendation: Continue to monitor this well in accordance with RFLMA. If necessary, after movement in the area stops, replace the well after regrading of the hillside has been completed.

Water-Quality Standards Changes (see Section 2.3)

Issue: Changes to RFLMA surface-water standards for arsenic, copper, and U may be promulgated by the Colorado Water Quality Control Commission (WQCC) at the completion of the triennial review for the Big Dry Creek Basin in 2009. Also, the existing temporary modifications (TMs) to the standards for nitrates and certain volatile organic compounds (VOCs) incorporated in the RFLMA surface-water standards are set to expire in 2009. The impacts of any changes to standards at the time of completion of the Colorado WQCC triennial review will depend on the results of continuing remedy implementation activities.

Recommendation: DOE should actively participate in the triennial review process to identify issues and collect and provide any necessary data to the WQCC for its decision-making process.

OLF Cover (see Section 2.5.2)

Issue: Routine inspections have identified historical seeps and small areas of slumps and slides on the OLF cover that need to be addressed and repaired as necessary to continue to meet cover design criteria.

Recommendation: Continue to inspect the OLF cover in accordance with RFLMA requirements. Cover repairs should be made in accordance with the OLF Monitoring and Maintenance (M&M) Plan so that design criteria continue to be met. An engineering evaluation to identify possible causes as well as approaches to address the causes should be completed.

Solar Ponds Plume (SPP) Treatment System (SPPTS) Treatability Study (see Section 3.1.5.4)

Issue: Routine maintenance for this system is difficult and inefficient.

Recommendation: Complete treatability study to determine whether a simpler, more efficient, and less management-intensive system could be designed and installed. Based on the results, proposed modifications should be developed in accordance with RFLMA.

RFLMA requires an evaluation of actions that could reduce the need to rely on institutional controls and the 5-year review considered new technologies that might reduce groundwater contamination faster or more efficiently than the current remedy. None were identified for further investigation.

RFLMA also specifies that the inspection frequency of the final cover and stormwater management systems for the OLF and PLF be evaluated in the CERCLA periodic review. Under the landfill M&M Plans, monthly inspections have been ongoing since June 2006 and it is recommended that the frequency be reduced to quarterly for the PLF.

The next 5-year review report will be submitted to EPA for concurrence by August 1, 2012.

2.3 WQCC Proceedings Related to Rocky Flats

Several Colorado WQCC proceedings related to Rocky Flats surface-water standards occurred in 2007, as described below. As recommended by the CERCLA 5-year review, the Site is actively participating in the triennial review process to identify issues and collect and provide any necessary data to the WQCC for its decision-making process.

The U surface-water standard for Rocky Flats, adopted based on an ambient water quality determination in 1989, is 10 picocuries per liter (pCi/L) for North Walnut Creek and 11 pCi/L for Woman Creek. Based on post-closure conditions groundwater makes up more of the stream baseflow than it did prior to closure. In post-closure, surface-water concentrations have approached and may exceed the site-specific standard in the future due to the predominant natural U concentrations in groundwater. The statewide basic U standard, adopted by the WQCC in 2005, is 30 micrograms per liter (μg/L) (equivalent to 20 pCi/L), which is the EPA MCL for drinking water. Surface water is impounded in the terminal ponds, and sampled for compliance with the standard before release through the POC monitoring locations.

A Petition for Rulemaking to remove the site-specific U surface-water standard was filed with the WQCC on July 31, 2007, so that the statewide basic standard would be the standard at Rocky Flats. Elimination of the site-specific U standard in favor of the statewide standard may obviate the possible need to develop management or treatment options for impounded surface water in the terminal ponds if future U concentrations approach or slightly exceed the current site-specific standard.

The WQCC considered DOE's petition at its August 13 meeting. Rocky Flats staff presented a short briefing on the petition and rationale for the timing and answered questions. Local municipality staff members also spoke at the meeting, and requested that more time be allowed to obtain analyses to determine if the predominance of naturally occurring U in groundwater is consistent with pre-closure findings, and to consult regarding the implications of changing the standard. The WQCC decided to accept the petition and set the matter for formal rulemaking, but set a hearing date for January 2009 instead of the date requested in the petition of January 2008. Staff will continue to consult with the local municipality stakeholders as the formal rulemaking proceeds.

The WQCC also held hearings related to issues scoping for the next South Platte River Basin triennial review and also regarding TMs set to expire before February 28, 2010. In accordance with Colorado law, the WQCC must consider retaining, changing, or eliminating existing TMs in Colorado that are set to expire within 2 years. TMs for nitrate/nitrite and six volatile/semivolatile organic analytes are relevant to stream segments at Rocky Flats and will expire on December 31, 2009, and Rocky Flats streams are included in the South Platte River Basin.

The issues scoping hearing for the triennial review for the South Platte River Basin was held October 9, 2007. The issues potentially affecting Rocky Flats presented to the WQCC for possible rulemaking during the triennial review are the TMs relevant to Rocky Flats that are set to expire; the anticipated lowering of the statewide arsenic standard to conform to the EPA standard of 10 μg/L; and the current Rocky Flats petition for rulemaking to adopt the statewide basic standard for U. The WQCC recommended that Rocky Flats staff work with the Colorado

Water Quality Control Division staff to develop the necessary evidence for the next phases of the rulemaking process. The next phases are the WQCC issues formulation hearing in November 2008 and the rulemaking hearing in June 2009.

The WQCC hearing on TMs was held on December 10, 2008. Consistent with the pre-hearing filings, the WQCC retained the December 31, 2009, expiration date for the current Rocky Flats stream segments TMs. All TMs in Colorado, and thus those in place at Rocky Flats, set to expire within 2 years will again be considered by the WQCC in 2009.

2.4 Pond Operations

Twelve constructed ponds collect and manage surface-water runoff at the Site. The ponds are grouped together in series based on the drainage in which they are located, with the A-Series Ponds in North Walnut Creek, the B-Series Ponds in South Walnut Creek, the C-Series Ponds in Woman Creek, and the Landfill Pond in No Name Gulch. Ponds A-4, B-5, and C-2 are referred to as "terminal ponds," because they are the farthest downstream ponds in their respective drainages, and the ponds from which water is discharged off the Site. Off-site discharges of water from the terminal ponds are currently performed using a batch release method.

During CY 2007, the Site performed four terminal pond discharges. Ponds A-4 and B-5 were each discharged twice (Table 2-1). Pond A-3 was discharged to Pond A-4 four times in CY 2007 (Table 2-1). For habitat enhancement, water was periodically allowed to enter Pond B-1 from South Walnut Creek, and Ponds A-1 and A-2 from North Walnut Creek. As of December 31, 2007, Ponds A-3, A-4, B-5, C-2, and the Landfill Pond were holding a total of approximately 16.2 million gallons (16.4 percent of total capacity).

Table 2-1. CY 2007 Pond Water Discharges and Transfers

Discharge/Transfer	Dates	Volume (million gallons)
Pond A-3 to A-4	1/10−1/24/07	5.68
Pond A-3 to A-4	2/7−2/12/07	4.95
Pond A-4 to Walnut Creek	3/1−3/13/07	10.25
Pond B-5 to Walnut Creek	3/1−3/13/07	7.47
Pond A-3 to A-4	3/13−3/28/07	7.67
Pond A-3 to A-4	4/25−5/4/07	7.47
Pond A-4 to Walnut Creek	7/5−7/26/07	10.39
Pond B-5 to Walnut Creek	7/5−7/12/07	3.13

Monthly routine dam inspections, pond level measurements, and piezometer measurements were performed as scheduled during the year. Annual dam mowing and vegetation removal was completed in July and August. Semiannual movement monument surveys and inclinometer readings were also performed as scheduled.

In compliance with the State of Colorado "Rules and Regulations for Dam Safety and Dam Construction," a formal dam safety inspection by a registered professional engineer was completed for all dams in September. All Rocky Flats dams received a *Satisfactory* condition rating and a recommended safe storage level of *Full*. Several recommendations to improve dam

safety were identified. The final report was submitted to the Colorado Office of the State Engineer, satisfying the periodic 6-year reporting requirement.

2.5 Landfills

The annual report of the results of inspections, monitoring data, and maintenance activities for the PLF and OLF is provided below.

2.5.1 Present Landfill

The PLF consists of an approximately 22-acre engineered RCRA Subtitle C-compliant cover over a former sanitary/construction debris landfill. A diversion channel surrounds the landfill and diverts stormwater runoff away from the landfill to No Name Gulch. The landfill has a passive seep interception and treatment system (the Present Landfill Treatment System [PLFTS]), installed to treat landfill seep water and groundwater intercept system (GWIS) water that discharges into the Landfill Pond. A gas extraction system is also built into the landfill and allows subsurface gas to vent to the atmosphere.

Subsidence and consolidation at the PLF is monitored by visually inspecting the surface of the landfill cover for cracks, depressions, heaving, and sinkholes. The landfill final construction site conditions are used as a baseline for comparisons made during site inspections. In addition to the visual inspection, settlement monuments are used to evaluate the actual settlement at these specific locations compared to the expected settlement calculated in the final design. Nine settlement monuments were installed across the top of the landfill cap, with an additional six monuments located on the east face of the landfill. The monuments are monitored quarterly for the first year, and annually thereafter. The first survey of these locations was performed during fourth quarter CY 2006. Annual surveys were initiated in fourth quarter CY 2007.

Inspections and monitoring tasks follow the format and protocol established in the *Present Landfill Monitoring and Maintenance Plan* (PLF M&M Plan) and include groundwater and surface-water monitoring, and monitoring subsidence/consolidation, slope stability, soil cover, vegetation, stormwater management structures, and erosion in surrounding features so that corrective actions can be taken in a timely manner. Monthly inspections were initiated in October 2005. Quarterly inspections were initiated in fourth quarter CY 2007 as described in RFLMA Contact Record 2007-08.

2.5.1.1 Inspection Results

Eleven inspections were performed at the PLF in CY 2007. The inspection process followed the format and protocol established in the PLF M&M Plan. No significant problems were observed during these inspections. Appendix C contains the landfill inspection forms for fourth quarter CY 2007; earlier 2007 inspections forms are included in the applicable quarterly reports.

PLF area surface-water and groundwater monitoring, and operation of the PLFTS, is covered in those respective sections of this report.

2.5.1.2 Slumps

On February 13, 2007, a slump was discovered on the north-facing hillside just east of the PLF. The slump is not on the PLF and it was determined by engineering review that it does not impact the PLF cover. The slump was likely caused by heavy snow conditions and influenced by the post-closure lower water levels in the Landfill Pond. Therefore regrading of the slump is not necessary; however, deep-rooted plants were planted in the slump area to promote stabilization. There were no significant changes to the slumping area for the remainder of 2007.

2.5.1.3 Settlement Monuments

Surveys were completed in March, June, August, and December of 2007. Results of the settlement monument surveys indicate settling at each monument does not exceed expected settlement calculated in the final design and does not trigger any maintenance activity under the PLF M&M Plan.

2.5.2 Original Landfill

The OLF consists of an approximately 20-acre soil cover over a former solid sanitary and construction debris landfill. The final cover consists of a 2-foot-thick Rocky Flats Alluvium soil cover that was constructed over both a regraded surface and a buttress fill and revegetated. The original surface was regraded to provide a consistent slope. A 20-foot-high, 1,000-foot-long soil mass buttress fill was placed at the toe of the landfill. Erosion is controlled by a series of diversion berms that carry storm runoff away from the cover to channels on the east and west perimeter of the cover.

Inspections of the OLF are conducted monthly in accordance with the *Final Landfill Monitoring and Maintenance Plan* (OLF M&M Plan).

2.5.2.1 Inspection Results

Twelve inspections were performed at the OLF in CY 2007. The inspection process followed the format and protocol established in the OLF M&M Plan. Appendix C contains the landfill inspection forms for fourth quarter CY2007; earlier 2007 inspections forms are included in the applicable quarterly reports.

OLF area surface-water and groundwater monitoring is covered in those respective sections of this report.

Conditions that warranted repair and that triggered further investigation were found at the OLF during 2007 inspections, as discussed below. Figure 2-1 is an aerial photograph of the OLF taken in June 2007 that illustrates the locations of the observed conditions.

A meeting with CDPHE and EPA to discuss OLF inspection findings was held on May 17. Discussion topics included possible mechanisms for the conditions observed at the OLF; allowing deeper-rooted plants in areas of higher moisture; extending the subsurface drain for Seep #7 northward to capture the seep; requirements for berm height and flow channel cross section; and inspecting soils and installing French drains at other seep/slump locations. A

summary of the meeting discussions and a proposed plan for OLF repair activities was transmitted to CDPHE. The plan responds to recommendations made in the CERCLA 5-year review (Section 2.2), and included proposed near-term repairs; proposed geotechnical investigation to determine the mechanisms that are causing the slumping; proposed revisions to the OLF M&M Plan; and design and construction of final repairs and modifications to address the problems documented at the OLF.

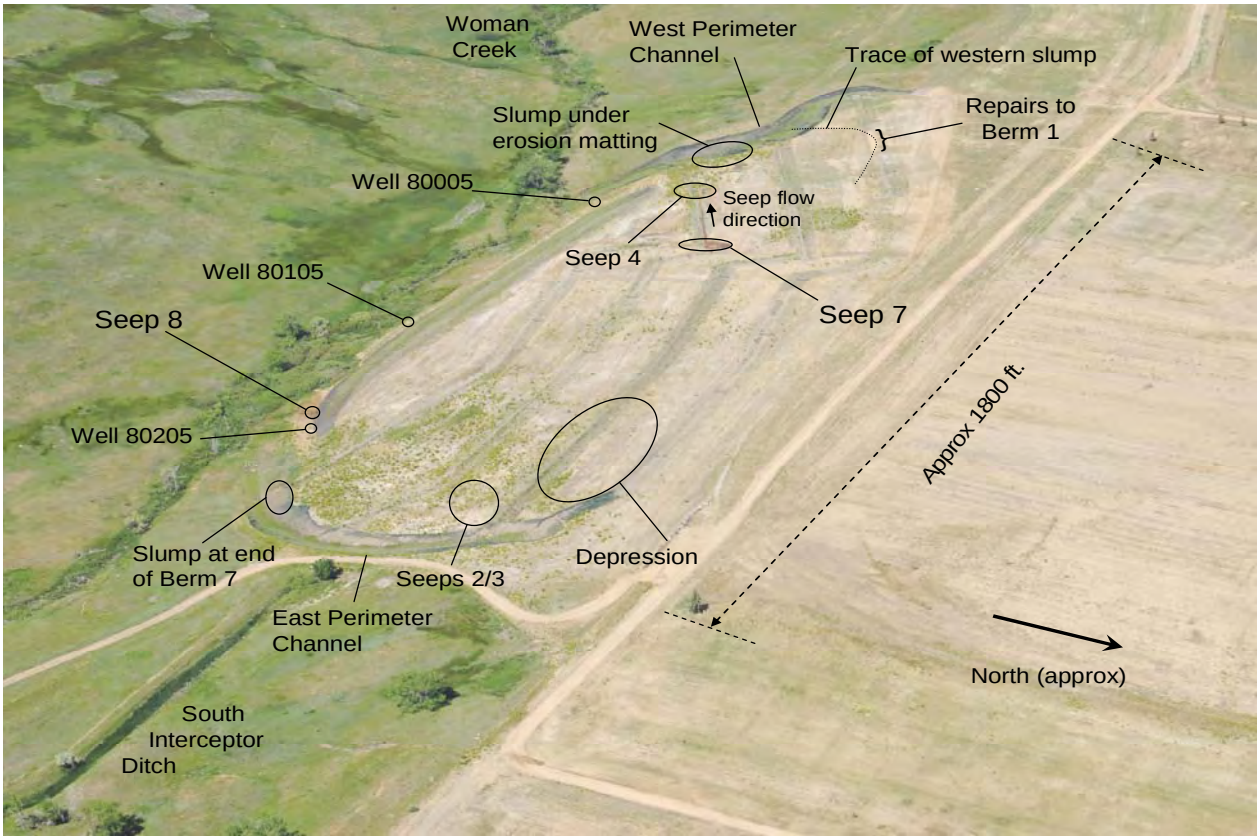

Figure 2-1. Aerial Photograph of OLF Taken June 2007

On November 12, the Final OLF Geotechnical Investigation Work Plan was submitted to CDPHE for review and subsequent approval. Phase 1 of the OLF geotechnical investigation (nonintrusive work) began on December 3 and consisted of a geophysical survey. The survey included using sonar instruments to catalog areas of waste beneath the cover, and was completed on December 6. Resulting data will be used to determine whether proposed test pit and borehole locations need to be moved for Phase 2 of the project. This intrusive work is expected to occur in February 2008.

2.5.2.2 Seeps

Seeps #4, #7, and #8 at the OLF were evaluated during the monthly inspections as well as during unscheduled visits throughout the year. Seep #7 flowed steadily beginning in January, but dried out in July and ceased to flow through the rest of the year except temporarily after precipitation events. Seep #4 showed areas of continuous active groundwater seepage throughout the year that was drained by Berm #3 into the western perimeter channel. A new seep, Seep #8, also showed

continuous steady flow of several gallons per minute throughout the year. Outfall from Seep #8 is channeled through various constructed pathways to help maximize wetland area and eventually drains into Woman Creek.

On August 9, the EPA and CDPHE RFLMA project coordinators and EPA staff walked down the OLF. EPA expressed interest in the regulatory status of the new seep (Seep #8) that surfaces at the east end of the buttress, which may be associated, at least in part, with the groundwater collected by the buttress drain. Samples from Seep #8 were collected on August 23. Refer to the third quarter CY 2007 report (DOE 2008a) for associated analytical results, which showed no water-quality concerns.

Other smaller seeps showed areas of wetness only temporarily after precipitation events. None produced any surface flow.

2.5.2.3 Slumps

Soil movement, including slumps, was observed on several occasions and in several locations at the OLF in 2007. Individual slump areas are discussed below.

Berm #1 Slump

On February 7, 2007, a slump below Berm #1 was documented following the melting of several heavy snowfalls and the associated 6- to 8-foot snow drifts. The slump cracks extended from the western perimeter channel up through Berm #1 and out to the east below Berm #1. The total length of this arcuate feature was approximately 200 feet. The slump was immediately staked, photographed, and surveyed with a global positioning system (GPS) unit. The cracks that extended through Berm #1 were covered with plastic sheeting and secured with sand bags to help prevent water from infiltrating the cracks and causing more movement of the berm.

A project designed to fill the crack in Berm #1 and raise the berm freeboard height back to 2 feet as required by the OLF M&M Plan was undertaken from March 14 through April 12. The project involved the addition and compaction of approximately 120 tons of Rocky Flats Alluvium. The berm was then covered with erosion control matting and reseeded. Photographs of the project were taken and included in the monthly landfill inspection report.

The slump at Berm #1 of the OLF cracked through the berm a second time, as documented on May 7. Repairs included adding and compacting a total of 38 tons of Rocky Flats Alluvium, which was completed on May 10. The berm was then re-covered with erosion control matting and revegetated.

The OLF Action Plan Phase 1 repairs were completed on August 2. The subcontractor smoothed and compacted the area of the main crack that extended below Berm #1 and into the western perimeter channel. The subcontractors then imported and compacted 227 tons of Rocky Flats Alluvium in the area of the crack to ensure that a 2-foot cover thickness was retained as required. The west portion of Berm #1 and all of the smaller sets of cracks between Berms #1 and #3 were also filled and compacted. The subcontractor subsequently reseeded the disturbed area of the cover and secured it with erosion control matting. This area did not show any signs of further slumping through the end of 2007.

Berm #4 Depression

A depression below Berm #4 on the east side of the OLF was observed on February 7, 2007. The western perimeter of the depression extends through a small area of Berm #5 but is not affecting the integrity of the berm. The depression has been staked, photographed, and surveyed with a GPS unit to help evaluate any additional movement. The depression will continue to be monitored during both scheduled inspections and unscheduled visits to the area.

Western Perimeter Channel Slump

A minor slump was observed in early 2006 on the edge of the western perimeter channel of the OLF between Berms #2 and #3. At that time, the area of slumping soil was delineated with pin flags, and the extent defined with the field GPS to provide an estimation of the aerial extent of the slump. Photographs were taken to help evaluate subtle changes over time. The slump has since extended southward to Berm #3 and still appears to be active. The slump is not affecting the outfall of Berm #3 and is not a threat to the integrity of the OLF cap or the perimeter channel. The slump will continue to be monitored during both scheduled inspections and unscheduled visits to the area.

Berm #2 Slump

A small crack in Berm #2 of the OLF from the eastern extent of the Berm #1 slump was documented on May 14. The crack was filled with Rocky Flats Alluvium and compacted on May 15.

Berm #7 Slump

A slump at the east end of Berm #7 was discovered in April 2007. The eastern end of this berm has slid into the eastern perimeter channel, presumably due to increased moisture content and the berm's position overhanging the perimeter channel. The new slump was staked, photographed, and located with a field GPS instrument. No changes occurred in the slump throughout the rest of the year.

2.5.2.4 Settlement Monuments

Six settlement monuments were installed at the OLF from March to April 2007. Settlement monument D was installed on July 5, after conditions dried enough to allow installation. The remaining monument will be installed upon the completion of the OLF geotechnical investigation or a subsequent repair project if necessary.

The settlement monuments were surveyed in June, August, and December 2007. Preliminary survey data indicate settling at each monument does not exceed expected settling calculated in the final design and does not trigger any maintenance activity under the OLF M&M Plan.

2.5.2.5 Consolidation Monitors

On September 19, 2007, 20 consolidation monitors (3-foot sections of rebar driven 2 feet into the ground and topped with a plastic cap) were installed at the OLF in the Berm #1 slump area. The

monitors were surveyed throughout the rest of the year on a monthly basis to help determine movement in the area. No significant movement was recorded for any of the surveys through the end of CY 2007.

2.5.2.6 Erosion Controls

The "Wattle Replacement Project" at the OLF began on May 29, 2007, and was completed on June 4. (Wattles are straw tubes that help prevent erosion from large precipitation events.) The subcontractor installed new wattles across the entire cover of the landfill except for the slide area between Berms #1 and #2. This area will have the wattles replaced upon completion of the OLF geotechnical investigation or subsequent construction project.

2.5.2.7 OLF Berm Survey

Surveyors completed surveys on the OLF berm crests and troughs the week of April 30, 2007. In areas where the grade of the troughs was found to be less than 1 percent, additional cross-sectional surveys were performed to evaluate repairs that would be necessary to fix the grade. Any repairs to the berms to maintain required berm heights will be recommended based on the results of the geotechnical investigation.

2.6 Groundwater Plume Treatment Systems Maintenance

The system-specific summaries below focus on the maintenance and operation of the Mound Site Plume Treatment System (MSPTS), the East Trenches Plume Treatment System (ETPTS), and the SPPTS. Details of the monitoring of the systems, including the PLFTS, are presented in Section 3.1.2.10.

2.6.1 Mound Site Plume Treatment System

Routine maintenance activities continued at the MSPTS through fourth quarter CY 2007. These activities included weekly raking of the media and inspection of influent and effluent flow conditions. In addition, the flow direction through the system was changed from a downflow to an upflow configuration in September. See Section 3.1.2.10 for additional information.

2.6.2 East Trenches Plume Treatment System

Routine maintenance activities continued at the ETPTS through fourth quarter CY 2007. This included weekly raking of the media and inspection of influent and effluent flow conditions. In addition, the flow direction through the system was changed from a downflow to an upflow configuration in September. See Section 3.1.2.10 for additional information.

2.6.3 Solar Ponds Plume Treatment System

Routine maintenance activities continued at the SPPTS through fourth quarter CY 2007. This included weekly inspection of the solar/battery system that powers the pump, operation of the pump, and influent and effluent flow conditions.

The solar pump system began operating erratically in December 2007, first shutting down on December 8. It resumed operation soon after with no intervention from Site staff; this pattern continued through the month. Evaluations suggested the erratic operation was related to weather conditions, as the pump appeared to shut down only during periods of colder temperatures. At the end of the year, efforts were underway to replace the batteries although they may not have been the primary cause. Instead, water may have been freezing in the transfer line between the collection well and the treatment cells, where this line nears the ground surface, thereby blocking the line and causing the pump to shut down. Additional improvements will be made as contributing factors to this condition are identified.

2.7 Erosion Control and Revegetation

The existing erosion controls are maintained and repaired to protect the bare soil areas until the vegetation can stabilize the soil. Areas lacking sufficient vegetative cover are assessed and typically reseeded or in some cases have soil amendments added to assist in the establishment of the native vegetation in these areas. Additional information on the revegetation activities that were conducted at the Site during 2007 is provided in Section 3.3.2.3 of this annual report.

2.7.1 Erosion Control

During 2007, the *Erosion Control Plan for the Rocky Flats Property Central Operable Unit* was finalized (DOE 2007b). The plan addresses the regulatory approach, monitoring inspections, and applicability and scope of erosion control activities at the Site. It outlines the responsibilities, BMPs, and implementation aspects for erosion control activities before, during, and after projects.

Maintenance, repair, replacement, and monitoring of the Site erosion control features continued through 2007, as needed. Assessing the erosion control is especially important following high wind events that are common at the Site and after significant precipitation events. Typical repairs included restaking (or weighting with rocks) wattles or erosion blankets that had become loose.

2.7.2 Slump South of Former Building 991

Site personnel and support staff inspected the slump that had developed on the hillside south of former Building 991 on July 17, 2007. Additional cracks indicative of continuing movement were noted. The path forward and observations from a walkdown with DOE were discussed. The preferred line for the toe of the slope was defined, with consideration of ecological factors, to delineate the proposed regrading activities. The proposed grade of the hillside was determined. New survey data were collected July 17 to refine estimates of excess material generated and to develop the conceptual design.

In September 2007, a conceptual design for regrading the slump was prepared for consultation with CDPHE. Sampling of the Sentinel well within the slump (well 45605) was performed, and the well was subsequently abandoned. (This well will be replaced in 2008; see Section 3.1.5.4 for additional information on the well and slump.) CDPHE approved RFLMA Contact Record 2007-05 to allow excavation and fill and the proposed final elevations. The final design was then completed and issued.

On October 12, heavy equipment was mobilized to the Site. Following a preconstruction briefing and installation of preliminary erosion controls, culverts, and a haul road, regrading began. Excess excavated material was hauled to the 903 Pad/Lip areas, where it was spread to prepare the area for revegetation activities (an activity that had already been scheduled in addition to the slump regrade, but now benefited from the addition of soil). Grading activities on the slump hillside were completed on November 8, and the revegetation phase of the project was completed on the 903 Pad/Lip Area and the 991 Hillside on November 20.

On December 5, staff installed 13 consolidation monitors across the regraded hillside to assist in monitoring potential future hillside movement. The consolidation monitors will be surveyed annually or more frequently if cracks become apparent on the hillside. Surveying lathes were placed at the turning points on the hillside and will be used as reference points to help determine where the original cracks were present on the hillside before the recent hillside repairs were completed.

2.7.3 Former Building 371 Area Regrade

Several locations in the vicinity of former B371 showed standing water following precipitation events. The B371/Functional Channel (FC)-1 Regrade Project was initiated to add fill from FC-1 to improve drainage into FC-1 and FC-2, and simultaneously to improve a portion of the bottom of FC-1 to support wetland vegetation if sufficient moisture is present. CDPHE approved RFLMA Contact Record 2007-03 to allow excavation and fill and the proposed final elevations. Heavy equipment was mobilized on August 23 and the construction was finished by September 22. Erosion controls were applied and the area was reseeded. Refer to Section 3.1.5.4 for additional information on the reasons for this regrade, and to Section 3.3.2.3 for more detail on the revegetation.

2.8 General Site Maintenance and Operations

The Site is managed and maintained and activities are conducted pursuant to DOE's jurisdiction and control responsibilities. These activities help maintain the general condition of the Site through BMPs. Assessment of the Site is performed on both a scheduled and continuous basis. Highlights of the routine and nonroutine maintenance and operations are described below.

2.8.1 Road Upgrades

After a significant snowmelt in late January and early February of 2007, the Site experienced minor erosion of several road areas. Temporary repairs were required to allow uninterrupted travel to all of the necessary locations of the Site. This repair project focused on short segments of Site roads. Road-base and drain rock were added in some locations. Work began on March 21 and was completed April 3, 2007.

The site received 1.5 inches of rain on April 25, eroding portions of the road to the A-Series Ponds. Small drainages were dug the same day to help water flow down the existing ditch on the east side of the road as an interim repair. The A-Series Ponds Road Repair Project was developed to construct a water management structure on the west side of the road that would help drain water into the existing drainage. The project also included grading the road to get rid

of the small areas of erosion that formed during the precipitation event. The project began on May 22 and was completed on June 1.

A larger roads improvement project was performed, and is referred to as the Roads III Project. CDPHE approved RFLMA Contact Record 2007-04 to allow grading and proposed final elevations. Designs reflected consideration of Preble's meadow jumping mouse (PMJM) and wetland issues. USFWS was notified as required. The subcontract was initiated August 20. Work was halted on September 13 when a road grader hit a live underground power line near the intersection of Walnut Creek and Indiana Street. The project was immediately stopped, and the necessary notifications were made. Work resumed on September 25 and was completed on September 28.

On November 26, staff installed three rock crossings on the road to the PLF to prevent erosion in this area. The rock crossings will help channel runoff from precipitation events into the existing ditch that runs along the west side of the road.

2.8.2 Electrical Lines

On July 20, 2007, Site staff escorted Xcel Energy personnel who tested transformers on the electrical lines along the east side of the federal property (i.e., along the west side of Indiana Street) for polychlorinated biphenyls (PCBs). A sagging power line on the east side of Rocky Flats was also tightened. The testing and work was completed on July 21, and found no regulated levels of PCBs in the transformers.

In August Xcel installed a single meter to supply power to the remaining 13.2-kilovolt power line at the Site, which continues to feed two surface-water monitoring stations, two air sampling stations, and one CDPHE air quality monitoring station.

2.8.3 Fence Maintenance and Construction

2.8.3.1 COU Fence

Construction of the fence surrounding the COU began on November 6, 2006. The construction was suspended on December 20, 2006, due to unusually heavy snow accumulation. Ground conditions were assessed frequently in the following days and weeks; however, several additional snowstorms as well as drifts caused by the wind prevented safe resumption of the work. Construction of the fence resumed on February 22, 2007, and was completed on March 22. "No Trespassing" signs required as physical controls under RFLMA were attached to the fence by March 23. Signs that are required by RFLMA at the entrances to the COU, listing the use restrictions for this OU, were also posted. Inspections of the signs and postings are conducted on a quarterly basis.

The entire 7-mile-long COU fence was inspected in April 2007 to identify areas where deer commonly cross the fence. Flags were hung in these locations to help make the fence more visible, and help reduce the number of deer that were getting hung up in the fence. A consultation with CDPHE was held on April 4 regarding this issue, and permanent fence flags (free-hanging plastic devices) were placed on the fence in the observed high-traffic areas in

May 2007. CDPHE approved RFLMA Contact Record 2007-01 regarding response to this adverse biological condition.

2.8.3.2 Perimeter Fence

The fence surrounding the outer perimeter of the POU was repaired as needed. Locations requiring repair included a portion along Indiana Street on the east, and a portion near the saw-mill on the northwest.

2.8.4 Site Security

Site surveillance is performed during times when Site personnel are not normally in the field (i.e., evenings and weekends).

2.8.4.1 Security Issues

During first quarter CY 2007 the subcontract surveillance personnel made numerous contacts with drivers of vehicles stopped near the Site, and were visible by passing motorists while stationed at their observation stations. Due to poor Site road conditions, in February the surveillance was limited to outer perimeter roads (public highways and streets) for safety reasons and to help protect the integrity of Site roads during periods of increased snowmelt. Normal surveillance routes resumed in late March 2007 after the completion of temporary road repairs.

Security-related notifications included one related to a television news helicopter that was flying around the Site, and another in which an individual was walking from the west access gate toward the west shed. All notifications were resolved without incident. A temporary sign was installed on the west gate indicating that the land is not open to the public.

End of current text

3.0 Environmental Monitoring

3.1 Water Monitoring

3.1.1 Introduction

This section presents data collected to satisfy water monitoring objectives implemented at the Site in accordance with RFLMA. The RFSOG provides a guidance framework in support of conducting LM activities at the Site including monitoring. Figure 3-1 shows a map with the water monitoring locations that were operational during fourth quarter CY 2007. Sampling maps for the first through third quarters of CY 2007 can be found in the respective quarterly reports.

This annual report presents data collected during CY 2007 (January through December 2007). This section includes:

- An evaluation of analytical results from routine monitoring as required by RFLMA and detailed in the RFSOG, organized by monitoring objective;
- A summary of hydrologic data for the CY; and
- Supplemental data interpretation and evaluation for CY 2007.

Analytical water-quality data are available in Appendix B.

3.1.1.1 Water Monitoring Highlights: CY 2007

During CY 2007, the water monitoring network successfully fulfilled the targeted monitoring objectives as required by RFLMA and using the RFSOG implementation guidance. During CY 2007, the RFLMA network consisted of 100 wells, 16 gaging stations, 14 surface-water grab sampling locations, 10 treatment system grab sampling locations, 10 precipitation gages, and 3 pre-discharge pond monitoring locations. During CY 2007, 201 samples composed of 7,145 individual grabs were collected at the surface-water locations[1] and 149 samples were collected from monitoring wells. Additional samples were collected beyond the RFLMA requirements as discussed in this report.

CY 2007 was nearly average with approximately 11.55 inches of precipitation, which is 92 percent of average (CY 1993−2006 average of 12.53 inches). The winter was significantly wetter than average due to snow events. December and January were significantly wetter than average (196 percent and 173 percent of average, respectively), while June, July, and November were significantly drier than average (25 percent, 48 percent, and 26 percent of average, respectively). The largest events occurred on April 24 (1.53 inches), and September 24 (0.89 inches).[2] The largest 2-day total (1.61 inches) occurred on April 23−24. The highest peak flow rates for the year from the COU were during the April 24 event. Peak flows were 11.74 cubic feet per second (cfs) in North Walnut Creek, 12.07 cfs in South Walnut Creek, and 4.09 cfs in the South Interceptor Ditch (SID).

[1] Composite samples consist of multiple aliquotts ("grabs") of identical volume. Each grab is delivered by the automatic sampler to the composite container at each predetermined flow volume or time interval.
[2] The precipitation gages used in the automated surface water monitoring network are not heated due to the lack of AC power at the locations. As such, the gages do not accurately measure snowfall (as water equivalent).

All water-quality data at the RFLMA Points of Compliance (POCs) remained well below the applicable standards through all of CY 2007.

Reportable 12-month rolling average total U concentrations continued to be observed in surface water at RFLMA POE monitoring station GS10, which is located in South Walnut Creek upstream of Pond B-1 in the Walnut Creek Basin. DOE provided the initial formal notification of reportable U concentrations at POE GS10 to EPA and CDPHE on July 13, 2006. DOE first became aware of the reportable values when all U sample results were validated on July 6, 2006. This notification reported, on a 12-month rolling average basis per the Integrated Monitoring Plan (IMP), a single reportable value for the last day of April 2006 (April 30, 2006; 10.19 pCi/L). At that time, the RFCA action level for total U in Walnut Creek was 10 pCi/L, as adopted by RFLMA.

A more comprehensive water-quality evaluation was detailed in Section 2.2.1.1, "Notification and Source Evaluation for Reportable 12-Month Rolling Total U Values at RFCA Point of Evaluation GS10" of the *Rocky Flats Site Quarterly Report of Site Surveillance and Maintenance Activities, Second Quarter Calendar Year 2006* (DOE 2006g). The Site continues to evaluate, in coordination with CDPHE and under RFLMA, the measured U concentrations at GS10. Recent GS10 data are evaluated in Section 3.1.2.2 of this report.

All other POE analyte concentrations remained below reporting levels for all of CY 2007. Erosion and runoff controls, as well as extensive revegetation efforts, have proven to be effective in measurably reducing both sediment transport and constituent concentrations. During CY 2007, all of the POEs showed plutonium-239,240 (Pu) and americium-241 (Am) concentrations well below the RFLMA standards. With the removal of impervious areas resulting in decreased runoff, the stabilization of soils within the drainages, and the progression of revegetation, acceptable water quality is expected to continue.

Groundwater monitoring results at the PLF and OLF are evaluated in Section 3.1.2.8 and Section 3.1.2.9, respectively. Groundwater was monitored in accordance with RFLMA (DOE 2007d).

3.1.1.2 Use of Analytical Data

Analytical data are evaluated statistically to meet many objectives in accordance with RFLMA. Rejected data are not included in statistical evaluations.

Surface-water data from POCs and POEs are evaluated on a semimonthly schedule, and results of these evaluations are included in the quarterly reports. Details regarding data handling for all surface water can be found in Appendix B.

Groundwater data evaluations are reported annually, because the groundwater regime is less dynamic and conditions change much more gradually than is the case with surface water. However, groundwater data from Area of Concern (AOC) wells are evaluated for reportable conditions as they are received; when such conditions exist, they are described in the corresponding quarterly report as well as the annual report.

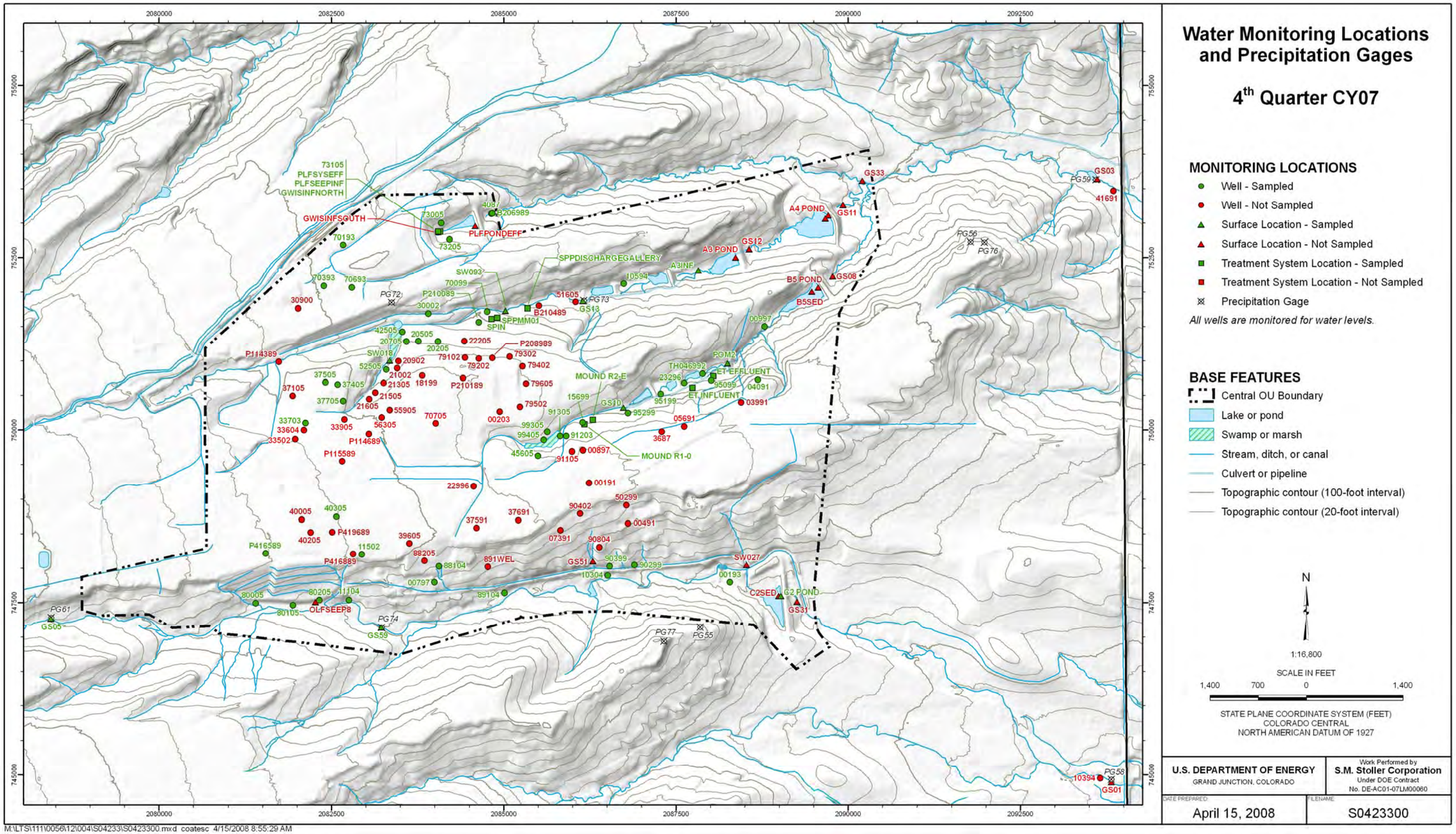

Figure 3-1. RFS Water Monitoring Locations and Precipitation Gages: Fourth Quarter CY 2007

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Groundwater statistics require a minimum of eight results representing routinely collected samples. A commercially available geostatistical software program (e.g., Sanitas™ or Visual Sample Plan) is used for these calculations. (Note: This report does not recommend any particular software; this information is merely included for the sake of completeness.) For trend calculations employing the Seasonal-Kendall (S-K) statistical method, a further requirement is for the data representing these routinely collected samples to comprise four sets of results per season. For example, wells required to be monitored semiannually are sampled in the second and fourth quarters of a CY. Trending will require a minimum of eight sets of results from routinely collected samples, distributed as four per season—four in the second quarter and four in the fourth quarter. In this example, therefore, a well would need to be sampled for 4 years (4 samples × 2 samples/year = 8 samples total; 4 each of second-quarter samples and fourth-quarter samples requires 4 full years of semiannual samples) to provide the necessary and appropriate data for statistical analysis. For wells sampled quarterly, although the minimum eight sets of results could be collected in 2 years of routine sampling, the minimum four sets of results per season (four seasons) would not be collected until 4 years of successful, routine sampling had been completed.

Groundwater field duplicates are omitted from statistical evaluations. Groundwater samples assigned laboratory qualifiers of J (estimated) are taken at face value, rather than being assigned a value of less than the method detection limit plus the practical quantitation limit (PQL). Samples qualified with a B (for organics, indicates the constituent was also detected in the blank) were also used at face value. This qualifier is commonly associated with results for methylene chloride. Because this compound is a commonly used laboratory solvent, B-qualified results should be carefully reviewed alongside corresponding detection limits, concentrations in the blanks, and other relevant data before basing any decisions on them. (Note: In some cases, these considerations have led to the results being assigned a validation qualifier including “U,” signifying that the result is so suspect as to be considered a nondetect.)

The RFSOG (DOE 2007f) instructs that nondetects reported for groundwater data be replaced by zeroes when performing statistical assessments. However, to calculate trends the data cannot contain zeroes. Therefore, instead of zeroes, nondetects are replaced with a value of 0.001. (Note that this includes data with lab qualifiers as well as validation qualifiers that include “U.”) Likewise, the statistical program cannot perform the necessary calculations if negative numbers are included in the results, as is occasionally the case for U isotopes and other radionuclides. Therefore, any negative U isotope-specific results were replaced with 0.001, then isotopes were converted to mass units and summed to provide a conservative estimate of total U in mass units. Calculated trends may be strongly affected by this data replacement; therefore, the data from calculated trends of interest should be carefully inspected before any conclusions are reached or decisions made.

Evaluations of U in groundwater are based on total U concentrations. In some cases, surface-water data are also evaluated (e.g., at GS13, the performance monitoring location supporting the SPPTS). The latter data, as well as some earlier groundwater data, are typically reported as isotopic activities. Any negative values for individual isotopic analyses were first replaced with 0.001, then the individual results for a given location/date were converted to mass units and summed to provide a conservative approximation of total U by mass. Replacement with 0.001 was also performed for any total U results that were equal to or less than zero to allow for the

requirements of the statistical calculations. Conversion factors used to support these groundwater evaluations are listed in Table 3-1.

Table 3-1. U Isotope Conversion Factors Used in Groundwater Evaluations

Isotope	Conversion Factor	Typical Activity Units	Typical Mass Units
U-233[a]	9636.6 pCi/µg	pCi/L	µg/L
U-234	6235.1 pCi/µg	pCi/L	µg/L
U-235	2.1612 pCi/µg	pCi/L	µg/L
U-236[a]	64.672 pCi/µg	pCi/L	µg/L
U-238	0.33614 pCi/µg	pCi/L	µg/L

Notes: [a]U-233 and U-236 are absent in natural U, and therefore can be used as definitive markers for anthropogenic U. LANL analyzes U-236 and also evaluates isotopic ratios for this purpose.
Source of conversion factors: Friedlander et al. 1981.
pCi/µg = picocuries per microgram

There are many instances in the database of multiple results for U on the same date at the same well (representing any or all of the following: isotopic analysis providing results in activity units, isotopic analysis providing results in mass units, total U analysis via a metals analytical method, total U via a total U analytical method, filtered sample, and unfiltered sample). Before trends were calculated, for each well where this applied these multiple results were winnowed to a single result representing each unique date. Factors evaluated in selecting the result for statistical use included:

- Filtration status;
- Validation qualifier(s);
- Lab qualifier(s); and
- Other U results from the well.

Because most samples were field-filtered, where both sample results are provided the filtered result is typically preferred for reasons of consistency. Similarly, where two very different results are presented, that most similar to other results from the well is retained; if the two are similar, the higher-concentration result is retained to be conservative.

Data from original wells are grouped with those from replacement wells to form a data set on which the statistics are based. As additional data are collected from replacement wells, most of which were installed in 2005, this may prove to be inappropriate given that the data populations from original and replacement wells may be discontinuous, suggesting data from the original well(s) be removed from statistical assessments of the groundwater data. This determination will be made as the post-closure data set becomes large enough to allow such an evaluation. Therefore, it should be stressed that trends calculated for replacement wells may be misleading in that they may be strongly affected by well replacement, as opposed to reflecting only groundwater geochemistry and hydrology.

3.1.2 Routine Monitoring

3.1.2.1 POC Monitoring

This objective deals with monitoring discharges from the terminal ponds into Woman and Walnut Creeks and streamflow at the additional POCs downstream at Indiana Street to demonstrate compliance with RFLMA surface-water quality standards (see Table 1 of Attachment 2 to RFLMA). Water-quality data at POCs are reportable under RFLMA when the applicable compliance parameter(s) are greater than the corresponding Table 1 value(s) (see Appendix D). Terminal pond discharges are monitored by POCs GS11, GS08, and GS31. Walnut Creek is monitored at Indiana Street by POC GS03. Woman Creek is monitored at Indiana Street by POC GS01. These locations are shown on Figure 3-2. Sampling and data evaluation protocols are summarized in Table 3-2.

Table 3-2. Sampling and Data Evaluation Protocols at POCs

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS01	Woman Creek at Indiana Street	Continuous flow-paced composites; frequency varies (target is 25−35 per year)[a]	total Pu, Am, and U isotopes[b] [TSS[d]]	see Figure 5 in Appendix D
GS03	Walnut Creek at Indiana Street	Continuous flow-paced composites; frequency varies (target is 20−40 per year)[a]	total Pu, Am, U isotopes[b], and nitrate[c] [TSS[d]]	see Figure 5 in Appendix D
GS08	Pond B-5 Outlet	Continuous flow-paced composites; frequency varies (target is 0−20 per year)	total Pu, Am, U isotopes[b], and nitrate[c]	see Figure 5 in Appendix D
GS11	Pond A-4 Outlet	Continuous flow-paced composites; frequency varies (target is 0−15 per year)	total Pu, Am, U isotopes[b], and nitrate[c]	see Figure 5 in Appendix D
GS31	Pond C-2 Outlet	Continuous flow-paced composites; frequency varies (target is 0−5 per year)	total Pu, Am, and U isotopes[b]	see Figure 5 in Appendix D

Notes [a]Frequency depends on available flow; samples are segregated by water origin (baseflow or pond discharge).
[b]U isotopes are U-233,234 + U-235 + U-238.
[c]Collected during pond discharges only; nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.
[d]Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

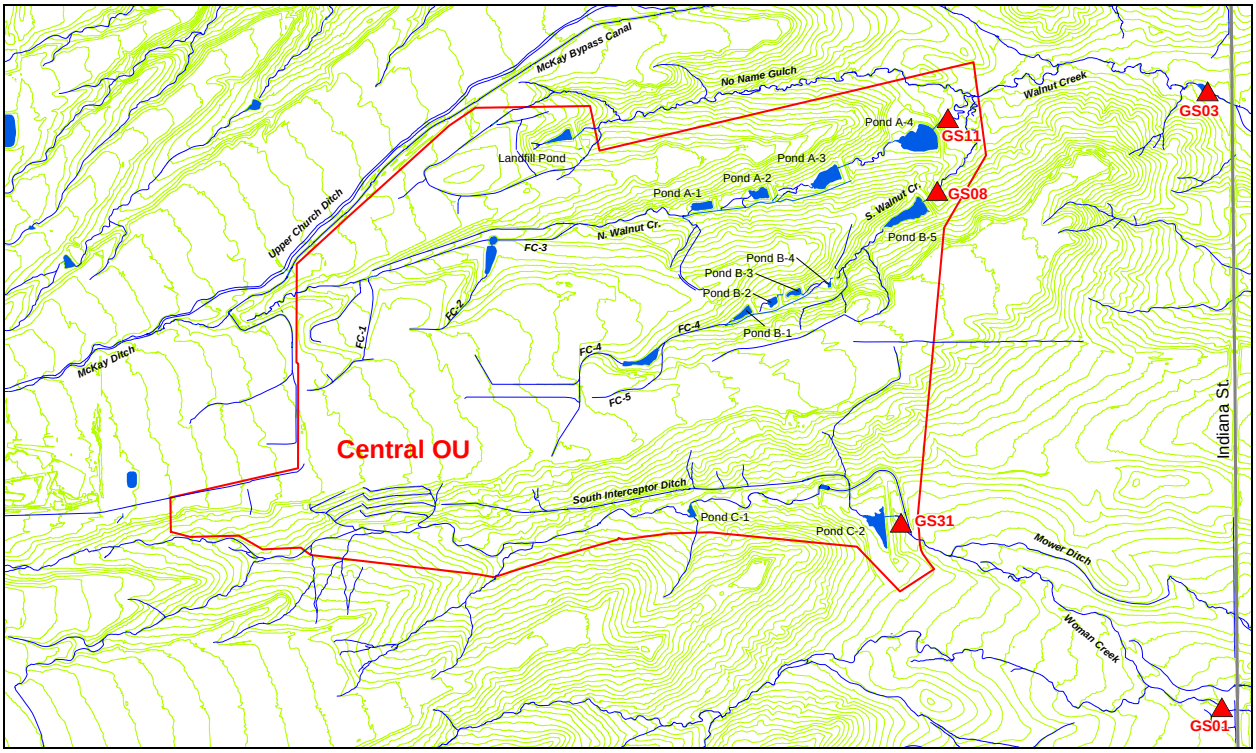


Figure 3-2. POC Monitoring Locations

The following sections include summary tables and plots showing the applicable 30-day and 12-month rolling averages for the POC analytes. The evaluations include all results that were not rejected through the verification and validation process. Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the "real" and "duplicate" values. When a sample has multiple "real" analyses (Site-requested "reruns"), the value used in calculations is the arithmetic average of the multiple "real" analyses.[3]

Refer to Appendix B, which contains the water-quality data, for further information.

Location GS01

Monitoring location GS01 is located on Woman Creek at Indiana Street (Figure 3-2). The Woman Creek headwaters, the southern portion of the COU, and Pond C-2 contribute flow to GS01.

[3] Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for comparison cannot be determined with sufficient confidence to make compliance decisions. As such, an evaluation of the duplicate error ratio (DER) or relative percent difference (RPD), depending on the analyte, is required to assess the representativeness of the sample and its usability for compliance decisions (see Section 8.2.3 of the RFSOG for discussion).

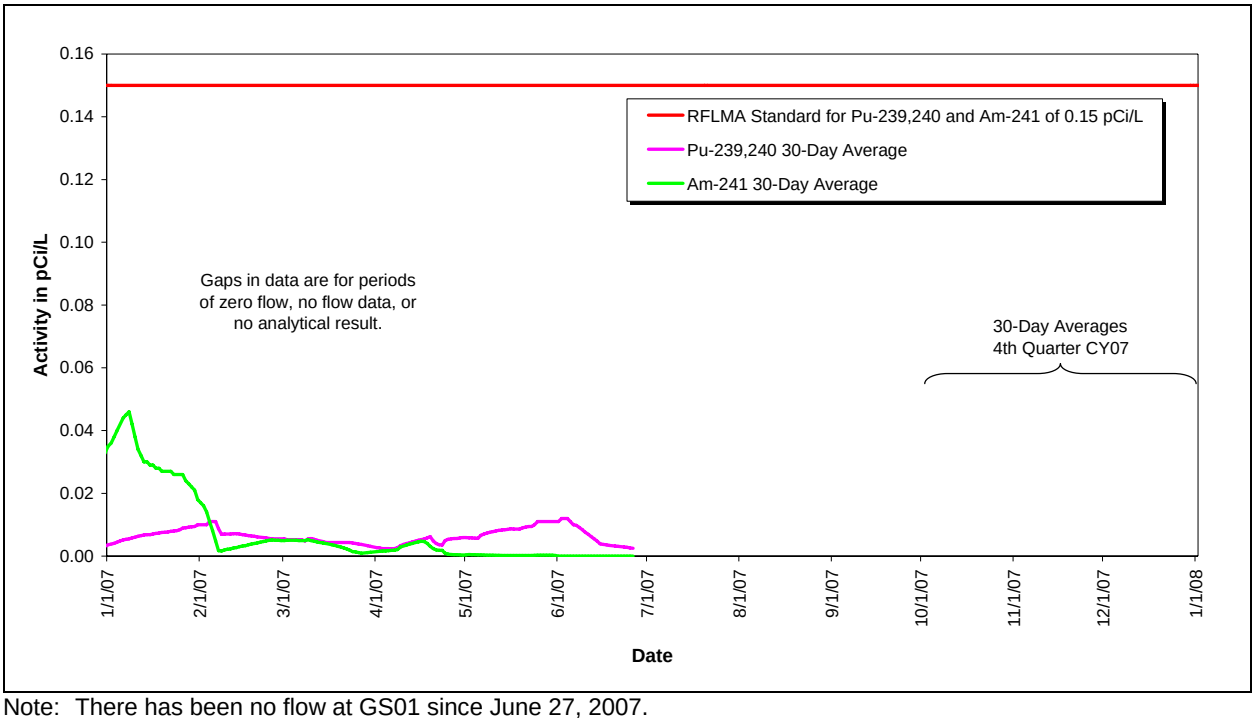
Table 3-3 shows that all of the annual average Pu and Am activities were well below the RFLMA standard of 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are well below 0.15 pCi/L. The average total U activities are all well below the RFLMA standard for Woman Creek of 11 pCi/L.

Table 3-3. Annual Volume-Weighted Average Radionuclide Activities at GS01 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.003	0.007	NA
1998	0.006	0.006	NA
1999	0.005	0.008	NA
2000	0.004	0.003	NA
2001	0.004	0.006	NA
2002	0.002	0.001	NA
2003	0.002	0.004	1.24
2004	0.003	0.002	3.56
2005	0.004	0.003	2.50
2006	0.012	0.003	4.76
2007	0.002	0.007	1.09
Total (1997−2007)	0.004	0.006	1.70

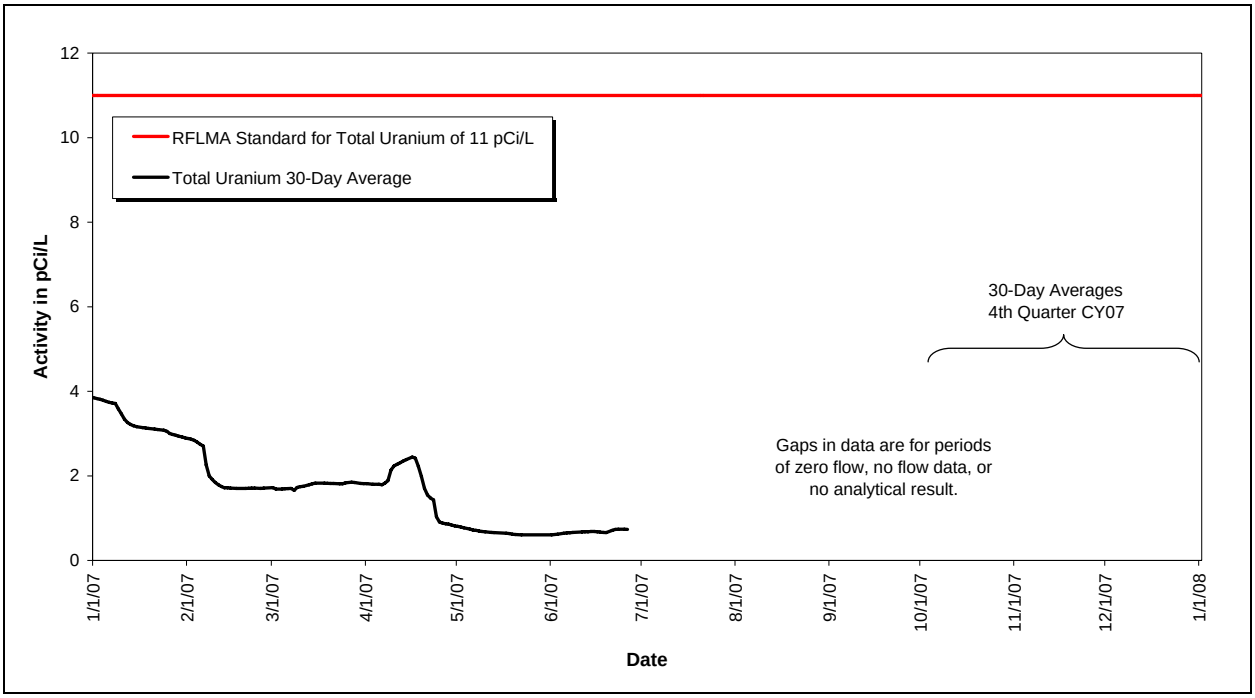
Notes: Collection of total U data began on February 3, 2003. NA = not applicable.

Figure 3-3 and Figure 3-4 show no occurrences of reportable 30-day averages for the year.



Note: There has been no flow at GS01 since June 27, 2007.

Figure 3-3. Volume-Weighted 30-Day Average Pu and Am Activities at GS01: Calendar Year Ending Fourth Quarter CY 2007



Note: There has been no flow at GS01 since June 27, 2007.

Figure 3-4. Volume-Weighted 30-Day Average Total U Activities at GS01: Calendar Year Ending Fourth Quarter CY 2007

Location GS03

Monitoring location GS03 is located on Walnut Creek at Indiana Street (Figure 3-2). The Walnut Creek headwaters, the majority of the COU, Pond A-4, and Pond B-5 contribute flow to GS03.

Table 3-4 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are well below 0.15 pCi/L. The average total U and nitrate+nitrite concentrations are all well below the RFLMA standard for Walnut Creek of 10 pCi/L and 10 milligrams per liter (mg/L), respectively.

Figure 3-5, Figure 3-6, and Figure 3-7 show no occurrences of reportable 30-day averages for the year.

Table 3-4. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS03 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L)[a]
	Am-241	Pu-239,240	Total U	Nitrate+Nitrite as N
1997	0.014	0.026	NA	NA
1998	0.010	0.014	NA	NA
1999	0.009	0.015	NA	NA
2000	0.007	0.005	NA	NA
2001	0.005	0.009	NA	NA
2002	0.006	0.012	NA	NA
2003	0.005	0.006	1.79	NA
2004	0.008	0.008	1.76	NA
2005	0.022	0.008	3.95	NA (no pond discharges after 10/13/05)
2006	NA (no flow)	NA (no flow)	NA (no flow)	NA (no pond discharges)
2007	0.002	0.006	3.76	2.34
Total (1997−2007)	0.009	0.012	2.42	2.34

Notes: Collection of total U data began on November 5, 2002. NA = not applicable.
[a]For pond discharge periods only; nitrate+nitrite as N sampling began on October 13, 2005.

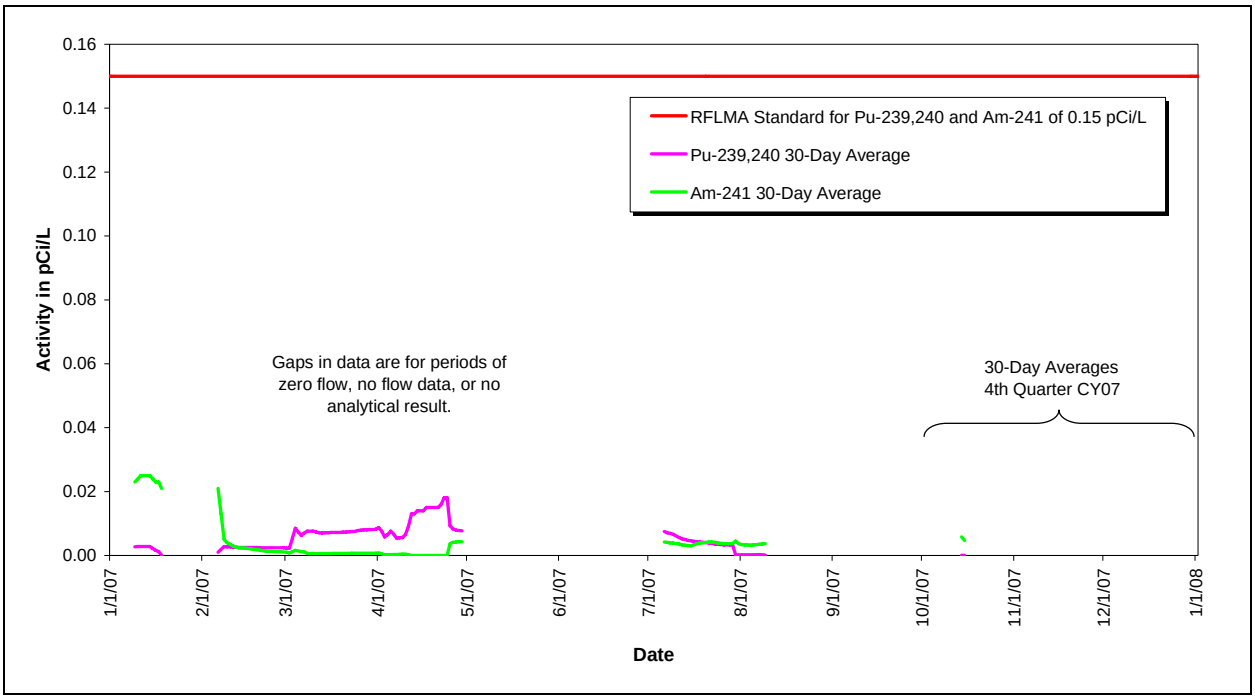


Figure 3-5. Volume-Weighted 30-Day Average Pu and Am Activities at GS03: Calendar Year Ending Fourth Quarter CY 2007

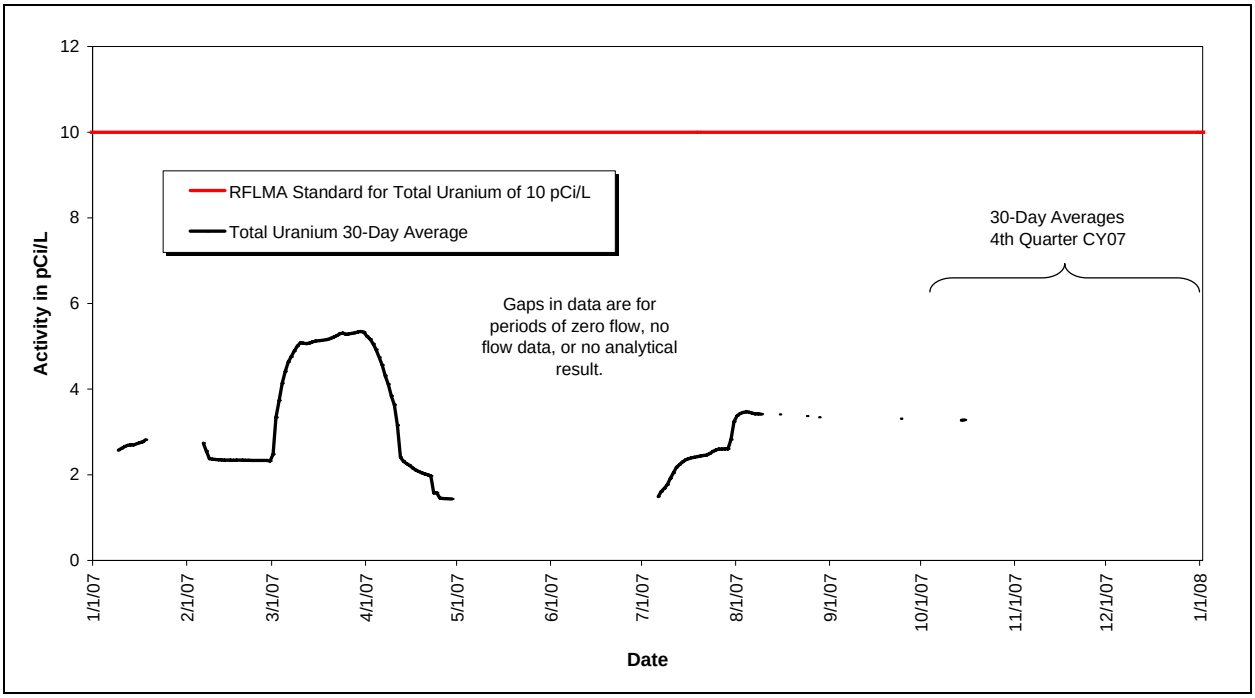


Figure 3-6. Volume-Weighted 30-Day Average Total U Activities at GS03: Calendar Year Ending Fourth Quarter CY 2007

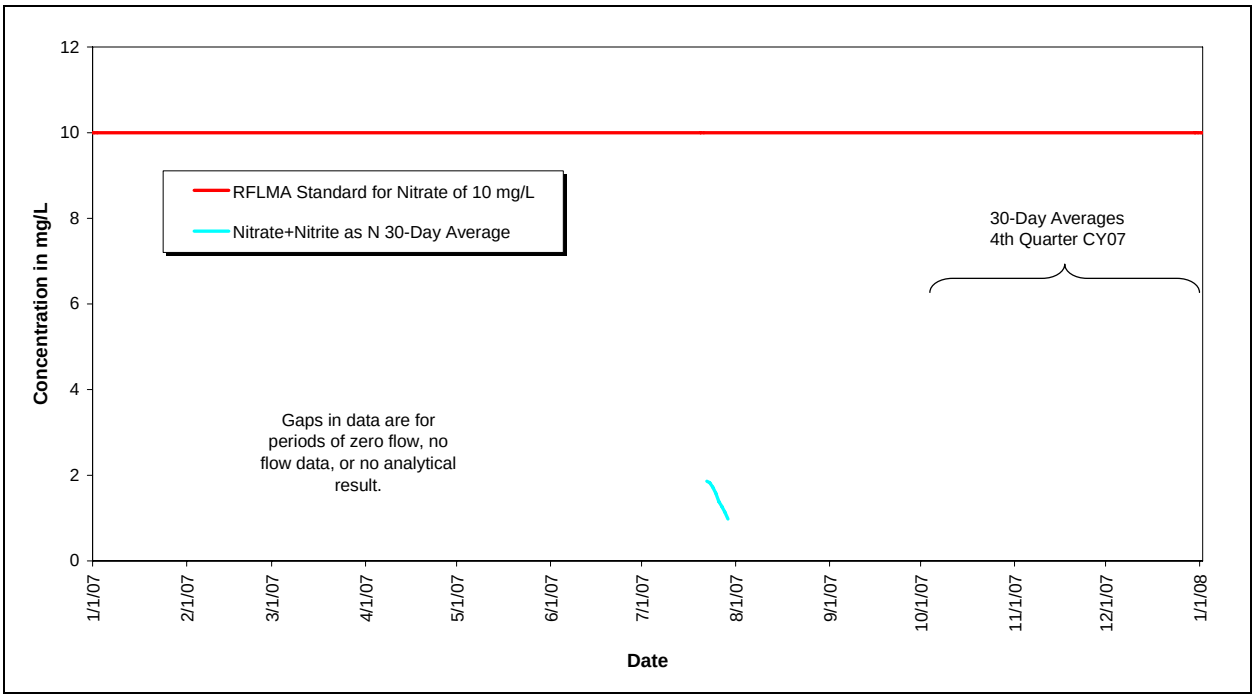


Figure 3-7. Volume-Weighted 30-Day Average Nitrate + Nitrite as N Concentrations at GS03: Calendar Year Ending Fourth Quarter CY 2007

Location GS08

Monitoring location GS08 is located on South Walnut Creek at the outlet of Pond B-5 (Figure 3-2). The central portion of the COU contributes flow to Pond B-5.

Table 3-5 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are well below 0.15 pCi/L. The average total U activities have shown recent increases due to contributions from GS10 (see Section 3.1.2.2). Nitrate+nitrite concentrations are well below 10 mg/L.

Figure 3-8, Figure 3-9, and Figure 3-10 show no occurrences of reportable 12-month rolling averages for the year.

Table 3-5. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS08 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L)[a]
	Am-241	Pu-239,240	Total U	Nitrate+Nitrite as N
1997	0.008	0.006	1.69	NA
1998	0.006	0.008	2.33	NA
1999	0.015	0.046	1.38	NA
2000	0.029	0.047	0.93	NA
2001	0.004	0.006	1.24	NA
2002	0.003	0.002	0.68	NA
2003	0.006	0.026	1.37	NA
2004	0.009	0.009	1.24	NA
2005	0.021	0.008	6.11	NA (no pond discharge after 10/13/05)
2006	NA (no discharge)	NA (no discharge)	NA (no discharge)	NA (no discharge)
2007	0.002	0.003	8.45	0.38
Total (1997−2007)	0.012	0.022	1.71	0.38

Notes: NA = not applicable.
[a]Nitrate+nitrite as N sampling began on October 13, 2005.

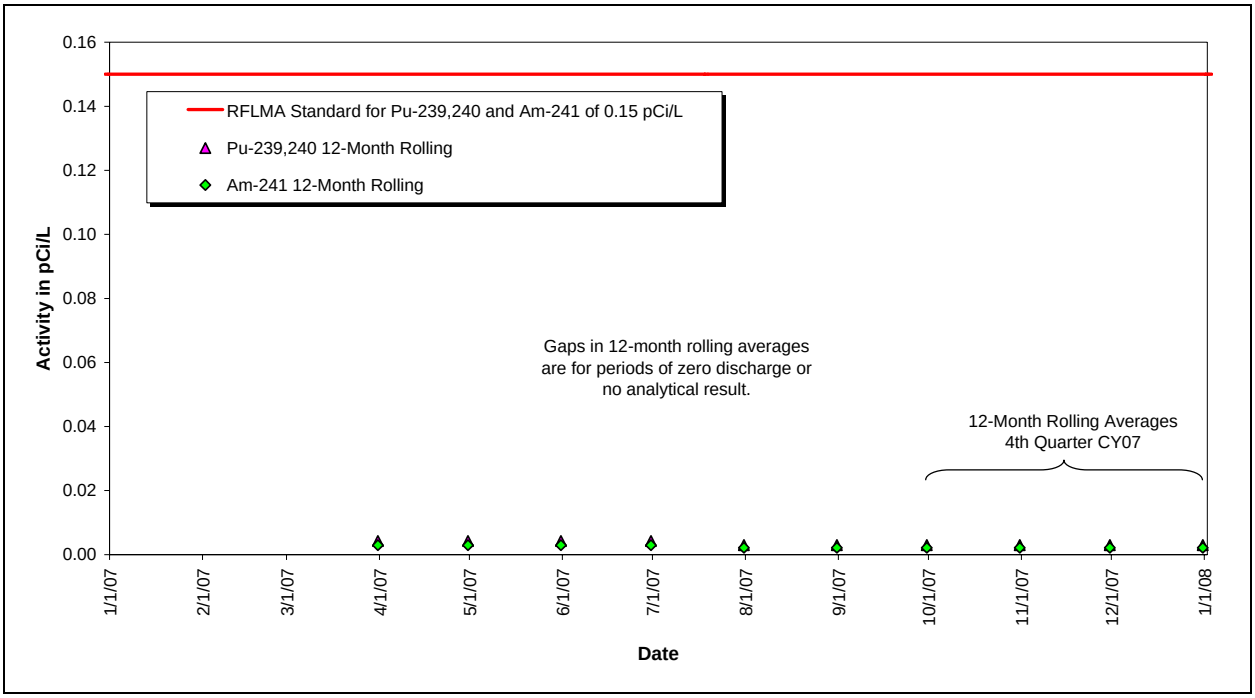


Figure 3-8. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS08: Calendar Year Ending Fourth Quarter CY 2007

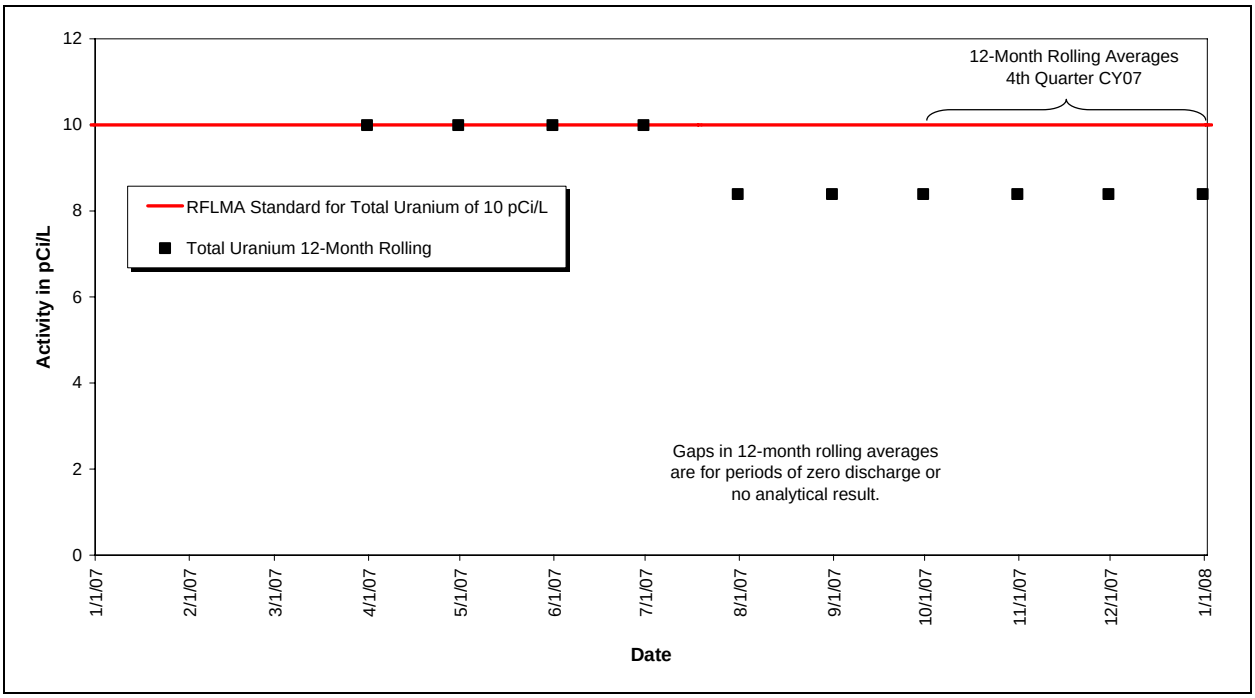
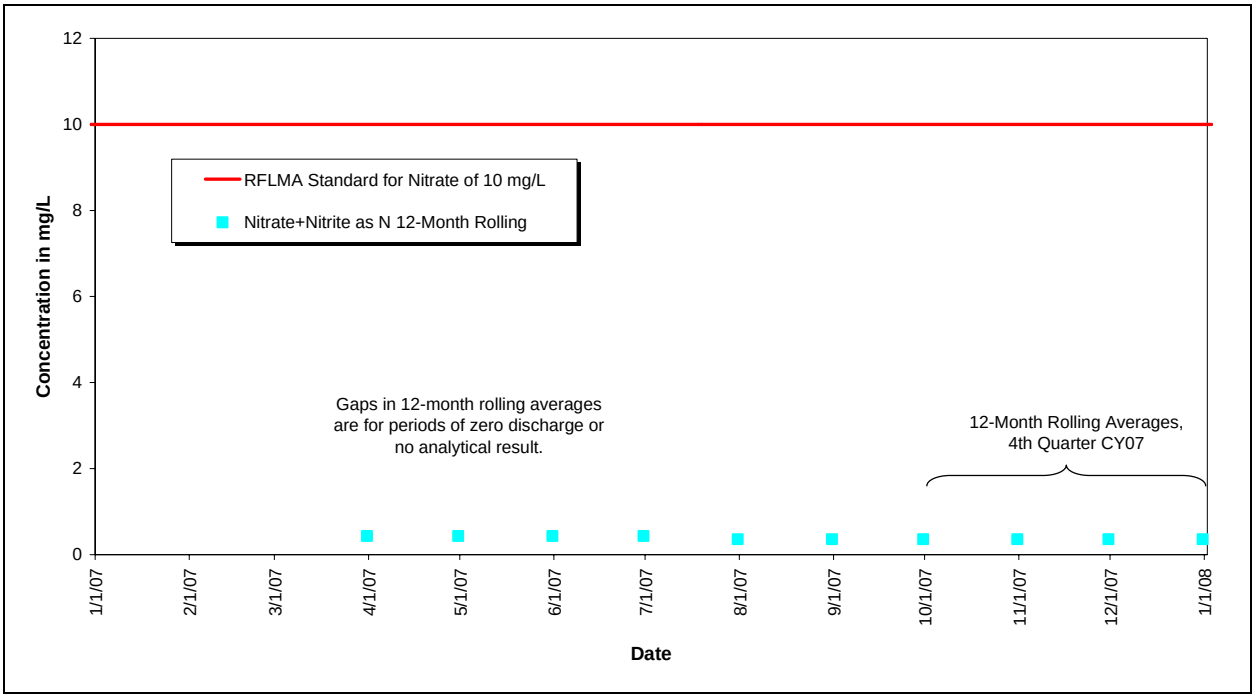


Figure 3-9. Volume-Weighted 12-Month Rolling Average Total U Activities at GS08: Calendar Year Ending Fourth Quarter CY 2007



Note: Nitrate+nitrite as N 12-month averages are conservatively compared to the nitrate standard only.

Figure 3-10. Volume-Weighted 12-Month Rolling Average Nitrate+Nitrite as N Concentrations at GS08: Calendar Year Ending Fourth Quarter CY 2007

Location GS11

Monitoring location GS11 is located on North Walnut Creek at the outlet of Pond A-4 (Figure 3-2). The northern portion of the COU contributes flow to Pond A-4.

Table 3-6 shows that all of the annual average Pu and Am activities were well below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are well below 0.15 pCi/L. The average total U and nitrate+nitrite concentrations are all well below 10 pCi/L and 10 mg/L, respectively.

Figure 3-11, Figure 3-12, and Figure 3-13 show no occurrences of reportable 12-month rolling averages for the year.

Table 3-6. Annual Volume-Weighted Average Radionuclide Activities and Nitrate+Nitrite as N Concentrations at GS11 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)			Volume-Weighted Average Concentration (mg/L)[a]
	Am-241	Pu-239,240	Total U	Nitrate+Nitrite as N
1997	0.005	0.008	1.82	NA
1998	0.011	0.004	2.18	NA
1999	0.003	0.007	1.76	NA
2000	0.001	0.018	2.45	NA
2001	0.003	0.002	2.89	NA
2002	0.003	0.000	2.29	NA
2003	0.003	0.002	2.91	NA
2004	0.006	0.002	2.71	NA
2005	0.022	0.002	1.78	NA (no pond discharge after 10/13/05)
2006	NA (no discharge)	NA (no discharge)	NA (no discharge)	NA (no discharge)
2007	0.001	0.007	3.77	3.02
Total (1997−2007)	0.006	0.006	2.26	3.02

Notes: NA = not applicable.
[a]Nitrate+nitrite as N sampling began on October 13, 2005.

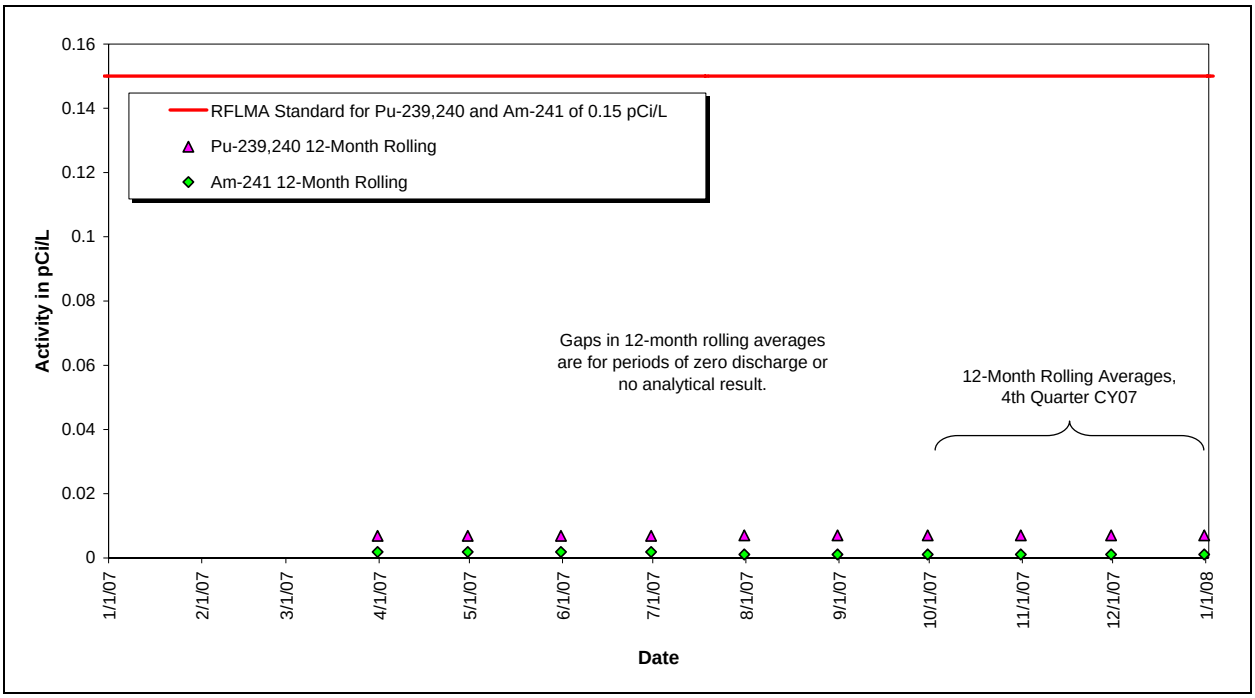


Figure 3-11. Volume-Weighted 12-Month Rolling Average Pu and Am Activities at GS11: Calendar Year Ending Fourth Quarter CY 2007

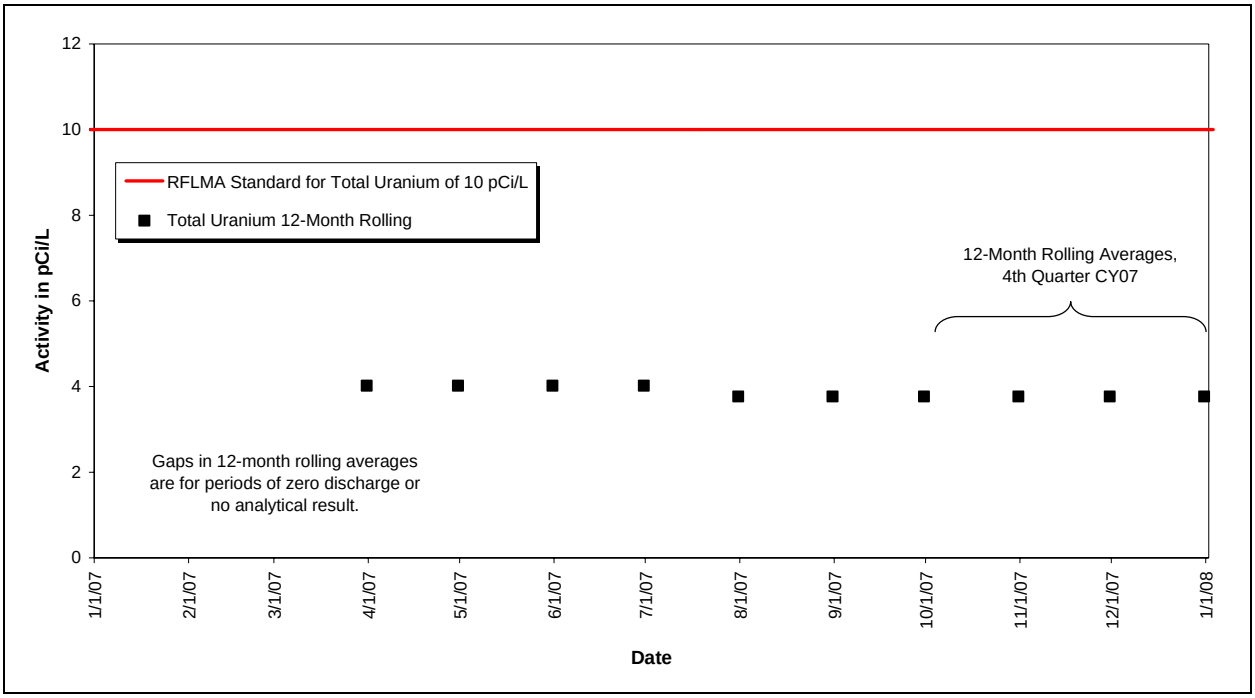
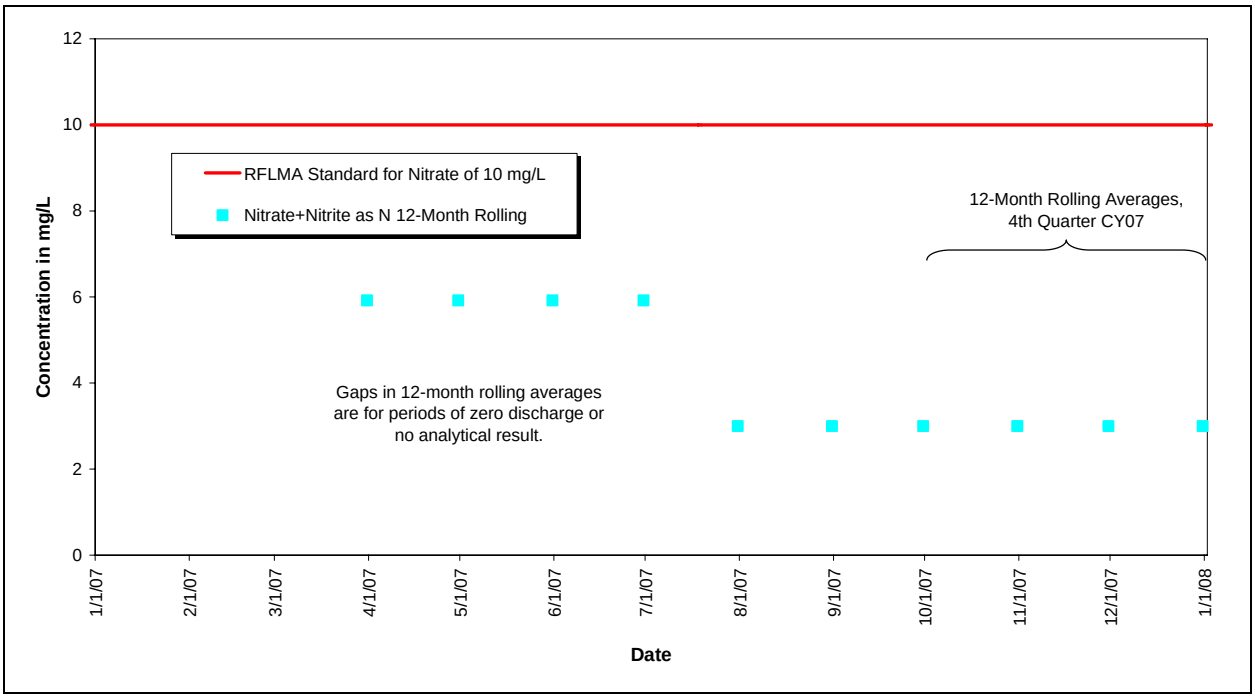


Figure 3-12. Volume-Weighted 12-Month Rolling Average Total U Activities at GS11: Calendar Year Ending Fourth Quarter CY 2007



Note: Nitrate+nitrite as N 12-month averages are conservatively compared to the nitrate standard only.

Figure 3-13. Volume-Weighted 12-Month Rolling Average Nitrate+Nitrite as N Concentrations at GS11: Calendar Year Ending Fourth Quarter CY 2007

Location GS31

Monitoring location GS31 is located on Woman Creek at the outlet of Pond C-2 (Figure 3-2). The southern portion of the COU contributes flow to Pond C-2.

Pond C-2 was not discharged during CY 2007. The last discharge occurred during July 1−July 14, 2005. Therefore, no 12-month rolling averages are calculated after June 30, 2006, and no compliance plots are presented.

Table 3-7 shows that all of the annual average Pu and Am activities were below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are below 0.15 pCi/L. The average U activities are all well below 11 pCi/L.

Table 3-7. Annual Volume-Weighted Average Radionuclide Activities at GS31 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.008	0.017	2.10
1998	0.018	0.003	2.53
1999	0.010	0.043	2.70
2000	No C-2 discharge	No C-2 discharge	No C-2 discharge
2001	0.013	0.021	1.25
2002	0.015	0.089	2.43
2003	0.006	0.015	1.62
2004	0.010	0.021	1.65
2005	0.008	0.020	4.07
2006	No C-2 discharge	No C-2 discharge	No C-2 discharge
2007	No C-2 discharge	No C-2 discharge	No C-2 discharge
Total (1997−2007)	0.011	0.019	2.13

Note: NA = not applicable.

3.1.2.2 POE Monitoring

This objective deals with monitoring runoff and baseflow from the interior of the COU to the A-, B-, and C-Series Ponds to demonstrate compliance with surface-water-quality standards (see Table 1 of Attachment 2 to RFLMA). Water-quality data are reportable under RFLMA when the applicable compliance parameter(s) are greater than the corresponding Table 1 value(s) (see Appendix D). Surface water is monitored by POEs SW093, GS10, and SW027 on North Walnut Creek, South Walnut Creek, and the SID, respectively. These locations are shown on Figure 3-14. Sampling and data evaluation protocols are summarized in Table 3-8.

Table 3-8. Sampling and Data Evaluation Protocols at POEs

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS10	South Walnut Creek at Outfall of FC-4	Continuous flow-paced composites; frequency varies (target is 20 per year)[a]	total hardness, Be, Cr, Pu, Am, and U isotopes[b]; dissolved Ag and Cd; [TSS[c]]	see Figure 6 in Appendix D
SW027	SID at Pond C-2	Continuous flow-paced composites; frequency varies (target is 20 per year)[a]	total hardness, Be, Cr, Pu, Am, and U isotopes[b]; dissolved Ag and Cd; [TSS[c]]	see Figure 6 in Appendix D
SW093	North Walnut Creek at Outfall of FC-3	Continuous flow-paced composites; frequency varies (target is 20 per year)[a]	total hardness, Be, Cr, Pu, Am, and U isotopes[b]; dissolved Ag and Cd; [TSS[c]]	see Figure 6 in Appendix D

Notes: [a]Frequency depends on available flow.
[b]U isotopes are U-233,234 + U-235 + U-238.
[c]Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

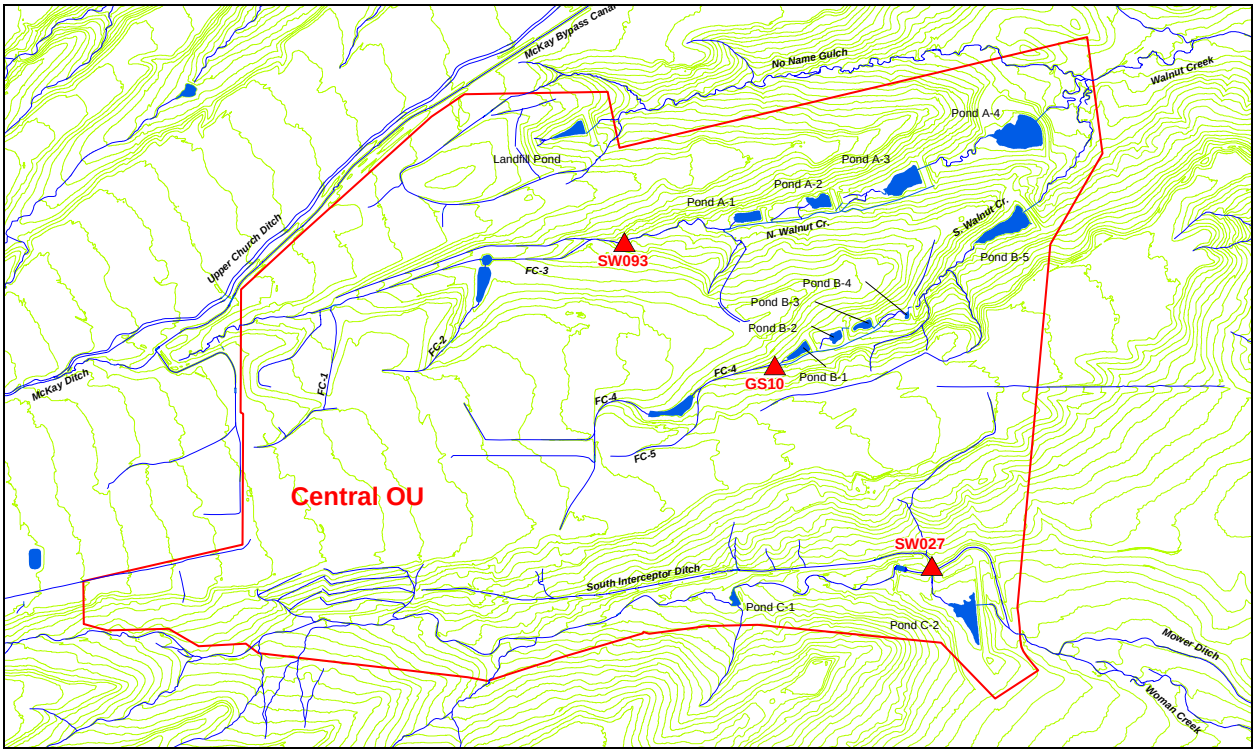


Figure 3-14. POE Monitoring Locations

The following sections include summary tables and plots showing the applicable 30-day and 12-month rolling averages for the POE analytes. The evaluations include all results that were not rejected through the verification and validation process. Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the "real" and "duplicate" values. When a sample has multiple "real" analyses (Site-

requested "reruns"), the value used in calculations is the arithmetic average of the multiple "real" analyses.[4]

Refer to Appendix B, which contains the water-quality data, for further information.

Location GS10

Monitoring location GS10 is located on South Walnut Creek just upstream of the B-Series Ponds (Figure 3-14). The central portion of the COU contributes flow to GS10 through FC-4 and FC-5.

Table 3-9 shows that many of the annual average Pu and Am activities at GS10 were greater than 0.15 pCi/L during active Site closure. However, a significant reduction in both Pu and Am activities has been observed following Site closure. With the completion of the FCs, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am has been virtually eliminated. Figure 3-15 shows no reportable Pu or Am values during the year.

Table 3-9. Annual Volume-Weighted Average Radionuclide Activities at GS10 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.266	0.260	2.78
1998	0.109	0.158	3.06
1999	0.274	0.139	2.49
2000	0.421	0.195	2.23
2001	0.075	0.080	2.91
2002	0.087	0.061	2.88
2003	0.117	0.113	2.68
2004	0.136	0.314	2.48
2005	0.185	0.238	8.27
2006	0.010	0.014	13.43
2007	0.010	0.020	11.52
Total (1997−2007)	0.183	0.168	3.54

Figure 3-16 shows reportable 12-month rolling averages for total U during the year. Details regarding notification and source evaluation are contained in Section 2.2.1.1, "Notification and Source Evaluation for Reportable 12-Month Rolling Total U Values at RFCA Point of Evaluation GS10" of the *Quarterly Report of Site Surveillance and Maintenance Activities, Second Quarter Calendar Year 2006* (DOE 2006g). The Site continues to evaluate, in coordination with CDPHE, the measured U concentrations at GS10. Recent data are summarized below in a source evaluation update.

[4] Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for comparison cannot be determined with sufficient confidence to make compliance decisions. As such, an evaluation of the DER or RPD, depending on the analyte, is required to assess the representativeness of the sample and its usability for compliance decisions (see Section 8.2.3 of the RFSOG for discussion).

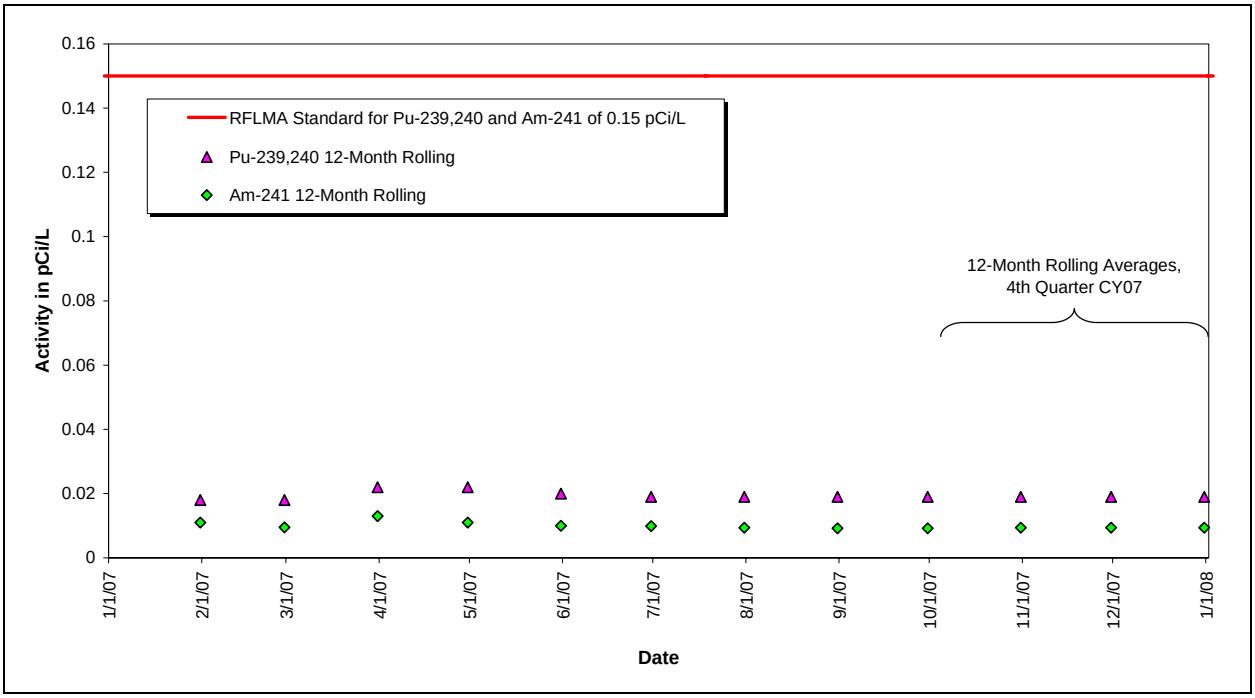


Figure 3-15. Volume-Weighted Average Pu and Am Compliance Values at GS10: Calendar Year Ending Fourth Quarter CY 2007

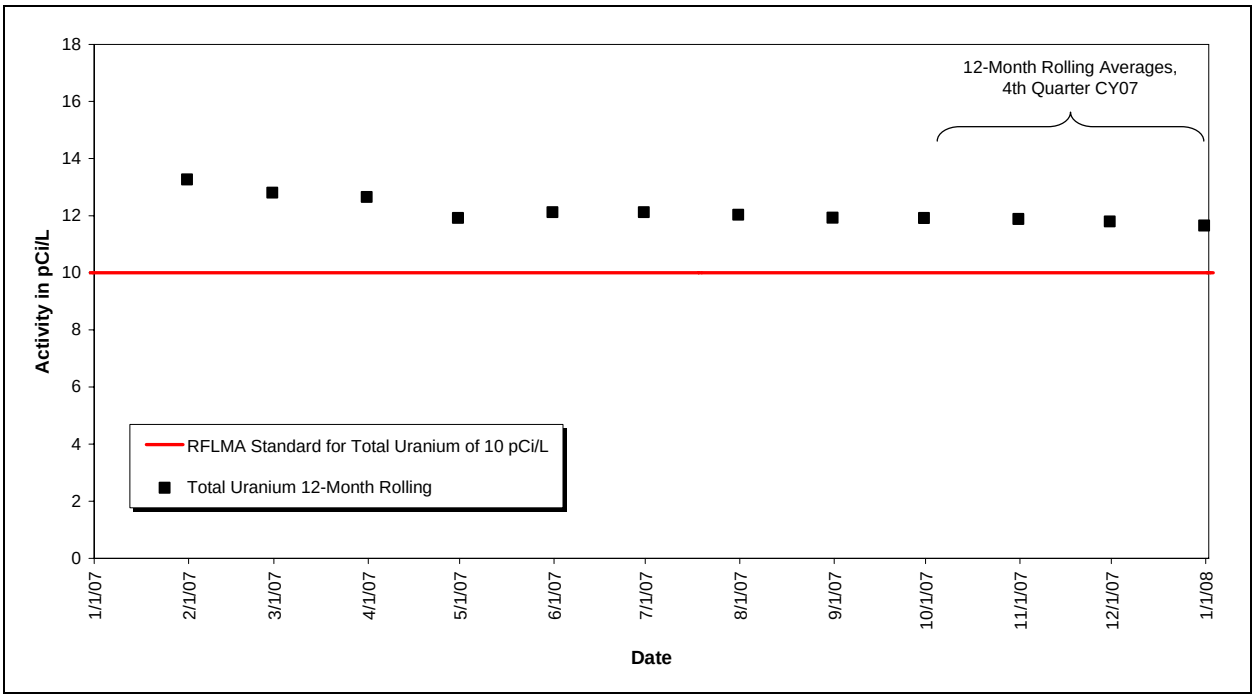


Figure 3-16. Volume-Weighted Average Total U Compliance Values at GS10: Calendar Year Ending Fourth Quarter CY 2007

Table 3-10 shows that all of the annual average metals concentrations were less than the standards/PQLs. Additionally, the long-term metals averages (1997−2007) were all less than the RFLMA standards/PQLs. Figure 3-17 shows that none of the 85th percentile 30-day average metals concentrations were reportable for the year.

Table 3-10. Annual Volume-Weighted Average Hardness and Metals Concentrations at GS10 for 1997−2007

Calendar Year	Volume-Weighted Average Concentration (µg/L)				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	138	0.50	0.09	4.05	0.11
1998	162	0.15	0.13	3.32	0.20
1999	139	0.16	0.07	4.08	0.15
2000	181	0.21	0.11	3.65	0.11
2001	222	0.32	0.11	5.95	0.11
2002	277	0.24	0.09	5.38	0.10
2003	228	0.22	0.10	6.91	0.12
2004	227	0.60	0.10	13.1	0.13
2005	401	0.88	0.06	17.5	0.15
2006	604	0.50	0.05	0.74	0.10
2007	383	0.50	0.10	0.89	0.10
Total (1997−2007)	214	0.35	0.10	6.14	0.13

Notes: Hardness units in mg/L.

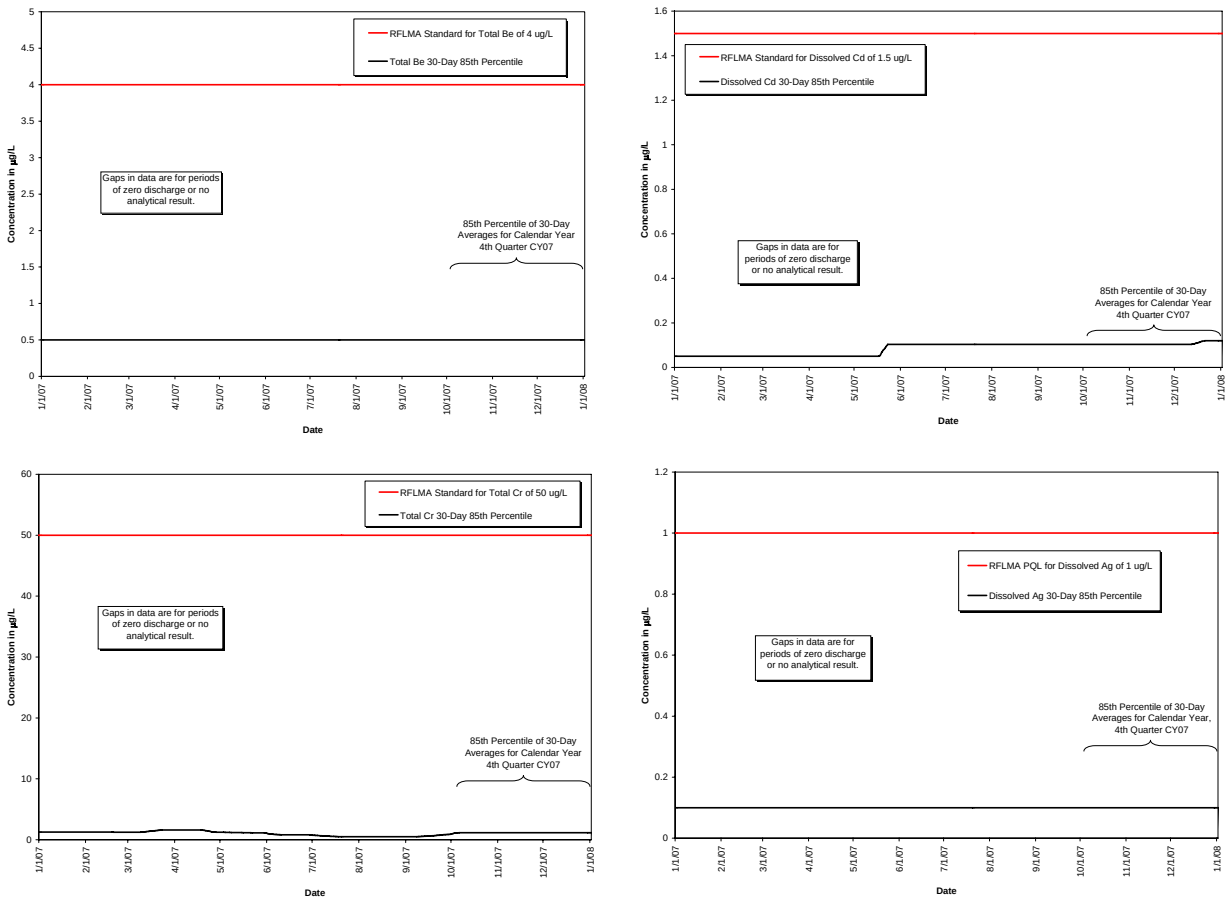


Figure 3-17. Volume-Weighted Average Metals Compliance Values at GS10: Calendar Year Ending Fourth Quarter CY 2007

Summary of Recent Reportable 12-Month Rolling Total U Values at POE GS10

This section provides follow-up information regarding the Site's July 13, 2006, notification of observed reportable concentrations of U in surface water at RFCA POE surface-water monitoring location GS10, which is located in South Walnut Creek upstream of Pond B-1 (Figure 3-1). Reportable U levels continue to be observed at GS10. The Site continues to evaluate, in coordination with CDPHE, the measured U concentrations at GS10. Note that this section includes the most recent data available; these data extend beyond the end of CY 2007.

DOE first became aware of the reportable 12-month rolling averages when all U sample results were validated on July 6, 2006. To meet the RFCA commitment at the time, DOE transmitted notification to EPA and CDPHE within the 15-day reporting period, which ended July 21, 2006. In addition, RFCA required that DOE, within 30 days of gaining knowledge of the reportable results, submit to EPA and CDPHE a source evaluation plan addressing reportable values. The July 13, 2006, notification letter served as both the comprehensive notice and the plan for that source evaluation, based on consideration for other evaluative work already performed in this drainage.

The characteristics of the current reportable period for U at GS10 are consistent with those for the previous reportable period during the summer of 2005. DOE provided notice for that reportable period on August 16, 2005 (05-DOE-00522).

The calculated 12-month rolling average for total U triggered the reporting requirements under RFCA Attachment 5, Section 2.4 (B) and subsequently Section 6.0 of Attachment 2 to RFLMA, beginning April 30, 2006, and not ended as of the end of 2007 (for details, see Table 3-11). All data used in the calculation of the 12-month rolling average have been validated. The end of the reportable period will be determined by subsequent data. Recent analytical results are listed in Table 3-12.

Table 3-11. Reportable 12-Month Rolling Average Values for POE Monitoring Location GS10

Analyte	Dates of Reportable Values	Range of 12-Month Rolling Average Values (pCi/L)
Total U	4/30/06−to be determined	10.19−13.41

Note: The standard for total U in Walnut Creek is 10 pCi/L.

Table 3-12. Recent Analytical Results for Composite Samples Collected at GS10

Composite Sample Start Date	Total U Analytical Result (pCi/L)
2/8/2007	13.82
3/2/2007	12.14
3/25/2007	17.31
4/17/2007	14.92
4/24/2007	8.46
4/25/2007	13.18
5/1/2007	15.12
5/10/2007	12.79
5/24/2007	12.83
5/31/2007	11.45
7/5/2007	6.88
7/23/2007	6.74
8/6/2007	6.56
8/21/2007	6.52
9/6/2007	6.15
10/1/2007	7.87
10/16/2007	10.98
11/1/2007	10.60
11/20/2007	13.24

Note: NSQ = nonsufficient quantity; this sample was not analyzed due to faulty automated sampling due to winter icing conditions.

The following evaluation for South Walnut Creek monitoring station GS10 covers data received through April 9, 2008. Laboratory analyses for the composite sample collected for the period February 12−March 18, 2008, have not been completed. The composite sample started on March 18, 2008, is still in progress. The following are included in this assessment:

- Evaluation of ongoing automated surface-water monitoring at GS10;
- Estimation of U loads at GS10; and
- Evaluation of water-quality trends and correlations at GS10.

Downstream Water-Quality Monitoring

Water flowing through GS10 also passes through the lower B-Series Ponds (Ponds B-4 and B-5) and South Walnut Creek before leaving the Site. POCs GS08 (Pond B-5 outlet) and GS03 (Walnut Creek at Indiana Street) again monitor this water during Pond B-5 discharges.

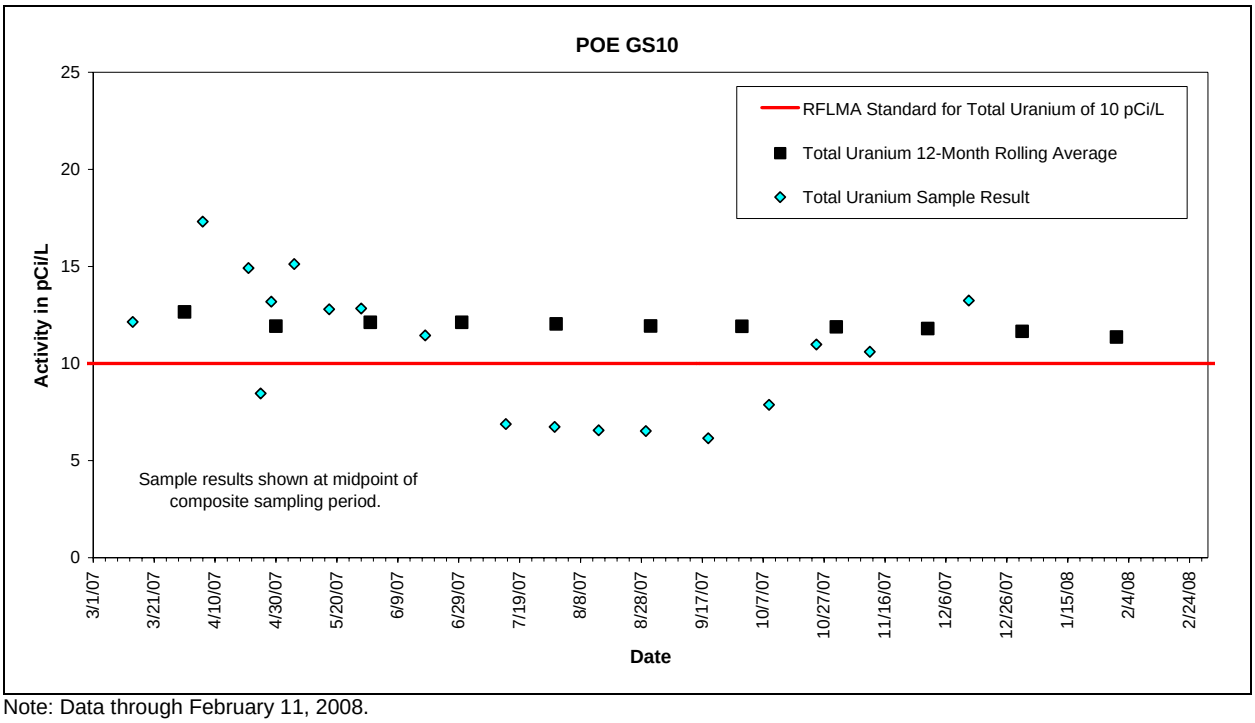
Pond B-5 was pre-discharge sampled on February 28, 2007. The total U concentration for that sample was 7.82 pCi/L. Pond B-5 was direct-discharged through the outlet to South Walnut Creek through POC GS08 starting on March 1, 2007, and ending on March 13, 2007. During the discharge period, six composite samples were collected at both POC GS08 and POC GS03. Total U concentrations in the GS08 samples ranged from 11.1 to 9.36 pCi/L. The 12-month rolling average at GS08 for March 31, 2007, was 9.99 pCi/L, just below the standard. Total U results at GS03 during the discharge ranged from 6.38 to 4.38 pCi/L; the highest 30-day average resulting from the discharge was 5.35 pCi/L.[5]

Pond B-5 was again pre-discharge sampled on May 4, 2007. Total U results for this sample (Site results) were significantly different than CDPHE results from the split sample. Based on the discrepancy, the decision was made to resample Pond B-5 for total U; samples were collected on June 7, 2007. The total U concentration for the June 7, 2007, sample was 7.8 µg/L (approximately 5.35 pCi/L). Based on that result, Pond B-5 was direct-discharged through the outlet to South Walnut Creek through POC GS08 starting on July 5, 2007, and ending on July 12, 2007. During the Pond B-5 discharge period, two composite samples were collected at POC GS08 and three composite samples were collected at POC GS03. Total U concentrations in the GS08 samples were 4.29 and 4.87 pCi/L. The 12-month rolling average at GS08 for July 31, 2007, was 8.39 pCi/L. Total U results at GS03 during the Pond B-5 discharge ranged from 3.47 to 3.99 pCi/L; the highest 30-day average at GS03 during the discharge was 2.17 pCi/L.[6] Pond B-5 has not been discharged since July 2007.

GS10 Monitoring Results

As specified in RFLMA, the Site demonstrates compliance using 12-month rolling average values for select radionuclides at POE surface-water monitoring locations. Results for recent 12-month rolling average values using available data at GS10 are summarized in Table 3-11. Figure 3-18 shows the calculated compliance values and the individual sample results at GS10 for the previous CY period.

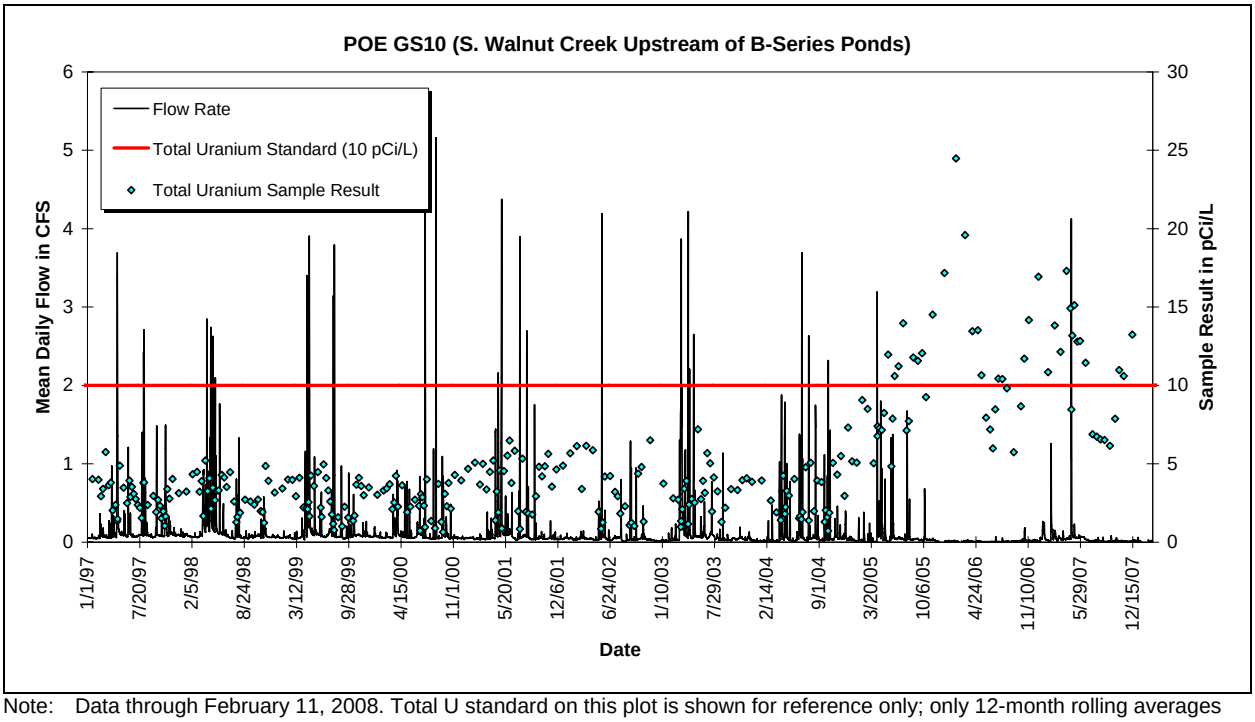
[5] Pond A-4 was concurrently discharged with Pond B-5 in March 2007; samples collected at GS03 included commingled water from both ponds.
[6] Pond A-4 was also concurrently discharged with Pond B-5 in July 2007; samples collected at GS03 included commingled water from both ponds.



Note: Data through February 11, 2008.

Figure 3-18. POE Monitoring Station GS10: Compliance Values and Individual Sample Results for Total U (March 1, 2007−March 1, 2008)

All analytical results for the composite samples collected during the period of reportable values have been validated through February 11, 2008. A review of historical GS10 monitoring data shows that these results are measurably higher than those for previous years (Figure 3-19). The significant reduction in runoff following Site closure can also be clearly seen on Figure 3-19.



Note: Data through February 11, 2008. Total U standard on this plot is shown for reference only; only 12-month rolling averages are compared to the standard.

Figure 3-19. POE Monitoring Station GS10: Hydrograph and Individual Sample Results for Total U (January 1, 1997−March 1, 2008)

Data Summary and Analysis

Monitoring data were extracted from the former Soil Water Database or the current Site Environmental Evaluation for Projects (SEEPro) database. The following list describes the environmental data compilation process:

- Individual sample result values are calculated as arithmetic averages of real and field duplicate results when both results are from the same sampling event;[7]
- When available, Site-requested laboratory reruns are averaged with initial runs for the same sampling event;
- Laboratory duplicate and replicate quality control (QC) results are not used;
- When negative values for actinide measurement are returned from the laboratories due to blank correction, 0.0 pCi/L is used in the calculations;
- Only total radionuclide measurements are used; and
- Data that did not pass validation (rejected data) are not used.

[7] Radionuclide data pairs are averaged when the DER is less than 1.5; sample pairs with DER ratios in excess of 1.5 are not used due to inferred lack of confidence in either result.

Verification and Validation of Surface-Water Analytical Results

Prior to Site closure, all surface-water isotopic data are either verified or validated, based on criteria determined by the Kaiser-Hill Company, LLC (K-H) Analytical Services Division, or at the special request of the requestor. Approximately 75 percent of all isotopic data are verified and the remaining 25 percent are validated. Validation is typically determined randomly for each subcontracted laboratory, based on the specific analytical suites. This random validation selection may or may not routinely include POE or POC locations. However, when reportable values are observed, all analytical results used in the calculations receive formal validation.

Under current LM procedures, all data are validated prior to being loaded into the SEEPro database.

High-Resolution Inductively Coupled Plasma/Mass Spectrometry and Thermal Ionization Mass Spectrometry Analyses

Prior to Site closure, groundwater and surface-water samples from select locations were sent to LANL for high-resolution inductively coupled plasma/mass spectrometry (HR ICP/MS) and/or thermal ionization mass spectrometry (TIMS) analyses. These analytical methods measure mass ratios of four U isotopes (masses 234, 235, 236, and 238). Isotopic ratios provide a signature that indicates whether and the extent to which the source of U is natural or anthropogenic (manmade).

In August 2005, South Walnut Creek surface-water samples from SW056, SW141, and GS10, and groundwater samples from upgradient wells 91305, 99305, 91203, and 99405 were evaluated using HR ICP/MS and TIMS. The results indicate that, although concentrations of U vary widely, all the groundwater and surface-water locations produce water samples with a predominantly natural U isotopic signature. Location GS10, however, displayed a higher percentage of anthropogenic U than the other locations. Concentrations of U in groundwater samples collected in August 2005 from wells located upstream of GS10 vary from less than 5 µg/L at well 91203 (with a 93.4 percent natural U isotopic signature) to nearly 400 µg/L at well 99405 (with an isotopic signature that is 99.9 percent natural U). (A previous sample from the original well at this location, 99401, contained just over 650 µg/L U that was 100 percent natural.)

The results of all the HR ICP/MS and TIMS analyses are summarized in a report titled *Quantitative Evaluation of Mixture Components in RFETS Uranium Isotopic Analyses: Development & Verification/Validation of Calculations using an Excel Spreadsheet* by Dr. David R. Janecky, LANL (Janecky 2006; included as Attachment 3 to Section 8 of the Remedial Investigation/Feasibility Study (RI/FS) Report published in June 2006). This report provides a summary of the HR ICP/MS and TIMS results and calculations of U isotopic mixtures (mixtures between natural and anthropogenic [enriched and depleted] U). Dr. Janecky's analysis concludes that the U at GS10 is dominated by natural U, with a lesser amount of depleted and minimal enriched U. An earlier sample analyzed by LANL, collected in May 2002, shows a generally similar isotopic signature, although the relative fraction of anthropogenic U is smaller.

The Site recently submitted additional samples collected in 2007 to LANL for high-resolution isotopic analyses. Results for GS10 LANL analysis are provided in Table 3-13. Table 3-14 lists the locations of the 2007 LANL samples. Results from LANL analyses are summarized in the

report titled *Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters* (Janecky et al. 2007), provided in Appendix E.

Table 3-13. U Concentrations and Isotopic Signatures from Samples Collected at GS10 as Reported by LANL

Date	U Concentration, µg/L	% Depleted U	% Enriched U	% Natural U
5/1/2002	9.4	22.1	0.04	77.8
8/11/2005	13.2	36.2	0.10	63.7
7/23/2007[a]	10.0	29.2	0.10	70.7

Source: Data are from RI/FS Section 8, Attachment 3, and the most recent LANL report; data have been normalized to 100 percent.
[a]This sample included a duplicate analysis; data shown are arithmetic averages.

Table 3-14. Locations Selected for Sampling and High-Resolution U Analysis

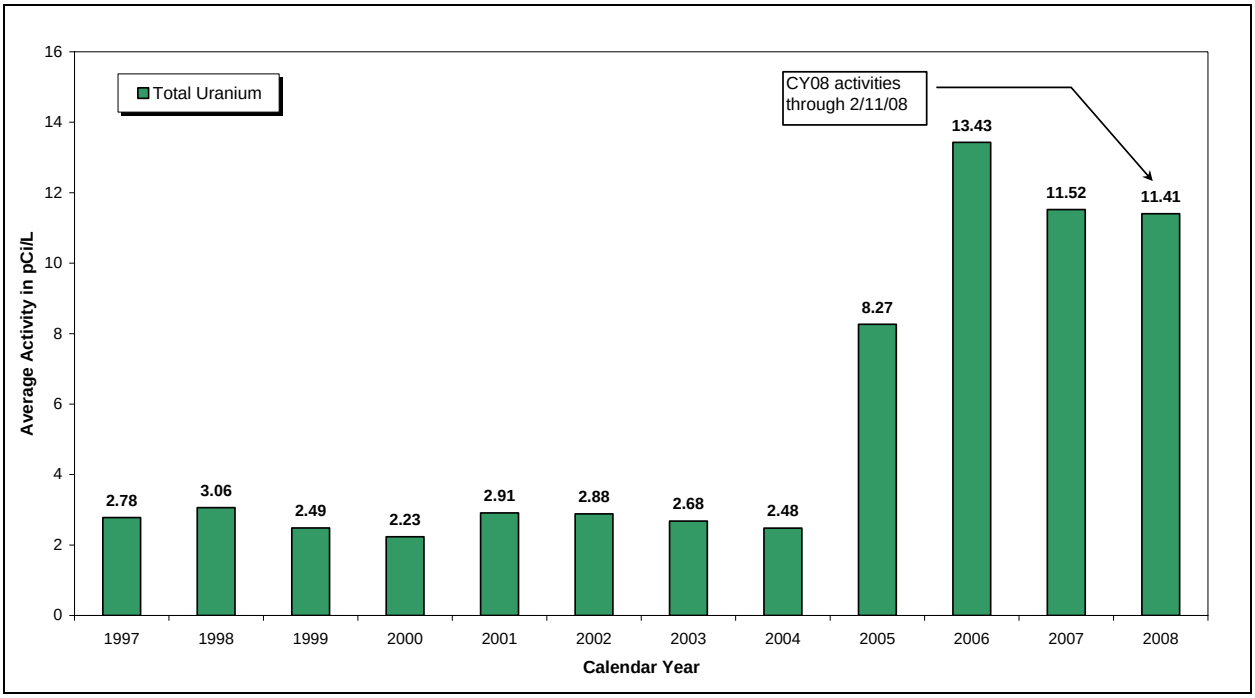
Sample Location	Sample Date - Time	General Area
Well 80205	9/7/2007 8:28	Downgradient OLF
Well 10594	9/11/2007 14:29	North Walnut Creek downgradient of SPP
Well 99405	9/12/2007 12:00	South Walnut Creek near former B991
GS03	7/9/2007 16:50	Walnut Creek at Indiana Street
SPP Discharge Gallery	9/12/2007 11:35	North Walnut Creek above Pond A-1
GS10	7/23/2007 12:00	South Walnut Creek

The samples from GS10 summarized in Table 3-13 illustrate the isotopic variability of the mixture of direct runoff and groundwater that contributes to surface-water flow at this location. Over longer periods, this variability may have a greater influence on the concentration and signature characteristics of the U in surface water.

Total U at GS10: Data Summary

Figure 3-20 shows the volume-weighted average annual activity-concentrations (concentration in surface water expressed as activity per unit volume) for total U at GS10 during CY 1997−2007 and a portion of 2008. A measurable increase in concentration is noted starting in 2005.

Annual total U loads (mass) for GS10 in grams are plotted on Figure 3-21 to show long-term loading at GS10. The activity-concentration for each flow-paced composite sample is multiplied by the associated discharge volume to get picocuries (pCi), then converted to grams and totaled annually. Although reportable compliance values were observed during the 2005−2008 period shown, and concentrations in Figure 3-20 show a measurable increase, the loads for the 2005−2008 period shown are closer to historical ranges, and measurably lower in CY 2006. This further suggests that the recently observed increased U concentrations at GS10 may be a result of changing hydrologic conditions, and not significant increases in the quantity of U reaching the creek.



Note: Data through February 11, 2008.

Figure 3-20. Average Annual Total U Concentrations at GS10: 1997−2008

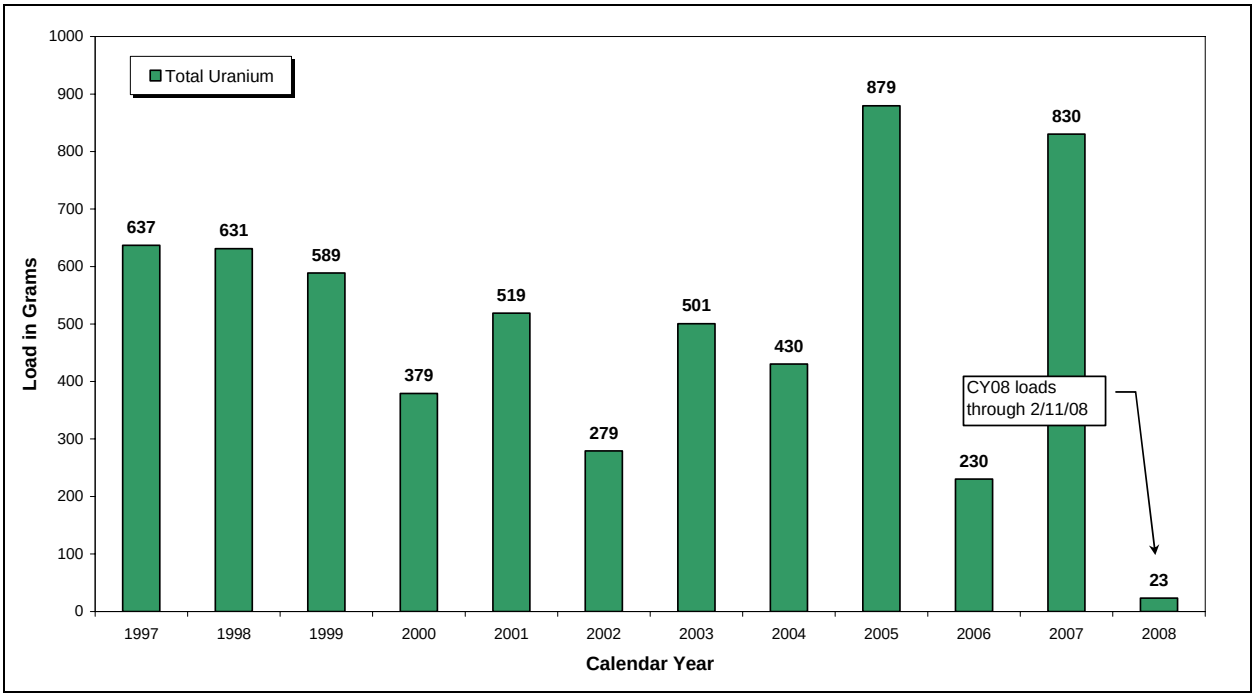


Figure 3-21. Annual Total U Loads at GS10: 1997−2008

Figure 3-22 shows that the higher U concentrations are generally associated with lower flow rates, during periods of extended baseflow sustained by groundwater contributions.[8] As the area of impervious surfaces in the GS10 drainage was reduced by Site closure (i.e., removal of buildings, asphalt, and concrete), direct runoff to GS10 was also reduced. Similarly, removal of Site infrastructure likely resulted in reduced baseflow contributions from domestic and sanitary water leakage.[9] Therefore, groundwater contributions to the creek over the same period comprised an increasing portion of the flows monitored at GS10. Groundwater data from monitoring wells located near South Walnut Creek show naturally occurring U in concentrations that are considerably higher than the surface-water standard. Without the attenuation of U from groundwater sources by direct runoff and infrastructure leakage, increases in surface water U concentrations would be expected.

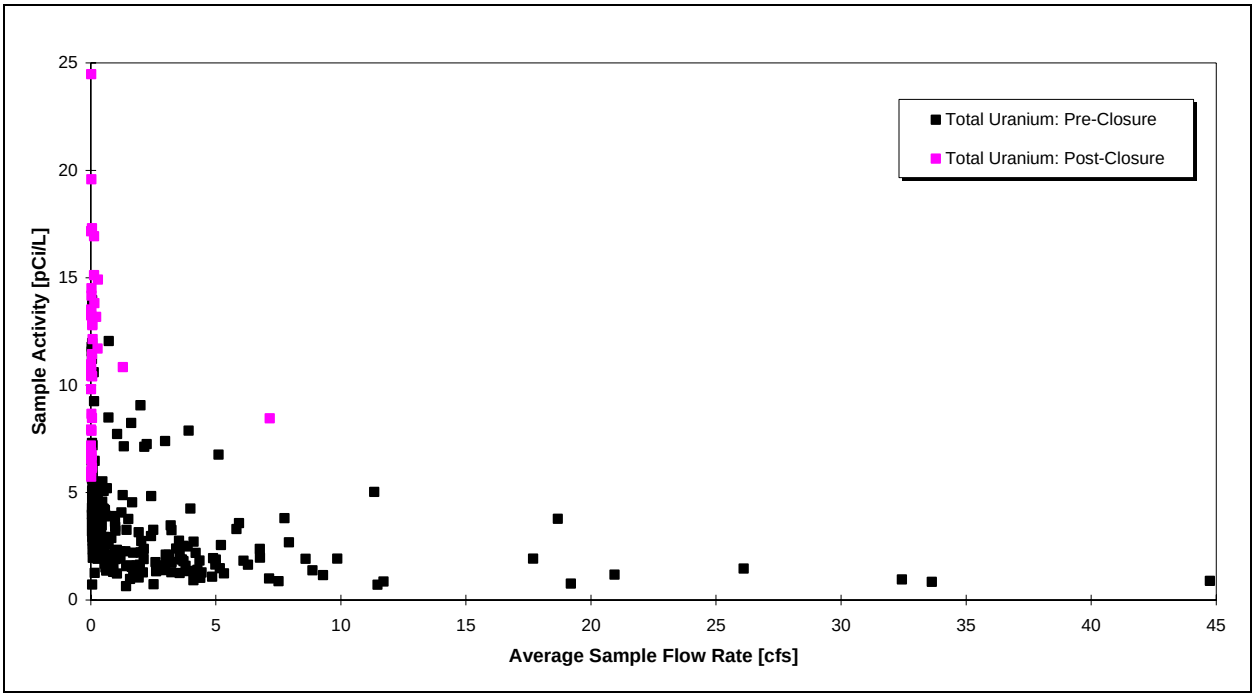


Figure 3-22. Variation of Total U Concentration with Flow Rate at GS10: 1997−2007 and Portion of 2008

Hardness is measured for all composite samples at GS10 to support metals evaluation. Figure 3-23 shows individual sample results for hardness plotted with flow rate. A measurable increase in hardness is noted during the recent period of reduced flow rates and increased U concentrations (see Figure 3-19). In contrast, the measurably higher hardness concentrations starting in 2001 have been attributed to changes in the deicing products used at Rocky Flats starting with the winter of 2000−2001. Since groundwater generally shows higher hardness than surface-water runoff, these data further suggest an increase in the proportion of groundwater in flows at GS10.

[8] These groundwater contributions occur as localized or distributed seeps to the streambed.
[9] Leaks from domestic and sanitary utility lines are presumed to have lower U concentrations than natural groundwater sources.

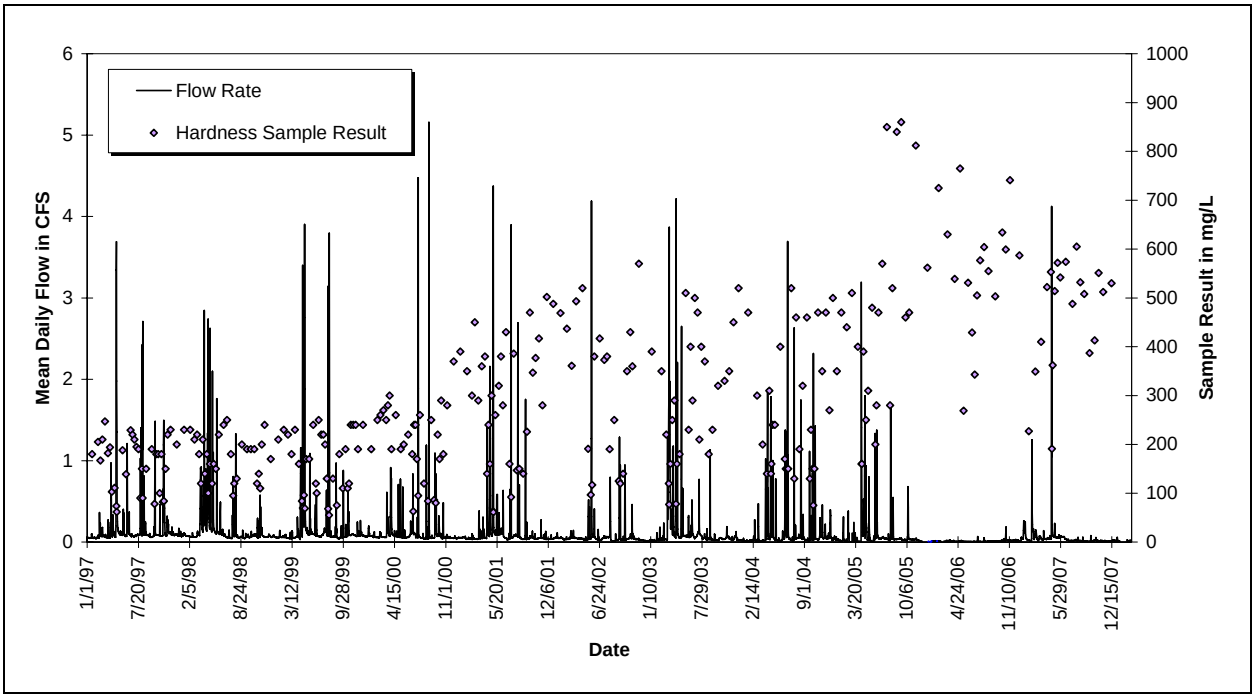


Figure 3-23. POE Monitoring Station GS10: Hydrograph and Individual Sample Results for Hardness (January 1, 1997−February 11, 2008)

Summary and Conclusions

Based on the above evaluation, Site personnel conclude that the recent U activities at GS10 are likely a result of changing hydrologic conditions (particularly the increasing groundwater component in surface-water flows at GS10, relative to conditions that prevailed prior to Site closure), and that no specific remedial action(s) is indicated at this time. The data do not suggest a previously unknown localized source(s) of contamination that warrants targeted remediation. The current conclusions are summarized below:

- Data collected from all terminal pond and fenceline POCs remain below reporting thresholds for all monitored analytes. However, increased U concentrations are being observed downstream of GS10.
- Past HR ICP/MS and TIMS analyses for both groundwater and surface-water samples collected upstream of GS10 all show a predominantly natural U signature (Janecky 2006, Janecky et al. 2007). While the four analyses[10] of surface water from GS10 indicate the existence of some anthropogenic U[11], the normal variability of direct runoff and groundwater flow would be expected to strongly influence the U characteristics, both concentration and signature, over longer periods. To fully understand this variability, additional U data as they relate to the appropriate water-quality standard continue to be evaluated.
- Groundwater data within South Walnut Creek show naturally occurring U activities considerably higher than the surface-water standard. Baseflow at GS10 is sustained by

[10] Three LANL samples have been collected at GS10: May 1, 2002, August 11, 2005, and July 23, 2007. The July 23, 2007, sample includes a duplicate analysis.
[11] GS10 continues to show a predominantly natural uranium signature.

groundwater expressions in the form of both localized seeps and distributed flow to the streambed.

- Surface-water data from GS10 generally show that the higher U concentrations are associated with lower flow rates, during periods of extended baseflow sustained by groundwater contributions. As the amount of impervious surface at the Site was reduced, direct runoff to GS10 was also reduced. Similarly, removal of Site infrastructure likely resulted in reduced baseflow contributions from domestic and sanitary water leakage. Therefore, groundwater contributions to South Walnut Creek now make up a larger portion of the flows monitored at GS10. Without the attenuation of U groundwater sources by direct runoff and infrastructure leakage, increases in surface-water U concentrations would be expected.

Location SW027

Monitoring location SW027 is located at the end of the SID at the inlet to Pond C-2 (Figure 3-14). The southern portion of the COU contributes flow to SW027 through the SID.

Table 3-15 shows that the majority of the annual average Pu and Am activities are less than 0.15 pCi/L. The significant increase in 2004 was the result of increased solids transport from disturbed areas associated with the 903 Pad/Lip accelerated actions. However, a significant reduction in both Pu and Am activities has been observed following completion of accelerated actions in the drainage. With the completion of the 903 Pad/Lip actions, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am approaching the action level has been virtually eliminated. The total U annual average activities are well below 11 pCi/L.

Table 3-15. Annual Volume-Weighted Average Radionuclide Activities at SW027 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.008	0.036	1.48
1998	0.021	0.156	3.45
1999	0.019	0.066	1.90
2000	0.060	0.348	1.10
2001	0.006	0.025	1.33
2002	0.001	0.003	0.53
2003	0.011	0.080	1.70
2004	0.413	2.273	1.05
2005	0.022	0.156	2.34
2006	NA (no flow)	NA (no flow)	NA (no flow)
2007	0.040	0.092	2.04
Total (1997−2007)	0.058	0.318	1.84

Note: NA = not applicable.

Figure 3-24 and Figure 3-25 display the volume-weighted average Pu and Am and total U compliance values at SW027 for CY 2007, respectively.

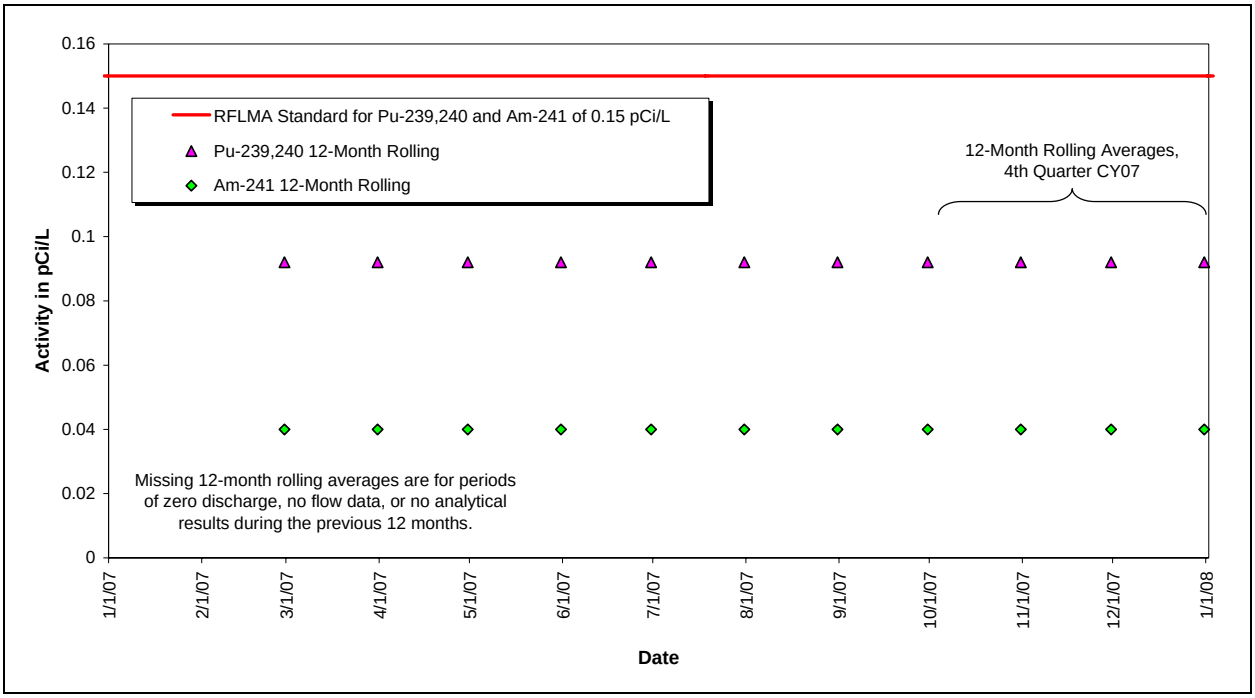


Figure 3-24. Volume-Weighted Average Pu and Am Compliance Values at SW027: Calendar Year Ending Fourth Quarter CY 2007

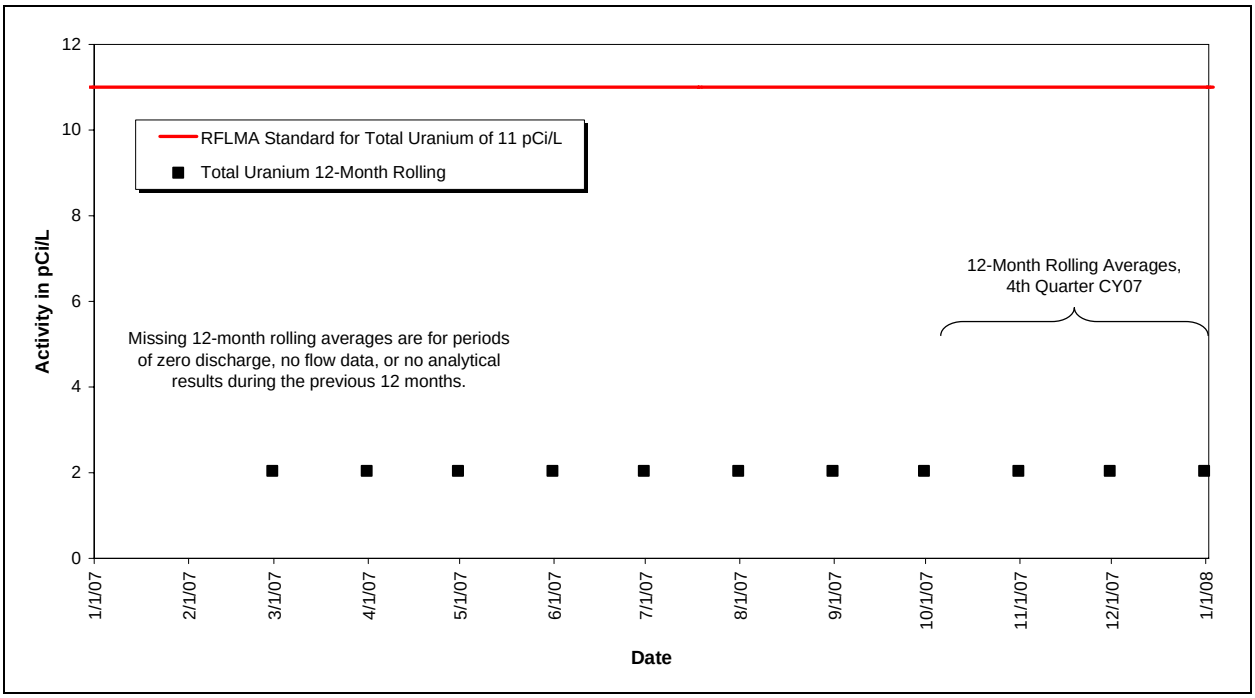


Figure 3-25. Volume-Weighted Average Total U Compliance Values at SW027: Calendar Year Ending Fourth Quarter CY 2007

Table 3-16 shows that all of the annual average metals concentrations are less than the standards. Additionally, the long-term metals averages (1997−2007) are less than the standards.

Table 3-16. Annual Volume-Weighted Average Hardness and Metals Concentrations at SW027 for 1997−2007

Calendar Year	Volume-Weighted Average Concentration (µg/L)				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	112	0.44	0.09	1.71	0.10
1998	152	0.14	0.15	0.91	0.21
1999	111	0.03	0.10	1.55	0.24
2000	150	0.27	0.05	4.14	0.09
2001	145	0.23	0.07	1.82	0.12
2002	114	0.12	0.05	2.88	0.11
2003	148	0.06	0.06	1.75	0.15
2004	133	0.32	0.06	7.36	0.19
2005	236	0.08	0.07	2.03	0.19
2006	NA (no flow)	NA (no flow)	NA (no flow)	NA (no flow)	NA (no flow)
2007	133	0.50	0.05	0.50	0.10
Total (1997−2007)	138	0.21	0.08	2.28	0.16

Notes: Hardness units in mg/L.
NA = not applicable.

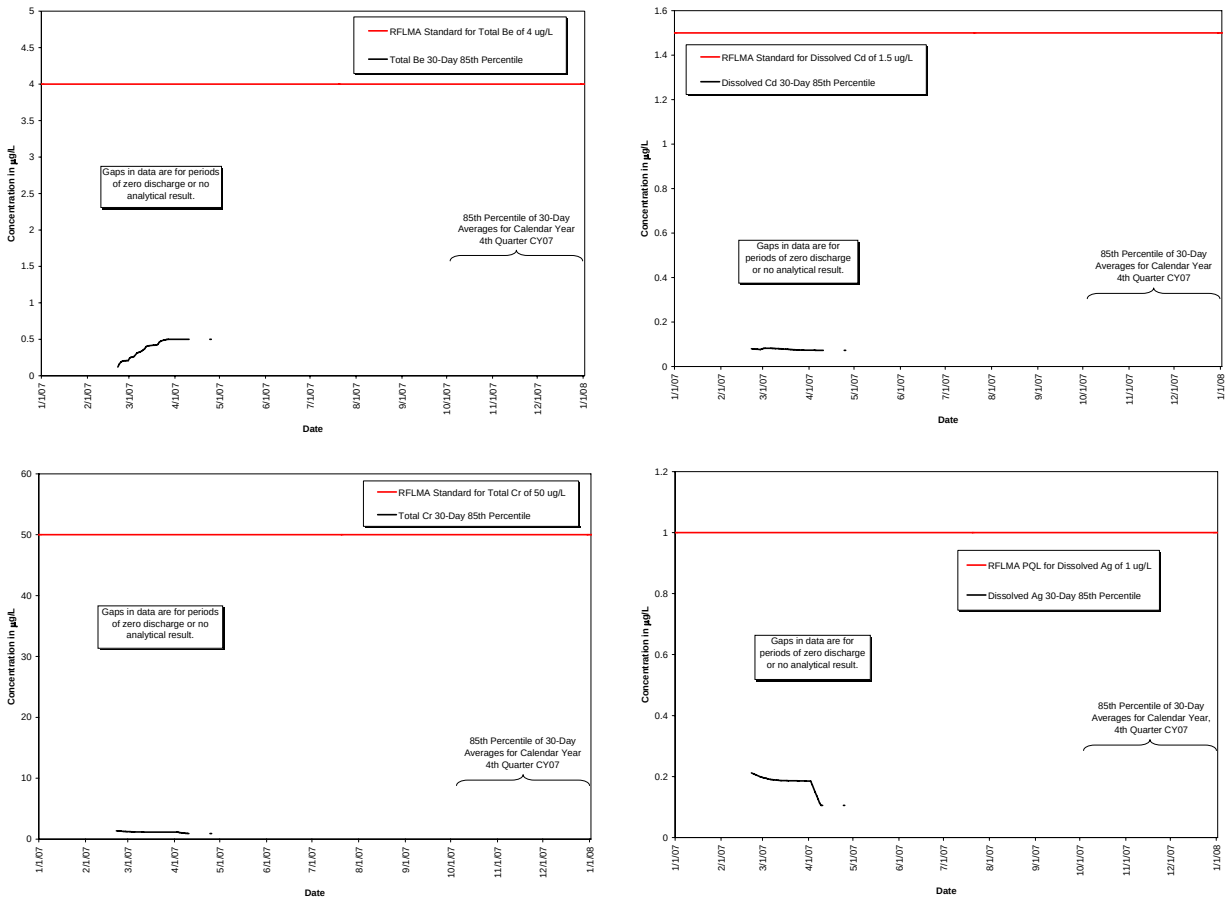


Figure 3-26. Volume-Weighted Average Metals Compliance Values at SW027: Calendar Year Ending Fourth Quarter CY 2007

Location SW093

Monitoring location SW093 is located on North Walnut Creek 1,300 feet upstream of the A-Series Ponds (Figure 3-14). The northern portion of the COU contributes flow to SW093 through FC-2 and FC-3.

Table 3-17 shows that the majority of the annual average Pu and Am activities are below 0.15 pCi/L. Additionally, the long-term Pu and Am averages (1997−2007) are below 0.15 pCi/L. The average total U activities are all well below 10 pCi/L.

Table 3-17 indicates an increase in Pu and Am activities during 2004. However, a significant reduction in both Pu and Am activities has been observed following Site closure. With the completion of the FCs, implementation of enhanced erosion controls, revegetation, soil stabilization, and lack of substantial runoff, transport of Pu and Am has been virtually eliminated. Figure 3-27 and Figure 3-28 show no reportable Pu, Am, or total U values during the year.

Table 3-17. Annual Volume-Weighted Average Radionuclide Activities at SW093 for 1997−2007

Calendar Year	Volume-Weighted Average Activity (pCi/L)		
	Am-241	Pu-239,240	Total U
1997	0.035	0.052	2.38
1998	0.020	0.022	2.26
1999	0.025	0.038	1.95
2000	0.022	0.040	2.06
2001	0.011	0.015	2.14
2002	0.017	0.006	2.67
2003	0.039	0.056	2.34
2004	0.622	0.603	2.50
2005	0.029	0.022	3.97
2006	0.004	0.008	5.93
2007	0.009	0.011	3.78
Total (1997−2007)	0.078	0.084	2.50

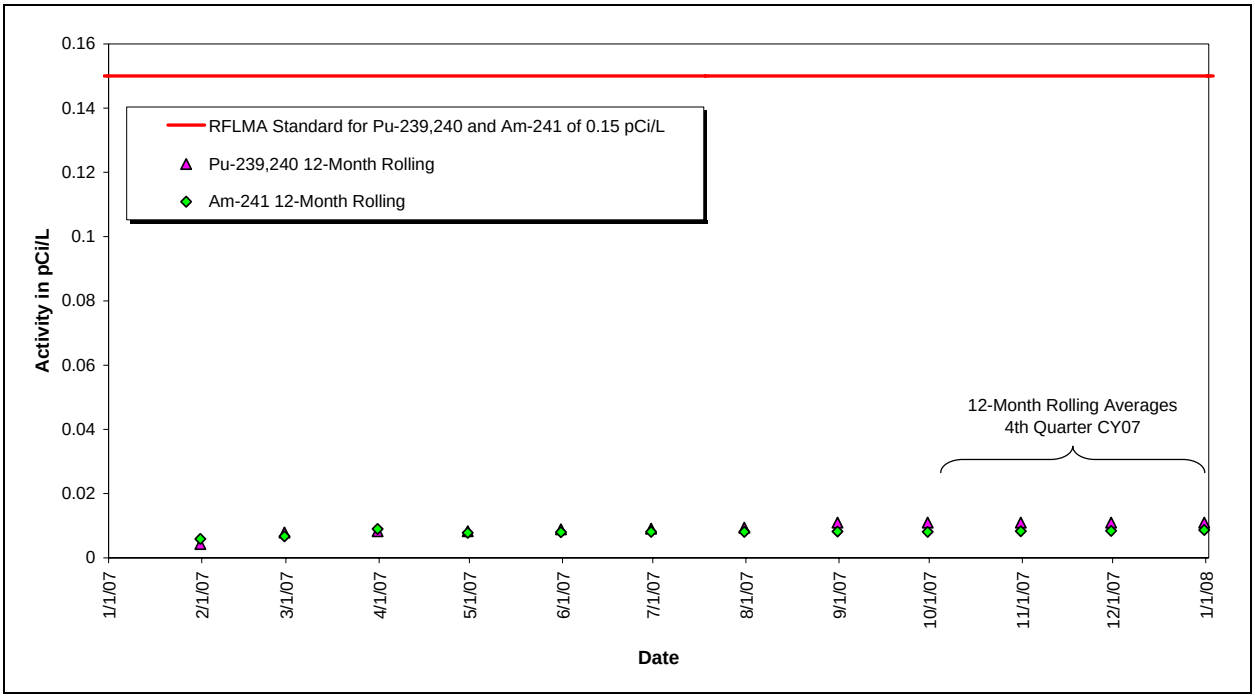


Figure 3-27. Volume-Weighted Average Pu and Am Compliance Values at SW093: Calendar Year Ending Fourth Quarter CY 2007

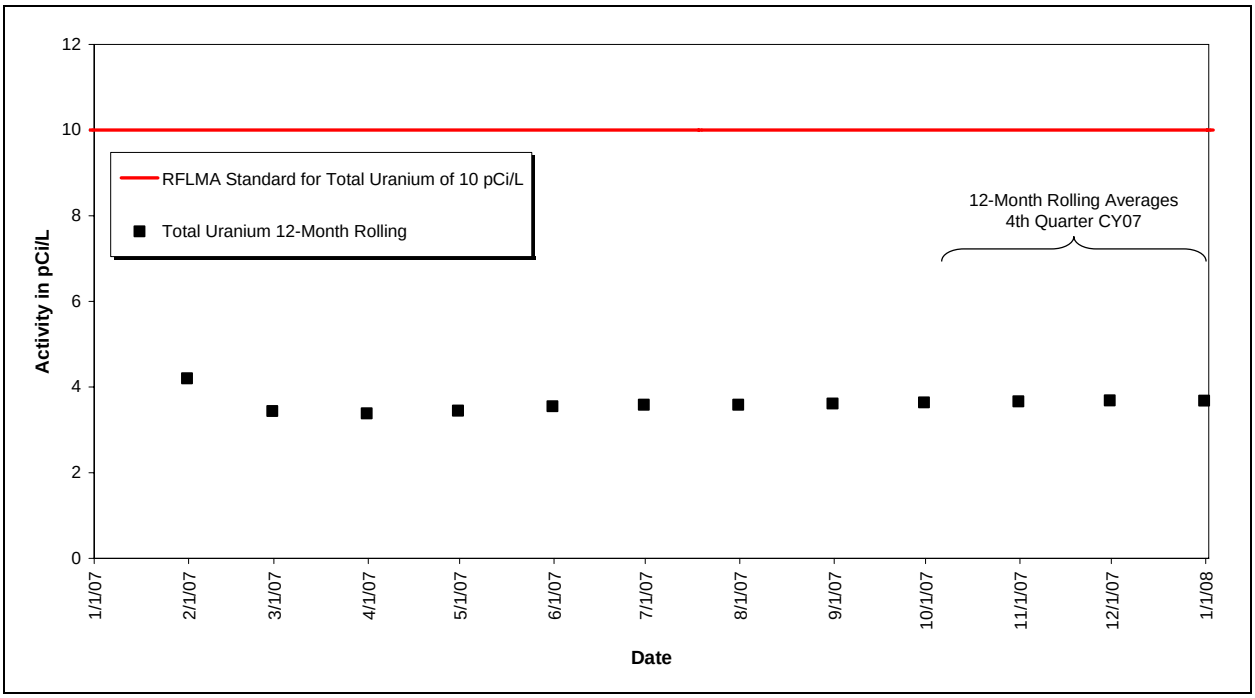


Figure 3-28. Volume-Weighted Average Total U Compliance Values at SW093: Calendar Year Ending Fourth Quarter CY 2007

Table 3-18 shows that all of the annual average metals concentrations are less than the standards. Additionally, the long-term metals averages (1997−2007) are less than the standards. Figure 3-29 shows that none of the 85th percentile 30-day average metals concentrations were reportable for the year.

Table 3-18. Annual Volume-Weighted Average Hardness and Metals Concentrations at SW093 for 1997−2007

Calendar Year	Volume-Weighted Average Concentration (µg/L)				
	Hardness (mg/L)	Total Be	Dissolved Cd	Total Cr	Dissolved Ag
1997	168	0.43	0.07	2.36	0.12
1998	184	0.14	0.23	2.22	0.22
1999	152	0.20	0.13	5.08	0.16
2000	231	0.21	0.08	3.94	0.11
2001	247	0.36	0.07	6.49	0.11
2002	365	0.30	0.08	5.95	0.11
2003	257	0.29	0.09	6.88	0.16
2004	315	0.57	0.09	12.05	0.12
2005	337	0.11	0.05	1.92	0.11
2006	564	0.50	0.05	0.82	0.10
2007	287	0.50	0.06	0.82	0.10
Total (1997−2007)	240	0.31	0.10	4.79	0.14

Note: Hardness units in mg/L.

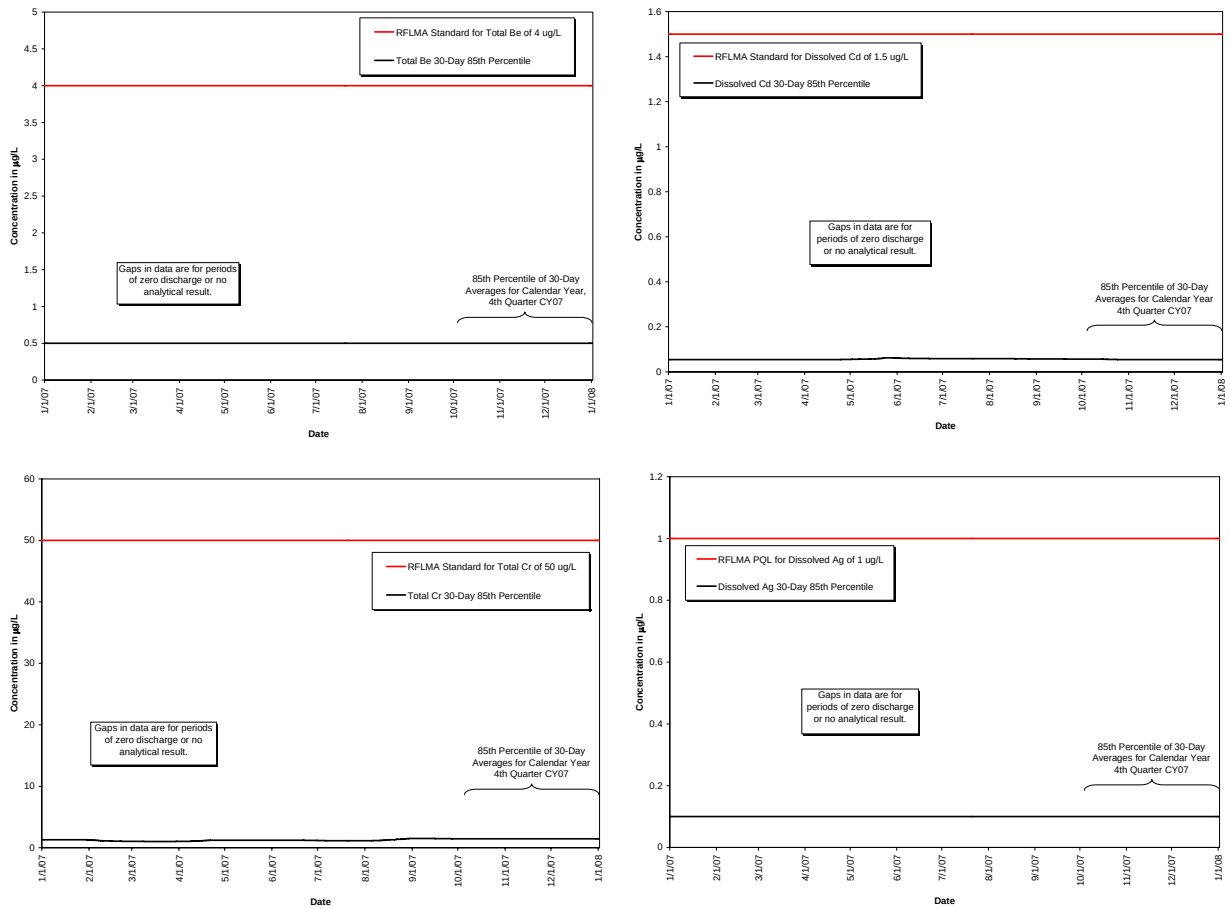


Figure 3-29. Volume-Weighted Average Metals Compliance Values at SW093: Calendar Year Ending Fourth Quarter CY 2007

3.1.2.3 AOC Wells and SW018

AOC wells (Figure 3-30 and Table 3-19) are located to evaluate potential groundwater impacts to surface water. Impacts are based on a minimum of two routinely scheduled sampling events in a row, not on a single data point. Analytical results from AOC wells are compared directly against the appropriate surface-water standards in Table 1 of Attachment 2 to RFLMA or the RFLMA U groundwater threshold value of 120 µg/L. Analytical data from surface-water performance location SW018, where grab samples for VOCs are collected to support groundwater objectives, are assessed in a manner similar to data from AOC wells.

Table 3-19. Sampling and Data Evaluation Protocols at AOC Wells and SW018

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
00193	Woman Creek upstream of Pond C-2	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 7 in Appendix D
00997	South Walnut Creek upstream of Pond B-5	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
10304	Southeast of 903 Pad/Ryan's Pit Plume at Woman Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
10594	North Walnut Creek downstream of Pond A-1	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
11104	Downgradient, downstream	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 7 in Appendix D
4087	Below Landfill Pond	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
42505	Terminus of FC-2	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 7 in Appendix D
89104	Downgradient at Woman Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 7 in Appendix D
B206989	Below Landfill Pond	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
SW018	FC-2 west of former Building 771 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 7 in Appendix D

Notes: [a]Samples for the analysis of U are field-filtered using a 0.45-micron in-line filter.
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

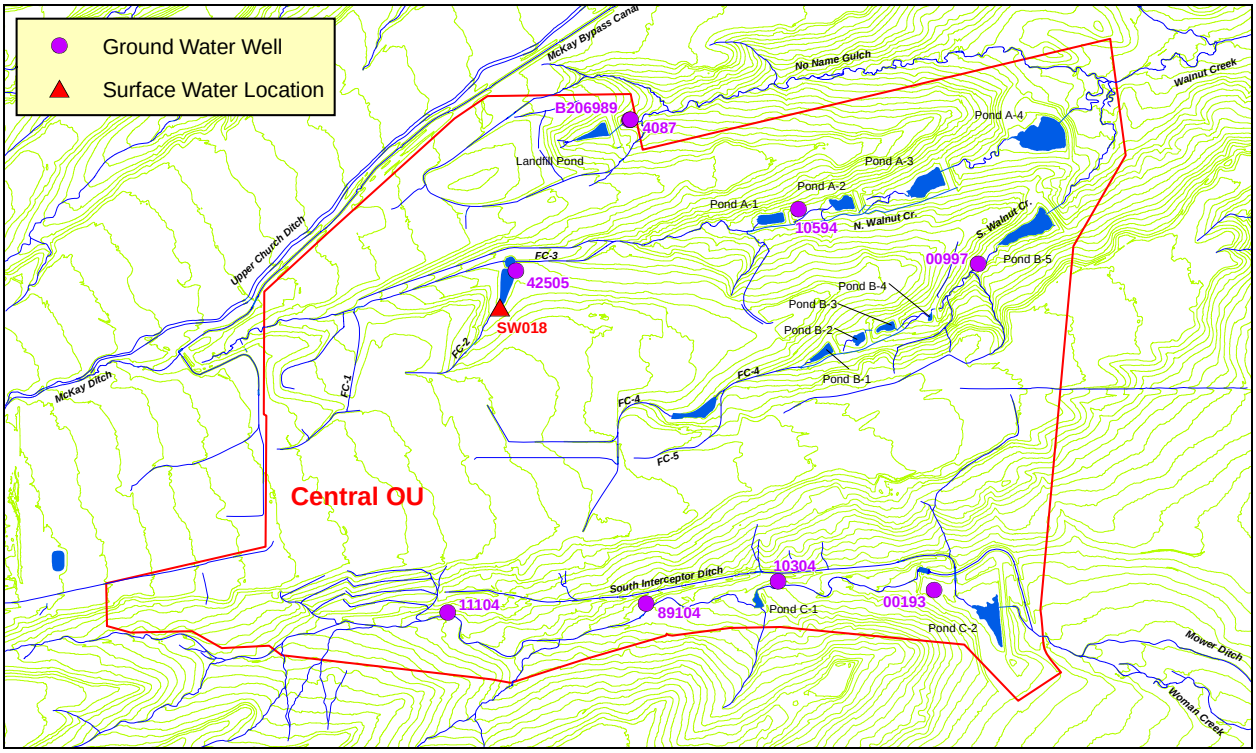


Figure 3-30. AOC Well and SW018 Locations

Data Evaluation

All AOC wells and SW018 were scheduled for routine monitoring in fourth quarter CY 2007. No decision criteria were triggered by the associated analytical results (Appendix B), which were consistent with previous data. However, AOC well 10594, located in North Walnut Creek near Pond A-1, reported a U concentration (130 µg/L) that exceeds the associated 120 µg/L threshold. This was the first such result received since RFLMA was signed; if two consecutive results above the threshold are reported, a reportable condition will exist. It bears noting that concentrations of U in this well have repeatedly been determined to be 100 percent natural (most recently for a sample in September 2007 that was sent for LANL analysis), and have exceeded the 120 µg/L threshold on numerous occasions in the past. In addition, trend calculations performed for U data from well 10594 indicate an apparent decreasing trend, but with a statistical significance of less than 80 percent (and, therefore, also less than the required 95 percent). Monitoring will continue as prescribed in RFLMA (DOE 2007d).

A reportable condition was encountered for AOC well B206989 in August 2007 (see corresponding RFLMA Contact Record 2007-06 in Appendix H) due to elevated concentrations of nitrate in groundwater samples from this well. Concentrations reported in fourth quarter CY 2007 are consistent with previous data. S-K trend calculations continue to suggest nitrate concentrations in samples from this well are decreasing, but at less than an 80-percent level of significance.

3.1.2.4 Boundary Wells

Boundary wells (Figure 3-31 and Table 3-20) are located at the Walnut Creek/Indiana Street and Woman Creek/Indiana Street intersections to provide surrounding stakeholders with assurance that groundwater leaving the historic extent of the Rocky Flats Environmental Technology Site (RFETS) in these drainages is not adversely impacted by the Site.

Monitoring the Boundary wells is not required by the CAD/ROD. However, these wells are included in the network to satisfy operational monitoring requirements in RFLMA.

Table 3-20. Sampling and Data Evaluation Protocols at Boundary Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
10394	Woman Creek at Indiana Street	Annual grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D
41691	Walnut Creek at Indiana Street	Annual grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 7 in Appendix D

Notes: [a]Samples for the analysis of U are field-filtered using a 0.45-micron in-line filter.
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

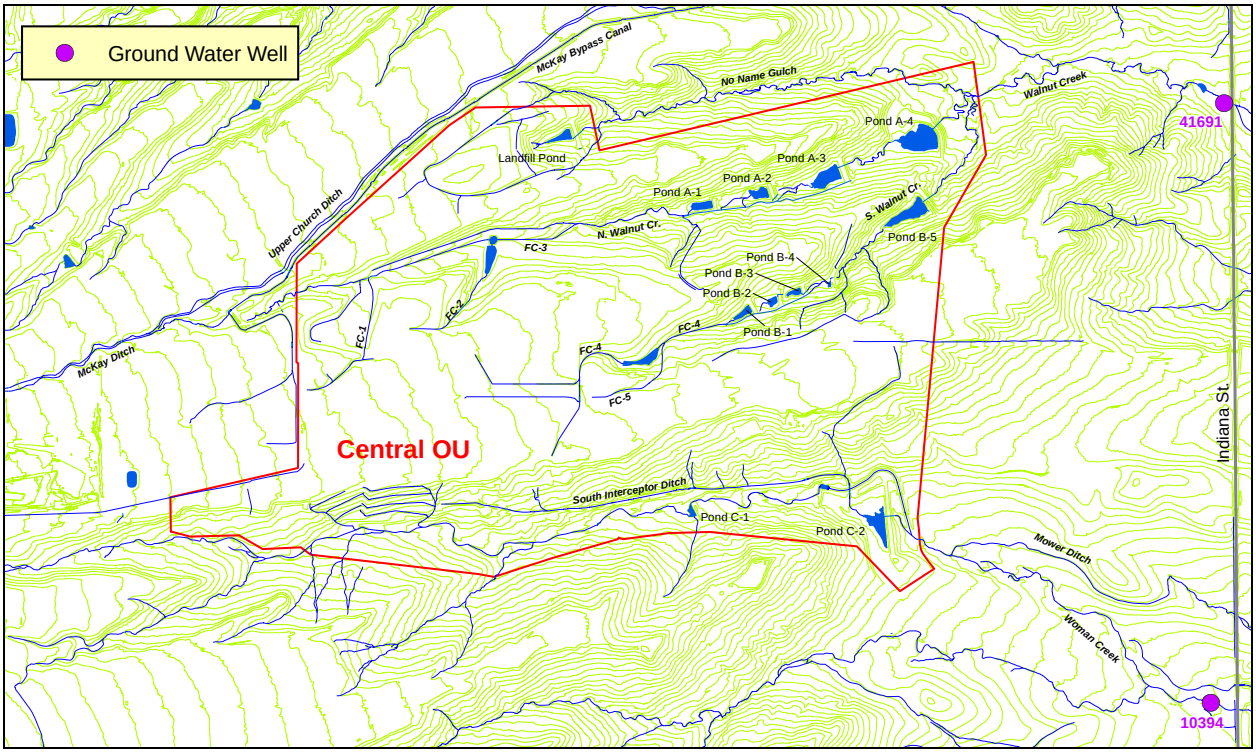


Figure 3-31. Boundary Well Locations

Data Evaluation

Both Boundary wells were sampled in second quarter CY 2007. All results were below RFLMA standards.

3.1.2.5 Sentinel Wells

Sentinel wells (Figure 3-32 and Table 3-21) are located near downgradient edges of contaminant plumes, in drainages, at groundwater treatment systems, and along contaminant pathways to surface water. These wells are monitored to determine whether concentrations of contaminants are increasing, thereby providing advance warning of potential groundwater quality impacts to the downgradient AOC well(s). Confirmation of a potential impact to downgradient wells will require an analytical record that consistently indicates an impact, not a single data point that indicates a contaminant has been detected.

Sentinel wells are used to monitor the performance of an accelerated action (including soil/source removals, in situ contaminant plume treatment, groundwater intercept components of treatment systems, and facility demolitions) and assess contaminant trends at important locations. Data from Sentinel wells are supplemented by those from Evaluation wells, and are used to determine when monitoring may cease or additional remedial work should be considered.

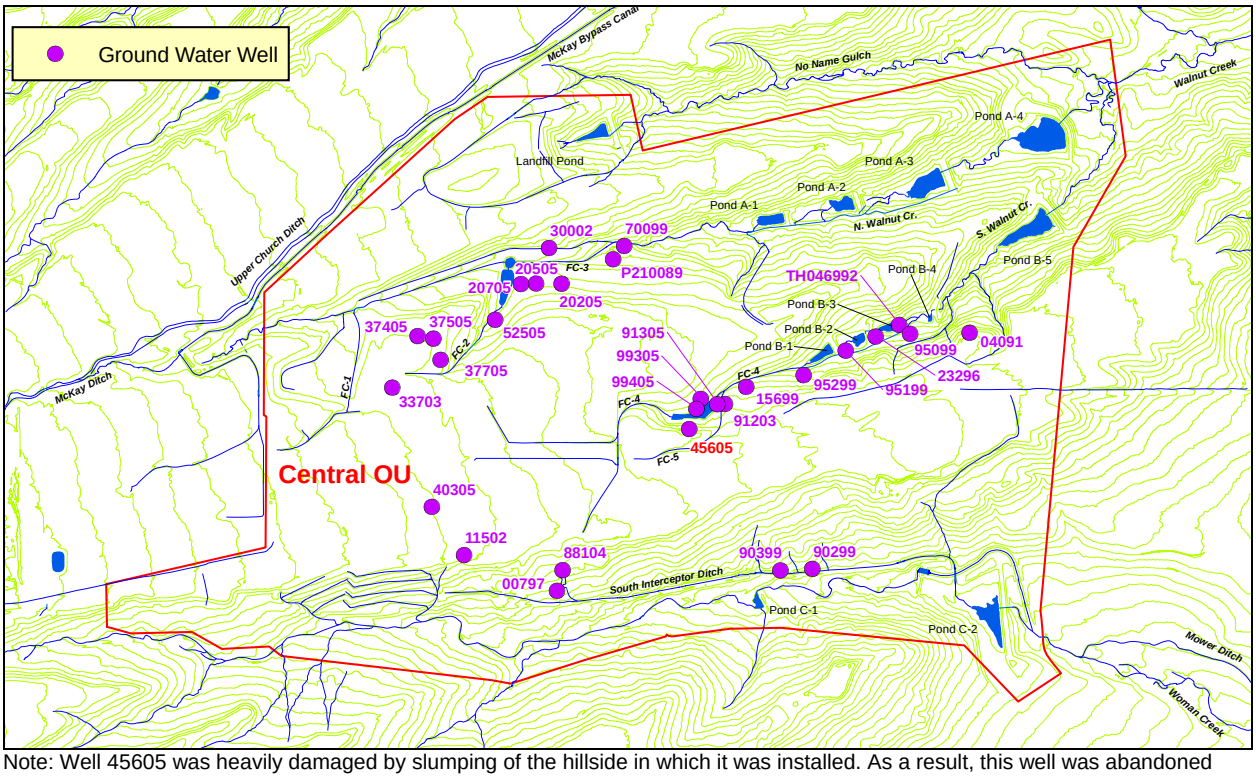
Table 3-21. Sampling and Data Evaluation Protocols at Sentinel Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
00797	South of former Building 881 (B881) area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 8 in Appendix D
04091	East of source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
11502	Southeast of former B444 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 8 in Appendix D
15699	Downgradient of MSPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
20205	North/northeast of former B771/774 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, Pu, Am	See Figure 8 in Appendix D
20505	North of former B771/774 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, Pu, Am	See Figure 8 in Appendix D
20705	North/northwest of former B771 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	See Figure 8 in Appendix D
23296	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 8 in Appendix D
30002	Downgradient at North Walnut Creek	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
33703	Downgradient of source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
37405	North/northeast part of former B371/374 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	See Figure 8 in Appendix D
37505	North part of former B371 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 8 in Appendix D

Table 3−21 (continued). Sampling and Data Evaluation Protocols at Sentinel Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
37705	East/southeast of former B371/374 area at foundation drain confluence	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate, Pu, Am	See Figure 8 in Appendix D
40305	East part of former B444 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 8 in Appendix D
45605	Adjacent to remnants of SW056 French drain and drain interruption	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
52505	West of former IHSS 118.1 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
70099	Northwest (side-gradient) of SPPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	See Figure 8 in Appendix D
88104	South part of former B881 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U	See Figure 8 in Appendix D
90299	Southeast part of 903 Pad/Ryan's Pit Plume at SID	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
90399	Southeast part of 903 Pad/Ryan's Pit Plume at SID	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
91203	Downgradient of Oil Burn Pit (OBP) #2 source area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
91305	South of confluence of FC-4 and FC-5	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 8 in Appendix D
95099	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
95199	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
95299	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D
99305	East part of former B991 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 8 in Appendix D
99405	Southeast part of former B991 area	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 8 in Appendix D
P210089	Downgradient (north) portion of SPP	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs, U, nitrate	See Figure 8 in Appendix D
TH046992	Downgradient of ETPTS intercept trench	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 8 in Appendix D

Notes: [a]Samples for the analysis of U are field-filtered using a 0.45-micron in-line filter.
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.
IHSS = Individual Hazardous Substance Site



Note: Well 45605 was heavily damaged by slumping of the hillside in which it was installed. As a result, this well was abandoned following sample collection in fourth quarter CY 2007 and will be replaced in 2008.

Figure 3-32. Sentinel Well Locations

Data Evaluation

All Sentinel wells were monitored in fourth quarter CY 2007 (refer to Appendix B for analytical results).

Analytical data are generally consistent with previous results. Data for well 45605 represent the last samples that will be collected from this well. Movement of the slump (located south of former Building 991) in which the well was installed heavily damaged the well. After the fourth-quarter sample was collected, the well was abandoned and the slump was regraded. The well will be replaced in 2008.

The result for trichloroethene (TCE) from well 23296 (8.5 µg/L) is unusually low; however, the data were validated and TCE concentrations typically have been highly variable in samples from this well.

Vinyl chloride (VC) was detected at 0.46 µg/L (J-qualified, indicating this is an estimated concentration) in samples from well 52505, located between former Building 371/374 and Building 771. The presence of VC may be indicative of biodegradation of other, primary contaminants, such as tetrachloroethene (PCE) or TCE.

Trend plots are included in Appendix A. These data and statistical results are discussed in greater detail in Section 3.1.5.3.

3.1.2.6 Evaluation Wells

Evaluation wells (Figure 3-33 and Table 3-22) are located within groundwater contaminant plumes and near plume source areas, and within the interior of the COU at the Site. As such, they may monitor the effects of accelerated actions that have been performed (e.g., source removal and in situ treatment). Data from these Evaluation wells are therefore appropriate to determine whether monitoring of a particular plume and source area may cease, and provide data to support the determination of whether corresponding groundwater plume treatment systems may be decommissioned. In addition, Evaluation wells are used to support any groundwater evaluations that may be needed as a result of changing contaminant characteristics in downgradient Sentinel and/or AOC wells. Data from these wells also assist evaluations of predictions made through groundwater modeling efforts.

Table 3-22. Sampling and Data Evaluation Protocols at Evaluation Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
00191	East of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
00203	Downgradient (south) portion of SPP	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
00491	Southeast of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
00897	Mound Site source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
3687	East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
03991	East of East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
05691	East Trenches source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
07391	Ryan's Pit source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
18199	North of former IHSS 118.1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
20902	Northwest of former IHSS 118.1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
21505	West of former B776/777 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
22205	Downgradient (north) portion of SPP	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
22996	East/northeast part of former B886 area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D

Table 3−22 (continued). Sampling and Data Evaluation Protocols at Evaluation Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
30900	PU&D Yard Plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
33502	OBP #1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
33604	OBP #1 source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
33905	North of former 231 Tanks area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
40005	West part of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
40205	South part of former B444 end	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
50299	East of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
51605	Downgradient, adjacent to GS13	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
55905	North part of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
56305	West part of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
70705	East part of former B707 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
79102	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
79202	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
79302	SPP source area - northeast	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D
79402	SPP source area - northeast	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D
79502	SPP source area - east	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
79605	SPP source area - east	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
88205	South part of former B881 area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D
891WEL	OU 1 Plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D

Table 3−22 (continued). Sampling and Data Evaluation Protocols at Evaluation Wells

Location Code	Location Description	Sample Types/Frequencies	Analytes[a]	Data Evaluation
90402	Southeast of former 903 Pad area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
90804	Southeast part of 903 Pad/Ryan's Pit Plume	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
91105	OBP #2 source area	Biennial grabs; Second calendar quarter (high-water conditions)	U, nitrate	See Figure 9 in Appendix D
B210489	Downgradient of SPPTS	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
P210189	SEP-area VOC plume source area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
P208989	SPP source area - north	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U, nitrate	See Figure 9 in Appendix D
P114689	Southwest of former B559 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
P115589	West part of former B551 Warehouse area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs, U	See Figure 9 in Appendix D
P419689	Southeast of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D
P416889	Southeast of former B444 area	Biennial grabs; Second calendar quarter (high-water conditions)	VOCs	See Figure 9 in Appendix D

Notes: [a]Samples for the analysis of U are field-filtered using a 0.45-micron in-line filter.
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.
PU&D = Property Utilization and Disposal
SEP = Solar Evaporation Pond

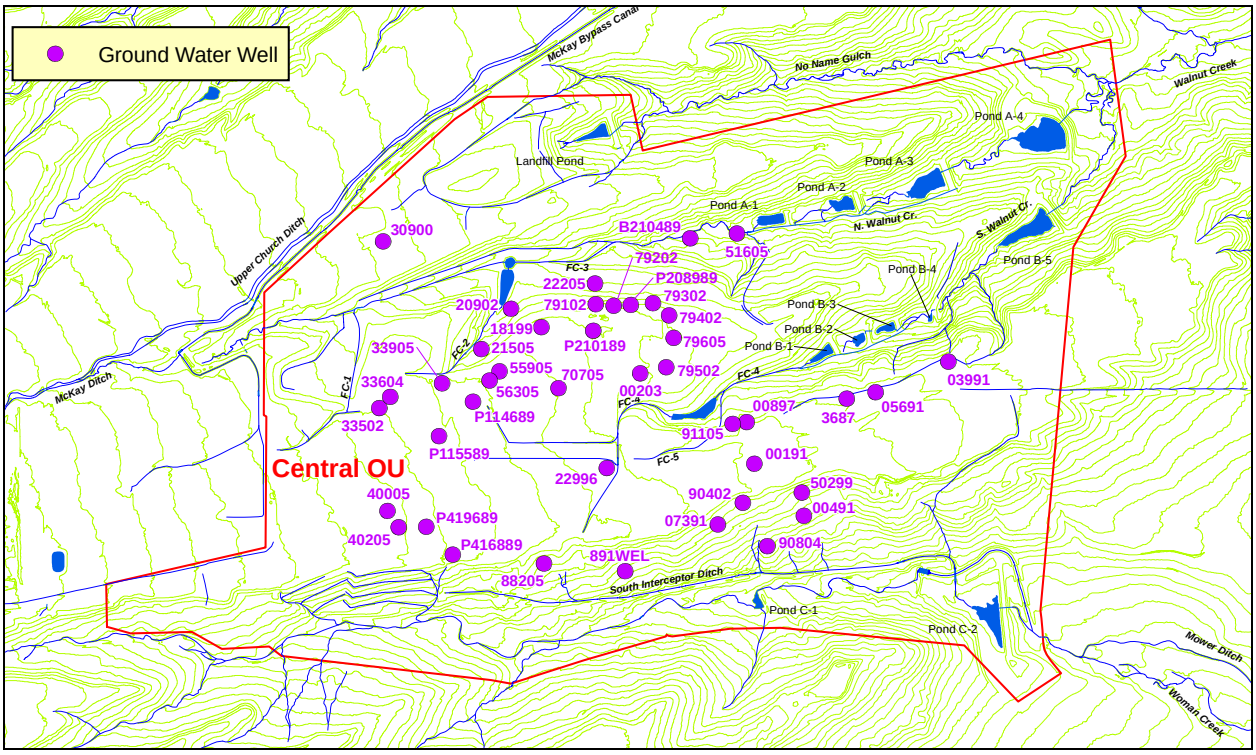


Figure 3-33. Evaluation Well Locations

Data Evaluation

Evaluation wells were not scheduled for routine monitoring in 2007; however, wells 00191, 07391, 18199, 33502, 33604, 51605, and 91105 were sample for nonroutine monitoring. Such monitoring supports investigation and performance data needs. See Section 3.1.5.2 for a discussion of the sample results for these Evaluation wells.

3.1.2.7 Investigative Monitoring

When reportable water-quality measurements are detected by surface-water monitoring at POEs or POCs, additional monitoring may be required to identify[12] the source and evaluate for mitigating action. Although not required by RFLMA, this investigative monitoring objective is intended to provide upstream water-quality information if reportable water-quality values are detected at POEs or POCs. Data collection is generally limited to POE and POC analytes and is intended to be discontinued once acceptable water quality has been demonstrated at POEs and POCs for an extended period.

Data collection is currently implemented at the locations listed in Table 3-23 and shown on Figure 3-34. The majority of these locations are sampled primarily to satisfy other monitoring objectives, although the data are used for this investigative objective. The current locations were not chosen in response to a specific source evaluation. They were chosen preemptively as a BMP immediately following cleanup and closure work and are intended to be discontinued under this

[12] Note that the term "identify" is used here to mean "locate." Characterization is also implied.

monitoring objective based on data evaluation. Any future data collection upstream of POEs and POCs, subject to the consultative process, is not limited to the locations in Table 3-23. The parties may also elect to collect data using other methods, subject to the characteristics of the reportable water-quality values and through the consultative process.

Table 3-23. Sampling and Data Evaluation Protocols at Investigative Monitoring Locations

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
GS05	Woman Creek at western POU boundary	Continuous flow-paced composites; frequency varies (target is 8 per year)[a]	total U isotopes[b]	see Figure 6-15 in Appendix D
GS13	North Walnut Creek just upstream of A-Series Bypass	Continuous flow-paced composites; frequency varies (target is 8 per year)[a]	total U isotopes[b]	see Figure 6-15 in Appendix D
GS51	Drainage area tributary to the SID and south of former 903 Pad/Lip	Continuous flow-paced composites; frequency varies (target is 8 per year)[a]	total Pu and Am; [TSS[c]]	see Figure 6-15 in Appendix D
GS59	Woman Creek 800 feet east of OLF	Continuous flow-paced composites; frequency varies (target is 8 per year)[a]	total U isotopes[b]	see Figure 6-15 in Appendix D
SW018	FC-2 west of former Building 771 area	Continuous flow-paced composites; frequency varies (target is 8 per year)[a]	total Pu and Am; [TSS[c]]	see Figure 6-15 in Appendix D

Notes: [a]Frequency depends on available flow.
[b]U isotopes are U-233,234 + U-235 + U-238.
[c]Total suspended solids (TSS) is analyzed when the composite sampling period is within TSS hold-time limits.

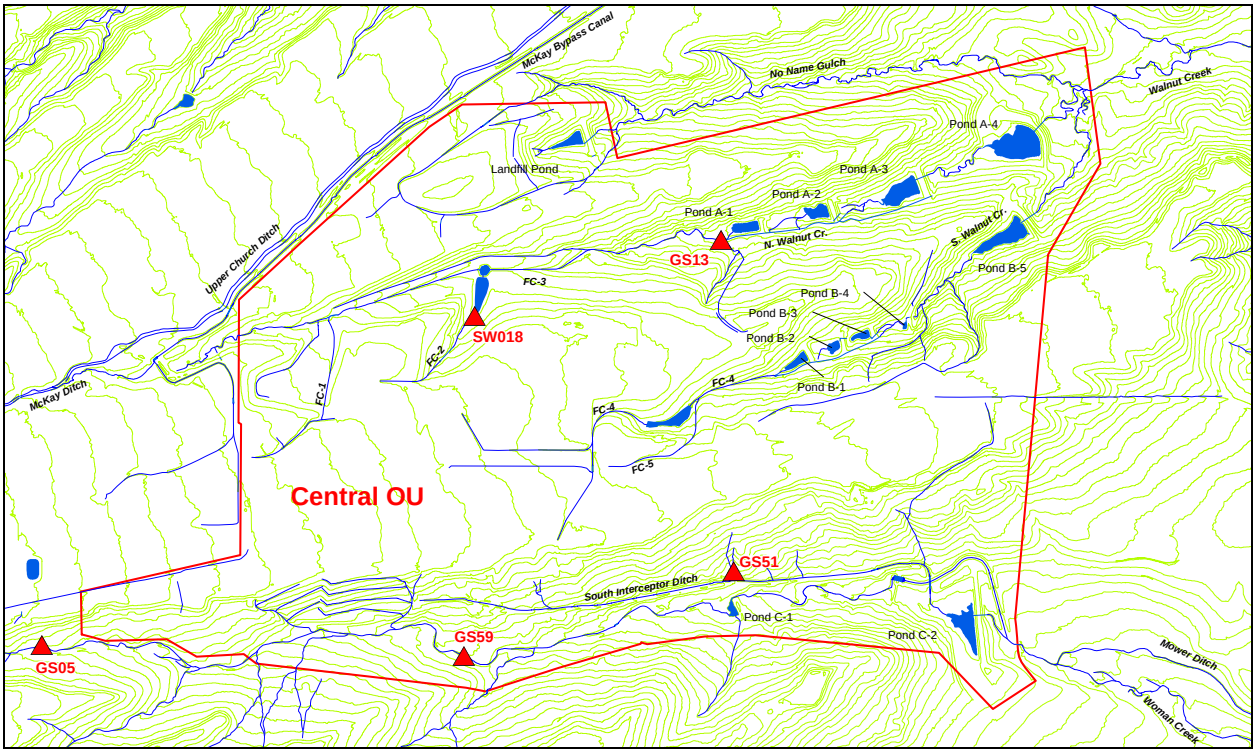


Figure 3-34. Investigative Monitoring Locations

Data Evaluation

During CY 2007, five investigative locations were operational (Table 3-23). As of November 26, 2007, analysis of composite samples collected at SW018 for Pu and Am has been discontinued. This action has been taken in accordance with the Investigative Monitoring flowchart (see Appendix D) for upstream locations where no reportable compliance values have been observed at a downstream POE or POC. Composite samples for Pu and Am will continue to be collected at SW018, but analysis will not be routinely conducted. These samples will be archived for 6 months, and will only be analyzed if required by a source evaluation triggered by reportable compliance values observed at a downstream POE or POC.

No routine data evaluation for the investigative objective is presented in this report. Refer to Appendix B, which contains the water-quality data, for additional information.

3.1.2.8 PLF Monitoring

The PLF is located in the COU just north of the former Industrial Area (IA). This objective deals with monitoring surface water and groundwater at the PLF to determine the short- and long-term effectiveness of the remedy. These requirements were initially identified in the *Final Interim Measures/Interim Remedial Action for IHSS 114 and RCRA Closure of the RFETS Present Landfill*, Appendix B: Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations (DOE 2004), and finalized in the PLF M&M Plan (DOE 2006b).

Water monitoring locations for the PLF are shown on Figure 3-35. The surface-water and treatment system monitoring requirements deal specifically with the PLFTS and are discussed in detail in Section 3.1.2.10. Details regarding general groundwater monitoring are provided below.

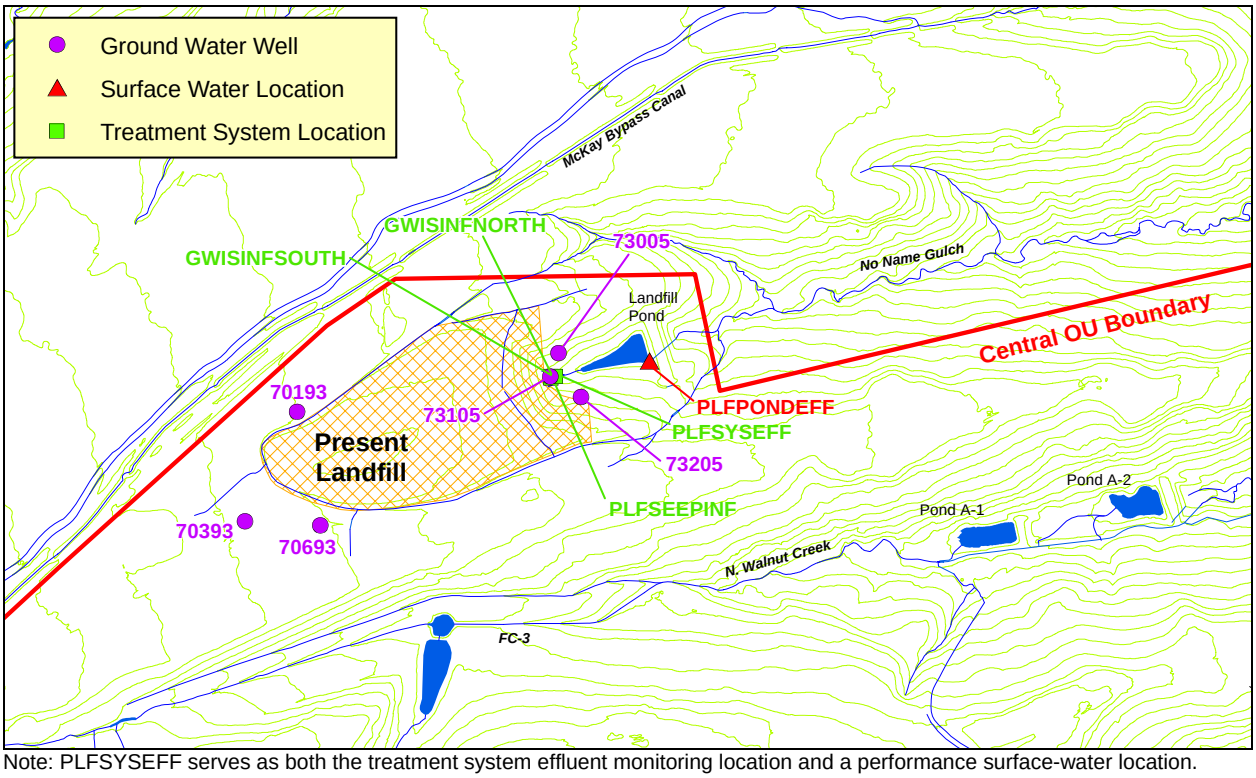
The RCRA monitoring network at the PLF comprises six wells: three are located upgradient of the landfill, and three are downgradient of the landfill but upgradient of the Landfill Pond. The RCRA wells are monitored in accordance with RFLMA. Decision rules are also set forth in that document; see Appendix D for the RFLMA decision flowcharts. Additional monitoring wells are present in the general vicinity of the PLF; however, they do not contribute to the RCRA monitoring of the landfill and are discussed in other sections of this report.

Sampling and data evaluation protocols for the RCRA wells at the PLF are provided in Table 3-24.

Table 3-24. Sampling and Data Evaluation Protocols at PLF RCRA Monitoring Wells

Location Code	Location Description	Sample Types/ Frequencies	Analytes[a]	Data Evaluation
70193	Upgradient (northwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D
70393	Upgradient (west/southwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D
70693	Upgradient (southwest) of the upgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D
73005	Downgradient (northeast) of the downgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D
73105	Downgradient (east) of the downgradient end of the PLF at the PLFTS	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D
73205	Downgradient (southeast) of the downgradient end of the PLF	Quarterly each calendar quarter	VOCs, metals	See Figure 10 in Appendix D

Notes: [a]Samples for the analysis of metals are field-filtered using a 0.45-micron in-line filter.
Laboratory analytes are limited to those based on the analytical methods listed in the PLF M&M Plan.



Note: PLFSYSEFF serves as both the treatment system effluent monitoring location and a performance surface-water location.

Figure 3-35. PLF Monitoring Locations

Data Evaluation

All RCRA wells at the PLF were sampled in fourth quarter CY 2007. Results are included in Appendix B. This section presents the evaluation of the PLF groundwater-quality data for all of CY 2007. Monitoring performed in 2007 is summarized in Table 3-25.

Table 3-25. RCRA Groundwater Sampling Performed in 2007 at the PLF

Well	Location	Q1	Q2	Q3	Q4
70193	Upgradient	V, M	V, M	V, M	V, M
70393	Upgradient	V, M	V, M	V, M	V, M
70693	Upgradient	V, M	V, M	V, M	V, M
73005	Downgradient	V, M	V, M	V, M	V, M
73105	Downgradient	V, M	V, M	V, M	V, M
73205	Downgradient	V, M	V, M	V, M	V, M

Notes: Q = quarter. V = VOCs, M = metals (which includes U). Only RFLMA-defined (DOE 2007d) RCRA wells supporting the PLF are listed; other wells in the area (such as Sentinel and Evaluation wells) are omitted because they are not part of the RCRA monitoring network.

Downgradient water quality (as represented by analytical data from wells 73005, 73105, and 73205) was statistically compared against upgradient water quality (as represented by analytical data from wells 70193, 70393, and 70693). Generally speaking, water quality in the upgradient wells continues to be more impacted than that in the downgradient wells, because upgradient wells 70393 and 70693 are within the margins of the Property Utilization and Disposal (PU&D) Yard Plume.

Statistical evaluation of the analytical data from the PLF was performed using all nonrejected data for upgradient and downgradient RCRA wells. An interwell comparison was made (i.e., comparing upgradient wells against downgradient wells) in accordance with RFLMA and the PLF M&M Plan, using the Analysis of Variance (ANOVA) procedure as run using the Sanitas™ software package (Sanitas Technologies 2007). Results for U were all converted to mass units: first, any negative values for isotopic analyses were replaced with 0.001, then the individual results were converted to mass units and summed to provide a conservative approximation of total U by mass. Replacement with 0.001 was also performed for any total U results that were equal to or less than zero to abide by software limitations, as discussed in Section 3.1.1.2. The data were also assessed for trends, again using Sanitas™ and the S-K trending method in keeping with the findings of previous studies indicating this method to be most appropriate for Rocky Flats groundwater data (KH 2004d).

A year of quarterly analytical data (i.e., four sets of quarterly samples) are required to determine the baseline, and the same quantity of data are needed to perform the ANOVA statistical analyses. To calculate S-K trends based on four seasons—as represented by the four quarters of sampling—requires four sets of results for each of the four quarters. Therefore, while there is sufficient data for the ANOVA assessment, there is not yet sufficient data for trend calculations.

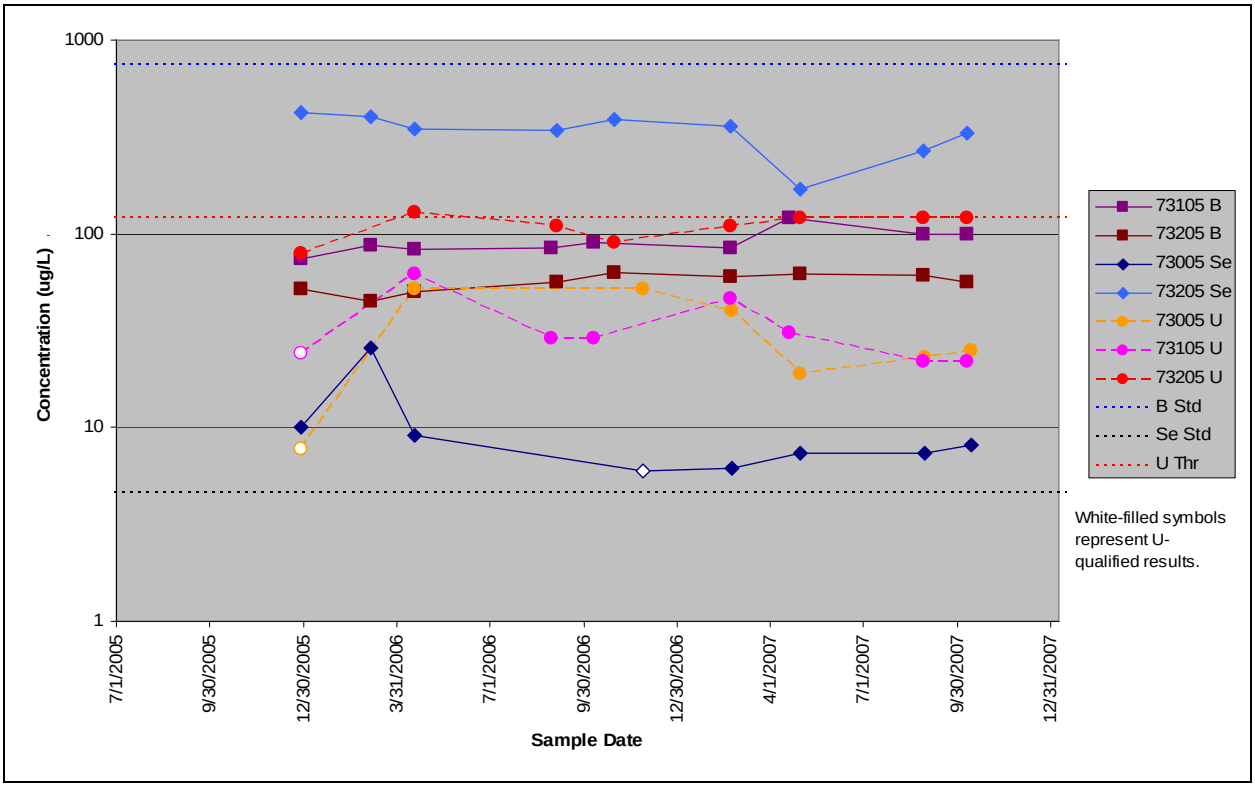
ANOVA evaluation of the groundwater analytical data from PLF RCRA wells indicates groundwater sample results from some of the downgradient wells are statistically higher in the concentration of certain constituents. No VOCs were found to be present in downgradient wells at statistically higher concentrations than in upgradient wells; however, the concentrations of several metals are statistically higher in downgradient wells. Downgradient wells 73105 and 73205 produce groundwater samples with statistically higher concentrations of boron (B) than upgradient wells. The same applies to downgradient wells 73005 and 73205 for selenium (Se), and all three downgradient wells are higher in U concentrations. Table 3-26 summarizes the ANOVA results.

Table 3-26. Results of Groundwater ANOVA Evaluation at the PLF

Analyte	73005	73105	73205
Boron		x	x
Selenium	x		x
Uranium	x	x	x

Note: x = analyte is present in groundwater at a statistically significant higher concentration in the indicated downgradient well compared to upgradient wells.

Concentrations of B in downgradient groundwater are uniformly well under the RFLMA Table 1 standard of 750 µg/L. Concentrations of Se in groundwater samples from downgradient well 73005 frequently exceed the 4.6 µg/L RFLMA standard. The highest reported concentration was 26 µg/L (March 2006). However, many results are B-qualified (indicating the result was identified below the required detection limit but above the instrument detection limit) and one result in fourth quarter CY 2006 is reported as a nondetect. Conversely, the Se standard is consistently exceeded by samples from well 73205. Concentrations in this well have ranged from 170 µg/L to 420 µg/L, with an average concentration (based on nine samples) of approximately 337 µg/L. Time-series plots of Se concentrations in groundwater samples from wells 73005 and 73205 are displayed on Figure 3-36.



Notes: Only those analyte-well combinations identified in the ANOVA evaluation of PLF groundwater data are shown. RFLMA action levels are published in DOE 2007d. B = boron, Se = selenium, U = uranium. Several of the results for well 73005 are qualified with a B, but are not shown differently for simplicity. In addition to the nondetects (U-qualified results), several other results were qualified (B, J), but are not shown differently for the sake of simplicity. Note logarithmic concentration scale.

Figure 3-36. Boron, Selenium, and U in Downgradient Groundwater from PLF RCRA Wells Identified in ANOVA Data Evaluations

Although all three downgradient wells produce samples with concentrations of U that are statistically higher than in upgradient wells, only well 73205 produces samples with concentrations that are close to the U threshold of 120 µg/L. To date, U data from this well include one result (collected in 2006) exceeding that concentration, and the last three samples collected in 2007 (representing the second, third, and fourth calendar quarters of 2007) returned U results that are equal to the threshold. The other downgradient wells produce groundwater samples with U concentrations that are less than the threshold.

It is also worth noting that the ANOVA assessment identified many fewer analytes with higher downgradient than upgradient concentrations than was the case for the 2006 report (DOE 2007e). Each of the constituents identified in the 2007 ANOVA assessment as being present in higher concentrations downgradient than upgradient—B, Se, and U—was also identified in 2006, but many other metals were also identified in the earlier year. This change is likely due to the larger data set, which smoothes out anomalies. In addition, B was identified in the 2006 report as being statistically higher in all three downgradient wells, but the assessment for 2007 did not find this to be the case for well 73005. There was no change from 2006 to 2007 with respect to Se. Data limitations in 2006 at well 73005 prevented the determination of whether U was statistically higher in this well than in upgradient wells, but both the other downgradient wells were identified as producing samples with significantly higher U concentrations than upgradient wells.

Per RFLMA, if downgradient concentrations are significantly greater than upgradient concentrations <u>and</u> downgradient concentrations show a statistically significant increasing trend, the consultative process is initiated to determine the appropriate response. As noted above, there are insufficient data for proper trend calculations, although the results of trending efforts are included in Appendix B.3. RCRA monitoring will continue in accordance with RFLMA, and future data will be assessed for statistical trend in these downgradient wells.

Groundwater quality at the PLF is impacted on the upgradient side by VOCs from the PU&D Yard Plume. However, data from the RCRA wells in 2007 showed no VOCs were detected in downgradient groundwater. Conversely, as reported in 2006 several VOCs were detected (DOE 2007e).

Groundwater flow at the PLF is strongly affected by the GWIS, which diverts groundwater flow around the perimeter of the PLF rather than through the wastes. The GWIS includes a slurry wall and perforated drain around the upgradient and side-gradient perimeter of the PLF, and acts to isolate groundwater within the PLF from that outside the PLF. (Refer to the previously published reports referenced earlier in this section for more detail on the GWIS and related discussions.) Previous RCRA and Groundwater Annual Reports have confirmed the effectiveness of this isolation. Because the GWIS is located between the upgradient PLF RCRA wells and the downgradient PLF RCRA wells, estimating seepage velocities as discussed in Section 3.1.3.5 between those sets of wells is not appropriate.

3.1.2.9 OLF Monitoring

The OLF is located in the COU just south for the former IA. This objective addresses monitoring surface water and groundwater at the OLF to determine the short- and long-term effectiveness of the remedy. These requirements were initially identified in the *Draft Final IM/IRA of IHSS Group SW-2, IHSS 115, Original Landfill and IHSS 196, Filter Backwash Pond*, Appendix B:

Post-Accelerated Action Monitoring and Long-Term Surveillance and Monitoring Considerations (DOE 2005a), and finalized in the OLF M&M Plan (DOE 2006a).

Four groundwater monitoring wells were identified to monitor the OLF, and are classified as RCRA wells in RFLMA; three of these wells were installed in 2005. One of the OLF RCRA wells is located upgradient of the landfill, and three are downgradient of the landfill but upgradient of Woman Creek. The RCRA wells are monitored in accordance with RFLMA. Decision rules are also set forth in that document; see Appendix D for the RFLMA decision flowcharts. Additional monitoring wells are present in the general vicinity of the OLF; however, they do not contribute to the RCRA monitoring of the facility and therefore are discussed in other sections of this report.

Surface-water and RCRA groundwater monitoring locations for the OLF are shown on Figure 3-37. Sampling and data evaluation protocols are summarized in Table 3-27 and Table 3-28.

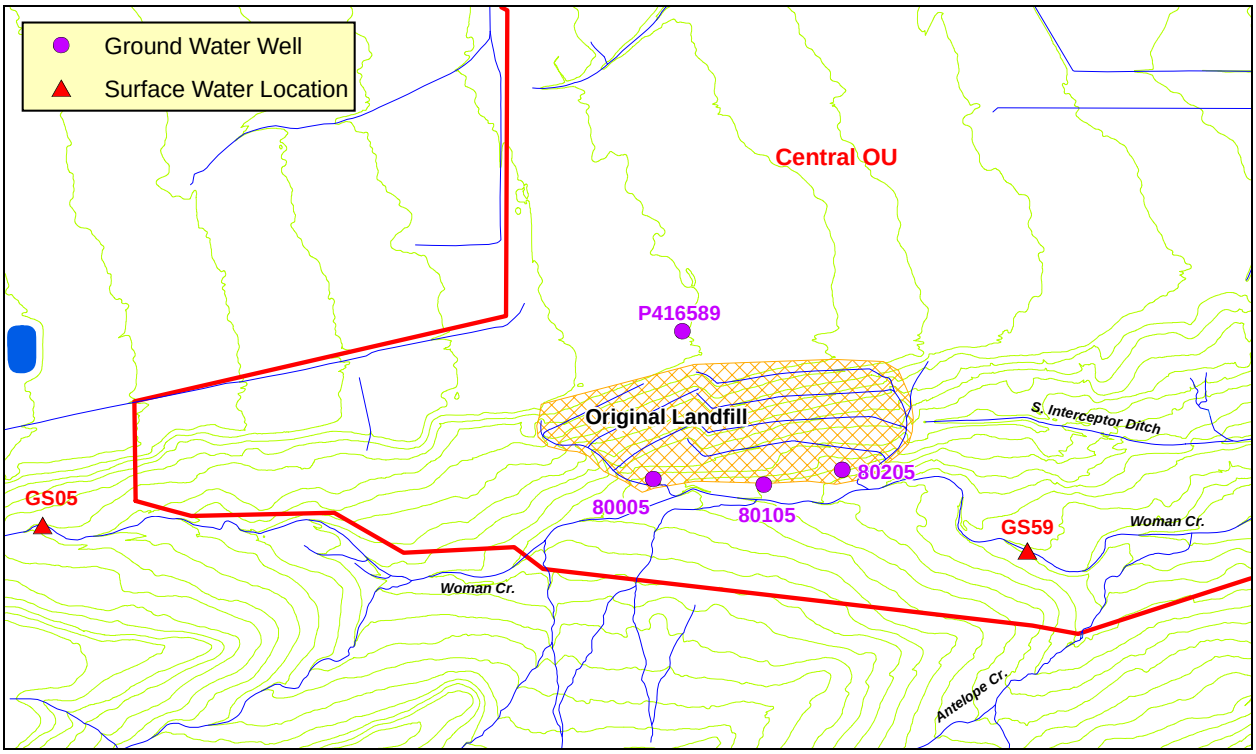


Figure 3-37. OLF Monitoring Locations

Table 3-27. Sampling and Data Evaluation Protocols at OLF Surface-Water Monitoring Locations

Location Code	Location Description	Sample Types/ Frequencies	Analytes[b]	Data Evaluation
GS05; upgradient	Woman Creek at west POU fenceline	Quarterly grab samples[a]	total U isotopes[c]; dissolved and total metals; VOCs; Hg	see Figure 12 in Appendix D
GS59; downgradient	Woman Creek 800 feet downstream of OLF	Quarterly grab samples[a]	total U isotopes[c]; dissolved and total metals; VOCs; Hg	see Figure 12 in Appendix D

Notes: [a]Samples for isotopic U and metals are currently collected as continuous flow-paced composites in conjunction with the Investigative monitoring objective; decisions specifically for the OLF monitoring objective only require quarterly grabs.
[b]Laboratory analytes are limited to those based on the analytical methods listed in the OLF M&M Plan.
[c]U isotopes are U-233,234 + U-235 + U-238.

Table 3-28. Sampling and Data Evaluation Protocols at OLF RCRA Monitoring Wells

Location Code	Location Description	Sample Types/ Frequencies	Analytes[a]	Data Evaluation
P416589	Upgradient (north) of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	See Figure 10 in Appendix D
80005	Downgradient (south) of the western portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	See Figure 10 in Appendix D
80105	Downgradient (south) of the central portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	See Figure 10 in Appendix D
80205	Downgradient (south) of the eastern portion of the OLF	Quarterly each calendar quarter	VOCs, SVOCs, metals	See Figure 10 in Appendix D

Notes: [a]Samples for the analysis of metals are field-filtered using a 0.45-micron in-line filter.
Laboratory analytes are limited to those based on the analytical methods listed in the OLF M&M Plan.

Data Evaluation

Analytical results for GS59 and GS05 are compared, per Figure 12 in Appendix D, to the appropriate surface-water standard in Table 1 of Attachment 2 to RFLMA. During CY 2007, selenium was detected above the standard in the October 1, 2007−January 4, 2008, composite sample. Selenium was observed at 6.7 µg/L at GS59, and the Table 1 standard is 4.6 µg/L. Per the RFLMA data evaluation flowchart (Appendix D), sampling frequency for selenium at the OLF surface-water locations has been increased to monthly pending future analytical results. All other analytical results were acceptable during CY 2007.

All RCRA wells at the OLF were sampled in fourth quarter CY 2007. Results are included in Appendix B. This section presents the evaluation of the CY 2007 groundwater-quality data for the OLF, previously known as OU 5. All RCRA wells are monitored quarterly. Monitoring performed in 2007 is summarized in Table 3-29.

Table 3-29. RCRA Groundwater Sampling Performed in 2007 at the OLF

Well	Location	Q1	Q2	Q3	Q4
P416589	Upgradient	V, M, S	V, M, S	V, M, S	V, M, S
80005	Downgradient	V, M, S	V, M, S	V, M, S	V, M, S
80105	Downgradient	V, M, S	V, M, S	V, M, S	V, M, S
80205	Downgradient	V, M, S	V, M, S	V, M, S	V, M, S

Notes: Q = quarter. V = VOCs, M = metals (which includes U), S = semivolatile organic compounds. Only RCRA wells supporting the OLF are listed; other wells in the area (such as AOC, Sentinel, and Evaluation wells) are omitted because they are not part of the RCRA monitoring network.

In addition to monitoring and evaluating these wells similar to RCRA wells (i.e., on a quarterly basis, and evaluating the resulting analytical data via upgradient-downgradient comparisons), the three downgradient wells are also monitored and evaluated in the manner of Sentinel wells. Specifically, data from these wells are statistically evaluated using 85th percentile concentrations to compare against surface-water standards, and data trends are constructed as warranted to determine a need for action. This type of evaluation requires a minimum of eight data points for each well-analyte combination to generate the 85th percentile concentrations, and four data points for each well-analyte-quarter combination to calculate trends.

As with the PLF, statistical evaluation of the analytical data from the OLF was performed using all nonrejected data for upgradient and downgradient RCRA wells. An interwell comparison was made (i.e., comparing the upgradient well against downgradient wells) in accordance with RFLMA and the OLF M&M Plan (DOE 2006a), using the ANOVA procedure as performed with the Sanitas™ software package (Sanitas Technologies 2007). Results for U were all reported in mass units, so no conversions were necessary. An attempt was also made to assess the data for trends, again using Sanitas™ and the S-K trending method in keeping with the findings of previous studies indicating this method to be most appropriate for Rocky Flats groundwater data (KH 2004d).

A year of quarterly analytical data (i.e., four sets of quarterly samples) are required to determine the baseline, and the same quantity of data are needed to perform the ANOVA statistical analyses. To date, the OLF is represented by more than 2 years (eight quarters) of data. To calculate S-K trends based on four seasons—as represented by the four quarters of sampling—requires four sets of results for each of the four quarters. Therefore, while there is sufficient data for the ANOVA assessment, there is not yet sufficient data for trend calculations.

ANOVA evaluation of the groundwater analytical data from OLF RCRA wells indicates groundwater samples from some of the downgradient wells are statistically higher in the concentration of certain constituents. No VOCs were found to be present in downgradient wells at statistically higher concentrations than in upgradient wells, but the concentrations of two metals are statistically higher in one or more downgradient wells. These results are summarized in Table 3-30.

Table 3-30. Results of Groundwater ANOVA Evaluation at the OLF

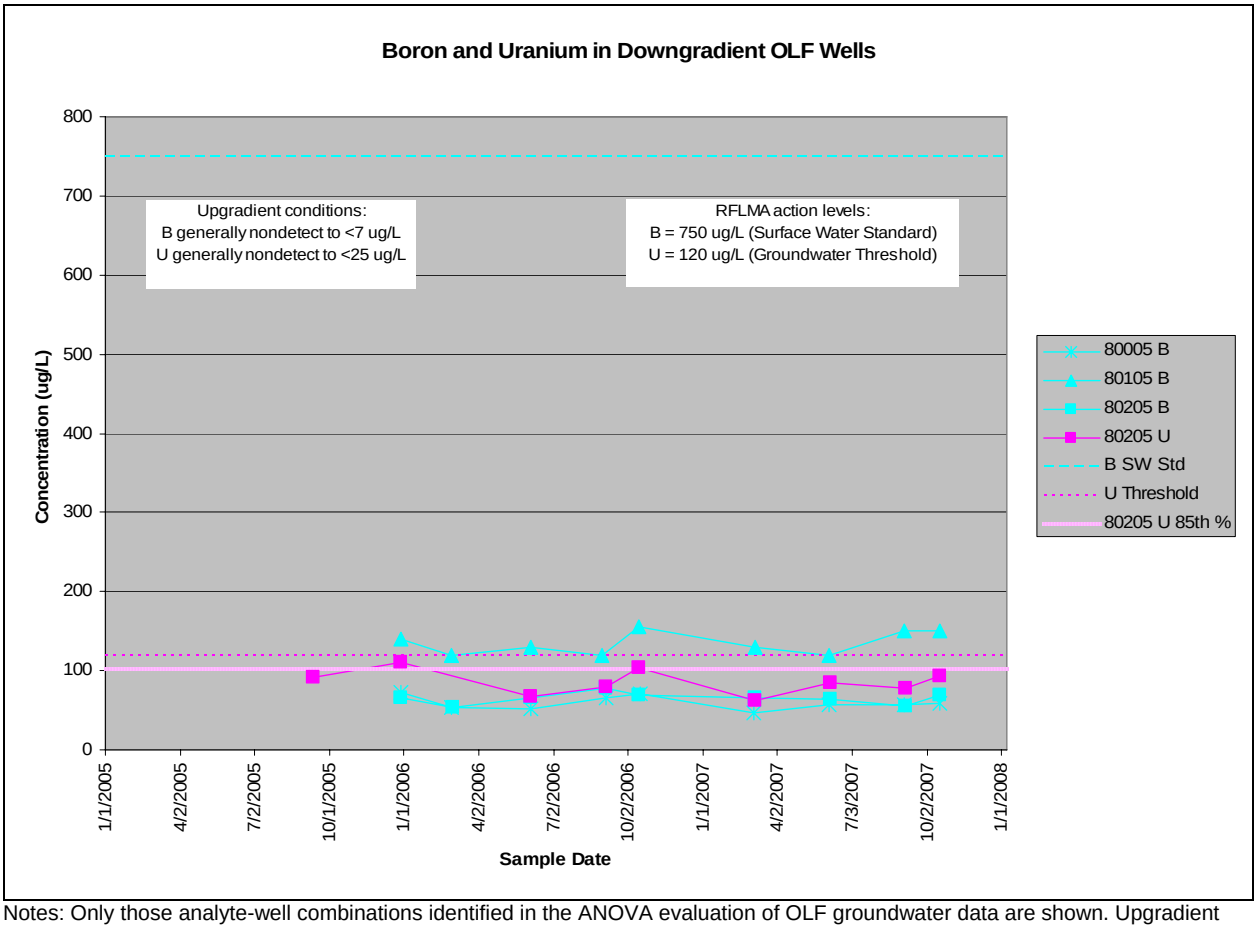
Analyte	80005	80105	80205
Boron	x	x	x
Uranium			x

Note: x = analyte is present in groundwater at a statistically significant higher concentration in the indicated downgradient well compared to upgradient wells, based on ANOVA statistical analyses performed using the Sanitas™ software package.

All three downgradient wells produce groundwater samples with statistically higher concentrations of B than the upgradient well. The same applies to downgradient well 80205 for U concentrations. Both of these conditions are unchanged from those reported in the 2006 Annual Report (DOE 2007e). However, for the 2006 report, the ANOVA analysis also indicated downgradient groundwater contained statistically higher concentrations of several additional metals: lithium in all three wells, manganese in well 80105, and strontium in wells 80105 and 80205. Differences in concentrations for these constituents no longer appear to be statistically significant.

Figure 3-38 provides time-series plots of B and U concentrations in groundwater from the wells listed in Table 3-30. As shown, concentrations of B in downgradient groundwater are uniformly well under the RFLMA Table 1 standard of 750 µg/L; the highest result reported to date is 155 µg/L from well 80105. The surface-water quality reported at downstream OLF location GS59 does not indicate B concentrations in downgradient OLF groundwater represent a threat.

Concentrations of U in samples from well 80205 are also shown on Figure 3-38, as is the U threshold of 120 µg/L. U concentrations at this well have yet to exceed the U threshold, and it follows that the 85th percentile concentration of U in samples from well 80205 also does not exceed this threshold (as described in the Sentinel well decision rules that also apply to downgradient OLF RCRA wells). And finally, the surface water monitored at location GS59 has not indicated U concentrations in downgradient OLF groundwater represent a threat to surface-water quality.



Notes: Only those analyte-well combinations identified in the ANOVA evaluation of OLF groundwater data are shown. Upgradient groundwater quality is represented by samples from OLF RCRA well P416589. RFLMA action levels are published in DOE 2007d. B = boron, U = uranium. The 85th percentile concentration of U in well 80205 is approximately 102 µg/L.

Figure 3-38. Boron and U in Groundwater Samples from Downgradient OLF Wells Identified in ANOVA Data Evaluations

In keeping with the recommendation made in the 2006 Annual Report (DOE 2007e) and CERCLA 5-year review (Section 2.2), groundwater from well 80205 was collected and analyzed using a high-resolution method (TIMS) to determine the isotopic signature of the water and its anthropogenic content. This sample was collected on September 7, 2007, and shipped to LANL for analysis and interpretation (see Appendix E for the analytical report). The total U concentration in that sample was reported at 79.2 nanograms per gram—equivalent to 79.2 µg/L—and was characterized as 100.0 percent natural. This indicates the OLF is not contributing anthropogenic U to groundwater monitored by well 80205.

Data reported in 2007 from downgradient RCRA wells at the OLF show two VOCs were detected in downgradient groundwater, although not at statistically higher concentrations than in the upgradient well. Validated detections are summarized in Table 3-31.

Table 3-31. VOCs Detected in 2007 in Downgradient Wells at the Original Landfill

Well	Sample Date	Analyte	Result	Units	Lab Qualifier
80005	3/5/07	TCE	0.16	µg/L	J
80005	6/4/07	1,3-Dichlorobenzene	0.2	µg/L	J
80105	6/5/07	1,3-Dichlorobenzene	0.22	µg/L	J

Note: J = analyte detected, result is estimated. No validation qualifiers were attached to these results.

Groundwater flow at the OLF is not affected by controls such as the GWIS at the PLF. Groundwater flows beneath the pediment surface north of the OLF in a general west to east direction. As it nears the southern edge of the pediment, groundwater is diverted to a more south-southeasterly direction. This latter general flow direction applies to groundwater moving through the OLF.

Groundwater flow velocities were calculated (see Section 3.1.3.5) for OLF well pair P416589 (the upgradient well) and 80105 (the middle downgradient well). The resulting estimates for the travel time from the upgradient to downgradient well range from just over 4 years to just over 4.5 years. Note that this calculated velocity is simplistic, and applies only to pure water; contaminants would be retarded to varying degrees.

Seeps are also present at the OLF, and have been observed in this area for decades (as well as being suggested on aerial photographs taken before the RFP came into existence). A new seep identified as Seep #8, located adjacent to well 80205, was sampled on August 23, 2007. No water-quality concerns were indicated; refer to the third quarter CY 2007 report (DOE 2008a) for the analytical data. Additional discussion of seeps at the OLF is provided in Section 2.5.2.2.

3.1.2.10 Groundwater Treatment System Monitoring

Contaminated groundwater is intercepted and treated in four areas of the Site. Three of these systems (MSPTS, ETPTS, and SPPTS) include a groundwater intercept trench (collection trench), which is similar to a French drain with an impermeable membrane on the downgradient side. Groundwater entering the trench is routed through a drain pipe into one or more treatment cells, where it is treated and then discharged to surface water. The fourth system (PLFTS) treats water from the north and south components of the GWIS and flow from the PLF seep.

Water monitoring at the MSPTS, ETPTS, and SPPTS includes a minimum of three sample collection points: untreated influent entering the treatment system, treated effluent exiting the system, and a surface-water performance location. At the PLFTS, the treated effluent and surface-water sampling locations are typically the same; this is discussed in further detail below.

The fundamental questions at each system are whether (1) influent water quality indicates treatment is still necessary, (2) effluent water quality indicates system maintenance is required, and (3) surface-water quality suggests impacts from inadequate treatment of influent.

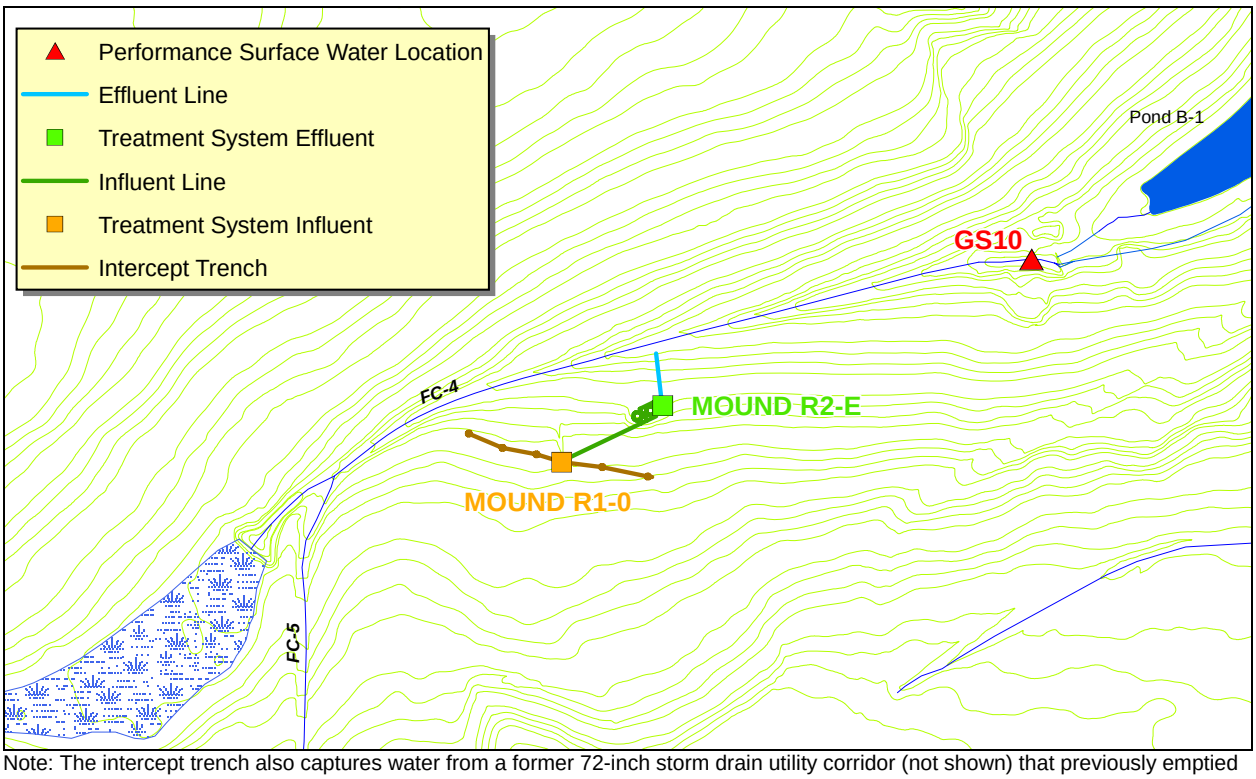
Note that groundwater monitoring wells also support the MSPTS, ETPTS, and SPPTS. These locations are not discussed in this section, but rather in that corresponding to their objective (i.e., text describing Sentinel and Evaluation wells).

Mound Site Plume Treatment System

Monitoring locations specific to the MSPTS are shown on Figure 3-39. Sampling and data evaluation protocols are summarized in Table 3-32. In addition to the monitoring locations shown, several monitoring wells are present, and several piezometers are present within the collection trench. One of the wells is monitored as a Sentinel well (see related text above), and the others will be abandoned in 2008. Although the piezometers are no longer routinely monitored, they are retained for troubleshooting purposes.

Table 3-32. RFLMA Sampling and Data Evaluation Protocols at MSPTS Monitoring Locations

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
MOUND R1-0	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D
MOUND R2-E	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D
GS10	Downgradient surface-water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D



Note: The intercept trench also captures water from a former 72-inch storm drain utility corridor (not shown) that previously emptied to South Walnut Creek (shown here as FC-4). This corridor runs from south to north, approximately parallel to the dominant trend of FC-5 shown here. It was backfilled and tied into the western portion of the intercept trench during Site closure activities. See the Annual Report for 2006 (DOE 2007e) for additional discussion, and subsequent sections of this 2007 report for updates.

Figure 3-39. RFLMA MSPTS Monitoring Locations

Data Evaluation

All MSPTS locations listed above were scheduled for routine monitoring in fourth quarter CY 2007. In addition, performance-check samples were collected. Results are provided in Appendix B and are discussed in Section 3.1.5.3.

East Trenches Plume Treatment System

Monitoring locations specific to the ETPTS are shown on Figure 3-40. Sampling and data evaluation protocols are summarized in Table 3-33. In addition to the monitoring locations shown, several monitoring wells are present, and several piezometers are present within the collection trench. Each of the wells is monitored as a Sentinel well (see related text above). Although the piezometers are no longer routinely monitored, they are retained for troubleshooting purposes.

Table 3-33. RFLMA Sampling and Data Evaluation Protocols at ETPTS Monitoring Locations

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
ET INFLUENT	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D
ET EFFLUENT	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D
POM2	Downgradient surface-water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	VOCs	See Figure 11 in Appendix D

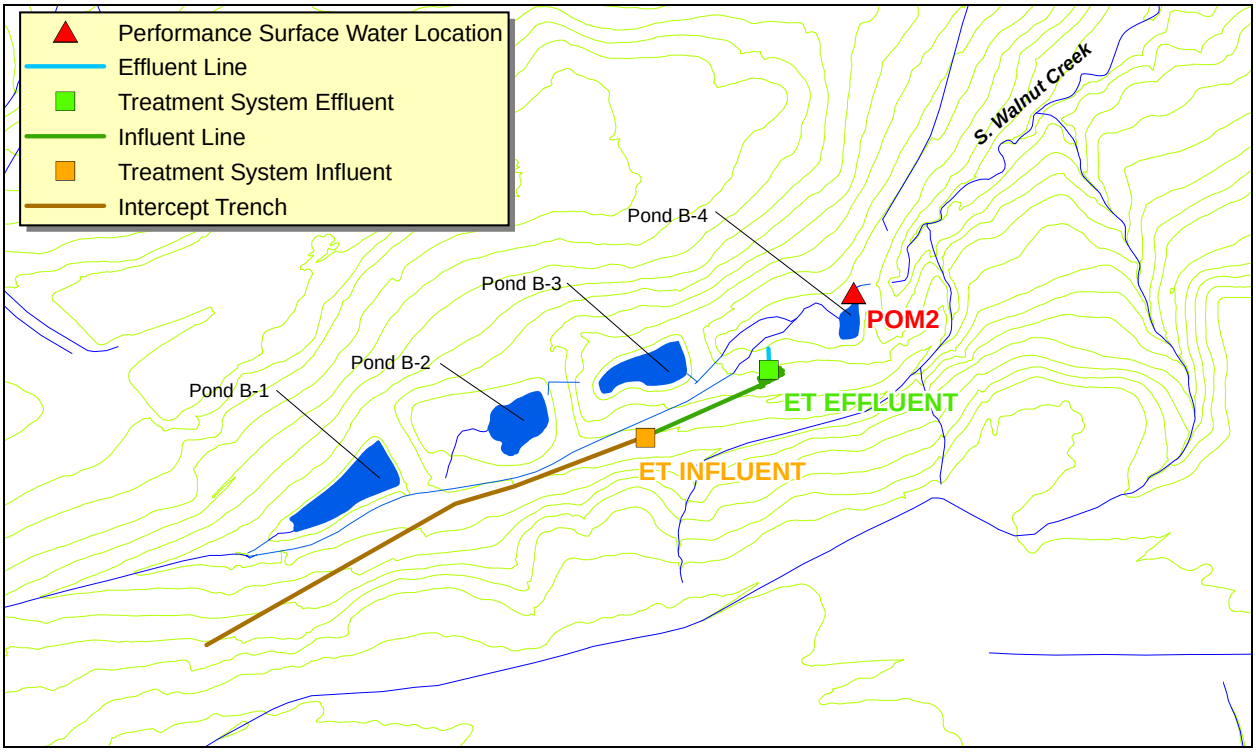


Figure 3-40. RFLMA ETPTS Monitoring Locations

Data Evaluation

All ETPTS locations listed above were scheduled for routine monitoring in fourth quarter CY 2007. In addition, performance-check samples were collected. Results are provided in Appendix B and are discussed in Section 3.1.5.3.

Solar Ponds Plume Treatment System

Monitoring locations specific to the SPPTS are presented on Figure 3-41. Sampling and data evaluation protocols are summarized in Table 3-34. In addition to the monitoring locations shown, several monitoring wells are present, and several piezometers are present within the collection trench. The wells are monitored as either Sentinel wells or Evaluation wells (see related text above). Although the piezometers are no longer routinely monitored, they are retained for troubleshooting purposes.

Table 3-34. RFLMA Sampling and Data Evaluation Protocols at SPPTS Monitoring Locations

Location Code	Location Description	Sample Types/Frequencies	Analytes	Data Evaluation
SPIN	Influent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	See Figure 11 in Appendix D
SPPMM01	Effluent sampling location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	See Figure 11 in Appendix D
GS13	Downgradient surface-water performance location	Semiannual grabs; Second and fourth calendar quarters (high- and low-water conditions)	U, nitrate	See Figure 11 in Appendix D

Notes: [a]Samples collected for U at GS13 are typically flow-paced, unfiltered, and analyzed for U isotopes; however, if desired they may be collected as grab samples and field-filtered. U data at GS13 support other monitoring objectives that are not addressed here.
Nitrate is analyzed as nitrate+nitrite as N; this result is conservatively compared to the nitrate standard only.

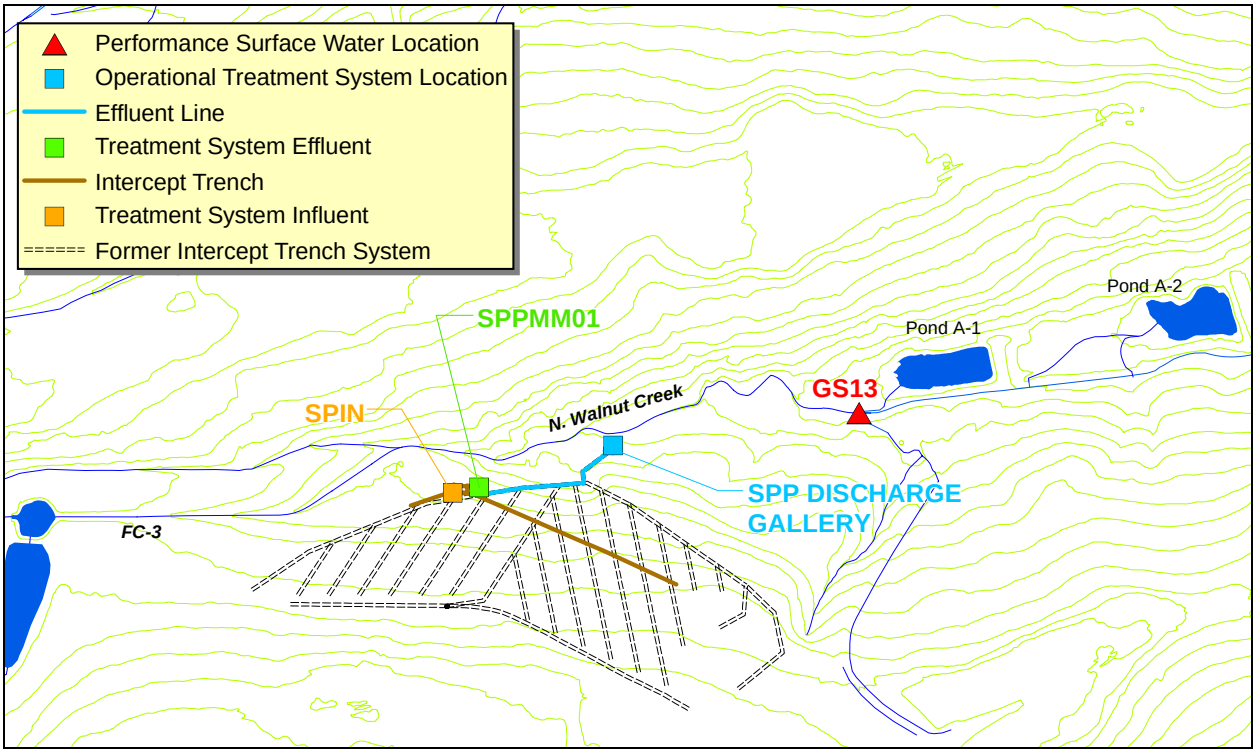


Figure 3-41. RFLMA SPPTS Monitoring Locations

Data Evaluation

All SPPTS locations listed above were scheduled for routine monitoring in fourth quarter CY 2007. The SPP Discharge Gallery (DG) was also sampled per the RFSOG; it, and location GS13, were sampled a second time in the fourth quarter to support WQCC discussions. Results are included in Appendix B.6; see Section 3.1.5.3 for discussion.

Present Landfill Treatment System

Water monitoring locations for the PLF are shown on Figure 3-35. The general groundwater monitoring requirements deal specifically with the RCRA wells and are discussed in detail in Section 3.1.2.8. Details regarding surface-water and treatment system monitoring are provided below.

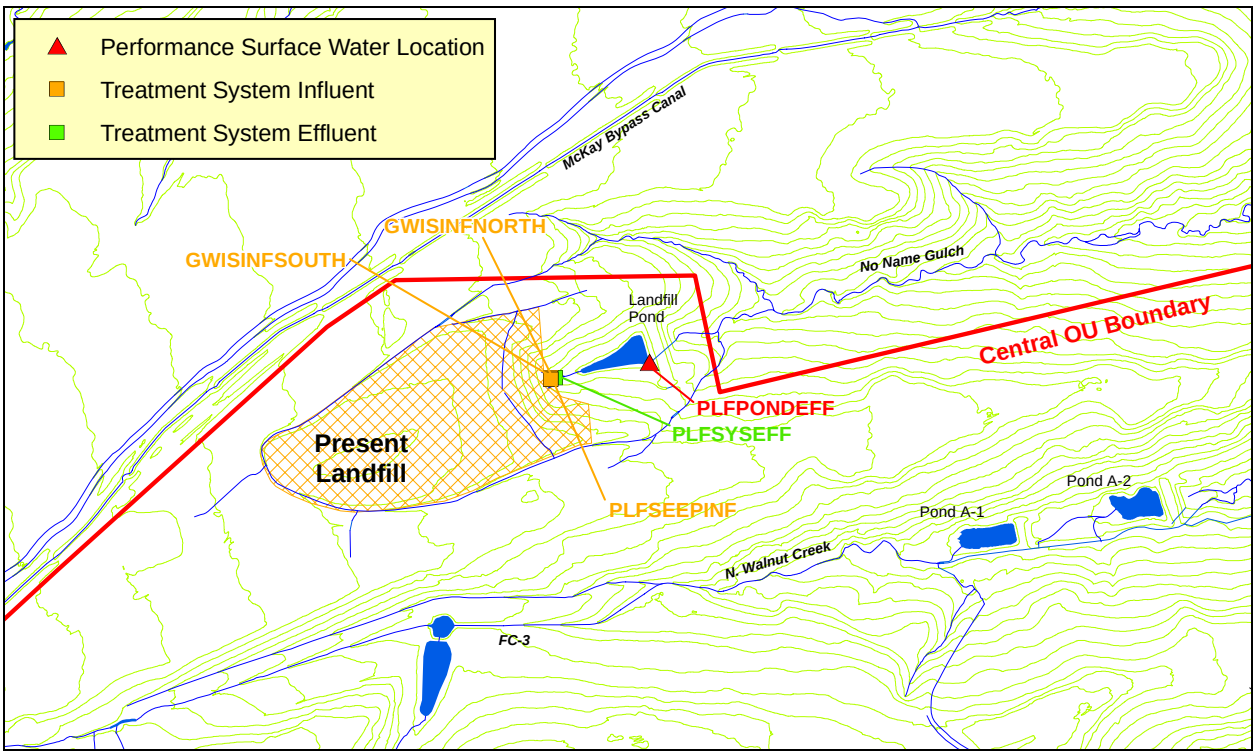
As part of PLF closure, a passive seep interception and treatment system was installed to treat landfill seep water and GWIS water. There are three sources of influent to the treatment system: two GWIS pipes and the PLF seep. Effluent for the treatment system eventually flows to the Landfill Pond. This section presents the monitoring data for the treatment system effluent as well as the Landfill Pond if the treatment system effluent exceeds surface-water standards. Details regarding PLFTS monitoring can be found in the PLF M&M Plan.

Monitoring locations for the PLFTS are shown on Figure 3-42. Sampling and data evaluation protocols are summarized in Table 3-35.

Table 3-35. Sampling and Data Evaluation Protocols at PLFTS Monitoring Locations

Location Code	Location Description	Sample Types/ Frequencies	Analytes	Data Evaluation
GWISINFNORTH	Northern GWIS influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, nitrate	see Figure 11 in Appendix D
GWISINFSOUTH	Southern GWIS influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, nitrate	see Figure 11 in Appendix D
PLFSEEPINF	Landfill seep influent to the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals	see Figure 11 in Appendix D
PLFSYSEFF	Effluent from the treatment system	Quarterly grabs	VOCs, isotopic U, total and dissolved metals, SVOCs	see Figure 11 in Appendix D
PLFPONDEFF	Landfill Pond at the downstream (east) end	As needed; triggered by data evaluation	As needed; determined by decision rule	see Figure 11 in Appendix D

Note: Nitrate is analyzed as nitrate+nitrite as N.



Note: PLFSYSEFF serves as both the treatment system effluent monitoring location and a performance surface-water monitoring location.

Figure 3-42. PLFTS Monitoring Locations

Data Evaluation

Analytical results for the treatment system effluent (PLFSYSEFF) are compared to the appropriate surface-water standards listed in Table 1 of Attachment 2 to RFLMA. Table 3-36 lists the sample results that were greater than the applicable surface-water standard in CY 2007.

Table 3-36. PLFTS Effluent (PLFSYSEFF): Summary of CY 2007 Grab Sampling Analytical Results Exceeding RFLMA Surface-Water Standards

Analyte	Sample Date	Result	Units	RFLMA Standard	Basis for Standard[a]
Vinyl chloride	5/1/07	0.803	µg/L	0.023 (PQL = 0.2)	W+F
	6/5/07	1.40	µg/L	0.023 (PQL = 0.2)	W+F
	7/25/07	0.888	µg/L	0.023 (PQL = 0.2)	W+F
	8/31/07	0.610	µg/L	0.023 (PQL = 0.2)	W+F
Selenium	5/1/07	8.5	µg/L	4.6	AL
	6/5/07	5.0	µg/L	4.6	AL

Note: [a]Basis acronyms: W+F = Water plus Fish; AL = Aquatic Life.

For Se at PLFSYSEFF (Table 3-36), three consecutive months with Se results greater than the standard were not observed and sampling of the Landfill Pond was not triggered. The three consecutive months of VC results greater than the PQL at PLFSYSEFF (Table 3-36) did, however, subsequently trigger sampling of the Landfill Pond (PLFPONDEFF) per the RFLMA flow chart (Table 3-37 for detail). This sample was collected on September 6, 2007; VC was not detected in that sample.

Table 3-37. PLFTS Effluent (PLFSYSEFF): Summary of Monthly Analytical Results

Analyte	Sample Date	Result	Units
Vinyl chloride	**5/1/07**	**0.803**	**µg/L**
	6/5/07	1.40	µg/L
	7/25/07	0.888	µg/L
	Status:	Sampled Landfill Pond on 9/6/07; vinyl chloride was not detected.	

Note: The initial result triggering monthly sampling is shown in **bold**.

3.1.2.11 Pre-Discharge Monitoring

This monitoring objective deals with pre-discharge sampling of Ponds A-4, B-5, and C-2, or any other upstream pond functioning as a terminal pond, as a BMP to indicate compliance with surface water-quality standards (see Table 1 of Attachment 2 to RFLMA) at the downstream POCs. Pre-discharge samples are collected at Ponds A-4, B-5, and C-2 on North Walnut Creek, South Walnut Creek, and Woman Creek, respectively. These locations are shown on Figure 3-43. Sampling and data evaluation protocols are summarized in Table 3-38.

Table 3-38. Sampling and Data Evaluation Protocols at Pre-Discharge Monitoring Locations

Location Code	Location Description	Sample Types/ Frequencies	Analytes	Data Evaluation
A4 POND	Pond A-4 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U[a], nitrate	Consultation with regulators prior to discharge
B5 POND	Pond B-5 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U, nitrate	Consultation with regulators prior to discharge
C2 POND	Pond C-2 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U	Consultation with regulators prior to discharge

Notes: [a]Isotopes U-233,234; U-235; U-238.
Nitrate is analyzed as nitrate+nitrite; the nitrate+nitrite result is conservatively compared to the nitrate standard only.

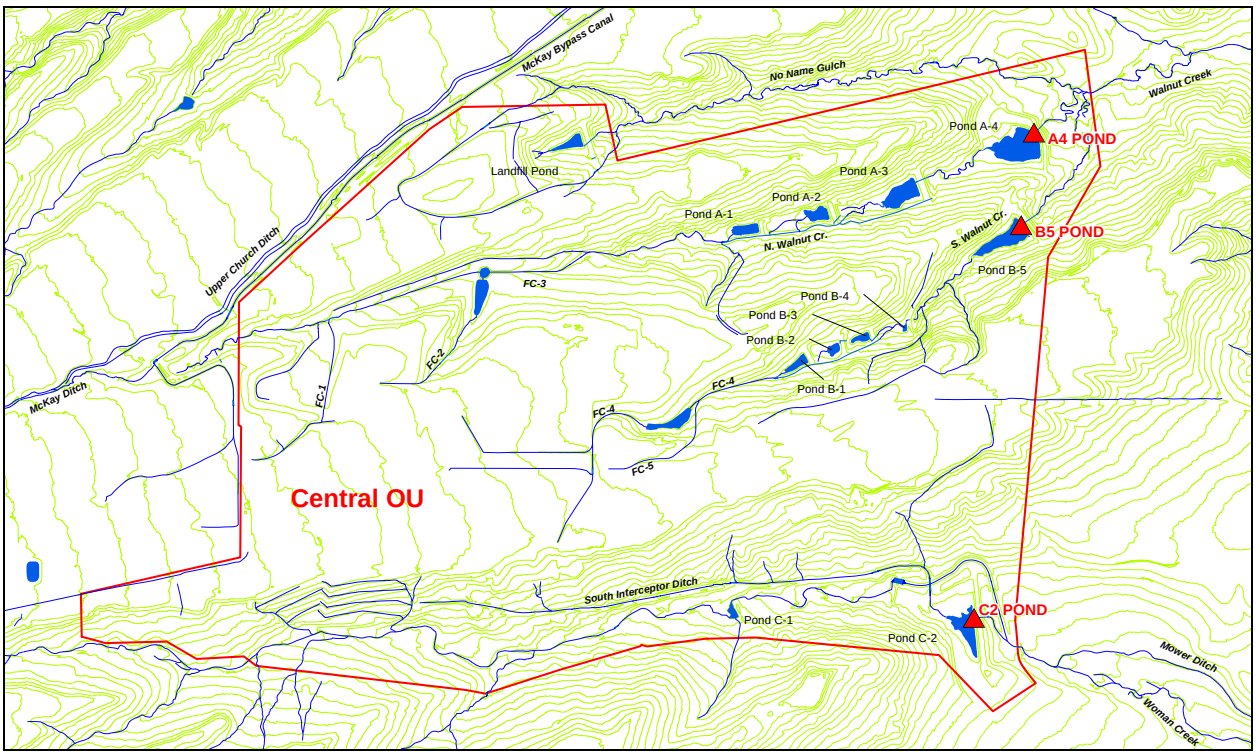


Figure 3-43. Pre-Discharge Sampling Locations

Data Evaluation

During CY 2007, pre-discharge samples were collected at Ponds A-4 and B-5. All data suggested, and was subsequently confirmed by POC sampling (see Section 3.1.2.1), that the planned discharges would not result in reportable compliance values at the downstream POCs.

3.1.3 Rocky Flats Hydrology

The following section provides information for all automated surface-water monitoring and precipitation gage locations at the Site that operated during CY 2007. For locations with continuous flow measurement, graphical discharge summaries are provided. Graphical summaries are also provided for all precipitation gage locations. Numerical discharge and precipitation values are included in the tables in Appendix A.

Table 3-38. Sampling and Data Evaluation Protocols at Pre-Discharge Monitoring Locations

Location Code	Location Description	Sample Types/ Frequencies	Analytes	Data Evaluation
A4 POND	Pond A-4 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U[a], nitrate	Consultation with regulators prior to discharge
B5 POND	Pond B-5 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U, nitrate	Consultation with regulators prior to discharge
C2 POND	Pond C-2 at east end of pond near outlet works	Prior to discharge	Pu, Am, isotopic U	Consultation with regulators prior to discharge

Notes: [a]Isotopes U-233,234; U-235; U-238.
Nitrate is analyzed as nitrate+nitrite; the nitrate+nitrite result is conservatively compared to the nitrate standard only.

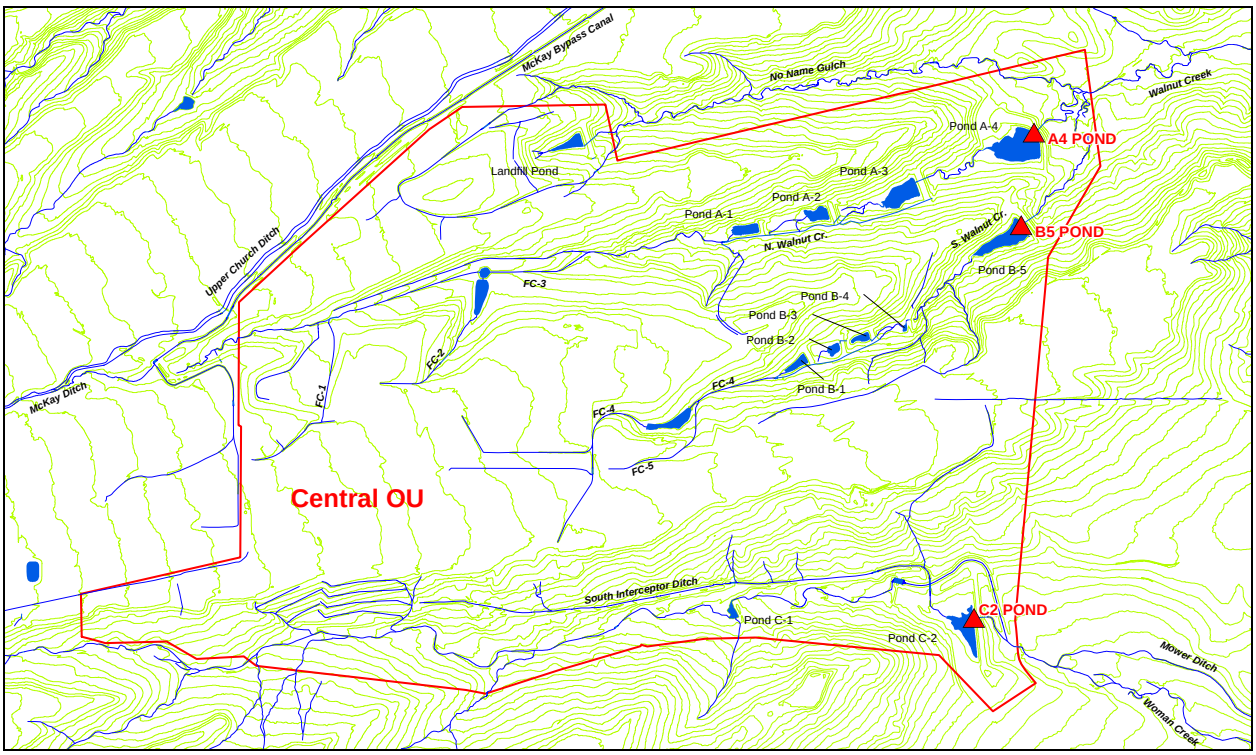


Figure 3-43. Pre-Discharge Sampling Locations

Data Evaluation

During CY 2007, pre-discharge samples were collected at Ponds A-4 and B-5. All data suggested, and was subsequently confirmed by POC sampling (see Section 3.1.2.1), that the planned discharges would not result in reportable compliance values at the downstream POCs.

3.1.3 Rocky Flats Hydrology

The following section provides information for all automated surface-water monitoring and precipitation gage locations at the Site that operated during CY 2007. For locations with continuous flow measurement, graphical discharge summaries are provided. Graphical summaries are also provided for all precipitation gage locations. Numerical discharge and precipitation values are included in the tables in Appendix A.

Groundwater hydrology is also addressed. This includes a discussion of groundwater levels in various areas of interest via the preparation of hydrographs and potentiometric surface maps. Flow velocities are also calculated. Hydrographs for monitoring wells are included in Appendix A.4.

3.1.3.1 General Hydrologic Setting

Streams and seeps at the Site are largely ephemeral, with stream reaches gaining or losing flow, depending on the season and precipitation amounts. Surface-water flow across the Site is primarily from west to east, with three major drainages traversing the Site. Fourteen ponds (plus several small stock ponds) collect surface-water runoff, although only 12 ponds are within the COU and maintained by DOE-LM. The Site drainages and ponds, including their respective pertinence to this report, are described below and shown on Figure 3-44.

The major stream drainages leading out of the Refuge, from north to south, are Rock Creek, Walnut Creek, and Woman Creek. North Walnut Creek flows through the A-Series Ponds and South Walnut Creek flows through the B-Series Ponds; both are tributaries to Walnut Creek. The hydrologic routing diagram (as of December 31, 2007) for the locations included in this report is shown on Figure 3-45.

The groundwater hydrology is generally characterized by relatively thin, shallow saturated materials (in the COU, typically on the order of a few dozen feet thick and less than 50 feet deep). This shallow saturated interval occurs within the unconsolidated Rocky Flats Alluvium, hillslope colluvium, valley-fill alluvium, artificial fill, and the weathered portion of the underlying bedrock. Collectively, these materials are referred to as the upper hydrostratigraphic unit (UHSU). Regionally, groundwater flows from west to east within the UHSU of the pediment surfaces, except where locally diverted toward generally east-west trending drainages that bisect these pediments. Groundwater typically discharges at seeps and springs along pediment edges, or as baseflow to surface water. Vertical flow is sharply limited by the low-permeability claystones underlying the unconsolidated surficial materials. This underlying low-permeability bedrock surface comprises the Arapahoe and Laramie Formations, which are typically undifferentiated; the gentle eastward dip of the unconformity marking the contact between this bedrock and the overlying unconsolidated surficial materials acts to direct the groundwater flow. Locally, this bedrock may include sandstone lenses that subcrop or are sufficiently shallow to be included in the UHSU. For a more thorough description of the hydrogeology at Rocky Flats, refer to EG&G (1995a).

Surface Water

Walnut Creek

Walnut Creek receives surface-water flow from the central third of the Refuge, including the majority of the COU. It consists of several tributaries: McKay Ditch, No Name Gulch, North Walnut Creek, and South Walnut Creek. These tributaries join Walnut Creek upstream of the Refuge’s eastern boundary (Indiana Street). East of Indiana Street, Walnut Creek flows through a diversion structure normally configured to divert flow to the Broomfield Diversion Ditch around

Great Western Reservoir and into Big Dry Creek. The Walnut Creek tributaries, from north to south, are described below.

McKay Ditch

The McKay Ditch was formerly a tributary to Walnut Creek within the Refuge boundary, but was diverted in July 1999 into a new pipeline to keep McKay Ditch water from commingling with water in Walnut Creek upstream of Indiana Street. Although no longer a contributor to Walnut Creek, the McKay Ditch drainage is described here to clarify water routing. The new configuration allows the City of Broomfield to direct water from the South Boulder Diversion Canal, across the northern portion of the Refuge and directly into Great Western Reservoir, without entering Walnut Creek. This configuration prevents the commingling of McKay Ditch water with discharged water from the Site ponds. McKay Ditch (as well as both the McKay Bypass Canal and McKay Bypass Pipeline) are outside the COU; these features are not maintained by DOE-LM.

No Name Gulch

This drainage is located downstream of the Landfill Pond. A surface-water diversion ditch is constructed around the perimeter of the PLF to divert surface-water runoff around the landfill area to No Name Gulch. Effluent from the PLFTS and runoff from the area surrounding the Landfill Pond are the sole surface-water sources to the Landfill Pond. The Landfill Pond is normally operated in a flow-through configuration, although the pool level often drops below the outlet works.

North Walnut Creek

Runoff from the northern portion of the COU flows into this drainage, which has four ponds (Ponds A-1, A-2, A-3, and A-4). The combined capacity of the A-Series Ponds is approximately 197,000 cubic meters (m^3) (52 million gallons or 160 acre-feet [ac-ft]). In the normal operational configuration, Ponds A-1 and A-2 are bypassed and maintained for supplemental stormwater control and wetland habitat; evaporation or transfer controls water levels in these ponds. North Walnut Creek flow is diverted around Ponds A-1 and A-2 to Pond A-3 for retention. Pond A-3 is discharged in batches to the A-Series “terminal pond” Pond A-4. If routine discharge of retained water is warranted, Pond A-4 is isolated, sampled, and water is released if surface water-quality criteria are met. Criteria for emergency discharge, regardless of pre-discharge pond sampling results, are detailed in the *Emergency Response Plan for Rocky Flats Site Dams* (ERP) (DOE 2007a).

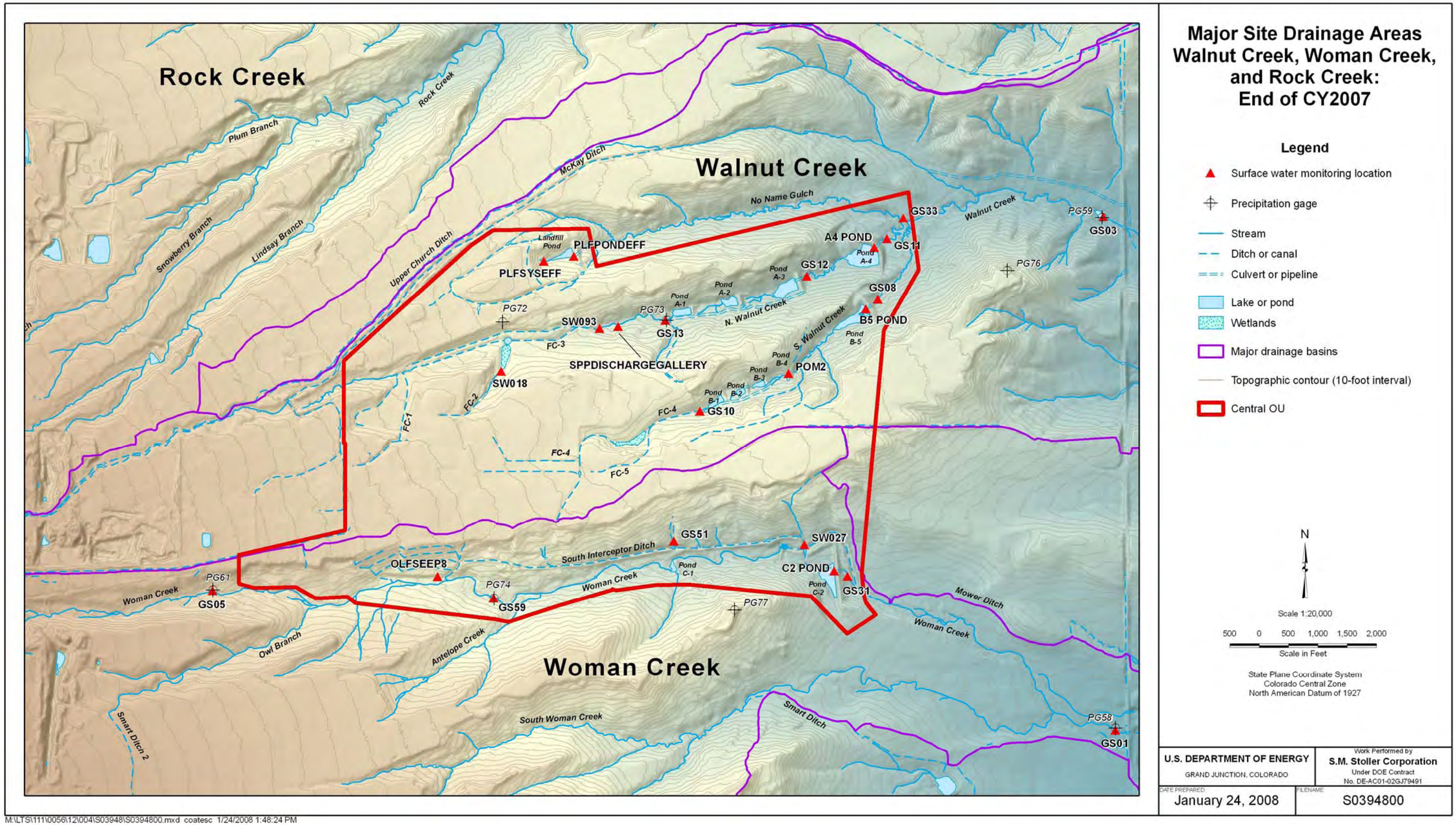


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Figure 3-44. Major Site Drainage Areas - Walnut Creek, Woman Creek, and Rock Creek: End of CY 2007

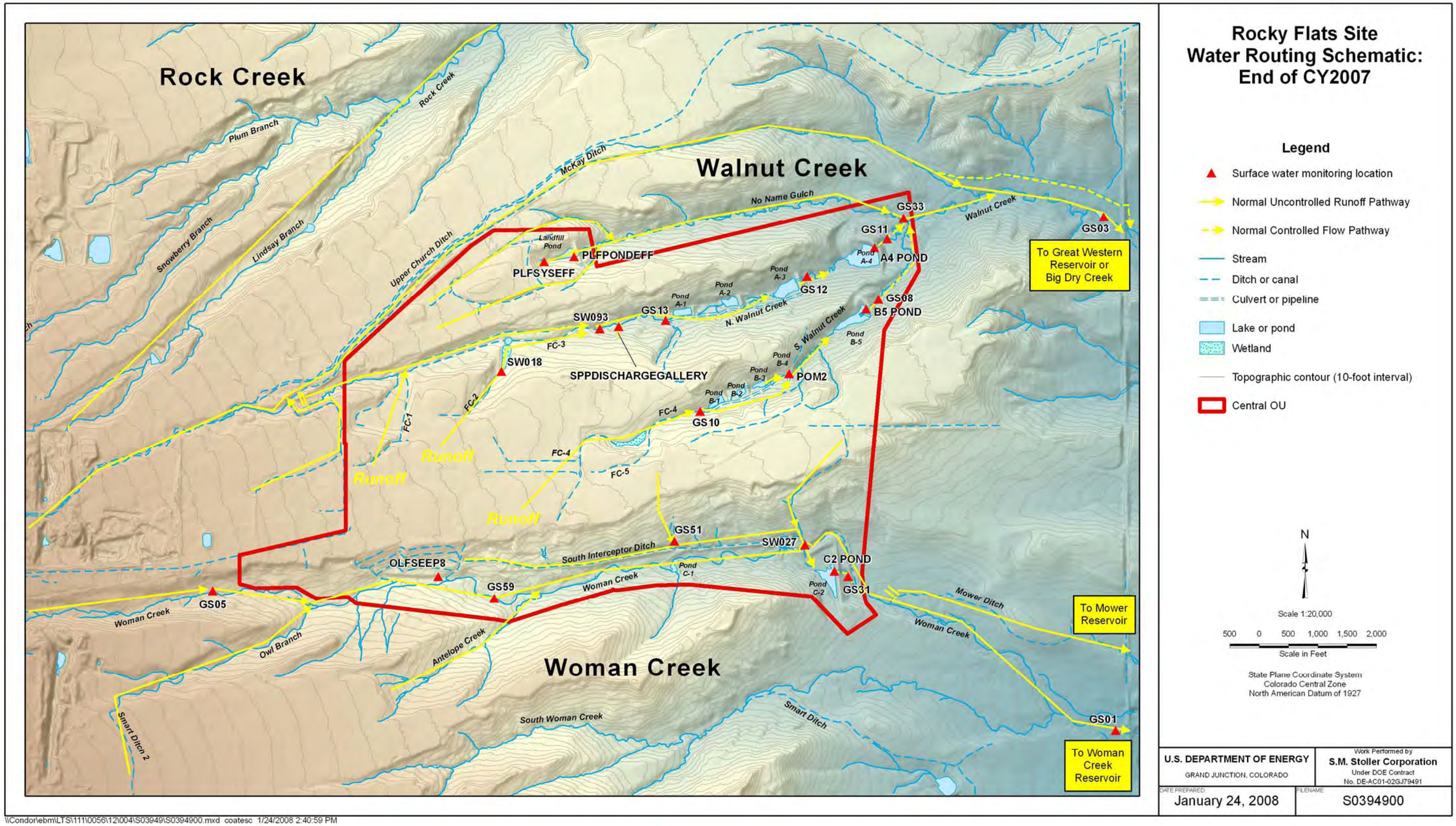


Figure 3-45. Rocky Flats Site Water Routing Schematic: End of CY 2007

South Walnut Creek

Runoff from the central portion of the COU flows into this drainage, which has five ponds (Ponds B-1, B-2, B-3, B-4, and B-5). The combined capacity of the South Walnut Creek B-Series Ponds is approximately 102,000 m^3 (27 million gallons or 83 ac-ft). Ponds B-1, B-2, and B-3 are bypassed and maintained for supplemental stormwater control and wetland habitat; evaporation or transfer controls water levels in these ponds. South Walnut Creek flow is diverted around Ponds B-1, B-2, and B-3 and into Pond B-4, which flows directly into "terminal pond" Pond B-5. If routine discharge of retained water is warranted, Pond B-5 is sampled and water is released if surface water-quality criteria are met. Criteria for emergency discharge, regardless of pre-discharge pond sampling results, are detailed in the ERP.

Woman Creek

South of the COU is Woman Creek, which flows through Pond C-1 and off Site onto Refuge lands toward Indiana Street. The Woman Creek drainage basin extends eastward from the base of the foothills, near Coal Creek Canyon, to Standley Lake. In the current configuration, Woman Creek flows into the Woman Creek Reservoir located east of Indiana Street and upstream of Standley Lake, where the water is held until it is pump-transferred to Big Dry Creek by the Woman Creek Reservoir Authority.

South Interceptor Ditch

In the southern portion of the COU, and tributary to Woman Creek, is the SID drainage. Surface-water runoff from the southern portion of the COU is captured by the SID, which flows from west to east into Pond C-2. If routine discharge of retained water is warranted, Pond C-2 is sampled and water is released to Woman Creek if surface water-quality criteria are met. Criteria for emergency discharge, regardless of pre-discharge pond sampling results, are detailed in the ERP.

Other Drainages

The third major drainage, other than Walnut and Woman Creeks, is Rock Creek. The Rock Creek drainage covers the northwestern portion of the Refuge. East-sloping alluvial plains to the west, several small stock ponds within the creek bed, and multiple steep gullies and stream channels to the east characterize the drainage channel. This entire basin is outside the COU.

Smart Ditch/South Woman Creek, located south of Woman Creek, is also completely outside the COU. The D-Series Ponds (D-1 and D-2) are located on Smart Ditch. This drainage and these ponds are not maintained by DOE-LM.

3.1.3.2 Surface-Water Hydrologic Data Presentation

Flow Data Collection and Computation

Data obtained at a continuous surface-water gaging station on a stream or conveyance, such as an irrigation ditch, consist of a continuous record of stage,[13] individual measurements of flow

[13] Stage is the water level (in units such as feet or meters) in a conveyance structure.

throughout a range of stages, and notations regarding factors that might affect the relation of stage to flow rate. These data, together with supplemental information such as climatological records, are used to compute daily mean discharges.

Continuous records of stage are obtained with electronic recorders that store stage values at selected time intervals or secondarily with radio-telemetry data-collection platforms that transmit near real-time data at selected time intervals to a central database for subsequent processing. Direct field measurements of flow are made with current meters, using methods adapted by the U.S. Geological Survey, or with flumes or weirs that are calibrated to provide a relation of observed stage to flow rate. These methods are described by Carter and Davidian (1968) and by Rantz (1982a, 1982b).

In computing flow records for nonstandard flow-control devices, results of individual measurements are plotted against the corresponding stage, and stage-flow rate relation curves are constructed. From these curves, rating tables indicating the computed flow rate for any stage within the range of the measurements are prepared. For standard devices (e.g., flumes and weirs), rating tables indicating the flow rate for any stage within the range of the device are prepared based on the geometry of the device. If it is necessary to define extremes of flow outside the range of the device, the curves can be extended using (1) logarithmic plotting, (2) velocity-area studies, (3) results of indirect measurements of peak flow rate, such as slope-area or contracted-opening measurements, and computation of flow over dams or weirs, or (4) step-back-water techniques.

Daily mean discharges are computed by averaging the individual flow measurements using the stage-flow rate curves or tables. If the stage-flow rate relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual flow rate measurements and notes by the personnel making the measurements are applied to the gage heights before the flow rates are determined from the curves or tables. This shifting-control method also is used if the stage-flow rate relation is changed temporarily because of aquatic vegetation growth or debris on the control. For some gaging stations, formation of ice in the winter can obscure the stage-flow rate relations so that daily mean discharges need to be estimated from other information, such as temperature and precipitation records, notes of observations, and records for other gaging stations in the same or nearby basins for comparable periods.

For most gaging stations, there may be periods when no gage-height record is obtained or the recorded gage height is faulty so that it cannot be used to compute daily mean discharge or contents. This record loss occurs when recording instruments malfunction or otherwise fail to operate properly, intakes are plugged, the stilling well is frozen, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, field discharge measurements, climatological records, and comparison with other gaging-station records from the same or nearby basins. Information explaining how estimated daily discharge values are identified in gaging-station records is provided in the “Identifying Estimated Daily Discharge” section.

Data Presentation

The information published for each continuous-record surface-water gaging station consists of six parts: the station description, a map showing the drainage area for the station, a plot of the daily mean discharge for the CY(s), a table of daily mean discharge values for the CY with summary data, a tabular statistical summary of monthly mean discharge data for the CY, and a summary statistics table that includes statistical data of annual discharge and runoff. The tables are included in Appendix A, while the other information is presented below.

Station Description

The station description provides, under various headings, descriptive information included gaging-station location, drainage area, period of record, and gage information. The following information is provided:

- Location—This entry provides the gaging-station state plane coordinates and geographic location. Gaging station state plane coordinates were obtained by geographic positioning system or digitized from Site geographic information system (GIS) coverages.
- Drainage Area—This entry provides the drainage area (in acres) of the gaged basin. If, because of unusual natural conditions or artificial controls, some part of the basin does not contribute flow to the total flow measured at the gage, the noncontributing drainage area also is identified. Drainage area is usually measured using digital techniques and the most accurate maps available. Because the type of map available might vary from one drainage basin to another, the accuracy of digitized drainage areas also can vary. Drainage areas are updated as better maps become available. Some of the gaging stations included in this report measure stage and flow rate in channels that convey water to or from reservoirs or other features; these channels might have little or no contributing drainage area. Drainage areas in this report were provided by Site GIS coverages.[14]
- Period of Record—This entry provides the period for which the Site has been collecting records at the gage. This entry includes the month and year of the start of collection of hydrologic records by the Site and the words “to current year” if the records are to be continued into the following year.
- Gage—This entry provides the type of gage currently in use, and a condensed history of the types and locations of previous gages.

Daily Mean Discharge Values

The daily mean discharge values computed for each gaging station during a CY are listed in the body of the data tables in Appendix A. In the monthly “Flow Rate” summary part of the table, the line headed “Average” lists the average flow rate, in cfs, during the month; and the lines headed “Maximum” and “Minimum” list the maximum and minimum daily mean discharges for each month. Total discharge for the month also is expressed in cubic feet (“Cubic Feet”), gallons (“Gallons”), and acre-feet (“Acre-Feet”). The term “Partial Data” denotes a month with incomplete data.

[14] Drainage area maps show Site configuration at the end of CY 2007.

Summary Statistics

A section of the table titled "Annual Summaries for CY07" follows the monthly mean data section. This section provides a statistical summary of annual flow rates and discharge for the labeled CY. The applicable units are to the left of the table value. The term "PARTIAL DATA" denotes a year with incomplete data.

Identifying Estimated Daily Discharge

Estimated daily discharges published in water-discharge tables and figures of this annual report are identified by *italicizing* individual daily values or through color coding in hydrographs. For periods of no data, a gap is shown on the hydrographs.

Other Records Available

Information used in the preparation of the records in this report, such as discharge-measurement notes, gage-height records, and rating tables, are on file. Information on the availability of the unpublished information or on the published statistical analyses is available from personnel involved with data collection at the Site.

3.1.3.3 Surface-Water Discharge Data Summaries

Site-Wide Discharge Summary

Discharge summaries for the two major Site drainages receiving flow from the COU (Walnut and Woman Creeks) are given on Figure 3-46 and Figure 3-47.[15] Walnut Creek flows are measured at GS03 and Woman Creek flows are measured at GS01. Figure 3-48 shows the relative total CY 1997−2007 discharge volumes from the major Site drainages as measured at Site POEs and POCs. Through CY 2004, Walnut Creek discharged larger volumes than Woman Creek due to the contribution of imported water and runoff from impervious surfaces. After final closure in CY 2005, the reduction of discharge in Walnut Creek and the corresponding change in relative volumes is clearly observed.

[15] The pre-closure period is for the dates 1/1/97−10/1/05; the post-closure period is for the dates 10/1/05−12/31/07.

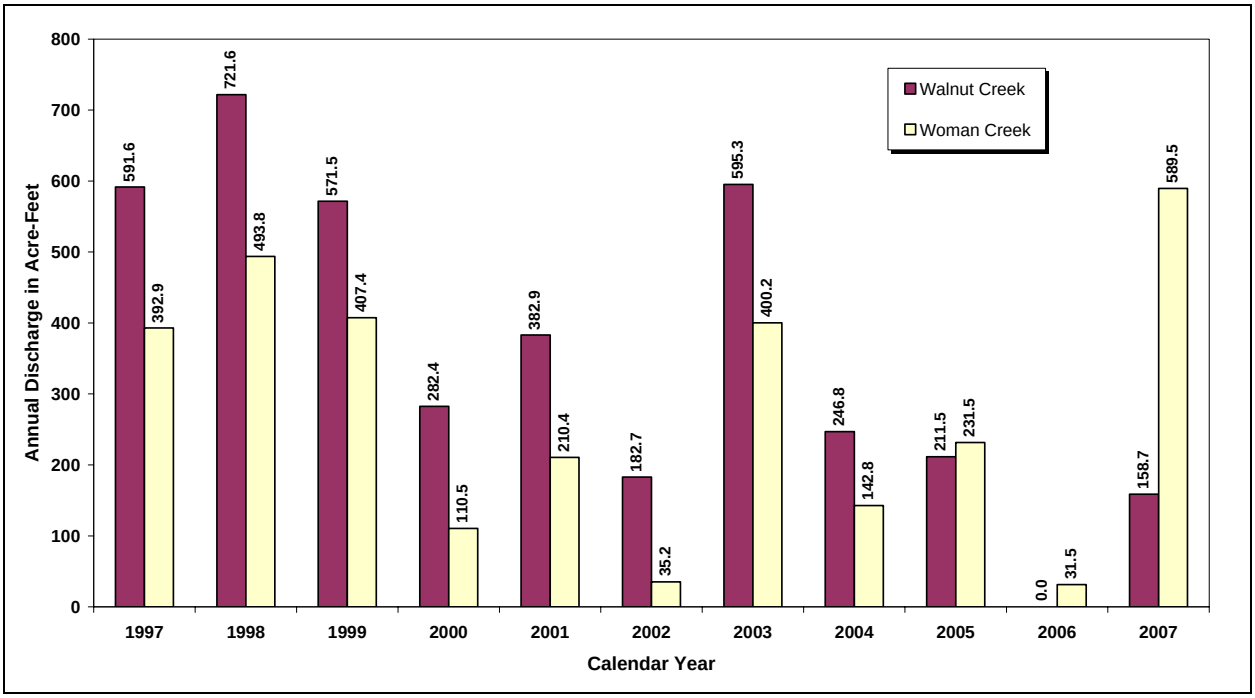


Figure 3-46. Annual Discharge Summary from Major Site Drainages: CY 1997−2007

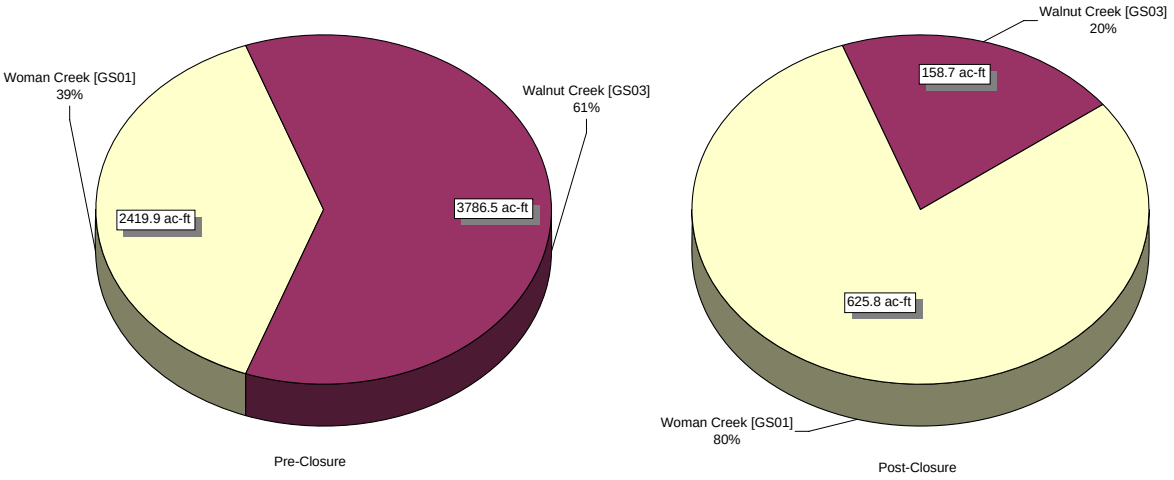


Figure 3-47. Relative Total Discharge Summary from Major Site Drainages: Pre- and Post-Closure Periods

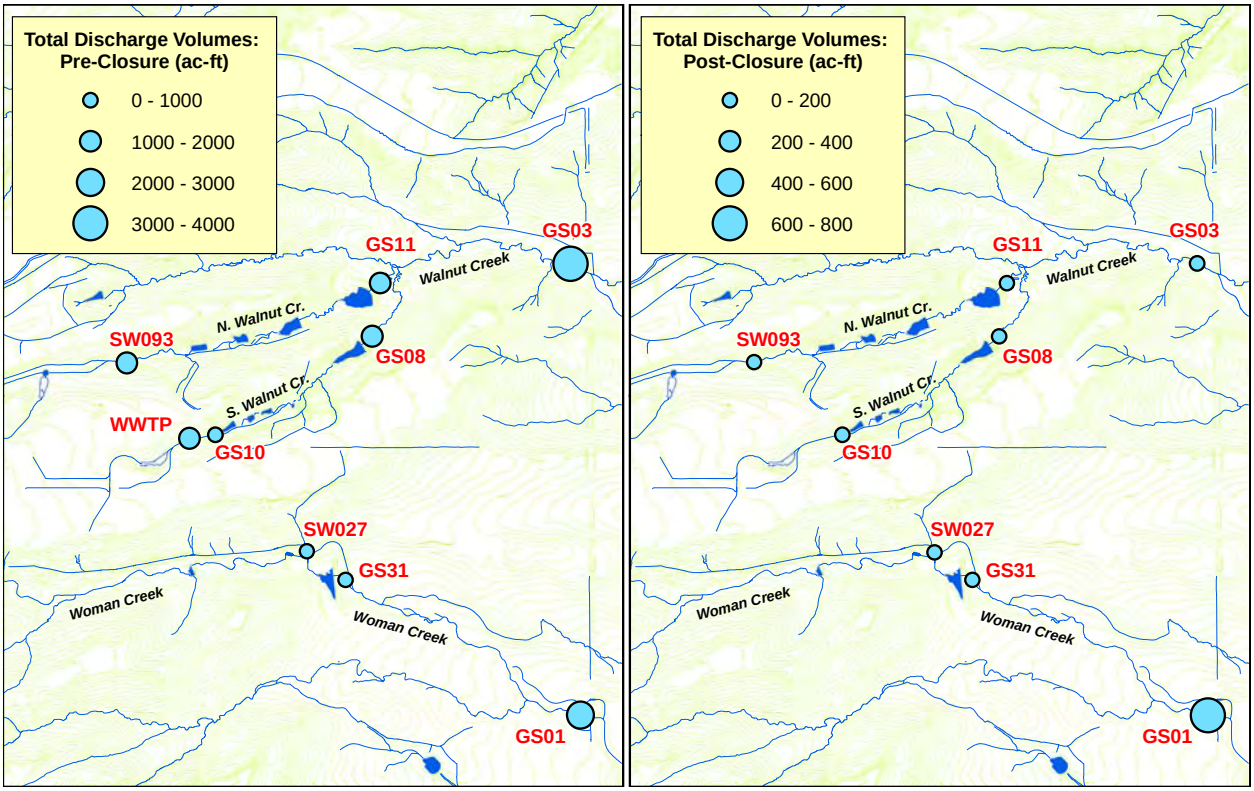
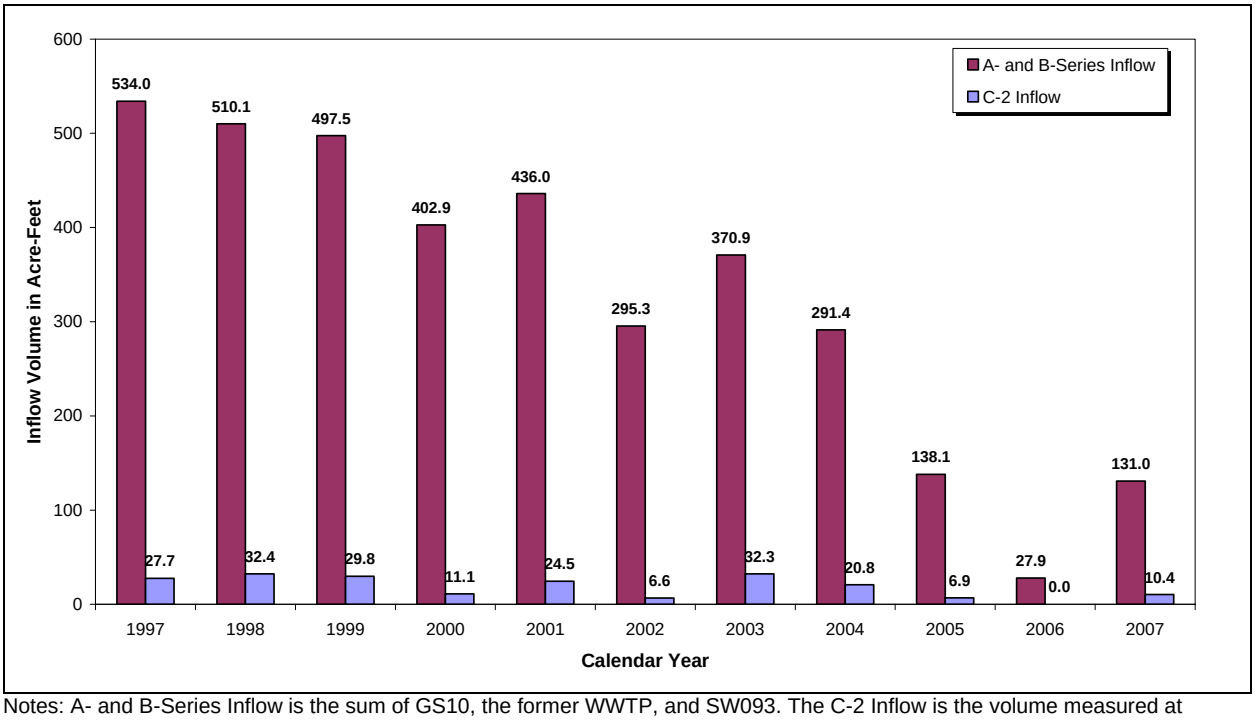


Figure 3-48. Map Showing Relative CY 1997−2007 Discharge Volumes for POEs and POCs: Pre- and Post Closure Periods

Pond Discharge Summary

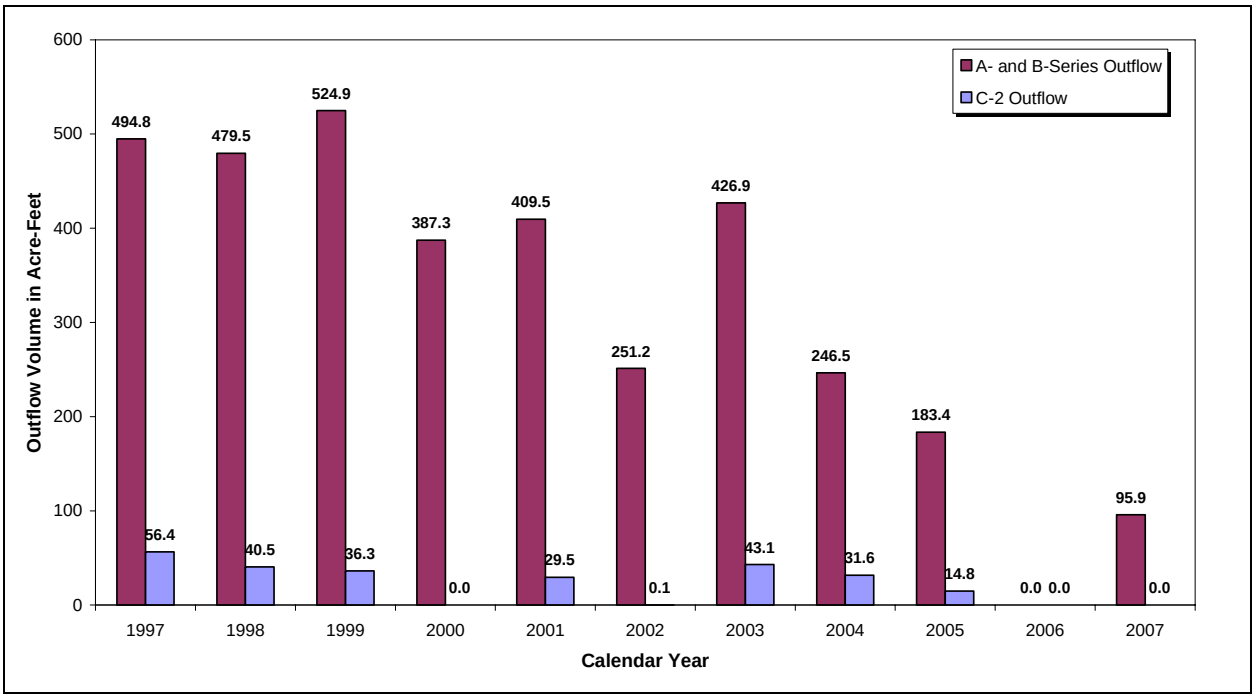
Figure 3-49 and Figure 3-50 show the annual ponds inflows and outflows, respectively. Due to the intermittent pump transfers of Pond B-5 water to Pond A-4, the volumes for the A- and B-Series Ponds are combined. The reduction in pond water volumes as the Site progressed toward closure is clearly observed. Figure 3-51 and Figure 3-52 show the relative total CY 1997−2007 discharge volumes from the ponds (as measured at GS08, GS11, and GS31) and from the major drainages tributary to the ponds (as measured at GS10, SW027, SW091, SW093, and the former Waste Water Treatment Plant [WWTP] [995POE]).[16, 17] Pond inflows do not necessarily equal outflows for any given year due to the storage of water in the ponds across water years, evaporative/seepage losses/gains, and local runoff to the ponds.

[16] The WWTP was removed from service on November 4, 2004.
[17] The pre-closure period is for the dates 1/1/97−10/1/05; the post-closure period is for the dates 10/1/05−12/31/07.



Notes: A- and B-Series Inflow is the sum of GS10, the former WWTP, and SW093. The C-2 Inflow is the volume measured at SW027.

Figure 3-49. Pond Inflows: CY 1997−2007



Notes: A- and B-Series Outflow is the sum of GS11 and GS08. The C-2 Outflow is the volume measured at GS31.

Figure 3-50. Pond Outflows: CY 1997−2007

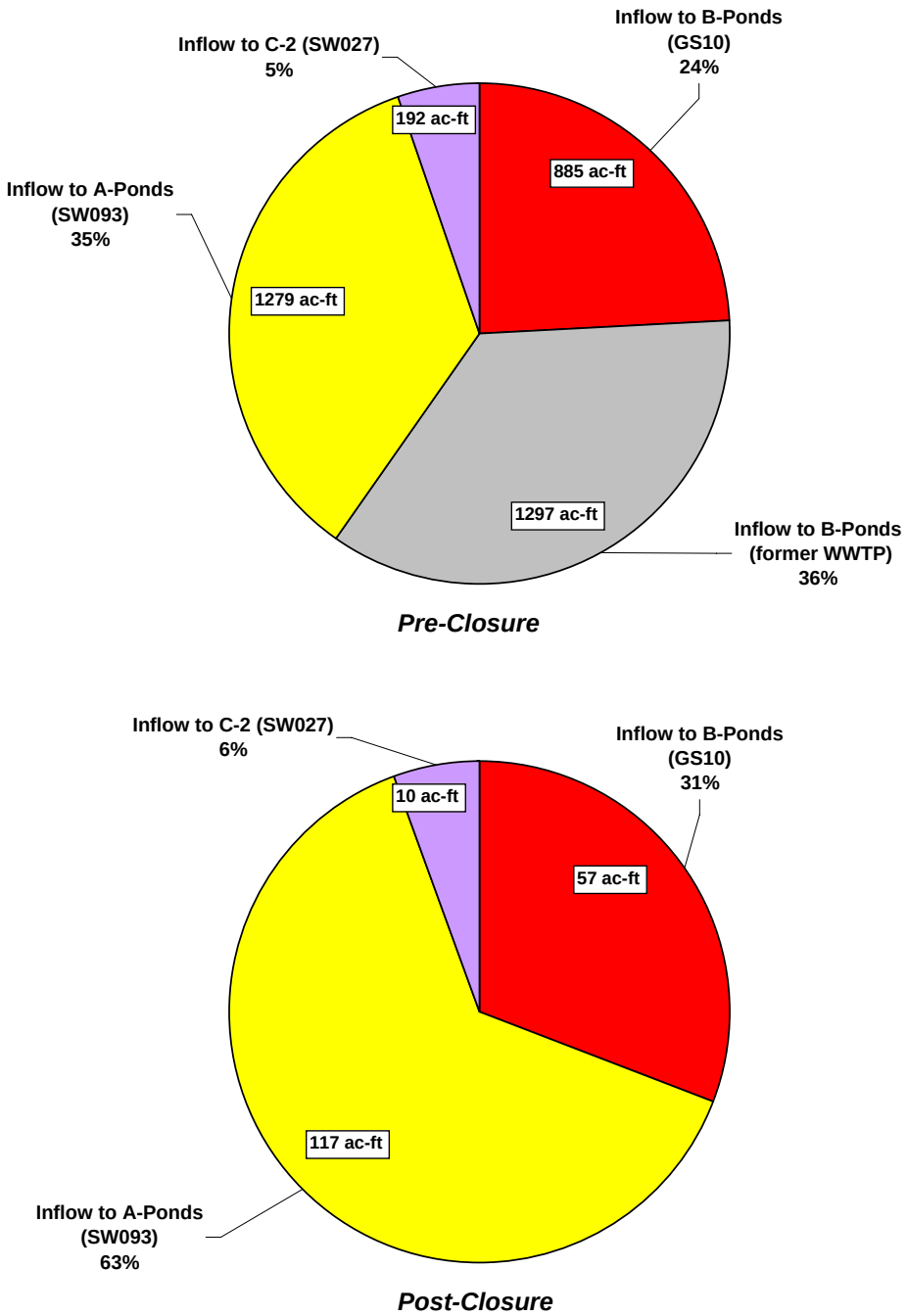


Figure 3-51. Relative Total Inflow Volumes for Site Ponds: Pre- and Post-Closure Periods

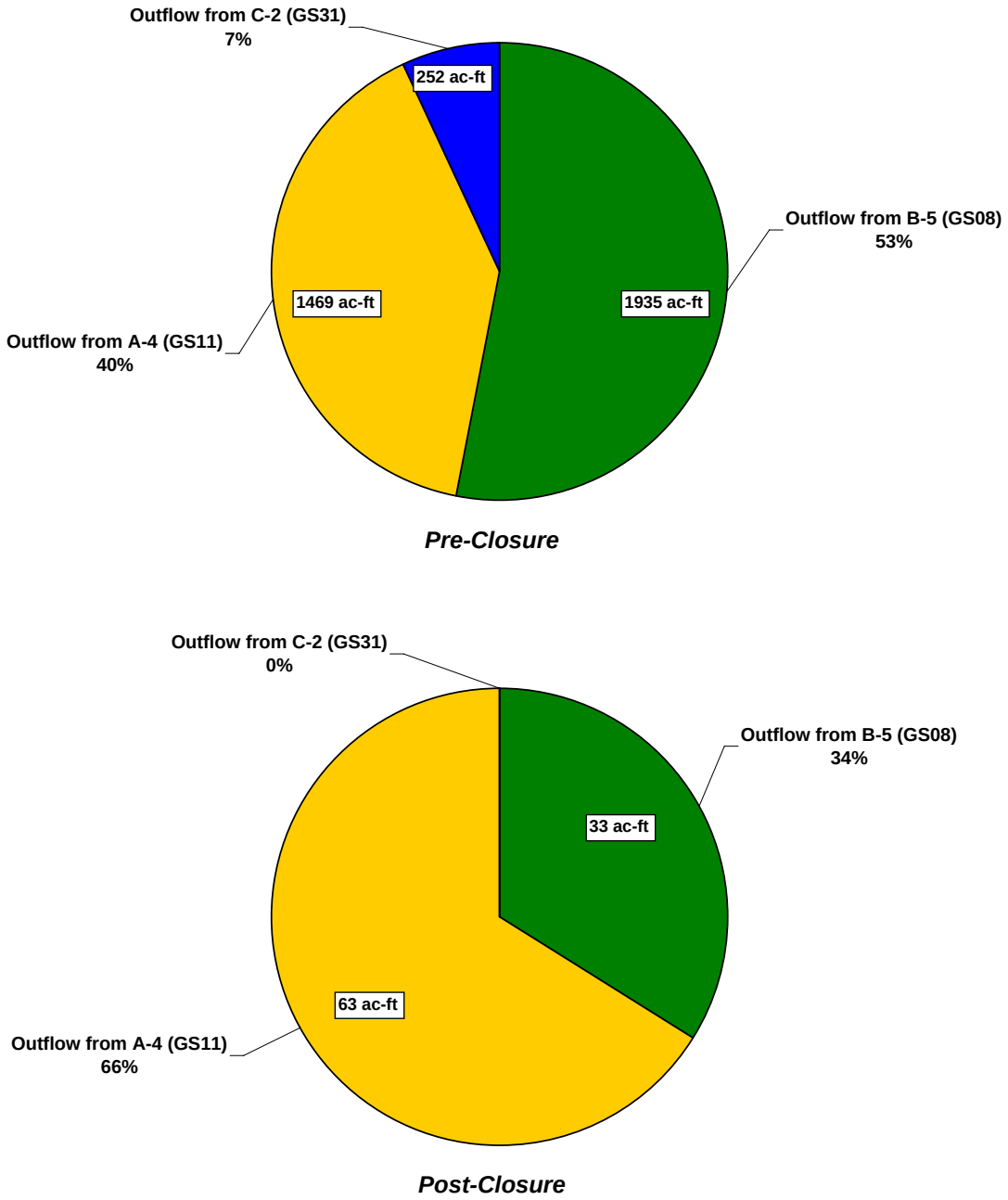


Figure 3-52. Relative Total Outflow Volumes for Site Ponds: Pre- and Post-Closure Periods

GS01: Woman Creek at Indiana Street

Location—Woman Creek 200 feet upstream of Indiana Street; State Plane: E2093824, N744889.

Drainage Area—The basin includes the Woman Creek drainage and southern portions of the COU; areas west of Highway 93 also contribute runoff (total drainage acreage undetermined).

Period of Record—September 16, 1991, to current year.

Gage—Water-stage recorder and 18-inch Parshall flume (flume is located just east of Indiana Street, sampling conducted on Site property); prior to March 24, 1998, flow measurement was at the on-site sampling location using a 9-inch Parshall flume.

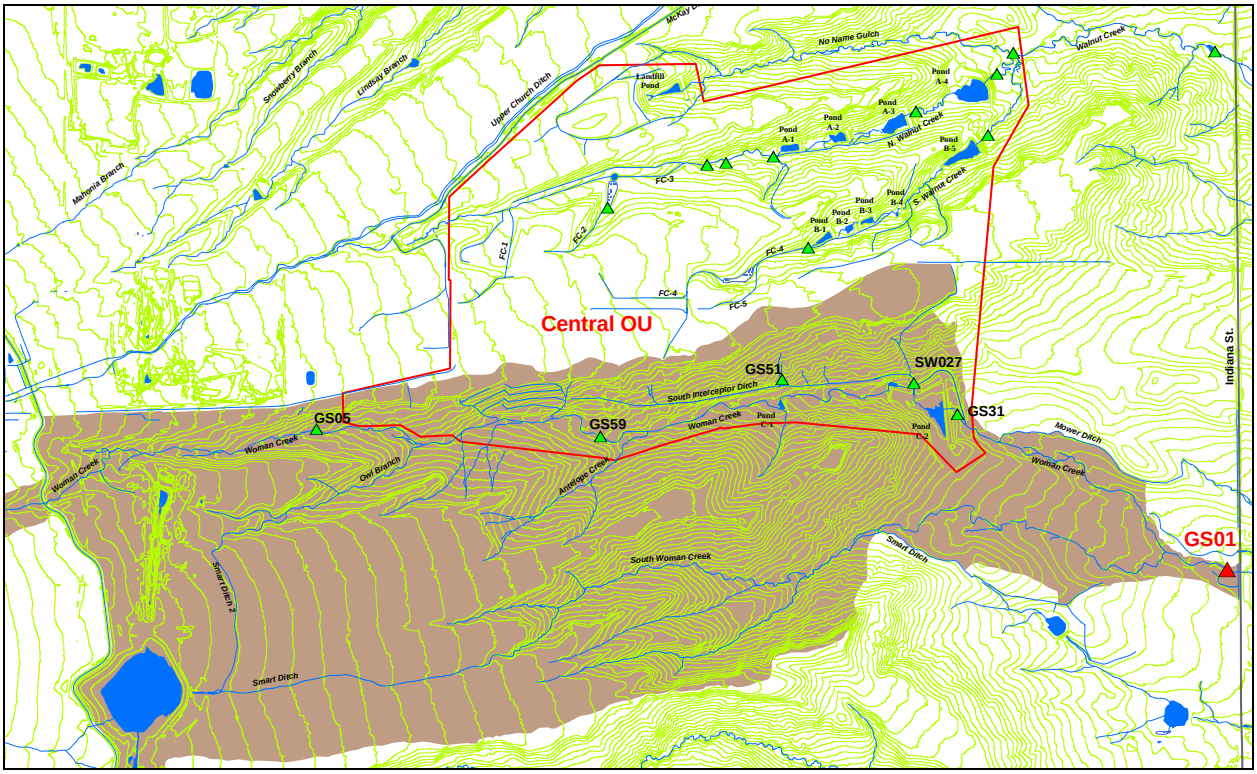


Figure 3-53. GS01 Drainage Area

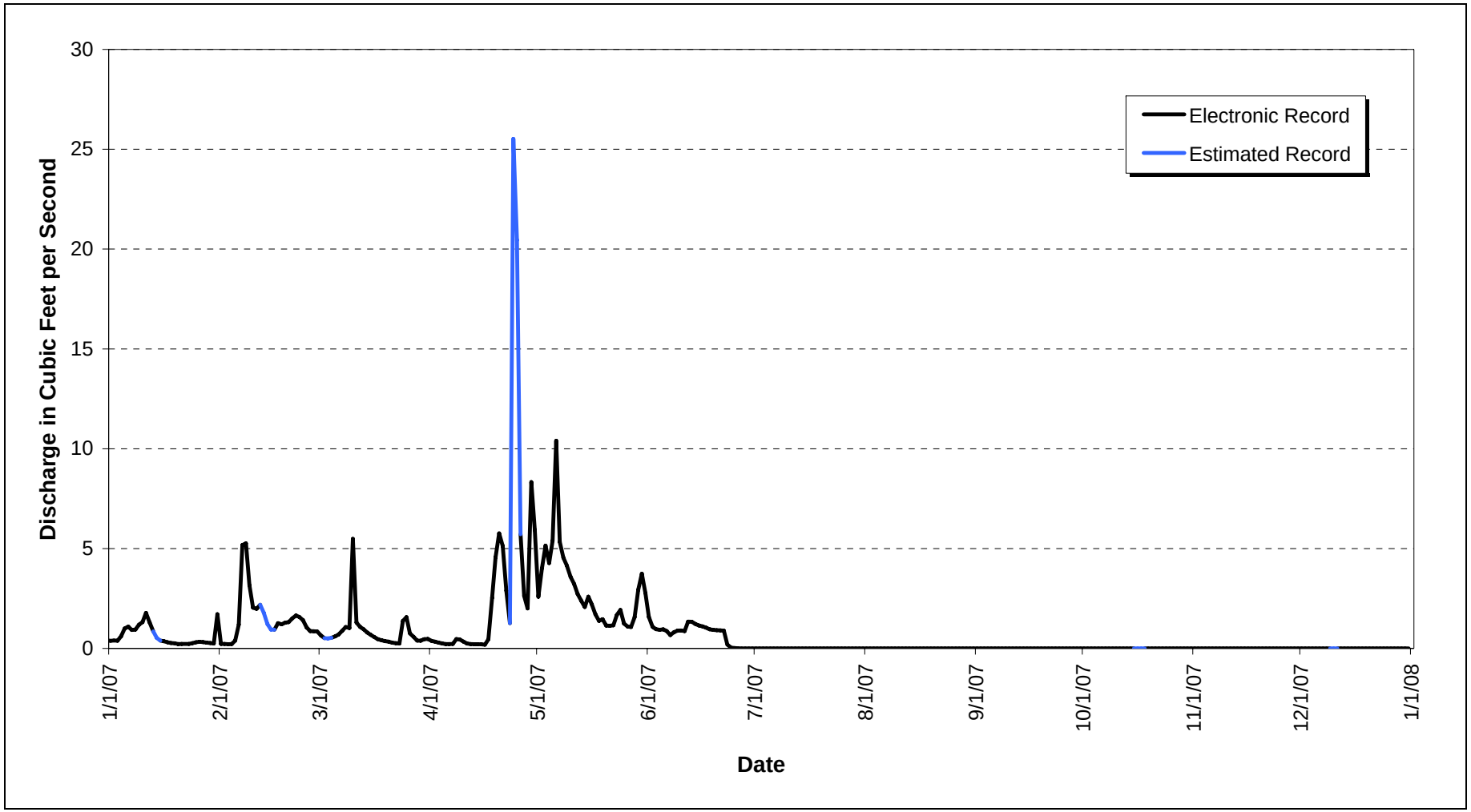


Figure 3-54. CY 2007 Mean Daily Hydrograph at GS01: Woman Creek at Indiana Street

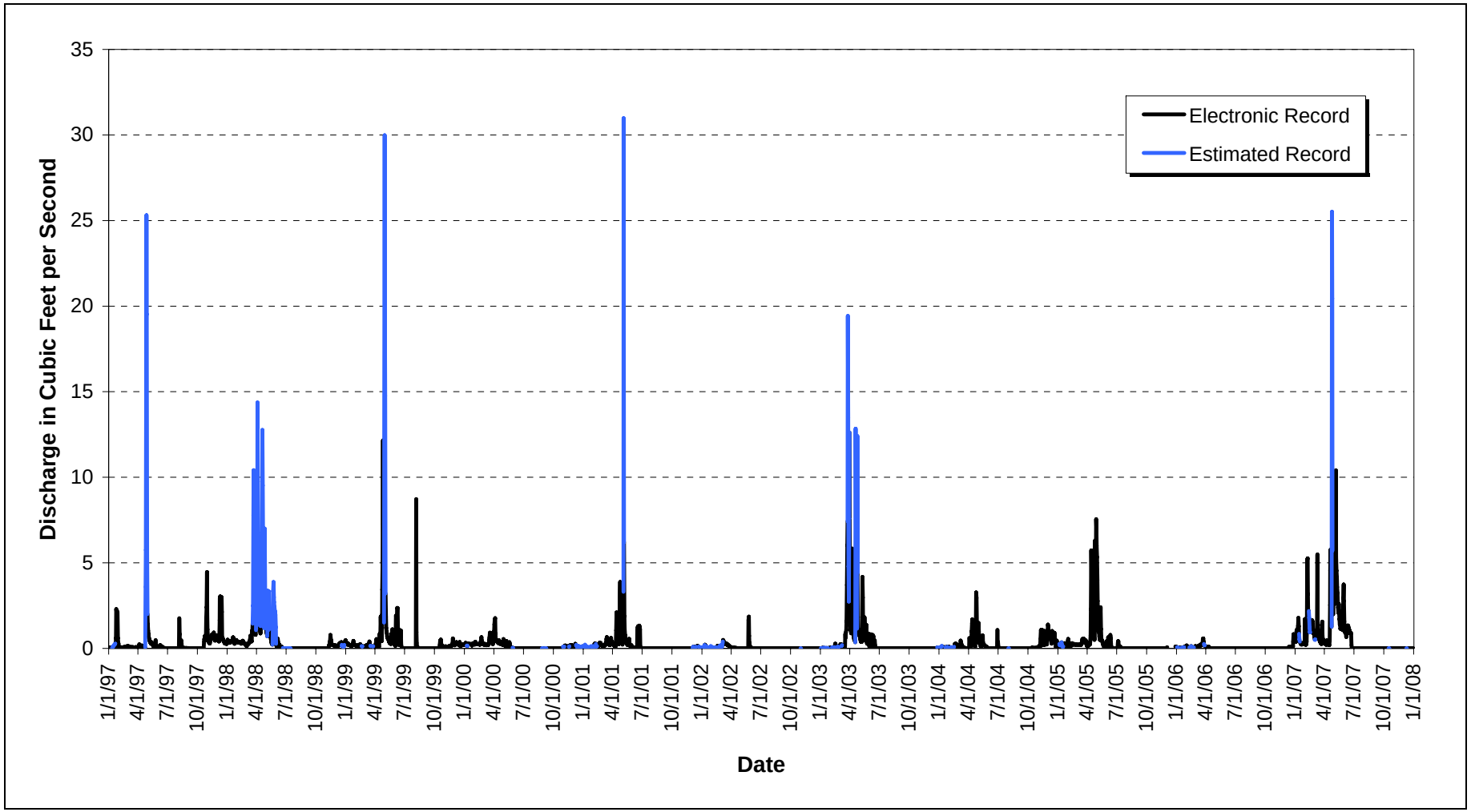


Figure 3-55. CY 1997−2007 Mean Daily Hydrograph at GS01: Woman Creek at Indiana Street

GS03: Walnut Creek at Indiana Street

Location—Walnut Creek at Flume Pond outlet upstream of Indiana Street; State Plane: E2093618, N753646.

Drainage Area—The basin includes the Walnut Creek drainage and the majority of the COU; areas west of Highway 93 also contribute runoff (total drainage acreage undetermined).

Period of Record—September 2, 1991, to current year.

Gage—Water-stage recorder and parallel 6-inch and 36-inch Parshall flumes prior to November 5, 2002. Rated stream section during flume construction (GS03T; November 5, 2002−February 12, 2003). Three-foot HL flume starting February 12, 2003.

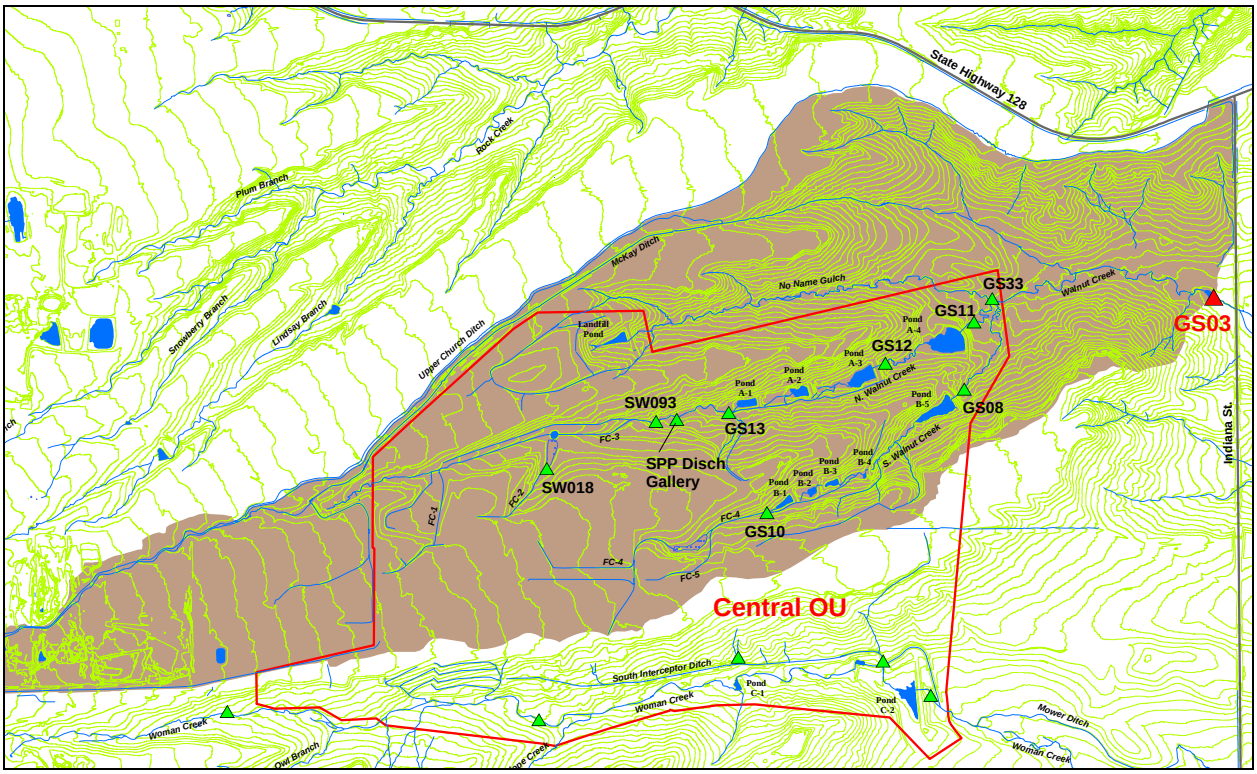


Figure 3-56. GS03 Drainage Area

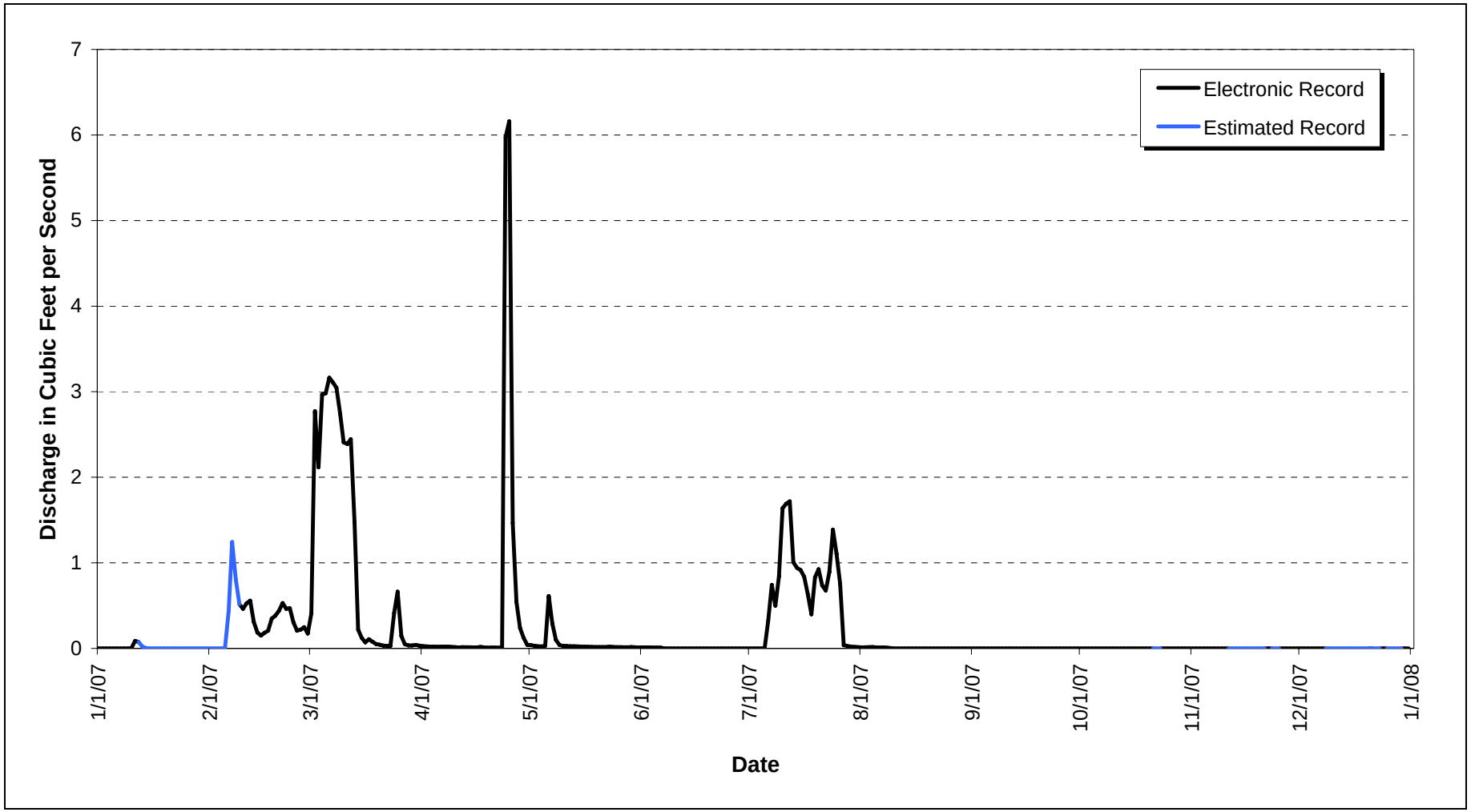


Figure 3-57. CY 2007 Mean Daily Hydrograph at GS03: Walnut Creek at Indiana Street

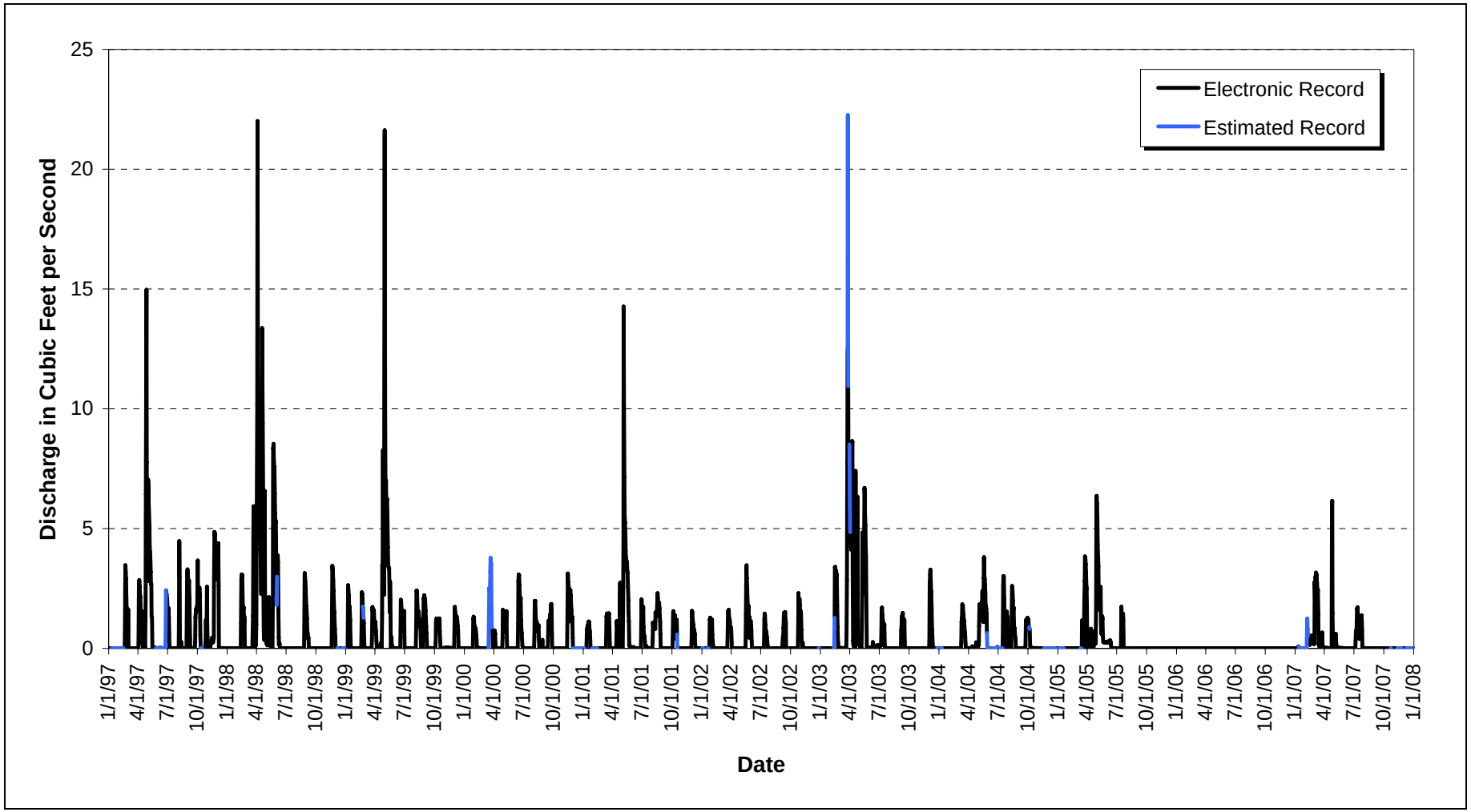


Figure 3-58. CY 1997−2007 Mean Daily Hydrograph at GS03: Walnut Creek at Indiana Street

GS05: North Woman Creek at West Fenceline

Location—Woman Creek east of western Site boundary; State Plane: E2078429, N747264.

Drainage Area—The basin includes a portion of the Woman Creek drainage; areas west of Highway 93 also contribute runoff (total drainage acreage undetermined).

Period of Record—September 23, 1991, to current year.

Gage—Water-stage recorder and 9-inch Parshall flume with weir insert.

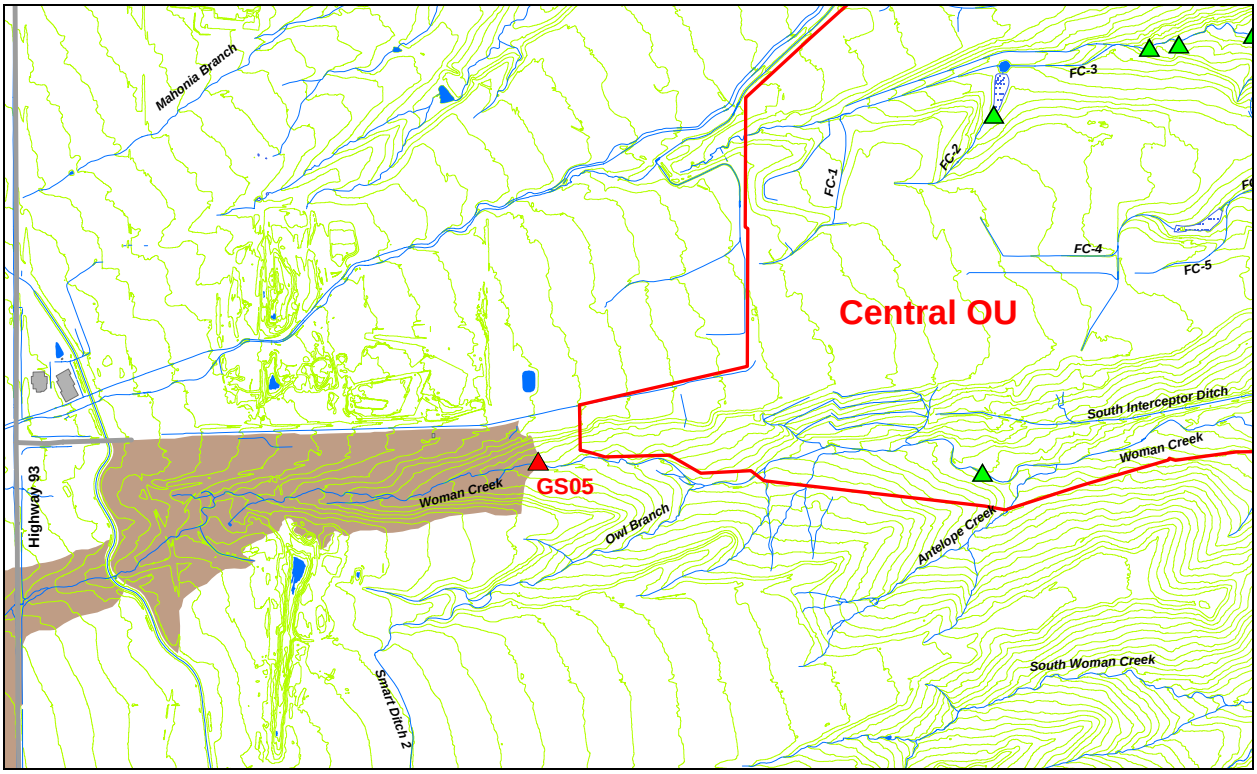


Figure 3-59. GS05 Drainage Area

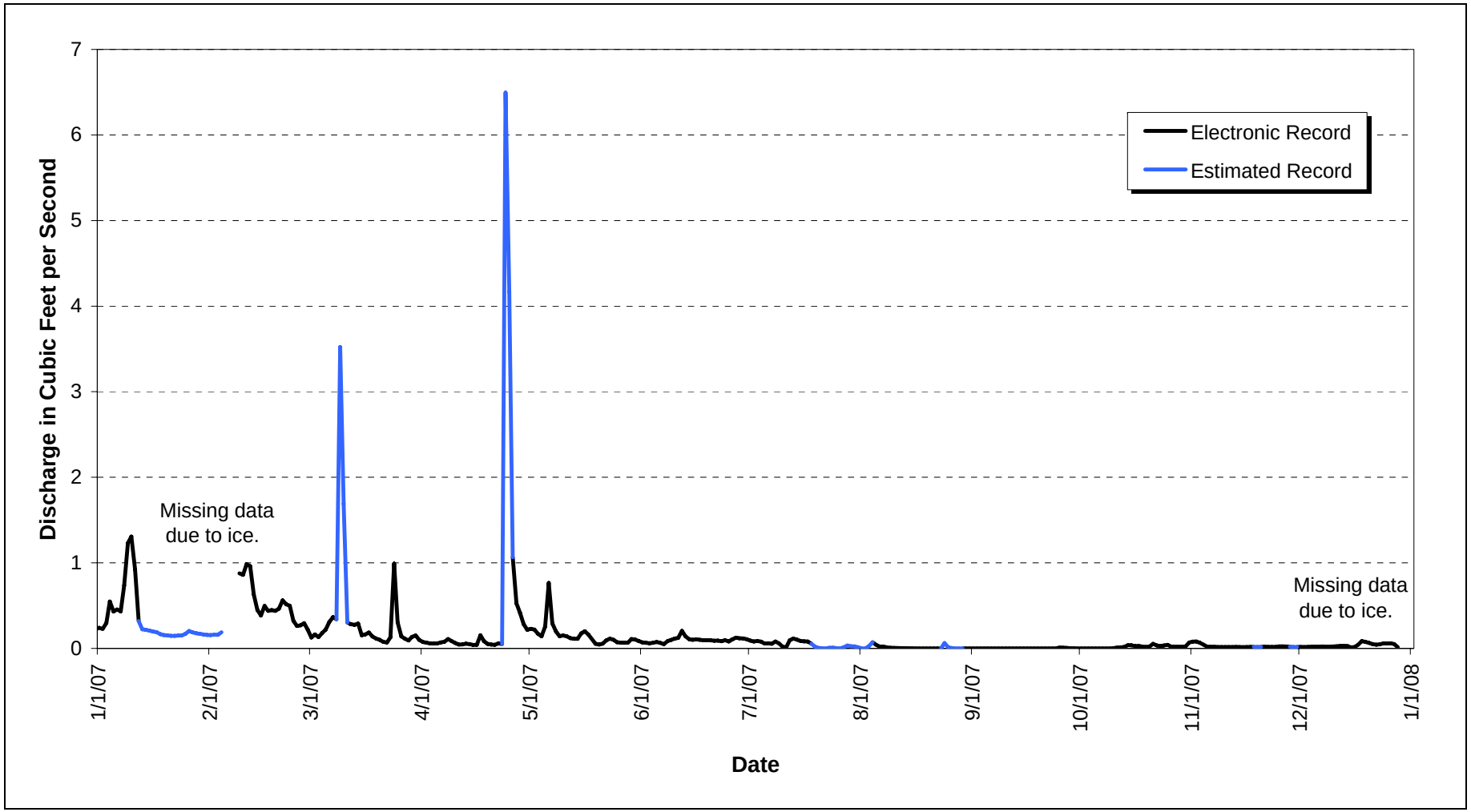


Figure 3-60. CY 2007 Mean Daily Hydrograph at GS05: North Woman Creek at West Fenceline

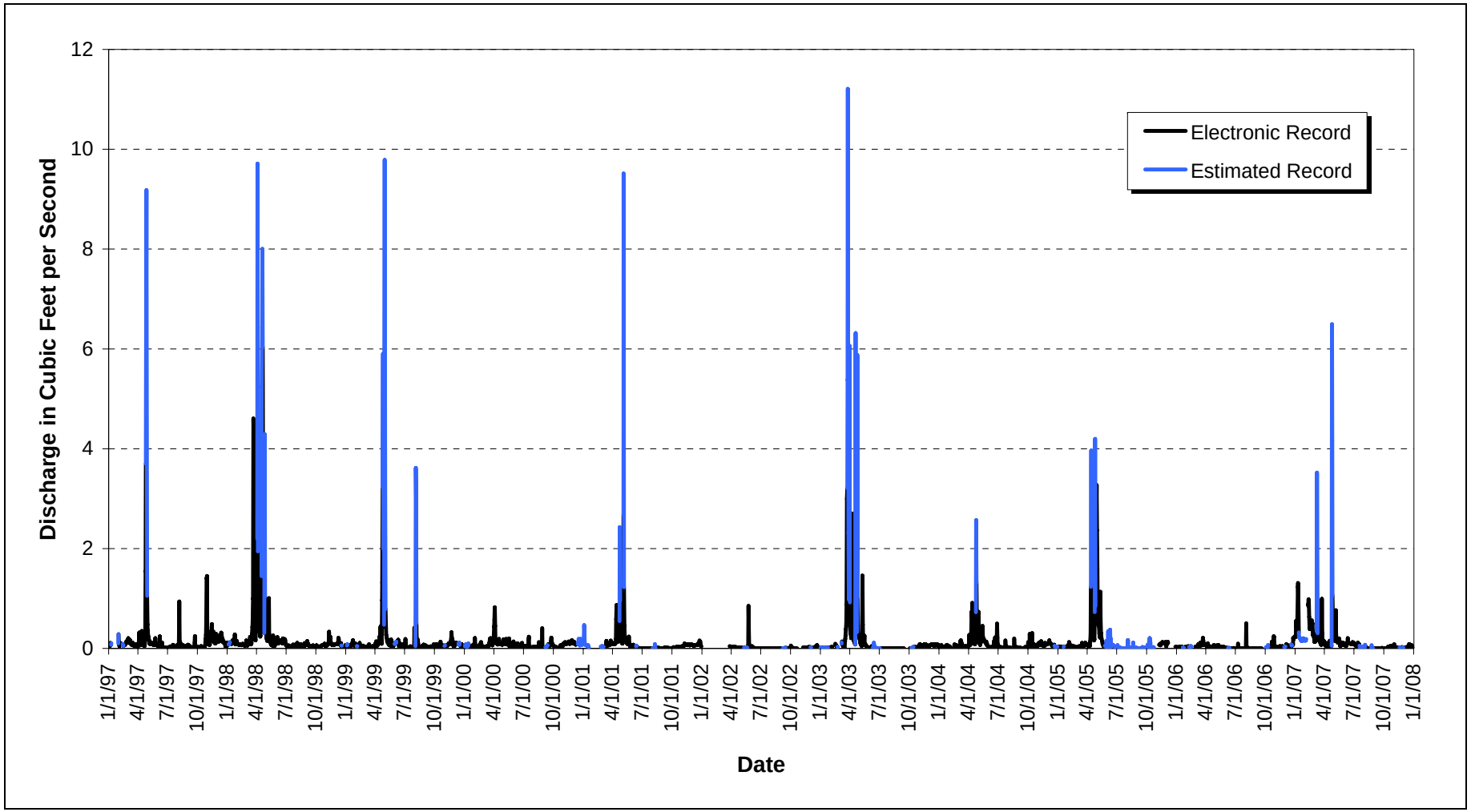


Figure 3-61. CY 1997−2007 Mean Daily Hydrograph at GS05: North Woman Creek at West Fenceline

GS08: South Walnut Creek at Pond B-5 Outlet

Location—South Walnut Creek at Pond B-5 outlet; State Plane: E2089778, N752231.

Drainage Area—The basin includes the South Walnut Creek drainage and central portions of the COU (total of 311.0 acres).

Period of Record—March 23, 1994, to current year.

Gage—Water-stage recorder and 24-inch Parshall flume.

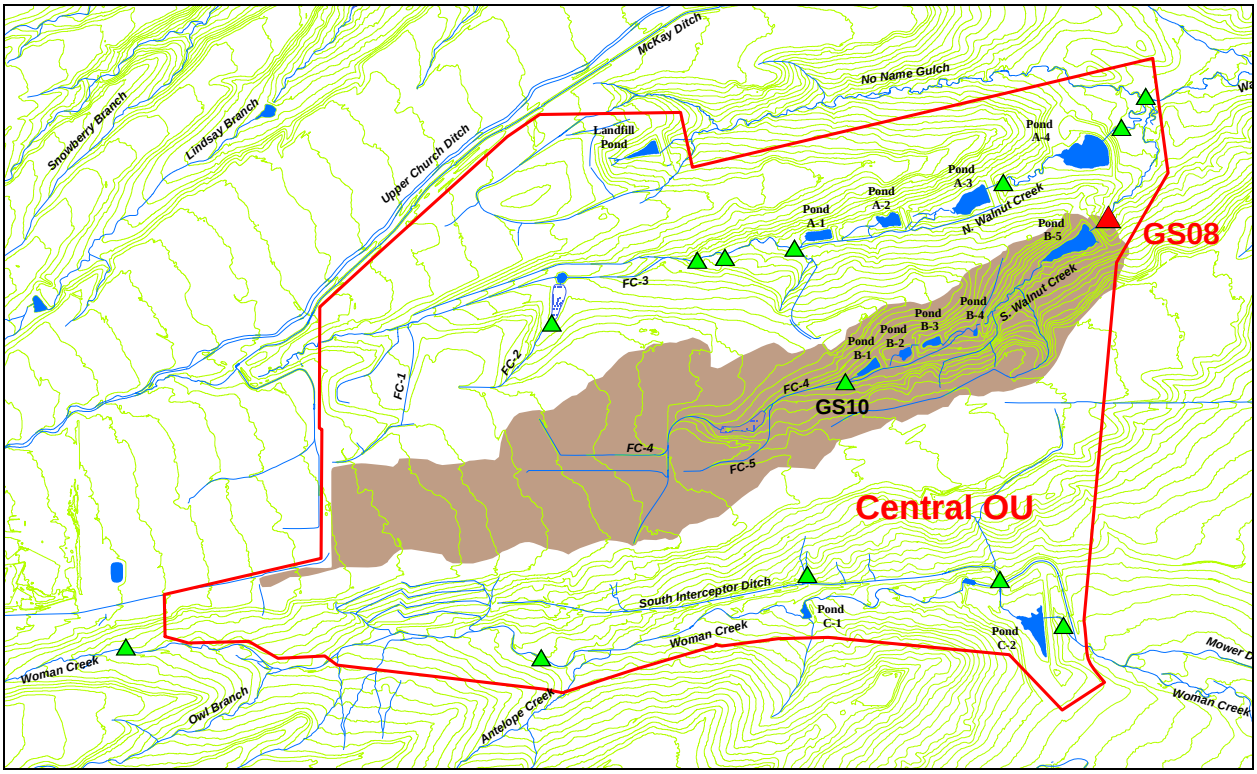


Figure 3-62. GS08 Drainage Area

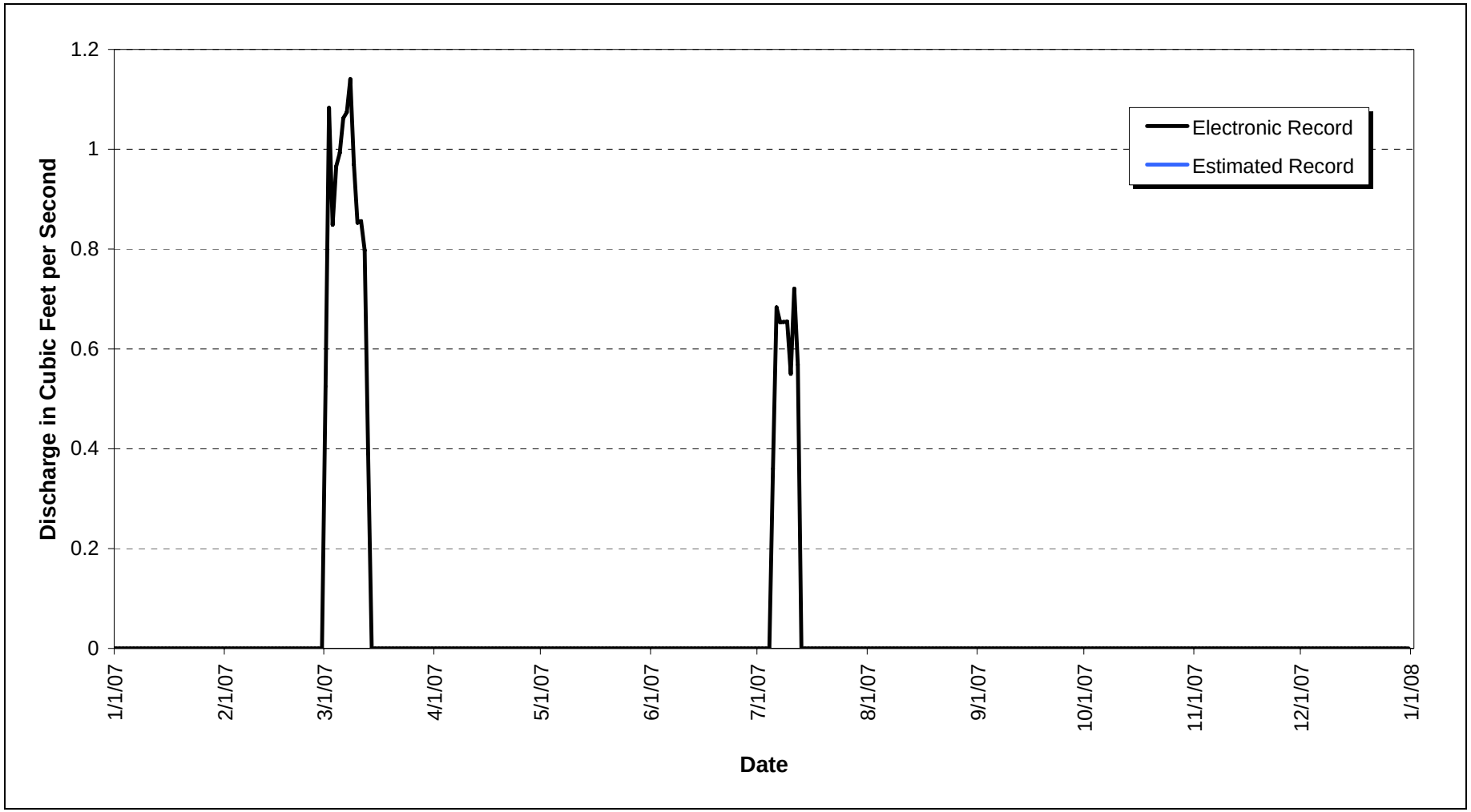


Figure 3-63. CY 2007 Mean Daily Hydrograph at GS08: South Walnut Creek at Pond B-5 Outlet

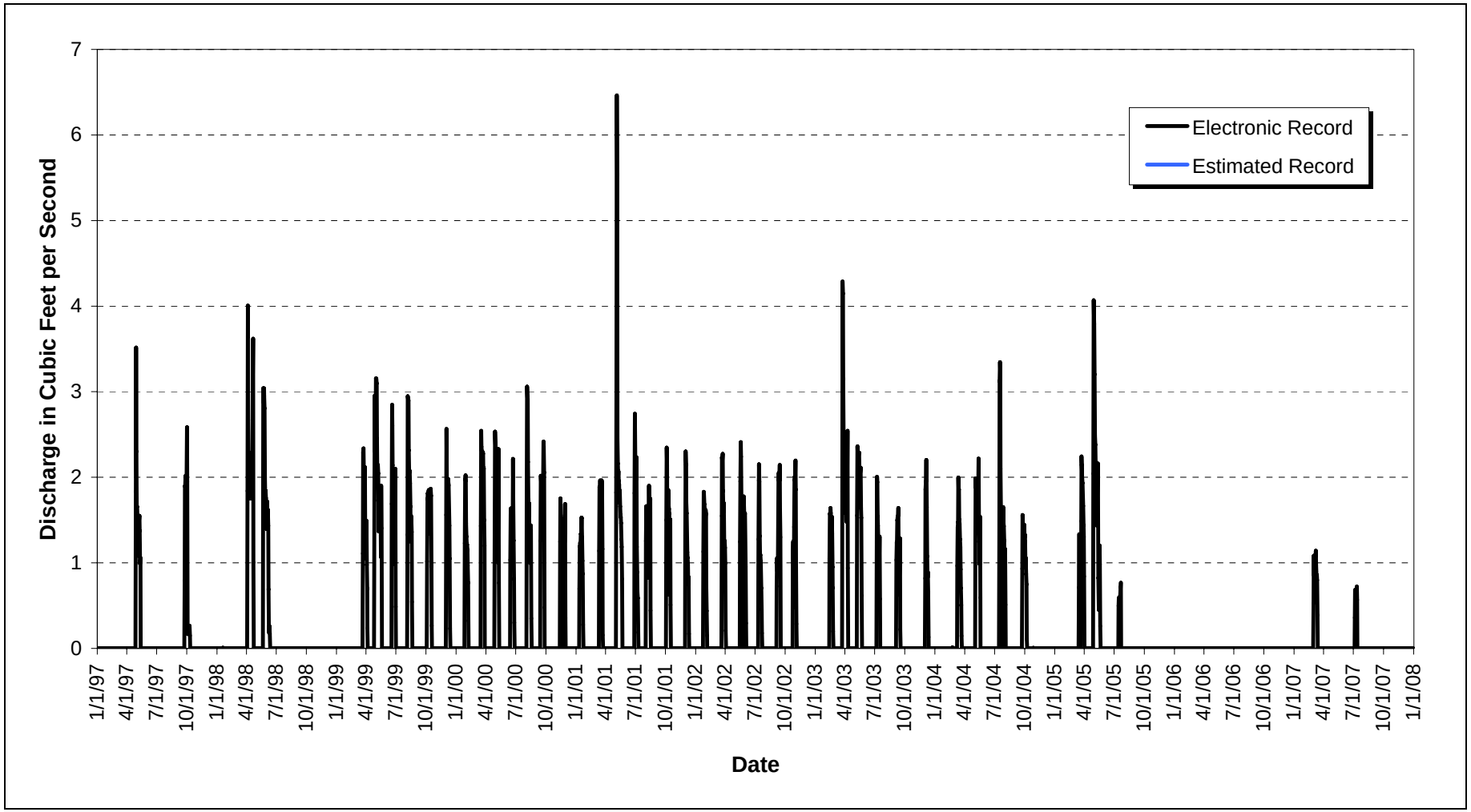


Figure 3-64. CY 1997−2007 Mean Daily Hydrograph at GS08: South Walnut Creek at Pond B-5 Outlet

GS10: South Walnut Creek at Pond B-1 Bypass

Location—South Walnut Creek above Pond B-1 Bypass; State Plane: E2086741, N750329.

Drainage Area—The basin includes the central portion of the COU (total of 206.0 acres).

Period of Record—April 1, 1993, to current year.

Gage—Water-stage recorder and 9-inch Parshall flume with weir insert.

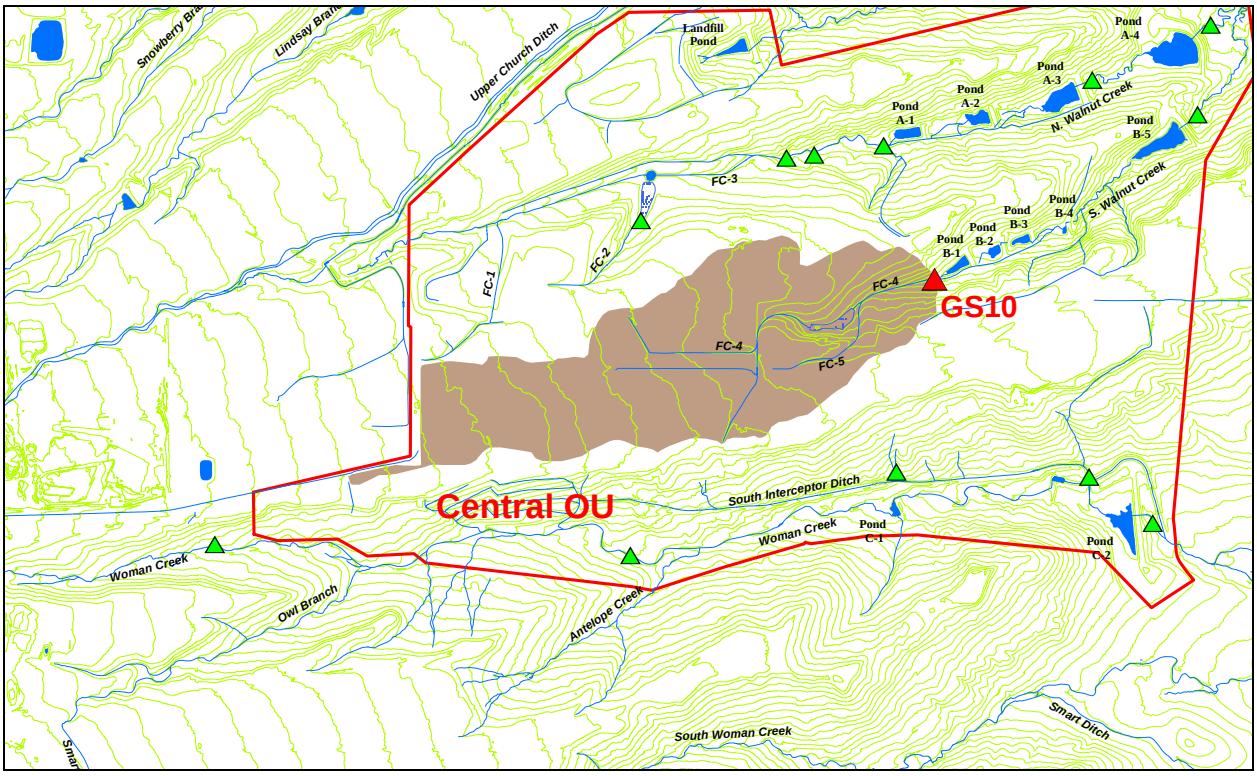


Figure 3-65. GS10 Drainage Area

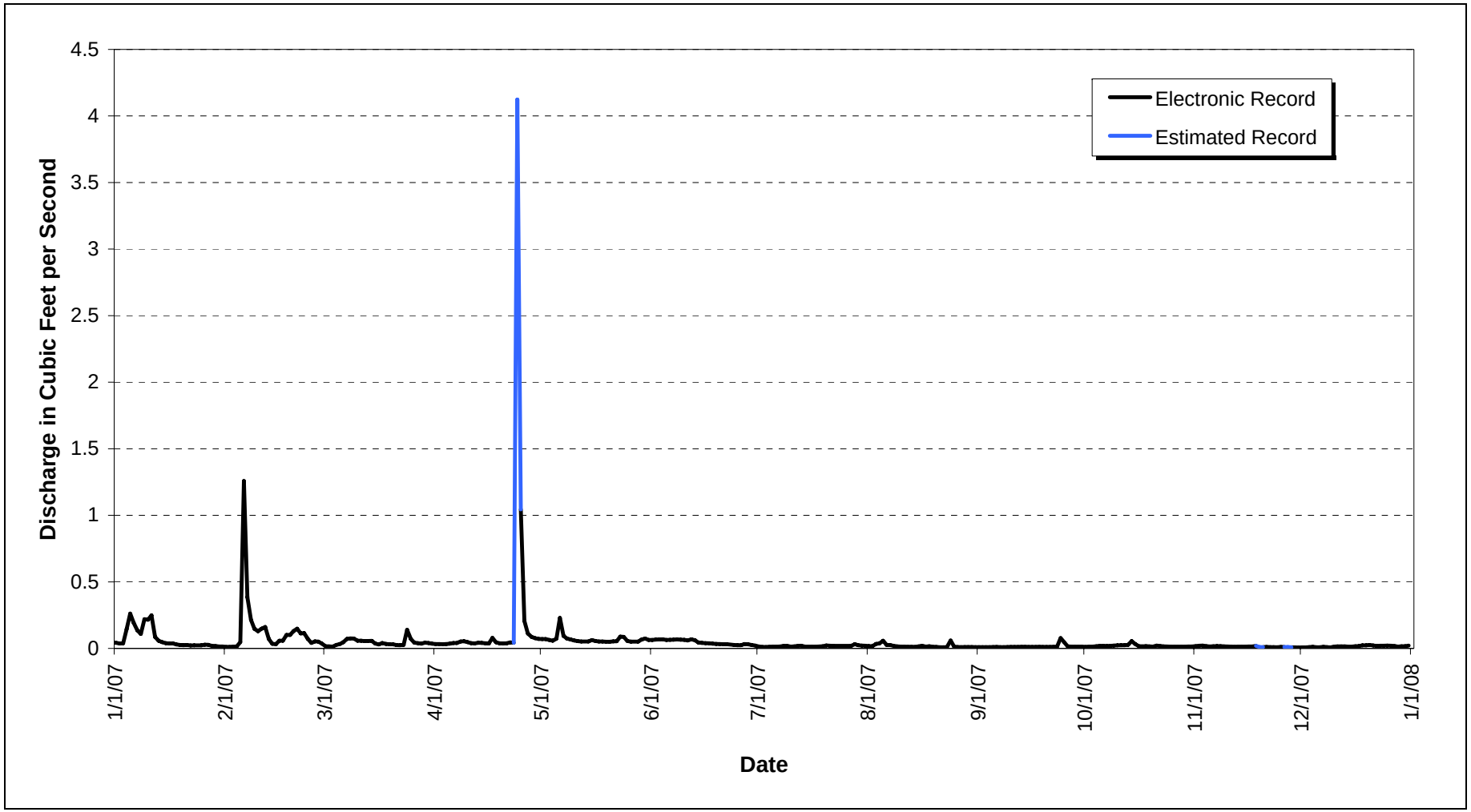


Figure 3-66. CY 2007 Mean Daily Hydrograph at GS10: South Walnut Creek at Pond B-1 Bypass

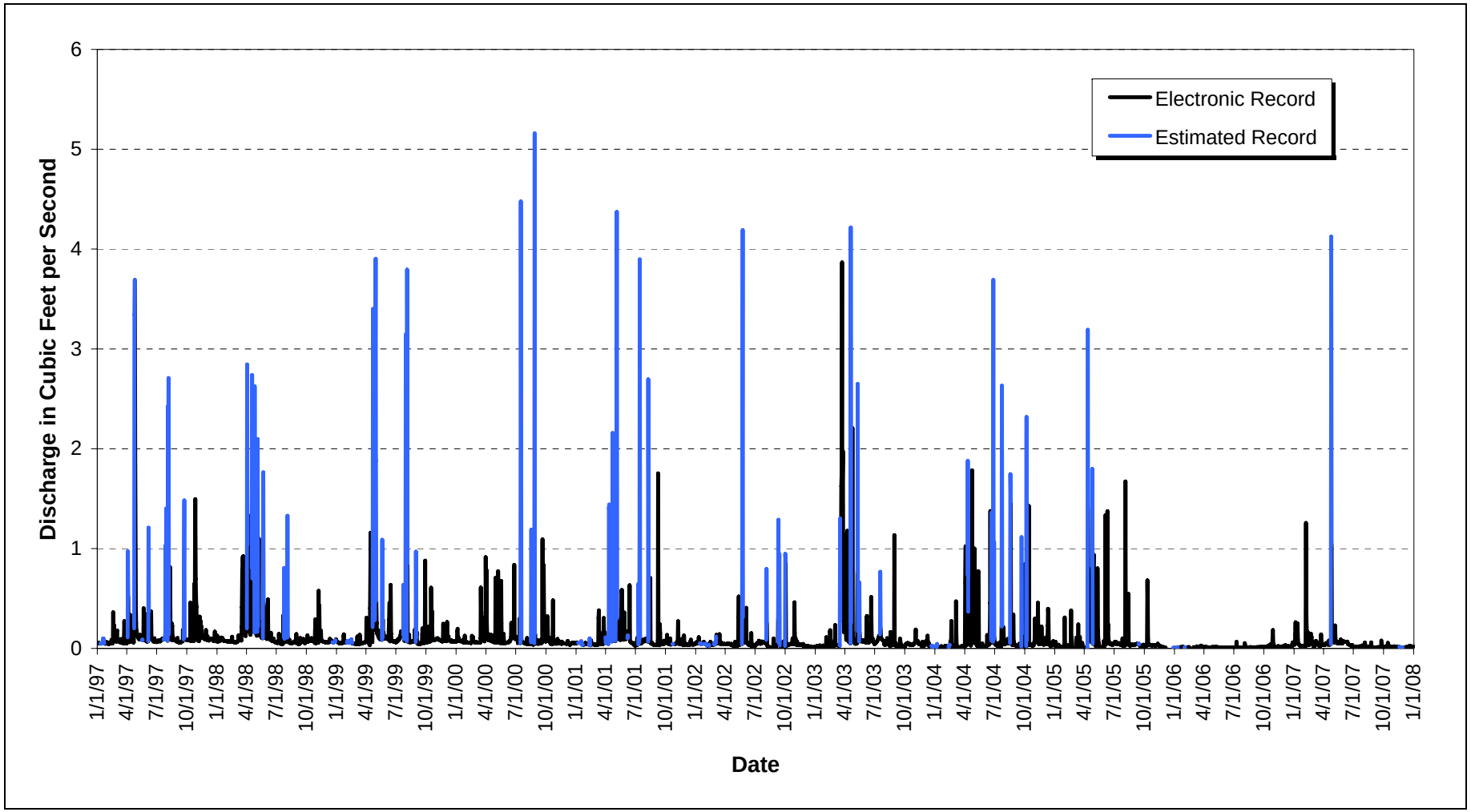


Figure 3-67. CY 1997−2007 Mean Daily Hydrograph at GS10: South Walnut Creek at Pond B-1 Bypass

GS11: North Walnut Creek at Pond A-4 Outlet

Location—North Walnut Creek at Pond A-4 outlet; State Plane: E2089930, N753265.

Drainage Area—The basin includes the North Walnut Creek drainage and northern portions of the COU (total of 395.0 acres).

Period of Record—May 12, 1992, to current year.

Gage—Water-stage recorder and 24-inch Parshall flume.

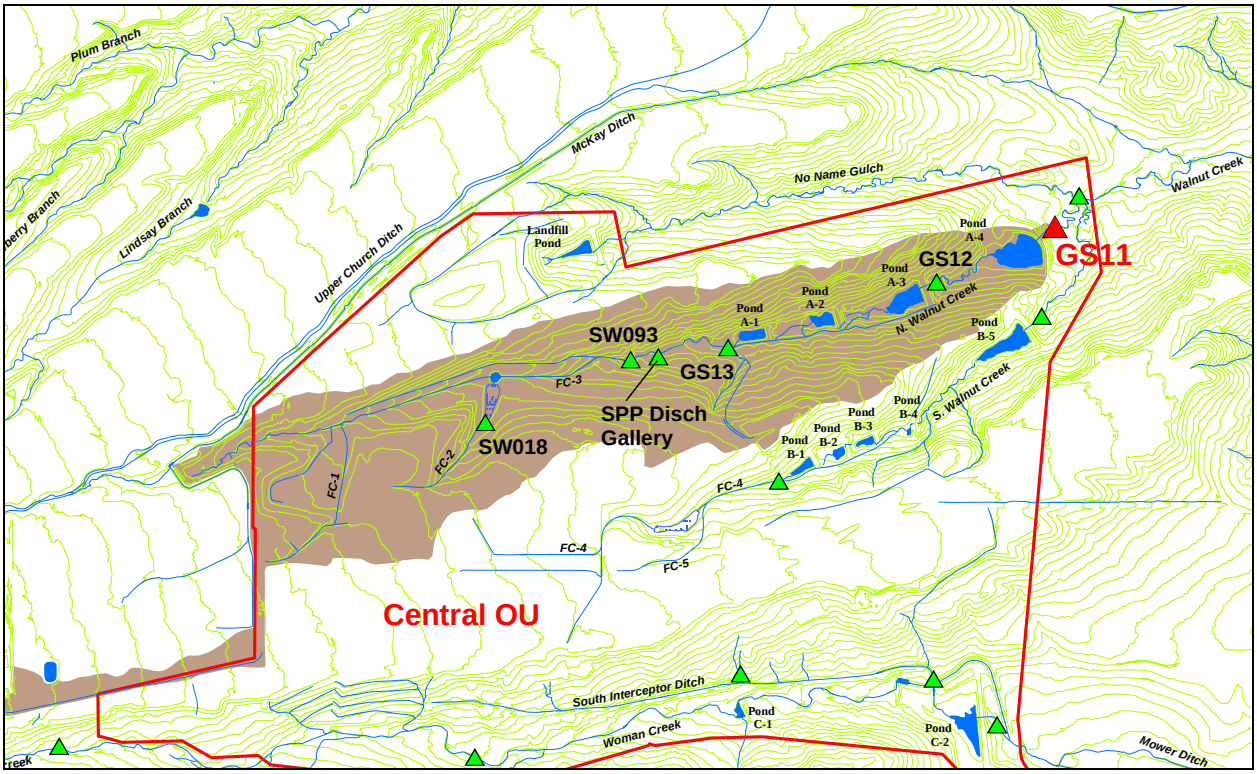


Figure 3-68. GS11 Drainage Area

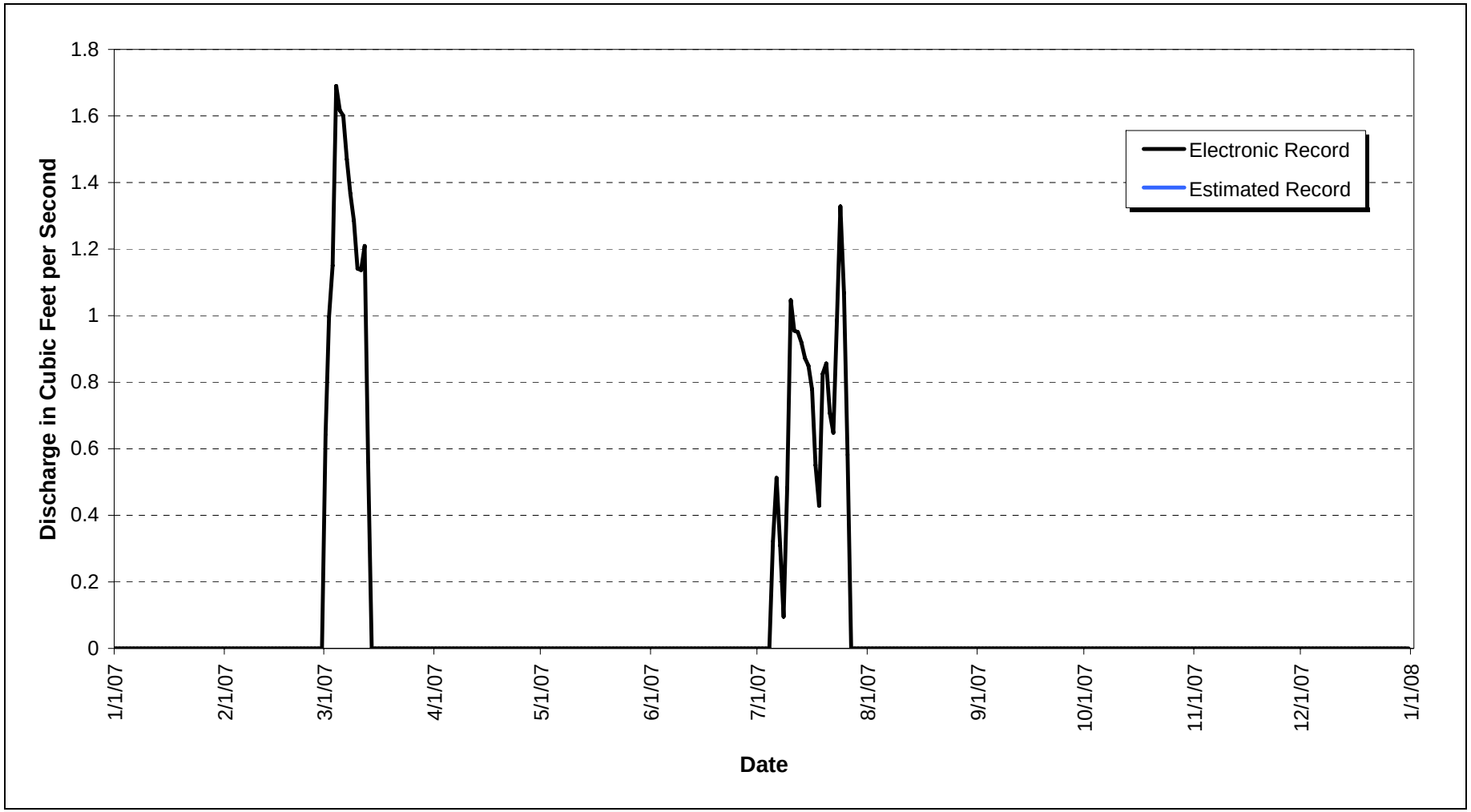


Figure 3-69. CY 2007 Mean Daily Hydrograph at GS11: North Walnut Creek at Pond A-4 Outlet

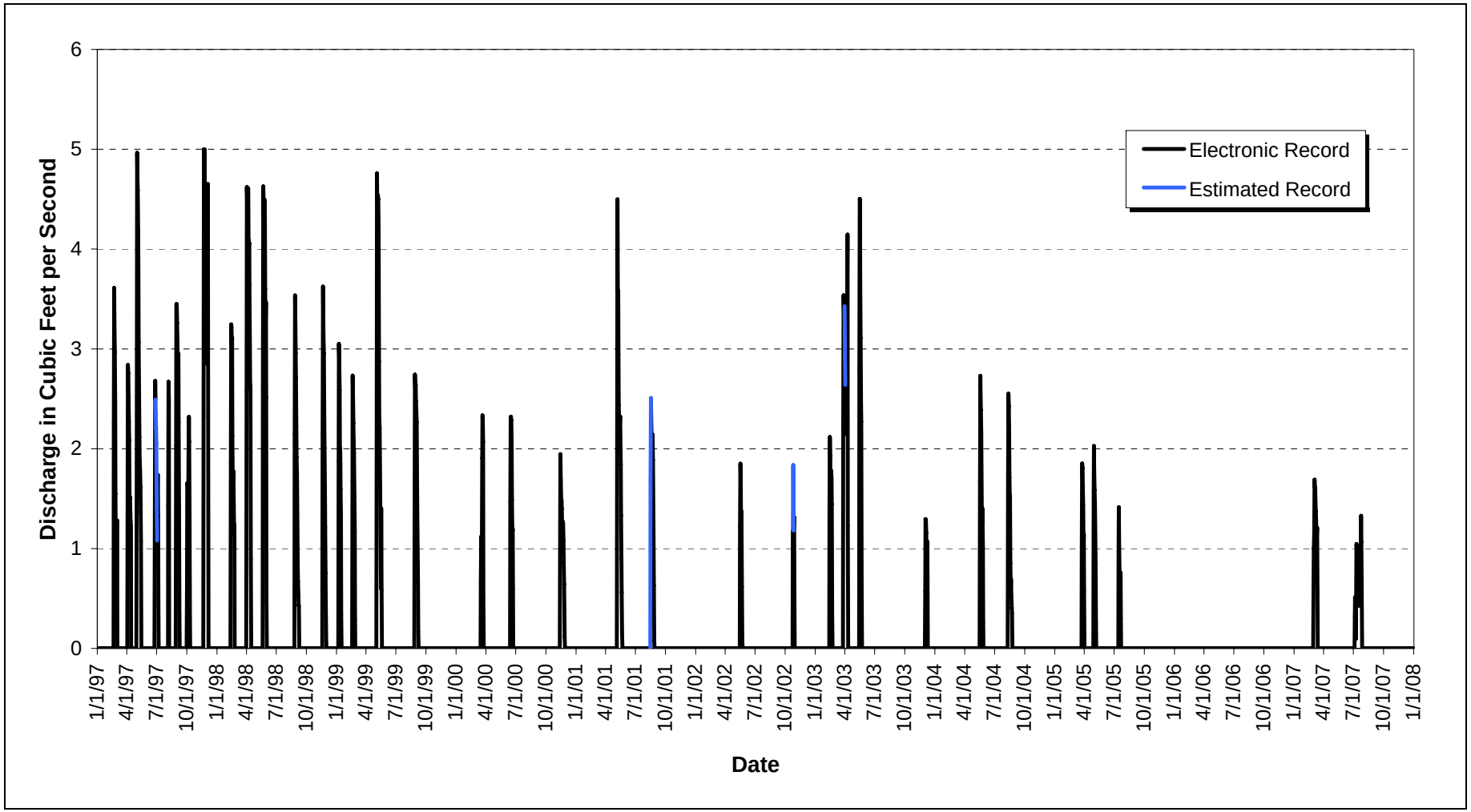


Figure 3-70. CY 1997−2007 Mean Daily Hydrograph at GS11: North Walnut Creek at Pond A-4 Outlet

GS12: North Walnut Creek at Pond A-3 Outlet

Location—North Walnut Creek at Pond A-3 outlet; State Plane: E2088564, N752629.

Drainage Area—The basin includes the North Walnut Creek drainage and northern portions of the COU (total of 361.7 acres).

Period of Record—May 13, 1992, to current year.

Gage—Water-stage recorder and 30-inch Parshall flume.

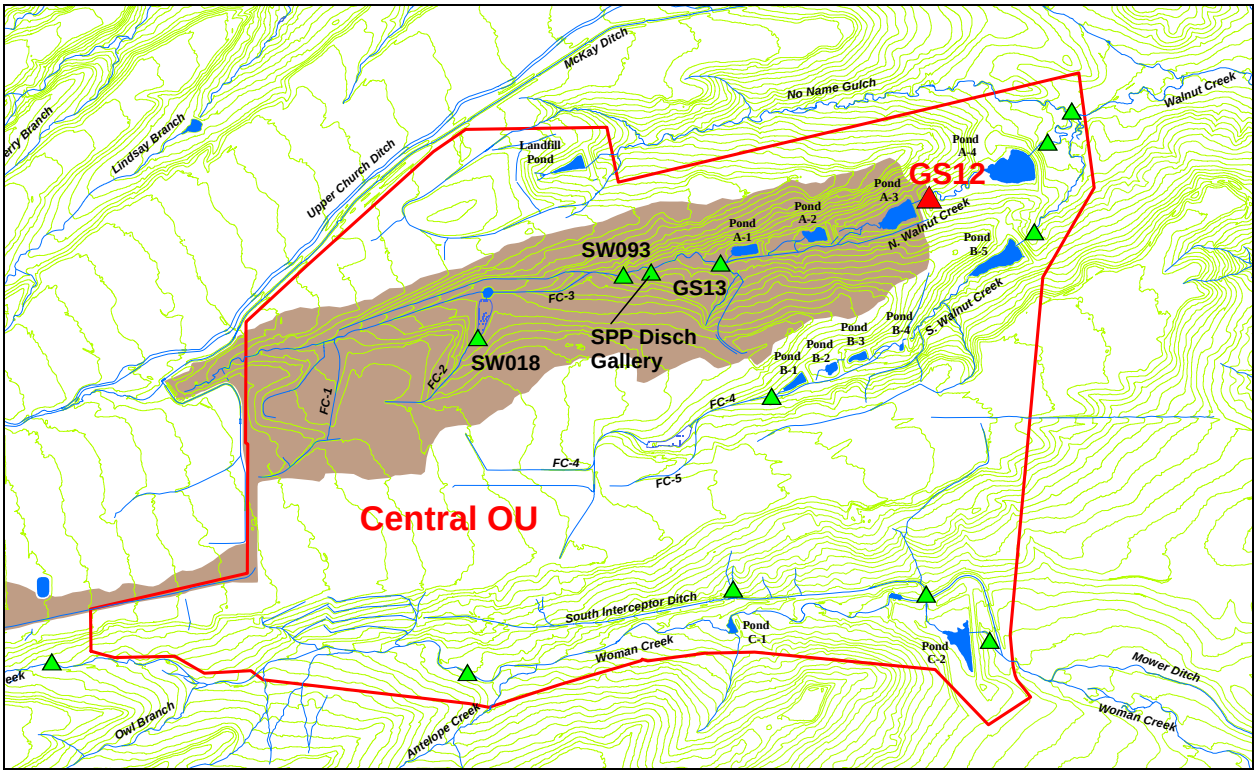


Figure 3-71. GS12 Drainage Area

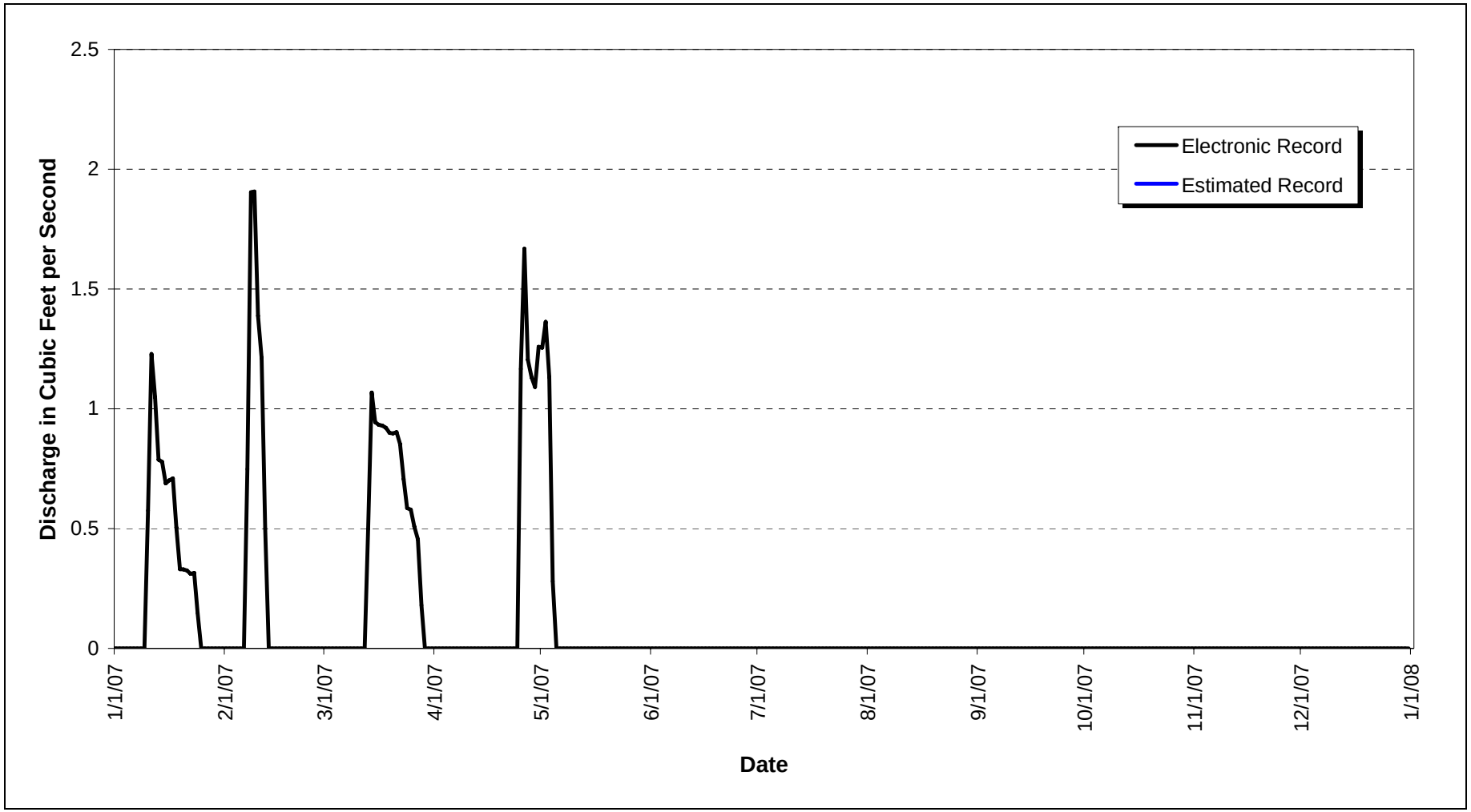


Figure 3-72. CY 2007 Mean Daily Hydrograph at GS12: North Walnut Creek at Pond A-3 Outlet

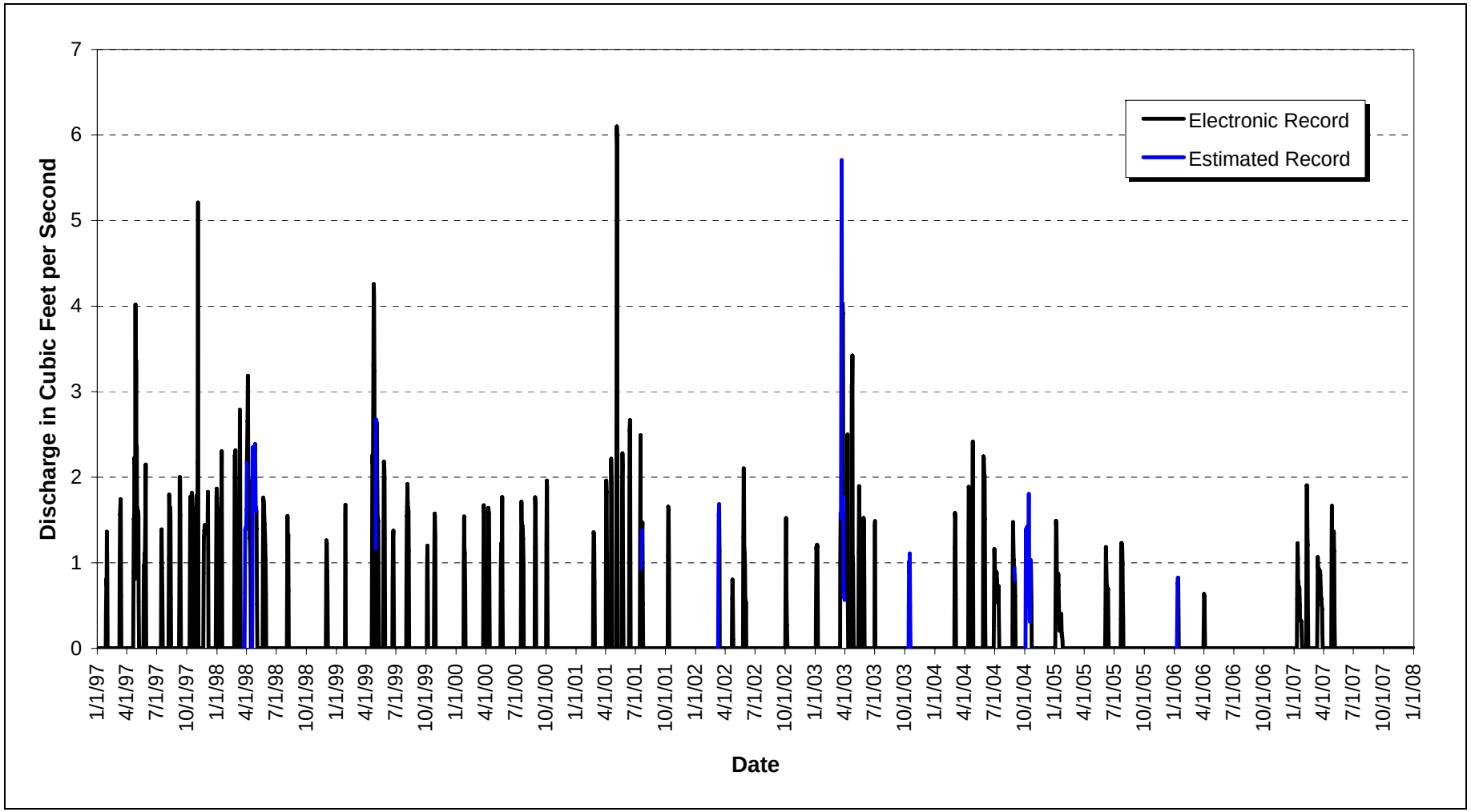


Figure 3-73. CY 1997−2007 Mean Daily Hydrograph at GS12: North Walnut Creek at Pond A-3 Outlet

GS13: North Walnut Creek at Pond A-1 Bypass

Location—North Walnut Creek at A-1 Bypass; State Plane: E2086153, N751870.

Drainage Area—The basin includes the North Walnut Creek drainage and northwestern portions of the COU (total of 260.8 acres).

Period of Record—October 1, 2005, to current year.

Gage—Water-stage recorder and 6-inch Parshall flume.

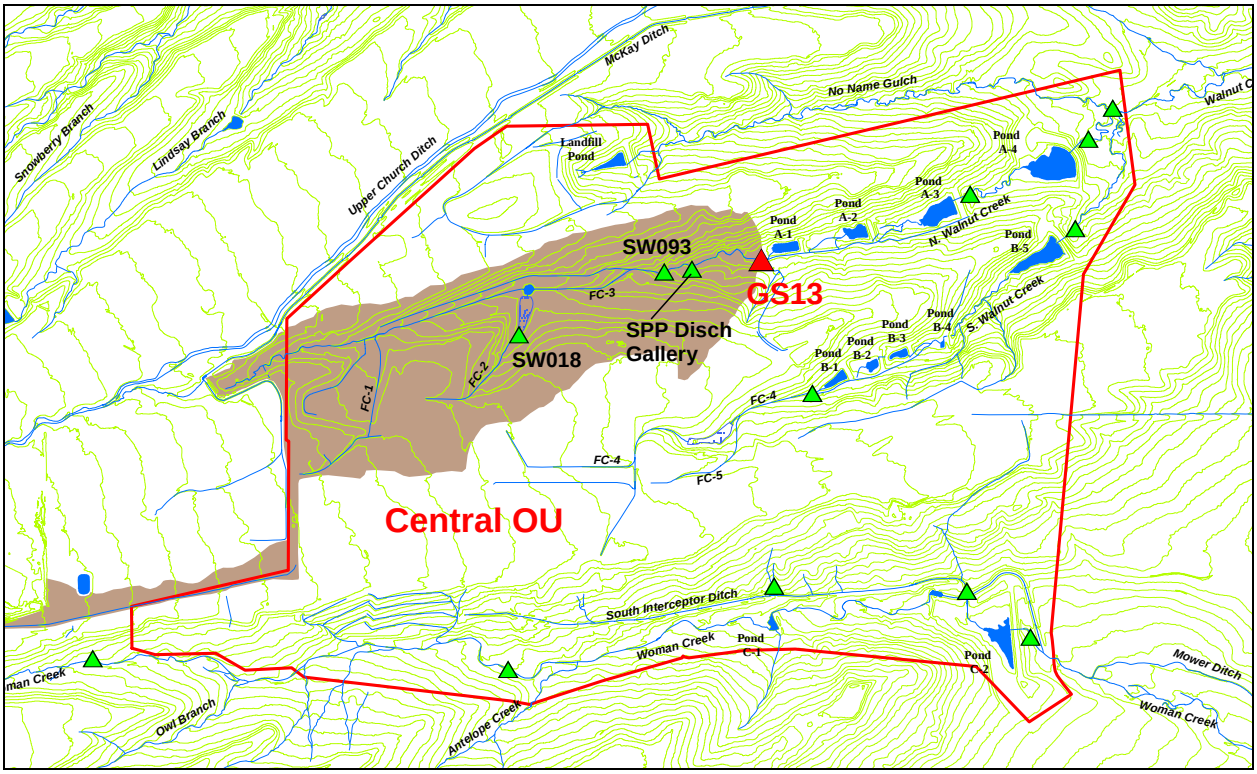


Figure 3-74. GS13 Drainage Area

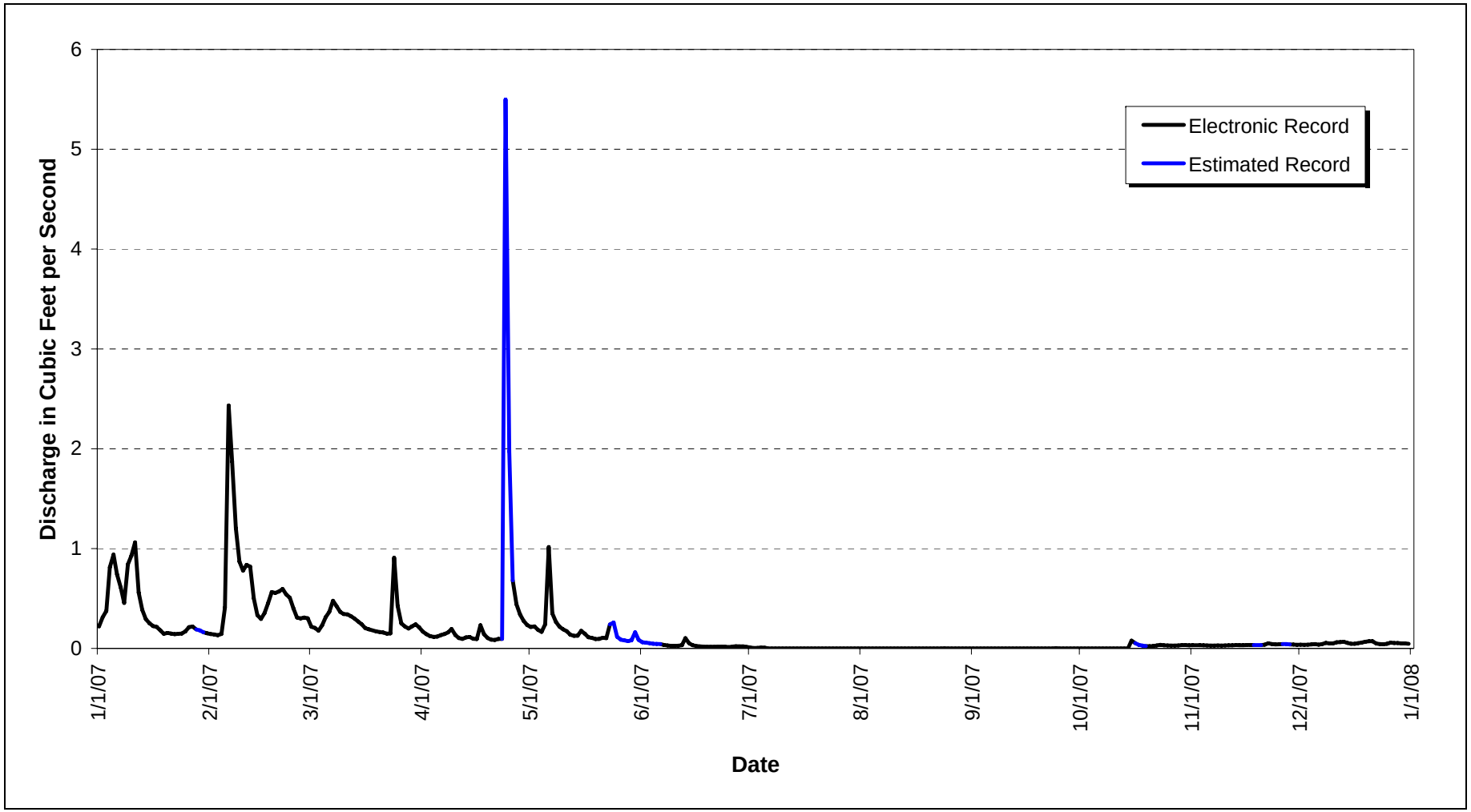


Figure 3-75. CY 2007 Mean Daily Hydrograph at GS13: North Walnut Creek at Pond A-1 Bypass

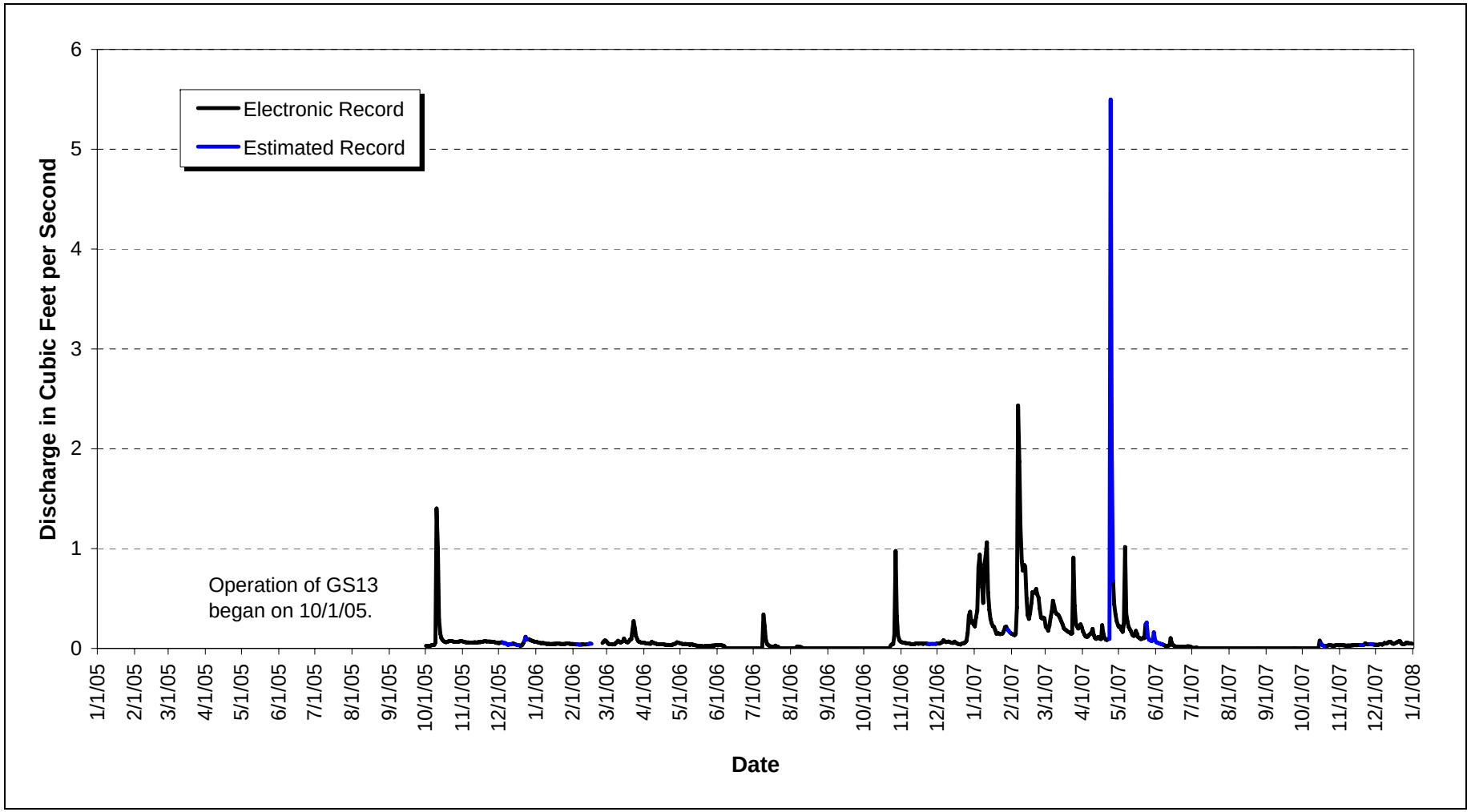


Figure 3-76. CY 2005−2007 Mean Daily Hydrograph at GS13: North Walnut Creek at Pond A-1 Bypass

GS31: Woman Creek at Pond C-2 Outlet

Location—Pond C-2 outlet; State Plane: E2089261, N747512.

Drainage Area—The basin includes a portion of the southern COU draining to the SID and the area surrounding Pond C-2 (total of 204.1 acres).

Period of Record—October 1, 1996, to current year.

Gage—Water-stage recorder and 24-inch Parshall flume.

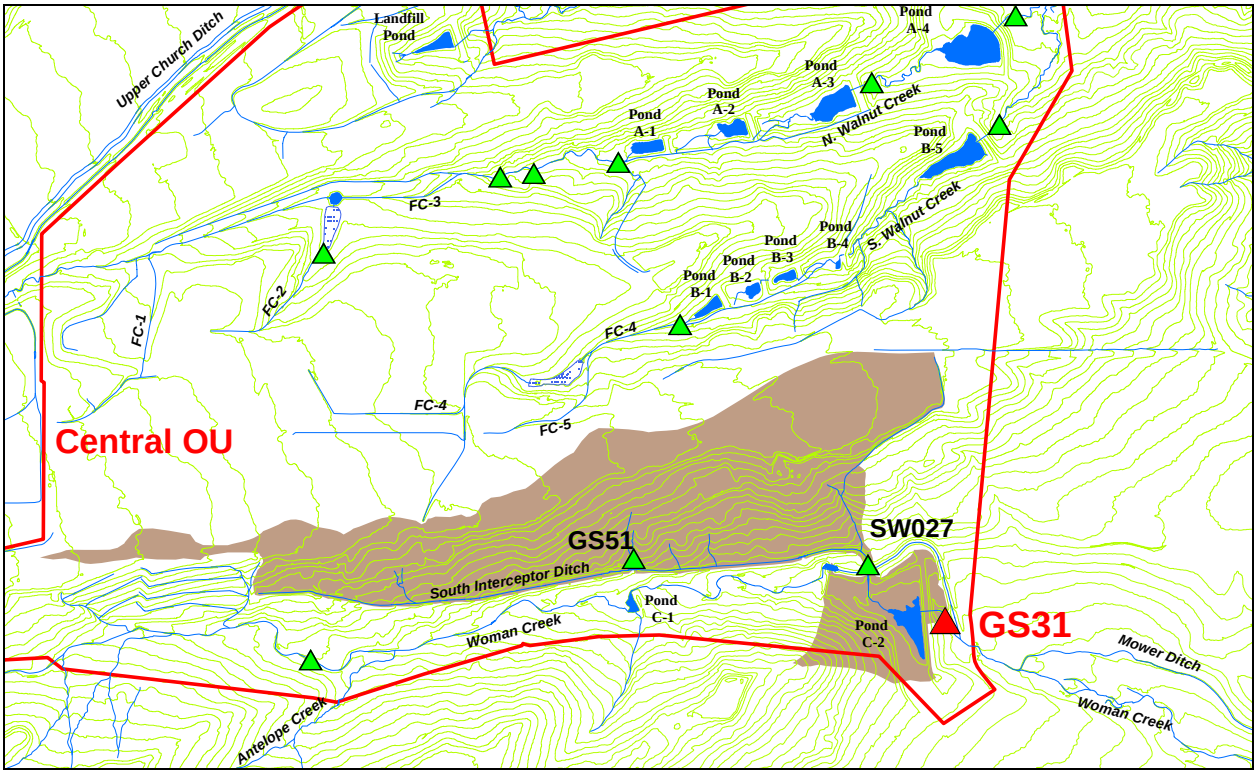


Figure 3-77. GS31 Drainage Area

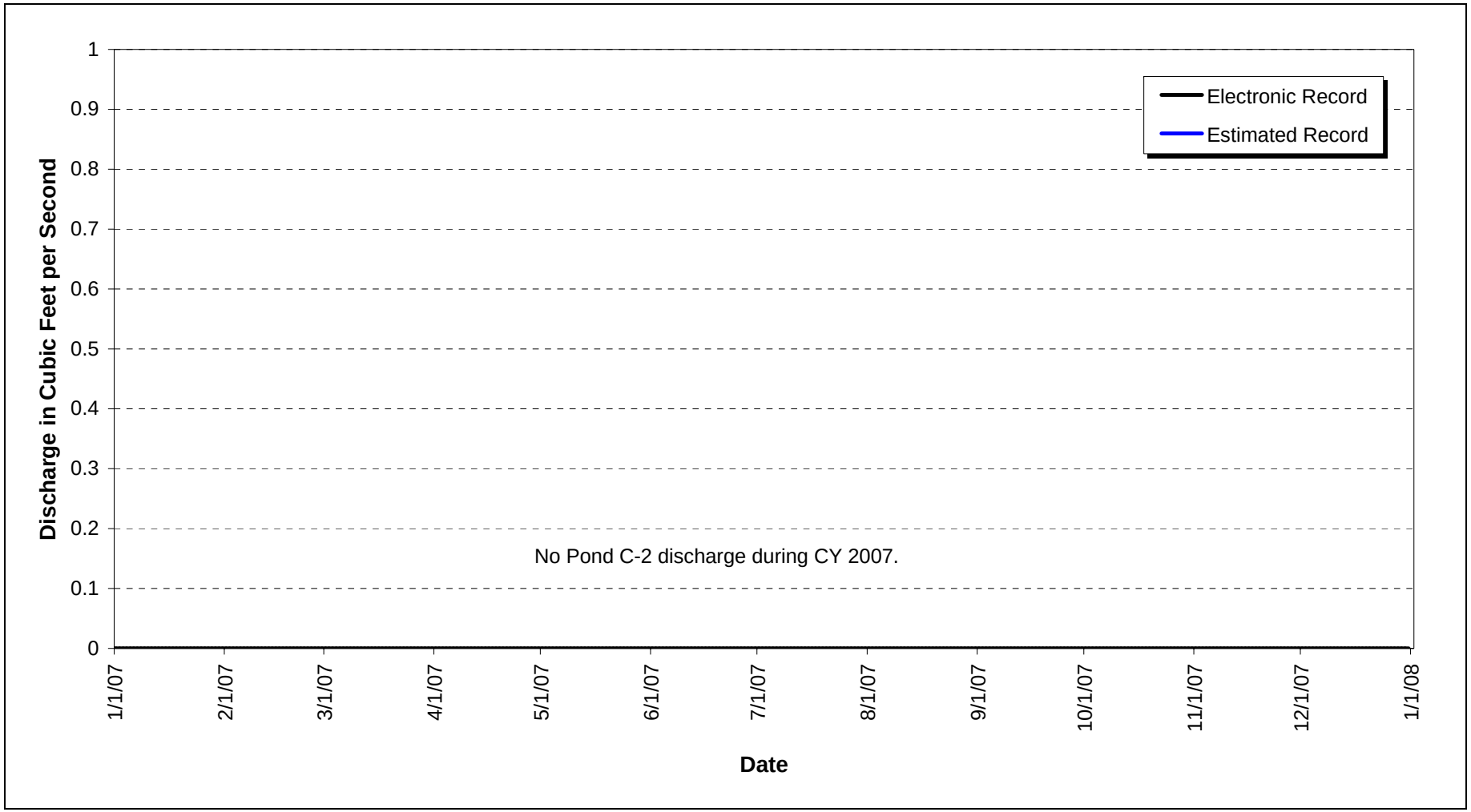


Figure 3-78. CY 2007 Mean Daily Hydrograph at GS31: Woman Creek at Pond C-2 Outlet

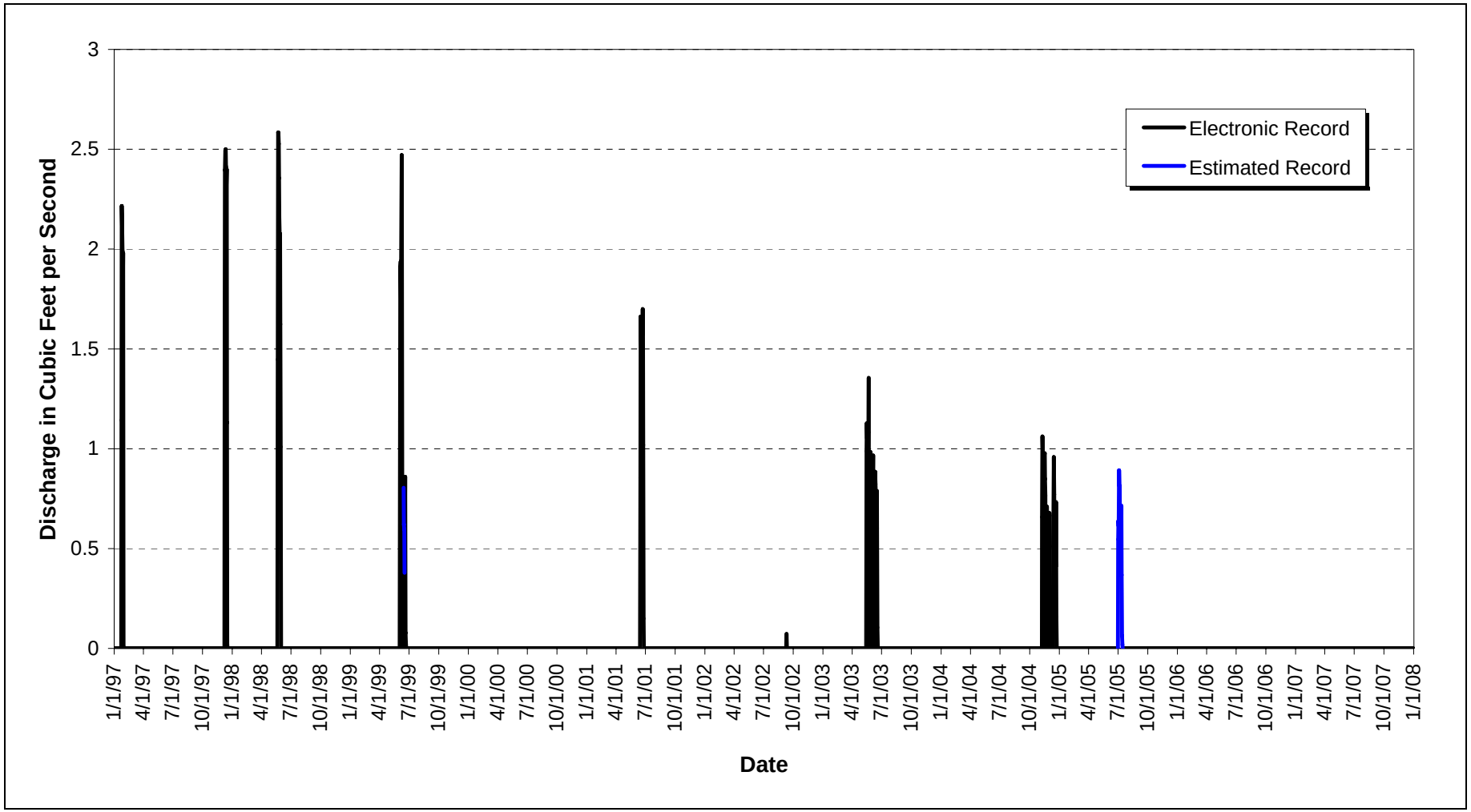


Figure 3-79. CY 1997−2007 Mean Daily Hydrograph at GS31: Woman Creek at Pond C-2 Outlet

GS33: No Name Gulch at Walnut Creek

Location—No Name Gulch at Walnut Creek; State Plane: E2090210, N753623.

Drainage Area—The basin is the No Name Gulch drainage (total of 295.3 acres).

Period of Record—September 16, 1997, to current year.

Gage—Water-stage recorder and 9.5-inch Parshall flume.

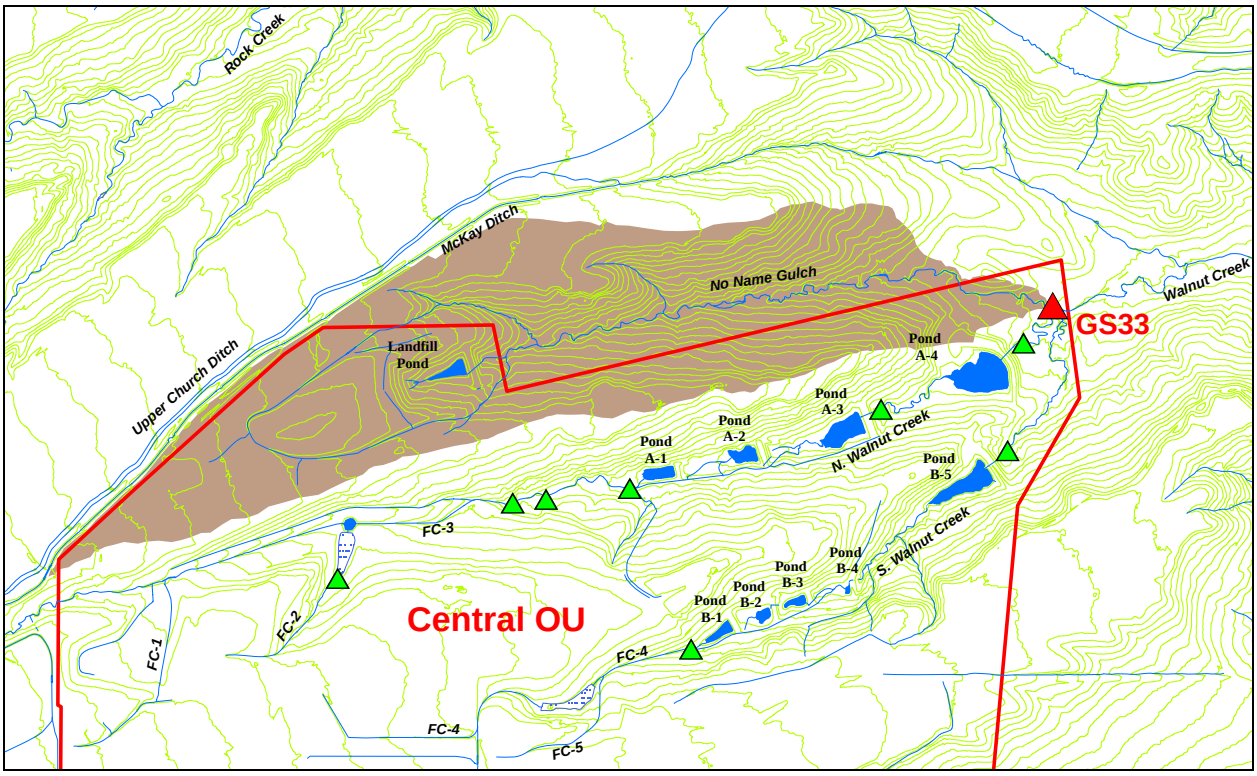


Figure 3-80. GS33 Drainage Area

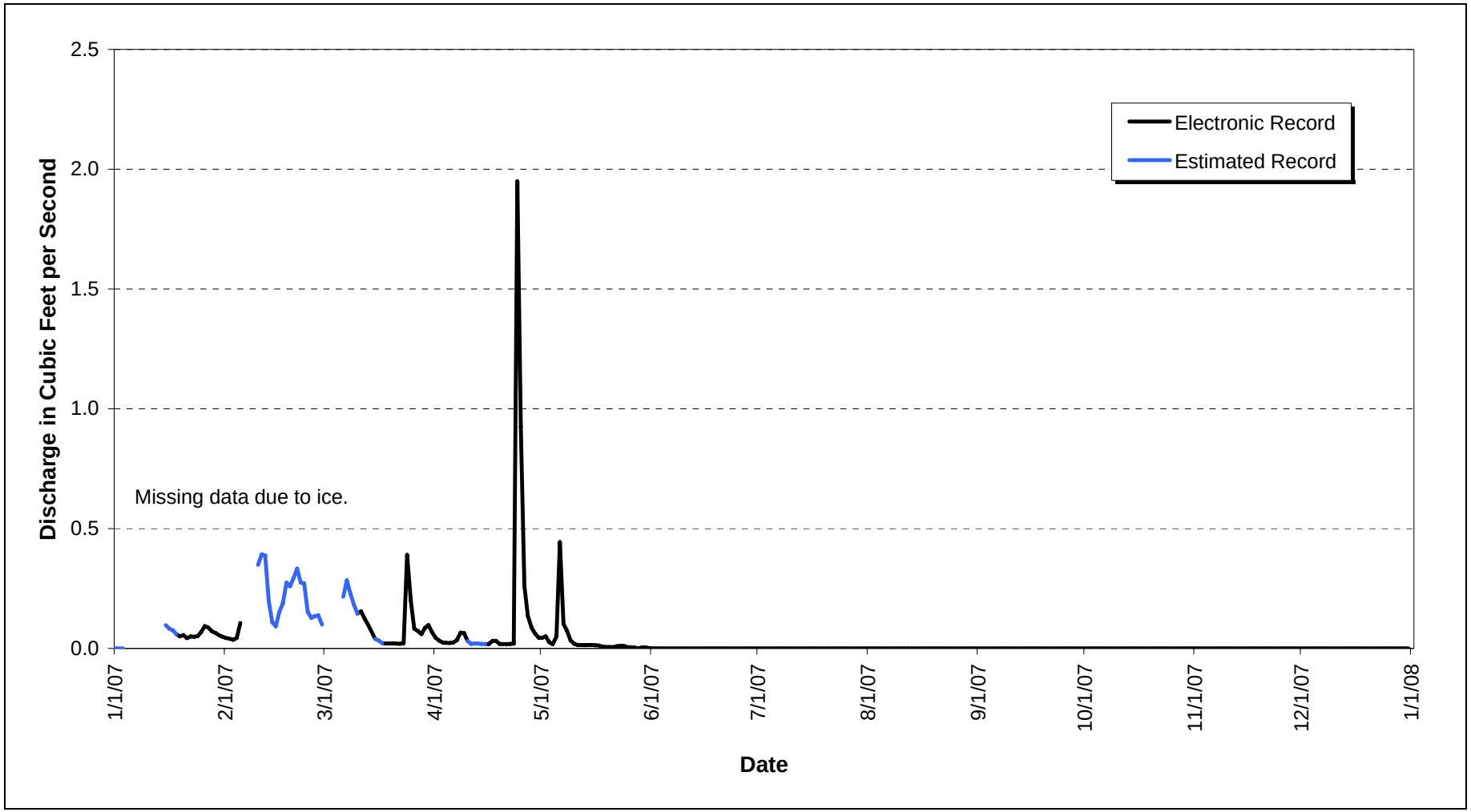


Figure 3-81. CY 2007 Mean Daily Hydrograph at GS33: No Name Gulch at Walnut Creek

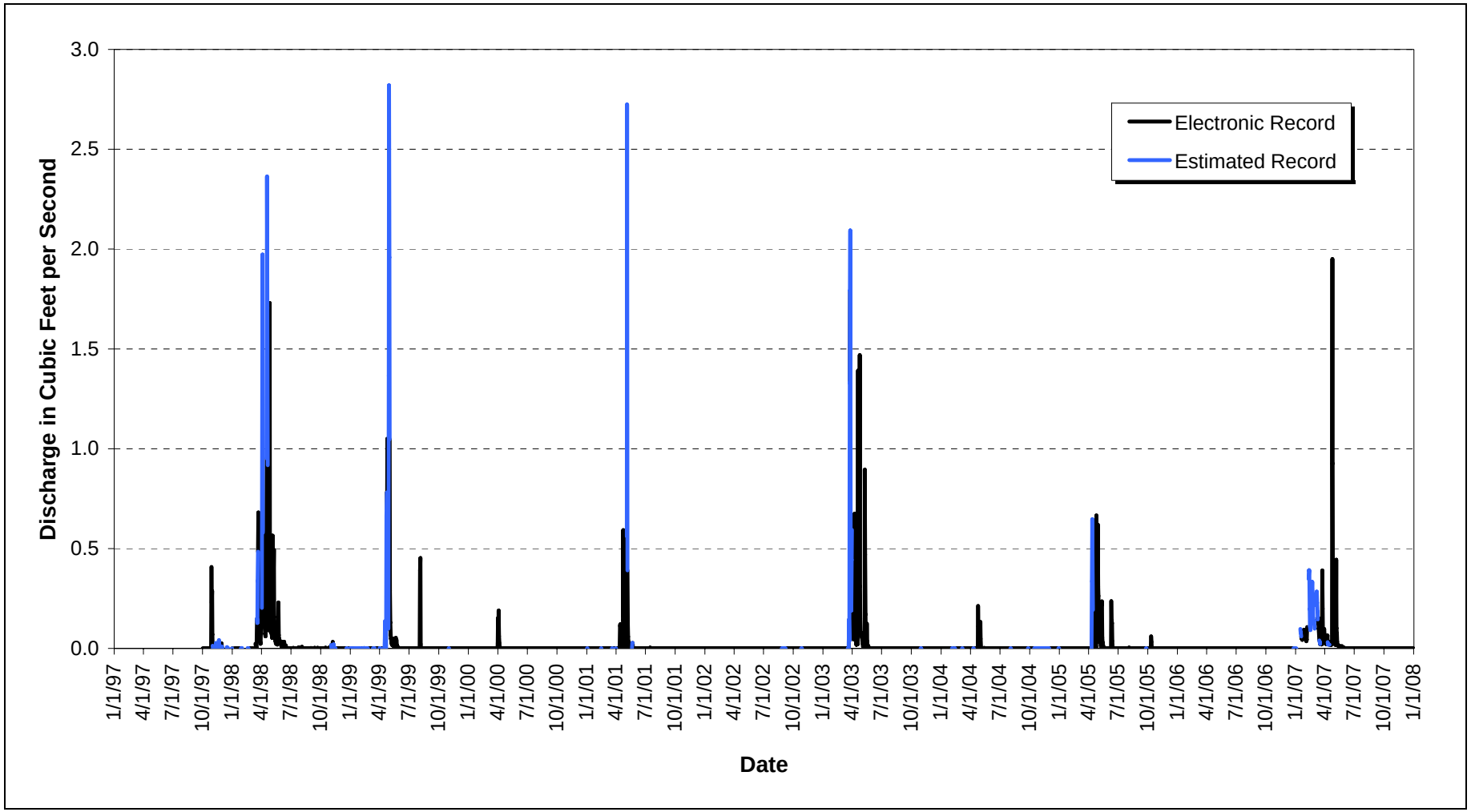


Figure 3-82. CY 1997−2007 Mean Daily Hydrograph at GS33: No Name Gulch at Walnut Creek

GS51: Ditch South of 903 Pad

Location—Ditch south of 903 Pad; State Plane: E2086300, N748102.

Drainage Area—The basin includes an area south and west of the former 903 Pad (total of 16.0 acres).

Period of Record—August 13, 2001, to current year.

Gage—Water-stage recorder and 0.75-foot H-flume.

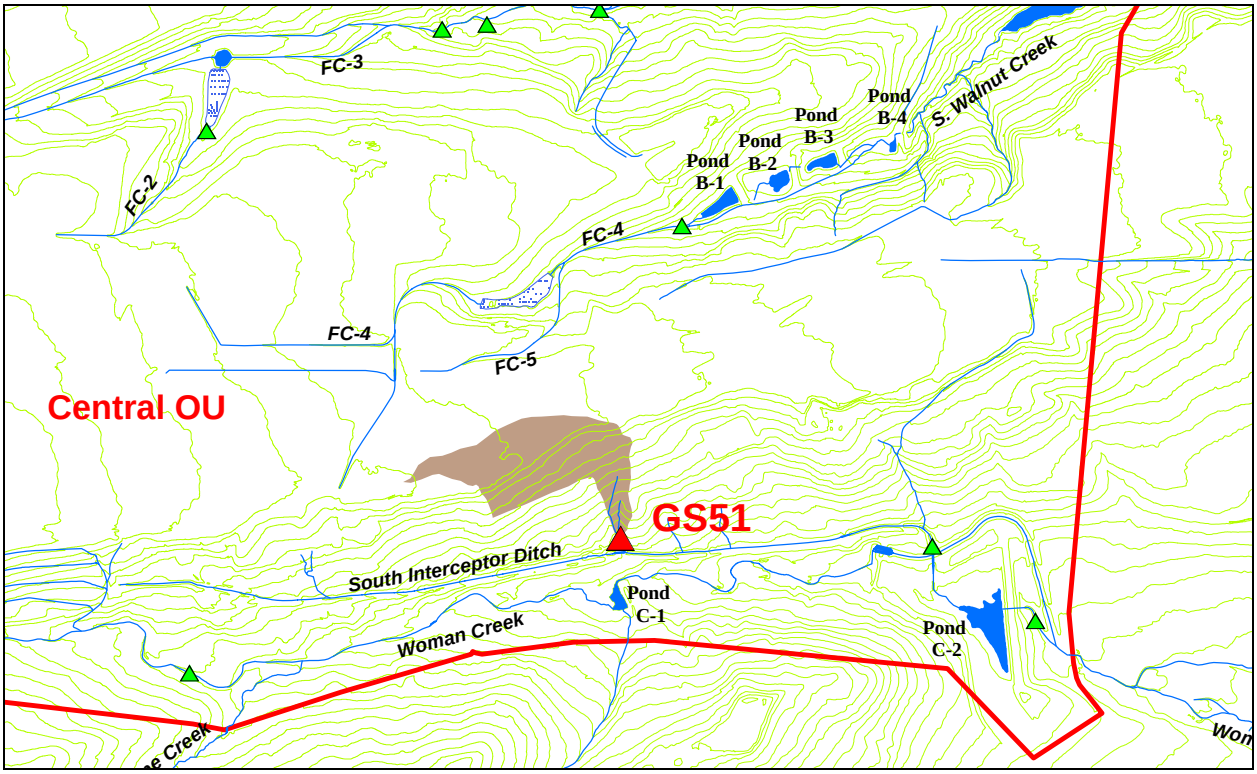


Figure 3-83. GS51 Drainage Area

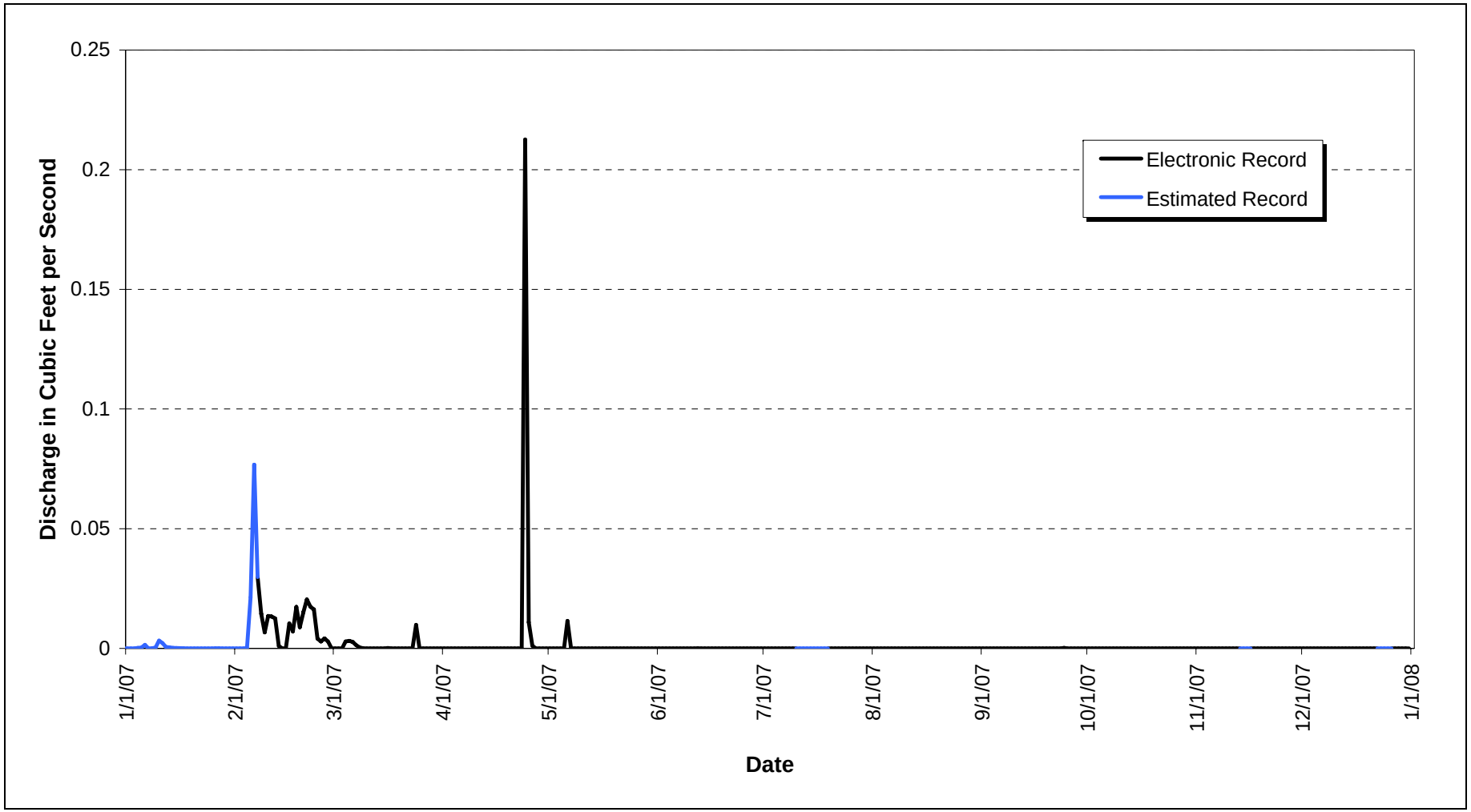


Figure 3-84. CY 2007 Mean Daily Hydrograph at GS51: Ditch South of 903 Pad

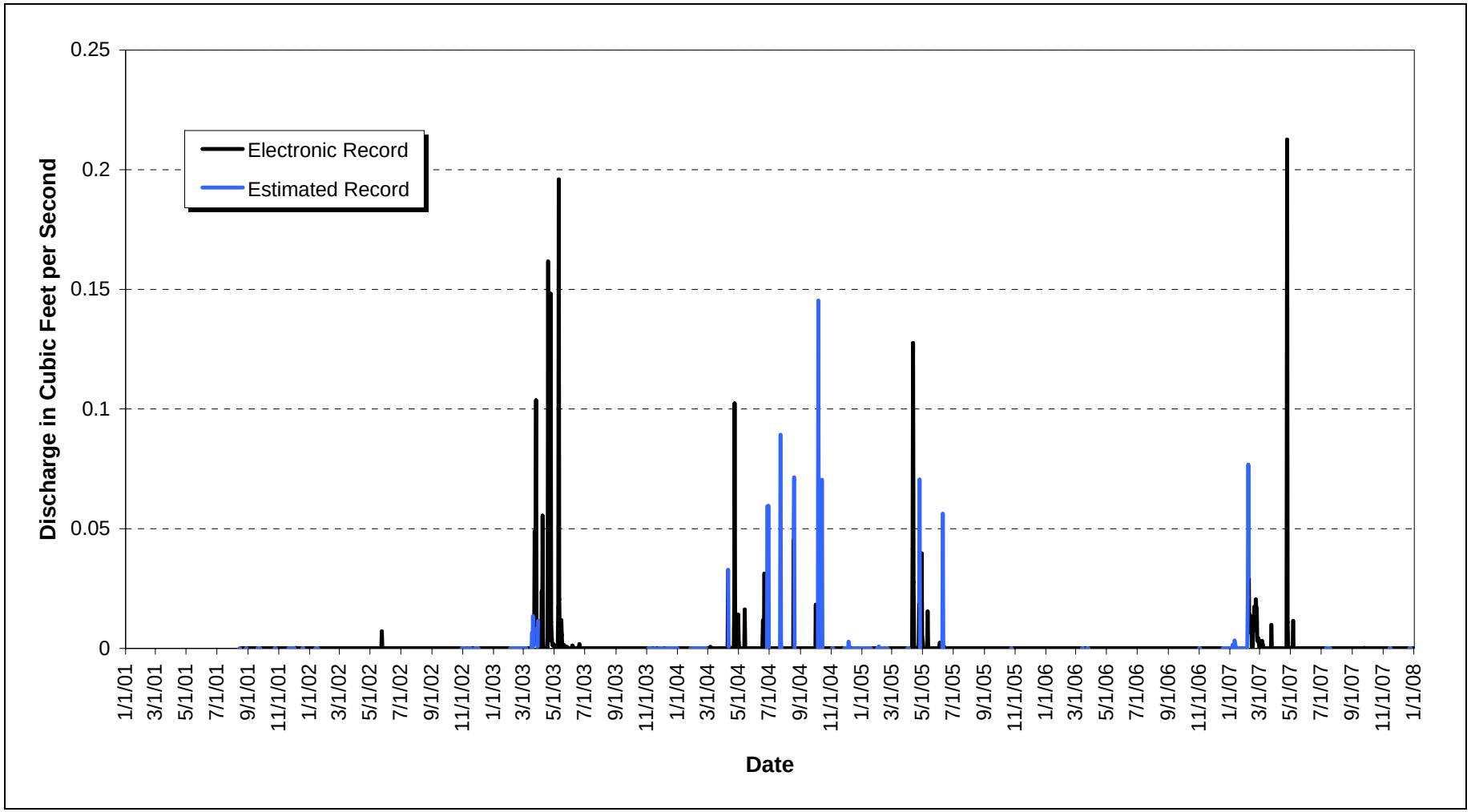


Figure 3-85. CY 2001−2007 Mean Daily Hydrograph at GS51: Ditch South of 903 Pad

GS59: Woman Creek Upstream of Antelope Springs Confluence

Location—Woman Creek 900 feet upstream of Antelope Springs confluence; State Plane: E2083228, N747139.

Drainage Area—The basin includes upstream reaches of Woman Creek; areas west of Highway 93 also contribute runoff (total drainage acreage undetermined).

Period of Record—November 20, 2002, to current year.

Gage—Water-stage recorder and 1.5-foot Parshall flume.

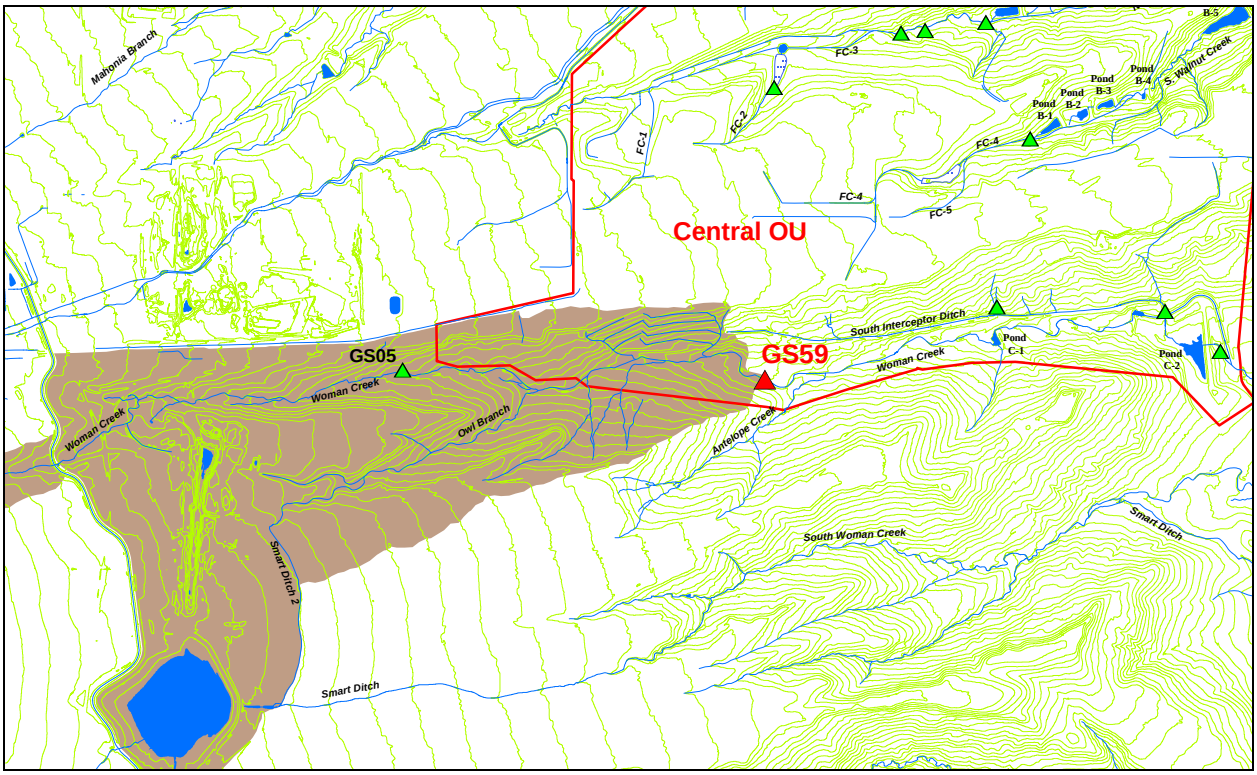


Figure 3-86. GS59 Drainage Area

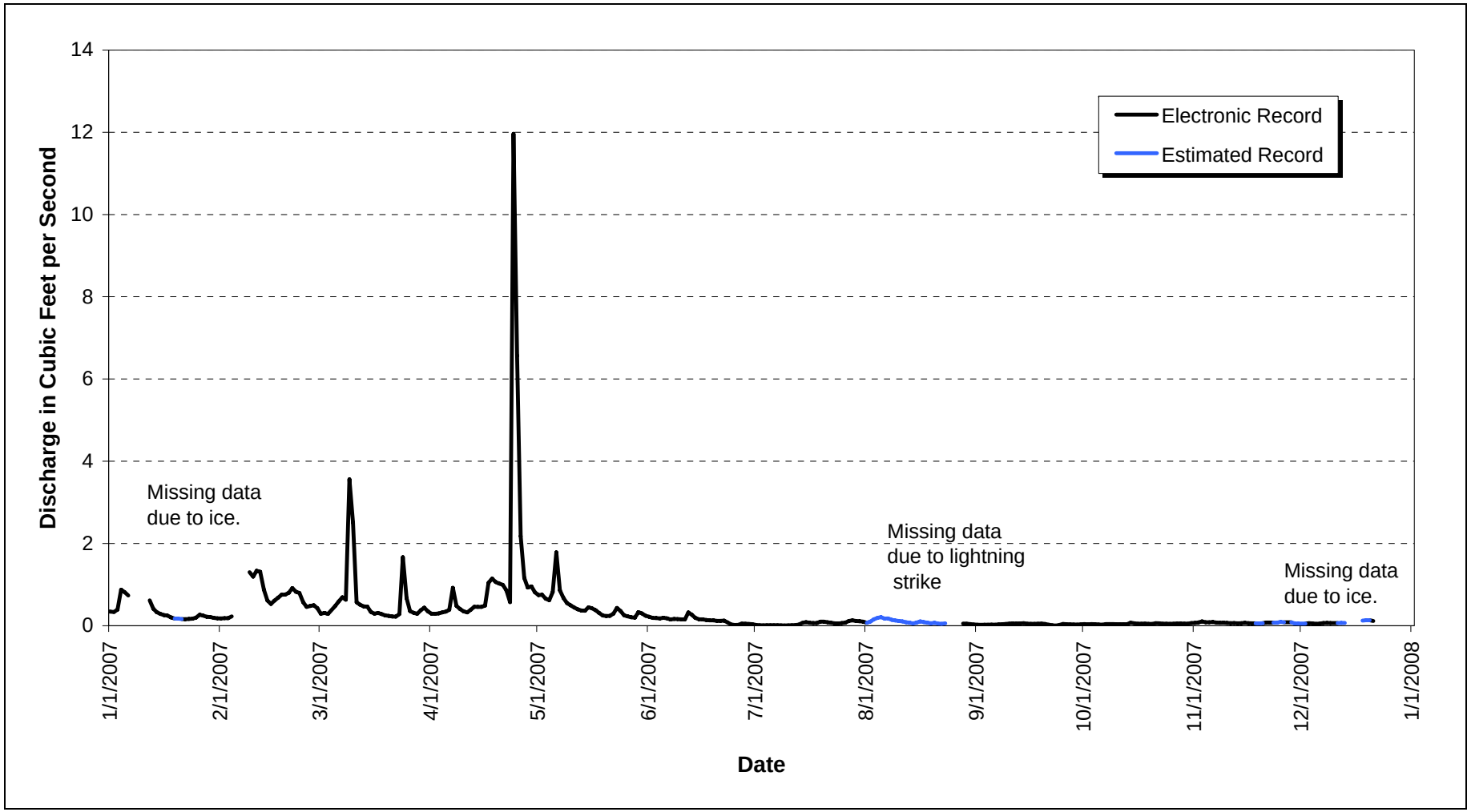


Figure 3-87. CY 2007 Mean Daily Hydrograph at GS59: Woman Creek Upstream of Antelope Springs Confluence

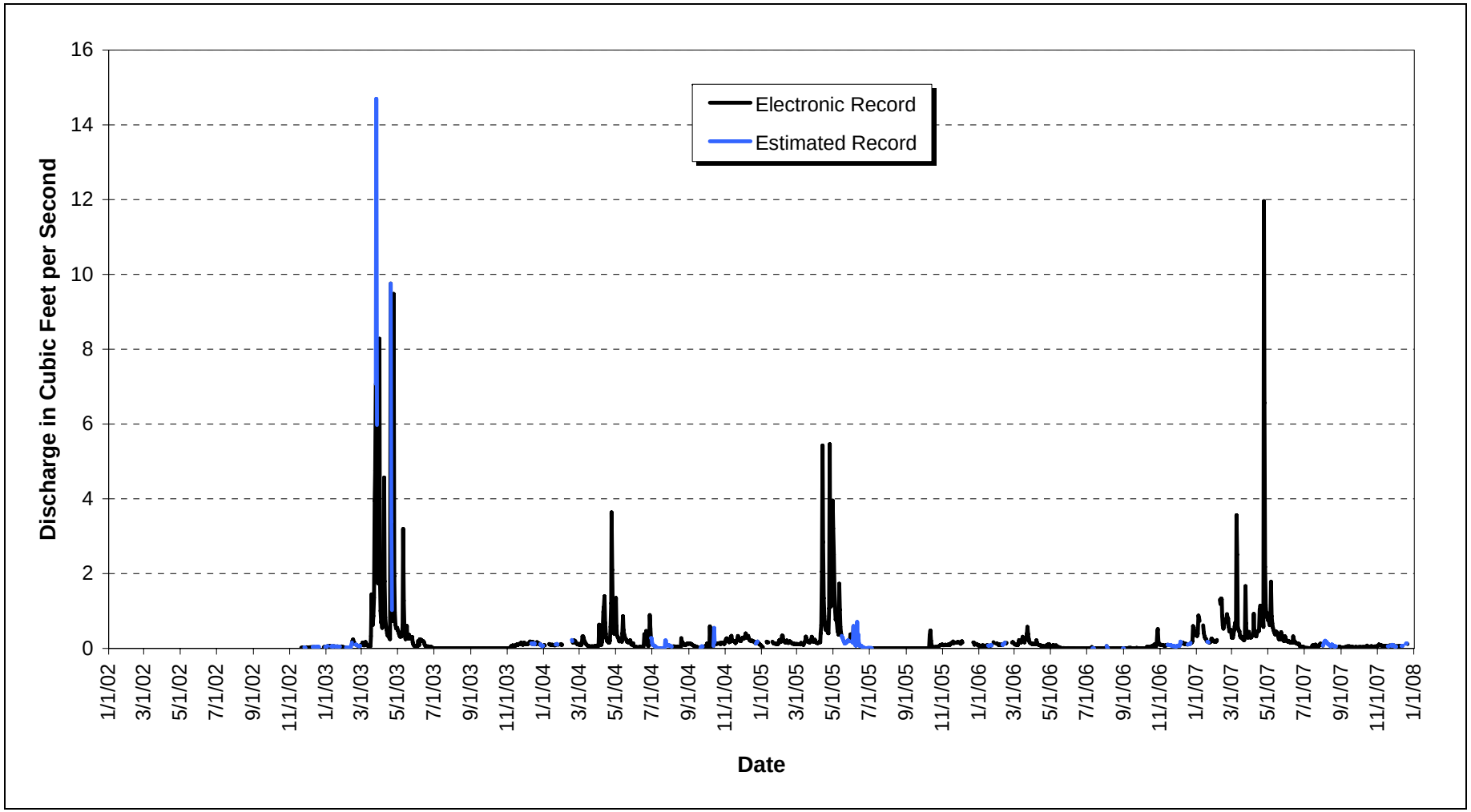


Figure 3-88. CY 2002−2007 Mean Daily Hydrograph at GS59: Woman Creek Upstream of Antelope Springs Confluence

SPPDISCHARGEGALLERY: SPPTS DG

Location—SPPTS DG tributary to North Walnut Creek; State Plane: E2085350, N751764.

Drainage Area—Not applicable; the SPPDISCHARGEGALLERY receives effluent flow from the SPPTS.

Period of Record—April 10, 2007, to current year.

Gage—Water-stage recorder and 0.6-foot HS flume.

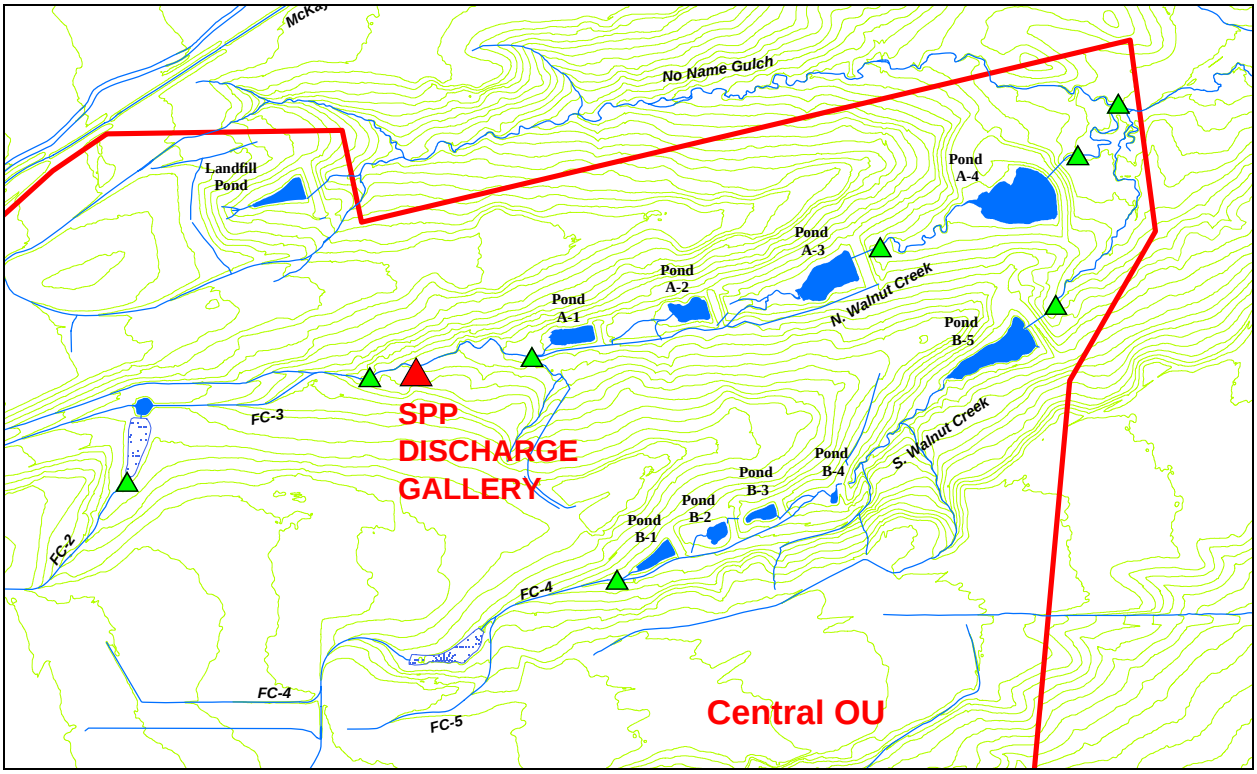


Figure 3-89. SPPDISCHARGEGALLERY Location

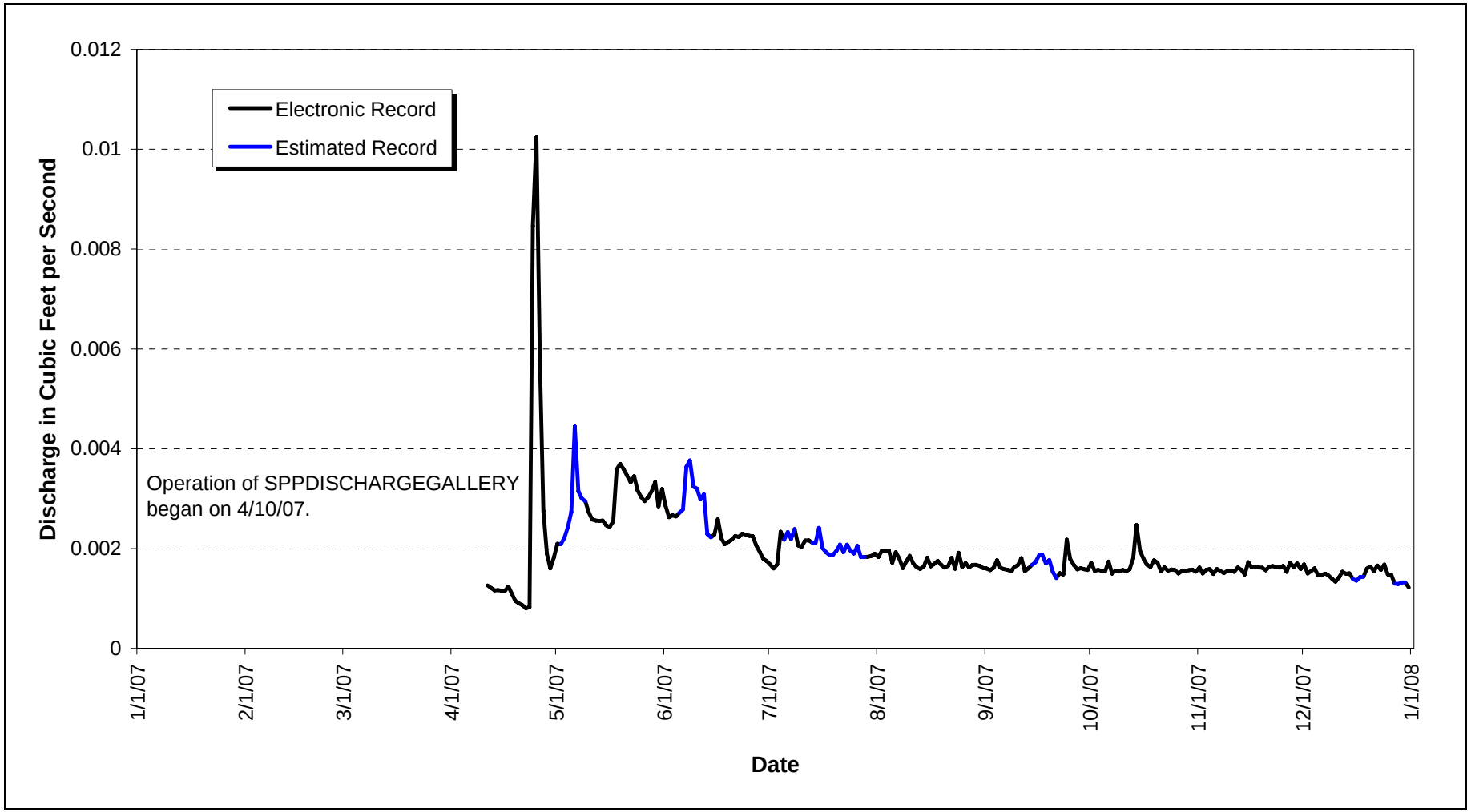


Figure 3-90. CY 2006 Mean Daily Hydrograph at SPPDISCHARGEGALLERY

SW018: FC-2 at FC-2 Wetland

Location—FC-2 drainage just upstream of FC-2 wetland; State Plane: E2083351, N751006.

Drainage Area—The basin includes FC-2 areas tributary to North Walnut Creek (total of 42.4 acres).

Period of Record—October 10, 2003, to current year.

Gage—Water-stage recorder and 1-foot Parshall flume through September 12, 2006. One-foot H flume installed on September 13, 2006.

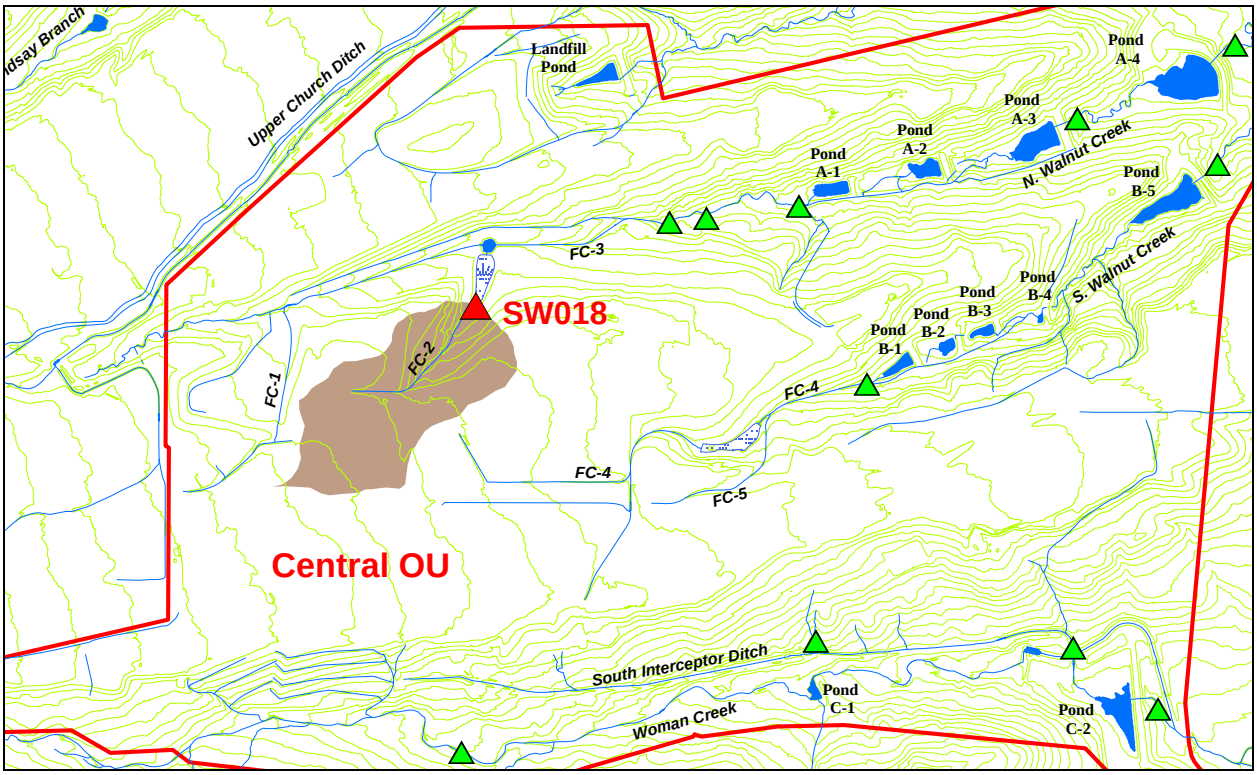


Figure 3-91. SW018 Drainage Area

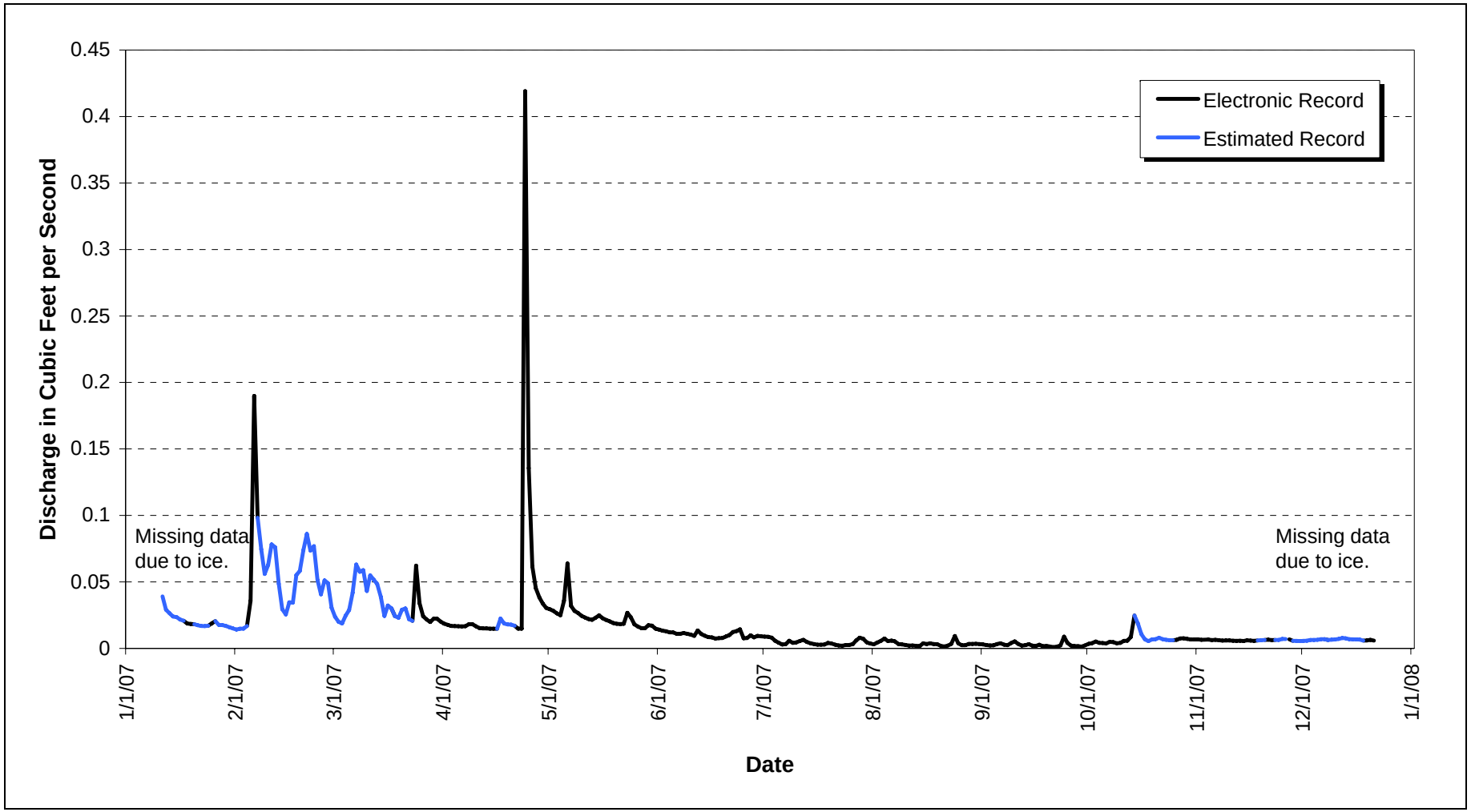


Figure 3-92. CY 2007 Mean Daily Hydrograph at SW018: FC-2 at FC-2 Wetland

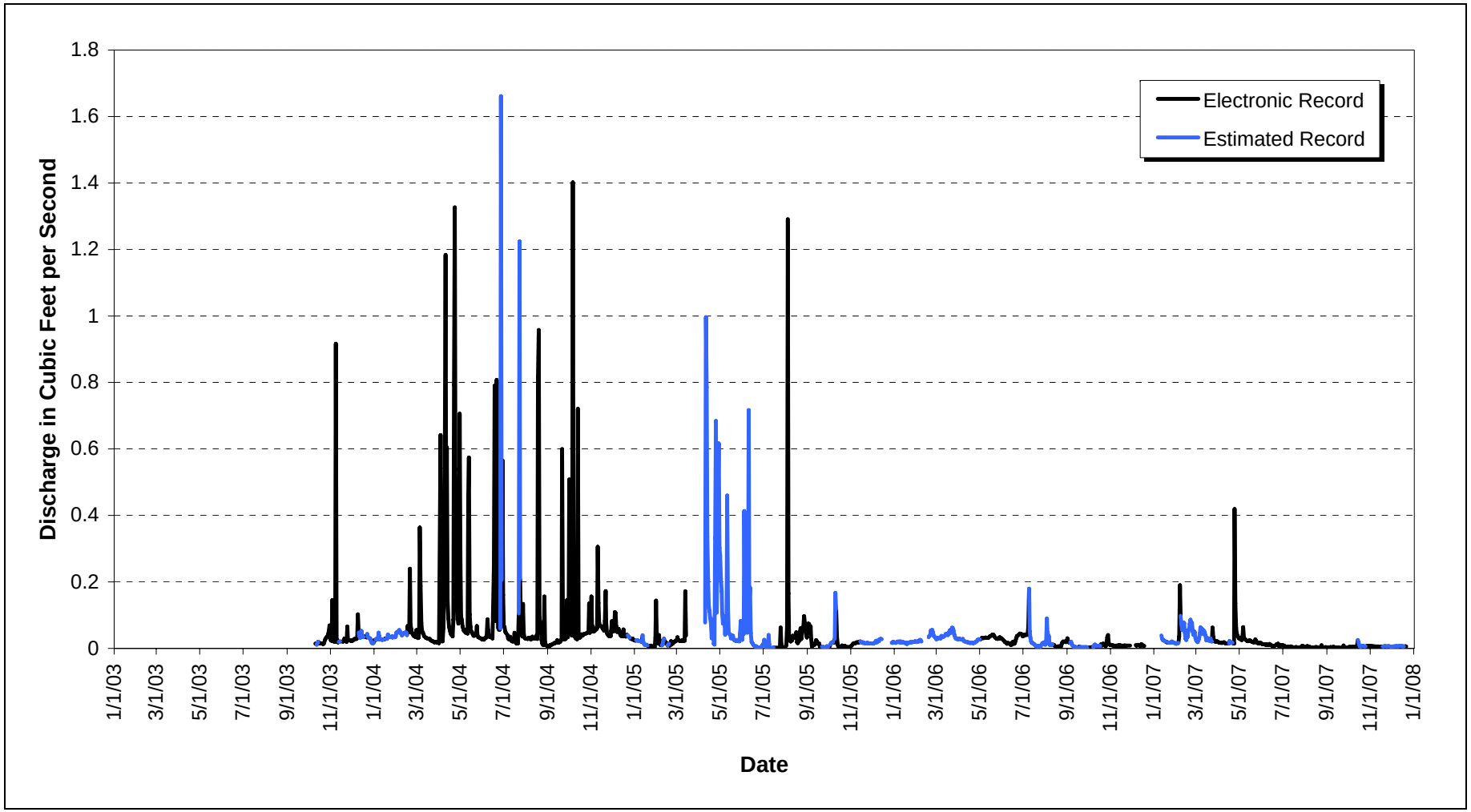


Figure 3-93. CY 2003−2007 Mean Daily Hydrograph at SW018: FC-2 at FC-2 Wetland

SW027: SID at Pond C-2

Location—East end of SID at Pond C-2; State Plane: E2088527, N748044.

Drainage Area—The basin includes a portion of the southern COU drained by the SID (total of 177.6 acres).

Period of Record—September 11, 1991, to current year.

Gage—Water-stage recorder and dual, parallel 120° V-notch weirs.

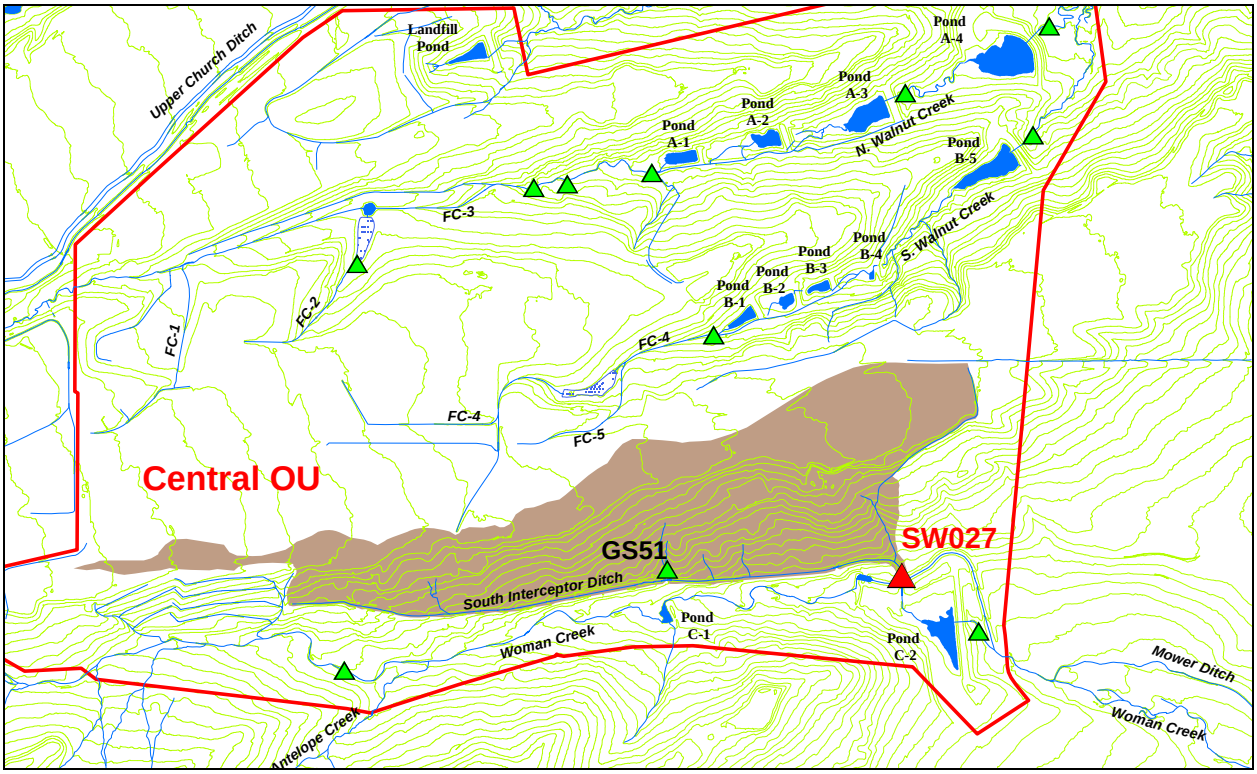


Figure 3-94. SW027 Drainage Area

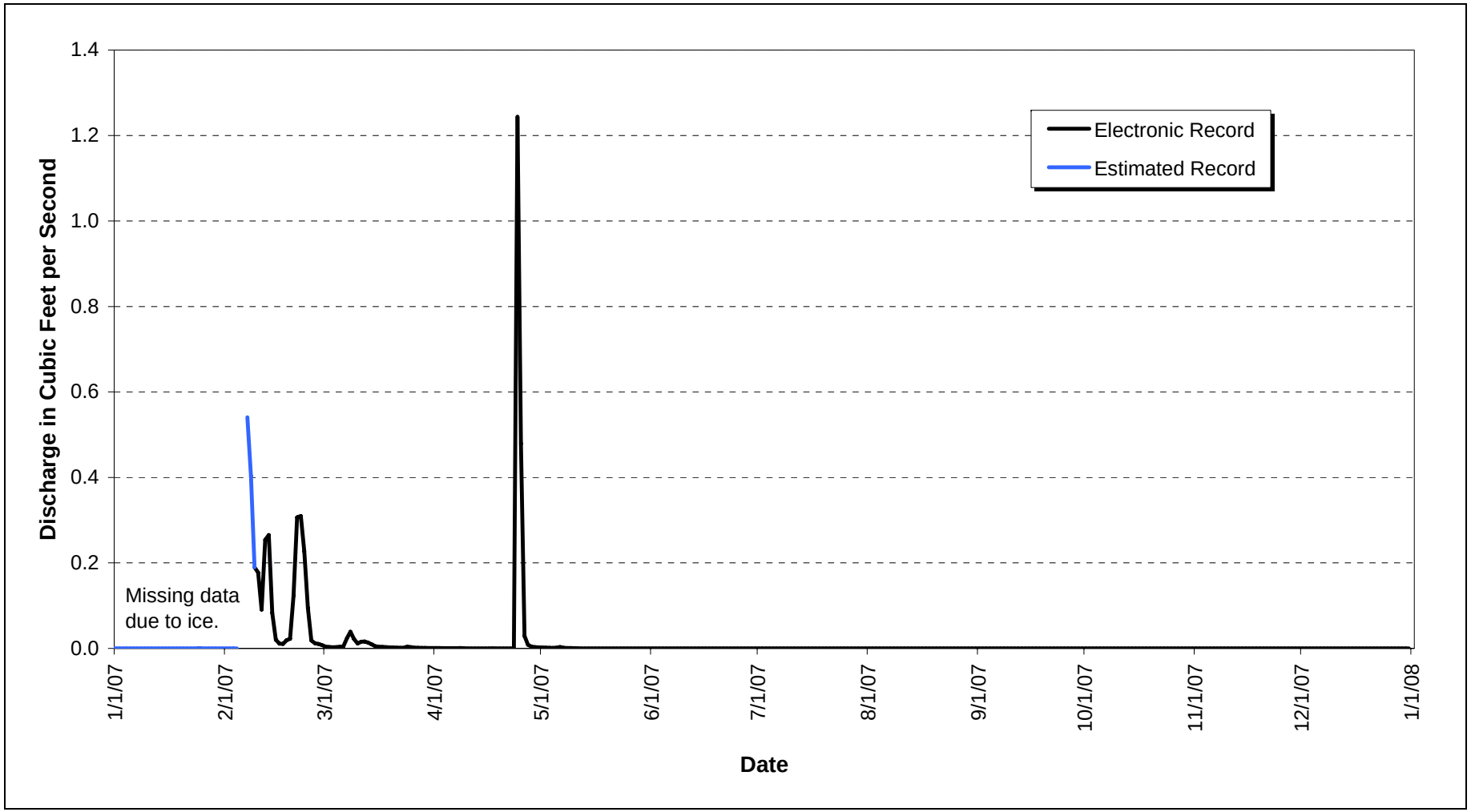


Figure 3-95. CY 2007 Mean Daily Hydrograph at SW027: SID at Pond C-2

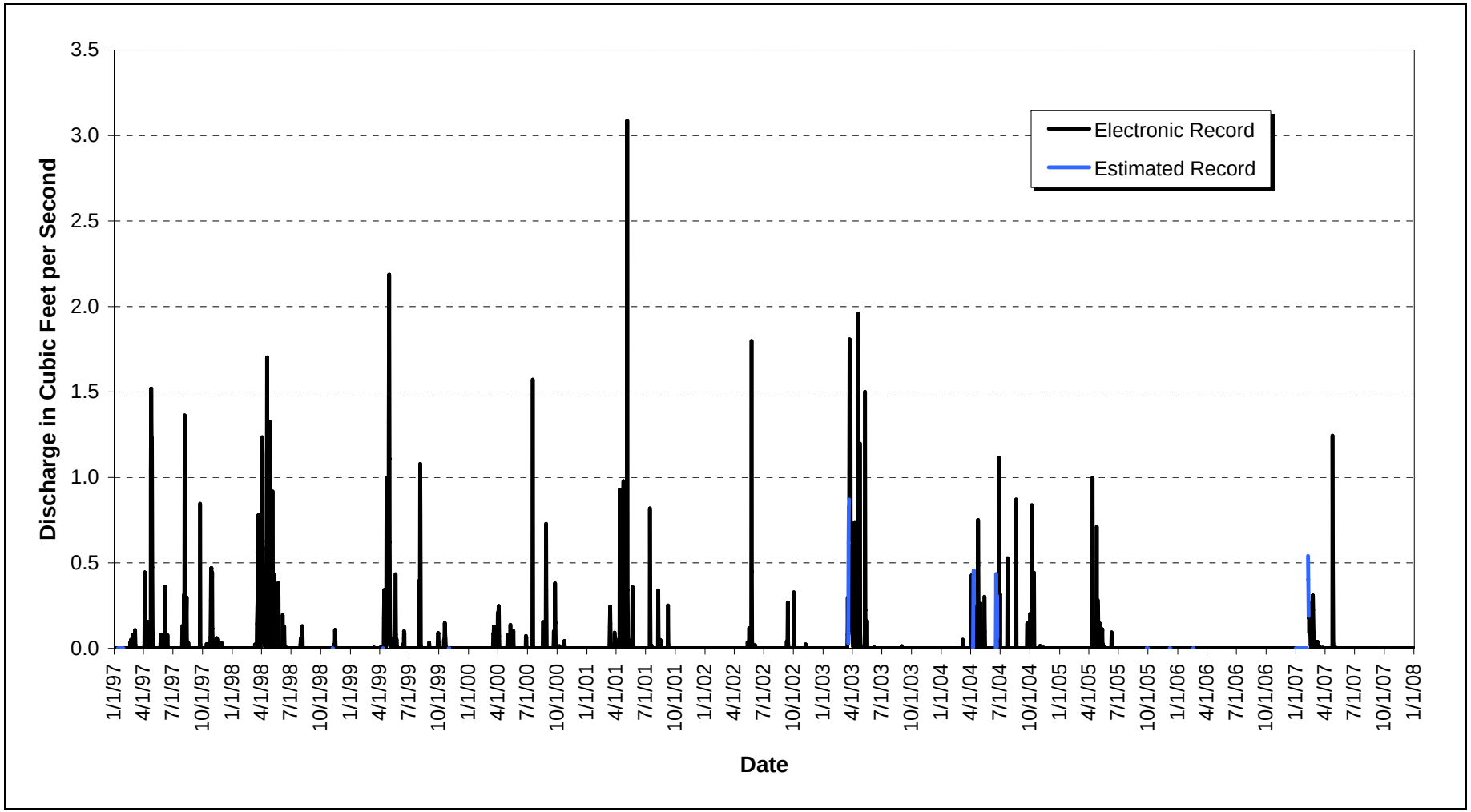


Figure 3-96. CY 1997−2007 Mean Daily Hydrograph at SW027: SID at Pond C-2

SW093: North Walnut Creek Upstream of Pond A-1 Bypass

Location—North Walnut Creek 1,300 feet above Pond A-1 Bypass; State Plane: E2085030, N751730.

Drainage Area—The basin includes the northwestern portion of the COU drained by FC-3 (total of 220.0 acres).

Period of Record—September 11, 1991, to current year.

Gage—Water-stage recorder and 36-inch suppressed, rectangular, sharp-crested weir to January 27, 2003; rated stream section during new flume construction (SW093T; January 27, 2003−May 29, 2003). Three-foot H flume starting May 29, 2003.

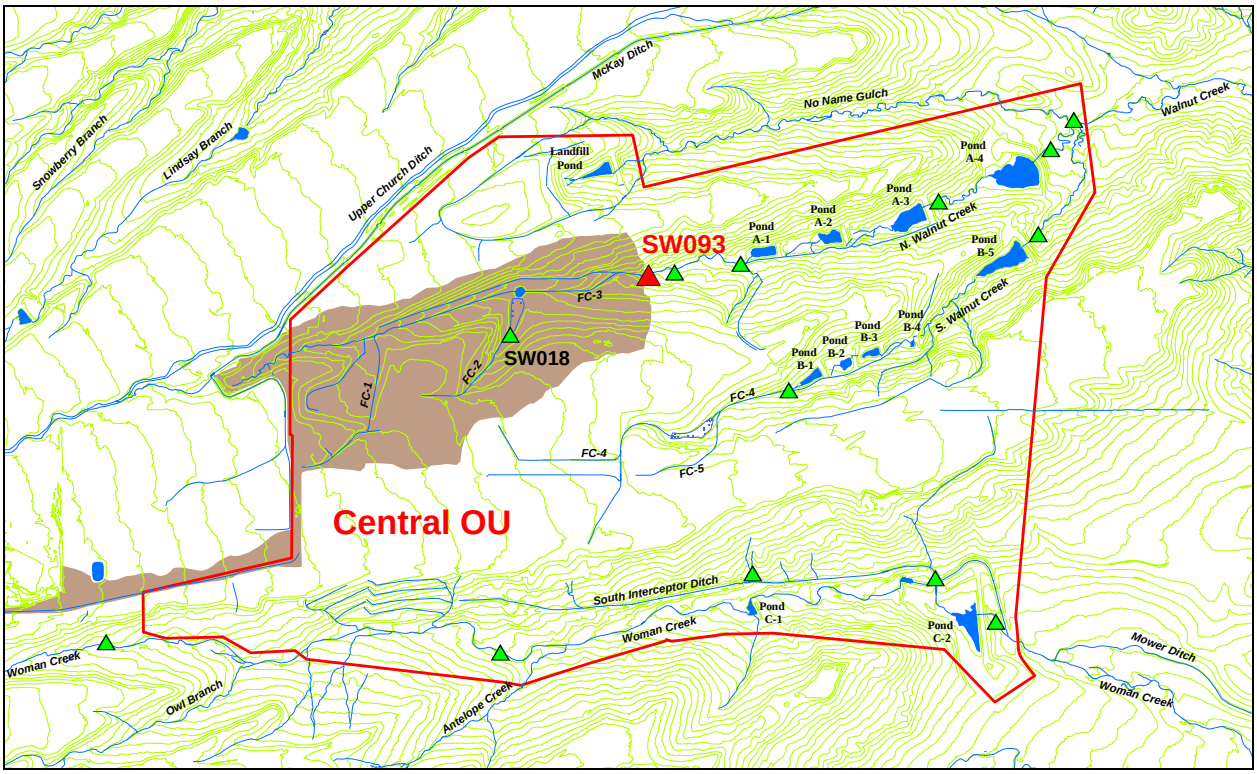


Figure 3-97. SW093 Drainage Area

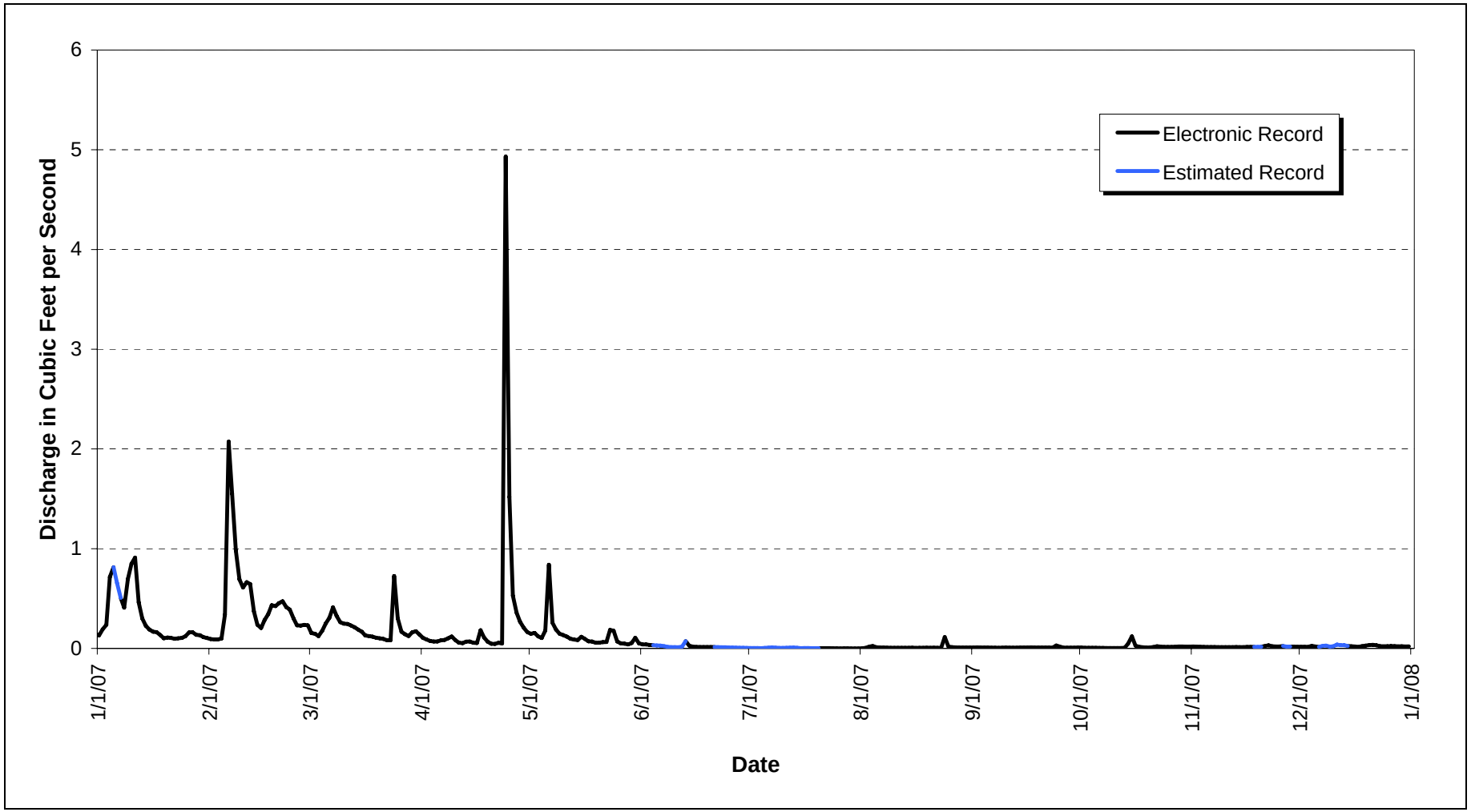


Figure 3-98. CY 2007 Mean Daily Hydrograph at SW093: North Walnut Creek Upstream of Pond A-1 Bypass

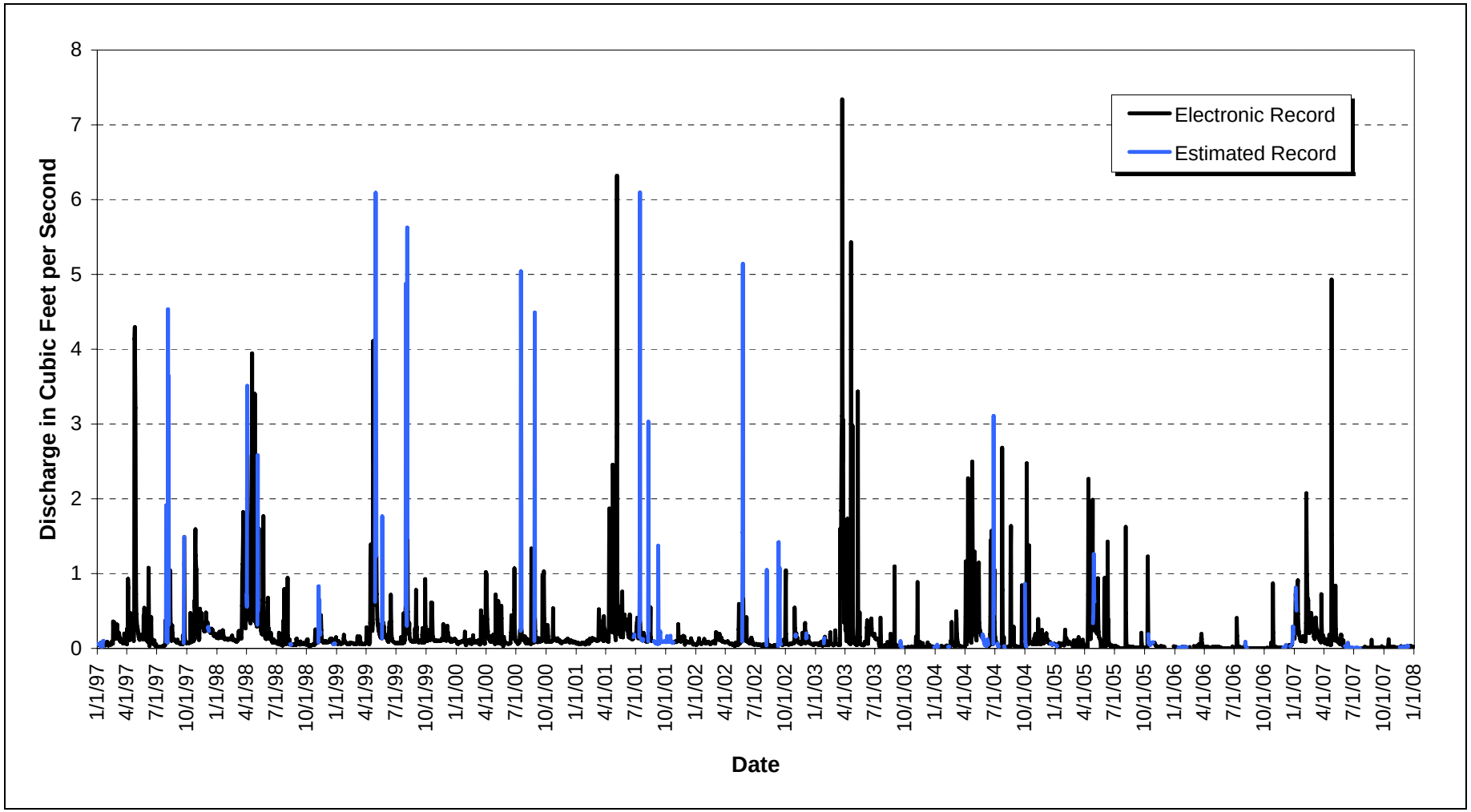


Figure 3-99. CY 1997−2007 Mean Daily Hydrograph at SW093: North Walnut Creek Upstream of Pond A-1 Bypass

3.1.3.4 Precipitation Data

During CY 2007, 10 precipitation gages were operated as part of the automated surface-water monitoring network (Table 3-39 and Figure 3-100). The locations employ tipping-bucket rain gages generally mounted at ground level. Precipitation totals are logged on 5- and/or 15-minute intervals. The gages are not heated and will not accurately record equivalent precipitation for all snowfall events. The following sections present several figures (Figure 3-101, Figure 3-102, Figure 3-103, Figure 3-104, Figure 3-105, and Figure 3-106) summarizing the precipitation data collected for CY 1997−2007.

Table 3-39. Monitoring Network Precipitation Gage Information

Location Code (Surface-Water Gage)	Easting (State Plane)	Northing (State Plane)	Period of Operation
PG55 [NA]	2087857.63	747141.16	7/19/94−8/23/07
PG56 [NA]	2091790.63	752716.35	7/18/94−3/22/07
PG58 [GS01]	2093835.22	744921.16	10/11/96−current year
PG59 [GS03]	2093598.99	753629.51	4/1/96−current year
PG61 [GS05]	2078432.10	747285.45	4/1/96−current year
PG72 [NA]	2083387.82	751851.00	6/7/05−current year
PG73 [GS13]	2086169.70	751862.47	9/27/05−current year
PG74 [GS59]	2083245.00	747172.00	9/5/06−current year
PG76 [NA]	2091963.00	752705.00	3/28/07−current year
PG77 [NA]	2087329.00	746937.00	8/23/07−current year

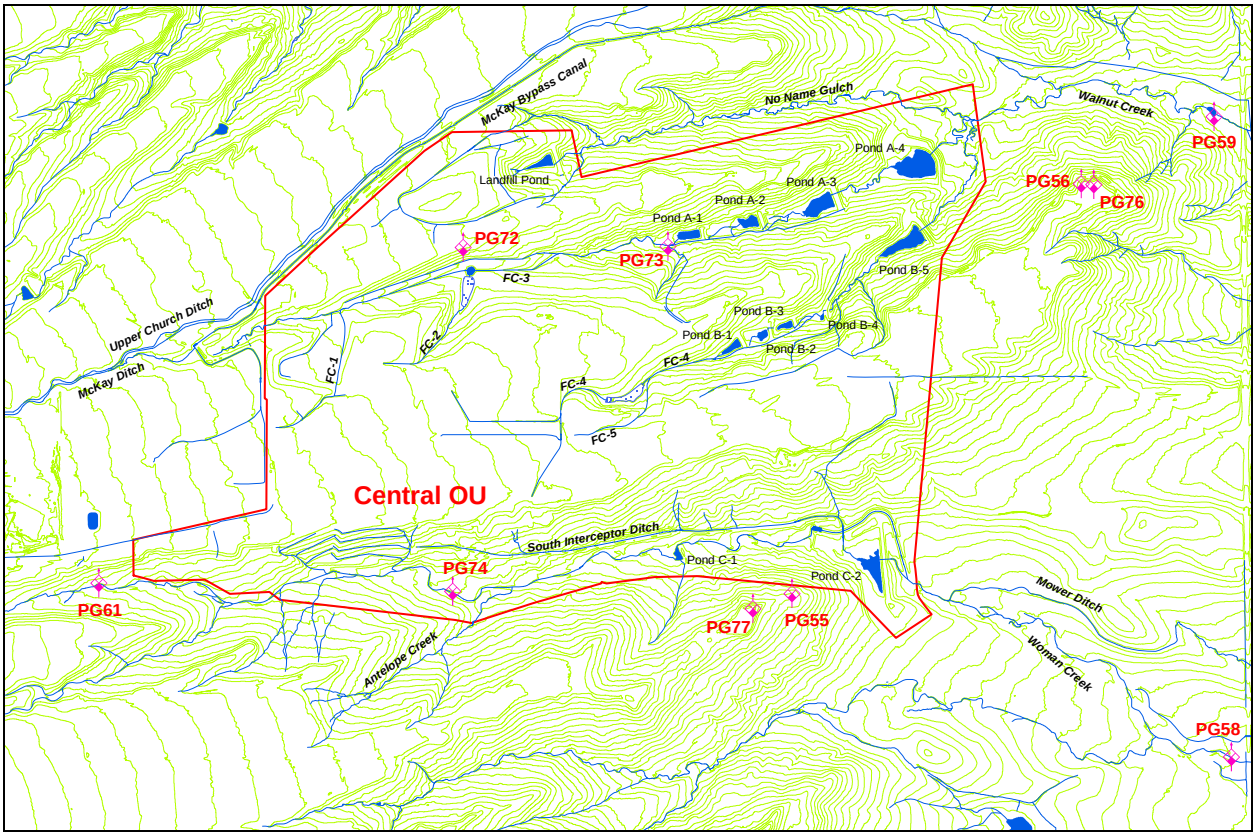
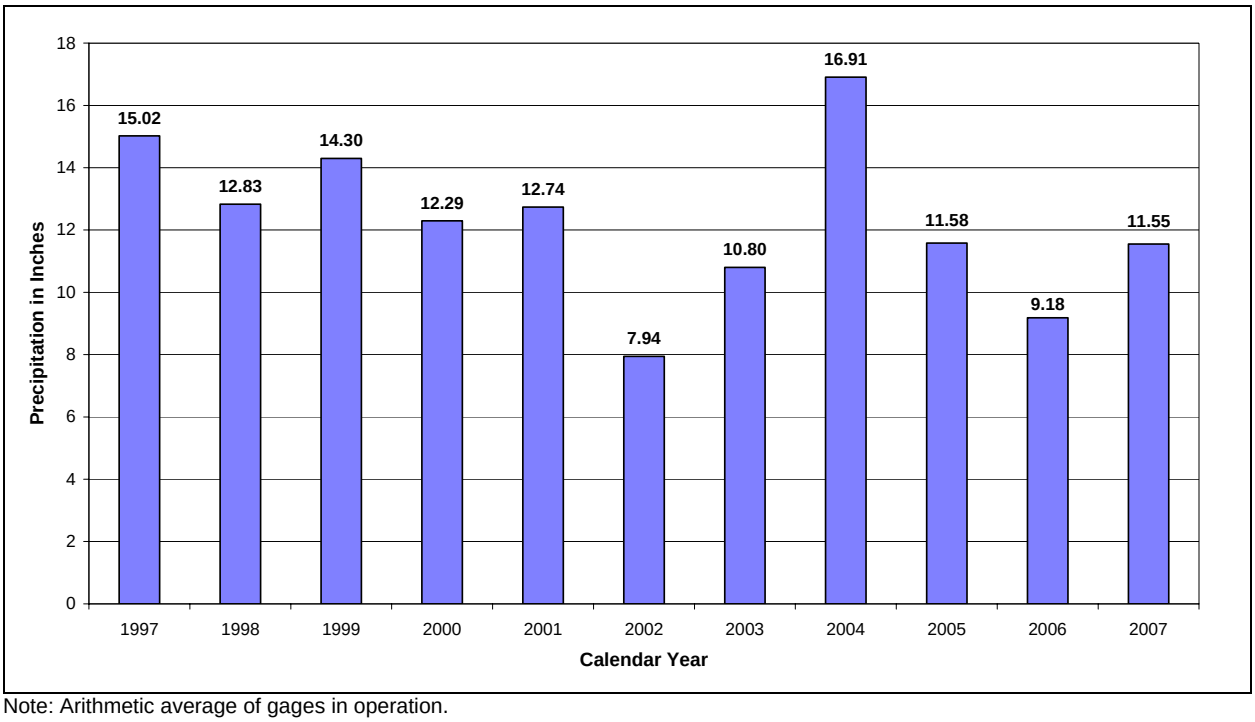


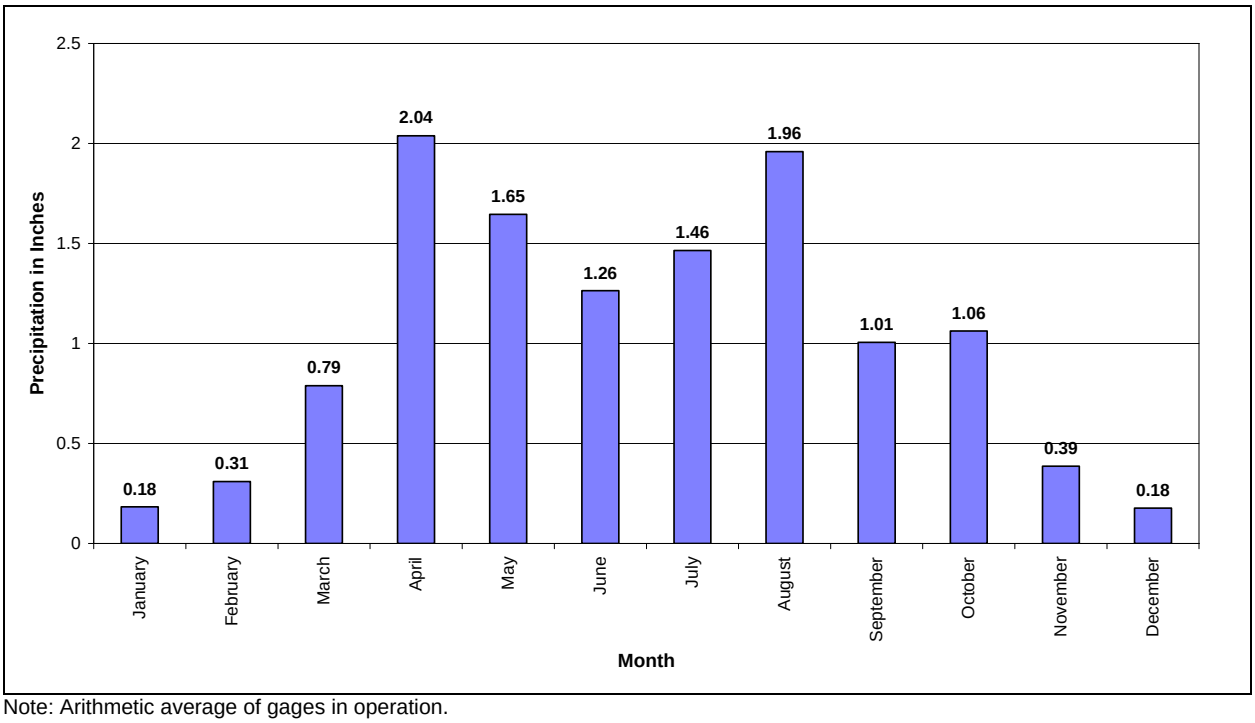
Figure 3-100. Site Precipitation Gages: CY 2007

CY 1997–2007 Summary



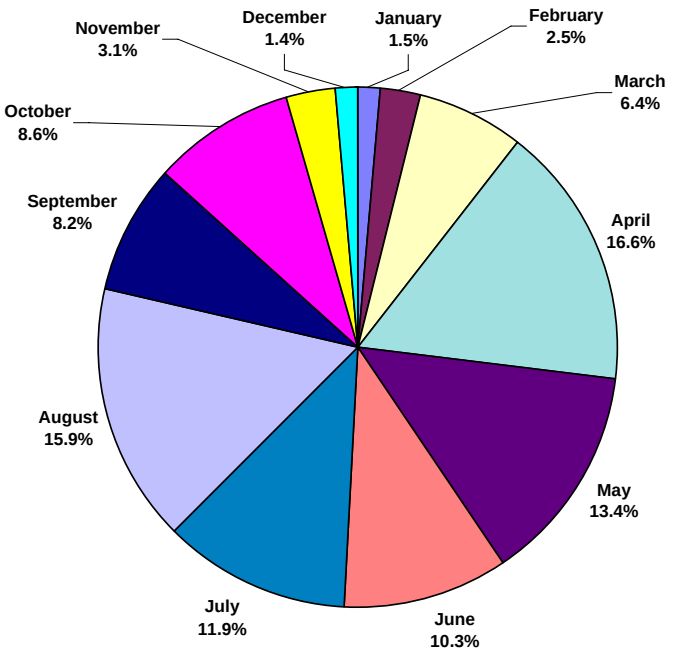
Note: Arithmetic average of gages in operation.

Figure 3-101. Annual Total Precipitation for CY 1997–2007



Note: Arithmetic average of gages in operation.

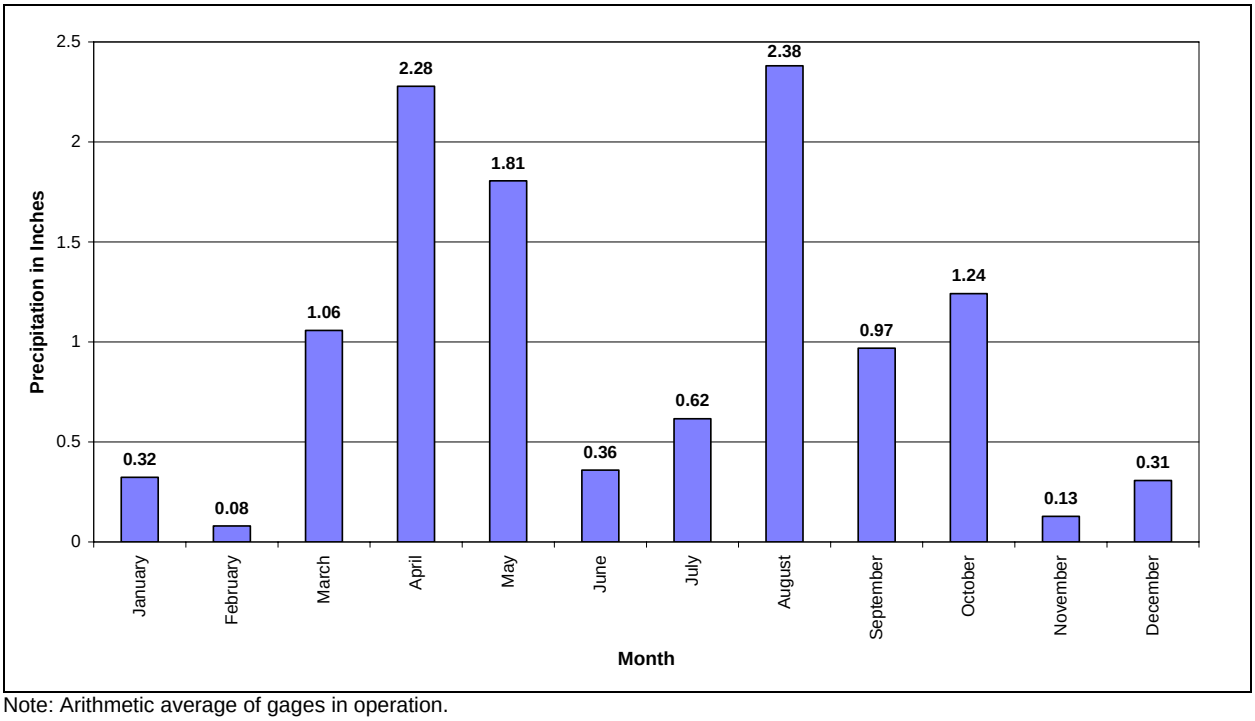
Figure 3-102. Average Monthly Precipitation for CY 1997–2007



Note: Arithmetic average of gages in operation.

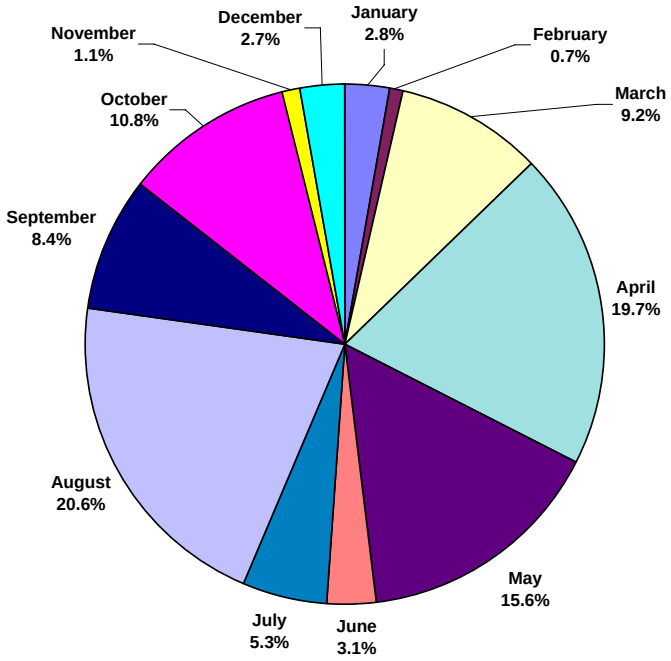
Figure 3-103. Relative Monthly Precipitation Totals for CY 1997–2007

CY 2007 Summary



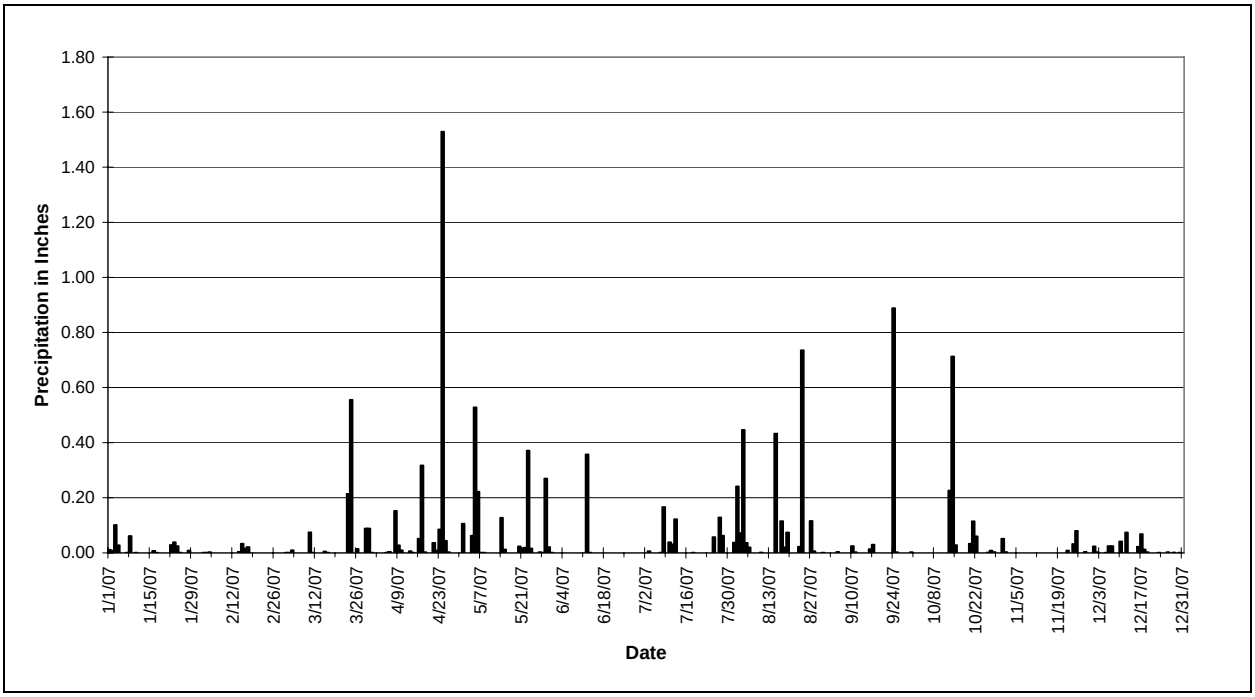
Note: Arithmetic average of gages in operation.

Figure 3-104. Monthly Precipitation for CY 2007



Note: Arithmetic average of gages in operation.

Figure 3-105. Relative Monthly Precipitation Volumes for CY 2007



Note: Arithmetic average of gages in operation.

Figure 3-106. Daily Precipitation Totals for CY 2007

3.1.3.5 Groundwater Flow

This section summarizes groundwater elevations and flow characteristics. Groundwater elevation data are discussed through the construction and interpretation of potentiometric surface maps and hydrographs. Groundwater flow characteristics are then assessed, including flow velocities.

Groundwater Elevations

Groundwater elevation data were collected at the start of the second and fourth quarters in 2007; these data are included in Appendix A. These data were plotted and hand-contoured to create potentiometric surface maps. The potentiometric surface map for second quarter CY 2007 is included as Figure 3-107, and the map for fourth quarter CY 2007 is included as Figure 3-108. These maps are derived from manual water level measurements.

Monitoring wells at Rocky Flats are screened within the UHSU. The UHSU encompasses unconsolidated surface materials such as Rocky Flats Alluvium, hillslope colluvium, valley-fill alluvium, and artificial fill (all of which are often referred to as “alluvium”), and underlying weathered bedrock (most often the Cretaceous-aged Laramie Formation or the Cretaceous-aged Arapahoe Formation). A well screened entirely within the weathered bedrock may yield different water levels than an adjacent well screened in the alluvium.

Seeps posted on both potentiometric surface maps are from the 1995 Hydrogeologic Characterization Report (EG&G 1995a). This depiction of seeps is the best available map of the seeps for the Site. However, it is no longer accurate, having been most strongly affected by the removal of all artificial water sources, as well as land surface reconfiguration (e.g., excavations and placement of fill) in some areas. Potentiometric surface maps for 2007 are based on many fewer locations than pre-closure years, and are therefore less detailed in comparison. The areas of interest in post-closure years are the former IA and adjacent areas.

There are several locations on the potentiometric maps labeled as dry. Wells are labeled dry if they are measured to be dry, or if the water level measured is below the bottom of the screened interval (water below the screen is stagnant and may not reflect the actual water level). The locations labeled as dry may indicate areas that are unsaturated. These areas are a result of limited groundwater, caused by a reduction in recharge from precipitation (e.g., droughts, such as that in 2002) or the reduction in contributions from artificial sources (e.g., removal of water lines, foundation drains, and dust suppression water). However, many wells in the monitoring network do not fully penetrate the UHSU; therefore, locations depicted as dry may not truly be unsaturated, but rather may be saturated at depths greater than that of the associated well.

Unsaturated areas in 2007 are similar to those depicted in 2006. Unsaturated areas in the second and fourth quarters include parts of the OU 1 Plume and each of the three groundwater treatment systems. (Refer to Section 3.1.5.3 for a discussion of the several historically named plumes at Rocky Flats). These four areas are typically dry due to the dewatering effects of the associated groundwater intercept trenches or, at the OU 1 Plume, the nearby defunct French drain. Groundwater flow paths in 2007 are consistent with 2006, as estimated from the potentiometric surface maps (Figure 3-107 and Figure 3-108).

Water levels in 2007 appear to be equilibrating from closure activities, as shown in the area surrounding former B371 (Figure 3-107 and Figure 3-108). This area no longer appears to act as a groundwater sink since the disruption of the foundation drains. A similar pattern is suggested by the groundwater distribution in the areas of former B771 and B883/B881, which were also strongly influenced prior to closure by foundation drains but appear to be equilibrating in 2007.

Water levels are generally higher in the second quarter than the fourth quarter because of seasonal influences (recharge from spring precipitation, followed by drier conditions and continuing discharge via baseflow and evapotranspiration). Prior to closure, other influences—most particularly, the addition of imported water to the hydrologic system—were also major factors in some areas but this is no longer the case.

Precipitation in 2007 was recorded at eight locations across the Site. The "total" precipitation (i.e., as measured by unheated rain gauges, which do not accurately reflect precipitation totals related to snowfall) recorded at the Site in CY 2007 was 11.55 inches. This is consistent with the historical average for annual precipitation totals (11.91 inches). Table 3-40 summarizes precipitation totals for recent CYs, and displays the total precipitation for 2007. Note that the amount shown for 2003 incorporates March data from the Site's former 61-meter meteorology tower, which included a heated precipitation gauge that recorded precipitation from the multi-foot March 2003 snowstorm more accurately than did the unheated gauges operated by the Water Programs Group. See Section 3.1.3.4 for additional discussion of precipitation.

Table 3-40. Calendar Year Precipitation Totals at the Site

Calendar Year	Total Precipitation (inches)
1993	12.27*
1994	10.64
1995	16.49*
1996	12.36
1997	15.02*
1998	12.83*
1999	14.30
2000	12.29
2001	12.74*
2002	7.94
2003	12.35
2004	16.91
2005	11.58
2006	9.18
2007	11.55

Notes: Total precipitation listed is an average of all precipitation gauges operating that year at the Site. In 2007, this was eight gauges. *Value corrected from that included in 2005 Annual Report. Correction factors were 0.01 to 0.03 inches.

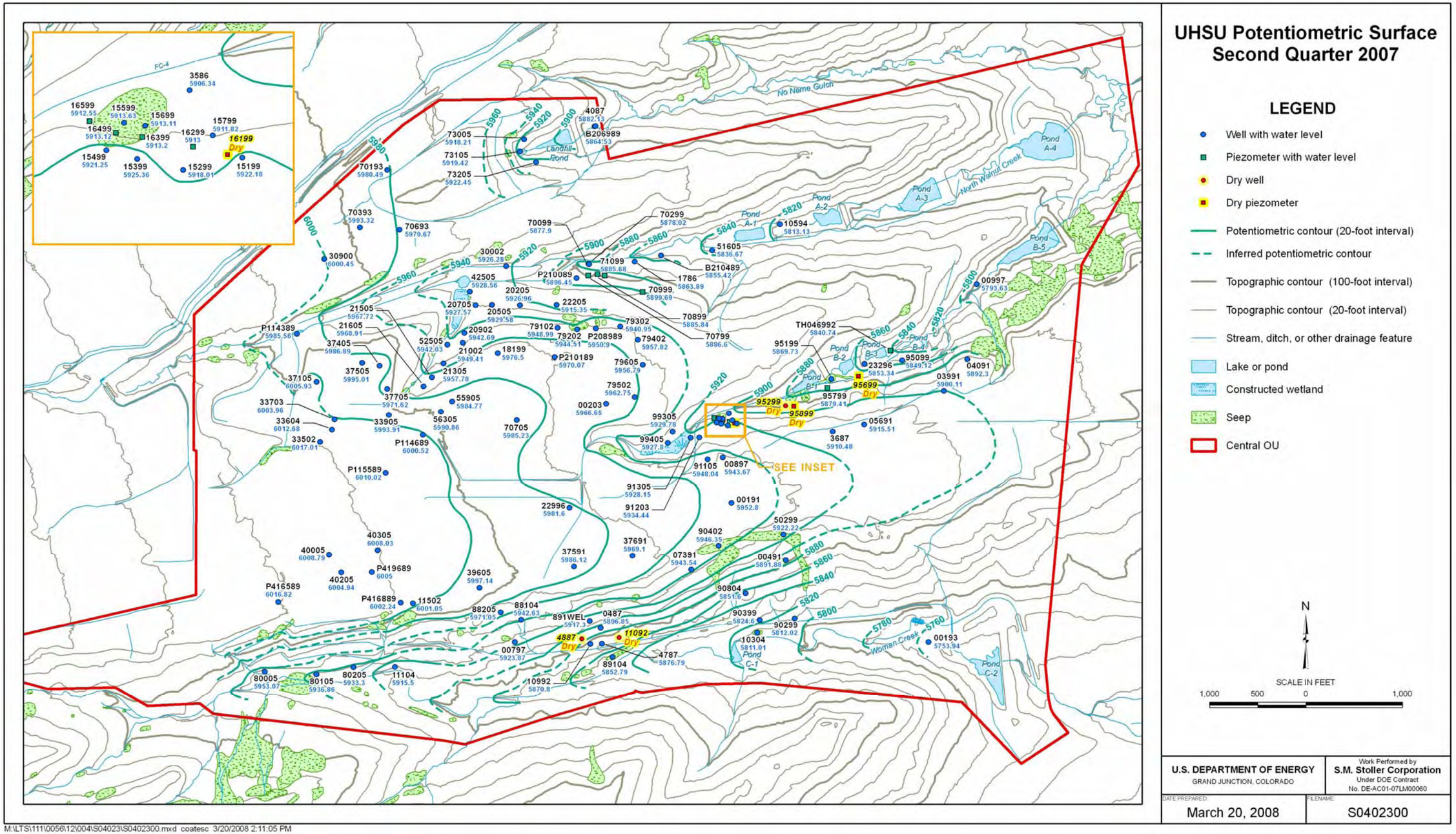


Figure 3-107. UHSU Potentiometric Contours: Second Quarter CY 2007

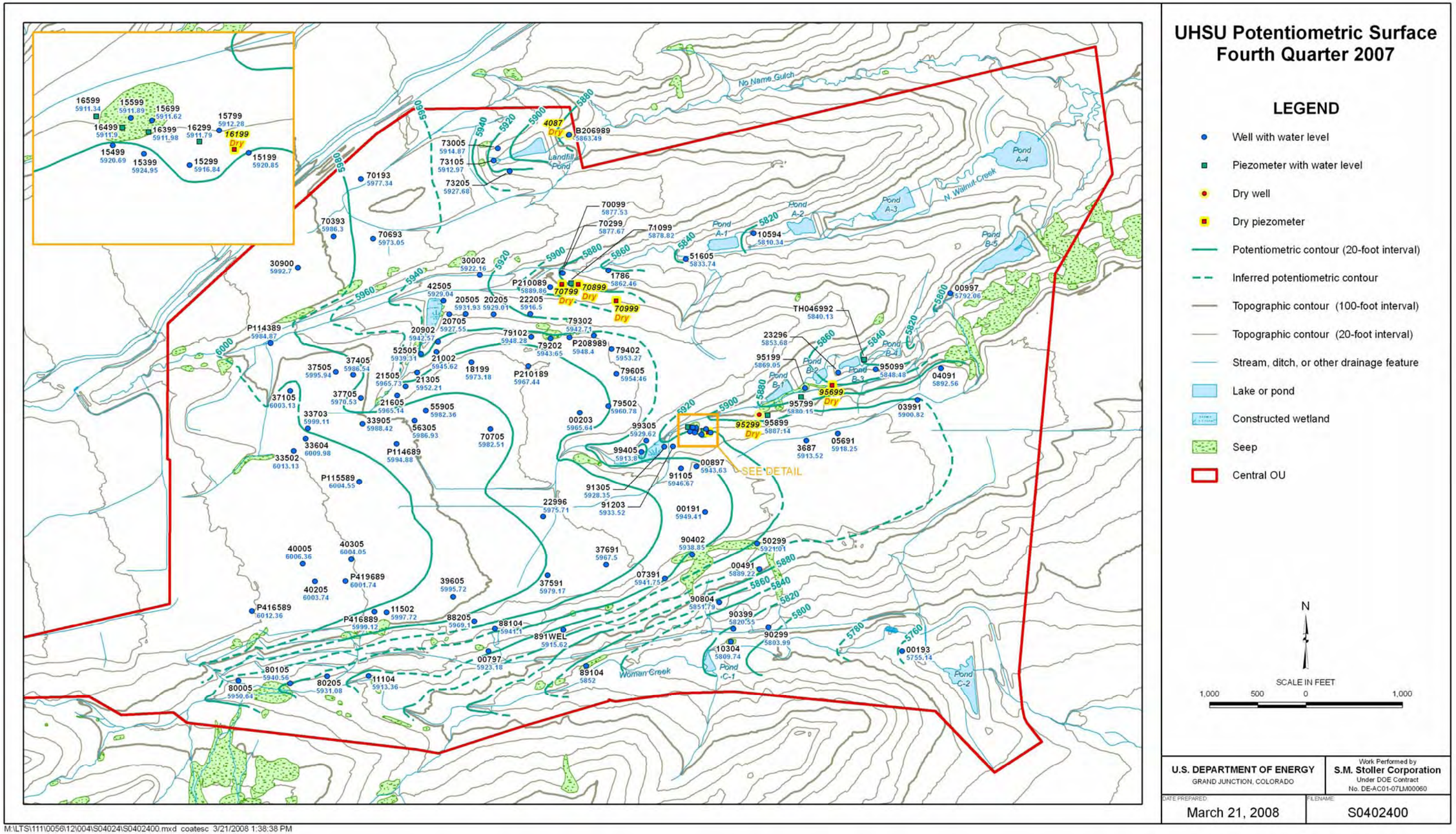


Figure 3-108. UHSU Potentiometric Contours: Fourth Quarter CY 2007

Hydrographs

Water level measurements provide additional information on the hydrogeologic conditions surrounding the wells, as well as well recharge patterns. Hydrographs were prepared and are included in Appendix A.4. Selected groups of hydrographs are discussed here. It may be helpful to refer to the referenced hydrographs throughout the following discussion; otherwise, much of the text will have little meaning.

As in the previous two annual reports (DOE 2006e, 2007e) and similar to the treatment of analytical data as discussed above, water level data for original and replacement wells are combined into a single hydrograph under the assumption that the corresponding data are continuous. (As additional data are collected this assumption may prove to be false at some locations, in which case the corresponding data will no longer be pooled.) Water level data used for these hydrographs includes routine, pre-sampling, and special-request measurements.

Water level elevations were calculated by subtracting the measured depth to water from the surveyed elevation of the top of the well casing. When wells were found to be dry, the water level posted on the hydrograph is equivalent to the elevation of the bottom of the well casing, as calculated from the total depth of well casing recorded during its installation. The same water level is posted when the measured water level is found to be below the bottom of the screened interval, because this water is not in hydraulic connection with saturated materials and is therefore likely not representative.

Note that water levels for first quarter CY 2007 were not measured due to inclement weather; multiple blizzards and heavy snowfall rendered the Site essentially inaccessible. In addition, the hydrograph for well 45605 was not constructed. This well was installed within the slump south of former B991 that developed beginning in January 2006 (see DOE 2006e and 2007e for more information). Because of the resulting continual changes in ground surface elevation at that well, water level elevations based on measurements referencing the original ground and top of casing elevations are not accurate. This well was abandoned following fourth-quarter sampling in October 2007; a replacement well will be installed in 2008. See Section 2.7.2 for additional discussion of the slump.

Wells are grouped and discussed by geographic proximity, hydrogeologic setting, and contamination plume. Typically, the resulting groups of wells are represented by hydrographs with similar patterns. Many hydrographs display a rebound in 2007 following the dry conditions of 2006. This rebound has a strong seasonal signature, with the highest water levels in spring followed by a decline through the end of 2007. Water levels in 2007 appear to have stabilized, and may no longer be influenced by closure activities.

The contaminant plumes in the eastern portion of the former IA, including the Oil Burn Pit (OBP) #2 Plume, Mound Site Plume, 903 Pad/Ryan's Pit Plume, and East Trenches Plume, are discussed together based on their geographic proximity and commingled contaminants. Groundwater from both the OBP #2 Plume and the Mound Site Plume is captured by the MSPTS. Well 91105, located in the OBP #2 source area, is represented by a relatively uniform hydrograph, although some rebound is evident in 2007. The hydrograph for well 91203, located a short distance north of well 91105, shows a very similar pattern in 2006 and 2007 following increasing water levels in spring 2005. Increasing water levels in 2005 are discussed in the 2005

Annual Report (DOE 2006e), and may be attributed to the re-routing of 700 Area water through an unlined ditch upgradient of this well (and downgradient of well 91105). Farther downgradient and on the southern margin of the FC-4 constructed wetland, well 91305 also shows a similar pattern, although the magnitudes of these water level changes are smaller than in the wells upgradient. The hydrograph for Mound source-area well 00897, which is located closest to OBP #2 well 91105, does not show a strong resemblance to the aforementioned hydrographs, although a seasonal increase in water levels in spring 2007 is evident.

Wells in the area of the MSPTS include 15199, 15299, 15399, 15499, 15599, 15699, 15799, and 3586. (91203 can also be considered within the area, but has been discussed above.) The three wells on the upgradient side of the MSPTS groundwater intercept trench, 15299, 15399, and 15499, all show a very similar hydrograph. This pattern is marked by a seasonal drop in water levels (to dry conditions in well 15299) in the second half of 2006, followed by a rebound in 2007. In the hydrograph for well 15499, located at the western end of the trench, this rebound is very subtle; water levels have been steadily rising since 2003 with minimal decrease in water level in response to the dry year of 2006. This is almost certainly due to the influence (as of mid-2005) of water within the diverted storm drain corridor from OBP #2, which is now directed to the MSPTS intercept trench as discussed above and in previous reports (e.g., DOE 2007e). Conversely, hydrographs for wells on the downgradient side of the intercept trench—15599, 15699, 15799, and 3586—differ from this pattern and from each other. Of greatest interest is the hydrograph for Sentinel well 15699, which is marked by a strong seasonal pattern since 2005, with each year's maximum water level above that of the prior year. (This hydrograph shows a drop in water levels that reflects sampling in May 2007.) In addition, the pattern for well 15799, which is typically dry, includes measurable water levels throughout 2007, with a strong seasonal (spring recharge) component. On the east, beyond the eastern end of the MSPTS groundwater intercept trench, well 15199 is represented by a hydrograph that is similar to those for the upgradient trench wells (particularly wells 15299 and 15399) but with higher-magnitude fluctuations. In summary, wells on the upgradient side and eastern end of the intercept trench show seasonal recharge that is affected by the groundwater contributions of the OBP #2 storm drain corridor. The magnitude of those effects is proportional to the proximity to the western end of the intercept trench; with increasing distance from the point at which that corridor ties to the MSPTS intercept trench (i.e., comparing wells 15299 and 15499), the effect of this added water is less noticeable on the hydrographs. However, as this water is probably the mechanism responsible for the higher water level elevations in most wells in the area of the MSPTS since 2005, it is probably also responsible for the presence of measurable groundwater in well 15299 in the same time period.

Wells 07391, 00191, and 90402 are located near Ryan's Pit and the 903 Pad. Hydrographs for these wells show a similar pattern of rebound between the last reading in 2006 and the first in 2007, although the magnitude of rebound at 90402 (approaching 10 feet) is much greater than at either 07391 (close to 4 feet) or 00191 (approximately 5 feet). Wells 50299, 00491, 90804, 90399, and 90299 monitor the downgradient portion of the plume, and—except for 90804—also show similar rebounds in 2007. Well 90804 monitors a detachment plane beneath a slump, and to date shows little variation in water level regardless of climatic influences. In summary, effects of closure on groundwater levels in the 903 Pad/Ryan's Pit Plume area are minimal, and except for well 90804 the hydrographs for these wells show a fairly strong rebound in water levels in 2007.

The East Trenches Plume is monitored by wells 3687, 05691, 03991, and 04091. The hydrographs for these wells are generally similar in 2006 and 2007. Hydrographs for wells nearer the former IA—3687 and 05691—show a somewhat higher amplitude rebound in 2007 than do the more distal wells, 03991 and 04091, although this last well goes dry and therefore its hydrograph does not depict the full range of water levels at that location. Notably, this well—04091—did not go dry in 2007, in contrast to the entire year of 2006. Interestingly, the hydrograph for well 05691 indicates higher than average water levels are typically observed during odd-numbered years, but this is almost certainly a coincidence.

Wells monitoring groundwater around former B771/774 include 18199, 20902, 21002, 20205, 20505, and 20705. The hydrographs for these wells all show similar patterns: a water level decrease in the relatively dry year of 2006 followed by a rebound in spring 2007. Some wells, most notably 18199 and 20505, show a lowered water level during 2004-2005 that may relate to groundwater equilibrating within the subsurface at former B771/774. As this area had been kept artificially dry by the building's foundation drain system, much of the building footprint would have represented a groundwater "sink" that was then slowly filled after the drain was disrupted. Water elevations now appear to be stabilizing at close to the same values as was the case prior to closure. In summary, wells in this area were affected by closure activities in 2006, but are stabilizing and display more seasonal influences in 2007.

Wells monitoring the former B371/374 complex include 37105, 37405, 37505, 37705, and the more distant P114389. Wells in the area immediately adjacent to the buildings were affected by the disruption of the foundation drains and, as at B771, the subsequent presence of a groundwater sink (at B371/374, represented by the backfilled basement and sub-basement) that then took time to become saturated with groundwater. Water levels appear to be stabilizing in 2007. Water levels in wells 37105 (upgradient and west of the complex), 37705 (downgradient and east), and P114389 (at the north end of FC-1) were least affected by this behavior, and their hydrographs show relatively unimpacted water levels. (Note that well 37705 is separated from its predecessor, well 37701, by nearly 200 feet, as well as a difference in ground surface elevation of over 30 feet. This well is now situated at the convergence of the foundation drains, unlike the original well. As such, even though the hydrograph does not appear to show a significant discontinuity, these differences should be kept in mind when evaluating the associated data.) Conversely, the hydrographs for wells 37405 and 37505 show a sharp drop in water levels as the groundwater began to saturate the backfill within the building remnants; water levels appear to be stabilizing and show more seasonal influences in 2007. However, it also appears that these water levels are stabilizing at elevations that are somewhat below pre-closure levels—perhaps 10 feet lower at well 37405 and half that at 37505, although additional data are needed to confirm the differences. Water levels in the other wells are closer to or within their pre-closure ranges. In summary, water levels for wells closest to former B371/374 were strongly affected by closure activities, but are stabilizing and becoming more seasonally variable in 2007.

Wells that monitor along FC-2 include (listed in order from the head of the drainage to its confluence with North Walnut Creek) 33905, 21605, 21505, 21305, 21002, 20902, 52505, and 42505. Wells 20902 and 21002 are discussed above with B771, and well 33905 is discussed below with the VC Plume. The hydrographs for wells 21305 and 21505 both appear strongly affected by closure. The former rebounded little in 2006, but much more in 2007. Well 21505 rebounded immediately following closure; its hydrograph displays similar seasonality for both 2006 and 2007. Well 21605, located close to a seep northwest of former B559, appears less

affected by closure than by the dry year of 2006; this is followed by a strong seasonal rebound in 2007. Well 52505, located closest to the creek feeding the FC-2 constructed wetland, is represented by a hydrograph that displays a general decrease in water levels at closure followed by a steady rebound extending through 2007. Water levels here appear more variable than in the pre-closure era, most likely reflecting the elimination of continuous surface-water contributions from the B371/374 foundation drain system, imported water, and runoff from impermeable surfaces. The effects of fourth-quarter sampling are also evident on the hydrograph for well 52505. Well 42505, located at the confluence of FC-2 and North Walnut Creek/FC-3, shows little seasonal influence following its post-closure rebound in early 2006, although the mid-2007 water level is the highest on record at this well. The difference in the hydrographs for wells 52505 (near the inlet of the FC-2 constructed wetland) and 42505 (at the outlet of this wetland) shows the effects of the retained water in FC-2, which acts to maintain a very uniform water level in downgradient well 42505 but has minimal or no effect on water levels in well 52505. In summary, wells located along FC-2 are represented by hydrographs that display strong seasonal recharge in 2007 and, in many cases, a return to more normal water levels following closure and the dry year of 2006. Wells within the drainage appear less strongly affected by the dry conditions of 2006, and at the confluence of FC-2 and North Walnut Creek groundwater levels have been steady since shortly after closure.

Wells 33502, 33604, 33703, and 33905 monitor the buried drainage that hosts the VC Plume upgradient of FC-2. Hydrographs for these wells show more pre-closure variation from one to the other than might be expected, given their close proximity to one another, but in the post-closure era, particularly in 2007, are fairly similar. All show a seasonal recharge in spring 2007 followed by a decline toward year end, and water levels in spring 2007 are the highest on record at each well. The two upgradient wells (33502 and 33604) show less impact from the dry conditions of 2006 than the two downgradient wells, but the more uniform responses to the 2007 recharge may be an indication that longer-term hydrograph patterns will be more similar among these four wells.

The former central IA is monitored by wells P114689, P115589, 56305, 55905, and 70705. Hydrographs for these wells show strong similarities in 2007. Spring water levels in well P114689 were slightly higher than historic levels, and the general trend appears to be toward a slightly higher water elevation. Conversely, although spring 2007 water levels in well P115589 are only slightly lower than historic values, the longer-term trend for groundwater elevations in this well appears to be toward a small decrease in average water levels. Wells 56305 and 55905 monitor former B559, and display very similar patterns. In 2007 these wells both show seasonal variations, and demonstrate increasing (higher) water levels that are more apparent at well 56305. Farther east, well 70705 also shows an increase in 2007 water levels that continues the trend of higher water levels begun in 2005 or early 2006. This increase may be related to the disruption of the foundation drain system supporting former B707, as that system would have acted to lower water levels in the area of this well prior to closure of the building. In general, wells in the former central IA displayed similar patterns in 2007, and with the removal of paved surfaces and infrastructure during Site closure, water levels at most locations appear to be stabilizing at slightly higher average levels than pre-closure values.

The former 400 and 600 Areas, located in the southern portion of the former IA and including former B444, is monitored by wells 40005, 40205, 40305, P419689, P416889, and 11502, plus to some degree well P416589. Hydrographs for the wells in this area show similar patterns in

2006 and 2007. All show lower water levels in 2006 as a result of the dry conditions that year, followed by a spring 2007 rebound. This pattern is minimized at well 40205, in keeping with the remarkably uniform water levels measured in this well since 2000 (with the exception of one reading in 2003 that was unusually high). The hydrographs for wells P419689 and P416889 are especially similar in their post-closure patterns. Wells in this area appear to be less affected by closure activities and more seasonally influenced in 2007 than previous years.

Wells monitoring the former B881 area include 39605, 88205, 88104, and 00797. The hydrographs for these wells do not show a high degree of similarity. In general terms, water levels in the wells closest to the former building—39605 on the west, 88104 and 88205 on the south—appear to have stabilized or nearly stabilized following the effects of closure. Well 39605 is deeper than its typically dry predecessor (which was strongly affected by the nearby foundation drain for B881), and therefore provides more complete water level data over its seasonal range. Post-closure groundwater elevations at this location may be somewhat higher than in the pre-closure era, but that is not yet certain. Water levels in both 88104 and 88205, located immediately south of the building, appear to be leveling off following a lengthy period in which the groundwater elevation gradually rose as the backfill within former B881 became saturated (a pattern not affecting well 39605 due to its upgradient/side-gradient location). As noted previously, it is important to bear in mind that the predecessor well for 88104 (88102) was approximately 110 feet north of the current well, which may alone be responsible for some of the variation seen in pre- versus post-closure groundwater elevations. Aside from the effects of sampling, an example of which is evident in the water level measured following the sampling event of May 2007, water levels in this well appear to be stabilizing at a much more uniform elevation (i.e., water levels do not vary as dramatically as in the pre-closure era) that may be somewhat lower than the average water level prior to closure. Conversely, the predecessor for well 88205 (well 5187) was less than 2 feet away, but water levels were kept artificially low by the building's foundation drain system and the underground tank adjacent to the original well. As a result, water levels in well 88205 are stabilizing approximately 20 feet above the pre-closure elevations. The hydrograph for well 00797, located farther south of former B881, shows relatively stable water levels affected by seasonal variations and sampling.

Water levels in the southeastern portion of the former IA are monitored by wells 22996, 37591, and 37691. Water levels in all three wells show strong seasonal (spring) recharge in 2007. The hydrograph for well 22996, located adjacent to former B886, is very similar in 2007 to prior years. Conversely, the hydrograph for well 37591, located near former B891, shows a drop in water elevation in fourth quarter CY 2007 that is the lowest water level indicated, although this well is not represented by many data points. Well 37691, located south of the former 904 Pad, has a pre-closure record dominated by dry conditions. In 2007, water was present in this well for the first time since shortly after the blizzard of 2003; however, the well was again dry by fourth quarter CY 2007.

Wells monitoring the Solar Evaporation Ponds (SEPs) and associated SPP include 00203 south of the SEPs; P210189 on the south edge of Pond 207-C; 79102, 79202, P208989, and 79302 along the northern edge of the former SEPs; 79402, 79605, and 79502 along the eastern edge of the SEPs; 22205 and P210089 near the base of the slope north of the SEPs; and 70099 and 70299 at the northwest edge of the SPPTS groundwater intercept trench. (Other wells in the North Walnut Creek drainage could also be considered here, but instead are discussed separately under the paragraph below on groundwater elevations within the drainage itself.) Hydrographs for the

wells along the northern edge of the pediment (which coincides with the northern edge of the former SEPs), in particular those for wells 79102, 79202, and 79302, display fairly stable water levels with a very subtle spring 2007 recharge effect; a similar pattern is seen on the hydrograph for well 22205, located farther down the northern slope. This pattern is probably related to the generally wetter conditions that often exist along parts of this northern slope, as reflected in seasonal seeps. Hydrographs for wells on the pediment surface (such as wells P210189, 79402, 79502, and 79605) show greater water level fluctuations in response to seasonal recharge patterns, reflecting the typical hydrologic behavior of pediments at Rocky Flats, which gradually dewater as they act as a source of groundwater recharge to the hillslopes. Farther down in the valley, the hydrograph for well P210089 (just upgradient of the SPPTS) shows strong seasonal behavior as well as a rising water level since construction of nearby FC-3 and removal of the culverts that previously prevented runoff from recharging localized areas of this valley bottom, including in the vicinity of this well. Water levels in wells 70099 (screens alluvium) and 70299 (screens weathered bedrock) are relatively stable, and are affected by the SPPTS groundwater intercept trench a few feet to the south and the FC-3/North Walnut Creek a few feet to the north. In summary, groundwater elevations on the SEP pediment top typically show more marked seasonal behavior than do those along the north-facing SEP/SPP hillslope. Those nearer the valley bottom may show strong seasonal effects unless other controls outweigh these climatic factors.

Wells monitoring the North Walnut Creek drainage include, from upgradient to downgradient, P114389 in FC-1; 52505 and 42505 in the FC-2 constructed wetland area; 30002 on the south-facing slope, across from former B771/774; 70099 and 70299 (discussed above); 1786 and B210489 near the SPPTS DG; 51605 near the inlet to Pond A-1; 10594 in the Pond A-1 spillway; and well 41691 at the Walnut Creek/Indiana Street intersection. As noted above, wells P114389 and 42505 display fairly flat hydrographs, while that for 52505 clearly demonstrates seasonal variability and impacts from sampling. Hydrographs for the other wells farther east in this drainage display strong seasonal character, most classically displayed on the hydrograph for well 30002, with peaks in spring months and decreasing water levels during the summer through winter months. This well is mainly influenced by groundwater discharge from the pediment to the north and the occasional flow through the small drainage that was previously a borrow ditch along the north side of the North Perimeter Road. Of interest on the hydrograph for well 1786 is the general decline in water levels since closure that reflect the elimination of imported water and decrease in runoff-related recharge. The hydrograph for well 51605 is marked by its very low water levels in 2005 (as water slowly charged the well following its installation) and 2006 (a drier year). The groundwater elevation in this well appears to be stabilizing within the same range as pre-closure values. Water levels in well 10594 clearly show the effects of dry years (e.g., 2002 and 2006), when the well may go dry. Boundary well 41691 continues to be most strongly influenced by terminal pond discharges; as none were performed in 2006 and it was a dry year, the period of the lowest water elevations shown on the hydrograph are for water year 2006 (October 2005 through September 2006). The pond discharges in 2007 recharged the well, but by late 2007 this effect was diminishing. In summary, wells in the North Walnut Creek drainage are predominantly affected by seasonal climate patterns, with other localized factors also playing a part.

Contrary to the overall similarity in hydrographs for North Walnut Creek wells, those for wells monitoring the South Walnut Creek drainage show similarity based more on setting. This drainage is monitored by, from upgradient to downgradient, wells 99405 and 91305 near the

FC-4 constructed wetland, 23296 between Ponds B-2 and B-3, TH046992 in the Pond B-3 dam, 00997 near the inlet to Pond B-5, and 41691 at Walnut Creek and Indiana Street. (Wells positioned along the ETPTS intercept trench are not included in this discussion, and well 41691 is discussed above.) The hydrographs for wells 91305, 23296, and TH046992 appear most similar and are relatively uniform, with minor seasonal fluctuation in water levels; this similarity could be attributed to the fact that they are all adjacent to ponds or saturated areas. However, well 99405 and, to some extent, well 00997 are also located very near such areas, yet hydrographs for these wells show greater variability in water levels that is only partially explained by seasonal influences. The variability seen on the hydrograph for well 99405 can be attributed to sampling events. That for well 00997 can be explained by the strong effects of the dry 2006, elimination of imported water that previously filled Pond B-5, and the fewer discharges that have been conducted since closure. As might be expected, the loss of imported water appears to be resulting in an average water level in well 00997 that is stabilizing at an elevation that is lower than was the case prior to closure, similar to conditions at Boundary well 41691. However, the opposite appears to be true for wells 23296 and 91305, while average water levels are unchanged at well TH046992 and are unclear at well 99405.

The Woman Creek drainage is monitored by, from upgradient to downgradient, wells 80005, 80105, 80205, 11104, 89104, 10304, 00193, and 10394. Except for 10394, which is located at the Woman Creek/Indiana Street intersection, these wells are all represented by relatively few data, making it difficult to determine clear patterns in groundwater levels. Wells 80005, 80105, and 80205 are all located below the OLF and are represented by hydrographs that display a pattern that is interesting as a whole. Wells 80005 and 80205 are each positioned adjacent to the OLF diversion channels and are at the west and east ends, respectively, of the clay buttress at the base of the OLF. Conversely, well 80105 is located between the channels and closer to the midpoint of the buttress. The hydrographs for the wells on the ends show a seasonal influence, while that in the middle shows an inverted seasonal pattern—lower water levels in spring, and higher water levels in the fall and winter—that is exactly opposite the pattern in wells 80005 and 80205. This is likely due to a combination of factors including nearby Woman Creek, the perimeter ditches, and interception and storage of groundwater from the OLF hillside within the buttress. Note that well 80205 is located adjacent to OLF Seep #8, yet does not appear to reflect the higher water levels that would result if the well monitored the same water that issues at the seep. Farther downgradient, wells 11104 (just east of the OLF wells) and 10304 (immediately east of Pond C-1) show seasonal patterns that are similar to, but slightly more pronounced than, those shown by OLF wells 80005 and 80205. Well 89104, located between wells 11104 and 10304, is represented by a hydrograph that does not resemble any others in this drainage. Instead, water levels in this well steadily increased through 2006, apparently stabilizing in 2007 at a relatively uniform, slightly seasonally influenced elevation. Well 00193, located near the Pond C-2 inlet, appears to reflect seasonally influenced water levels combined with impacts from sampling in 2007. Water levels in Boundary well 10394 show a very uniform seasonal pattern that included annual dry periods prior to 2004, but since that year it appears the well has retained water year-round.

Groundwater Flow Velocities

Groundwater flow directions and velocities in 2007 are generally consistent with those reported in 2006. Flow directions, water level data, geological information, and completed well designs and locations support the selection of several well pairs for the calculation of linear groundwater

flow velocities, also referred to as seepage velocities. Using the potentiometric surface maps, a pair of wells is potentially useful if a line drawn between them is perpendicular (or nearly so) to the potentiometric contour lines between the two wells, and there are no intervening drainages or artificial groundwater control structures (such as the groundwater intercept trenches that are a component of each of the treatment systems, and the GWIS at the PLF).

Well pairs selected for use in this report are the same as those selected in 2006 with one change: well 90299 was used instead of 90399 as the downgradient pairing to well 00491 in order to better reflect the flow direction indicated by the potentiometric surface map.

The seepage velocity (v) may be calculated using the Darcy equation:

$$v = \left(K/n\right)\left(dh/dl\right)$$

where

K = hydraulic conductivity
n = effective porosity
dh/dl = hydraulic gradient.

This calculation is most sensitive to the hydraulic gradient and value of K used, because for all calculations of v in this report a porosity of 0.1 (consistent with previous Annual RFCA Groundwater Monitoring Reports) is used.

The hydraulic gradient was calculated from groundwater elevation data collected in the second and fourth quarters of 2007. Results of this calculation typically differ slightly when using data from one quarter versus that from another, but the differences are typically not large.

Calculated seepage velocities are only useful as estimates. These velocities are most often used to estimate the travel time of conservative (nonreactive) constituents. Reactive constituents will tend to migrate more slowly than the calculated velocity. These calculated velocities do not take into account properties such as sorption and chemical reactions (e.g., precipitation, biodegradation, and volatilization) that can strongly influence the migration rate of groundwater contaminants.

For each well pair, the value of K selected for this calculation was based on the predominant lithologic unit comprising the flow path between the two wells. This is based on the core logs for the respective wells and the published geology (EG&G 1995b), as well as information from the hydrographs (i.e., whether the saturated interval is typically restricted to the bedrock or includes surficial materials). If more than one lithology is represented between the wells and, from the hydrographs, appears to comprise a meaningful fraction of the saturated interval, an average K was calculated from the lithologies. K values used for these calculations are from EG&G (1995a), Table G-2, with subsequently modified values for Rocky Flats Alluvium and valley-fill alluvium (RMRS 2000; Safe Sites 2001, 2002).

One factor that may cause significant error in estimated seepage velocities is the presence of artificial fill in many portions of the former IA. The K for Rocky Flats Alluvium is used because the source of the fill was typically deposits of Rocky Flats Alluvium. However, it is unlikely that the backfilled alluvium has the internal structure or is as compacted as the original deposits,

resulting in a higher effective porosity and K than the published values for Rocky Flats Alluvium. Where well pairs cross former buildings that were backfilled with concrete rubble and alluvium, the effective porosity and K values will be higher still. For this report, well pairs crossing areas of sufficiently thick backfill deposits may use the K for Rocky Flats Alluvium rather than that for the original lithology, under the assumption that the entire area of backfill/regrading has a hydraulic conductivity closer to that of Rocky Flats Alluvium than to a lower-permeability unit.

An example well pair may serve to illustrate some of the related difficulties. Well 18199 is located between former B776 and B771. It screens Rocky Flats Alluvium and sandstone of the Arapahoe Formation (the "No. 1 Sandstone;" EG&G 1995a). Groundwater in this area previously flowed toward the west as a result of the B771 foundation drain system. Following disruption of this drain, groundwater flow is anticipated to be more northerly, potentially through the rubble- and alluvium-backfilled subsurface remnants of B771. Well 20505 was selected as the downgradient well in this well pair. This well screens artificial fill, clays, claystone, and silty claystone. The transect from 18199 to 20505 is mostly occupied by the artificial fill of the B771 closure, and that fill is essentially reworked alluvium. Therefore, an average hydraulic conductivity of the Arapahoe Formation No. 1 Sandstone and Rocky Flats Alluvium is used to calculate the seepage velocity between this well pair.

As noted above, these calculated velocities are based in part on data displayed on the hydrographs: where water is shown above the bedrock contact, hydraulic conductivities for the unconsolidated surficial material (e.g., Rocky Flats Alluvium or colluvium) are included for this calculation. If the hydrographs show water is typically restricted to the bedrock, the K value for the generalized bedrock type at that well is selected. Note that, similar to the alluvial deposits, the extreme variability of bedrock lithologies (e.g., from claystone to silty claystone to clayey siltstone to siltstone) is often reflected in cores from the screened interval of a given well, but a single K value is selected to represent the well.

Table 3-41 presents the results of the calculation of seepage velocities. Refer to Figure 3-202 for the respective locations of the wells. Estimated velocities range from 17 feet per year (ft/yr) (along the pediment surface from well 40305 to 39605 in the South IA area) to 585 ft/yr (on the hillslope from well 18199 to 20505 in the B771 area). The resulting travel time between each well in a well pair ranges from approximately 1onths (from well 18199 to 20505) to over 72 years (from well 40305 at B444 to well 22996 at B886). These velocities are comparable to those calculated prior to Site closure (e.g., K-H 2004b), and are also similar to those discussed in 2006. For a more detailed discussion of flow between well pairs by area, refer to the 2006 Annual Report. (Note that in two cases—40399 to 22996 and 00491 to 90299—a member of the well pair was dry in the fourth quarter, preventing calculation of the velocity.)

Table 3-41. Calculated Flow Velocities for 2007

Well Pair	Area	2007 Quarter	Geological Unit	WL Elevation, Well 1	WL Elevation, Well 2	dh (ft)	dl (ft)	dh/dl (hydraulic gradient)	K (cm/s)	v (ft/yr)	Time to Traverse Transect (yr)
P115589-P114689	North IA	2	Qrf	6010.02	6000.52	9.5	550.14	0.017	4.18E-04	74.68	7.37
P115589-P114689	North IA	4	Qrf	6004.55	5994.88	9.67	550.14	0.018	4.18E-04	76.02	7.24
P114689-56305	North IA/ 559	2	Qrf	6000.52	5990.86	9.66	304.74	0.032	4.18E-04	137.09	2.22
P114689-56305	North IA/ 559	4	Qrf	5994.88	5986.93	7.95	304.74	0.026	4.18E-04	112.82	2.70
56305-21605	B559	2	Qrf/Qc	5990.86	5968.91	21.95	319.61	0.069	2.56E-04	181.66	1.76
56305-21605	B559	4	Qrf/Qc	5986.93	5965.14	21.79	319.61	0.068	2.56E-04	180.33	1.77
18199-20505	B771	2	Qrf/ KaNo.1ss	5976.5	5929.58	46.92	500.43	0.094	6.03E-04	584.96	0.86
18199-20505	B771	4	Qrf/ KaNo.1ss	5973.18	5931.93	41.25	500.43	0.082	6.03E-04	514.27	0.97
P416589-80105	OLF	2	Qrf/KaKlclst	6016.82	5936.86	79.96	846.63	0.094	2.09E-04	204.66	4.14
P416589-80105	OLF	4	Qrf/KaKlclst	6012.36	5940.56	71.8	846.63	0.085	2.09E-04	183.39	4.62
40305-39605	South IA	2	Qrf/KaKlslt	6008.03	5997.14	10.89	1126.39	0.010	2.23E-04	22.35	50.41
40305-39605	South IA	4	Qrf/KaKlslt	6004.05	5995.72	8.33	1126.39	0.007	2.23E-04	17.09	65.90
40005-P419689	South IA	2	Qrf	6008.79	6005	3.79	478.87	0.008	4.18E-04	34.23	13.99
40005-P419689	South IA	4	Qrf	6006.36	6001.74	4.62	478.87	0.010	4.18E-04	41.72	11.48
P419689-11502	South IA	2	Qrf	6005	6001.05	3.95	535.27	0.007	4.18E-04	31.91	16.77
P419689-11502	South IA	4	Qrf	6001.74	5997.72	4.02	535.27	0.008	4.18E-04	32.48	16.48
40305-22996	South IA/ 800 Area	2	Qrf/KaKlclst*	6008.03	5981.6	26.43	2037.05	0.013	2.09E-04	28.12	72.45
40305-22996	South IA/ 800 Area	4	Qrf/KaKlclst*	6004.05	Dry	N/A	2037.05	N/A	N/A	N/A	N/A
88205-00797	881 Hillside	2	Qrf/Qc	5971.05	5923.87	47.18	343.12	0.138	2.56E-04	363.70	0.94
88205-00797	881 Hillside	4	Qrf/Qc	5969.1	5923.18	45.92	343.12	0.134	2.56E-04	353.99	0.97
00191-00491	903 Pad-Lip	2	Qrf/KaKlclst	5952.8	5891.88	60.92	816.98	0.075	2.09E-04	161.58	5.06
00191-00491	903 Pad-Lip	4	Qrf/KaKlclst	5949.41	5889.22	60.19	816.98	0.074	2.09E-04	159.65	5.12
00491-90299	903 Hillside	2	Qc/KaKlclst	5891.88	5812.02	79.86	609.84	0.131	4.71E-05	63.80	9.56
00491-90299	903 Hillside	4	Qc/KaKlclst	5889.22	Dry	N/A	609.84	N/A	N/A	N/A	N/A
07391-10304	Ryan's Pit/ Woman Creek	2	Qc/KaKlclst	5943.54	5811.01	132.53	948.74	0.140	4.71E-05	68.06	13.94
07391-10304	Ryan's Pit/ Woman Creek	4	Qc/KaKlclst	5941.75	5809.74	132.01	948.74	0.139	4.71E-05	67.79	13.99
91105-91203	OBP #2	2	Qrf/KaKlslt	5948.04	5934.44	13.6	242.17	0.056	2.23E-04	129.81	1.87
91105-91203	OBP #2	4	Qrf/KaKlslt	5946.67	5933.52	13.15	242.17	0.054	2.23E-04	125.51	1.93
91105-15499	OBP #2	2	Qrf/Qc	5948.04	5921.25	26.79	392.19	0.068	2.56E-04	180.68	2.17
91105-15499	OBP #2	4	Qrf/Qc	5946.67	5920.69	25.98	392.19	0.066	2.56E-04	175.22	2.24

Table 3−41 (continued). Calculated Flow Velocities for 2007

Well Pair	Area	2007 Quarter	Geological Unit	WL Elevation, Well 1	WL Elevation, Well 2	dh (ft)	dl (ft)	dh/dl (hydraulic gradient)	K (cm/s)	v (ft/yr)	Time to Traverse Transect (yr)
91105-15399	OBP #2	2	Qrf/Qc	5948.04	5925.36	22.68	394.09	0.058	2.56E-04	152.22	2.59
91105-15399	OBP #2	4	Qrf/Qc	5946.67	5924.95	21.72	394.09	0.055	2.56E-04	145.78	2.70
00897-15499	Mound	2	KaKlslt/Qc	5943.67	5921.25	22.42	366.17	0.061	6.11E-05	38.67	9.47
00897-15499	Mound	4	KaKlslt/Qc	5943.63	5920.69	22.94	366.17	0.063	6.11E-05	39.57	9.25
00897-15399	Mound	2	KaKlslt/Qc	5943.67	5925.36	18.31	347.49	0.053	6.11E-05	33.28	10.44
00897-15399	Mound	4	KaKlslt/Qc	5943.63	5924.95	18.68	347.49	0.054	6.11E-05	33.96	10.23
P210189-79102	SEPs	2	KaKlslt/Qrf	5970.07	5948.99	21.08	301.98	0.070	2.23E-04	161.35	1.87
P210189-79102	SEPs	4	KaKlslt/Qrf	5967.44	5948.28	19.16	301.98	0.063	2.23E-04	146.65	2.06
79102-22205	North of SEPs	2	KaKlslt	5948.99	5915.35	33.64	235.62	0.143	2.88E-05	42.54	5.54
79102-22205	North of SEPs	4	KaKlslt	5948.28	5916.5	31.78	235.62	0.135	2.88E-05	40.19	5.86
79502-99305	SEPs/B991	2	KaKlslt/Qrf	5962.75	5929.78	32.97	532.37	0.062	2.23E-04	143.15	3.72
79502-99305	SEPs/B991	4	KaKlslt/Qrf	5960.78	5929.62	31.16	532.37	0.059	2.23E-04	135.29	3.94
70393-70693	PU&D/PLF	2	Qrf	5993.32	5979.67	13.65	410.48	0.033	4.18E-04	143.82	2.85
70393-70693	PU&D/PLF	4	Qrf	5986.3	5973.05	13.25	410.48	0.032	4.18E-04	139.60	2.94
30900-30002	PU&D/ North Walnut Creek	2	Qrf/KaKlclst	6000.45	5926.28	74.17	1890.74	0.039	2.09E-04	85.01	22.24
30900-30002	PU&D/ North Walnut Creek	4	Qrf/KaKlclst	5992.7	5922.16	70.54	1890.74	0.037	2.09E-04	80.85	23.39

Notes: WL = water level; dh (ft) = difference in height, in feet; dl (ft) = distance between wells, in feet; cm/s = centimeters per second; v (ft/yr) = velocity in feet per year; yr = years.
Qrf = Rocky Flats Alluvium; Qc = colluvium; KaNo.1ss = Arapahoe Formation No. 1 Sandstone; KaKlclst = undifferentiated Arapahoe/Laramie Formation claystone; KaKlslt = undifferentiated Arapahoe/Laramie Formation siltstone.
*Bedrock lithology estimated due to incomplete core log for well 22996.

In the one case where a well pairing changed from 2006 (current well pair 00491 to 90299, mentioned above), calculated flow velocities increased from approximately 49 ft/yr using the previous pairing to approximately 64 ft/yr. This change was made because 00491-90299 reflects a more viable flow path (more nearly perpendicular to potentiometric contours) than the previous pairing.

Few Evaluation wells were sampled in 2007, and therefore new information regarding contaminant transport was limited in most source areas. The few well pairs sampled in 2007 are discussed in Section 3.1.5.2, and of these only one well pair (discussed first) appears to present noteworthy results.

One well pair in the Ryan's Pit Plume for which velocities and travel times were calculated (Evaluation well 07391 to AOC well 10304) was sampled in 2007, with well 10304 showing a

detection of TCE. As previously noted, more data are required before it can be reasonably concluded that this detection is or is not related to groundwater from Ryan's Pit.

In the Individual Hazardous Substance Site (IHSS) 118.1 area, data from well 20505 (downgradient from source-area well 18199) continued to show no detections of carbon tetrachloride or chloroform, the most notable contaminants from IHSS 118. Seepage velocities summarized in Table 3-41 indicate that these contaminants could have been detected in well 20505 beginning in 2006, but this has still not occurred. This may be evidence of contaminant retardation, or it could indicate that groundwater is being diverted in another direction or that these constituents are being degraded before they reach the receptor well(s). While the flow path from 18199 to 20505 appears reasonable, groundwater may be diverted by the presence of disrupted foundation drains and associated corridors, the backfilled B771, and backfilled/ disrupted subsurface utility corridors around the sides of the building.

In the former SEP area, travel times for a potential southeastern route for nitrate contamination were calculated to be slightly less than 4 years, using the 79505-99305 well pairing. The continued absence of significant nitrate contamination in groundwater samples from well 99305 (the results in 2007 included one nondetect and one detection reported at 0.34 mg/L) indicates that the potential flow path from 79502 to 99305 may represent a negligible transport mechanism for the SPP.

Overall, groundwater flow paths and flow velocities in 2007 show little change from 2006.

3.1.4 Surface-Water Data Interpretation and Evaluation

3.1.4.1 Surface Water-Quality Summaries

This section presents water-quality summaries for select analytes for the period January 1, 1997, through December 31, 2007 (CY 1997–2007), for the locations operational in CY 2007. Radionuclides summarized include Pu, Am,[18] and total U. Additionally, the POE metals (total beryllium [Be], dissolved cadmium [Cd], total chromium [Cr], and dissolved silver [Ag]) are also summarized. Additional analyses are also performed based on the specific monitoring objective. The results and evaluation for these additional analytes are presented in Section 3.1.2.1 through Section 3.1.2.11 by monitoring objective.

Radionuclides

The following summaries include all results that were not rejected through the validation process.[19] Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When a negative radionuclide result (e.g., −0.002 pCi/L) is reported by the laboratory due to blank correction, a value of 0.0 pCi/L is used for calculation purposes. When a sample has a corresponding field duplicate, the value used

[18] In this report, "plutonium" or "Pu" refers to plutonium-239,240 and "americium" or "Am" refers to americium-241.
[19] Summaries do not include supplemental post-closure grab samples from GS13 that were collected to assess modifications to the SPPTS; only routine continuous flow-paced samples are included.

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[18] In this report, "plutonium" or "Pu" refers to plutonium-239,240 and "americium" or "Am" refers to americium-241.
[19] Summaries do not include supplemental post-closure grab samples from GS13 that were collected to assess modifications to the SPPTS; only routine continuous flow-paced samples are included.

in calculations is the arithmetic average of the "real" and "duplicate" values.[20] When a sample has multiple "real" analyses (e.g., Site requested "reruns"), the value used in calculations is the arithmetic average of the multiple "real" analyses. Total U activity is calculated by summing the activities for the analyzed isotopes (U-233,234 + U-235 + U-238).

The Pu/Am ratio is calculated for each sample by dividing the Pu result by the corresponding Am result. Ratios are only calculated for samples where *both* the Pu and Am results are greater than 0.015 pCi/L (generally the minimum detectable activity [MDA] for Pu and Am analyses) to exclude ratios for very low results with high relative error.

The U-233,234/U-238 ratio is calculated for each sample by dividing the U-233,234 result by the corresponding U-238 result. Ratios are only calculated for samples where *both* the U-233,234 and U-238 results are greater than 0.025 pCi/L (generally the MDA for these isotope analyses) to exclude ratios for very low results with high relative error. The U-233,234/U-238 ratios can only be used to qualitatively infer the characteristics of the U in surface water. In the past, groundwater and surface-water samples from select locations have been sent to LANL for HR ICP/MS and/or TIMS analyses. These analyses measure mass ratios of four U isotopes (masses 234, 235, 236, and 238) and are detailed in the reports titled *Uranium in Surface Soil, Surface Water, and Groundwater at the Rocky Flats Environmental Technology Site* (K-H 2004e), and in the *Interim Measure/Interim Remedial Action for Groundwater at the Rocky Flats Environmental Technology Site* (K-H 2005c). Isotopic ratios provide a signature that indicates whether the source of U is natural, anthropogenic (manmade), or mixed. The results to date indicate that the groundwater and surface-water locations at Rocky Flats display a predominately natural signature.

Each table includes only those locations where samples were collected that were analyzed for the referenced analyte. Maps are also included showing monitoring locations and the corresponding median values of the referenced parameter. Only locations that had four or more individual results are mapped.

Table 3-42 and Table 3-43 show that post-closure median Pu activities for all locations are well below 0.15 pCi/L.[21] Post-closure significant reductions in Pu activities are noted, most significantly at COU locations GS10, GS51, SW027, and SW093. Figure 3-109 and Figure 3-110 show the pre- and post-closure medium Pu activities, respectively.

[20] Arithmetic averaging of radionuclide pairs is performed only when the DER is less than 1.5. If the DER is greater than or equal to 1.5, the radionuclide results are determined to be nonrepresentative. These results are not used for the calculation of summary statistics. A more thorough discussion of data management is given in Appendix B.1, "Analytical Data Evaluation Methods."

[21] The Pu, Am, and total U standards noted in this section apply only to POE (GS10, SW027, and SW093; Section 3.1.2.2) and POC (GS01, GS03, GS08, GS11, and GS31; Section 3.1.2.1) 30-day or 12-month rolling averages. Comparisons of standards/action levels to other locations are noted in this section for reference only. POEs and POCs are highlighted in **bold** in the tables.

Table 3-42. Summary Statistics for Pu-239,240 Analytical Results in CY 1997−October 13, 2005

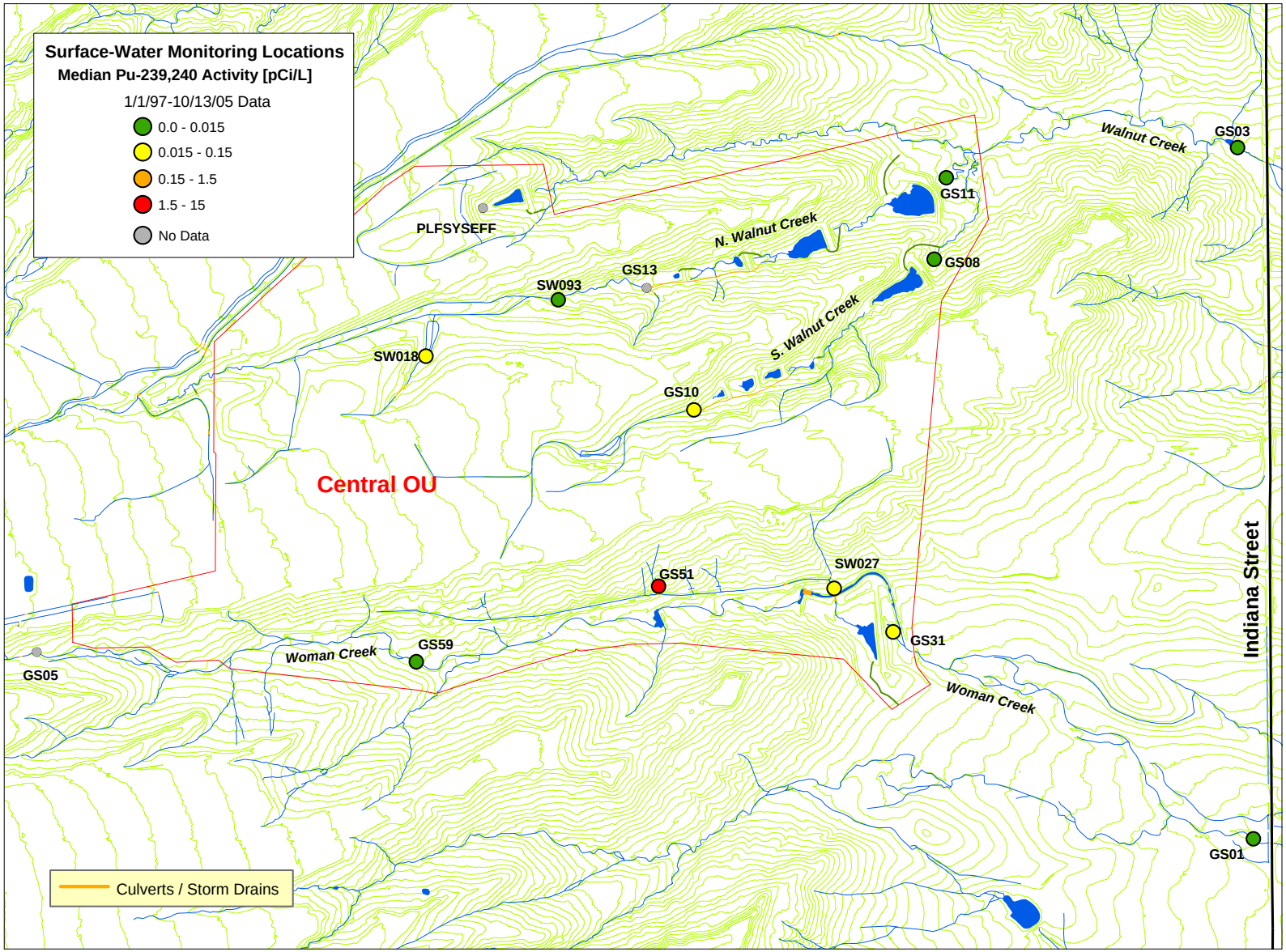
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**165**	**0.002**	**0.008**	**0.024**
GS03	**257**	**0.005**	**0.016**	**0.220**
GS05	NA	NA	NA	NA
GS08	**118**	**0.004**	**0.013**	**0.864**
GS10	**266**	**0.054**	**0.207**	**2.27**
GS11	**89**	**0.002**	**0.009**	**0.070**
GS13	NA	NA	NA	NA
GS31	**26**	**0.017**	**0.094**	**0.348**
GS51	27	3.97	8.41	99.7
GS59	30	0.000	0.004	0.020
PLFSYSEFF	NA	NA	NA	NA
SW018	33	0.017	0.043	0.197
SW027	**71**	**0.049**	**0.199**	**13.2**
SW093	**284**	**0.010**	**0.063**	**4.18**

Notes: NA = Analyte not sampled; Bold-face type = POC or POE

Table 3-43. Post-Closure Summary Statistics for Pu-239,240 Analytical Results (October 13, 2005−December 31, 2007)

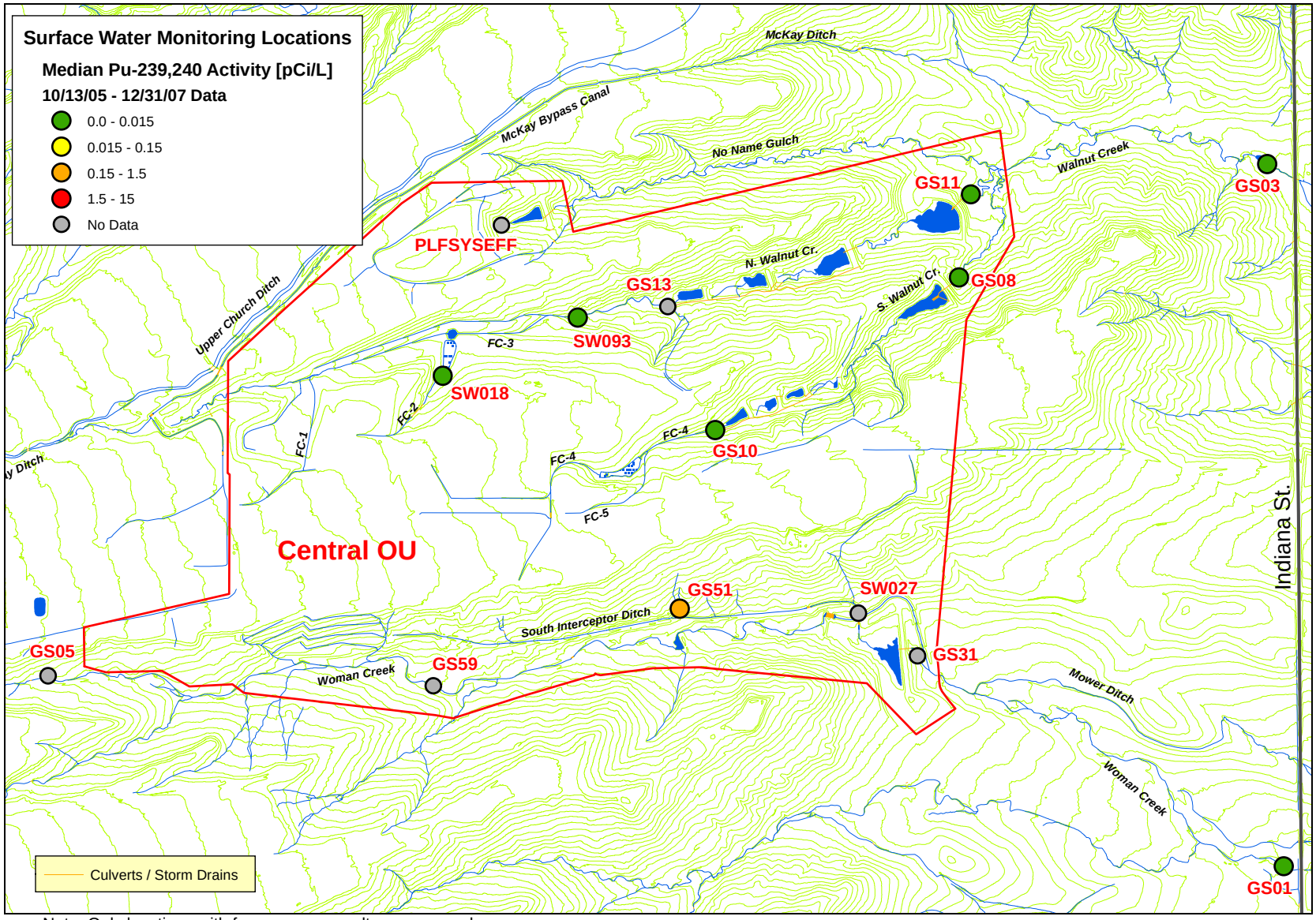
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**30**	**0.004**	**0.008**	**0.017**
GS03	**19**	**0.002**	**0.009**	**0.024**
GS05	NA	NA	NA	NA
GS08	**8**	**0.000**	**0.008**	**0.017**
GS10	**39**	**0.009**	**0.025**	**0.076**
GS11	**10**	**0.005**	**0.014**	**0.046**
GS13	NA	NA	NA	NA
GS31	*****	*****	*****	*****
GS51	6	0.690	0.858	1.05
GS59	NA	NA	NA	NA
PLFSYSEFF	NA	NA	NA	NA
SW018	17	0.002	0.009	0.026
SW027	**1**	**0.092**	**0.092**	**0.092**
SW093	**34**	**0.010**	**0.025**	**0.288**

Notes: * = No post-closure results through CY 2007; NA = Analyte not sampled; Bold-face type = POC or POE



Note: Only locations with four or more results are mapped.

Figure 3-109. Median Pu-239,240 Activities for CY 1997–October 13, 2005



Note: Only locations with four or more results are mapped.

Figure 3-110. Post-Closure Median Pu-239,240 Activities

Table 3-44 and Table 3-45 show that post-closure median Am activities for all locations are well below 0.15 pCi/L. Post-closure significant reductions in Am activities are noted, most significantly at COU locations GS10, GS51, SW027, and SW093. Figure 3-111 and Figure 3-112 show median Am activities for pre- and post-closure, respectively.

Table 3-44. Summary Statistics for Am-241 Analytical Results in CY 1997−October 13, 2005

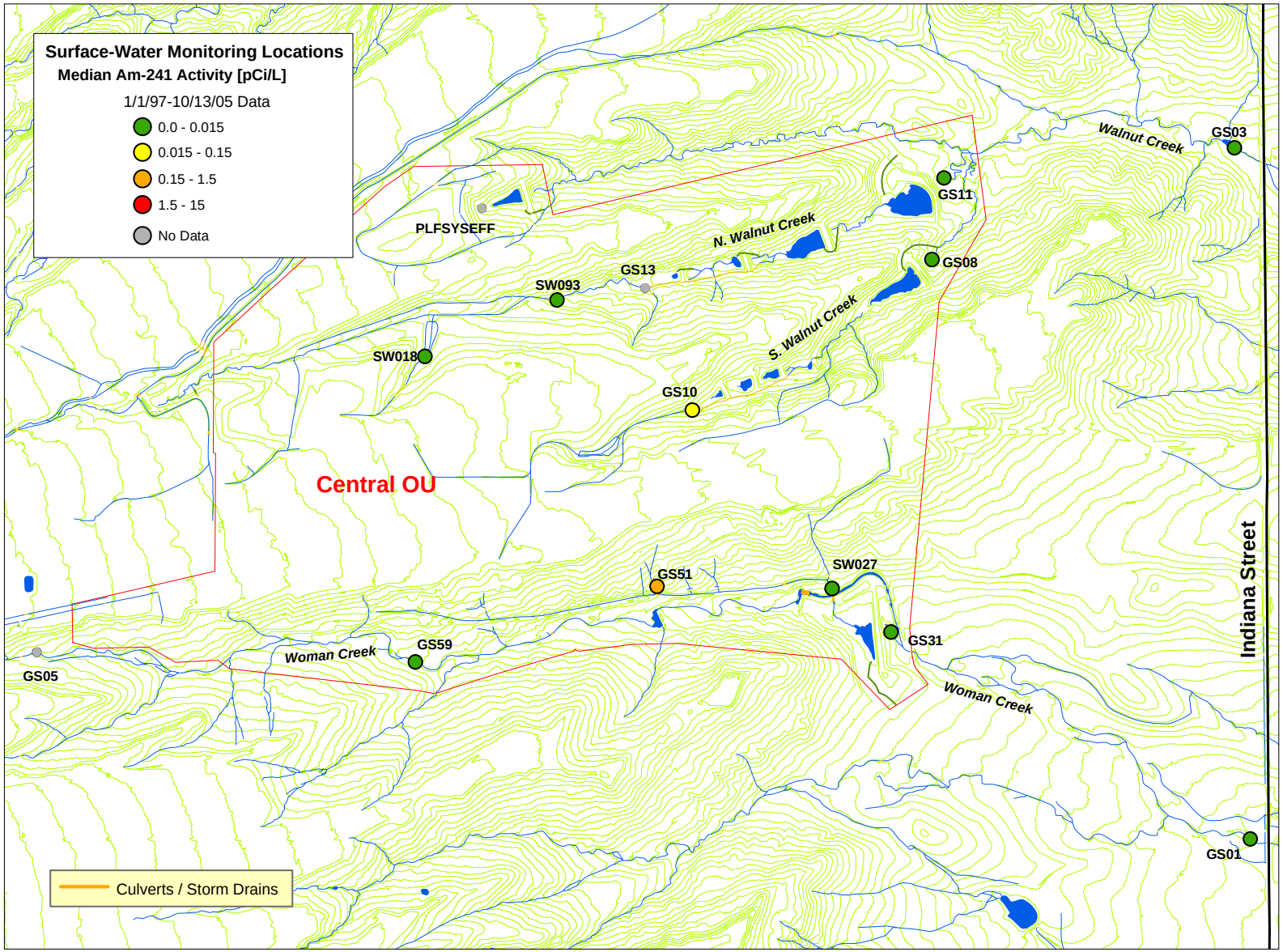
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**164**	**0.001**	**0.008**	**0.054**
GS03	**258**	**0.006**	**0.018**	**0.066**
GS05	NA	NA	NA	NA
GS08	**118**	**0.006**	**0.015**	**0.275**
GS10	**259**	**0.057**	**0.193**	**8.39**
GS11	**88**	**0.003**	**0.010**	**0.047**
GS13	NA	NA	NA	NA
GS31	**26**	**0.009**	**0.020**	**0.116**
GS51	25	0.807	1.76	3.41
GS59	30	0.001	0.004	0.015
PLFSYSEFF	NA	NA	NA	NA
SW018	34	0.008	0.024	0.091
SW027	**71**	**0.009**	**0.045**	**2.33**
SW093	**279**	**0.012**	**0.052**	**14.1**

Notes: NA = Analyte not sampled
Bold-face type = POC or POE

Table 3-45. Post-Closure Summary Statistics for Am-241 Analytical Results (October 13, 2005−December 31, 2007)

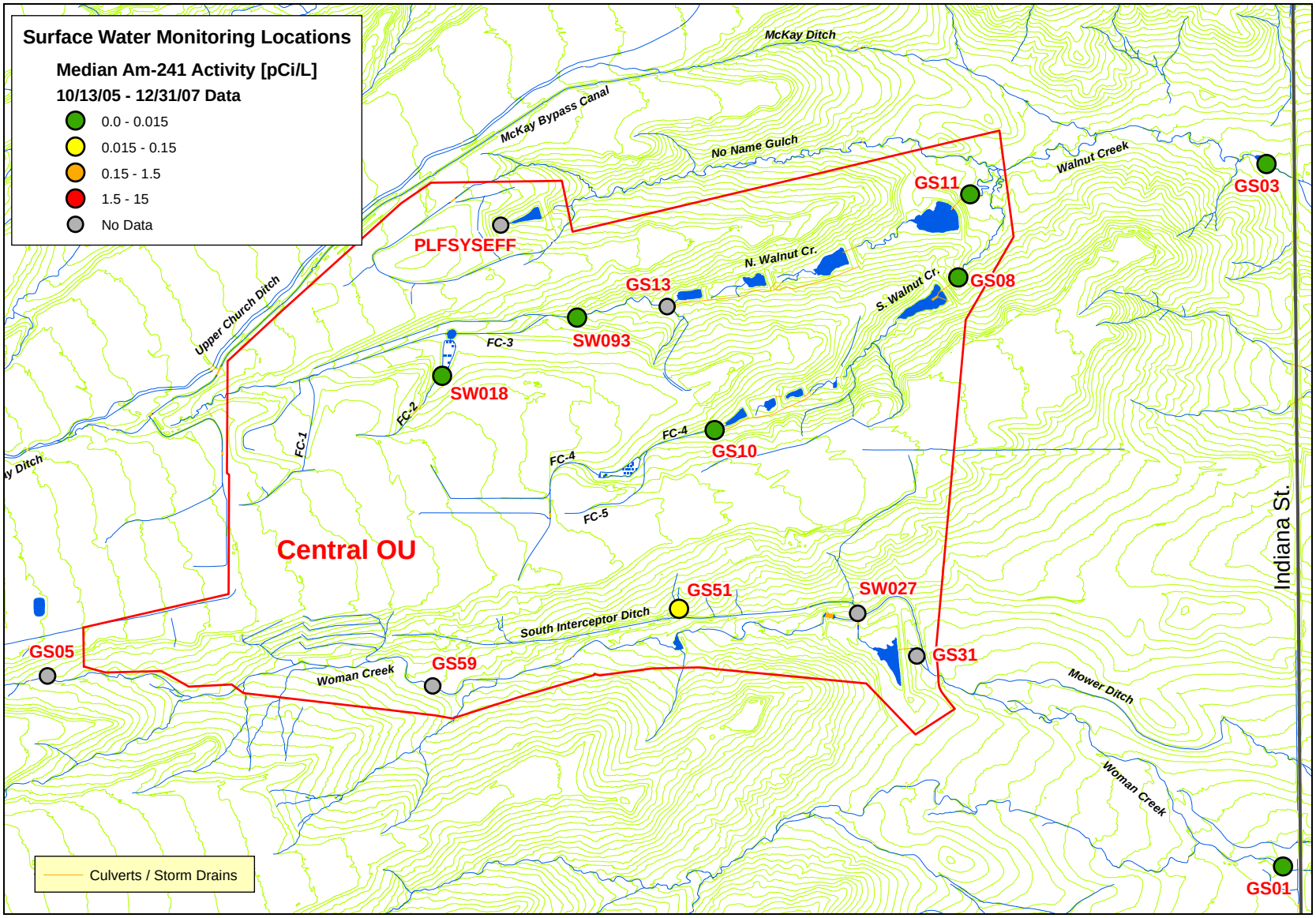
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**30**	**0.001**	**0.007**	**0.057**
GS03	**19**	**0.000**	**0.009**	**0.023**
GS05	NA	NA	NA	NA
GS08	**8**	**0.000**	**0.004**	**0.012**
GS10	**39**	**0.006**	**0.026**	**0.047**
GS11	**10**	**0.001**	**0.003**	**0.005**
GS13	NA	NA	NA	NA
GS31	*****	*****	*****	*****
GS51	6	0.127	0.192	0.209
GS59	NA	NA	NA	NA
PLFSYSEFF	NA	NA	NA	NA
SW018	17	0.002	0.012	0.027
SW027	**1**	**0.040**	**0.040**	**0.040**
SW093	**34**	**0.005**	**0.020**	**0.049**

Notes: * = No post-closure results through CY 2007
NA = Analyte not sampled
Bold-face type = POC or POE



Note: Only locations with four or more results are mapped.

Figure 3-111. Median Am-241 Activities for CY 1997–October 13, 2005



Note: Only locations with four or more results are mapped.

Figure 3-112. Post-Closure Median Am-241 Activities

Table 3-46 and Table 3-47 show that post-closure median total U activities for most locations are below the standard of 10 pCi/L (11 pCi/L for Woman Creek). Recent data from GS10 and GS13 show total U levels in excess of 10 pCi/L. U activities at GS13 are known to be directly affected by groundwater associated with the SPP. The measurements at GS10 are likely due to contributions of naturally occurring U in groundwater and hydrologic changes at GS10 (see Section 3.1.2.2 for further detail). These U activities can also be seen in samples collected at downstream locations GS11, GS08, and GS03. Figure 3-113 and Figure 3-114 show median total U activities for pre- and post-closure, respectively.

Table 3-46. Summary Statistics for Total U Analytical Results in CY 1997−October 13, 2005

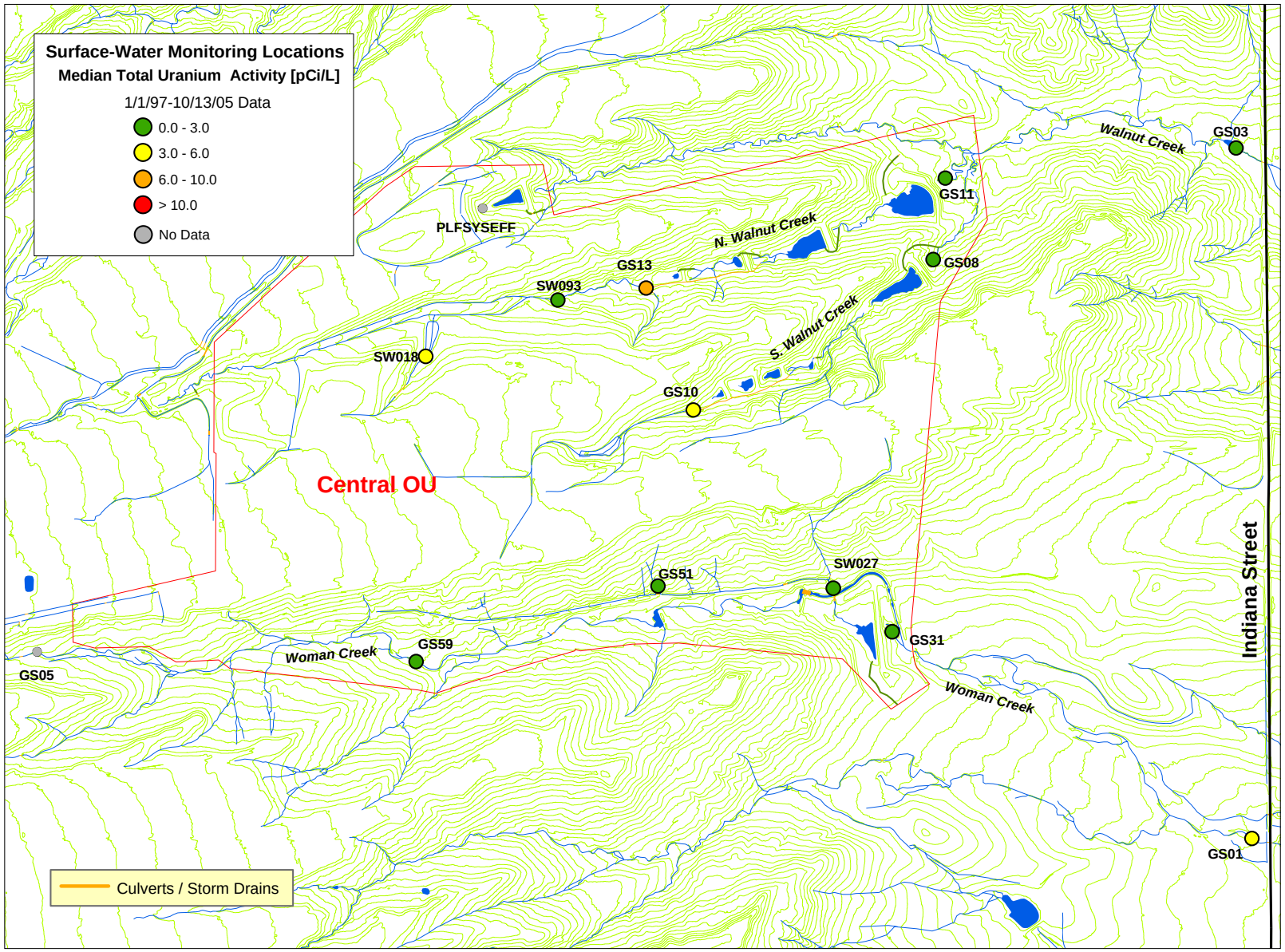
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**53**	**3.26**	**5.10**	**9.35**
GS03	**78**	**1.75**	**3.25**	**5.43**
GS05	NA	NA	NA	NA
GS08	**118**	**1.32**	**2.23**	**6.87**
GS10	**266**	**3.23**	**5.04**	**14.0**
GS11	**89**	**2.10**	**3.08**	**4.06**
GS13	68	7.97	12.8	23.5
GS31	**26**	**2.21**	**2.68**	**4.07**
GS51	26	1.07	1.83	2.76
GS59	31	0.762	1.24	3.87
PLFSYSEFF	NA	NA	NA	NA
SW018	33	3.87	5.43	7.94
SW027	**71**	**1.32**	**2.92**	**4.48**
SW093	**284**	**2.72**	**4.16**	**7.33**

Notes: NA = Analyte not sampled
Bold-face type = POC or POE

Table 3-47. Post-Closure Summary Statistics for Total U Analytical Results (October 13, 2005−December 31, 2007)

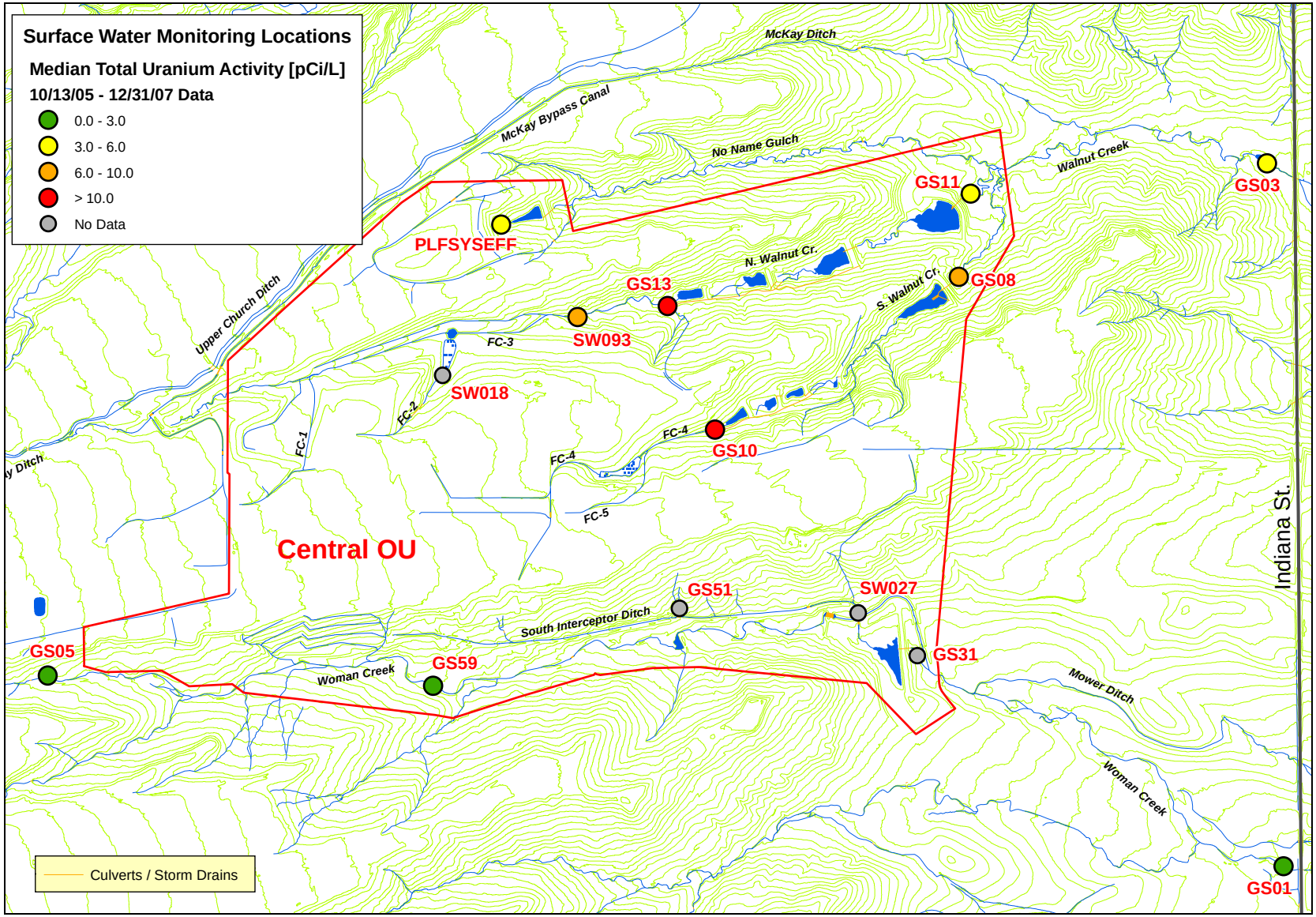
Location	Samples (N)	Median (pCi/L)	85th Percentile (pCi/L)	Maximum (pCi/L)
GS01	**30**	**2.13**	**4.99**	**7.53**
GS03	**19**	**3.60**	**5.79**	**6.38**
GS05	13	0.64	0.85	2.35
GS08	**8**	**9.64**	**10.5**	**11.1**
GS10	**39**	**11.0**	**15.0**	**24.5**
GS11	**10**	**4.02**	**4.07**	**4.32**
GS13	17	11.7	20.6	25.0
GS31	*****	*****	*****	*****
GS51	NA	NA	NA	NA
GS59	13	1.25	2.76	5.65
PLFSYSEFF	9	4.07	7.11	8.43
SW018	NA	NA	NA	NA
SW027	**1**	**2.04**	**2.04**	**2.04**
SW093	**34**	**6.15**	**8.20**	**10.2**

Notes: * = No post-closure results through CY 2007
NA = Analyte not sampled
Bold-face type = POC or POE



Note: Only locations with four or more results are mapped.

Figure 3-113. Median Total U Activities for CY 1997–October 13, 2005



Note: Only locations with four or more results are mapped.

Figure 3-114. Post-Closure Median Total U Activities

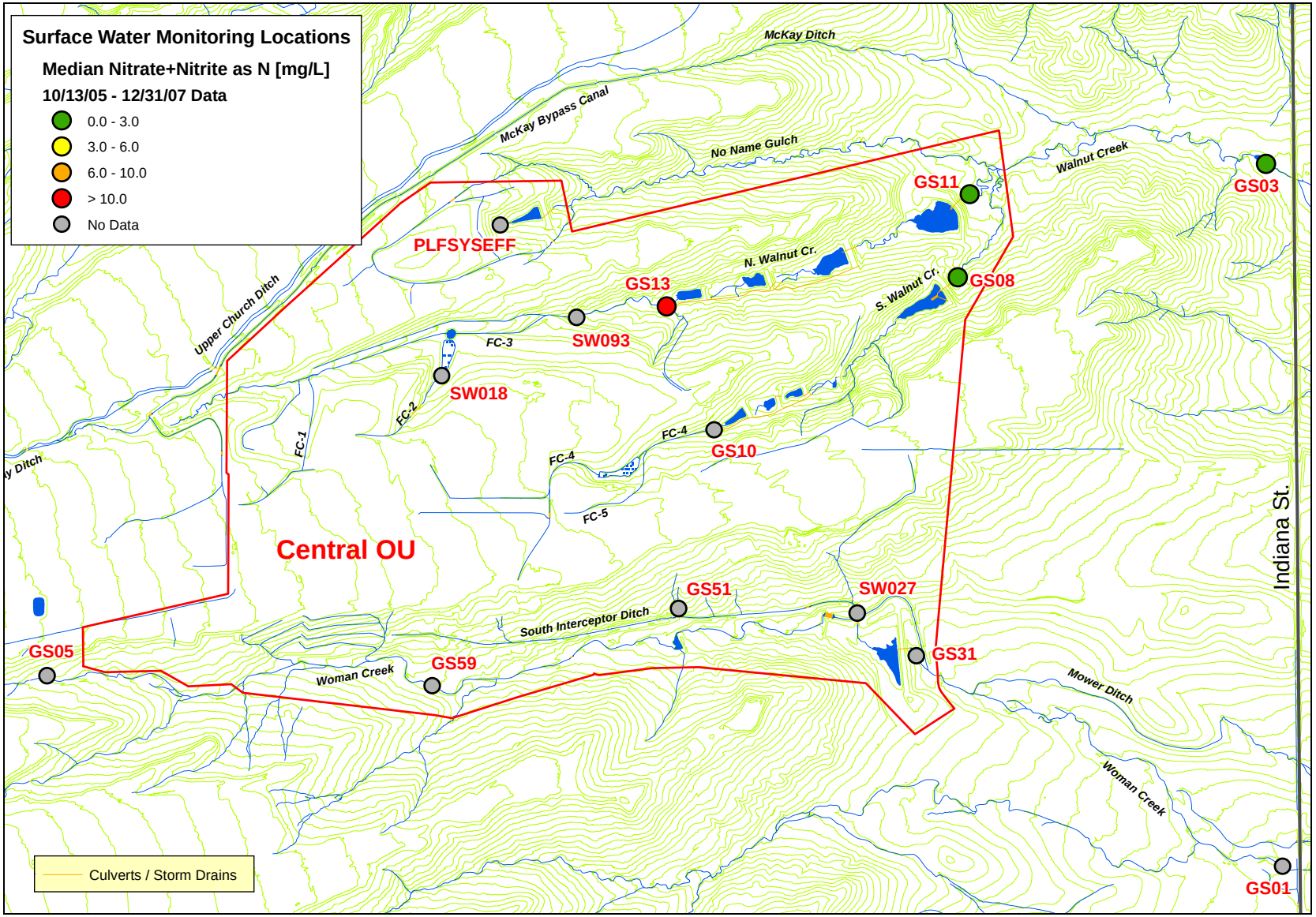
Table 3-48 and Figure 3-115 show that post-closure median nitrate concentrations for most locations are below the standard of 10 mg/L (a TM of 100 mg/L in effect for Walnut Creek above Ponds A-4 and B-5). Location GS13 clearly shows the effects of groundwater associated with the SPP.

Table 3-48. Post-Closure Summary Statistics for Nitrate+Nitrite as N Analytical Results (October 13, 2005−December 31, 2007)

Location	Samples (N)	Median (mg/L)	85th Percentile (mg/L)	Maximum (mg/L)
GS03	**12**	**1.54**	**3.70**	**5.10**
GS08	**8**	**0.44**	**0.69**	**0.73**
GS11	**10**	**2.78**	**6.17**	**6.26**
GS13	22	33.5	69.6	98.0

Notes: Bold-face type = POC or POE

Table 3-49 and Table 3-50 list the average Pu/Am activity ratios for locations where samples are analyzed for Pu and Am. A ratio greater than one indicates Pu activity in excess of Am activity. Conversely, a ratio less than one indicates Am activity in excess of Pu activity. Generally, Pu activities are greater than Am activities in surface water at the Site. Post-closure data show patterns similar to pre-closure. Figure 3-116 and Figure 3-117 present pre- and post-closure average Am/Pu ratios, respectively.



Note: Only locations with four or more results are mapped.

Figure 3-115. Post-Closure Median Nitrate + Nitrite as N Concentrations

Table 3-49. Average Pu/Am Ratios for Analytical Results in CY 1997−October 13, 2005

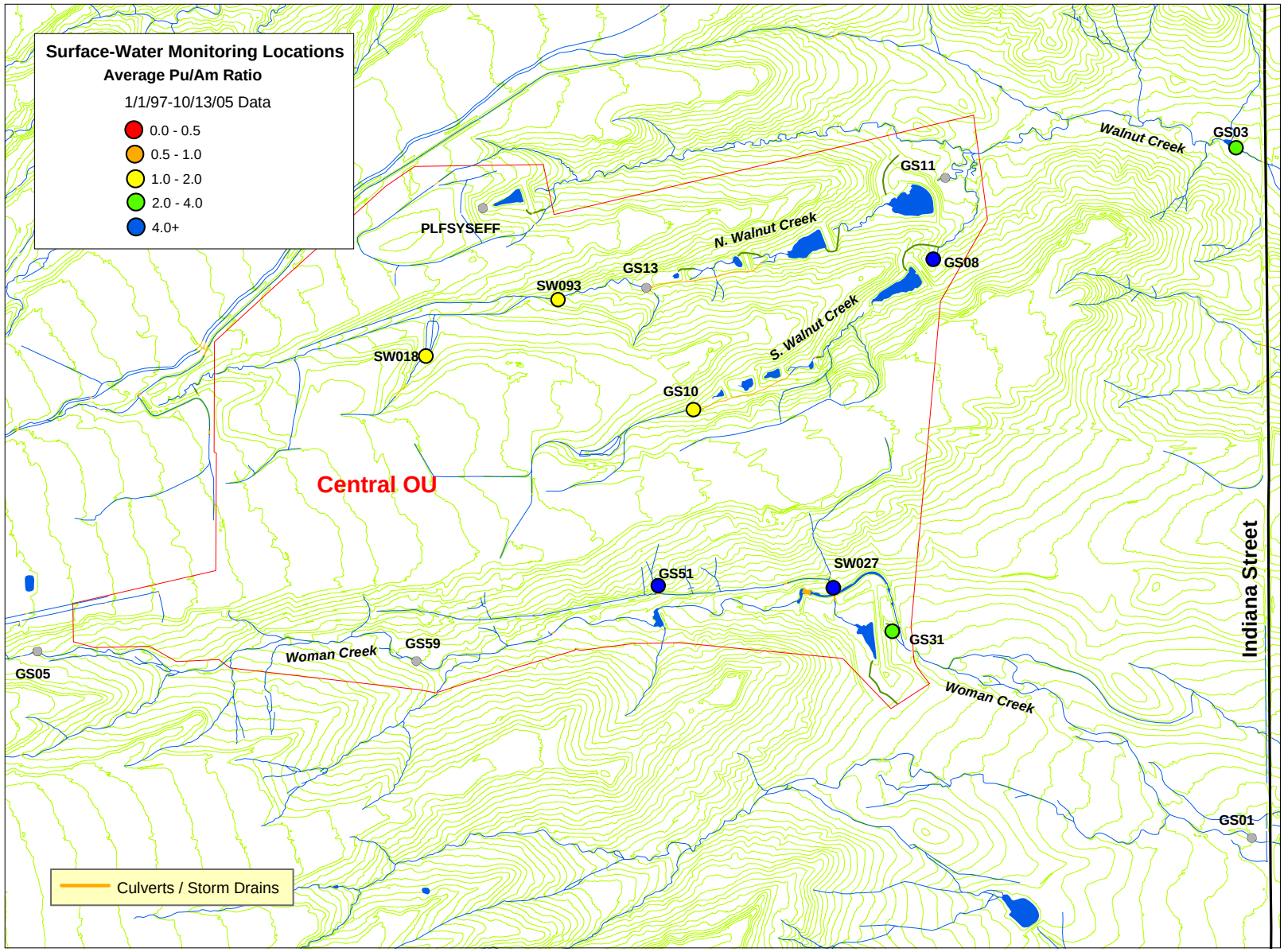
Location	Samples (N)[a]	Average Pu/Am Ratio
GS01	**1**	**1.5**
GS03	**14**	**2.1**
GS05	NA	NA
GS08	**5**	**8.9**
GS10	**196**	**1.3**
GS11	*****	*****
GS13	NA	NA
GS31	**4**	**3.9**
GS51	24	4.6
GS59	*	*
PLFSYSEFF	NA	NA
SW018	9	1.8
SW027	**26**	**4.9**
SW093	**95**	**1.8**

[a]Number of samples where both Pu and Am were greater than 0.015 pCi/L
*No results greater than 0.015 pCi/L
Bold-face type = POC or POE
NA = Analyte not sampled

Table 3-50. Post-Closure Average Pu/Am Ratios for Analytical Results (October 13, 2005−December 31, 2007)

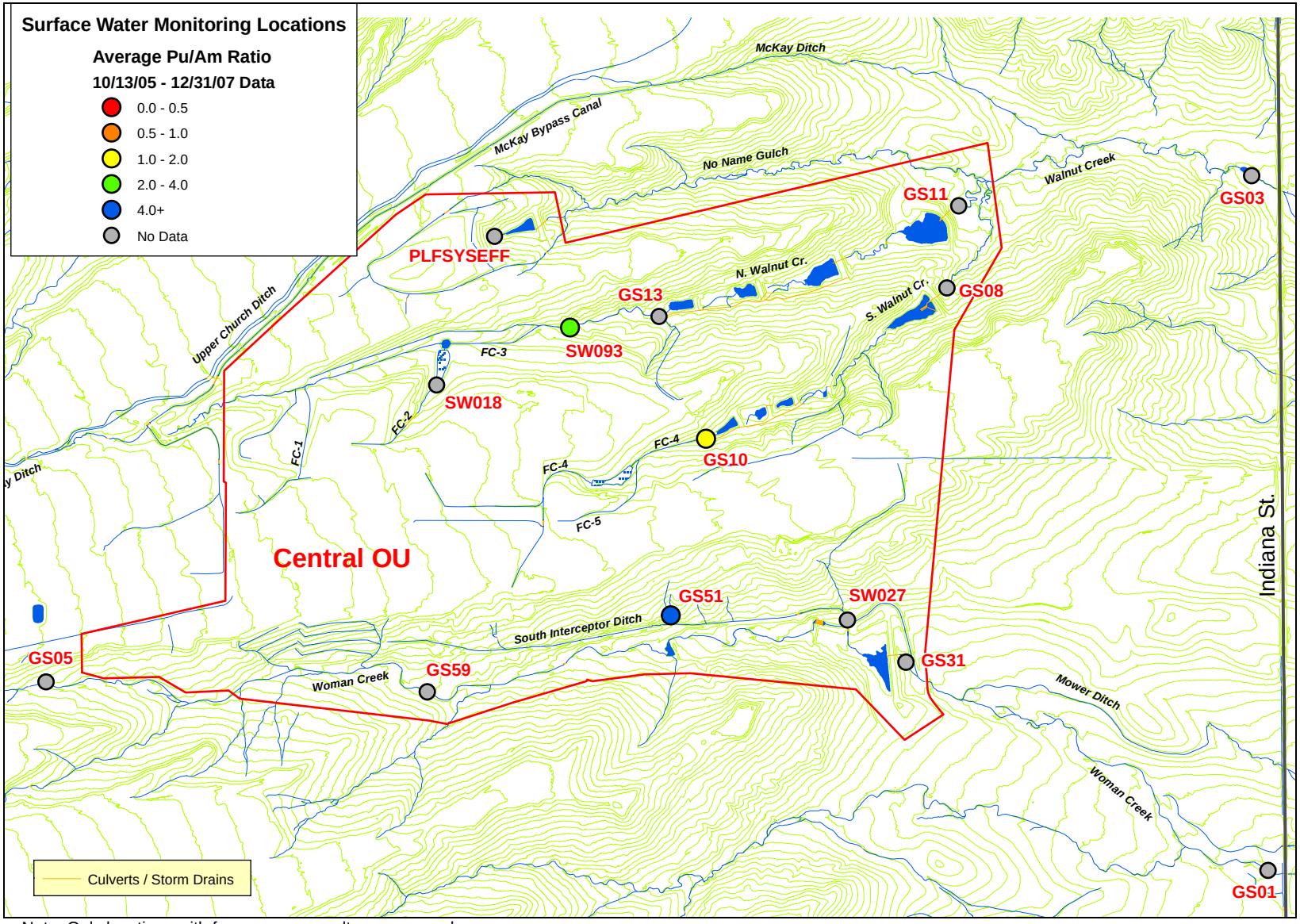
Location	Samples (N)[a]	Average Pu/Am Ratio
GS01	*****	*****
GS03	*****	*****
GS05	NA	NA
GS08	*****	*****
GS10	**5**	**1.6**
GS11	*****	*****
GS13	NA	NA
GS31	*****	*****
GS51	6	5.4
GS59	NA	NA
PLFSYSEFF	NA	NA
SW018	*	*
SW027	**1**	**2.3**
SW093	**4**	**2.4**

[a]Number of samples where both Pu and Am were greater than 0.015 pCi/L
*No results greater than 0.015 pCi/L
Bold-face type = POC or POE
NA = Analyte not sampled



Note: Only locations with four or more results are mapped.

Figure 3-116. Average Pu/Am Ratios for CY 1997–October 13, 2005



Note: Only locations with four or more results are mapped.

Figure 3-117. Post-Closure Average Pu/Am Ratios

Naturally occurring U generally shows a U-233,234/U-238 activity ratio of approximately one. The U-233,234/U-238 activity ratios at Site surface-water monitoring locations may be used as an indication of the existence of U with "unnatural" ratios. Although this evaluation does not deal systematically with analytical counting errors, Table 3-51, Table 3-52, Figure 3-118, and Figure 3-119 are presented here for reference.

In the past, Site groundwater and surface-water samples from select locations have been sent to LANL for HR ICP/MS and/or TIMS analyses as discussed previously. The results indicate that groundwater and surface water at the Site display a predominately natural signature.

Table 3-51. Average U-233,234/U-238 Ratios for Analytical Results in CY 1997−October 13, 2005

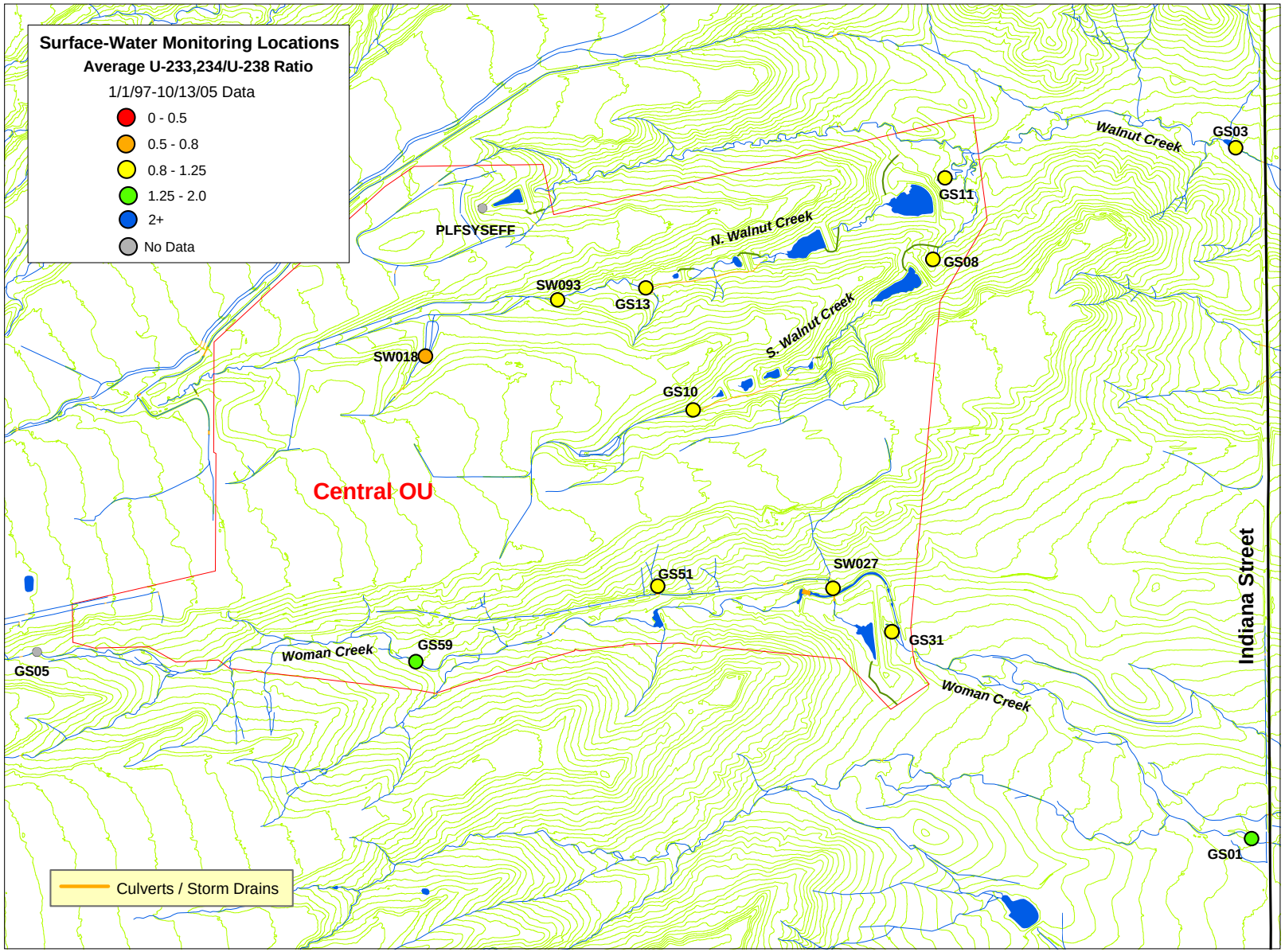
Location	Samples (N)[a]	Average U-233,234/U-238 Ratio
GS01	**53**	**1.3**
GS03	**78**	**1.2**
GS05	NA	NA
GS08	**118**	**1.1**
GS10	**266**	**1.1**
GS11	**89**	**1.0**
GS13	68	1.1
GS31	**26**	**0.9**
GS51	26	1.0
GS59	31	1.3
PLFSYSEFF	NA	NA
SW018	33	0.6
SW027	**71**	**0.8**
SW093	**284**	**1.0**

[a]Number of samples where both U-233,234 and U-238 were greater than 0.025 pCi/L
Bold-face type = POC or POE
NA = Analyte not sampled

Table 3-52. Post-Closure Average U-233,234/U-238 Ratios for Analytical Results (October 13, 2005−December 31, 2007)

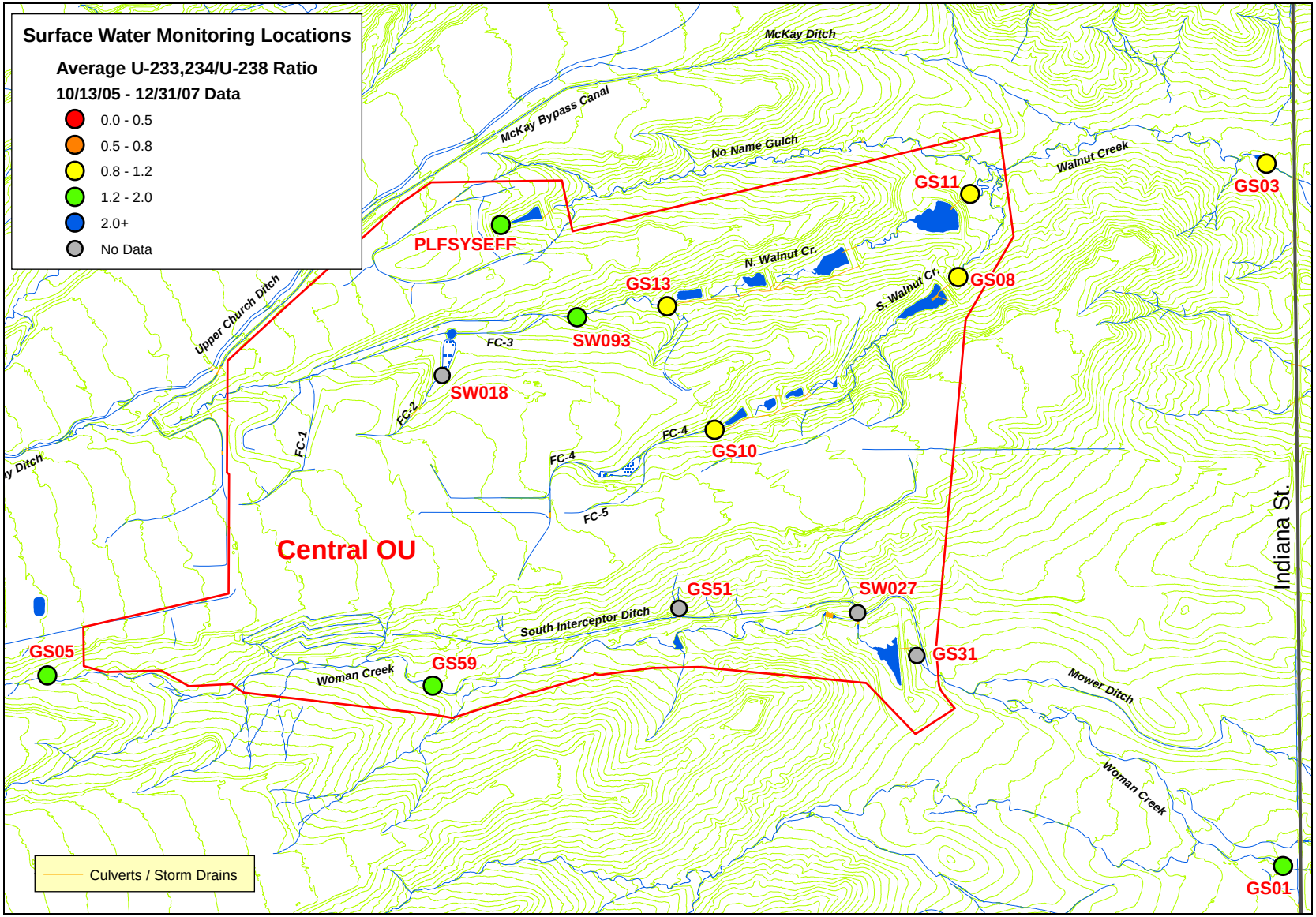
Location	Samples (N)[a]	Average U-233,234/U-238 Ratio
GS01	**30**	**1.3**
GS03	**19**	**1.2**
GS05	13	1.2
GS08	**8**	**1.1**
GS10	**39**	**1.1**
GS11	**10**	**1.1**
GS13	17	1.2
GS31	*****	*****
GS51	NA	NA
GS59	13	1.4
PLFSYSEFF	9	1.3
SW018	NA	NA
SW027	**1**	**1.1**
SW093	**34**	**1.2**

[a]Number of samples where both U-233,234 and U-238 were greater than 0.025 pCi/L
Bold-face type = POC or POE
NA = Analyte not sampled



Note: Only locations with four or more results are mapped.

Figure 3-118. Average U-233,234/U-238 Ratios for CY 1997–October 13, 2005



Note: Only locations with four or more results are mapped.

Figure 3-119. Post-Closure Average U-233,234/U-238 Ratios

POE Metals

The following summaries include all results that were not rejected through the validation process. Data are generally presented to decimal places as reported by the laboratories. Accuracy should not be inferred; minimum detectable concentrations/activities and analytical error are often greater than the precision presented. When an "undetect" is returned from the laboratory for metals analyses, one-half the detection limit is used for calculation purposes. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the "real" value and the "duplicate."[22] When a sample has multiple "real" analyses (Site-requested "reruns"), the value used in calculations is the arithmetic average of the multiple "real" analyses.

Table 3-53, Table 3-54, Table 3-55, Table 3-56, Table 3-57, and Table 3-58 present summary statistics for the POE metals. All three POEs generally show reduced metals concentrations post-closure.

Table 3-53. Summary Statistics for POE Metals Results from GS10 in CY 1997−October 13, 2005

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	263	32.3%	0.12	0.63	3.40
Dissolved Cd	259	59.1%	0.05	0.15	1.00
Total Cr	264	13.3%	2.40	9.72	80.10
Dissolved Ag	258	88.8%	0.11	0.18	1.10

Table 3-54. Post-Closure Summary Statistics for POE Metals Results from GS10 (October 13, 2005−December 31, 2007)

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	39	100.0%	0.50	0.50	0.50
Dissolved Cd	39	92.3%	0.05	0.06	0.34
Total Cr	39	84.6%	0.50	1.09	7.10
Dissolved Ag	39	97.4%	0.10	0.10	0.20

Table 3-55. Summary Statistics for POE Metals Results from SW027 in CY 1997−October 13, 2005

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	70	45.7%	0.09	0.41	1.30
Dissolved Cd	70	68.6%	0.05	0.13	0.70
Total Cr	70	8.6%	1.70	4.03	31.2
Dissolved Ag	68	85.3%	0.12	0.24	0.72

[22] Arithmetic averaging of metal pairs is performed only when the RPD is less than 100 percent. If the RPD is greater than or equal to 100 percent, the metal results are determined to be nonrepresentative. The results are then not used for the calculation of summary statistics.

Table 3-56. Post-Closure Summary Statistics for POE Metals Results from SW027 (October 13, 2005−December 31, 2007)

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	1	1	0.50	NA	0.50
Dissolved Cd	1	1	0.05	NA	0.05
Total Cr	1	1	0.50	NA	0.50
Dissolved Ag	1	1	0.10	NA	0.10

Notes: NA = not applicable

Table 3-57. Summary Statistics for POE Metals Results from SW093 in CY 1997−October 13, 2005

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	284	35.2%	0.11	0.55	2.10
Dissolved Cd	284	68.7%	0.05	0.14	2.20
Total Cr	283	16.3%	2.00	7.40	34.90
Dissolved Ag	280	89.6%	0.10	0.18	1.03

Table 3-58. Post-Closure Summary Statistics for POE Metals Results from SW093 (October 13, 2005−December 31, 2007)

Analyte	Samples (N)	Undetect	Median (µg/L)	85th Percentile (µg/L)	Maximum (µg/L)
Total Be	34	100.0%	0.50	0.50	0.50
Dissolved Cd	34	91.2%	0.05	0.06	0.16
Total Cr	34	61.8%	0.50	1.41	2.70
Dissolved Ag	34	100.0%	0.10	0.10	0.10

3.1.4.2 Surface-Water Loading Analysis

This section provides a summary of radionuclide loads (Am, Pu, and total U) for RFCA POEs and POCs. These locations collect continuous flow-paced composite samples for laboratory analysis. The nature of the continuous sampling during all flow conditions allows for more accurate load estimations compared to storm-event or grab sampling.

This loading analysis should not be confused with demonstration of compliance at POCs and POEs. Compliance is demonstrated based on water activity (essentially concentration in pCi/L) in comparison to applicable surface-water standards (see Section 3.1.2.1 and Section 3.1.2.2). This loading analysis is presented to show changes in the transport of Pu, Am, and U following Site closure. These changes in load, in conjunction with the successful demonstration of compliance, can be used to support conclusions regarding the success and continued performance of the remedy.

To calculate load, the activity for each composite sample (pCi/L) is multiplied by the corresponding stream discharge (liters [L]) during the composite sample period, to yield the load

(pCi). The total pCi value is then converted to micrograms (µg) using the conversion factors in Table 3-59.[23] A detailed description of the method for load estimation is given in Appendix B1.[24]

Table 3-59. Activity to Mass Conversion Factors for Pu, Am, and U Isotopes

Analyte	Mass/Activity (g/Ci)
Pu-239,240	14.085
Am-241	0.292
U-233,234	1.6 E+02
U-235	4.63 E+05
U-238	2.98 E+06

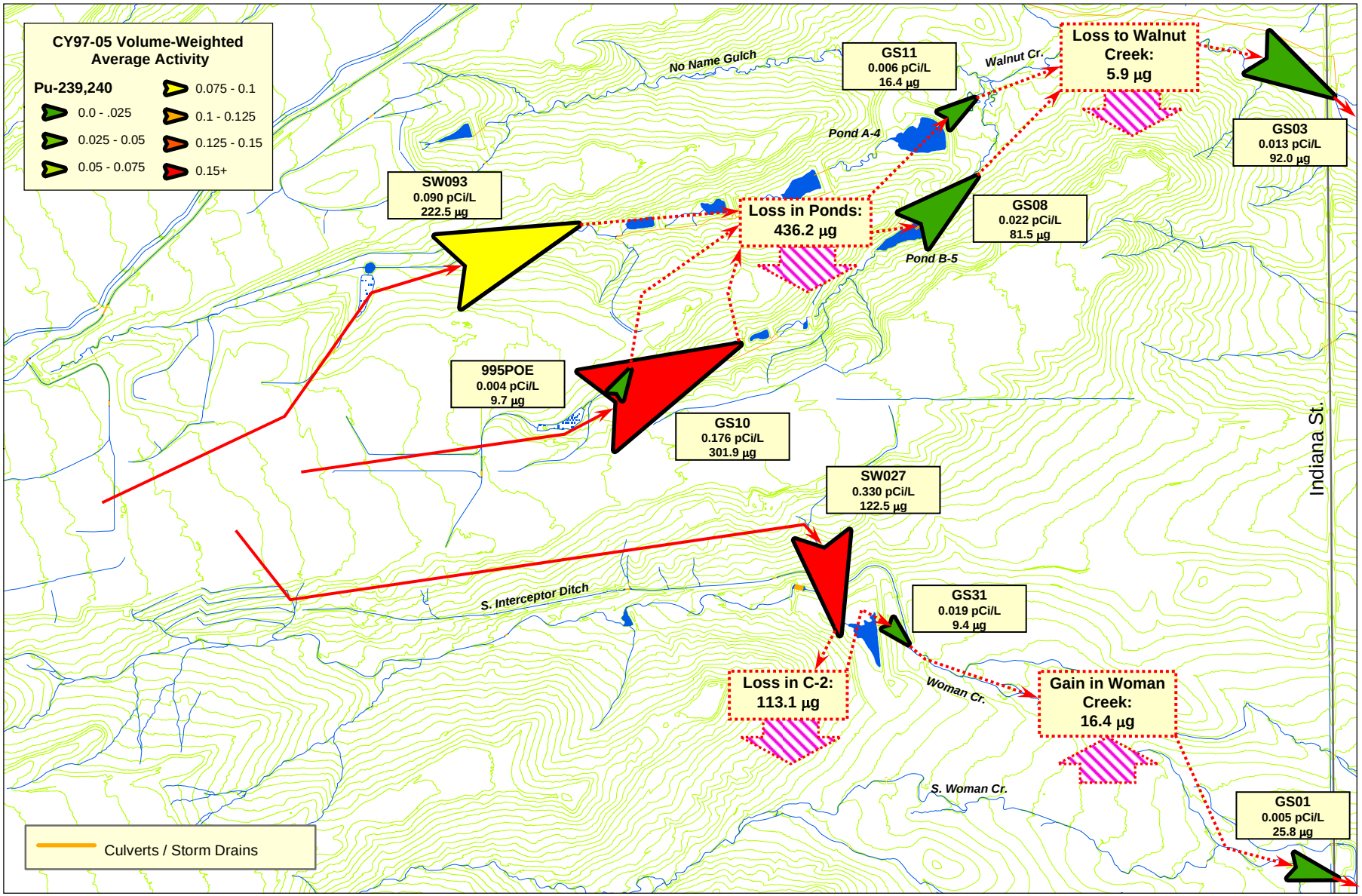
The Pu-239,240 conversion factor was derived from Table 2.7.2-2 in the April 1980 *Final Environmental Impact Statement (Final Statement to ERDA 1545-D)*, RFP Site. The conversion factors for Am-241, U-233,234, U-235, and U-238 were taken from the *Code of Federal Regulations* (CFR), Title 40, Chapter I, Part 302.4, Appendix B, October 7, 2000.[25]

Site and Refuge Area

This section summarizes the calculated overall Pu and Am loads for select locations. Total U data collection began at GS01 and GS03 just prior to CY 2003, as such only CY 2003−2007 data are shown. The following points are noted:

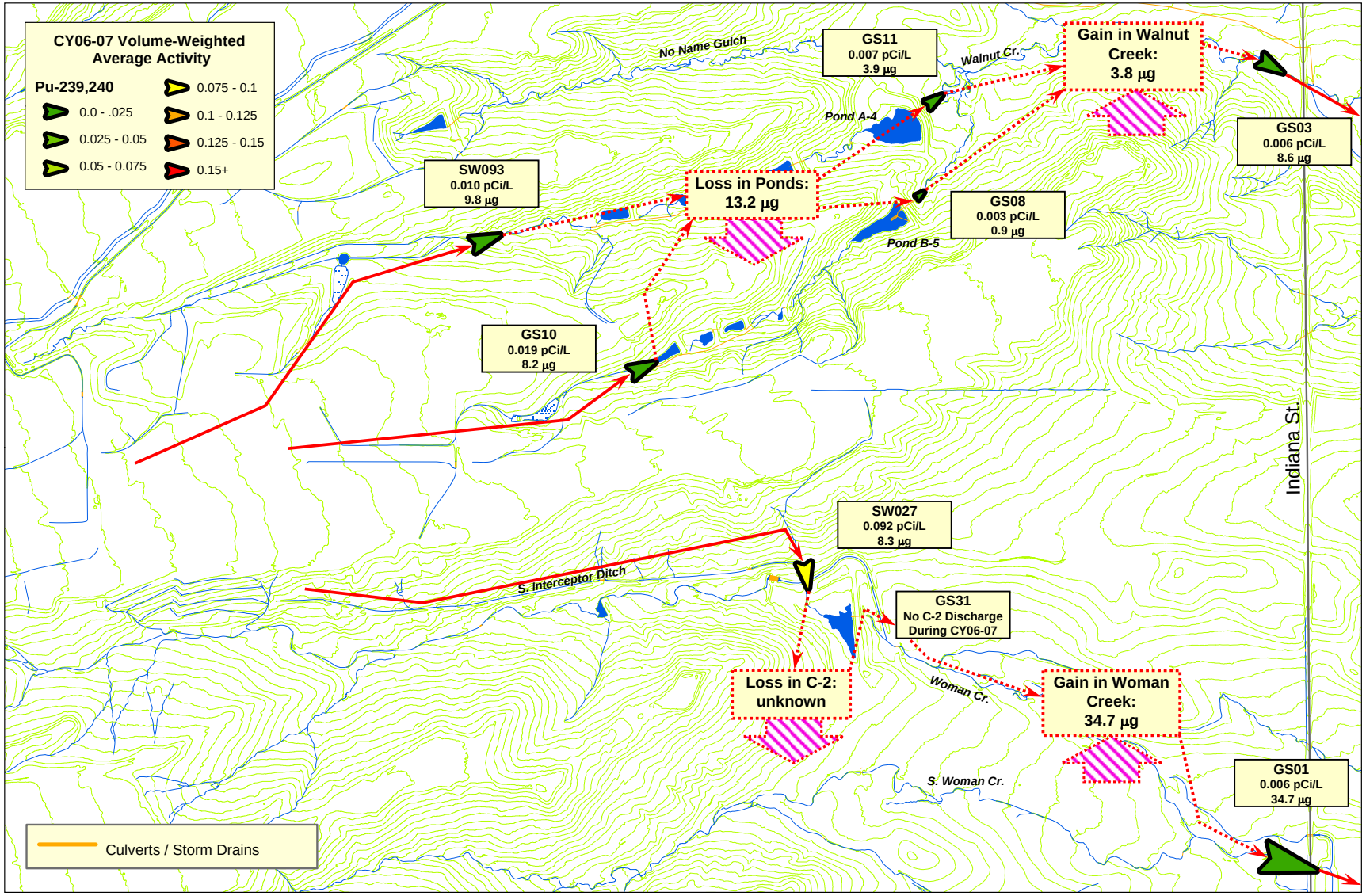
- Figure 3-120, Figure 3-121, Figure 3-122, and Figure 3-123 show a significant reduction in average annual Pu and Am load and activity from the COU, the terminal ponds, and Walnut Creek at Indiana Street post-closure. The reductions are generally an order of magnitude for all locations affected directly by the former IA. For lower Woman Creek, however, loads and activities are generally unchanged. This is likely due to transport of diffuse, low-level contamination in the much larger flow volumes measured at GS01, a location not significantly affected by the former IA. The post-closure volume-weighted average Pu and Am activities of 0.006 and 0.003 pCi/L, respectively, at GS01 are significantly below the standard of 0.15 pCi/L for each analyte.
- For both Pu and Am, remedial actions, removal of impervious surfaces (reducing runoff), revegetation, and erosion control efforts have significantly improved water quality.
- Figure 3-124 and Figure 3-125 show a measurable increase in average annual total U[26] activity in Walnut Creek post-closure. This increase is likely due to the reduction of runoff and the corresponding proportional increase of groundwater seepage in streamflow with relatively high concentrations of naturally occurring U. Conversely, the reduction in overall streamflows has resulted in decreased loads. For lower Woman Creek, however, loads and activities have changed to a lesser extent. This is likely due to transport of naturally occurring U in the much larger flow volumes measured at GS01, a location not significantly affected by the former IA.

[23] In the following tables and plots, values are rounded for presentation.
[24] Data are generally presented at varying precision for presentation. Accuracy should not be inferred; both analytical and flow measurement error have not been quantified in this report.
[25] The U-234 conversion factor was used to represent U-233,234 due to the small relative abundance of U-233.
[26] Total U is calculated as the sum of individual isotopes: U-233,234 + U-235 + U-238.



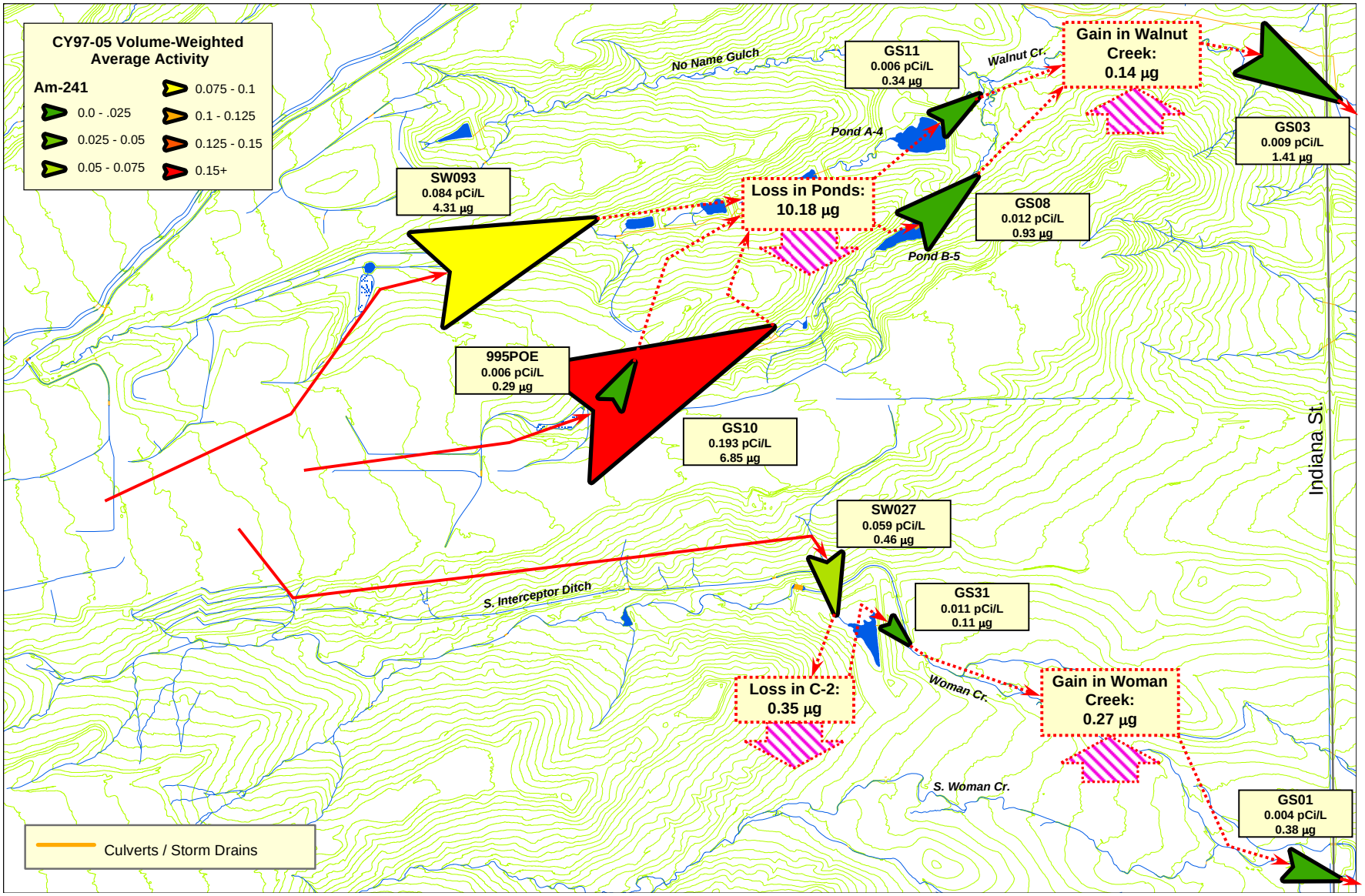
Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-120. Relative Average Annual Pu Loading Schematic: CY 1997–2005



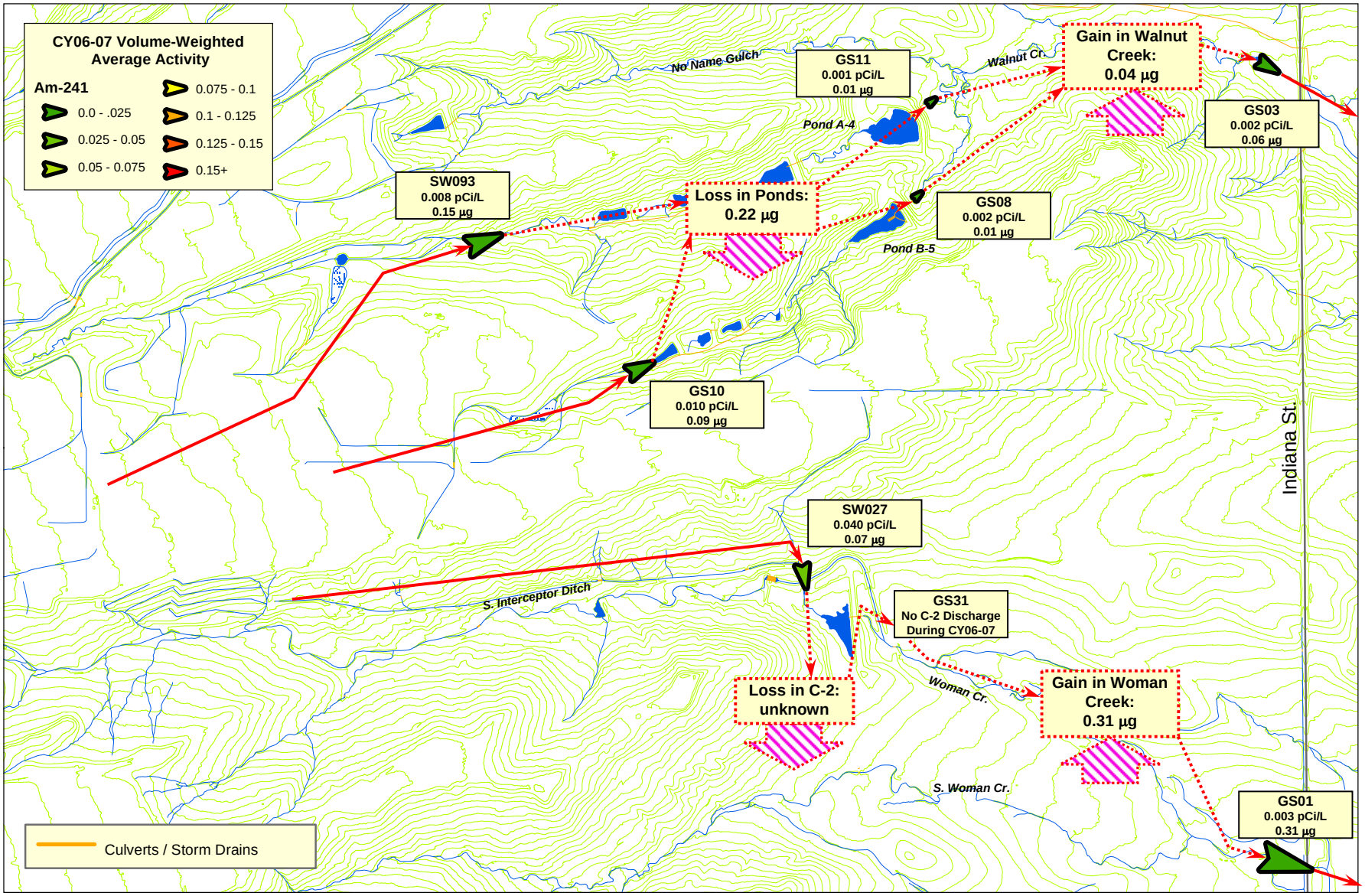
Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-121. Relative Average Annual Pu Loading Schematic: CY 2006−2007



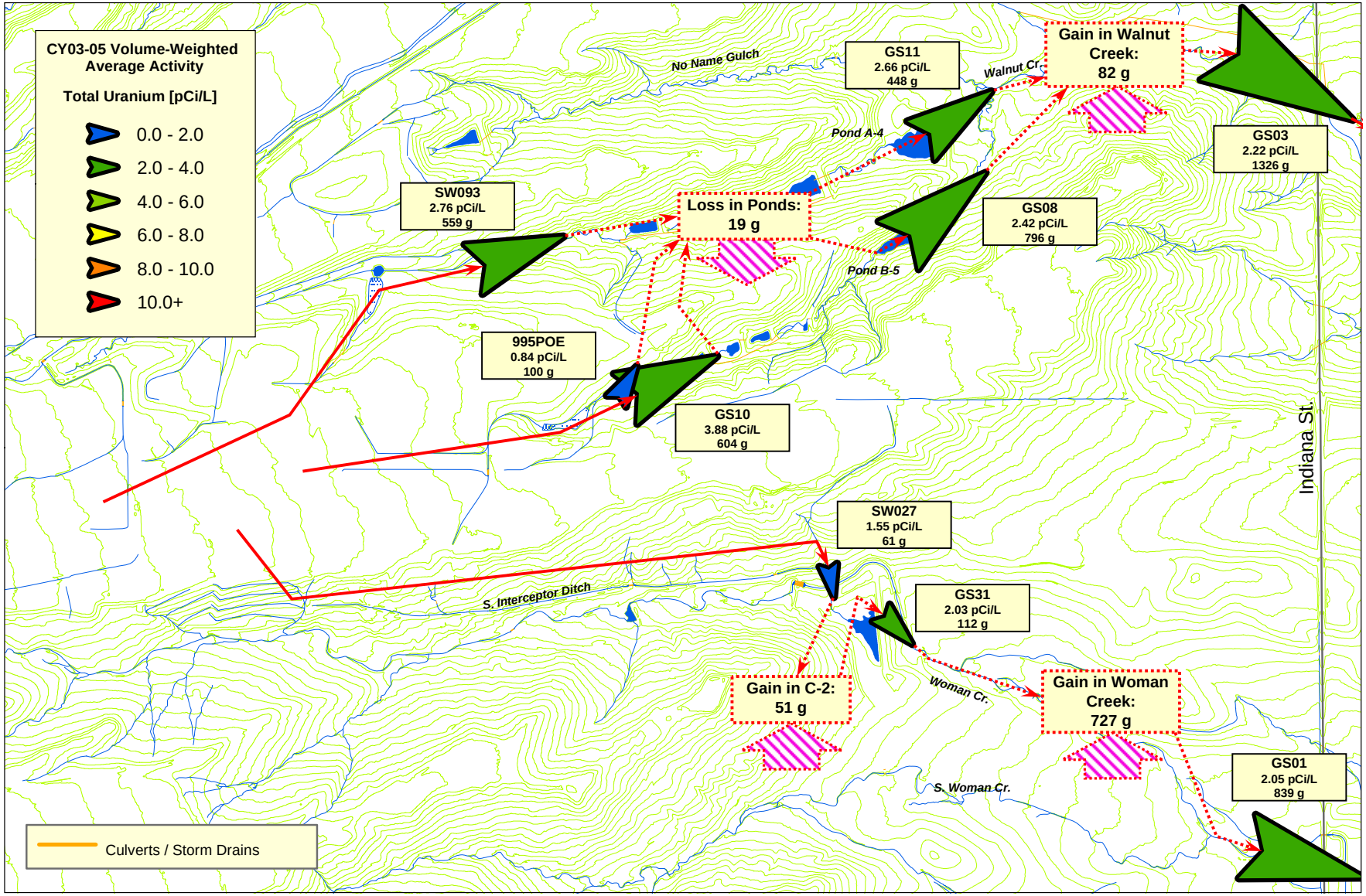
Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-122. Relative Average Annual Am Loading Schematic: CY 1997−2005



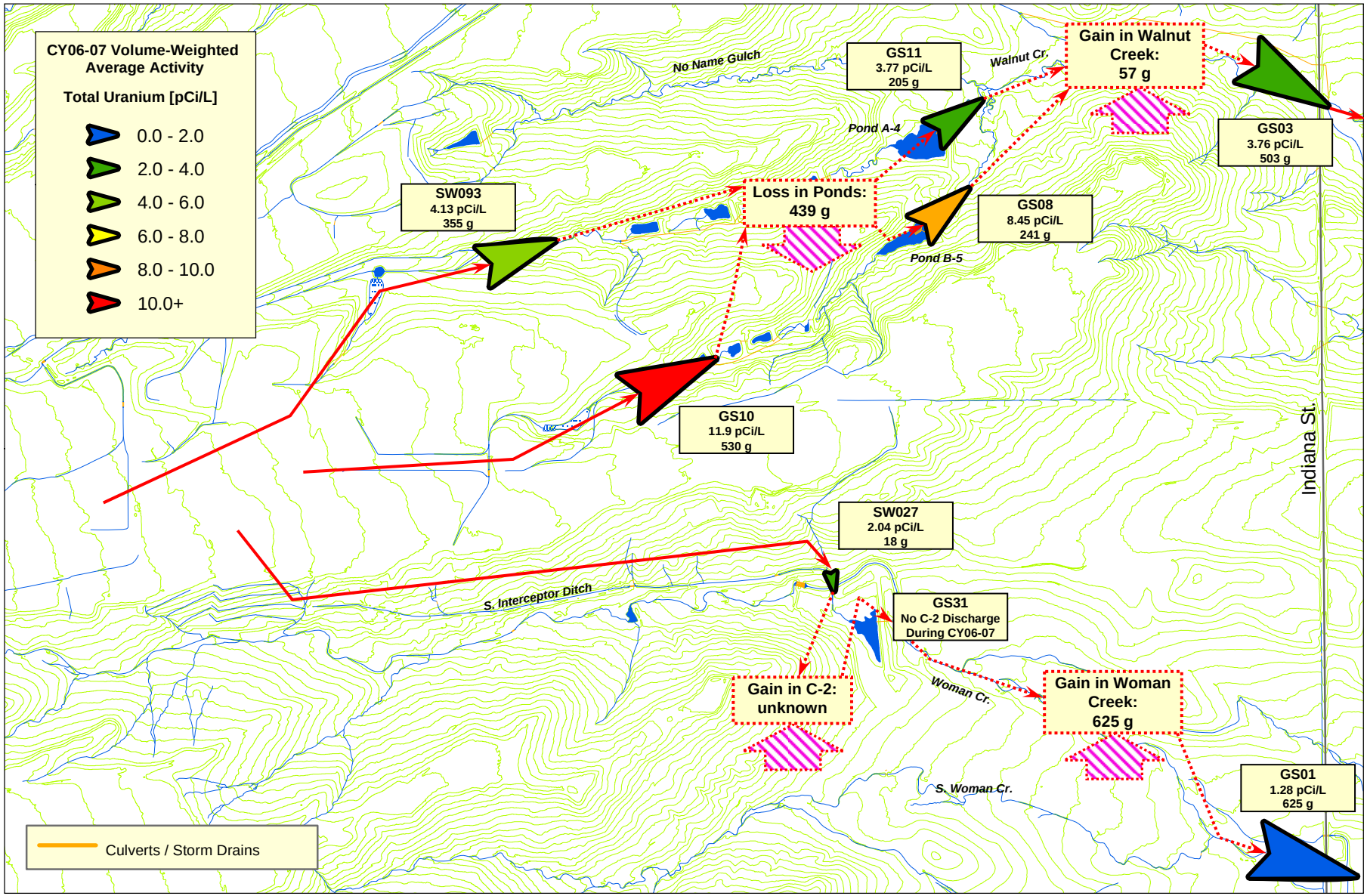
Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-123. Relative Average Annual Am Loading Schematic: CY 2006−2007



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-124. Relative Average Annual Total U Loading Schematic: CY 2003−2005



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-125. Relative Average Annual Total U Loading Schematic: CY 2006−2007

Indiana Street POCs

This section summarizes the calculated Pu and Am loads from Walnut and Woman Creeks at Indiana Street. Figure 3-126, Figure 3-127, Figure 3-128, Figure 3-129, Figure 3-130, Figure 3-131, and Figure 3-132, as well as Table 3-60 and Table 3-61 present the load data. The following points are noted:

- Walnut Creek accounts for nearly 80 percent of both the Pu (Figure 3-128) and Am (Figure 3-130) loads at Indiana Street pre-closure. However, post-closure these proportions are reversed due to the reduction in runoff and transport due to the effectiveness of remedial actions, revegetation, and erosion control measures.
- Both Pu and Am loads have decreased in recent years as Site closure activities have reduced discharge volumes and eliminated source terms (Figure 3-126).
- Figure 3-127 and Figure 3-129 show a significant reduction in both Pu and Am loads at Walnut Creek and Indiana Street.
- The somewhat higher Pu and Am loads in Woman Creek at Indiana Street (Figure 3-127 and Figure 3-129) can be attributed to high flow volumes at GS01.[27] Average annual volume-weighted Pu and Am activities at GS01 were 0.006 and 0.004 pCi/L, respectively (Table 3-3).
- Walnut Creek accounts for 61 percent of the pre-closure and 45 percent of the post-closure U loads at Indiana Street (Figure 3-132). Although U activity has increased in Walnut Creek post-closure, reduced flow volumes have resulted in decreased loads comparable to pre-closure loads.

Table 3-60. Offsite Pu and Am Loads from Walnut and Woman Creeks: CY 1997–2007

Calendar Year	Pu-239,240 (μg)			Am-241 (μg)		
	Walnut Creek	Woman Creek	Total	Walnut Creek	Woman Creek	Total
1997	262.4	47.9	310.3	2.99	0.40	3.39
1998	172.2	55.4	227.6	2.66	0.99	3.65
1999	150.2	56.7	206.9	1.83	0.75	2.57
2000	26.0	6.1	32.1	0.74	0.18	0.92
2001	58.6	22.4	81.0	0.63	0.30	0.93
2002	37.4	0.8	38.2	0.37	0.03	0.40
2003	57.6	25.9	83.5	1.07	0.34	1.41
2004	33.1	4.7	37.8	0.70	0.15	0.86
2005	30.3	12.5	42.8	1.67	0.30	1.97
2006	0.0	1.4	1.4	0.0	0.13	0.13
2007	17.2	68.0	85.1	0.12	0.49	0.60
Total	844.9	301.7	1,146.6	12.79	4.04	16.83

Note: During CY 1997, flows from Woman Creek were routinely diverted to Mower Ditch for subsequent monitoring at GS02. Therefore, the load calculated for Woman Creek at Indiana Street (GS01) includes the water that was measured at GS02. The estimated load diverted to GS02 is calculated by multiplying the CY 1997 volume-weighted activities at GS01 by the streamflow volume measured at GS02, and converting for units. This diverted load is then added to the calculated load at GS01 to obtain the total CY 1997 load at GS01. For subsequent water years, the Mower diversion structure has been upgraded and configured to prevent Woman Creek flows from entering the Mower Ditch.

[27] Measured flow volumes at GS01 in CY 2007 were the highest recorded to date. These volumes are attributed to a combination of large snow events and extensive flood irrigation from Rocky Flats Lake.

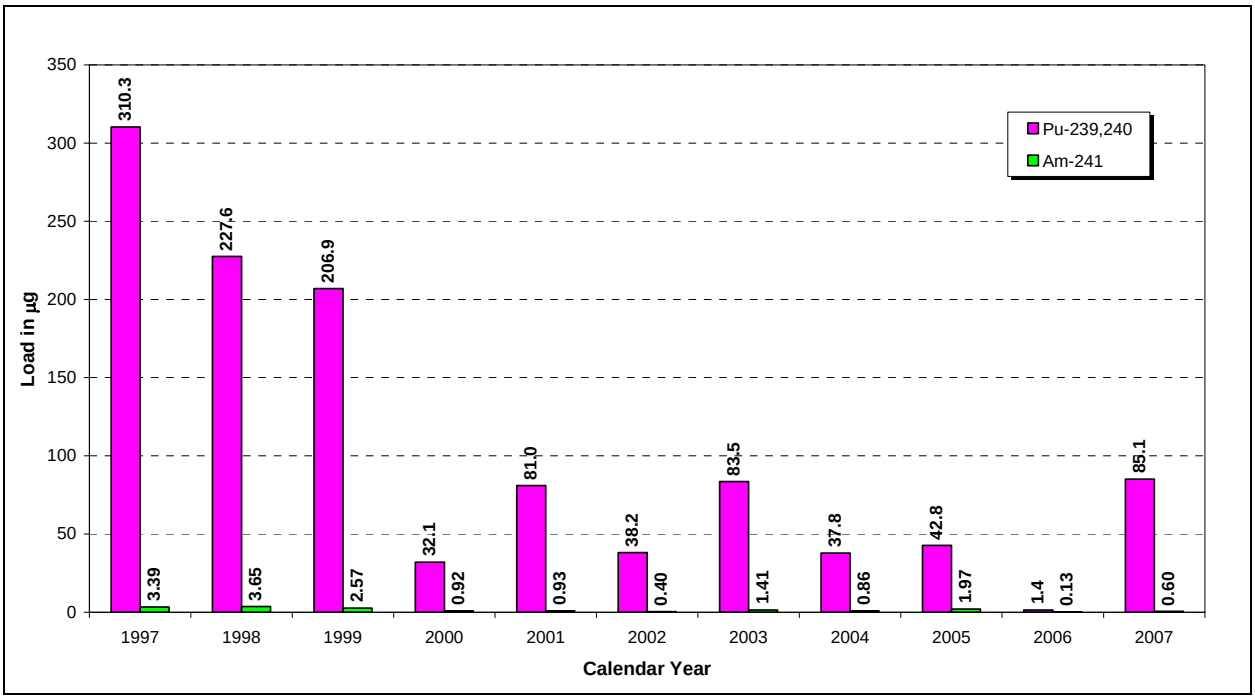


Figure 3-126. Combined Annual Pu and Am Loads from Walnut and Woman Creeks: CY 1997–2007

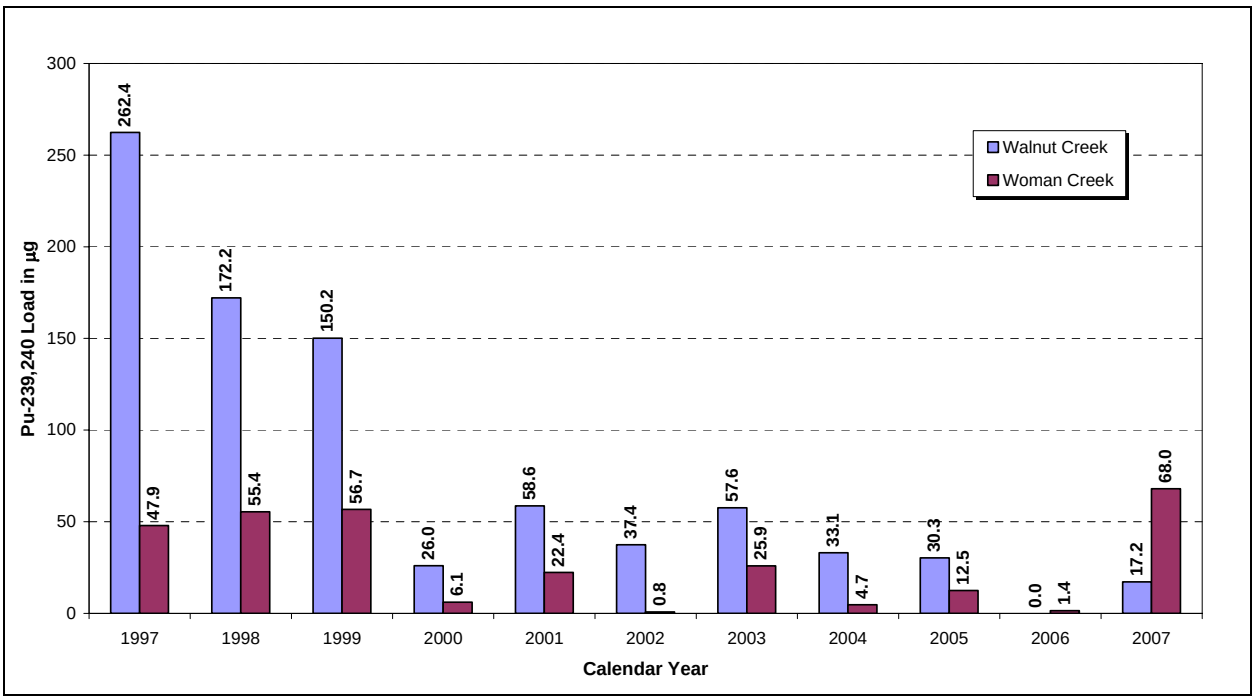


Figure 3-127. Annual Pu Loads from Walnut and Woman Creeks: CY 1997–2007

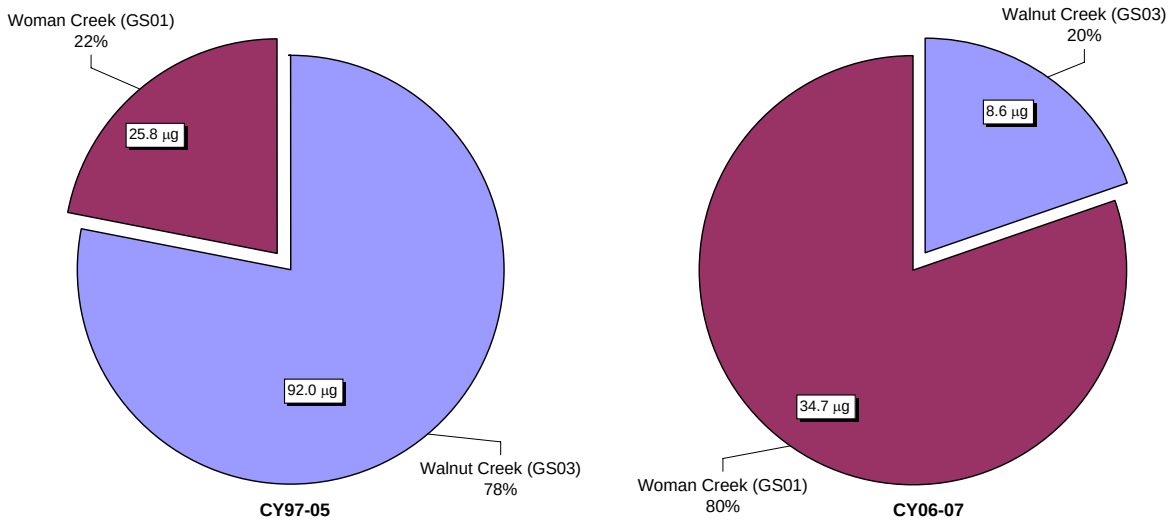


Figure 3-128. Relative Average Annual Pu Load Totals from Walnut and Woman Creeks

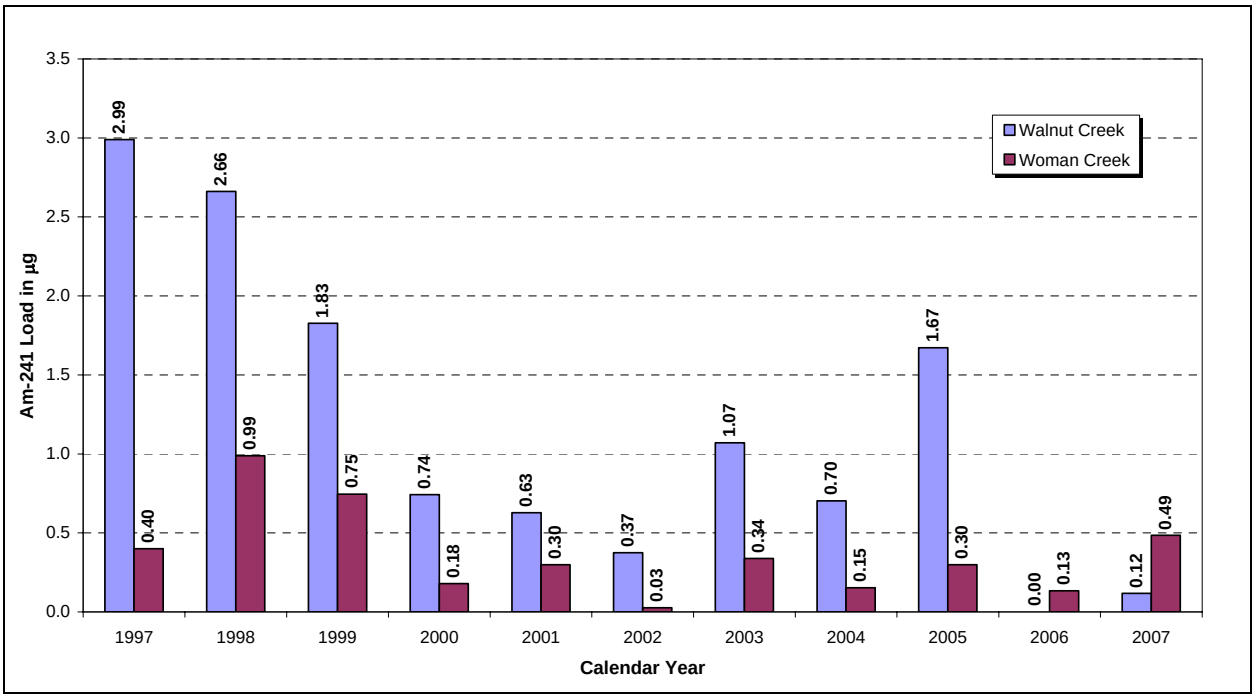


Figure 3-129. Annual Am Loads from Walnut and Woman Creeks: CY 1997–2007

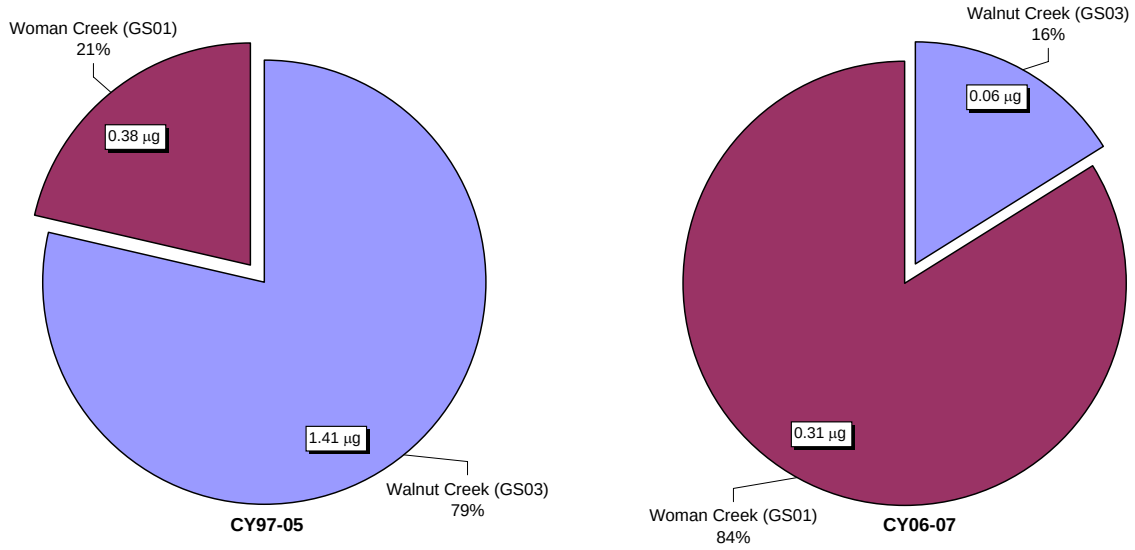


Figure 3-130. Relative Average Annual Am Load Totals from Walnut and Woman Creeks

Table 3-61. Total U Loads from Walnut and Woman Creeks: CY 2003−2007

Calendar Year	Total Uranium (g)		
	Walnut Creek	**Woman Creek**	**Total**
2003	1,751	790	2,541
2004	744	808	1,551
2005	1,482	918	2,400
2006	0 No flow	235	235
2007	1,005	1,016	2,021
Total	4,982	3,767	8,749

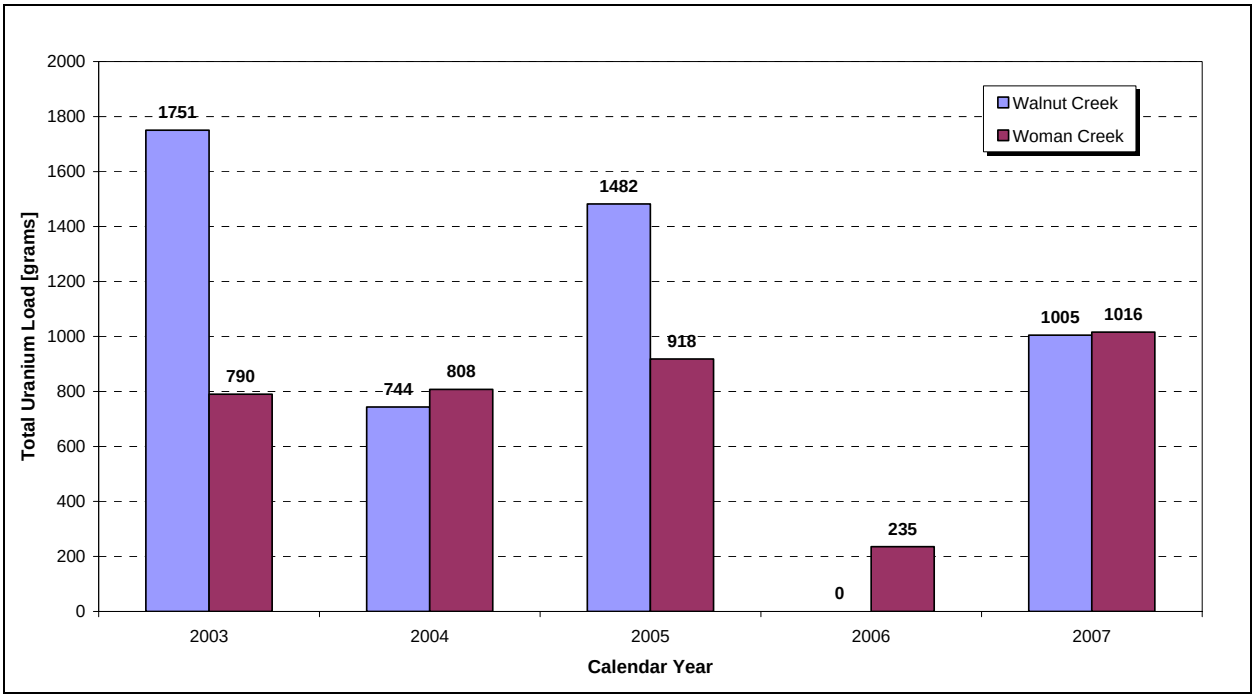


Figure 3-131. Annual Total U Loads from Walnut and Woman Creeks: CY 2003–2007

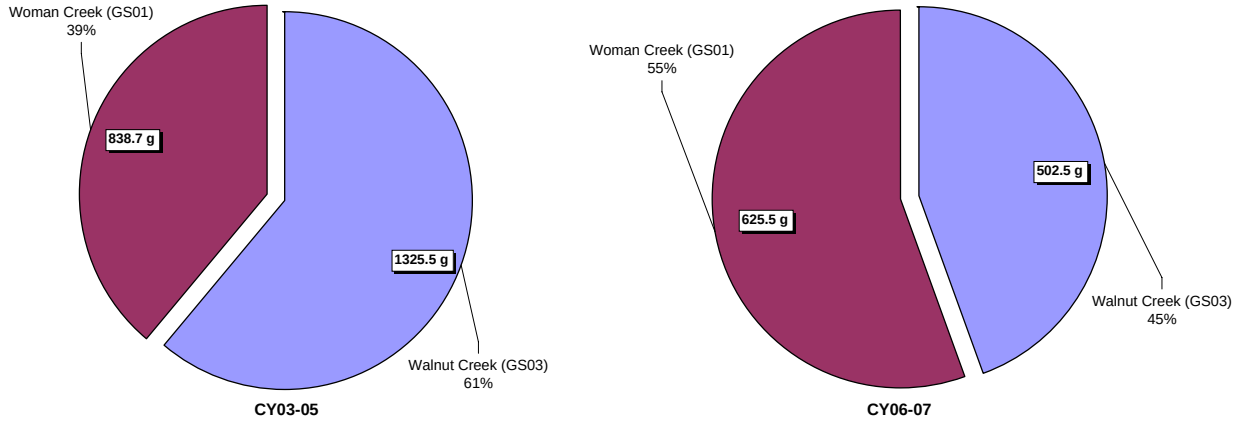


Figure 3-132. Relative Average Annual Total U Load Totals from Walnut and Woman Creeks

Lower Walnut Creek

This section summarizes the calculated Pu and Am loads in Walnut Creek at GS03 (Walnut Creek and Indiana Street), GS08 (Pond B-5 outlet), and GS11 (Pond A-4 outlet). The data are presented in Table 3-62, Table 3-63, and Table 3-64, and depicted on Figure 3-133, Figure 3-134, Figure 3-135, Figure 3-136, Figure 3-137, Figure 3-138, and Figure 3-139. Total U

data collection at GS03 began on November 5, 2002; as such only CY 2003−2007 data are shown. The following points are noted:

- Annual Pu and Am loads vary by up to two orders of magnitude year to year (Figure 3-134 and Figure 3-136). The significant annual variability in Pu and Am loads is likely due to water-quality variation during active closure and the very low measured activities with the inherent analytical error at such low levels.
- Pu and Am loads appear to be decreasing at GS03 (Figure 3-133). The slight increase in Am loads at GS03 during CY 2005 is due to increased Am contributions to the A-Series Ponds related to the decontamination and decommissioning (D&D) of B771. Treatment of Pond A-4 water was successful in reducing Am levels well below the applicable standard (0.15 pCi/L), but the Am activity of the discharged water was somewhat higher than normal. Pond B-5 also showed some increased Am activity due to temporarily increased Am load associated with solids transport resulting from the construction of FC-4. These slightly higher Am activities were subsequently also measured at GS03.
- Annual Pu and Am loads for all locations have been reduced significantly post-closure (Figure 3-134 and Figure 3-136) due to the reduction in runoff and transport due to the effectiveness of remedial actions, revegetation, and erosion control measures.
- Pu and Am loads from Pond B-5 are significantly greater than loads from Pond A-4 (Table 3-62 and Table 3-63), a result of both higher activities and larger discharge volumes pre-closure.
- Total Pu loads from Ponds A-4 and B-5 for the entire period of 1997 through 2007 are marginally greater than the loads at GS03 (Table 3-62), indicating a small net loss of load to the Walnut Creek streambed below Ponds A-4 and B-5.
- Total Am loads from Ponds A-4 and B-5 for the entire period of 1997 through 2007 are marginally less than the loads at GS03 (Table 3-63), indicating a small net gain of load from tributaries and the Walnut Creek streambed below Ponds A-4 and B-5.
- Total CY 2003−2007 U loads from Ponds A-4 and B-5 are slightly less than the loads at GS03 (Figure 3-139), indicating a small net gain of load from tributaries and the Walnut Creek streambed below Ponds A-4 and B-5.

Table 3-62. Pu Loads at GS03, GS08, and GS11: CY 1997–2007

Calendar Year	Pu-239,240 (μg)			
	Pond A-4 (GS11)	**Pond B-5 (GS08)**	**Walnut Creek Terminal Ponds Total**	**POC GS03**
1997	59.2	8.8	68.0	262.4
1998	20.0	22.4	42.4	172.2
1999	23.8	261.4	285.2	150.2
2000	28.4	244.6	273.0	26.0
2001	4.7	32.3	37.0	58.6
2002	0.1	7.8	7.9	37.4
2003	7.3	111.5	118.8	57.6
2004	2.2	27.1	29.3	33.1
2005	2.2	17.9	20.1	30.3
2006	0.0; No A-4 discharge	0.0; No B-5 discharge	0.0	0.0 No flow
2007	7.8	1.9	9.6	17.2
Total	155.7	735.7	891.4	844.9

Notes: NA = not applicable

Table 3-63. Am Loads at GS03, GS08, and GS11: CY 1997–2007

Calendar Year	Am-241 (μg)			
	Pond A-4 (GS11)	**Pond B-5 (GS08)**	**Walnut Creek Terminal Ponds Total**	**POC GS03**
1997	0.70	0.25	0.95	2.99
1998	1.25	0.35	1.60	2.66
1999	0.20	1.81	2.01	1.83
2000	0.02	3.14	3.16	0.74
2001	0.11	0.46	0.57	0.63
2002	0.04	0.25	0.29	0.37
2003	0.18	0.54	0.72	1.07
2004	0.14	0.58	0.73	0.70
2005	0.43	0.97	1.39	1.67
2006	0.0 No A-4 discharge	0.0; No B-5 discharge	0.00	0.0 No flow
2007	0.02	0.03	0.05	0.12
Total	3.10	8.38	11.48	12.79

Notes: NA = not applicable

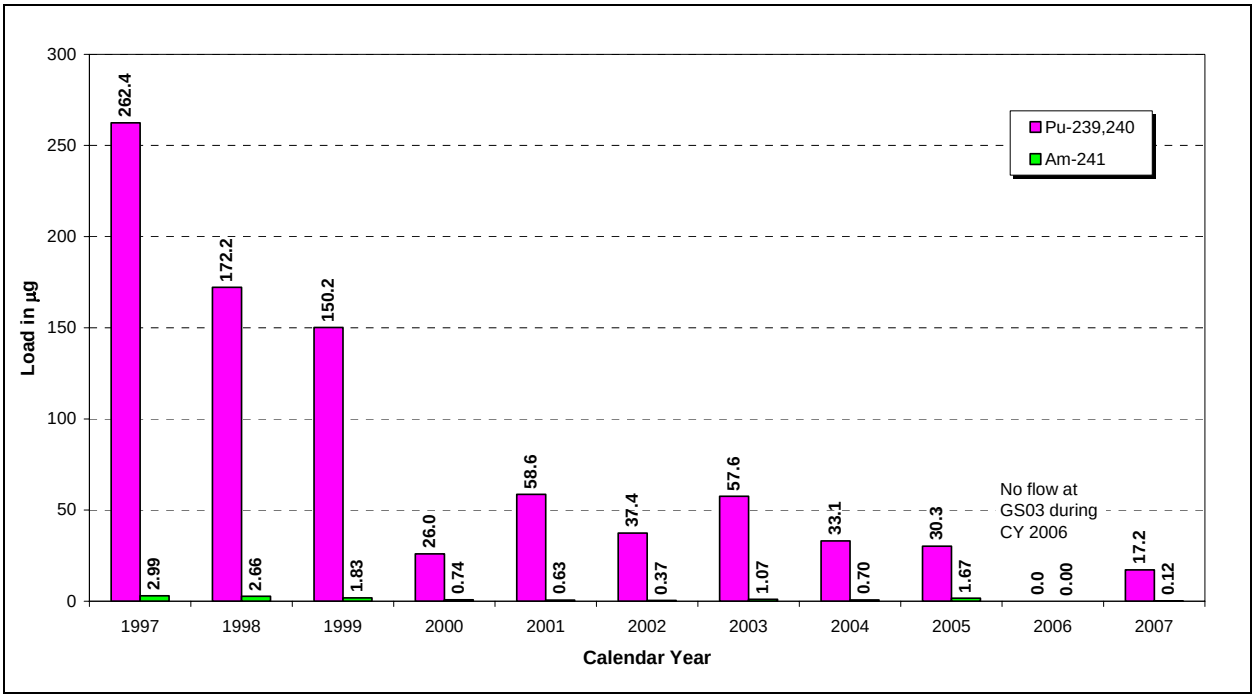


Figure 3-133. Annual Pu and Am Loads at GS03: CY 1997–2007

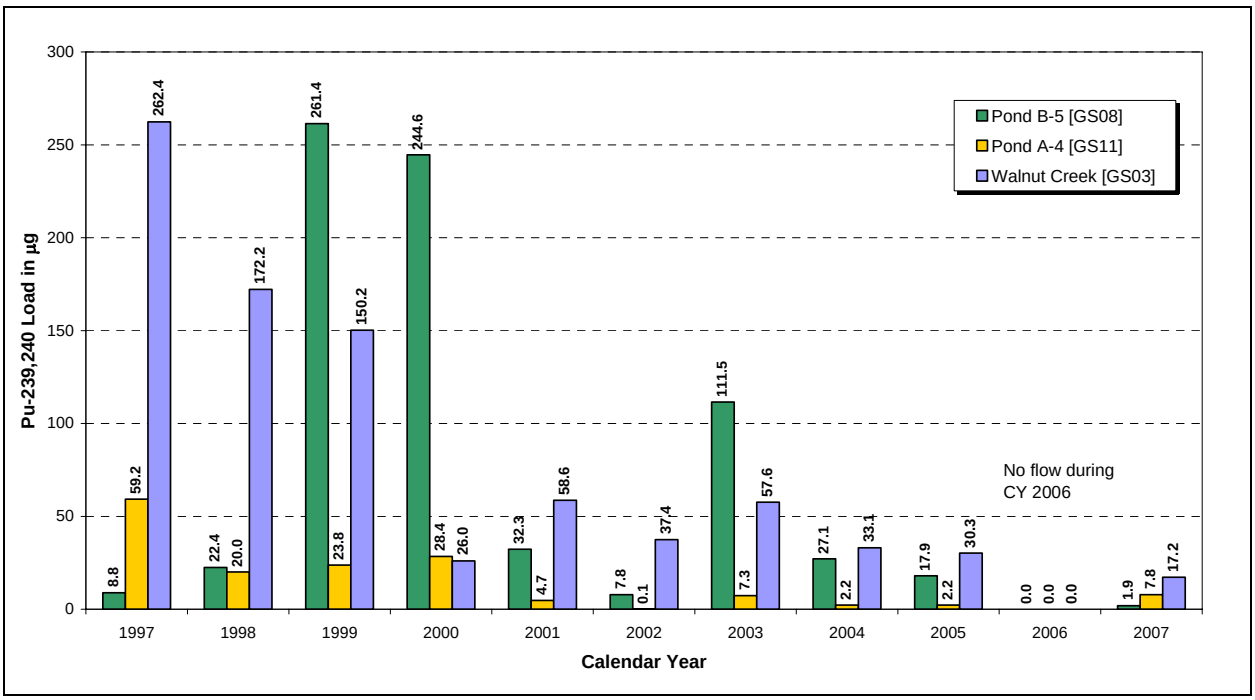


Figure 3-134. Annual Pu Loads at GS03, GS08, and GS11: CY 1997–2007

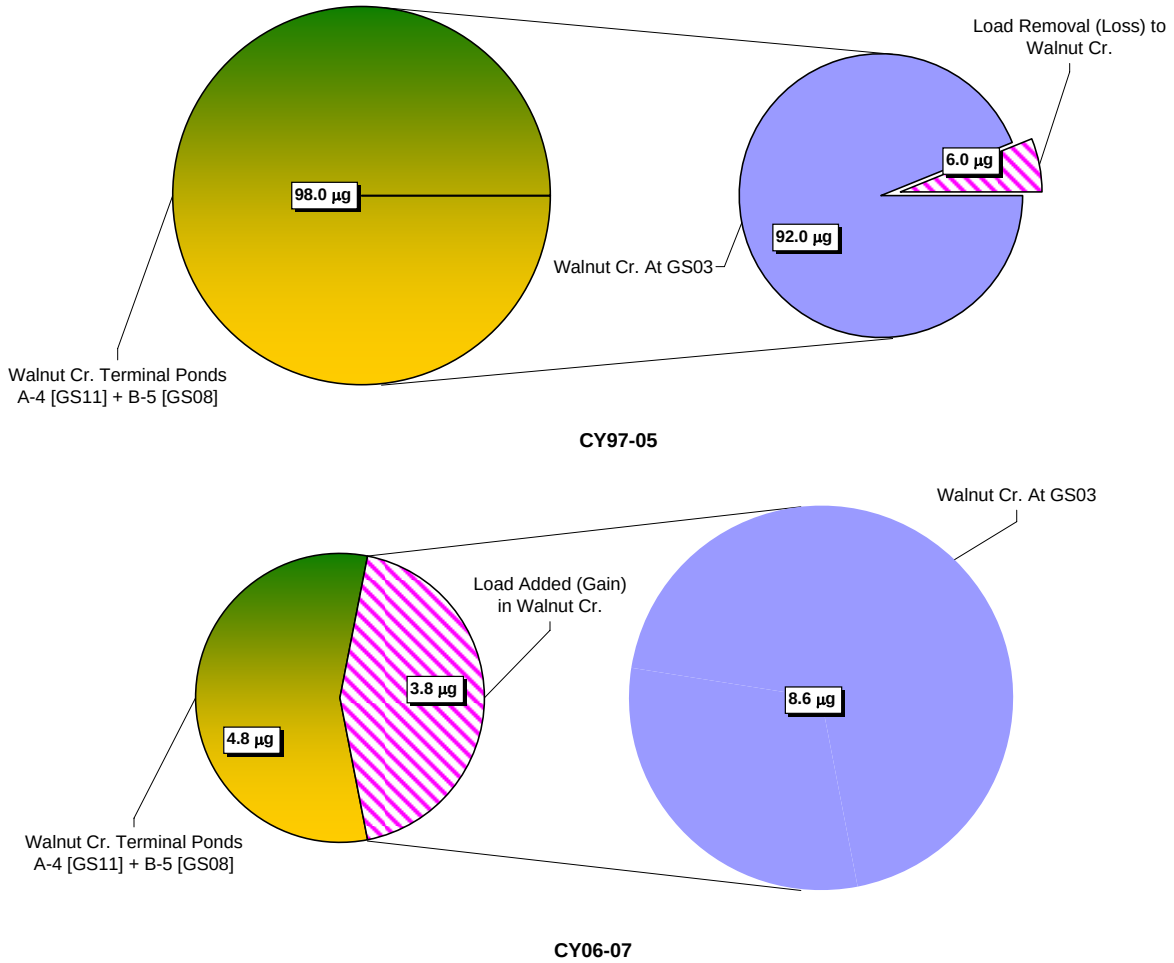


Figure 3-135. Relative Average Annual Pu Load Totals at GS03, GS08, and GS11

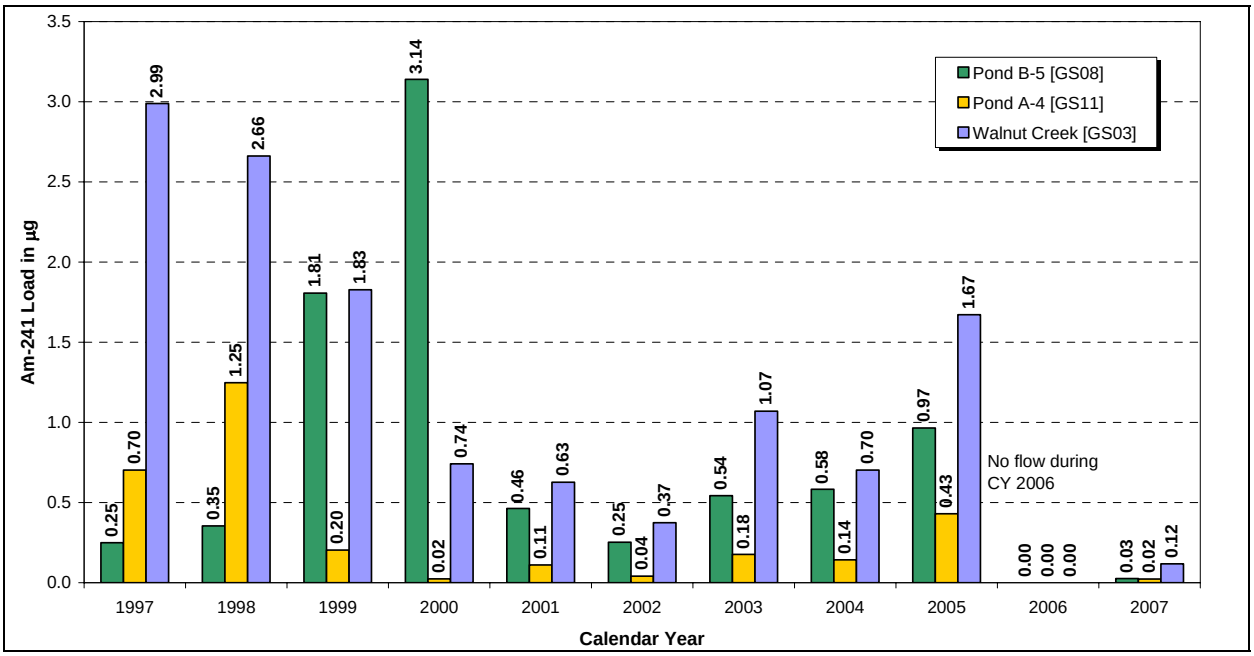


Figure 3-136. Annual Am Loads at GS03, GS08, and GS11: CY 1997–2007

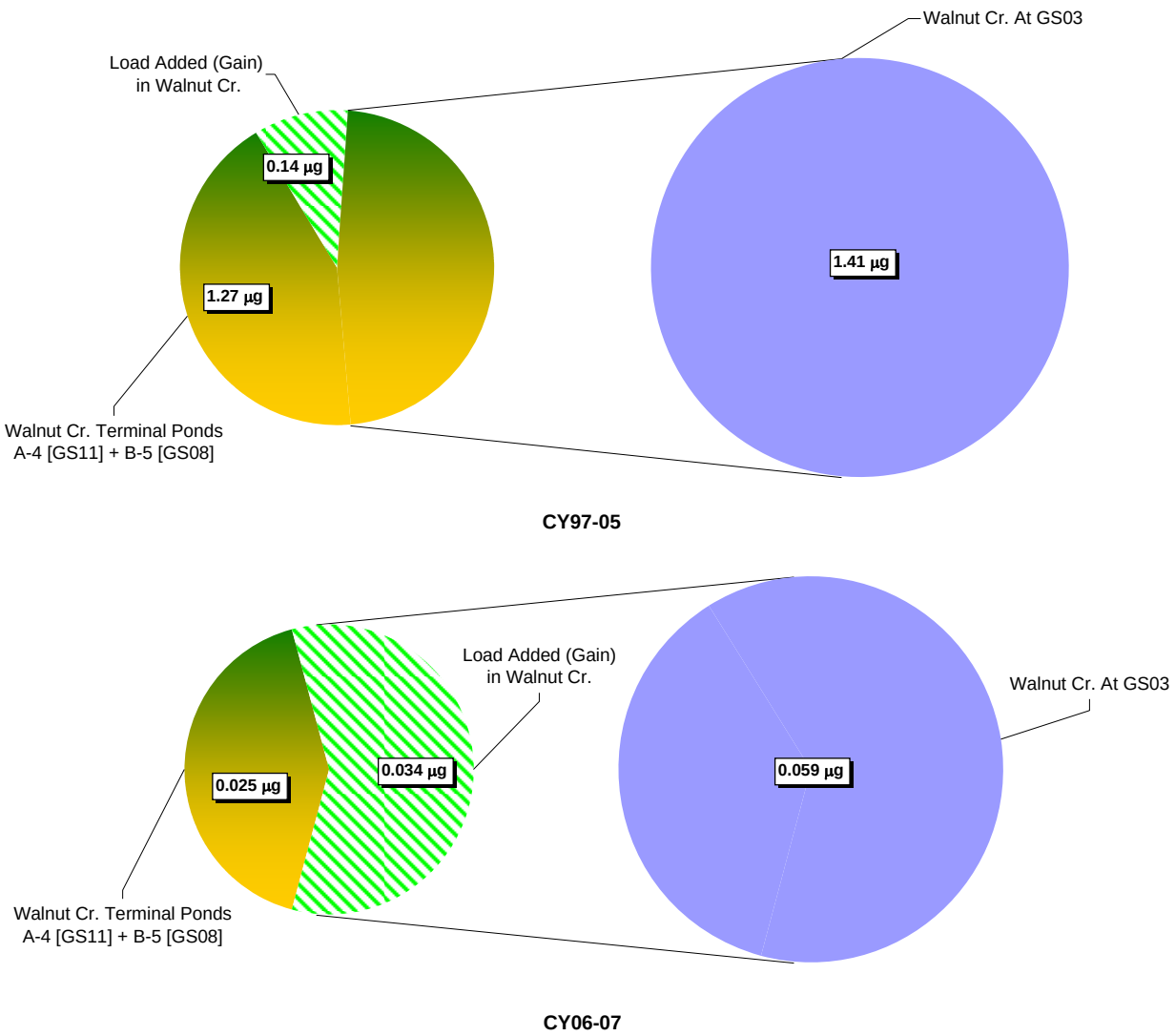


Figure 3-137. Relative Average Annual Am Load Totals at GS03, GS08, and GS11

Table 3-64. Total U Loads at GS03, GS08, and GS11: CY 2003–2007

Calendar Year	Total Uranium (g)			
	Pond A-4 (GS11)	Pond B-5 (GS08)	Walnut Creek Terminal Ponds Total	POC GS03
2003	865	610	1,474	1,751
2004	316	390	705	744
2005	165	1,389	1,554	1,482
2006	0; No A-4 discharge	0; No B-5 discharge	0	0 No flow
2007	411	481	892	1,005
Total	1,756	2,870	4,625	4,982

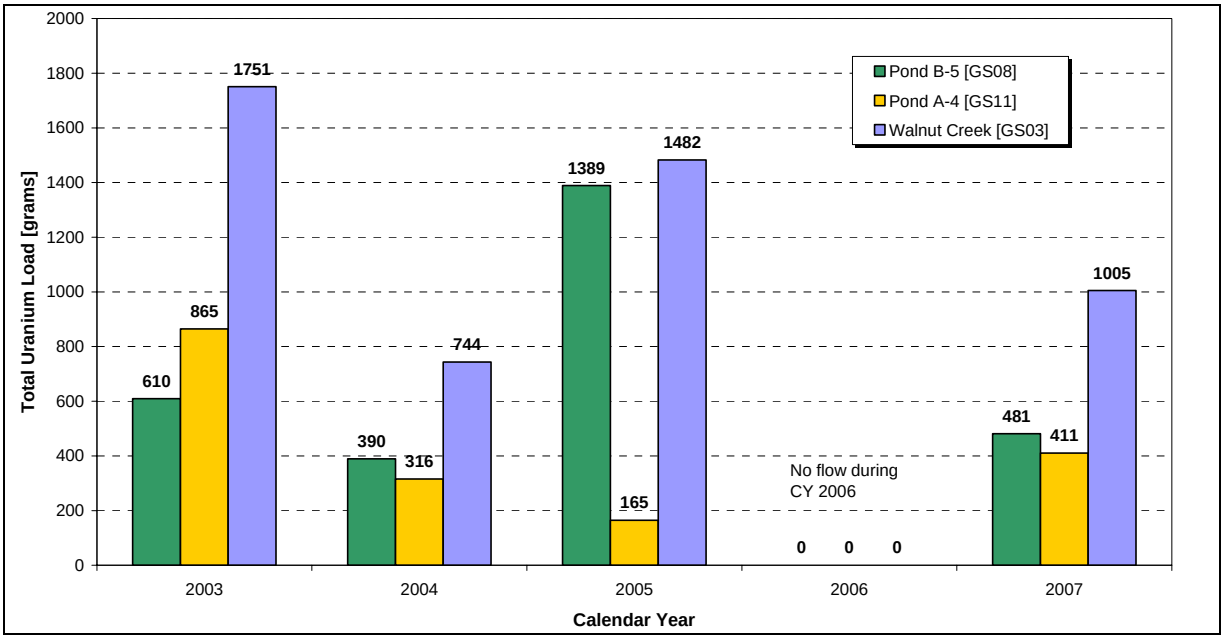


Figure 3-138. Annual Total U Loads at GS03, GS08, and GS11: CY 2003–2007

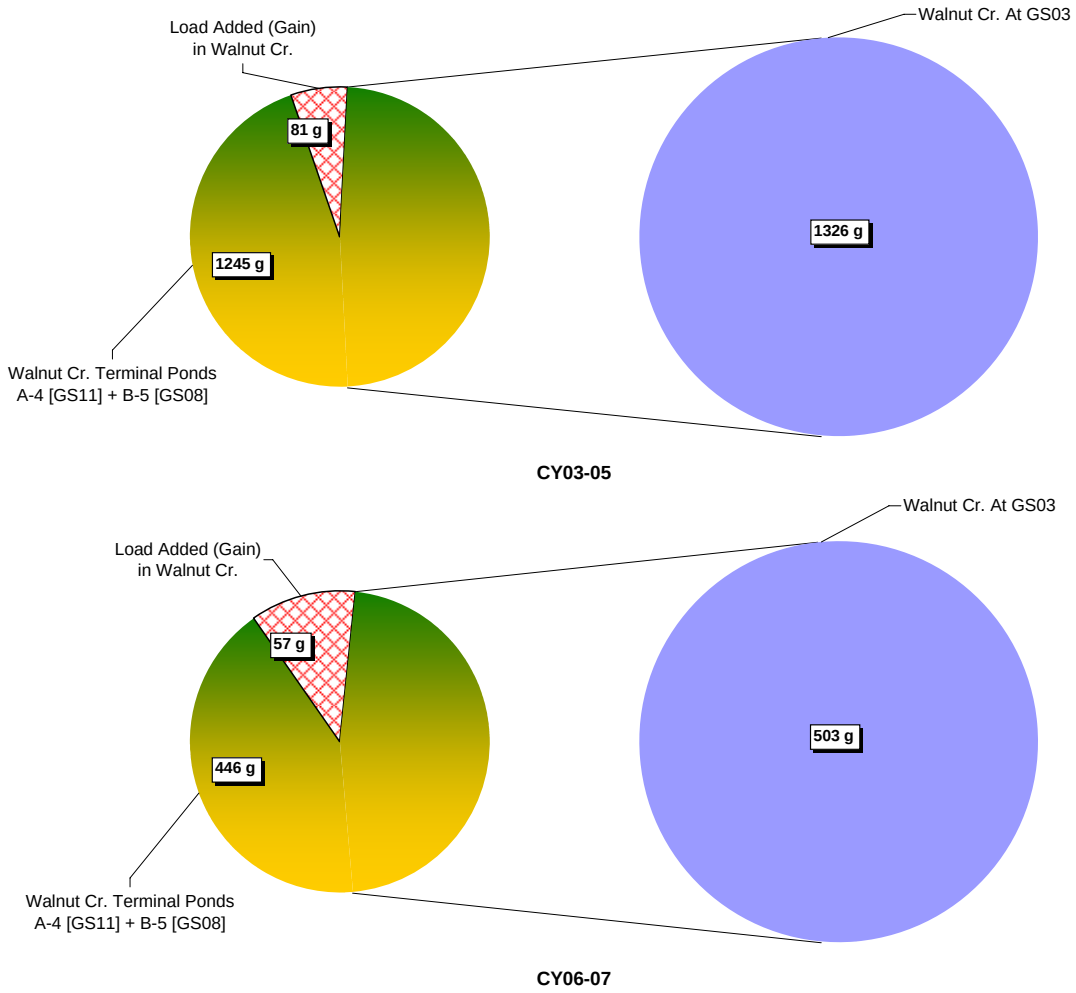


Figure 3-139. Relative Average Annual Total U Load Totals at GS03, GS08, and GS11

Lower Woman Creek

This section summarizes the calculated Pu and Am loads in Woman Creek at GS01 (Woman Creek at Indiana Street) and GS31 (Pond C-2 outlet). The data are presented in Table 3-65, Table 3-66, and Table 3-67, and depicted on Figure 3-140, Figure 3-141, Figure 3-142, Figure 3-143, Figure 3-144, Figure 3-145, and Figure 3-146. Total U data collection began at GS01 on February 3, 2003, as such only CY 2003−2007 data are shown. The following points are noted:

- Annual Pu and Am loads generally vary by up to two orders of magnitude year to year (Figure 3-141 and Figure 3-143). The significant annual variability in Pu and Am loads is likely due to large fluctuations in stream discharge volumes and the very low measured activities with inherent analytical error at such low levels.
- Pu and Am loads generally appear to be decreasing at GS01 (Figure 3-140). However, during CY 2007 there is a measurable load increase. This increase can be attributed to larger than normal flow volumes, and not increases in activity.
- Total Pu loads from Pond C-2 are less than the loads at GS01 (Table 3-65 and Figure 3-142), indicating a gain of load from the Woman Creek drainage.
- Total Am loads from Pond C-2 are less than the loads at GS01 (Table 3-66 and Figure 3-144), indicating a gain of load from the Woman Creek drainage.
- Total CY 2003−2007 U load from Pond C-2 is significantly less than the load at GS01 (Table 3-67 and Figure 3-146), indicating a gain of load from naturally occurring U in the Woman Creek drainage.

Table 3-65. Pu Loads at GS01 and GS31: CY 1997–2007

Calendar Year	Pu-239,240 (µg)	
	Pond C-2 (GS31)	POC GS01
1997	16.7	47.9
1998	2.2	55.4
1999	26.9	56.7
2000	0.0; No C-2 discharge	6.1
2001	11.0	22.4
2002	0.2	0.8
2003	11.0	25.9
2004	11.5	4.7
2005	5.0	12.5
2006	0.0; No C-2 discharge	1.4
2007	0.0; No C-2 discharge	68.0
Total	84.5	301.7

Note: During CY 1997 (through September 30, 1997), flows from Woman Creek were routinely diverted to Mower Ditch for subsequent monitoring at GS02 (discontinued location). Therefore, the load calculated for Woman Creek at Indiana Street (GS01) includes the water that was measured at GS02. The estimated load diverted to GS02 is calculated by multiplying the CY 1997 volume-weighted activities at GS01 by the streamflow volume measured at GS02, and converting for units. This diverted load is then added to the calculated load at GS01 to obtain the total CY 1997 load at GS01. For subsequent water years, the Mower diversion structure has been upgraded and configured to prevent Woman Creek flows from entering the Mower Ditch.

Table 3-66. Am Loads at GS01 and GS31: CY 1997–2007

Calendar Year	Am-241 (µg)	
	Pond C-2 (GS31)	POC GS01
1997	0.17	0.40
1998	0.27	0.99
1999	0.13	0.75
2000	0.00; No C-2 discharge	0.18
2001	0.14	0.30
2002	<0.01	0.03
2003	0.09	0.34
2004	0.11	0.15
2005	0.04	0.30
2006	0.0; No C-2 discharge	0.13
2007	0.0; No C-2 discharge	0.49
Total	0.96	4.04

Note: During CY 1997 (through September 30, 1997), flows from Woman Creek were routinely diverted to Mower Ditch for subsequent monitoring at GS02 (discontinued location). Therefore, the load calculated for Woman Creek at Indiana Street (GS01) includes the water that was measured at GS02. The estimated load diverted to GS02 is calculated by multiplying the CY 1997 volume-weighted activities at GS01 by the streamflow volume measured at GS02, and converting for units. This diverted load is then added to the calculated load at GS01 to obtain the total CY 1997 load at GS01. For subsequent water years, the Mower diversion structure has been upgraded and configured to prevent Woman Creek flows from entering the Mower Ditch.

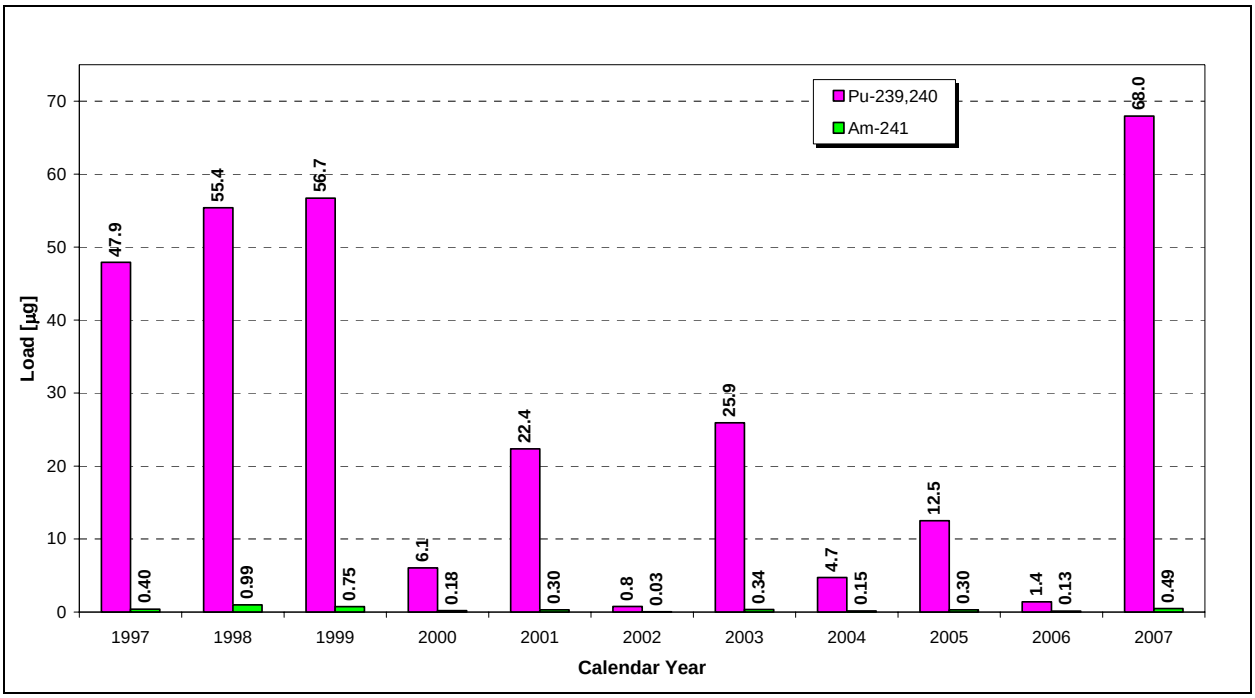


Figure 3-140. Annual Pu and Am Loads at GS01: CY 1997–2007

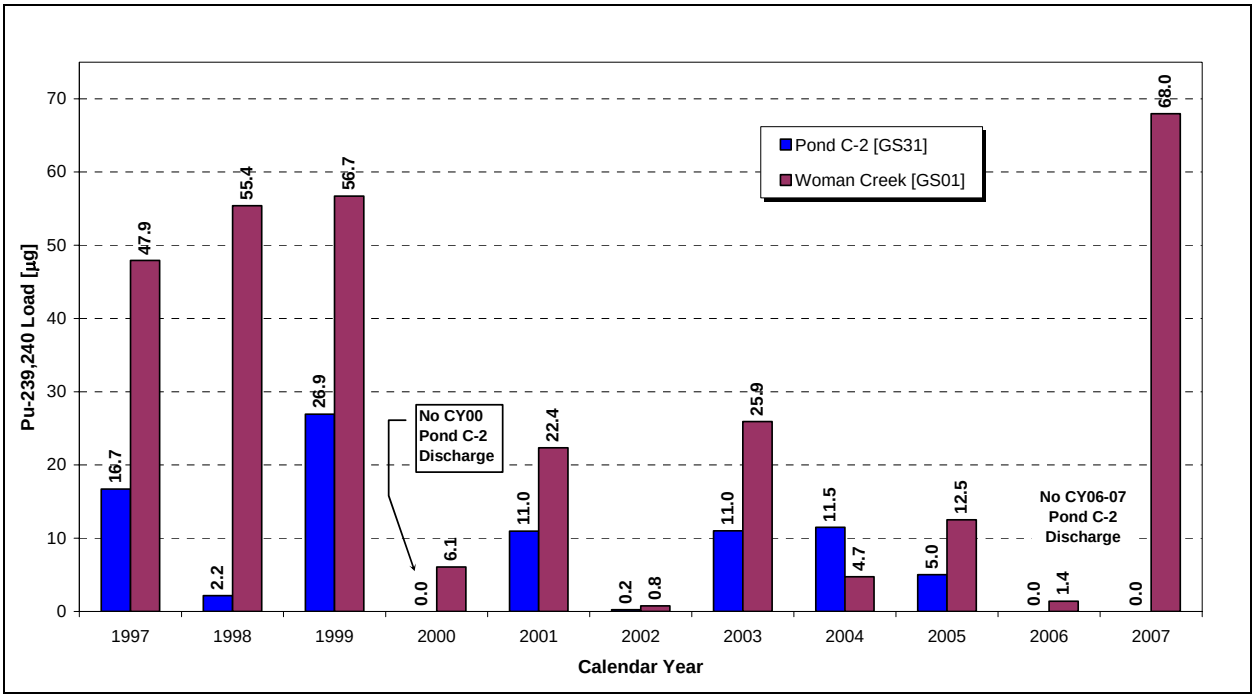
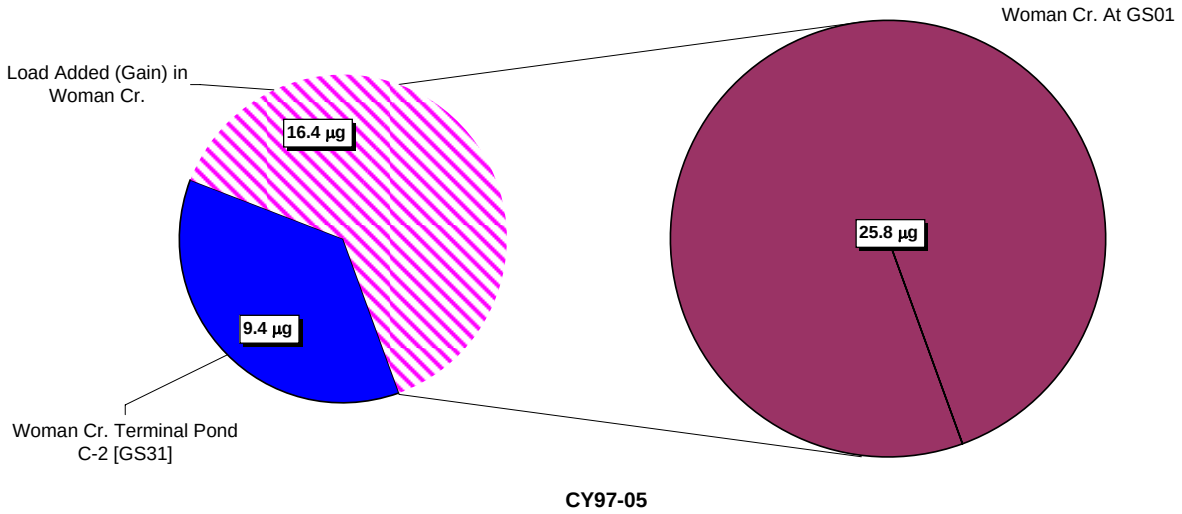


Figure 3-141. Annual Pu Loads at GS01 and GS31: CY 1997–2007



Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-142. Relative Average Annual Pu Load Totals at GS01 and GS31: CY 1997–2005

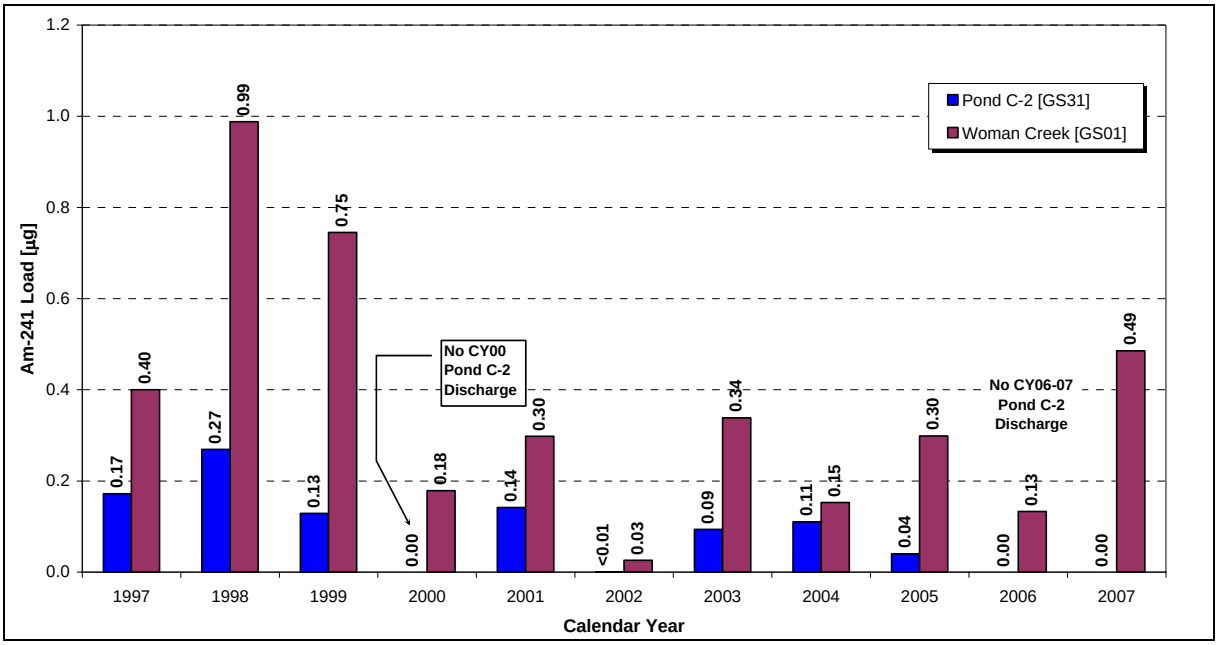
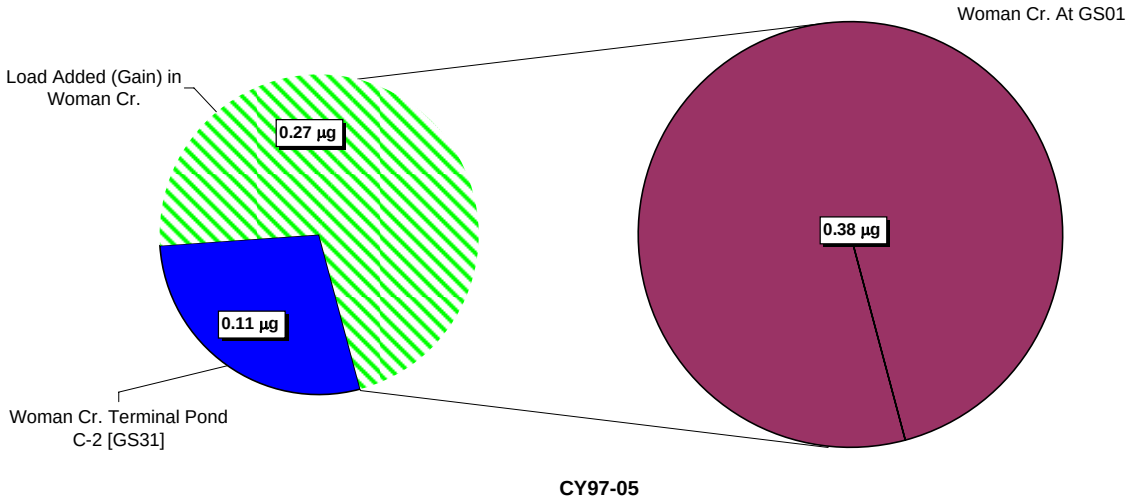


Figure 3-143. Annual Am Loads at GS01 and GS31: CY 1997–2007



Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-144. Relative Average Annual Am Load Totals at GS01 and GS31: CY 1997–2005

Table 3-67. Total U Loads at GS01 and GS31: CY 2003−2007

Calendar Year	Total Uranium (g)	
	Pond C-2 (GS31)	POC GS01
2003	129	790
2004	92	808
2005	115	918
2006	0; No C-2 discharge	235
2007	0; No C-2 discharge	1,016
Total	336	3,767

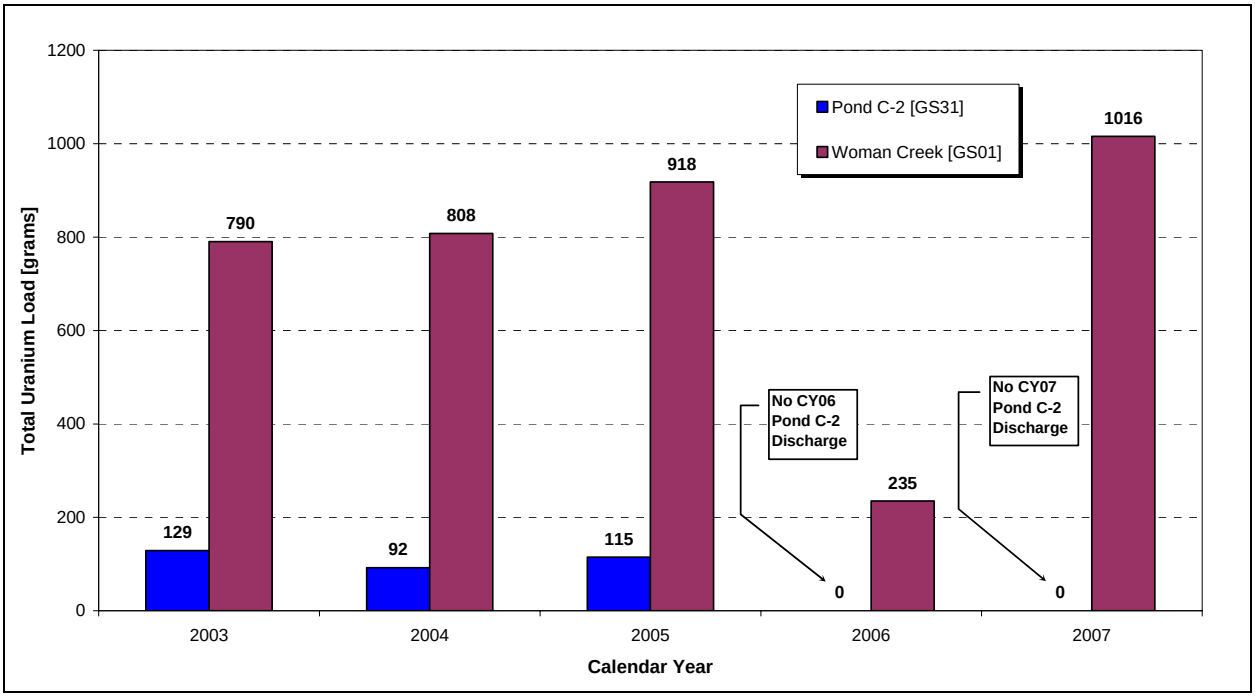
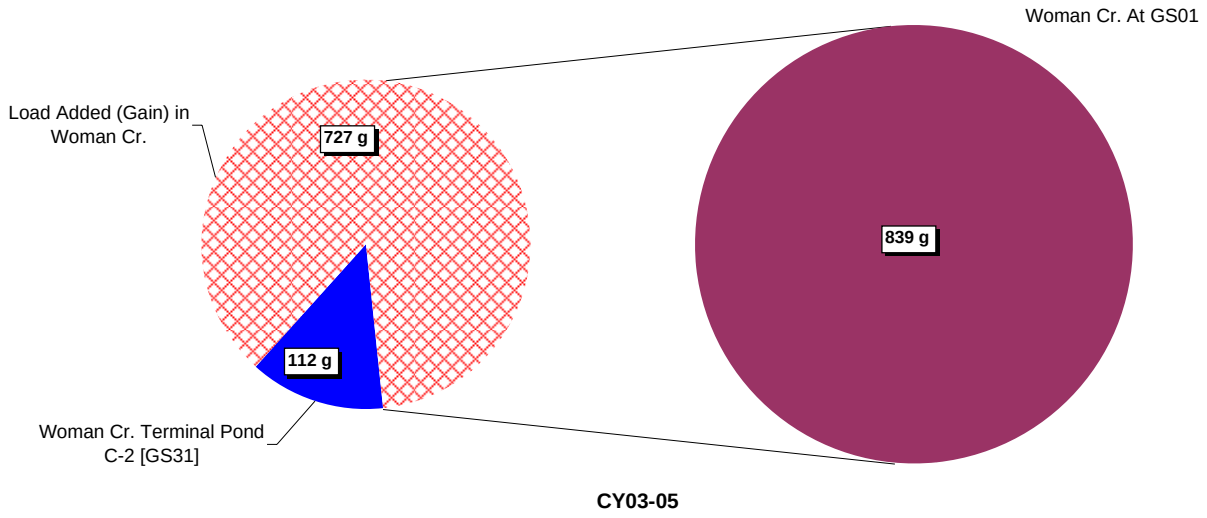


Figure 3-145. Annual Total U Loads at GS01 and GS31: CY 2003−2007



Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-146. Relative Average Annual Total U Load Totals at GS01 and GS31: CY 2003−2005

Terminal Ponds A-4, B-5, and C-2

This section summarizes the calculated Pu, Am, and total U loads from terminal Ponds A-4, B-5, and C-2. The data are presented in Table 3-68 and Table 3-69, and depicted on Figure 3-147, Figure 3-148, Figure 3-149, Figure 3-150, Figure 3-151, and Figure 3-152. The following points are noted:

- Annual Pu and Am loads vary significantly year to year (Figure 3-147 and Figure 3-149). A general reduction in Pu and Am loads is noted during active closure, with a significant reduction post-closure due to the reduction in runoff and transport attributed to the effectiveness of remedial actions, revegetation, and erosion control measures.
- Pond B-5 accounts for a majority (76 percent) of the Pu load from the terminal ponds (Figure 3-148) pre-closure. With the reduction of both discharge volume and activity, Pond B-5 accounts for 19 percent of the post-closure load.
- Pond B-5 accounts for a majority (67 percent) of the Am load from the terminal ponds (Figure 3-150). With the reduction of both discharge volume and activity, Pond B-5 accounts for 52 percent of the post-closure load.
- Pond A-4 accounts for a slim majority (47 percent) of the total U loads from the terminal ponds (Figure 3-152) pre-closure. With the increased U activities in South Walnut Creek post-closure, Pond B-5 accounts for the majority of the load (54 percent).

Table 3-68. Pu and Am Loads from Terminal Ponds A-4, B-5, and C-2: CY 1997–2007

Calendar Year	Pu-239,240 (µg)			Am-241 (µg)		
	Pond A-4 (GS11)	Pond B-5 (GS08)	Pond C-2 (GS31)	Pond A-4 (GS11)	Pond B-5 (GS08)	Pond C-2 (GS31)
1997	59.2	8.8	16.7	0.70	0.25	0.17
1998	20.0	22.4	2.2	1.25	0.35	0.27
1999	23.8	261.4	26.9	0.20	1.81	0.13
2000	28.4	244.6	0.0; No C-2 discharge	0.02	3.14	0.00; No C-2 discharge
2001	4.7	32.3	11.0	0.11	0.46	0.14
2002	0.1	7.8	0.2	0.04	0.25	<0.01
2003	7.3	111.5	11.0	0.18	0.54	0.09
2004	2.2	27.1	11.5	0.14	0.58	0.11
2005	2.2	17.9	5.0	0.43	0.97	0.04
2006	0.0; No A-4 discharge	0.0; No B-5 discharge	0.0; No C-2 discharge	0.00; No A-4 discharge	0.00; No B-5 discharge	0.0; No C-2 discharge
2007	7.8	1.9	0.0; No C-2 discharge	0.02	0.03	0.0; No C-2 discharge
Total	155.7	735.7	84.5	3.1	8.38	0.96

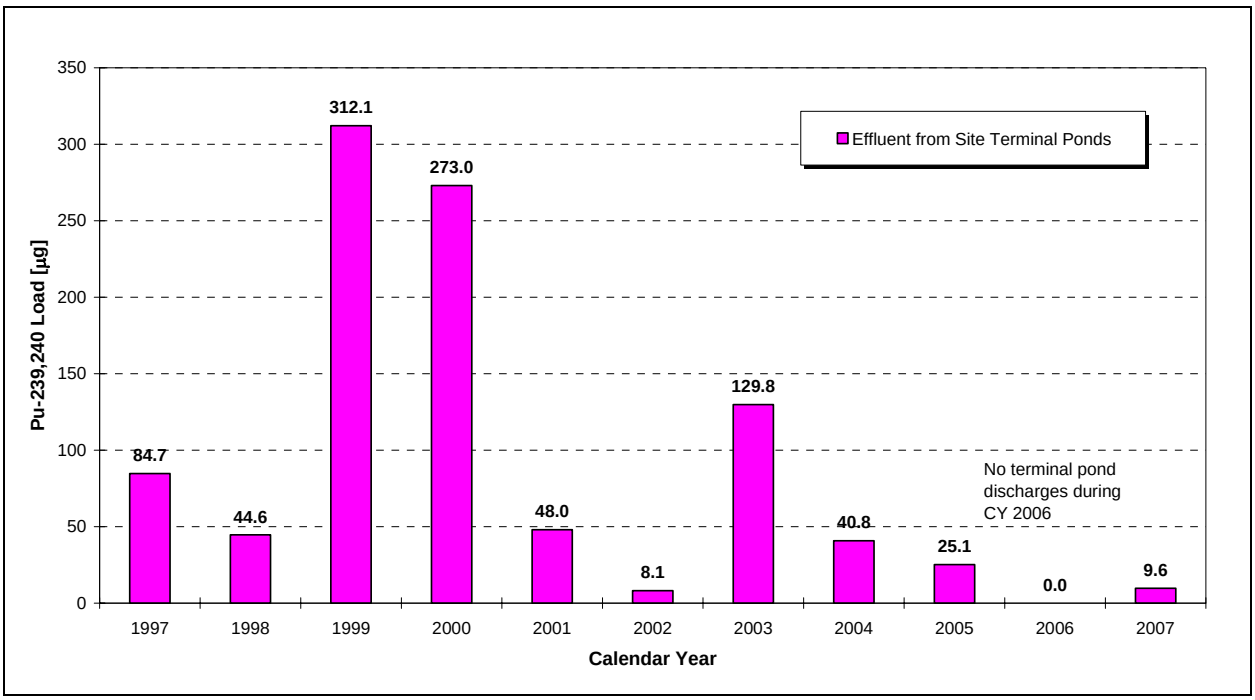


Figure 3-147. Annual Pu Loads from Terminal Ponds A-4, B-5, and C-2: CY 1997–2007

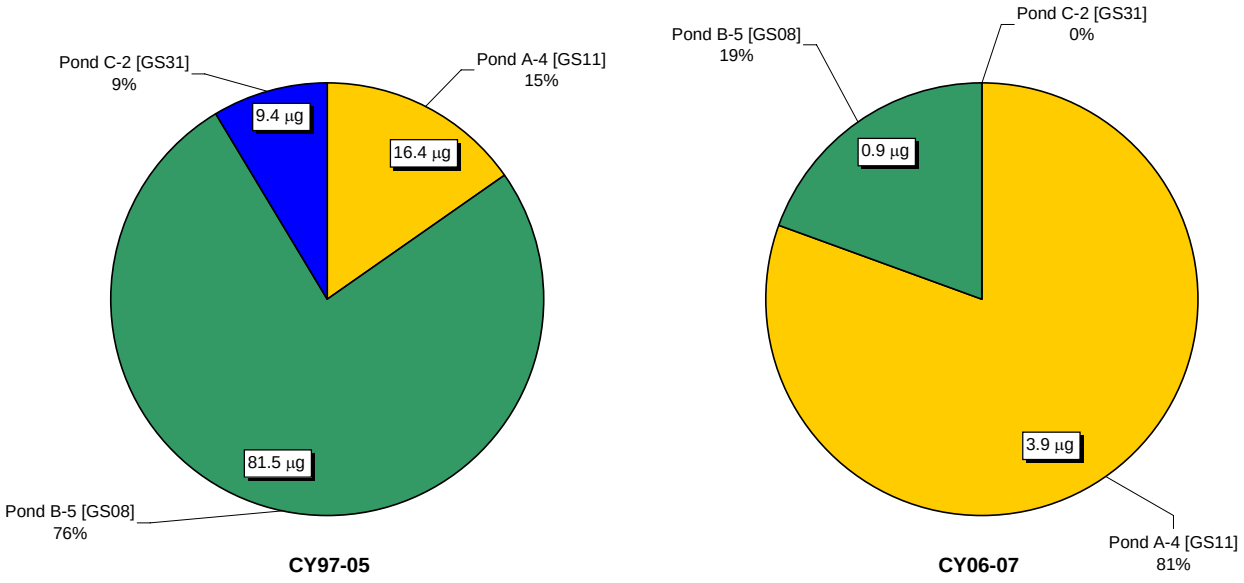


Figure 3-148. Relative Average Annual Pu Load Totals from Terminal Ponds A-4, B-5, and C-2

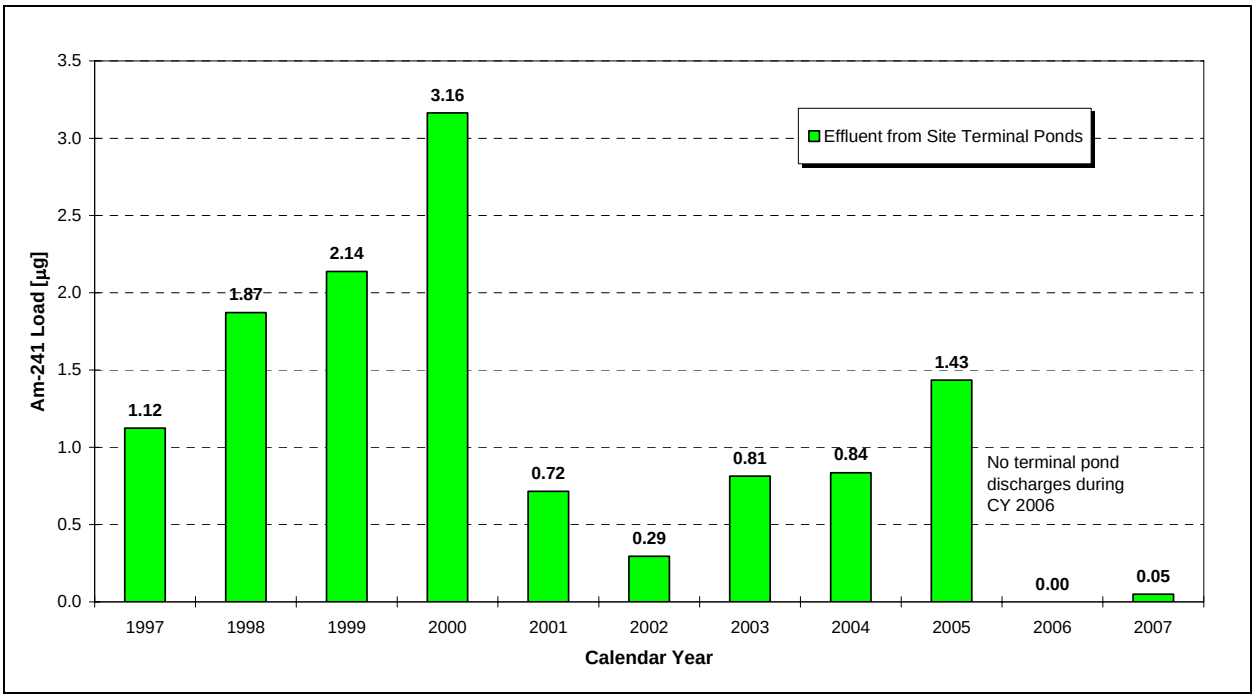


Figure 3-149. Annual Am Loads from Terminal Ponds A-4, B-5, and C-2: CY 1997–2007

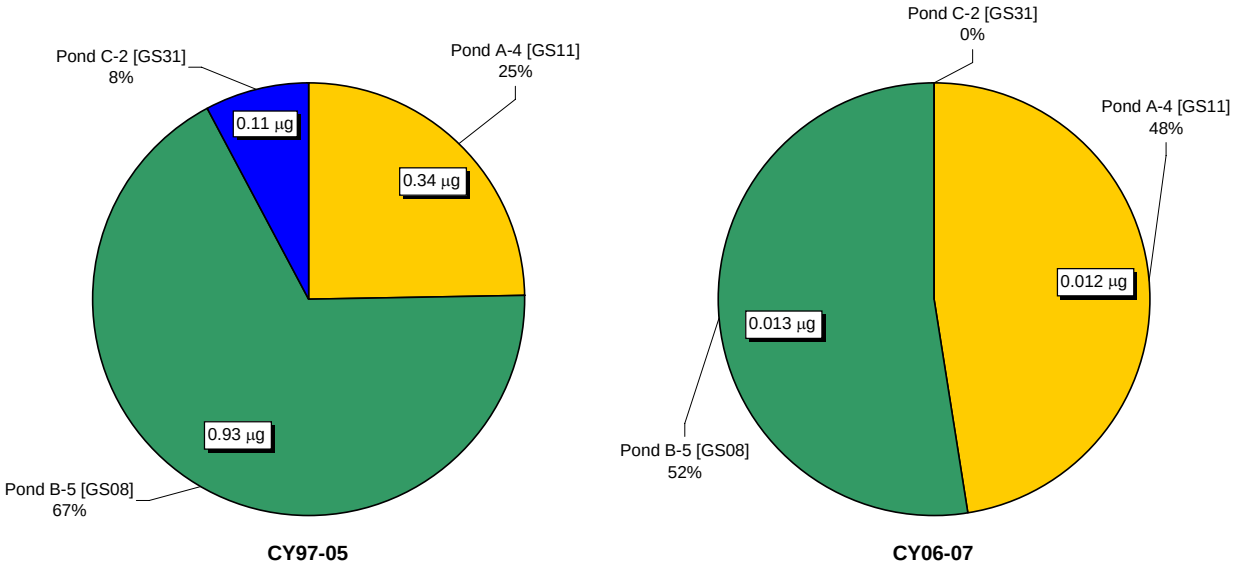


Figure 3-150. Relative Average Annual Am Load Totals from Terminal Ponds A-4, B-5, and C-2

Table 3-69. Total U Loads from Terminal Ponds A-4, B-5, and C-2: CY 1997–2007

Calendar Year	Total Uranium (g)		
	Pond A-4 (GS11)	**Pond B-5 (GS08)**	**Pond C-2 (GS31)**
1997	1,365	252	231
1998	1,301	620	216
1999	633	809	189
2000	386	465	0; No C-2 discharge
2001	564	639	67
2002	132	258	1
2003	865	610	129
2004	316	390	92
2005	165	1,389	115
2006	0; No A-4 discharge	0; No B-5 discharge	0; No C-2 discharge
2007	411	481	0; No C-2 discharge
Total	6,137	5,914	1,039

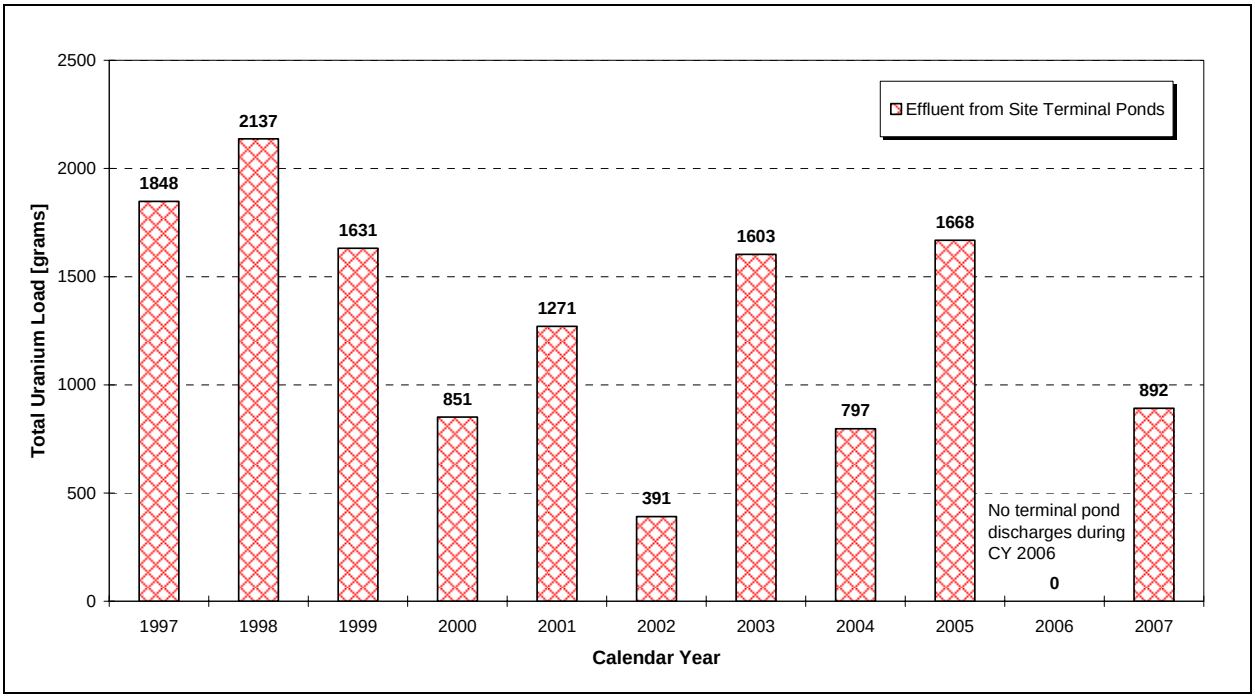


Figure 3-151. Annual Total U Loads from Terminal Ponds A-4, B-5, and C-2: CY 1997–2007

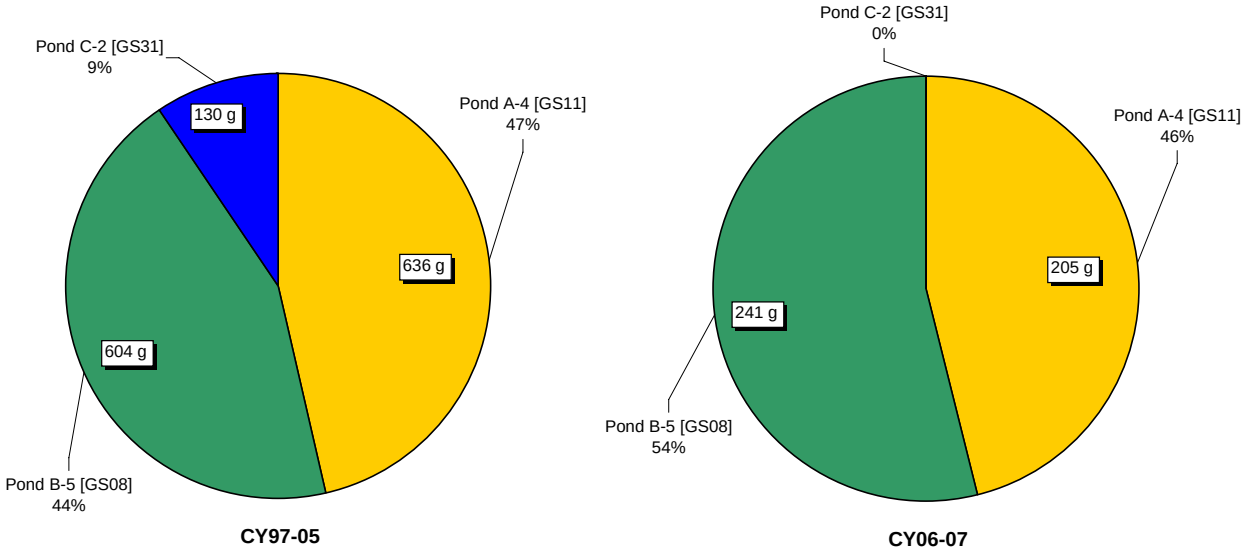


Figure 3-152. Relative Average Annual Total U Load Totals from Terminal Ponds A-4, B-5, and C-2

A- and B-Series Ponds (POCs GS08 and GS11)

This section summarizes the calculated Pu, Am, and total U loads for the A- and B-Series Ponds. The data are presented in Table 3-70, Table 3-71, and Table 3-72, and depicted on Figure 3-153, Figure 3-154, Figure 3-155, Figure 3-156, Figure 3-157, Figure 3-158, Figure 3-159, and Figure 3-160. Since water transfers occurred between ponds pre-closure, the load analysis is performed for both pond series combined. The influent load sources are GS10 and the former

WWTP (South Walnut; removed in November 2004), and SW093 (North Walnut). The effluent loads are GS08 (Pond B-5 outlet) and GS11 (Pond A-4 outlet). The following points are noted:

- Table 3-70 shows GS10 with the highest influent Pu load.
- A significant increase in Pu loads to the ponds is noted during CY 2004 due to increased solids transport resulting from active building demolition and soil disturbance (Figure 3-153). With the implementation of remedial actions, erosion controls, revegetation, and soil stabilization, a significant reduction is noted for CY 2005−2007 (Figure 3-154).
- Table 3-71 shows GS10 with the highest influent Am load.
- A measurable increase in Am loads to the ponds is noted during CY 2004. This increase was partly due to increased solids transport resulting from active building demolition and soil disturbance (Figure 3-155). Increased Am loads at SW093 were primarily due to contributions from B771 D&D during the July 2004 through November 2004 period. The pathway causing these increased loads was eliminated in December 2004. With the implementation of remedial actions, erosion controls, revegetation, and soil stabilization, a significant reduction is noted for CY 2006−2007 (Figure 3-156).
- Annual Pu and Am loads vary significantly year to year (Figure 3-153 and Figure 3-155) primarily due to hydrologic and solids transport variation.
- Pre-closure Figure 3-157 shows GS10 with the highest influent total U activity, while SW093 shows the highest total U load (due to larger flow volumes at SW093). Post-closure, GS10 shows both the highest activity and load. It should be noted that although U activity has increased significantly, corresponding reductions in streamflow volume has resulted in essentially no change in load.
- Pre-closure Figure 3-157 shows GS11 with the highest effluent total U activity and load. However, with the increased activity in South Walnut Creek, GS08 shows the highest effluent U activity post-closure. Again, it should be noted that although U activity has increased significantly, corresponding reductions in discharge volume have resulted in a decrease in load.

Table 3-70. Pu Load Summary for the A- and B-Series Ponds: CY 1997–2007

Calendar Year	Pu-239,240 (µg)				
	Influent (WWTP)	Influent (GS10)	Influent (SW093)	Effluent (GS08)	Effluent (GS11)
1997	11.2	576.0	164.2	8.8	59.2
1998	13.4	328.6	69.1	22.4	20.0
1999	19.4	307.9	127.8	261.4	23.8
2000	17.4	326.2	87.4	244.6	28.4
2001	11.3	141.4	44.4	32.3	4.7
2002	8.3	59.3	9.6	7.8	0.1
2003	3.8	207.2	140.1	111.5	7.3
2004	2.1	523.3	1,330.9	27.1	2.2
2005	0.0 WWTP removed	247.1	29.2	17.9	2.2
2006	0.0 WWTP removed	2.3	2.5	0.0; No B-5 discharge	0.0; No A-4 discharge
2007	0.0 WWTP removed	14.2	17.0	1.9	7.8
Total	86.9	2,733.7	2,022.3	735.7	155.7

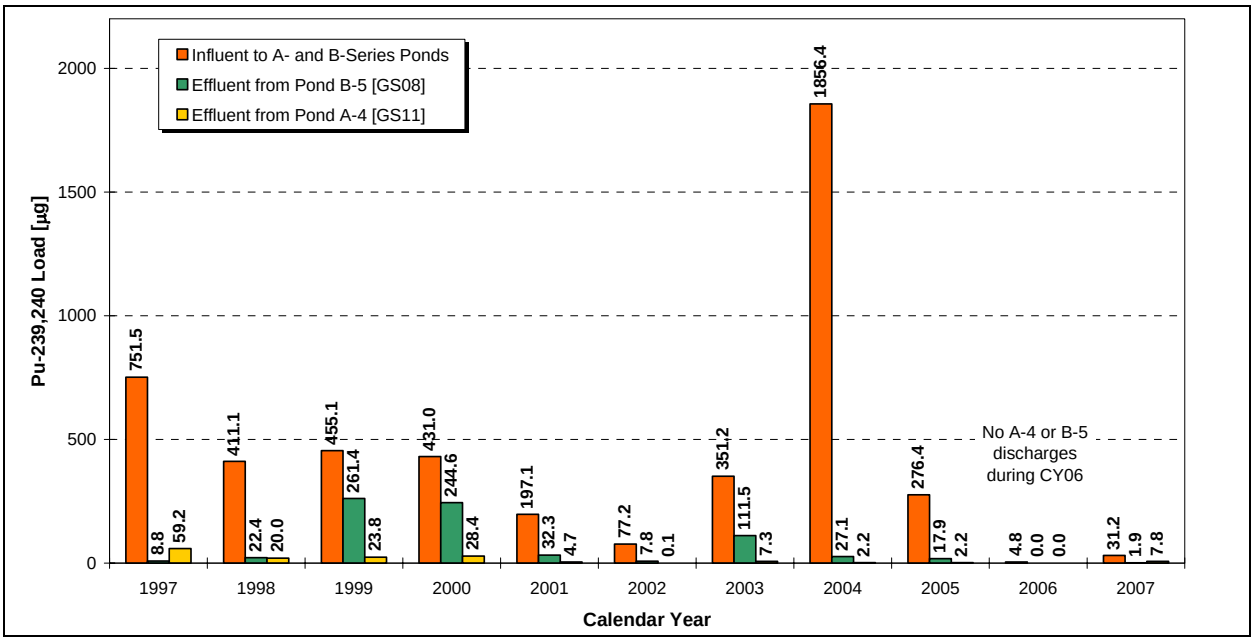


Figure 3-153. Annual Pu Loads for the A- and B-Series Ponds: CY 1997–2007

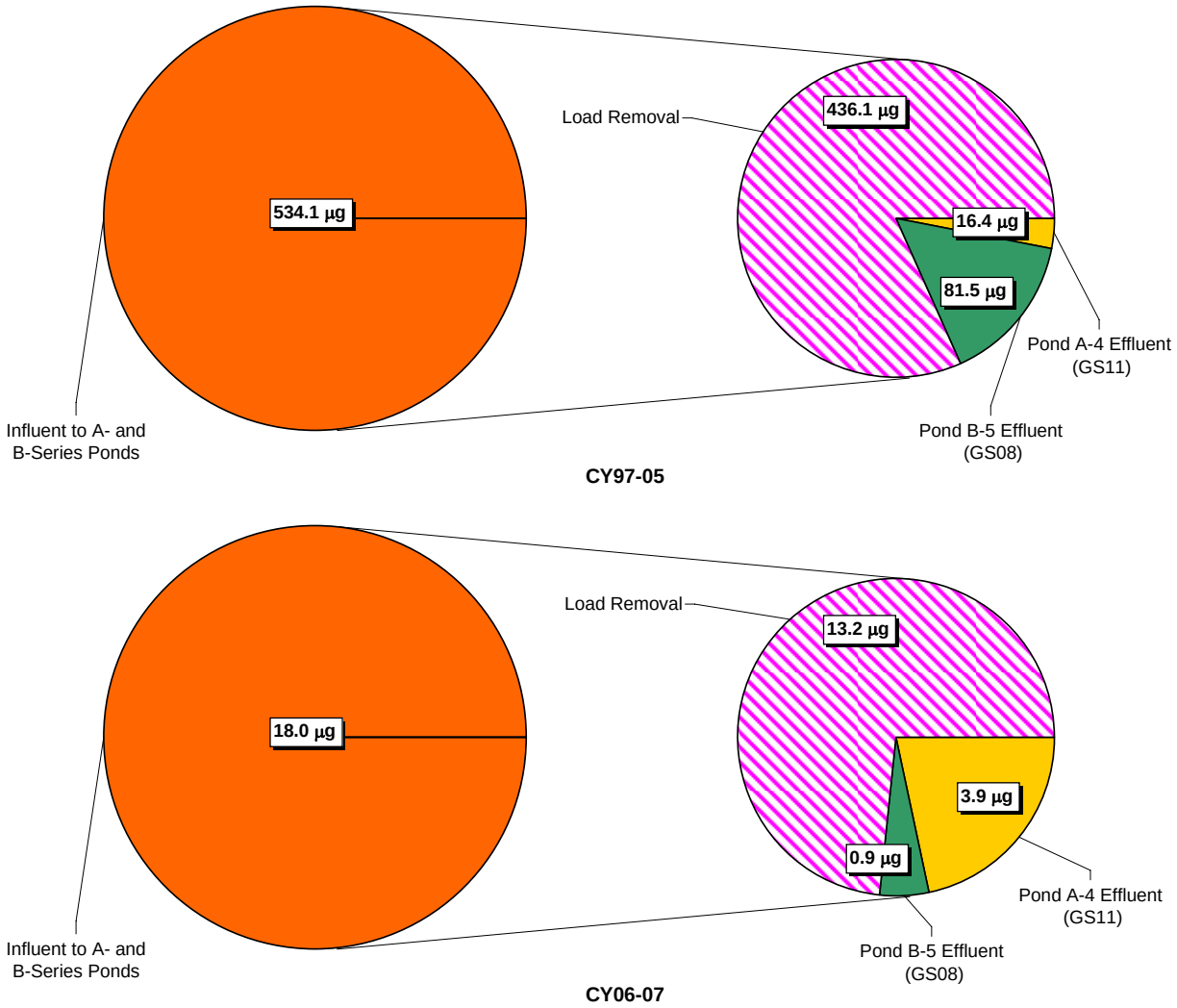


Figure 3-154. Relative Average Annual Pu Load Totals for the A- and B-Series Ponds

Table 3-71. Am Load Summary for the A- and B-Series Ponds: CY 1997–2007

Calendar Year	Am-241 (µg)				
	Influent (WWTP)	Influent (GS10)	Influent (SW093)	Effluent (GS08)	Effluent (GS11)
1997	0.64	12.20	2.24	0.25	0.70
1998	0.32	4.69	1.30	0.35	1.25
1999	0.11	12.55	1.73	1.81	0.20
2000	0.29	14.57	0.98	3.14	0.02
2001	0.32	2.75	0.65	0.46	0.11
2002	0.20	1.76	0.52	0.25	0.04
2003	0.52	4.44	2.05	0.54	0.18
2004	0.25	4.68	28.48	0.58	0.14
2005	0.00 WWTP removed	3.98	0.82	0.97	0.43
2006	0.00 WWTP removed	0.04	0.02	0.00; No B-5 discharge	0.00; No A-4 discharge
2007	0.00 WWTP removed	0.14	0.28	0.03	0.02
Total	2.65	61.80	39.09	8.38	3.10

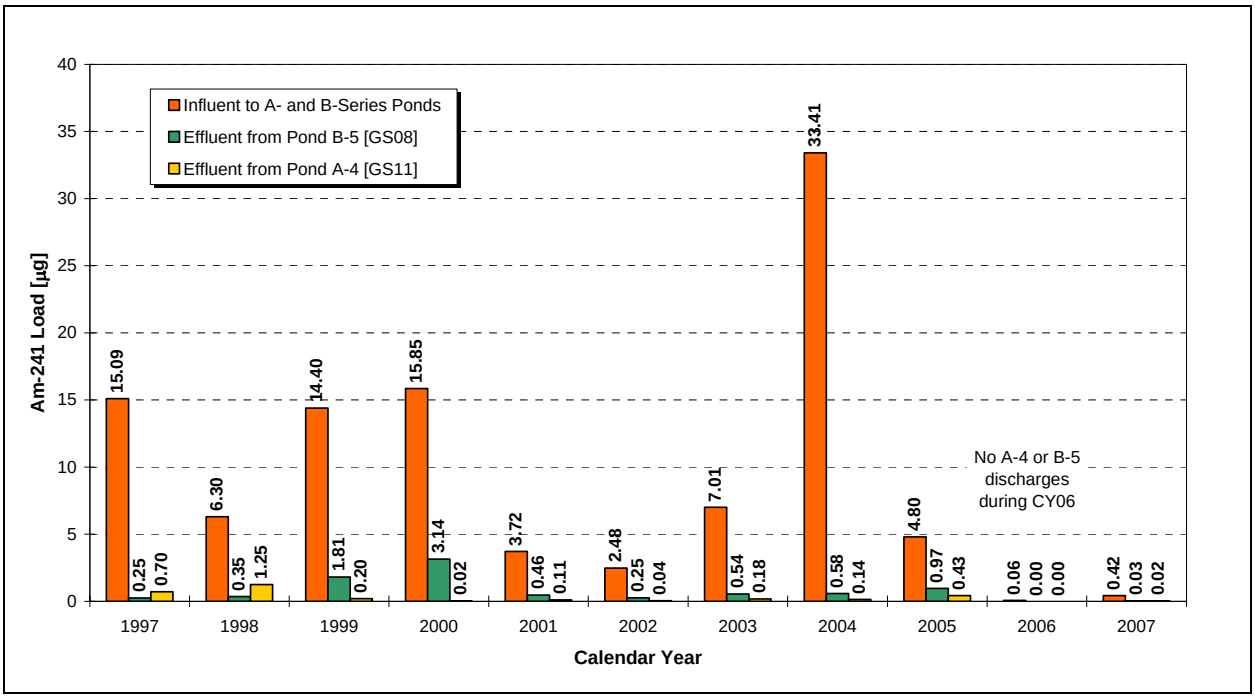


Figure 3-155. Annual Am Loads for the A- and B-Series Ponds: CY 1997–2007

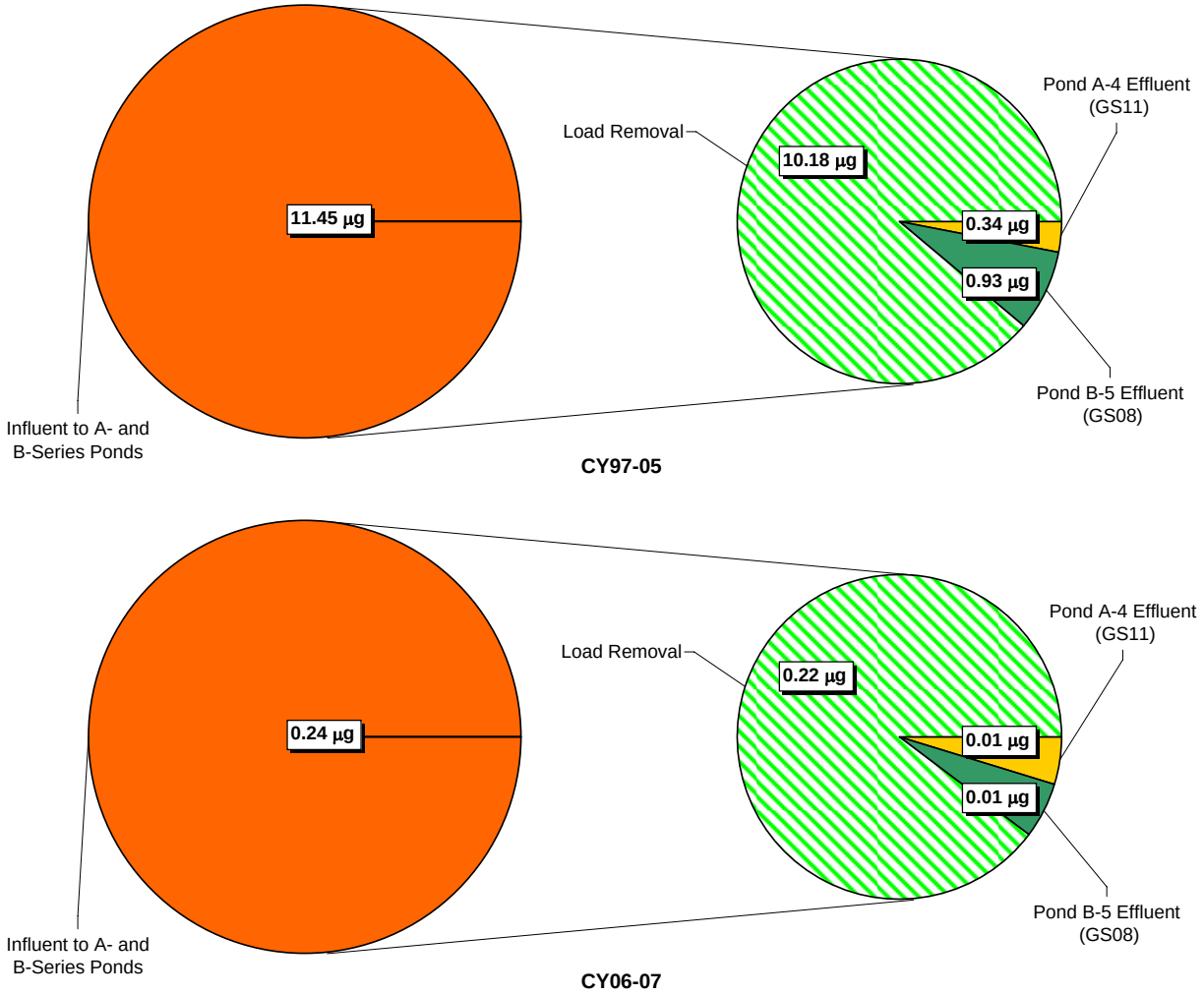
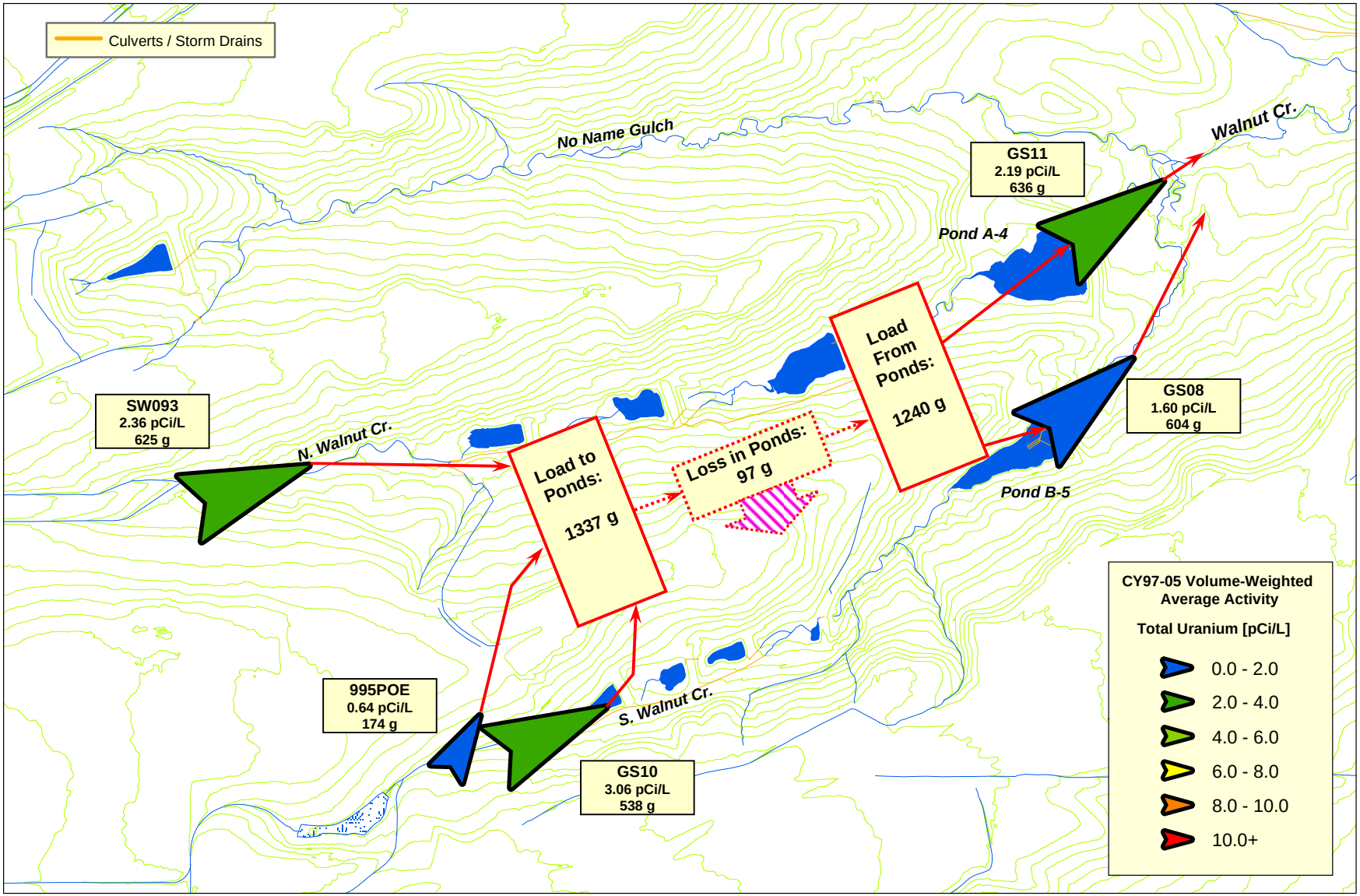
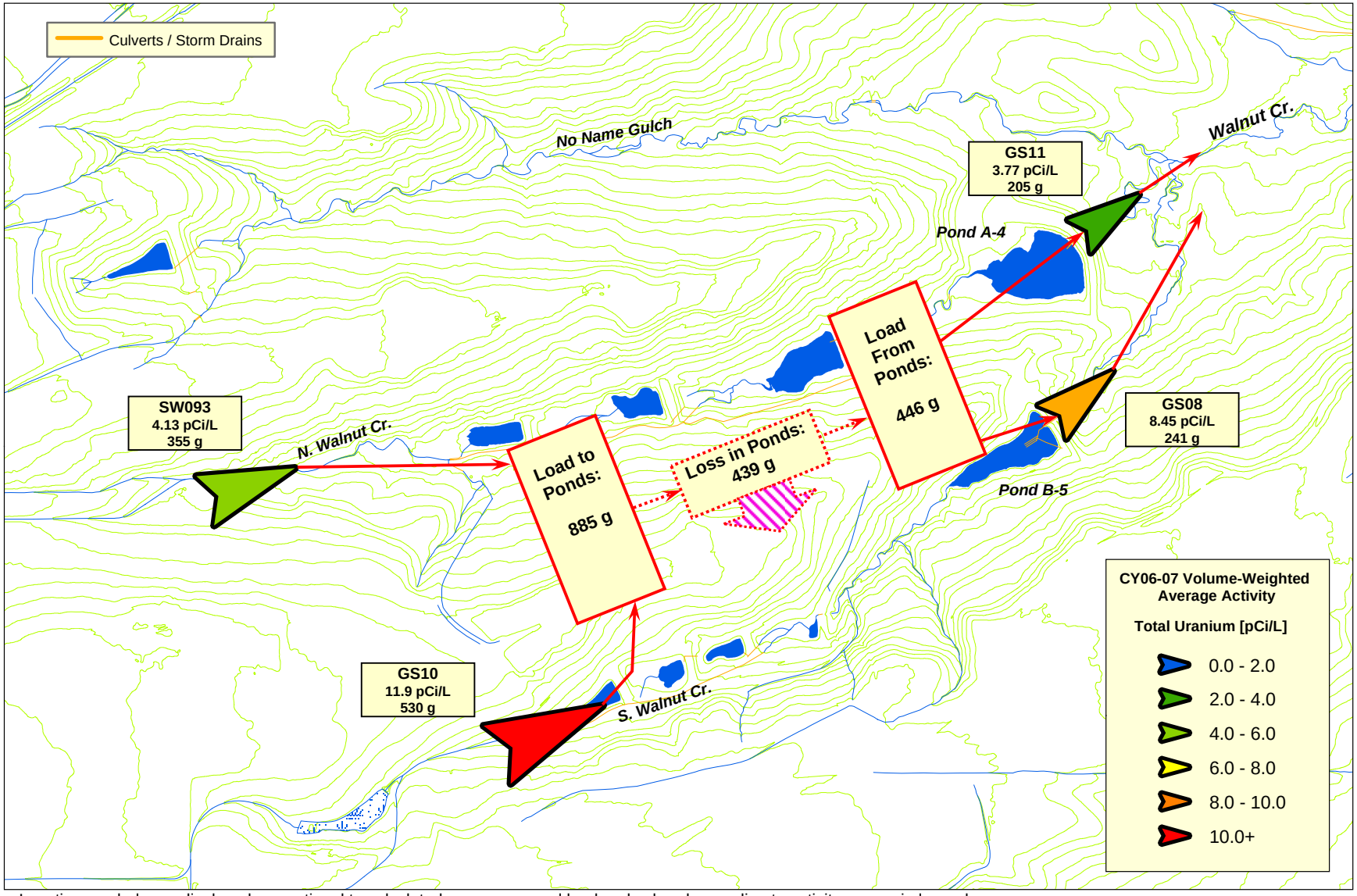


Figure 3-156. Relative Average Annual Am Load Totals for the A- and B-Series Ponds



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-157. Relative Average Annual Total U Loading Schematic for the A- and B-Series Ponds: CY 1997–2005



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-158. Relative Average Annual Total U Loading Schematic for the A- and B-Series Ponds: CY 2006–2007

Table 3-72. Total U Load Summary for the A- and B-Series Ponds: CY 1997–2007

Calendar Year	Total Uranium (g)				
	Influent (WWTP)	Influent (GS10)	Influent (SW093)	Effluent (GS08)	Effluent (GS11)
1997	257	637	853	252	1,365
1998	467	631	797	620	1,301
1999	121	589	714	809	633
2000	103	379	485	465	386
2001	259	519	646	639	564
2002	61	279	450	258	132
2003	161	501	568	610	865
2004	139	430	575	390	316
2005	0 WWTP removed	879	534	1,389	165
2006	0 WWTP removed	230	171	0; No B-5 discharge	0; No A-4 discharge
2007	0 WWTP removed	830	540	481	411
Total	1,569	5,905	6,333	5,914	6,137

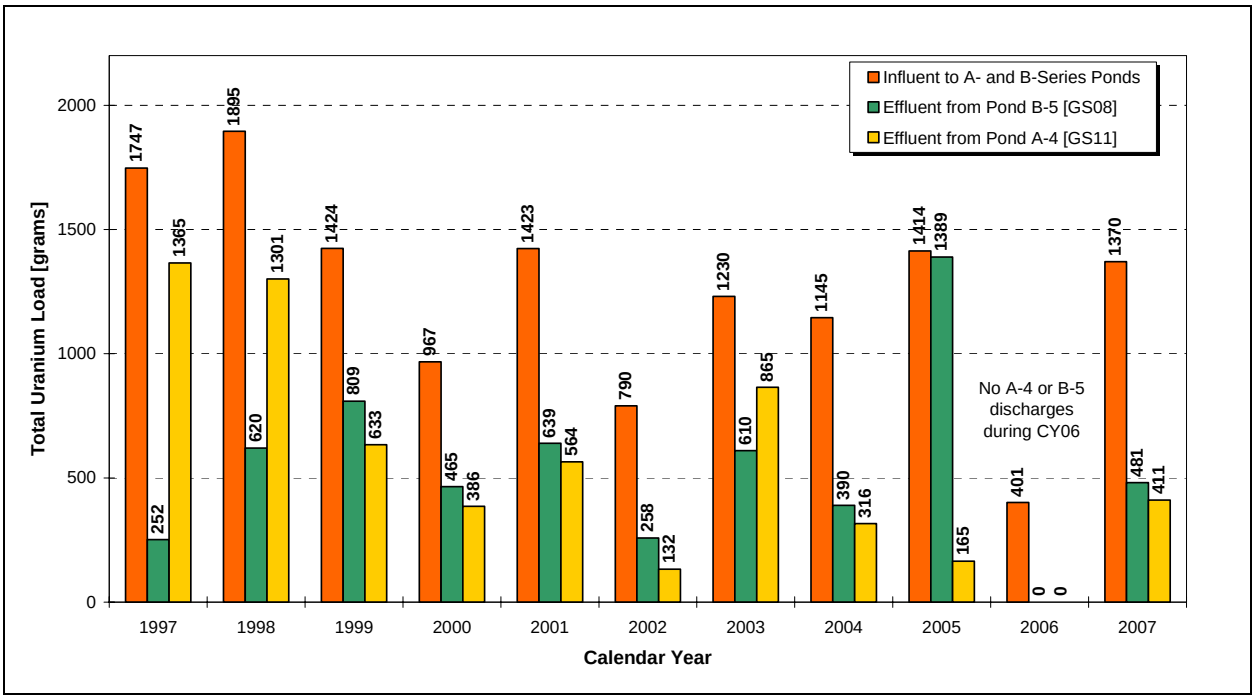


Figure 3-159. Annual Total U Loads for the A- and B-Series Ponds: CY 1997–2007

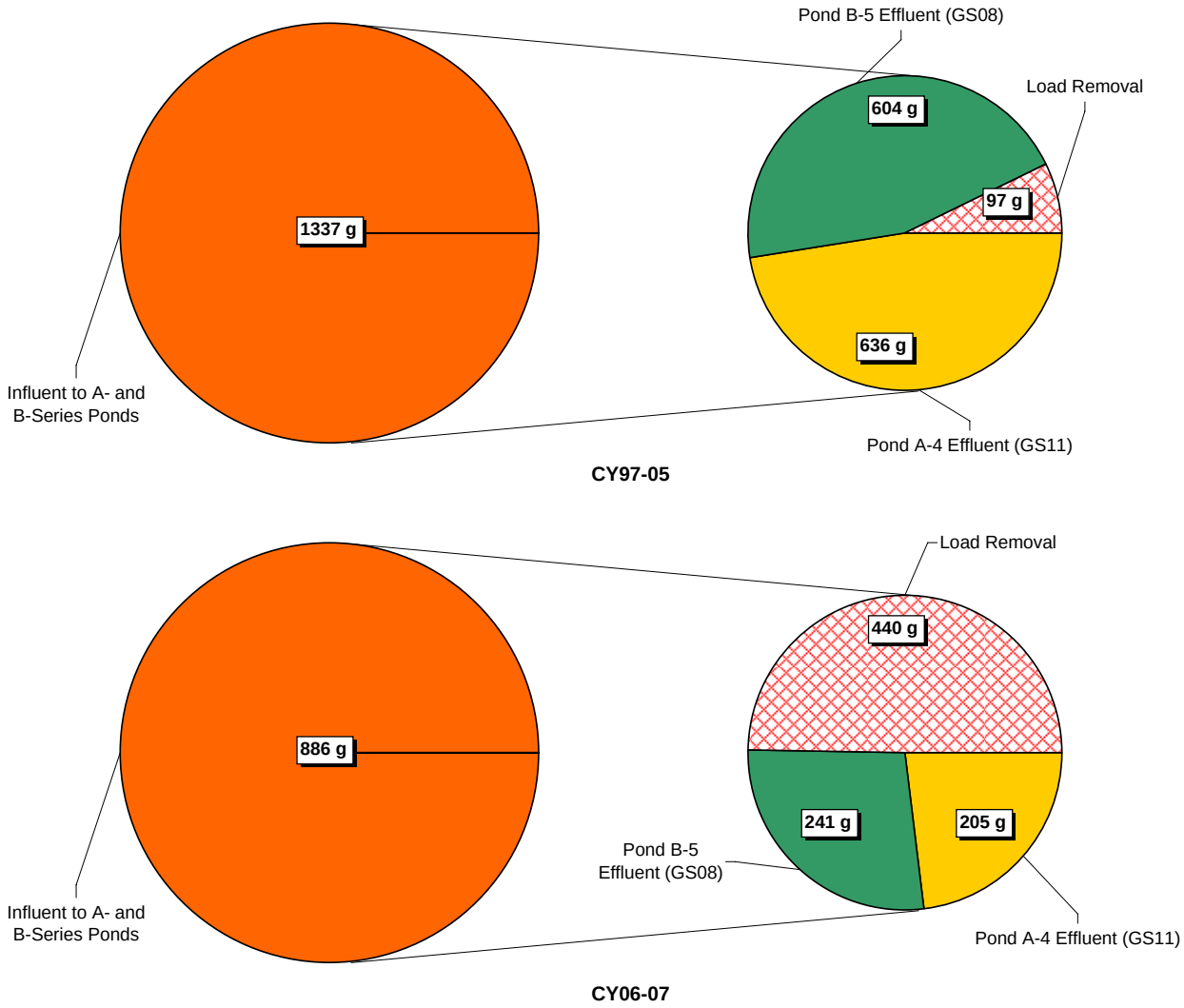


Figure 3-160. Relative Average Annual Total U Load Totals for the A- and B-Series Ponds

Pond C-2 (POC GS31)

This section summarizes the calculated Pu, Am, and total U loads for Pond C-2. Data are presented in Table 3-73, Table 3-74, and Table 3-75, and depicted on Figure 3-161, Figure 3-162, Figure 3-163, Figure 3-164, Figure 3-165, Figure 3-166, Figure 3-167, and Figure 3-168. The influent load source is SW027 (SID at Pond C-2 inlet). The effluent loads are calculated at GS31 (Pond C-2 outlet). The following points are noted:

- Annual Pu and Am loads vary significantly year to year (Figure 3-161 and Figure 3-163). A significant increase in both Pu and Am loads to Pond C-2 is noted during CY 2004 due to increased solids transport from extensive soil disturbance in the drainage associated with the 903 Pad/Lip accelerated actions. With the enhanced implementation of erosion controls, revegetation, and soil stabilization, a significant reduction is noted for CY 2005−2007 (no flow in the SID or Pond C-2 discharge in CY 2006).
- Annual total U loads also vary significantly year to year (Figure 3-167).

- There is a measurable total U load gain in Pond C-2 (Figure 3-165; no Pond C-2 discharges during CY 2006-2007). This is likely due to groundwater seepage to Pond C-2 with naturally occurring U.

Table 3-73. Pu Load Summary for Terminal Pond C-2: CY 1997–2007

Calendar Year	Pu-239,240 (µg)	
	Influent (SW027)	Effluent (GS31)
1997	17.4	16.7
1998	87.7	2.2
1999	34.3	26.9
2000	67.2	0.0; No C-2 discharge
2001	10.7	11.0
2002	0.3	0.2
2003	45.1	11.0
2004	820.8	11.5
2005	18.6	5.0
2006	0.0; No flow	0.0; No C-2 discharge
2007	16.5	0.0; No C-2 discharge
Total	1,118.6	84.5

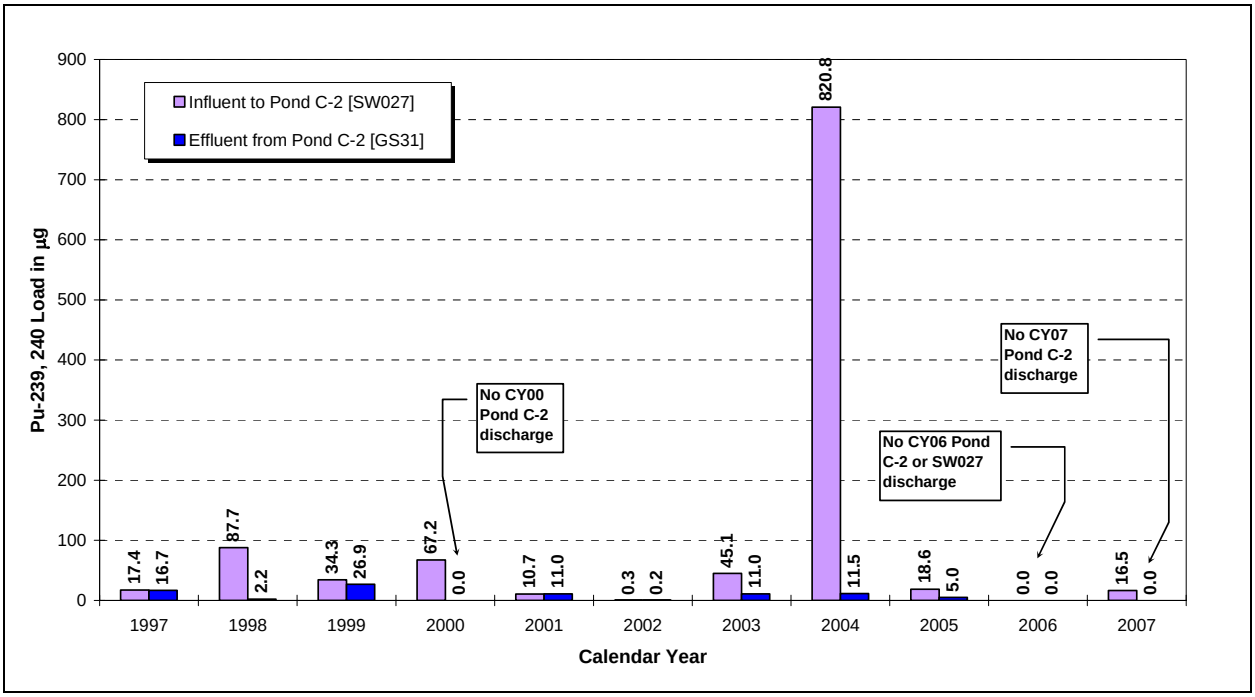
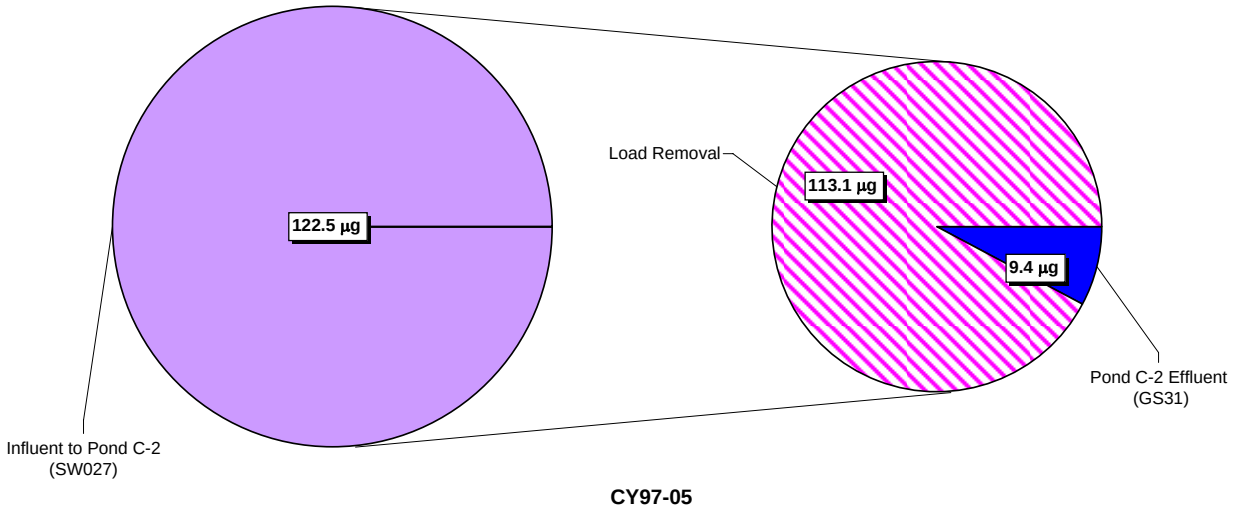


Figure 3-161. Annual Pu Loads for Pond C-2: CY 1997–2007



Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-162. Relative Average Annual Pu Load Totals for Pond C-2

Table 3-74. Am Load Summary for Terminal Pond C-2: CY 1997–2007

Calendar Year	Am-241 (µg)	
	Influent (SW027)	**Effluent (GS31)**
1997	0.08	0.17
1998	0.25	0.27
1999	0.20	0.13
2000	0.24	0.00; No C-2 discharge
2001	0.05	0.14
2002	0.00	<0.01
2003	0.12	0.09
2004	3.09	0.11
2005	0.05	0.04
2006	0.00; No flow	0.00; No C-2 discharge
2007	0.15	0.00; No C-2 discharge
Total	4.25	0.96

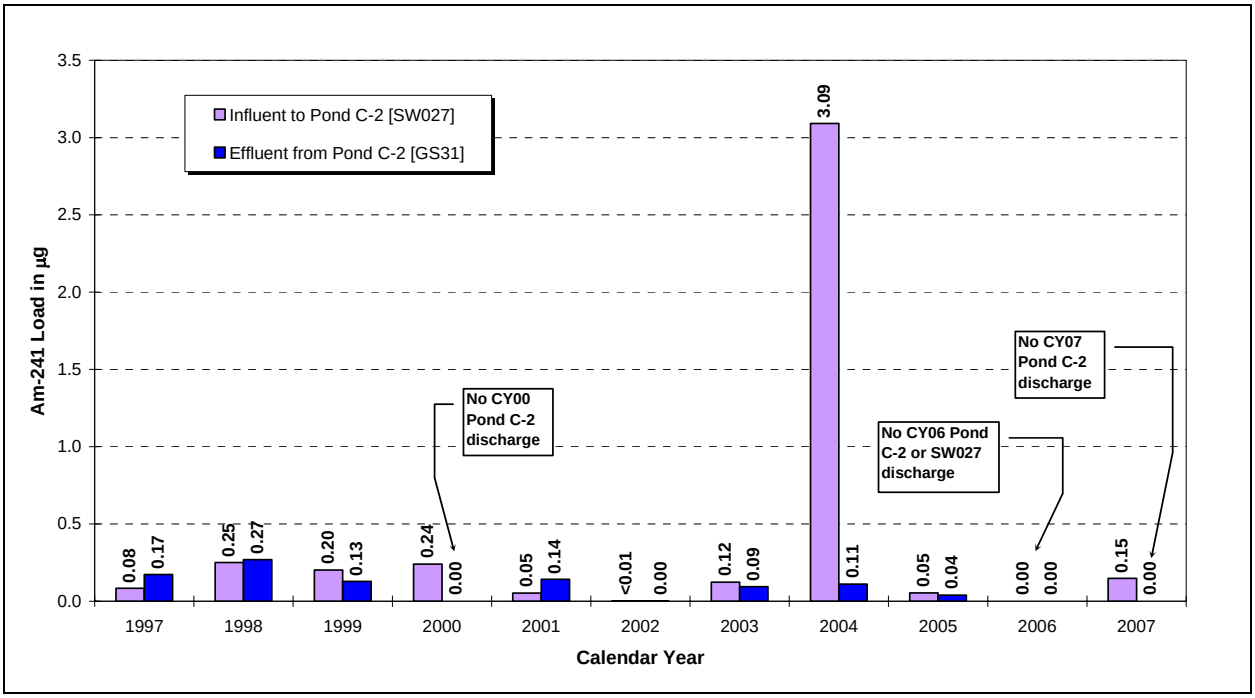
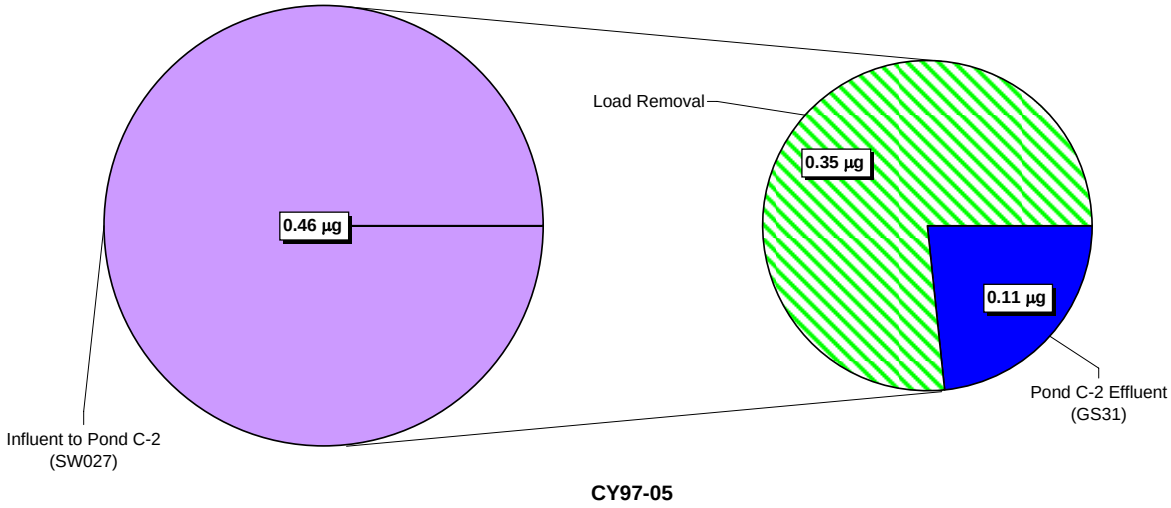


Figure 3-163. Annual Am Loads for Pond C-2: CY 1997–2007

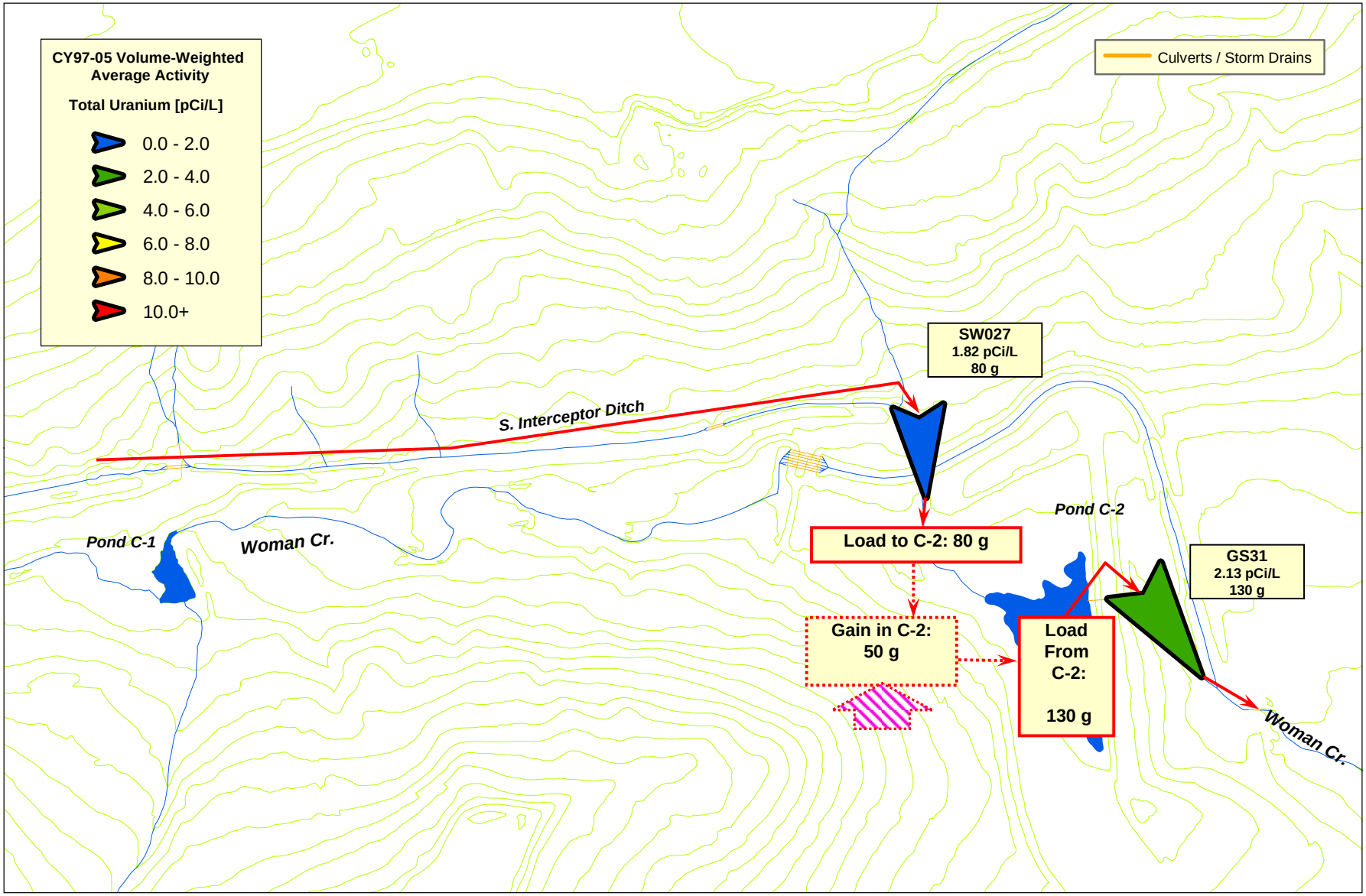


Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-164. Relative Average Annual Am Load Totals for Pond C-2

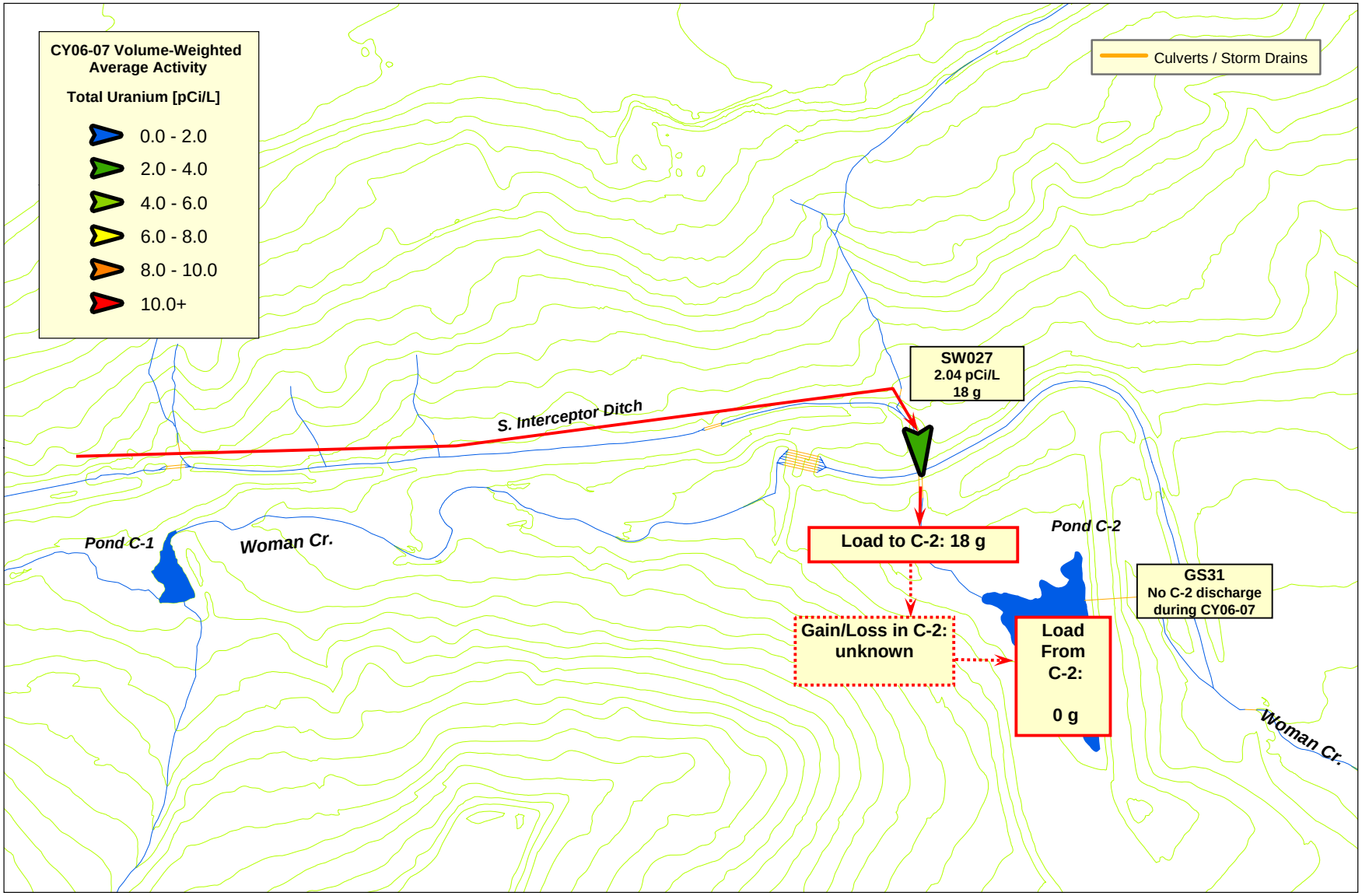
Table 3-75. Total U Load Summary for Terminal Pond C-2: CY 1997–2007

Calendar Year	Total Uranium (g)	
	Influent (SW027)	Effluent (GS31)
1997	84	231
1998	239	216
1999	116	189
2000	22	0.00; No C-2 discharge
2001	66	67
2002	7	1
2003	111	129
2004	40	92
2005	33	115
2006	0; No flow	0; No C-2 discharge
2007	36	0; No C-2 discharge
Total	753	1,039



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-165. Relative Average Annual U Loading Schematic for Pond C-2: CY 1997–2005



Note: Location symbols are displayed proportional to calculated average annual load and colored according to activity ranges in legend.

Figure 3-166. Relative Average Annual U Loading Schematic for Pond C-2: CY 2006–2007

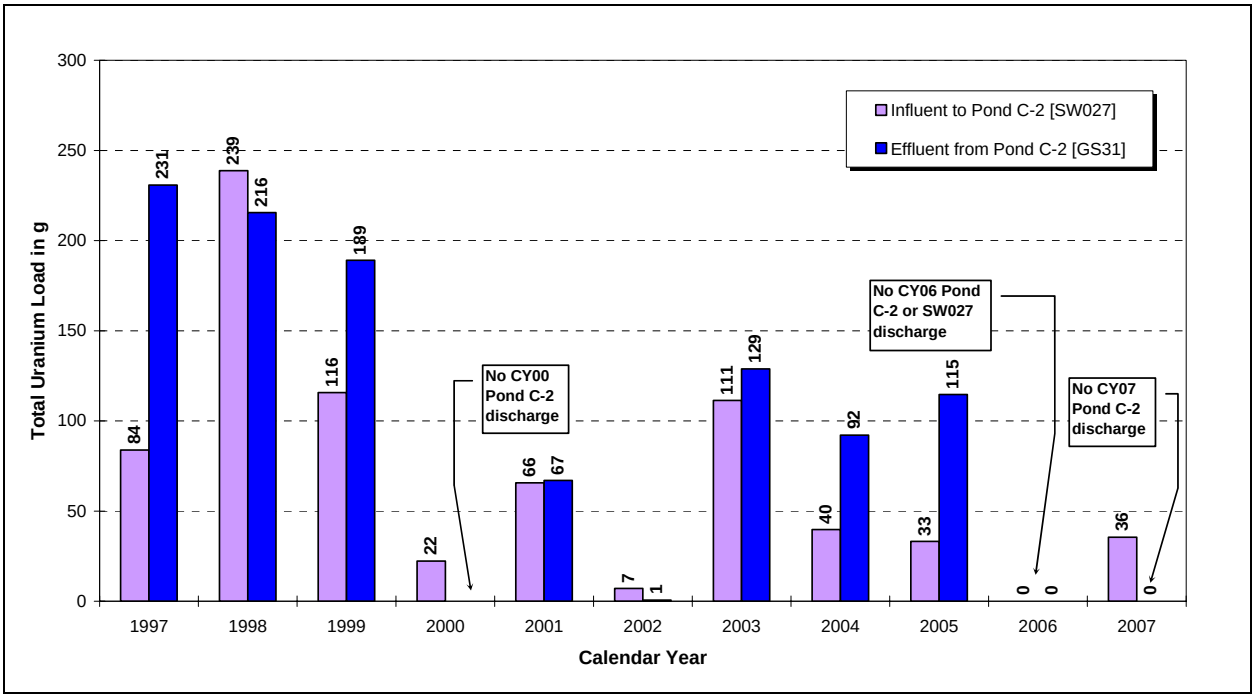
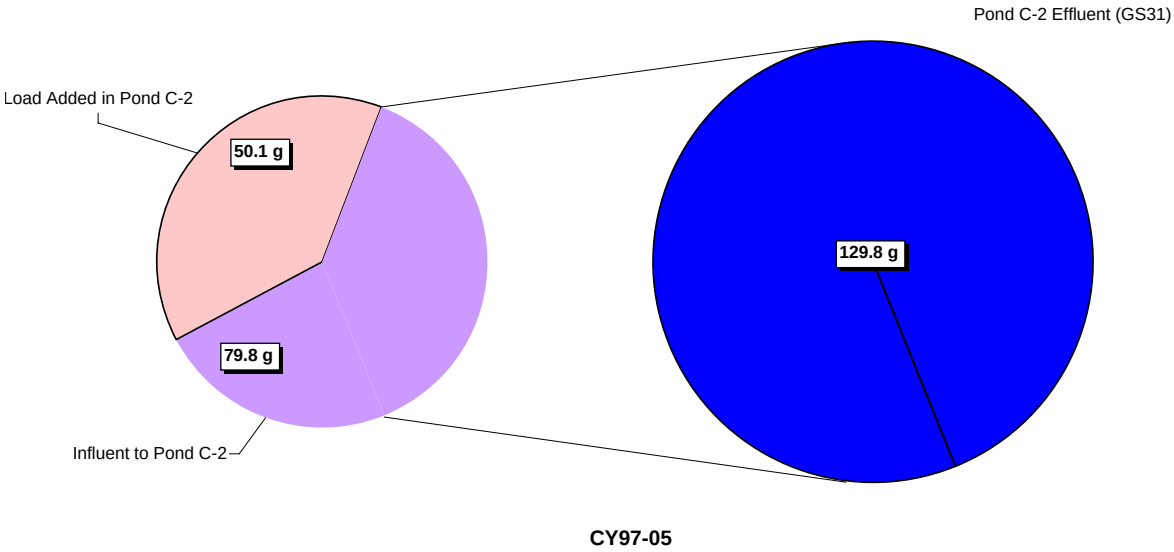


Figure 3-167. Annual Total U Loads for Pond C-2: CY 1997–2007



Note: There has been no Pond C-2 discharge since CY05; no chart is presented for CY06-07

Figure 3-168. Relative Average Annual Total U Load Totals for Pond C-2

RFCA Points of Evaluation

Major COU Drainages

This section summarizes the calculated Pu, Am, and total U loads for the three major COU drainages: North Walnut Creek (SW093), South Walnut Creek (GS10 and the former WWTP), and the SID (SW027). Data are presented in Table 3-76 and Table 3-77, and depicted on Figure 3-169, Figure 3-170, Figure 3-171, Figure 3-172, Figure 3-173, Figure 3-174, Figure 3-175, Figure 3-176, Figure 3-177, and Figure 3-178. The following points are noted:

- Total Pu load varies year to year and shows a significant increase in CY 2004 due to extensive soil disturbance (Figure 3-169). With the implementation of remedial actions, erosion controls, revegetation, and soil stabilization, a significant reduction is noted for CY 2006−2007.
- Total Am load also varies year to year and shows a measurable increase in CY 2004 due to soil disturbance and contributions from the B771 area (Figure 3-171). With the implementation of remedial actions, erosion controls, revegetation, and soil stabilization, a significant reduction is noted for CY 2006−2007. Data from SW093 in CY 2005 (Figure 3-176) also clearly show that the B771 pathway elimination was successful.
- South Walnut Creek accounts for a majority (47 percent) of the Pu load from the COU (Figure 3-170) pre-closure. Of the South Walnut Creek Pu load, GS10 accounted for 97 percent while the former WWTP accounted for the remaining 3 percent. Post-closure, Pu loads are evenly distributed between the drainages (Figure 3-170).
- South Walnut Creek accounts for a majority (60 percent) of the Am load from the COU (Figure 3-172) pre-closure. Of the South Walnut Creek Am load, GS10 accounted for 96 percent while the former WWTP accounted for the remaining 4 percent. Post-closure, North Walnut Creek accounts for the majority (48 percent) of the Am loads (Figure 3-172).
- Annual total U loads are more consistent year to year (Figure 3-177). The load reduction in CY 2006 is due to flow volume reduction, and not a decrease in U activity.
- Total U loads are fairly evenly divided (44 percent to 50 percent) between North and South Walnut Creeks (Figure 3-178) pre-closure. Post-closure, South Walnut Creek accounts for an increased proportion of the load, due to increases in activity in the drainage.

Table 3-76. COU Pu and Am Loads: CY 1997–2007

Calendar Year	Pu-239,240 (µg)				Am-241 (µg)			
	North Walnut Creek (SW093)	South Walnut Creek (GS10)	South Walnut Creek (WWTP)	SID (SW027)	North Walnut Creek (SW093)	South Walnut Creek (GS10)	South Walnut Creek (WWTP)	SID (SW027)
1997	164.2	576.0	11.2	17.4	2.24	12.20	0.64	0.08
1998	69.1	328.6	13.4	87.7	1.30	4.69	0.32	0.25
1999	127.8	307.9	19.4	34.3	1.73	12.55	0.11	0.20
2000	87.4	326.2	17.4	67.2	0.98	14.57	0.29	0.24
2001	44.4	141.4	11.3	10.7	0.65	2.75	0.32	0.05
2002	9.6	59.3	8.3	0.3	0.52	1.76	0.20	0.00
2003	140.1	207.2	3.8	45.1	2.05	4.44	0.52	0.12
2004	1,330.9	523.3	2.1	820.8	28.48	4.68	0.25	3.09
2005	29.2	247.1	0.0; WWTP removed	18.6	0.82	3.98	0.00; WWTP removed	0.05
2006	2.5	2.3	0.0; WWTP removed	0.0; No flow	0.02	0.04	0.00; WWTP removed	0.00; No flow
2007	17.0	14.2	0.0; WWTP removed	16.5	0.28	0.14	0.00; WWTP removed	0.15
Total	2,022.3	2,733.7	86.9	1,118.6	39.09	61.80	2.65	4.25

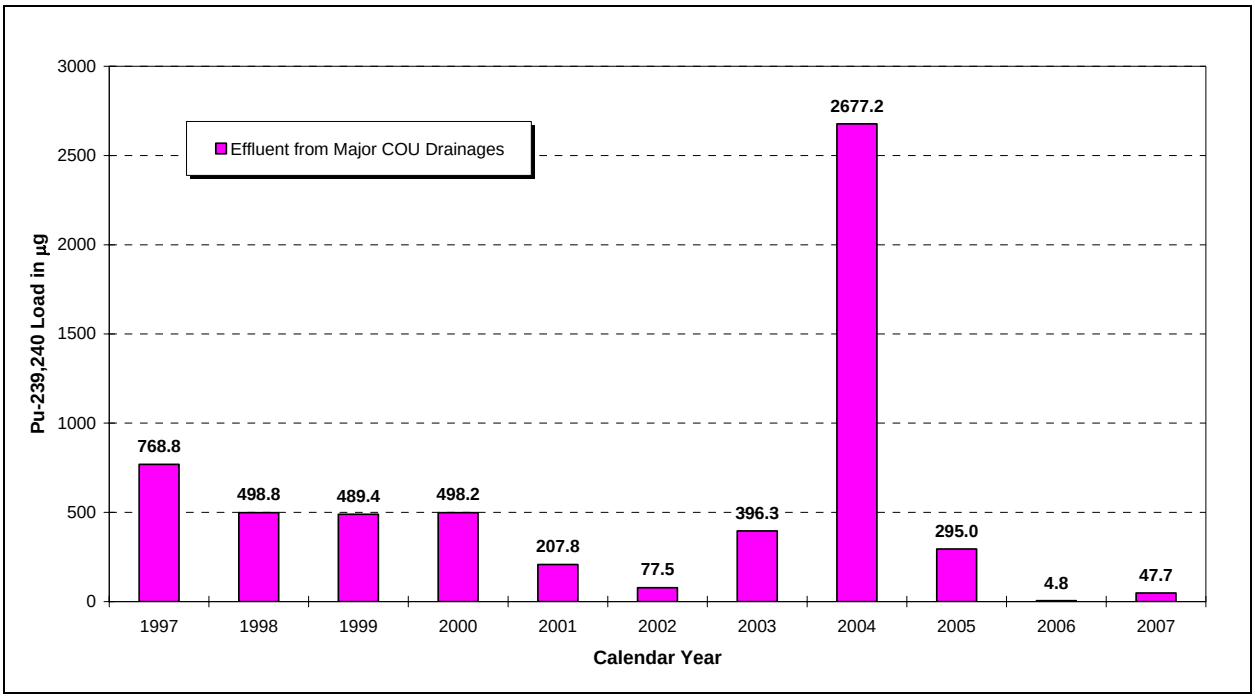


Figure 3-169. Combined Annual Pu Loads from Major COU Drainages and Former WWTP: CY 1997–2007

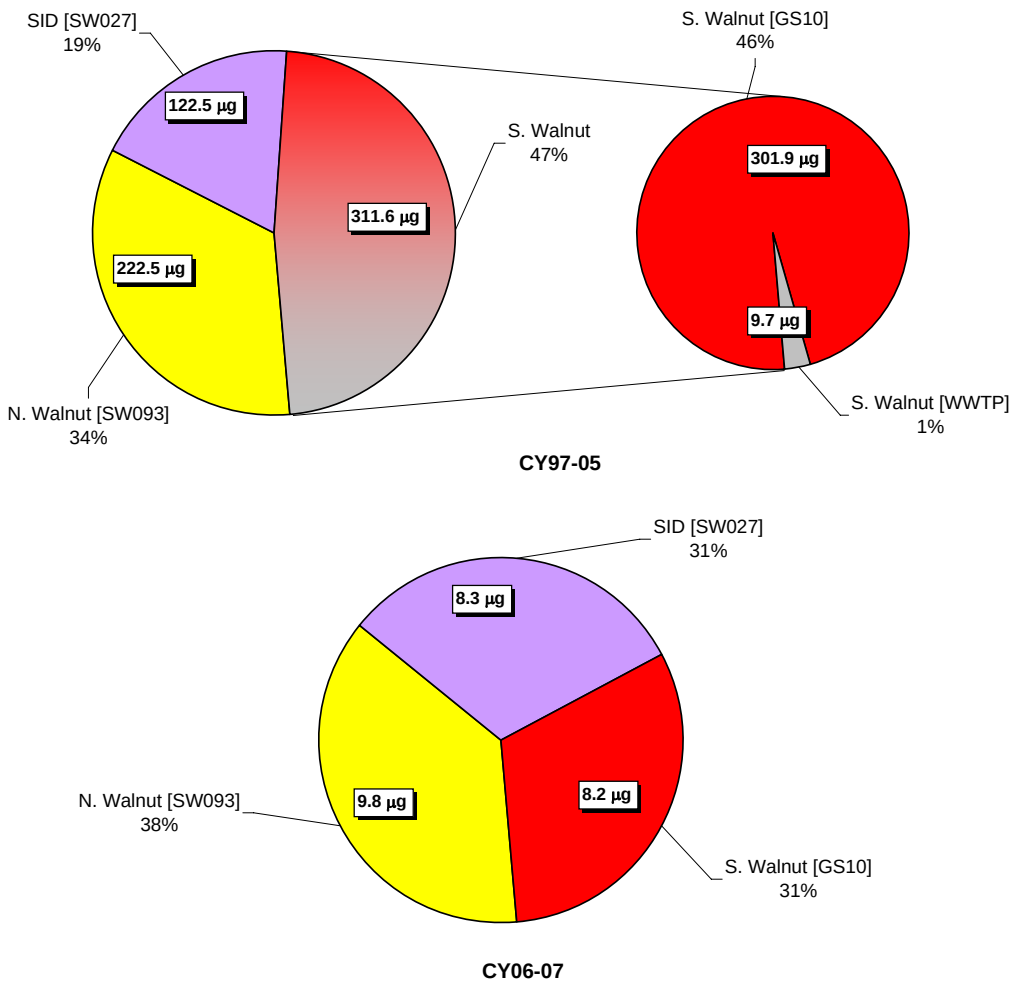


Figure 3-170. Relative Average Annual Pu Load Totals from Major COU Drainages and Former WWTP

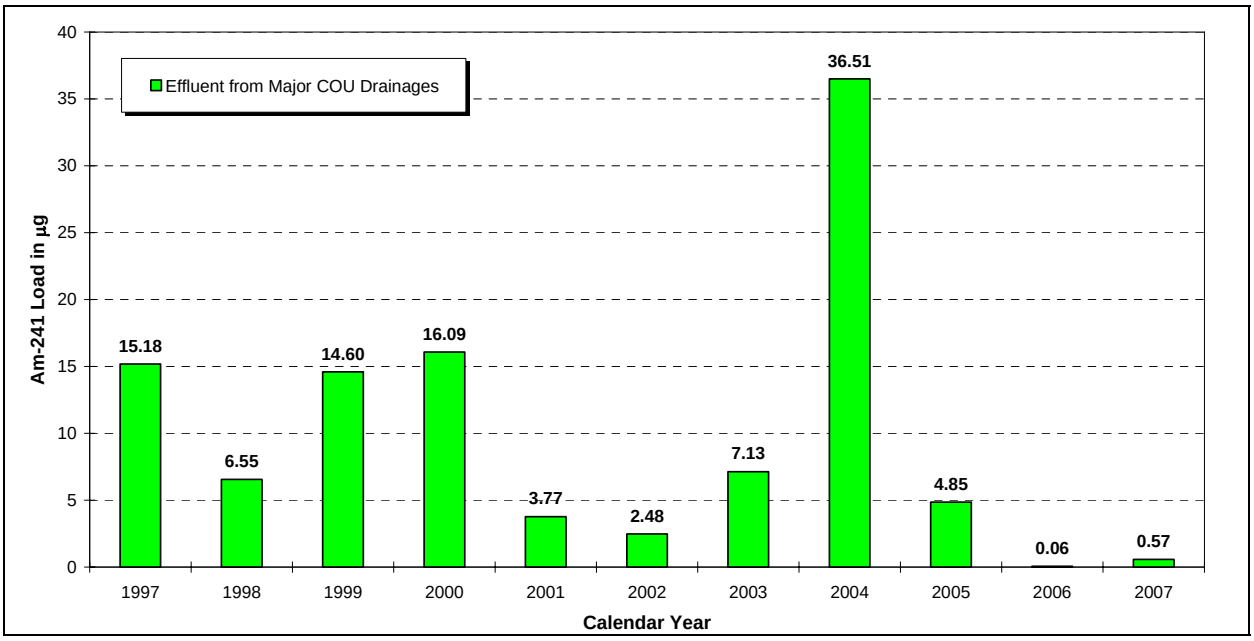


Figure 3-171. Annual Am Loads from Major COU Drainages and WWTP: CY 1997–2007

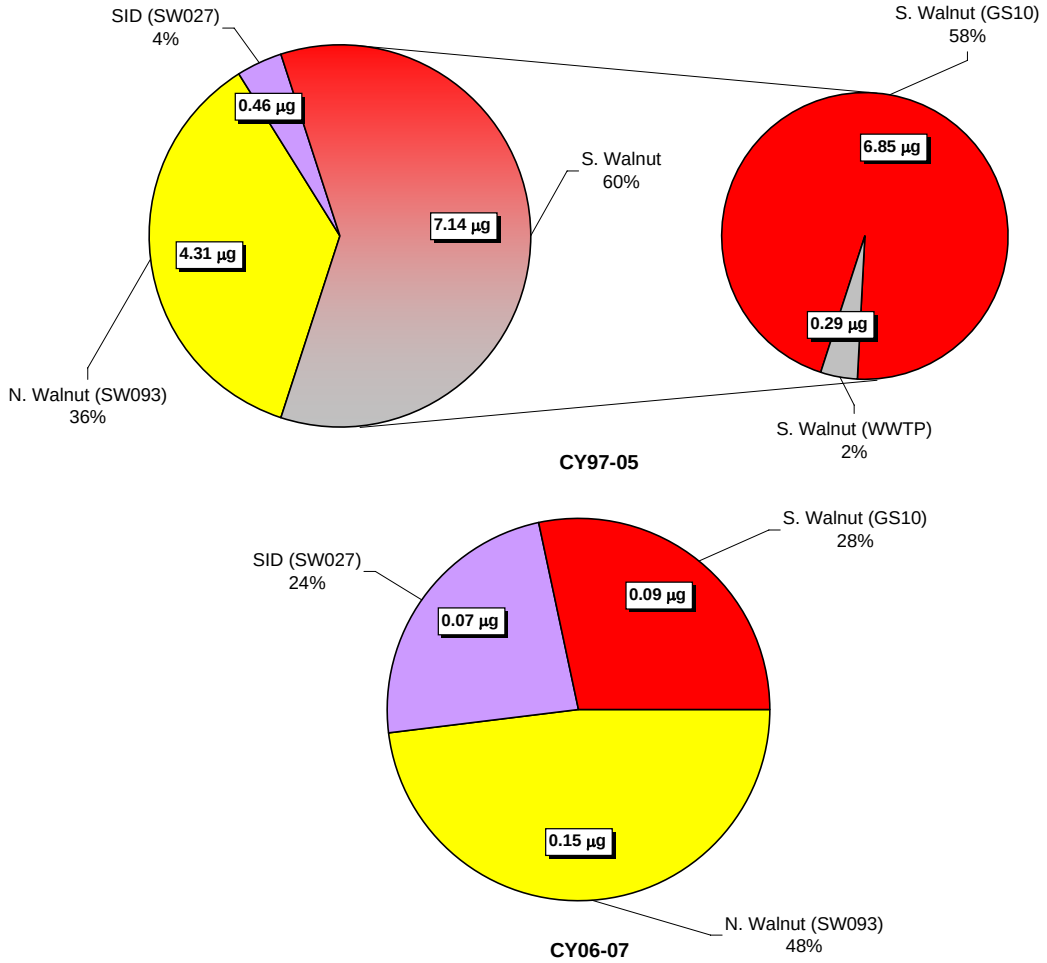


Figure 3-172. Relative Average Annual Am Load Totals from Major COU Drainages and WWTP

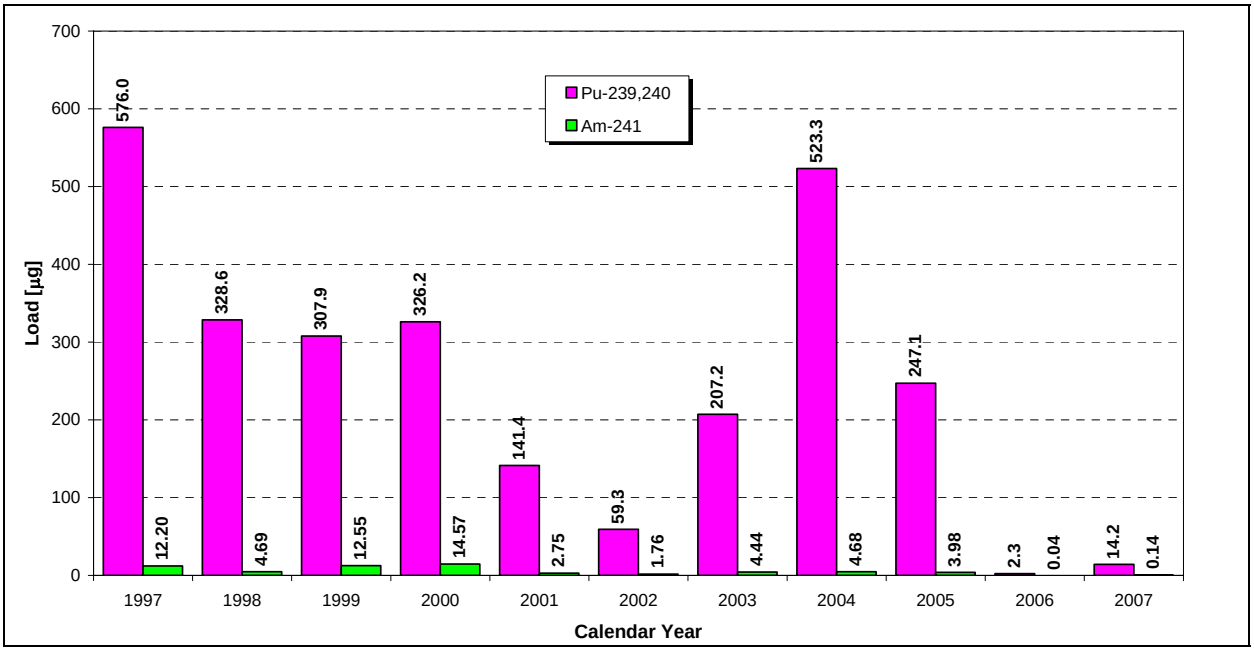


Figure 3-173. Annual Pu and Am Loads at GS10: CY 1997–2007

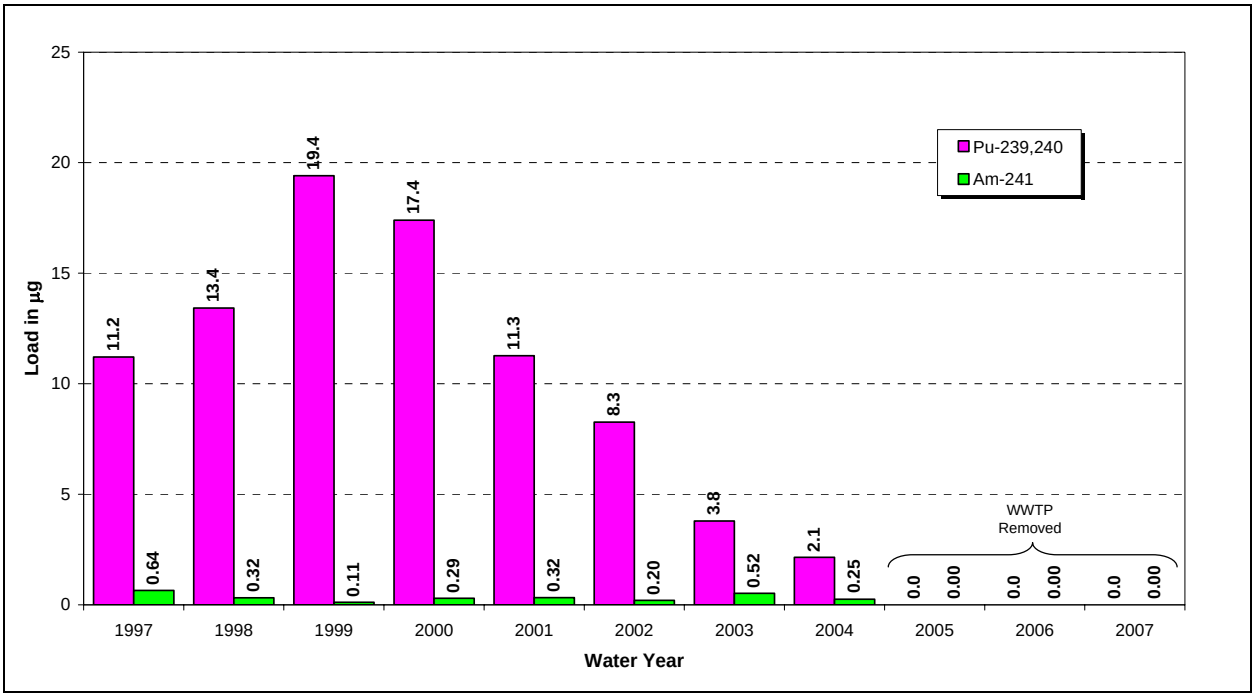


Figure 3-174. Annual Pu and Am Loads at the WWTP: CY 1997–2007

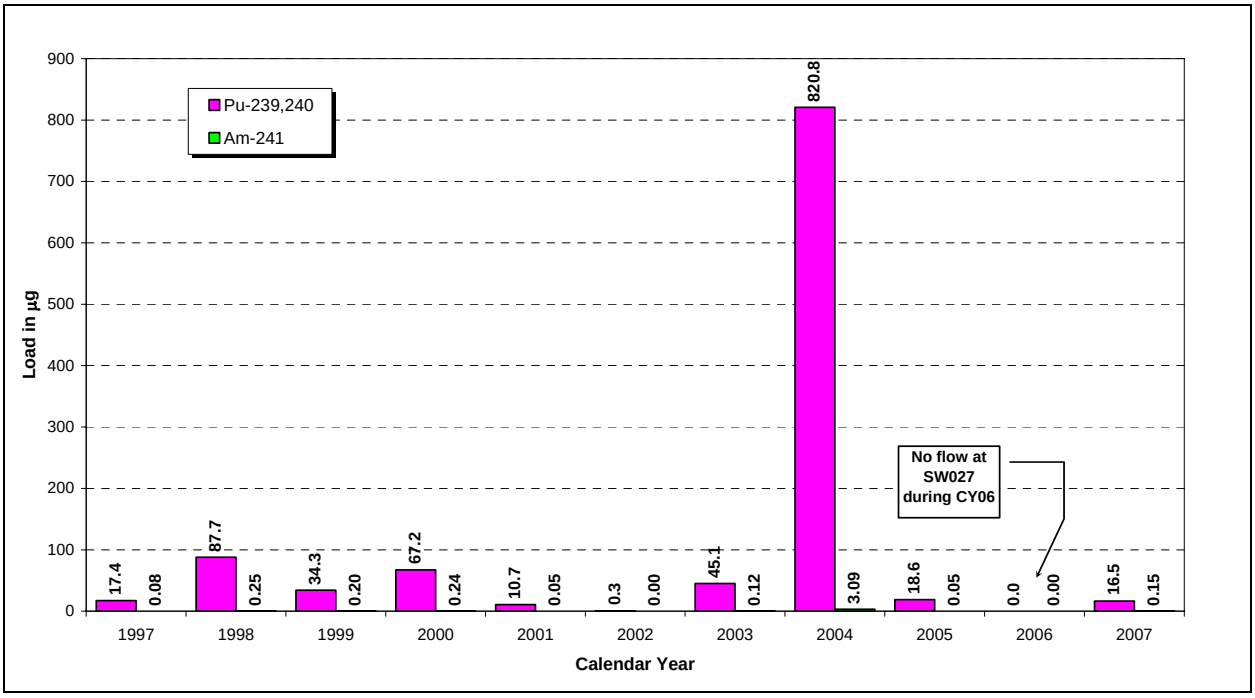


Figure 3-175. Annual Pu and Am Loads at SW027: CY 1997–2007

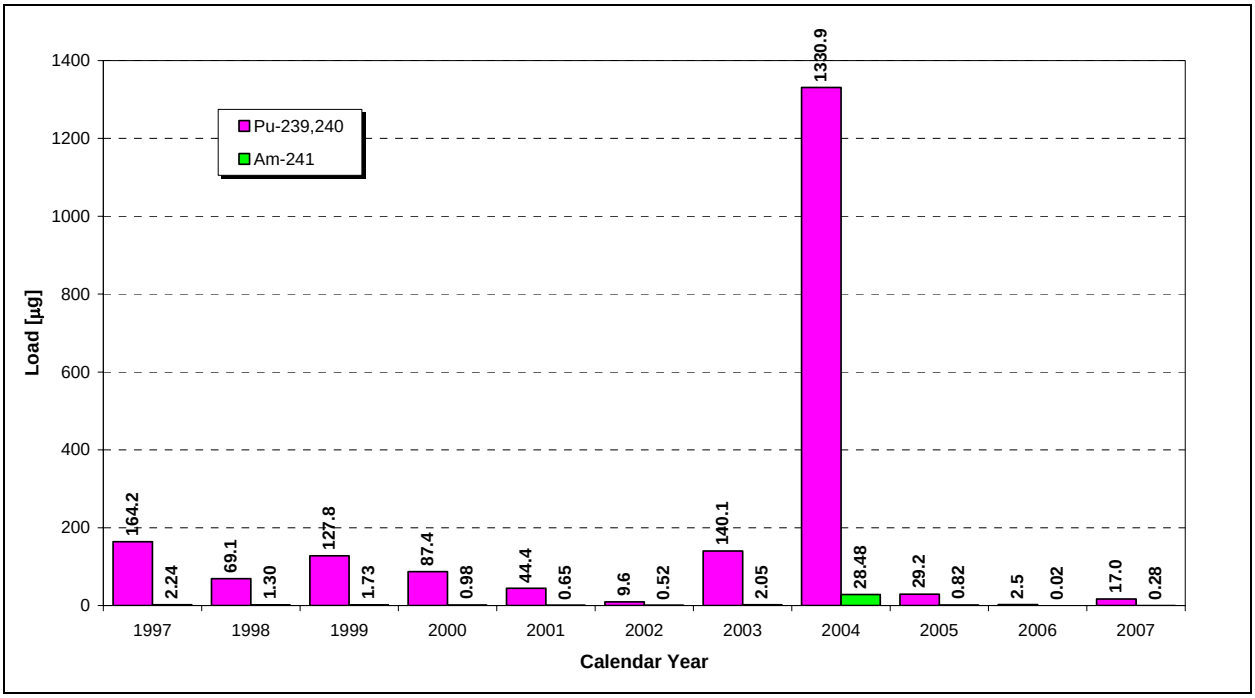


Figure 3-176. Annual Pu and Am Loads at SW093: CY 1997–2007

Table 3-77. COU Total U Loads: CY 1997–2007

Calendar Year	Total Uranium (g)			
	North Walnut Creek (SW093)	South Walnut Creek (GS10)	South Walnut Creek (WWTP)	SID (SW027)
1997	853	637	257	84
1998	797	631	467	239
1999	714	589	121	116
2000	485	379	103	22
2001	646	519	259	66
2002	450	279	61	7
2003	568	501	161	111
2004	575	430	139	40
2005	534	879	0; WWTP removed	33
2006	171	230	0; WWTP removed	0; No flow
2007	540	830	0; WWTP removed	36
Total	6,333	5,905	1569	753

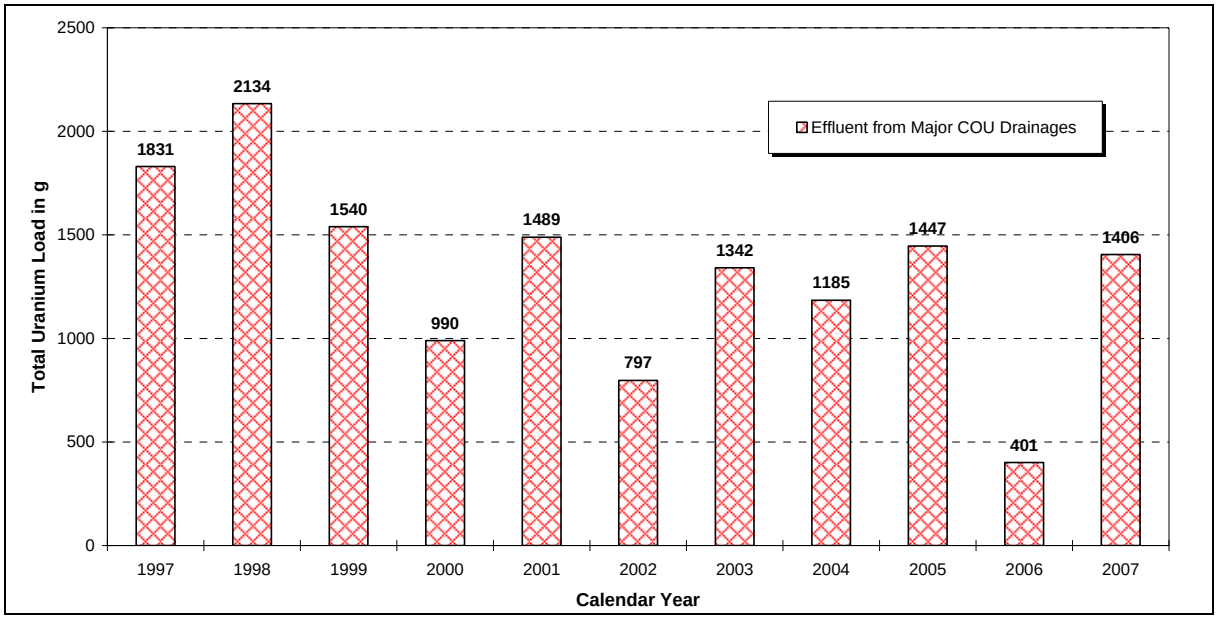


Figure 3-177. Annual Total U Loads from Major COU Drainages and Former WWTP: CY 1997–2007

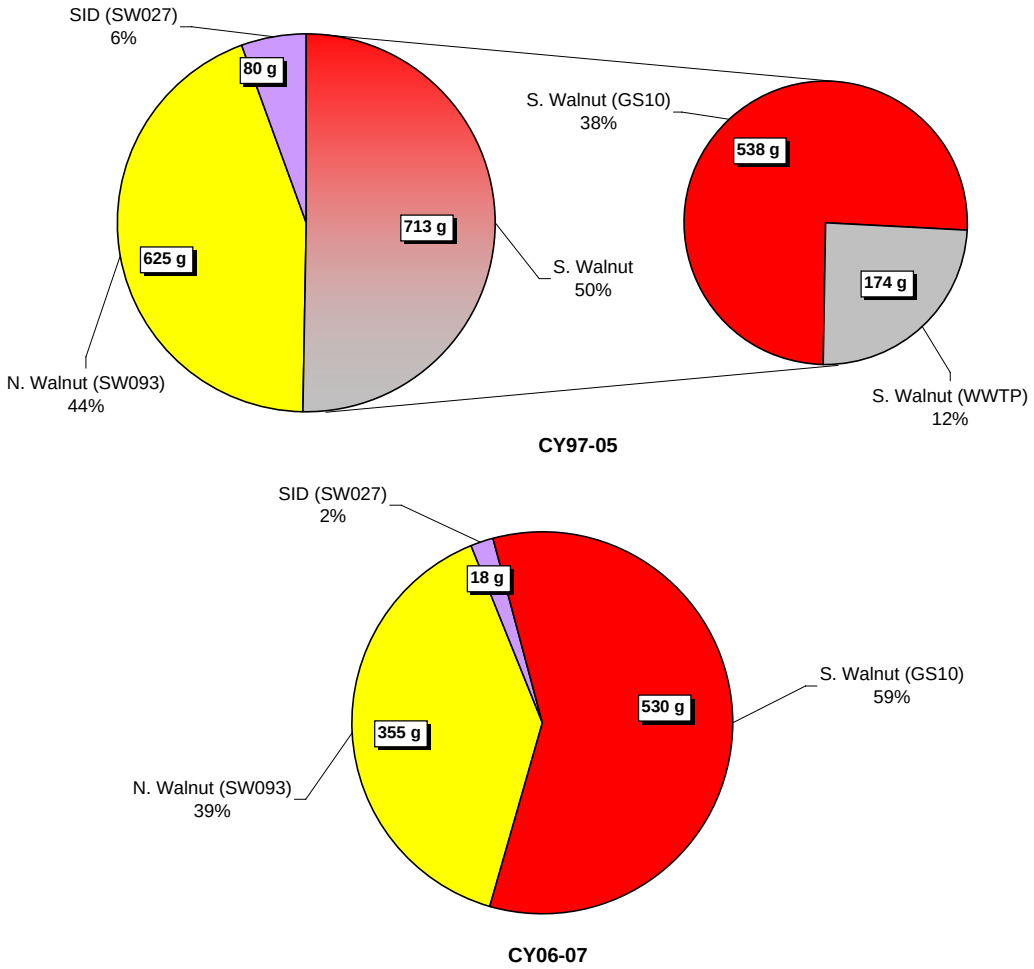
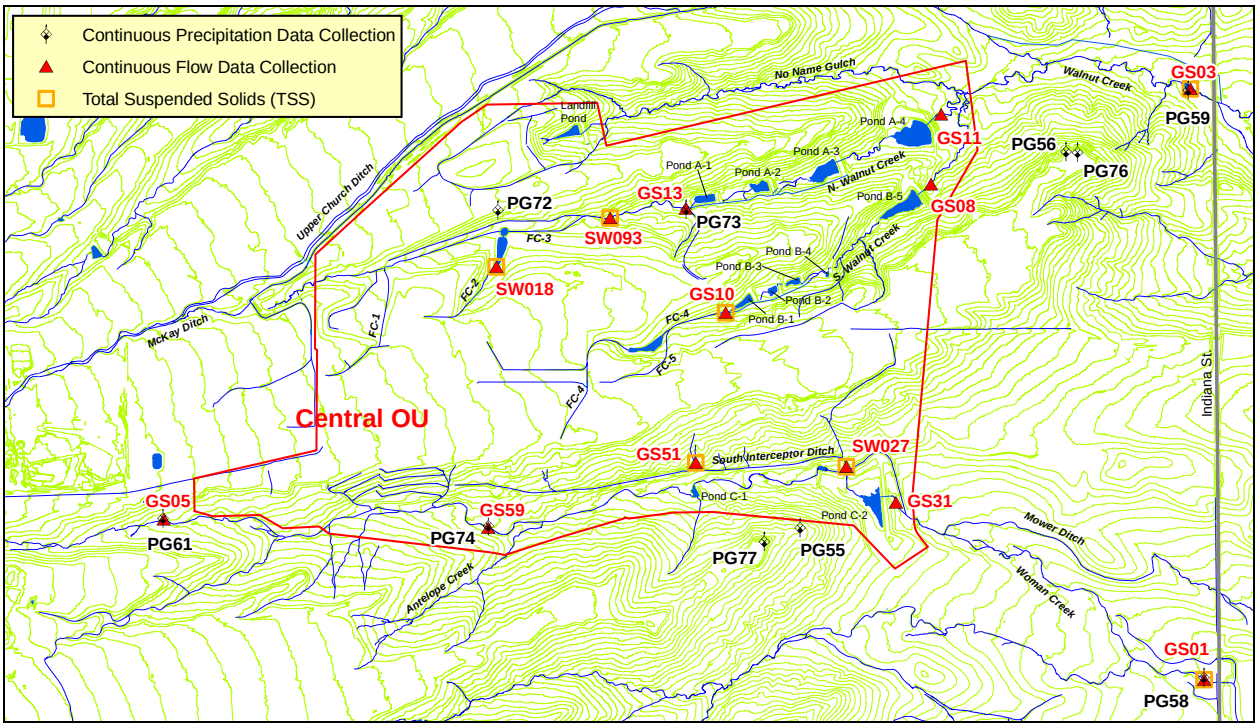


Figure 3-178. Relative Average Annual Total U Loads from Major COU Drainages and Former WWTP

3.1.4.3 Indicator Parameter Monitoring for Assessment of Analytical Water-Quality Data

This monitoring objective provides for the collection of general water quality and quantity information at select locations (Figure 3-179) to be used for various data assessments. Indicator parameter data collected are used to assess analytical measurements of constituents such as radionuclides and metals to determine whether stormwater runoff is affecting water quality. The targeted indicator parameters include total suspended solids (TSS), precipitation, and flow rate. The collection of these data supports evaluation of erosion control measures, design of water management options, investigations into actinide transport, assessment of statistically significant changes in water quality, and management decision making.



Note: Monitoring at PG72 will be discontinued and replaced by PG75 during CY 2008.

Figure 3-179. Indicator Parameter Monitoring Locations

Data and Sample Collection Protocols

To evaluate actinides in conjunction with TSS, TSS would ideally be analyzed for all actinide samples collected at the locations covered by the other surface-water monitoring objectives (Table 3-78). However, automated sampling protocols (continuous, flow-paced composites) often result in samples collected over periods exceeding the 7-day hold time for TSS analyses. Therefore, TSS cannot be analyzed for in all composite samples, but is analyzed when possible.

Table 3-78. Indicator Parameter Monitoring Sample Field Data and Sample Collection

Monitoring Location	Analytical Analyses	TSS Analyses	Flow Measurement Frequency
All automated locations	As required by primary monitoring objectives	For all samples when meeting 7-day TSS hold-time requirement when also analyzing for Pu and/or Am	15 minute continuous

Notes: Sampling frequency is specified by the primary monitoring objective for each automated location. The data collection shown above includes current parameters. Additional parameters may be added or deleted as needs arise.

Table 3-79 lists the data evaluations included in this section. Evaluation is limited to locations that monitor the former IA: GS10, GS13, GS51, SW018, SW027, and SW093.

Table 3-79. Data Evaluation for Indicator Parameter Monitoring for Analytical Water-Quality Assessment

Data Use	Required Parameters	Description
Correlation of Actinides with TSS	Actinides, TSS	Use of TSS measurements to predict actinide concentrations
Correlation of Actinides with Flow Rate	Actinides, flow rate	Use of flow rate measurements to predict actinides concentrations
Correlation of TSS with Flow Rate	TSS, flow rate	Use of flow rate measurements to predict TSS concentrations

Correlation of Actinides with TSS

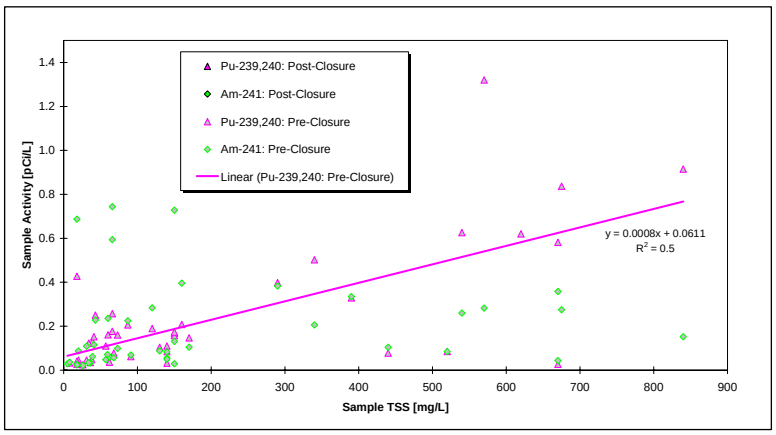
Since Pu and Am are transported in surface water in association with particulate matter (measured as TSS), a relationship between activity and TSS could be used as an indicator of Pu and Am transport. This section evaluates the variation of composite sample Pu and Am activity with the corresponding TSS concentration. Plots are presented for select locations where both Pu and Am data are collected with TSS (Figure 3-180, Figure 3-181, Figure 3-182, Figure 3-183, and Figure 3-184). Data in plots are further separated by pre- and post-closure periods as appropriate.

The sample Pu and Am activities are the values obtained through laboratory analysis given in pCi/L. Only Pu and Am values greater than the MDA (generally 0.015 pCi/L) are included.[28] The sample TSS is the value obtained through laboratory analysis given in mg/L. TSS analysis is only performed for composite samples that are collected over a period of less than the TSS hold time (7 days). Consequently, not all samples collected at the locations below were analyzed for TSS. Only TSS values greater than the detection limit (generally 5 mg/L) are included.

Only locations that had more than two data pairs are plotted. As such, plots are not presented for location SW018.

[28] Data are generally presented at varying precision for clarity. Accuracy should not be inferred; both analytical and flow measurement error have not been quantified in this section.

Location GS10

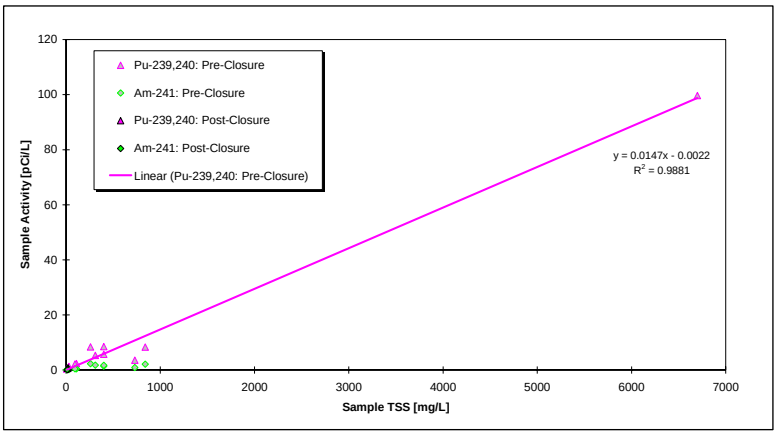


GS10 shows a fair trend between increasing Pu and increasing TSS for pre-closure data. However, no trend is evident between Am and TSS. This lack of correlation may be caused by the variability of contamination levels throughout the drainage and the possible existence of localized Am source areas prior to Site Closure.

A single Pu-TSS data pair is available post-closure (0.022 pCi/L Pu; 38 mg/L TSS). No post-closure results for Am through CY 2007 met the MDA criteria.

Figure 3-180. Variation of Pu and Am with TSS at GS10

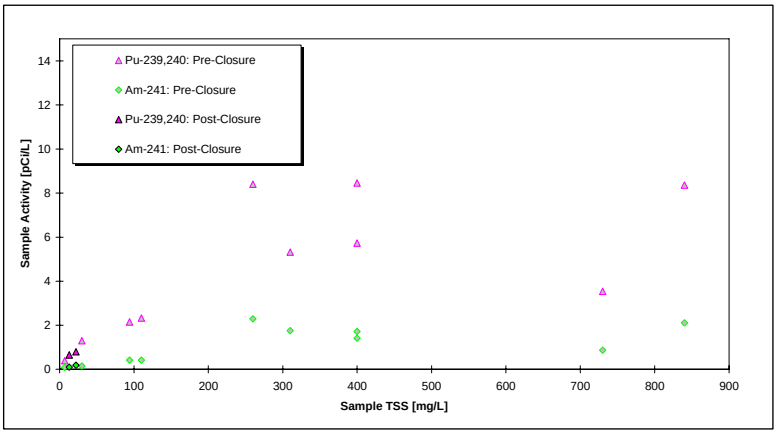
Location GS51



GS51 shows a strong correlation between increasing Pu activity and increasing TSS for pre-closure data. The correlation is strongly influenced by a very high TSS value collected during the 903 Pad/Lip accelerated actions. No statistically significant correlation is noted for Am (the Am result associated with the highest TSS value was rejected by data validation).

Note: Only two post-closure TSS results through CY 2007.

Figure 3-181. Variation of Pu and Am with TSS at GS51

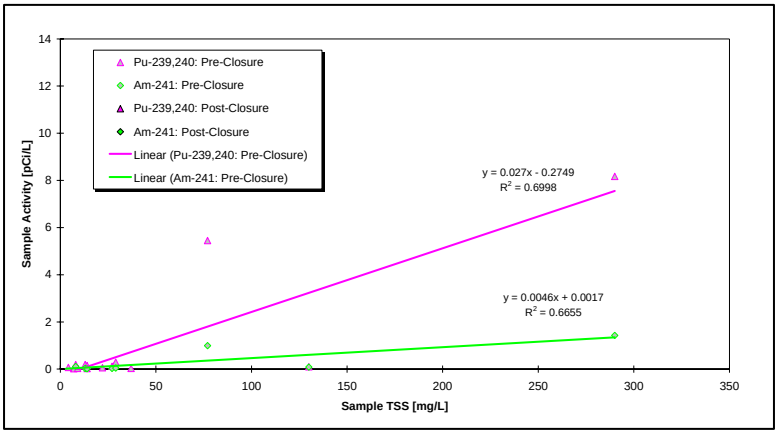


With the single high TSS result noted above removed from the analysis, no correlations are noted.

The two post-closure TSS results through CY 2007 exhibit both low TSS and activity, confirming the effectiveness of erosion controls and remedial actions.

Figure 3-182. Variation of Pu and Am with TSS at GS51: Data Subset

Location SW027

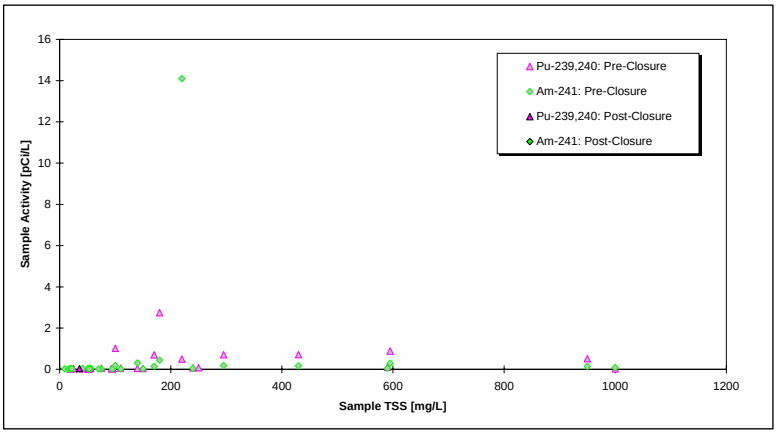


SW027 shows fair correlations between activity and TSS, but are highly influenced by single points.

Note: No post-closure TSS results through CY 2007.

Figure 3-183. Variation of Pu and Am with TSS at SW027

Location SW093



SW093 shows no statistically significant correlation between activity and TSS.

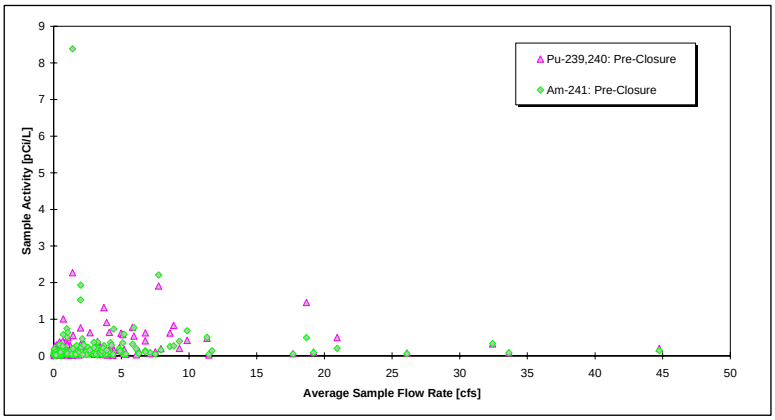
A single Pu-TSS data pair is available post-closure (0.029 pCi/L Pu; 35.8 mg/L TSS). No post-closure results for Am through CY 2007 met the MDA criteria.

Figure 3-184. Variation of Pu and Am with TSS at SW093

Correlation of Actinides with Flow Rate

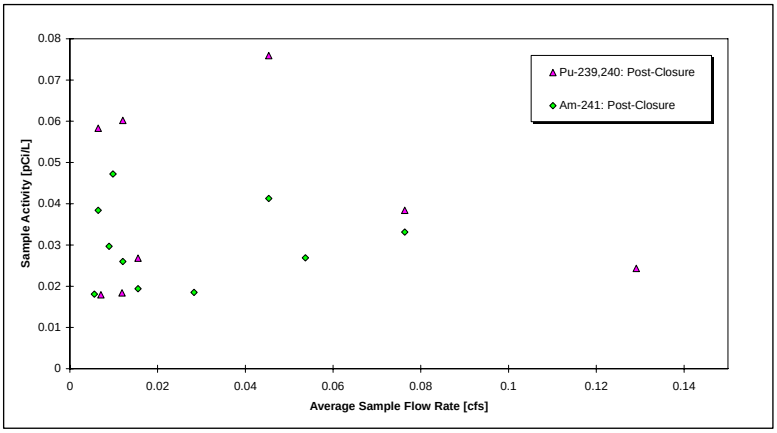
Figure 3-185, Figure 3-186, Figure 3-187, Figure 3-188, Figure 3-189, Figure 3-190, Figure 3-191, Figure 3-192, Figure 3-193, Figure 3-194, Figure 3-195, and Figure 3-196 present the correlations of actinides with flow rate. Since Pu and Am are transported in surface water in association with particulate matter, and assuming that higher flow rates tend to transport more sediment, a relationship between activity and flow rate could be used as an indicator of Pu and Am transport. This section evaluates the variation of composite sample Pu and Am activity with the corresponding average flow rate. Plots are presented for select locations where both Pu and Am data are collected with flow measurement. Data in plots are further separated by pre- and post-closure periods.

Location GS10



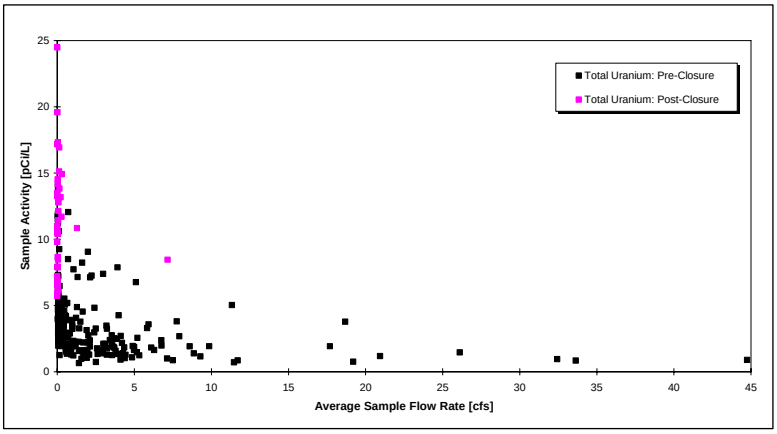
GS10 shows no statistically significant correlation between Pu and Am activity with flow rate using pre-closure data.

Figure 3-185. Variation of Pu and Am with Flow Rate at GS10: Pre-Closure



GS10 also shows no statistically significant correlation between Pu and Am activity with flow rate using post-closure data.

Figure 3-186. Variation of Pu and Am with Flow Rate at GS10: Post-Closure

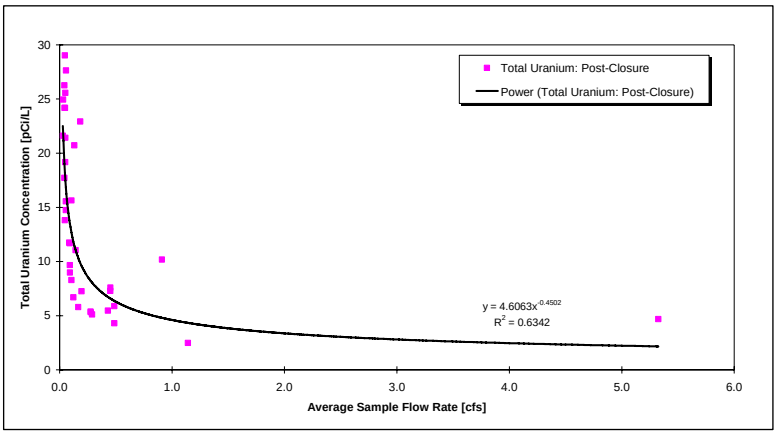


GS10 shows a visual trend between decreasing U activity and increasing flow rate. Baseflow at GS10 is sustained by groundwater seepage to the creek. Naturally occurring U is associated with these flows. Therefore, the decrease in U activity at higher flow rates is likely caused by dilution from stormwater runoff. The highest activities are associated with the lowest flows.

The post-closure results clearly show this trend, as runoff rates have been significantly reduced.

Figure 3-187. Variation of Total U with Flow Rate at GS10

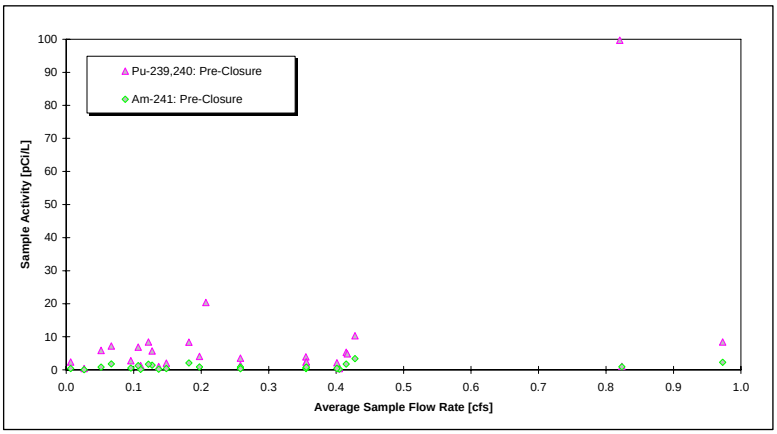
Location GS13



GS13 shows a fair correlation between decreasing U activity and increasing flow rate. Baseflow at GS13 is sustained by groundwater seepage and treated discharge from the SPPTS. U is associated with these flows. Therefore, the decrease in U activity at higher flow rates is likely caused by attenuation from stormwater runoff.

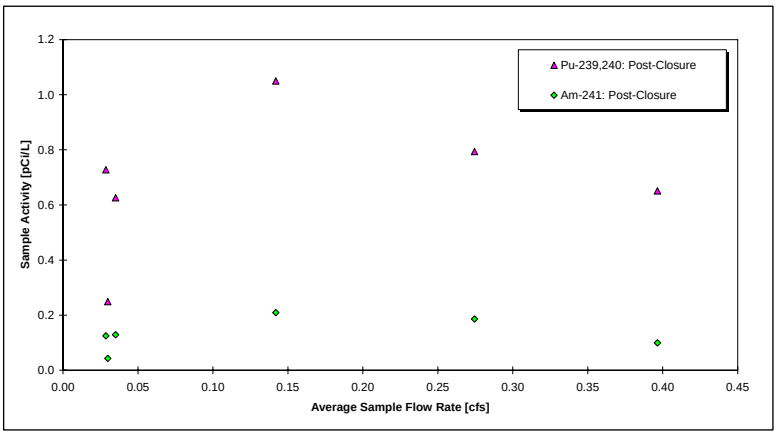
Figure 3-188. Variation of Total U with Flow Rate at GS13

Location GS51



GS51 shows no statistically significant correlation between Pu and Am activity with flow rate for pre-closure results.

Figure 3-189. Variation of Pu and Am with Flow Rate at GS51: Pre-Closure

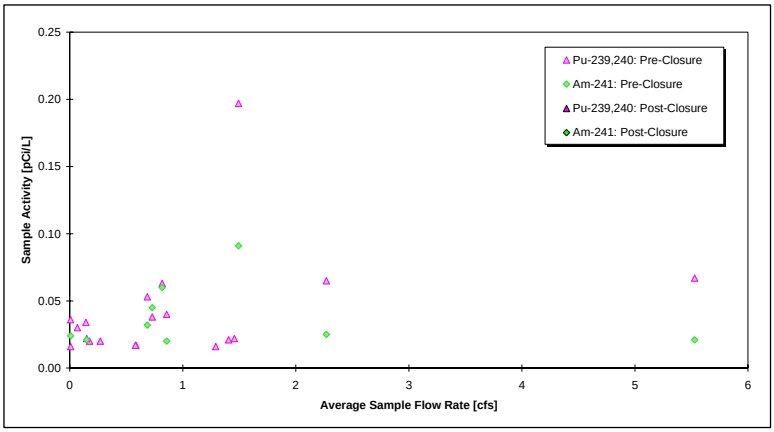


GS51 shows no statistically significant correlation between Pu and Am activity with flow rate for post-closure results.

The post-closure results show lower activity in relation to flow rate compared to pre-closure results, confirming that remedial actions and erosion control measures have been effective.

Figure 3-190. Variation of Pu and Am with Flow Rate at GS51: Post-Closure

Location SW018

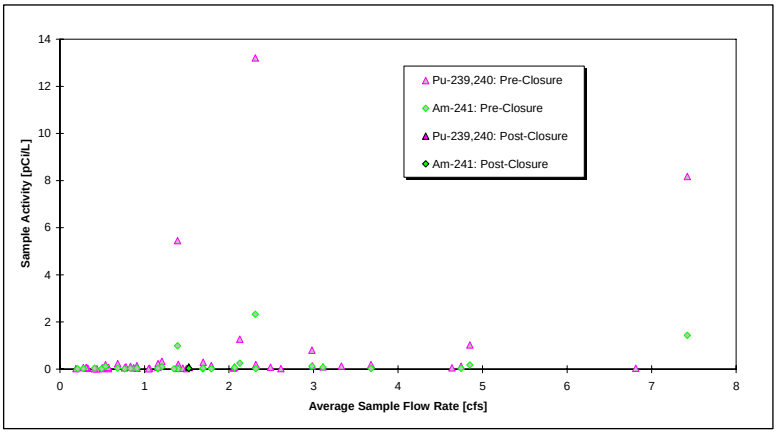


SW018 shows no statistically significant correlation between Pu and Am activity with flow rate using pre-closure data.

Note: Less than three post-closure results greater than the MDA through CY 2007.

Figure 3-191. Variation of Pu and Am with Flow Rate at SW018

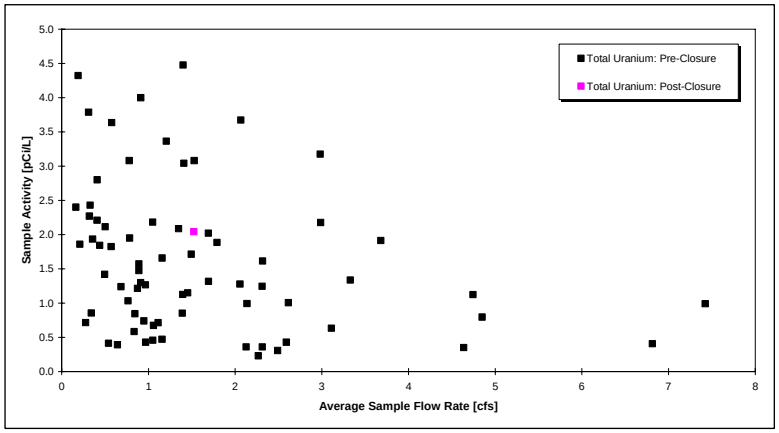
Location SW027



SW027 shows no statistically significant correlation between Pu and Am activity with flow rate.

The single post-closure result shows low activity for the corresponding flow rate, confirming the effectiveness of erosion controls and remedial actions.

Figure 3-192. Variation of Pu and Am with Flow Rate at SW027

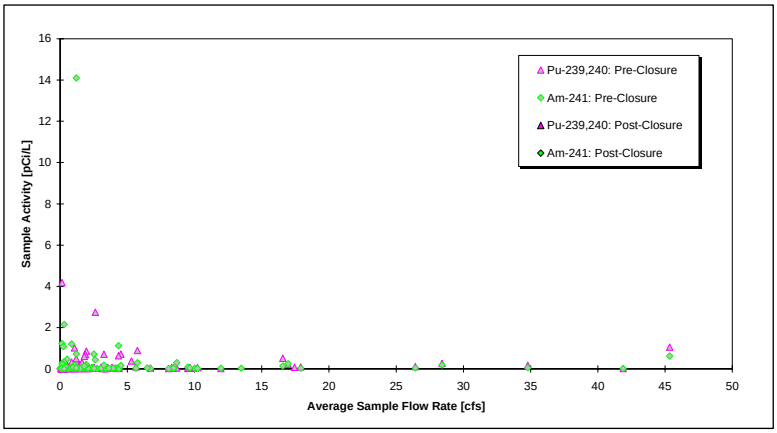


SW027 shows no statistically significant correlation between U activity and flow rate.

Note: One post-closure result through CY 2007.

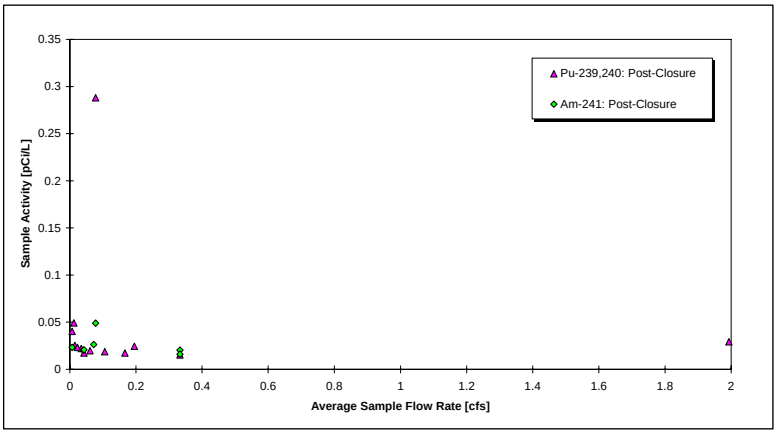
Figure 3-193. Variation of Total U with Flow Rate at SW027

Location SW093



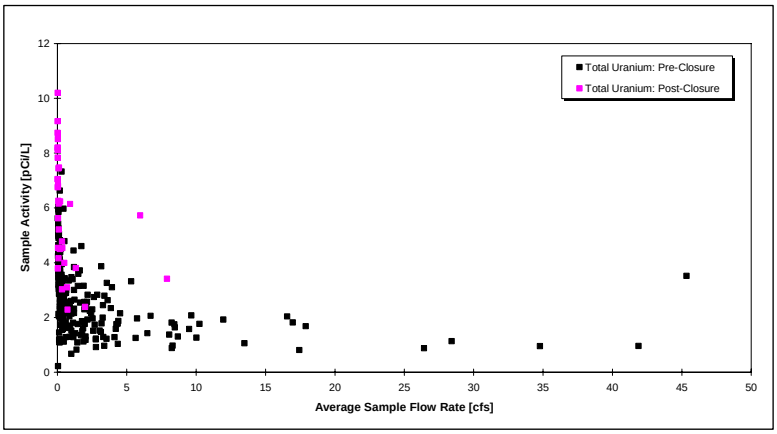
SW093 shows no statistically significant correlation between Pu and Am activity with flow rate using pre-closure data.

Figure 3-194. Variation of Pu and Am with Flow Rate at SW093: Pre-Closure



SW093 shows no statistically significant correlation between Pu and Am activity with flow rate using post-closure data.

Figure 3-195. Variation of Pu and Am with Flow Rate at SW093: Post-Closure



SW093 shows a visual trend between decreasing U activity and increasing flow rate. Baseflow at SW093 is sustained by groundwater seepage to the creek. Naturally occurring U is associated with these flows. Therefore, the decrease in U activity at higher flow rates is likely caused by dilution from stormwater runoff.

The post-closure results also show this trend, as runoff rates have been significantly reduced.

Figure 3-196. Variation of Total U with Flow Rate at SW093

The sample Pu and Am activities are the values obtained through laboratory analysis given in pCi/L. Only Pu and Am values greater than the MDA (generally 0.015 pCi/L) are included.[29]

Plots are also presented showing the variability of total U with flow rate. Plots are presented for all locations where U data are collected with flow measurement. The sample total U activity is the sum of the isotopic values obtained through laboratory analysis given in pCi/L (U-233, 234 + U-235 + U-238).

The average composite-sample period flow rate (cfs) is calculated as follows:

1. The date and time of each grab sample comprising the composite is obtained from the monitoring instrumentation.
2. The corresponding flow value for each grab sample is interpolated from the 15-minute interval flow data. Some samples may not have flow values due to equipment failures and periodic winter icing conditions.
3. Since each grab sample is of the same volume (200 milliliters [mL]), the interpolated flow values are arithmetically averaged to obtain the applicable flow for the entire composite sampling period.

It should be noted that many locations were temporarily influenced by closure activities that resulted in large areas of disturbed soils susceptible to transport as TSS. Any Pu and Am that may be associated with these soils would then also be subject to increased transport for the given flow rate. Only locations that had more than two data pairs are plotted. As such, post-closure plots are not presented for location SW018.

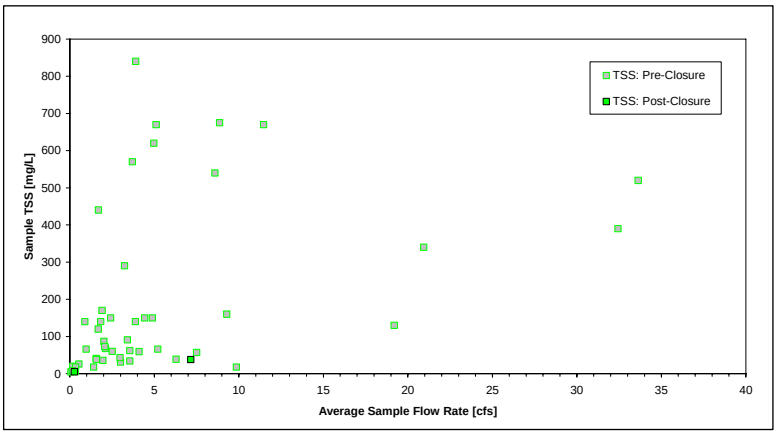
Correlation of TSS with Flow Rate

Since many contaminants are transported in surface water in association with particulate matter (measured as TSS), if a relationship between TSS and flow rate could be established, then flow could be used as an indicator of contaminant transport. This section evaluates the variation of composite sample TSS with the corresponding average flow rate. Plots are presented for select locations where both flow and TSS data are collected (Figure 3-197, Figure 3-198, Figure 3-199, Figure 3-200, and Figure 3-201). Data in plots are further separated by pre- and post-closure periods.

The sample TSS is the value obtained through laboratory analysis given in mg/L. TSS analysis is only performed for composite samples that are collected over a period of less than the TSS hold time (7 days). Consequently, not all samples collected at the locations evaluated were analyzed for TSS. Only TSS values greater than the detection limit (generally 5 mg/L) are included.[30]

[29] Data are generally presented at varying precision for clarity. Accuracy should not be inferred; both analytical and flow measurement error have not been quantified in this section.
[30] Data are generally presented at varying precision for clarity. Accuracy should not be inferred; both analytical and flow measurement error have not been quantified in this section.

Location GS10

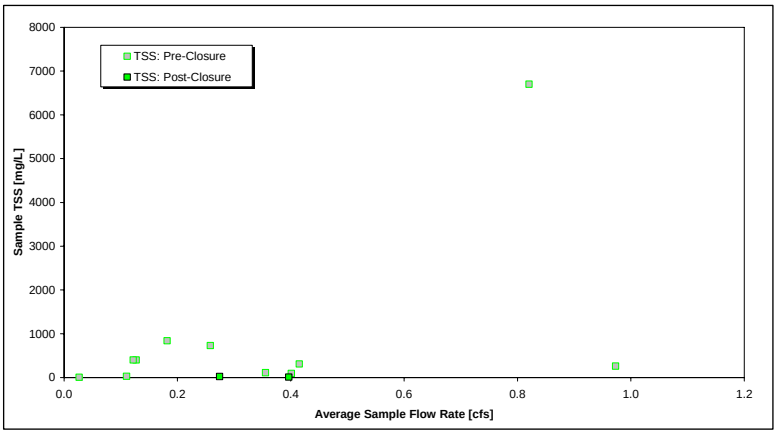


GS10 shows no statistically significant correlation between TSS and flow rate. GS10 had previously shown a fair correlation between increasing TSS and increasing flow rate. This loss of correlation is due to high TSS at relatively low flow rates caused by extensive 2004−2005 soil disturbances in the GS10 drainage.

Post-closure data show low TSS levels for the corresponding flow rates, confirming the effectiveness of erosion control measures.

Figure 3-197. Variation of TSS with Flow Rate at GS10

Location GS51

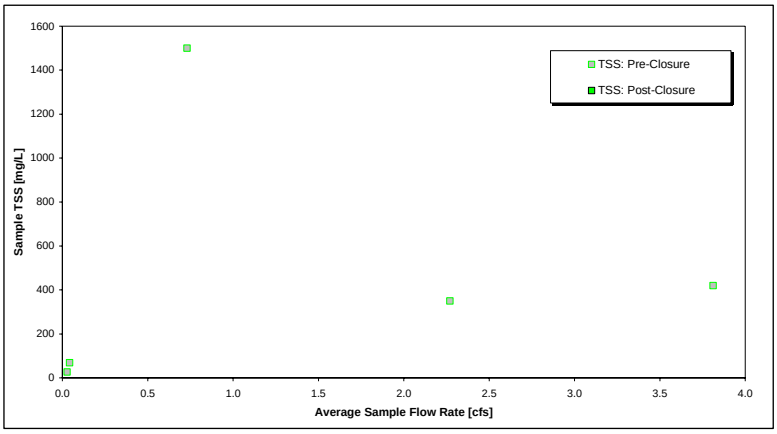


GS51 shows no statistically significant correlation between TSS and flow rate.

Post-closure results show low TSS for the corresponding flow rates, confirming the effectiveness of erosion control measures.

Figure 3-198. Variation of TSS with Flow Rate at GS51

Location SW018

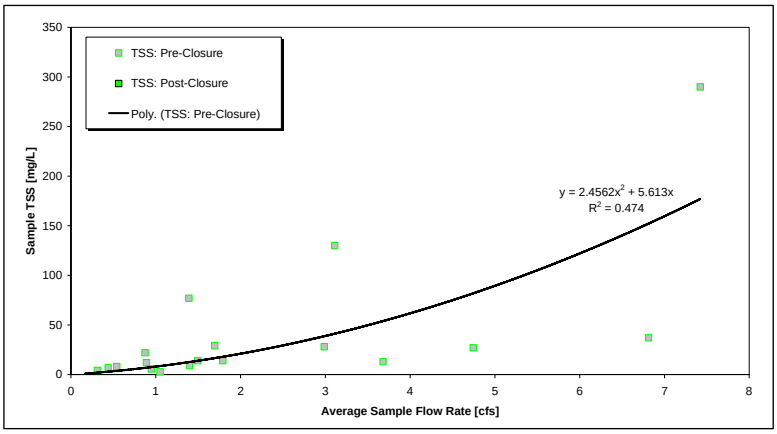


SW018 shows no statistically significant correlation between TSS and flow rate.

Note: No post-closure results through CY 2007.

Figure 3-199. Variation of TSS with Flow Rate at SW018

Location SW027

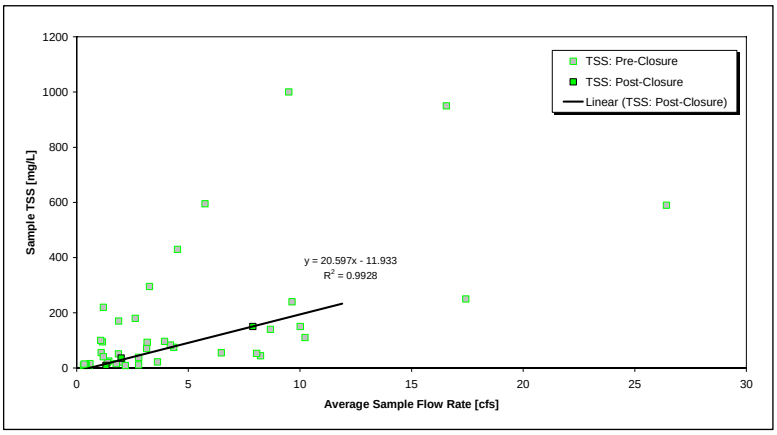


SW027 shows a weak correlation between increasing TSS and increasing flow rate.

Note: No post-closure results through CY 2007.

Figure 3-200. Variation of TSS with Flow Rate at SW027

Location SW093



SW093 shows a strong correlation between TSS and flow rate for post-closure data. Post-closure data also show lower TSS values for the corresponding flow rates compared to pre-closure data, confirming the effectiveness of erosion controls.

Figure 3-201. Variation of TSS with Flow Rate at SW093

The average composite sample period flow rate (cfs) is calculated as follows:

1. The date and time of each grab sample comprising the composite is obtained from the monitoring instrumentation.
2. The corresponding flow value for each grab sample is interpolated from the 15-minute interval flow data. Some TSS samples may not have flow values due to equipment failures and poor flow data due to winter icing conditions.
3. Since each grab sample is of the same volume (200 mL for flow-paced composites and generally 1 L for storm-event composites), the interpolated flow values are arithmetically averaged to obtain the applicable flow for the entire composite sampling period.

It should be noted that many locations were significantly influenced by closure activities that resulted in large areas of disturbed soils susceptible to transport as TSS. This increased transport of soil would result in increased TSS for the given flow rate.

3.1.5 Groundwater Data Interpretation and Evaluation

This section provides a summary of groundwater monitoring performed in 2007, separated into RFLMA-required and non-RFLMA-required. A discussion of groundwater conditions during 2007, focusing on areas of interest (i.e., major plumes), is then presented.

3.1.5.1 RFLMA Groundwater Monitoring Activities of 2007

Groundwater was monitored in accordance with RFLMA beginning in March 2007, when that agreement was signed. Several samples were also collected from the OU 1 Plume wells in accordance with the 2006 IMP (DOE 2006c, 2006d), before RFLMA was signed (Figure 3-202). Routine activities of the groundwater monitoring program in 2007 included sample collection, water level measurement, and well maintenance. Note that this "groundwater" monitoring also includes monitoring activities at several surface-water locations, as well as at some locations that may not clearly belong to either category. Examples of the former include performance monitoring locations within streams and ponds; examples of the latter include locations monitoring effluent from a treatment system. However, because all of these locations support groundwater monitoring objectives, the data collected from them in support of these objectives are included as part of the groundwater discussion.

The groundwater monitoring program also performed special, non-RFLMA monitoring to support various objectives. This is discussed in Section 3.1.5.2. Analytical data and other information generated via RFLMA (a.k.a. routine) and non-RFLMA (a.k.a. nonroutine) sampling have been reported in the corresponding quarterly reports (DOE 2007g, 2007h, and 2008a) and are included in Appendix B.

The network of groundwater monitoring locations changed during 2007 with the implementation of RFLMA. Changes largely represented requests and comments from the IMP/Water Working Group made during development of the 2005 IMP (K-H 2005d, 2005e), as reported in the 2005 and 2006 Annual Reports (DOE 2006e, 2007e). A summary of these changes, as implemented via RFLMA, is presented in Table 3-80. In addition to these changes, Sentinel well 45605, which was installed within the slump block south of former B991, was abandoned in late 2007 to make way for regrading activities on that hillside. A replacement well will be installed in 2008. The schedule by which this well was abandoned and will be replaced is planned such that no required samples will be missed from this location. (See Section 3.1.5.4 for additional discussion on this topic.)

Table 3-80. Changes to the Groundwater Monitoring Network in 2007

Location	General Area	Nature of Change	Reason for Change
15199	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
15299	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
15399	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
15499	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group

Table 3−80 (continued). Changes to the Groundwater Monitoring Network in 2007

Location	General Area	Nature of Change	Reason for Change
15599	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
15799	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
16199	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
16299	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
16399	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
16499	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
16599	MSPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
3586	MSPTS	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
70799	SPPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
70899	SPPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
70999	SPPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
71099	SPPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
70299	SPPTS	Required by IMP, not required by RFLMA	Unnecessary; per IMP group, selected 70099 for retention rather than 70299 due to quicker response time by the former well
1786	SPPTS	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
SPP Discharge Gallery	SPPTS	Required by IMP, not required by RFLMA	Unnecessary per RFLMA; however, retained in operational monitoring per the RFSOG
95699	ETPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
95799	ETPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
95899	ETPTS	Required by IMP, not required by RFLMA	Unnecessary, water level only; per IMP group
0487	OU1	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
4787	OU1	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
4887	OU1	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
10992	OU1	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
11092	OU1	Required by IMP, not required by RFLMA	Unnecessary; per IMP group
P114389	FC-1	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
37105	B371	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
21605	North IA	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
21305	North IA	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
21002	North IA	Required by IMP, not required by RFLMA	Water level only, not part of the remedy

Table 3−80 (continued). Changes to the Groundwater Monitoring Network in 2007

Location	General Area	Nature of Change	Reason for Change
39605	B881	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
37591	B891	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
37691	904 Pad	Required by IMP, not required by RFLMA	Water level only, not part of the remedy
POM3	ETPTS	Required by IMP, not required by RFLMA	Was to be sampled in coordination with CDPHE at CDPHE's request, but no requests were made, location was never sampled
891WEL	881 Hillside	From quarterly Decision Document well to biennial Evaluation well	"Decision Document" classification eliminated, well is consistent with Evaluation well characteristics (in source area)
51605	North Walnut Creek	From semiannual Sentinel well to biennial Evaluation well	Per IMP group; more frequent data not needed
70099	SPPTS	From semiannual Decision Document well to semiannual Sentinel well	"Decision Document" classification eliminated, well is consistent with Sentinel well characteristics (in drainage, near edge of plume)
B206989	No Name Gulch	From semiannual Sentinel well to semiannual AOC well	CDPHE request; no AOC well exists downgradient of this well
4087	No Name Gulch	From semiannual Sentinel well to semiannual AOC well	CDPHE request; no AOC well exists downgradient of this well
SPPTS influent location	SPPTS	From SPPMM02 (a.k.a. piezometer 71099) to SPIN (the collection well)	SPPMM02 was defined as influent monitoring location before SPIN was installed; SPIN accurately represents influent, while SPPMM02 only approximates it
Site-wide	--	Groundwater samples for analysis of Pu and/or Am will be field-filtered using 0.45 um in-line filter	Pu and Am adhere to particulates, which do not represent a significant contaminant transport mechanism in Site groundwater
MOUND R1-0, MOUND R2-E	MSPTS	Eliminate gross alpha, gross beta, Pu, Am, and U from analytical suite	Historic data justify deletion of these constituents from the suite

Notes: OU 1 = former Operable Unit 1, a.k.a. the 881 Hillside. IMP group comprised of representatives of DOE, CDPHE, EPA, and area municipalities (who are also commonly referred to as stakeholders). MOUND R1-0 = influent MSPTS sampling location; MOUND R2-E = effluent MSPTS sampling location.

The groundwater monitoring network set forth in RFLMA is subdivided and categorized as shown in Table 3-81.

Table 3-81. RFLMA Monitoring Classifications for the 2007 Groundwater Monitoring Network

Well Classification	General Objective	Number of Wells	Monitoring Frequency
AOC	Monitor groundwater quality and water levels in a drainage downgradient of a contaminant plume or group of plumes	9	Semiannual (2x/year)
Boundary	Monitor groundwater quality and water levels in Woman Creek and Walnut Creek drainages at eastern (downgradient) Site boundary	2	Annual (1x/year)
Sentinel	Monitor groundwater quality and water levels near contaminant plume edges and in drainages	29	Semiannual (2x/year)
Evaluation	Monitor groundwater quality and water levels in or near contaminant source areas and in the former IA	42	Biennial (1x/every 2 years)
RCRA	Monitor groundwater quality and water levels upgradient and downgradient of the PLF and the OLF	10	Quarterly (4x/year)
Treatment System[a, b]	Monitor quality of groundwater treatment system influent, effluent, and downgradient surface water	9	Semiannual (2x/year)
Surface-Water Support[a]	Monitor quality of surface water downgradient of contaminant plume	2	Semiannual (2x/year)

[a]Treatment system and surface-water support locations are not monitoring wells but are included for completeness.
[b]The PLFTS is not considered part of the groundwater monitoring network, and is discussed separately.

Table 3-82 presents the full 2007 schedule for RFLMA groundwater sample collection, a subset of which is summarized in Table 3-83 as those scheduled samples that were not successfully collected (e.g., due to dry conditions). Corresponding analytical results are published in the associated quarterly reports (DOE 2007g, 2007h, 2008a) and Appendix B.

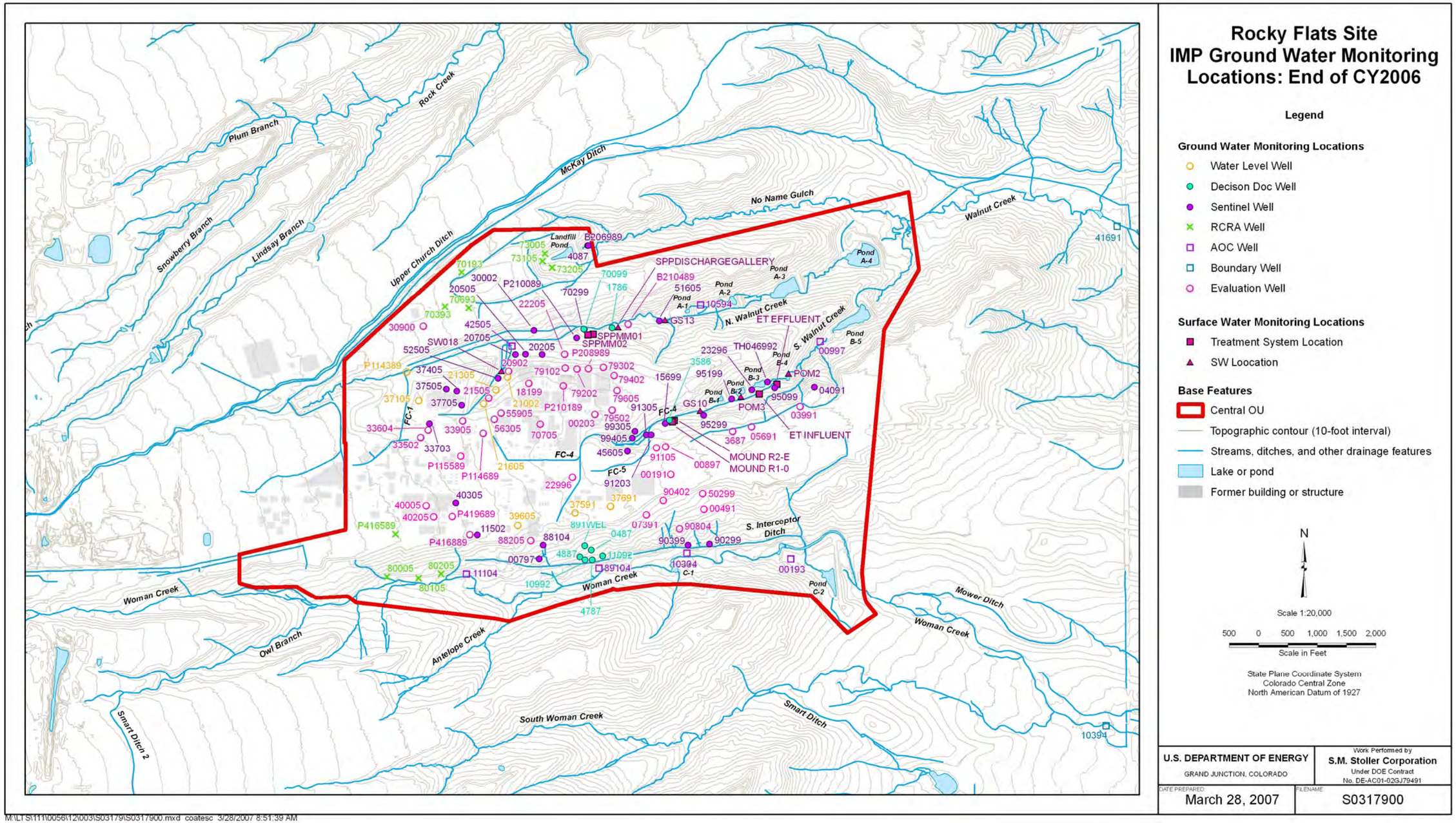


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Figure 3-202. Rocky Flats Site IMP Groundwater Monitoring Locations: End of CY 2006

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Table 3-82. Summary of Scheduled RFLMA-Required Groundwater Sampling in CY 2007 (by Quarter)

Location		Analytes					
ID	Location Classification	VOCs	U	Nitrate	Metals	Pu/Am	SVOCs
0487[a]	DD	1					
4087	AOC	2,4	2,4	2,4			
00193	AOC	2,4	2,4				
00797	S	2,4	2,4				
00997	AOC	2,4	2,4	2,4			
04091	S	2,4					
10304	AOC	2,4	2,4	2,4			
10394	B	2	2	2			
10594	AOC	2,4	2,4	2,4			
11104	AOC	2,4	2,4				
11502	S	2,4	2,4				
15699	S	2,4					
20205	S	2,4	2,4			2,4	
20505	S	2,4	2,4			2,4	
20705	S	2,4	2,4	2,4		2,4	
23296	S	2,4	2,4				
30002	S	2,4					
33703	S	2,4					
37405	S	2,4	2,4	2,4		2,4	
37505	S	2,4	2,4	2,4			
37705	S	2,4	2,4	2,4		2,4	
40305	S	2,4	2,4				
41691	B	2	2	2			
42505	AOC	2,4					
45605	S	2,4					
52505	S	2,4					
70099	S		2,4	2,4			
70193	RCRA	1,2,3,4			1,2,3,4		
70393	RCRA	1,2,3,4			1,2,3,4		
70693	RCRA	1,2,3,4			1,2,3,4		
73005	RCRA	1,2,3,4			1,2,3,4		
73105	RCRA	1,2,3,4			1,2,3,4		
73205	RCRA	1,2,3,4			1,2,3,4		
80005	RCRA	1,2,3,4			1,2,3,4		1,2,3,4
80105	RCRA	1,2,3,4			1,2,3,4		1,2,3,4
80205	RCRA	1,2,3,4			1,2,3,4		1,2,3,4
88104	S	2,4	2,4				
89104	AOC	2,4					
891WEL[a]	E	1					
90299	S	2,4					
90399	S	2,4					
91203	S	2,4					
91305	S	2,4	2,4	2,4			
95099	S	2,4					
95199	S	2,4					
95299	S	2,4					
99305	S	2,4	2,4	2,4			

Table 3−82 (continued). Summary of Scheduled RFLMA-Required Groundwater Sampling in CY 2007 (by Quarter)

Location		Analytes					
ID	**Location Classification**	**VOCs**	**U**	**Nitrate**	**Metals**	**Pu/Am**	**SVOCs**
99405	S	2,4	2,4	2,4			
B206989	AOC	2,4	2,4	2,4			
P210089	S	2,4	2,4	2,4			
P416589	RCRA	1,2,3,4			1,2,3,4		1,2,3,4
TH046992	S	2,4					
MOUND R1-0	TS	2,4					
MOUND R2-E	TS	2,4					
GS10	TS	2,4					
ET INFLUENT	TS	2,4					
ET EFFLUENT	TS	2,4					
POM2	TS	2,4					
SPPMM01	TS		2,4	2,4			
SPIN	TS		2,4	2,4			
GS13	TS		2,4	2,4			
SW018	SS	2,4					

Notes: [a]During first quarter CY 2007, prior to the signing of RFLMA on March 14, groundwater sampling was conducted in accordance with the 2006 IMP (DOE 2006c, 2006d). Groundwater samples were collected from OU 1 wells 891WEL and 0487 during the first quarter, which would not have occurred had RFLMA been in place at that time: under RFLMA, well 891WEL is now sampled biennially as an Evaluation well and sampling at well 0487 was discontinued.
ID = Identification (name) of well/sampling location
Location classifications: AOC = Area of Concern, B = Boundary, S = Sentinel, DD = Decision Document, E = Evaluation, RCRA = Resource Conservation and Recovery Act, TS = Treatment System, and SS = Surface Water Support
SVOCs = semivolatile organic compounds
2 (or other numeral) = Analyte requested for that quarter; if blank, analyte not requested

Table 3-83. Summary of Groundwater Samples Not Successfully Collected in 2007

Location		Analytes						Comments
ID	**Classification**	**VOCs**	**U**	**Nitrate**	**Metals**	**Pu/Am**	**SVOCs**	
4087	AOC	4	4	4				Dry well
90299	S	4						Dry well
95299	S	2, 4						Dry well
P210089	S	2						Sample for VOCs successfully collected in third quarter.

Notes: ID = Identification (name) of well/sampling location
RFLMA classifications: AOC = Area of Concern, B = Boundary, S = Sentinel, E = Evaluation, RCRA = Resource Conservation and Recovery Act, TS = Treatment System, SS = Surface Water Support
SVOCs = semivolatile organic compounds
2 (or other numeral) = Analyte requested; if blank, analyte not requested

3.1.5.2 Non-RFLMA Groundwater Monitoring Activities of 2007

Non-RFLMA (a.k.a. nonroutine) groundwater monitoring was performed in 2007 in support of several data needs, which generally fall within the following two categories:

- Investigative sampling; and
- Performance sampling.

Table 3-84 summarizes all non-RFLMA sample collection performed in 2007. In addition to this non-RFLMA sampling, additional non-RFLMA monitoring was performed through the Site-wide measurement of water levels as discussed in Section 3.1.3.5.

Table 3-84. Summary of Non-RFLMA Groundwater Monitoring Performed in 2007

Location		Analytes[a]				
ID	**Classification**	**VOCs**	**U**	**U Isotopes**	**Nitrate**	***α/β/γ***
00191[b]	E	2				
07391[b]	E	2	2			
10594	AOC		3	3		3
18199[b]	E	2				
33502[b]	E	2				
33604[b]	E	2				
45605	S	1				
51605[b]	E		2		2	
80205	RCRA		3	3		3
91105[b]	E	2				
99405	S		3	3		3
MOUND R1-0	TS	3,4 (4)				
MOUND R2-E	TS	3,4 (4)				
GS10	TS	3 (2)				
ET INFLUENT	TS	3,4 (2)				
ET EFFLUENT	TS	3,4 (2)				
SPIN	TS		1,2,3 (10)		1,2,3 (10)	
SPPMM01	TS		1,2,3 (10)		1,2,3 (10)	
SPP DIS GAL[c]	TS		1,2,3,4 (14)	3	1,2,3,4 (15)	3,4 (2)
GS13	TS		1,2 (9)		1,2,4 (10)	4

Notes: [a]For those locations where more than one non-RFLMA-required sample was collected, the total number of non-RFLMA samples collected in 2007 is indicated in parentheses.
[b]Samples from these Evaluation wells are normally collected biennially (i.e., every other year, during even-numbered years).
[c]The Solar Ponds Plume Discharge Gallery (SPP DIS GAL, a.k.a. SPP DG) is sampled in accordance with the RFSOG (DOE 2007f).
ID = Identification (name) of well/sampling location
RFLMA classifications: AOC = Area of Concern; B = Boundary; S = Sentinel; E = Evaluation; RCRA = Resource Conservation and Recovery Act; TS = Treatment System; and SS = Surface Water Support
α/β/γ = gross alpha, gross beta, and in some cases gross gamma
2 (or other numeral) = Quarter in which analyte was requested; if blank, analyte not requested

Investigative sampling may be performed when additional data needs are identified that may not be satisfied by the routine monitoring schedule. In 2007, as in the prior year, this was applicable to the SPPTS. Following plumbing repairs made in 2006 (DOE 2007e), samples were collected on an increased frequency from locations supporting the SPPTS, including SPIN, SPPMM01, SPP DG (a non-RFLMA location), and GS13. This “extra” sampling, which focused on nitrate and U concentrations, continued into third quarter CY 2007, at which point it was determined that the plumbing repairs had been successful in restoring water treatment. The SPPTS is discussed in greater detail in Section 3.1.2.10.

Investigative sampling was also performed via the continuation of the no-purge sampling evaluation begun in late 2005 (see DOE 2007e for additional discussion). This topic is addressed in Section 3.1.5.4.

Another application of investigative sampling was the collection of samples from select groundwater and surface-water monitoring locations for the determination of U isotope signature. This effort was conducted in part to support negotiations with the Colorado WQCC on the site-specific U standard, which the Site is requesting be eliminated in favor of the State-wide standard. These negotiations are discussed in greater detail in Section 2.3.

No Evaluation wells were scheduled for RFLMA sampling in 2007; however, several wells were sampled for investigative reasons, for example to evaluate the effects of nearby remediations on water quality. Wells sampled for this investigative sampling are listed in Table 3-85. Not included in this table is well 891WEL, which was sampled in the first quarter as a "Decision Document" well under the IMP (DOE 2006c, 2006d) and was subsequently reclassified as an Evaluation well through the signing of RFLMA (DOE 2007d). Results of this sampling are discussed in the text on the associated plumes (Section 3.1.5.3).

Table 3-85 Investigative Sampling of Evaluation Wells in 2007

Location	General Area	Reason for Sampling
00191	903 Pad	Collect additional data near VOC source area where HRC was inserted
07391	Ryan's Pit	Collect additional data near VOC source area where source was removed and HRC was inserted
18199	IHSS 118.1 (Carbon Tetrachloride Plume)	Collect additional data near VOC source area where source was removed and HRC was inserted
33502	VC Plume	Collect additional data near VOC source area following removal of overlying impermeable surfaces
33604	VC Plume	Collect additional data near VOC source area following removal of overlying impermeable surfaces
51605	North Walnut Creek	Collect additional data following repair of SPPTS (located upgradient of this well)
91105	OBP #2	Collect additional data near VOC source area where source was removed and HRC was inserted

HRC= Hydrogen Release Compound®

Performance sampling was conducted to evaluate groundwater treatment system maintenance activities on effluent water quality. During system upgrades in 2006, in which automated instrumentation was installed and plumbing was upgraded at the MSPTS and ETPTS, the plumbing at each treatment cell was updated to allow either downflow (water enters at the top of the cell and exits at the bottom—the original configuration of these systems) or upflow (water enters at the bottom and exits at the top) configurations. An upflow configuration can be more effective in some settings, as preferential flowpaths may not develop as readily. To determine whether the direction of flow has a significant influence on effluent water quality at the MSPTS and ETPTS, the flow direction was changed for both cells at each system and samples were collected after the systems had been allowed to equilibrate to these conditions. Results did not indicate any significant change in water quality, but there was a sharp increase in the maintenance required. See Section 2.6 for maintenance information.

3.1.5.3 Groundwater at the RFS: Discussion and Interpretations

This section presents a summary evaluation of groundwater quality and flow at the RFS during 2007. Groundwater quality is addressed first, followed by interpretations of groundwater flow; descriptions of special studies and activities concludes the section. Included in the discussion of water quality are descriptions of the behavior of and any notable activities at the groundwater treatment systems during 2007.

Trend Plots

Numerous statistical trend plots were constructed using analytical data collected from AOC, Boundary, Sentinel, and RCRA wells as part of this report. These are presented in Appendix B.3. Plots were also constructed for locations associated with the SPPTS, and are discussed later in this section.

The Sanitas™ software package (version 8.7; Sanitas Technologies 2007) was used for statistical calculations, including the construction of trend plots. (This is noted for the purpose of completeness only; this report does not make any software recommendations.) For simplicity, because the fundamental objective of AOC, Boundary, and Sentinel wells is related to detection monitoring, and because no interwell statistics were planned for these classes of wells (only intrawell assessment of the trend of an analyte over time at each given well), all wells were assigned downgradient positions. Only RCRA wells were assigned either upgradient or downgradient positions to support the related statistical evaluations, as described in Section 3.1.2.8 and Section 3.1.2.9.

Analytical data were handled as described in Section 3.1.1.2. Trends were calculated and plotted using the S-K statistical method, as recommended for Rocky Flats groundwater data (K-H 2004d) and in accordance with the RFSOG (DOE 2007f). Trends were only plotted where they were calculated to be at least 80 percent significant.

Table 3-86 summarizes the results of S-K trend plot calculations performed for AOC, Boundary, Sentinel, and RCRA wells. Only increasing and decreasing trends calculated to be at least 80 percent significant are included in this table. (Therefore, even if 95 percent significant, trends with zero slope are not included.) Additionally, only those groundwater monitoring well classifications scheduled for routine monitoring per RFLMA are included; this means Evaluation wells are omitted. Evaluation wells will next be scheduled for routine monitoring in 2008. Refer to Appendix B.3 for the plots and associated summary tables, and Figure 3-202 for well locations. Significant trends for select analytes and locations are discussed later in this section in the context of their respective groundwater contaminant plumes.

Table 3-86. Summary of S-K Trend Calculations

Well	General Location	Analyte	Trend	Significant at 95%?
		AOC Wells		
00997	Pond B-5	Uranium	Increasing	No
		Boundary Wells		
41691	Walnut Creek/Indiana Street	Nitrate	Increasing	No
41691	**Walnut Creek/Indiana Street**	**Uranium**	**Increasing**	**Yes**
10394	**Woman Creek/Indiana Street**	**Uranium**	**Decreasing**	**Yes**

Table 3−86 (continued). Summary of S-K Trend Calculations

Well	General Location	Analyte	Trend	Significant at 95%?
		Sentinel Wells		
15699	MSPTS	1,1,1-TCA	Decreasing	No
91203	OBP #2	1,1,1-TCA	Increasing	No
20505	B771	1,1-DCE	Increasing	No
90399	903 Pad/Ryan's Pit Plume-SID	1,1-DCE	Increasing	No
91203	OBP #2	1,1-DCE	Increasing	No
15699	MSPTS	1,2-DCA	Increasing	No
33703	OBP#1	1,3-DCB	Increasing	No
33703	**OBP#1**	**1,4-DCB**	**Increasing**	**Yes**
04091	**East Trenches Plume**	**Carbon tet**	**Decreasing**	**Yes***
23296	**ETPTS**	**Carbon tet**	**Decreasing**	**Yes**
90299	**903 Pad/Ryan's Pit Plume-SID**	**Carbon tet**	**Decreasing**	**Yes***
90399	903 Pad/Ryan's Pit Plume-SID	Carbon tet	Decreasing	No
33703	**OBP#1**	**Chlorobenzene**	**Decreasing**	**Yes**
15699	**MSPTS**	**Chloroform**	**Decreasing**	**Yes***
23296	**ETPTS**	**Chloroform**	**Decreasing**	**Yes**
90299	903 Pad/Ryan's Pit Plume-SID	Chloroform	Decreasing	No
20705	**B771**	**Cis-1,2-DCE**	**Increasing**	**Yes***
23296	**ETPTS**	**Cis-1,2-DCE**	**Increasing**	**Yes**
33703	OBP#1	Cis-1,2-DCE	Increasing	No
91203	**OBP #2**	**Cis-1,2-DCE**	**Increasing**	**Yes***
99305	**B991**	**Cis-1,2-DCE**	**Increasing**	**Yes**
99405	B991	Cis-1,2-DCE	Increasing	No
TH046992	**ETPTS**	**Cis-1,2-DCE**	**Increasing**	**Yes***
04091	East Trenches Plume	PCE	Decreasing	No
15699	MSPTS	PCE	Decreasing	No
23296	**ETPTS**	**PCE**	**Decreasing**	**Yes**
91203	OBP #2	PCE	Increasing	No
95199	ETPTS	PCE	Increasing	No
99305	B991	PCE	Increasing	No
99405	**B991**	**PCE**	**Increasing**	**Yes***
15699	**MSPTS**	**Trans-1,2-DCE**	**Increasing**	**Yes***
33703	OBP#1	Trans-1,2-DCE	Increasing	No
15699	MSPTS	TCE	Decreasing	No
23296	ETPTS	TCE	Decreasing	No
90299	**903 Pad/Ryan's Pit Plume-SID**	**TCE**	**Decreasing**	**Yes**
91203	OBP #2	TCE	Increasing	No
95199	ETPTS	TCE	Increasing	No
99405	**B991**	**TCE**	**Increasing**	**Yes***
15699	**MSPTS**	**VC**	**Increasing**	**Yes***
20705	B771	VC	Increasing	No
00797	**B881**	**Uranium**	**Increasing**	**Yes**
20705	**B771**	**Uranium**	**Increasing**	**Yes****
37505	B371	Uranium	Increasing	No
40305	B444	Uranium	Increasing	No
88104	**B881**	**Uranium**	**Decreasing**	**Yes****
99305	**B991**	**Uranium**	**Increasing**	**Yes**
99405	B991	Uranium	Decreasing	No
37705	**B371**	**Nitrate**	**Increasing**	**Yes***

Table 3−86 (continued). Summary of S-K Trend Calculations

Well	General Location	Analyte	Trend	Significant at 95%?
70099	**SPPTS**	**Nitrate**	**Decreasing**	**Yes**
99305	B991	Nitrate	Decreasing	No
20705	B771	Am-241	Decreasing	No
RCRA Wells				
70393	**PLF**	**1,1,1-TCA**	**Decreasing**	**Yes**
70393	**PLF**	**1,1-DCE**	**Decreasing**	**Yes**
70393	**PLF**	**PCE**	**Decreasing**	**Yes**
70393	**PLF**	**TCE**	**Decreasing**	**Yes**
70193	PLF	Se	Decreasing	No
70193	PLF	U	Decreasing	No

Notes: Only increasing and decreasing trends are included; indeterminate and zero-slope trends are not. Trends are listed if there is an 80 percent statistical significance; any decisions that may be made would be based on trends having a 95 percent significance. Bold entries designate those trends having a 95 percent significance. Of the RCRA well networks, only upgradient PLF members are represented by sufficient data for trending. Evaluation wells are not included because they were not scheduled for RFLMA biennial sampling in 2007.
DCA = dichloroethane; DCE = dichloroethene; DCB = dichlorobenzene
*Although the trend is calculated to have a 95 percent significance, 25 percent or more of the analytical data used to calculate this trend are nondetects. See Section 3.1.1.2 for discussion of how nondetects were handled in trending calculations.
**Although the trend is calculated to have a 95 percent significance, the data used to calculate this trend may be affected by well replacement. Results for this constituent from the original well are markedly different from those from the replacement well. These data sets may be separated in the future, rather than continue to be pooled, as additional data are collected from the replacement well and are sufficient for trending separately.

Additional data will be collected in accordance with RFLMA, and will further refine the trend plots. Given that most of the analytical data used in the trend calculations were collected before the Site was closed and in many cases are from wells that have since been replaced, some change in slope is to be expected as the hydrologic and geochemical systems stabilize. For a cross-walk of original and replacement wells, refer to the 2006 IMP (DOE 2006c: Appendix B, Table B-4).

Groundwater Plumes with Treatment Systems

Groundwater-quality data were obtained for all monitored areas in 2007. Analytical data have been published in quarterly reports issued for 2007 (DOE 2007g, 2007h, 2008a), plus Appendix B.6, and will not be duplicated here. Appendix B.3 includes the S-K trend plots that were contained within those documents as well as S-K trend plots for fourth quarter CY 2007.

Groundwater quality at the Site in 2007 was largely consistent with data reported in prior years. Groundwater plumes that were identified and characterized through the decades of pre-closure groundwater monitoring at the Site do not appear to have been greatly affected during 2007 by closure of the Site.

It bears repeating that the reduction in size and density of the post-closure groundwater monitoring network compared to that operating prior to Site closure does not permit the assessment of small-scale changes in plume configuration, nor in many other local-scale attributes. This is consistent with the vision and design of the closure network, which was never intended to provide the level of detail afforded by the extremely dense well network existing in past years.

This section describes the general groundwater quality in various areas of interest across the Site. Descriptions of activities and conditions in 2007 at the three main groundwater contaminant plume treatment systems (MSPTS, ETPTS, and SPPTS) are also provided.

Mound Plume and Treatment System

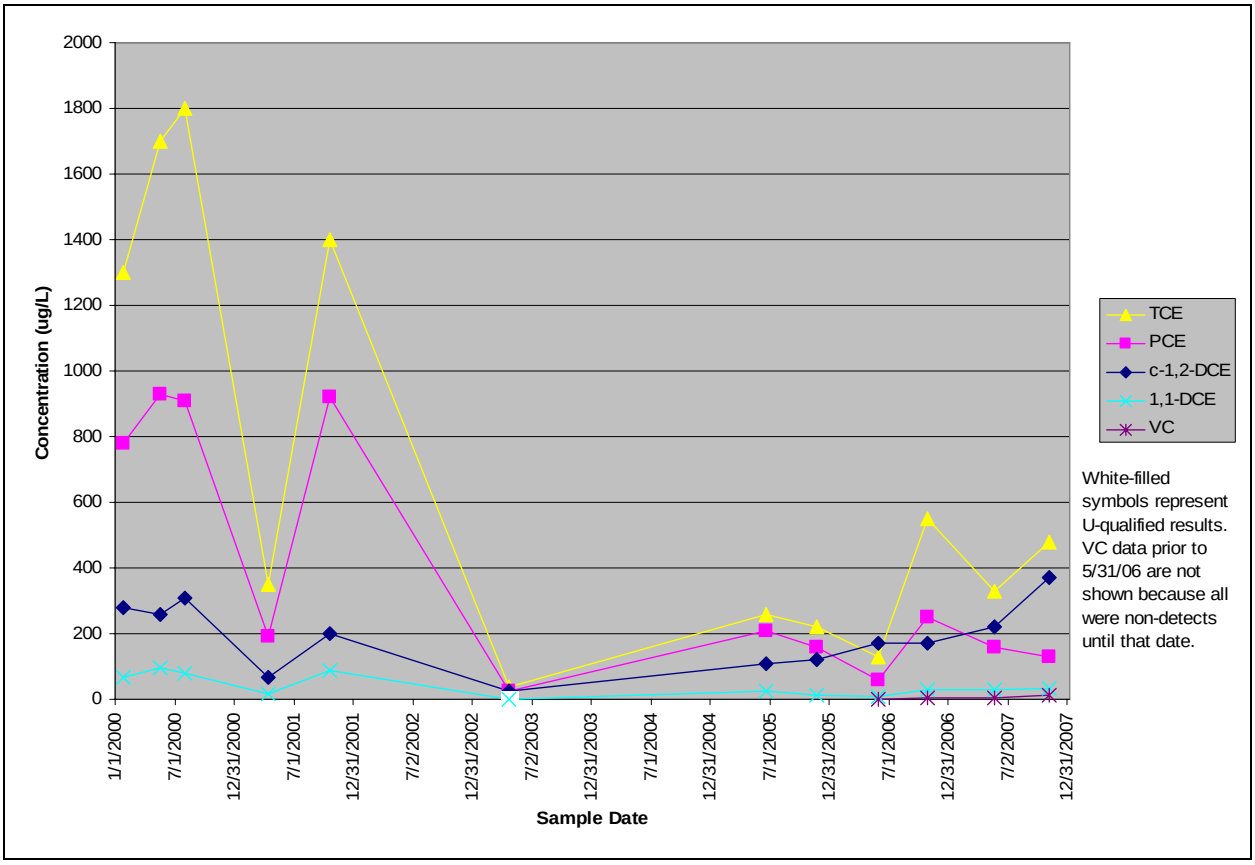
The Mound Plume (a.k.a. Mound Site Plume) is located north of the former 903 Pad. The source of the plume is a former drum storage area ("the Mound") that was in use in the 1950s. Some of the drums leaked, creating a groundwater contaminant plume extending north toward South Walnut Creek. The drums were removed in 1970, and contaminated soils were removed in 1997. The following paragraphs describe the plume and treatment system installed to address the groundwater contamination.

Mound Plume

The Mound Plume is characterized by elevated concentrations of PCE and TCE. The source area is very near OBP #2, source of another VOC plume, which is discussed separately below. Note, however, that flow from the OBP #2 source area is also captured and treated by the MSPTS, and has been since 2005.

No groundwater sample was collected from Evaluation well 00897 in 2007. Figure 3-203 displays concentrations of PCE, TCE, cis-1,2-dichloroethene (DCE), 1,1-DCE, and VC in samples from downgradient Sentinel well 15699. (Refer to DOE 2007g, 2007h, 2008a, and Appendix B.6 for additional analytical data from 2007.) As noted in the 2006 annual report (DOE 2007e), the concentrations of these constituents are correlated; for most data collected since 2000, the relative concentration of each mirrors its position in the degradation pathway of PCE. (With successive dechlorination, PCE is transformed to TCE and then to cis-1,2-DCE, 1,1-DCE, and VC [K-H 2004a].) With more active biodegradation of chlorinated solvents in the Mound Plume, one would expect to see a relative increase of daughter products and a corresponding decrease in concentrations of parent products. Indeed, data collected in 2007 suggest there is an increase in biodegradation, with concentrations of cis-1,2-DCE and VC increasing markedly since closure.

As discussed in the 2006 report (DOE 2007e) and confirmed with current data (see below), concentrations of these compounds have also increased sharply at the MSPTS. This increase has been attributed to the application of Hydrogen Release Compound® (HRC) in backfill of the remediated OBP #2 source area, with the HRC stimulating biodegradation of residual VOCs in the subsurface. This mechanism may also be the cause of increased daughter products reported in groundwater samples collected from well 15699. The additional volume represented by groundwater from the OBP #2 Plume that is now directed to the MSPTS (i.e., transported to the system by the backfilled storm drain) may increase the amount of groundwater infiltrating the walls and floor of the intercept trench associated with that treatment system. Samples from well 15699, located downgradient of that trench, may be reflecting the addition of OBP #2 water with its higher concentration of daughter products than is typical in Mound Plume groundwater.



Notes: RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d, Attachment 2, Table 1): PCE, 5; TCE, 5; cis-1,2-DCE, 70; 1,1-DCE, 7; VC, 0.2. Several results are qualified (J, D), but are not shown differently for the sake of simplicity.

Figure 3-203. VOC Concentrations in Samples from Sentinel Well 15699

S-K trend plots for well 15699 (see Appendix B.3, as well as Section 3.1.2.5 and Table 3-86) show a statistically significant (95 percent) decreasing trend for chloroform and similarly significant increasing trends in trans-1,2-DCE and VC concentrations. However, the two increasing trends may not be real, because most of the data for this well since 2000 for these constituents are reported as nondetects with elevated detection limits (e.g., 100 µg/L).

Mound Site Plume Treatment System

The MSPTS was the first groundwater intercept/treatment system installed at the Site to incorporate zero-valent iron (ZVI), and is actually among the first of its type in the world. This work was completed in 1998.

Routine maintenance activities performed at the MSPTS in 2007 are discussed in Section 2.6.1. No crust has yet been observed as this media was installed in the summer of 2006.

Flow rates through the MSPTS have remained well above pre-2005 levels due to the routing of groundwater flow through the backfilled storm-drain corridor and into the MSPTS intercept trench. (For additional background, see the 2005 Annual Report, DOE 2006e.) The total volume of water treated by the MSPTS during 2007 is estimated at approximately 326,000 gallons. This reflects an apparent decrease relative to the volume treated in 2005 and 2006, but still a several-

fold increase over the estimated volumes treated in most years prior to closure. Table 3-87 provides annual estimates of the volume of water treated by the MSPTS, and Figure 3-204 presents the corresponding hydrograph. Figure 3-205 provides a hydrograph for CY 2007.

Table 3-87. Estimated Volumes of Water Treated by the MSPTS

Calendar Year	Annual Estimates of Volume Treated (gallons)	Estimated Cumulative Volume Treated (gallons)
2000	258,000	660,000
2001	119,000	780,300
2002	53,000	833,000
2003	82,000	915,000
2004	86,000	1,001,000
2005	506,000	1,507,000
2006	430,000	1,937,000
2007	326,000	2,263,000

Note: Estimates for years 2000 through 2004 are compiled from K-H (2000a, 2000b, 2000c, 2000d, 2001a, 2003, 2005a, 2005f).

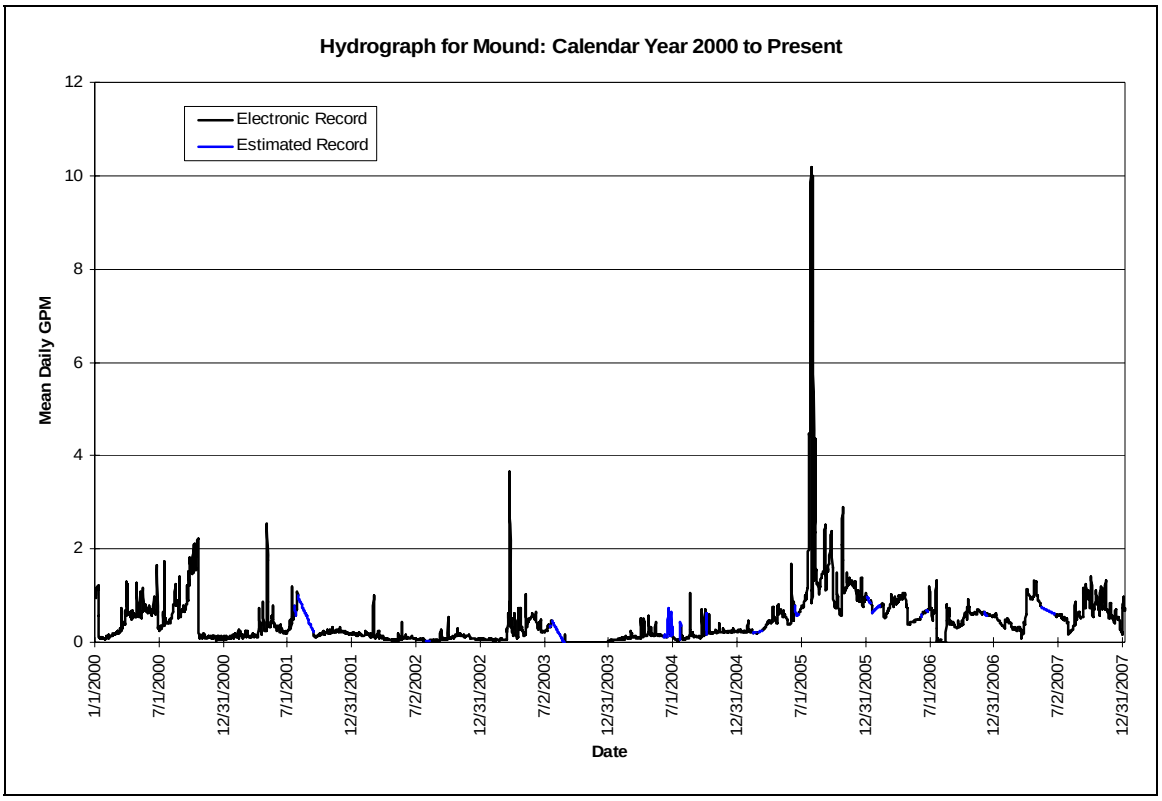


Figure 3-204. Hydrograph for MSPTS Since 2000

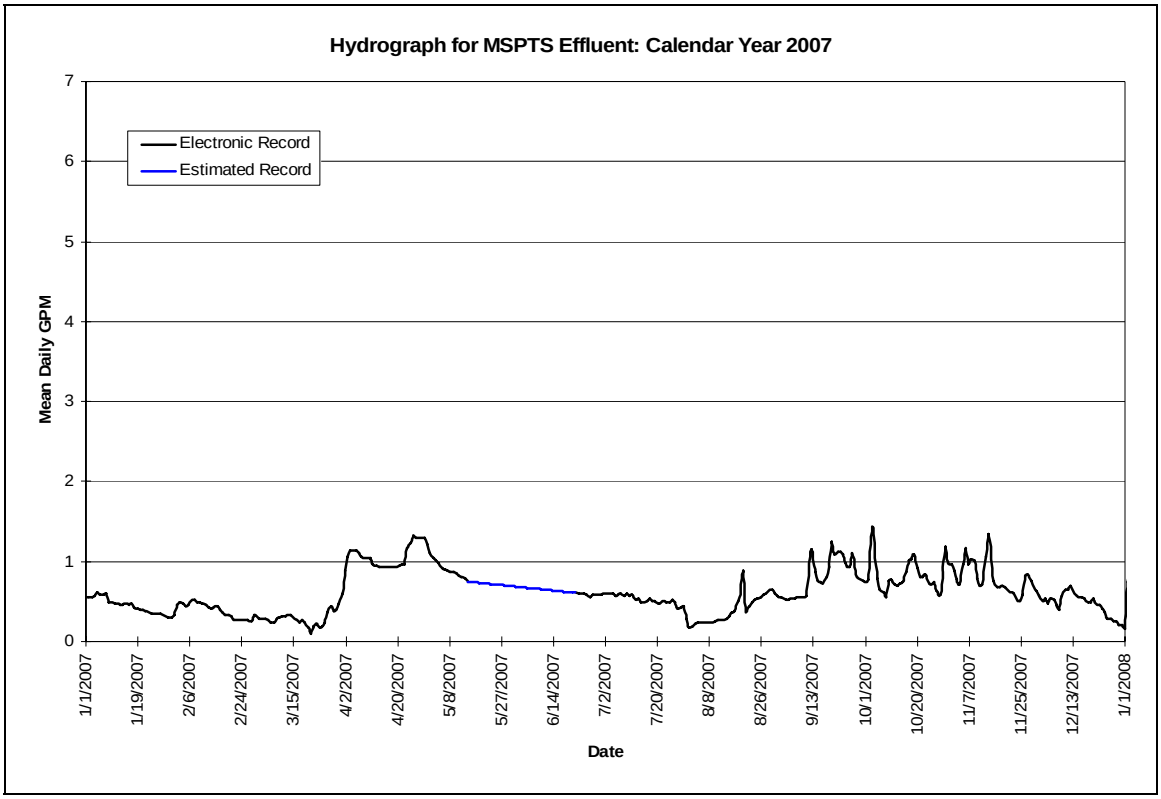


Figure 3-205. Hydrograph for MSPTS for CY 2007

As described for the MSPTS and ETPTS in the 2006 annual report (DOE 2007e), the plumbing at the treatment cells was upgraded that summer to provide an upflow condition within each cell (i.e., such that the influent water would enter each cell at the bottom, move upward through the media, and exit at the top of the cell, rather than the reverse). Flow direction was changed to upflow on September 12, 2007, to assess whether treatment effectiveness varied significantly under different flow conditions. Samples were collected on two occasions: approximately 1 and 2 months after the flow direction was changed. Results indicated no obvious, meaningful differences between the two flow regimes. However, because of the sharp increase in maintenance required while the MSPTS was operating under upflow conditions, the system was returned to downflow on January 17, 2008. (Maintenance was increased because the filter between the two cells kept plugging, as fine-grained, iron-based particles in the uppermost portion of the media were mobilized and trapped by the filter. As a result, the filter had to be flushed up to twice weekly; when operating in the downflow configuration, there is rarely a need to do this.)

The MSPTS was sampled six times in 2007: once each in June and July, twice in August, and once each in October and November. The June and November samples were collected in accordance with RFLMA, while the other samples were collected as performance checks and to assess upflow versus downflow conditions as described above.

In 2007, eight VOCs were detected in MSPTS influent at concentrations exceeding their respective Table 1 levels (DOE 2007d): 1,1,1-trichloroethane (TCA), 1,1-DCE, carbon

tetrachloride, chloroform, cis-1,2-DCE, PCE, TCE, and VC. Worth noting is the fact that 1,1,1-TCA had not been detected in MSPTS influent at these levels (i.e., above 200 µg/L) until July 2007, and was one of the primary contaminants detected in groundwater from the pre-remediated OBP #2. Its presence in MSPTS influent illustrates the effectiveness of the connection of the preferential pathway formed by the backfilled storm drain corridor (which transports groundwater from the OBP #2 area) to the MSPTS intercept trench.

Three VOCs were detected in MSPTS treated effluent in 2007 at concentrations exceeding RFLMA Table 1 values: cis-1,2-DCE, methylene chloride, and VC. These represent some of the more recalcitrant compounds, hence their presence in effluent even after the media replacement in 2006. These results are generally consistent with conditions reported in 2006 (DOE 2007e). As discussed below, this is also true of conditions at surface-water performance monitoring location GS10, which reported detections of VOCs but no exceedances of RFLMA Table 1 values.

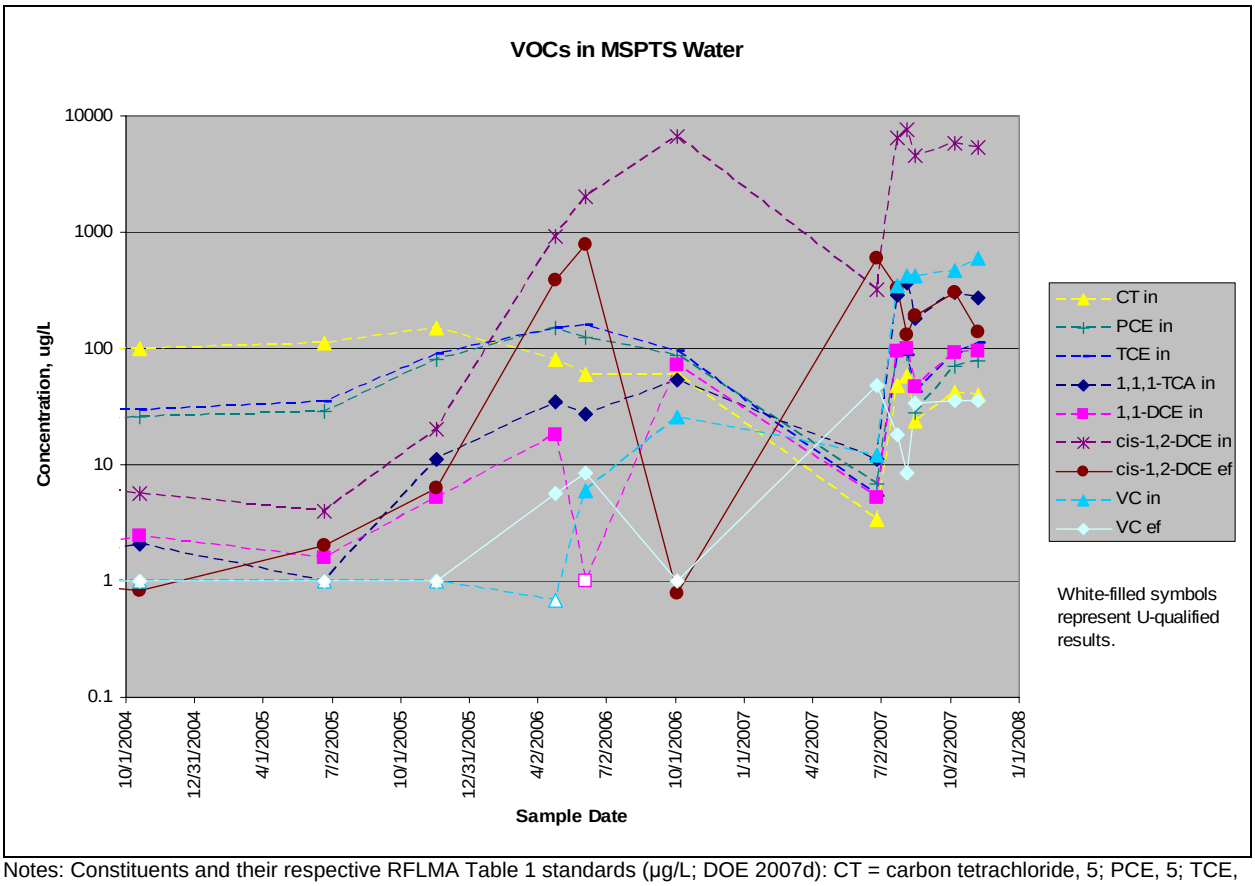
Table 3-88 summarizes MSPTS influent and effluent data. Refer to the quarterly reports (DOE 2007g, 2007h, 2008a) and Appendix B.6 for additional water-quality data for the MSPTS. Data for samples of MSPTS influent show the influence of closure activities performed upgradient of the system. As discussed in previous annual reports (DOE 2006e, 2007e), a preferential pathway (backfilled storm drain corridor) now routes groundwater impacted by the OBP #2 into the MSPTS groundwater intercept trench. Because the source area was remediated and HRC was added to the backfill to stimulate biodegradation of residual VOCs, the concentrations of daughter products cis-1,2-DCE, 1,1-DCE, and VC in MSPTS influent have increased.

Figure 3-206 illustrates how concentrations of some primary VOCs in MSPTS influent and effluent have been affected by these closure activities. This figure encompasses the period from immediately prior to the OBP #2 remediation to the end of 2007. As shown, the concentration of carbon tetrachloride has decreased over this period, while concentrations of PCE, TCE, 1,1,1-TCA, and daughter products from these constituents (1,1-DCE, cis-1,2-DCE, and VC) have increased. This is interpreted to be a reflection of the increased volume of water reaching the MSPTS from the OBP #2 area, relative to the volume of flow from this area reaching the MSPTS prior to remediation of that source area.

Table 3-88. Select VOC Data (µg/L) from MSPTS Influent and Effluent

Date	1,1,1-TCA		1,1-DCE		CT		CF		cis-1,2-DCE		MCl		PCE		TCE		VC	
	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E	R1-0	R2-E
1/27/00	8 (J)	1 (U)	**10**	1 (U)	**110**	1 (U)	**25**	1 (U)	57	1	**5 (BJ)**	1 (B)	**120**	0.1 (J)	**150**	1 (U)	10 (U)	1 (U)
2/8/00	9 (J)	1 (U)	**10**	1 (U)	**110**	1 (U)	**25**	1 (U)	59	2	**6 (JB)**	2 (B)	**96**	1 (U)	**140**	1 (U)	10 (U)	0.1 (J)
3/7/00	9 (J)	1 (U)	**12**	1 (U)	**110**	1 (U)	**26**	1 (U)	62	2	14 (B)	0.9 (JB)	**100**	1 (U)	**160**	1 (U)	10 (U)	1 (U)
4/26/00	7 (J)	1 (U)	**10**	1 (U)	**96**	1 (U)	**24**	1 (U)	61	4	20 (B)	0.8 (JB)	**110**	1 (U)	**140**	1 (U)	10 (U)	0.2 (J)
5/15/00	6	1 (U)	**8**	1 (U)	**49 (D)**	1 (U)	**19**	1 (U)	42 (D)	3	0.1 (JB)	0.7 (BJ)	**68 (D)**	1 (U)	**87 (D)**	1 (U)	**0.3 (J)**	1 (U)
6/14/00	8	1 (U)	**10**	1 (U)	**130**	1 (U)	**24**	1 (U)	42	1	3 (BJ)	0.2 (BJ)	**130**	1 (U)	**150**	1 (U)	10 (U)	1 (U)
7/19/00	4 (J)	1 (U)	6	1 (U)	**63**	1 (U)	**12**	1 (U)	42	2	4 (JB)	0.9 (JB)	**64**	1 (U)	**79**	1 (U)	5 (U)	1 (U)
8/16/00	10 (J)	1 (U)	**10 (J)**	1	**180**	1 (U)	**31**	1 (U)	39	1 (J)	23 (B)	0.3 (BJ)	**100**	1 (U)	**140**	1 (U)	10 (U)	1 (U)
9/13/00	5.9	0.5 (U)	7	0.5 (U)	**122**	0.5 (U)	**25.4**	0.5 (U)	32.1	0.74	1 (U)	0.57	**65.3**	0.5 (U)	**99.9**	0.5 (U)	1 (U)	0.5 (U)
10/25/00	6.3	0.5 (U)	**8**	0.5 (U)	**133**	0.5 (U)	**25.6**	0.5 (U)	37.3	0.69	1 (U)	0.5 (U)	**68.7**	0.33 (J)	**104**	0.5 (U)	1 (U)	0.5 (U)
4/19/01	4 (D)	1 (U)	5 (D)	1 (U)	**73 (D)**	1 (U)	**20 (D)**	0.6 (J)	38 (D)	3	2 (U)	**6**	**44 (D)**	1 (U)	**76 (D)**	1 (U)	2 (U)	1 (U)
10/25/01	3.4	1 (U)	5.1	1 (U)	**130**	1 (U)	**23**	1 (U)	23	0.9 (J)	1 (U)	1 (U)	**50**	1 (U)	**74**	1 (U)	1 (U)	1 (U)
4/25/02	2.9	1 (U)	4.5	1 (U)	**110**	1 (U)	**26**	1 (U)	24	1.8	1 (U)	1 (U)	**41**	1 (U)	**76**	1 (U)	1 (U)	1 (U)
10/21/02	2.6	1 (U)	1.06	1 (U)	**155**	1 (U)	**27.5**	1 (U)	11.3	1 (U)	1 (U)	1 (U)	**33.6**	1 (U)	**46.8**	1 (U)	1 (U)	1 (U)
4/17/03	2.8	1 (U)	2.5	0.23 (J)	**73**	1 (U)	**19**	0.93 (J)	23	4.4	1 (U)	3.5 (B)	**31**	0.38 (J)	**38**	0.31 (J)	**0.81 (J)**	1 (U)
12/1/03	2	1 (U)	2	1 (U)	**104 (D)**	1 (U)	**21.4**	1 (U)	9	1	1 (U)	1 (U)	**22.6**	1 (U)	**31.4**	1 (U)	1 (U)	1 (U)
6/9/04	1.34	1 (U)	1.49	1 (U)	**91.9**	1 (U)	**22.4**	1 (U)	6.98	1 (U)	1 (U)	1 (U)	**21.5**	1 (U)	**28.3**	1 (U)	1 (U)	1 (U)
10/20/04	2.07	1 (U)	2.47	1 (U)	**100**	1 (U)	**24.6**	1 (U)	5.59	0.83 (J)	1 (U)	1 (U)	**25.7**	0.72 (J)	**29.4**	2.74	1 (U)	1 (U)
6/21/05	1 (U)	1 (U)	1.58	1 (U)	**110**	1 (U)	**30.4**	0.48 (J)	3.93	2.04	0.74 (J)	1 (U)	**29.1**	1.66	**34.9**	1.28	1 (U)	1 (U)
11/18/05	11	1 (U)	5.2	0.67 (J)	**150**	1 (U)	**31**	0.42 (J)	20	6.3	1 (U)	1 (U)	**81**	4.5	**90**	1.6	1 (U)	1 (U)
4/25/06	35	0.16 (U)	**18**	4.8	**81**	0.19 (U)	**56**	0.16 (U)	**920**	**390**	**20**	1.7	**150**	**5.7**	**150**	**7.6**	0.68 (U)	**5.6**
6/5/06	27.4	1 (U)	1 (U)	1 (U)	**60.1**	1 (U)	**45**	1 (U)	**2040 (D)**	**793 (D)**	**27.2**	1 (U)	**125 (D)**	3	**158 (D)**	4.6	**6**	**8.6**
10/5/06	53.3	1 (U)	**73.1**	1 (U)	**60.1**	1 (U)	**45.1**	1 (U)	**6580 (D)**	0.78 (J)	**6.9**	**7.3**	**87.2**	1 (U)	**93.7**	1 (U)	**26.1**	1 (U)
6/26/07	11	0.43 (U)	5.2	1.4 (J)	3.4	0.51 (U)	**4.1**	0.43 (U)	**320**	**590**	0.32 (U)	2.6 (J)	**6.8**	0.53 (U)	**5.3**	0.43 (U)	**12**	**48**
7/24/07	**290**	0.32 (U)	**95**	0.52 (J)	**48 (J)**	0.38 (U)	**77**	0.32 (U)	**6500**	**330**	21 (U)	**6.7**	**94**	0.4 (U)	**88**	0.32 (U)	**350**	**18**
8/6/07	**370**	0.16 (U)	**99**	0.35 (J)	**58**	0.19 (U)	**99**	0.16 (U)	**7700**	**130**	8.5 (U)	3.3	**89**	0.2 (U)	**88**	0.16 (U)	**420**	**8.6**
8/16/07	180	0.32 (U)	**47**	0.4 (J)	**24**	0.38 (U)	**67**	0.32 (U)	**4500**	**190**	4.1 (JB)	5.4 (B)	**28**	0.4 (U)	**42**	0.32 (U)	**420**	**34**
10/9/07	**300**	0.16 (U)	**93**	0.44 (J)	**42**	0.19 (U)	**88**	0.16 (U)	**5800**	**300**	13 (U)	**4.8**	**70**	0.2 (U)	**93**	0.16 (U)	**470**	**36**
11/8/07	**270**	0.16 (U)	**94**	0.5 (J)	**40**	0.19 (U)	**85**	0.16 (U)	**5400**	**140**	13 (U)	**4.7**	**78**	0.2 (U)	**110**	0.16 (U)	**590**	**36**

Notes: 1,1,1-TCA = 1,1,1-trichloroethane; 1,1-DCE = 1,1-dichloroethene; CT = carbon tetrachloride; CF = chloroform; cis-1,2-DCE = cis-1,2-dichloroethene; MCl = methylene chloride; PCE = tetrachloroethene; TCE = trichloroethene; VC = vinyl chloride. R1-0 = influent, R2-E = effluent; formal sampling location names are Mound R1-0 and Mound R2-E. Shaded, bold value indicates detected concentration exceeds corresponding level stipulated in RFLMA Attachment 2, Table 1 (DOE 2007d). Lab qualifiers: J = result is estimated below the sample quantitation limit; U = analyte not detected at the indicated concentration; B = chemical was also detected in the blank; D = analysis was performed at a dilution.



Notes: Constituents and their respective RFLMA Table 1 standards (µg/L; DOE 2007d): CT = carbon tetrachloride, 5; PCE, 5; TCE, 5; 1,1,1-TCA, 200; 1,1-DCE, 7; cis-1,2-DCE, 70; VC = vinyl chloride, 0.2. in = influent (Mound R1-0), ef = effluent (Mound R2-E). Lab qualifiers not indicated except for U (analyte not detected at the indicated concentration); other qualified data plotted at reported value for simplicity. Note logarithmic concentration scale.

Figure 3-206. Recent Concentrations of Select VOCs in MSPTS Influent and Effluent

Four grab samples for the analysis of VOCs were collected in 2007 at the performance monitoring location for the MSPTS, surface-water station GS10. Two of these samples, one each collected in June and November, represent RFLMA-required monitoring; the other two, both collected in August, represent additional, non-RFLMA performance checks. As in prior years, results include detections of VOCs; none exceeded the corresponding surface-water action levels. VOCs detected in 2007 are summarized in Table 3-89.

Table 3-89. Summary of VOCs Detected in 2007 at GS10

Date	Constituent	Result (µg/L)	Qualifier
6/5/2007	TCE	0.18	J
6/5/2007	cis-1,2-DCE	66	
8/6/2007	cis-1,2-DCE	1.7	
11/8/2007	1,2-DCA	0.15	J
11/8/2007	cis-1,2-DCE	4.7	

East Trenches Plume and Treatment System

The East Trenches Plume is an area of contamination named after several buried disposal trenches that contribute VOCs to groundwater. These trenches are located on the pediment south of South Walnut Creek, in former OU 2. The source of this plume is predominantly Trenches T-3 and T-4, which were remediated in 1996. In addition, a portion of the 903 Pad Plume flows toward the northeast and joins the East Trenches Plume. A treatment system (the ETPTS) was installed in 1999 to intercept and treat contaminated groundwater flowing toward the B-Series Ponds and South Walnut Creek.

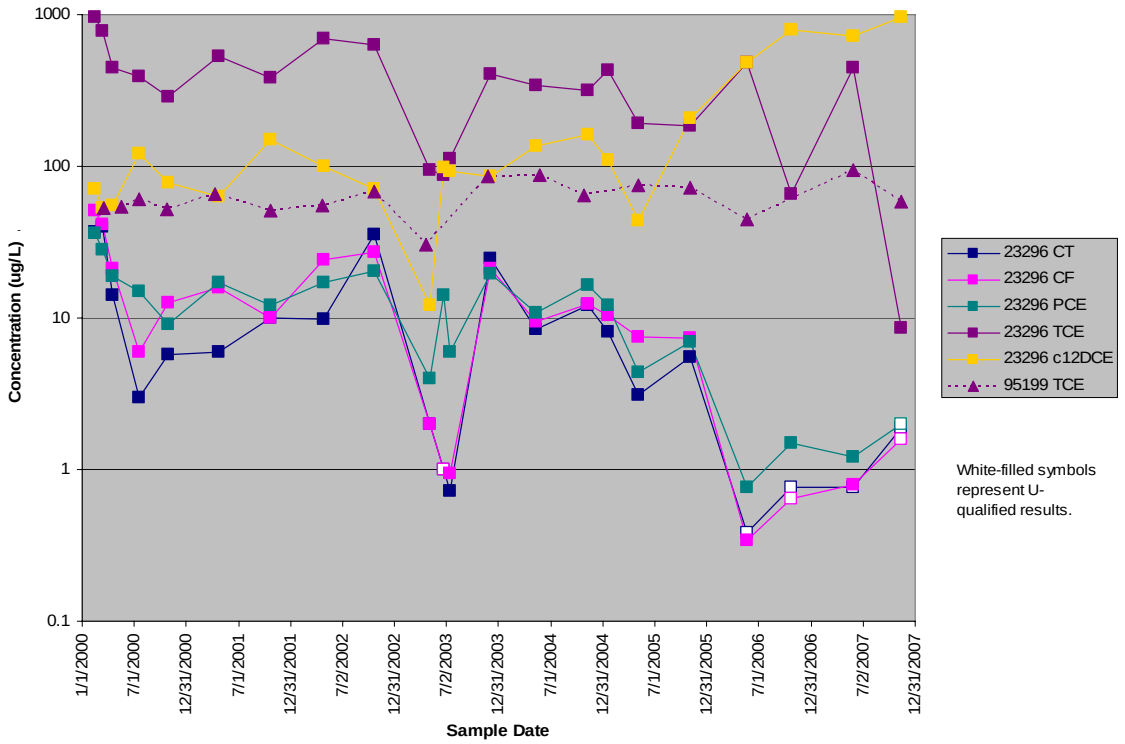
East Trenches Plume

Evaluation wells 3687 and 05691 monitor the source areas of the East Trenches Plume, Trenches T-3 and T-4, respectively. More distal portions of the plume are monitored by Evaluation well 03991 and Sentinel well 04091 to the east-northeast, and AOC well 00997 at the mouth of Pond B-5 in the South Walnut Creek drainage. Sentinel wells 95099, 95199, 95299, 23296, and TH046991 monitor the ETPTS and downgradient portions of the plume.

None of the Evaluation wells was sampled in 2007. The AOC and Sentinel wells were all sampled in 2007.

AOC well 00997 was sampled twice in 2007 (May and November). No constituents exceeded the RFLMA Table 1 standards. Nitrate was detected in the May sample (at 4.8 mg/L), and one VOC was detected in the November sample (1,3-dichlorobenzene (DCB), at 0.36 µg/L, J-qualified). Nitrate is typically detected in samples from this well, although at concentrations less than 1 mg/L. AOC well 00997 will continue to be monitored in accordance with RFLMA.

All Sentinel wells supporting the East Trenches Plume/ETPTS were sampled twice in 2007. Analytical data for these wells in 2007 were generally consistent with those from recent years. (Well TH046992 is represented by fewer data, as it was added to the network in 2005.) RFLMA Table 1 standards were exceeded in samples from wells 23296 and 95199, which is consistent with past conditions, as is the fact that samples from well 23296 contained the highest concentrations of VOCs of this group of wells. Figure 3-207 displays VOCs most commonly detected in these two wells at concentrations exceeding the corresponding RFLMA action level. Refer to Appendix B.3 for S-K trend plots.



Notes: Constituents and their respective RFLMA Table 1 standards (µg/L; DOE 2007d): CT = carbon tetrachloride, 5; CF = chloroform, 3.4; PCE, 5; TCE, 5; c12DCE = cis-1,2-DCE, 70. In addition to nondetects (U-qualified results), several other results were qualified (D, J), but are not shown differently for the sake of simplicity. Note logarithmic concentration scale.

Figure 3-207. Most Commonly Detected VOCs in Sentinel Wells Downgradient of the ETPTS

S-K trend plots (Appendix B.3, and summarized above in Table 3-86) indicate 95 percent significant trends for several constituents monitored in East Trenches Plume wells. Well 23296 is represented by significant trends for carbon tetrachloride (decreasing), chloroform (decreasing), cis-1,2-DCE (increasing), and PCE (decreasing). These trends suggest the source removal actions are affecting concentrations of VOCs as desired; the increasing trend in cis-1,2-DCE suggests ongoing degradation of parent compounds.

Well TH046992 is also represented by a significant trend, in this case for cis-1,2-DCE (increasing), although the data set includes many nondetects and therefore the trend may not be valid. Distal well 04091 is represented by a significant trend for carbon tetrachloride (decreasing); this data set also contains many nondetects.

Wells monitoring the East Trenches Plume will continue to be monitored in accordance with RFLMA. As additional data are collected, additional significant trends should become evident.

East Trenches Plume Treatment System

The ETPTS was installed in 1999. Its design is very similar to that of the MSPTS. However, the intercept trench for the ETPTS is 1,200 feet long, compared to the 220-foot-long MSPTS trench.

The longer trench is required to intercept the broader East Trenches Plume as it flows toward South Walnut Creek and the B-Series Ponds.

The ETPTS treated approximately 951,000 gallons of water in 2007, a nearly 50 percent increase over the volume treated in 2006. This increase is most likely due to the increased precipitation in 2007 relative to 2006, particularly in the early winter months. This volume also continues the pattern observed since closure, when the flow to the system was reduced by a factor of two to three. See Table 3-90 for annual estimates of the volume of water treated by the ETPTS, and Figure 3-208 for a hydrograph showing flow estimates since January 2000. Figure 3-209 provides a hydrograph for CY 2007.

Table 3-90. Estimated Volumes of Water Treated by the ETPTS

Calendar Year	Annual Estimates of Volume Treated (gallons)	Estimated Cumulative Volume Treated (gallons)
2000	1,633,000	2,800,000
2001	1,900,000	4,700,000
2002	≤1,000,000	5,700,000
2003	2,100,000	7,800,000
2004	1,500,000	9,300,000
2005	1,800,000	11,100,000
2006	675,000	11,775,000
2007	951,000	12,726,000

Note: Estimates for years 2000 through 2004 are compiled from K-H (2000a, 2000b, 2000c, 2000d, 2001a, 2003, 2005a, 2005f).

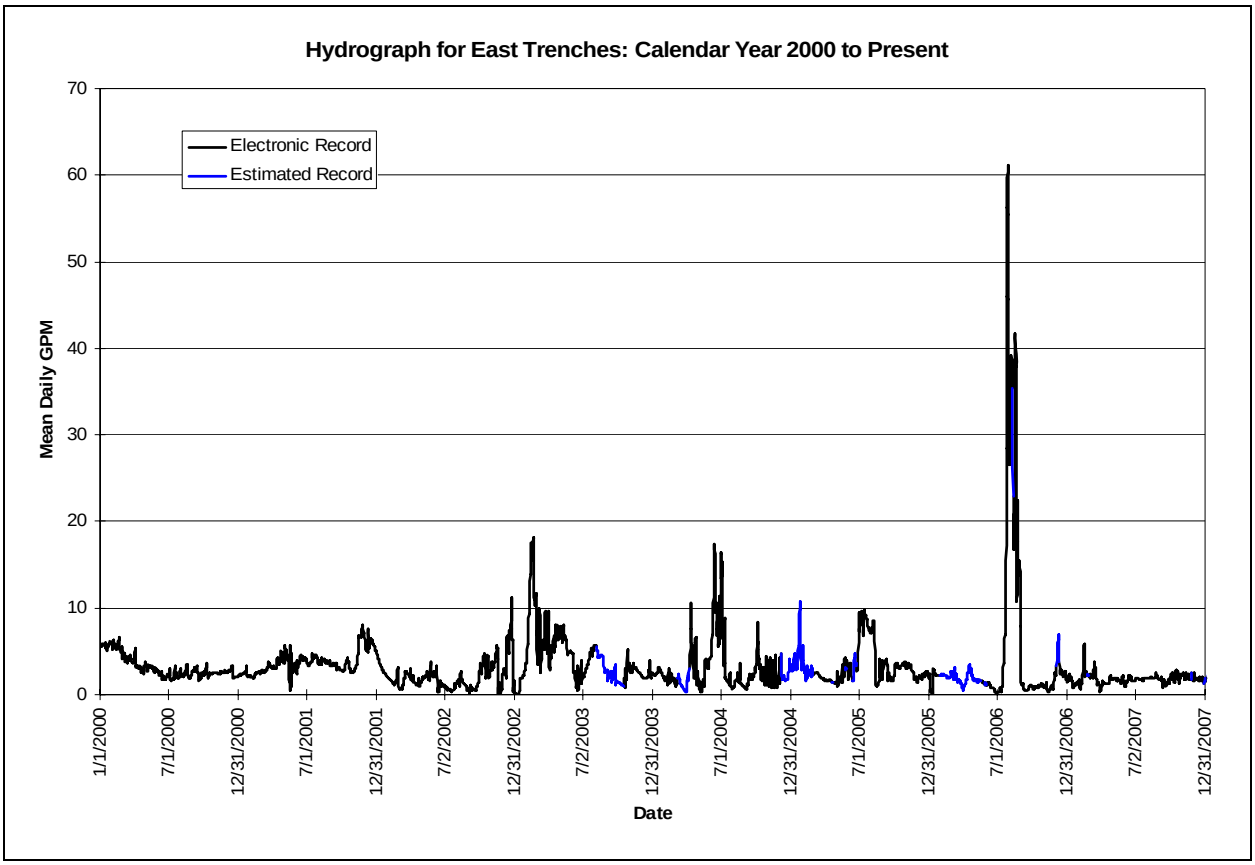


Figure 3-208. Hydrograph for ETPTS Since 2000

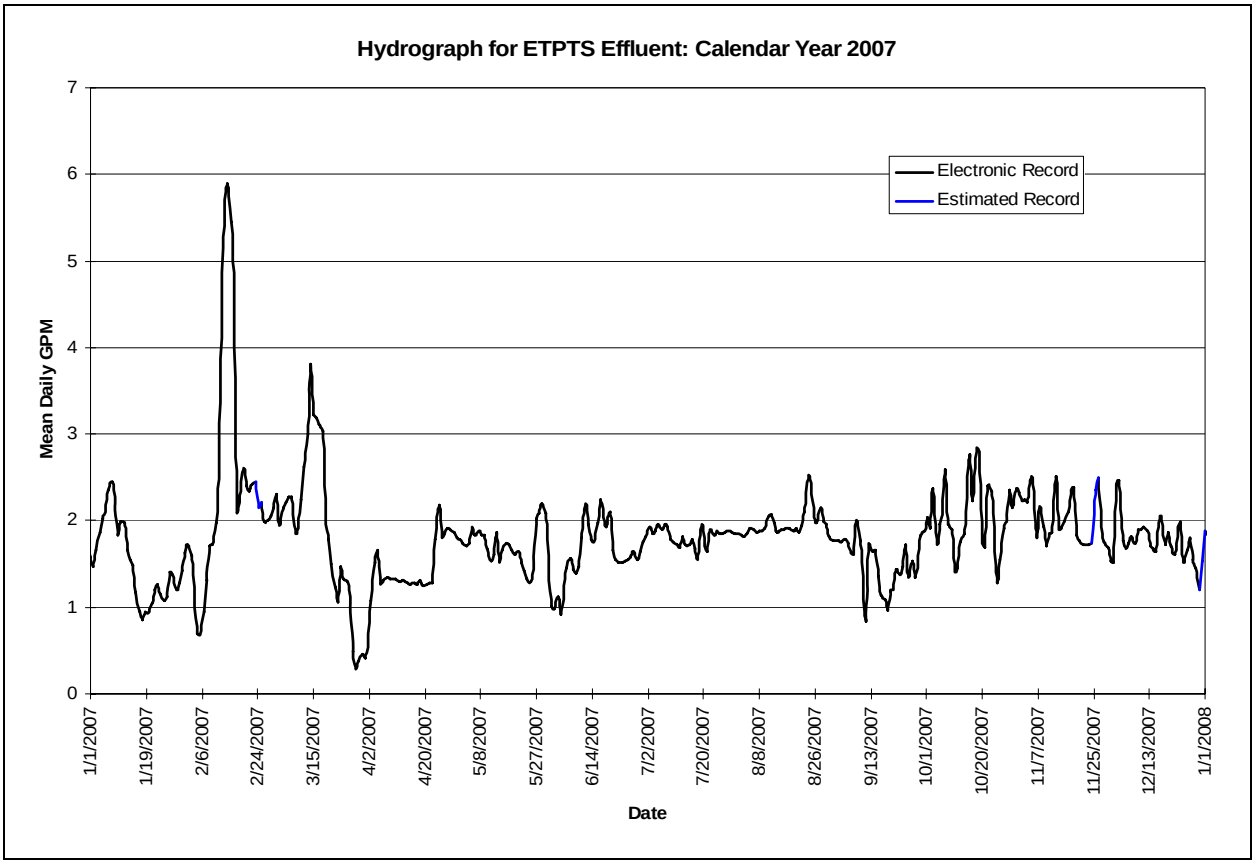


Figure 3-209. Hydrograph for ETPTS for CY 2007

Routine maintenance activities at the ETPTS were conducted throughout 2007, and are reported in Section 2.6.2. As described in the 2006 annual report (DOE 2007e), the ETPTS and MSPTS treatment cell plumbing was upgraded that year to provide an upflow condition within each cell. As at the MSPTS, the ETPTS was changed to upflow configuration in September 2007 to assess whether treatment effectiveness varied significantly under different flow conditions. Samples were collected on two occasions: approximately 1 and 2 months after the change in flow direction. Results indicated no obvious, meaningful differences in flow regimes, and the system was returned to downflow in January 2008 to reduce maintenance needs.

The ETPTS was sampled four times: once each in June, August, October, and November. The June and November samples were collected in accordance with RFLMA, while the August and October samples were collected for performance checks and to support the upflow versus downflow assessment described above.

Treatment of groundwater by the ETPTS in 2007 was generally consistent with previous years in which it operated effectively (i.e., those years in which the media did not need to be replaced). Effluent water quality reflected a dramatic reduction in VOC load, but as in other years there were some VOCs detected in the effluent. A summary of the VOCs most commonly detected since 2003 (for brevity) is presented in Table 3-91; refer to quarterly reports (DOE 2007g, 2007h, 2008a) and Appendix B.6 for additional data from 2007.

Table 3-91. Summary of Recent VOC Data from ETPTS Influent and Effluent

Date	CT		CF		MCl		PCE		TCE	
	ET In	ET Ef	ET In	ET Ef	ET In	ET Ef	ET In	ET Ef	ET In	ET Ef
1/28/2004	**130**	1 (U)	**71**	1.1	5 (U)	**20**	**290**	0.93 (J)	**2300**	1.8
2/25/2004	**150**	1 (U)	**71**	1.4	2.7 (JB)	**19 (B)**	**270**	1.1	**2400**	2.5
3/22/2004	**180**	1 (U)	**71**	1	2.6 (JB)	**21**	**270**	1.2	**2400**	1.8
5/26/2004	**216**	1 (U)	**65.1**	1 (U)	1 (U)	**17**	**618 (D)**	3.38	**5510 (D)**	**6.36**
6/22/2004	**130**	1 (U)	**59**	1 (U)	**6.7 (JB)**	**14 (B)**	**240**	1.9	**1900**	1.8
7/29/2004	**142 (D)**	1 (U)	**54.1**	1 (U)	2.3	**14.1 (B)**	**354 (D)**	1.8	**1960 (D)**	0.69 (J)
8/19/2004	**68.1**	1 (U)	**26.6**	1 (U)	1 (U)	**13.7**	**137 (D)**	1.2	**774 (D)**	0.55 (J)
10/20/2004	**160**	1 (U)	**72.9**	2.56	1 (U)	**15.6**	**230 (D)**	**2.13**	**1170 (D)**	1.91
5/12/2005	**131**	1 (U)	**66**	**22.2**	1 (U)	**14.6**	**256 (D)**	**21.9**	**2280 (D)**	**33.1**
6/7/2005	**160**	1 (U)	**81**	**30**	10 (U)	**22 (B)**	**340**	**36**	**3300**	**66**
11/2/2005	**151**	1 (U)	**74.8**	0.73 (J)	250 (U)	**18.2**	**350**	1 (U)	**2500**	4.4
5/17/2006	**170**	0.23 (J)	**75 (J)**	1.9	0.32 (U)	**32**	**280**	4.1	**2800**	2.8
10/31/2006	**120**	0.19 (U)	**75**	0.16 (U)	6.4 (U)	0.32 (U)	**290**	0.85 (J)	**2100**	0.18 (J)
6/26/2007	**110**	0.19 (U)	**70**	0.16 (U)	1.6 (U)	0.32 (U)	**320**	**9.7**	**2500**	4.8
8/16/2007	**150**	0.19 (U)	**81**	0.16 (U)	**8 (JB)**	0.73 (JB)	**390**	4.4	**2500**	1.1
10/9/2007	**130**	0.19 (U)	**71**	0.25 (J)	3.2 (U)	1.7	**270**	**9.5**	**2200**	**5.3**
11/8/2007	**110**	0.19 (U)	**64**	0.16 (U)	3.2 (U)	0.32 (U)	**260**	**9.1**	**2200**	4.4

Notes: Constituents and their respective RFLMA Table 1 standards (µg/L; DOE 2007d): CT = carbon tetrachloride, 5; CF = chloroform, 3.4; MCl = methylene chloride, 4.6; PCE, 5; TCE, 5. ET In = influent (ET INFLUENT), ET Ef = effluent (ET EFFLUENT). Shaded, bold value indicates detected concentration exceeds corresponding RFLMA standard. Lab qualifiers: J = result is estimated below the sample quantitation limit; U = analyte not detected at the indicated concentration; B = chemical was also detected in the blank; D = analysis was performed at a dilution.

In addition to the constituents summarized in Table 3-91, several other VOCs were detected in system effluent in 2007 (see DOE 2007g, 2007h, 2008a and Appendix B.6 for the data). Of those, VC was the only compound reported at a level exceeding the RFLMA Table 1 concentration (represented by the PQL, 0.2 µg/L). This constituent was repeatedly reported at concentrations exceeding 0.2 µg/L in 2000, but then not again until 2004 (once), 2005 (once), 2006 (once), and in all four samples collected in 2007. Many of these detections are J-qualified, indicating the constituent was positively identified but the result is estimated. Detections in 2007 ranged from 0.43 µg/L (J-qualified) to 1.7 µg/L. Note that the previous action level for VC set by RFCA Attachment 5 (CDPHE, DOE, and EPA 2003), which was in effect until RFLMA was signed in March 2007, was 2 µg/L. Because it has not been detected at a concentration exceeding this since monitoring of the ETPTS effluent began, VC has not previously been reported as exceeding the standard.

The performance monitoring location for the ETPTS is POM2, which is located in Pond B-4. Sampling in support of the ETPTS began at this location in 2005. Grab samples were collected from POM2 in June and November 2006. No VOCs were detected in either sample. No samples were collected in 2007.

Solar Ponds Plume and Treatment System

The SPP is an area of elevated nitrate and U concentrations in groundwater. (Note: The analytical data report concentrations of nitrate/nitrite as N; this is referred to herein simply as nitrate.) The former SEPs, which were located on the pediment in the northeastern portion of the

former IA, were the source of this contamination. Liquid wastes generated during the production era were stored in these ponds. Leaks that occurred over the years are the source of the groundwater plume. The following paragraphs describe the plume, the treatment system installed to address this contamination, and work performed in 2007 on the system. Discussion of special investigations of the system is provided in Section 3.1.5.4.

Solar Ponds Plume

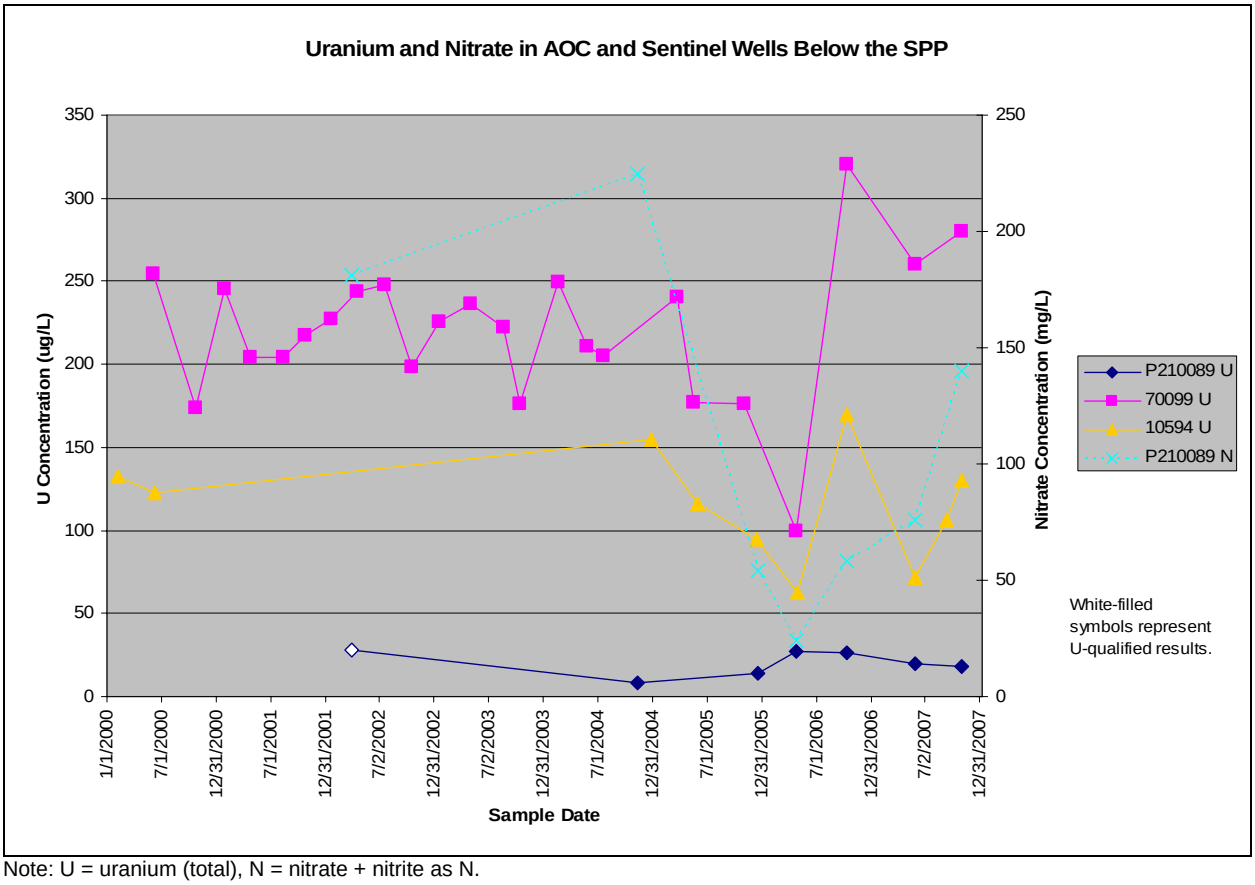
Groundwater in the SEP area is contaminated with nitrate and U. The westernmost portion of this area, generally coinciding with the location of former Pond 207-C, is also contaminated with VOCs.

The source area of the SPP (the SEPs) is monitored by a line of eight Evaluation wells installed immediately downgradient of the SEPs (generally along the north, east, and south sides of the former SEPs), with additional wells located at greater distances from the source. Another Evaluation well is positioned at the south edge of former Pond 207-C, in or near the VOC source area. This distribution effectively monitors groundwater flowing north/northeastward, the primary contaminant flowpath, as well as eastward and southeastward, which are less significant flowpaths.

None of these Evaluation wells was sampled in 2007; they are next scheduled for sampling in 2008. However, Sentinel wells P210089 and 70099 and AOC well 10594 were sampled. Each of these wells was sampled twice in 2007 in accordance with RFLMA.

Figure 3-210 presents a summary of nitrate and U concentrations from these three wells. Nitrate data for wells 70099 and 10594 are not included, because all data from the former are under 2 mg/L, and from the latter are under 1 mg/L. U data represent results reported in µg/L as well as isotopic data reported in pCi/L (which were then converted to mass and summed for total U concentrations in mass units). As stated in Section 3.1.2.3, the U result in November 2007 from AOC well 10594 is above the 120-µg/L threshold; if the next sample collected is also above that threshold, a reportable condition will apply. U in this well has been repeatedly characterized as 100 percent natural, most recently in September 2007.

As indicated on Figure 3-210, of the SPP wells sampled in 2007, that nearest the source (Sentinel well P210089) does not produce groundwater samples with the highest concentrations of U; rather, this is the case with samples from well 70099, located at the northwestern end of the SPPTS groundwater intercept trench. Of these wells, even most-distal well 10594 produces samples with higher concentrations of U than does well P210089. In contrast, concentrations of nitrate are highest in well P210089, and are uniformly less than 2 mg/L in wells 70099 and 10594. This further substantiates the previous findings that U in groundwater samples from wells 70099 and 10594 is natural, and is not part of a plume of anthropogenic U and nitrate. (Samples from well 70099 were characterized in 2002 as being 99.4 percent natural.)



Note: U = uranium (total), N = nitrate + nitrite as N.

Figure 3-210. Nitrate and U Concentrations in AOC and Sentinel Wells Monitoring the SPP

Concentrations of nitrate in samples collected in 2007 from these wells are generally consistent with previous results, although the data from well P210089 are too few to make any firm conclusions. Concentrations of U are also generally consistent with past years, although data from samples collected in late 2006 through 2007 from well 70099 continue to be somewhat higher in U concentration than was the case in past years. As noted in the 2006 Annual Report (DOE 2007e), both samples collected in that year were anomalous, with the first (collected in April) representing the lowest concentration in the period of record, and the second (collected in October) the highest. The 2007 data suggest the latter, elevated 2006 result is more reasonable of the two. Additional data will be collected per RFLMA, and will assist in determining whether U concentrations are truly increasing in this location. Note that calculations of S-K trends did not identify U in well 70099 as having an increasing (or decreasing) trend at even the 80 percent level of significance; conversely, concentrations of nitrate in samples from this well appear to be decreasing at the 95 percent level of significance.

The VOC plume in the western SEP area was not monitored in 2007. Samples for the analysis of VOCs were collected from Sentinel well P210089, located a short distance downgradient of source-area well P210189; no VOCs were detected in either sample.

Solar Ponds Plume Treatment System

Like the ETPTS, the SPPTS was installed in 1999. In basic terms, the system is very similar to the MSPTS and ETPTS, with an intercept trench (1,100 feet long) and two treatment cells. However, unlike the ETPTS and MSPTS, this system is designed to treat water with elevated concentrations of nitrate and U. As such, the treatment media in the SPPTS differs from that in the VOC-treating MSPTS and ETPTS. The treatment media in the SPPTS consists of organic material (sawdust) and ZVI.

Another difference between the SPPTS and the other two systems is that the water collected in the intercept trench is actively pumped into the treatment cells, rather than flowing into the cells by gravity. This is accomplished using a solar-charged, battery-powered pump system. This component of the SPPTS, together with the collection well that houses the pump and is installed within the trench, was added in 2002.

Routine maintenance activities at the SPPTS were conducted throughout 2007, and are reported in Section 2.6.3. The telemetry was also upgraded in 2007, allowing remote collection of system data including water level in the collection well ("SPIN") and flow. A temporary flume was installed at the DG to monitor surface-water flow from the area in which the DG is located. This is discussed in greater detail below.

As discussed in Section 3.1.5.4, treatability studies and other investigations were performed in 2007 at the SPPTS.

The SPPTS removed nitrate and U effectively throughout 2007. Repairs made in September 2006 were determined to have corrected the problem previously observed and reported with respect to inadequate nitrate treatment (DOE 2007e).

The SPPTS treated approximately 244,000 gallons in 2007. This is generally consistent with volumes treated since the system was modified with the addition of the pump. Table 3-92 lists the annual estimates of the volume of water treated by the SPPTS, and Figure 3-211 presents a hydrograph showing flow since January 2000. Figure 3-212 provides a hydrograph for CY 2007.

Table 3-92. Estimated Volumes of Water Treated by the SPPTS

Calendar Year	Annual Estimates of Volume Treated (gallons)	Estimated Cumulative Volume Treated (gallons)
2000*	64,000	64,000
2001*	424,000	452,700
2002	5,600**	458,000
2003	340,000	797,000
2004	230,000	1,027,000
2005	140,000	1,167,000
2006	251,000	1,418,000
2007	244,000	1,662,000

Notes: Estimates for years 2000 through 2004 are compiled from KH (2000a, 2000b, 2000c, 2000d, 2001a, 2003, 2005f, 2005a).
* = Annual and cumulative volume estimates for 2000 and 2001 are suspect, as a sum of the volumes presented in each of the quarterly reports for 2000 and statements regarding the volume for 2001 disagree by approximately 35,000 gallons.
** = Most of this volume was from the former Modular Storage Tanks (K-H 2003).

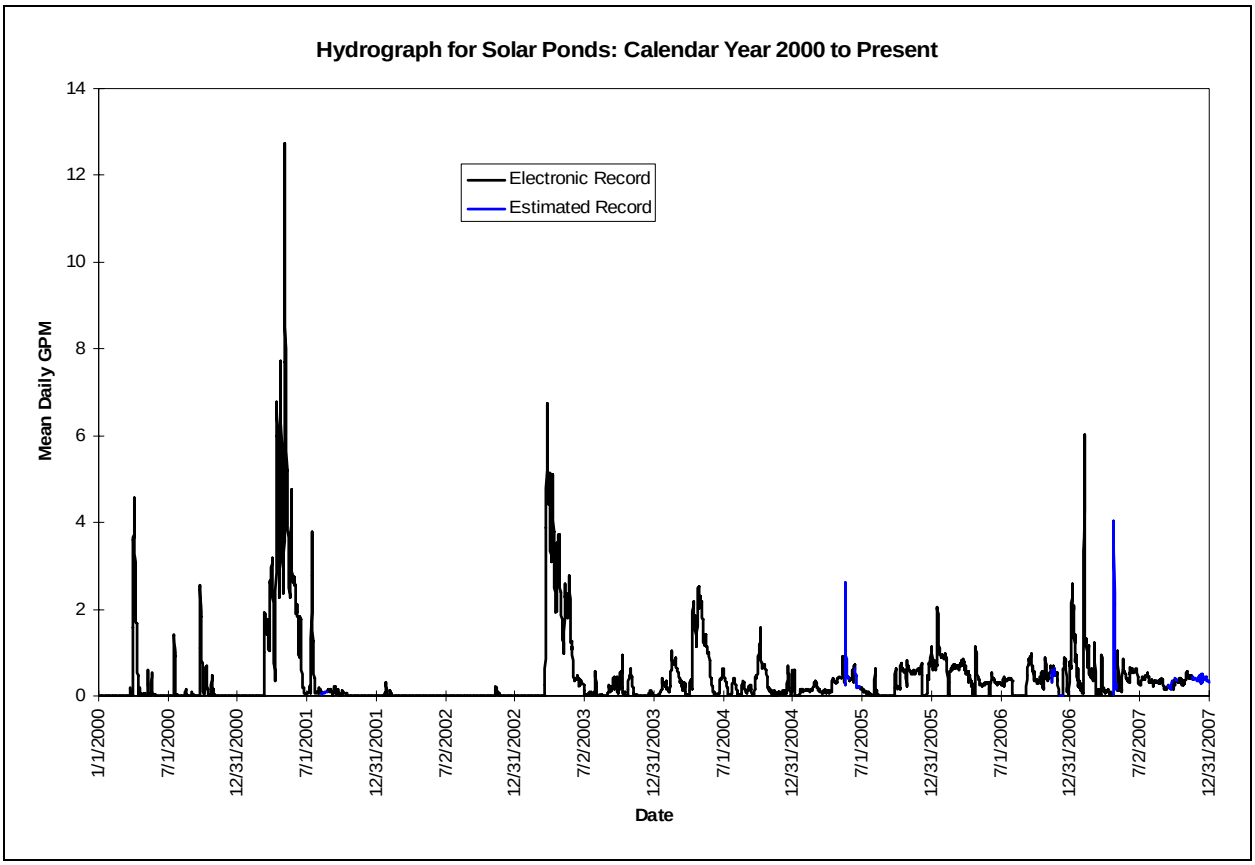


Figure 3-211. Hydrograph for SPPTS Since 2000

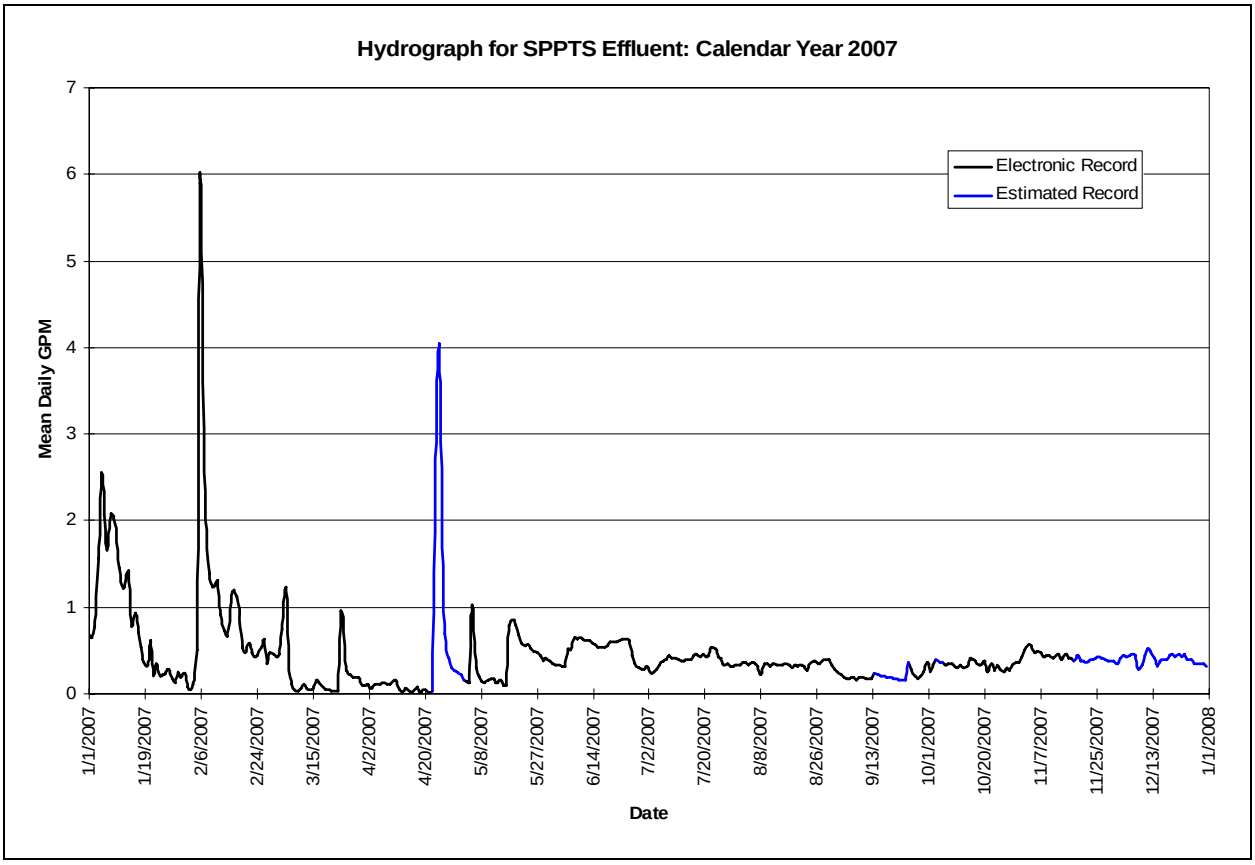
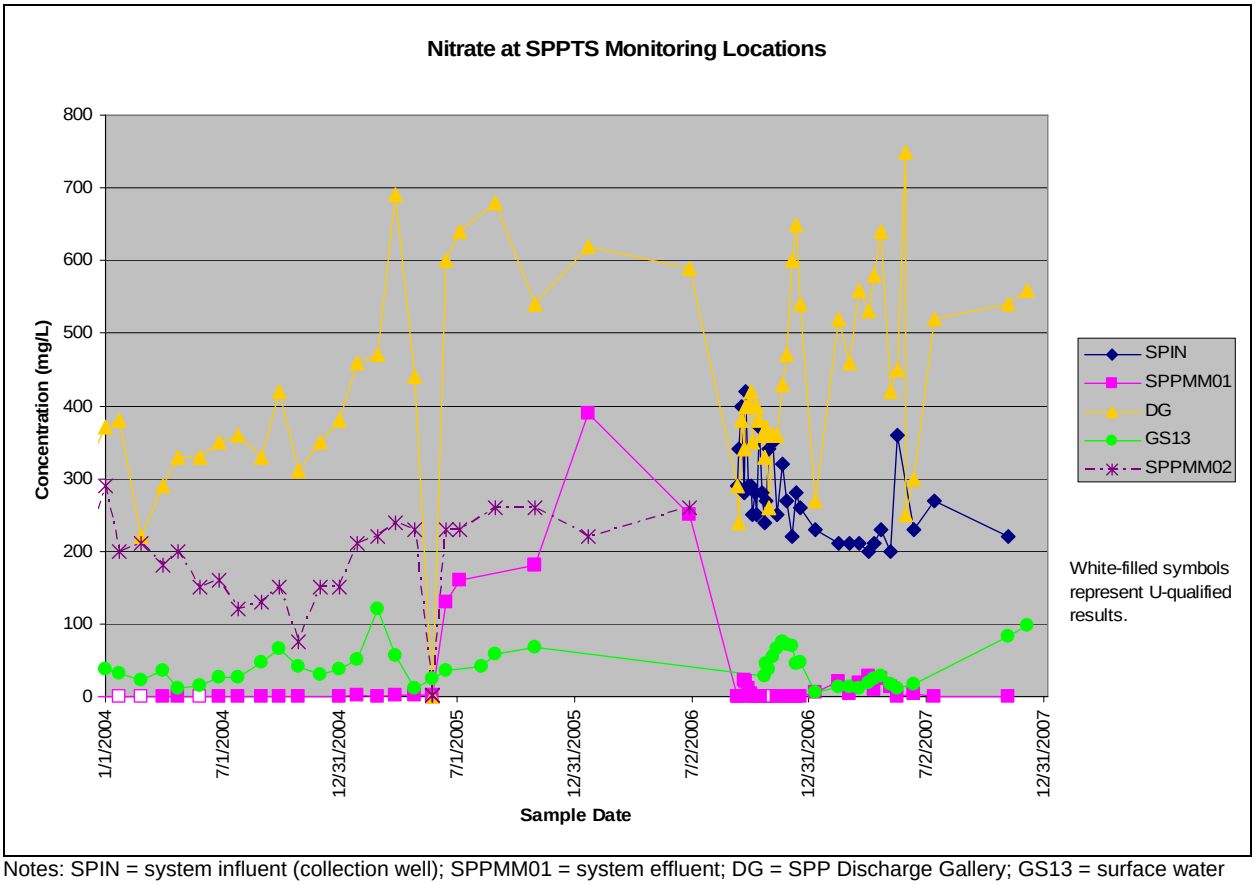


Figure 3-212. Hydrograph for SPPTS for Calendar Year 2007

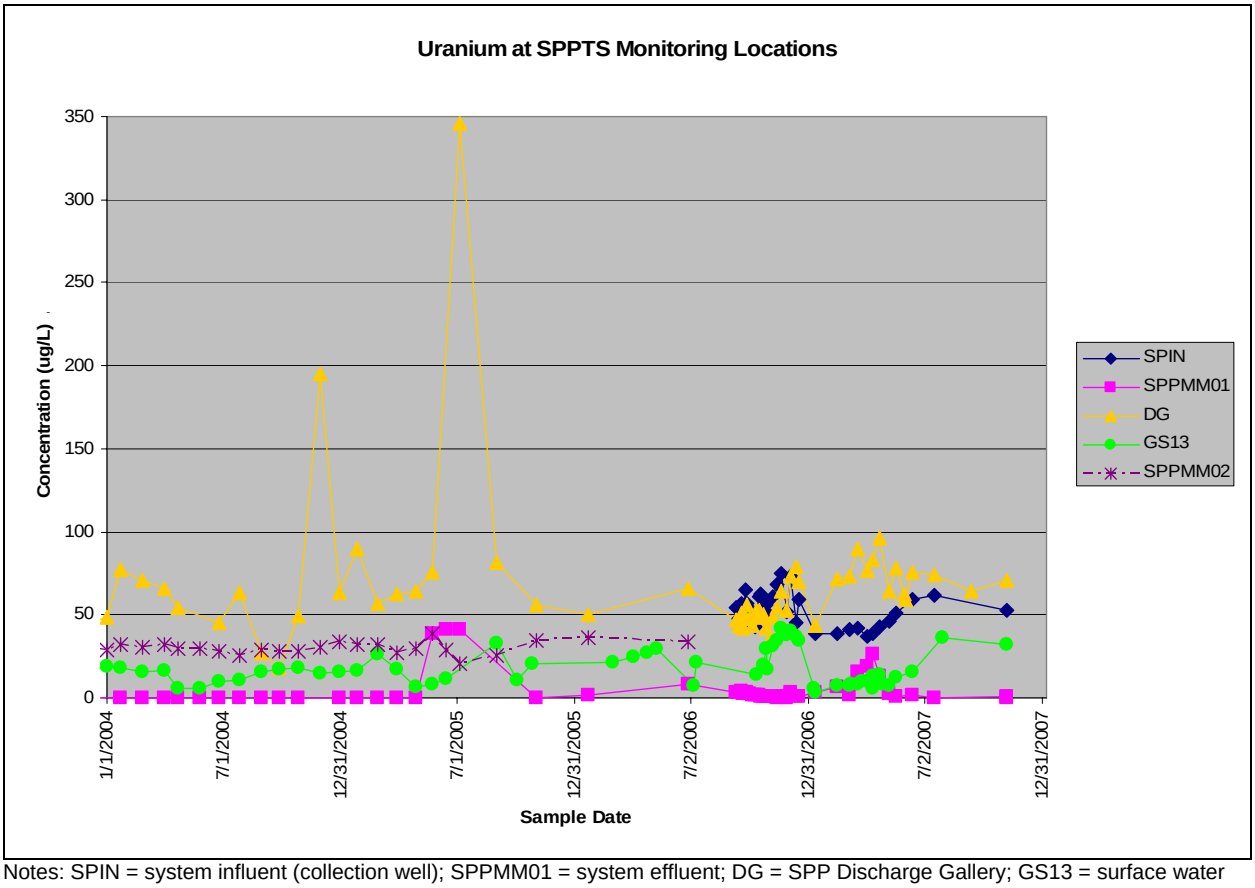
In accordance with and upon the signing of RFLMA in March 2007, the influent monitoring point for the SPPTS was changed from sample location SPPMM02 (a.k.a. piezometer 71099) to the collection well, referred to as SPIN. This change was made because samples collected from SPIN represent true influent water, while those collected from the nearby trench piezometer only approximate influent (see the 2006 Annual Report for additional discussion).

In much of early 2007, snowmelt increased flow through the system, with mean daily flow rates as high as 6 gallons per minute (gpm) (Figure 3-212). During this period, nitrate and U concentrations in system effluent (SPPMM01) were observed to increase, although most of the load continued to be removed by the system. Figure 3-213 provides an illustration of nitrate concentrations since 2004; Figure 3-214 shows a similar graph for U concentrations. In both figures, the effects of valve changes made in mid-2005 are obvious on concentrations of these constituents in the effluent, and to some degree at the DG and GS13 as well (see the 2006 Annual Report for additional discussion). The effects of the system repairs made in 2006 are also obvious on the nitrate graph (Figure 3-213). The effluent (i.e., collected at location SPPMM01) data for 2007 in both graphs show the slight increase in concentrations observed during the period of higher flow rates in early 2007, which corresponded to a decrease in residence time of water within the treatment cells.



Notes: SPIN = system influent (collection well); SPPMM01 = system effluent; DG = SPP Discharge Gallery; GS13 = surface water performance monitoring location; SPPMM02 = historic "influent" monitoring location. Analytical data from SPPMM02 are included for comparison only; this location is no longer monitored. See the 2006 Annual Report (DOE 2007e) for a more detailed discussion of this location, as well as a discussion of the activities responsible for the abrupt concentration changes seen in data for May 24, 2005. Some data are qualified with B (reported concentration is less than the required detection limit but above the instrument detection limit), but are not displayed differently for simplicity.

Figure 3-213. Recent Concentrations of Nitrate in Samples from SPPTS Monitoring Locations



Notes: SPIN = system influent (collection well); SPPMM01 = system effluent; DG = SPP Discharge Gallery; GS13 = surface water performance monitoring location; SPPMM02 = historic "influent" monitoring location. Analytical data from SPPMM02 are included for comparison only; this location is no longer monitored. See 2006 Annual Report (DOE 2007e) for more detailed discussion of this location, as well as a discussion of the activities responsible for the abrupt concentration changes seen in data for or immediately following May 24, 2005. Some data are qualified with J (detected at less than the detection limit; result is estimated) or H (one set of isotopic results at GS13; indicates analysis was done outside method maximum holding time) but are not displayed differently for simplicity. In addition, some of the data for individual isotopes, which are used to calculate total U concentrations, are U-qualified, but are not shown as nondetects for simplicity.

Figure 3-214. Recent Concentrations of U in Samples from SPPTS Monitoring Locations

Water quality in 2007 at the performance monitoring location for the SPPTS, GS13, is generally consistent with previous data. Concentrations of nitrate are below the 100-mg/L TM stipulated in RFLMA. However, a sample collected on December 6 reported a concentration of 98 mg/L, the second-highest concentration reported since 2000. (A concentration of 120 mg/L was reported on February 28, 2005.)

Although not required, S-K trend plots were constructed for locations at the SPPTS including SPIN, system effluent (SPPMM01), the DG, and GS13. These are provided in Appendix B.3. A high degree of scatter is evident in the data, which have been collected on varying schedules (from more than once weekly to twice in one year); these facts add uncertainty to any S-K trending (calculated using the RFLMA-assigned sampling frequency—used to define the seasons —of twice per year). The calculated trend of nitrate concentrations at surface-water location GS13 is increasing at the 95 percent confidence level (see S-K trend plot for GS13 in Appendix B.3). This is also the case with the nitrate trend at the DG. The trend for nitrate concentrations at SPIN is decreasing, also at the 95 percent confidence level, although the data record is significantly shorter at this location due to all the prior "influent" data being collected

from SPPMM02. (Indeed, a semiannual S-K trend calculation requires at least four *routinely* collected samples per season; therefore, a minimum of 4 full years of data should be collected before any trend calculated for SPIN data is given credence. This sampling frequency issue is the same as at the other SPPTS locations.) The nitrate trend at effluent location SPPMM01 indicates nitrate concentrations are also increasing, although very slightly; this is due to the plumbing problems in 2005−2006, as well as the minor increases discussed above related to higher flows in early 2007. Note that there are many nondetects for nitrate in this data set, but the total number of nondetects is less than 25 percent of the nitrate data for this location.

Other Plumes

In accordance with RFLMA, several other groundwater contaminant plumes were monitored during 2007. These include the 903 Pad/Ryan's Pit Plume, the collection of small plumes collectively referred to as the IA Plume (and often discussed, as in this report, in terms of the South and North IA Plume), the VC Plume (or OBP #1 Plume) located south of former B371, the OBP #2 Plume located immediately west of the Mound Plume, the IHSS 118.1 Plume (a.k.a. the carbon tetrachloride plume) located north-northwest of former B776, the PU&D Yard Plume, and the OU 1 Plume. Each of these is discussed below, followed by a short summary of data from other locations.

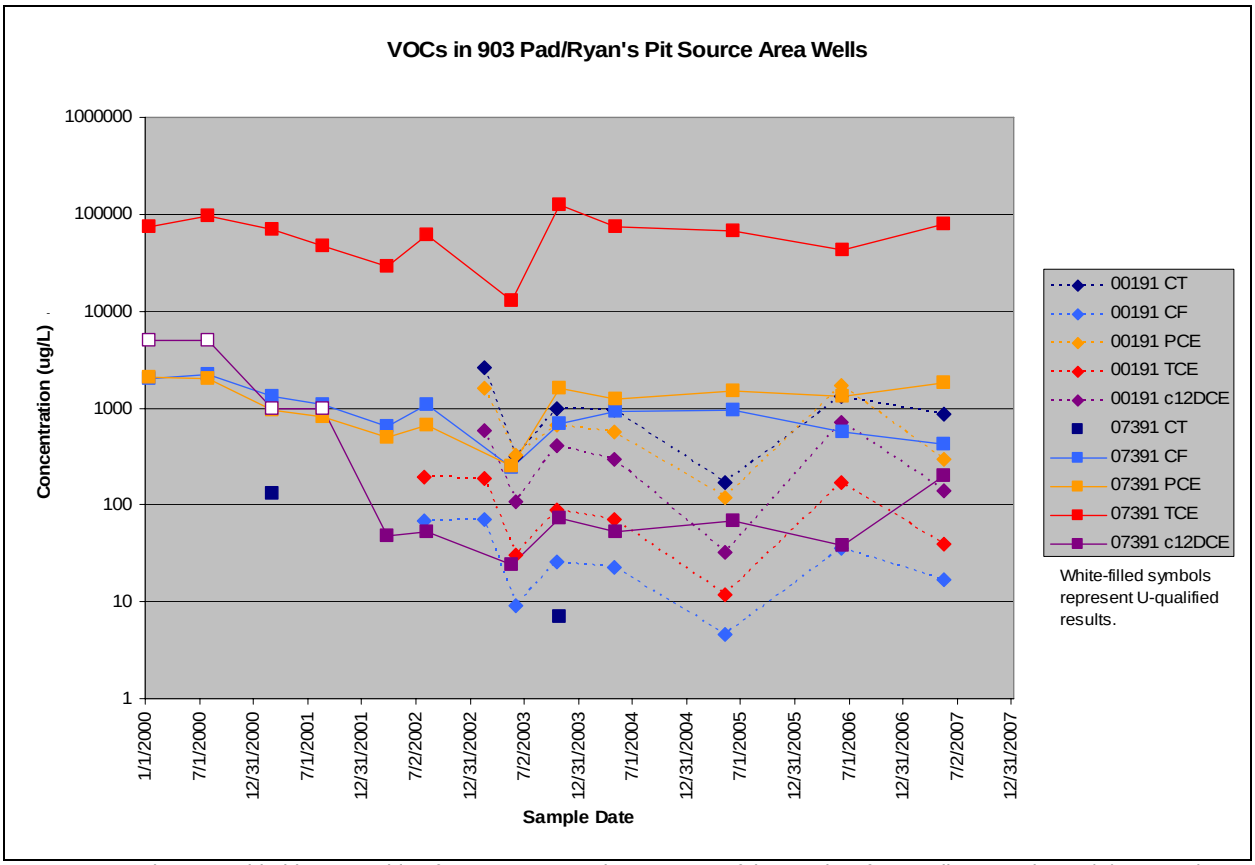
903 Pad/Ryan's Pit Plume

The 903 Pad/Ryan's Pit Plume was monitored in 2007 via several wells distributed within and at the margins of the plume. This plume bifurcates, with one portion flowing toward the southeast and Woman Creek, and the other flowing toward the northeast and joining the East Trenches Plume. The northeastern branch is not discussed here; refer to the text on the East Trenches Plume above.

Water quality within the southeastern portion of the 903 Pad/Ryan's Pit Plume appears generally consistent with that reported in previous years, but AOC well 10304, located on Woman Creek south of the SID and just east of Pond C-1, reported two first-time VOC detections. The sample collected in November 2007 reported J-qualified (estimated) detections of 1,3-DCB (0.43 µg/L) and TCE (0.17 µg/L), and a B-qualified (below the required detection limit but above the instrument detection limit) detection of nitrate at 0.034 mg/L. Each of these concentrations is well below the corresponding RFLMA Table 1 standard (94 µg/L, 5 µg/L, and 10 mg/L, respectively). Due to the very low concentrations detected and the tendency for the analytical data to include occasional anomalous results, particularly at such low concentrations, more data are required before it can be reasonably concluded that these detections are or are not related to groundwater from Ryan's Pit. This well will continue to be monitored and analytical data will be evaluated in accordance with RFLMA.

This plume is also monitored by downgradient Sentinel wells 90299 and 90399, source-area Evaluation wells 00191 (just east of the former 903 Pad) and 07391 (just south of the former Ryan's Pit), and in-plume Evaluation wells 90402, 50299, 00491, and 90804. The Evaluation wells that monitor the source-area (00191 and 07391) and the downgradient Sentinel wells (90299 and 90399) were all sampled in 2007. (The two Evaluation wells were sampled to better assess the continuing effects of HRC insertion at the 903 Pad and Ryan's Pit source areas just prior to closure.) These wells show contamination that is consistent with the source constituents.

Groundwater near the 903 Pad source area (represented by well 00191) is enriched in carbon tetrachloride relative to the PCE-TCE chain of compounds, although concentrations of PCE approach those of carbon tetrachloride. Conversely, groundwater near Ryan's Pit (represented by well 07391) contains much higher concentrations of TCE relative to carbon tetrachloride, which is frequently not detected (although the need to perform these analyses at a dilution has resulted in detection limits for carbon tetrachloride as high as 5,000 µg/L since 2000). Figure 3-215 shows time-series plots of carbon tetrachloride and its initial daughter product, chloroform, as well as PCE and its daughter products TCE and cis-1,2-DCE, for source-area wells 00191 and 07391. Note that some daughter products, particularly TCE, were heavily used during production at the Site and therefore do not always represent true "daughter" products.



Notes: CT = carbon tetrachloride, CF = chloroform, c12DCE = cis-1,2-DCE. Of the CT data from well 07391 since 1/1/2000, only two results are detections, the other 10 are nondetects. Both detections are shown. RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): CT, 5; CF, 3.4; PCE, 5; TCE, 5; cis-1,2-DCE, 70. Not shown are U-qualified data for CT from well 07391, as discussed. Several other results were qualified (D, E, J), but are not shown differently for the sake of simplicity. Note logarithmic concentration scale.

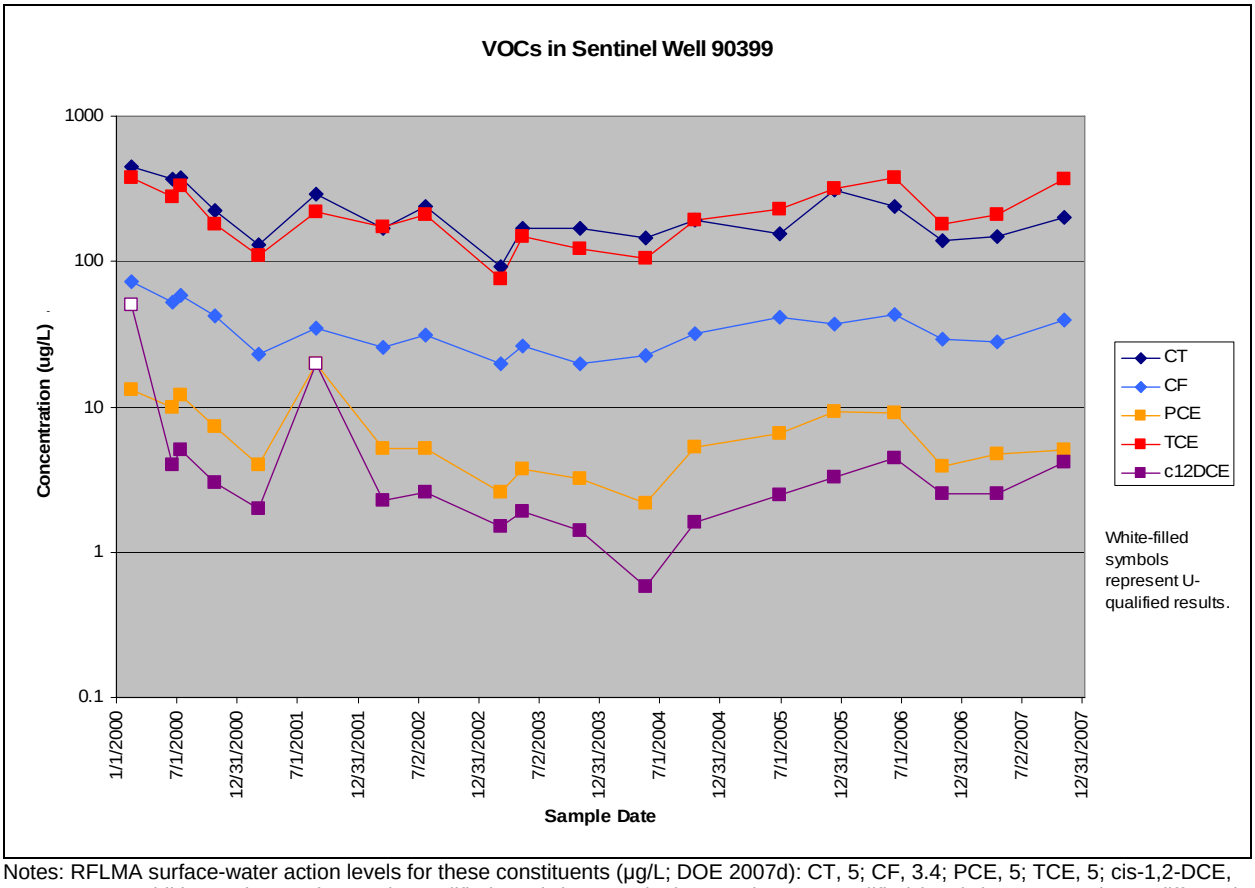
Figure 3-215. Concentrations of VOCs in Source-Area Wells 00191 (903 Pad) and 07391 (Ryan's Pit)

As is evident on Figure 3-215, the relative concentrations of different VOCs in each source-area well appear to track one another closely, although concentrations in one well do not closely track those in the other. The 2007 result for cis-1,2-DCE in samples from well 07391 show a relative increase, to the highest detected concentration in the data set. This may be indicative of enhanced biodegradation related to the HRC insertion, although the parent compounds do not appear to be reduced to any great extent, with only chloroform showing a slight decrease. A similar increase in cis-1,2-DCE is not evident in samples from well 00191, while a slight, relative increase in

carbon tetrachloride and its daughter, chloroform, appear to be indicated. Additional data will be required to determine the effects of HRC on contaminant concentrations in these two source areas.

Concentrations of VOCs in downgradient wells 90299 and 90399 in 2007 were generally consistent with previous data, and for several constituents show decreasing trends. As summarized in Table 3-86, decreasing trends in the concentrations of carbon tetrachloride, chloroform, and TCE are indicated in one or both wells; the decreasing trends in carbon tetrachloride and TCE concentrations in samples from well 90299 are significant at the 95 percent confidence level. Conversely, the trend for 1,1-DCE in well 90399 may be increasing, although the trend is not significant at the 95 percent confidence level. See Appendix B.3 for the corresponding S-K trend plots. VOC concentrations in samples from well 90399 continue to be higher than in adjacent well 90299, which is located just over 350 feet east of 90399.

The main VOCs present in samples from well 90399 are displayed on Figure 3-216. As shown, concentrations of carbon tetrachloride and TCE—the two dominant VOCs in the two source areas for the 903 Pad/Ryan's Pit Plume—are very similar, hence the conclusion that both source areas contribute to the contamination reported in samples from this well. While biodegradation of the PCE to TCE may also be contributing to the higher TCE concentrations, previous reports (K-H 2004a) suggest this mechanism would be of minor importance in this area.



Notes: RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): CT, 5; CF, 3.4; PCE, 5; TCE, 5; cis-1,2-DCE, 70. In addition to the nondetects (U-qualified results), several other results were qualified (D, J), but are not shown differently for the sake of simplicity. Note logarithmic concentration scale.

Figure 3-216. VOCs in Downgradient 903 Pad/Ryan's Pit Plume Well 90399

IA Plume

The IA Plume is actually a collection of several small VOC plumes grouped together for convenience and, in some cases, because of uncertainties regarding specific sources.

The South IA Plume is monitored by AOC well 11104. No VOCs were detected in samples collected in 2007 from this well. Concentrations of U, samples for which are collected because of the proximity of the OLF and former B444, continued to be well below the U threshold (DOE 2007d).

Upgradient of well 11104, wells monitoring the South IA Plume include Sentinel wells 11502 and 40305, and Evaluation wells 40005, 40205, P419689, and P416889. None of these Evaluation wells was sampled, but both Sentinel wells were sampled in 2007. Results are consistent with past samples.

As indicated in Table 3-86, the S-K trend plot for TCE in well 40305 is decreasing at the 95 percent confidence level. However, this trend is strongly affected by the presence of nondetects in the data, and therefore should not be taken at face value. In this case, of the 15 results for TCE reported since January 1, 2000, 11 are nondetects, and the highest detection reported is only 1 μg/L.

The North IA Plume is monitored by AOC well 42505. This well was sampled twice in 2007, and reported no confirmed detections of VOCs. This area is also monitored by Sentinel well 52505, which reported two J-qualified (estimated) detections of cis-1,2-DCE (highest detection estimated at 0.3 μg/L; RFLMA standard is 70 μg/L) and a J-qualified detection of VC (0.46 μg/L; RFLMA standard is represented by the PQL of 0.2 μg/L). Cis-1,2-DCE has been reported several times previously in samples from this well (or its predecessor, 1986), but this represents the first confirmed detection of VC reported for the well. However, detection limits have varied over the years. Note that this location is one of only two Site-wide that was found to provide at least adequate evidence of biodegradation (K-H 2004a), the other being Evaluation well 33502, which monitors the VC Plume source area.

VC Plume

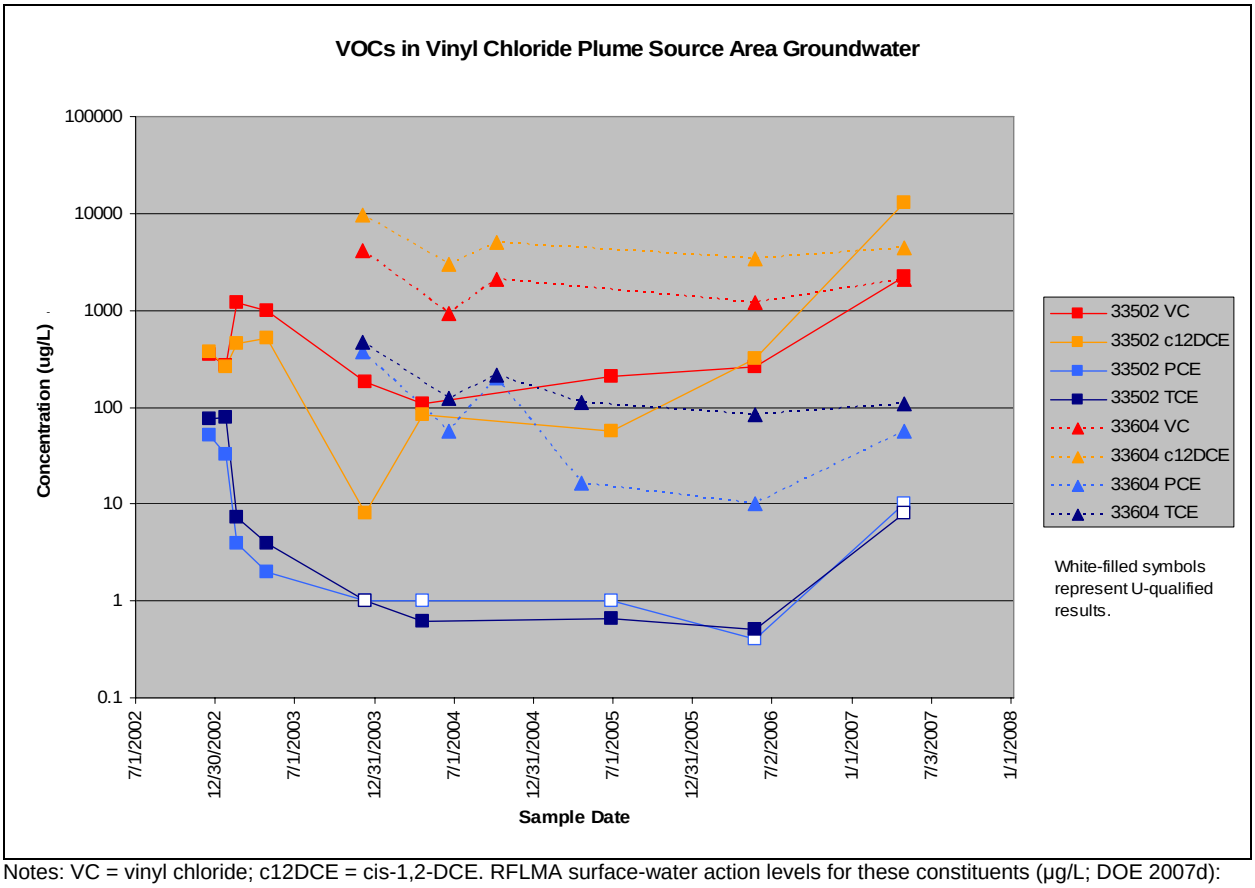
The VC Plume emanates from OBP#1 and/or the metal disposal/destruction sites (former IHSSs 134N and 134S). These IHSSs are on the margin of a valley that was buried during construction of B371 and became the site of the Portal 2 parking lots, among other facilities. The plume resides within and groundwater flow appears to be routed within that buried valley. This is the only Rocky Flats area where VC is present in such elevated concentrations.

The VC Plume is monitored by Sentinel well 33703 and Evaluation wells 33502 and 33604. Elevated concentrations of VC have been reported in wells 33502 and 33604 (as well as the latter's predecessor, 33603). Well 33703 was scheduled for routine RFLMA monitoring twice in 2007. In addition, both Evaluation wells were sampled to support a continuing assessment of the effects of the removal of impermeable surfaces that previously covered the plume source area, and of the regrading performed here (see Section 3.1.5.4 and Section 2.7.3).

Well 33502 is one location where strong evidence for biodegradation has been found (K-H 2004a), which may explain both the high concentrations of VC as well as the extremely limited aerial extent over which it has been observed. This biodegradation is probably a result of the slowly decomposing organic matter remaining from the vegetation that once grew within the valley. This would consume oxygen, providing an anaerobic environment suitable for reductive dechlorination of the chlorinated solvents most commonly found at RFS. Another breakdown product that is present at higher levels in samples from the source area is cis-1,2-DCE. Parent compounds including PCE and TCE are present in the groundwater in this area but at much lower concentrations compared with that of VC. While VC and cis-1,2-DCE are reported in groundwater samples from source-area wells 33502 and 33604 at concentrations in the hundreds to thousands, PCE and TCE are typically reported in the tens to hundreds (and are frequently not detected in well 33502).

Concentrations of cis-1,2-DCE have been quite variable in samples from well 33502. Prior to 2007, concentrations were reported to range from under 10 µg/L to over 500 µg/L. The sample collected in May 2007 reported a concentration of 13,000 µg/L cis-1,2-DCE. The VC concentration also increased significantly, although not to the same degree: this constituent had ranged from just over 100 µg/L to 1,200 µg/L, and in the May 2007 sample was reported at 2,200 µg/L. Nearby, concentrations of these constituents in groundwater samples from well 33604 have not reported the same degree of variability. These compounds are displayed via a time series plot on Figure 3-217. As is evident on that figure, the concentrations of VC and cis-1,2-DCE in groundwater samples collected from well 33502 increased in 2006 and 2007, and concentrations of all four constituents increased in samples from well 33604 collected in 2007. Downgradient Sentinel well 33704, however, produced samples in 2007 that were generally consistent with results from previous samples. PCE and TCE were not detected; cis-1,2-DCE and VC were both reported at J-qualified concentrations under 1 µg/L. (Data for this well are not displayed on Figure 3-217 because of all the nondetects and for clarity.) The associated results are published in DOE (2007h) and Appendix B.

Additional data will be required to determine whether the increasing concentrations noted above for source-area wells 33502 and 33604 represent the onset of trends. As noted in Section 3.1.5.4 and Section 2.7.3, the source area was the focus of regrading efforts intended to improve surface-water drainage off the source area.



Notes: VC = vinyl chloride; c12DCE = cis-1,2-DCE. RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): VC, 0.2; cis-1,2-DCE, 70; PCE, 5; TCE, 5. In addition to the nondetects (U-qualified results), several other results were qualified (J, D), but are not shown differently for the sake of simplicity. Note logarithmic concentration scale. Plots for well 33604 include data from its predecessor, 33603.

Figure 3-217. VOCs Present in the Vinyl Chloride Plume Source Area

OBP #2 Plume

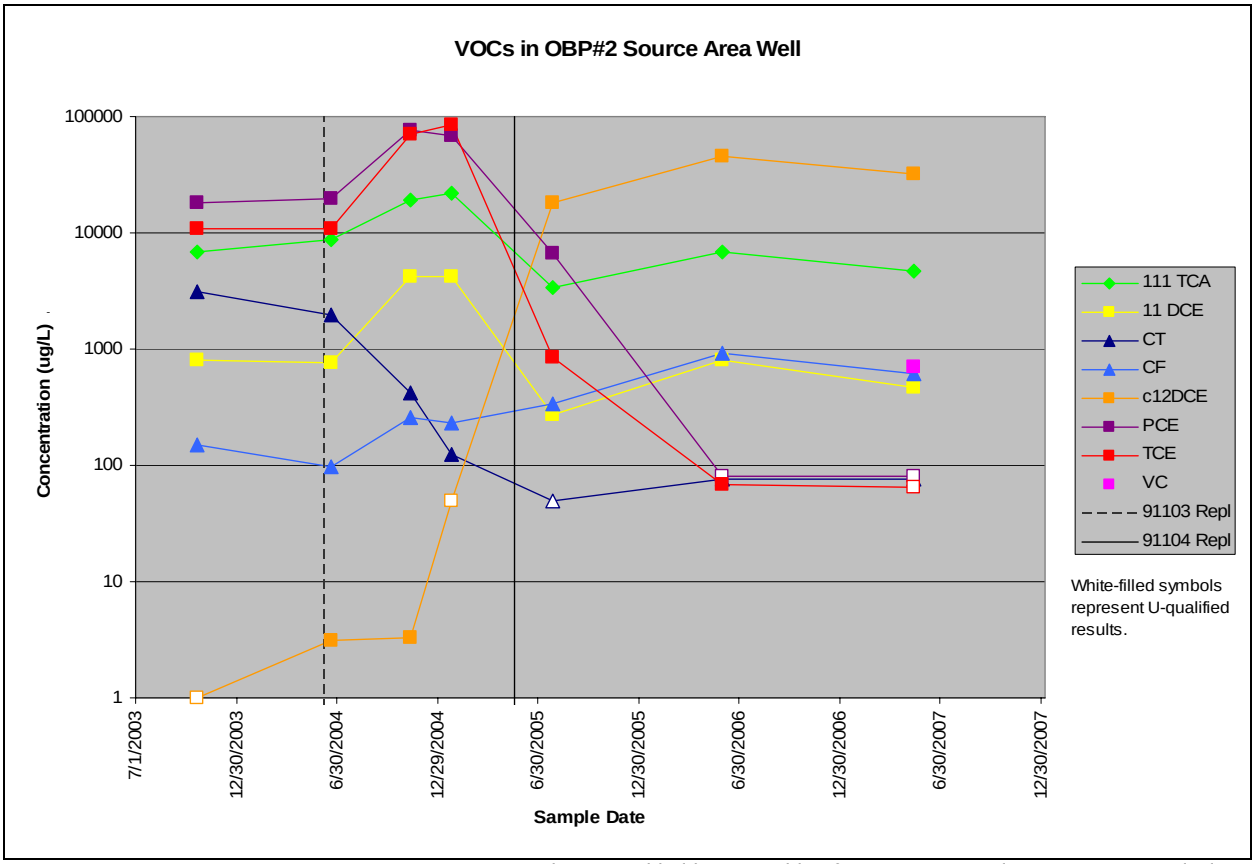
OBP #2 was located at the southeast corner of the former Protected Area (PA) fence just west of the Mound source area. Because of the security infrastructure, groundwater monitoring of OBP #2 was not feasible until the PA was eliminated. Groundwater and soil were subsequently sampled and elevated concentrations of VOCs were observed. This led to the source removal action that addressed elevated concentrations in the soils. HRC was added to the backfill to enhance biodegradation of residual VOCs (K-H 2005b). Although not scheduled for routine RFLMA monitoring, to assist the continuing assessment of the effects of HRC on water quality in this area Evaluation well 91105 was sampled in 2007.

Groundwater in the source area of OBP #2 was first monitored by well 91103, which was positioned within the subsequently remediated source area. Due to the elevated concentrations of VOCs reported in samples from this well and resulting concerns about the integrity of the polyvinyl chloride (PVC) of which this well was constructed, stainless-steel replacement well 91104 was installed 10 feet from the original well, still within the area that was remediated. Excavation of the source area then required abandonment of well 91104. Well 91105 was installed following completion of source removal activities, and is located a few feet downgradient of the downgradient edge of the source removal excavation, just under 75 feet

north-northeast from the location of former well 91104. As a result of the source removal, enhancement of biodegradation, and ultimate location of the replacement well, water quality in samples from well 91105 is not expected to closely resemble that in samples from former wells 91103 and 91104. Even so, for the time being the data are pooled.

The groundwater contaminant plume from OBP #2 flows generally north toward South Woman Creek/FC-4. As noted above in the discussion of the Mound Plume and associated MSPTS, adjacent to the OBP #2 source area was a 72-inch storm drain that potentially acted as a preferential groundwater pathway from the source area to South Walnut Creek. Previous work has shown the majority of this plume is captured by the MSPTS intercept trench (K-H 2005a). To further enhance this, following removal of the storm drain the resulting corridor was backfilled and a trench linking it to the MSPTS intercept trench was cut and backfilled with gravel, thereby diverting groundwater from the OBP #2 source area to the MSPTS for treatment (K-H 2005b).

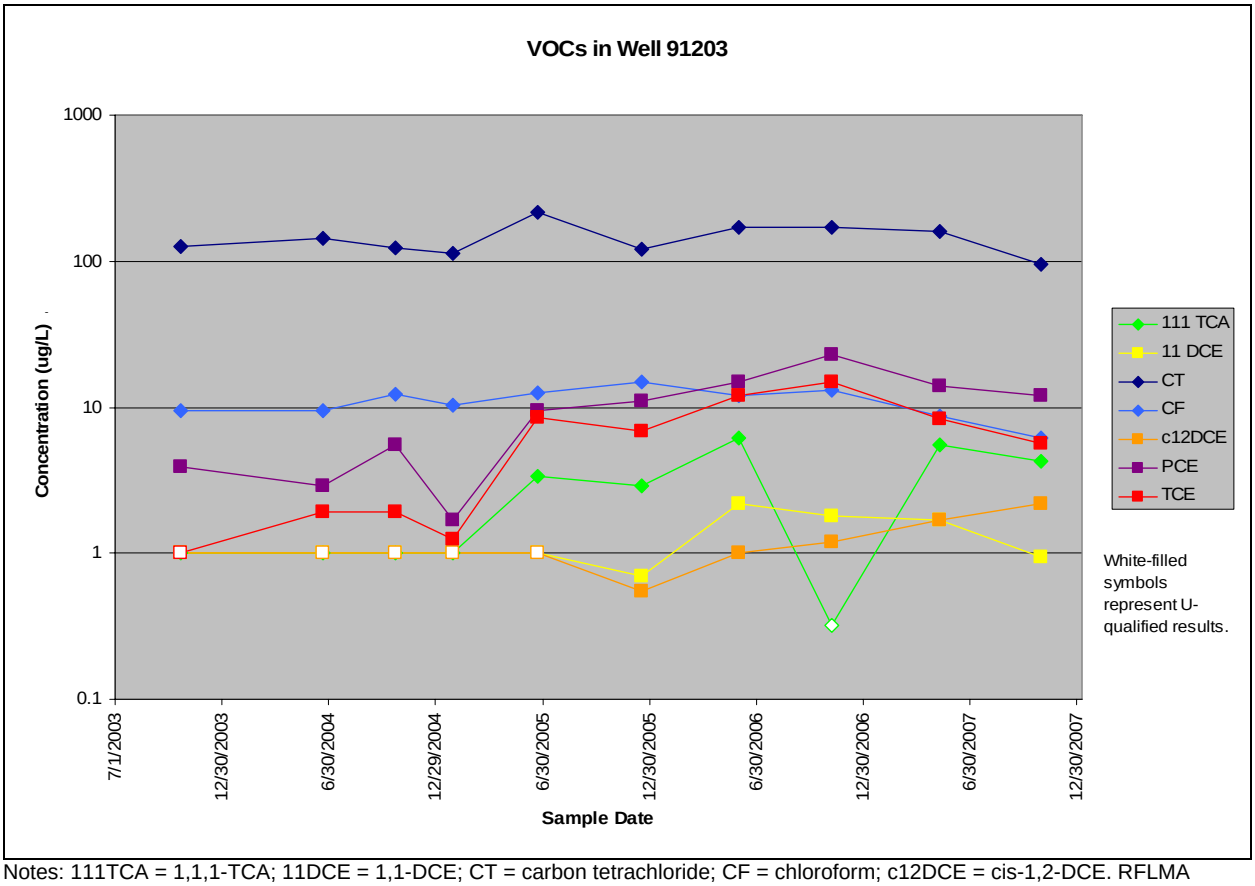
The main VOCs present in groundwater samples from the OBP #2 source area are displayed on the time-series plot on Figure 3-218. Evident on this figure are several patterns. First, although not necessarily meaningful, concentrations of the primary parent compounds (1,1,1-TCA, PCE, and TCE) were highest during the period in which the monitoring employed stainless-steel well 91104. More important from the perspective of Site closure is the fact that parent compound concentrations (especially PCE and TCE) decreased, while primary daughter product (cis-1,2-DCE, chloroform, and VC) concentrations increased following remediation of the source area. To some extent, this pattern must be an artifact of the well's relocation outside the source area (which was desired because there was little value in installing 91105 in clean backfill). Even so, the difference in relative concentrations among parents and daughters is probably a reflection of the source removal.



Notes: 111TCA = 1,1,1-TCA; 11DCE = 1,1-DCE; CT = carbon tetrachloride; CF = chloroform; c12DCE = cis-1,2-DCE; VC = vinyl chloride. RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): 1,1,1-TCA, 200; 1,1-DCE, 7; CT, 5; CF, 3.4; cis-1,2-DCE, 70; PCE, 5; TCE, 5; VC, 0.2. Concentrations of VC prior to the 2007 result are not illustrated because they are all nondetects (detection limit ranged from 1 µg/L to 68 µg/L). In addition to the nondetects (U-qualified results) that are illustrated, several other results were qualified (J, D) but are not shown differently for the sake of simplicity. Well replacement dates are noted on the figure; original PVC well 91103 provided samples from the contaminated source area through June 21, 2004; stainless-steel replacement well 91104 provided subsequent samples from the contaminated source area through January 26, 2005; OBP #2 was remediated and replacement well 91105 installed as shown, providing the balance of the samples. Note logarithmic scale for concentrations.

Figure 3-218. Concentrations of VOCs in OBP #2 Source Area Well 91105

With the exception of VC, which is not detected, the same compounds are displayed on Figure 3-219 for Sentinel well 91203, located north of the OBP #2 source area (Figure 3-202). Samples from this well show an increase in some parent compound concentrations (particularly PCE, TCE, and 1,1,1-TCA) coinciding with the disruption associated with remediation of OBP #2 completed on April 1, 2005. Concentrations of carbon tetrachloride and chloroform also show a shorter-term increase. These patterns suggest that, while groundwater at well 91203 is not strongly impacted by the OBP #2 source area, it does receive some input from that area.



Notes: 111TCA = 1,1,1-TCA; 11DCE = 1,1-DCE; CT = carbon tetrachloride; CF = chloroform; c12DCE = cis-1,2-DCE. RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): 1,1,1-TCA, 200; 1,1-DCE, 7; CT, 5; CF, 3.4; cis-1,2-DCE, 70; PCE, 5; TCE, 5. In addition to the nondetects (U-qualified results), several other results were qualified (J, D), but are not shown differently for the sake of simplicity. Note logarithmic scale for concentrations.

Figure 3-219. Concentrations of OBP #2 VOCs in Downgradient Well 91203

Data from well 91305, located west of well 91203, suggest the OBP #2 source area does not contribute significant quantities of groundwater to this well. Concentrations of cis-1,2-DCE and VC have been frequently reported in samples from well 91305. This differs from results for samples collected from the predecessor well, 2187 (which was located almost 60 feet north), as these constituents were reported as nondetects. For the two sets of groundwater samples collected in May and November 2007, respectively, the concentrations of cis-1,2-DCE were reported at 9.6 µg/L (estimated) and 7.6 µg/L; concentrations of VC were reported at 0.49 µg/L (estimated) and nondetect.

S-K trend calculations suggest several trends for contaminants reported in groundwater samples collected from well 91203 (Table 3-86). Cis-1,2-DCE has an increasing trend at a 95 percent confidence level; however, the trend may not be valid due to numerous nondetects in the data set. Other trends are also suggested but at a lower confidence level. Refer to Appendix B.3 for the S-K plots and detailed summary tables.

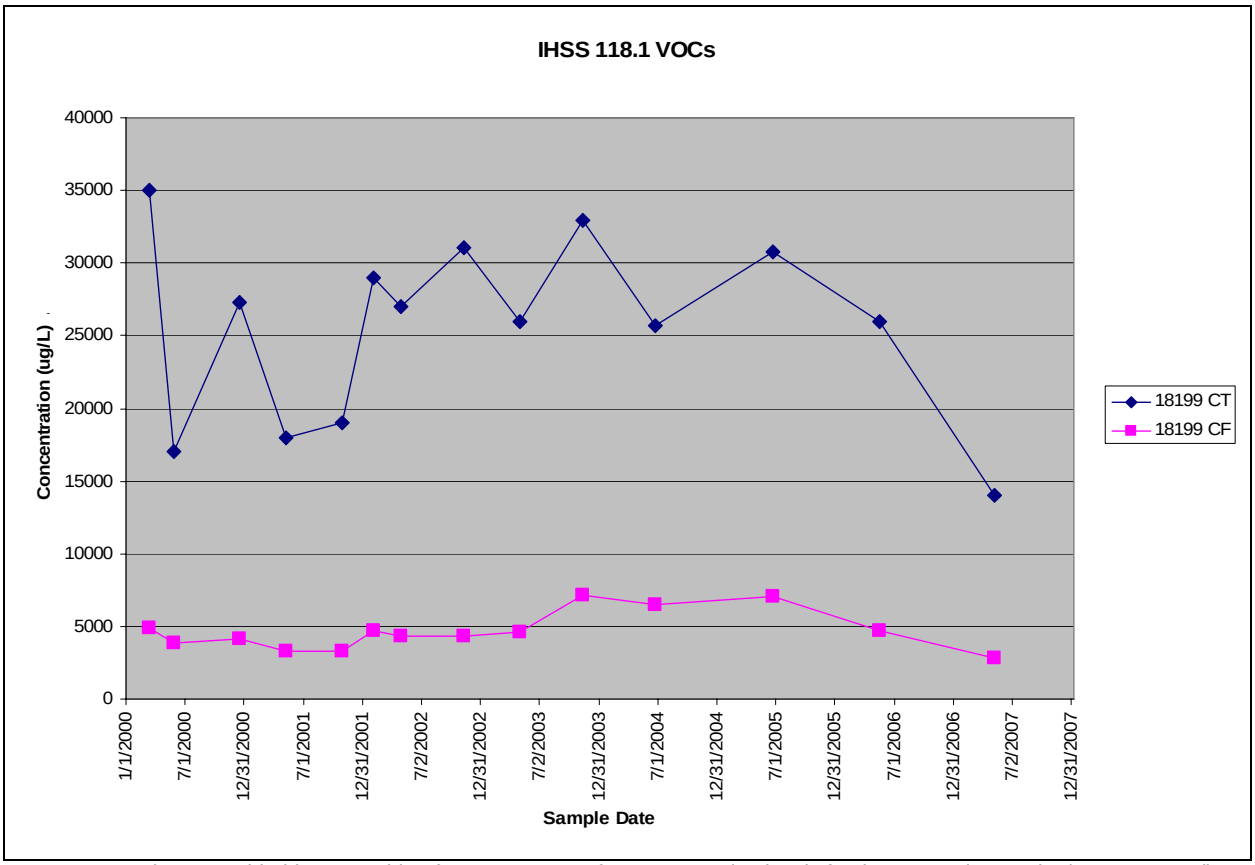
IHSS 118.1 (Carbon Tetrachloride) Plume

The area referred to as former IHSS 118.1 is the source of a carbon tetrachloride plume. In late 2004, the dense, nonaqueous phase liquid source material was removed along with an adjacent

subsurface tank group referred to as B730. HRC was added to the backfill material to enhance biodegradation of residual contamination.

Evaluation well 18199 is located immediately north of the former IHSS, roughly 80 to 90 feet north-northwest of the area in which free-phase carbon tetrachloride was present and perhaps 30 feet north of the source-removal excavation boundaries. Although not scheduled for RFLMA sampling in 2007, to support the continuing assessment of the effects of HRC the well was sampled.

Concentrations of carbon tetrachloride and chloroform, the primary contaminants in this well, appear to be decreasing in the sample collected in 2007 relative to those reported in prior years. Time-series plots are presented on Figure 3-220. Additional samples will be required to confirm whether this decrease represents the start of a trend.



Notes: CT = carbon tetrachloride; CF = chloroform. RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): CT, 5; CF, 3.4. Several results were qualified (J, D, E), but are not shown differently for the sake of simplicity.

Figure 3-220. Concentrations of Primary IHSS 118.1 VOCs in Source Area Well 18199

Concentrations of methylene chloride, another breakdown product of carbon tetrachloride, are also reported in samples from well 18199 but are not shown on Figure 3-220 because of the frequent B qualifiers (indicating laboratory contamination from this common lab solvent). Also not shown are PCE and TCE concentrations, which are relatively low compared to those of carbon tetrachloride and chloroform (i.e., PCE is reported at well under 100 µg/L, and the most common result for TCE is nondetect).

Water-quality data from wells 20705, 20505, and 20205, all of which are located generally north of IHSS 118.1 and former B771, will also continue to be assessed to determine whether a more northerly groundwater flow path is indicated. Such a path is not suggested by data collected in 2007, which are generally consistent with pre-closure results. As noted in Table 3-86 and Appendix B.3, S-K trend calculations indicate statistically significant (95 percent) increasing trends in cis-1,2-DCE and U concentrations at well 20705; however, the VOC data are complicated by the presence of many nondetects and the U data may be affected by the well replacement. The highest U concentrations are an order of magnitude lower than the U threshold defined in RFLMA. Note that well 20505 is also reported (Table 3-86) as suggesting an increasing trend in 1,1-DCE, although at less than a 95 percent significance—and of the nine results available since 2000, five represent estimated concentrations, three are nondetects, and only one is an unqualified detection, further casting doubt on the validity of such a trend.

PU&D Yard Plume

The PU&D Yard Plume is an area of groundwater with low concentrations of primarily PCE-family VOCs. This area was the site of the first HRC application performed at Rocky Flats, which took the form of a treatability study performed in early 2001 (K-H 2001b, 2002; see K-H 2005a for final detailed information from this study). This plume is monitored by Evaluation well 30900 in the source area and Sentinel well 30002 to the east, at the margin of North Walnut Creek. In addition, PLF RCRA wells 70393 and 70693 monitor the northern edge of this plume.

Evaluation well 30900 was not sampled in 2007, but Sentinel well 30002 and RCRA wells 70393 and 70693 were sampled. No VOCs were detected in either of the semiannual samples collected from Sentinel well 30002. RCRA wells 70393 and 70693, which are sampled quarterly, both reported consistent detections of VOCs including 1,1,1-TCA, 1,1-DCE, PCE, and TCE. Only TCE concentrations in samples from well 70393 exceeded the RFLMA Table 1 standards. Concentrations of TCE were very uniform, ranging from 8.3 µg/L to 8.7 µg/L in the four samples collected in 2007; the Table 1 standard is 5 µg/L (DOE 2007d). As summarized in Table 3-86 (see also Appendix B.3), the S-K trend calculations indicate concentrations of TCE in samples from well 70393 are decreasing at the 95 percent confidence level.

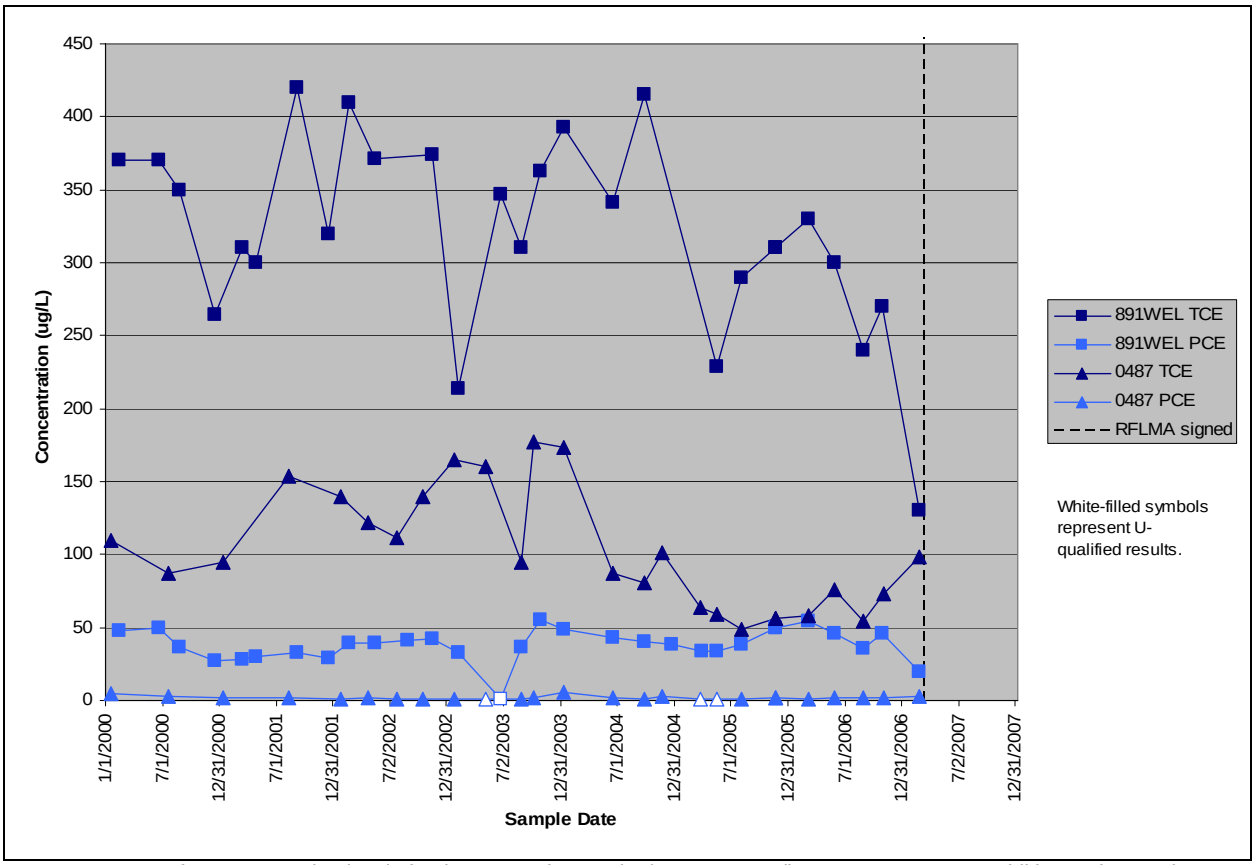
Other compounds, including carbon tetrachloride, chloroform, cis-1,2-DCE, and ethylbenzene were each reported inconsistently, and at J-qualified (estimated) concentrations that all were less than 1 µg/L. Refer to the quarterly reports for 2007 (DOE 2007g, 2007h, 2008a) and Appendix B for analytical data.

OU 1 Plume

The OU 1 Plume is located on the 881 Hillside, immediately south of the former IA. Its source area, former IHSS 119.1, was a drum and scrap metal storage area. Wells monitoring this plume were sampled prior to March 14, 2007, according to the OU 1 CAD/ROD (DOE 2001), which specified that six wells be monitored on set monitoring frequencies ranging from quarterly to semiannually. In first quarter CY 2007, the two quarterly monitored wells, 891WEL and 0487, were sampled. With the signing of RFLMA, the former well is reclassified as an Evaluation well

and the other wells previously monitoring this plume (including 0487, 4787, 4887, 10992, and 11092) are no longer monitored. Reporting on this plume has changed accordingly.

Concentrations of TCE, the constituent of greatest historic interest in this plume, appeared to decrease somewhat in the samples collected from source-area well 891WEL in first quarter CY 2007, compared with previous results (Figure 3-221). This plume is also monitored by AOC well 89104, located to the south adjacent to Woman Creek (Figure 3-202). No VOCs were detected in either sample collected from this well in 2007.



Notes: RFLMA surface-water action levels for these constituents (µg/L; DOE 2007d): TCE, 5; PCE, 5. In addition to the nondetects (U-qualified results), several other results were qualified (J, D), but are not shown differently for the sake of simplicity. With the signing of RFLMA, well 891WEL was reclassified as an Evaluation well (sampled biennially) and well 0487 was removed from the monitoring network.

Figure 3-221. Concentrations of Primary OU 1 VOCs in Source Area Wells 891WEL and 0487

Other Areas

Although not marked by plumes, other areas warrant mention either because associated wells have produced samples with concentration trends having a 95 percent significance or because they may be of interest. These are summarized below.

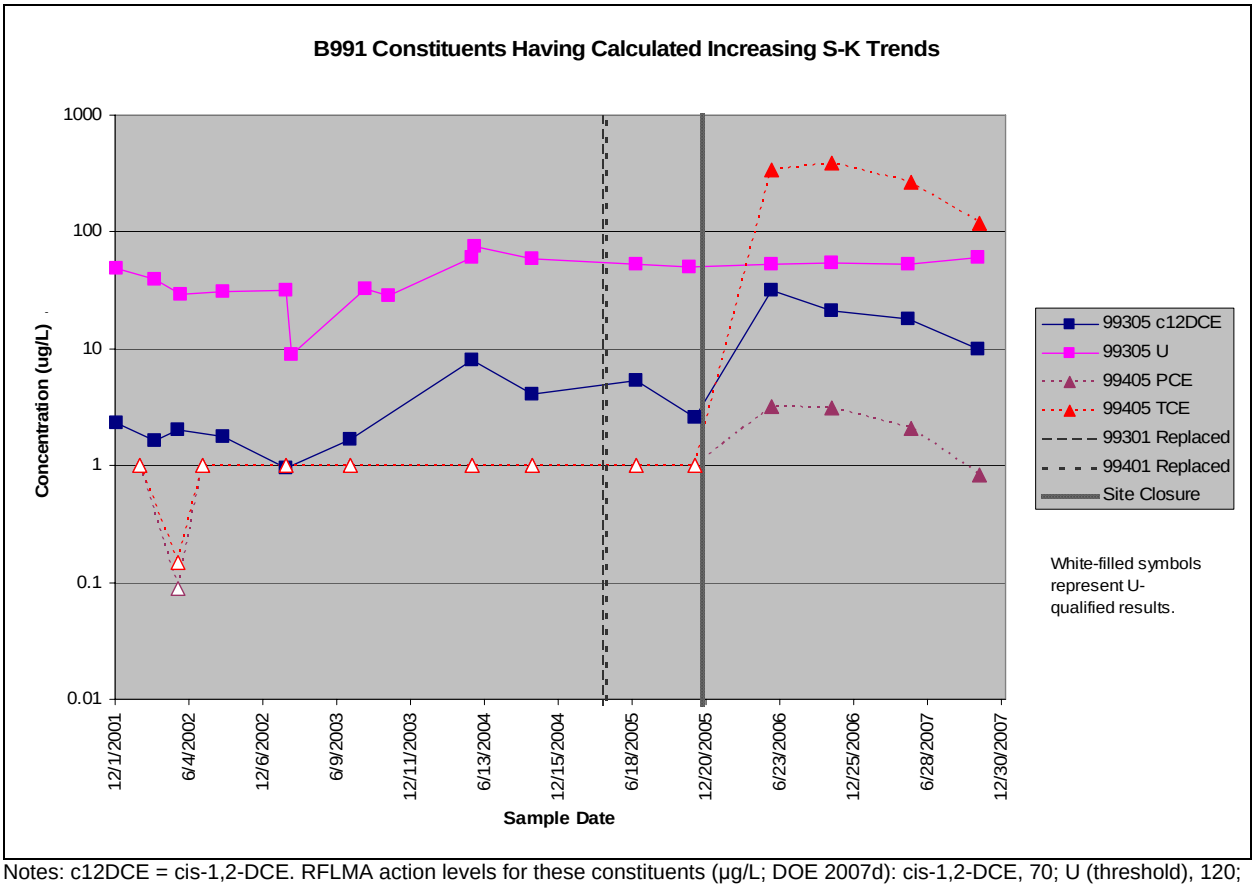
East Government property boundary: Boundary wells 10394 (Woman Creek and Indiana Street) and 41691 (Walnut Creek and Indiana Street) were sampled in 2007 and results were consistent with previous data. Constituents that were detected at 10394 included nitrate and U; at 41691, only U was detected. S-K trend calculations indicate two significant (at 95 percent level) trends

in groundwater at these locations: a decreasing trend in U at 10394, and an increasing trend in U at 41691. The latter may be related to the elimination of the large volume of imported water that previously flowed off site (via pond discharges) and therefore was previously available to recharge groundwater along Walnut Creek prior to closure. This water would have acted to reduce the U content of the groundwater. Increasing U concentrations now may reflect the groundwater regime seeking to reestablish a natural geochemical equilibrium.

Former B991: Wells 99305 and 99405 have both reported detections of VOCs at higher concentrations than were typical prior to closure. S-K trend plots show 95 percent confidence in the calculated increasing trends in cis-1,2-DCE at well 99305, PCE at well 99405, and TCE at well 99405. In addition, an increasing trend is indicated for U at 99305. Both of these wells were located off the east edge of B991, with well 99405 positioned in the east loading dock area. As shown on Figure 3-222, these water-quality changes occurred suddenly, particularly with respect to TCE in groundwater collected from well 99405. The apparent trend in the results reported after this initial increase appears to be toward decreasing concentrations of each of the VOCs. Most importantly, only TCE in well 99405 is reported at concentrations exceeding the RFLMA action level of 5 µg/L. See previous quarterly and annual reports (particularly DOE 2006g, 2007e, 2007h) and Appendix B for details on the analytical data.

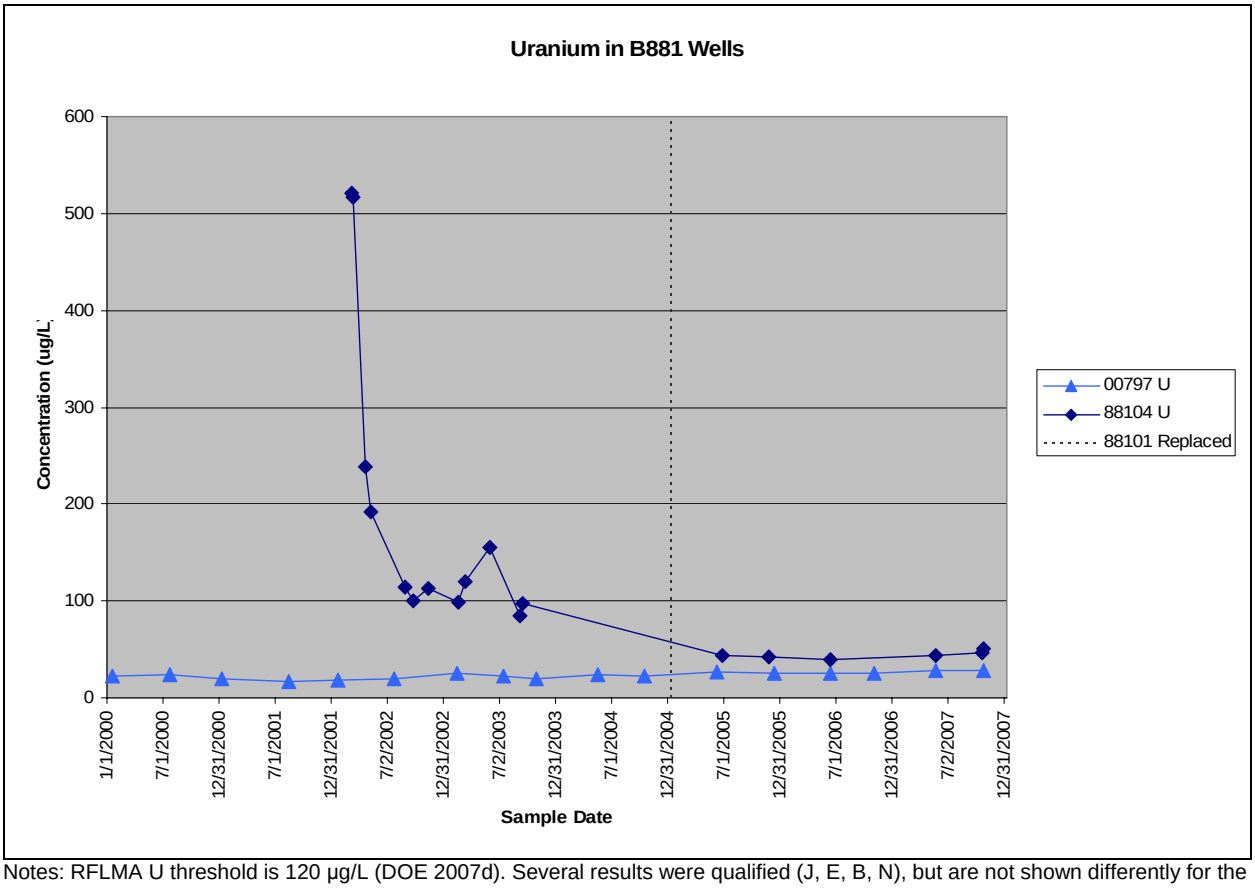
Also shown on Figure 3-222 are the dates of the well replacements, when well 99301 was replaced with 99305 and well 99401 with 99405, and Site closure. This clarifies that the changes in water quality do not appear to be a result of well replacements, but rather activities performed to close the Site. As noted above, VOC concentrations in grab samples from downgradient surface-water location GS10 have been below RFLMA standards.

Former B881: As noted in the 2006 Annual Report (DOE 2007e) and Table 3-86, the trend for U in well 88104 is decreasing, while in well 00797 it is increasing. The trend calculated for well 88104 is complicated by the well replacement performed in 2004, when well 88101 was replaced with well 88104, the latter of which was located approximately 110 feet south of the original location. Figure 3-223 illustrates U concentrations in these two wells since 2000, and clearly shows the difference in U concentrations between the original well, 88101, and replacement well, 88104. Also evident is the relatively uniform concentrations of U in groundwater samples from well 00797; the increasing trend has a very slight positive slope (calculated to be 1.167; see the S-K plots and summary tables in Appendix B.3). Note that concentrations of U in both wells are and have been below the RFLMA U threshold of 120 µg/L (DOE 2007d) since before B881 was demolished.



Notes: c12DCE = cis-1,2-DCE. RFLMA action levels for these constituents (µg/L; DOE 2007d): cis-1,2-DCE, 70; U (threshold), 120; TCE, 5; PCE, 5. In addition to the nondetects (U-qualified results), several other results were qualified (J, B, N), but are not shown differently for the sake of simplicity. U data include results for U-mass and converted isotopic activities. Note logarithmic concentration scale.

Figure 3-222. Concentration of Constituents With Increasing S-K Trends in B991 Wells



Notes: RFLMA U threshold is 120 µg/L (DOE 2007d). Several results were qualified (J, E, B, N), but are not shown differently for the sake of simplicity. U data include results for U-mass and converted isotopic activities.

Figure 3-223. Concentration of Constituents With Increasing S-K Trends in B881 Wells

3.1.5.4 Other Water-Related Issues in 2007

This section summarizes some of the more notable events, activities, and conditions related to groundwater at the RFS in 2007.

Reportable Condition: Nitrate at AOC Well B206989

Well B206989 entered a reportable condition in 2007 due to the presence of nitrate in groundwater at concentrations exceeding the applicable standard in RFLMA. This condition was set up by the well being reclassified via RFLMA from a Sentinel well to an AOC well. (The former classification has no reportable conditions, while the latter does.) This reportable condition was anticipated, because the well produces groundwater samples that are consistently above the nitrate standard (10 mg/L in No Name Gulch, where the TM does not apply).

Results for the first sample collected subsequent to the well being reclassified was above the standard. Decision rules for AOC wells define a reportable condition as existing when two consecutive, routinely collected (i.e., per the frequency stated in RFLMA) samples each contain concentrations of the constituent of interest at levels above those presented in RFLMA Attachment 2, Table 1 (DOE 2007d). Technically speaking, this had not yet occurred, as only one such sample had been collected since the well was classified as an AOC well. However,

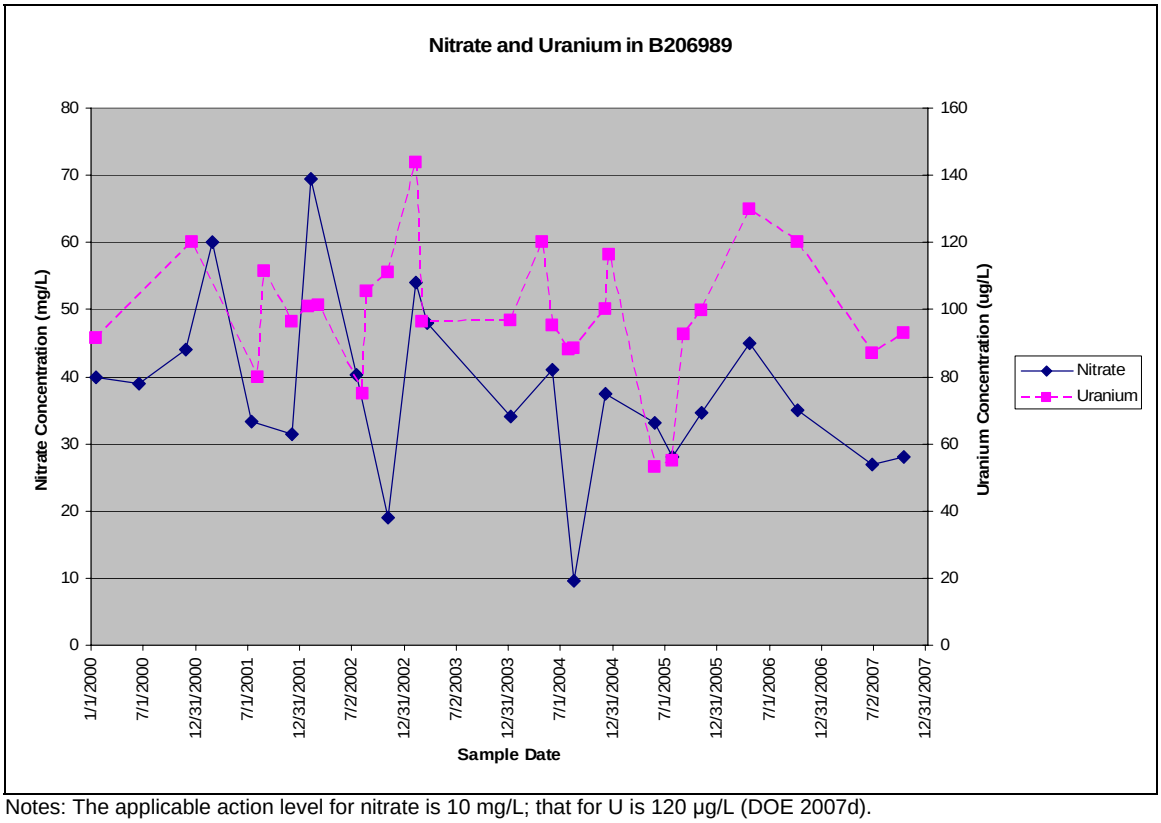
given the consistently elevated concentrations of nitrate in previous samples from well B206989 (since January 2000, only one sample had reported concentrations below the standard), a reportable condition was anticipated and declared upon the receipt of the sample collected in June 2007.

Following discussions with CDPHE, RFLMA Contact Record 2007-06 (see Appendix H) was finalized on October 12, 2007, documenting the agreement that was reached regarding nitrate in groundwater samples from well B206989. This contact record provided statistical evaluations of nitrate in samples from well B206989, which suggest that the concentrations of nitrate are decreasing. The level of confidence in these trends is not sufficient to conclude the trends are indeed decreasing, and therefore the contact record requires additional data be collected per RFLMA and assessed statistically.

Briefly summarizing, per the contact record, if the decreasing trend is confirmed at a confidence level of 80 percent or more, the evaluation shall terminate. (Until the evaluation terminates, additional samples that exceed the nitrate standard shall not constitute a new reportable condition.) If the trend appears to reverse, even at less than 80 percent confidence, or if an 80 percent confidence in the decreasing trend (full record or last eight routinely collected samples) is still not reached by the end of CY 2011, consultation shall ensue to determine the appropriate path forward. See the full contact record in Appendix H for details.

Note that the U concentrations in groundwater samples from this well are also occasionally above the applicable level, in this case the 120 µg/L total U threshold. Therefore, it is anticipated that a reportable condition may eventually apply for this constituent as well. However, because the threshold is not exceeded with the same regularity as is the 10 mg/L nitrate standard, a reportable condition for U has not yet been declared.

Figure 3-224 provides updated trend plots of nitrate and U in groundwater samples collected through the end of 2007 from well B206989. Updated S-K plots are provided in Appendix B.3, even though neither trend (both of which are apparently decreasing) is statistically significant at even the 80 percent level. (U is included for completeness, to illustrate its historical concentrations and provide some context for the possible future reportable condition for this constituent.)



Notes: The applicable action level for nitrate is 10 mg/L; that for U is 120 µg/L (DOE 2007d).

Figure 3-224. Concentrations of Nitrate and U in Groundwater Samples from AOC Well B206989

Slump South of B991

The slump south of former B991 was regraded in 2007 as discussed in detail in Section 2.7.2. Cracks suggesting the potential for slumping were first observed in January 2006, and the vertical and horizontal displacement was monitored thereafter.

Seeps were observed on the slump, predominantly in the eastern portion and around the eastern margins of the feature (Figure 3-225). As of the end of 2007, they had not reappeared. Figure 3-226 and Figure 3-227 provide photographs of the slump before its development, during a time of maximum displacement, and after the regrade was complete.

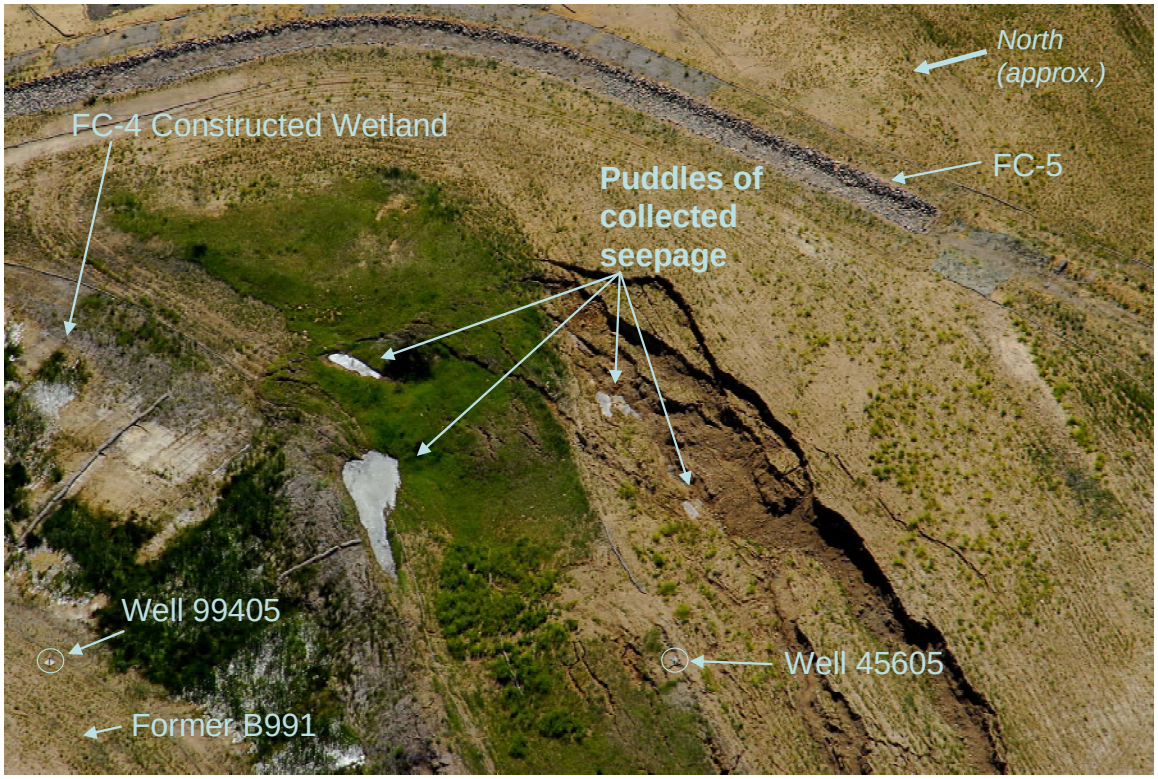


Figure 3-225. June 2007 Aerial Photo of Slump Showing Areas of Seepage

As previously noted, Sentinel well 45605 was abandoned to make way for the regrading effort. This well will be replaced in 2008. For additional information on the slump, refer to the 2006 annual report (DOE 2007e).

Top photo: Conditions on June 6, 2005. The constructed hillside is the area covered with green grass. Future FC-4 wetland is at its base, and former SW056 is located as shown. The site of former B991 is across (north of) FC-4 from the hillside and SW056, on the center-right edge of the photo. FC-5 (the line of gray riprap) enters from the left and joins FC-4 near the center of the photograph. Site closure activities are still in progress at this time, as indicated by the presence of heavy equipment and former B891 in the background. Bottom photo: Conditions on September 26, 2007, just prior to the start of regrading activities.

Figure 3-226. Photographs of Hillside Before and After Slump Development

Regraded slump on January 7, 2008. The replacement for well 45605 will be installed in the bench midway up the slope (marked by a long strip of snow below the line of trees). Note that the Russian olive tree that had been present near the western end of the slump (toward the right in this and the preceding pictures) was also removed during the regrade.

Figure 3-227. Photograph of Regraded Slump

Abandonment of Well 45605

As noted above, the hillside in which Sentinel well 45605 was installed developed into a slump beginning in January 2006 (the first instance in which surface cracks were observed). This caused damage to the well.

On October 1, 2007, the fourth-quarter CY 2007 sampling event at this well was successfully performed, and on October 18 the well was abandoned in place. Due to the kinked condition of the well casing, the depth of the well could not be measured at that time. The 1-inch PVC well casing was filled with sand and clay (granulated bentonite) per State requirements (State of Colorado 2005), although this activity was also hampered by the condition of the well. The upper 5 feet of casing was removed and the remaining borehole filled to surface with granulated bentonite.

Additional PVC well casing was subsequently removed as the hillside was regraded by heavy equipment. However, the length of additional casing removed was not documented.

Well 45605 will be replaced before the end of second quarter CY 2008 to ensure it is available for routine sampling on the normal semiannual schedule for Sentinel wells. The objectives of the original well will apply to the replacement well (see DOE 2007e for a description of the location-specific objectives). The well will be developed prior to sampling. The location of the replacement well will be approximately 5 to 10 feet west of the surveyed location of well 45605

(i.e., upgradient, along remnants of the buried French drain). The replacement well will be identified as Sentinel well 45608.

SPPTS Treatability Studies

As reported in the 2006 Annual Report (DOE 2007e), treatability studies of the SPP water began in 2006 but were not successfully completed. A revised set of studies was performed in 2007, fulfilling one of the recommendations made in the CERCLA 5-year review (Section 2.2). Appendix G includes the full report on these studies; a brief summary is provided here.

The treatability studies were designed to test different substrates and carbon sources for microbiological denitrification of nitrate-contaminated water from the SPP. These studies were performed by researchers from Colorado State University. Substrates were selected to represent an inexpensive and readily available, high-surface area material (pea gravel), and a purpose-built, high-surface area material (a plastic environmental media called NorPak, manufactured by Jaeger Environmental). Carbon sources that were tested in a preliminary phase included ethanol and methanol. (In comparison, the current SPPTS uses sawdust as a combined substrate/carbon source, with 10 percent ZVI mixed in.)

This second round of studies began in spring 2007. The first step of this second phase focused on a matrix of laboratory batch tests to evaluate and compare different microbial inocula (sewage sludge, manure, and soil), water additives (such as phosphate and yeast extract), and carbon sources (ethanol, methanol, and corn syrup). The blend that was selected for use in the larger-scale barrel tests was sewage sludge with minor soil added (the soil was from the DG area), no water additives (except phosphate during the initial inoculation/acclimation period), and methanol as a carbon source.

Barrel (or “reactor”) tests were then performed using these components shared between one reactor with a pea-gravel substrate and one with the plastic NorPak substrate. The reactors and a holding tank, from which water could be metered at a constant rate, were installed within the SPPTS structure (Figure 3-228).

Notes: Water was routed from SPIN (collection well) to yellow vessel on left, from which it was metered at a constant flow rate to each of the two reactors. The larger reactor in the background was filled with pea gravel; the smaller reactor in the foreground was filled with the engineered plastic media. All effluent was then routed back into the SPPTS, via the Cell 1 influent vent riser (gray vertical pipe to right of the reactors) to ensure complete treatment. Before initiating the treatability studies, all components (reactors, holding tank) were buried in wood chips. See Appendix G for full report.

Figure 3-228. Photograph of 2007 SPPTS Treatability Study Apparatus

Water from SPIN was first used in the study, and was fed through the reactors at a rate of 50 milliliters per minute (mL/min) with a methanol application rate of 0.8 mL/min (approximately 1.6 percent of the total flow). Treatment was effective within 3 weeks after the study began. (The delay was due to the need for the bacteria to attach to the substrate and become acclimated to the reactor environment.) The hydraulic residence time was determined to be approximately 37 hours in each reactor.

Water from the DG was then used in the study, at the same flow and methanol application rates as were used for the SPIN water. It was successfully treated with no lag time—the bacteria had already acclimated to the reactor environment.

Optimization tests were then run, in which the methanol feed rate was reduced by one half and/or the influent flow rate was doubled. It was determined that the SPIN water could be treated at the lower methanol rate with minimal ill effects; however, the higher flow rate resulted in a significant decrease in nitrate removal. When both changes were made (halved methanol, doubled flow rate), the effluent contained excessive nitrate (i.e., above the TM). Water from the DG was not tested for optimization, but it is likely that incomplete treatment would have resulted. This is based on the water quality of these two waters, with the SPIN water averaging approximately 300 mg/L nitrate (as N) during the tests, and the DG water averaging roughly 500 mg/L nitrate (as N).

Analysis of U was also performed at several points in the studies, and as anticipated it was found that U was being removed from the water. Concentrations of U in SPIN water was reduced from 55 μg/L to 3.5−13 μg/L, depending on the reactor. Concentrations of U in DG water were

reduced from 68 µg/L to 24−36 µg/L, again depending on the reactor. (The gravel-filled reactor was more efficient at removing U, presumably due to the mineral surfaces available for sorption that were not present in the plastic-filled reactor.) The studies were designed to evaluate removal of nitrate, so the fact that U was not removed to the same extent should not be seen as a flaw in the treatment method.

Although the treatability studies successfully demonstrated that adequate water treatment could be achieved using the selected inocula, methanol as carbon source, and either type of solid support material tested, significant deviations from results that were anticipated based on current literature were evident. In particular, the stoichiometric requirement for methanol was calculated to be approximately 0.16 percent by volume (0.08 mL per 50 mL, or one-tenth that used in the studies). However, while influent and effluent nitrate concentrations were essentially equivalent between the two reactors, the concentrations of residual methanol in reactor effluents were variable, suggesting incomplete mixing took place within the reactors. In addition, when the reactors were dismantled for demobilization it was found that the expected biofilm was restricted to the "upstream-most" portion of each reactor, suggesting incomplete distribution of the denitrifying bacteria. Had the bacteria been thoroughly distributed and flow been uniform through the reactors, more efficient treatment would have resulted. This was partly a factor of reactor size and study duration. Shortcutting would be less likely through a larger-scale system, and the bacteria would be distributed throughout over a longer time period than was available to the studies. Bacterial distribution could also have been improved had the inoculum been recirculated for a longer time through each reactor; this took place for 4 days during the studies, but results suggest that time should have been increased to at least 2 weeks or so.

See Appendix G for the full report on these treatability studies, and DOE (2007e) for the report on the first set of studies (performed in 2006).

SPPTS DG Flow Measurement and Potholing

Treated effluent from the SPPTS is routed through a perforated segment of the pre-existing Interceptor Trench System (ITS) to the point where it is diverted through a newer, nonperforated pipe and discharges to the subsurface. A portion of this subsurface discharge eventually is present as surface flow that is monitored at the SPP DG. Since installation of the SPPTS in 1999, water quality measured at the DG has shown that additional nitrate and U impacts the effluent between the point where it exits the treatment system (and is clean) and the DG.

Two activities were undertaken in 2007 to better understand conditions at the DG. First, a temporary flume was installed at the DG in April 2007. Flow measured at this location does not represent all flow discharged to the subsurface. This is because the discharge pipe is buried and inaccessible. Only that portion of the flow that eventually reaches the surface and flows through a small channel to the flume is measured. The fraction of the total flow that is measured is not known; however, because of the saturated ground and lush vegetation between the discharge location and the flume, it is certain that some discharge goes unmeasured. Even so, it was found that under baseflow conditions (i.e., not storm surges), flow measured at the DG is on average approximately two and one-half times the flow measured at system effluent location SPPMM01 (Figure 3-229).

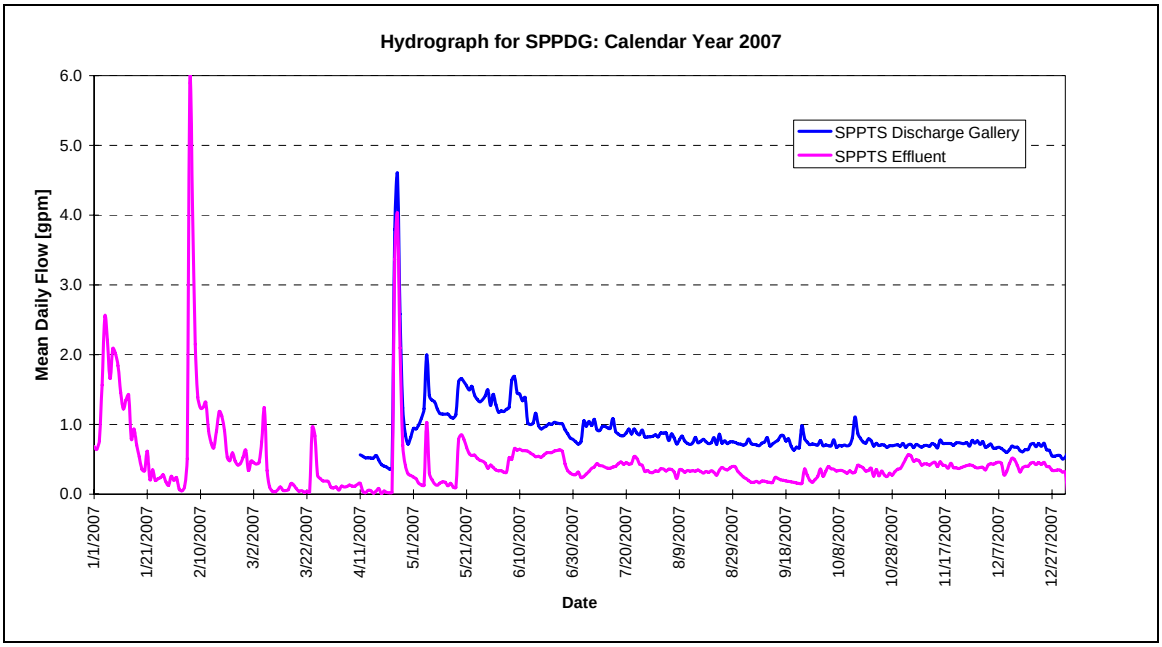
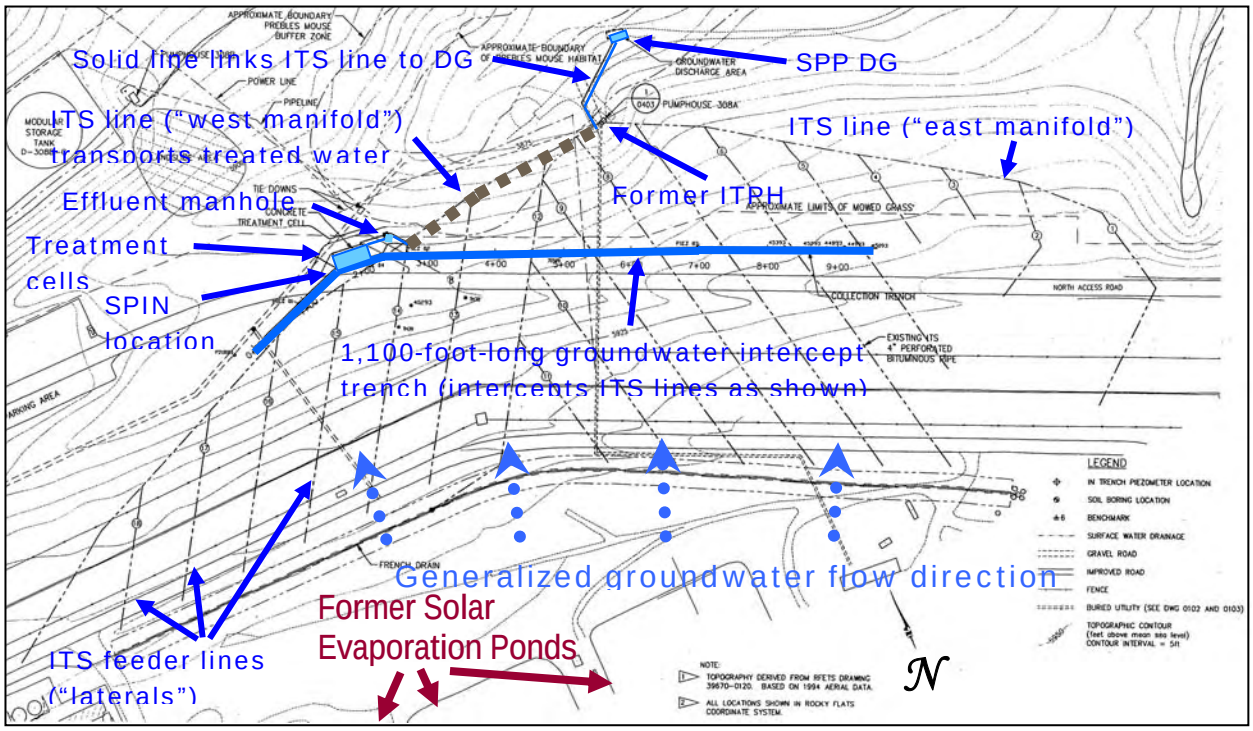


Figure 3-229. Flow Measured at SPPTS Effluent and DG Locations

Following this, exploratory excavations, or potholes, were dug to intercept the ITS east and west manifolds to evaluate water quality in each, and determine which might be contributing to higher concentrations detected at the DG. These are the two northernmost lines of the ITS; they are fed by the herringbone array of ITS "laterals" and previously emptied collected water to the former Interceptor Trench Pump House (ITPH, which was demolished as part of closure). These components are illustrated on Figure 3-230.



Notes: North edges of SEPs are visible near the bottom of the drawing. The effluent manhole is referred to as sampling location SPPMM01. Water collects in the intercept trench, is pumped into the treatment cells, exits the cells and flows through the (perforated) ITS west manifold and into the (nonperforated) line linking the manifold to the DG, where it discharges to the subsurface.

Figure 3-230. Drawing of SPPTS and ITS Components

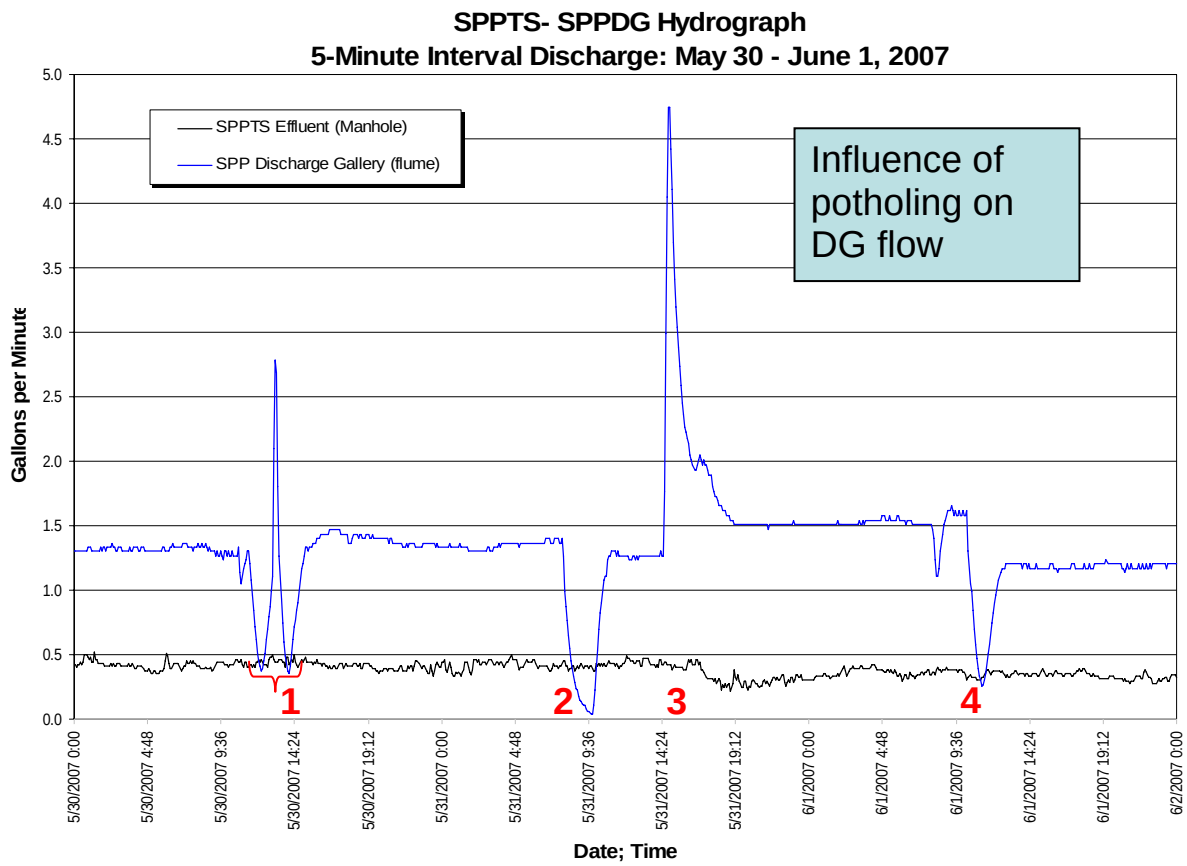
The west manifold pothole was dug at the point where the line to the DG joins the ITS line, and the east manifold pothole was dug at the point where the manifold penetrates the backfilled ITPH sump. When each of these lines was intercepted, flow rates were estimated and samples were collected.

Excavations of the ITS west and east manifolds revealed the lines at both locations to be under head due to their positions near the downhill end of the respective lines. In addition, the ITS east manifold was disrupted during the excavation. The next day, water was cleared out of the excavation and flow resumed from the pipe, but at a much lower rate than had been observed the previous day. Most of the flow at that time was observed to be coming from the remnants of the ITPH sump.

Table 3-93 summarizes events and observations during the excavation activities, and Figure 3-231 shows the effects of specific excavation activities on flow measured at the DG.

Table 3-93. Summary of Events During DG Excavations

Location	Date, Time	Samples (grabs)	Estimated Flow Rate	Comments
ITS west	5/31, ~0800	--	4 gpm	Flow under head; visual estimate of flow rate
ITS west	5/31, 0900	U, nitrate	1.2 gpm	Flow stabilized; average of three measurements
DG	5/31, 1030	U, nitrate	0.9 gpm	DG flow stopped as flow from loose coupling drained into excavation; resumed after coupling connection was completed, but not yet stable
ITS east	5/31, 1500	U, nitrate	50−60 gpm	Pipe disrupted on contact, flow under head; visual estimate of flow rate from pipe; sample from pipe flow
ITS east	6/1, 1045	U, nitrate	5 gpm	Cleared out excavation, flow resumed, rate stabilizing but still decreasing; visual estimate of flow rate from subsurface remains of ITPH; sample from this ITPH flow
DG	6/1, 1100	U, nitrate	0.5 gpm	Flow still varying somewhat due to excavation-related disturbances



Notes: ITS pot-holing timeline: 1. ITS west excavated and located, water drained from pipe into trench. 2. ITS west excavation cleaned out and sampled; flow subsided from ~4 gpm to stabilize at ~1 gpm (avg. 1.2 gpm, n=3). 3. ITS east intercepted and broken; initial flow ~50−60 gpm, sampled; job paused for safety. 4. ITS east excavation cleaned out, flow ~5 gpm and subsiding; sampled.
One interpretation: Confinement of pipe relieved at point 1, water flooded into trench. Trench reexcavated at point 2, again relieving confinement (this time from water pressure in the trench). At point 3, large volume of water in east manifold (which previously dead-ended in earth-filled sump, with water gradually percolating through to join flow to DG, but was broken during excavation work) flooded the excavation and short-circuited to DG, then flow stabilized. Clearing out the excavation at point 4 again reduced flow to DG as east manifold flow was diverted to refilling the excavation.

Figure 3-231. Annotated Summary of Flow Measured at DG During Potholing Activities

Analytical results (Figure 3-232) show concentrations in water samples collected from the ITS west manifold to be very similar to those in samples collected from the DG, while samples from the ITS east manifold contained much lower concentrations of both U and nitrate. Therefore, the source of the bulk of the contamination reported at the DG is the remnants of the west ITS manifold and associated laterals downgradient of the SPPTS interceptor trench.

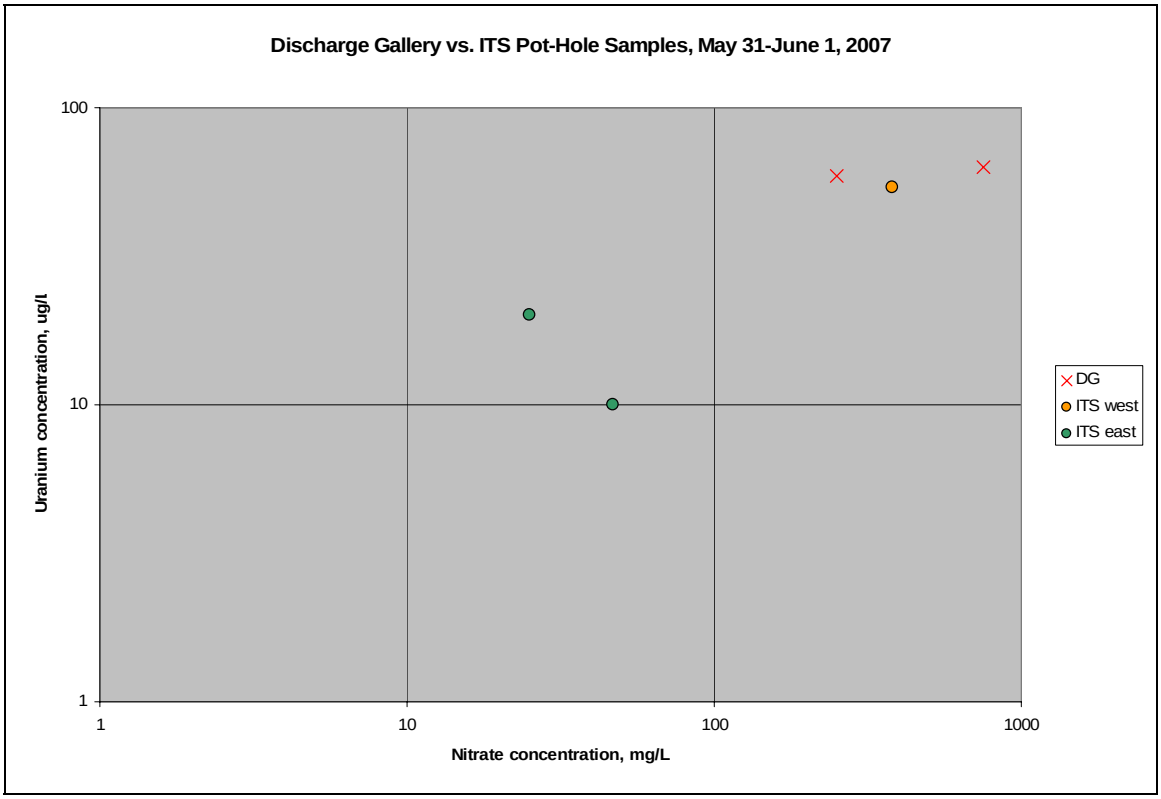


Figure 3-232. Analytical Data From DG and ITS West and East Manifold Samples

Updates to Groundwater Models

Prior to Site closure, numerous groundwater models were constructed (e.g., K-H 2004c) to support closure planning and decisions. These models also supported the design of the water monitoring network, helping to identify appropriate monitoring locations so that significant gaps in the network would not be present.

In 2007, several models were updated to assess general groundwater conditions and confirm they were consistent with pre-closure predictions. Models that were updated included the IA VOC Flow Model, the OLF Flow Model, and the Mound Site Flow Model. Each of the resulting memoranda reports on the updated models is included in Appendix F. It should be stressed that no contaminant models were updated, only flow components of these models. If the updated flow aspects of a model had shown unexpected groundwater flowpaths, for example, contaminant-related components of the model would have been updated as appropriate. However, groundwater flows agreed well with pre-closure predictions, so contaminant modeling was not performed.

In summary, the model updates found the monitoring network to be appropriately designed for its purpose. While additional data would be necessary to construct the sort of detailed models that were initially performed, existing data did not suggest the pre-closure predictions were inaccurate. Refer to Appendix F for the memoranda reports on these model updates.

No-Purge Sampling

Background

Groundwater at Rocky Flats is not plentiful, and wells in many areas dewater readily when purged. This is due to the semiarid climate (what groundwater is present does not receive abundant recharge), as well as the low-permeability materials in which most wells are installed (groundwater does not travel rapidly). With little recharge and slow-moving groundwater, wells tend to dewater readily and recharge may be a slow process, a condition that has hampered the groundwater monitoring program at Rocky Flats for decades.

After DOE-LM accepted control of the Site in late 2005, a study was begun to determine the feasibility of using a different sampling method at wells that typically go dry during the pre-sampling purge (even when purged using low-flow techniques). The purging activity is intended to remove stagnant water from a well so that the sample represents "fresh" formation water, with the understanding that the stagnant water may not be representative of the formation water (Puls and Barcelona 1996; EPA 2002; Cal/EPA 2006; Vandenberg and Varljen 2000). However, by purging extremely low-producing wells, often there is insufficient recharge to collect a sample within the allotted time (at Rocky Flats, samples for the analysis of VOCs must be collected within 48 hours after purging).

Well purging and sampling is a topic that has received much scholarly attention over the past several decades, and methods have improved greatly. The newer methods produce samples that are typically considered more representative of the formation water than do older methods. Even so, collecting representative samples from wells that go dry when purging is attempted remains a challenge. Dewatering the well (especially if done aggressively, either with a bailer or via higher flow-rate pumping) changes the geochemical conditions to which recharge is subjected, leading to recommendations against this approach (Barcelona et al. 2005; EPA 1998, 2002; Negrao and Kaminski 2007; Kaminski 2003, 2006). Nonetheless, at wells that typically experience sharp drawdown and dewater with minimal purging, the alternatives are very limited.

Some entities employ a "no-purge" sampling technique at low-producing and other wells. (In this use of the term, "no-purge" samples are collected from water initially present within the well casing, rather than purging that water and collecting samples from the recharge (if any); this latter process is the traditional sampling method at Rocky Flats.) The reason for using the no-purge method is often related to a desire to reduce the costs of monitoring, including disposal of purge waters and the labor required to purge and sample a well. The no-purge method has been reported to be applicable to carefully selected fuel-hydrocarbon sites (Newell et al. 2000), although this study advocates the collection of sets of purge/no-purge samples for comparison before adopting the no-purge method. A study by the Western States Petroleum Association (WSPA) (1996) in California suggests such a method is appropriate for wells meeting six criteria, the first of which is that the well is "only impacted by gasoline hydrocarbons." Both of the aforementioned reports are based on large data sets comprising hundreds of wells, although it

appears the wells produced adequate water and did not go dry (and therefore may not be directly comparable to wells in the Rocky Flats study). Conversely, Barcelona (1997) has a somewhat different view of no-purge sampling: "the 'method' is a fraud." EPA (2002, p.44) describes the utility of well purging as follows:

> "In most cases, the standing water in the well casing can be of a different chemical composition than that contained in the aquifer to be sampled. Solutes may be adsorbed or desorbed from the casing material, oxidation may occur, and biological activity is possible. Therefore, the stagnant water within the well must be purged so that water that is representative of the aquifer may enter the well."

It is important to note, however, that many (e.g., Negrao and Kaminski 2007) have recognized that in some cases, the standing water in the casing—or some portion of it (i.e., that in the screened interval, where the top of the screen is submerged)—may be representative in some settings or may simply represent the best available sample water, given various imperfect alternatives. Because of the lack of strong consensus in the literature, a Site-specific evaluation of the method was appropriate.

Description of the Evaluation

When analytical data are used to make decisions related to compliance, a complete absence of sample data is preferable to the collection and use of nonrepresentative sample data. Therefore, an evaluation was begun to determine whether using the no-purge sampling method at Rocky Flats yields samples that are significantly different in contaminant concentrations from those collected following a well purge. If not, the method would be adopted for use for groundwater sampling at Rocky Flats.

Parallel sampling at the Site was attempted from late 2005 through the end of 2007. The wells where this was conducted were located across the COU, and were selected because they often fail to recover during sampling. (The following point needs to be stressed. This entire evaluation is focused solely on low-producing wells that often go dry during the purge. It is not known whether findings from this evaluation would be applicable to more productive wells; additional data would be needed to determine broader applicability.) The intent at each selected well was to collect a sample using the no-purge method (the "no-purge sample"), then purge (and typically dewater) the well and collect a second sample (the "purge sample"). In most cases, the analytical suite was limited to VOCs; however, nitrate, total U, and/or metals were included at some locations. (Samples for the first two suites are collected without filtering, while the last two samples are field-filtered using a 0.45-micron [μm] in-line filter.)

Many of the wells selected for this study did not provide adequate water to meet the study objectives. In some cases they were dry and provided no samples; in other cases, they provided the no-purge sample but not the purge sample. Further complication resulted from the need to return to some wells at a later date to collect the purge samples, because recharge was so slow. The resulting temporal gap between samples ranged from several hours to over 6 weeks. Such a long period between samples clearly raises the question of whether both such samples can be considered to represent the same groundwater, and whether the latter sample could accurately be described as a purge sample as opposed to simply another no-purge sample. Finally, even when both samples were successfully completed, if analytical results from both methods were reported as nondetects, the associated data were of no benefit to this evaluation. In the end, the total

number of complete sample sets (i.e., one no-purge sample and one purge sample from the same well, representing the same sampling event, for the full scheduled analyte suite) that were successfully collected was 29.

Analytical results of these samples were assembled. Only paired samples were included in the assessment; if a well did not produce both the no-purge and purge samples for a given sampling event, analytical data for the event were eliminated from this evaluation. Furthermore, if those two samples were separated by more than 2 days, they were removed from the evaluation. This was because most of the comparisons were based on VOC samples. In several cases, both a "real" and a "field duplicate" sample were collected from a well for either the no-purge or purge sample. In these cases, both were used and compared with the sample collected using the other method.

Data gathered during this evaluation were first examined; results for analytes that were not detected in either sample were removed from the data set. The final data set was then assessed statistically using both the ANOVA and Mann-Whitney methods. A modified interwell comparison was made, in which no-purge data were assigned upgradient and purge downgradient positions. Finally, a qualitative, visual comparison of the data was performed.

Results and Discussion

Table 3-94 summarizes the numbers of sample sets attempted and successfully collected for this evaluation. As noted in the table, seven sample sets were not successfully collected due to dry conditions, and temporal separation (i.e., too much time between no-purge and purge samples) affected two sample sets.

Both the ANOVA and Mann-Whitney statistical methods found the data set to be too small to support an effective statistical analysis. This is not surprising, given that most locations evaluated for this study successfully produced only one set of samples (Table 3-94). Given the time and labor requirements and difficulties associated with sample collection related to water availability, it would be overly costly to continue to collect and analyze purge and no-purge sample sets from low-producing Rocky Flats wells until they are sufficient in number to support a robust statistical evaluation of the two sampling methods, yielding results with a high degree of confidence. Even so, the data that have been collected are useful for a qualitative comparison of the methods, and combined with published studies can serve as an indication of whether the no-purge method might be appropriate for use at Rocky Flats.

Two types of displays of the data were prepared to allow a visual comparison of the methods. One is a tabulation of the analytical data, allowing simple observation of the numerical differences in the results generated by the two sampling methods. The second employs graphical comparisons of these data.

Table 3-94. Tally of No-Purge/Purge Sample Sets Collected from 2005-2007

Well	VOCs		Uranium		Nitrate		Metals		SVOCs		Total Attempted	Total Collected
	Attempted	Collected	Attempted	Collected	Attempted	Collected	Attempted	Collected	Attempted	Collected		
00797	1	1	1	1							1	**1**
04091	1	1									1	**1**
10594	2	2	2	2	2	2					2	**2**
10992	2	2									2	**2**
11092	1	0									1	**0***
15699	1	1									1	**1**
21505	1	1									1	**1**
4087	3	1	3	1	3	1					3	**1***
4787	1	0									1	**0***
4887	1	0									1	**0***
70099			1	1	1	1					1	**1**
73005	3	3	3	2			3	2			3	**2****
73205	1	0					1	0			1	**0***
80205	1	1	1	1			1	1	1	1	1	**1**
88104	1	1	1	1							1	**1**
90299	3	1									3	**1***
90399	5	5									5	**5**
90402	1	1									1	**1**
91305	1	1	1	1	1	1					1	**1**
95099	1	1									1	**1**
95199	1	1									1	**1**
95299	3	0									3	**0***
99305	1	1	1	1	1	1					1	**1**
99405	1	1	1	1	1	1					1	**1**
B206989	3	2	3	2	3	2					3	**2****
P210089	1	1	1	1	1	1					1	**1**
Total	41	***29***	19	***15***	13	***10***	5	***3***	1	***1***	42	***29***

Notes: Attempted = number of sampling events in which a pair of samples (no-purge and purge) was attempted to be collected. Collected = number of sampling events in which a pair of samples (no-purge and purge) was successfully collected. * = Dry conditions/insufficient water prevented collection of all sample sets attempted. ** = Temporal separation between the no-purge and purge samples caused removal of the associated data from the data set.

Table 3-95 provides a summary table of VOC data from this study, and Table 3-96 summarizes data for inorganic constituents. (Inorganics include metals and nitrate. U is grouped with metals.) Results are presented if (after the data management steps described above) more than two high-confidence data points (i.e., not U-, J-, or B-qualified) are represented in the full data set, and the constituent is listed in the table of RFLMA action levels (DOE 2007d). This was done to reduce the table to a manageable size, and also because the resulting table tends to summarize the more commonly detected (and therefore more important, on a Site-wide basis) constituents. Refer to Appendix B.7 for the full set of no-purge and purge data.

Table 3-95. Summary of Analytical Results (µg/L) for No-Purge and Purge Samples: VOCs

Location	Sample Date	1,1-DCE		Carbon Tetrachloride		Chloroform		cis-1,2-DCE		PCE		TCE	
		NP	P	NP	P	NP	P	NP	P	NP	P	NP	P
00797	12/12, 14/05											0.58 (J)	0.2 (U)
04091	11/8/07			0.19 (U)	0.21 (J)								
10594	12/12, 14/05											0.51 (J)	0.2 (U)
15699	11/6/07	**14**	**32**					**400**	**370**	**5.7**	**130**	**130**	**480**
21505	5/24/06	1.5	0.6 (J)			0.66 (J)	0.29 (J)	3.2	1.5	4.6	1.3	**25**	**8.9**
88104	10/22, 23/07									0.2 (U)	0.22 (J)	0.16 (U)	0.24 (J)
90299	4/18/07			0.48 (J)	0.19 (U)	1.6	0.53 (J)					0.93 (J)	0.32 (J)
90399*	12/12, 13/05	1.3	1.3	**250 (D)**	**310 (D)**	**29 (D)**	**37**	3.8	3.3	**8.6**	**9.2**	**280 (D)**	**320 (D)**
		1.2		**250 (D)**		**28 (D)**		3.6		**8.8**		**280 (D)**	
90399	6/13/06	1	1.2	**210**	**240**	**39**	**43**	3.8	4.4	**8.2**	**9.1**	**350**	**380**
90399	11/1, 2/06	0.34 (J)	0.76 (J)	**120**	**140**	**28**	**29**	2.4	2.5	3.5	3.9	**170**	**180**
90399	4/18/07	0.71 (J)	0.74 (J)	**150**	**150**	**27**	**28**	2.4	2.5	4.7	4.7	**210**	**210**
90399	11/6/07	0.87 (J)	1.3	**140**	**200**	**34**	**40**	3.7	4.2	4.4	**5.1**	**300**	**370**
90402	6/12/06	0.27 (J)	0.24 (J)	**10**	**10**	2.7	2.7	0.24 (J)	0.16 (J)	**9.7**	**11**	**17**	**16**
91305*	11/5/07							6.3	7.6				
									7.5				
95099	11/8/07			0.19 (J)	0.19 (U)								
95199	11/13/07	0.21 (J)	0.57 (J)			0.16 (U)	0.18 (J)	1.1	2.2	0.38 (J)	2.1	**16**	**58**
99305	11/1/07	0.14 (U)	0.29 (J)					6.9	10	1.8	4.2	**27**	**75**
99405*	11/5/07					0.18 (J)	0.16 (U)	1.1	1.4	0.47 (J)	0.83 (J)	**69**	**120**
							0.17 (J)		1.6		0.79 (J)		**91**
RFLMA Surface-Water Standard		*7*		*5*		*3.4*		*70*		*5*		*5*	

Notes: NP refers to no-purge samples, P refers to the purge samples. Results are not included if both were nondetects. **BOLD** results exceed the corresponding RFLMA action level (DOE 2007d). Qualifiers: J = estimated; U = analyte not detected at indicated detection limit; D = analysis run at a dilution. Analytes were omitted if they were represented by two or fewer sets of high-confidence detected results (i.e., not U-, J-, or B-qualified), or if they are not listed on RFLMA Attachment 2, Table 1 (DOE 2007d). *The second set of data represents a field duplicate sample.

Table 3-96. Summary of Analytical Results (µg/L except as noted) for No-Purge and Purge Samples: Inorganics

Location	Sample Date	Nitrate+ Nitrite as N (mg/L)		Boron		Uranium	
		NP	P	NP	P	NP	P
00797	12/12, 14/05					26	25
10594	12/12, 14/05	0.07	0.04 (B)			91	95
10594	11/1/07	0.2	0.14			110	**130**
4087	4/16/07	0.47	0.36			28	30
70099	10/30/07	0.095	0.52			**260**	**280**
73005	4/30/07			32	32	17 (B)	19 (B)
73005	10/15/07			32	34	25 (B)	25 (B)
80205	10/17, 18/07			71	69	69	94
88104	10/22, 23/07					51	47
91305*	11/5/07	0.074	0.25			48	54
			0.26				53
99305	11/1/07	0.019 (U)	0.34			63	61
99405*	11/5/07	3.9	4.2			**440**	**400**
			4.1				**400**
B206989	10/10/06	36	35			110	120
B206989	10/16/07	27	28			89	93
P210089	10/30/07	140	140			16	18
RFLMA Surface-Water Standard		*10 or 100*		*750*		*120 (Threshold)*	

Notes: NP refers to no-purge samples, P refers to the purge samples. Results are not included if both were nondetects. **BOLD** results exceed the corresponding RFLMA action level or U threshold (DOE 2007d). (No Boundary wells were appropriate for this evaluation, so the 16 µg/L total U threshold applying to them is not listed as the U threshold.) Qualifiers: U = analyte not detected at indicated detection limit; B = detected concentration was less than the required detection limit but above the instrument detection limit. Analytes were omitted if they were represented by two or fewer sets of high-confidence detected results (i.e., not U-, J-, or B-qualified), or if they are not listed on RFLMA Attachment 2, Table 1 (DOE 2007d). *The second set of data represents a field duplicate sample.

Several significant differences are immediately obvious on these tables. For example, Table 3-95 shows PCE and TCE results in the sample set from well 15699 differ markedly between the purge and no-purge methods, with the no-purge sample result for PCE reported at 5.7 µg/L while that for the purge sample is reported at 130 µg/L. For TCE, these results are reported as 130 µg/L and 480 µg/L, respectively. There are also instances in which the no-purge sample is reported to contain higher concentrations of a constituent (such as cis-1,2-DCE in the same sample from well 15699, with a no-purge result of 400 µg/L, and a purge result of 370 µg/L). However, where differences exist between the results, in most cases the purge sample is reported at a higher concentration than the no-purge sample. For inorganic constituents (Table 3-96), the results are more mixed.

Graphs of the data were also prepared that plot purge versus no-purge results. Each point on the graph has the coordinates x = no-purge result and y = purge result for a specific well/constituent/ sample date combination. For clarity, details of the various constituents and well numbers are omitted. (Refer to Appendix B.7 for the full data set.)

Two graphs incorporate the methods employed when evaluating Rocky Flats groundwater data that are qualified either by the laboratory or through the data validation process as nondetects: these results were replaced with a value of 0.001. To provide a comparison with a convention

that is widely used when evaluating analytical data including nondetects, two other graphs were prepared in which the nondetects were replaced by a value equal to one-half the reported detection limit.

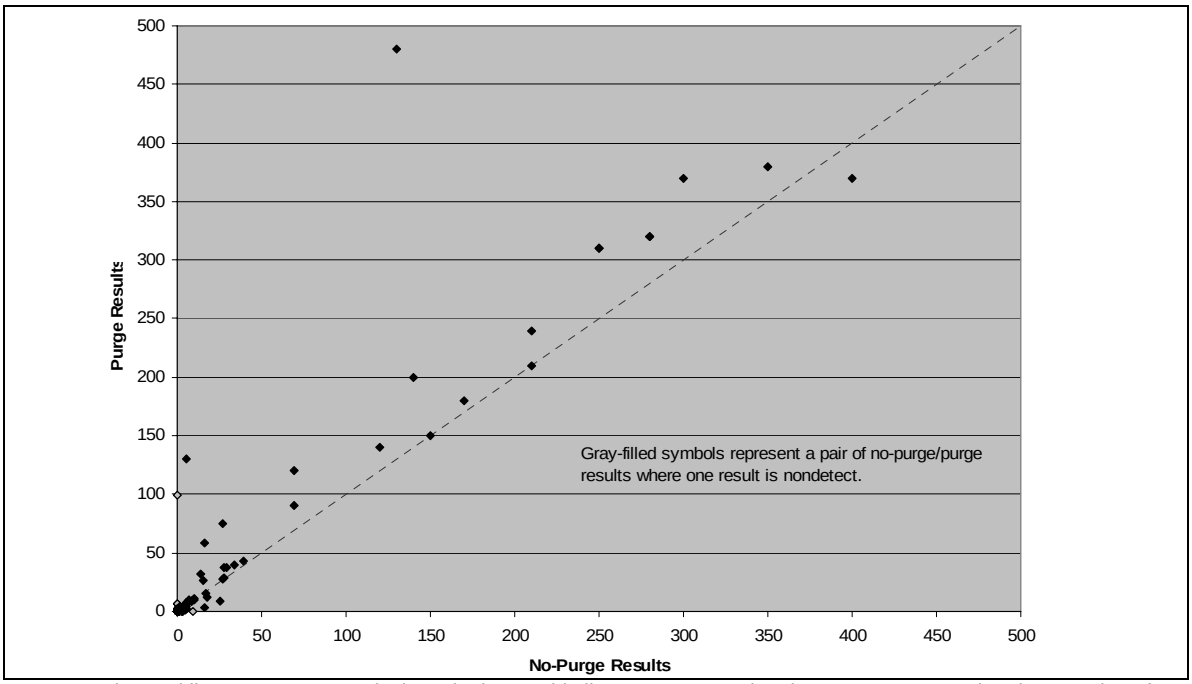
Only data with relatively lower concentrations, in the 0−500 μg/L (or mg/L, in the case of nitrate) range, were included for this report. This is for two reasons. First, the Rocky Flats groundwater monitoring program is focused on detection and compliance monitoring, and most of the applicable action levels are in this range (DOE 2007d). That is, groundwater is monitored to detect the presence of contamination, particularly as the groundwater nears surface water, and to determine whether the groundwater may pose a threat to surface-water quality. Groundwater data are compared against surface-water action levels, and decision rules are largely based on these compliance standards. Therefore, it is appropriate to focus more closely on the concentration range represented by these standards. Second, most of the results in the data set compiled for this evaluation fall in this range; those that do not (which exclusively represent calcium, magnesium, potassium, silica, sodium, and strontium) are of less (or no) importance to the monitoring program.

A 1:1 line was added to the plots. If both sampling methods yield samples that are equivalent, and the usual laboratory and field uncertainties are nonexistent, all points will plot on this line regardless of sampling method. However, these uncertainties do exist, so if both methods result in equivalent samples the points should plot along the 1:1 line, with points equally distributed on both sides of and preferably fairly close to the line.

Results of this graphical approach are provided on the following figures. Figure 3-233 and Figure 3-234 illustrate this comparison for VOCs when nondetects are replaced with 0.001 and with one-half the detection limit, respectively, Figure 3-235 and Figure 3-236 represent inorganics, using the same nondetect replacements, respectively.

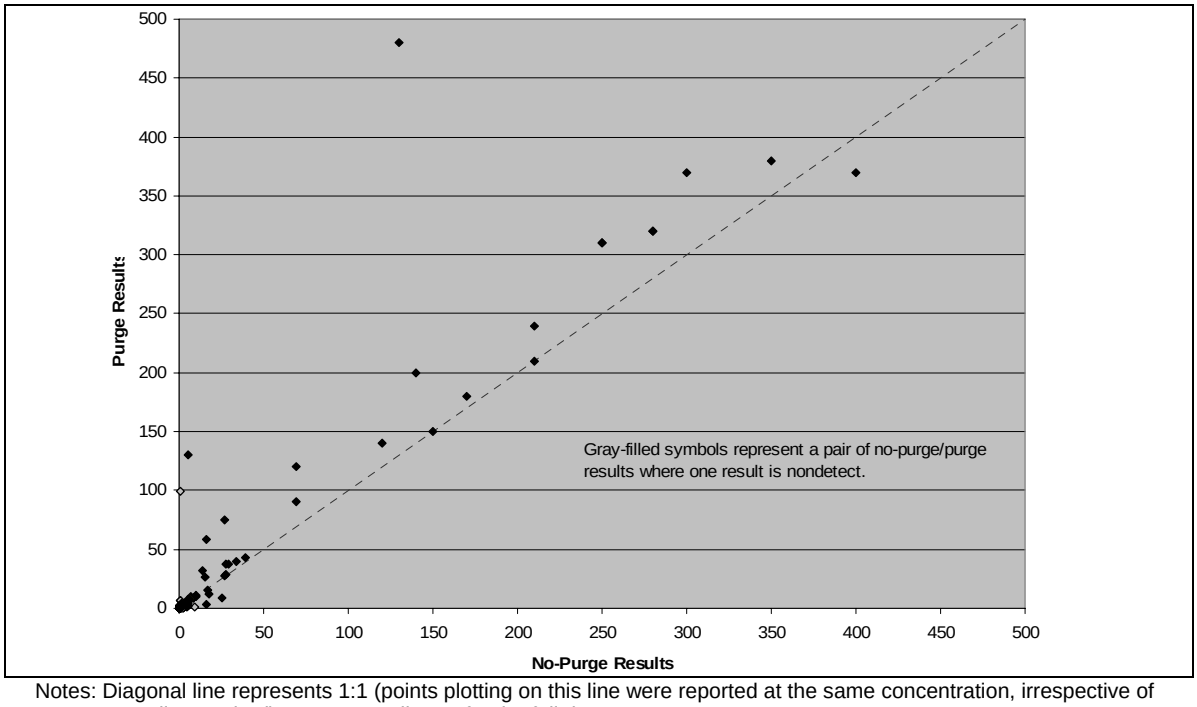
From these figures, it is fairly obvious that there is a difference in results generated by the two sampling methods with respect to organic constituents (Figure 3-233 and Figure 3-234). Regardless of whether nondetects are replaced with one-half the reported detection limit or 0.001, reported VOC concentrations are frequently higher when the purge method is used to collect samples; more points on these figures plot above the 1:1 line than below the line. This indicates that these differences cannot be attributed solely to analytical or field uncertainties, because if that was true there would be an even distribution of points on both sides of the line. Therefore, samples collected using the no-purge method are biased toward lower VOC concentrations, even in comparison to the data from many samples collected from recharge after the well dewatered.

The differences are not as clear when samples are analyzed for inorganics, as shown on Figure 3-235 and Figure 3-236. Additional no-purge and purge sets of data for inorganic constituents would need to be collected to support a conclusion of whether any bias is present.



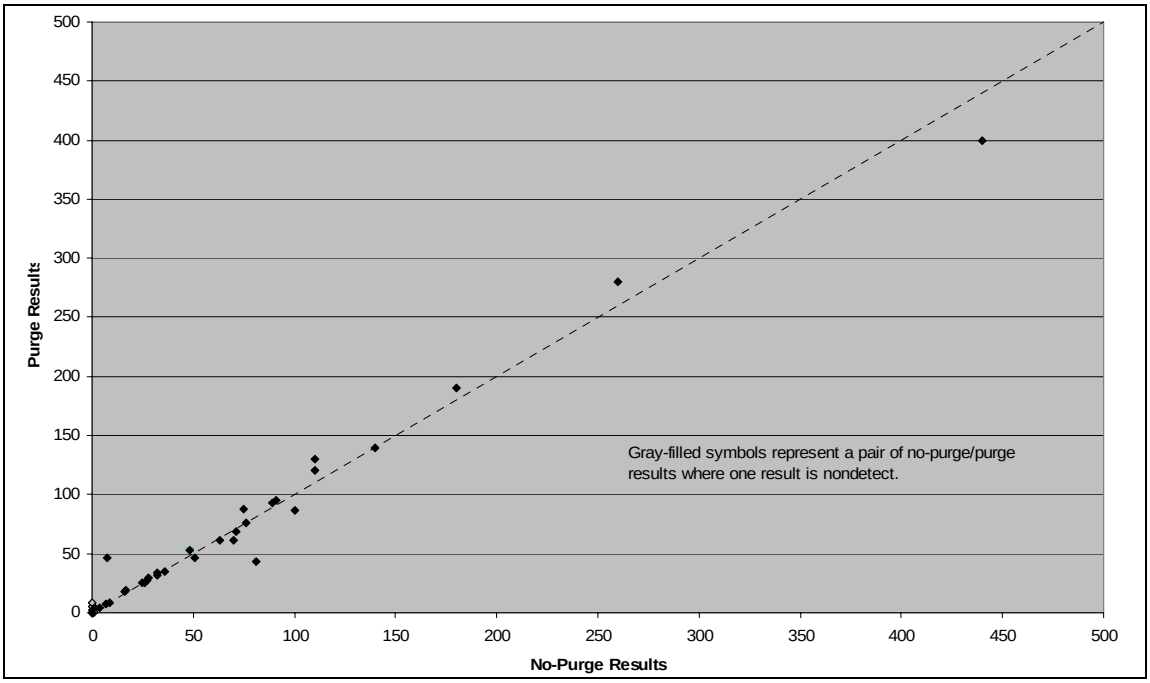
Notes: Diagonal line represents 1:1 (points plotting on this line were reported at the same concentration, irrespective of sampling method). See Appendix B.7 for the full data set.

Figure 3-233. Plot of No-Purge vs. Purge Results for VOCs: Nondetects Replaced with 0.001



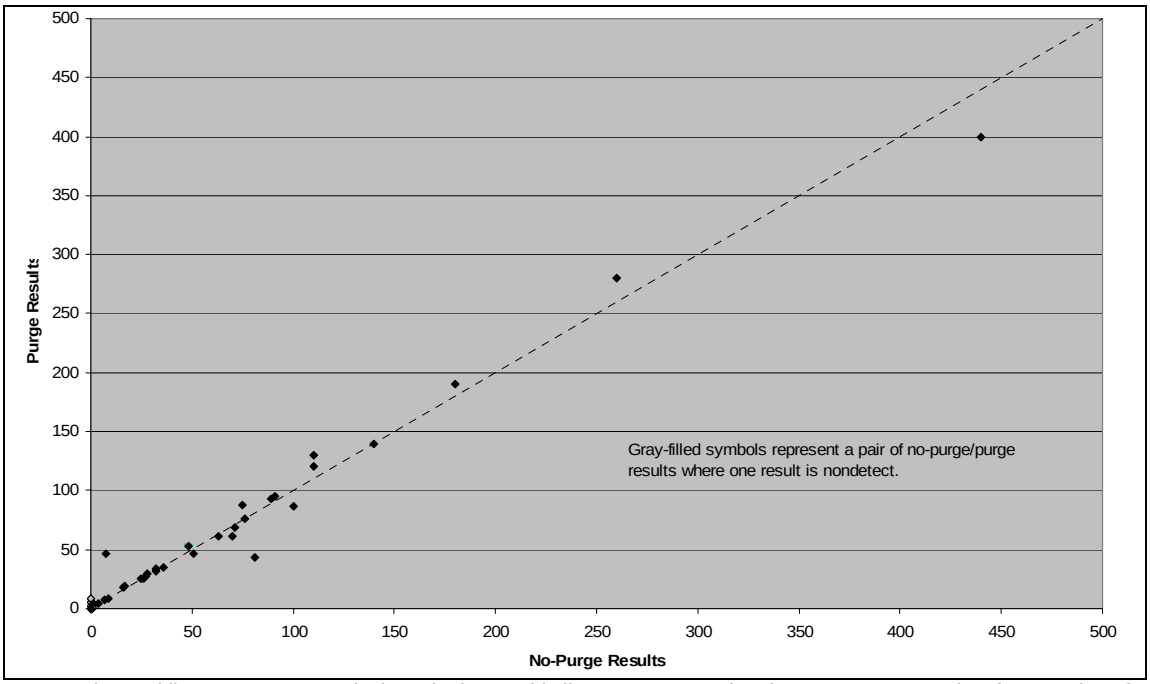
Notes: Diagonal line represents 1:1 (points plotting on this line were reported at the same concentration, irrespective of sampling method). See Appendix B.7 for the full data set.

Figure 3-234. Plot of No-Purge vs. Purge Results for VOCs: Nondetects Replaced with One-Half the Reported Detection Limit



Notes: Diagonal line represents 1:1 (points plotting on this line were reported at the same concentration, irrespective of sampling method). See Appendix B.7 for the full data set.

Figure 3-235. Plot of No-Purge vs. Purge Results for Inorganics: Nondetects Replaced with 0.001



Notes: Diagonal line represents 1:1 (points plotting on this line were reported at the same concentration, irrespective of sampling method). See Appendix B.7 for the full data set.

Figure 3-236. Plot of No-Purge vs. Purge Results for Inorganics: Nondetects Replaced with One-Half the Reported Detection Limit

To a degree, the finding that purge samples contain higher concentrations of VOCs is intuitively reasonable. Because these constituents readily volatilize (hence the term "volatile organic compounds"), they would be expected to be present at lower concentrations in stagnant water within the well casing than they would be in formation water. Even with the effects of aeration as the dewatered wells recharged with water that cascaded through the filter pack and screen, purge samples are generally higher in VOCs than are no-purge samples. Conversely, metals do not volatilize as readily. However, this is not to say that inorganics in fresh formation water will be identical to those in stagnant water within the well casing, either in terms of concentration or speciation. Metals can sorb to sediments at the bottom of the well or in the filter pack, or to the well casing itself, and can precipitate, all of which would effectively reduce metals concentrations. The opposite can also occur: sorbed, mineralized, or corroding metals can be liberated into stagnating water if geochemical conditions are right (Puls and Barcelona 1996; Boylan 2004; Vandenberg and Varljen 2000). (It should also be noted that some VOCs can sorb to sediments, suggesting the possibility that purged samples could be higher in VOC concentrations simply because more particulates were included in the samples of agitated water collected following the purge than in samples of less-turbid water in the no-purge samples. No attempt was made to review turbidity data to determine whether this might be a significant factor.)

Nitrate concentrations may be reduced via bacteria within the well or filter pack. With respect to speciation, if it is important to determine nitrite concentrations (for example), fresh formation water would need to be collected and analyzed because any nitrite present in the water would typically react quickly with atmospheric oxygen within the well casing to become nitrate. Other redox-sensitive constituents can also undergo chemical changes, potentially resulting in poor decisions if based on data from samples of stagnant water (for example, with respect to concentrations of Cr-III vs. Cr-VI; Hg-0 versus Hg-II versus methylmercury, CH_3Hg; various lead species; and so on).

As wells at Rocky Flats (and most other locations) are purged the conductivity, or specific conductance, of the purge water initially varies, and finally stabilizes. This parameter is a measure of the electrical conductivity of the water, and is a useful reflection of major-ion chemistry (most commonly represented by such species as sodium, calcium, potassium, iron, magnesium, chloride, sulfate, nitrate, and phosphate). By varying as the well is purged, the conductivity is indicative of varying concentrations of the ionic components in the water. Conductivity is affected by water temperature, which also varies as the well is purged until reaching a stable level. The gradual stabilization of these parameters as a well is purged is an indication that the stagnant water in the casing is not completely representative of formation water at that location.

Barcelona et al. (1994) report on a study focusing on variations in field parameters and VOC concentrations as wells were purged. They found dissolved oxygen (DO) content and conductivity stabilization to be most indicative of an adequate purge, and report the corresponding purge volume to be consistently less than one-half of a bore volume (where the bore volume is equivalent to the volume of water contained in the sand pack, screen, and well casing). More recently, Vandenberg and Varljen (2000) report on a study in which field parameters, again including DO and conductivity, were monitored and samples collected for analysis of major ions, VOCs, and metals as wells were purged. The results indicated each of

these varied as the purge proceeded, stabilizing after one-half to two casing volumes (not bore volumes) were purged.

The data reported by Newell et al. (2000), in a paper advocating wider use of no-purge methods, also indicate a small amount of bias in the data. Plots of benzene concentrations from six individual studies of no-purge versus purge sampling are presented, and include calculated regression lines. The slopes of the regression lines for four of the six individual studies are weighted toward the purge data, indicating purge samples were slightly higher in benzene concentration than no-purge samples. The regression line calculated for the data compiled from all six studies is also biased in this direction, although more slightly. Note that these lines do not differ greatly from a slope of 1, with the individual study data sets represented by regression lines that range in slope from 0.92 to 1.03 (where a slope less than 1 indicates the purge samples are higher in concentration than no-purge samples). The correlation coefficient, r^2, for these studies ranges from 0.68 to 0.87; the numbers of sample sets range from 29 to 480, with a total for all six studies of 736.

Newell et al. (2000, p.8) also caution that "underestimation of VOC concentrations is most likely to occur: i) in relatively low-permeability formations (with slow seepage velocities and long in-well residence time); and ii) at lower VOC concentrations." They recommend (p.9) a comparison of data representing purge versus no-purge samples "to evaluate potential for bias toward lower concentrations in the No-Purge samples."

Conclusions and Recommendations

It should be reiterated that when the analytical results are used to evaluate compliance with water-quality standards, a complete lack of analytical data is strongly preferred over the acquisition and use of biased data—even if this means that efforts required to collect a sample cause the well to dewater and not produce any data at all.

This evaluation showed that samples collected using the no-purge method are not consistently equivalent to those collected using the purge method. Historically, low-producing wells at Rocky Flats were sampled using the purge method, and decisions were based on data reported from the associated samples. Therefore, if the no-purge method does not produce samples that are equivalent to purge samples, the associated data should not be pooled with and considered equivalent to these historic data.

If detailed results with minimal chance of bias are required—for example, when the data support decisions related to compliance—the no-purge sampling method does not appear to be appropriate for groundwater sampling at Rocky Flats. This is especially evident for VOCs, and sufficient doubt is present in the literature to suggest this applies also to inorganic constituents. Even if the higher VOC concentrations in purge samples are a result of increased turbidity—a possibility that was not confirmed as part of this study, and which would require specialized analyses to confirm VOCs are truly sorbed to the particulates and would not be present in such high concentrations without the presence of these solids—the purge sample at least provides a conservative indication of concentrations. To support a detection monitoring program that incorporates many wells screening relatively low-permeability deposits, as is the case at Rocky Flats, the well should be purged before samples are collected. However, for the collection of field screening-level information intended to determine the presence of contaminants at relatively higher concentrations, the no-purge method would appear to be appropriate.

A fundamental question remaining to be answered is, what sampling method at low-yield wells is both efficient and produces groundwater samples that are truly most representative of formation water? This evaluation did not attempt to resolve that question, and as indicated this subject is actively being studied. It is likely that "the best" and "most representative" sampling method at low-yield wells would not be defined by a universally applied set of specific criteria (e.g., casing volumes purged), but rather a well-specific determination based on water availability, well design, hydrogeology, and analytical suite. Other possible method candidates include "passive" sampling (as described by Negrao and Kaminski [2007]) and the use of passive samplers (such as passive diffusion bags or grab samplers [Kaminski 2006]).

Based on results from this evaluation and the supporting literature reviews, low-yield wells at Rocky Flats will be purged before samples are collected. Low-flow methods will be used as practicable, the intent being to minimize disturbance of the water column and collect low-turbidity samples. The no-purge sampling method will not be used.

High-Resolution Analysis of Water Samples for U Isotope Characterization

Samples were collected from six established groundwater and surface-water monitoring locations for characterization of their U content using the TIMS high-resolution analytical method. Results obtained through these analyses may be used to determine the isotopic distribution of U—its isotopic signature—and whether the water reflects any anthropogenic (manmade) U, and if so, how much. This information will be useful in discussions with the WQCC regarding the U standard in place at the Site (see Section 2.3), and two of the locations were recommended for this evaluation in the CERCLA 5-year review (Section 2.2).

Five of the locations that were selected for this sampling were previously characterized for their U signature on at least one occasion. However, all previous data were from the pre-closure era. Therefore, at those locations the general objective was to see whether post-closure results varied significantly (in a qualitative sense) from pre-closure results.

One location had not been previously characterized for its U content. Downgradient OLF RCRA well 80205 was recommended for this analysis in the 2006 Annual Report (DOE 2007e), as discussed in Section 3.1.2.9.

Samples were shipped to LANL for analysis. LANL is the same laboratory that performed similar analyses for numerous monitoring locations prior to closure, using both the TIMS analytical method and the HR ICP/MS method. The associated results have been published in various reports, including individual Annual RFCA Groundwater Monitoring Reports (e.g., RMRS 2000; SSOC 2001, 2002; K-H 2004b), the report on U in various media at Rocky Flats (K-H 2004e), and the summary report by Janecky (2006) that tabulates all such data collected from 1998 through 2005.

Table 3-97 summarizes the 2007 sampling effort and associated results. See Figure 3-202 for a map of sampling locations, and refer to Appendix E for the complete analytical report.

Table 3-97. High-Resolution U Isotopic Characterization in 2007

Location	Area	Date	Objective	Total U result, µg/L	% Natural
80205	OLF	9/7/07	Initial characterization	79.2	100.0
10594	Pond A-1	9/11/07	Follow-up	103	96.8
99405	B991	9/12/07	Follow-up	439	99.9
SPP DG	SPPTS	9/12/07	Follow-up	62.0	42.9
GS03*	Walnut/Indiana	7/9/07	Follow-up	3.71	76.9
GS10	South Walnut Creek	7/23/07	Follow-up	10.1	70.5

Notes: * = Due to a typographical error in the third quarter CY 2007 report (DOE 2008a), data from this location were misattributed to GS13. Walnut/Indiana = Walnut Creek/Indiana Street intersection. Locations listing the objective as "Follow-up" have been characterized by LANL for U isotope signature in the past.

Because groundwater samples from well 80205 had not been characterized for U isotopic signature before, no comparison with previous results at this location is possible. However, all other locations listed in Table 3-97 have been so characterized before. In all but one case, results from 2007 are consistent with those reported previously. At the SPP DG, however, some change was suggested. Only one previous TIMS or HR ICP/MS result is available for this location. As noted in the analytical report for the samples collected in 2007 (Appendix E), this location was previously characterized using a sample collected on June 18, 2002. That sample provided a result of 67.2 percent natural U, whereas the sample collected in 2007 reported 42.9 percent natural U.

Reasons for this variation are not known, but can be hypothesized. By far the most likely cause relates to the many significant changes to physical systems (including hydrology) in this area that occurred between June 2002 and September 2007. During that time, the SEPs (the source area for the nitrate and U treated by the SPPTS) were closed; numerous culverts that had controlled surface water in the North Walnut Creek drainage west of the SPP DG were removed and FC-3 was constructed; the impermeable surface that was the North Perimeter Road (generally overlaying the SPPTS groundwater intercept trench) was removed; much of the area between the SPP DG and the SEPs was regraded; the ITS was disrupted; and other physical attributes were changed.

Any one or several of these mechanisms, and/or others not mentioned, could have contributed to the differences in U signature reported. Perhaps more importantly, the difference may relate to sampling and analytical uncertainties. First, pre-closure conditions are represented by only a single sample, as are post-closure conditions. Those conditions may vary significantly over short time periods. This has been reported over the years at other Rocky Flats locations (Janecky 2006, also reported in the respective Annual Reports). For example, pre-closure LANL data for natural U content in samples from well 07391 (the Ryan's Pit source-area well) have shown variations of more than 20 percent over a period of approximately 6 months. (A sample collected in January 2000 reported no natural U, a sample collected in June 2000 reported 21.1 percent natural U, and a sample collected in March 2001 reported 7.6 percent natural U.) Therefore, the variation reported at SPP DG between two samples collected from 2002 to 2007 may be another example of this.

Sampling and analytical uncertainty may also be significant factors. Prior to closure, samples provided to LANL were typically 500 mL or 1 L in volume. Since that time, however, the laboratory requirements have changed; now, a sample is limited to the volume represented by

2 μg of total U. A sample from the SPP DG, therefore, is now represented by a volume that is much smaller (and therefore, potentially less representative) than was the case before closure. For example, the sample supplied to LANL for the 2007 analysis was reported to contain a total U concentration of 62 μg/L, meaning only approximately 32 mL of sample could be shipped for this location. (For well 99405, with a reported total U concentration of 439 μg/L, the sample volume would need to be even smaller, not quite 5 mL.) Clearly, in an area known to contain anthropogenic U, the effects of a small quantity of this anthropogenic U—potentially in the form of a solid particle, as the sample of water from the SPP DG that was provided to LANL was not field-filtered—could cause a shift in the isotopic signature from predominantly natural to anthropogenic.

Additional data will be collected from the SPP DG to further explore isotopic U variability at this location. Assuming weather conditions permit, in 2008 samples will be collected to represent both lower-flow and higher-flow conditions at several locations, including the SPP DG. Although the mechanism(s) responsible for the variations noted above may not be identified, the resulting data will help to refine the U signature at this location.

Regrading at the VC Plume Source Area

Following significant snowmelt and precipitation events, several large puddles were typically present in the area of the IHSSs thought to be the source of the VC Plume. As noted above and discussed in K-H (2004a), of all Rocky Flats this area represents that most conducive to natural biodegradation of VOCs. This is due to the reducing conditions of groundwater here, presumably a result of the decaying vegetation in this buried valley.

The presence of lingering puddles in this area caused a concern that relatively oxygen-rich surface water would infiltrate the ground and hamper continuing anaerobic biodegradation of residual parent VOCs, which might result in expansion of this plume and a change to a more parent compound-rich contaminant characteristic. Therefore, in 2007 the area was regraded, with soil excavated from nearby FC-1 (thereby simultaneously improving the gradient there) and spread on the surface generally around wells 33502, 33604, and 33703. The intent of this regrading effort was to force rain and snowmelt to drain off the area into FC-1 and FC-2, rather than collect in puddles over an area of residual subsurface VOC contamination. See Section 2.7.3 for additional information on the regrading work.

3.2 Air Monitoring

3.2.1 Introduction

Air monitoring and emissions assessments have been performed at the Site since the Site began operations in the early 1950s. The Site has historically been subject to 40 CFR 61, Subpart H which specifies radionuclide air emissions limitations and monitoring requirements for DOE facilities. However, following decommissioning and environmental restoration activities pursuant to RFCA (CDPHE et al 1996), completed in fall 2005, the remaining DOE-retained lands are no longer a “facility” as defined in 40 CFR 61.91(b). Consequently, 40 CFR 61, Subpart H, no longer applies.

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Air monitoring is not required as part of the CERCLA remedy; however, it is currently performed so that data can be available if needed during the early post-closure period.

The Site operates two high-volume, size-fractionating ambient air samplers located east of the Site along Indiana Street. The sampling locations are shown on Figure 3-237. These two locations on Indiana Street (S-136 and S-138) are downwind of the Site under prevailing higher-speed winds and in locations where typically the highest potential dose would be expected to occur from wind-eroded Site sources, based on modeling using representative meteorological conditions. These two downwind locations are those that would be appropriate to measure Site emissions based on the alternative compliance demonstration guidance given in EPA's *Guidance on Implementing the Radionuclide NESHAPs* (EPA 1991) under conditions of continuous fugitive dust emissions.

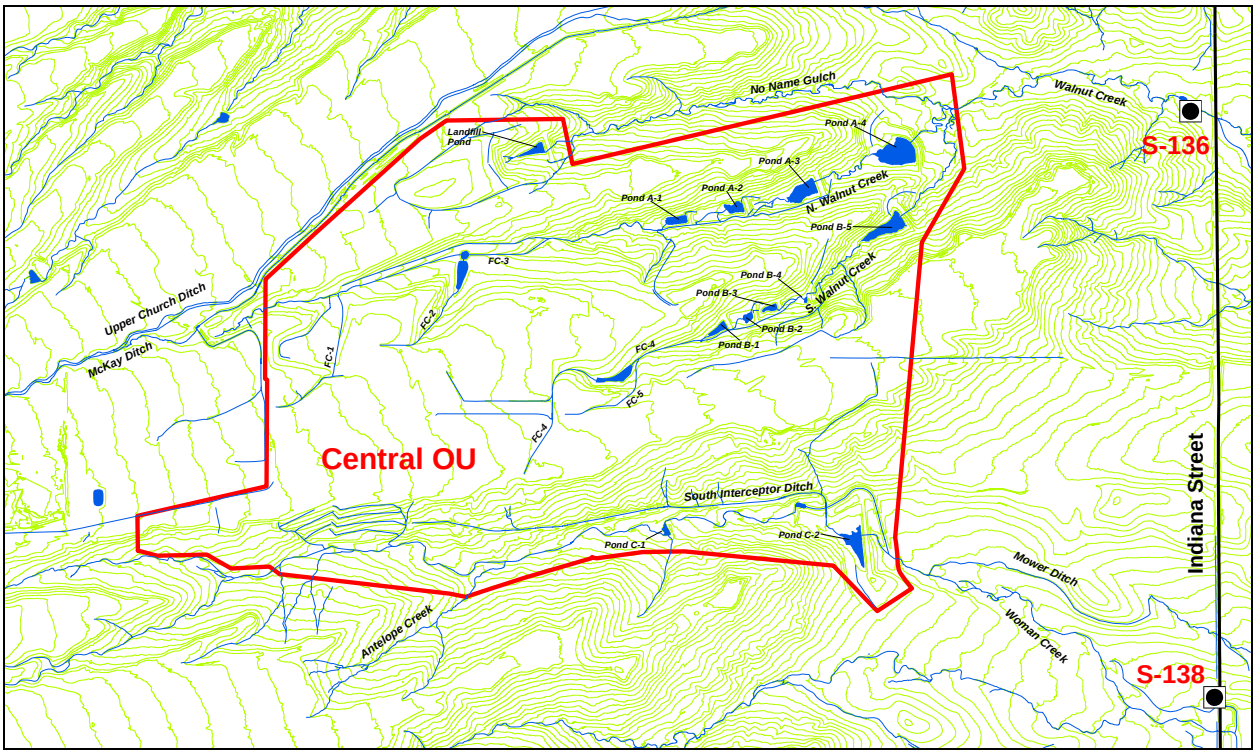

Figure 3-237. CY 2007 Air Sampling Network

The ambient air samplers continuously collect both fine and coarse particulate matter fractions on filters and removable impactor surfaces that were exchanged and analyzed on a monthly schedule through September 2006. The samples were analyzed for the Pu, Am, and U isotopes that represent most of the radioactive materials handled at or residing on the Site. These isotopes account for all materials that have the potential to contribute 10 percent or more of the dose to the public.

In October 2006, following a year of continuous monthly sampling and observation, routine analysis of air monitoring filters was suspended at all sampling locations. The samples from two of the locations (S-136 and S-138) are still collected on a continuous monthly sampling schedule, but are archived without analysis pending review of Site activities and identification of activities

that are potentially able to cause significant air emissions. In the absence of large-scale soil disturbances in specific areas, potential air emissions from the Site would be expected to remain near or below their detection limit in the samples and would not be measured.

3.3 Ecological Monitoring

3.3.1 Introduction

The Ecology Group conducts ecological monitoring of the Site's ecological resources to ensure regulatory compliance and to preserve, protect, and manage those resources. Ecological monitoring is an integral aspect of determining whether the management objectives and goals for the natural resources at the Site are being achieved. This report summarizes the results of the ecological monitoring that was conducted at the Site during 2007.

At an elevation of approximately 6,000 feet, the Site contains a unique ecotonal mixture of mountain and prairie plant species resulting from the topography of the area and its proximity to the mountain front. The POU, the area surrounding COU (the general area where the former IA was once located), is one of the largest remaining undeveloped tracts of its kind along the Colorado Piedmont. A number of plant communities present at the Site have been identified as increasingly rare and unique by the Colorado Natural Heritage Program (CNHP 1994, 1995). These communities include the xeric tallgrass prairie, tall upland shrubland, wetlands, and Great Plains riparian woodland communities. Small inclusions of a number of other increasingly rare plant communities are also found on the Site. Many of these communities support populations of increasingly rare animals as well, including the federally protected PMJM, and other uncommon species such as the grasshopper sparrow, loggerhead shrike, Merriam's shrew, black crowned night heron, hops blue butterfly, and Arogos skipper.

During 2007, transfer of the POU was made to USFWS to create the Rocky Flats National Wildlife Refuge. As a result, the total acreage managed by DOE-LM is now approximately 1,308 acres in the COU. However, ecological monitoring was conducted by DOE in the POU prior to the transfer; the POU monitoring is also discussed in this report.

A summary of the highlights from the 2007 field season is provided in the following sections. Full, detailed summaries and analyses for each field monitoring effort are presented as stand-alone reports on the accompanying Ecology DVD.

3.3.2 Vegetation Monitoring

Vegetation monitoring reported here is conducted at the RFS to provide information necessary for management of the natural resources. Objectives of the vegetation monitoring in 2007 were to:

- Identify any new plant species records for the Site;
- Identify and document infestations of select noxious weeds at the Site to assist with planning of noxious weed control applications;
- Document and track the locations where herbicide applications were conducted in 2007;
- Document where revegetation activities were conducted in 2007;

that are potentially able to cause significant air emissions. In the absence of large-scale soil disturbances in specific areas, potential air emissions from the Site would be expected to remain near or below their detection limit in the samples and would not be measured.

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- Document and track the locations where herbicide applications were conducted in 2007;
- Document where revegetation activities were conducted in 2007;

- Evaluate the success of revegetation activities at the Site; and
- Conduct photomonitoring for visual documentation of changes in vegetation establishment at the Site.

3.3.2.1 Site Flora

The complete list of plant species known to occur at the Site as of the end of 2007 is found on the accompanying Ecology DVD. For purposes of the Site flora, the Site includes both the COU and POU areas. As a result of the 2007 field work, one new record of vascular plant species for the Site flora is reported. Leafy spurge (*Euphorbia uralensis*), a state-listed noxious weed, was found near the shooting range west of the PLF. The population was sprayed in fall 2007 to eradicate the plants. The area will continue to be checked for the next few years, and any plants that are found will be treated to eradicate the population. The following taxonomic name is used at the Site for the new plant species[31]:

Family	Scientific Name	Speccode	Common Name
Euphorbiaceae	*Euphorbia uralensis* Fisch. ex Link	EUUR1	leafy spurge

Voucher specimens of the species will be deposited at the University of Colorado Herbarium in Boulder, Colorado.

3.3.2.2 Weed Mapping and Weed Control

Resource management is an important concern at the Site with a goal to protect and sustain the native ecological resources that make the Site so unique along the Front Range. One of the challenges at the Site is to manage the ecological resources with a limited set of management tools. Currently most efforts focus on the control or eradication of the weed species themselves with little emphasis on trying to improve conditions for the desired native species. Two of the key tools for grassland management, fire and grazing, are not currently allowed or planned for use at the Site in the near future. As a result, management of the ecological resources in the COU is largely limited to controlling the noxious weeds themselves. The Comprehensive Conservation Plan (USFWS 2005), developed by USFWS for management of the Rocky Flats National Wildlife Refuge, has identified the full range of Integrated Pest Management tools for use at the Refuge for controlling weeds. This includes administrative, cultural, biological (including grazing), mechanical (including prescribed fire), and chemical as viable tools for controlling noxious weeds and ecosystem management. Thus there may be a greater opportunity for some of these other resource management tools to be used in the future.

The methods used for weed mapping are provided in the full report on the Ecology DVD at the end of this report.

[31] Plant nomenclature follows that of GPFA (1986), Weber (1976), and Weber (1990) in that order of determination, when feasible. Species were verified at the University of Colorado Herbarium in Boulder, Colorado.

The 2007 weed distribution maps for diffuse knapweed (*Centaurea diffusa*) and dalmatian toadflax (*Linaria dalmatica*) are shown on Figure 3-238 and Figure 3-239, respectively. Table 3-98 presents the estimated total acreage and acreage-by-density categories for each species, based on the 2007 maps. The acreage values are only approximate and should not be interpreted as exact areas. In 2007, diffuse knapweed was observed on approximately 460 acres at various levels of infestation. Dalmatian toadflax was mapped on approximately 237 acres at the Site in 2007. The total area of the COU is approximately 1,308 acres.

Table 3-98. 2007 Noxious Weed Acreage Summary

	Density (acres)				
Species	**High**	**Medium**	**Low**	**Scattered**	**Total**
Diffuse knapweed	2.2	41.2	248.8	167.7	459.9
Dalmatian toadflax	77.1	51.0	0.0	109.0	237.1

During 2007, approximately 848 acres at the Site were treated with herbicides using ground applications. Approximately 468 acres were treated in the POU area and 380 acres were treated in the COU. Diffuse knapweed, dalmatian toadflax, musk thistle (*Carduus nutans*), common mullein (*Verbascum thapsus*), and Canada thistle (*Cirsium arvense*) have been the most significant noxious weed problems. Kochia (*Kochia scoparia*) is also a common problem in the first year or two in some of the revegetation areas. Figure 3-240 show the locations where herbicide was applied in 2007. Table 3-99 lists the target species, herbicides, and application rates applied at each location, and the approximate timing of the application during the year. Note that at several locations multiple herbicides are listed for a location. This does not mean that each herbicide was used across that entire location. Rather, depending on site-specific characteristics such as target weed species, the locations of water bodies, soil types, and the professional judgment of the licensed herbicide applicator, different herbicides were used within that location to provide the control needed.

The herbicide Milestone (active ingredient is aminopyralid) was used to treat several areas at the Site in 2007. This herbicide first became available on the market in 2006. Its advantages include a low application rate, a low environmental impact, and high effectiveness on many target species at the Site. The fact that it can be sprayed to the water's edge also makes it a good tool for controlling Canada thistle and other weedy species that are often present at the edges of ponds and wetlands. Previously, near water these species have been difficult or impossible to control with other methods. Milestone also seems to have at least a 2-year residual effect on preventing the establishment of target species such as diffuse knapweed at the Site.

The use of biocontrol insects continues at the Site. Additional biocontrols for different species may be released as they become available. Collections from established populations at the Site may be made and moved to other infestations at the Site where control is needed, as feasible.

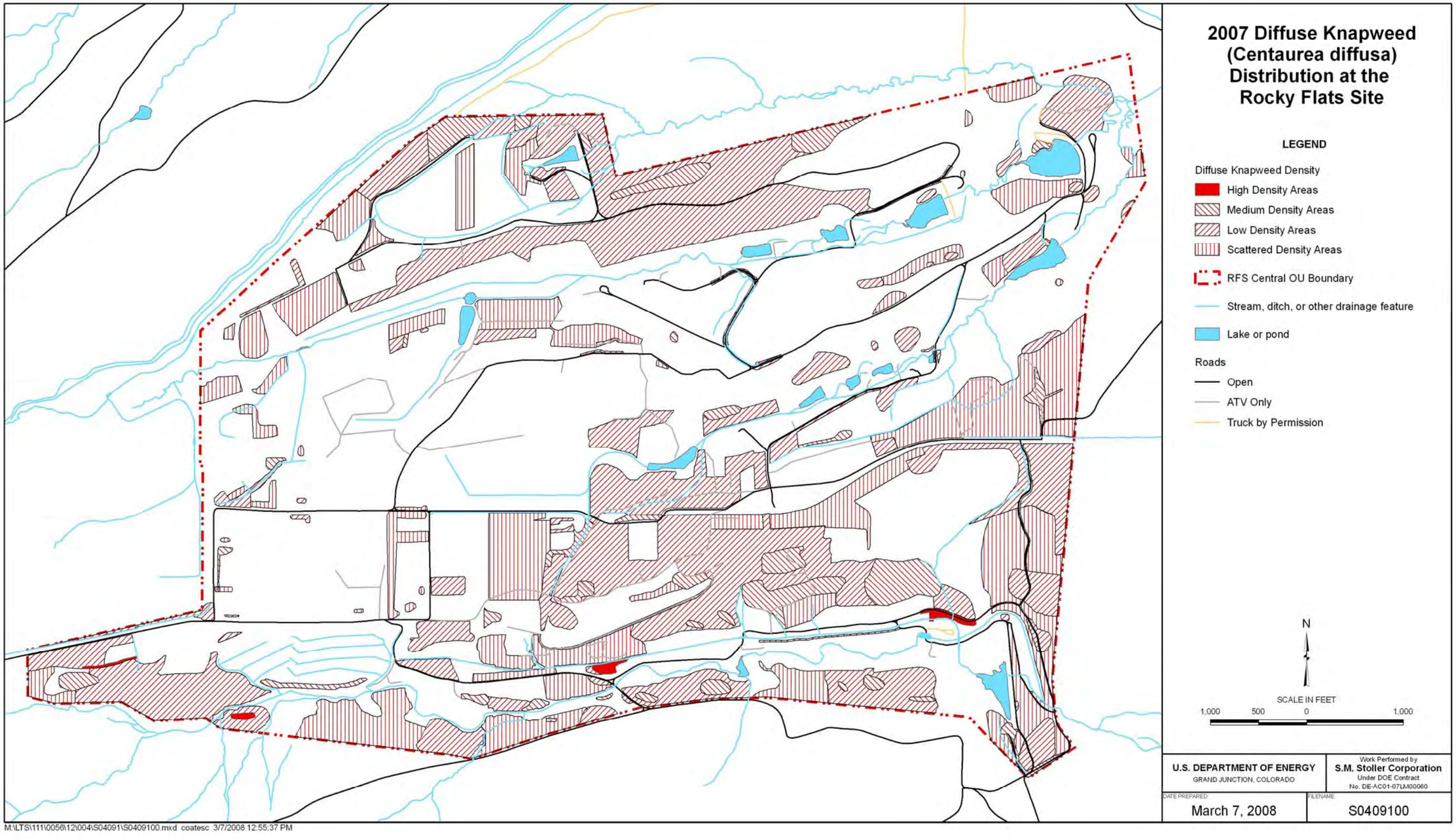

Figure 3-238. 2007 Diffuse Knapweed (Centaurea diffusa) Distribution at the Rocky Flats Site

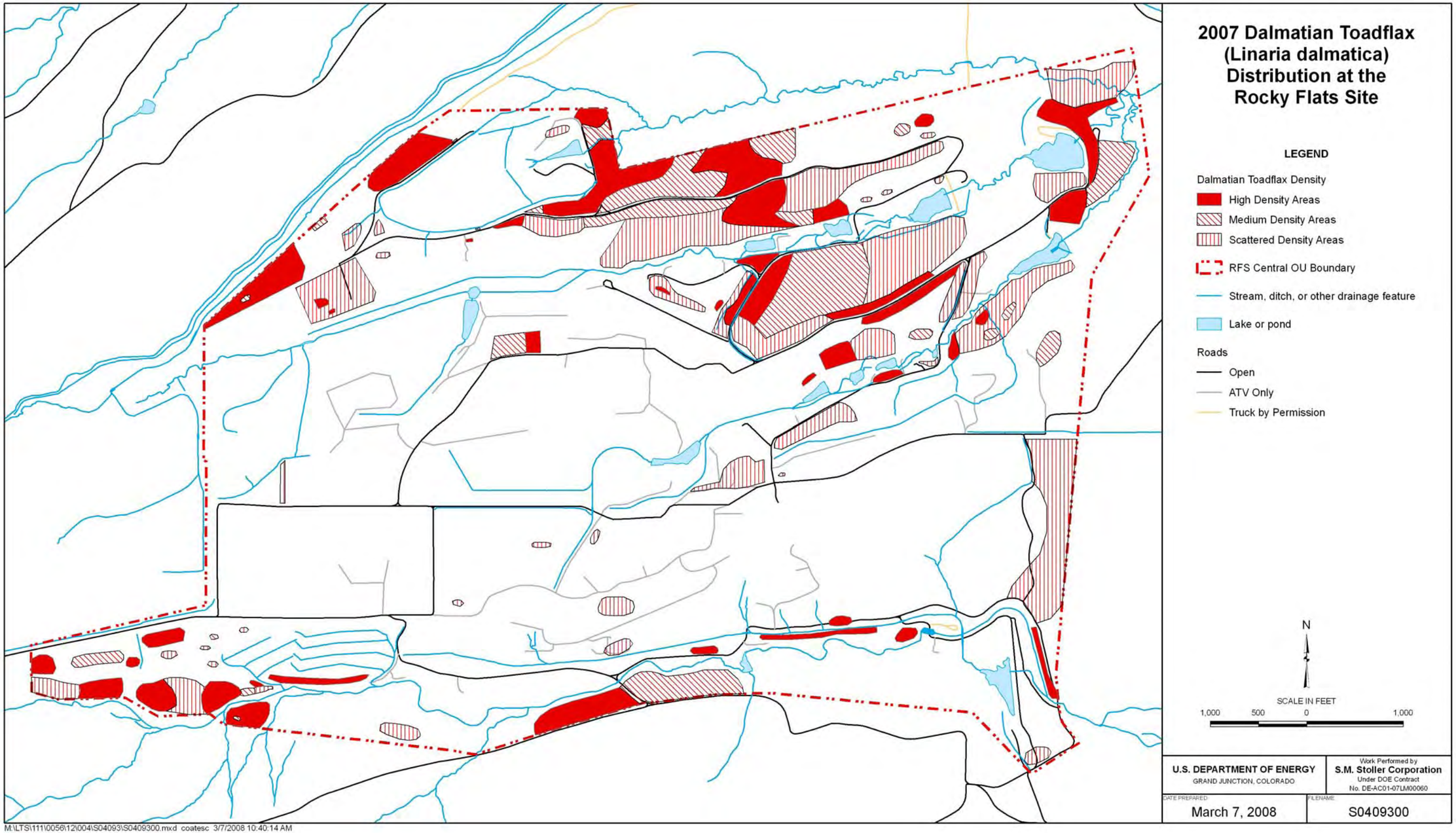

Figure 3-239. 2007 Dalmatian Toadflax (Linaria dalmatica) Distribution at the Rocky Flats Site

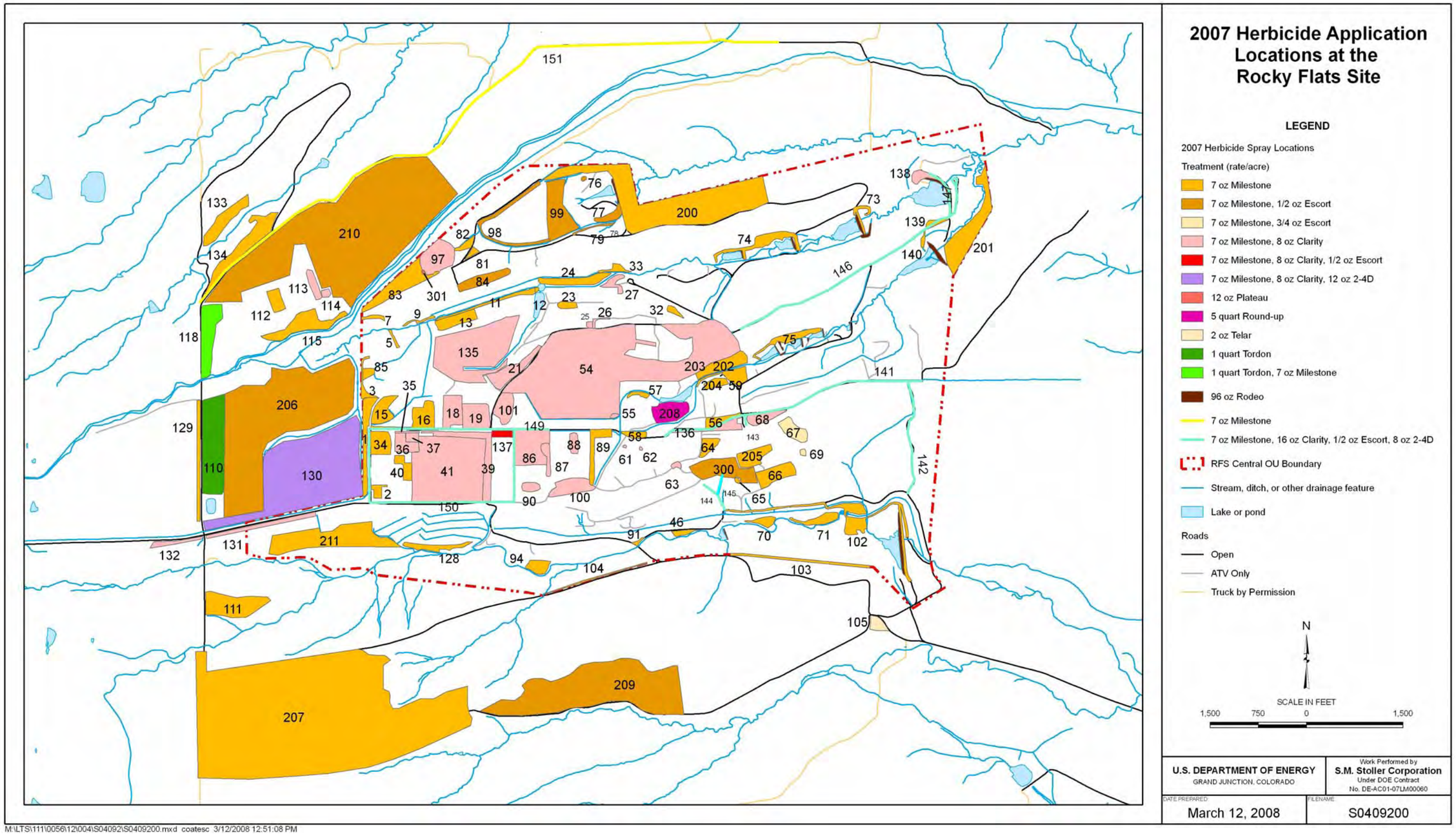

Figure 3-240. 2007 Herbicide Application Locations at the Rocky Flats Site

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Table 3-99. 2007 Herbicide Application Summary

Location	Target Species*	Treatment**	Actual Acreage Treated	Time of Year Treated
1	CEDI1	7 oz Milestone	4.0	Spring 2007 Phase I
2	CEDI1	7 oz Milestone	1.0	Spring 2007 Phase I
3	CEDI1	7 oz Milestone	1.0	Spring 2007 Phase I
5	CEDI1, VETH1, ONAC1	7 oz Milestone	0.7	Spring 2007 Phase I
7	CEDI1	7 oz Milestone	0.8	Spring 2007 Phase I
9	CEDI1, VETH1, CIAR1	7 oz Milestone	0.6	Spring 2007 Phase I
11	CEDI1	7 oz Milestone	1.5	Spring 2007 Phase I
12	KOSC1	7 oz Milestone	0.3	Spring 2007 Phase I
13	CEDI1	7 oz Milestone	3.5	Spring 2007 Phase I
15	CEDI1	7 oz Milestone	2.5	Spring 2007 Phase I
16	CEDI1	7 oz Milestone	3.5	Spring 2007 Phase I
18	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	3.5	Spring 2007 Phase I
19	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	4.0	Spring 2007 Phase I
21	CEDI1	7 oz Milestone, 8 oz Clarity	4.0	Spring 2007 Phase I
23	CIAR1, CEDI1	7 oz Milestone	1.0	Spring 2007 Phase I
24	CIAR1	7 oz Milestone	3.5	Spring 2007 Phase I
25	KOSC1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
26	CEDI1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
27	CEDI1, CIAR1, KOSC1	7 oz Milestone, 8 oz Clarity	1.0	Spring 2007 Phase I
32	CEDI1, KOSC1	7 oz Milestone	0.5	Spring 2007 Phase I
33	CIAR1	7 oz Milestone	2.0	Spring 2007 Phase I
34	CEDI1	7 oz Milestone	3.0	Spring 2007 Phase I
35	CEDI1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
36	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	2.5	Spring 2007 Phase I
37	KOSC1	7 oz Milestone, 8 oz Clarity	1.0	Spring 2007 Phase I
39	CEDI1, CANU1, VETH1	7 oz Milestone, 8 oz Clarity	4.5	Spring 2007 Phase I
40	CEDI1	7 oz Milestone	1.8	Spring 2007 Phase I
41	CEDI1	7 oz Milestone, 8 oz Clarity	23.3	Spring 2007 Phase I
46	CEDI1	7 oz Milestone	0.5	Spring 2007 Phase I
54	CEDI, MEOF1, KOSC1	7 oz Milestone, 8 oz Clarity	72.0	Spring 2007 Phase I
55	ONAC1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
56	CEDI1	7 oz Milestone	1.3	Spring 2007 Phase I
57	CIAR1	7 oz Milestone	0.8	Spring 2007 Phase I
58	CIAR1	7 oz Milestone	0.8	Spring 2007 Phase I
59	CIAR1	7 oz Milestone	2.0	Spring 2007 Phase I
61	CEDI1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
62	VETH1, KOSC1	7 oz Milestone, 8 oz Clarity	0.5	Spring 2007 Phase I
63	CEDI1	7 oz Milestone, 8 oz Clarity	0.3	Spring 2007 Phase I
64	CEDI1	7 oz Milestone	1.5	Spring 2007 Phase I
65	CEDI1	7 oz Milestone	0.3	Spring 2007 Phase I
66	CEDI1, CIAR1	7 oz Milestone	3.8	Spring 2007 Phase I
67	VETH1	7 oz Milestone, 3/4 oz Escort	2.0	Spring 2007 Phase I
68	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	2.0	Spring 2007 Phase I

Table 3−99 (continued). 2007 Herbicide Application Summary

Location	Target Species*	Treatment**	Actual Acreage Treated	Time of Year Treated
69	VETH1	7 oz Milestone, 3/4 oz Escort	1.0	Spring 2007 Phase I
70	VETH1	7 oz Milestone	1.0	Spring 2007 Phase I
71	VETH1, CACH1	7 oz Milestone	1.5	Spring 2007 Phase I
73	CEDI1	7 oz Milestone	1.0	Spring 2007 Phase I
74	CEDI1	7 oz Milestone	4.0	Spring 2007 Phase I
75	CEDI1, CIAR1	7 oz Milestone	2.0	Spring 2007 Phase I
76	CIAR1	7 oz Milestone, 1/2 oz Escort	1.0	Spring 2007 Phase I
77	CEDI1	7 oz Milestone, 1/2 oz Escort	1.5	Spring 2007 Phase I
78	VETH1, CIAR1	7 oz Milestone, 1/2 oz Escort	0.3	Spring 2007 Phase I
79	VETH1	7 oz Milestone, 1/2 oz Escort	0.5	Spring 2007 Phase I
81	CEDI1	7 oz Milestone	0.3	Spring 2007 Phase I
82	CEDI1	7 oz Milestone	1.0	Spring 2007 Phase I
83	CEDI1	7 oz Milestone	6.0	Spring 2007 Phase I
84	VETH1, CEDI1	7 oz Milestone, 1/2 oz Escort	4.0	Spring 2007 Phase I
85	CEDI1	7 oz Milestone	0.5	Spring 2007 Phase I
86	CEDI1	7 oz Milestone, 8 oz Clarity	7.5	Spring 2007 Phase I
87	CEDI, KOSC1	7 oz Milestone, 8 oz Clarity	1.0	Spring 2007 Phase I
88	CEDI1	7 oz Milestone, 8 oz Clarity	1.5	Spring 2007 Phase I
89	CEDI1	7 oz Milestone	2.5	Spring 2007 Phase I
90	CEDI1	7 oz Milestone, 8 oz Clarity	1.0	Spring 2007 Phase I
91	CEDI1, CIAR1	7 oz Milestone	0.3	Spring 2007 Phase I
94	VETH1	7 oz Milestone	2.0	Spring 2007 Phase I
97	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	5.0	Spring 2007 Phase I
98	CEDI1	7 oz Milestone, 1/2 oz Escort	5.0	Spring 2007 Phase I
99	CEDI1	7 oz Milestone, 1/2 oz Escort	7.0	Spring 2007 Phase I
100	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	3.5	Spring 2007 Phase I
101	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	3.0	Spring 2007 Phase I
102	CEDI1	7 oz Milestone	7.0	Spring 2007 Phase I
103	CEDI1	7 oz Milestone	2.0	Spring 2007 Phase I
104	CEDI1	7 oz Milestone	0.8	Spring 2007 Phase I
105	CERE1	2 oz Telar	1.0	Spring 2007 Phase II
110	CEDI1	1 quart Tordon	12.0	Spring 2007 Phase II
111	CEDI1	7 oz Milestone	7.0	Spring 2007 Phase II
112	CEDI1	7 oz Milestone	2.0	Spring 2007 Phase II
113	CEDI1	7 oz Milestone, 8 oz Clarity	1.5	Spring 2007 Phase II
114	KOSC1	7 oz Milestone, 8 oz Clarity	0.5	Spring 2007 Phase II
115	CEDI1	7 oz Milestone	5.0	Spring 2007 Phase II
118	CEDI1	1 quart Tordon, 7 oz Milestone	7.0	Spring 2007 Phase II
128	CEDI1	7 oz Milestone	3.0	Spring 2007 Phase II
129	CEDI1	7 oz Milestone	3.0	Spring 2007 Phase II
130	CEDI1	7 oz Milestone, 8 oz Clarity, 12 oz 2-4D	43.0	Spring 2007 Phase II
131	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	4.0	Spring 2007 Phase II
132	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	2.0	Spring 2007 Phase II
133	CEDI1, CIAR1	7 oz Milestone	4.0	Spring 2007 Phase II
134	CEDI1, CIAR1	7 oz Milestone	8.0	Spring 2007 Phase II
135	MEOF1, CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	28.0	Spring 2007 Phase II
136	CEDI1, KOSC1	7 oz Milestone, 8 oz Clarity	4.0	Spring 2007 Phase II

Table 3−99 (continued). 2007 Herbicide Application Summary

Location	Target Species*	Treatment**	Actual Acreage Treated	Time of Year Treated
137	CEDI1, KOSC1, CADR1	7 oz Milestone, 8 oz Clarity, 1/2 oz Escort	3.0	Spring 2007 Phase II
138	CEDI1, CIAR1	7 oz Milestone, 8 oz Clarity	1.8	Spring 2007 Phase II
139	CEDI1, CIAR1	7 oz Milestone	1.0	Spring 2007 Phase II
140	CEDI1, CIAR1	7 oz Milestone	0.8	Spring 2007 Phase II
141	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	3.8	Spring 2007 Phase II
142	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	1.6	Spring 2007 Phase II
143	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	0.1	Spring 2007 Phase II
144	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	0.5	Spring 2007 Phase II
145	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	0.3	Spring 2007 Phase II
146	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	4.2	Spring 2007 Phase II
147	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	0.8	Spring 2007 Phase II
149	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	3.6	Spring 2007 Phase II
150	KOSC1, CEDI1	7 oz Milestone, 16 oz Clarity, 1/2 oz Escort, 8 oz 2-4D	3.1	Spring 2007 Phase II
151	CEDI1	7 oz Milestone	16.0	Fall 2007
200	CEDI1, CIAR1	7 oz Milestone	36.0	Fall 2007
201	CEDI1, CIAR1	7 oz Milestone	9.0	Fall 2007
202	CEDI1, CIAR1	7 oz Milestone	3.5	Fall 2007
203	CEDI1, CIAR1	7 oz Milestone	0.5	Fall 2007
204	CEDI1, CIAR1	7 oz Milestone	2.0	Fall 2007
205	CEDI1, CIAR1	7 oz Milestone	3.5	Fall 2007
206	CEDI1, CIAR1	7 oz Milestone, 1/2 oz Escort	60.0	Fall 2007
207	CEDI1, CIAR1	7 oz Milestone	155.0	Fall 2007
208	Total Kill	5 quart Round-up	3.5	Fall 2007
209	CEDI1, CIAR1	7 oz Milestone, 1/2 oz Escort	46.0	Fall 2007
210	CEDI1	7 oz Milestone, 1/2 oz Escort	93.0	Fall 2007
211	CEDI1, CIAR1	7 oz Milestone	13.0	Fall 2007
300	CEDI1, CIAR1, CACH1	7 oz Milestone, 1/2 oz Escort	6.0	Spring 2007 Phase II
301	EUES1	12 oz Plateau	0.1	Fall 2007
NA	Total Kill	96 oz Rodeo (riprap on dam faces)	3.5	Spring 2007 Phase II
		Total Acreage Treated in 2007	848.1	

Species Codes: CEDI1 = Diffuse knapweed, KOSC1 = Kochia, CIAR1 = Canada thistle, CADR1 = Tall mustard, CERE1 = Russian knapweed, EUES1 = Leafy spurge, VETH1 = Mullein, MEOF1 = Yellow sweet clover, ONAC1 = Scotch thistle

** Each herbicide listed was not sprayed across the entire area. The first herbicide listed was the primary herbicide used across the entire area. The additional herbicides were used at select locations within each area to target specific species.

3.3.2.3 Revegetation Activities in 2007

During 2007, several locations where previous revegetation efforts had not been successful were redone. The locations that were redone included areas that were previously roads, parking areas, and building foundations where poor soil and substrate conditions existed after closure. Two other locations were also redone after additional project activities were completed in 2007. Figure 3-241 shows the locations at the Site where the large-scale revegetation activities were conducted in 2007. A total of 105 acres areas were redone with various soil amendments. Table 3-100 lists each location and the revegetation activities that were conducted in 2007. A number of other locations were interseeded by hand or using an ATV-mounted broadcast seeder with the appropriate seed mix to help increase the amount of vegetation cover.

3.3.2.4 Revegetation Monitoring

As part of the cleanup and closure of the Site, the buildings, roads, and other infrastructure in the former IA were removed. Approximately 650 acres were disturbed during cleanup activities, which were completed in fall 2005. Revegetation of the disturbed areas was conducted to prevent erosion and sedimentation of the Site streams and to meet water-quality standards. Reestablishment of native plant species is also desirable to benefit wildlife and provide desirable vegetation and ground cover adjacent to the Rocky Flats National Wildlife Refuge. As part of the revegetation process, monitoring is conducted to determine whether success criteria, as stated in the *Rocky Flats, Colorado, Site Revegetation Plan* (Revegetation Plan; DOE 2005b) are being met as well as to determine whether management of these revegetation areas are needed. This section summarizes the revegetation monitoring results for data collected during 2007. The objective of the revegetation monitoring in 2007 was to assess the success of the revegetation efforts at select locations. The methods used for the revegetation monitoring are provided in the full report on the Ecology DVD at the end of this report. Figure 3-242 shows the locations at the Site where revegetation monitoring was conducted in 2007.

Table 3-101 shows the total species richness (number of species) found at each revegetation location. Species richness in 2007 at the revegetation locations ranged from a low of 7 species in unit A40 to 47 species in unit A22. Table 3-102, Table 3-103, Table 3-104, Table 3-105, Table 3-106, Table 3-107, Table 3-108, and Table 3-109 show the actual species that were present at each revegetation location. The wide range in the number of species present in each revegetation location is attributable to a number of factors, including how long ago the area was revegetated, the size of the location, the number of quadrats sampled in the location, the degree of disturbance in the area prior to revegetation, and the management actions (e.g., weed control) that have been conducted in the area.

Thirteen different seeded graminoid species have established and are growing at some or all locations in 2007. Table 3-101 lists the species that were seeded at each revegetation location and the number of seeded species found growing there in 2007. These included western wheatgrass (*Agropyron smithii*), slender wheatgrass (*Agropyron caninum = Agropyron trachycaulum*), Canada wildrye (*Elymus canadensis*), junegrass (*Koleria pyrimidata*), green needle grass (*Stipa viridula*), big bluestem (*Andropogon gerardii*), little bluestem (*Andropogon scoparius*), side-oats grama (*Bouteloua curtipendula*), blue grama (*Bouteloua gracilis*), buffalo grass (*Buchloe dactyloides*), switchgrass (*Panicum virgatum*), Indian grass (*Sorghastrum*

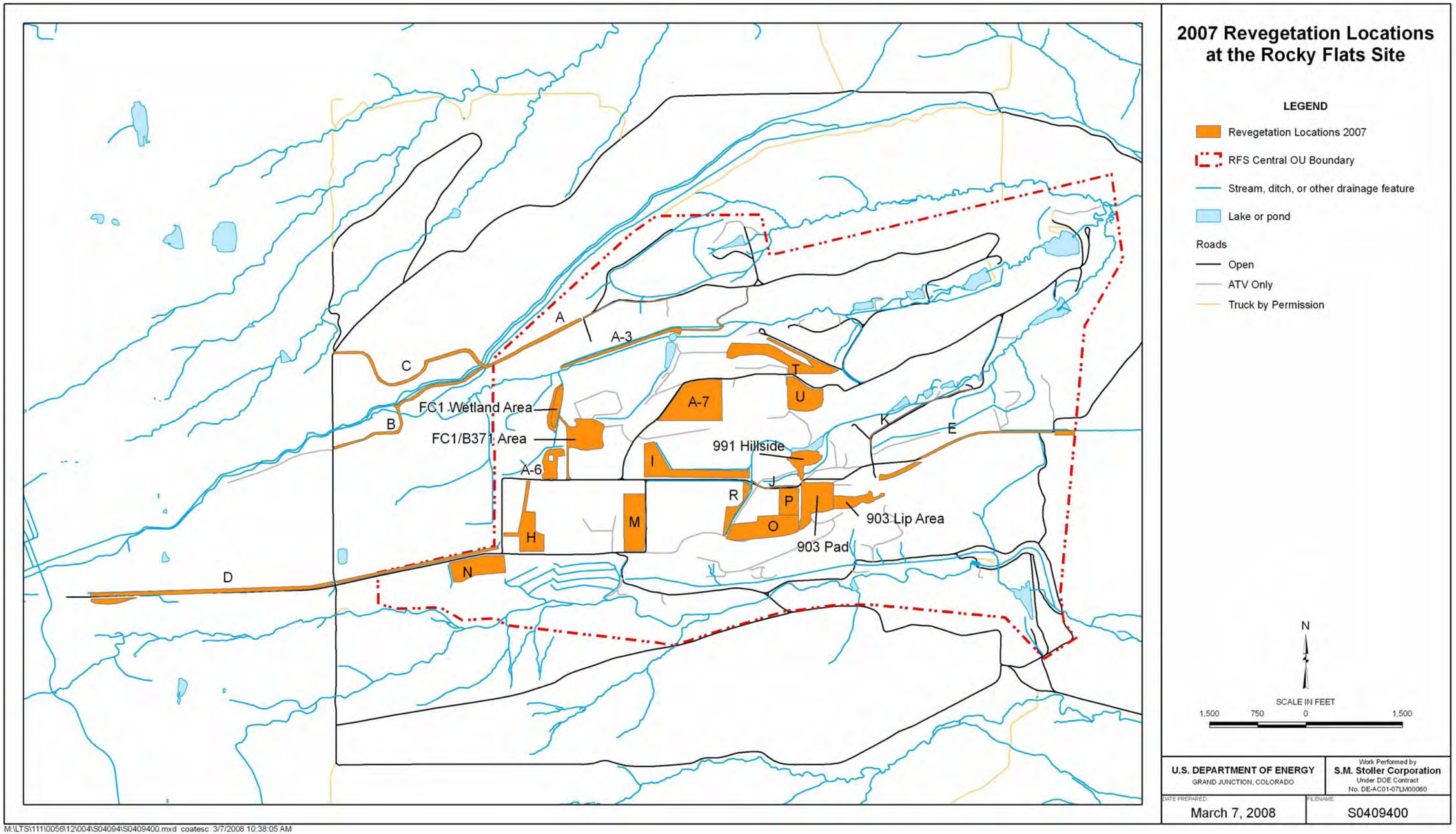

Figure 3-241. 2007 Revegetation Locations at the Rocky Flats Site

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nutans), and sand dropseed (*Sporobolus cryptandra*). Only western wheatgrass and slender wheatgrass were established at all 36 locations. As would be expected in a revegetation project, many other early successional species were growing at many of the areas. Kochia, wild lettuce (*Lactuca serriola*), yellow sweet clover (*Melilotus officinalis*), and Russian thistle (*Salsola iberica*) were among the more abundant species. These will largely disappear on their own over the next couple of years as the seeded species begin to fill in more. Several noxious weeds also occurred in the revegetation areas. The most common of these were diffuse knapweed, downy brome (*Bromus tectorum*), and fillaree (*Eurodium cicutarium*). Weed management will be conducted as needed to keep noxious weed populations down in the revegetation areas and enable the desired seeded species to establish more quickly and compete successfully with the weeds.

*Table 3-100. 2007 Revegetation Locations**

Location	Acreage	Compost	Biosol/Sustane	Mycorrhizal Inoculent	Seed Mix	Erosion Controls
A	2.1	Yes	Biosol	Yes	Flat Areas	Flexterra
B	2.6	Yes	Biosol	Yes	Flat Areas	Flexterra
C	3.0	Yes	Biosol	Yes	Flat Areas	Flexterra
D	8.2	Yes	Biosol	Yes	Flat Areas	Flexterra
E	3.1	Yes	Biosol	Yes	Flat Areas	Flexterra
H	5.1	Yes	Biosol	Yes	Flat Areas	Flexterra
I	7.1	Yes	Biosol	Yes	Flat Areas	Flexterra/ Wattles
J	0.3	Yes	Biosol	Yes	Flat Areas	Flexterra
K	0.6	Yes	Biosol	Yes	Hillside Areas	Flexterra
M	6.8	Yes	Biosol	Yes	Flat Areas	Flexterra
N	5.6	Yes	Biosol	Yes	Flat Areas	Flexterra
O	7.4	Yes	Biosol	Yes	Flat Areas	Flexterra
P	2.9	Yes	Biosol	Yes	Flat Areas	Flexterra
R	1.7	Yes	Biosol	Yes	Flat Areas	Flexterra
T	7.7	Yes	Biosol	Yes	Hillside Areas	Flexterra
U	5.1	Yes	Biosol	Yes	Flat Areas	Flexterra
A-3	2.5	Yes	Sustane	Yes	Hillside Areas	Flexterra/ Wattles
A-6	2.4	Yes	Sustane	Yes	Flat Areas	Flexterra/ Wattles
A-7	11.2	Yes	Sustane	Yes	Flat Areas	Flexterra
FC1 Wetland Area	1.5	No	No	No	Wetland	Wattles
FC1/B371 Area	6.8	No	Biosol	Yes	Flat Areas	Flexterra/Wattles
903 Lip Area	2.5	No	Biosol	Yes	Flat Areas	Flexterra/Wattles
903 Pad	6.1	No	Biosol	Yes	Flat Areas	Flexterra/Wattles
991 Hillside	2.7	No	Biosol	Yes	Hillside Areas	Flexterra/Wattles
Total Acres	105.0					

* Locations that were revegetated using heavy equipment.
Compost application rate = 40 tons/acre, Biosol application rate = 1000 lbs/acre, Sustane = 540 lbs/acre, Mycorrhizal inoculant = 60 lbs/acre
Flexterra application rate = Slopes (3,500 lbs/acre), Flat areas (3,000 lbs/acre)

Slightly different seed mixes were used at the revegetation locations depending on the year they were seeded and the slope position. One of the success criteria in the Revegetation Plan states that at least 50 percent of the seeded species must be present in an area for it to be considered successful. Table 3-101 lists the revegetation location, species in the seed mix, number of seeded species, number of species present at the location in 2007, and percentage present at the location in 2007. Nineteen locations had 50 percent or more seeded species present in 2007 and have thus met this success criterion (Table 3-110). Table 3-111 lists the date when the revegetation locations were originally seeded, whether they have been reseeded with soil amendments added, and what erosion controls were used.

Locations 26–40 were each reseeded in 2007 with soil amendments to help improve the soil conditions at these locations. As a result, most of these latter locations did not meet the success criterion of having at least 50 percent of the seeded species present. For the other locations that did not meet this criterion in 2007, other reasons may explain why many of the seeded species have not established—inadequate or uneven initial seeding, poor soil conditions, competition from the more aggressive cool season graminoid species in the seed mix, or drought. The monitoring methodology may also contribute to the apparent lack of seeded species present because this measure is based solely on the species list generated from the quadrat sampling. Given the small size of the total area measured on the ground through the quadrat method, it is quite feasible that more of the seeded species are present at the revegetation locations but are simply outside the "footprint" of the randomly located quadrats in 2007.

Ground cover protection from rock, litter, and current-year live vegetation varied from 59 percent to over 100 percent at the revegetation locations in 2007 (Table 3-112). The occasional values over 100 percent are a result of the cover class system used for estimating cover, which estimates cover values into a range and uses the midpoint of the cover class for analysis. Another success criterion outlined in the Revegetation Plan (K-H 2005b) states that a minimum of 70 percent total ground cover comprising litter cover, current-year live vegetation basal cover, and rock cover is to be present to help prevent erosion. All but four locations met this criterion in 2007 (Table 3-110). At most of the locations the greatest cover came from litter or rock. Currently, much of the litter category comes from the erosion control materials that are in place (i.e., erosion mats and Flexterra). In time, the dominant ground cover will be from natural litter as dead plant matter falls to the ground at the end of each growing season and builds up. Until the natural plant litter increases, however, the erosion control materials provide an artificial litter to protect the ground surface from erosion.

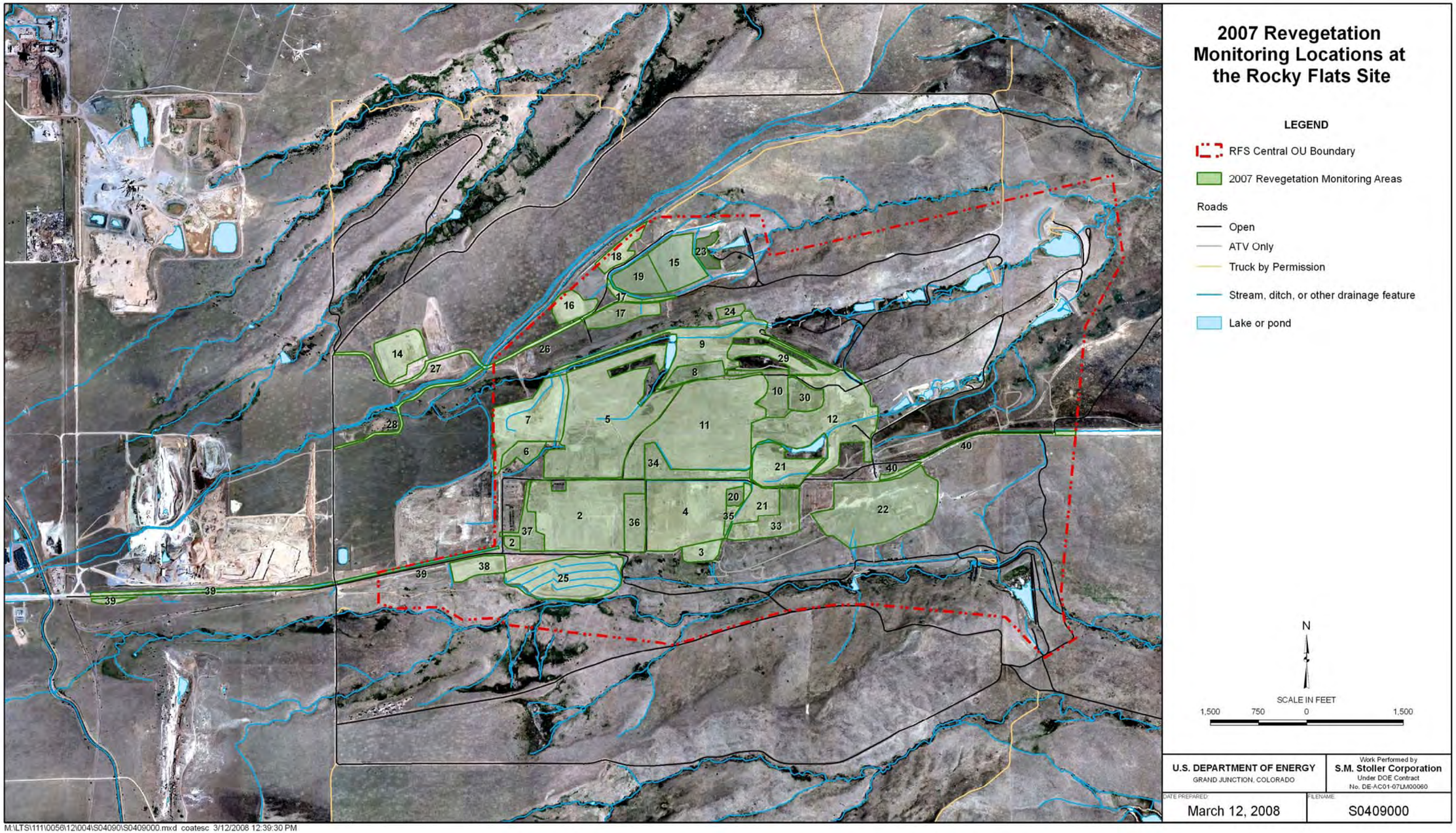

Figure 3-242. 2007 Revegetation Monitoring Locations at the Rocky Flats Site

Table 3-101. Species Seeded by Location and 2007 Total Species Richness Summary

Family	Scientific Name	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12	A14	A15	A16	A17	A18	A19	A20	A21	A22	A23	A24	A25	A26	A27	A28	A29	A30	A33	A34	A35	A36	A37	A38	A39	A40
Graminoids																																					
POACEAE	Agropyron caninum	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
POACEAE	Agropyron dasystachum		X					X	X				X	X				X	X			X	X	X				X									
POACEAE	Agropyron lanceolatus													X				X																			
POACEAE	Agropyron smithii	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
POACEAE	Andropogon gerardii	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	X
POACEAE	Andropogon scoparius	X		X	X	X	X			X	X	X	X		X	X	X		X	X	X				X	X	X		X	X	X	X	X	X	X	X	X
POACEAE	Bouteloua curtipendula	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
POACEAE	Bouteloua gracilis	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
POACEAE	Buchloe dactyloides	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
POACEAE	Elymus canadensis						X																														
POACEAE	Koleria pyrimidata	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	X
POACEAE	Panicum virgatum						X																														
POACEAE	Poa canbyi													X				X																			
POACEAE	Sorghastrum nutans	X		X	X	X	X			X	X	X	X	X	X	X	X	X	X	X	X				X	X	X		X	X	X	X	X	X	X	X	X
POACEAE	Sporobolus cryptandrus	X		X	X	X	X			X	X	X		X	X	X	X	X		X	X				X	X	X		X	X	X	X	X	X	X	X	X
POACEAE	Stipa viridula	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Forbs																																					
ASTERACEAE	Achillea millifolium																						X														
ASTERACEAE	Gallarida aristata												X						X																		
ASTERACEAE	Liatris punctata												X						X																		
ASTERACEAE	Ratibida columnifera												X						X				X														
LINACEAE	Linum lewisii (L. perenne)																		X				X														
	Total # Species Seeded	11	7	11	11	11	13	7	7	11	11	11	14	13	11	11	11	13	15	11	11	7	10	7	11	11	11	7	11	11	11	11	11	11	11	11	11
	# Present in 2007	6	3	8	5	9	9	5	6	4	9	5	9	8	5	8	7	6	4	8	7	4	5	5	5	7	6	3	2	6	2	5	2	3	3	3	2
	% Seeded Species Present in 2007	55	43	73	45	82	69	71	86	36	82	45	64	62	45	73	64	46	27	73	64	57	50	71	45	64	55	43	18	55	18	45	18	27	27	27	18
	Total Species Richness in 2007	26	22	30	23	30	27	15	34	13	27	24	17	23	12	29	24	17	18	25	47	9	19	26	16	24	22	26	23	24	16	24	16	14	24	18	7

Table 3-102. Species Foliar Cover Summary at Locations A2−A5

						A2		A3		A4		A5	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N			0.1	0.2						
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			1.8	5.1	1.0	2.2	1.2	2.9	0.6	1.2
Barbarea vulgaris R. Br.	BAVU1	F	N										
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N										
Centaurea diffusa Lam.	CEDI1	F	N		X	0.7	1.9	0.3	0.5	0.3	0.8	0.5	1.1
Chenopodium album L.	CHAL1	F	N										
Cirsium arvense (L.) Scop.	CIAR1	F	N		X					0.1	0.2	0.5	1.1
Convolvulus arvensis L.	COAR1	F	N		X			2.0	4.3				
Cynoglossum officinale L.	CYOF1	F	N		X							0.1	0.2
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N										
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	1.4	4.0	0.8	1.6	3.0	7.6	0.7	1.4
Hypericum perforatum L.	HYPE1	F	N		X								
Kochia scoparia (L.) Schrad.	KOSC1	F	N			1.8	4.9	5.8	12.4	2.7	6.7	3.3	7.1
Lactuca serriola L.	LASE1	F	N			0.3	0.9	0.8	1.6	1.2	2.9	0.4	0.9
Lepidium campestre (L.) R. Br.	LECA1	F	N										
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X								
Melilotus alba Medic.	MEAL1	F	N							0.5	1.3	1.3	2.6
Melilotus officinalis (L.) Pall.	MEOF1	F	N			3.3	9.1	0.8	1.6	1.4	3.6	19.0	40.2
Medicago sativa L. ssp. sativa	MESA1	F	N										
Plantago lanceolata L.	PLLA1	F	N			0.1	0.2			0.1	0.2		
Plantago major L.	PLMA1	F	N										
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			0.5	1.4			0.3	0.6	0.5	1.1
Polygonum persicaria L.	POPE2	F	N										
Rumex crispus L.	RUCR1	F	N										
Salsola iberica Senn. & Pau.	SAIB1	F	N			1.9	5.3	1.5	3.2	1.4	3.6	0.4	0.9
Scorzonera laciniata L.	SCLA1	F	N							0.6	1.5		
Sisymbrium altissimum L.	SIAL1	F	N			0.1	0.2						
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X								
Taraxacum officinale Weber	TAOF1	F	N					0.3	0.5				
Thlaspi arvense L.	THAR1	F	N										
Tragopogon dubius Scop.	TRDU1	F	N			0.2	0.5			0.2	0.4		
Verbascum thapsus L.	VETH1	F	N		X					0.5	1.3		
Agrostis scabra Willd.	AGSC1	F	Y										
Ambrosia artemisiifolia L.	AMAR1	F	Y					2.3	4.8			0.5	1.1
Ambrosia psilostachya DC.	AMPS1	F	Y			0.1	0.2	0.3	0.5				
Artemisia dracunculus L.	ARDR1	F	Y										
Aster falcatus Lindl.	ASFA1	F	Y										
Aster porteri Gray	ASPO1	F	Y										
Chenopodium fremontii S. Wats.	CHFR1	F	Y										
Chrysopsis villosa Pursh.	CHVI1	F	Y										
Conyza canadensis (L.) Cronq.	COCA1	F	Y										
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y										
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y										
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y										
Erigeron divergens T. & G.	ERDI1	F	Y										
Euphorbia serpyllifolia Pers.	EUSE1	F	Y										
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			0.7	1.9	0.5	1.1	0.5	1.3	0.5	1.1
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y										
Helianthus annuus L.	HEAN1	F	Y					6.8	14.5	0.1	0.2	0.1	0.2
Lepidium densiflorum Schrad.	LEDE1	F	Y										
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y										
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y										
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y										
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y										
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y										
Psoralea tenuiflora Pursh.	PSTE1	F	Y										
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y										
Rumex maritimus L.	RUMA1	F	Y										
Senecio plattensis Nutt.	SEPL1	F	Y										
Silene antirrhina L.	SIAN1	F	Y										
Solanum triflorum Nutt.	SOTR1	F	Y										
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y							0.2	0.4	0.5	1.1
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y										
Xanthium strumarium L.	XAST1	F	Y					0.3	0.5				
Aegilops cylindrica Host	AECY1	G	N	C	X								
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C									
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C									
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C									
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X								
Agrostis stolonifera L.	AGST1	G	N	C									
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C				0.8	1.6				
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		0.4	1.2	0.8	1.6	0.2	0.4	1.3	2.8
Bromus tectorum L.	BRTE1	G	N	C	X	0.8	2.3	0.3	0.5	1.0	2.5		
Dactylis glomerata L.	DAGL1	G	N	C									
Festuca pratensis Huds.	FEPR1	G	N	C						0.1	0.2		
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C		0.1	0.2						
Poa compressa L.	POCO1	G	N	C		0.6	1.6						
Poa pratensis L.	POPR1	G	N	C									
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C									
Triticum aestivum L.	TRAE1	G	N	C		9.4	26.3			0.1	0.2	0.3	0.7
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W									
Setaria viridis (L.) Beauv.	SEVI1	G	N	W		0.2	0.5						
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		8.9	24.9	12.0	25.8	14.1	35.5	14.2	30.0
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C									
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C									
Agropyron smithii Rydb.	AGSM1	G	Y	C		1.4	4.0	9.0	19.4	4.9	12.4	1.1	2.3
Elymus canadensis L.	ELCA1	G	Y	C									
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C								0.1	0.2
Hordeum jubatum L.	HOJU1	G	Y	C				0.3	0.5	0.2	0.4		
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C									
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C									
Stipa comata Trin. & Rupr.	STCO1	G	Y	C				0.3	0.5				
Stipa viridula Trin.	STVI1	G	Y	C						0.2	0.4		
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.2	0.5			1.2	2.9		
Andropogon scoparius Michx.	ANSC1	G	Y	W									
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		0.4	1.2	0.3	0.5	1.3	3.4	0.2	0.4
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.2	0.5			1.5	3.8	0.3	0.5
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		0.4	1.2			0.8	2.1	1.0	2.1
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W									
Juncus torreyi Cov.	JUTO1	G	Y	W									
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W									
Panicum capillare L.	PACA1	G	Y	W									
Panicum virgatum L.	PAVI1	G	Y	W									
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W									
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W									
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W						0.1	0.2		
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W									
Spartina pectinata Link	SPPE1	G	Y	W									
Chenopodium sp.	CHE1												
Unknown sp.	UNKN												
Total Foliar Cover						35.8	100.0	46.5	100.0	39.7	100.0	47.3	100.0
Total Forb Cover						12.8	35.8	23.0	49.5	14.1	35.5	28.8	61.0
Total Non-Native Forb Cover						12.1	33.7	13.0	28.0	13.3	33.6	27.3	57.7
Total Native Forb Cover						0.8	2.1	10.0	21.5	0.8	1.9	1.6	3.4
Total Graminoid Cover						23.0	64.2	23.5	50.5	25.6	64.5	18.4	39.0
Total Non-Native Graminoid Cover						11.5	32.1	1.8	3.8	1.3	3.4	1.7	3.5
Total Native Graminoid Cover						11.5	32.1	21.8	46.8	24.3	61.1	16.8	35.4
Total Herbaceous Native Cover						12.3	34.2	31.8	68.3	25.0	63.0	18.3	38.8
Total Herbaceous Non-Native Cover						23.6	65.8	14.8	31.7	14.7	37.0	28.9	61.2
Total Warm-Season Graminoid Cover						1.3	3.7	0.3	0.5	4.9	12.4	1.4	3.0
Total Cool-Season Graminoid Cover						21.7	60.5	23.3	50.0	20.7	52.1	17.0	36.0
Total Noxious Weed Cover						2.9	8.1	3.3	7.0	4.9	12.4	1.8	3.7

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-103. Species Foliar Cover Summary at Locations A6−A10

						A6		A7		A8		A9		A10	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N												
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			2.5	4.7	0.7	1.8	0.3	0.5	0.1	0.2	0.3	0.3
Barbarea vulgaris R. Br.	BAVU1	F	N									4.3	7.8		
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N												
Centaurea diffusa Lam.	CEDI1	F	N		X	0.5	0.9	0.3	0.7	3.8	8.0	2.3	4.1		
Chenopodium album L.	CHAL1	F	N												
Cirsium arvense (L.) Scop.	CIAR1	F	N		X							0.8	1.4		
Convolvulus arvensis L.	COAR1	F	N		X							0.3	0.5	0.3	0.3
Cynoglossum officinale L.	CYOF1	F	N		X										
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N												
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	0.8	1.4	1.3	3.6						
Hypericum perforatum L.	HYPE1	F	N		X	0.3	0.5								
Kochia scoparia (L.) Schrad.	KOSC1	F	N			1.5	2.8	0.8	2.3	0.5	1.1	3.6	6.7		
Lactuca serriola L.	LASE1	F	N			0.3	0.5	0.3	0.7	0.5	1.1	4.5	8.3	0.3	0.3
Lepidium campestre (L.) R. Br.	LECA1	F	N									0.1	0.2		
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X										
Melilotus alba Medic.	MEAL1	F	N					0.5	1.4			3.1	5.7		
Melilotus officinalis (L.) Pall.	MEOF1	F	N			0.3	0.5	1.1	2.9	0.3	0.5	3.5	6.4	0.8	1.0
Medicago sativa L. ssp. sativa	MESA1	F	N												
Plantago lanceolata L.	PLLA1	F	N			0.3	0.5								
Plantago major L.	PLMA1	F	N									0.1	0.2		
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			1.5	2.8	0.6	1.6			0.4	0.7		
Polygonum persicaria L.	POPE2	F	N												
Rumex crispus L.	RUCR1	F	N												
Salsola iberica Senn. & Pau.	SAIB1	F	N			0.3	0.5	0.7	1.8	0.3	0.5	0.9	1.6		
Scorzonera laciniata L.	SCLA1	F	N			0.3	0.5					0.1	0.2		
Sisymbrium altissimum L.	SIAL1	F	N												
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X										
Taraxacum officinale Weber	TAOF1	F	N												
Thlaspi arvense L.	THAR1	F	N												
Tragopogon dubius Scop.	TRDU1	F	N			0.3	0.5								
Verbascum thapsus L.	VETH1	F	N		X										
Agrostis scabra Willd.	AGSC1	F	Y					0.1	0.2						
Ambrosia artemisiifolia L.	AMAR1	F	Y					0.1	0.2			0.9	1.6	0.3	0.3
Ambrosia psilostachya DC.	AMPS1	F	Y					0.1	0.2			1.0	1.8		
Artemisia dracunculus L.	ARDR1	F	Y												
Aster falcatus Lindl.	ASFA1	F	Y												
Aster porteri Gray	ASPO1	F	Y							0.3	0.5				
Chenopodium fremontii S. Wats.	CHFR1	F	Y												
Chrysopsis villosa Pursh.	CHVI1	F	Y												
Conyza canadensis (L.) Cronq.	COCA1	F	Y												
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y												
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y												
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y												
Erigeron divergens T. & G.	ERDI1	F	Y			0.3	0.5								
Euphorbia serpyllifolia Pers.	EUSE1	F	Y												
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			0.5	0.9					2.0	3.7		
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y							0.3	0.5				
Helianthus annuus L.	HEAN1	F	Y					0.1	0.2			2.0	3.7	0.3	0.3
Lepidium densiflorum Schrad.	LEDE1	F	Y												
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y												
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y												
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y												
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y									0.1	0.2		
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y												
Psoralea tenuiflora Pursh.	PSTE1	F	Y												
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y			0.3	0.5								
Rumex maritimus L.	RUMA1	F	Y												
Senecio plattensis Nutt.	SEPL1	F	Y												
Silene antirrhina L.	SIAN1	F	Y												
Solanum triflorum Nutt.	SOTR1	F	Y												
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y					0.1	0.2						
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y												
Xanthium strumarium L.	XAST1	F	Y												
Aegilops cylindrica Host	AECY1	G	N	C	X										
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C								0.1	0.2		
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C											
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C											
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X										
Agrostis stolonifera L.	AGST1	G	N	C											
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C		3.5	6.6			0.3	0.5			1.5	2.0
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		0.3	0.5					1.0	1.8		
Bromus tectorum L.	BRTE1	G	N	C	X	4.3	8.0					0.1	0.2	2.3	3.0
Dactylis glomerata L.	DAGL1	G	N	C											
Festuca pratensis Huds.	FEPR1	G	N	C											
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C											
Poa compressa L.	POCO1	G	N	C		1.5	2.8	0.1	0.2	0.3	0.5	1.9	3.4	1.5	2.0
Poa pratensis L.	POPR1	G	N	C											
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C											
Triticum aestivum L.	TRAE1	G	N	C				0.2	0.5						
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W								0.1	0.2		
Setaria viridis (L.) Beauv.	SEVI1	G	N	W											
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		18.3	34.4	16.5	44.9	22.8	48.7	8.8	16.1	24.0	31.5
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C		0.3	0.5								
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C											
Agropyron smithii Rydb.	AGSM1	G	Y	C		5.3	9.9	1.3	3.4	13.3	28.3	5.9	10.8	41.5	54.4
Elymus canadensis L.	ELCA1	G	Y	C				7.7	20.9						
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C											
Hordeum jubatum L.	HOJU1	G	Y	C		1.5	2.8					0.9	1.6		
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C				0.1	0.2						
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C											
Stipa comata Trin. & Rupr.	STCO1	G	Y	C											
Stipa viridula Trin.	STVI1	G	Y	C		0.3	0.5					0.3	0.5		
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.5	0.9					0.1	0.2		
Andropogon scoparius Michx.	ANSC1	G	Y	W		0.3	0.5	0.1	0.2						
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		5.3	9.9	0.8	2.0	0.3	0.5	0.4	0.7		
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.5	0.9	0.8	2.3	1.8	3.7	3.1	5.7		
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		0.3	0.5	0.2	0.5	2.3	4.8	0.9	1.6	2.0	2.6
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W								0.1	0.2		
Juncus torreyi Cov.	JUTO1	G	Y	W				2.1	5.7						
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W											
Panicum capillare L.	PACA1	G	Y	W											
Panicum virgatum L.	PAVI1	G	Y	W				0.5	1.4						
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W		1.8	3.3							1.5	2.0
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W											
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W											
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W											
Spartina pectinata Link	SPPE1	G	Y	W								0.8	1.4		
Chenopodium sp.	CHE1														
Unknown sp.	UNKN														
Total Foliar Cover						53.0	100.0	36.8	100.0	46.8	100.0	54.4	100.0	76.3	100.0
Total Forb Cover						9.5	17.9	6.6	17.9	6.0	12.8	30.0	55.2	2.0	2.6
Total Non-Native Forb Cover						8.5	16.0	6.2	16.8	5.5	11.8	24.0	44.1	1.5	2.0
Total Native Forb Cover						1.0	1.9	0.4	1.1	0.5	1.1	6.0	11.0	0.5	0.7
Total Graminoid Cover						43.5	82.1	30.2	82.1	40.8	87.2	24.4	44.8	74.3	97.4
Total Non-Native Graminoid Cover						9.5	17.9	0.3	0.7	0.5	1.1	3.3	6.0	5.3	6.9
Total Native Graminoid Cover						34.0	64.2	29.9	81.4	40.3	86.1	21.1	38.9	69.0	90.5
Total Herbaceous Native Cover						35.0	66.0	30.3	82.5	40.8	87.2	27.1	49.9	69.5	91.1
Total Herbaceous Non-Native Cover						18.0	34.0	6.4	17.5	6.0	12.8	27.3	50.1	6.8	8.9
Total Warm-Season Graminoid Cover						8.5	16.0	4.4	12.0	4.3	9.1	5.5	10.1	3.5	4.6
Total Cool-Season Graminoid Cover						35.0	66.0	25.8	70.1	36.5	78.1	18.9	34.7	70.8	92.8
Total Noxious Weed Cover						5.8	10.8	1.6	4.3	3.8	8.0	3.4	6.2	2.5	3.3

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-104. Species Foliar Cover Summary at Locations A11−A15

						A11		A12		A14		A15	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N			0.1	0.2						
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			0.9	2.3	1.1	3.0	0.3	0.5		
Barbarea vulgaris R. Br.	BAVU1	F	N										
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N										
Centaurea diffusa Lam.	CEDI1	F	N		X	1.3	3.2	2.4	6.3	0.3	0.5	0.3	1.0
Chenopodium album L.	CHAL1	F	N										
Cirsium arvense (L.) Scop.	CIAR1	F	N		X			1.1	3.0			1.0	2.9
Convolvulus arvensis L.	COAR1	F	N		X			2.1	5.6				
Cynoglossum officinale L.	CYOF1	F	N		X								
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N										
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	3.3	8.3	4.0	10.6				
Hypericum perforatum L.	HYPE1	F	N		X								
Kochia scoparia (L.) Schrad.	KOSC1	F	N			1.3	3.4	1.6	4.3	1.8	3.3		
Lactuca serriola L.	LASE1	F	N			0.1	0.2	1.1	3.0			0.3	1.0
Lepidium campestre (L.) R. Br.	LECA1	F	N										
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X								
Melilotus alba Medic.	MEAL1	F	N										
Melilotus officinalis (L.) Pall.	MEOF1	F	N			11.1	28.2	2.0	5.3	0.5	0.9	0.7	1.9
Medicago sativa L. ssp. sativa	MESA1	F	N					0.8	2.0				
Plantago lanceolata L.	PLLA1	F	N										
Plantago major L.	PLMA1	F	N										
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			0.1	0.2						
Polygonum persicaria L.	POPE2	F	N										
Rumex crispus L.	RUCR1	F	N										
Salsola iberica Senn. & Pau.	SAIB1	F	N			1.4	3.6	0.8	2.0	0.3	0.5		
Scorzonera laciniata L.	SCLA1	F	N			0.1	0.2						
Sisymbrium altissimum L.	SIAL1	F	N										
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X								
Taraxacum officinale Weber	TAOF1	F	N									0.2	0.5
Thlaspi arvense L.	THAR1	F	N									0.2	0.5
Tragopogon dubius Scop.	TRDU1	F	N					0.1	0.3			0.3	1.0
Verbascum thapsus L.	VETH1	F	N		X			0.1	0.3				
Agrostis scabra Willd.	AGSC1	F	Y										
Ambrosia artemisiifolia L.	AMAR1	F	Y										
Ambrosia psilostachya DC.	AMPS1	F	Y					0.8	2.0			0.5	1.4
Artemisia dracunculus L.	ARDR1	F	Y										
Aster falcatus Lindl.	ASFA1	F	Y										
Aster porteri Gray	ASPO1	F	Y										
Chenopodium fremontii S. Wats.	CHFR1	F	Y										
Chrysopsis villosa Pursh.	CHVI1	F	Y										
Conyza canadensis (L.) Cronq.	COCA1	F	Y										
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y										
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y										
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y										
Erigeron divergens T. & G.	ERDI1	F	Y									0.2	0.5
Euphorbia serpyllifolia Pers.	EUSE1	F	Y										
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			0.1	0.2	0.1	0.3			0.2	0.5
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y										
Helianthus annuus L.	HEAN1	F	Y					0.1	0.3				
Lepidium densiflorum Schrad.	LEDE1	F	Y										
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y										
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y										
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y										
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y										
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y										
Psoralea tenuiflora Pursh.	PSTE1	F	Y										
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y										
Rumex maritimus L.	RUMA1	F	Y										
Senecio plattensis Nutt.	SEPL1	F	Y										
Silene antirrhina L.	SIAN1	F	Y										
Solanum triflorum Nutt.	SOTR1	F	Y										
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y									0.2	0.5
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y										
Xanthium strumarium L.	XAST1	F	Y										
Aegilops cylindrica Host	AECY1	G	N	C	X								
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C		0.1	0.2	0.1	0.3				
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C									
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C									
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X								
Agrostis stolonifera L.	AGST1	G	N	C									
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C				0.3	0.7				
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		0.1	0.2	0.5	1.3			1.2	3.4
Bromus tectorum L.	BRTE1	G	N	C	X	0.8	2.1			2.0	3.8	0.3	1.0
Dactylis glomerata L.	DAGL1	G	N	C						0.3	0.5		
Festuca pratensis Huds.	FEPR1	G	N	C								0.2	0.5
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C				0.1	0.3				
Poa compressa L.	POCO1	G	N	C		0.1	0.2					2.2	6.3
Poa pratensis L.	POPR1	G	N	C									
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C									
Triticum aestivum L.	TRAE1	G	N	C		9.8	25.1						
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W									
Setaria viridis (L.) Beauv.	SEVI1	G	N	W									
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		5.1	13.0	9.4	24.9	7.0	13.1	14.5	42.0
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C									
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C									
Agropyron smithii Rydb.	AGSM1	G	Y	C		0.9	2.3	4.4	11.6	1.3	2.3	5.5	15.9
Elymus canadensis L.	ELCA1	G	Y	C									
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C									
Hordeum jubatum L.	HOJU1	G	Y	C									
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C								0.3	1.0
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C									
Stipa comata Trin. & Rupr.	STCO1	G	Y	C									
Stipa viridula Trin.	STVI1	G	Y	C		0.1	0.2			0.3	0.5	0.2	0.5
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.1	0.2			9.5	17.8	1.3	3.9
Andropogon scoparius Michx.	ANSC1	G	Y	W		0.3	0.6			1.0	1.9		
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		0.3	0.6	1.8	4.7	5.5	10.3	1.2	3.4
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.3	0.6	1.5	4.0	5.5	10.3	0.2	0.5
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		0.9	2.3	1.4	3.7	9.3	17.4	3.5	10.1
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W									
Juncus torreyi Cov.	JUTO1	G	Y	W									
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W									
Panicum capillare L.	PACA1	G	Y	W									
Panicum virgatum L.	PAVI1	G	Y	W									
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W						8.5	16.0		
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W									
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W		0.8	1.9						
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W						0.3	0.5		
Spartina pectinata Link	SPPE1	G	Y	W									
Chenopodium sp.	CHE1												
Unknown sp.	UNKN					0.1	0.2						
Total Foliar Cover						39.3	100.0	37.6	100.0	53.3	100.0	34.5	100.0
Total Forb Cover						19.8	50.3	18.3	48.5	3.0	5.6	4.0	11.6
Total Non-Native Forb Cover						19.6	49.9	17.3	45.8	3.0	5.6	3.0	8.7
Total Native Forb Cover						0.1	0.2	1.0	2.7	0.0	0.0	1.0	2.9
Total Graminoid Cover						19.5	49.7	19.4	51.5	50.3	94.4	30.5	88.4
Total Non-Native Graminoid Cover						10.9	27.8	1.0	2.7	2.3	4.2	3.8	11.1
Total Native Graminoid Cover						8.6	21.9	18.4	48.8	48.0	90.1	26.7	77.3
Total Herbaceous Native Cover						8.7	22.1	19.4	51.5	48.0	90.1	27.7	80.2
Total Herbaceous Non-Native Cover						30.5	77.7	18.3	48.5	5.3	9.9	6.8	19.8
Total Warm-Season Graminoid Cover						2.5	6.4	4.6	12.3	39.5	74.2	6.2	17.9
Total Cool-Season Graminoid Cover						17.0	43.3	14.8	39.2	10.8	20.2	24.3	70.5
Total Noxious Weed Cover						5.3	13.6	9.8	25.9	2.3	4.2	1.7	4.8

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-105. Species Foliar Cover Summary at Locations A16−A20

						A16		A17		A18		A19		A20	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N												
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			13.3	20.9	4.0	5.9	1.0	1.9	0.2	0.3	11.0	12.9
Barbarea vulgaris R. Br.	BAVU1	F	N												
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N											1.3	1.5
Centaurea diffusa Lam.	CEDI1	F	N		X			4.0	5.9	4.0	7.8				
Chenopodium album L.	CHAL1	F	N							0.3	0.5				
Cirsium arvense (L.) Scop.	CIAR1	F	N		X										
Convolvulus arvensis L.	COAR1	F	N		X	1.8	2.8							1.0	1.2
Cynoglossum officinale L.	CYOF1	F	N		X										
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N					0.3	0.4	0.3	0.5				
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	5.8	9.1	15.0	22.3	17.8	34.5	0.2	0.3	2.5	2.9
Hypericum perforatum L.	HYPE1	F	N		X			0.3	0.4						
Kochia scoparia (L.) Schrad.	KOSC1	F	N					1.0	1.5	0.3	0.5			0.3	0.3
Lactuca serriola L.	LASE1	F	N					2.3	3.3	2.5	4.9			0.5	0.6
Lepidium campestre (L.) R. Br.	LECA1	F	N												
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X										
Melilotus alba Medic.	MEAL1	F	N												
Melilotus officinalis (L.) Pall.	MEOF1	F	N			23.0	36.2	0.5	0.7	6.3	12.1			0.3	0.3
Medicago sativa L. ssp. sativa	MESA1	F	N												
Plantago lanceolata L.	PLLA1	F	N												
Plantago major L.	PLMA1	F	N												
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N												
Polygonum persicaria L.	POPE2	F	N												
Rumex crispus L.	RUCR1	F	N					0.3	0.4						
Salsola iberica Senn. & Pau.	SAIB1	F	N					0.3	0.4						
Scorzonera laciniata L.	SCLA1	F	N												
Sisymbrium altissimum L.	SIAL1	F	N												
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X										
Taraxacum officinale Weber	TAOF1	F	N												
Thlaspi arvense L.	THAR1	F	N											0.3	0.3
Tragopogon dubius Scop.	TRDU1	F	N												
Verbascum thapsus L.	VETH1	F	N		X			0.5	0.7						
Agrostis scabra Willd.	AGSC1	F	Y												
Ambrosia artemisiifolia L.	AMAR1	F	Y					2.0	3.0	0.5	1.0				
Ambrosia psilostachya DC.	AMPS1	F	Y												
Artemisia dracunculus L.	ARDR1	F	Y												
Aster falcatus Lindl.	ASFA1	F	Y												
Aster porteri Gray	ASPO1	F	Y												
Chenopodium fremontii S. Wats.	CHFR1	F	Y												
Chrysopsis villosa Pursh.	CHVI1	F	Y												
Conyza canadensis (L.) Cronq.	COCA1	F	Y												
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y												
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y												
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y												
Erigeron divergens T. & G.	ERDI1	F	Y					0.3	0.4						
Euphorbia serpyllifolia Pers.	EUSE1	F	Y												
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y							0.3	0.5				
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y												
Helianthus annuus L.	HEAN1	F	Y							0.3	0.5	0.2	0.3		
Lepidium densiflorum Schrad.	LEDE1	F	Y					0.5	0.7						
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y												
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y											10.3	12.0
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y												
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y												
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y												
Psoralea tenuiflora Pursh.	PSTE1	F	Y												
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y												
Rumex maritimus L.	RUMA1	F	Y												
Senecio plattensis Nutt.	SEPL1	F	Y												
Silene antirrhina L.	SIAN1	F	Y												
Solanum triflorum Nutt.	SOTR1	F	Y							0.3	0.5				
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y							0.8	1.5			0.3	0.3
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y												
Xanthium strumarium L.	XAST1	F	Y												
Aegilops cylindrica Host	AECY1	G	N	C	X										
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C											
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C								0.2	0.3	3.0	3.5
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C		1.8	2.8			0.3	0.5				
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X										
Agrostis stolonifera L.	AGST1	G	N	C											
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C										0.5	0.6
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C				0.3	0.4	1.0	1.9			1.8	2.0
Bromus tectorum L.	BRTE1	G	N	C	X	1.0	1.6	5.3	7.8	0.5	1.0	0.2	0.3	1.5	1.8
Dactylis glomerata L.	DAGL1	G	N	C								0.2	0.3		
Festuca pratensis Huds.	FEPR1	G	N	C				0.3	0.4	0.3	0.5				
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C											
Poa compressa L.	POCO1	G	N	C								7.3	12.9	1.8	2.0
Poa pratensis L.	POPR1	G	N	C								0.2	0.3		
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C				0.5	0.7						
Triticum aestivum L.	TRAE1	G	N	C		1.5	2.4								
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W											
Setaria viridis (L.) Beauv.	SEVI1	G	N	W				0.5	0.7						
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		7.0	11.0	9.5	14.1	8.5	16.5	34.2	60.3	12.3	14.3
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C											
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C								2.3	4.1		
Agropyron smithii Rydb.	AGSM1	G	Y	C		5.8	9.1	1.3	1.9	0.8	1.5	4.5	7.9	31.3	36.5
Elymus canadensis L.	ELCA1	G	Y	C								1.0	1.8		
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C											
Hordeum jubatum L.	HOJU1	G	Y	C				0.5	0.7			1.3	2.4		
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C								2.2	3.8		
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C											
Stipa comata Trin. & Rupr.	STCO1	G	Y	C											
Stipa viridula Trin.	STVI1	G	Y	C				0.5	0.7			0.2	0.3		
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.5	0.8	2.3	3.3	1.3	2.4	0.5	0.9		
Andropogon scoparius Michx.	ANSC1	G	Y	W											
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		1.8	2.8	7.0	10.4	2.0	3.9				
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.5	0.8	5.5	8.2	0.8	1.5			6.0	7.0
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W				2.3	3.3	0.3	0.5	2.0	3.5		
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W											
Juncus torreyi Cov.	JUTO1	G	Y	W											
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W											
Panicum capillare L.	PACA1	G	Y	W											
Panicum virgatum L.	PAVI1	G	Y	W											
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W											
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W				0.5	0.7						
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W				0.3	0.4	1.8	3.4				
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W											
Spartina pectinata Link	SPPE1	G	Y	W											
Chenopodium sp.	CHE1														
Unknown sp.	UNKN														
Total Foliar Cover						63.5	100.0	67.3	100.0	51.5	100.0	56.7	100.0	85.5	100.0
Total Forb Cover						43.8	68.9	31.0	46.1	34.3	66.5	0.5	0.9	27.5	32.2
Total Non-Native Forb Cover						43.8	68.9	28.3	42.0	32.3	62.6	0.3	0.6	17.0	19.9
Total Native Forb Cover						0.0	0.0	2.8	4.1	2.0	3.9	0.2	0.3	10.5	12.3
Total Graminoid Cover						19.8	31.1	36.3	53.9	17.3	33.5	56.2	99.1	58.0	67.8
Total Non-Native Graminoid Cover						4.3	6.7	6.8	10.0	2.0	3.9	8.0	14.1	8.5	9.9
Total Native Graminoid Cover						15.5	24.4	29.5	43.9	15.3	29.6	48.2	85.0	49.5	57.9
Total Herbaceous Native Cover						15.5	24.4	32.3	48.0	17.3	33.5	48.3	85.3	60.0	70.2
Total Herbaceous Non-Native Cover						48.0	75.6	35.0	52.0	34.3	66.5	8.3	14.7	25.5	29.8
Total Warm-Season Graminoid Cover						2.8	4.3	18.3	27.1	6.0	11.7	2.5	4.4	6.0	7.0
Total Cool-Season Graminoid Cover						17.0	26.8	18.0	26.8	11.3	21.8	53.7	94.7	52.0	60.8
Total Noxious Weed Cover						8.5	13.4	25.0	37.2	22.3	43.2	0.3	0.6	5.0	5.8

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-106. Species Foliar Cover Summary at Locations A21−A25

						A21		A22		A23		A24		A25	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N												
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			0.9	2.1	2.4	3.1			2.0	2.0	0.6	1.7
Barbarea vulgaris R. Br.	BAVU1	F	N												
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N									0.8	0.7		
Centaurea diffusa Lam.	CEDI1	F	N		X	4.1	9.8	9.3	11.8	1.8	7.8			3.9	10.8
Chenopodium album L.	CHAL1	F	N												
Cirsium arvense (L.) Scop.	CIAR1	F	N		X	0.5	1.2	0.4	0.5						
Convolvulus arvensis L.	COAR1	F	N		X	0.9	2.1	7.5	9.6						
Cynoglossum officinale L.	CYOF1	F	N		X										
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N												
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	3.4	8.0	0.7	0.9			0.3	0.2	0.1	0.2
Hypericum perforatum L.	HYPE1	F	N		X			0.5	0.6						
Kochia scoparia (L.) Schrad.	KOSC1	F	N			1.3	3.0	3.2	4.0					1.9	5.3
Lactuca serriola L.	LASE1	F	N			1.3	3.0	0.5	0.6	4.3	18.9			1.6	4.3
Lepidium campestre (L.) R. Br.	LECA1	F	N												
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X			0.2	0.2						
Melilotus alba Medic.	MEAL1	F	N			0.3	0.6							1.8	5.0
Melilotus officinalis (L.) Pall.	MEOF1	F	N			6.1	14.5	0.3	0.4					1.2	3.4
Medicago sativa L. ssp. sativa	MESA1	F	N												
Plantago lanceolata L.	PLLA1	F	N												
Plantago major L.	PLMA1	F	N												
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			0.3	0.6								
Polygonum persicaria L.	POPE2	F	N												
Rumex crispus L.	RUCR1	F	N												
Salsola iberica Senn. & Pau.	SAIB1	F	N			0.9	2.1	1.1	1.4	1.5	6.7			1.6	4.6
Scorzonera laciniata L.	SCLA1	F	N			0.1	0.3	0.7	0.9						
Sisymbrium altissimum L.	SIAL1	F	N					0.1	0.1						
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X										
Taraxacum officinale Weber	TAOF1	F	N											0.1	0.2
Thlaspi arvense L.	THAR1	F	N									0.3	0.2		
Tragopogon dubius Scop.	TRDU1	F	N			1.0	2.4	0.4	0.5						
Verbascum thapsus L.	VETH1	F	N		X			1.8	2.2						
Agrostis scabra Willd.	AGSC1	F	Y												
Ambrosia artemisiifolia L.	AMAR1	F	Y					0.6	0.7						
Ambrosia psilostachya DC.	AMPS1	F	Y					2.3	2.9			0.3	0.2	0.1	0.2
Artemisia dracunculus L.	ARDR1	F	Y					0.2	0.2						
Aster falcatus Lindl.	ASFA1	F	Y					0.5	0.6						
Aster porteri Gray	ASPO1	F	Y												
Chenopodium fremontii S. Wats.	CHFR1	F	Y												
Chrysopsis villosa Pursh.	CHVI1	F	Y					0.8	1.1						
Conyza canadensis (L.) Cronq.	COCA1	F	Y											0.2	0.5
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y												
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y									0.3	0.2		
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y									0.8	0.7		
Erigeron divergens T. & G.	ERDI1	F	Y												
Euphorbia serpyllifolia Pers.	EUSE1	F	Y							0.3	1.1				
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			1.9	4.5			1.5	6.7			0.2	0.5
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y												
Helianthus annuus L.	HEAN1	F	Y					1.8	2.2						
Lepidium densiflorum Schrad.	LEDE1	F	Y												
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y					0.5	0.6						
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y					0.3	0.3						
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y					0.1	0.1						
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y												
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y					0.1	0.1						
Psoralea tenuiflora Pursh.	PSTE1	F	Y					1.0	1.3						
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y												
Rumex maritimus L.	RUMA1	F	Y												
Senecio plattensis Nutt.	SEPL1	F	Y					0.1	0.1						
Silene antirrhina L.	SIAN1	F	Y												
Solanum triflorum Nutt.	SOTR1	F	Y												
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y												
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y												
Xanthium strumarium L.	XAST1	F	Y												
Aegilops cylindrica Host	AECY1	G	N	C	X										
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C		0.3	0.6	0.1	0.1			1.5	1.5		
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C											
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C								6.3	6.2		
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X										
Agrostis stolonifera L.	AGST1	G	N	C										0.1	0.2
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C				6.0	7.7			0.5	0.5		
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C				1.8	2.2					0.2	0.5
Bromus tectorum L.	BRTE1	G	N	C	X	0.3	0.6	3.8	4.8			64.3	63.8	0.4	1.2
Dactylis glomerata L.	DAGL1	G	N	C											
Festuca pratensis Huds.	FEPR1	G	N	C											
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C											
Poa compressa L.	POCO1	G	N	C				0.7	0.9			1.5	1.5	0.5	1.4
Poa pratensis L.	POPR1	G	N	C				0.1	0.1			0.3	0.2		
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C											
Triticum aestivum L.	TRAE1	G	N	C										1.4	3.8
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W											
Setaria viridis (L.) Beauv.	SEVI1	G	N	W										0.2	0.5
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		9.8	23.1	7.7	9.8	5.8	25.6	0.8	0.7	10.6	29.5
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C											
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C											
Agropyron smithii Rydb.	AGSM1	G	Y	C		3.1	7.4	7.7	9.8	4.3	18.9	13.0	12.9	7.0	19.4
Elymus canadensis L.	ELCA1	G	Y	C											
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C											
Hordeum jubatum L.	HOJU1	G	Y	C		0.8	1.8	0.1	0.1						
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C				0.2	0.2						
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C										0.1	0.2
Stipa comata Trin. & Rupr.	STCO1	G	Y	C				0.5	0.6						
Stipa viridula Trin.	STVI1	G	Y	C		0.1	0.3	1.8	2.3			7.5	7.4		
Andropogon gerardii Vitman	ANGE1	G	Y	W		1.1	2.7	0.6	0.7						
Andropogon scoparius Michx.	ANSC1	G	Y	W				0.1	0.1					0.2	0.5
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		1.9	4.5	5.9	7.5	3.0	13.3	0.3	0.2	1.6	4.3
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		1.0	2.4	2.8	3.5					0.2	0.5
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		1.0	2.4	1.6	2.0	0.3	1.1	0.3	0.2	0.4	1.2
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W											
Juncus torreyi Cov.	JUTO1	G	Y	W											
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W											
Panicum capillare L.	PACA1	G	Y	W				0.1	0.1						
Panicum virgatum L.	PAVI1	G	Y	W											
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W				0.2	0.2						
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W											
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W		0.1	0.3					0.3	0.2		
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W											
Spartina pectinata Link	SPPE1	G	Y	W											
Chenopodium sp.	CHE1														
Unknown sp.	UNKN														
Total Foliar Cover						42.1	100.0	78.4	100.0	22.5	100.0	100.8	100.0	35.9	100.0
Total Forb Cover						22.8	54.0	37.0	47.2	9.3	41.1	4.5	4.5	13.2	36.7
Total Non-Native Forb Cover						20.9	49.6	28.9	36.9	7.5	33.3	3.3	3.2	12.8	35.5
Total Native Forb Cover						1.9	4.5	8.1	10.3	1.8	7.8	1.3	1.2	0.4	1.2
Total Graminoid Cover						19.4	46.0	41.4	52.8	13.3	58.9	96.3	95.5	22.8	63.3
Total Non-Native Graminoid Cover						0.5	1.2	12.3	15.7	0.0	0.0	74.3	73.7	2.8	7.7
Total Native Graminoid Cover						18.9	44.8	29.1	37.1	13.3	58.9	22.0	21.8	20.0	55.6
Total Herbaceous Native Cover						20.8	49.3	37.2	47.4	15.0	66.7	23.3	23.1	20.4	56.8
Total Herbaceous Non-Native Cover						21.4	50.7	41.3	52.6	7.5	33.3	77.5	76.9	15.5	43.2
Total Warm-Season Graminoid Cover						5.1	12.2	11.2	14.2	3.3	14.4	0.8	0.7	2.5	7.0
Total Cool-Season Graminoid Cover						14.3	33.8	30.3	38.6	10.0	44.4	95.5	94.8	20.3	56.4
Total Noxious Weed Cover						9.1	21.7	24.0	30.6	1.8	7.8	64.5	64.0	4.4	12.2

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-107. Species Foliar Cover Summary at Locations A26−A30

						A26		A27		A28		A29		A30	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N												
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N											0.8	0.9
Barbarea vulgaris R. Br.	BAVU1	F	N												
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N					0.1	0.4						
Centaurea diffusa Lam.	CEDI1	F	N		X	0.5	2.5	0.4	1.1	3.3	8.2	1.4	2.4	8.9	10.9
Chenopodium album L.	CHAL1	F	N			0.1	0.6	0.1	0.4	0.3	0.6			0.5	0.6
Cirsium arvense (L.) Scop.	CIAR1	F	N		X							1.0	1.8		
Convolvulus arvensis L.	COAR1	F	N		X							0.3	0.4	1.1	1.4
Cynoglossum officinale L.	CYOF1	F	N		X										
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N												
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X			1.0	3.0	0.4	0.9	2.0	3.5	1.1	1.4
Hypericum perforatum L.	HYPE1	F	N		X										
Kochia scoparia (L.) Schrad.	KOSC1	F	N			5.9	28.8	4.0	12.2	0.9	2.2	15.0	26.3	15.3	18.7
Lactuca serriola L.	LASE1	F	N					0.3	0.8	1.8	4.4	6.0	10.5	2.5	3.1
Lepidium campestre (L.) R. Br.	LECA1	F	N												
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X										
Melilotus alba Medic.	MEAL1	F	N												
Melilotus officinalis (L.) Pall.	MEOF1	F	N					0.1	0.4	0.1	0.3	2.6	4.6	1.0	1.2
Medicago sativa L. ssp. sativa	MESA1	F	N												
Plantago lanceolata L.	PLLA1	F	N							0.1	0.3	1.6	2.8		
Plantago major L.	PLMA1	F	N												
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			2.0	9.8	7.0	21.3	5.8	14.5	4.0	7.0	25.1	30.7
Polygonum persicaria L.	POPE2	F	N												
Rumex crispus L.	RUCR1	F	N									0.1	0.2		
Salsola iberica Senn. & Pau.	SAIB1	F	N			0.9	4.3	3.6	11.0	7.0	17.7	1.3	2.2	3.0	3.7
Scorzonera laciniata L.	SCLA1	F	N									0.5	0.9		
Sisymbrium altissimum L.	SIAL1	F	N											0.3	0.3
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X										
Taraxacum officinale Weber	TAOF1	F	N												
Thlaspi arvense L.	THAR1	F	N												
Tragopogon dubius Scop.	TRDU1	F	N									0.1	0.2		
Verbascum thapsus L.	VETH1	F	N		X										
Agrostis scabra Willd.	AGSC1	F	Y												
Ambrosia artemisiifolia L.	AMAR1	F	Y			0.1	0.6	0.3	0.8	7.0	17.7	0.9	1.5	5.1	6.3
Ambrosia psilostachya DC.	AMPS1	F	Y												
Artemisia dracunculus L.	ARDR1	F	Y												
Aster falcatus Lindl.	ASFA1	F	Y												
Aster porteri Gray	ASPO1	F	Y							0.1	0.3				
Chenopodium fremontii S. Wats.	CHFR1	F	Y												
Chrysopsis villosa Pursh.	CHVI1	F	Y												
Conyza canadensis (L.) Cronq.	COCA1	F	Y												
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y											1.0	1.2
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y												
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y												
Erigeron divergens T. & G.	ERDI1	F	Y												
Euphorbia serpyllifolia Pers.	EUSE1	F	Y												
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y					0.1	0.4	0.9	2.2	0.8	1.3	1.1	1.4
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y												
Helianthus annuus L.	HEAN1	F	Y			0.1	0.6	0.3	0.8	0.1	0.3	4.0	7.0	7.1	8.7
Lepidium densiflorum Schrad.	LEDE1	F	Y			0.1	0.6								
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y												
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y												
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y												
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y												
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y												
Psoralea tenuiflora Pursh.	PSTE1	F	Y												
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y												
Rumex maritimus L.	RUMA1	F	Y											1.5	1.8
Senecio plattensis Nutt.	SEPL1	F	Y												
Silene antirrhina L.	SIAN1	F	Y												
Solanum triflorum Nutt.	SOTR1	F	Y												
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y					0.4	1.1	0.3	0.6				
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y					0.1	0.4						
Xanthium strumarium L.	XAST1	F	Y												
Aegilops cylindrica Host	AECY1	G	N	C	X										
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C											
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C											
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C								0.8	1.3		
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X							0.8	1.3		
Agrostis stolonifera L.	AGST1	G	N	C											
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C											
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		0.1	0.6			0.1	0.3	0.1	0.2	0.1	0.2
Bromus tectorum L.	BRTE1	G	N	C	X	0.1	0.6					0.1	0.2	0.3	0.3
Dactylis glomerata L.	DAGL1	G	N	C											
Festuca pratensis Huds.	FEPR1	G	N	C											
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C											
Poa compressa L.	POCO1	G	N	C				0.4	1.1						
Poa pratensis L.	POPR1	G	N	C											
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C											
Triticum aestivum L.	TRAE1	G	N	C										0.3	0.3
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W				0.1	0.4					0.1	0.2
Setaria viridis (L.) Beauv.	SEVI1	G	N	W		0.3	1.2	0.1	0.4	0.4	0.9				
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		7.4	36.2	9.3	28.1	5.0	12.6	6.0	10.5	2.8	3.4
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C											
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C											
Agropyron smithii Rydb.	AGSM1	G	Y	C		1.9	9.2	4.1	12.5	4.8	12.0	5.5	9.6	2.4	2.9
Elymus canadensis L.	ELCA1	G	Y	C											
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C											
Hordeum jubatum L.	HOJU1	G	Y	C								1.9	3.3	0.5	0.6
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C											
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C											
Stipa comata Trin. & Rupr.	STCO1	G	Y	C											
Stipa viridula Trin.	STVI1	G	Y	C											
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.1	0.6	0.1	0.4	0.3	0.6				
Andropogon scoparius Michx.	ANSC1	G	Y	W				0.1	0.4	0.1	0.3				
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		0.1	0.6	0.1	0.4	0.1	0.3				
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.6	3.1	0.5	1.5	1.0	2.5				
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W				0.3	0.8			0.1	0.2		
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W											
Juncus torreyi Cov.	JUTO1	G	Y	W											
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W											
Panicum capillare L.	PACA1	G	Y	W								0.3	0.4		
Panicum virgatum L.	PAVI1	G	Y	W											
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W											
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W											
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W								0.1	0.2		
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W											
Spartina pectinata Link	SPPE1	G	Y	W											
Chenopodium sp.	CHE1														
Unknown sp.	UNKN														
Total Foliar Cover						20.4	100.0	32.9	100.0	39.6	100.0	57.1	100.0	81.8	100.0
Total Forb Cover						9.8	47.9	17.8	54.0	27.9	70.3	41.5	72.6	75.4	92.2
Total Non-Native Forb Cover						9.4	46.0	16.6	50.6	19.5	49.2	35.9	62.8	59.5	72.8
Total Native Forb Cover						0.4	1.8	1.1	3.4	8.4	21.1	5.6	9.8	15.9	19.4
Total Graminoid Cover						10.6	52.1	15.1	46.0	11.8	29.7	15.6	27.4	6.4	7.8
Total Non-Native Graminoid Cover						0.5	2.5	0.6	1.9	0.5	1.3	1.8	3.1	0.8	0.9
Total Native Graminoid Cover						10.1	49.7	14.5	44.1	11.3	28.4	13.9	24.3	5.6	6.9
Total Herbaceous Native Cover						10.5	51.5	15.6	47.5	19.6	49.5	19.5	34.1	21.5	26.3
Total Herbaceous Non-Native Cover						9.9	48.5	17.3	52.5	20.0	50.5	37.6	65.9	60.3	73.7
Total Warm-Season Graminoid Cover						1.1	5.5	1.4	4.2	1.9	4.7	0.5	0.9	0.1	0.2
Total Cool-Season Graminoid Cover						9.5	46.6	13.8	41.8	9.9	24.9	15.1	26.5	6.3	7.6
Total Noxious Weed Cover						0.6	3.1	1.4	4.2	3.6	9.1	5.5	9.6	11.4	13.9

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-108. Species Foliar Cover Summary at Locations A33−A35

						A33		A34		A35	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N							0.1	0.3
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N			0.1	0.3			0.1	0.3
Barbarea vulgaris R. Br.	BAVU1	F	N								
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N								
Centaurea diffusa Lam.	CEDI1	F	N		X	3.6	7.6			5.4	11.1
Chenopodium album L.	CHAL1	F	N			0.1	0.3	0.1	0.3		
Cirsium arvense (L.) Scop.	CIAR1	F	N		X						
Convolvulus arvensis L.	COAR1	F	N		X						
Cynoglossum officinale L.	CYOF1	F	N		X						
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N								
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X	0.4	0.8			1.1	2.3
Hypericum perforatum L.	HYPE1	F	N		X						
Kochia scoparia (L.) Schrad.	KOSC1	F	N			19.3	40.4	20.5	42.1	10.0	20.7
Lactuca serriola L.	LASE1	F	N			2.5	5.2	1.3	2.6	4.0	8.3
Lepidium campestre (L.) R. Br.	LECA1	F	N								
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X						
Melilotus alba Medic.	MEAL1	F	N								
Melilotus officinalis (L.) Pall.	MEOF1	F	N			0.1	0.3	1.5	3.1	1.8	3.6
Medicago sativa L. ssp. sativa	MESA1	F	N								
Plantago lanceolata L.	PLLA1	F	N								
Plantago major L.	PLMA1	F	N								
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			4.5	9.4	11.8	24.1	1.4	2.8
Polygonum persicaria L.	POPE2	F	N								
Rumex crispus L.	RUCR1	F	N								
Salsola iberica Senn. & Pau.	SAIB1	F	N			0.8	1.6	0.3	0.5	0.9	1.8
Scorzonera laciniata L.	SCLA1	F	N								
Sisymbrium altissimum L.	SIAL1	F	N			0.3	0.5			0.1	0.3
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X	0.1	0.3				
Taraxacum officinale Weber	TAOF1	F	N								
Thlaspi arvense L.	THAR1	F	N								
Tragopogon dubius Scop.	TRDU1	F	N								
Verbascum thapsus L.	VETH1	F	N		X						
Agrostis scabra Willd.	AGSC1	F	Y								
Ambrosia artemisiifolia L.	AMAR1	F	Y			1.0	2.1	0.3	0.5	0.9	1.8
Ambrosia psilostachya DC.	AMPS1	F	Y					0.1	0.3		
Artemisia dracunculus L.	ARDR1	F	Y								
Aster falcatus Lindl.	ASFA1	F	Y								
Aster porteri Gray	ASPO1	F	Y								
Chenopodium fremontii S. Wats.	CHFR1	F	Y								
Chrysopsis villosa Pursh.	CHVI1	F	Y								
Conyza canadensis (L.) Cronq.	COCA1	F	Y								
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinners.	DACA1	F	Y								
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y								
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y								
Erigeron divergens T. & G.	ERDI1	F	Y								
Euphorbia serpyllifolia Pers.	EUSE1	F	Y								
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			0.4	0.8	0.3	0.5	0.3	0.5
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y								
Helianthus annuus L.	HEAN1	F	Y			1.4	2.9	0.1	0.3	2.3	4.7
Lepidium densiflorum Schrad.	LEDE1	F	Y								
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y								
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y								
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y								
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & Raven	OEVI1	F	Y								
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L. Hitchc.	POGR1	F	Y								
Psoralea tenuiflora Pursh.	PSTE1	F	Y								
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y								
Rumex maritimus L.	RUMA1	F	Y								
Senecio plattensis Nutt.	SEPL1	F	Y								
Silene antirrhina L.	SIAN1	F	Y								
Solanum triflorum Nutt.	SOTR1	F	Y								
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y			0.1	0.3				
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & Warren	VEPE1	F	Y								
Xanthium strumarium L.	XAST1	F	Y								
Aegilops cylindrica Host	AECY1	G	N	C	X						
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C							
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C							
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C							
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X						
Agrostis stolonifera L.	AGST1	G	N	C							
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C		0.3	0.5	0.1	0.3	0.9	1.8
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C							
Bromus tectorum L.	BRTE1	G	N	C	X	0.1	0.3	0.1	0.3	0.3	0.5
Dactylis glomerata L.	DAGL1	G	N	C							
Festuca pratensis Huds.	FEPR1	G	N	C						0.8	1.6
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C							
Poa compressa L.	POCO1	G	N	C							
Poa pratensis L.	POPR1	G	N	C							
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C							
Triticum aestivum L.	TRAE1	G	N	C				5.6	11.5	0.1	0.3
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W							
Setaria viridis (L.) Beauv.	SEVI1	G	N	W							
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		8.6	18.1	5.0	10.3	11.8	24.3
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C							
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C							
Agropyron smithii Rydb.	AGSM1	G	Y	C		3.3	6.8	1.5	3.1	4.3	8.8
Elymus canadensis L.	ELCA1	G	Y	C							
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C							
Hordeum jubatum L.	HOJU1	G	Y	C		0.1	0.3	0.3	0.5	1.0	2.1
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C							
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C							
Stipa comata Trin. & Rupr.	STCO1	G	Y	C							
Stipa viridula Trin.	STVI1	G	Y	C							
Andropogon gerardii Vitman	ANGE1	G	Y	W		0.1	0.3			0.1	0.3
Andropogon scoparius Michx.	ANSC1	G	Y	W							
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		0.3	0.5				
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.1	0.3			0.4	0.8
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		0.1	0.3			0.5	1.0
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W							
Juncus torreyi Cov.	JUTO1	G	Y	W							
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W							
Panicum capillare L.	PACA1	G	Y	W							
Panicum virgatum L.	PAVI1	G	Y	W							
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W							
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W							
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W							
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W							
Spartina pectinata Link	SPPE1	G	Y	W							
Chenopodium sp.	CHE1									0.1	0.3
Unknown sp.	UNKN										
Total Foliar Cover						47.6	100.0	48.8	100.0	48.4	100.0
Total Forb Cover						34.6	72.7	36.1	74.1	28.4	58.7
Total Non-Native Forb Cover						31.8	66.7	35.4	72.6	24.9	51.4
Total Native Forb Cover						2.9	6.0	0.8	1.5	3.4	7.0
Total Graminoid Cover						13.0	27.3	12.6	25.9	20.0	41.3
Total Non-Native Graminoid Cover						0.4	0.8	5.9	12.1	2.0	4.1
Total Native Graminoid Cover						12.6	26.5	6.8	13.8	18.0	37.2
Total Herbaceous Native Cover						15.5	32.5	7.5	15.4	21.4	44.2
Total Herbaceous Non-Native Cover						32.1	67.5	41.3	84.6	26.9	55.6
Total Warm-Season Graminoid Cover						0.6	1.3	0.0	0.0	1.0	2.1
Total Cool-Season Graminoid Cover						12.4	26.0	12.6	25.9	19.0	39.3
Total Noxious Weed Cover						4.3	8.9	0.1	0.3	6.8	14.0

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-109. Species Foliar Cover Summary at Locations A36−A40

						A36		A37		A38		A39		A40	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum alyssoides (L.) L.	ALAL1	F	N												
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.)	ALMI1	F	N			0.1	0.2			0.1	0.2				
Barbarea vulgaris R. Br.	BAVU1	F	N												
Camelina microcarpa Andrz. ex DC.	CAMI1	F	N							0.1	0.2				
Centaurea diffusa Lam.	CEDI1	F	N		X	0.1	0.2	1.1	3.1	0.3	0.4	0.5	1.1		
Chenopodium album L.	CHAL1	F	N			0.6	1.1			1.3	1.8				
Cirsium arvense (L.) Scop.	CIAR1	F	N		X										
Convolvulus arvensis L.	COAR1	F	N		X										
Cynoglossum officinale L.	CYOF1	F	N		X										
Dyssodia papposa (Vent) Hitchc.	DYPA1	F	N												
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X					0.5	0.7				
Hypericum perforatum L.	HYPE1	F	N		X										
Kochia scoparia (L.) Schrad.	KOSC1	F	N			15.3	27.5	16.1	43.9	22.9	33.4	9.9	21.7	33.4	75.6
Lactuca serriola L.	LASE1	F	N			1.3	2.3	1.3	3.4	0.9	1.3	0.3	0.5		
Lepidium campestre (L.) R. Br.	LECA1	F	N												
Linaria dalmatica (L.) Mill.	LIDA1	F	N		X										
Melilotus alba Medic.	MEAL1	F	N												
Melilotus officinalis (L.) Pall.	MEOF1	F	N			0.1	0.2			2.8	4.0	1.4	3.0		
Medicago sativa L. ssp. sativa	MESA1	F	N												
Plantago lanceolata L.	PLLA1	F	N					0.3	0.7			0.1	0.3		
Plantago major L.	PLMA1	F	N												
Polygonum arenastrum Jord. ex Bor.	POAR1	F	N			9.8	17.6	5.5	15.0	1.8	2.6	15.0	33.0	1.0	2.3
Polygonum persicaria L.	POPE2	F	N									0.1	0.3		
Rumex crispus L.	RUCR1	F	N												
Salsola iberica Senn. & Pau.	SAIB1	F	N			3.4	6.1	2.6	7.1	3.9	5.7	9.1	20.1	0.3	0.6
Scorzonera laciniata L.	SCLA1	F	N												
Sisymbrium altissimum L.	SIAL1	F	N												
Sonchus arvensis L. ssp. arvensis L.	SOAR1	F	N		X	0.1	0.2								
Taraxacum officinale Weber	TAOF1	F	N												
Thlaspi arvense L.	THAR1	F	N							0.1	0.2				
Tragopogon dubius Scop.	TRDU1	F	N												
Verbascum thapsus L.	VETH1	F	N		X										
Agrostis scabra Willd.	AGSC1	F	Y												
Ambrosia artemisiifolia L.	AMAR1	F	Y			0.1	0.2	0.1	0.3	0.1	0.2			0.1	0.3
Ambrosia psilostachya DC.	AMPS1	F	Y												
Artemisia dracunculus L.	ARDR1	F	Y												
Aster falcatus Lindl.	ASFA1	F	Y												
Aster porteri Gray	ASPO1	F	Y												
Chenopodium fremontii S. Wats.	CHFR1	F	Y									0.1	0.3		
Chrysopsis villosa Pursh.	CHVI1	F	Y												
Conyza canadensis (L.) Cronq.	COCA1	F	Y												
Dalea candida Michx. ex Willd. var. oligophylla (Torr.) Shinn	DACA1	F	Y												
Descurainia pinnata (Walt.) Britt.	DEPI1	F	Y												
Descurainia richardsonii (Sweet) Schultz	DERI1	F	Y												
Erigeron divergens T. & G.	ERDI1	F	Y												
Euphorbia serpyllifolia Pers.	EUSE1	F	Y												
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y												
Gutierrezia sarothrae (Pursh.) Britt. & Rusby	GUSA1	F	Y												
Helianthus annuus L.	HEAN1	F	Y			0.3	0.5					0.8	1.6		
Lepidium densiflorum Schrad.	LEDE1	F	Y												
Lippia cuneifolia (Torr.) Steud.	LICU1	F	Y												
Linum perenne L. var. lewisii (Pursh.) Eat. & Wright	LIPE1	F	Y												
Mirabilis linearis (Pursh.) Heimerl	MILI1	F	Y												
Oenothera villosa Thunb. ssp. strigosa (Rydb.) Dietrich & R	OEVI1	F	Y												
Potentilla gracilis Dougl. ex Hook. var. glabrata (Lehm.) C. L	POGR1	F	Y												
Psoralea tenuiflora Pursh.	PSTE1	F	Y												
Ratibida columnifera (Nutt.) Woot. & Standl.	RACO1	F	Y												
Rumex maritimus L.	RUMA1	F	Y												
Senecio plattensis Nutt.	SEPL1	F	Y												
Silene antirrhina L.	SIAN1	F	Y							0.1	0.2				
Solanum triflorum Nutt.	SOTR1	F	Y												
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y							0.1	0.2				
Veronica peregrina L. var. xalapensis (H. B. K.) St. John & V	VEPE1	F	Y							0.3	0.4				
Xanthium strumarium L.	XAST1	F	Y												
Aegilops cylindrica Host	AECY1	G	N	C	X			0.1	0.3	1.9	2.7				
Agropyron cristatum (L.) Gaertn.	AGCR1	G	N	C						0.1	0.2				
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C											
Agropyron intermedium (Host) Beauv.	AGIN1	G	N	C						0.8	1.1				
Agropyron repens (L.) Beauv.	AGRE1	G	N	C	X										
Agrostis stolonifera L.	AGST1	G	N	C											
Bromus inermis Leyss. ssp. inermis	BRIN1	G	N	C											
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		0.1	0.2			0.1	0.2				
Bromus tectorum L.	BRTE1	G	N	C	X	0.3	0.5	0.3	0.7	0.4	0.5	0.1	0.3		
Dactylis glomerata L.	DAGL1	G	N	C											
Festuca pratensis Huds.	FEPR1	G	N	C											
Lolium perenne L. var. aristatum Willd.	LOPE1	G	N	C											
Poa compressa L.	POCO1	G	N	C											
Poa pratensis L.	POPR1	G	N	C											
Schedonnardus paniculatus (Nutt.) Trel.	SCPA2	G	N	C											
Triticum aestivum L.	TRAE1	G	N	C		18.1	32.7	1.1	3.1	1.6	2.4	0.3	0.5		
Echinochloa crusgallii (L.) Beauv.	ECCR1	G	N	W											
Setaria viridis (L.) Beauv.	SEVI1	G	N	W				0.1	0.3						
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hit	AGCA1	G	Y	C		4.6	8.4	5.9	16.0	25.3	36.9	5.5	12.1	7.9	17.8
Agropyron dasystachyum (Hook.) Scribn.	AGDA1	G	Y	C											
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C											
Agropyron smithii Rydb.	AGSM1	G	Y	C		1.1	2.0	2.1	5.8	3.0	4.4	1.8	3.8	1.4	3.1
Elymus canadensis L.	ELCA1	G	Y	C								0.3	0.5		
Festuca ovina L. var. rydbergii St. Yves	FEOV1	G	Y	C											
Hordeum jubatum L.	HOJU1	G	Y	C										0.1	0.3
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C											
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C											
Stipa comata Trin. & Rupr.	STCO1	G	Y	C											
Stipa viridula Trin.	STVI1	G	Y	C											
Andropogon gerardii Vitman	ANGE1	G	Y	W											
Andropogon scoparius Michx.	ANSC1	G	Y	W											
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W											
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W								0.1	0.3		
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W				0.1	0.3	0.3	0.4	0.1	0.3		
Distichlis spicata (L.) Greene var. stricta (Torr.) Beetle	DISP1	G	Y	W											
Juncus torreyi Cov.	JUTO1	G	Y	W											
Leptochloa fasicularis (Lam.) A. Gray	LEFA1	G	Y	W								0.1	0.3		
Panicum capillare L.	PACA1	G	Y	W											
Panicum virgatum L.	PAVI1	G	Y	W											
Sorghastrum nutans (L.) Nash	SONU1	G	Y	W											
Sporobolus asper (Michx.) Kunth	SPAS1	G	Y	W											
Sporobolus cryptandrus (Torr.) A. Gray	SPCR1	G	Y	W											
Sporobolus heterolepis (A. Gray) A. Gray	SPHE1	G	Y	W											
Spartina pectinata Link	SPPE1	G	Y	W											
Chenopodium sp.	CHE1														
Unknown sp.	UNKN														
Total Foliar Cover						55.4	100.0	36.8	100.0	68.5	100.0	45.5	100.0	44.1	100.0
Total Forb Cover						31.1	56.2	27.0	73.5	35.1	51.3	37.3	81.9	34.8	78.8
Total Non-Native Forb Cover						30.8	55.5	26.9	73.1	34.5	50.4	36.4	79.9	34.6	78.5
Total Native Forb Cover						0.4	0.7	0.1	0.3	0.6	0.9	0.9	1.9	0.1	0.3
Total Graminoid Cover						24.3	43.8	9.8	26.5	33.4	48.7	8.3	18.1	9.4	21.2
Total Non-Native Graminoid Cover						18.5	33.4	1.6	4.4	4.9	7.1	0.4	0.8	0.0	0.0
Total Native Graminoid Cover						5.8	10.4	8.1	22.1	28.5	41.6	7.9	17.3	9.4	21.2
Total Herbaceous Native Cover						6.1	11.1	8.3	22.4	29.1	42.5	8.8	19.2	9.5	21.5
Total Herbaceous Non-Native Cover						49.3	88.9	28.5	77.6	39.4	57.5	36.8	80.8	34.6	78.5
Total Warm-Season Graminoid Cover						0.0	0.0	0.3	0.7	0.3	0.4	0.4	0.8	0.0	0.0
Total Cool-Season Graminoid Cover						24.3	43.8	9.5	25.9	33.1	48.4	7.9	17.3	9.4	21.2
Total Noxious Weed Cover						0.5	0.9	1.5	4.1	3.0	4.4	0.6	1.4	0.0	0.0

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

Table 3-110. Success Criteria Evaluation Summary

Location	>30% Relative Cover of Desired Species	>70% Total Ground Cover (Litter, Rock, and Basal Veg Cover)	50% or More of Seeded Species Present	No Single Species With >45% Relative Foliar Cover	PASS/FAIL
A2	PASS	PASS	PASS	PASS	PASS
A3	PASS	PASS	FAIL	PASS	FAIL
A4	PASS	PASS	PASS	PASS	PASS
A5	PASS	FAIL	FAIL	PASS	FAIL
A6	PASS	PASS	PASS	PASS	PASS
A7	PASS	PASS	PASS	PASS	PASS
A8	PASS	PASS	PASS	FAIL	FAIL
A9	PASS	FAIL	PASS	PASS	FAIL
A10	PASS	PASS	FAIL	FAIL	FAIL
A11	FAIL	PASS	PASS	PASS	FAIL
A12	PASS	PASS	FAIL	PASS	FAIL
A14	PASS	FAIL	PASS	PASS	FAIL
A15	PASS	PASS	PASS	PASS	PASS
A16	FAIL	PASS	FAIL	PASS	FAIL
A17	PASS	PASS	PASS	PASS	PASS
A18	PASS	FAIL	PASS	PASS	FAIL
A19	PASS	PASS	FAIL	FAIL	FAIL
A20	PASS	PASS	FAIL	PASS	FAIL
A21	PASS	PASS	PASS	PASS	PASS
A22	PASS	PASS	PASS	PASS	PASS
A23	PASS	PASS	PASS	PASS	PASS
A24	FAIL	PASS	PASS	PASS	FAIL
A25	PASS	PASS	PASS	PASS	PASS
A26	PASS	PASS	FAIL	PASS	FAIL
A27	PASS	PASS	PASS	PASS	PASS
A28	PASS	PASS	PASS	PASS	PASS
A29	PASS	PASS	FAIL	PASS	FAIL
A30	FAIL	PASS	FAIL	PASS	FAIL
A33	PASS	PASS	PASS	PASS	PASS
A34	FAIL	PASS	FAIL	PASS	FAIL
A35	PASS	PASS	FAIL	PASS	FAIL
A36	FAIL	PASS	FAIL	PASS	FAIL
A37	FAIL	PASS	FAIL	PASS	FAIL
A38	PASS	PASS	FAIL	PASS	FAIL
A39	FAIL	PASS	FAIL	PASS	FAIL
A40	FAIL	PASS	FAIL	FAIL	FAIL
% Passing	75	89	53	89	36

Table 3-111. Revegetation Location Information Table

Location	Original Revegetation Date	Original Erosion Control	Additional Revegetation Effort Date	Amendments Added	New Erosion Control
A2	Summer/Fall 2005	Crimped Straw			
A3	Fall 2004	Erosion Matting			
A4	Summer 2005	Flexterra			
A5	Summer/Fall 2005	Crimped Straw			
A6	Spring 2004	Crimped Straw			
A7	Summer/Fall 2005	Flexterra/Crimped Straw			
A8	Spring 2005	Erosion Matting			
A9	Summer 2005	Crimped Straw			
A10	Spring 2003	Crimped Straw			
A11	Summer/Fall 2005	Crimped Straw			
A12	Spring 2005	Crimped Straw			
A14	Spring 2003	Crimped Straw			
A15	Spring 2005	Hydromulch/Erosion Matting			
A16	Summer 2005	Crimped Straw			
A17	Summer 2005	Flexterra			
A18	Spring 2005	Flexterra			
A19	Spring 2005	Hydromulch/Erosion Matting			
A20	Summer 2002	Hydromulch			
A21	Summer 2005	Flexterra			
A22	Summer 2004	Erosion Matting			
A23	Spring 2005	Erosion Matting			
A24	Winter 2003	Hydromulch			
A25	Summer 2005	Straw/Flexterra/Erosion Matting			
A26	NA		Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A27	NA		Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A28	NA		Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A29	Spring 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A30	Spring 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A33	Summer 2005	Flexterra	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A34	Summer/Fall 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A35	Summer 2005	Flexterra	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A36	Summer/Fall 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A37	Summer/Fall 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A38	Summer/Fall 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A39	Summer/Fall 2005	Crimped Straw	Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra
A40	NA		Spring 2007	Compost, Biosol, Mycorrhizal Inoculent	Flexterra

*Table 3-112. Basal Cover Summary at Revegetation Locations**

Location	Basal Vegetation Cover (%)	Litter Cover (%)	Rock Cover (%)	Total Ground Cover (%)*	Bare Ground (%)
A2	2.9	17.7	67.5	88.1	11.9
A3	3.8	64.3	12.3	80.3	19.8
A4	3.8	22.0	52.9	78.7	21.3
A5	3.3	9.4	49.5	62.3	37.8
A6	6.3	17.0	68.8	92.0	8.0
A7	2.9	7.3	60.0	70.2	29.8
A8	6.3	61.0	36.8	104.0	0.0
A9	3.6	29.9	25.3	58.8	41.3
A10	6.3	93.8	2.5	102.5	0.0
A11	2.9	28.8	55.3	86.9	13.1
A12	3.8	36.4	35.8	75.9	24.1
A14	8.8	17.0	40.0	65.8	34.3
A15	12.3	49.2	45.0	106.5	0.0
A16	2.5	20.5	47.8	70.8	29.3
A17	13.8	14.5	63.0	91.3	8.8
A18	3.8	8.5	54.8	67.0	33.0
A19	13.3	68.8	14.8	97.0	3.0
A20	10.0	68.8	5.8	84.5	15.5
A21	3.1	24.0	46.6	73.8	26.3
A22	10.3	65.0	23.9	99.2	0.8
A23	3.5	87.8	11.0	102.3	0.0
A24	7.5	95.0	1.0	103.5	0.0
A25	3.9	63.9	30.4	98.2	1.8
A26	2.4	64.6	35.4	102.4	0.0
A27	3.1	78.8	18.8	100.6	0.0
A28	2.5	65.8	22.9	91.1	8.9
A29	2.5	74.0	13.5	90.0	10.0
A30	3.1	80.0	16.8	99.9	0.1
A33	3.1	49.0	46.1	98.3	1.8
A34	2.5	85.9	12.9	101.3	0.0
A35	2.5	65.9	27.9	96.3	3.8
A36	2.5	62.1	30.4	95.0	5.0
A37	2.5	80.9	20.3	103.6	0.0
A38	7.5	62.0	28.9	98.4	1.6
A39	2.5	79.9	19.5	101.9	0.0
A40	2.5	82.3	17.1	101.9	0.0
Grand Mean	4.9	52.8	32.2	90.0	10.9

* Numbers greater than 100 are an artifact of the sampling method using a cover class system and midpoints for analysis.
The Total Ground Cover value is the sum of the Basal Vegetation Cover, Litter Cover, and Rock Cover.

A third success criterion outlined in the Revegetation Plan states that a minimum of 30 percent relative cover of desired species must be present, and a fourth criterion states that no single species should comprise more than 45 percent of the total relative cover. Table 3-102, Table 3-103, Table 3-104, Table 3-105, Table 3-106, Table 3-107, Table 3-108, and Table 3-109 summarize the foliar cover data by location for 2007. The shaded row titled Total Herbaceous Native Cover at the bottom of each table shows the percent cover of desired species at each location. The values that are higher than 30 percent at each revegetation location are shaded, indicating that these locations have met this success criterion. Total relative vegetation cover of desired (native) species was greater than 30 percent at 27 of the 36 locations monitored in 2007. Only 4 of the 36 revegetation locations had a single species that comprised greater than 45 percent of the relative cover (locations A8, A10, A19, and A40). Locations A8 and A19 were dominated by slender wheatgrass, one of the early successional seeded native species (49 percent and 60 percent, respectively). In time, this short-lived perennial native species should be replaced by the other native graminoids planted in the seed mix. At location A10, western wheatgrass, a native seeded species, has become dominant (54 percent), and is outcompeting the other seeded native species. In time this may change. At location A40, kochia was the dominant species in 2007, comprising 76 percent of the total vegetation cover at this location. Location A40 was revegetated in early spring 2007, and soil amendments were used to improve the quality of the substrate. The kochia is not a surprise, since it is commonly one of the species that dominate new revegetation areas at the Site during the first growing season. It should decrease in 2008 as other species establish and compete with it for resources.

Besides kochia, other dominant species at the revegetation locations include common weedy, early successional species such as wild lettuce, yellow sweet clover, Russian thistle, filaree, alyssum (*Alyssum minus*), devil's shoestring (knotweed; *Polygonum arenastrum*), annual ragweed (*Ambrosia artemisifolia*), and diffuse knapweed, a noxious weed. Most of these species will disappear on their own after a year or two as the desired seeded species outcompete them for resources and begin to establish more abundantly. Weeds such as diffuse knapweed will need to be controlled through weed control efforts, which will be done as part of the normal vegetation management operations at the Site.

Table 3-110 presents a summary of the pass/fail criteria for each revegetation location monitored in 2007. Thirteen of the 36 locations (36 percent) passed all four criteria in 2007. It is not unexpected that most failed to meet all the success criteria, as it often takes 5 or 6 years to establish a good stand of vegetation. In addition, the success criteria listed in the Revegetation Plan are an initial set of criteria established primarily for erosion protection. As stated in the Revegetation Plan, these "...criteria are provided as initial guidance; however, common sense combined with scientific data will need to be applied to final evaluations to determine whether further management actions are required at specific locations." Also, although some of the areas passed each of the criteria listed in the Revegetation Plan, this does not necessarily mean that the vegetation has established to a desirable level at these locations as of 2007. Some of the revegetation locations may require some reseeding and weed control. Proactive management of the revegetation areas is critical to success. These data are useful for making management decisions and provide documentation of the successional changes at the revegetation locations. This documentation can be used to help improve revegetation techniques at the Site.

3.3.2.5 PLF and OLF Monitoring

As part of the cleanup and closure of the Site, two landfills were covered using different types of covers. At the PLF, a RCRA Subtitle C-compliant cover was constructed to protect the underlying waste. At the OLF, a 2-foot-thick soil cover was placed over the waste material. Both areas were seeded with native plant species to provide a vegetation cover on each landfill. As part of the revegetation process, monitoring is conducted to evaluate the status of the vegetation. The Revegetation Plan (DOE 2005b) provides initial success criteria for revegetation areas at the Site. As stated in the plan the success criteria contained therein are simply initial guidance and may be modified using professional judgment, scientific data, and common sense to determine whether the vegetation establishment at a given location is acceptable for the specific location(s). This section summarizes revegetation monitoring results for data collected at the PLF and OLF during 2007.

The methods used for the revegetation monitoring on the PLF and OLF are provided in the full report on the Ecology DVD at the end of this report. Figure 3-243 shows the locations at the Site where revegetation monitoring was conducted in 2007.

Table 3-113 presents the species richness in 2007 at both the PLF and OLF. Total species richness was 34 species at the PLF and 25 species at the OLF. The difference in numbers between the PLF and OLF is largely related to the environmental conditions at each location. The OLF is on a south-facing hillside, where soil is much drier than soil at the PLF. The 2006 drought also affected the OLF more than the PLF as a result of the slope aspect. Therefore, germination and vegetation establishment has been less because of the harsher conditions. Also, the overabundance of erosion control materials initially installed on the OLF (straw with Flexterra applied on top) has hindered germination and establishment of the seeded species. Several locations still remain where the thickness of the erosion controls inhibits germination. Until this material breaks down, little growth is expected. Table 3-114 lists the species that were seeded at each landfill. At the PLF and OLF, a total of eight and five seed species were present, respectively, in 2007. One of the success criteria in the Revegetation Plan states that at least 50 percent of the seeded species must be present in an area for it to be considered successful. Based on an evaluation by sampling location, only the western portion of the PLF cover did not meet this criterion in 2007 (Table 3-114).

Ground cover protection from rock, litter, and current-year live vegetation was above 95 percent at both the PLF and OLF (Table 3-115). The occasional value over 100 percent is a result of the cover class system used for estimating cover, which estimates cover values into a range and uses the midpoint of the cover class for analysis. Another success criterion outlined in the Revegetation Plan states that a minimum of 70 percent total ground cover consisting of litter cover, current-year live vegetation basal cover, and rock cover is to be present to help prevent erosion. At each of the locations on the PLF and OLF, most of the ground cover came from litter, of which a portion is represented by the erosion matting. In time, the litter cover will continue to remain the dominant ground cover, but it will come from dead plant material that becomes matted down, rather than from the erosion matting. The conclusion is that the covers at both landfills have substantial protection on the soil surface to prevent erosion.

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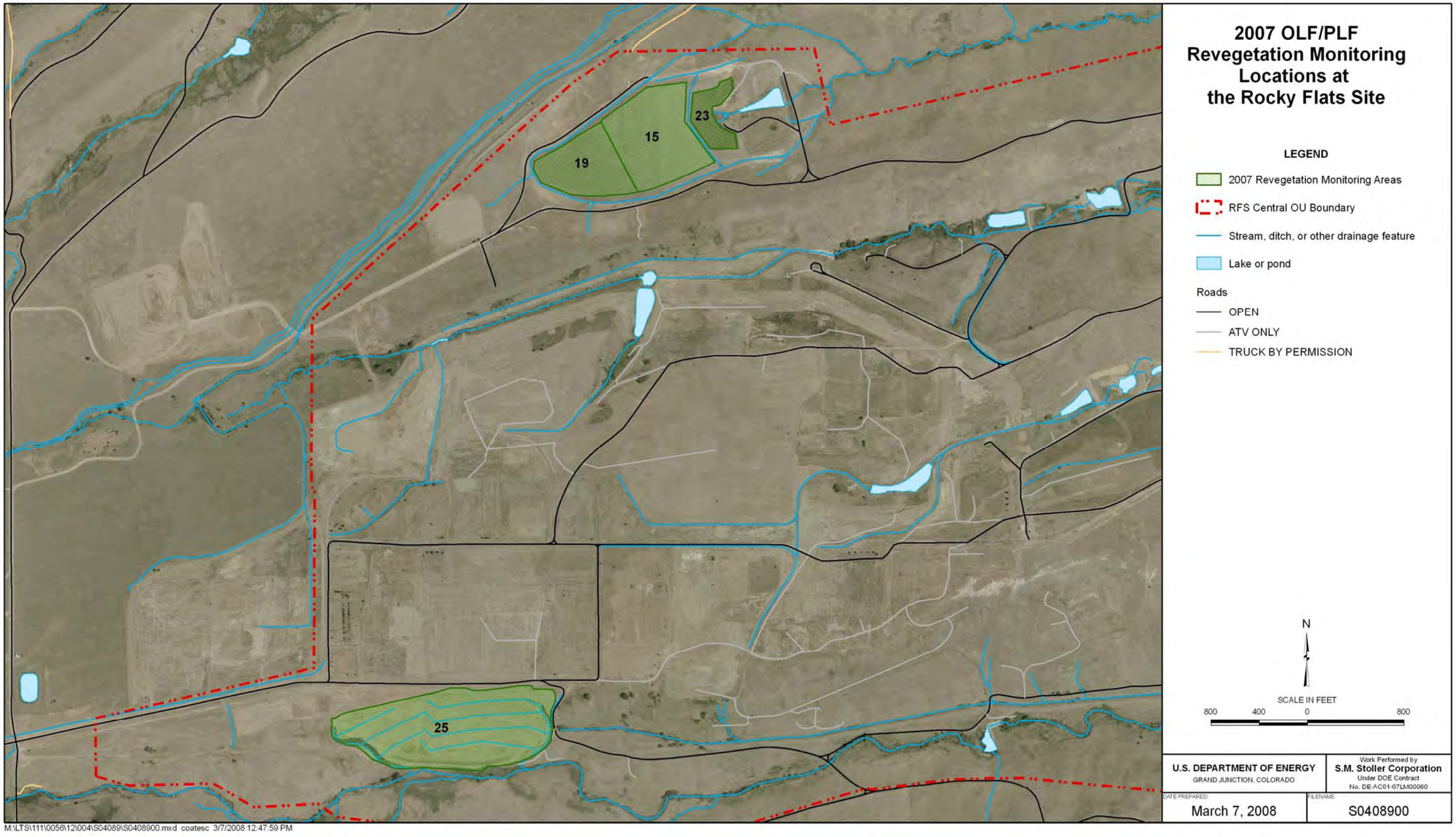

Figure 3-243. 2007 OLF and PLF Revegetation Monitoring Locations at the Rocky Flats Site

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Table 3-113. 2007 Species Richness and Foliar Cover Summary at the PLF and OLF

						East PLF Cover		West PLF Cover		East Face PLF		OLF Cover	
						A15		A19		A23		A25	
Scientific Name	**Speccode**	**Growth Form**	**Native**	**Cool/ Warm Season**	**Noxious Weed**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**	**Absolute Cover (%)**	**Relative Cover (%)**
Alyssum minus (L.) Rothmaler var. micranthus (C. A. Mey.) Dudley	ALMI1	F	N					0.2	0.3			0.6	1.7
Centaurea diffusa Lam.	CEDI1	F	N		X	0.3	1.0			1.8	7.8	3.9	10.8
Cirsium arvense (L.) Scop.	CIAR1	F	N		X	1.0	2.9						
Erodium cicutarium (L.) L'Her.	ERCI1	F	N		X			0.2	0.3			0.1	0.2
Kochia scoparia (L.) Schrad.	KOSC1	F	N									1.9	5.3
Lactuca serriola L.	LASE1	F	N			0.3	1.0			4.3	18.9	1.6	4.3
Melilotus alba Medic.	MEAL1	F	N									1.8	5.0
Melilotus officinalis (L.) Pall.	MEOF1	F	N			0.7	1.9					1.2	3.4
Salsola iberica Senn. & Pau.	SAIB1	F	N							1.5	6.7	1.6	4.6
Taraxacum officinale Weber	TAOF1	F	N			0.2	0.5					0.1	0.2
Thlaspi arvense L.	THAR1	F	N			0.2	0.5						
Tragopogon dubius Scop.	TRDU1	F	N			0.3	1.0						
Ambrosia psilostachya DC.	AMPS1	F	Y			0.5	1.4					0.1	0.2
Conyza canadensis (L.) Cronq.	COCA1	F	Y									0.2	0.5
Erigeron divergens T. & G.	ERDI1	F	Y			0.2	0.5						
Euphorbia serpyllifolia Pers.	EUSE1	F	Y							0.3	1.1		
Grindelia squarrosa (Pursh.) Dun.	GRSQ1	F	Y			0.2	0.5			1.5	6.7	0.2	0.5
Helianthus annuus L.	HEAN1	F	Y					0.2	0.3				
Verbena bracteata Lag. & Rodr.	VEBR1	F	Y			0.2	0.5						
Agropyron desertorum (Fisch.) Schult.	AGDE1	G	N	C				0.2	0.3				
Agrostis stolonifera L.	AGST1	G	N	C								0.1	0.2
Bromus japonicus Thunb. ex Murr.	BRJA1	G	N	C		1.2	3.4					0.2	0.5
Bromus tectorum L.	BRTE1	G	N	C	X	0.3	1.0	0.2	0.3			0.4	1.2
Dactylis glomerata L.	DAGL1	G	N	C				0.2	0.3				
Festuca pratensis Huds.	FEPR1	G	N	C		0.2	0.5						
Poa compressa L.	POCO1	G	N	C		2.2	6.3	7.3	12.9			0.5	1.4
Poa pratensis L.	POPR1	G	N	C				0.2	0.3				
Triticum aestivum L.	TRAE1	G	N	C								1.4	3.8
Setaria viridis (L.) Beauv.	SEVI1	G	N	W								0.2	0.5
Agropyron caninum (L.) Beauv. ssp. majus (Vasey) C. L. Hitchc.	AGCA1	G	Y	C		14.5	42.0	34.2	60.3	5.8	25.6	10.6	29.5
Agropyron griffithsii Scribn. & Smith	AGGR1	G	Y	C				2.3	4.1				
Agropyron smithii Rydb.	AGSM1	G	Y	C		5.5	15.9	4.5	7.9	4.3	18.9	7.0	19.4
Elymus canadensis L.	ELCA1	G	Y	C				1.0	1.8				
Hordeum jubatum L.	HOJU1	G	Y	C				1.3	2.4				
Koeleria pyramidata (Lam.) Beauv.	KOPY1	G	Y	C		0.3	1.0	2.2	3.8				
Sitanion hystrix (Nutt.) Sm. var. brevifolium (Sm.) Hitchc.	SIHY1	G	Y	C								0.1	0.2
Stipa viridula Trin.	STVI1	G	Y	C		0.2	0.5	0.2	0.3				
Andropogon gerardii Vitman	ANGE1	G	Y	W		1.3	3.9	0.5	0.9				
Andropogon scoparius Michx.	ANSC1	G	Y	W								0.2	0.5
Bouteloua curtipendula (Michx.) Torr.	BOCU1	G	Y	W		1.2	3.4			3.0	13.3	1.6	4.3
Bouteloua gracilis (H. B. K.) Lag ex Griffiths	BOGR1	G	Y	W		0.2	0.5					0.2	0.5
Buchloe dactyloides (Nutt.) Engelm.	BUDA1	G	Y	W		3.5	10.1	2.0	3.5	0.3	1.1	0.4	1.2
Total Foliar Cover						34.5	100.0	56.7	100.0	22.5	100.0	35.9	100.0
Total Forb Cover						4.0	11.6	0.5	0.9	9.3	41.1	13.2	36.7
Total Non-Native Forb Cover						3.0	8.7	0.3	0.6	7.5	33.3	12.8	35.5
Total Native Forb Cover						1.0	2.9	0.2	0.3	1.8	7.8	0.4	1.2
Total Graminoid Cover						30.5	88.4	56.2	99.1	13.3	58.9	22.8	63.3
Total Non-Native Graminoid Cover						3.8	11.1	8.0	14.1	0.0	0.0	2.8	7.7
Total Native Graminoid Cover						26.7	77.3	48.2	85.0	13.3	58.9	20.0	55.6
Total Herbaceous Native Cover						27.7	80.2	48.3	85.3	15.0	66.7	20.4	56.8
Total Herbaceous Non-Native Cover						6.8	19.8	8.3	14.7	7.5	33.3	15.5	43.2
Total Warm-Season Graminoid Cover						6.2	17.9	2.5	4.4	3.3	14.4	2.5	7.0
Total Cool-Season Graminoid Cover						24.3	70.5	53.7	94.7	10.0	44.4	20.3	56.4
Total Noxious Weed Cover						1.7	4.8	0.3	0.6	1.8	7.8	4.4	12.2

Absolute Cover = The percentage of the number of hits on a species out of the total number of hits possible.
Relative Cover = The percentage of the number of hits on a species out of the total number of vegetation hits.
Native Categories: Y = Native, N = Non-Native
Growth Form Categories: F = Forb, G = Graminoid
Cool/Warm Season Categories: C = Cool-Season Graminoid, W = Warm-Season Graminoid
Noxious Weed Category: X = Noxious Weed (listed on May 2006 Colorado State Noxious Weed List)
Shaded cells indicate success criteria were met in 2007.

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Table 3-114. PLF and OLF Species Seeded by Location and 2007 Total Species Richness Summary

Family	Scientific Name	East PLF Cover A15	West PLF Cover A19	East Face PLF A23	OLF Cover A25
Graminoids					
POACEAE	Agropyron caninum	X	X	X	X
POACEAE	Agropyron dasystachum	X	X	X	X
POACEAE	Agropyron lanceolatus	X	X		
POACEAE	Agropyron smithii	X	X	X	X
POACEAE	Andropogon gerardii	X	X		
POACEAE	Andropogon scoparius				
POACEAE	Bouteloua curtipendula	X	X	X	X
POACEAE	Bouteloua gracilis	X	X	X	X
POACEAE	Buchloe dactyloides	X	X	X	X
POACEAE	Koleria pyrimidata	X	X		
POACEAE	Poa canbyi	X	X		
POACEAE	Sorghastrum nutans	X	X		
POACEAE	Sporobolus cryptandrus	X	X		
POACEAE	Stipa viridula	X	X	X	X
	Total # Species Seeded	13	13	7	7
	# Present in 2007	8	6	4	5
	% Seeded Species Present in 2007	62	46	57	71
	Total Species Richness in 2007	23	17	9	26

Table 3-115. PLF and OLF Basal Cover Summary at Revegetation Locations

Location	Basal Vegetation Cover (%)	Litter Cover (%)	Rock Cover (%)	Total Ground Cover (%)*	Bare Ground (%)
A15	12.3	49.2	45.0	106.5	0.0
A19	13.3	68.8	14.8	97.0	3.0
A23	3.5	87.8	11.0	102.3	0.0
A25	3.9	63.9	30.4	98.2	1.8

* Numbers greater than 100 are an artifact of the sampling method using a cover class system and midpoints for analysis.
The Total Ground Cover value is the sum of the Basal Vegetation Cover, Litter Cover, and Rock Cover.

A third success criterion outlined in the Revegetation Plan states that a minimum of 30 percent relative cover of desired species must be present. Table 3-113 summarizes the foliar cover data for the PLF and OLF by location for 2007. The shaded row titled Total Herbaceous Native Cover represents the percentage of desired species at each location. The relative cover values at individual locations that are higher than 30 percent are shaded, indicating that these locations have met this success criterion. This criterion was met at both the PLF and OLF in 2007. The dominant species on the cover of the PLF in 2007 were slender wheatgrass, western wheatgrass, buffalo grass, and Canada bluegrass (*Poa compressa*). The east face of the PLF was dominated by slender wheatgrass, western wheatgrass, side-oats grama, and wild lettuce. Weed cover from forbs on the PLF cover was not very high in 2007 because portions had been treated with Milestone (aminopyralid) in spring 2006 and 2007 to keep the weeds down to allow for better establishment of the graminoids. Small amounts of diffuse knapweed, Canada thistle, filaree, and downy brome, all noxious weeds, were present on the landfill cover in 2007. On the east face of the PLF, diffuse knapweed was the only noxious weed present. At the OLF, the dominant species were slender wheatgrass, western wheatgrass, and diffuse knapweed. Both the east face of the PLF and the face of the OLF are scheduled for weed control efforts in 2008.

A fourth success criterion outlined in the Revegetation Plan states that no single species shall comprise more than 45 percent of the total relative cover. The relative cover of slender wheatgrass on the west PLF area was 60 percent, and this area did not meet the success criterion in 2007 (Table 3-113). No other species made up more than 45 percent of the relative cover at either the PLF or OLF.

Table 3-116 presents a summary of the pass/fail criteria for each revegetation area at the PLF and OLF monitored in 2007. Three of the four locations passed all four criteria in 2007. The only area that did not pass was the western portion of the PLF, which lacked the presence of greater than 50 percent of seeded species and had greater than 45 percent cover of slender wheatgrass. However, the criteria listed in the Revegetation Plan are an initial set of criteria established primarily for erosion protection. As stated in the Revegetation Plan, these "...criteria are provided as initial guidance; however, common sense combined with scientific data will need to be applied to final evaluations to determine whether further management actions are required at specific locations." The fact that three of the areas passed each of the criteria listed in the Revegetation Plan does not mean that the vegetation has established to a desirable level at either landfill as of 2007. A good, healthy stand of vegetation is desirable on both landfills to protect the covers and provide good erosion control. Proactive management of the revegetation areas is critical to success. These data are useful for making management decisions and they provide documentation of the successional changes at the revegetation locations. This documentation can be used to help improve revegetation techniques at the Site.

Table 3-116. 2007 PLF and OLF Success Criteria Evaluation Summary

Location	>30% Relative Cover of Desired Species	>70% Total Ground Cover (Litter, Rock, and Basal Veg Cover)	50% or More of Seeded Species Present	No Single Species With >45% Relative Foliar Cover	PASS/FAIL
A15	PASS	PASS	PASS	PASS	PASS
A19	PASS	PASS	FAIL	FAIL	FAIL
A23	PASS	PASS	PASS	PASS	PASS
A25	PASS	PASS	PASS	PASS	PASS

3.3.2.6 Photomonitoring Results

Photomonitoring results are presented on the Ecology DVD found at the end of the report.

3.3.3 Wildlife Monitoring

Wildlife monitoring has been conducted as part of the ongoing ecological monitoring at the Site since the early 1990s. The frog vocalization surveys were conducted on April 18 and 28, 2007.

3.3.3.1 Frog Vocalization Monitoring

Although occasional frog observations were noted while conducting general wildlife monitoring in the past, there were no specific attempts to monitor frog populations until 1998. Even though an annual presence/absence record for amphibians was being established as part of general wildlife monitoring, the lack of a specific methodology precluded the ability to effectively track population abundance or distribution of these species at the Site. In an effort to better track amphibian populations and use that information as an indicator for detecting changes in the

health of aquatic ecosystems, a systematic and recognized monitoring program was initiated that was based on a nationally recognized protocol for monitoring frogs. Amphibians are an important group to track because their semiaquatic nature makes them particularly sensitive to aquatic impacts (Blaustein and Wake 1995). The boreal chorus frog (*Pseudacris triseriatus*) was chosen as the best candidate at the Site for vocalization monitoring and can also serve as an indicator species for tracking general amphibian population abundance on site.

In 2007, 20 locations were sampled for species presence/absence and population abundance (Figure 3-244). Boreal chorus frogs were recorded at 16 of the 20 sample locations (80 percent) surveyed in 2007 (Table 3-117). Figure 3-245 shows the frequency of the different vocalization indices at all 20 locations sampled in 2007. Nine of the locations sampled (45 percent) had full choruses of frogs calling (vocalization index 3). Two locations (10 percent) had multiple individuals calling with overlaps between the calls (vocalization index 2). Five locations (25 percent) had a vocalization index of 1, where individuals could be counted but the calls were not overlapping. The remaining four locations (20 percent) had no frogs calling (vocalization index 0).

On the evenings when sampling was conducted in 2007, the average water and air temperature was 12 °C and 15 °C, respectively, on April 18 and 18 °C and 16 °C, respectively, on April 28. No precipitation occurred on the days when sampling was conducted, and evening cloud cover was 75 percent on April 18 and 13 percent on April 28.

Table 3-117 and Figure 3-245 show the 2007 results in comparison to the data collected since 1999. The 1998 data are not shown because sample locations were different from those of 1999 and later. The 2007 mean vocalization index (1.8) is midway in the range of values observed from previous years, which have ranged from 1.2 to 2.4. Because the boreal chorus frog requires water to mate and lay eggs in, the overall abundance of the frogs at the Site appears be related to how much water is available at the Site during the spring. Available monitoring data indicate that frogs were least abundant in 2003 and 2006 (Table 3-117, no data were collected in 2002). In 2002, the drought limited the available surface water for breeding and affected abundance into 2003. During the fall and winter of 2005−2006, drought conditions prevailed again at the Site, which left few locations with standing pools of water available for breeding in spring 2006. Additionally, many of the ponds at the Site were drained in midsummer 2005 for sediment sampling. The lack of precipitation after they were drained resulted in little to no water present at many of these locations. In winter 2006–2007, an above-average snowfall at the Site resulted in an abundance of standing surface water in spring 2007. This abundance of surface water is reflected in the increased abundance of frogs in 2007 compared to 2006. Overall, the abundance of boreal chorus frogs at the Site in 2007 was good and was indicative of the good quality of the aquatic and riparian habitat available at the Site.

In addition, during the surveys on April 28, near sample location 1 in the western portion of the Site, a large chorus of Woodhouse's toads was heard, and the toads were observed in the upper reaches of the main channel of the Rock Creek drainage. A vocalization index of 3 was recorded in this part of the drainage for the Woodhouse's toads. Photographs were taken of the toads near an old stock pond in the drainage (Figure 3-246). Although occasionally a Woodhouse's toad has been observed or heard calling at the Site, this degree of abundance has not been recorded or noted since at least the early 1990s, when more intensive ecological studies began at the Site. Perhaps the abundance was related to the heavy snowfalls at the Site during the winter of 2006–2007.

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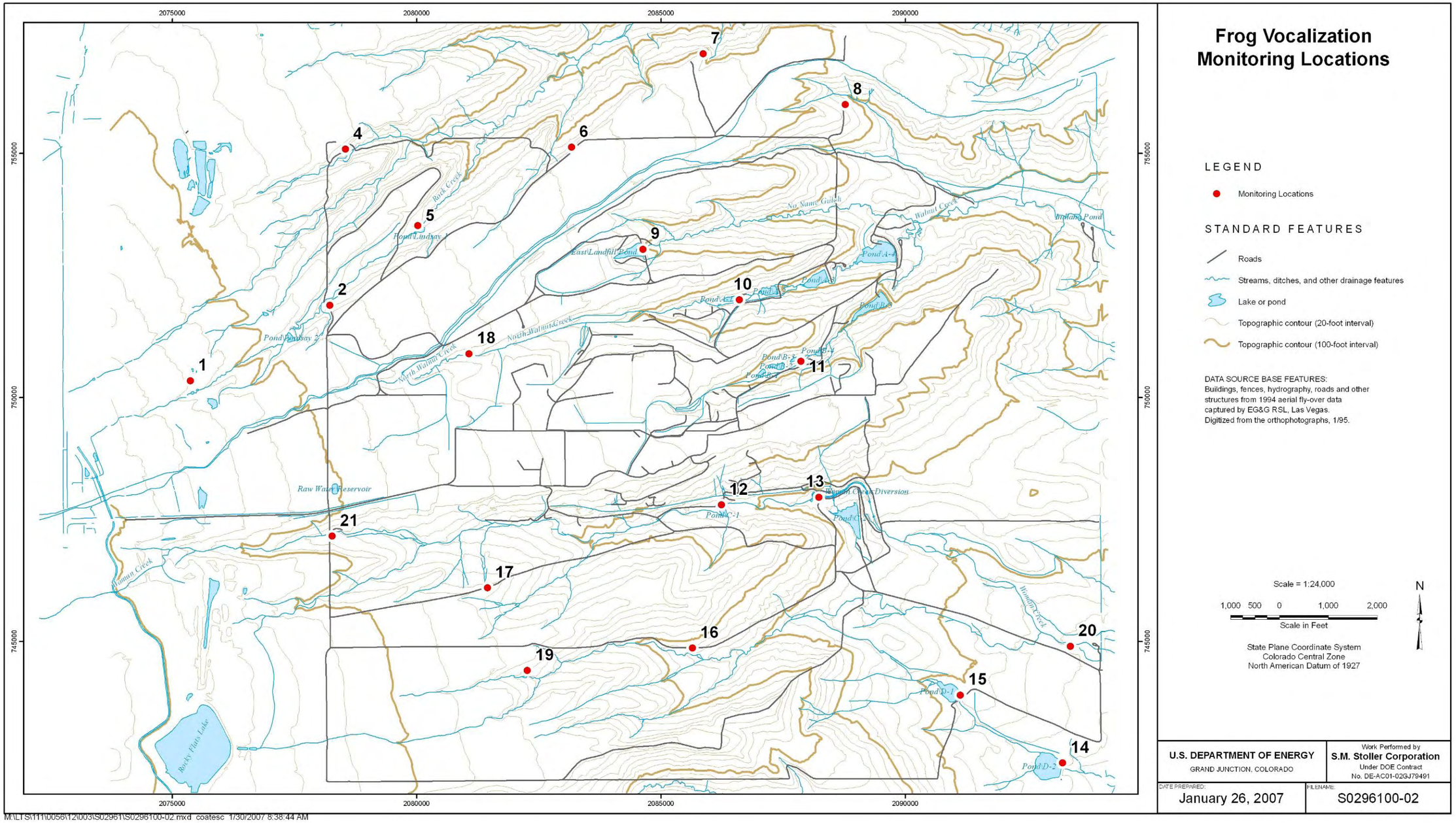

Figure 3-244. Frog Vocalization Monitoring Locations

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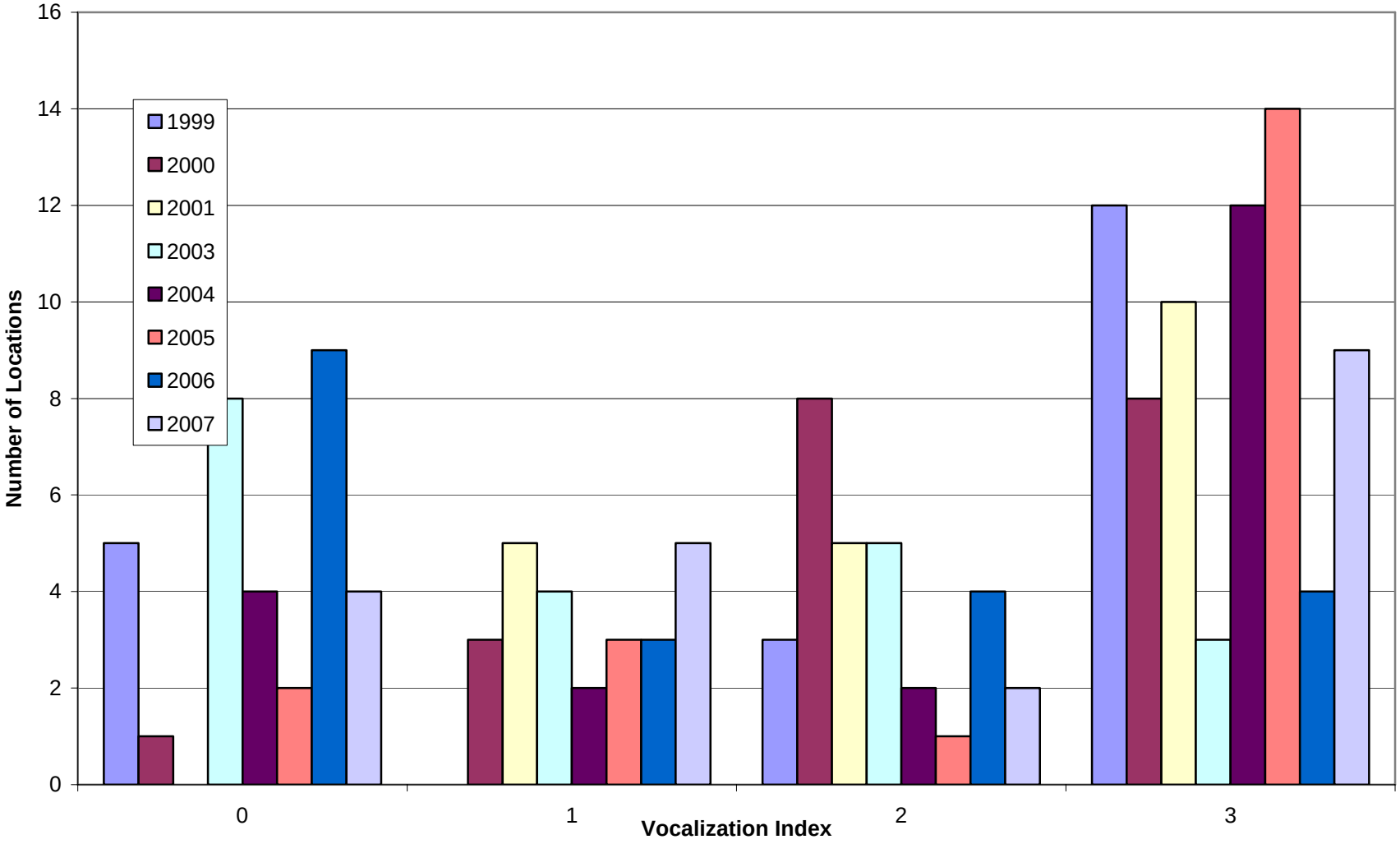

Figure 3-245. Frog Vocalization Summary

*Table 3-117. Frog Vocalization Summary 1999−2007**

Site Number	1999	2000	2001	2003	2004	2005	2006	2007
1	3	2	1	1	3	3	1	3
2	3	2	3	2	2	3	2	3
4	3	2	3	0	1	1	0	1
5	3	3	3	0	3	3	0	1
6	3	2	2	2	3	3	0	0
7	3	2	3	0	3	3	3	3
8	3	3	2	0	3	3	3	2
9	2	2	2	0	1	1	1	3
10	3	3	3	3	3	3	0	3
11	3	1	3	1	3	2	2	3
12	0	3	1	2	3	3	3	3
13	3	3	3	3	3	3	3	2
14	3	3	3	2	3	3	2	3
15	0	2	2	3	0	3	0	3
16	0	1	3	1	0	0	0	0
17	0	0	1	0	2	1	0	0
18	3	2	1	2	3	3	1	1
19	2	3	2	1	0	3	0	1
20	2	3	3	0	3	3	2	1
21	0	1	1	0	0	0	0	0
Mean Vocalization Index	2.1	2.2	2.3	1.2	2.1	2.4	1.2	1.8
Grand Mean (1999-2007)	1.9							

Values are vocalization indices.

Figure 3-246. Woodhouse's toads along the edge of an old stock pond in the western part of the Site on April 28, 2007

3.3.4 Summary

The Ecology Program at the RFS conducts monitoring of the ecological resources to ensure regulatory compliance and to preserve, protect, and manage those resources. Proactive management of the natural resources is critical to the long-term sustainability of the ecosystems at the Site. Noxious weeds continue to be a top priority as does the revegetation of the COU. Data from 2007 documented the continuing establishment of vegetation at revegetation locations. Noxious weed control activities and additional revegetation activities were conducted during 2007 to improve and enhance the vegetation at the Site. The monitoring results continue to provide useful information to assist in management activities. Full, detailed reports and analyses for each field monitoring effort are presented as stand-alone reports on the accompanying Ecology DVD.

3.4 RFLMA Ecological Sampling

The Ecological Risk Assessment determined that residual contamination does not represent a significant risk of adverse ecological effects. The CAD/ROD, however, requires that specific additional sampling be conducted to reduce the uncertainties determined in the Ecological Risk Assessment. RFLMA Attachment 2, Table 5, Ecological Sampling, specifies a minimum of three quarterly water samples at Ponds A-4, B-5, and C-2 for radium-228, cyanide, and ammonia. Ecological sampling and data evaluation protocols are summarized in Table 3-118. These locations are shown on Figure 3-1.

Table 3-118. Sampling and Data Evaluation Protocols for RFLMA Ecological Sampling

Location	Location Description	Sample Types/ Frequencies	Analytes	Data Evaluation
Pond A-4	Pond A-4 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators
Pond B-5	Pond B-5 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators
Pond C-2	Pond C-2 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators

The first quarterly water sampling at Pond C-2 was performed on February 12, 2007. Ponds A-4 and B-5 were sampled for radium-228 and ammonia on February 12, 2007, and for cyanide on March 19, 2007. The second quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on May 4, 2007. The third quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on September 12, 2007. Sediment sampling was performed at Ponds A-4, B-5, and C-2 on July 13, 2007.

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The Ecology Program at the RFS conducts monitoring of the ecological resources to ensure regulatory compliance and to preserve, protect, and manage those resources. Proactive management of the natural resources is critical to the long-term sustainability of the ecosystems at the Site. Noxious weeds continue to be a top priority as does the revegetation of the COU. Data from 2007 documented the continuing establishment of vegetation at revegetation locations. Noxious weed control activities and additional revegetation activities were conducted during 2007 to improve and enhance the vegetation at the Site. The monitoring results continue to provide useful information to assist in management activities. Full, detailed reports and analyses for each field monitoring effort are presented as stand-alone reports on the accompanying Ecology DVD.

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Pond B-5	Pond B-5 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators
Pond C-2	Pond C-2 at east end of pond near outlet works (water); at deepest location in pond (sediment)	Quarterly grabs (water); One-time (sediment)	Ammonia, cyanide, Ra-228	Consultation with regulators

The first quarterly water sampling at Pond C-2 was performed on February 12, 2007. Ponds A-4 and B-5 were sampled for radium-228 and ammonia on February 12, 2007, and for cyanide on March 19, 2007. The second quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on May 4, 2007. The third quarterly water sampling was performed at Ponds A-4, B-5, and C-2 on September 12, 2007. Sediment sampling was performed at Ponds A-4, B-5, and C-2 on July 13, 2007.

3.4.1 Data Evaluation

The minimum required sampling was completed in third quarter CY 2007. Refer to the analytical data accompanying this document for the completed sampling and analysis information. Validated analytical results for the samples collected in third quarter CY 2007 were available in fourth quarter CY 2007, and the evaluation is not complete for inclusion in this quarterly report. The data are being evaluated and DOE will consult with CDPHE regarding the relevance of the data to the ecological risks and the uncertainty identified in the CAD/ROD, as required by RFLMA. The results of the evaluation and consultation will be documented in a report and a RFLMA contact record. The report will be included in the quarterly or annual report for the period during which the consultation is completed.

3.5 Data Management

3.5.1 Water Data

Data from samples submitted to an analytical laboratory are received as both hard copy and as an electronic data deliverable. The electronic data are loaded into an Oracle®-based relational database. The environmental monitoring data are accessible using the SEEPro application. The hard-copy analytical reports are archived in the records library in Grand Junction, Colorado, along with the original field data forms and other relevant hard-copy forms or documents containing project data. Well construction and lithology logs are maintained for previously drilled wells and are produced for all new wells drilled. These logs are archived in the records library and can also be accessed electronically via the SEEPro database and the Geospatial Environmental Mapping System.

SEEPro uses Oracle® software for data management and Microsoft Access® for data retrieval and display. It compiles water quality, air quality, field parameter, sample tracking, sample location, and water level data for groundwater, surface water, boreholes, soils, and sediment samples. Field parameter data include such information as sample location, sample date, pH, turbidity, conductivity, and temperature. Chemical information (Chemical Abstracts Service registry numbers, analytical results, and detection limits) is also included. Specific procedures for verification of database information received from subcontractors, or input directly into SEEPro, are followed. These procedures provide quality assurance (QA) documentation, which ensures that available data have been incorporated and entered or uploaded properly into SEEPro. Data integrity is maintained with standardized error checking routines used when loading data into SEEPro. Other procedures address database system security and software change control.

The RFS field data are entered through the FieldPar field data entry system. This system is a data entry module that is compatible with the SEEPro database, and is used in the office by field personnel. Data entered into FieldPar are verified by the sampler before loading into the main SEEPro database.

Spatial information for air and water data features is located in the LM GIS database. Some of the data features included are monitoring locations, potentiometric surfaces, plume configurations, streams/creeks, lakes/ponds, topographic contours, and historic RFS facilities. This system uses an ESRI® ArcGIS™ suite of software to store and present data. Automated

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monitoring locations and other sample location data features are derived from location information stored in the SEEPro database.

Analytical results for water samples for fourth quarter CY 2007 are provided in Appendix B.

3.5.2 Ecology Data

Ecological data have been collected at the Site for many years. Since the early 1990s ecological data have been kept in electronic files for easier access, retrieval, and analysis. In the mid-1990s, the Sitewide Ecological Database (SED) was established as a master data set for the various types of ecological data collected at the Site. The SED is a Microsoft Access® database that contains all quality-assured ecological data for RFETS from early 1993 through the end of 2001. Data that did not meet the QA objectives are not included in the database. Ecology data in the SED include vegetation monitoring, weed control and controlled burn vegetation monitoring, wildlife surveys (including birds, small mammals, frogs, insects, and fish), PMJM habitat characterization and telemetry tracking, a small amount of soil characterization survey data (for revegetation issues), and a few other types of ecological data. The SED does not contain data on potential contaminants nor is it linked to any GIS or other spatial tool. The data in the SED are primarily observational or catch-and-release; they are considered raw data taken directly off of field logbooks and datasheets. The SED is not intended as a reference for the layperson. It is a repository of quality-assured raw field data collected by Site ecologists and cannot be taken out of context of the methods used to collect the data. Data collection methods are not stored in the database, they are described in reports and field sampling plans.

From 2002 to the present, the ecology data have been stored as separate data sets by sample type, event, and year. Depending on the data set, the data may be in a Microsoft Access® database or in a Microsoft Excel® spreadsheet format. The nonspatial electronic ecology data are stored on the Robin server at the RFS in Westminster, Colorado, or on backup electronic media.

Spatial ecology data for the RFS are available for several data types and are stored in the GIS on the Gull server in Grand Junction, Colorado. The types of ecological spatial data that are available include annual weed distribution data (for select species), annual weed control locations, biocontrol release locations, vegetation and wildlife monitoring locations (transect end points and sample points), vegetation community classifications, PMJM habitat, wetland locations, wildfire/prescribed burn locations, PMJM and wetland mitigation work, and rare plant locations. These data are available in various ArcGIS® compatible formats. In addition to these types of spatial data, orthorectified aerial and satellite imagery is also available for the Site for different timeframes, including pre- and post-closure.

3.6 Validation and Data Quality Assessment

Data validation and verification (V&V) during CY 2007 was performed by LM personnel at the Grand Junction, Colorado, office. Data quality assessment (DQA) is performed by personnel at the Site. The following section distinguishes DQA from data validation, and discusses the technical basis, equations, and criteria used for DQA of water.

monitoring locations and other sample location data features are derived from location information stored in the SEEPro database.

Analytical results for water samples for fourth quarter CY 2007 are provided in Appendix B.

3.5.2 Ecology Data

Ecological data have been collected at the Site for many years. Since the early 1990s ecological data have been kept in electronic files for easier access, retrieval, and analysis. In the mid-1990s, the Sitewide Ecological Database (SED) was established as a master data set for the various types of ecological data collected at the Site. The SED is a Microsoft Access® database that contains all quality-assured ecological data for RFETS from early 1993 through the end of 2001. Data that did not meet the QA objectives are not included in the database. Ecology data in the SED include vegetation monitoring, weed control and controlled burn vegetation monitoring, wildlife surveys (including birds, small mammals, frogs, insects, and fish), PMJM habitat characterization and telemetry tracking, a small amount of soil characterization survey data (for revegetation issues), and a few other types of ecological data. The SED does not contain data on potential contaminants nor is it linked to any GIS or other spatial tool. The data in the SED are primarily observational or catch-and-release; they are considered raw data taken directly off of field logbooks and datasheets. The SED is not intended as a reference for the layperson. It is a repository of quality-assured raw field data collected by Site ecologists and cannot be taken out of context of the methods used to collect the data. Data collection methods are not stored in the database, they are described in reports and field sampling plans.

From 2002 to the present, the ecology data have been stored as separate data sets by sample type, event, and year. Depending on the data set, the data may be in a Microsoft Access® database or in a Microsoft Excel® spreadsheet format. The nonspatial electronic ecology data are stored on the Robin server at the RFS in Westminster, Colorado, or on backup electronic media.

Spatial ecology data for the RFS are available for several data types and are stored in the GIS on the Gull server in Grand Junction, Colorado. The types of ecological spatial data that are available include annual weed distribution data (for select species), annual weed control locations, biocontrol release locations, vegetation and wildlife monitoring locations (transect end points and sample points), vegetation community classifications, PMJM habitat, wetland locations, wildfire/prescribed burn locations, PMJM and wetland mitigation work, and rare plant locations. These data are available in various ArcGIS® compatible formats. In addition to these types of spatial data, orthorectified aerial and satellite imagery is also available for the Site for different timeframes, including pre- and post-closure.

3.6 Validation and Data Quality Assessment

Data validation and verification (V&V) during CY 2007 was performed by LM personnel at the Grand Junction, Colorado, office. Data quality assessment (DQA) is performed by personnel at the Site. The following section distinguishes DQA from data validation, and discusses the technical basis, equations, and criteria used for DQA of water.

3.6.1 General Discussion

Data validation is the principal means of assessing the usability of water analytical data. Validation also improves overall data quality by allowing the laboratory coordinator to closely monitor laboratory performance and to provide feedback to each laboratory regarding its ability to produce quality data that meets subcontract requirements. The laboratory coordinator may also use the results of data validation to direct analytical work to laboratories that demonstrate superior performance by generating timely, high-quality analytical data for the Site.

Data validation is a rigorous data review performed by the laboratory coordinator or designee on all of the water analytical data generated by the Site. Additionally, the Site lead may request a secondary detailed validation on a case-by-case basis. Data validation is currently performed as specified in Stoller procedure *Environmental Procedures Catalog* (STO 6), "Standard Practice for Validation of Laboratory Data," GT-9(P). This procedure is based on the following EPA documents:

- EPA 2002. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, EPA540/R-01/008, July;
- EPA 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, EPA540/R-99/008, October;
- EPA 2001. USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review, EPA540/R-01/006, June; and
- EPA 1997. *Evaluation of Radiochemical Data Usability*, Office of Environmental Management, ES/ER/MS-5, April.

All water analytical data collected by the Site are considered valid unless data validation identifies analytical problems that require the data to be qualified. When it is necessary to qualify individual data records, standard qualifier codes (alphanumeric validation codes) are applied. Integer "reason codes" often accompany these validation codes, enabling the data user to determine why the results were qualified.

Common data qualifiers used by LM are defined below. Refer to *Environmental Procedures Catalog* (STO 6), "Standard Practice for Validation of Laboratory Data," GT-9(P) for formal definitions.

- U The material was analyzed for but was not detected. The associated numerical value is the sample quantitation limit.
- J The associated numerical value is an estimated quantity.
- R The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- N Presumptive evidence of the presence of the material.
- NJ Presumptive evidence of the presence of the material at an estimated quantity.
- UJ The material was analyzed for but was not detected. The sample quantitation limit is an estimated value.

Data validation includes the evaluation of laboratory QC data such as method blanks, laboratory control samples (LCSs), and spike recoveries. Adherence to sample and extract holding times, standard analytical methods, contractual requirements, and proper documentation are also verified.

Although DQA and data validation examine some of the same QC data, they do so from different perspectives. DQA (in this report) looks at the overall quality of an entire year of water data, in contrast to validation, which looks at the analytical details of individual data packages. Data validation focuses on laboratory performance, while DQA focuses on interpretation of data describing QC samples that originated in the field, such as "field duplicate" samples and "equipment rinsate" samples.

In contrast to data validation, the DQA performed by personnel at the Site does not assign data qualifiers to individual analytical results or data packages. DQA is a second level of QA intended to be a general assessment of how well the water data-collection program is operating. The DQA is performed by evaluating water-quality data in terms of the precision, accuracy, representativeness, completeness, and comparability (PARCC) parameters.

3.6.2 PARCC Parameters

Use of the PARCC parameters for DQA has been promoted by EPA guidance documents. Accuracy and precision are quantitative measures. Representativeness and comparability are qualitative measures. Completeness is a combination of both quantitative and qualitative measures.

Site personnel evaluate the PARCC parameters by following guidelines published in the following QC documents:

- RMRS, 1998. Procedure for Evaluation of Data for Usability;
- RMRS, 2000. Quality Assurance Program Plan for the Automated Surface-Water Monitoring Program, RF/RMRS-2000-013, Revision 0, March 2000; and
- RMRS, 2001. Quality Assurance Program Plan for the Groundwater Monitoring Program Rocky Flats Environmental Technology Site.

The following sections discuss the PARCC parameters and the types of data available to assess them.

3.6.2.1 Criteria for Precision

The precision of a measurement is an expression of the mutual agreement between duplicate measurements of the same property taken under similar conditions. Precision can be expressed quantitatively by the relative percent difference (RPD) between real and field duplicate samples for metals, VOCs, polychlorinated biphenyls, and water-quality parameters (WQPs) as defined by the following equation:

$$RPD = \frac{|(S - D)|}{(S + D)/2} * 100$$

where: S = Concentration of analyte in real sample
D = Concentration of analyte in duplicate sample
Undetects are not included

The Site uses the duplicate error ratio (DER) to quantify the precision of radionuclide activity data:

$$DER = \frac{|(S - D)|}{\sqrt{\left[(TPU_S)^2 + (TPU_D)^2\right]}}$$

where: TPU_S = Total propagated uncertainty of the sample
TPU_D = Total propagated uncertainty of the duplicate
S = Sample result
D = Duplicate (or lab replicate) result

Because TPU is seldom reported with radionuclide activity data, the two-sigma error or random counting error has been substituted for TPU in the U, Am, and Pu calculations made for this report.

The Site QC criterion for water RPDs is that individual RPDs should be ≤30 percent. The analogous criterion for DERs is ≤1.96. The overall goal for the water data set is to have 85 percent of the RPD and DER values comply with the QC criteria.

3.6.2.2 Criteria for Accuracy

Accuracy is the degree of agreement for a measurement with an accepted reference or true value and is a measure of the bias in a system. The closer the measurement is to the true value, the more accurate the measurement. The Site validation process is the principal means for evaluating the accuracy of analytical results.

Because the Site V&V process compares the actual analytical methods used by each laboratory to the contract-required analytical methods, the Site does not repeat this evaluation.

Matrix spike (MS) and matrix spike duplicate (MSD) recoveries are reported by the analytical laboratories for most nonradionuclide analytical suites. Criteria for acceptable MS recoveries vary between laboratories, depending on the analyte and the analytical method. The Site criterion for acceptable MS results ranges from 75 to 125 percent recovery.

LCS recoveries for radionuclides are often available for water-quality data. Laboratories in practice will commonly accept LCS values in the range of 70 to 130 percent. LCS percent recoveries between the 70 to 130 percent laboratory range and the 75 to 125 percent QC range required by the Site laboratory contracts are examined by data validators for acceptability on an analyte-by-analyte basis. The Site criterion for acceptable LCS recoveries ranges from 75 to 125 percent recovery.

Because some laboratories reported LCS results in pCi/L, while others calculated percent recovery, the Site uses the "relative bias" reporting criterion. The relative bias criterion is defined in the Basic Ordering Agreement (BOA) by the following formula (see Page J-6 of the National BOA, Section 2.3.2.5):

$$\text{Relative Bias} = (\text{Observed} - \text{Known}) / \text{Known}$$

where: Observed = measured activity of LCS standard (pCi/L)
Known = known activity of LCS standard (pCi/L)

Acceptable values for relative bias results range from –0.25 to +0.25.

3.6.2.3 Criteria for Representativeness

Representativeness in DQA is limited to an evaluation of whether analytical results for field samples are truly representative of environmental concentrations, or whether they may have been influenced by the introduction of contamination during collection and handling. The potential introduction of contamination is commonly evaluated by examination of the analytical results for equipment rinsates.

Equipment rinsates are used to assess the efficacy of the decontamination process used to clean water sampling equipment. Analytes detected in rinsate samples indicate possible cross-contamination between environmental samples. Rinsates are samples of volatile-free "distilled" water that has been poured over or through decontaminated sampling equipment and subsequently handled in the same manner as environmental samples. For flow-paced composite samples that are collected over time in carboys, a location-specific "rinse carboy" is prepared using distilled water. This carboy is treated the same as other surface-water samples from that location, and analyzed for the same parameters. Analytical data for these rinse carboys are used to assess how well the carboys were cleaned between field deployments and to determine whether contamination was introduced during sample preparation.

Although rinsates are used specifically as indicators of cross-contamination from improper decontamination of equipment, they are carried through the entire sampling, shipping, and laboratory process. Therefore, they are good indicators of potential contamination introduced during any of these steps.

3.6.2.4 Criteria for Completeness

A qualitative measure of completeness is the rate of successful sampling. The DQA verifies that all planned samples were collected, unless insufficient water was available for sampling. The completeness goal for successful sampling is the collection of at least 90 percent of the planned samples. However, the availability of water is outside the control of the Site. If all required stations were visited, sampling completeness is considered acceptable.

Completeness as a quantitative measure of data quality may be expressed as the percentage of valid or acceptable data obtained from a measurement system. The Site tracks analytical laboratory performance through both the shipment of samples to the laboratory and the receipt of data from the laboratory. The Site also evaluates data completeness using the following formula:

$$Completeness = DP_u = \frac{DP_t - DP_n}{DP_t} * 100$$

where: DP_u = Percentage of usable data points
DP_t = Total number of data points
DP_n = Nonusable (rejected) data points

The completeness criterion is having $\geq$ 90 percent valid samples.

3.6.2.5 Criteria for Comparability

Comparability is a qualitative parameter. Consistency in the acquisition, handling, and analysis of samples is necessary for comparing results. Samples are collected in accordance with Site standard operating procedures (SOPs), transported per Site SOPs and U.S. Department of Transportation shipping regulations, and analyzed using standard EPA or nationally recognized analytical methods. This helps to ensure comparability of results with other analyses performed in a similar manner.

The laboratory coordinator or designee verifies that laboratory analyses are performed according to the standard protocols specified by the Site subcontract to each laboratory. Therefore, the analytical results should be comparable to data produced by similar methods.

3.6.3 Water DQA Results for CY 2007

During CY 2007, 92 locations were sampled one or more times. This resulted in a total of 428 water samples collected.[32] During CY 2007, 1,252 bottles of water were submitted to analytical laboratories for analysis. Table 3-119 breaks this data down by sample type.

Table 3-119. CY 2007 Sample Type Breakdown

	Unique Water Samples	Unique Bottle Codes
Primary samples (REALs)	407	1,159
Field duplicates (DUPs)	21	62
Rinsates (RNSs)	10	31
Totals	438	1,252

Data used to evaluate the PARCC parameters are included in the available CY 2007 analytical data generated by the laboratories. These include analyses of field duplicate and rinsate QC samples submitted to the laboratory, and laboratory-generated QA/QC samples such as LCS. This PARCC evaluation is limited to analyses for analytes that are listed in Table 1 of Attachment 2 to RFLMA. By limiting the evaluation to Table 1 analytes, more targeted and accurate assessment is made for analytes that have water-quality standards applicable to the Site. The DQA of these analyses is discussed below by each PARCC parameter.

3.6.3.1 Precision During CY 2007

DERs are indicators of precision for radionuclide analyses. The QC criterion for precision requires that individual DER values should be ≤1.96, and overall the data set should have ≥85 percent compliance with the criterion. Appendix Table B-1 is a tabulation of the DER values for CY 2007 radionuclide analyses. The table has been sorted by the DER parameter so that the range of values is apparent. The DER range is from 0.03 to 1.28.

Table 3-120 summarizes the DER findings of Table B-1 and indicates if the 85 percent goal has been met. Overall, 100 percent of the DER data are in compliance with the criterion, indicating excellent precision for radionuclide analyses.

[32] This is the sum of real and duplicate samples for unique sampling events.

Table 3-120. Summary of DER Values

Analyte Group	Total Number of DER Results	Number of Unacceptable Results DER>1.96	Number of Acceptable Results	Percentage Acceptable	Goal Met
Radionuclides	24	0	24	100%	Yes

The RPD between real and field duplicate sample results is an indicator of precision for nonradionuclide analyses. Individual RPD values should be ≤30 percent and at least 85 percent of the RPDs should comply with the criterion. Appendix Table B-2 tabulates RPD values and is sorted first by analyte suite, then by RPD, in order to highlight the RPD range of each suite. RPD values ranged from 0.0 percent to 16.67 percent for metals, 0.0 percent to 6.54 percent for WQPs, and 0.0 percent to 27.49 percent for VOCs/semivolatile organic compounds (SVOCs).

Table 3-121 summarizes the RPD findings of Table B-2 and indicates if the 85 percent goal has been met. During CY 2007, the RPD goal was met for all analyte groups. Overall, the nonradionuclide data had 100 percent acceptable RPDs, and therefore exceeded the 85 percent goal.

Table 3-121. Summary of RPD Values

Analyte Group	Total Number of RPD Results	Number of Unacceptable Results RPD>30%	Number of Acceptable Results	Percentage Acceptable	Goal Met
Metals	16	0	16	100	Yes
WQPs	5	0	5	100	Yes
VOCs/SVOCs	31	0	31	100	Yes
Totals	52	0	52	100	Yes (overall)

3.6.3.2 Accuracy During CY 2007

MS recoveries provide another measure of accuracy. Appendix Table B-3 displays recoveries for 1,778 MS and MSD analytical records for metals, VOCs/SVOCs, and WQPs. These data are summarized in Table 3-122. All individual suites, except for WQPs, met the goal with greater than 90 percent of their spike recoveries falling in the acceptable range. Overall, across all analytical suites, the percentage of acceptable MS/MSD results was 95.7 percent.

Table 3-122. Summary of MS and MSD Recovery Data

Analyte Group	Total Number of MS & MSD Results	Number of Low Results Below 75%	Number of High Results Above 125%	Number Acceptable	Percentage Acceptable	Goal Met
Metals	529	10	2	517	97.7	Yes
WQPs	74	10	0	64	86.5	No
VOCs/SVOCs	1,175	51	3	1,121	95.4	Yes
Totals	1,778	71	5	1,702	95.7	Yes (overall)

Appendix Table B-4 contains 103 relative bias values for LCSs. These are used by the Site to evaluate the accuracy of radionuclide analyses. The QC criterion for the acceptable range of relative bias values is from –0.25 to +0.25. During CY 2007, the bias ranged from −0.220 to +0.230. All of the data met the QC criterion.

LCS results for nonradionuclide suites were available for metals, VOCs/SVOCs, and WQPs (including anions). These LCS recoveries are tabulated in Appendix Table B-5, which is sorted by analyte group, then by percent recovery. There are 421 LCS data records for metals. Most of the LCS recoveries for metals fell in the range 90.0 percent to 126.5 percent and were within the 75 percent to 125 percent acceptable QC range. Only one result (126.5 percent) was outside the acceptable range. There are 865 LCS data records for VOCs/SVOCs. LCS recoveries for VOCs/SVOCs fell between 27 percent and 131 percent. Eighty-two records are outside the 75 percent to 125 percent acceptable QC range (90.5 percent acceptable). There are 80 LCS data records for WQPs. LCS recoveries for WQPs fell between 90 percent and 118 percent and were all acceptable. Overall for nonradionuclides, 93.9 percent of the LCS recoveries indicate that CY 2007 water analytical data for metals, VOCs/SVOCs, and WQPs are of high accuracy.

Another aspect of accuracy is “rejected data.” Out of 11,455 analytical records representing reals, duplicates, and rinsates during CY 2007, 62 records were rejected (R or RJ qualified) during data V&V. Another way to state this is that 99.5 percent of the analytical data collected during the year were considered to be valid and usable. Appendix Table B-6 lists the 62 rejected records.

3.6.3.3 Representativeness During CY 2007

As defined earlier, representativeness is an evaluation of the sampling procedure for its ability to reflect the true concentrations of contaminants in water. Equipment rinsate samples (and “rinse carboys”) are used by the Site to determine whether there is introduced contamination from improper or incomplete decontamination of the sampling equipment.

During CY 2007 a total of 421 rinsate analytical records were generated for metals, radionuclides, VOCs/SVOCs, and WQPs. The majority of these records lack evidence of contamination. The remaining 12 records are tabulated in Appendix Table B-7. Two of these are B-qualified metals data which constitute only weak evidence of contamination. The B qualifier for inorganics indicates that the concentrations are above the instrument detection limit, but below the method detection limit. Six records are J-qualified indicating an estimated quantification/result.

Only four records (less than 1 percent; at the top of Table B-7) provide substantial evidence of inadequate decontamination of a sample carboy or equipment. Overall, there is very little evidence of introduced contamination during CY 2007 water sampling and/or shipping activities. Most of the 421 rinsate records appear to be clean. Therefore, water-quality data for the year are judged to be representative of the actual water concentrations.

Because all required sampling locations were visited, and the samples that could be collected were analyzed, analyses for the year are judged to be representative with respect to spatial coverage.

3.6.3.4 Completeness During CY 2007

If sufficient water is available for sampling, the goal is to have ≥90 percent successful sampling of all required locations. However, the availability of water is beyond the control of the samplers. Surface-water monitoring during CY 2007 targeted sampling at 26 surface-water sampling locations. In actuality, samples were collected at 25 sites and were submitted to the laboratory for analysis; one location was dry for the entire year. Groundwater monitoring during CY 2007 targeted sampling at 59 wells. In actuality, samples were collected at 58 wells and were submitted to the laboratory for analysis; one location was dry for the entire year. Treatment system monitoring during CY 2007 targeted sampling at 10 locations. In actuality, samples were collected at nine locations and were submitted to the laboratory for analysis (one location was dry the entire year). Because dry locations do not count against sampling success rates (being beyond the control of samples), success rates for surface water, groundwater, and treatment system sampling are all 100 percent.

V&V completeness is summarized in Table 3-123. This table compiles, by analyte group, the total number of data points for reals, duplicates, and rinsate samples. It then subtracts rejected data points as well as points that lack validation qualifiers. The result is the net number of usable validated or verified data points, and this is expressed as percent usable data, or percent V&V completeness. The QC goal for completeness is ≥90 percent.

Table 3-123. Summary of V&V Data Completeness

Analyte Group	Number of Data Points	Number of Unvalidated Points	Number Rejected	Net Usable Points	Percent Completeness	Goal Met
Metals	1,150	0	2	1,148	99.8	Yes
Radionuclides	714	0	0	714	100.0	Yes
WQPs	261	0	1	260	99.6	Yes
VOCs/SVOCs	8,930	0	59	8,871	99.3	Yes
	Sum of Number of Data Points	**Sum of Number of Unvalidated Points**	**Sum of Number Rejected**	**Sum of Net Usable Points**	**Overall Completeness**	**Goal Met**
Totals	**11,455**	**0**	**62**	**11,393**	**99.5**	**Yes**

Validation completeness for all suites was 99.5 percent and exceeded the completeness goal. Therefore, from the perspective of V&V completeness, the CY 2007 water data are acceptable.

Another measure of completeness is that an adequate number of QC samples (field duplicates and equipment rinsates) must be collected to meet QC requirements. The recommended frequency for collecting duplicate samples is 1 duplicate (DUP) per 20 or fewer primary (REAL) water samples. In other words, duplicates should be collected at a 5 percent or greater frequency per REAL sample. Like duplicates, rinsate samples (RNS) are also to be collected at a 5 percent or greater rate.

The sample collection frequencies of REAL, DUP, and RNS samples are tabulated by analyte group in Table 3-124. The ratios of REAL/DUP samples shown in Table 3-124 meet water program QC goals with 1 DUP per 11.9 REALs. Across all analyte suites and samples collected

during the year, the overall frequency of duplicates was 8.4 percent, exceeding program goals (≥5 percent).

The ratios of REAL/ RNS samples in Table 3-124 did not meet program QC goals with 1 rinsate per 24.17 REALs. Overall, across all suites and samples collected during the year, the rinsate collection frequency was 4.14 percent, falling short of program goals (≥5).

Table 3-124. Summary of Field QC Samples and Data Records

Analyte Group	Number of Locations Sampled for REALs	Number of Locations Sampled for DUPs	Ratio REALs/ DUPs (Goal <20)	Ratio REALs/ RNSs (Goal <20)	Number REAL Records	Number DUP Records	Number RNS Records	Total Records
Metals	56	12	24.6	38.2	1,453	59	38	1,550
Radionuclides	27	6	28.0	39.6	673	24	17	714
WQPs	50	13	18.6	40.3	242	13	6	261
VOCs/SVOCs	70	15	10.3	21.7	7,810	760	360	8,930
Totals			**11.9**	**24.17**	**10,178**	**856**	**421**	**11,455**
Percentages						**8.40%**	**4.14%**	

3.6.3.5 Comparability During CY 2007

No significant changes were made to water sampling or analytical procedures during CY 2007. Therefore, the analytical data generated during the year should be generally comparable to corresponding analyses from previous years.

End of current text

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Appendix A

Hydrologic Data

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Appendix A: Hydrologic Data

A.1 Surface-Water Discharge Data

This section includes mean daily discharge tables and hydrographs by monitoring location and calendar year.

A.1.1 GS01: Woman Creek at Indiana Street

Table A–1. CY 2007 Discharge Summary for GS01: Woman Creek at Indiana Street

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.376	0.224	0.656	0.377	2.585	1.573	0.000	0.000	0.000	0.000	0.000	0.000
2	0.399	0.226	0.515	0.336	4.014	1.075	0.000	0.000	0.000	0.000	0.000	0.000
3	0.385	0.207	*0.498*	0.286	5.147	0.957	0.000	0.000	0.000	0.000	0.000	0.000
4	0.612	0.221	0.531	0.252	4.272	0.929	0.000	0.000	0.000	0.000	0.000	0.000
5	1.001	0.390	0.597	0.223	5.388	0.953	0.000	0.000	0.000	0.000	0.000	0.000
6	1.089	1.193	0.696	0.215	10.404	0.867	0.000	0.000	0.000	0.000	0.000	0.000
7	0.920	5.178	0.884	0.226	5.329	0.665	0.000	0.000	0.000	0.000	0.000	0.000
8	0.942	5.260	1.068	0.465	4.540	0.809	0.000	0.000	0.000	0.000	0.000	0.000
9	1.184	3.158	1.021	0.440	4.147	0.893	0.000	0.000	0.000	0.000	0.000	0.000
10	1.315	2.040	5.490	0.339	3.588	0.897	0.000	0.000	0.000	0.000	0.000	*0.000*
11	1.781	1.980	1.293	0.243	3.227	0.871	0.000	0.000	0.000	0.000	0.000	0.000
12	1.291	2.185	1.075	0.214	2.725	1.339	0.000	0.000	0.000	0.000	0.000	0.000
13	0.851	*1.787*	0.954	0.208	2.391	1.334	0.000	0.000	0.000	0.000	0.000	0.000
14	*0.523*	*1.222*	0.793	0.205	2.072	1.223	0.000	0.000	0.000	0.000	0.000	0.000
15	0.394	*0.940*	0.677	0.202	2.592	1.147	0.000	0.000	0.000	0.000	0.000	0.000
16	0.359	0.932	0.560	0.183	2.198	1.100	0.000	0.000	0.000	*0.000*	0.000	0.000
17	0.305	1.264	0.458	0.454	1.705	1.041	0.000	0.000	0.000	*0.000*	0.000	0.000
18	0.269	1.207	0.410	2.529	1.384	0.954	0.000	0.000	0.000	0.000	0.000	0.000
19	0.254	1.292	0.369	4.559	1.462	0.931	0.000	0.000	0.000	0.000	0.000	0.000
20	0.222	1.316	0.339	5.764	1.143	0.910	0.000	0.000	0.000	0.000	0.000	0.000
21	0.229	1.501	0.289	5.125	1.138	0.903	0.000	0.000	0.000	0.000	0.000	0.000
22	0.226	1.647	0.261	2.891	1.153	0.885	0.000	0.000	0.000	0.000	0.000	0.000
23	0.229	1.573	0.246	1.263	1.674	0.187	0.000	0.000	0.000	0.000	0.000	0.000
24	0.260	1.410	1.366	*25.519*	1.923	0.035	0.000	0.000	0.000	0.000	0.000	0.000
25	0.303	1.051	1.564	*20.450*	1.249	0.017	0.000	0.000	0.000	0.000	0.000	0.000
26	0.328	0.868	0.750	5.716	1.092	0.006	0.000	0.000	0.000	0.000	0.000	0.000
27	0.314	0.860	0.575	2.628	1.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.287	0.844	0.390	1.995	1.567	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.269	NA	0.386	8.327	2.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.244	NA	0.457	5.943	3.738	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	1.713	NA	0.468	NA	2.768	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.609	1.499	0.827	3.253	2.923	0.750	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	1.781	5.260	5.490	25.519	10.404	1.573	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.222	0.207	0.246	0.183	1.067	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	1630987	3626544	2214798	8430705	7829271	1944163	0	2	0	0	0	0
Gallons	12200628	27128432	16567841	63066060	58567017	14543350	0	15	3	0	0	0
Acre-Feet	37.44	83.25	50.84	193.54	179.74	44.63	0.00	0.00	0.00	0.00	0.00	0.00

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Ft^3/Sec	0.814
GPM	365.4
Cubic Feet	25676470
Gallons	192073345
Acre-Feet	589.45

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.2 GS03: Walnut Creek at Indiana Street

Table A–2. CY 2007 Discharge Summary for GS03: Walnut Creek at Indiana Street

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.000	*0.000*	0.407	0.027	0.036	0.012	0.000	0.011	0.000	0.000	0.000	0.000
2	0.000	*0.000*	2.774	0.024	0.031	0.012	0.000	0.013	0.000	0.000	0.000	0.000
3	0.000	*0.000*	2.118	0.022	0.026	0.011	0.000	0.014	0.000	0.000	0.000	0.000
4	0.000	*0.000*	2.970	0.020	0.025	0.010	0.000	0.016	0.000	0.000	0.000	0.000
5	0.000	*0.000*	2.982	0.019	0.029	0.011	0.000	0.011	0.000	0.000	0.000	0.000
6	0.000	*0.435*	3.165	0.020	0.612	0.009	0.326	0.011	0.000	0.000	0.000	0.000
7	0.000	*1.242*	3.107	0.020	0.289	0.001	0.742	0.011	0.000	0.000	0.000	0.000
8	0.000	*0.801*	3.045	0.019	0.099	0.000	0.499	0.009	0.000	0.000	0.000	0.000
9	0.001	0.517	2.740	0.016	0.038	0.000	0.845	0.004	0.000	0.000	0.000	*0.000*
10	0.001	0.463	2.407	0.014	0.030	0.000	1.639	0.000	0.000	0.000	0.000	*0.000*
11	0.088	0.526	2.388	0.011	0.027	0.000	1.690	0.000	0.000	0.000	0.000	0.000
12	0.074	0.557	2.446	0.014	0.025	0.000	1.718	0.000	0.000	0.000	*0.000*	*0.000*
13	*0.023*	0.310	1.473	0.013	0.026	0.000	1.006	0.000	0.000	0.000	*0.000*	*0.000*
14	*0.004*	0.186	0.218	0.012	0.024	0.000	0.940	0.000	0.000	0.000	*0.000*	*0.000*
15	*0.001*	0.149	0.122	0.012	0.021	0.000	0.914	0.000	0.000	0.000	*0.000*	*0.000*
16	*0.000*	0.182	0.069	0.012	0.020	0.000	0.836	0.000	0.000	0.000	*0.000*	0.000
17	*0.000*	0.206	0.108	0.018	0.019	0.000	0.632	0.000	0.000	0.000	*0.000*	*0.000*
18	*0.000*	0.350	0.078	0.012	0.018	0.000	0.397	0.000	0.000	0.000	*0.000*	*0.000*
19	*0.000*	0.382	0.049	0.008	0.016	0.000	0.832	0.000	0.000	0.000	*0.000*	*0.000*
20	*0.000*	0.438	0.042	0.009	0.016	0.000	0.925	0.000	0.000	0.000	*0.000*	0.000
21	*0.000*	0.530	0.033	0.009	0.016	0.000	0.735	0.000	0.000	0.000	0.000	0.000
22	*0.000*	0.462	0.030	0.009	0.016	0.000	0.676	0.000	0.000	*0.000*	0.000	*0.000*
23	*0.000*	0.471	0.031	0.010	0.021	0.000	0.893	0.000	0.000	0.000	0.000	0.000
24	*0.000*	0.306	0.416	5.975	0.016	0.000	1.387	0.000	0.000	0.000	*0.000*	0.000
25	*0.000*	0.209	0.664	6.162	0.015	0.000	1.105	0.000	0.000	0.000	0.000	0.000
26	*0.000*	0.218	0.145	1.464	0.014	0.000	0.755	0.000	0.000	0.000	0.000	*0.000*
27	*0.000*	0.248	0.049	0.541	0.013	0.000	0.037	0.000	0.000	0.000	0.000	*0.000*
28	*0.000*	0.174	0.034	0.238	0.012	0.000	0.028	0.000	0.000	0.000	0.000	*0.000*
29	*0.000*	NA	0.034	0.123	0.016	0.000	0.021	0.000	0.000	0.000	0.000	0.000
30	*0.000*	NA	0.040	0.042	0.012	0.000	0.017	0.000	0.000	0.000	0.000	0.000
31	*0.000*	NA	0.033	NA	0.010	NA	0.014	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.006	0.334	1.104	0.496	0.051	0.002	0.633	0.003	0.000	0.000	0.000	0.000
Maximum	0.088	1.242	3.165	6.162	0.612	0.012	1.718	0.016	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.030	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	16541	808808	2956094	1286861	137193	5684	1694290	8661	13	10	0	0
Gallons	123736	6050305	22113123	9626393	1026277	42517	12674171	64789	98	75	0	0
Acre-Feet	0.38	18.57	67.86	29.54	3.15	0.13	38.90	0.20	0.00	0.00	0.00	0.00

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Ft^3/Sec	0.219
GPM	98.4
Cubic Feet	6914156
Gallons	51721485
Acre-Feet	158.73

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.3 GS05: Woman Creek at West Fenceline

Table A–3. CY 2007 Discharge Summary for GS05: Woman Creek at West Fenceline

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.241	*0.156*	0.126	0.074	0.228	0.069	0.092	*0.000*	0.000	0.000	0.079	0.017
2	0.227	*0.160*	0.163	0.067	0.220	0.066	0.079	*0.000*	0.000	0.000	0.079	0.015
3	0.297	*0.159*	0.132	0.058	0.169	0.059	0.087	*0.027*	0.000	0.000	0.066	0.016
4	0.548	*0.188*	0.180	0.057	0.143	0.066	0.078	0.071	0.000	0.000	0.043	0.019
5	0.430	WR	0.220	0.058	0.256	0.075	0.057	0.042	0.000	0.000	0.022	0.020
6	0.454	WR	0.308	0.070	0.764	0.064	0.060	0.020	0.000	0.000	0.018	0.022
7	0.432	WR	0.365	0.077	0.293	0.048	0.055	0.023	0.000	0.000	0.019	0.023
8	0.735	WR	0.340	0.108	0.198	0.086	0.080	0.012	0.000	0.000	0.016	0.021
9	1.231	0.877	*3.522*	0.086	0.143	0.099	0.059	0.007	0.000	0.000	0.016	0.021
10	1.307	0.860	*1.688*	0.063	0.152	0.116	0.020	0.005	0.000	0.003	0.016	0.023
11	0.921	0.983	0.303	0.044	0.140	0.123	0.011	0.004	0.000	0.009	0.015	0.026
12	0.319	0.962	0.283	0.045	0.119	0.206	0.096	0.003	0.000	0.012	0.015	0.029
13	*0.223*	0.630	0.275	0.056	0.113	0.143	0.116	0.002	0.000	0.017	0.017	0.030
14	*0.217*	0.450	0.290	0.049	0.113	0.106	0.102	0.002	0.000	0.039	0.015	0.029
15	*0.208*	0.385	0.154	0.040	0.175	0.099	0.087	0.001	0.000	0.036	0.014	0.011
16	*0.195*	0.496	0.162	0.041	0.200	0.106	0.082	0.000	0.000	0.027	0.015	0.015
17	*0.190*	0.438	0.185	0.155	0.161	0.100	0.082	0.000	0.000	0.030	0.017	0.043
18	*0.165*	0.448	0.138	0.084	0.106	0.095	0.054	0.000	0.000	0.019	0.017	0.085
19	*0.155*	0.438	0.116	0.053	0.054	0.096	*0.022*	0.000	0.000	0.017	*0.017*	0.075
20	*0.153*	0.463	0.100	0.044	0.045	0.095	*0.006*	0.000	0.000	0.023	0.017	0.064
21	*0.147*	0.563	0.075	0.041	0.056	0.090	*0.001*	0.000	0.000	0.054	0.019	0.051
22	*0.147*	0.515	0.068	0.058	0.094	0.091	*0.000*	0.000	0.000	0.035	0.018	0.043
23	*0.150*	0.500	0.129	0.050	0.114	0.084	*0.007*	0.000	0.000	0.027	0.018	0.048
24	*0.152*	0.322	0.992	*6.495*	0.100	0.095	*0.009*	*0.063*	0.000	0.034	0.017	0.059
25	*0.168*	0.263	0.304	*4.168*	0.072	0.080	*0.002*	*0.013*	0.010	0.041	0.025	0.057
26	*0.203*	0.269	0.141	1.066	0.067	0.104	*0.000*	*0.004*	0.009	0.021	0.024	0.061
27	*0.187*	0.295	0.114	0.527	0.065	0.125	*0.012*	*0.000*	0.005	0.020	0.023	0.049
28	*0.177*	0.218	0.092	0.416	0.067	0.118	*0.034*	*0.000*	0.002	0.020	0.021	0.014
29	*0.171*	NA	0.134	0.284	0.109	0.116	*0.025*	0.000	0.001	0.019	*0.018*	WR
30	*0.162*	NA	0.151	0.217	0.102	0.107	*0.024*	0.000	0.000	0.022	0.016	WR
31	*0.156*	NA	0.100	NA	0.088	NA	*0.012*	0.000	NA	0.068	NA	0.000
		Partial Data										Partial Data

Flow Rate

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Average	0.338	0.460	0.366	0.488	0.152	0.098	0.047	0.010	0.001	0.019	0.024	0.034
Maximum	1.307	0.983	3.522	6.495	0.764	0.206	0.116	0.071	0.010	0.068	0.079	0.085
Minimum	0.147	0.156	0.068	0.040	0.045	0.048	0.000	0.000	0.000	0.000	0.014	0.000
		Partial Data										Partial Data

Discharge

	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
Cubic Feet	904762	953535	980453	1266066	408357	252963	125435	25851	2353	51246	63139	85283
Gallons	6768089	7132935	7334300	9470833	3054723	1892298	938322	193378	17602	383345	472311	637960
Acre-Feet	20.77	21.89	22.51	29.06	9.37	5.81	2.88	0.59	0.05	1.18	1.45	1.96
		Partial Data										Partial Data

Annual Summaries for CY07

Ft^3/Sec	0.165
GPM	74.1
Cubic Feet	5119443
Gallons	38296096
Acre-Feet	117.53
	Partial Data

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.4 GS08: South Walnut Creek at Pond B-5 Outlet

Table A–4. CY 2007 Discharge Summary for GS08: South Walnut Creek at Pond B-5 Outlet

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.000	0.000	0.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	1.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.849	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.966	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.993	0.000	0.000	0.000	0.360	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	1.062	0.000	0.000	0.000	0.683	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	1.074	0.000	0.000	0.000	0.653	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	1.141	0.000	0.000	0.000	0.654	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.970	0.000	0.000	0.000	0.655	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.853	0.000	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.856	0.000	0.000	0.000	0.721	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.797	0.000	0.000	0.000	0.568	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.389	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	NA	0.000	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.000	0.000	0.373	0.000	0.000	0.000	0.156	0.000	0.000	0.000	0.000	0.000
Maximum	0.000	0.000	1.141	0.000	0.000	0.000	0.721	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	0	0	998530	0	0	0	418510	0	0	0	0	0
Gallons	0	0	7469521	0	0	0	3130676	0	0	0	0	0
Acre-Feet	0.00	0.00	22.92	0.00	0.00	0.00	9.61	0.00	0.00	0.00	0.00	0.00

Annual Summaries for CY07

Ft^3/Sec	0.045
GPM	20.2
Cubic Feet	1417040
Gallons	10600197
Acre-Feet	32.53

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.5 GS10: South Walnut Creek at B-1 Bypass

Table A–5. CY 2007 Discharge Summary for GS10: South Walnut Creek at B-1 Bypass

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.042	0.011	0.016	0.033	0.070	0.063	0.014	0.018	0.009	0.011	0.018	0.007
2	0.036	0.011	0.016	0.033	0.070	0.066	0.011	0.016	0.009	0.013	0.020	0.007
3	0.039	0.013	0.014	0.031	0.063	0.067	0.010	0.034	0.009	0.014	0.021	0.009
4	0.144	0.014	0.026	0.032	0.058	0.067	0.012	0.037	0.009	0.016	0.017	0.012
5	0.261	0.047	0.032	0.036	0.073	0.064	0.013	0.058	0.010	0.019	0.015	0.008
6	0.193	1.257	0.045	0.041	0.229	0.064	0.013	0.026	0.011	0.019	0.016	0.008
7	0.137	0.385	0.071	0.040	0.095	0.065	0.015	0.025	0.009	0.018	0.018	0.011
8	0.108	0.215	0.075	0.052	0.074	0.067	0.019	0.019	0.010	0.019	0.017	0.009
9	0.219	0.147	0.074	0.054	0.067	0.065	0.020	0.015	0.010	0.021	0.016	0.008
10	0.215	0.129	0.057	0.046	0.060	0.064	0.013	0.014	0.011	0.023	0.014	0.013
11	0.248	0.148	0.058	0.040	0.055	0.060	0.016	0.013	0.011	0.024	0.013	0.016
12	0.086	0.161	0.055	0.038	0.052	0.068	0.019	0.012	0.011	0.023	0.012	0.015
13	0.058	0.071	0.056	0.042	0.051	0.062	0.020	0.012	0.012	0.027	0.013	0.015
14	0.047	0.034	0.057	0.041	0.051	0.044	0.014	0.011	0.012	0.055	0.013	0.013
15	0.039	0.031	0.037	0.038	0.063	0.041	0.013	0.016	0.011	0.032	0.013	0.013
16	0.037	0.058	0.030	0.038	0.056	0.039	0.013	0.021	0.011	0.017	0.015	0.017
17	0.037	0.058	0.041	0.079	0.052	0.039	0.014	0.013	0.011	0.016	0.015	0.018
18	0.029	0.101	0.034	0.046	0.052	0.036	0.015	0.016	0.012	0.018	0.019	0.023
19	0.026	0.101	0.031	0.039	0.050	0.034	0.017	0.012	0.011	0.015	*0.010*	0.023
20	0.023	0.130	0.030	0.037	0.050	0.032	0.022	0.011	0.011	0.014	0.009	0.026
21	0.025	0.147	0.024	0.039	0.053	0.032	0.020	0.009	0.011	0.021	0.011	0.022
22	0.022	0.113	0.024	0.045	0.054	0.032	0.020	0.009	0.012	0.018	0.009	0.018
23	0.023	0.115	0.027	0.042	0.088	0.028	0.019	0.009	0.012	0.015	0.009	0.020
24	0.023	0.072	0.139	*4.124*	0.087	0.025	0.019	0.059	0.078	0.014	0.008	0.020
25	0.023	0.042	0.071	1.044	0.056	0.024	0.019	0.013	0.046	0.013	0.011	0.021
26	0.027	0.053	0.043	0.206	0.050	0.024	0.019	0.010	0.016	0.013	0.010	0.020
27	0.027	0.051	0.039	0.112	0.050	0.033	0.020	0.009	0.013	0.012	*0.010*	0.018
28	0.020	0.036	0.036	0.087	0.050	0.030	0.031	0.010	0.013	0.013	0.008	0.014
29	0.018	NA	0.043	0.077	0.066	0.026	0.024	0.010	0.013	0.014	0.007	0.017
30	0.015	NA	0.040	0.071	0.075	0.021	0.021	0.010	0.013	0.015	0.006	0.017
31	0.014	NA	0.036	NA	0.063	NA	0.020	0.009	NA	0.015	NA	0.021

Flow Rate

Average	0.073	0.134	0.044	0.223	0.067	0.046	0.017	0.018	0.015	0.019	0.013	0.015
Maximum	0.261	1.257	0.139	4.124	0.229	0.068	0.031	0.059	0.078	0.055	0.021	0.026
Minimum	0.014	0.011	0.014	0.031	0.050	0.021	0.010	0.009	0.009	0.011	0.006	0.007

Discharge

Cubic Feet	195401	324017	119010	577214	179827	119262	45992	48199	37894	50208	33973	41335
Gallons	1461698	2423816	890256	4317864	1345203	892141	344042	360550	283464	375583	254133	309211
Acre-Feet	4.49	7.44	2.73	13.25	4.13	2.74	1.06	1.11	0.87	1.15	0.78	0.95

Annual Summaries for CY07

Ft^3/Sec	0.056
GPM	25.2
Cubic Feet	1772331
Gallons	13257960
Acre-Feet	40.69

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.6 GS11: North Walnut Creek at Pond A-4 Outlet

Table A–6. CY 2007 Discharge Summary for GS11: North Walnut Creek at Pond A-4 Outlet

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.000	0.000	0.642	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.997	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	1.150	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	1.690	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	1.617	0.000	0.000	0.000	0.322	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	1.601	0.000	0.000	0.000	0.512	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	1.470	0.000	0.000	0.000	0.309	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	1.367	0.000	0.000	0.000	0.095	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	1.285	0.000	0.000	0.000	0.482	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	1.141	0.000	0.000	0.000	1.047	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	1.137	0.000	0.000	0.000	0.955	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	1.209	0.000	0.000	0.000	0.951	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.559	0.000	0.000	0.000	0.919	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.872	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.849	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.778	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.550	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.429	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.825	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.856	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.707	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.648	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.986	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	1.329	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	1.069	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.582	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	NA	0.000	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.000	0.000	0.512	0.000	0.000	0.000	0.518	0.000	0.000	0.000	0.000	0.000
Maximum	0.000	0.000	1.690	0.000	0.000	0.000	1.329	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	0	0	1370876	0	0	0	1388589	0	0	0	0	0
Gallons	0	0	10254862	0	0	0	10387365	0	0	0	0	0
Acre-Feet	0.00	0.00	31.47	0.00	0.00	0.00	31.88	0.00	0.00	0.00	0.00	0.00

Annual Summaries for CY07

Ft^3/Sec	0.088
GPM	39.3
Cubic Feet	2759464
Gallons	20642228
Acre-Feet	63.35

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.7 GS12: North Walnut Creek at Pond A-3 Outlet

Table A–7. CY 2007 Discharge Summary for GS12: North Walnut Creek at Pond A-3 Outlet

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.000	0.000	0.000	0.000	1.255	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	1.363	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	1.133	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.748	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	1.904	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	1.907	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.576	1.388	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	1.229	1.212	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	1.049	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.788	0.000	0.498	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.779	0.000	1.068	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.689	0.000	0.944	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.702	0.000	0.933	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.709	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.505	0.000	0.921	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.331	0.000	0.899	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.330	0.000	0.897	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.325	0.000	0.903	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.311	0.000	0.853	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.315	0.000	0.707	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.147	0.000	0.586	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.579	1.166	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.509	1.668	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.456	1.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.180	1.132	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	NA	0.000	1.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	NA	0.000	1.259	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	NA	0.000	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.283	0.274	0.383	0.251	0.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	1.229	1.907	1.068	1.668	1.363	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	758753	661770	1024790	649781	348250	0	0	0	0	0	0	0
Gallons	5675865	4950387	7665964	4860700	2605092	0	0	0	0	0	0	0
Acre-Feet	17.42	15.19	23.53	14.92	7.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Ft^3/Sec	0.109
GPM	49.0
Cubic Feet	3443345
Gallons	25758008
Acre-Feet	79.05

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.8 GS13: North Walnut Creek above Pond A-1

Table A–8. CY 2007 Discharge Summary for GS13: North Walnut Creek above Pond Pond A-1

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.220	0.143	0.216	0.168	0.214	*0.061*	0.008	0.000	0.000	0.000	0.032	0.037
2	0.311	0.139	0.205	0.142	0.220	*0.058*	0.003	0.000	0.000	0.000	0.032	0.035
3	0.376	0.132	0.178	0.123	0.186	*0.052*	0.005	0.000	0.000	0.000	0.032	0.037
4	0.813	0.145	0.232	0.115	0.165	*0.046*	0.008	0.000	0.000	0.000	0.031	0.039
5	0.938	0.410	0.312	0.118	0.241	*0.045*	0.007	0.000	0.000	0.000	0.029	0.043
6	0.742	2.433	0.365	0.133	1.014	0.044	0.000	0.000	0.000	0.000	0.028	0.037
7	0.611	1.871	0.477	0.143	0.351	0.035	0.000	0.000	0.000	0.000	0.029	0.042
8	0.455	1.205	0.424	0.160	0.266	0.029	0.000	0.000	0.000	0.000	0.029	0.055
9	0.842	0.870	0.365	0.194	0.216	0.026	0.000	0.000	0.000	0.000	0.029	0.050
10	0.928	0.778	0.344	0.135	0.191	0.026	0.000	0.000	0.000	0.000	0.029	0.051
11	1.062	0.836	0.341	0.103	0.171	0.027	0.000	0.000	0.000	0.000	0.030	0.062
12	0.559	0.819	0.322	0.095	0.137	0.031	0.000	0.000	0.000	0.000	0.030	0.063
13	0.386	0.502	0.299	0.110	0.125	0.103	0.000	0.000	0.000	0.000	0.033	0.066
14	0.292	0.334	0.268	0.113	0.127	0.052	0.000	0.000	0.000	0.000	0.031	0.055
15	0.253	0.294	0.241	0.097	0.176	0.032	0.000	0.000	0.000	0.078	0.031	0.047
16	0.223	0.354	0.202	0.092	0.148	0.024	0.000	0.000	0.000	0.052	0.033	0.047
17	0.215	0.454	0.191	0.232	0.111	0.021	0.000	0.000	0.000	*0.035*	0.034	0.053
18	0.181	0.564	0.181	0.141	0.105	0.017	0.000	0.000	0.000	*0.028*	0.033	0.059
19	0.147	0.555	0.170	0.103	0.093	0.016	0.000	0.000	0.000	0.024	*0.033*	0.066
20	0.155	0.569	0.164	0.086	0.094	0.015	0.000	0.000	0.000	0.022	0.033	0.072
21	0.149	0.596	0.159	0.084	0.106	0.015	0.000	0.000	0.000	0.023	0.036	0.072
22	0.142	0.540	0.148	0.094	0.103	0.017	0.000	0.000	0.000	0.029	0.051	0.049
23	0.145	0.509	0.151	0.094	0.239	0.017	0.000	0.000	0.000	0.036	0.043	0.042
24	0.149	0.401	0.909	*5.499*	*0.259*	0.017	0.000	0.001	0.003	0.031	0.040	0.041
25	0.170	0.309	0.427	*1.972*	*0.116*	0.012	0.000	0.000	0.000	0.030	0.040	0.046
26	0.213	0.300	0.251	0.681	*0.087*	0.017	0.000	0.000	0.000	0.028	0.043	0.057
27	0.218	0.310	0.220	0.442	*0.081*	0.022	0.000	0.000	0.000	0.028	*0.043*	0.053
28	0.189	0.302	0.199	0.340	*0.074*	0.021	0.000	0.000	0.000	0.030	0.039	0.053
29	*0.180*	NA	0.220	0.276	*0.081*	0.021	0.000	0.000	0.000	0.033	0.038	0.050
30	0.161	NA	0.241	0.233	*0.161*	0.015	0.000	0.000	0.000	0.033	0.036	0.050
31	0.151	NA	0.210	NA	*0.086*	NA	0.000	0.000	NA	0.030	NA	0.047

Flow Rate

Average	0.373	0.596	0.278	0.411	0.185	0.031	0.001	0.000	0.000	0.018	0.034	0.051
Maximum	1.062	2.433	0.909	5.499	1.014	0.103	0.008	0.001	0.003	0.078	0.051	0.072
Minimum	0.142	0.132	0.148	0.084	0.074	0.012	0.000	0.000	0.000	0.000	0.028	0.035

Discharge

Cubic Feet	1000285	1440771	745897	1064465	496332	80682	2779	89	253	49236	89080	136142
Gallons	7482653	10777718	5579699	7962753	3712818	603547	20788	667	1889	368309	666364	1018412
Acre-Feet	22.96	33.08	17.12	24.44	11.39	1.85	0.06	0.00	0.01	1.13	2.04	3.13

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Ft^3/Sec	0.162
GPM	72.7
Cubic Feet	5106011
Gallons	38195618
Acre-Feet	117.22

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.9 GS31: Woman Creek at Pond C-2 Outlet

Table A–9. CY 2007 Discharge Summary for GS31: Woman Creek at Pond C-2 Outlet

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.000	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.000	NA	0.000	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	0	0	0	0	0	0	0	0	0	0	0	0
Gallons	0	0	0	0	0	0	0	0	0	0	0	0
Acre-Feet	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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Ft^3/Sec	0.000
GPM	0.0
Cubic Feet	0
Gallons	0
Acre-Feet	0.00

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.10 GS33: No Name Gulch at Walnut Creek

Table A–10. CY 2007 Discharge Summary for GS33: No Name Gulch at Walnut Creek

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	*0.000*	0.043	WR	0.044	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	*0.000*	0.041	WR	0.033	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	*0.000*	0.036	WR	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	WR	0.043	WR	0.023	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	WR	0.107	WR	0.023	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	WR	WR	*0.216*	0.024	0.444	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	WR	WR	*0.284*	0.034	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	WR	WR	*0.229*	0.066	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	WR	WR	*0.183*	0.064	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	WR	*0.348*	0.145	0.031	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	WR	0.391	0.155	*0.019*	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	WR	0.387	0.124	*0.021*	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	WR	*0.196*	0.098	0.020	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	WR	*0.110*	0.068	*0.019*	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	0.097	*0.092*	0.040	0.018	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	*0.082*	*0.152*	*0.033*	0.018	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	*0.075*	*0.188*	0.022	0.032	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	0.059	0.273	0.021	0.031	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	0.050	0.260	0.021	0.019	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.056	*0.293*	0.021	0.019	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	0.043	0.333	0.020	0.018	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	0.050	*0.275*	0.019	0.019	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	0.048	*0.272*	0.021	0.020	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.051	*0.152*	0.390	1.950	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.068	*0.127*	0.198	0.926	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	0.093	*0.135*	0.081	0.260	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	0.087	*0.138*	0.073	0.136	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	0.071	*0.099*	0.059	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	0.064	NA	0.086	0.062	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	0.055	NA	0.097	0.045	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	0.049	NA	0.068	NA	0.002	NA	0.000	0.000	NA	0.000	NA	0.000
	Partial Data	Partial Data	Partial Data									

Flow Rate

Average	0.055	0.187	0.107	0.137	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.097	0.391	0.390	1.950	0.444	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.036	0.019	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Partial Data	Partial Data	Partial Data									

Discharge

Cubic Feet	95016	388064	239423	354470	89053	0	0	0	0	0	0	0
Gallons	710766	2902918	1791011	2651618	666160	0	0	0	0	0	0	0
Acre-Feet	2.18	8.91	5.50	8.14	2.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Partial Data	Partial Data	Partial Data									

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Ft^3/Sec	0.039
GPM	17.6
Cubic Feet	1166025
Gallons	8722473
Acre-Feet	26.77
	Partial Data

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.11 GS51: Ditch South of 903 Pad

Table A–11. CY 2007 Discharge Summary for GS51: Ditch South of 903 Pad

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	*0.000*	*0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	*0.000*	*0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	*0.000*	*0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	*0.000*	*0.000*	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	*0.000*	0.021	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	*0.001*	*0.077*	0.003	0.000	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	*0.000*	0.030	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	*0.000*	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	*0.000*	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	*0.003*	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	*0.002*	0.013	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
12	*0.001*	0.013	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
13	*0.000*	0.001	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
14	*0.000*	0.000	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	*0.000*	0.000
15	*0.000*	0.000	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	*0.000*	0.000
16	*0.000*	0.010	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
17	*0.000*	0.007	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
18	*0.000*	0.017	0.000	0.000	0.000	0.000	*0.000*	0.000	0.000	0.000	0.000	0.000
19	*0.000*	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	*0.000*	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	*0.000*	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	*0.000*	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	*0.000*	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	*0.000*
24	*0.000*	0.004	0.010	0.213	0.000	0.000	0.000	0.000	0.000	0.000	0.000	*0.000*
25	*0.000*	0.003	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	*0.000*
26	*0.000*	0.004	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	*0.000*	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	*0.000*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	*0.000*	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	*0.000*	NA	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	*0.000*	NA	0.000	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Flow Rate

Average	0.000	0.011	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.003	0.077	0.010	0.213	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Discharge

Cubic Feet	822	27351	1771	19409	996	7	0	0	16	0	0	0
Gallons	6150	204597	13246	145190	7452	49	0	0	122	0	0	0
Acre-Feet	0.02	0.63	0.04	0.45	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Annual Summaries for CY07

Ft^3/Sec	0.002
GPM	0.7
Cubic Feet	50372
Gallons	376806
Acre-Feet	1.16

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.12 GS59: Woman Creek Upstream of Antelope Springs Confluence

Table A–12. CY 2007 Discharge Summary for GS59: Woman Creek Upstream of Antelope Springs Confluence

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.342	0.177	0.287	0.290	0.746	0.217	0.017	0.072	0.024	0.038	0.069	*0.051*
2	0.334	0.183	0.312	0.288	0.754	0.191	0.011	*0.098*	0.021	0.034	0.079	0.050
3	0.391	0.184	0.283	0.300	0.655	0.186	0.010	*0.156*	0.023	0.038	0.105	0.061
4	0.876	0.224	0.384	0.324	0.620	0.177	0.012	*0.189*	0.025	0.034	0.083	0.057
5	0.816	WR	0.479	0.341	0.820	0.194	0.012	*0.206*	0.026	0.030	0.084	0.046
6	0.732	WR	0.587	0.386	1.782	0.180	0.011	*0.173*	0.025	0.024	0.090	0.053
7	WR	WR	0.690	0.924	0.861	0.151	0.011	*0.177*	0.033	0.038	0.077	0.064
8	WR	WR	0.632	0.480	0.671	0.162	0.008	*0.141*	0.035	0.039	0.070	0.068
9	WR	1.303	3.562	0.404	0.553	0.159	0.007	*0.128*	0.041	0.037	0.073	0.066
10	WR	1.192	2.507	0.350	0.495	0.155	0.008	*0.116*	0.050	0.037	0.067	0.064
11	WR	1.334	0.569	0.324	0.443	0.151	0.011	*0.104*	0.057	0.035	0.062	0.066
12	0.617	1.312	0.510	0.390	0.397	0.322	0.016	*0.083*	0.052	0.037	0.065	*0.070*
13	0.413	0.875	0.469	0.459	0.371	0.264	0.027	*0.073*	0.056	0.035	0.059	*0.069*
14	0.330	0.614	0.461	0.456	0.364	0.191	0.070	*0.057*	0.061	0.073	0.064	WR
15	0.285	0.527	0.336	0.458	0.447	0.155	0.086	*0.078*	0.047	0.060	0.072	WR
16	0.257	0.612	0.291	0.491	0.423	0.155	0.073	*0.104*	0.044	0.048	0.062	WR
17	0.247	0.683	0.312	1.040	0.376	0.141	0.066	*0.086*	0.046	0.046	0.061	WR
18	0.201	0.755	0.281	1.144	0.311	0.131	0.066	*0.074*	0.048	0.051	0.058	0.124
19	0.176	0.758	0.251	1.062	0.248	0.131	0.099	*0.060*	0.051	0.043	*0.055*	*0.134*
20	*0.172*	0.802	0.242	1.025	0.234	0.119	0.097	*0.071*	0.043	0.041	0.063	0.132
21	0.161	0.914	0.221	0.995	0.239	0.118	0.082	*0.049*	0.023	0.062	0.077	0.115
22	0.159	0.825	0.219	0.855	0.293	0.125	0.071	*0.045*	0.012	0.059	0.076	WR
23	0.164	0.794	0.283	0.573	0.434	0.079	0.060	*0.059*	0.002	0.047	0.074	WR
24	0.168	0.574	1.663	11.961	0.355	0.029	0.050	BD	0.018	0.046	*0.075*	WR
25	0.196	0.457	0.668	6.563	0.251	0.018	0.064	BD	0.043	0.046	*0.093*	WR
26	0.266	0.477	0.352	2.179	0.226	0.020	0.075	BD	0.035	0.048	0.083	WR
27	0.247	0.499	0.313	1.161	0.206	0.049	0.114	BD	0.033	0.056	0.083	WR
28	0.218	0.428	0.287	0.930	0.197	0.048	0.130	0.052	0.029	0.053	0.083	WR
29	0.210	NA	0.378	0.955	0.329	0.041	0.112	0.047	0.028	0.053	*0.058*	WR
30	0.190	NA	0.439	0.812	0.296	0.035	0.106	0.038	0.032	0.049	*0.049*	WR
31	0.180	NA	0.348	NA	0.244	NA	0.099	0.029	NA	0.065	NA	WR
	Partial Data	Partial Data						Partial Data				Partial Data

Flow Rate

Average	0.321	0.688	0.601	1.264	0.472	0.136	0.054	0.095	0.035	0.045	0.072	0.076
Maximum	0.876	1.334	3.562	11.961	1.782	0.322	0.130	0.206	0.061	0.073	0.105	0.134
Minimum	0.159	0.177	0.219	0.288	0.197	0.018	0.007	0.029	0.002	0.024	0.049	0.046
	Partial Data	Partial Data						Partial Data				Partial Data

Discharge

Cubic Feet	721092	1425757	1608382	3276136	1265188	353617	145270	221865	91857	121281	187332	111643
Gallons	5394142	10665401	12031536	24507199	9464263	2645239	1086693	1659665	687139	907243	1401339	835146
Acre-Feet	16.55	32.73	36.92	75.21	29.04	8.12	3.33	5.09	2.11	2.78	4.30	2.56
	Partial Data	Partial Data						Partial Data				Partial Data

Annual Summaries for CY07

Ft^3/Sec	0.326
GPM	146.5
Cubic Feet	9529419
Gallons	71285006
Acre-Feet	218.77
	Partial Data

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.13 SPPDischargeGallery: Solar Ponds Discharge Gallery in N. Walnut Creek

Table A–13. CY 2007 Discharge Summary for SPPDischargeGallery: Solar Ponds Discharge Gallery in N. Walnut Creek

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	No Data	No Data	No Data	No Data	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002
2	No Data	No Data	No Data	No Data	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.001
3	No Data	No Data	No Data	No Data	*0.002*	0.003	0.002	0.002	0.002	0.002	0.002	0.002
4	No Data	No Data	No Data	No Data	*0.002*	0.003	0.002	0.002	0.002	0.002	0.002	0.002
5	No Data	No Data	No Data	No Data	*0.003*	0.003	0.002	0.002	0.002	0.002	0.001	0.001
6	No Data	No Data	No Data	No Data	*0.004*	*0.003*	*0.002*	0.002	0.002	0.002	0.002	0.001
7	No Data	No Data	No Data	No Data	*0.003*	*0.004*	*0.002*	0.002	0.002	0.001	0.002	0.001
8	No Data	No Data	No Data	No Data	*0.003*	*0.004*	0.002	0.002	0.002	0.002	0.002	0.001
9	No Data	No Data	No Data	No Data	0.003	*0.003*	0.002	0.002	0.002	0.002	0.002	0.001
10	No Data	No Data	No Data	No Data	0.003	*0.003*	0.002	0.002	0.002	0.002	0.002	0.001
11	No Data	No Data	No Data	0.001	0.003	*0.003*	0.002	0.002	0.002	0.002	0.002	0.001
12	No Data	No Data	No Data	0.001	0.003	*0.003*	0.002	0.002	0.002	0.002	0.002	0.002
13	No Data	No Data	No Data	0.001	0.003	*0.002*	0.002	0.002	0.002	0.002	0.002	0.001
14	No Data	No Data	No Data	0.001	0.003	0.002	*0.002*	0.002	0.002	0.002	0.001	0.002
15	No Data	No Data	No Data	0.001	0.002	0.002	*0.002*	0.002	*0.002*	0.002	0.002	0.001
16	No Data	No Data	No Data	0.001	0.002	0.003	*0.002*	0.002	*0.002*	0.002	0.002	*0.001*
17	No Data	No Data	No Data	0.001	0.003	0.002	*0.002*	0.002	*0.002*	0.002	0.002	*0.001*
18	No Data	No Data	No Data	0.001	0.004	0.002	*0.002*	0.002	*0.002*	0.002	0.002	0.001
19	No Data	No Data	No Data	0.001	0.004	0.002	*0.002*	0.002	*0.002*	0.002	0.002	0.002
20	No Data	No Data	No Data	0.001	0.004	0.002	*0.002*	0.002	*0.002*	0.002	0.002	0.002
21	No Data	No Data	No Data	0.001	0.003	0.002	*0.002*	0.002	0.001	0.002	0.002	0.002
22	No Data	No Data	No Data	0.001	0.003	0.002	*0.002*	0.002	0.002	0.002	0.002	0.002
23	No Data	No Data	No Data	0.001	0.003	0.002	*0.002*	0.002	0.001	0.002	0.002	0.002
24	No Data	No Data	No Data	0.008	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.002
25	No Data	No Data	No Data	0.010	0.003	0.002	*0.002*	0.002	0.002	0.002	0.002	0.001
26	No Data	No Data	No Data	0.006	0.003	0.002	*0.002*	0.002	0.002	0.002	0.002	0.001
27	No Data	No Data	No Data	0.003	0.003	0.002	*0.002*	0.002	0.002	0.002	0.002	0.001
28	No Data	No Data	No Data	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	*0.001*
29	No Data	NA	No Data	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	*0.001*
30	No Data	NA	No Data	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.001
31	No Data	NA	No Data	NA	0.003	NA	0.002	0.002	NA	0.002	NA	0.001
	No Data	No Data	No Data	Partial Data								

Flow Rate

Average				0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.001
Maximum				0.010	0.004	0.004	0.002	0.002	0.002	0.002	0.002	0.002
Minimum				0.001	0.002	0.002	0.002	0.002	0.001	0.001	0.001	0.001
	No Data	No Data	No Data	Partial Data								

Discharge

Cubic Feet				4002	7891	6506	5386	4635	4289	4402	4138	3944
Gallons				29935	59026	48669	40291	34675	32084	32932	30955	29505
Acre-Feet				0.09	0.18	0.15	0.12	0.11	0.10	0.10	0.09	0.09
	No Data	No Data	No Data	Partial Data								

Annual Summaries for CY07

Ft^3/Sec	0.002
GPM	0.9
Cubic Feet	45193
Gallons	338070
Acre-Feet	1.04

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.14 SW018: Functional Channel 2 at FC-2 Wetland

Table A–14. CY 2007 Discharge Summary for SW018: North Walnut Creek Tributary East of B371

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	WR	*0.014*	*0.024*	0.019	0.029	0.014	0.009	0.003	0.003	0.004	0.007	*0.006*
2	WR	*0.015*	*0.020*	0.018	0.028	0.013	0.009	0.004	0.003	0.004	0.006	*0.006*
3	WR	*0.015*	*0.019*	0.017	0.026	0.013	0.008	0.006	0.002	0.005	0.006	0.006
4	WR	0.017	*0.025*	0.017	0.025	0.012	0.006	0.007	0.002	0.004	0.007	*0.006*
5	WR	0.036	*0.029*	0.017	0.036	0.012	0.004	0.006	0.003	0.004	0.006	*0.006*
6	WR	0.190	*0.042*	0.016	0.064	0.011	0.003	0.006	0.004	0.004	0.006	*0.007*
7	WR	0.098	*0.063*	0.017	0.032	0.011	0.003	0.005	0.003	0.005	0.006	0.007
8	WR	*0.075*	*0.058*	0.018	0.028	0.012	0.006	0.003	0.002	0.005	0.006	0.006
9	WR	*0.056*	*0.059*	0.018	0.027	0.011	0.004	0.003	0.004	0.004	0.006	*0.007*
10	WR	*0.063*	*0.043*	0.017	0.024	0.010	0.004	0.003	0.005	0.004	0.006	*0.007*
11	0.039	*0.078*	*0.055*	0.015	0.023	0.009	0.006	0.002	0.003	0.006	0.006	*0.007*
12	*0.029*	*0.076*	*0.052*	0.015	0.022	0.013	0.006	0.002	0.002	0.006	0.006	*0.008*
13	*0.026*	*0.049*	*0.048*	0.015	0.021	0.011	0.005	0.002	0.002	0.009	0.006	0.008
14	*0.024*	*0.029*	*0.039*	0.015	0.023	0.010	0.004	0.002	0.003	0.025	0.006	*0.007*
15	*0.023*	*0.025*	*0.024*	0.015	0.025	0.008	0.003	0.004	0.002	*0.019*	0.006	*0.007*
16	*0.022*	*0.035*	*0.032*	0.015	0.023	0.008	0.003	0.003	0.002	*0.011*	0.006	*0.007*
17	0.021	*0.034*	0.030	*0.023*	0.021	0.007	0.003	0.004	0.003	*0.007*	0.006	*0.007*
18	0.019	*0.055*	0.024	*0.019*	0.020	0.008	0.003	0.003	0.002	*0.005*	0.006	0.006
19	0.018	0.058	*0.023*	*0.018*	0.019	0.008	0.004	0.003	0.002	*0.007*	*0.006*	0.006
20	0.018	*0.074*	*0.029*	*0.018*	0.018	0.009	0.004	0.002	0.002	*0.007*	0.006	0.006
21	*0.017*	*0.086*	*0.030*	0.017	0.018	0.010	0.003	0.001	0.001	*0.008*	0.007	0.006
22	*0.017*	0.074	*0.022*	0.015	0.018	0.012	0.002	0.002	0.001	*0.007*	0.006	WR
23	*0.017*	*0.077*	0.021	0.015	0.027	0.013	0.002	0.003	0.002	*0.006*	0.006	WR
24	0.017	*0.052*	0.062	0.419	0.023	0.014	0.003	0.009	0.009	*0.006*	*0.006*	WR
25	0.019	*0.041*	0.034	0.136	0.018	0.008	0.003	0.004	0.004	0.006	0.007	*0.005*
26	0.020	*0.051*	0.024	0.062	0.016	0.008	0.003	0.002	0.002	0.006	*0.007*	WR
27	*0.018*	*0.049*	0.022	0.045	0.015	0.010	0.006	0.002	0.002	0.007	0.007	WR
28	*0.018*	*0.031*	0.020	0.038	0.015	0.008	0.008	0.003	0.002	0.008	0.006	WR
29	*0.017*	NA	0.022	0.034	0.017	0.009	0.007	0.003	0.001	0.007	*0.006*	WR
30	0.016	NA	0.022	0.030	0.017	0.009	0.004	0.003	0.002	0.007	*0.005*	WR
31	*0.015*	NA	0.020	NA	0.015	NA	0.004	0.003	NA	0.007	NA	WR
	Partial Data											Partial Data

Flow Rate

Average	0.020	0.055	0.033	0.038	0.024	0.010	0.005	0.004	0.003	0.007	0.006	0.006
Maximum	0.039	0.190	0.063	0.419	0.064	0.014	0.009	0.009	0.009	0.025	0.007	0.008
Minimum	0.015	0.014	0.019	0.015	0.015	0.007	0.002	0.001	0.001	0.004	0.005	0.005
	Partial Data											Partial Data

Discharge

Cubic Feet	37180	134033	89565	99299	63709	27014	12141	9652	6999	18802	15997	12343
Gallons	278128	1002636	669995	742807	476575	202078	90824	72200	52358	140645	119666	92331
Acre-Feet	0.85	3.08	2.06	2.28	1.46	0.62	0.28	0.22	0.16	0.43	0.37	0.28
	Partial Data											Partial Data

Annual Summaries for CY07

Ft^3/Sec	0.018
GPM	7.9
Cubic Feet	526734
Gallons	3940242
Acre-Feet	12.09
	Partial Data

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.15 SW027: South Interceptor Ditch at Pond C-2

Table A–15. CY 2007 Discharge Summary for SW027: South Interceptor Ditch at Pond C-2

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	*0.000*	*0.000*	0.004	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	*0.000*	*0.000*	0.003	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
3	*0.000*	*0.000*	0.003	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4	*0.000*	*0.000*	0.003	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5	*0.000*	WR	0.004	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000
6	*0.000*	WR	0.004	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
7	*0.000*	*0.541*	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	*0.000*	*0.403*	0.039	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	*0.000*	0.190	0.022	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	*0.000*	0.177	0.011	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
11	*0.000*	0.091	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
12	*0.000*	0.254	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	*0.000*	0.265	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
14	*0.000*	0.083	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
15	*0.000*	0.020	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
16	*0.000*	0.011	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
17	*0.000*	0.011	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
18	*0.000*	0.019	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	*0.000*	0.023	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	*0.000*	0.123	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
21	*0.000*	0.307	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	*0.000*	0.310	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
23	*0.000*	0.227	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
24	0.000	0.095	0.004	1.244	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
25	0.000	0.019	0.003	0.479	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
26	*0.000*	0.012	0.002	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
27	*0.000*	0.011	0.001	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	*0.000*	0.008	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
29	*0.000*	NA	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30	*0.000*	NA	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
31	*0.000*	NA	0.001	NA	0.000	NA	0.000	0.000	NA	0.000	NA	0.000

Partial Data

Flow Rate

Average	0.000	0.123	0.007	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Maximum	0.000	0.541	0.039	1.244	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Minimum	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Partial Data

Discharge

Cubic Feet	0	276236	18010	153456	1312	0	0	0	0	0	0	0
Gallons	0	2066389	134721	1147928	9815	0	0	0	0	0	0	0
Acre-Feet	0.00	6.34	0.41	3.52	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Partial Data

Annual Summaries for CY07

Ft^3/Sec	0.014
GPM	6.4
Cubic Feet	449013
Gallons	3358853
Acre-Feet	10.31

Partial Data

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.1.16 SW093: North Walnut Creek 1,300 feet Upstream of A-1 Bypass

Table A–16. CY 2007 Discharge Summary for SW093: North Walnut Creek Upstream of A-1 Bypass

Calendar Year 2007: Daily Mean Discharge Values in Cubic Feet per Second

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.130	0.093	0.155	0.106	0.147	0.039	*0.004*	0.001	0.009	0.008	0.019	0.016
2	0.191	0.089	0.146	0.089	0.155	0.039	*0.004*	0.005	0.009	0.006	0.018	0.016
3	0.236	0.089	0.124	0.075	0.122	0.035	*0.004*	0.018	0.009	0.006	0.016	0.015
4	0.716	0.100	0.178	0.068	0.104	0.032	*0.003*	0.024	0.008	0.006	0.015	0.025
5	0.814	0.338	0.250	0.068	0.179	*0.030*	*0.005*	0.012	0.008	0.006	0.014	0.019
6	*0.656*	2.074	0.307	0.081	0.838	*0.029*	*0.007*	0.009	0.008	0.005	0.013	0.015
7	0.506	1.549	0.413	0.084	0.257	*0.023*	*0.009*	0.008	0.007	0.005	0.013	*0.025*
8	0.409	0.982	0.327	0.102	0.187	*0.015*	*0.007*	0.007	0.007	0.004	0.012	*0.028*
9	0.696	0.692	0.263	0.119	0.147	*0.013*	*0.004*	0.007	0.007	0.003	0.012	*0.018*
10	0.849	0.611	0.248	0.082	0.133	*0.012*	*0.004*	0.006	0.008	0.003	0.012	*0.022*
11	0.911	0.664	0.245	0.058	0.117	*0.011*	*0.006*	0.006	0.008	0.003	0.012	*0.038*
12	0.462	0.645	0.230	0.052	0.097	*0.017*	*0.008*	0.006	0.007	0.004	0.012	*0.032*
13	0.301	0.371	0.212	0.067	0.088	0.073	*0.009*	0.006	0.007	0.006	0.013	*0.032*
14	0.226	0.238	0.189	0.070	0.083	0.027	*0.006*	0.006	0.008	0.049	0.013	0.024
15	0.188	0.204	0.166	0.056	0.116	0.018	*0.003*	0.007	0.008	0.121	0.013	0.022
16	0.166	0.284	0.129	0.054	0.095	0.015	*0.004*	0.005	0.008	0.027	0.014	0.019
17	0.163	0.343	0.123	0.182	0.072	0.014	*0.003*	0.006	0.010	0.016	0.015	0.015
18	0.134	0.433	0.117	0.108	0.069	0.014	*0.003*	0.006	0.009	0.011	0.014	0.023
19	0.102	0.424	0.106	0.067	0.057	0.013	*0.003*	0.007	0.009	0.009	*0.015*	0.028
20	0.109	0.454	0.101	0.047	0.057	0.013	0.003	0.007	0.008	0.009	0.016	0.033
21	0.105	0.472	0.096	0.046	0.062	0.013	0.003	0.007	0.008	0.013	0.024	0.035
22	0.096	0.415	0.082	0.057	0.063	*0.012*	0.003	0.006	0.008	0.022	0.030	0.031
23	0.102	0.389	0.082	0.049	0.184	*0.011*	0.002	0.005	0.007	0.018	0.022	0.022
24	0.105	0.301	0.725	4.932	0.177	*0.011*	0.001	0.114	0.029	0.015	0.020	0.022
25	0.123	0.232	0.302	1.519	0.068	*0.009*	0.001	0.017	0.017	0.014	0.019	0.022
26	0.160	0.228	0.166	0.528	0.050	*0.009*	0.000	0.012	0.008	0.014	0.025	0.023
27	0.161	0.236	0.142	0.358	0.047	*0.008*	0.001	0.009	0.007	0.015	*0.019*	0.023
28	0.136	0.231	0.124	0.267	0.040	*0.006*	0.001	0.009	0.007	0.019	0.018	0.021
29	0.132	NA	0.160	0.206	0.054	*0.006*	0.000	0.008	0.008	0.019	0.017	0.022
30	0.113	NA	0.172	0.163	0.107	*0.005*	0.000	0.008	0.008	0.018	0.015	0.019
31	0.104	NA	0.140	NA	0.051	NA	0.001	0.008	NA	0.017	NA	0.021

Flow Rate

Average	0.300	0.471	0.201	0.325	0.130	0.019	0.004	0.012	0.009	0.016	0.016	0.023
Maximum	0.911	2.074	0.725	4.932	0.838	0.073	0.009	0.114	0.029	0.121	0.030	0.038
Minimum	0.096	0.089	0.082	0.046	0.040	0.005	0.000	0.001	0.007	0.003	0.012	0.015

Discharge

Cubic Feet	803863	1138826	537314	842921	347575	49138	9639	31424	23458	42607	42514	62924
Gallons	6013312	8519010	4019387	6305486	2600042	367579	72108	235069	175475	318724	318026	470705
Acre-Feet	18.45	26.14	12.34	19.35	7.98	1.13	0.22	0.72	0.54	0.98	0.98	1.44

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Ft^3/Sec	0.125
GPM	56.0
Cubic Feet	3932203
Gallons	29414923
Acre-Feet	90.27

KEY: WR: No data or unacceptable data due to winter icing conditions
BD: Bad data due to equipment failures
ITALICS: Italic values contain data estimated from field observations and electronic record at adjacent or comparable gages

A.2 Precipitation Data

This section includes total daily precipitation tables and hyetographs by precipitation gage and calendar year.

A.2.1 PG55: Telemetry Repeater Node RPT2

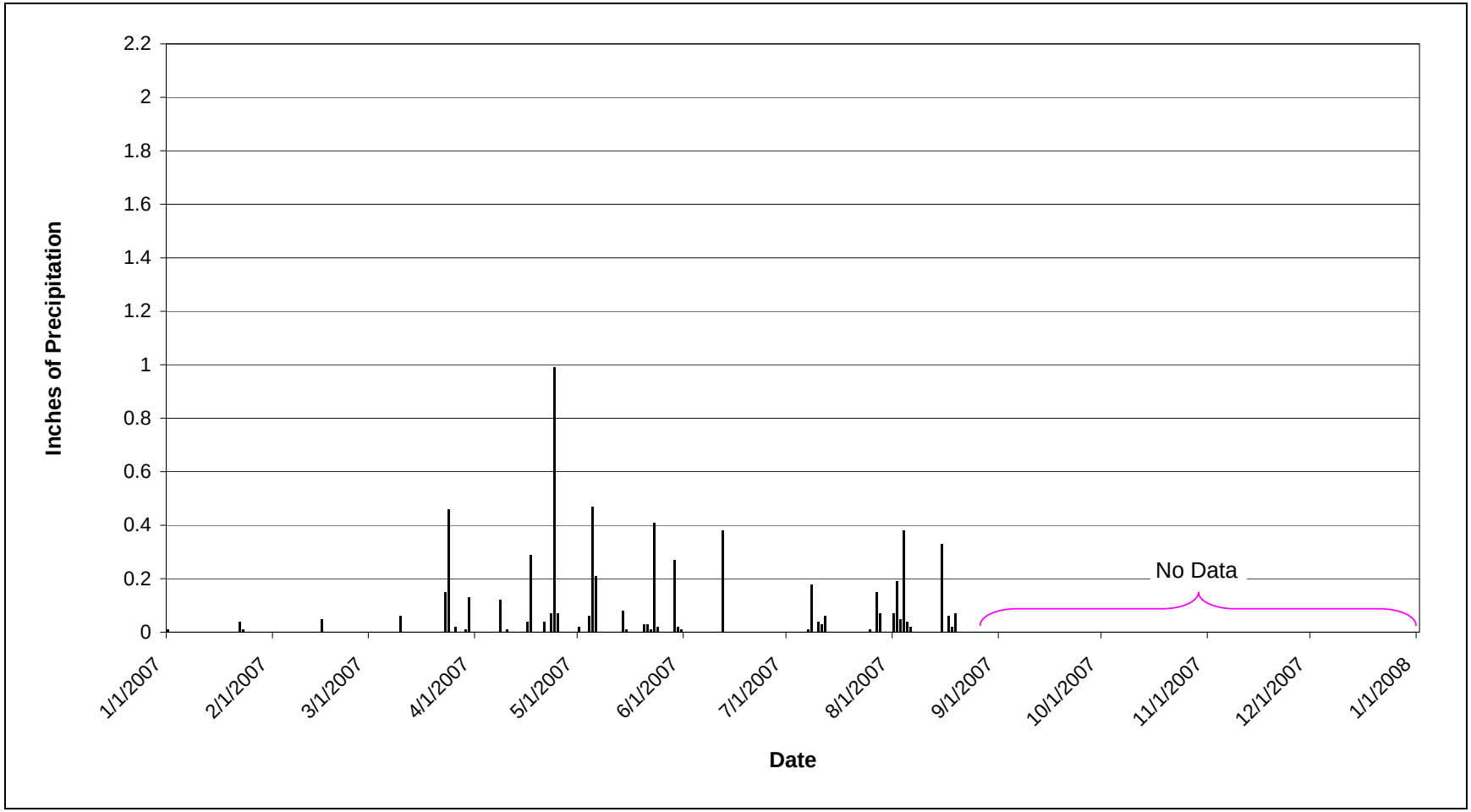


Figure A−1. CY 2007 Annual Hyetograph at PG55: Telemetry Repeater Node RPT2

Table A–17. CY 2007 Precipitation Summary for PG55: Telemetry Repeater Node RPT2

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.07	No Data	No Data	No Data	No Data
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	No Data	No Data	No Data	No Data
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	No Data	No Data	No Data	No Data
4	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.38	No Data	No Data	No Data	No Data
5	0.00	0.00	0.00	0.00	0.47	0.00	0.00	0.04	No Data	No Data	No Data	No Data
6	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.02	No Data	No Data	No Data	No Data
7	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	No Data	No Data	No Data	No Data
8	0.00	0.00	0.00	0.12	0.00	0.00	0.18	0.00	No Data	No Data	No Data	No Data
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data	No Data	No Data	No Data
10	0.00	0.00	0.06	0.01	0.00	0.00	0.04	0.00	No Data	No Data	No Data	No Data
11	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	No Data	No Data	No Data	No Data
12	0.00	0.00	0.00	0.00	0.00	0.38	0.06	0.00	No Data	No Data	No Data	No Data
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data	No Data	No Data	No Data
14	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	No Data	No Data	No Data	No Data
15	0.00	0.05	0.00	0.00	0.01	0.00	0.00	0.33	No Data	No Data	No Data	No Data
16	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	No Data	No Data	No Data	No Data
17	0.00	0.00	0.00	0.29	0.00	0.00	0.00	0.06	No Data	No Data	No Data	No Data
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	No Data	No Data	No Data	No Data
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	No Data	No Data	No Data	No Data
20	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	No Data	No Data	No Data	No Data
21	0.00	0.00	0.00	0.04	0.03	0.00	0.00	0.00	No Data	No Data	No Data	No Data
22	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00	No Data	No Data	No Data	No Data
23	0.01	0.00	0.15	0.07	0.41	0.00	0.00	No Data	No Data	No Data	No Data	No Data
24	0.00	0.00	0.46	0.99	0.02	0.00	0.00	No Data	No Data	No Data	No Data	No Data
25	0.00	0.00	0.00	0.07	0.00	0.00	0.01	No Data	No Data	No Data	No Data	No Data
26	0.00	0.00	0.02	0.00	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data
27	0.00	0.00	0.00	0.00	0.00	0.00	0.15	No Data	No Data	No Data	No Data	No Data
28	0.00	0.00	0.00	0.00	0.00	0.00	0.07	No Data	No Data	No Data	No Data	No Data
29	0.00	NA	0.01	0.00	0.27	0.00	0.00	No Data	No Data	No Data	No Data	No Data
30	0.00	NA	0.13	0.00	0.02	0.00	0.00	No Data	No Data	No Data	No Data	No Data
31	0.00	NA	0.00	NA	0.01	NA	0.00	No Data	NA	No Data	NA	No Data
								Partial Data	No Data	No Data	No Data	No Data

Precipitation

Monthly Total	0.06	0.05	0.83	1.63	1.65	0.38	0.55	1.23				
Daily Maximum	0.04	0.05	0.46	0.99	0.47	0.38	0.18	0.38				
								Partial Data	No Data	No Data	No Data	No Data

Annual Summaries for CY07

Total Inches	6.38
	Partial Data

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.2 PG56: Telemetry Repeater Node RPT3

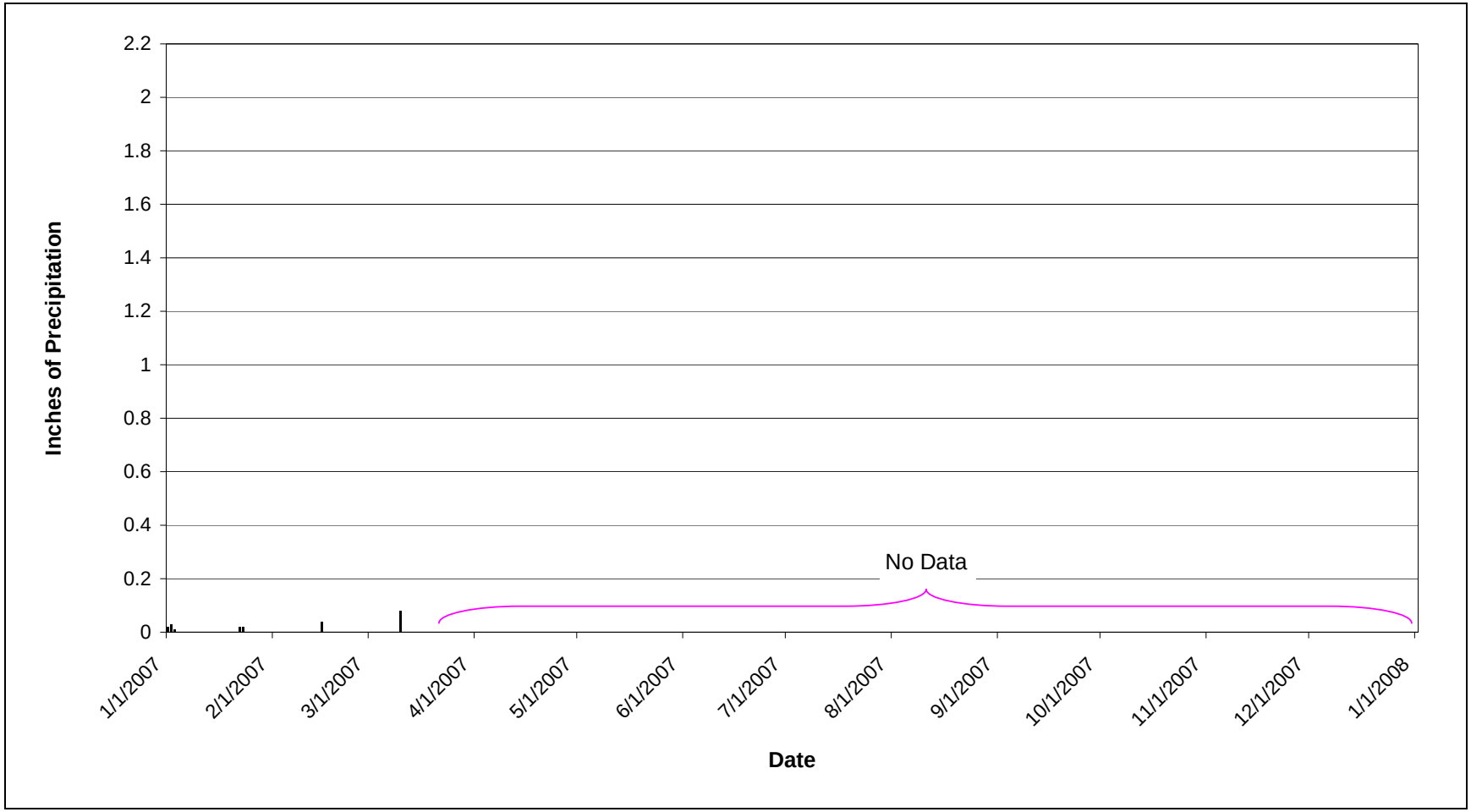


Figure A−2. CY 2007 Annual Hyetograph at PG56: Telemetry Repeater Node RPT3

Table A–18. CY 2007 Precipitation Summary for PG56: Telemetry Repeater Node RPT3

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.02	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
2	0.03	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
3	0.01	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
4	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
5	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
6	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
7	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
8	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
9	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
10	0.00	0.00	0.08	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
11	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
12	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
13	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
14	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
15	0.00	0.04	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
16	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
17	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
18	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
19	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
20	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
21	0.00	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
22	0.02	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
23	0.02	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
24	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
25	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
26	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
27	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
28	0.00	0.00	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
29	0.00	NA	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
30	0.00	NA	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data
31	0.00	NA	No Data	NA	No Data	NA	No Data	No Data	NA	No Data	NA	No Data
			Partial Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Precipitation

Monthly Total	0.10	0.04	0.08									
Daily Maximum	0.03	0.04	0.08									
			Partial Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data

Annual Summaries for CY07

Total Inches 0.22

Partial Data

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.3 PG58: Gaging Station GS01

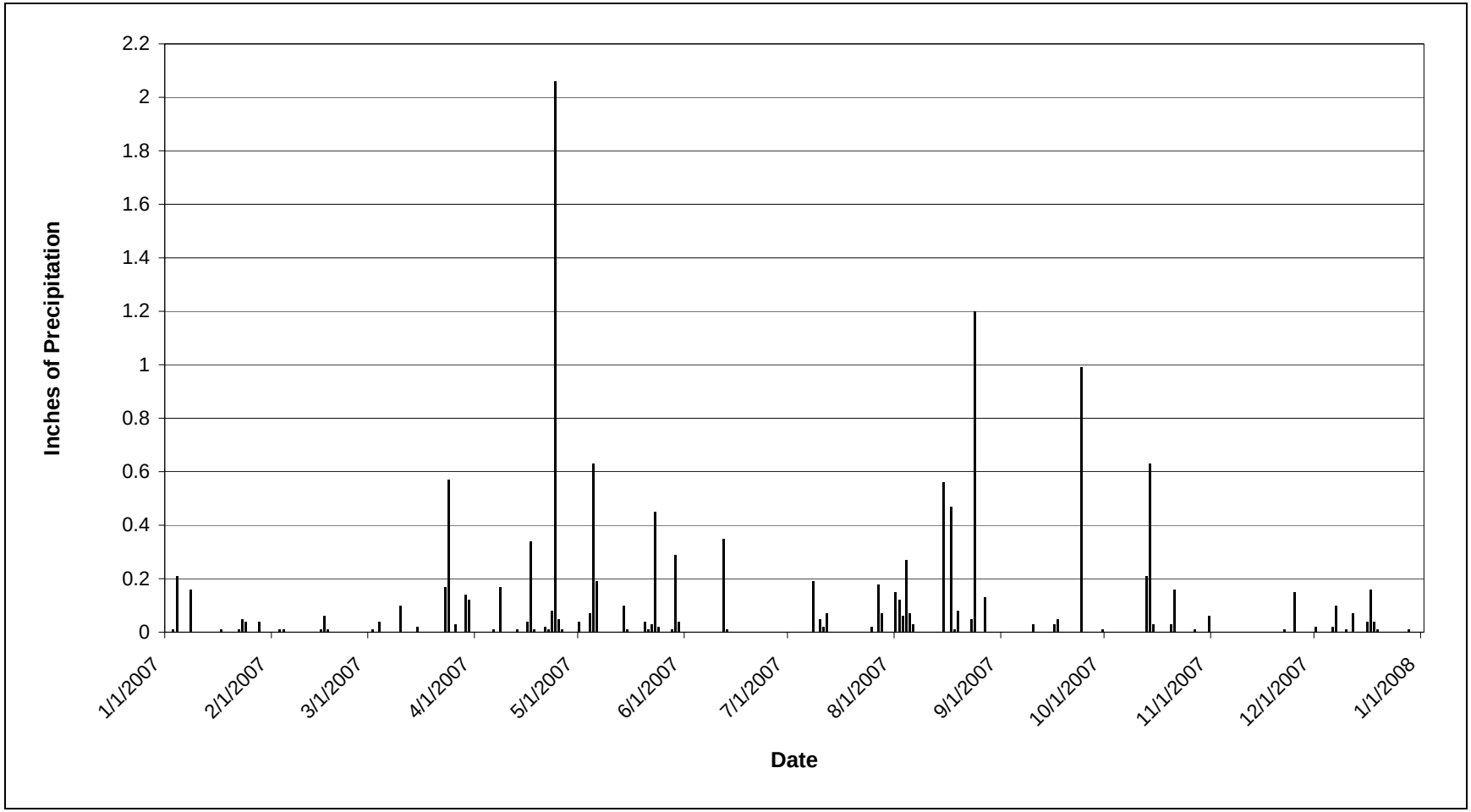


Figure A−3. CY 2007 Annual Hyetograph at PG58: Gaging Station GS01

Table A–19. CY 2007 Precipitation Summary for PG58: Gaging Station GS01

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.15	0.00	0.00	0.00	0.02
2	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.12	0.00	0.00	0.00	0.00
3	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
4	0.21	0.01	0.04	0.00	0.07	0.00	0.00	0.27	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.07	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.01	0.19	0.00	0.00	0.03	0.00	0.00	0.00	0.02
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
8	0.16	0.00	0.00	0.17	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.10	0.00	0.00	0.00	0.05	0.00	0.03	0.00	0.00	0.01
11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.35	0.07	0.00	0.00	0.00	0.00	0.07
13	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.21	0.00	0.00
14	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.63	0.00	0.00
15	0.00	0.01	0.02	0.00	0.01	0.00	0.00	0.56	0.00	0.03	0.00	0.00
16	0.00	0.06	0.00	0.04	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.04
17	0.01	0.01	0.00	0.34	0.00	0.00	0.00	0.47	0.05	0.00	0.00	0.16
18	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.04
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.01
20	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.03	0.00	0.00
21	0.00	0.00	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.16	0.00	0.00
22	0.01	0.00	0.00	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.00
23	0.05	0.00	0.17	0.08	0.45	0.00	0.00	0.05	0.00	0.00	0.00	0.00
24	0.04	0.00	0.57	2.06	0.02	0.00	0.00	1.20	0.99	0.00	0.00	0.00
25	0.00	0.00	0.00	0.05	0.00	0.00	0.02	0.00	0.00	0.00	0.15	0.00
26	0.00	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.13	0.00	0.01	0.00	0.00
28	0.04	0.00	0.00	0.00	0.01	0.00	0.07	0.00	0.00	0.00	0.00	0.01
29	0.00	NA	0.14	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.12	0.00	0.04	0.00	0.00	0.00	0.01	0.00	0.00	0.00
31	0.00	NA	0.00	NA	0.00	NA	0.00	0.00	NA	0.06	NA	0.00

Precipitation

Monthly Total	0.53	0.10	1.20	2.81	1.93	0.36	0.60	3.20	1.11	1.13	0.16	0.48
Daily Maximum	0.21	0.06	0.57	2.06	0.63	0.35	0.19	1.20	0.99	0.63	0.15	0.16

Annual Summaries for CY07

Total Inches 13.61

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.4 PG59: Gaging Station GS03

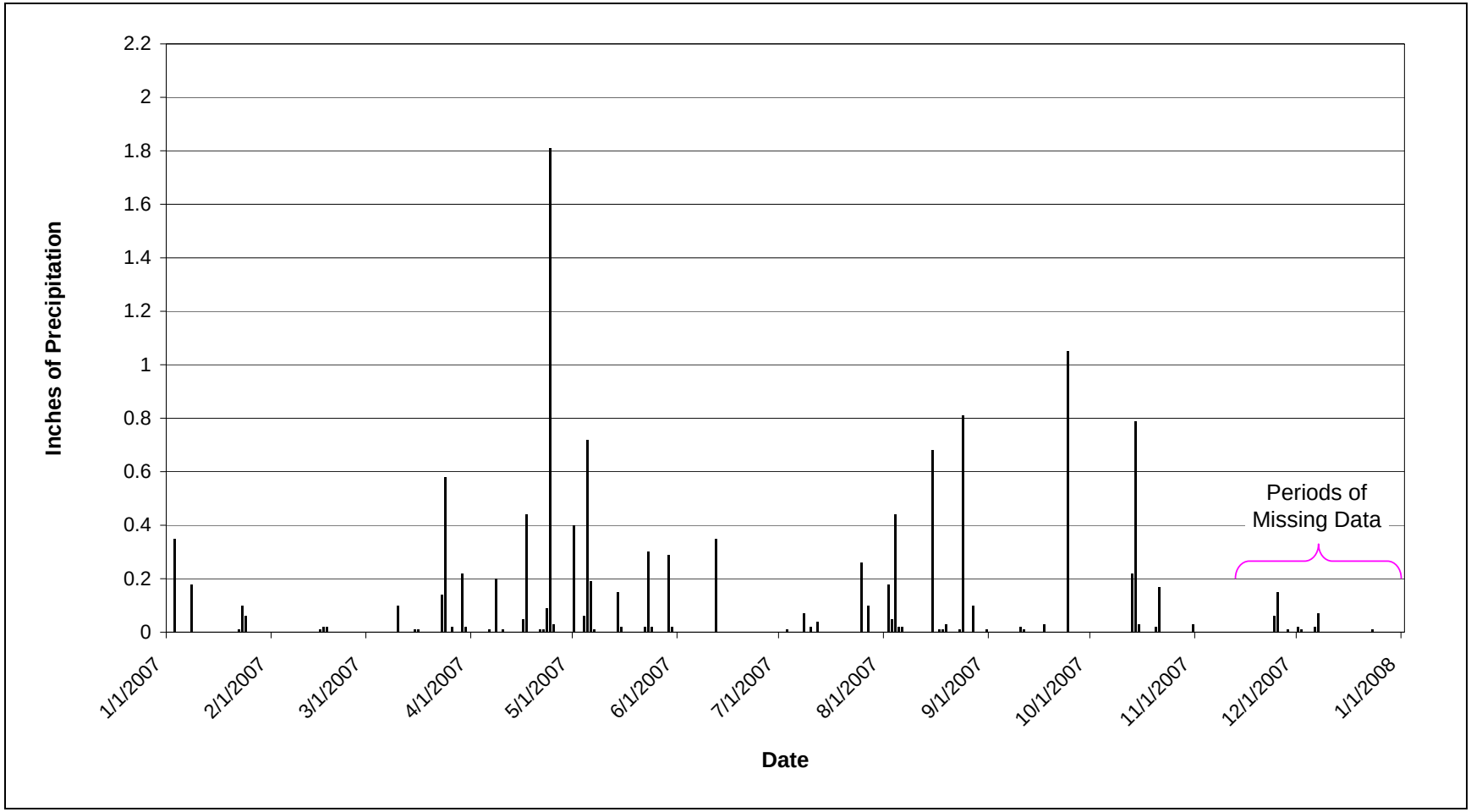


Figure A−4. CY 2007 Annual Hyetograph at PG59: Gaging Station GS03

Table A–20. CY 2007 Precipitation Summary for PG59: Gaging Station GS03

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.02
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.01
3	0.35	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.44	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.02	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.01	0.19	0.00	0.00	0.02	0.00	0.00	0.00	0.02
7	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.07
8	0.18	0.00	0.00	0.20	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data
10	0.00	0.00	0.10	0.01	0.00	0.00	0.02	0.00	0.02	0.00	0.00	No Data
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.35	0.04	0.00	0.00	0.00	No Data	No Data
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22	No Data	No Data
14	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.79	No Data	No Data
15	0.00	0.01	0.01	0.00	0.02	0.00	0.00	0.68	0.00	0.03	No Data	No Data
16	0.00	0.02	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00	No Data	No Data
17	0.00	0.02	0.00	0.44	0.00	0.00	0.00	0.01	0.03	0.00	No Data	No Data
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	No Data	No Data
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	No Data	No Data
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	No Data	0.00
21	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.17	0.00	0.00
22	0.01	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	No Data
23	0.10	0.00	0.14	0.09	0.30	0.00	0.00	0.01	0.00	0.00	0.00	0.01
24	0.06	0.00	0.58	1.81	0.02	0.00	0.00	0.81	1.05	0.00	0.06	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.26	0.00	0.00	0.00	0.15	0.00
26	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data
27	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.00	0.00	0.00	No Data
28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	No Data
29	0.00	NA	0.22	0.00	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	NA	0.00	NA	0.00	NA	0.00	0.01	NA	0.03	NA	0.00
											Partial Data	Partial Data

Precipitation

Monthly Total	0.70	0.05	1.10	2.66	2.20	0.35	0.50	2.37	1.11	1.26	0.22	0.13
Daily Maximum	0.35	0.02	0.58	1.81	0.72	0.35	0.26	0.81	1.05	0.79	0.15	0.07
											Partial Data	Partial Data

Annual Summaries for CY07

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

Total Inches 12.65

Partial Data

A.2.5 PG61: Gaging Station GS05

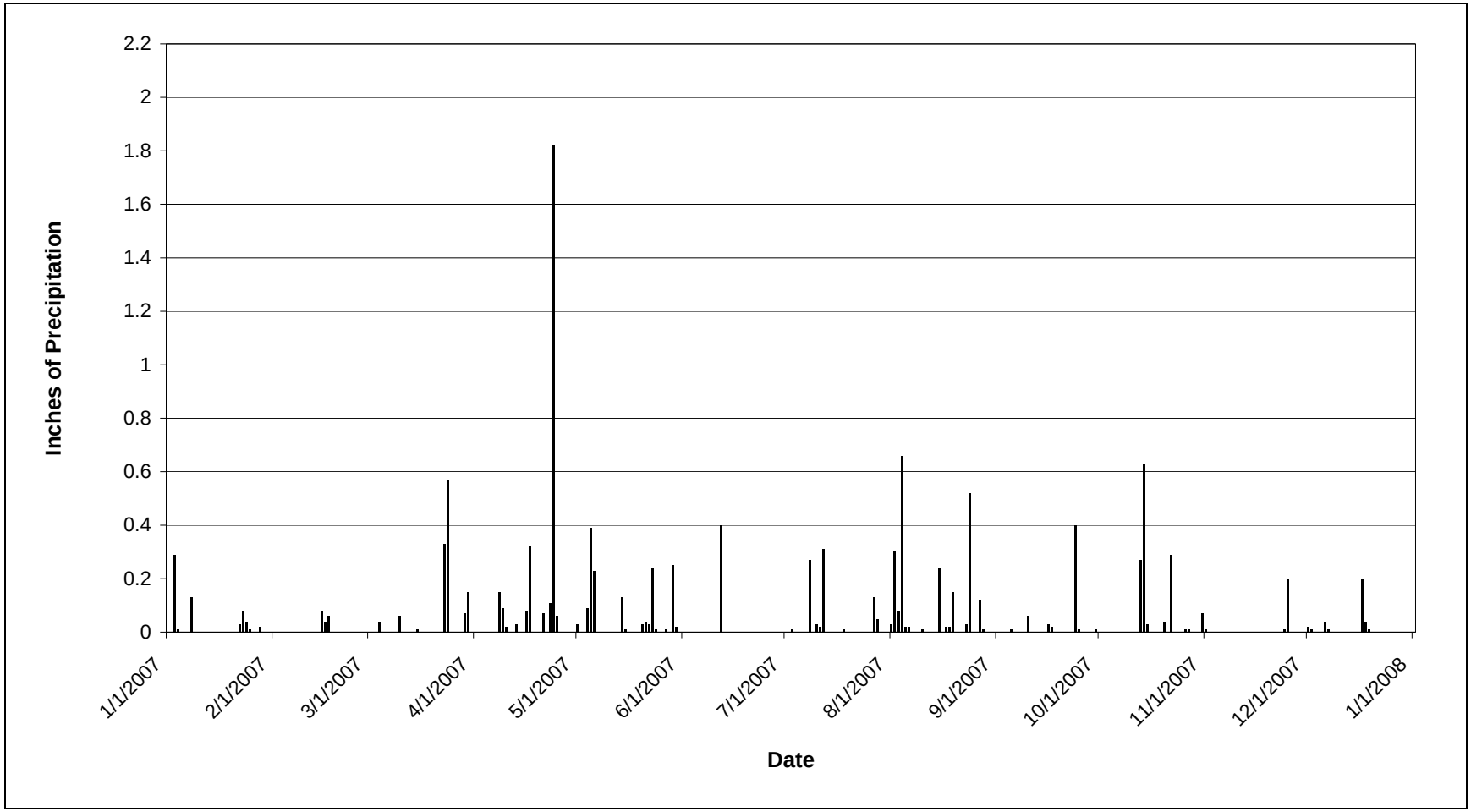


Figure A-5. CY 2007 Annual Hyetograph at PG61: Gaging Station GS05

Table A–21. CY 2007 Precipitation Summary for PG61: Gaging Station GS05

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.03	0.00	0.00	0.01	0.02
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.01
3	0.29	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00
4	0.01	0.00	0.04	0.00	0.09	0.00	0.00	0.66	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.02	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.02	0.00	0.00	0.00	0.04
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
8	0.13	0.00	0.00	0.15	0.00	0.00	0.27	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.06	0.02	0.00	0.00	0.03	0.01	0.06	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.40	0.31	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.27	0.00	0.00
14	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.63	0.00	0.00
15	0.00	0.08	0.01	0.00	0.01	0.00	0.00	0.24	0.00	0.03	0.00	0.00
16	0.00	0.04	0.00	0.08	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00
17	0.00	0.06	0.00	0.32	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.20
18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.04
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.01
20	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.07	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.03	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.29	0.00	0.00
23	0.08	0.00	0.33	0.11	0.24	0.00	0.00	0.03	0.00	0.00	0.00	0.00
24	0.04	0.00	0.57	1.82	0.01	0.00	0.00	0.52	0.40	0.00	0.01	0.00
25	0.01	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.01	0.00	0.20	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00
27	0.00	0.00	0.00	0.00	0.01	0.00	0.13	0.12	0.00	0.01	0.00	0.00
28	0.02	0.00	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00
29	0.00	NA	0.07	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.15	0.00	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00
31	0.00	NA	0.00	NA	0.00	NA	0.00	0.00	NA	0.07	NA	0.00

Precipitation

Monthly Total	0.61	0.18	1.23	2.75	1.51	0.40	0.83	2.23	0.54	1.35	0.22	0.33
Daily Maximum	0.29	0.08	0.57	1.82	0.39	0.40	0.31	0.66	0.40	0.63	0.20	0.20

Annual Summaries for CY07

Total Inches 12.18

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.6 PG72: Telemetry Repeater Node RPTR (North Walnut Creek)

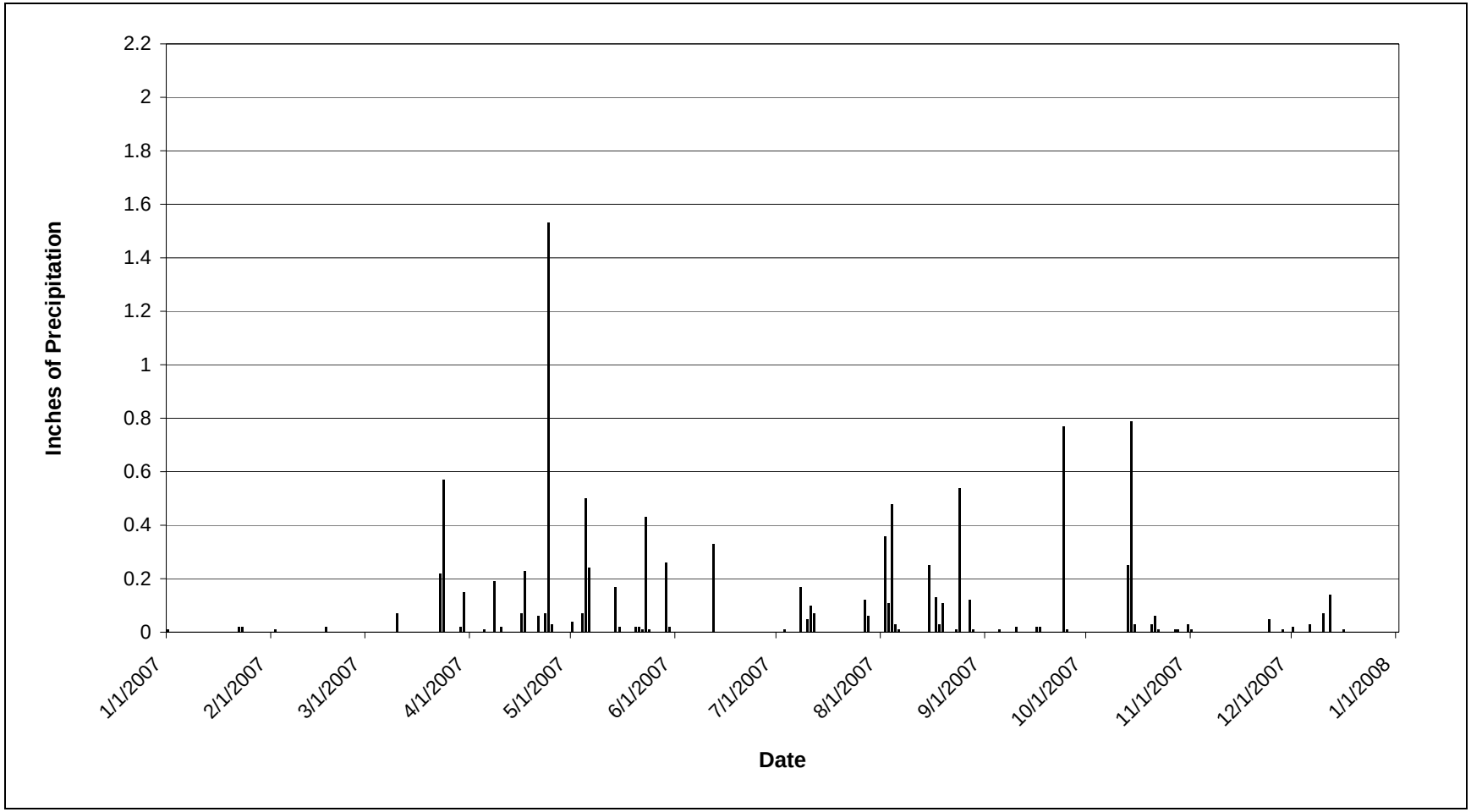


Figure A-6. CY 2007 Annual Hyetograph at PG72: Telemetry Repeater Node RPTR

Table A–22. CY 2007 Precipitation Summary for PG72: Telemetry Repeater Node RPTR

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.01	0.02
2	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.11	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.48	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.01	0.50	0.00	0.00	0.03	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.01	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.19	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.07	0.02	0.00	0.00	0.05	0.00	0.02	0.00	0.00	0.07
11	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.33	0.07	0.00	0.00	0.00	0.00	0.14
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00
14	0.00	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.79	0.00	0.00
15	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.25	0.00	0.03	0.00	0.00
16	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.01
17	0.00	0.02	0.00	0.23	0.00	0.00	0.00	0.13	0.02	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.03	0.00	0.00
21	0.00	0.00	0.00	0.06	0.02	0.00	0.00	0.00	0.00	0.06	0.00	0.00
22	0.02	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00
23	0.02	0.00	0.22	0.07	0.43	0.00	0.00	0.01	0.00	0.00	0.00	0.00
24	0.00	0.00	0.57	1.53	0.01	0.00	0.00	0.54	0.77	0.00	0.05	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00
26	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.12	0.00	0.01	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.00	0.01	0.01	0.00
29	0.00	NA	0.02	0.00	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.15	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	NA	0.00	NA	0.00	NA	0.00	0.00	NA	0.03	NA	0.00

Precipitation

Monthly Total	0.05	0.03	1.03	2.21	1.81	0.33	0.58	2.19	0.85	1.22	0.07	0.27
Daily Maximum	0.02	0.02	0.57	1.53	0.50	0.33	0.17	0.54	0.77	0.79	0.05	0.14

Annual Summaries for CY07

Total Inches 10.64

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.7 PG73: Gaging Station GS13

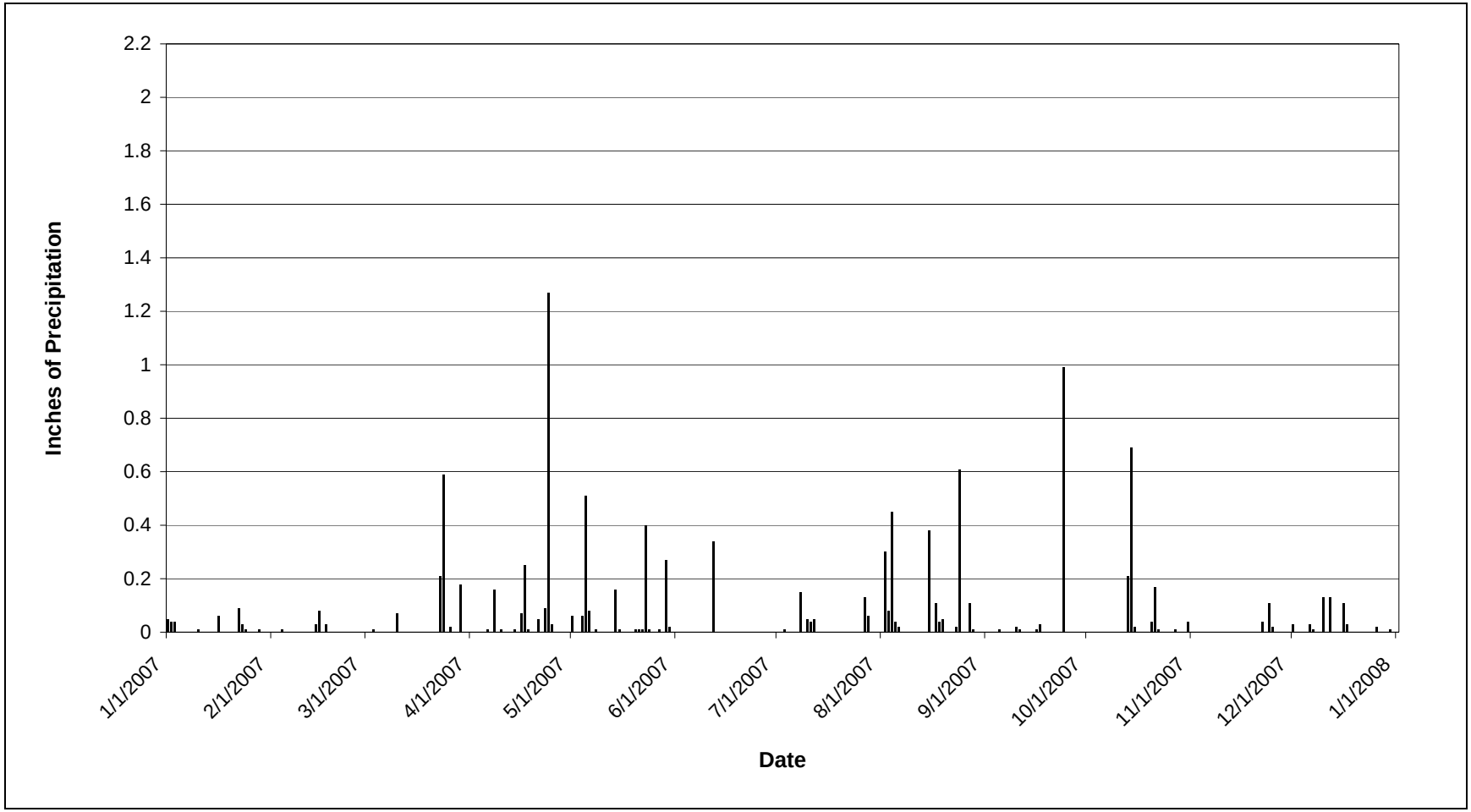


Figure A-7. CY 2007 Annual Hyetograph at PG73: Gaging Station GS13

Table A–23. CY 2007 Precipitation Summary for PG73: Gaging Station GS13

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.05	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.03
2	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.00
3	0.04	0.00	0.01	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00
4	0.00	0.01	0.00	0.00	0.06	0.00	0.00	0.45	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.04	0.01	0.00	0.00	0.00
6	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.02	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
8	0.00	0.00	0.00	0.16	0.01	0.00	0.15	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.01	0.00	0.07	0.01	0.00	0.00	0.05	0.00	0.02	0.00	0.00	0.13
11	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.01	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.34	0.05	0.00	0.00	0.00	0.00	0.13
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00
14	0.00	0.03	0.00	0.01	0.16	0.00	0.00	0.00	0.00	0.69	0.00	0.00
15	0.00	0.08	0.00	0.00	0.01	0.00	0.00	0.38	0.00	0.02	0.00	0.00
16	0.06	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.11
17	0.00	0.03	0.00	0.25	0.00	0.00	0.00	0.11	0.03	0.00	0.00	0.03
18	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.00	0.00	0.17	0.00	0.00
22	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.04	0.00
23	0.03	0.00	0.21	0.09	0.40	0.00	0.00	0.02	0.00	0.00	0.00	0.00
24	0.01	0.00	0.59	1.27	0.01	0.00	0.00	0.61	0.99	0.00	0.11	0.00
25	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
26	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
27	0.00	0.00	0.00	0.00	0.01	0.00	0.13	0.11	0.00	0.01	0.00	0.00
28	0.01	0.00	0.00	0.00	0.00	0.00	0.06	0.01	0.00	0.00	0.00	0.00
29	0.00	NA	0.18	0.00	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01
31	0.00	NA	0.00	NA	0.00	NA	0.00	0.00	NA	0.04	NA	0.00

Precipitation

Monthly Total	0.34	0.15	1.08	1.96	1.63	0.34	0.49	2.22	1.07	1.19	0.17	0.50
Daily Maximum	0.09	0.08	0.59	1.27	0.51	0.34	0.15	0.61	0.99	0.69	0.11	0.13

Annual Summaries for CY07

Total Inches 11.14

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.8 PG74: Gaging Station GS59

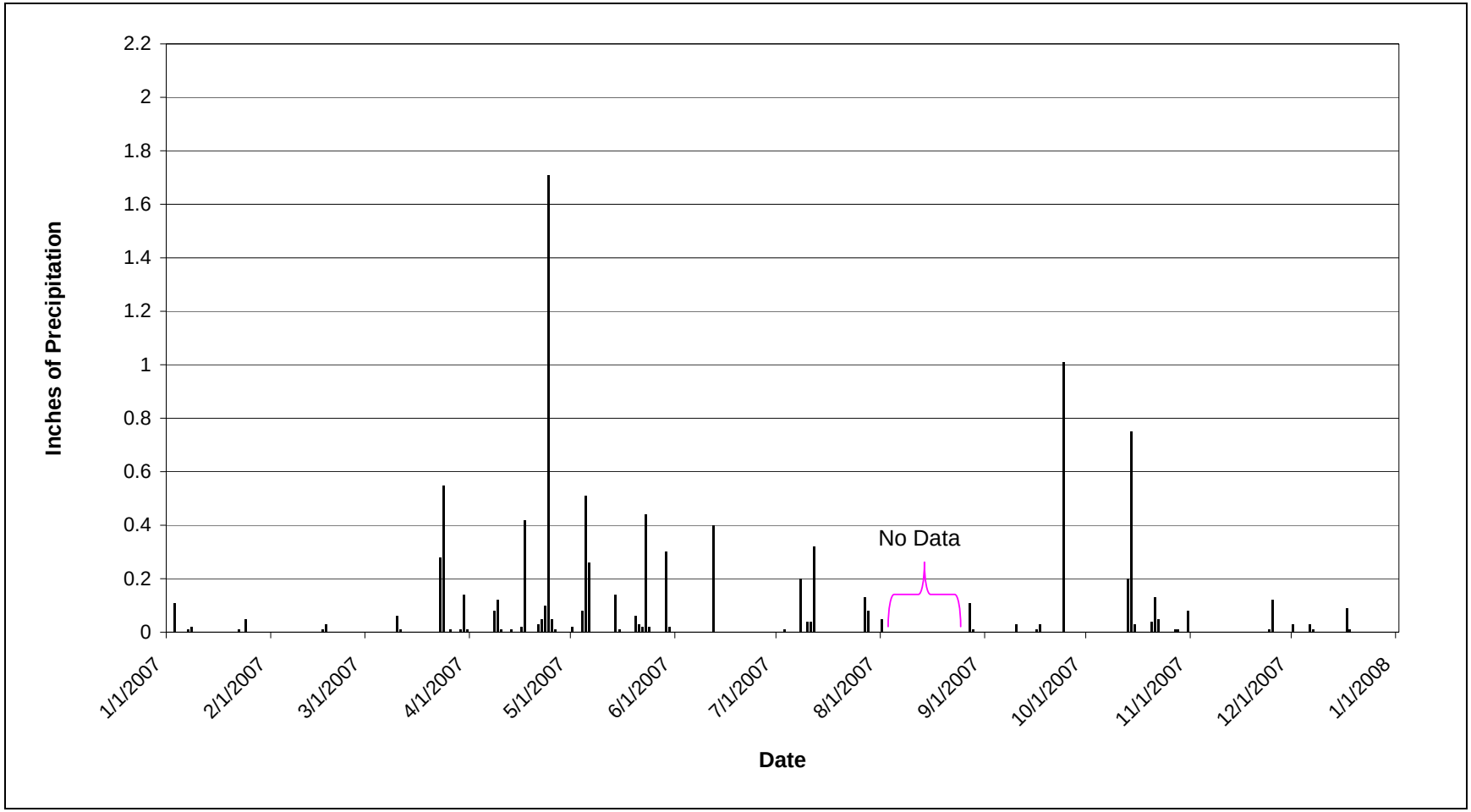


Figure A-8. CY 2007 Annual Hyetograph at PG74: Gaging Station GS59

Table A–24. CY 2007 Precipitation Summary for PG74: Gaging Station GS59

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.05	0.00	0.00	0.00	0.03
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.00
3	0.11	0.00	0.00	0.00	0.00	0.00	0.01	No Data	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.08	0.00	0.00	No Data	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.51	0.00	0.00	No Data	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.26	0.00	0.00	No Data	0.00	0.00	0.00	0.03
7	0.01	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.01
8	0.02	0.00	0.00	0.08	0.00	0.00	0.20	No Data	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.12	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.00
10	0.00	0.00	0.06	0.01	0.00	0.00	0.04	No Data	0.03	0.00	0.00	0.00
11	0.00	0.00	0.01	0.00	0.00	0.00	0.04	No Data	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.40	0.32	No Data	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.01	0.00	0.00	0.00	No Data	0.00	0.20	0.00	0.00
14	0.00	0.00	0.00	0.00	0.14	0.00	0.00	No Data	0.00	0.75	0.00	0.00
15	0.00	0.00	0.00	0.00	0.01	0.00	0.00	No Data	0.00	0.03	0.00	0.00
16	0.00	0.01	0.00	0.02	0.00	0.00	0.00	No Data	0.01	0.00	0.00	0.00
17	0.00	0.03	0.00	0.42	0.00	0.00	0.00	No Data	0.03	0.00	0.00	0.09
18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.01
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.06	0.00	0.00	No Data	0.00	0.04	0.00	0.00
21	0.00	0.00	0.00	0.03	0.03	0.00	0.00	No Data	0.00	0.13	0.00	0.00
22	0.01	0.00	0.00	0.05	0.02	0.00	0.00	No Data	0.00	0.05	0.00	0.00
23	0.00	0.00	0.28	0.10	0.44	0.00	0.00	No Data	0.00	0.00	0.00	0.00
24	0.05	0.00	0.55	1.71	0.02	0.00	0.00	No Data	1.01	0.00	0.01	0.00
25	0.00	0.00	0.00	0.05	0.00	0.00	0.00	No Data	0.00	0.00	0.12	0.00
26	0.00	0.00	0.01	0.01	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.00
27	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.11	0.00	0.01	0.00	0.00
28	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.01	0.00	0.01	0.00	0.00
29	0.00	NA	0.01	0.00	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	NA	0.14	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31	0.00	NA	0.01	NA	0.00	NA	0.00	0.00	NA	0.08	NA	0.00
								Partial Data				

Precipitation

Monthly Total	0.20	0.04	1.07	2.61	1.91	0.40	0.82	0.17	1.08	1.30	0.13	0.17
Daily Maximum	0.11	0.03	0.55	1.71	0.51	0.40	0.32	0.11	1.01	0.75	0.12	0.09
								Partial Data				

Annual Summaries for CY07

Total Inches 9.90

Partial Data

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.9 PG76: Telemetry Repeater Node RTU3

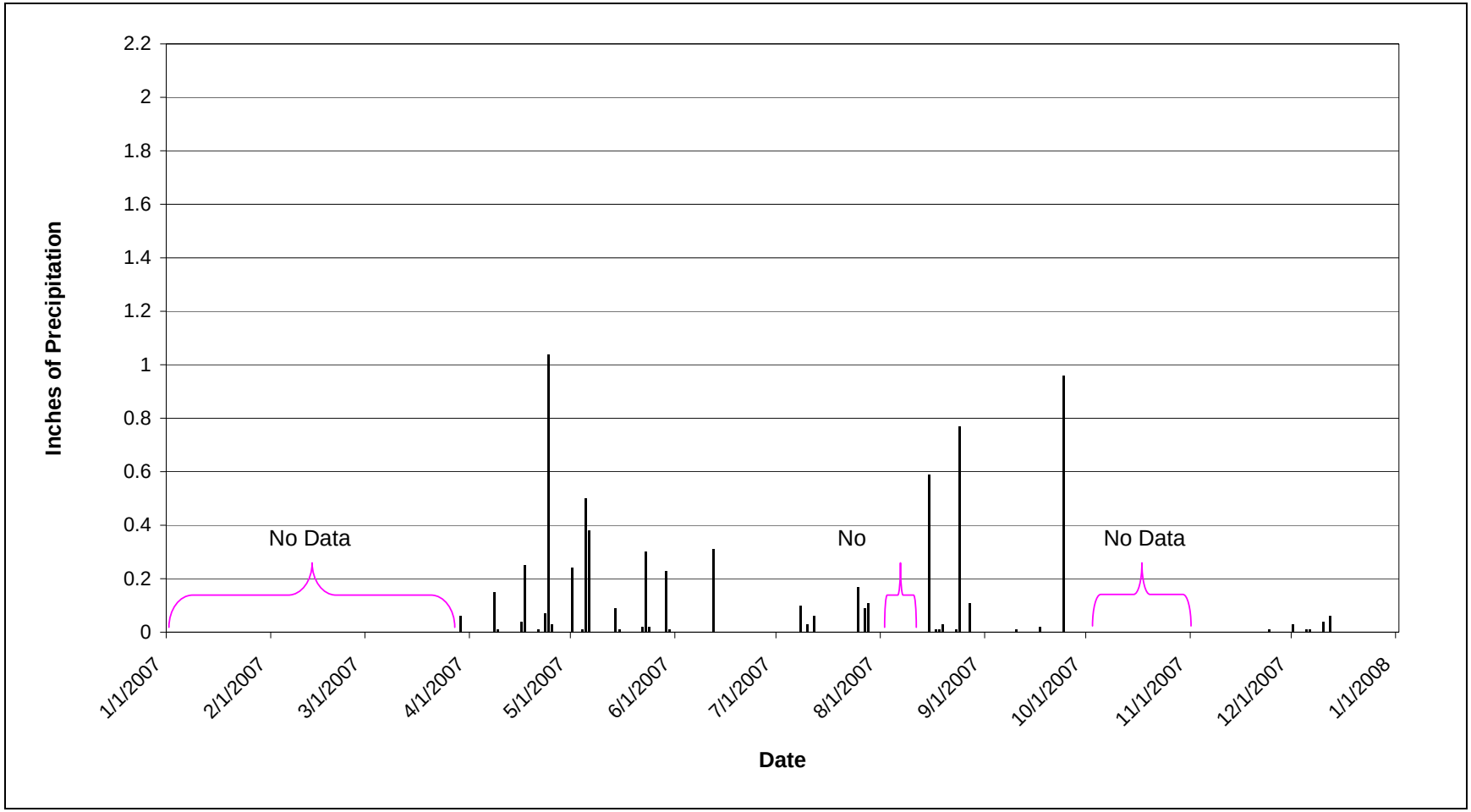


Figure A-9. CY 2007 Annual Hyetograph at PG76: Telemetry Repeater Node RTU3

Table A–25. CY 2007 Precipitation Summary for PG76: Telemetry Repeater Node RTU3

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	No Data	No Data	No Data	0.00	0.24	0.00	0.00	0.00	0.00	0.00	No Data	0.03
2	No Data	No Data	No Data	0.00	0.00	0.00	0.00	No Data	0.00	0.00	0.00	0.00
3	No Data	No Data	No Data	0.00	0.00	0.00	0.00	No Data	0.00	No Data	0.00	0.00
4	No Data	No Data	No Data	0.00	0.01	0.00	0.00	No Data	0.00	No Data	0.00	0.00
5	No Data	No Data	No Data	0.00	0.50	0.00	0.00	No Data	0.00	No Data	0.00	0.01
6	No Data	No Data	No Data	0.00	0.38	0.00	0.00	No Data	0.00	No Data	0.00	0.01
7	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
8	No Data	No Data	No Data	0.15	0.00	0.00	0.10	0.00	0.00	No Data	0.00	0.00
9	No Data	No Data	No Data	0.01	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
10	No Data	No Data	No Data	0.00	0.00	0.00	0.03	0.00	0.01	No Data	0.00	0.04
11	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
12	No Data	No Data	No Data	0.00	0.00	0.31	0.06	0.00	0.00	No Data	0.00	0.06
13	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
14	No Data	No Data	No Data	0.00	0.09	0.00	0.00	0.00	0.00	No Data	0.00	0.00
15	No Data	No Data	No Data	0.00	0.01	0.00	0.00	0.59	0.00	No Data	0.00	0.00
16	No Data	No Data	No Data	0.04	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
17	No Data	No Data	No Data	0.25	0.00	0.00	0.00	0.01	0.02	No Data	0.00	0.00
18	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.01	0.00	No Data	0.00	0.00
19	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.03	0.00	No Data	0.00	0.00
20	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
21	No Data	No Data	No Data	0.01	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
22	No Data	No Data	No Data	0.00	0.02	0.00	0.00	0.00	0.00	No Data	0.00	0.00
23	No Data	No Data	No Data	0.07	0.30	0.00	0.00	0.01	0.00	No Data	0.00	0.00
24	No Data	No Data	No Data	1.04	0.02	0.00	0.00	0.77	0.96	No Data	0.01	0.00
25	No Data	No Data	No Data	0.03	0.00	0.00	0.17	0.00	0.00	No Data	0.00	0.00
26	No Data	No Data	No Data	0.00	0.00	0.00	0.00	0.00	0.00	No Data	0.00	0.00
27	No Data	No Data	No Data	0.00	0.00	0.00	0.09	0.11	0.00	No Data	0.00	0.00
28	No Data	No Data	0.00	0.00	0.00	0.00	0.11	0.00	0.00	No Data	0.00	0.00
29	No Data	NA	0.06	0.00	0.23	0.00	0.00	0.00	0.00	No Data	0.00	0.00
30	No Data	NA	0.00	0.00	0.01	0.00	0.00	0.00	0.00	No Data	0.00	0.00
31	No Data	NA	0.00	NA	0.00	NA	0.00	0.00	NA	No Data	NA	0.00
	No Data	No Data	Partial Data					Partial Data		Partial Data	Partial Data	

Precipitation

Monthly Total			0.06	1.60	1.81	0.31	0.56	1.53	0.99	0.00	0.01	0.15
Daily Maximum			0.06	1.04	0.50	0.31	0.17	0.77	0.96	0.00	0.01	0.06
	No Data	No Data	Partial Data					Partial Data		Partial Data	Partial Data	

Annual Summaries for CY07

Total Inches 7.02

Partial Data

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.2.10 PG77: Telemetry Repeater Node RTU2

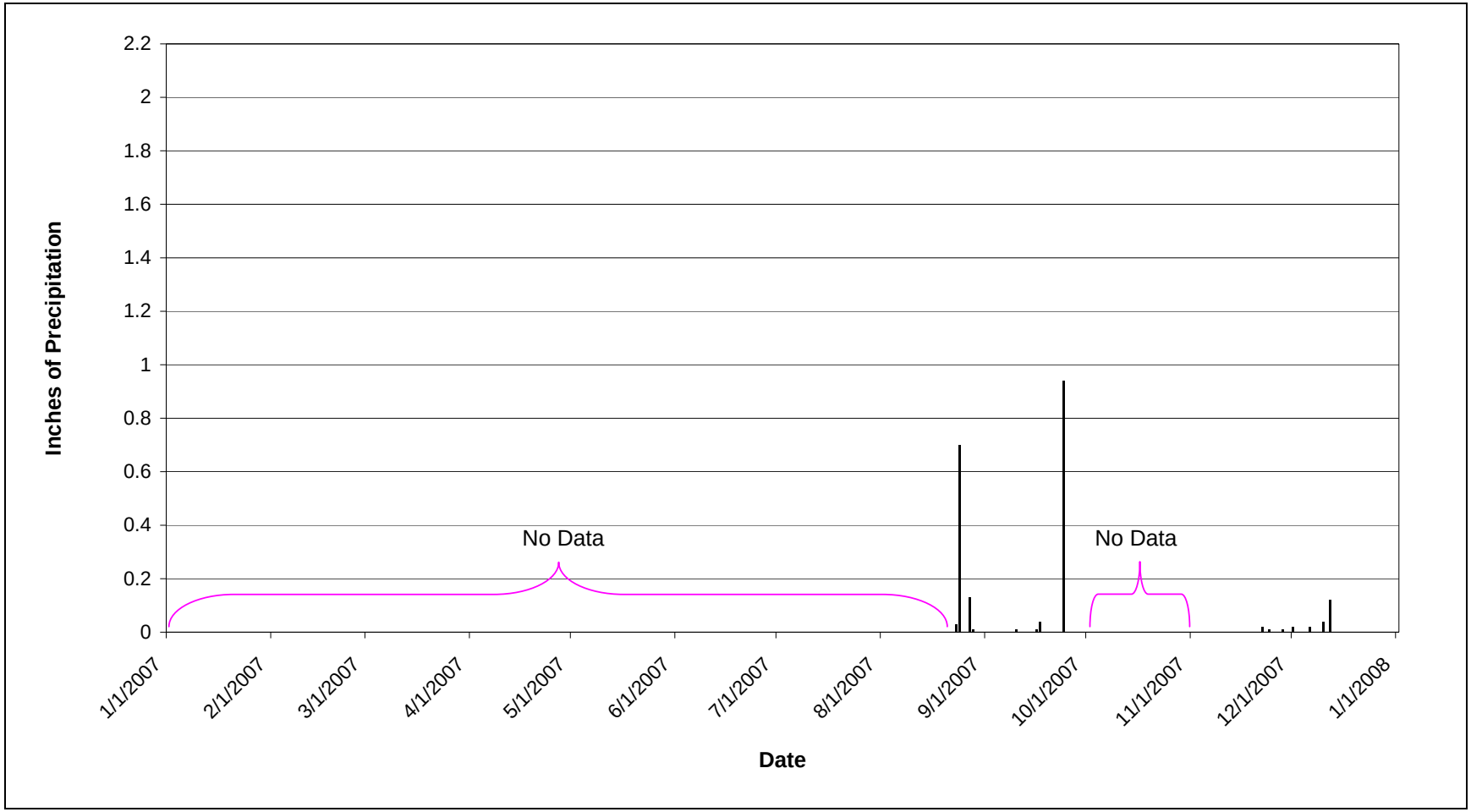


Figure A-10. CY 2007 Annual Hyetograph at PG77: Telemetry Repeater Node RTU2

Table A–26. CY 2007 Precipitation Summary for PG77: Telemetry Repeater Node RTU2

Calendar Year 2007: Daily Total Precipitation Values in Inches

Day	Jan-07	Feb-07	Mar-07	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07
1	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	0.00	No Data	0.02
2	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	0.00	0.00	0.00
3	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
4	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
5	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
6	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.02
7	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
8	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
9	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
10	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.01	No Data	0.00	0.04
11	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
12	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.12
13	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
14	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
15	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
16	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.01	No Data	0.00	0.00
17	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.04	No Data	0.00	0.00
18	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
19	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
20	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
21	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.00	0.00
22	No Data	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	No Data	0.02	0.00
23	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.03	0.00	No Data	0.00	0.00
24	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.70	0.94	No Data	0.01	0.00
25	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	0.00	No Data	0.00	0.00
26	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.00	0.00	No Data	0.00	0.00
27	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.13	0.00	No Data	0.00	0.00
28	No Data	No Data	No Data	No Data	No Data	No Data	No Data	0.01	0.00	No Data	0.01	0.00
29	No Data	NA	No Data	No Data	No Data	No Data	No Data	0.00	0.00	No Data	0.00	0.00
30	No Data	NA	No Data	No Data	No Data	No Data	No Data	0.00	0.00	No Data	0.00	0.00
31	No Data	NA	No Data	NA	No Data	NA	No Data	0.00	NA	No Data	NA	0.00
	No Data	No Data	No Data	No Data	No Data	No Data	No Data	Partial Data		Partial Data	Partial Data	

Precipitation

Monthly Total								0.87	1.00	0.00	0.04	0.20
Daily Maximum								0.70	0.94	0.00	0.02	0.12
	No Data	No Data	No Data	No Data	No Data	No Data	No Data	Partial Data		Partial Data	Partial Data	

Annual Summaries for CY07

Total Inches 2.11

Partial Data

KEY: No Data: Bad or missing data due to equipment failures or discontinued operation

A.3 Ground Water Level Data for CY 2007

Water level data are included for all wells at which manual measurements were collected.

Table A–27. Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
00191	4/4/2007	5952.80	17.68
00191	7/3/2007	5953.22	17.26
00191	10/8/2007	5949.41	21.07
00193	4/4/2007	5753.94	13.67
00193	7/3/2007	5749.70	17.91
00193	10/4/2007	5755.14	12.47
00193	11/7/2007	5756.26	11.35
00203	4/4/2007	5966.65	7.51
00203	7/9/2007	5966.90	7.26
00203	10/4/2007	5965.64	8.52
00491	4/4/2007	5891.88	13.39
00491	7/3/2007	5892.52	12.75
00491	10/4/2007	5889.22	16.05
00797	4/3/2007	5923.87	16.81
00797	7/20/2007	5919.79	20.89
00797	10/8/2007	5923.18	17.50
00797	10/23/2007	5923.37	17.31
00897	4/4/2007	5943.67	23.23
00897	7/5/2007	5945.44	21.46
00897	10/4/2007	5943.63	23.27
00997	4/5/2007	5793.63	7.48
00997	7/5/2007	5793.05	8.06
00997	10/4/2007	5792.06	9.05
00997	11/14/2007	5792.91	8.20
03991	4/5/2007	5900.11	36.58
03991	7/10/2007	5900.87	35.82
03991	10/4/2007	5900.82	35.87
04091	4/5/2007	5892.30	37.64
04091	7/10/2007	5892.59	37.35
04091	10/4/2007	5892.56	37.38
04091	11/8/2007	5892.53	37.41
0487	4/3/2007	5896.85	14.75
0487	7/3/2007	5898.32	13.28
05691	4/5/2007	5915.51	33.20
05691	7/5/2007	5918.41	30.30
05691	10/4/2007	5918.25	30.46
07391	4/4/2007	5943.54	7.19
07391	7/3/2007	5942.57	8.16
07391	10/8/2007	5941.75	8.98
10199	7/5/2007		
10304	4/4/2007	5811.01	5.79
10304	7/3/2007	5810.49	6.31
10304	10/8/2007	5809.74	7.06
10304	11/6/2007	5810.88	5.92
10394	4/4/2007	5628.38	4.80

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
10394	7/10/2007	5626.10	7.08
10394	10/8/2007	5624.82	8.36
10594	4/4/2007	5813.13	7.96
10594	7/10/2007	5811.45	9.64
10594	9/12/2007	5811.06	10.03
10594	10/4/2007	5810.34	10.75
10594	11/1/2007	5811.50	9.59
10992	4/3/2007	5870.80	27.82
10992	7/20/2007	5872.99	25.63
11092	4/3/2007		
11092	7/3/2007		
11104	4/3/2007	5915.50	7.89
11104	7/20/2007	5914.36	9.03
11104	10/8/2007	5913.36	10.03
11104	10/18/2007	5914.62	8.77
11502	4/3/2007	6001.05	15.14
11502	7/2/2007	5999.68	16.51
11502	10/8/2007	5997.72	18.47
11502	10/15/2007	5997.59	18.60
15199	4/5/2007	5922.18	5.67
15199	7/5/2007	5922.21	5.64
15199	10/4/2007	5920.85	7.00
15299	4/5/2007	5918.01	9.61
15299	7/5/2007	5917.63	9.99
15299	10/4/2007	5916.84	10.78
15399	4/5/2007	5925.36	0.80
15399	7/5/2007	5925.39	0.77
15399	10/8/2007	5924.95	1.21
15499	4/5/2007	5921.25	4.57
15499	7/5/2007	5921.24	4.58
15499	10/4/2007	5920.69	5.13
15599	4/5/2007	5913.63	6.36
15599	7/5/2007	5912.11	7.88
15599	10/4/2007	5911.89	8.10
15699	4/5/2007	5913.11	7.19
15699	7/5/2007	5911.68	8.62
15699	10/4/2007	5911.62	8.68
15699	11/6/2007	5912.08	8.22
15799	4/5/2007	5911.82	9.73
15799	7/5/2007	5912.92	8.63
15799	10/4/2007	5912.28	9.27
16199	4/5/2007		
16199	10/4/2007		
16299	4/5/2007	5913.00	11.90
16299	7/5/2007	5911.71	13.19
16299	10/4/2007	5911.79	13.11
16399	4/5/2007	5913.20	9.23
16399	7/5/2007	5911.90	10.53
16399	10/4/2007	5911.98	10.45
16499	4/5/2007	5913.12	8.69

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
16499	7/5/2007	5911.83	9.98
16499	10/4/2007	5911.90	9.91
16599	4/5/2007	5912.55	9.60
16599	7/5/2007	5911.26	10.89
16599	10/4/2007	5911.34	10.81
1786	4/4/2007	5863.89	5.47
1786	7/10/2007	5863.40	5.96
1786	10/8/2007	5862.46	6.90
18199	4/3/2007	5976.50	11.09
18199	7/9/2007	5975.57	12.02
18199	10/8/2007	5973.18	14.41
20205	4/4/2007	5926.96	12.55
20205	7/9/2007	5929.69	9.82
20205	10/8/2007	5929.01	10.50
20205	10/29/2007	5928.87	10.64
20505	4/4/2007	5929.58	11.96
20505	7/9/2007	5932.94	8.60
20505	10/8/2007	5931.93	9.61
20505	10/25/2007	5931.52	10.02
20705	4/4/2007	5927.57	15.63
20705	7/9/2007	5929.05	14.15
20705	10/8/2007	5927.55	15.65
20705	10/25/2007	5927.24	15.96
20902	4/3/2007	5942.69	6.69
20902	7/9/2007	5944.07	5.31
20902	10/4/2007	5942.57	6.81
21002	4/3/2007	5949.41	11.59
21002	7/9/2007	5948.86	12.14
21002	10/8/2007	5945.62	15.38
21305	4/3/2007	5957.78	8.88
21305	7/5/2007	5956.32	10.34
21305	10/8/2007	5952.21	14.45
21505	4/3/2007	5967.72	5.83
21505	7/5/2007	5966.51	7.04
21505	10/8/2007	5965.73	7.82
21605	4/3/2007	5968.91	7.35
21605	7/5/2007	5967.33	8.93
21605	10/9/2007	5965.14	11.12
22205	4/4/2007	5915.35	19.05
22205	7/9/2007	5916.75	17.65
22205	10/9/2007	5916.50	17.90
22996	4/4/2007	5981.60	5.36
22996	7/3/2007	5978.94	8.02
22996	10/9/2007	5975.71	11.25
23296	4/5/2007	5853.34	4.15
23296	7/5/2007	5853.16	4.33
23296	10/3/2007	5853.68	3.81
23296	11/13/2007	5853.50	3.99
30002	4/4/2007	5926.28	3.99
30002	7/2/2007	5924.93	5.34

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
30002	10/8/2007	5922.16	8.11
30002	10/16/2007	5922.09	8.18
30900	4/3/2007	6000.45	6.70
30900	7/2/2007	5998.78	8.37
30900	10/4/2007	5992.70	14.45
33502	4/3/2007	6017.01	5.15
33502	7/10/2007	6014.69	7.47
33502	10/8/2007	6013.13	9.03
33604	4/3/2007	6012.68	6.14
33604	7/10/2007	6012.63	6.19
33604	10/8/2007	6009.98	8.84
33703	4/3/2007	6003.96	12.75
33703	7/10/2007	6003.30	13.41
33703	10/8/2007	5999.11	17.60
33703	10/23/2007	5998.41	18.30
33905	4/3/2007	5993.91	13.51
33905	7/5/2007	5991.35	16.07
33905	10/9/2007	5988.42	19.00
3586	4/5/2007	5906.34	5.98
3586	7/5/2007	5905.94	6.38
3687	4/5/2007	5910.48	40.75
3687	7/5/2007	5912.71	38.52
3687	10/4/2007	5913.52	37.71
37105	4/3/2007	6005.93	8.21
37105	7/10/2007	6004.66	9.48
37105	10/9/2007	6003.13	11.01
37405	4/3/2007	5986.89	22.82
37405	7/10/2007	5987.71	22.00
37405	10/8/2007	5986.54	23.17
37405	10/24/2007	5986.37	23.34
37505	4/3/2007	5995.01	16.81
37505	7/10/2007	5997.41	14.41
37505	10/8/2007	5995.94	15.88
37505	10/24/2007	5995.58	16.24
37591	4/3/2007	5986.12	7.42
37591	7/3/2007	5984.80	8.74
37591	10/8/2007	5979.17	14.37
37691	4/3/2007	5969.10	17.21
37691	7/3/2007	5969.05	17.26
37691	10/8/2007	5967.50	18.81
37705	4/3/2007	5971.62	37.72
37705	7/10/2007	5969.36	39.98
37705	10/8/2007	5970.53	38.81
37705	10/24/2007	5970.62	38.72
39605	4/3/2007	5997.14	11.39
39605	7/20/2007	5997.87	10.66
39605	10/8/2007	5995.72	12.81
40005	4/3/2007	6008.79	29.54
40005	7/2/2007	6008.52	29.81
40005	10/8/2007	6006.36	31.97

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
40205	4/3/2007	6004.94	30.82
40205	7/2/2007	6004.47	31.29
40205	10/8/2007	6003.74	32.02
40305	4/3/2007	6008.03	16.52
40305	7/2/2007	6006.38	18.17
40305	10/8/2007	6004.05	20.50
40305	10/16/2007	6004.14	20.41
4087	4/3/2007	5882.13	2.17
4087	7/2/2007	5881.94	2.36
4087	10/4/2007		
4087	10/16/2007		
41691	4/4/2007	5638.54	7.24
41691	7/10/2007	5638.97	6.81
41691	10/8/2007	5634.21	11.57
42505	4/4/2007	5928.56	11.33
42505	7/9/2007	5929.50	10.39
42505	10/4/2007	5929.04	10.85
42505	10/29/2007	5929.28	10.61
45605	10/1/2007		
4787	4/3/2007	5876.79	7.89
4787	7/20/2007		
4887	4/4/2007		
4887	7/3/2007		
50299	4/4/2007	5922.22	3.69
50299	7/3/2007	5922.00	3.91
50299	10/8/2007	5921.01	4.90
51605	4/4/2007	5836.67	5.44
51605	7/10/2007	5834.97	7.14
51605	10/8/2007	5833.74	8.37
52505	4/3/2007	5942.03	3.76
52505	7/9/2007	5940.27	5.52
52505	10/8/2007	5939.31	6.48
52505	10/29/2007	5940.85	4.94
55905	4/3/2007	5984.77	12.68
55905	7/5/2007	5983.87	13.58
55905	10/8/2007	5982.36	15.09
56305	4/3/2007	5990.86	9.33
56305	7/5/2007	5989.39	10.80
56305	10/8/2007	5986.93	13.26
70099	4/4/2007	5877.90	21.62
70099	7/9/2007	5877.74	21.78
70099	10/3/2007	5877.53	21.99
70099	10/30/2007	5878.69	20.83
70193	4/3/2007	5980.49	11.72
70193	7/2/2007	5979.70	12.51
70193	8/22/2007	5978.62	13.59
70193	10/4/2007	5977.34	14.87
70193	10/10/2007	5977.77	14.44
70299	4/4/2007	5878.02	21.56
70299	7/9/2007	5876.37	23.21

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
70299	10/3/2007	5877.67	21.91
70393	4/3/2007	5993.32	6.77
70393	7/2/2007	5990.33	9.76
70393	8/22/2007	5987.95	12.14
70393	10/4/2007	5986.30	13.79
70393	10/10/2007	5986.18	13.91
70693	4/3/2007	5979.67	12.95
70693	7/2/2007	5976.78	15.84
70693	8/22/2007	5974.84	17.78
70693	10/4/2007	5973.05	19.57
70693	10/10/2007	5972.79	19.83
70705	4/3/2007	5985.23	8.31
70705	7/10/2007	5983.95	9.59
70705	10/9/2007	5982.51	11.03
70799	4/4/2007	5886.60	15.84
70799	7/9/2007	5882.01	20.43
70799	10/3/2007		
70899	4/4/2007	5885.84	16.79
70899	7/10/2007		
70899	10/3/2007		
70999	4/4/2007	5899.69	20.39
70999	7/10/2007		
70999	10/3/2007		
71099	4/5/2007	5885.68	15.27
71099	7/10/2007	5880.88	20.07
71099	10/3/2007	5878.82	22.13
73005	4/3/2007	5918.21	21.90
73005	7/2/2007	5918.15	21.96
73005	8/30/2007	5918.51	21.60
73005	10/3/2007	5914.87	25.24
73005	10/15/2007	5915.21	24.90
73105	4/3/2007	5919.42	9.13
73105	7/2/2007	5918.49	10.06
73105	8/29/2007	5917.66	10.89
73105	10/4/2007	5912.97	15.58
73105	10/11/2007	5914.14	14.41
73205	4/3/2007	5922.45	17.46
73205	7/2/2007	5923.63	16.28
73205	8/28/2007	5923.88	16.03
73205	10/3/2007	5927.68	12.23
73205	10/10/2007	5920.68	19.23
79102	4/4/2007	5948.99	19.89
79102	7/9/2007	5948.79	20.09
79102	10/8/2007	5948.28	20.60
79202	4/4/2007	5944.51	26.18
79202	7/9/2007	5944.67	26.02
79202	10/3/2007	5943.65	27.04
79302	4/4/2007	5940.95	18.86
79302	7/9/2007	5942.75	17.06
79302	10/8/2007	5942.71	17.10

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
79402	4/4/2007	5957.82	3.79
79402	7/9/2007	5955.18	6.43
79402	10/3/2007	5953.27	8.34
79502	4/4/2007	5962.75	7.51
79502	7/9/2007	5961.44	8.82
79502	10/4/2007	5960.78	9.48
79605	4/4/2007	5956.79	7.88
79605	7/9/2007	5957.05	7.62
79605	10/3/2007	5954.46	10.21
80005	4/3/2007	5953.07	7.12
80005	7/20/2007	5952.20	7.99
80005	9/5/2007	5951.30	8.89
80005	10/8/2007	5950.64	9.55
80005	10/17/2007	5952.12	8.07
80105	4/3/2007	5936.86	5.11
80105	7/20/2007	5937.70	4.27
80105	9/5/2007	5940.00	1.97
80105	10/8/2007	5940.56	1.41
80105	10/18/2007	5940.76	1.21
80205	4/3/2007	5933.30	8.37
80205	7/20/2007	5933.13	8.54
80205	9/7/2007	5932.23	9.44
80205	10/8/2007	5931.08	10.59
80205	10/17/2007	5931.10	10.57
88104	4/3/2007	5942.63	19.46
88104	7/20/2007	5937.58	24.51
88104	10/8/2007	5941.10	20.99
88104	10/22/2007	5941.38	20.71
88205	4/3/2007	5971.05	4.80
88205	7/20/2007	5971.14	4.71
88205	10/8/2007	5969.10	6.75
89104	4/4/2007	5852.79	5.42
89104	7/20/2007	5851.57	6.64
89104	10/8/2007	5852.00	6.21
89104	10/23/2007	5851.86	6.35
891WEL	4/3/2007	5917.30	9.50
891WEL	7/3/2007	5916.83	9.97
891WEL	10/8/2007	5915.62	11.18
90299	4/4/2007	5812.02	12.24
90299	7/3/2007	5807.43	16.83
90299	10/4/2007	5803.99	20.27
90299	11/6/2007		
90399	4/4/2007	5824.60	15.30
90399	7/3/2007	5821.79	18.11
90399	10/8/2007	5820.55	19.35
90399	11/6/2007	5820.99	18.91
90402	4/4/2007	5946.35	6.85
90402	7/3/2007	5945.70	7.50
90402	10/8/2007	5938.85	14.35
90804	4/4/2007	5851.60	43.49

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
90804	7/3/2007	5851.78	43.31
90804	10/4/2007	5851.79	43.30
91105	4/5/2007	5948.04	7.09
91105	7/5/2007	5948.10	7.03
91105	10/4/2007	5946.67	8.46
91203	4/5/2007	5934.44	3.70
91203	7/5/2007	5935.16	2.98
91203	10/8/2007	5933.52	4.62
91203	10/30/2007	5933.54	4.60
91305	4/5/2007	5928.15	3.37
91305	7/5/2007	5928.87	2.65
91305	10/4/2007	5928.35	3.17
91305	11/5/2007	5927.90	3.62
95099	4/5/2007	5849.12	14.26
95099	7/5/2007	5844.45	18.93
95099	10/3/2007	5848.48	14.90
95099	11/8/2007	5849.46	13.92
95199	4/5/2007	5869.73	11.52
95199	7/5/2007	5869.21	12.04
95199	10/3/2007	5869.05	12.20
95199	11/13/2007	5870.25	11.00
95299	4/5/2007		
95299	7/5/2007		
95299	10/3/2007		
95299	11/13/2007		
95699	4/5/2007		
95699	7/5/2007		
95699	10/3/2007		
95799	4/5/2007	5879.41	10.99
95799	7/5/2007	5881.19	9.21
95799	10/3/2007	5880.15	10.25
95899	4/5/2007		
95899	7/5/2007	5887.68	20.63
95899	10/3/2007	5887.14	21.17
99305	4/5/2007	5929.78	9.76
99305	7/5/2007	5925.57	13.97
99305	10/4/2007	5929.62	9.92
99305	11/1/2007	5928.63	10.91
99405	4/5/2007	5927.80	7.36
99405	7/5/2007	5922.14	13.02
99405	9/12/2007	5927.99	7.17
99405	10/4/2007	5913.80	21.36
99405	11/5/2007	5919.38	15.78
B206989	4/3/2007	5864.53	19.65
B206989	7/2/2007	5860.87	23.31
B206989	10/4/2007	5863.49	20.69
B206989	10/16/2007	5863.77	20.41
B210489	4/4/2007	5855.42	3.25
ET EFFLUENT	10/9/2007		
ET INFLUENT	10/9/2007		

Table A−27 (continued). Groundwater Elevation Data: CY 2007

Location Code	Log Date	Water Elevation	Depth From Toc
MOUND R1-0	10/9/2007		
MOUND R2-E	10/9/2007		
P114389	4/3/2007	5985.56	7.50
P114389	7/10/2007	5985.36	7.70
P114389	10/9/2007	5984.87	8.19
P114689	4/3/2007	6000.52	5.01
P114689	7/5/2007	5998.15	7.38
P114689	10/8/2007	5994.88	10.65
P115589	4/3/2007	6010.02	3.76
P115589	7/5/2007	6008.00	5.78
P115589	10/9/2007	6004.55	9.23
P208989	4/4/2007	5950.90	13.40
P208989	7/10/2007	5949.48	14.82
P208989	10/8/2007	5948.40	15.90
P210089	4/4/2007	5896.45	7.74
P210089	7/9/2007	5893.59	10.60
P210089	8/29/2007	5892.02	12.17
P210089	10/3/2007	5889.86	14.33
P210089	10/30/2007	5890.96	13.23
P210189	4/3/2007	5970.07	12.09
P210189	7/9/2007	5969.81	12.35
P210189	10/8/2007	5967.44	14.72
P416589	4/3/2007	6016.82	25.85
P416589	7/2/2007	6016.03	26.64
P416589	9/4/2007	6013.39	29.28
P416589	10/8/2007	6012.36	30.31
P416589	10/17/2007	6012.51	30.16
P416889	4/3/2007	6002.24	16.68
P416889	7/2/2007	6000.98	17.94
P416889	10/8/2007	5999.12	19.80
P419689	4/3/2007	6005.00	18.24
P419689	7/2/2007	6003.43	19.81
P419689	10/8/2007	6001.74	21.50
SPIN	11/7/2007		28.38
TH046292	11/14/2007	5783.14	18.50
TH046992	4/5/2007	5840.74	17.89
TH046992	7/5/2007	5840.42	18.21
TH046992	10/3/2007	5840.13	18.50

A.4 Ground Water Hydrographs

Hydrographs were constructed by first assembling all 2007 water level data for the RFLMA wells (DOE 2007d) and other groundwater locations existing through 2007. These data were then reviewed and prepared for display by merging them with water level data compiled for the 2006 report (DOE 2007e). The resulting hydrographs show water levels for current wells together with historic water levels for their predecessors, as applicable. (A separate set of hydrographs were prepared that include automated water level data; see separate description preceding those files.)

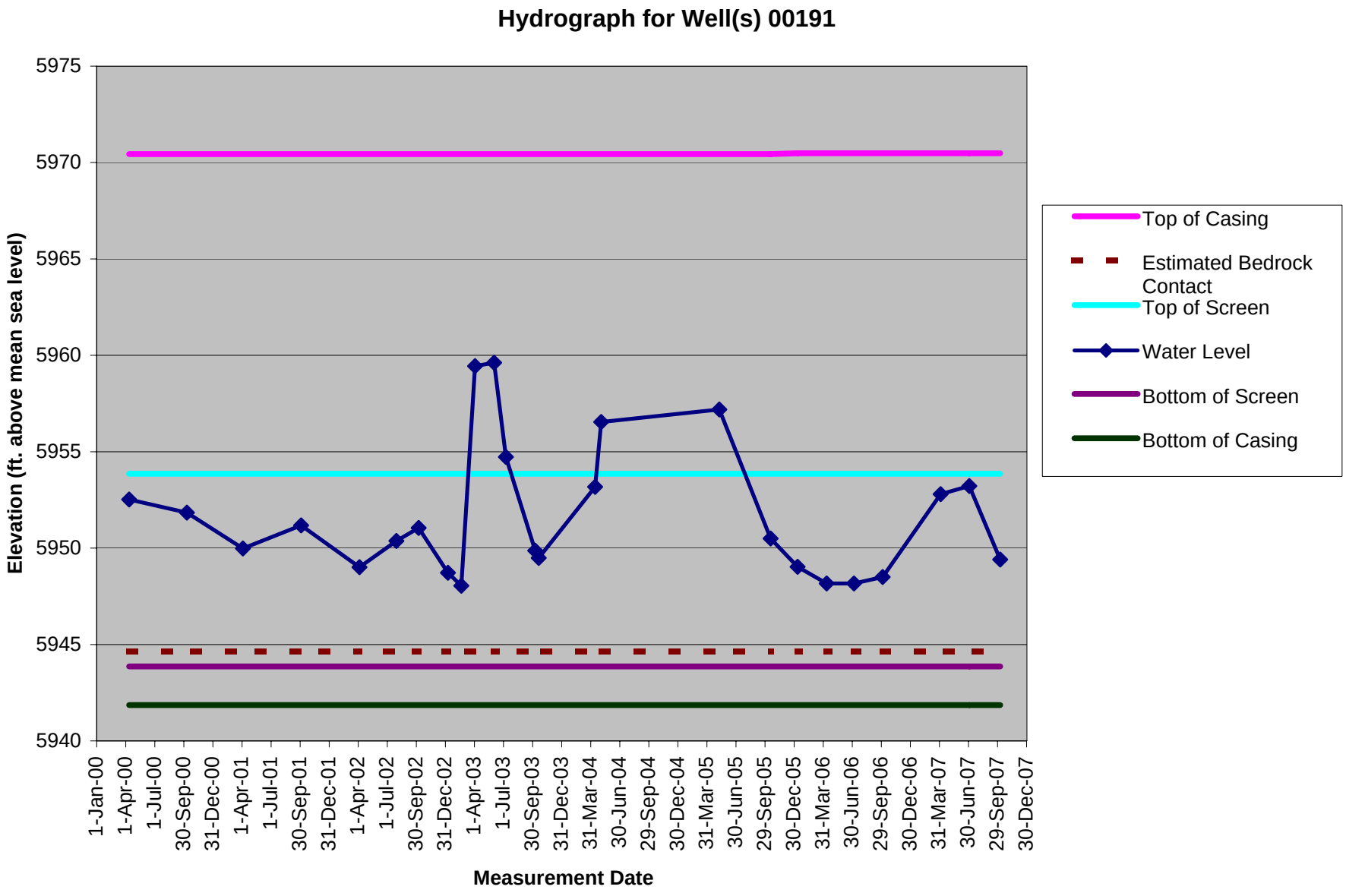
Data were adjusted as described in Table A–28 below.

Table A–28. Adjustments to Ground Water Level Data for Hydrograph Generation

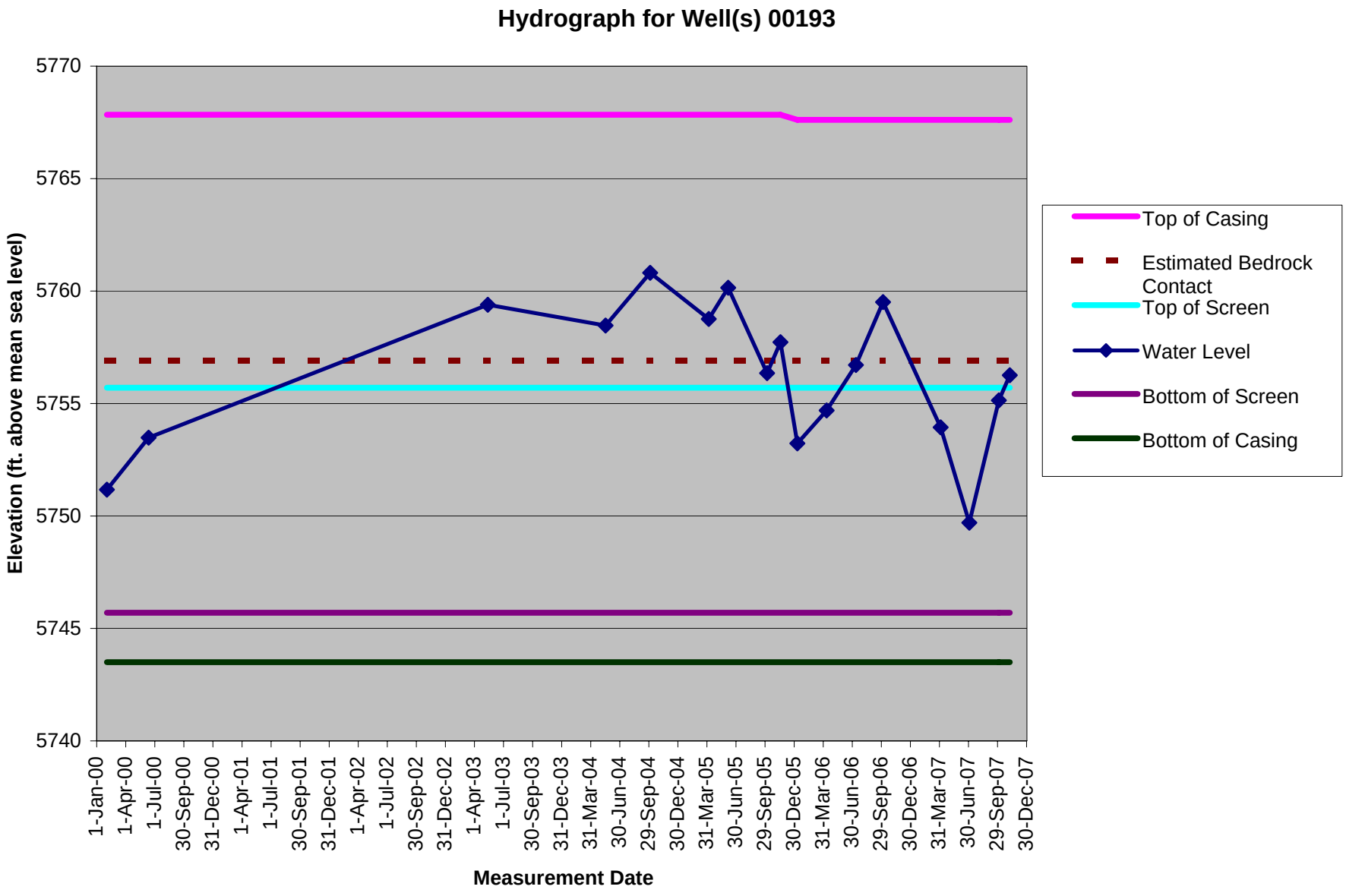
Original Entry	Converted To	Rationale
"D" or "Dry"	Calculated well TD	The actual water level may be as shallow as the bottom of the screened interval, but equating it to the bottom of the well is standard practice.
"Technically dry", or water level equivalent to technically dry	Calculated well TD	The actual water level may be as shallow as the bottom of the screened interval, but considering "technically dry" to be equivalent to "dry" is standard practice.
"Dry to the top of the pump"*	Calculated well TD	The actual water level may have been within the screened interval, but there is no way of determining the actual level based on the water level data recorded. Therefore, because wells that were dry to the top of the pump were often shown to be truly dry during later sampling, by convention the well was considered "dry".
Blank or N/A*	Record deleted	Non-entries and entries of "N/A" often referred to instances in which performing the water level measurement was not possible because of downhole tooling in the well, inaccessibility of the well, etc.
Water level below calculated TD*	Record deleted	Calculated TDs are based on measurements made during well construction, which may not be as accurate as those made during water level measurement. However, the latter show variability from one measurement to another. Calculated TDs were therefore selected to represent the bottom of the well. Because some water level records indicated a water level significantly deeper than the calculated TD, all were considered spurious data and were removed from the dataset.
Data for wells that had already been replaced*	Record deleted	Several wells replacements were installed before the original wells were abandoned. As soon as the replacement was deemed appropriate for use, the original well was removed from the program. Any water level measurements collected from the original on or after that date were removed from the hydrograph dataset.
Multiple entries on same day*	Redundant records deleted	On occasion, the water level in a well was measured more than once in the same day. Although usually the water levels were identical or within a few hundredths of a foot, the later water level measurements were deleted to clean up the dataset and resulting hydrographs.

TD = total depth of well.
"Technically dry" is the condition in which all water within a well is within the (non-perforated) sump below the base of the screened interval, and therefore does not reflect and is isolated from the local ground water.
* = results were adjusted for the 2005 Annual Report (DOE 2006e) and needed no additional adjustment for the current report. See the 2005 report for additional explanation.

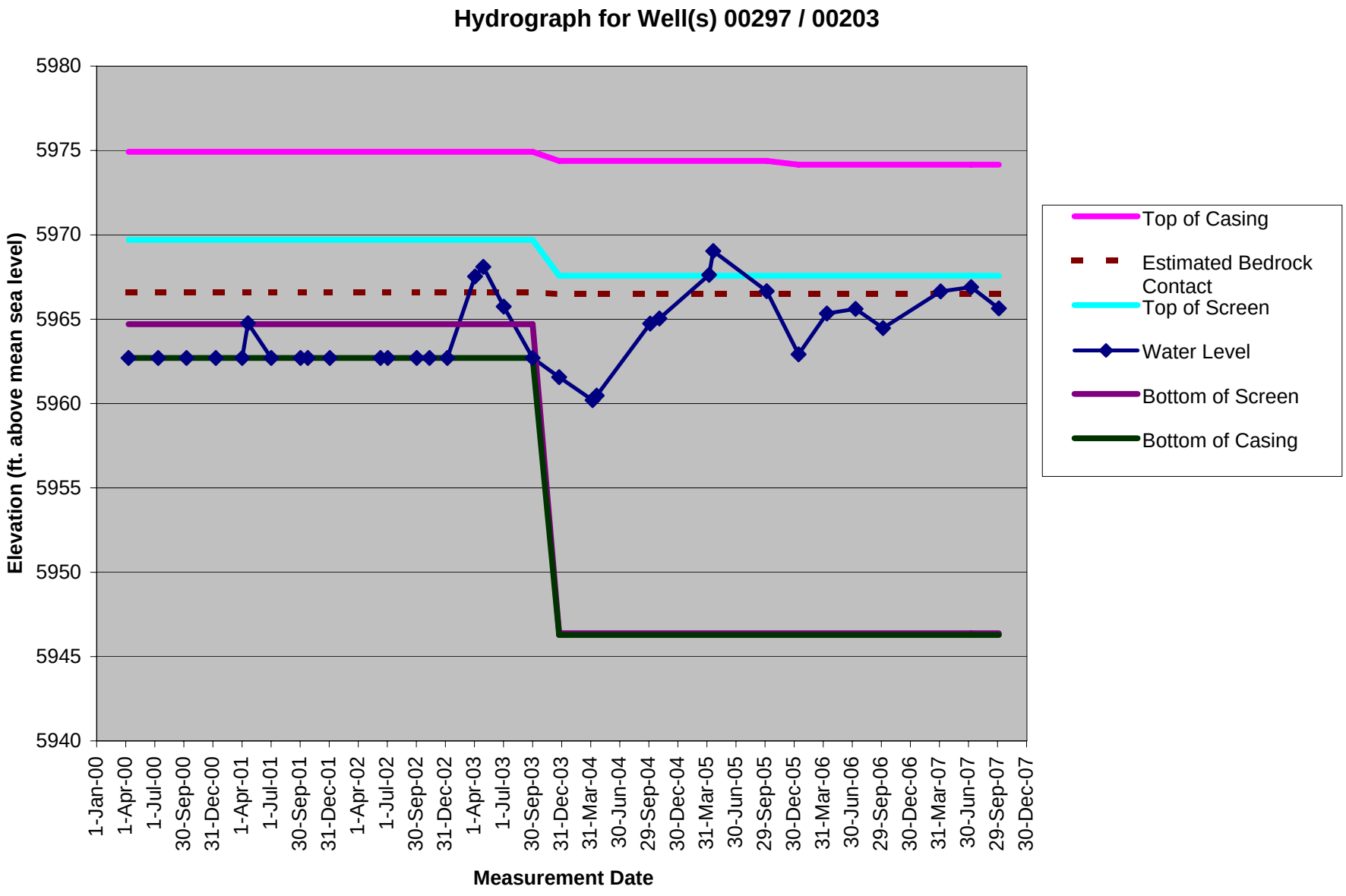
A.4.1 Hydrographs for Manually Collected Water Level Data



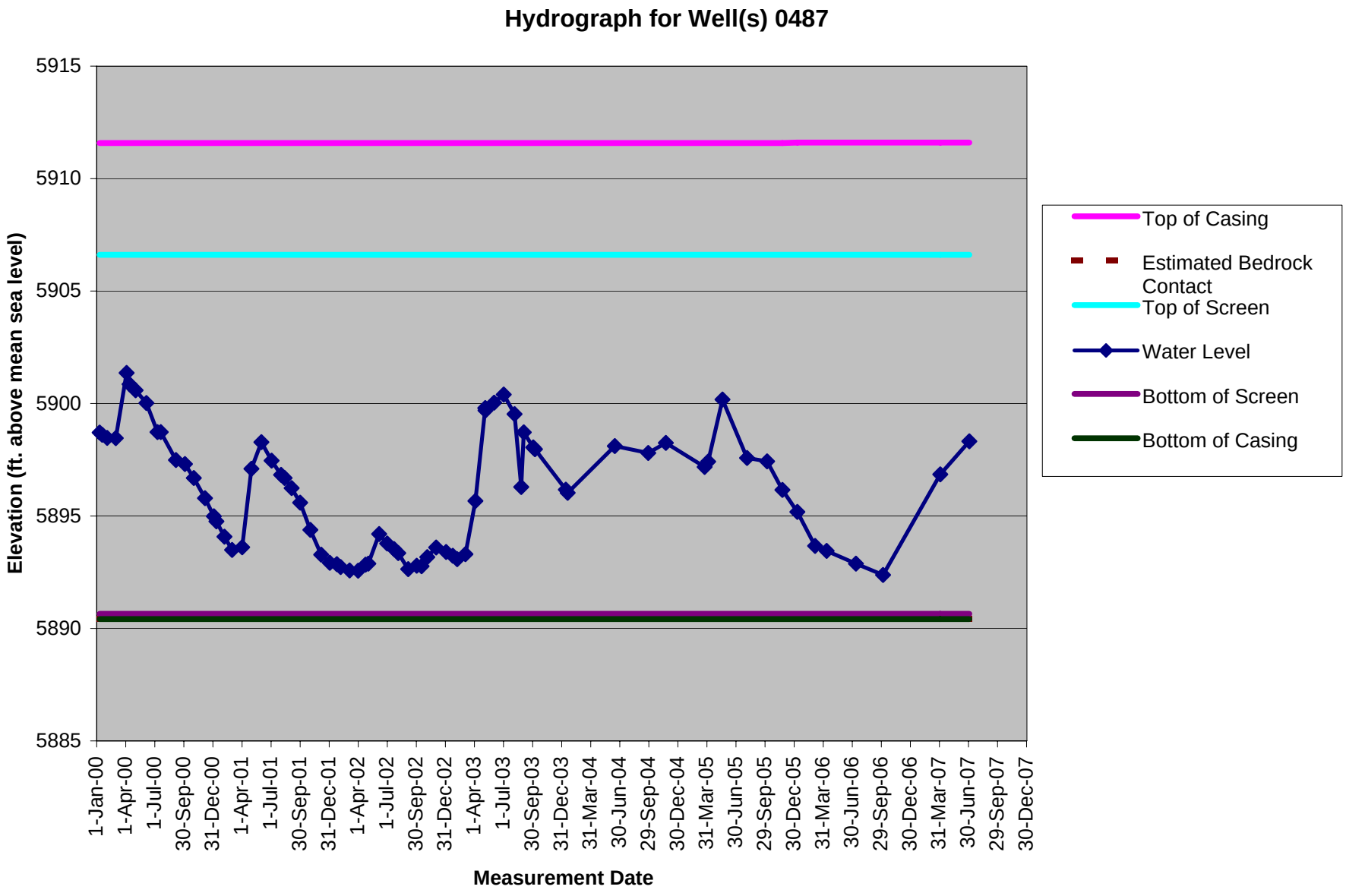
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



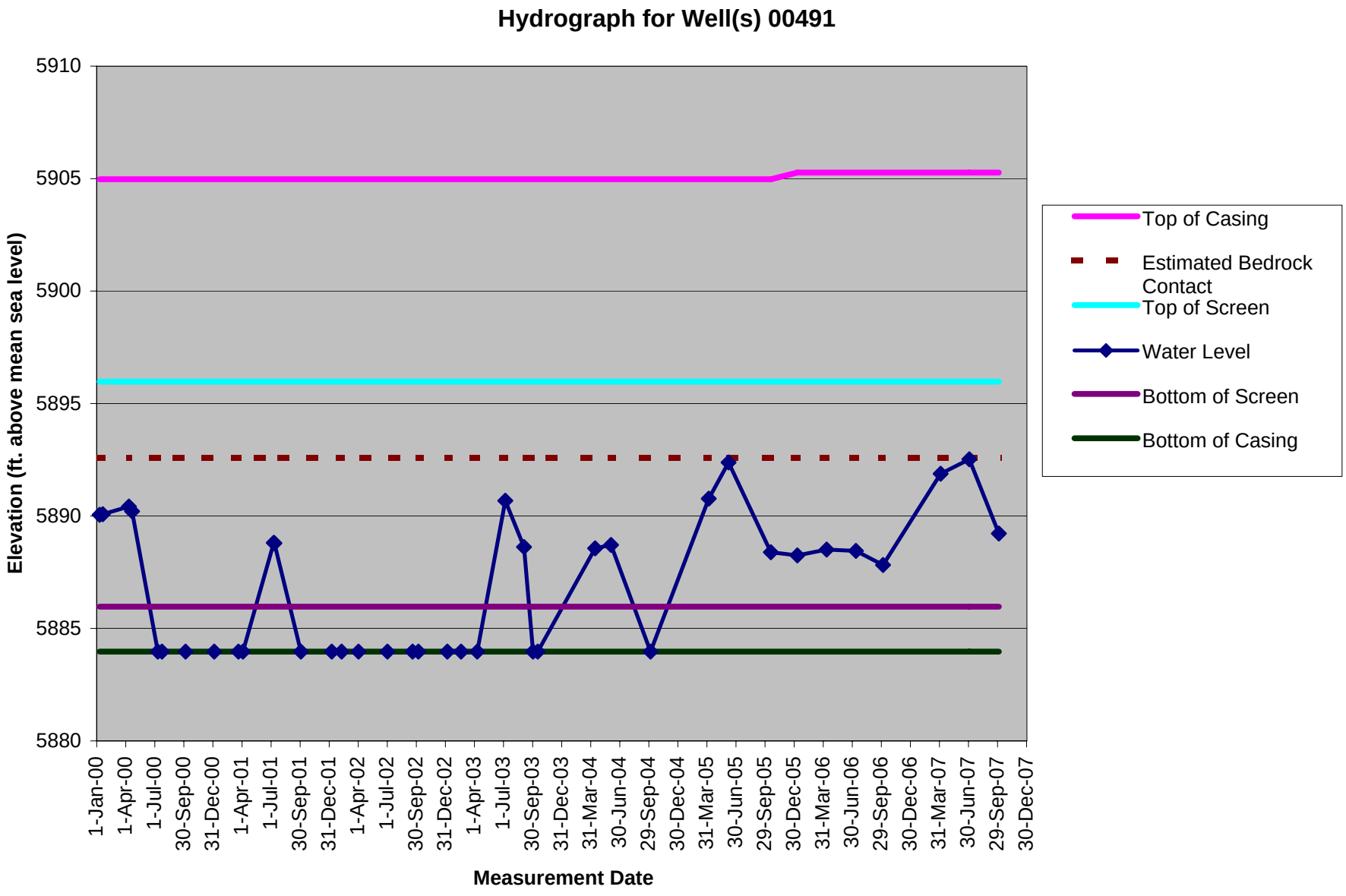
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



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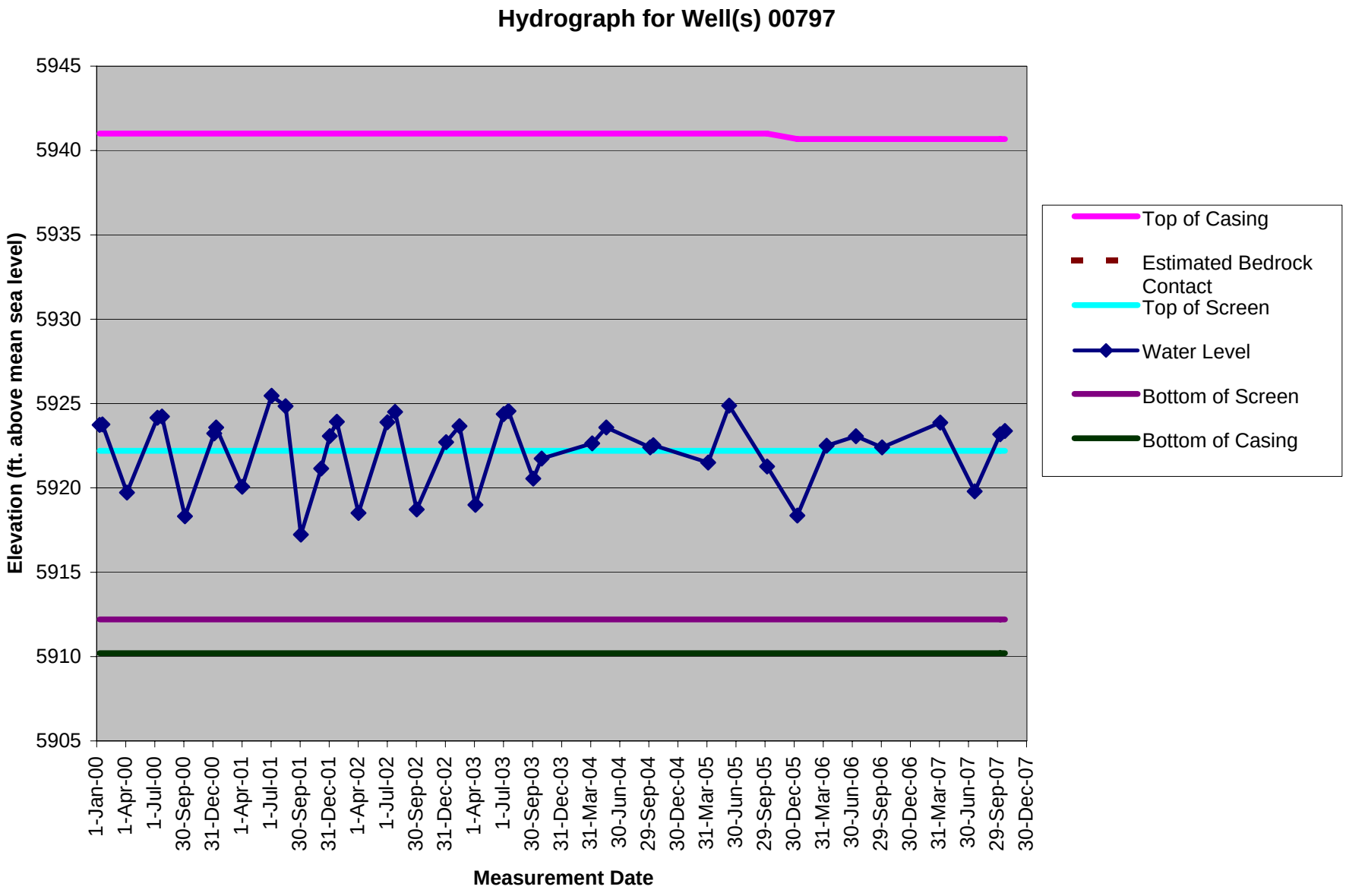

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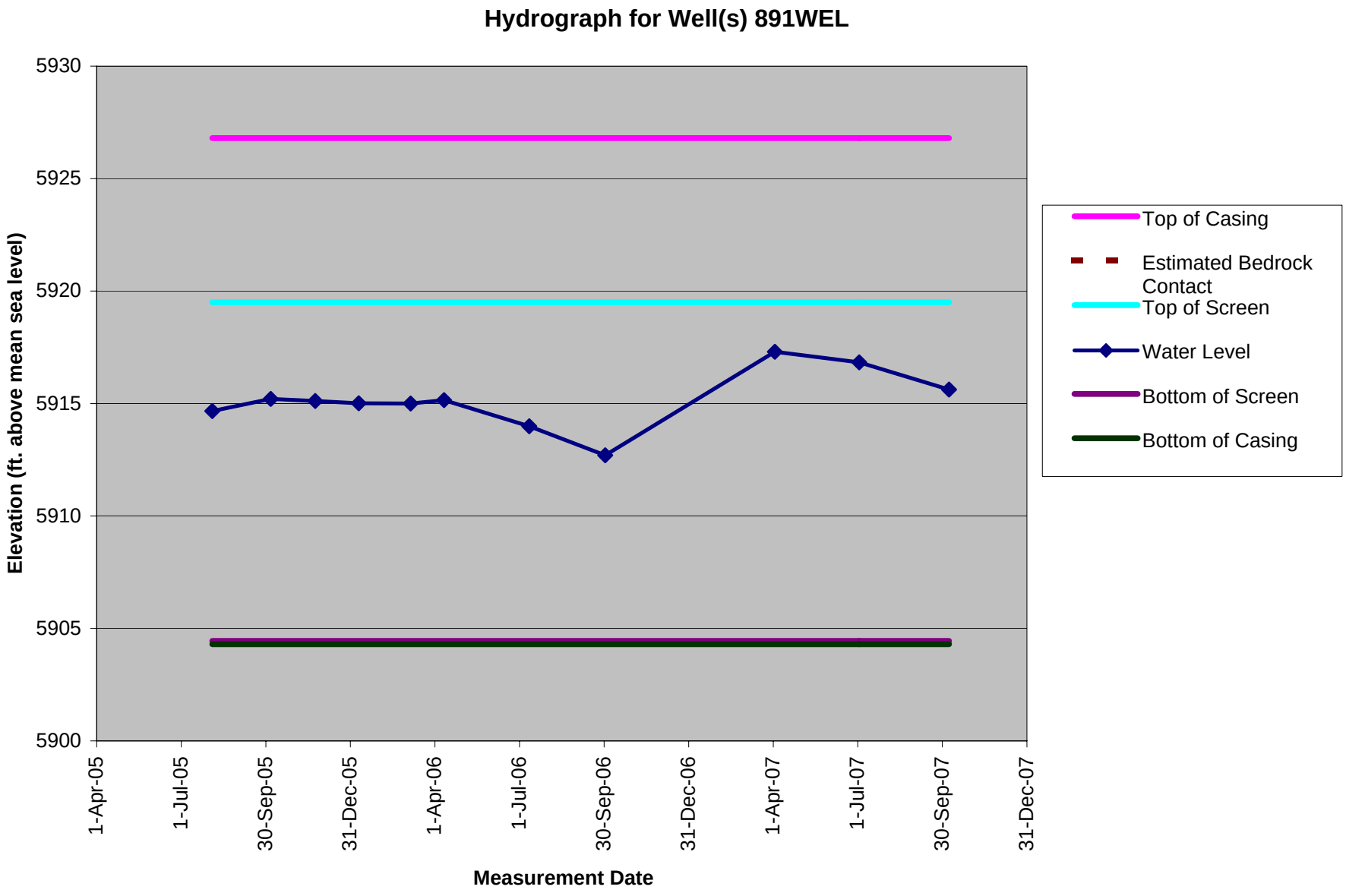
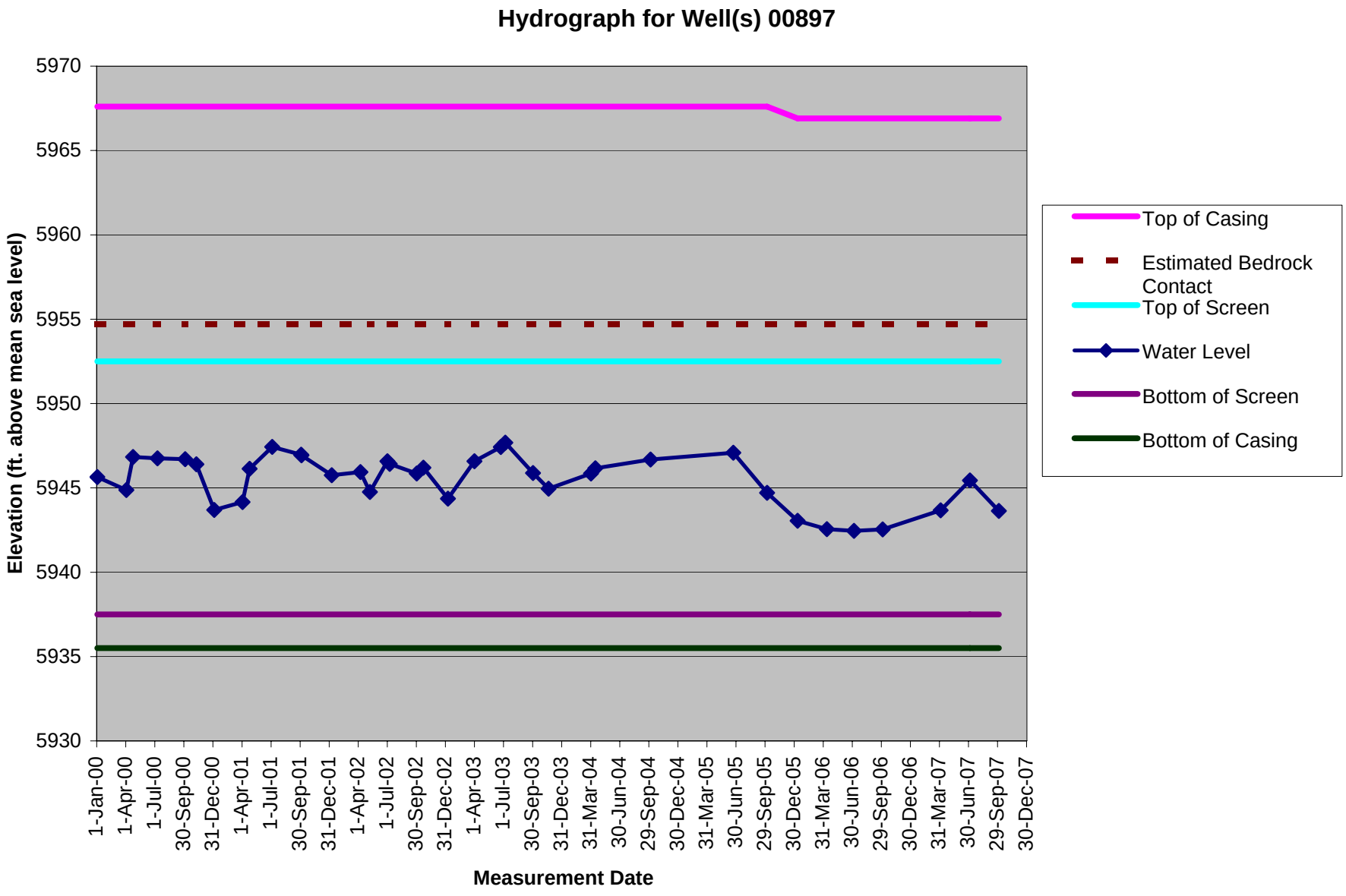


Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



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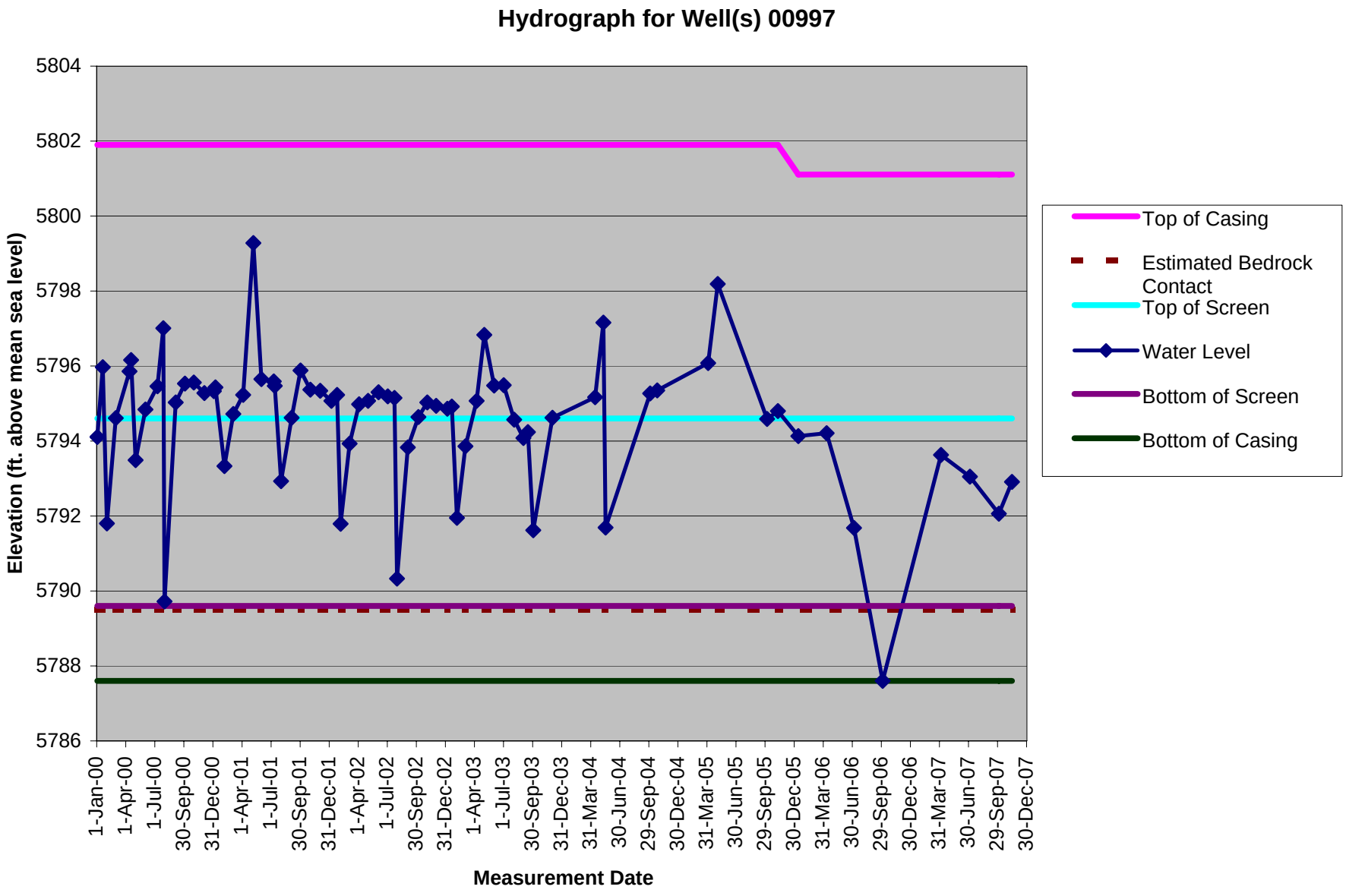

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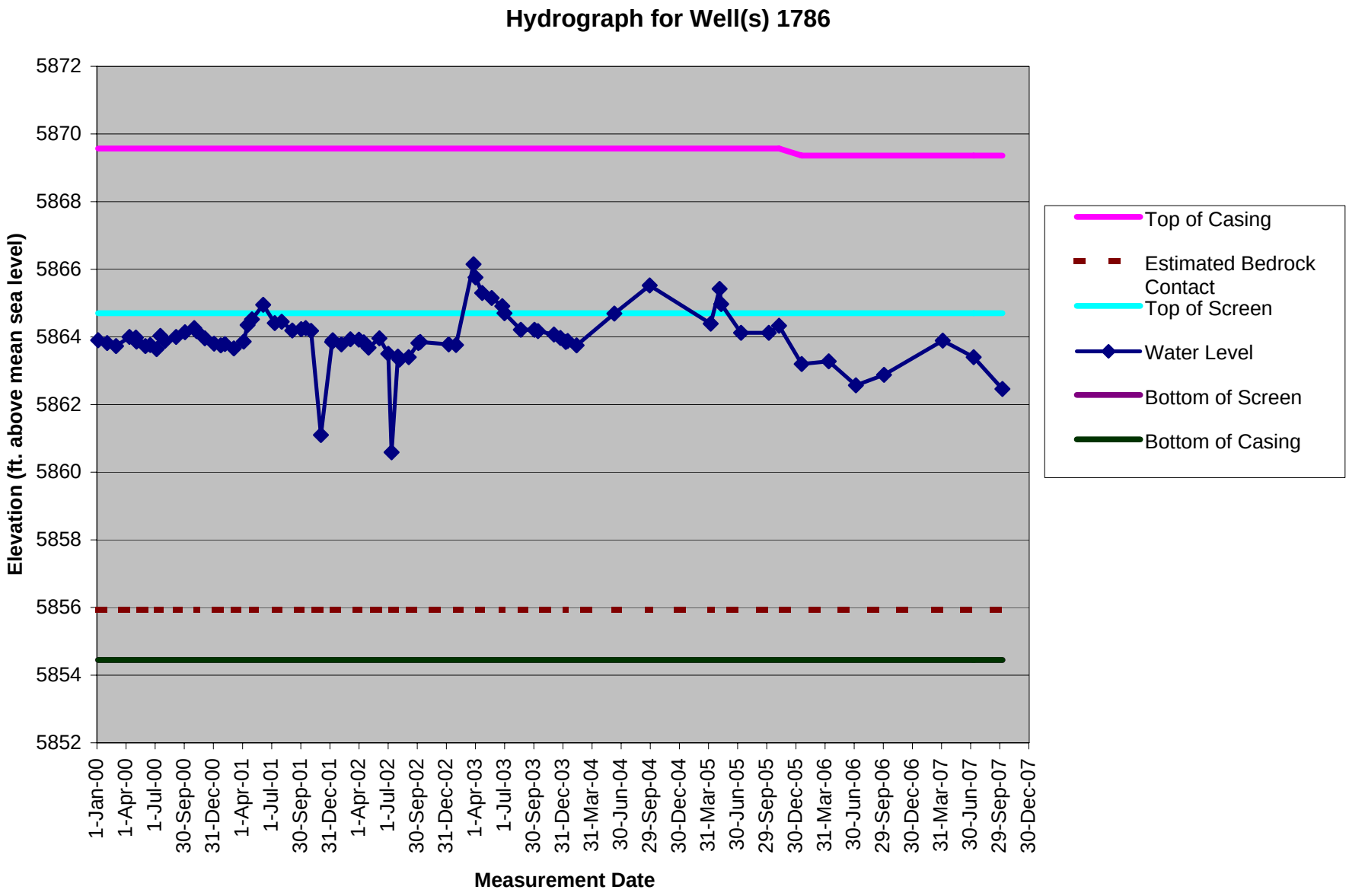

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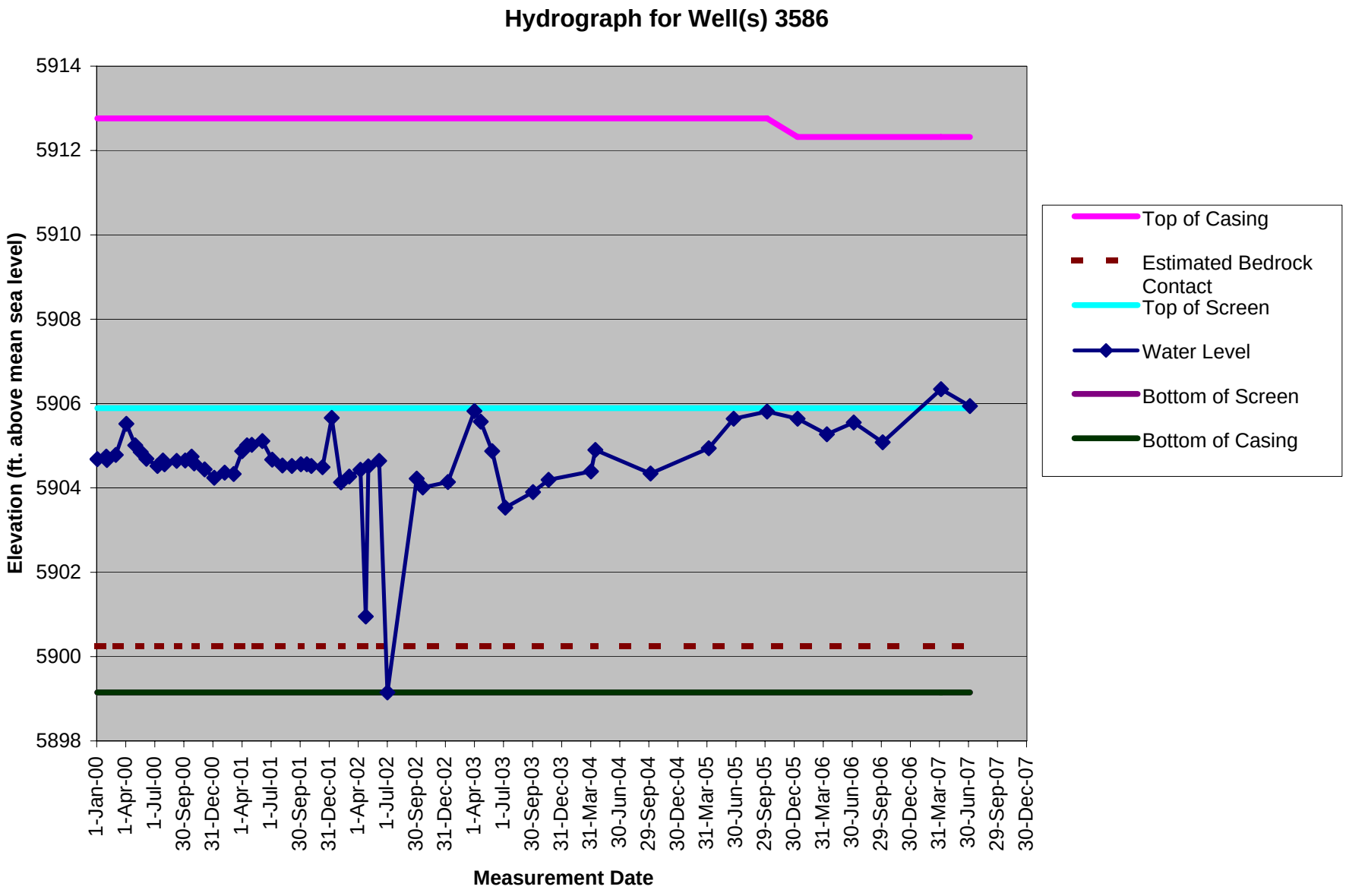

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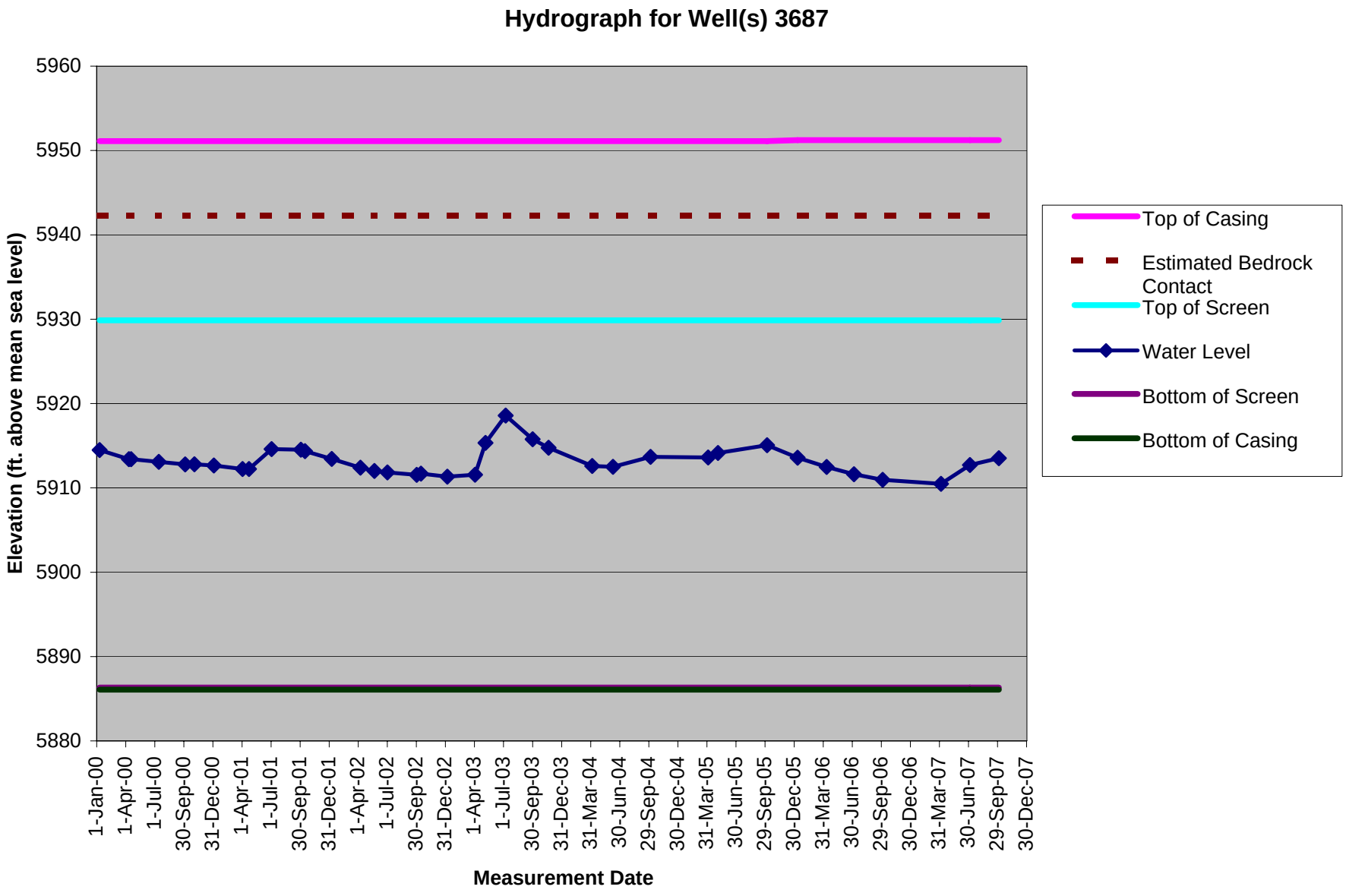

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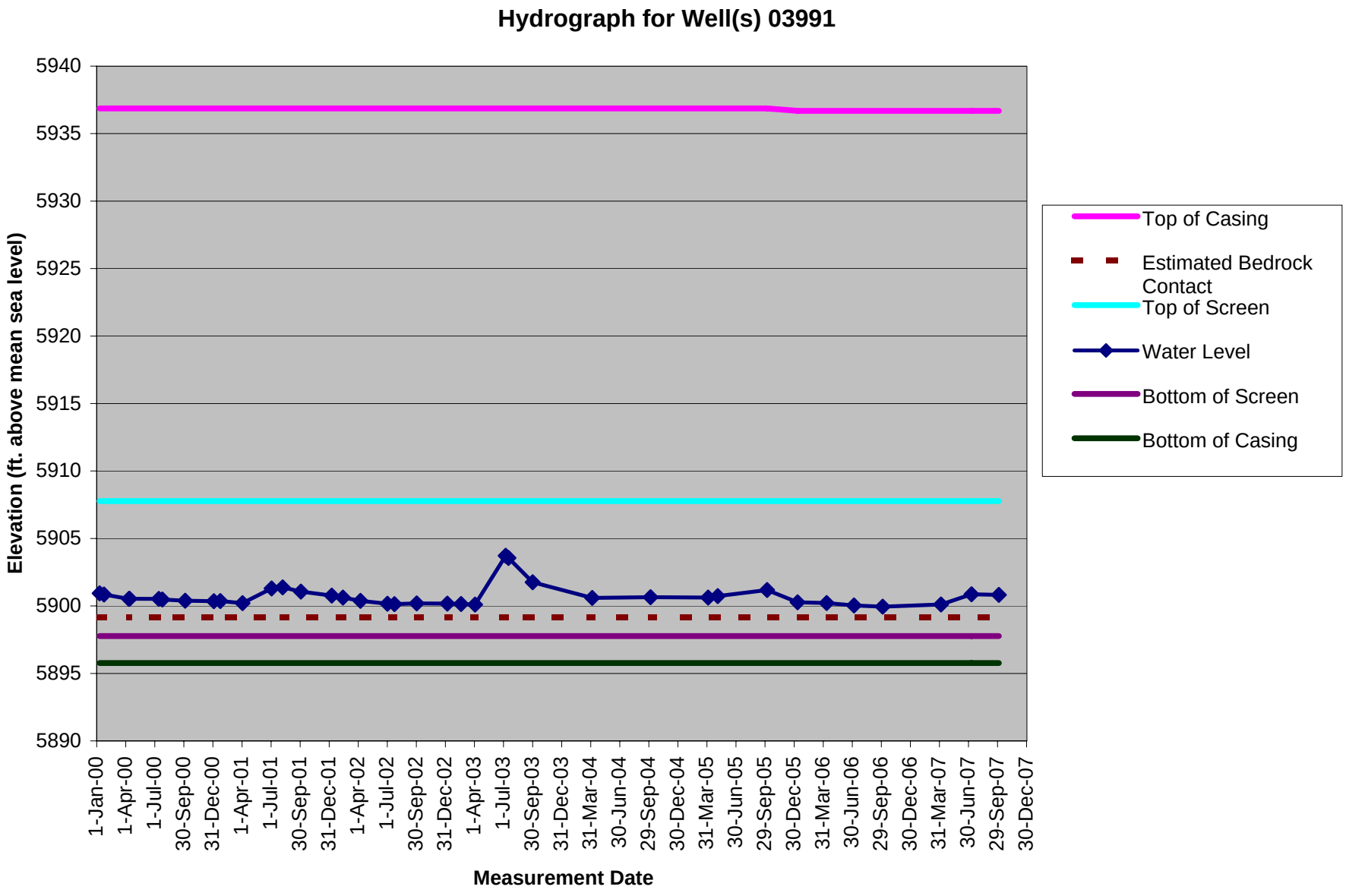

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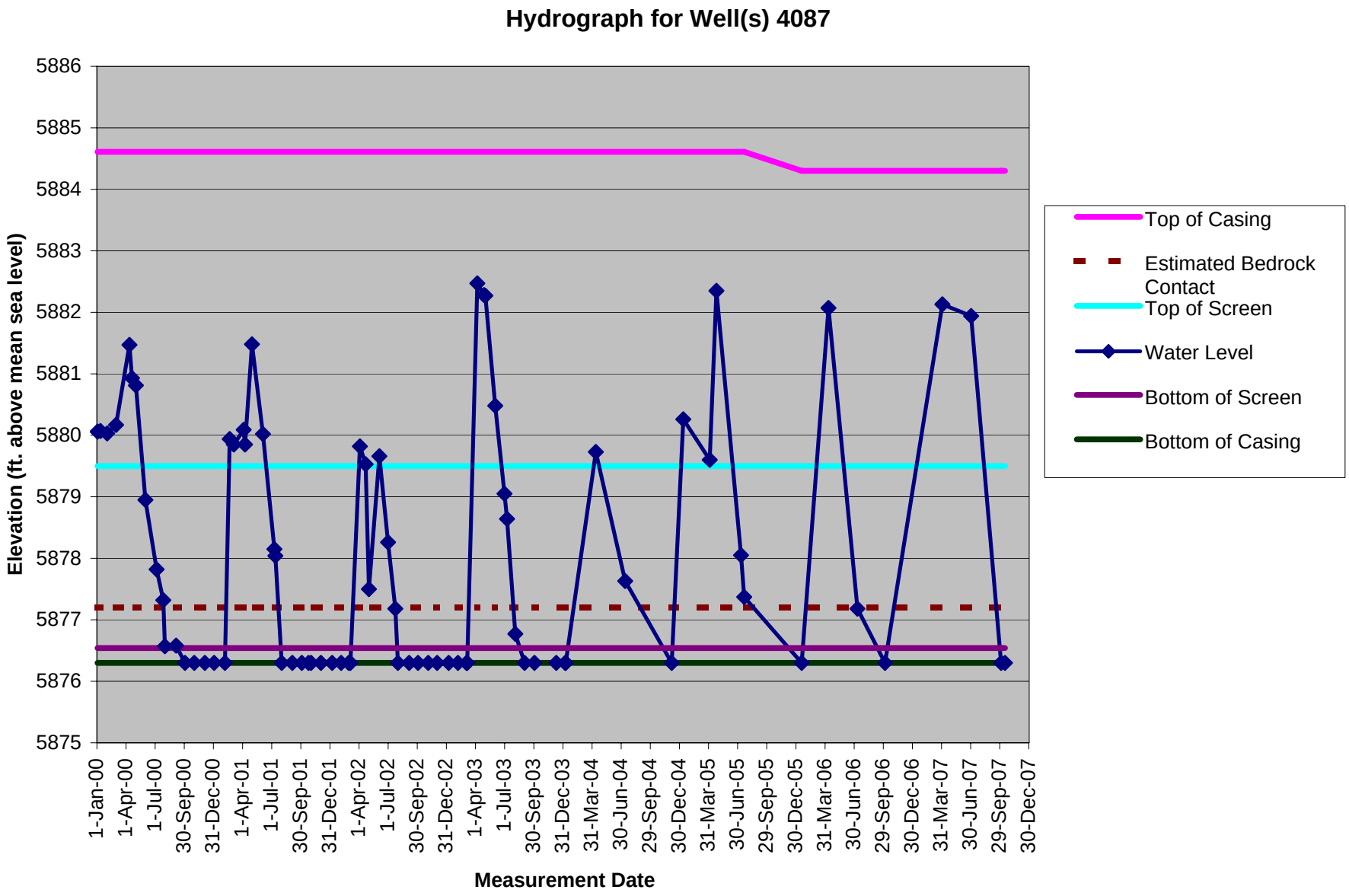

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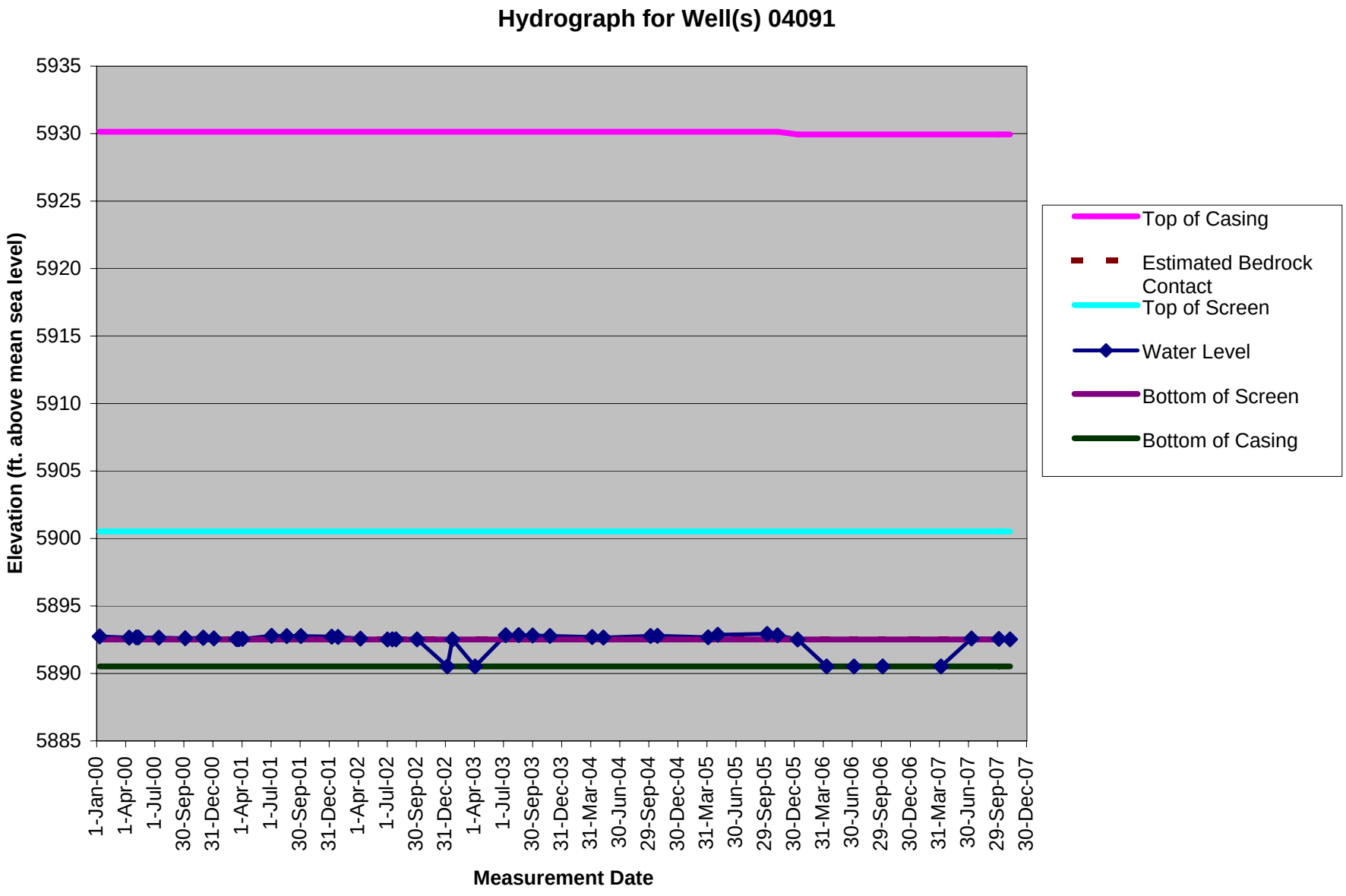

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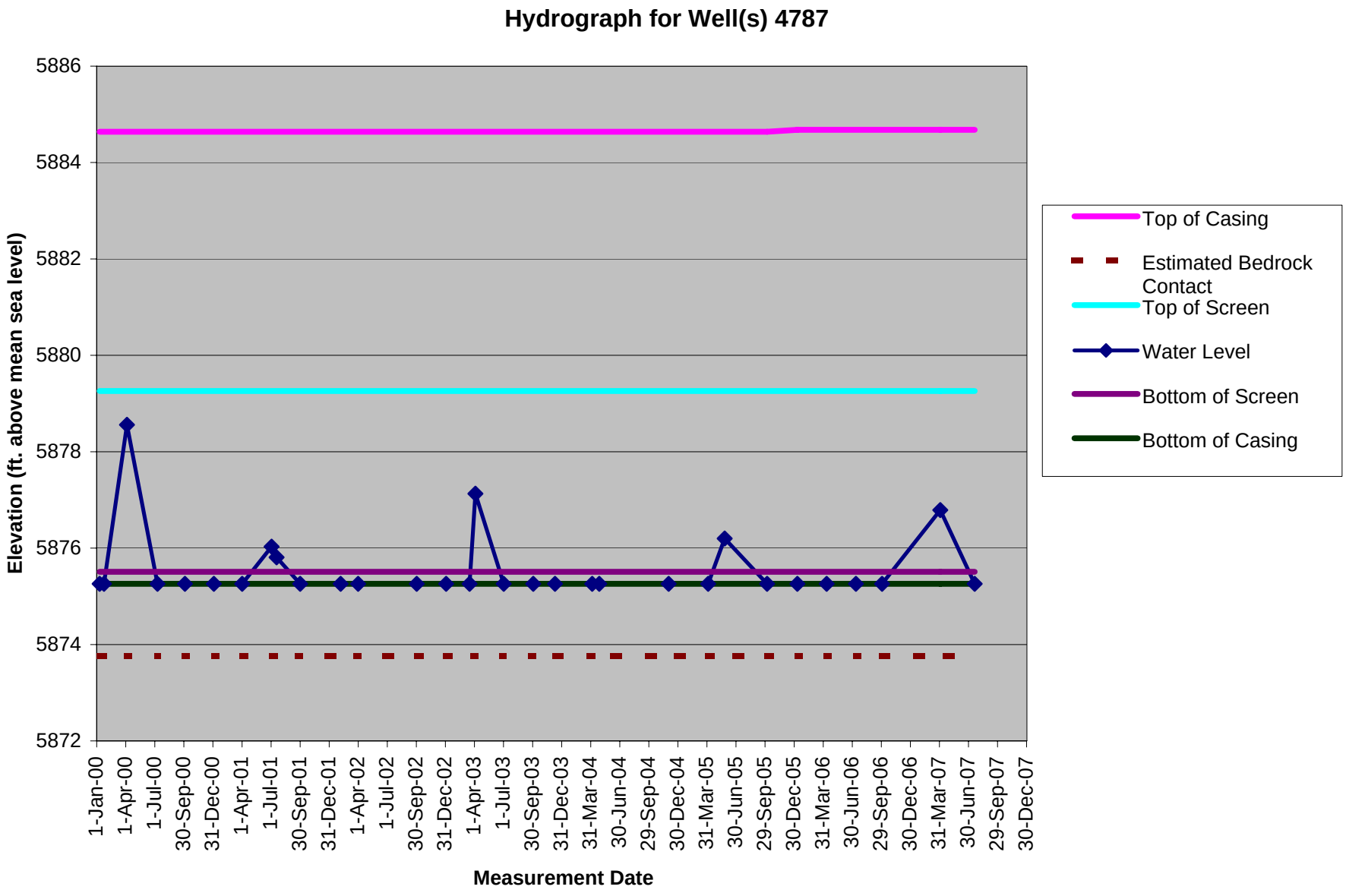

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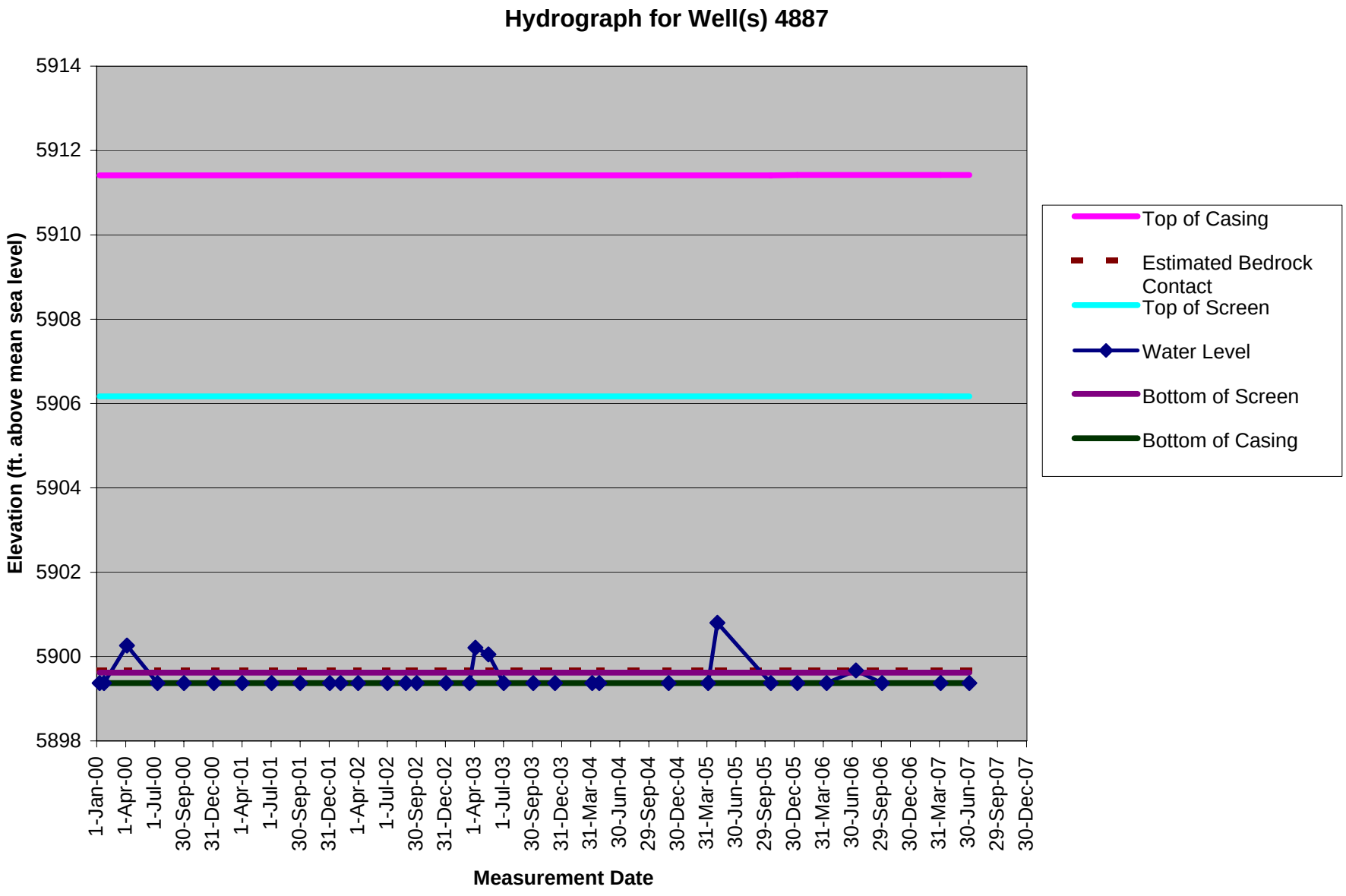

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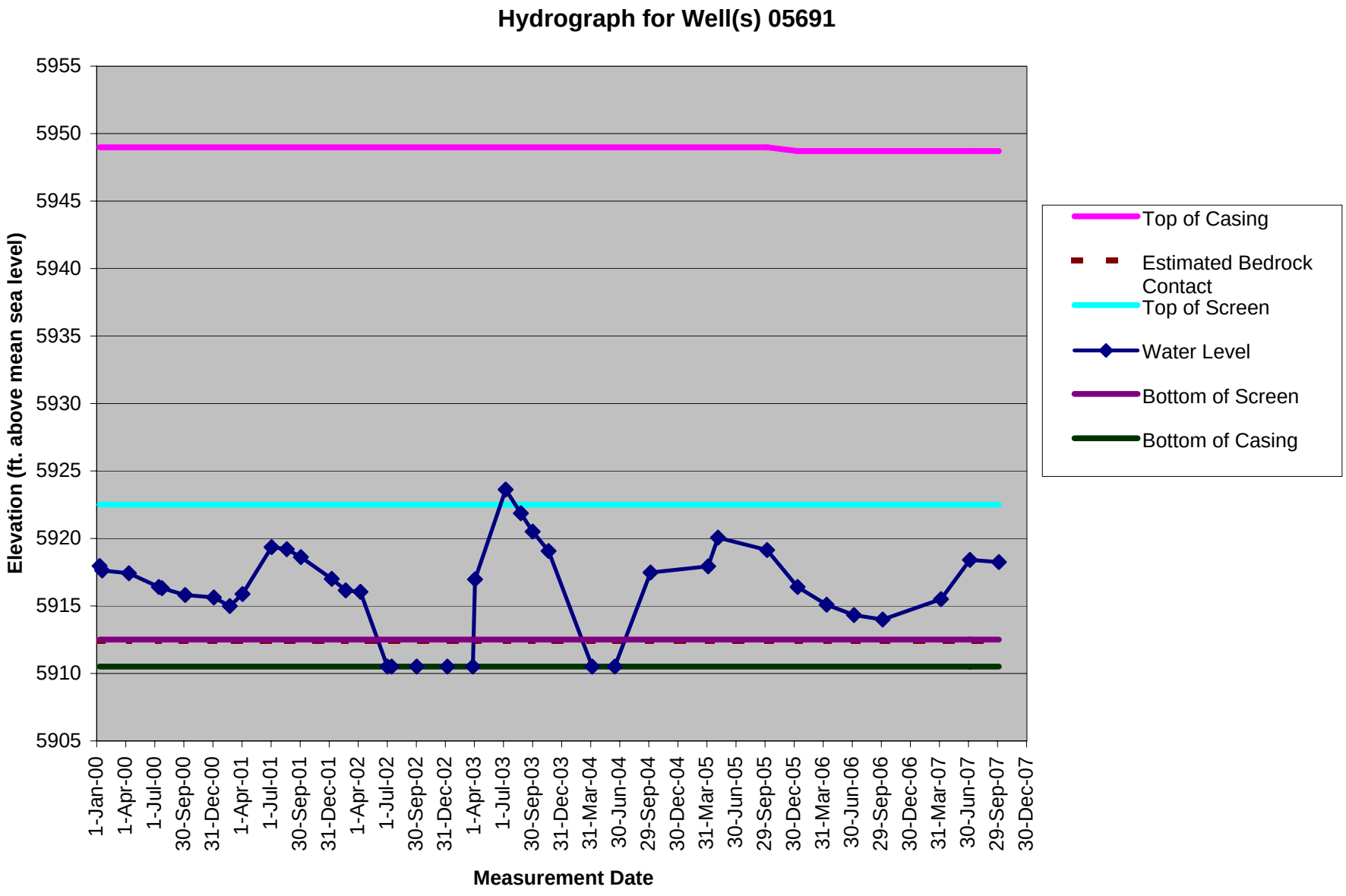

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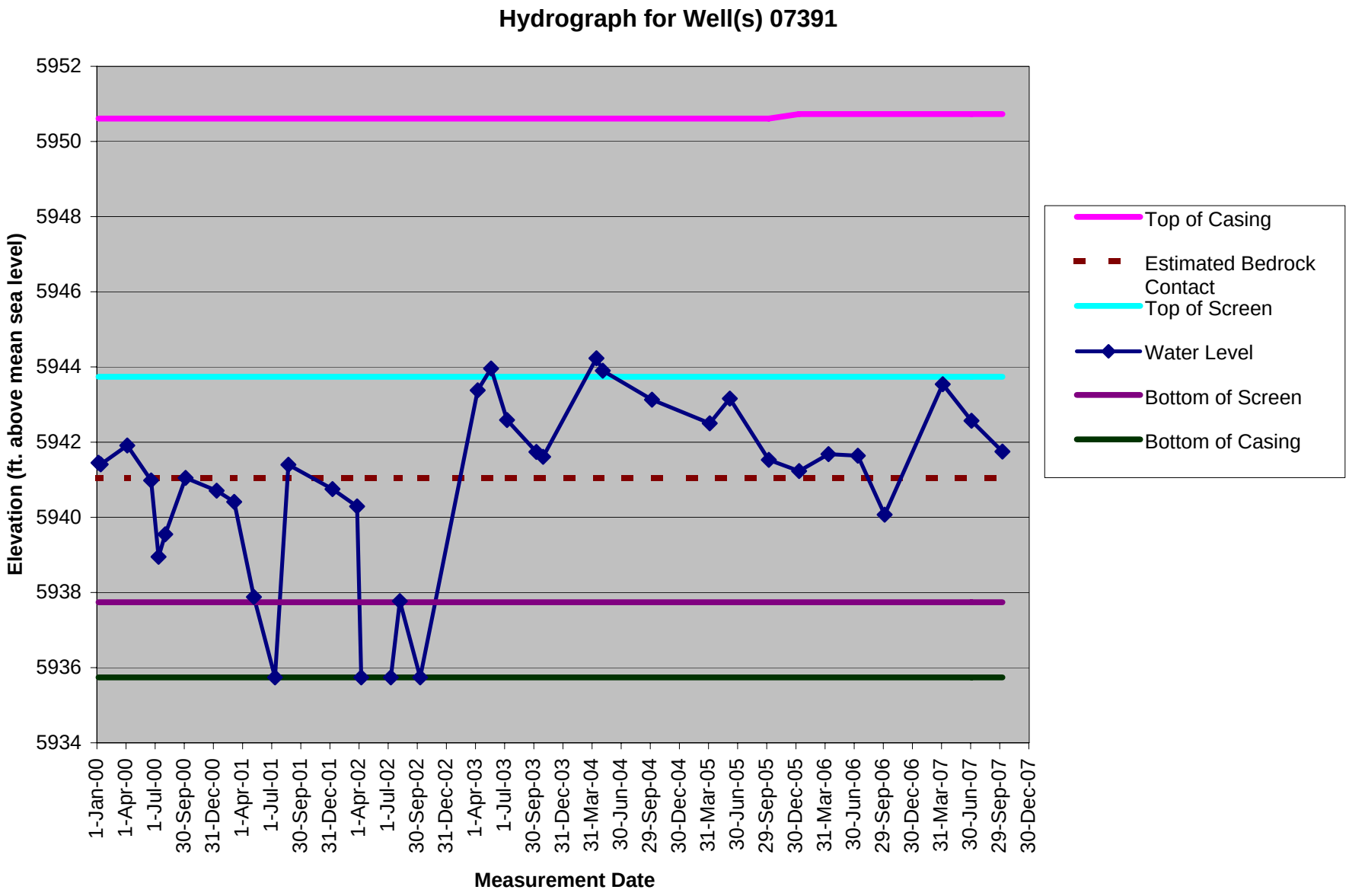

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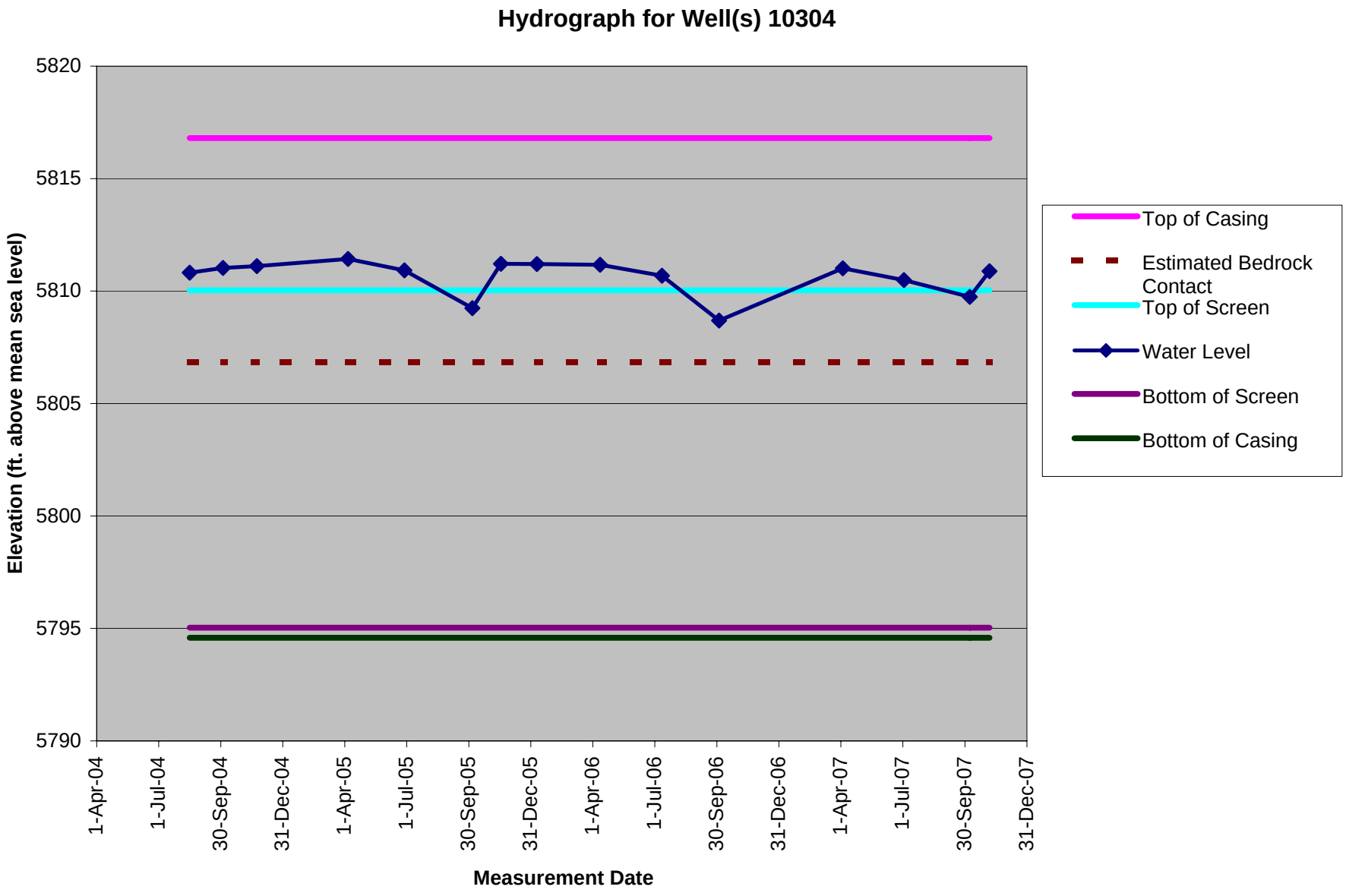

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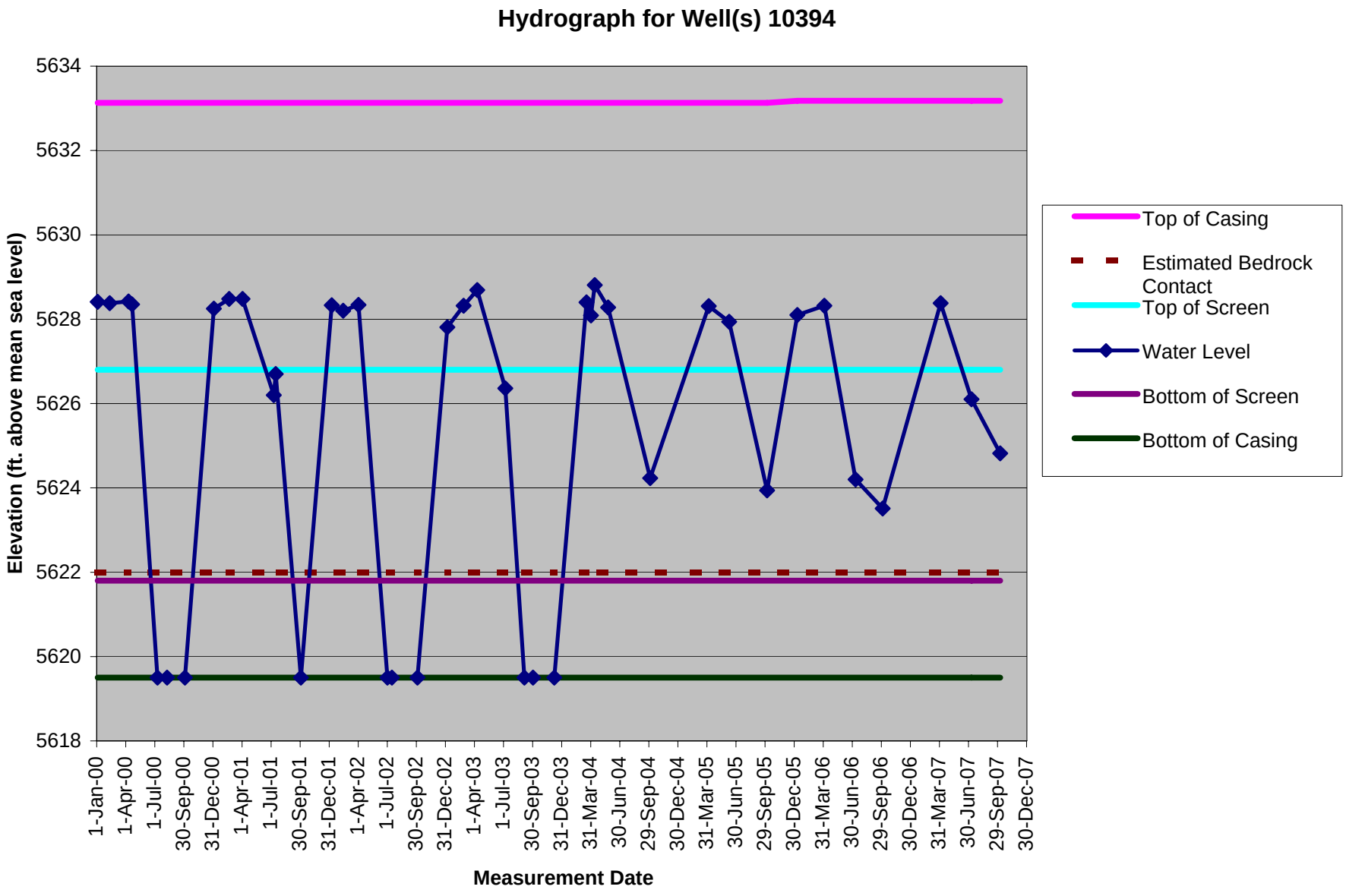

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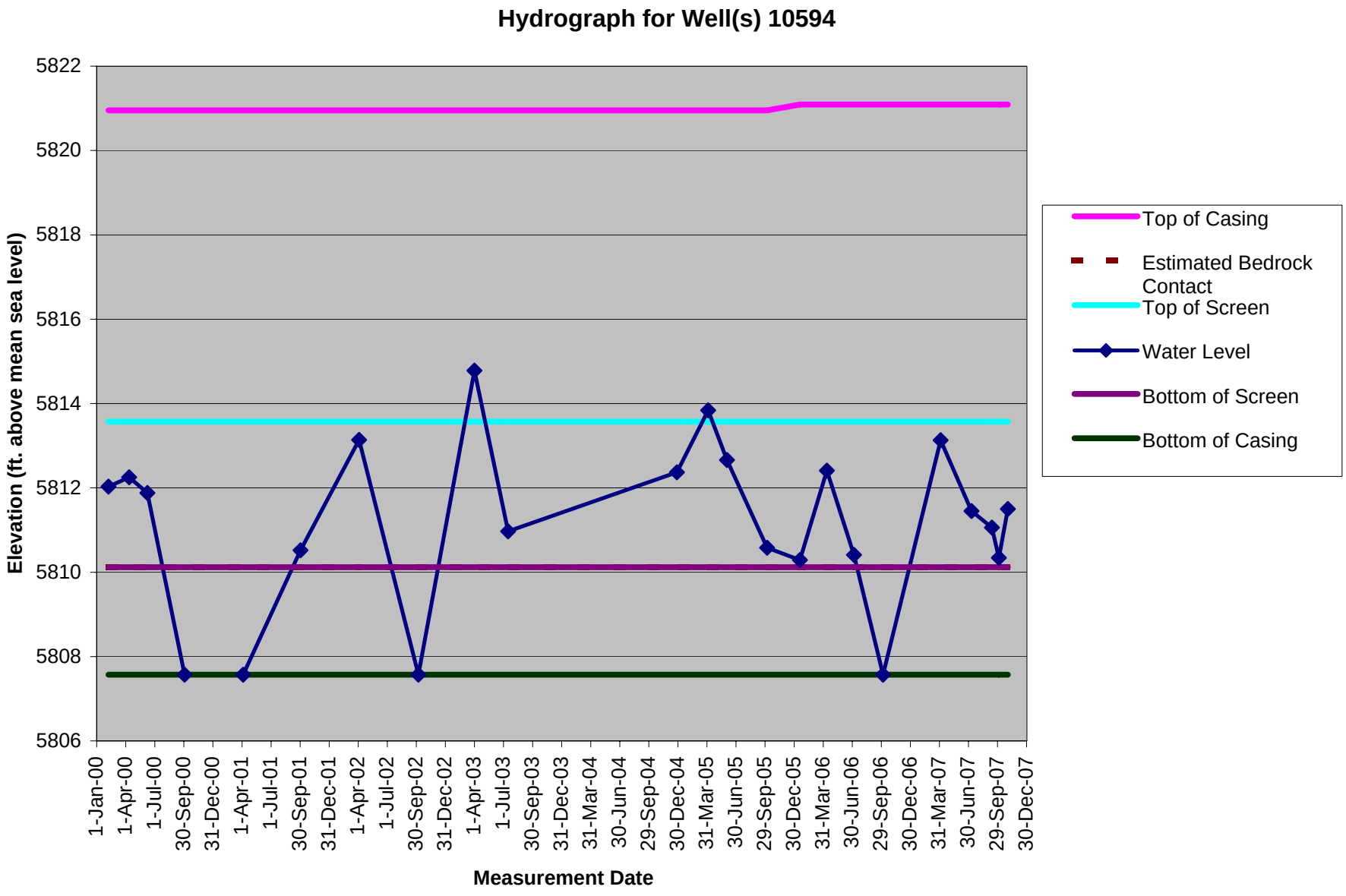

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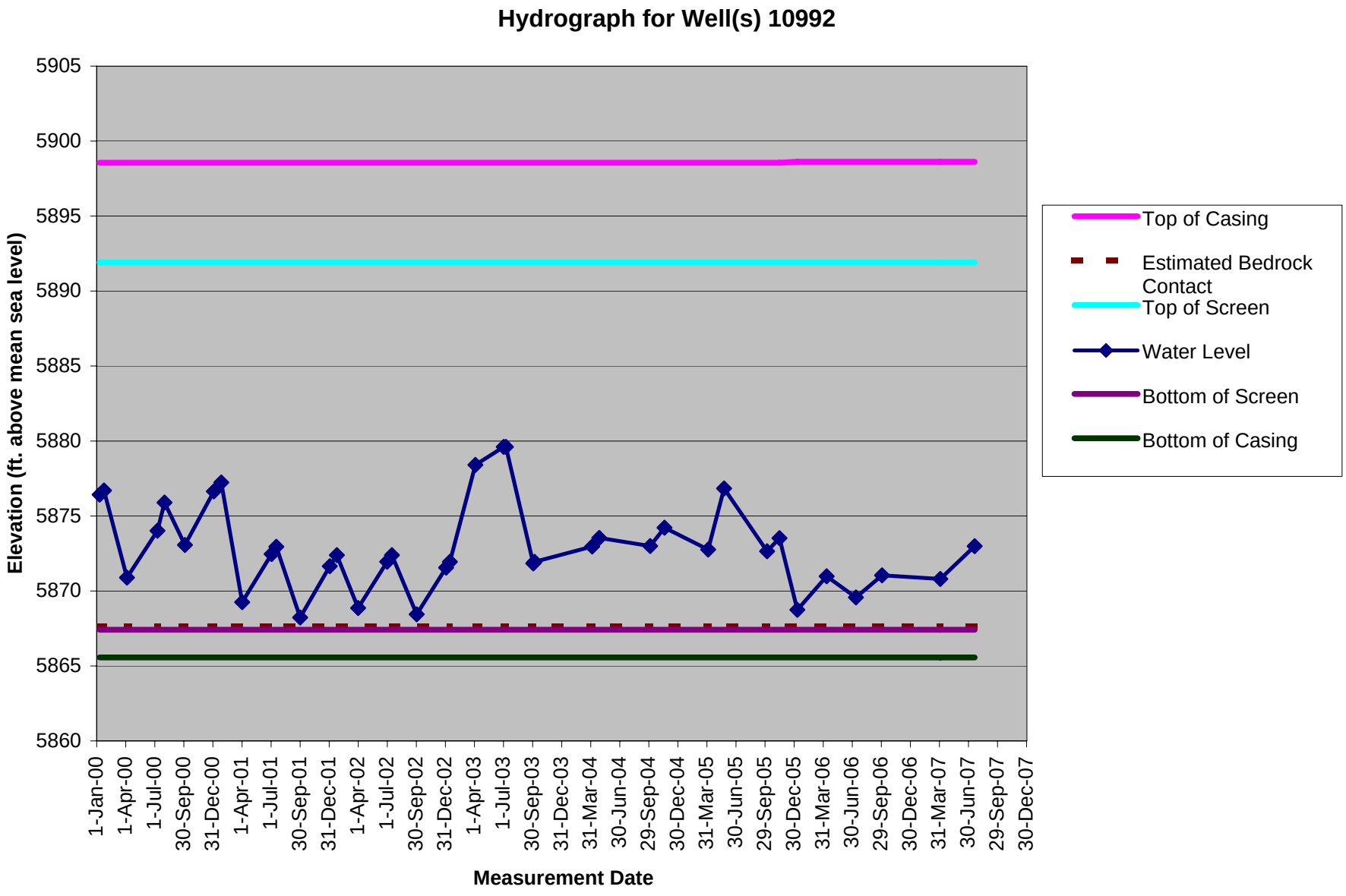

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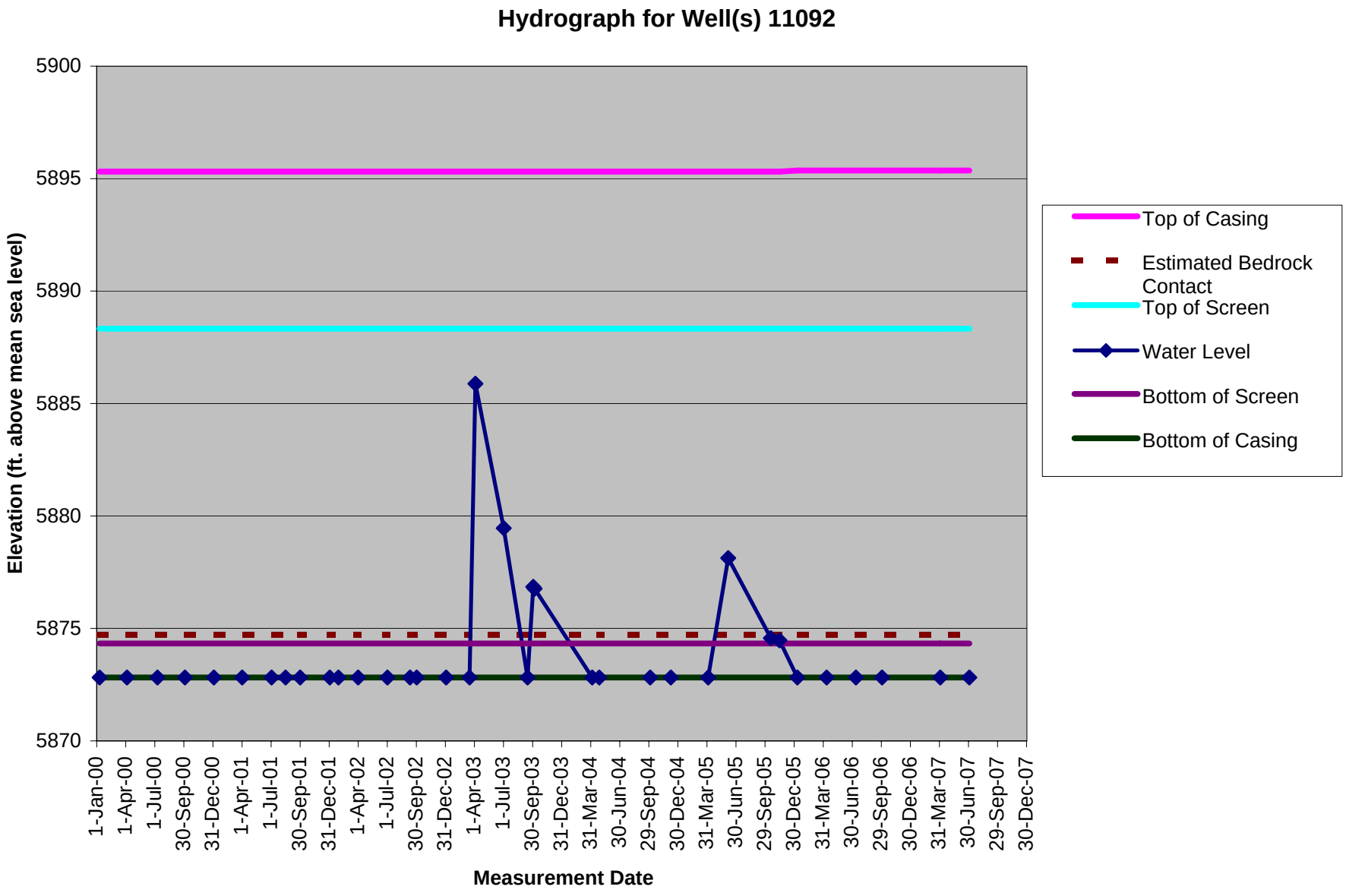

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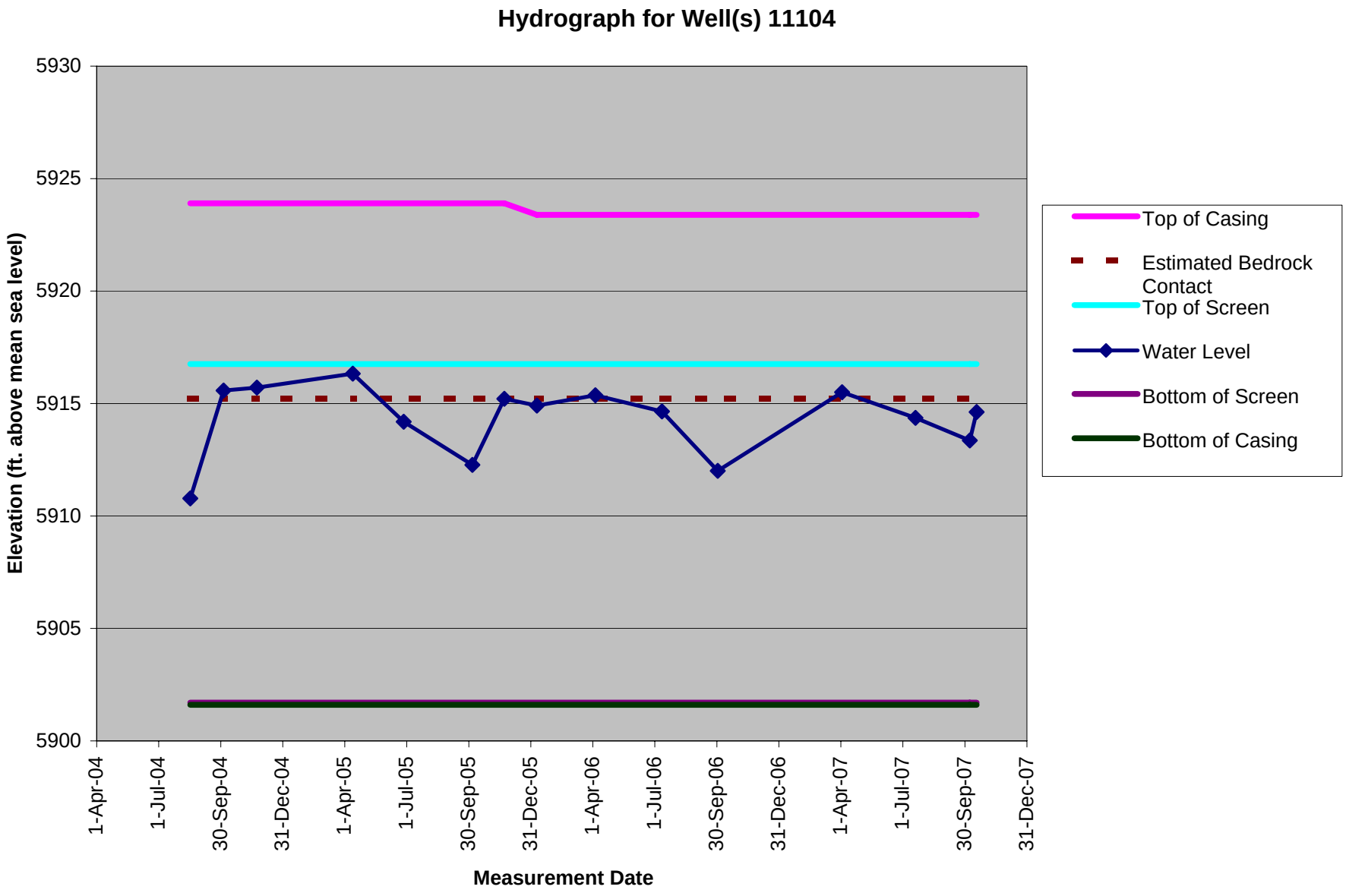

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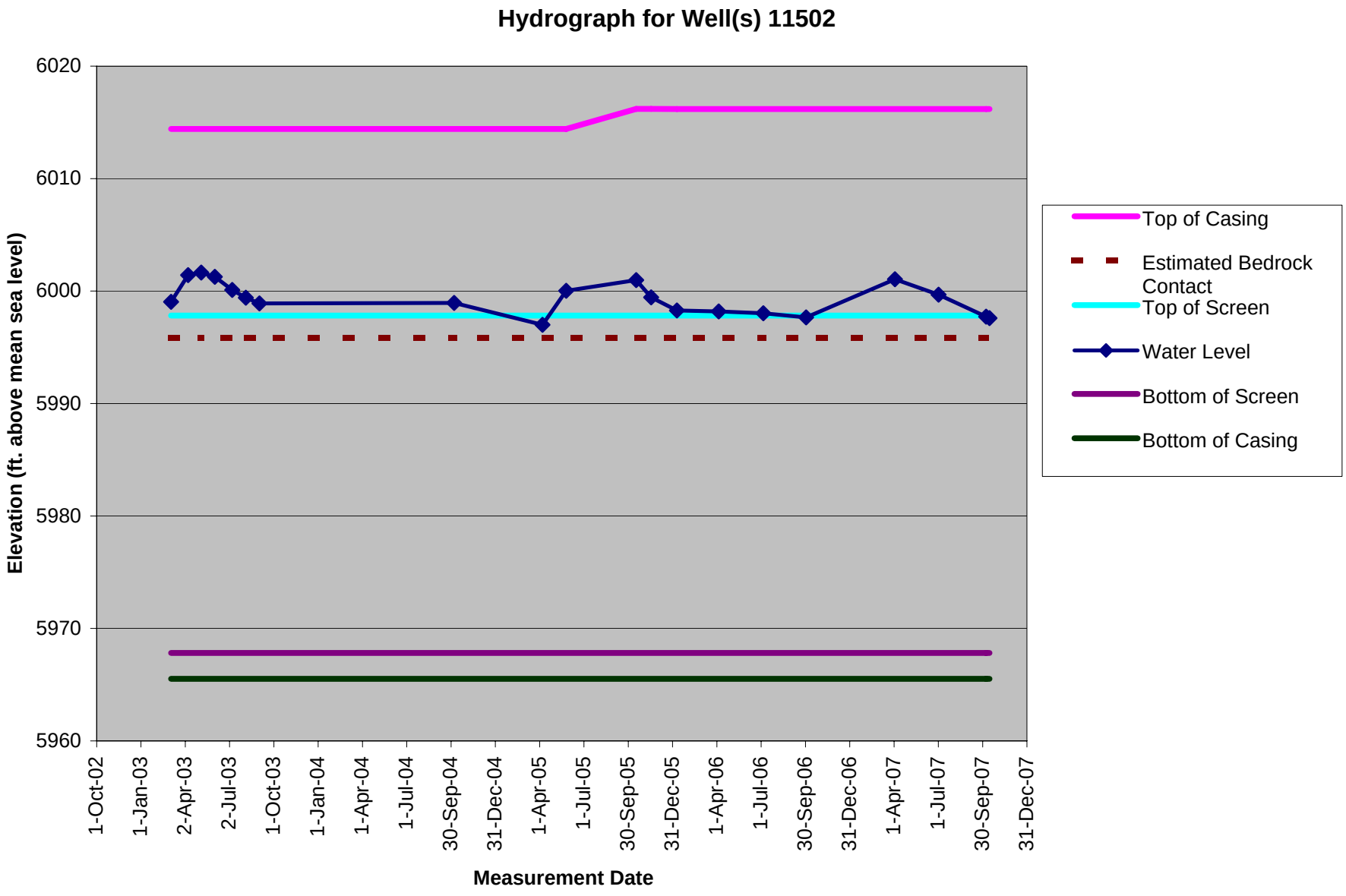

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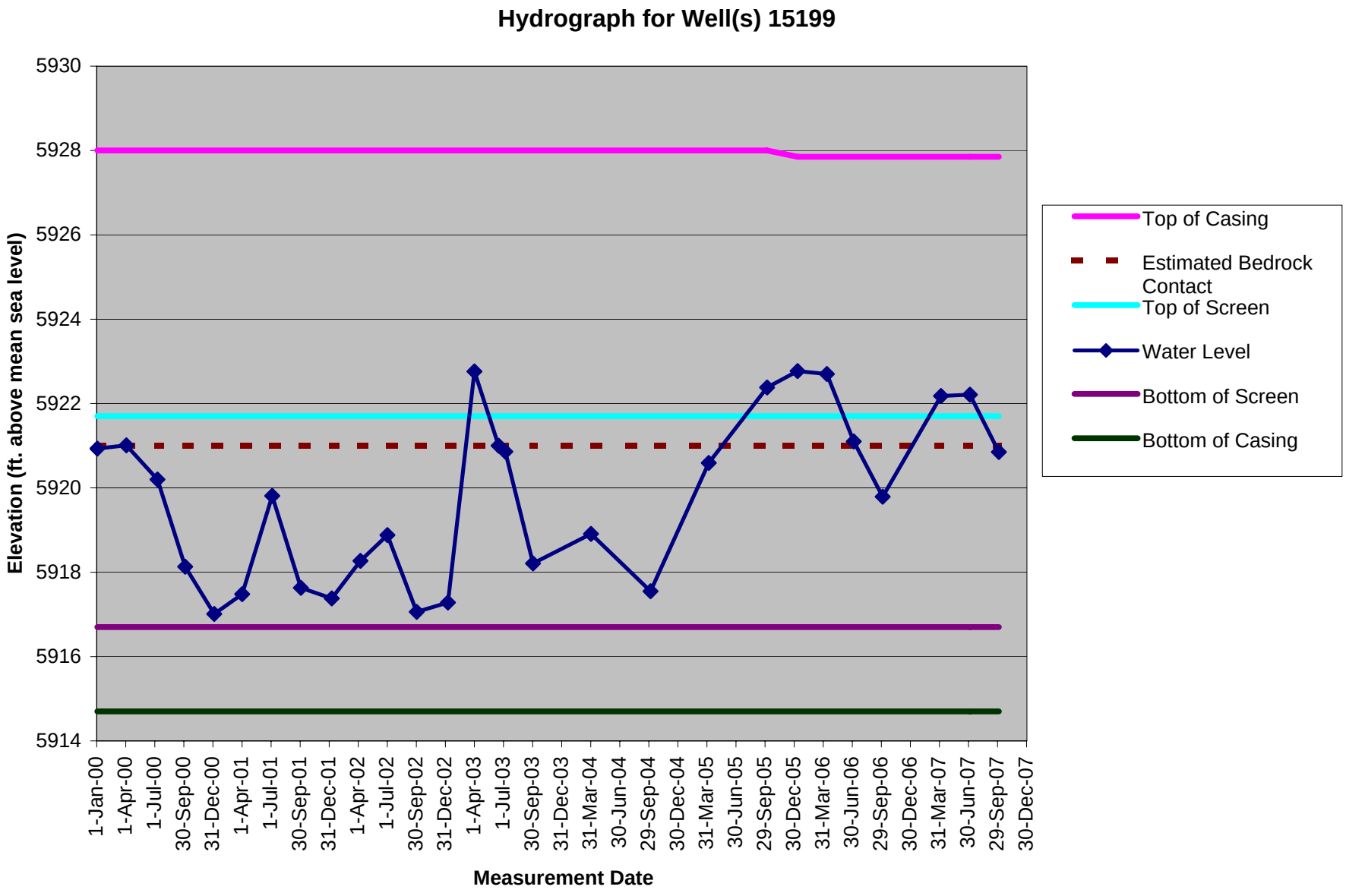

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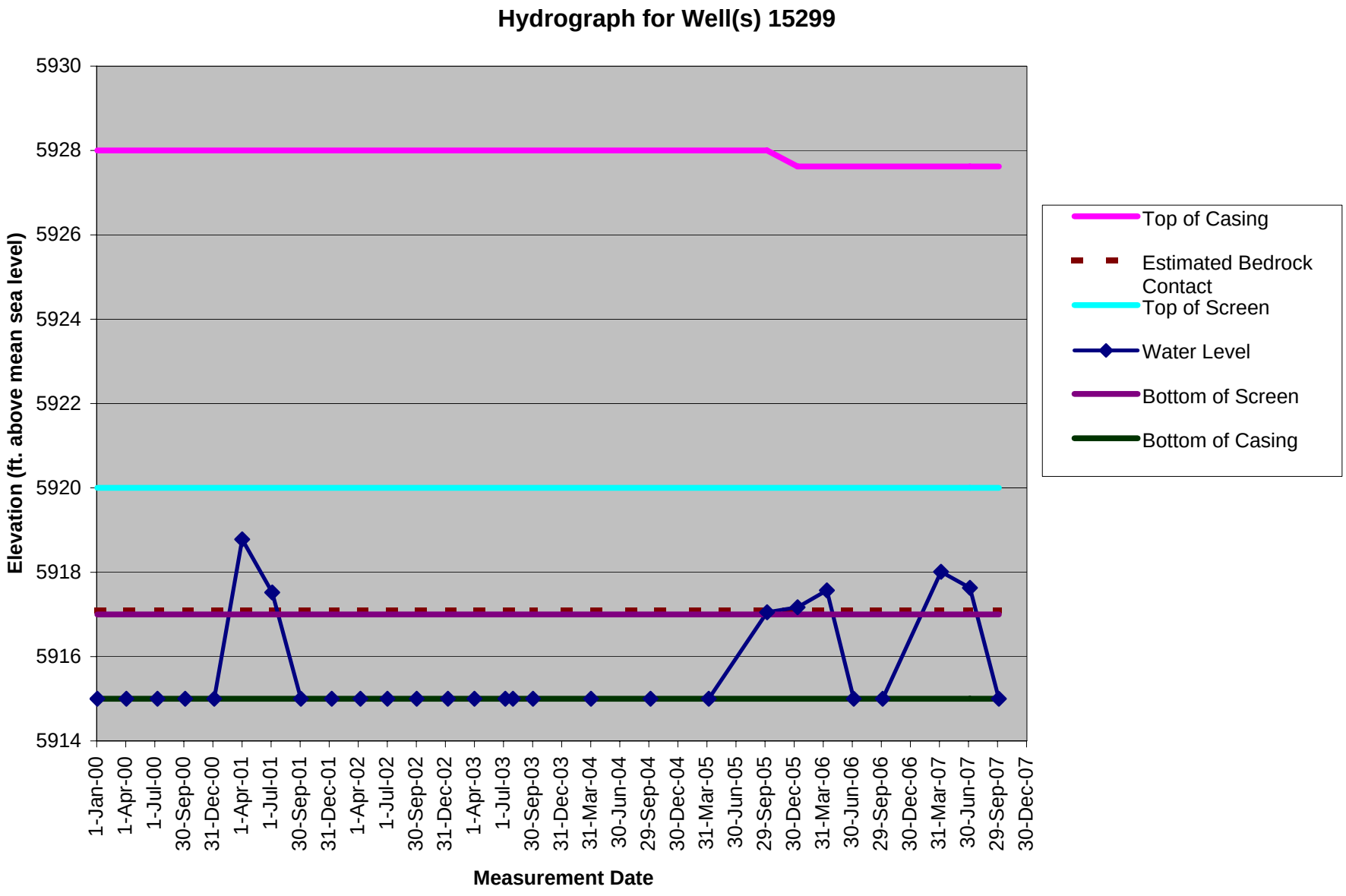

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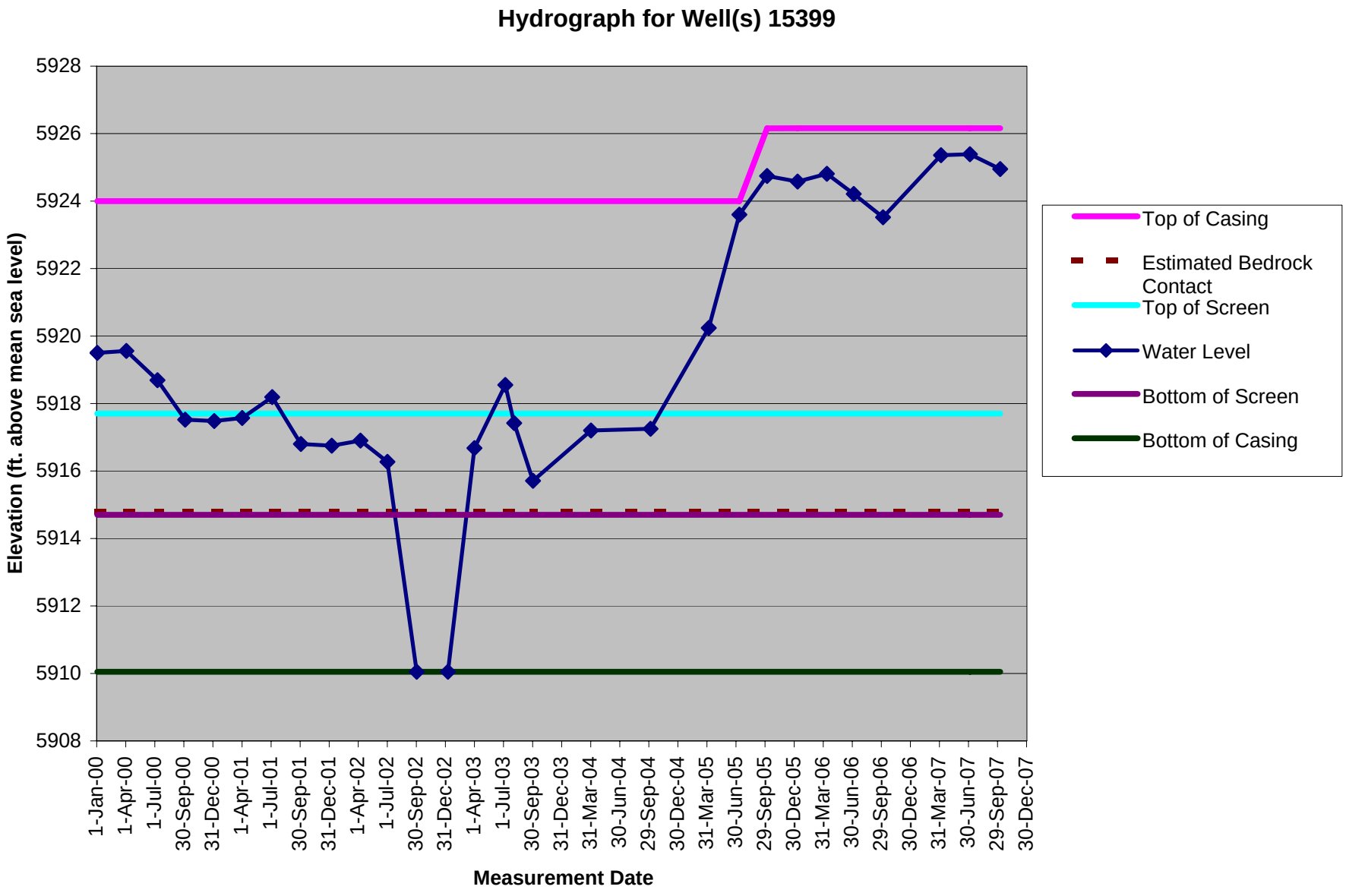

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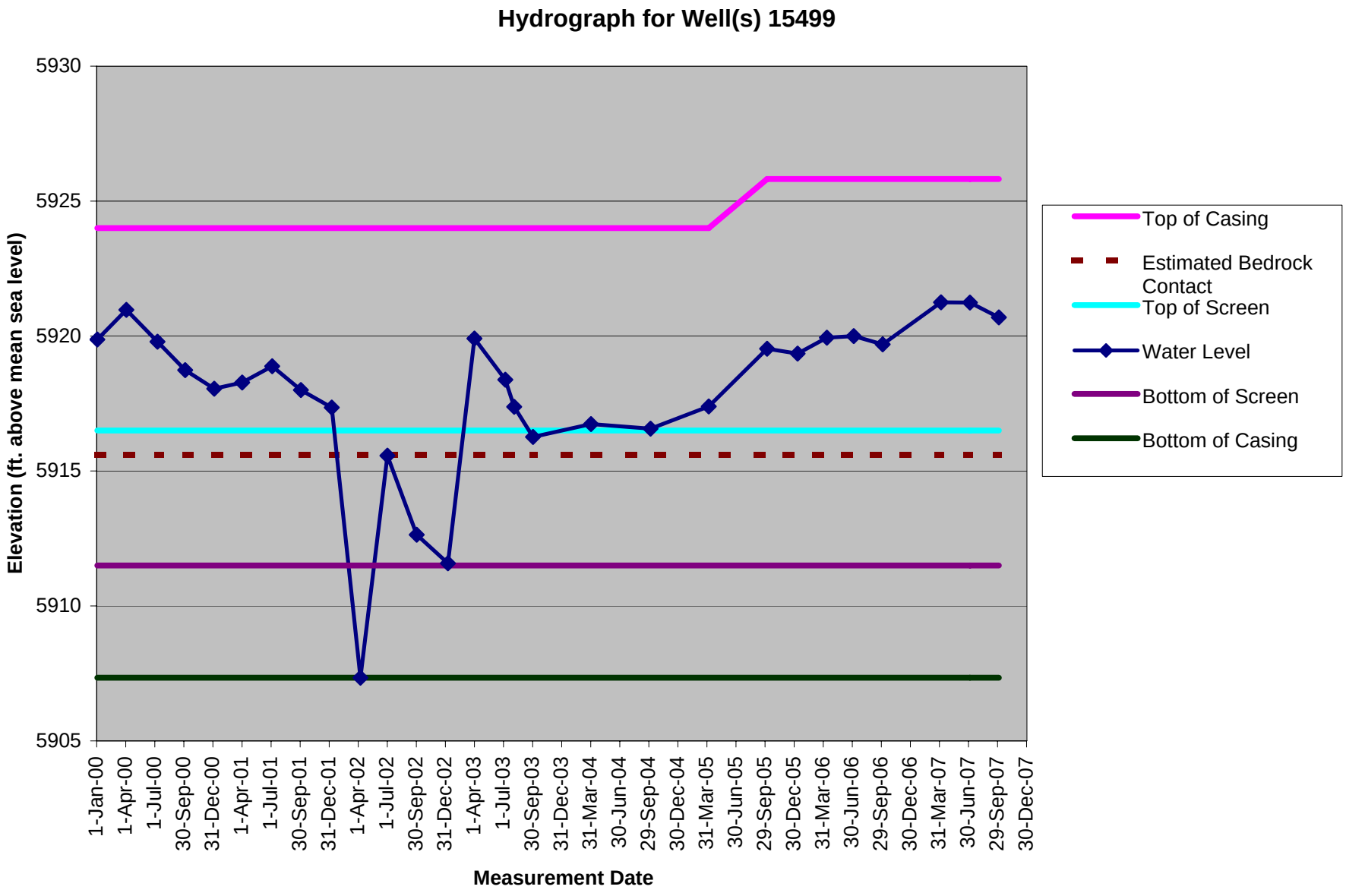

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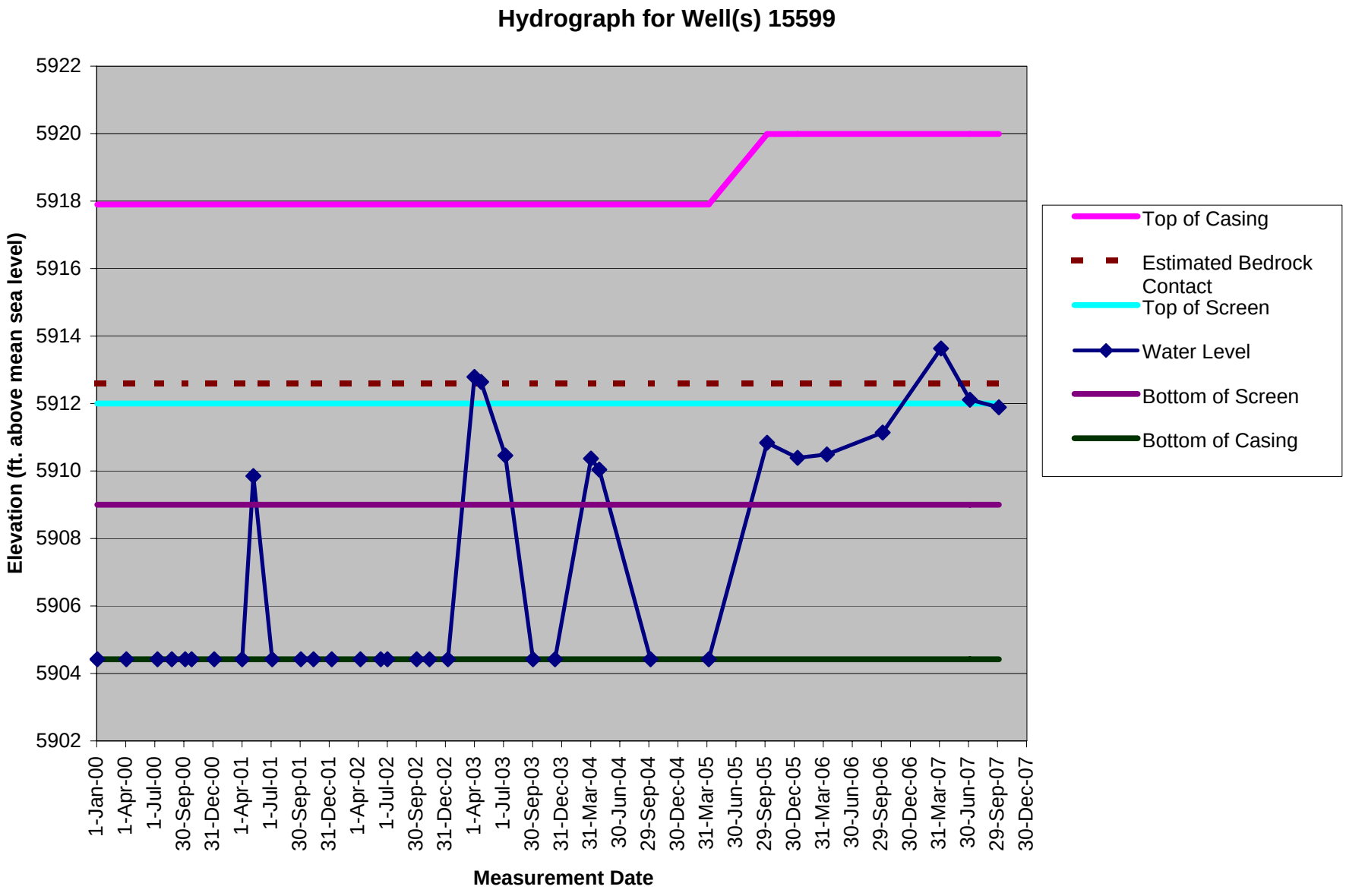

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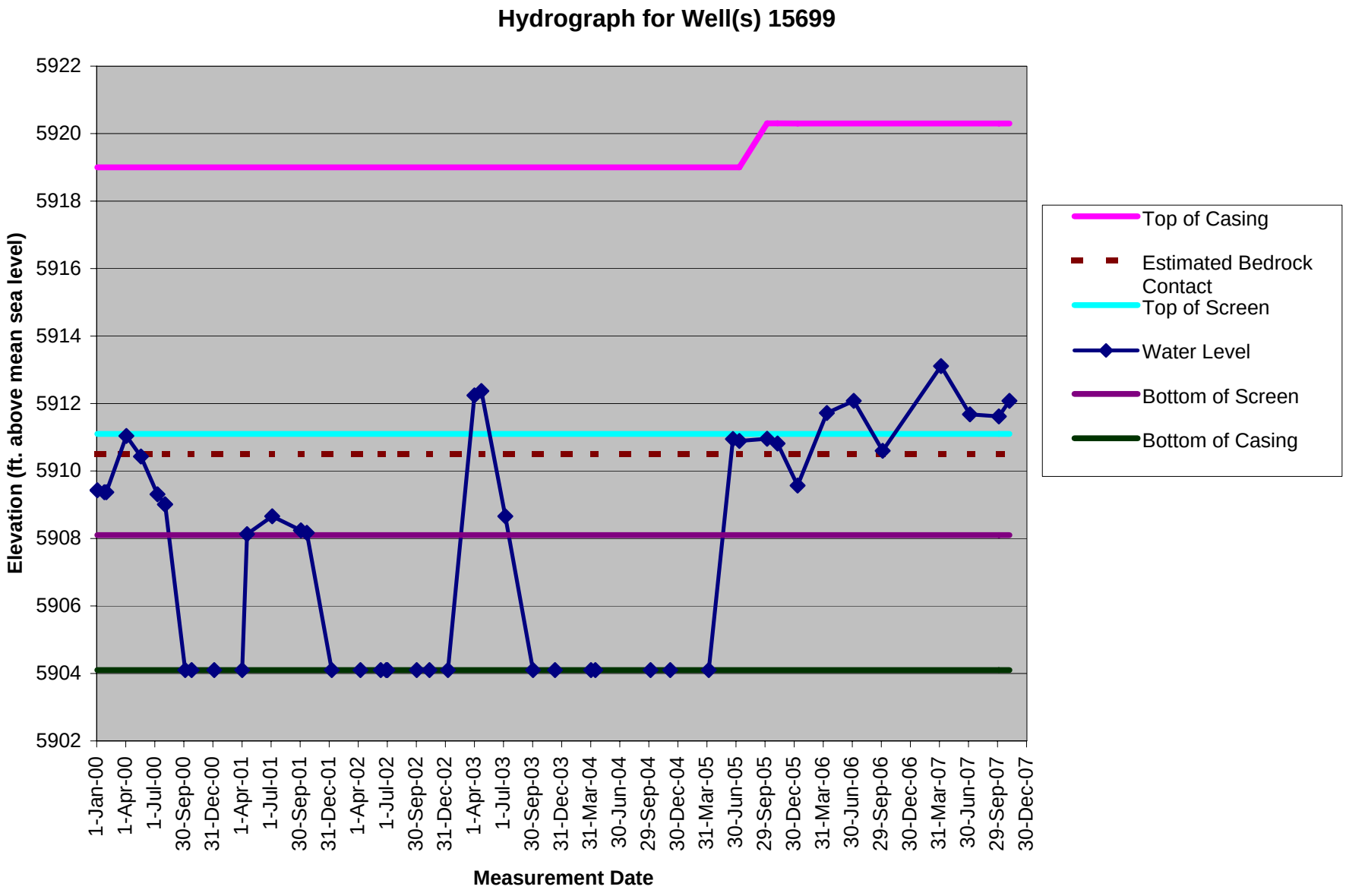

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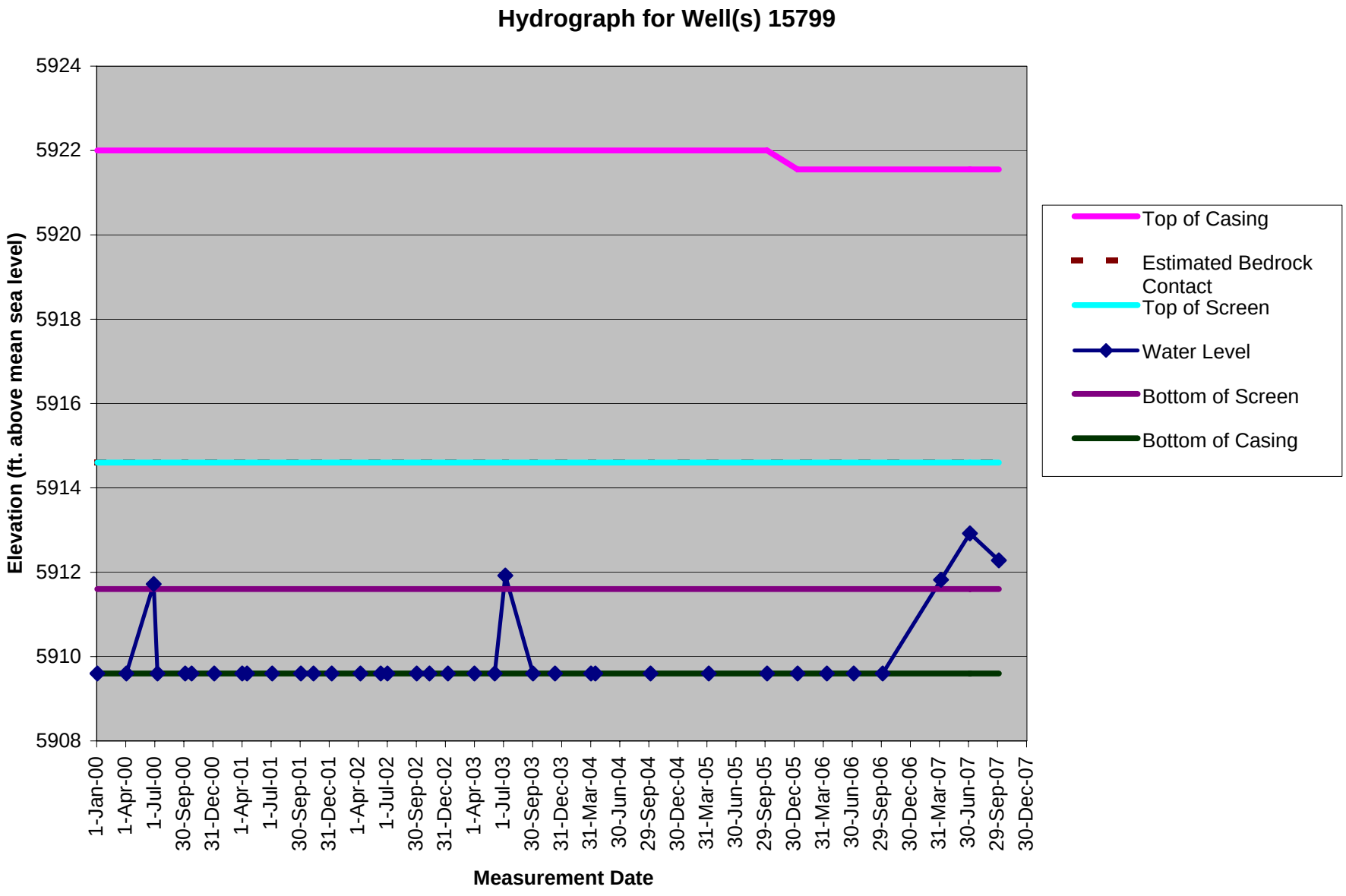

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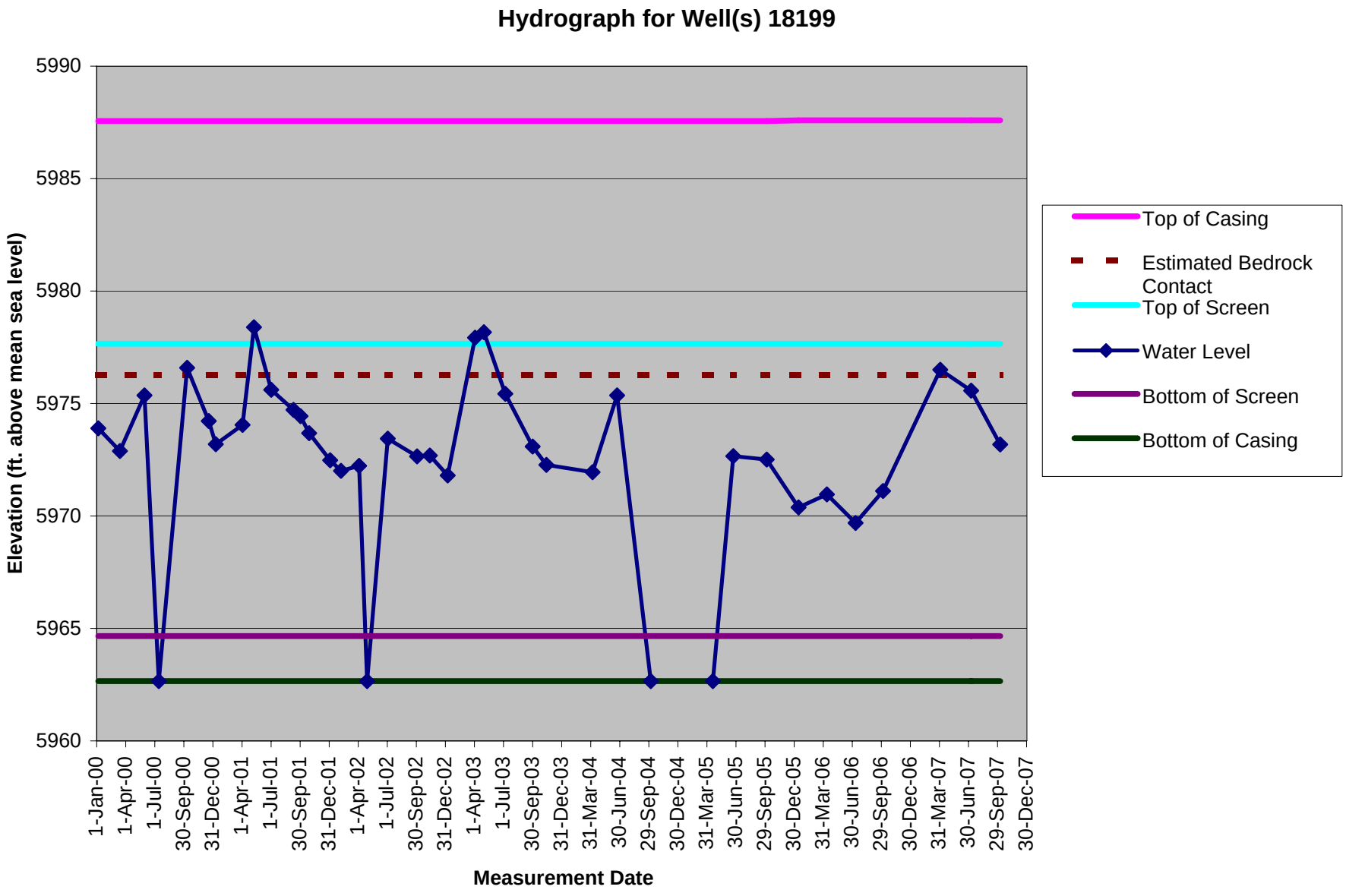

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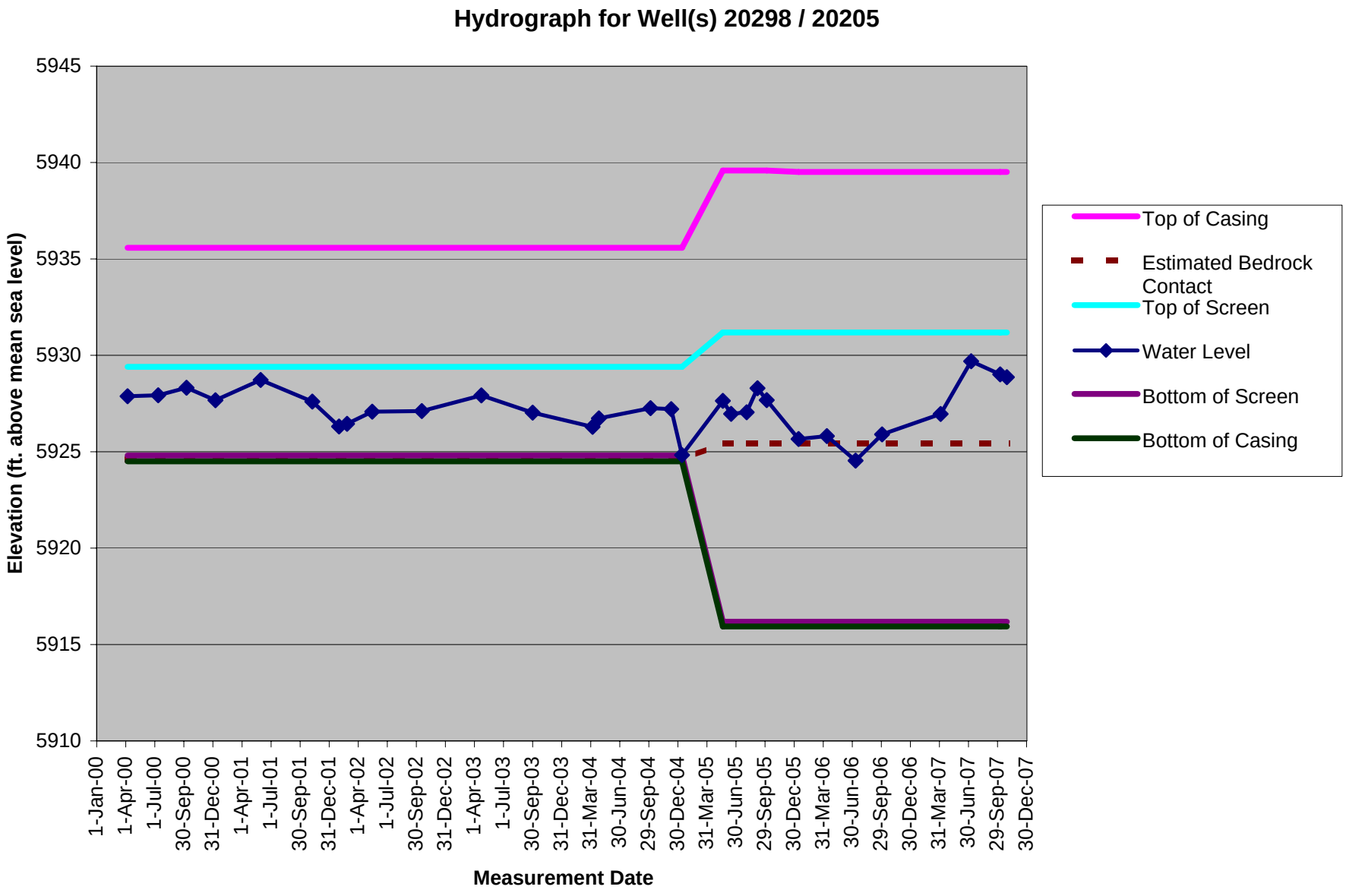

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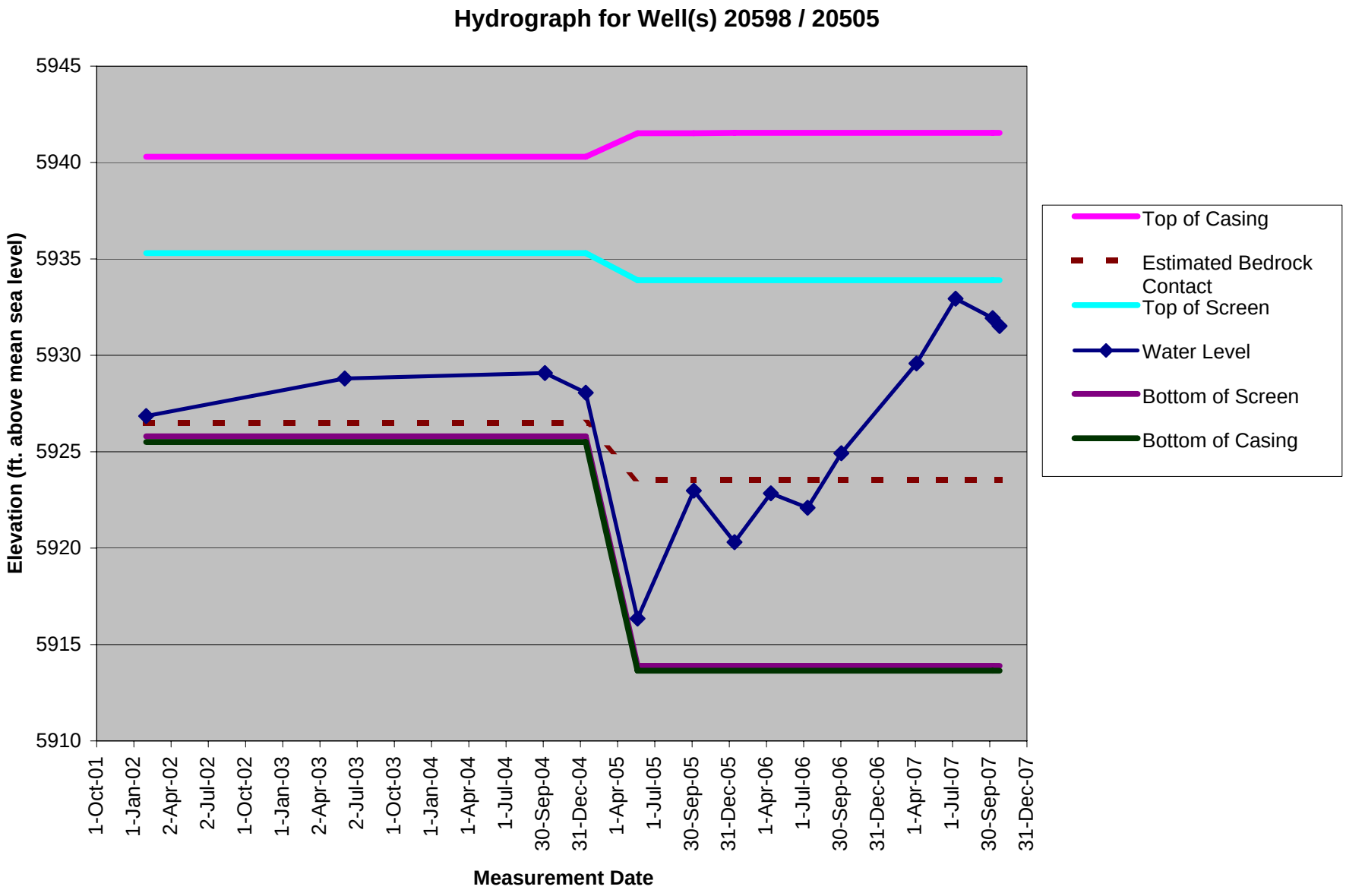

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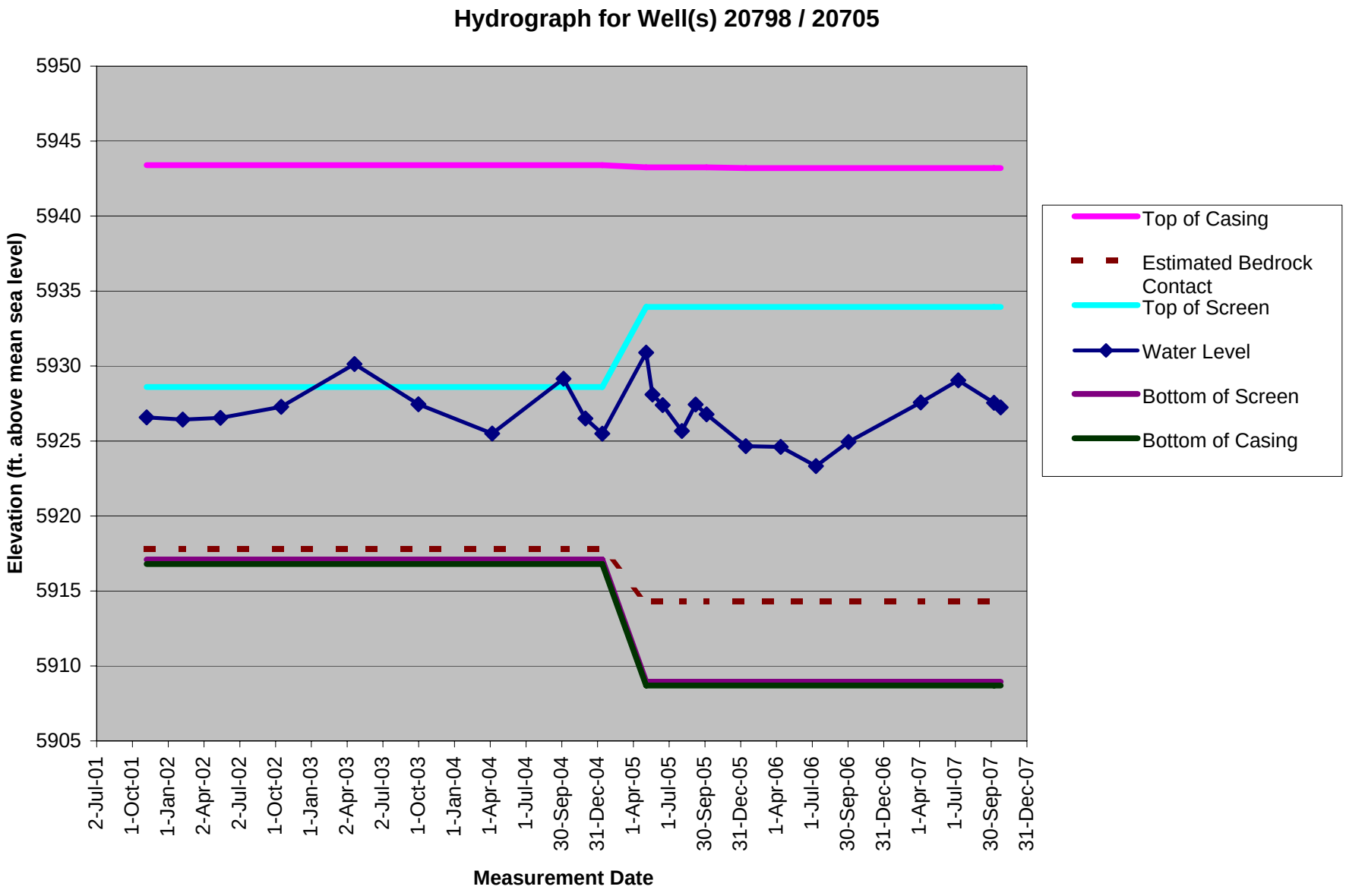

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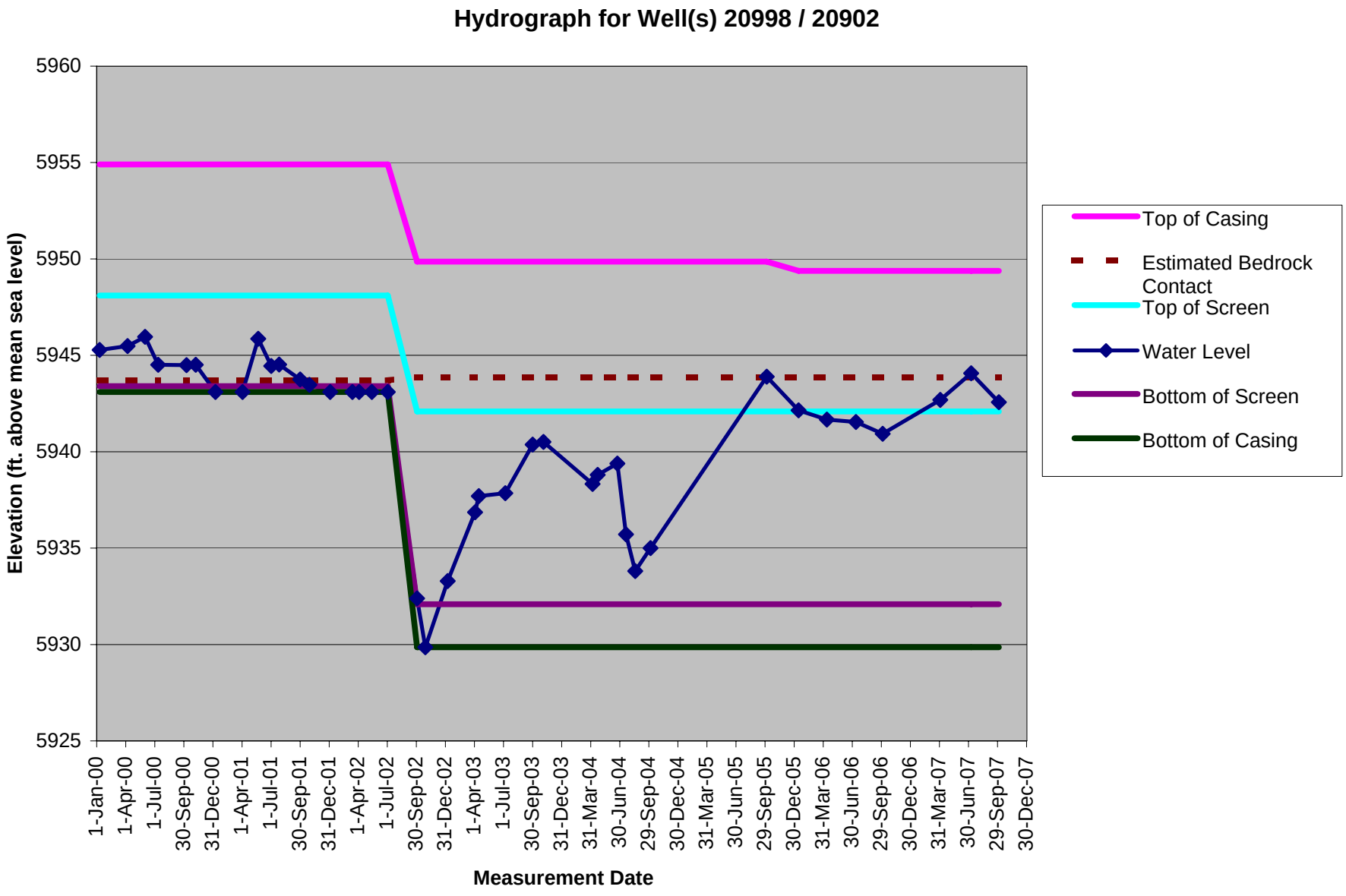

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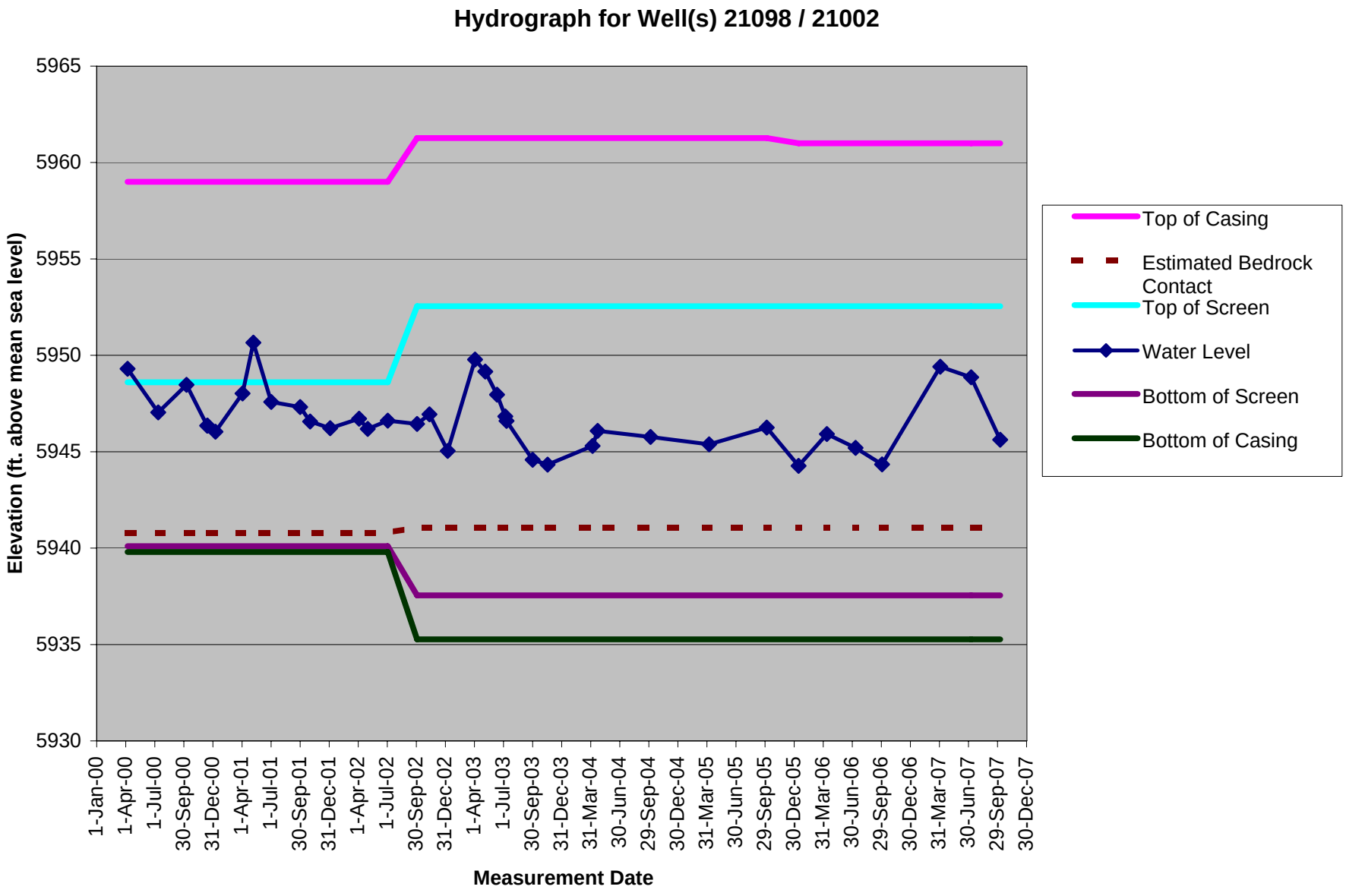

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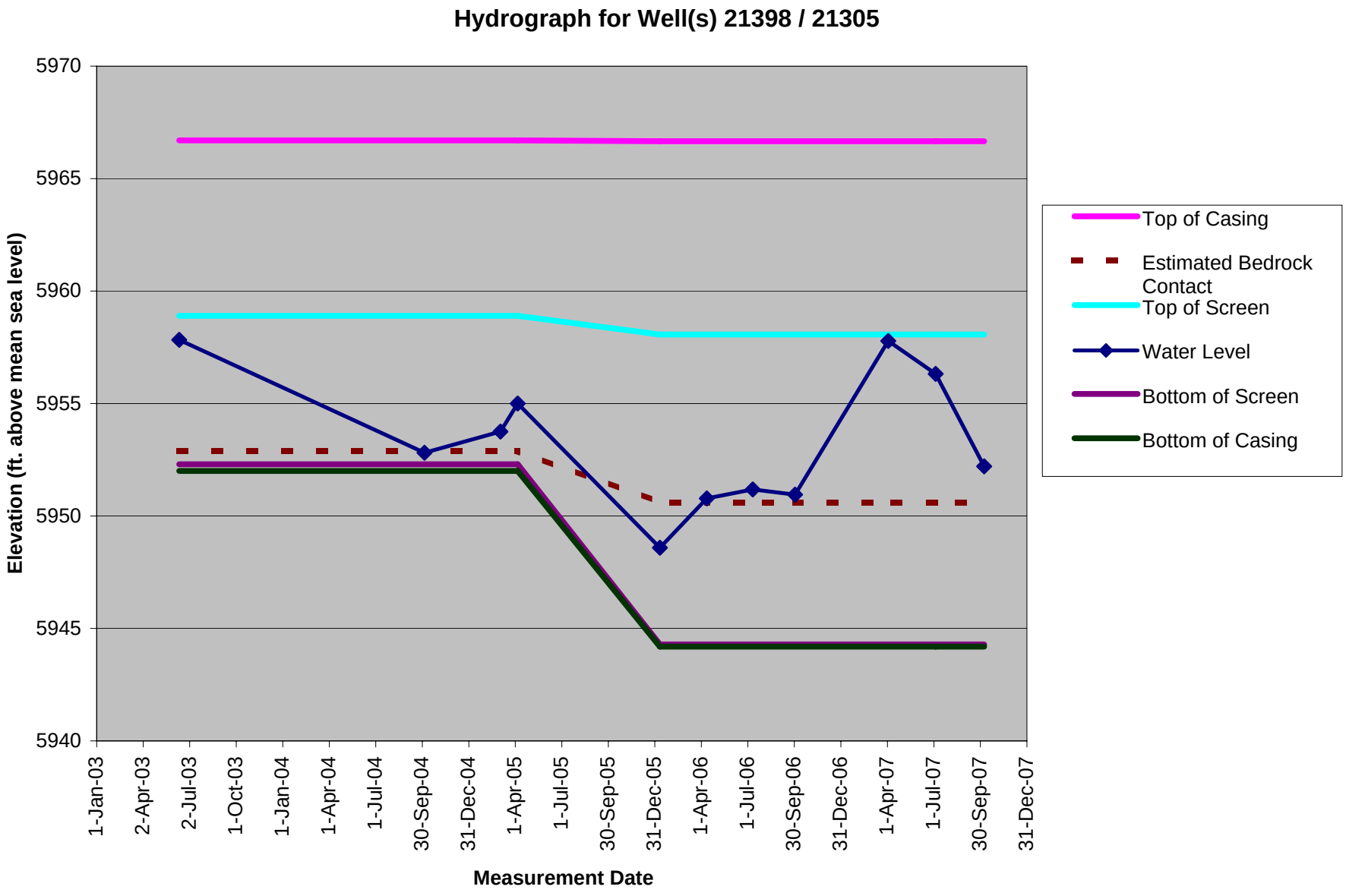

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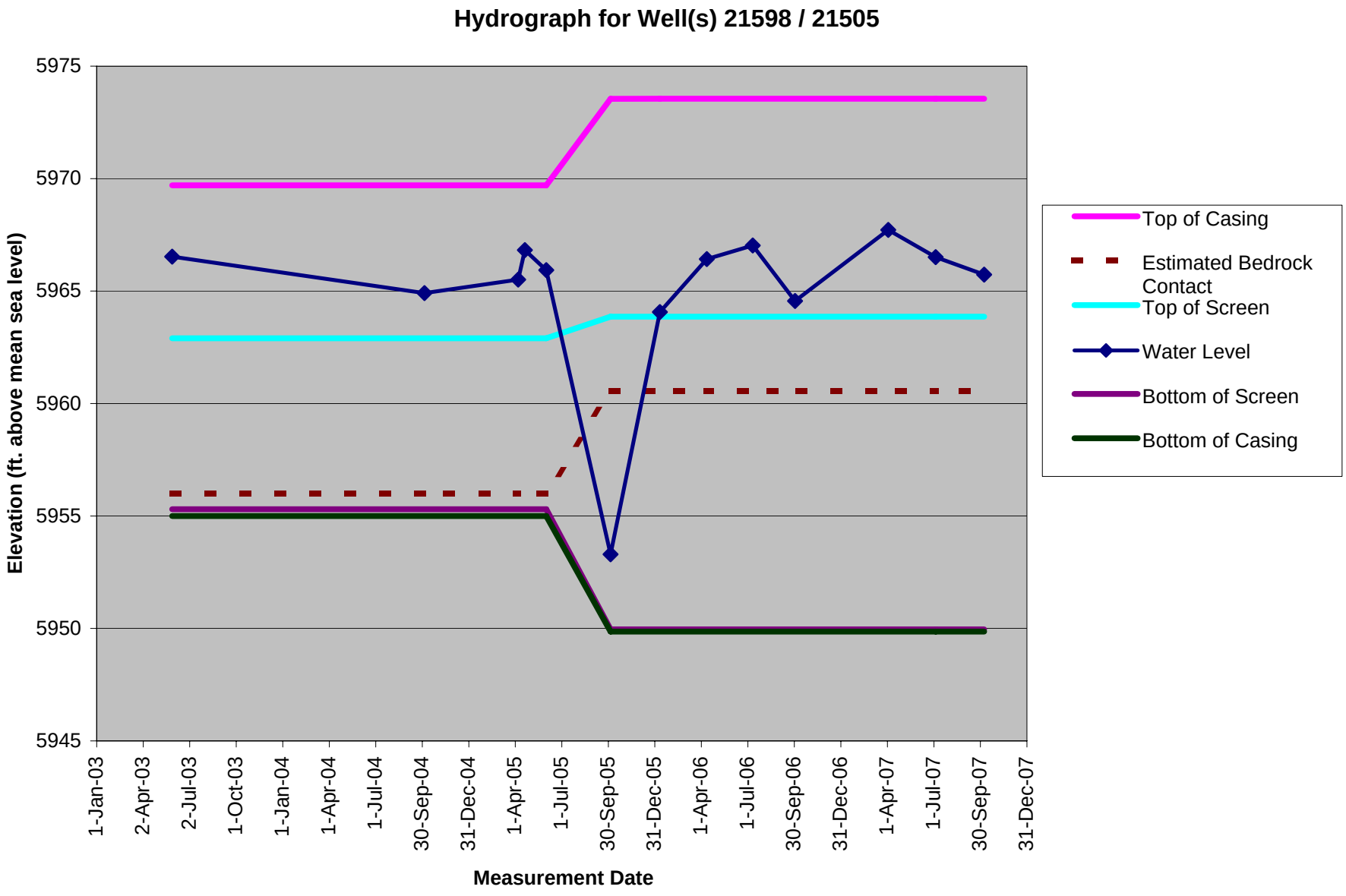

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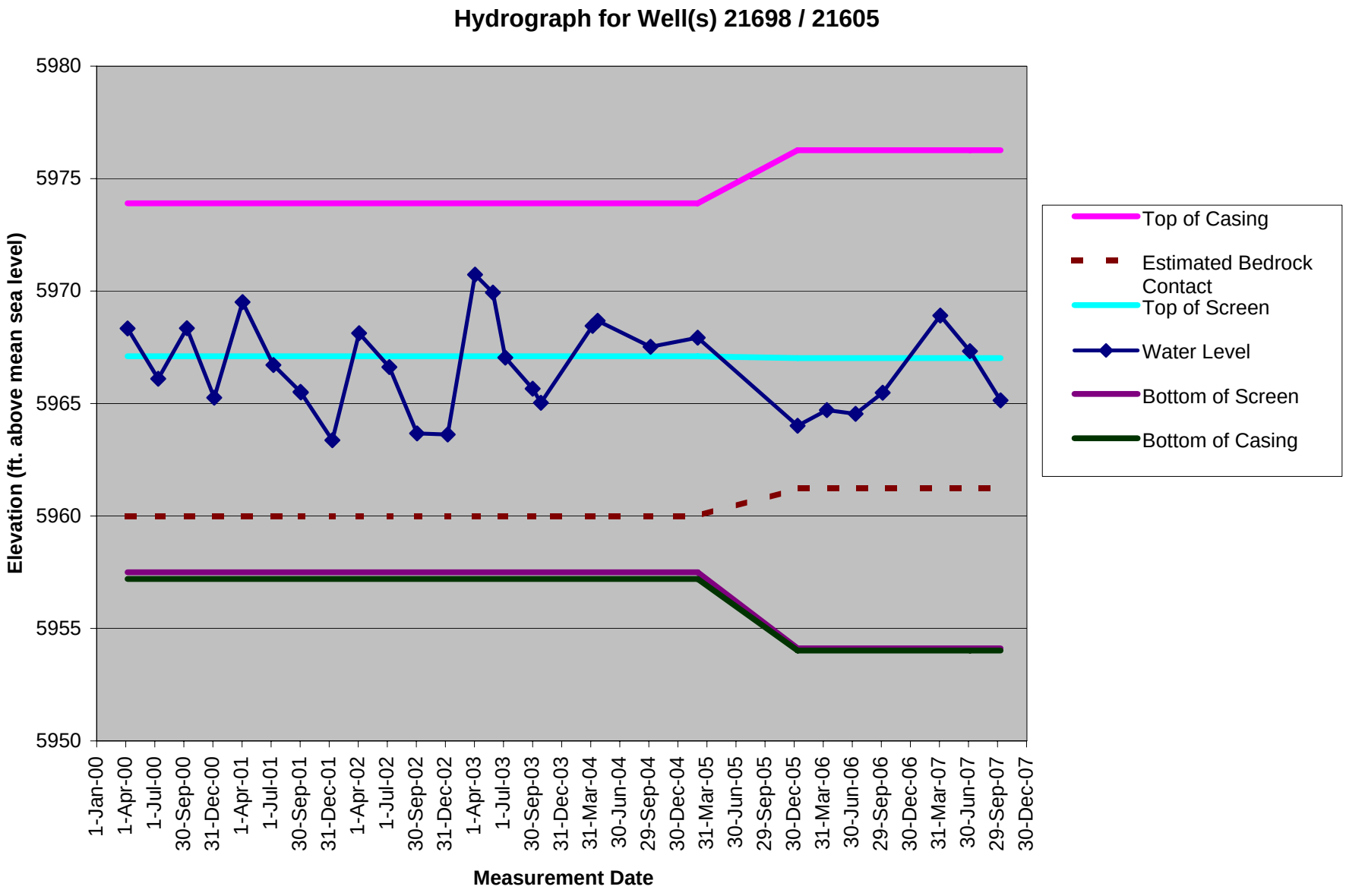

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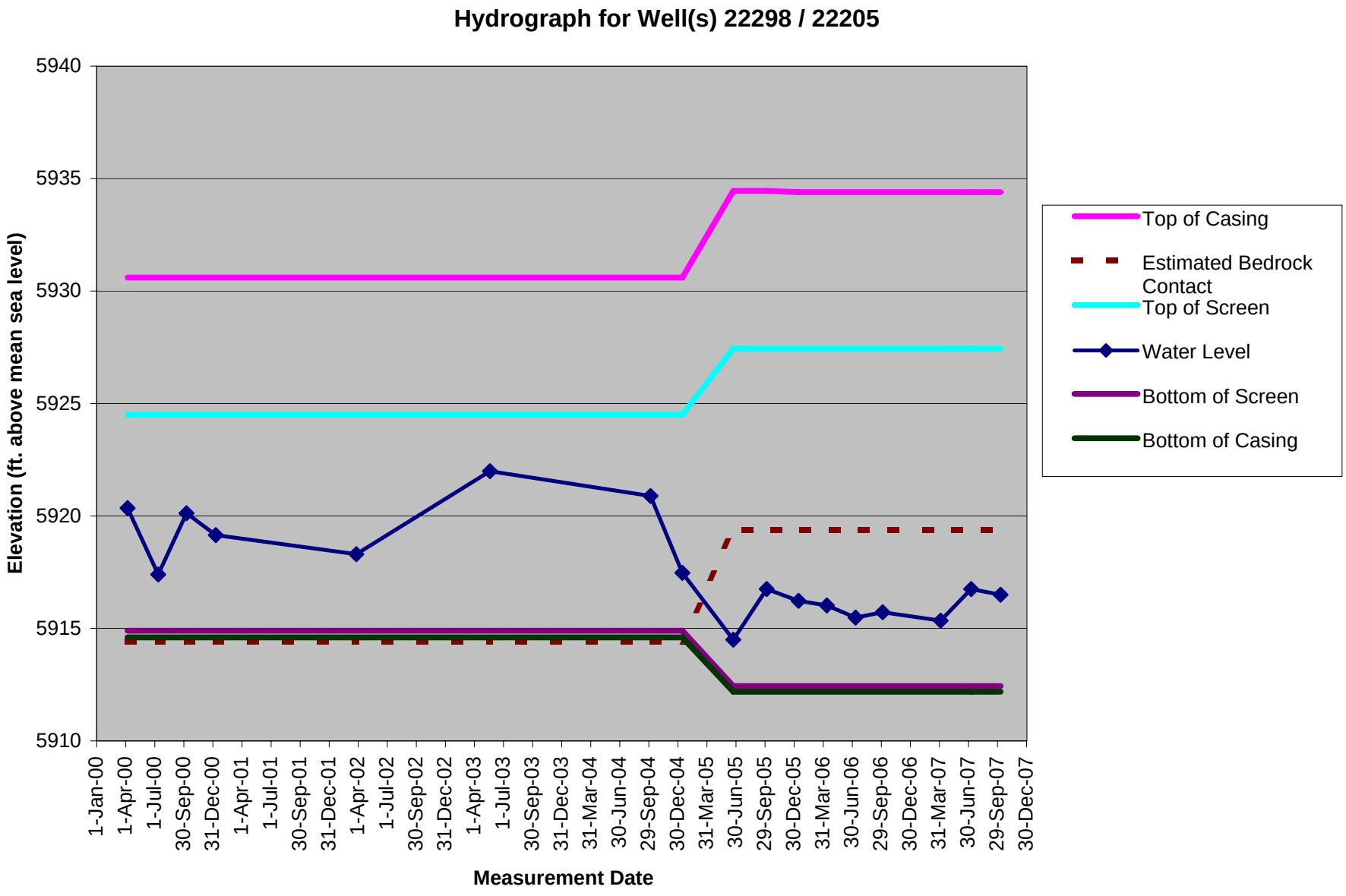

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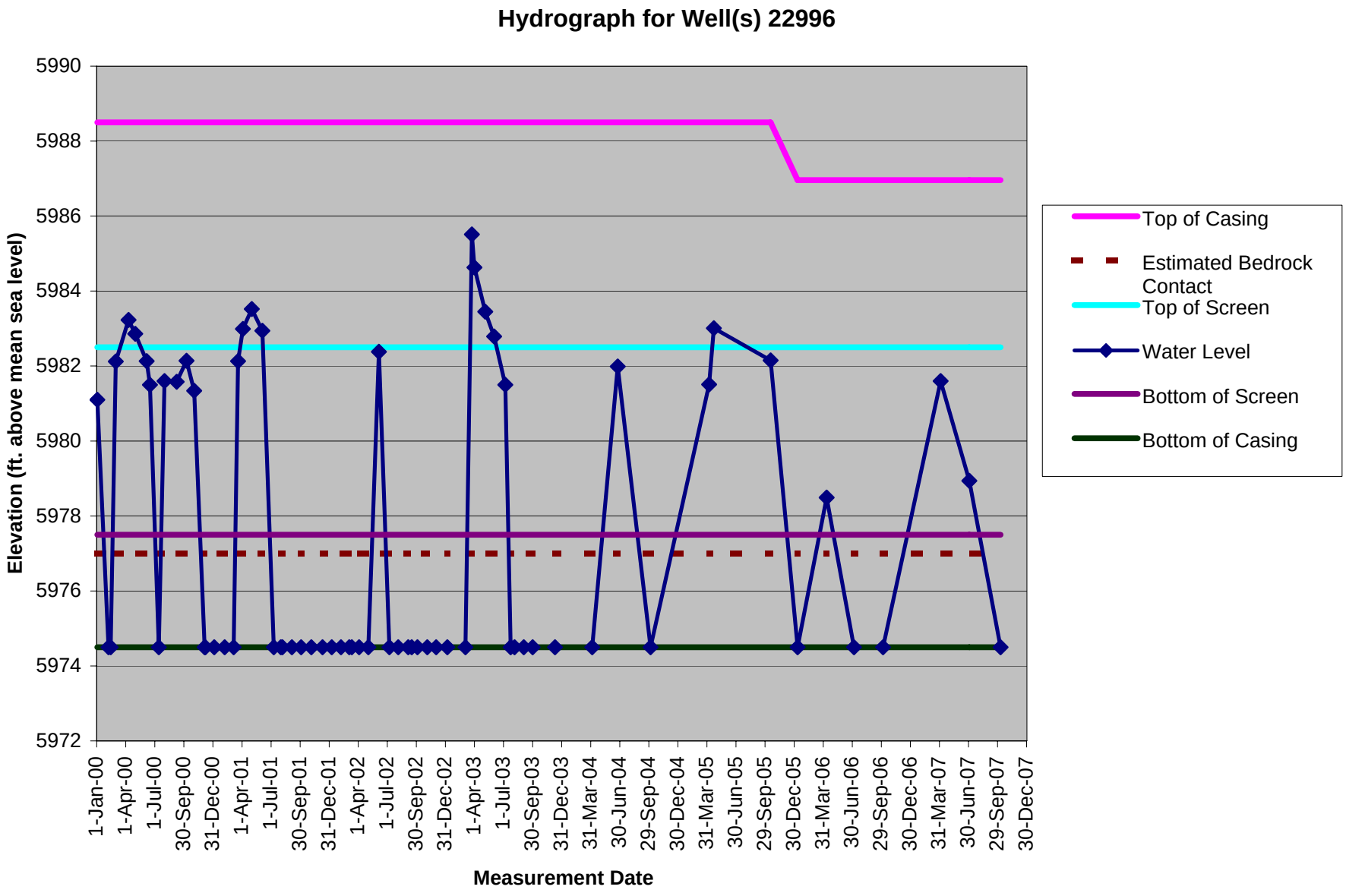

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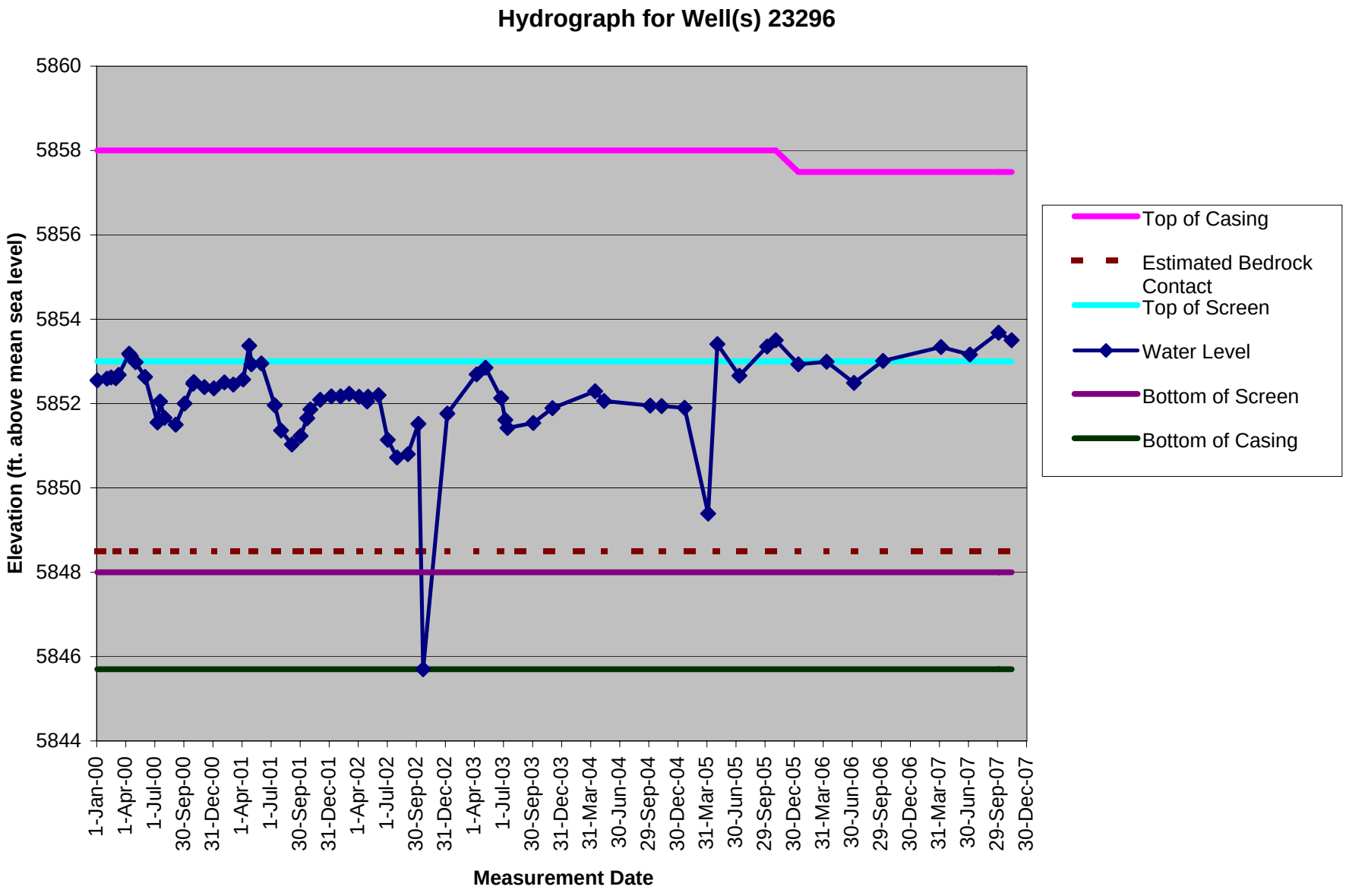

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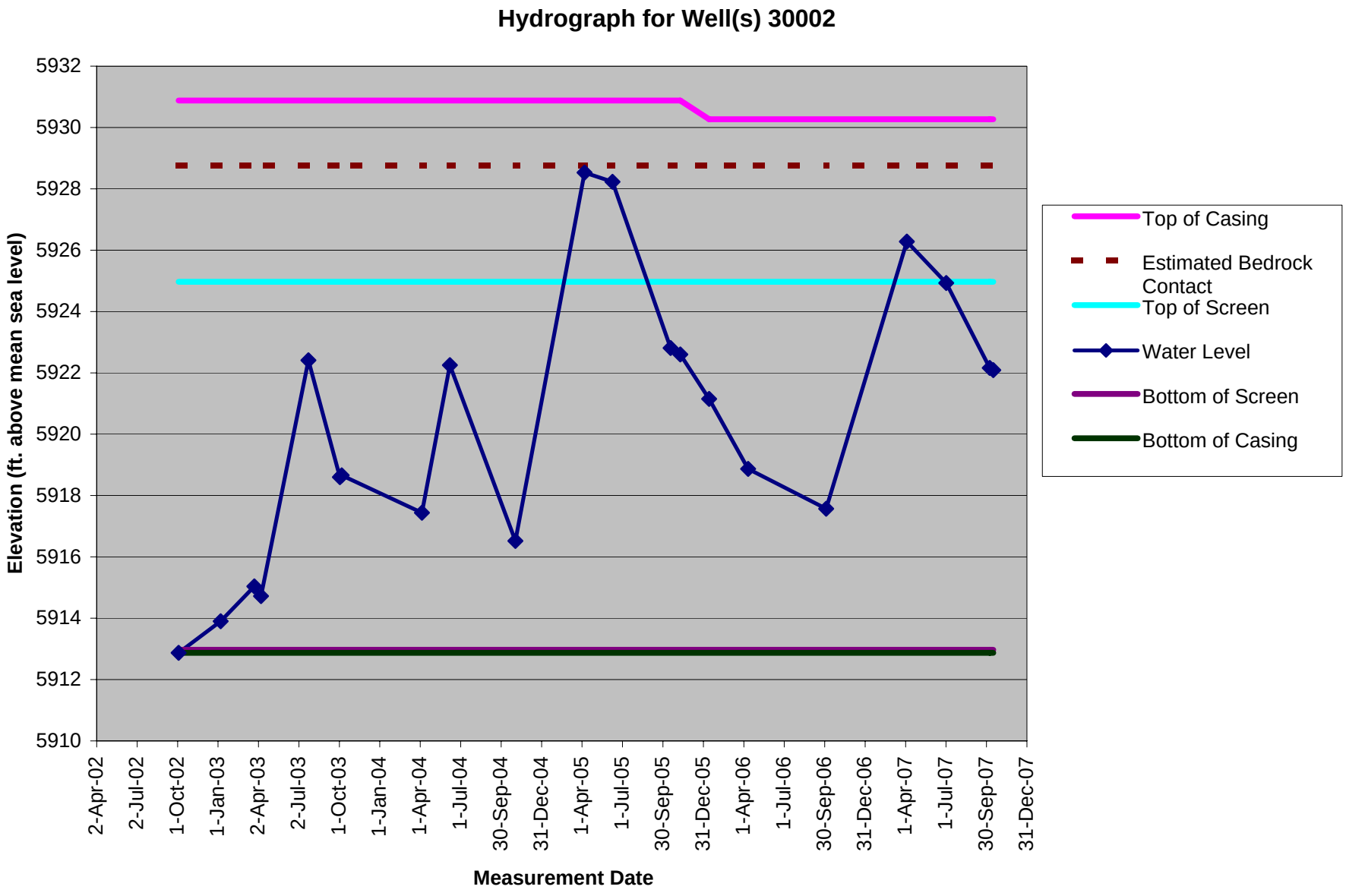

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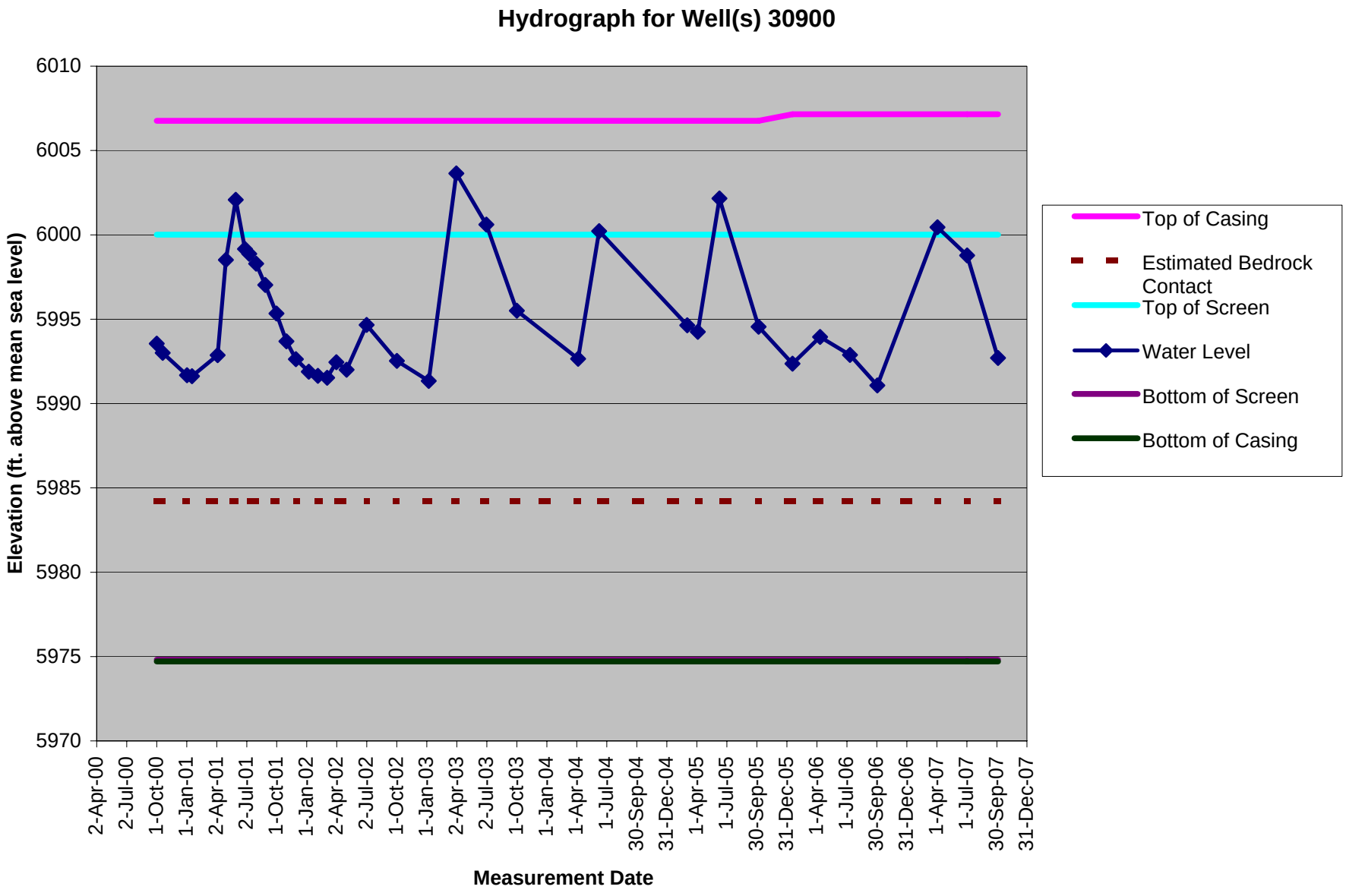

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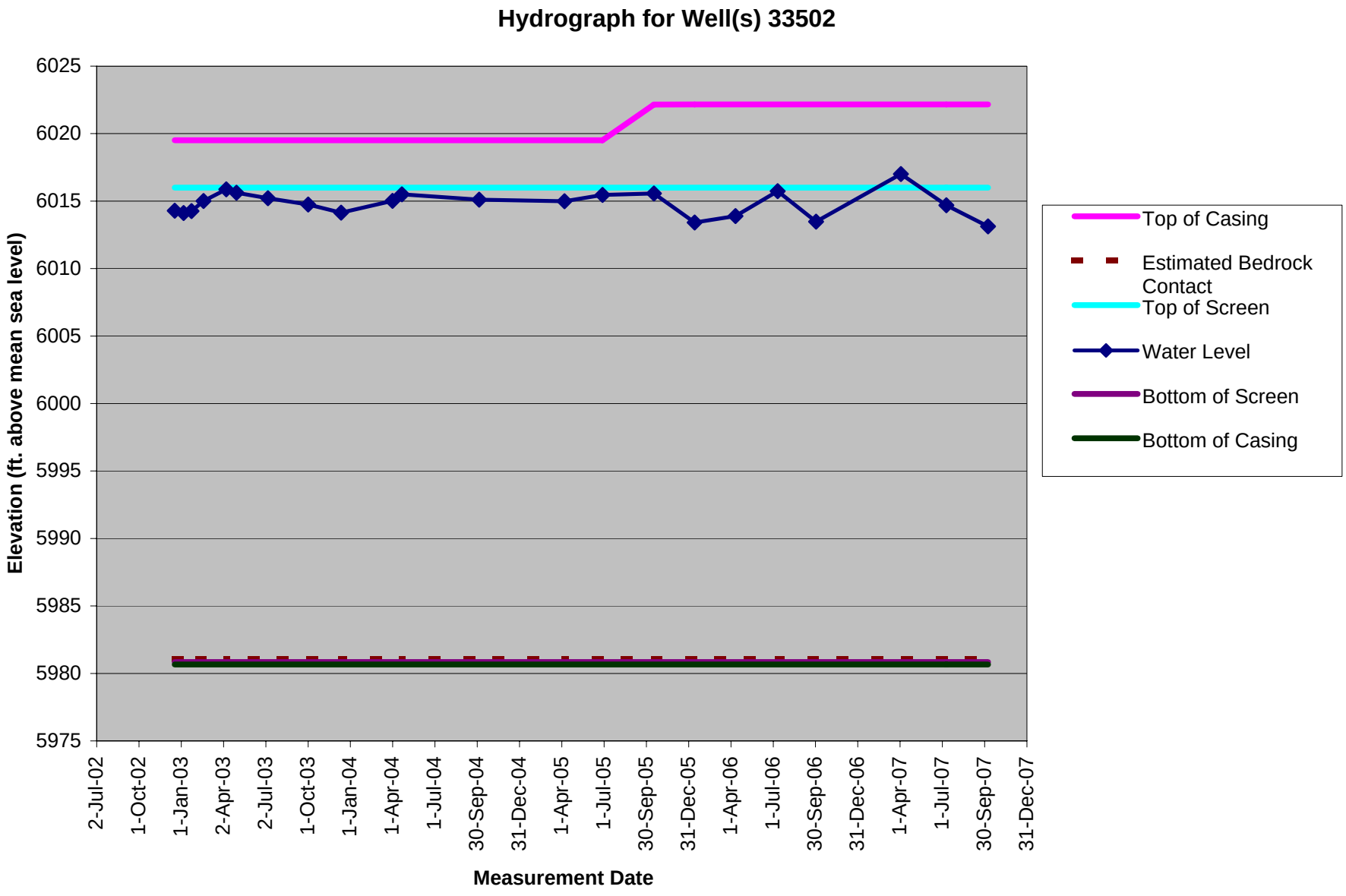

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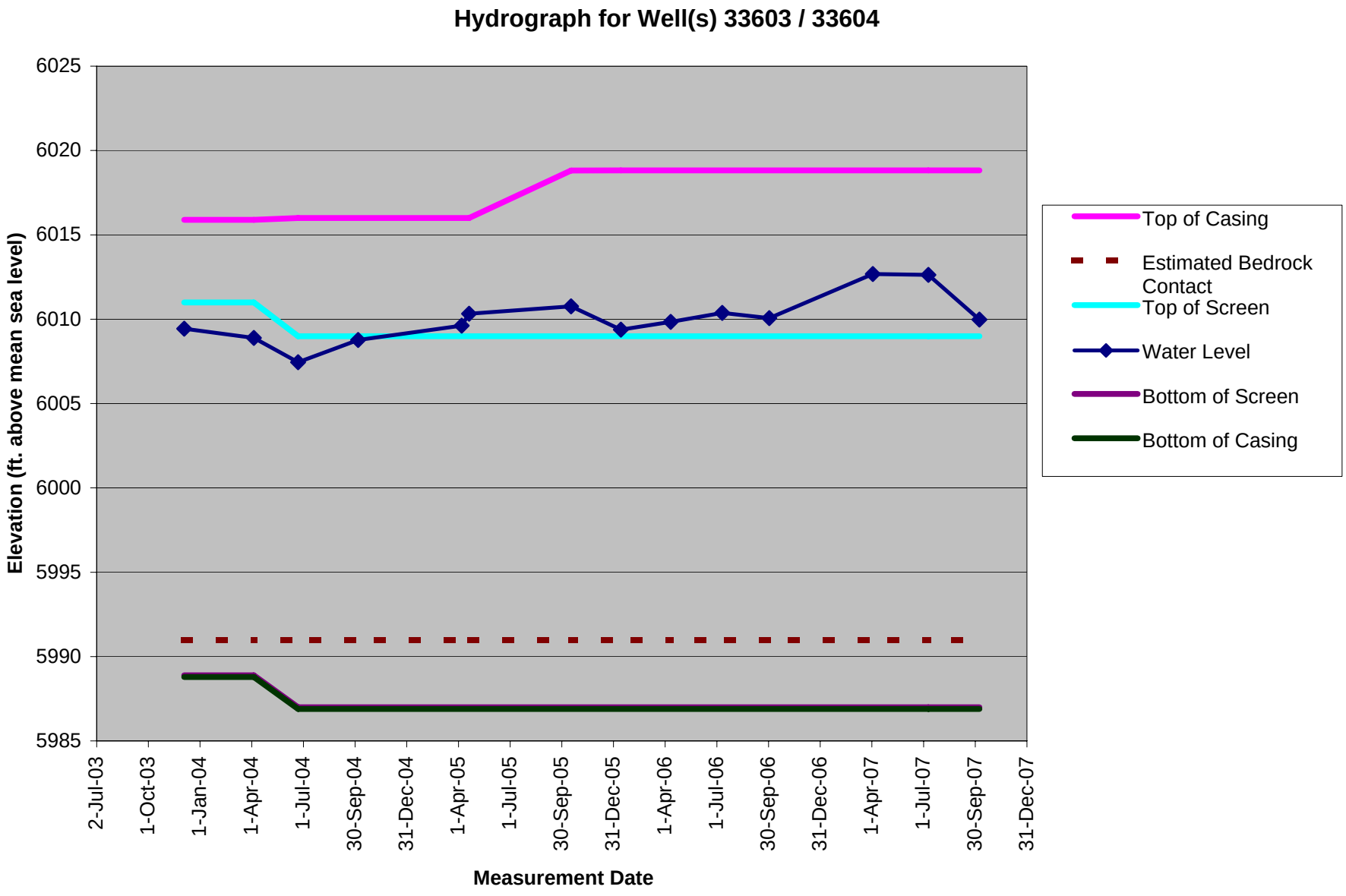

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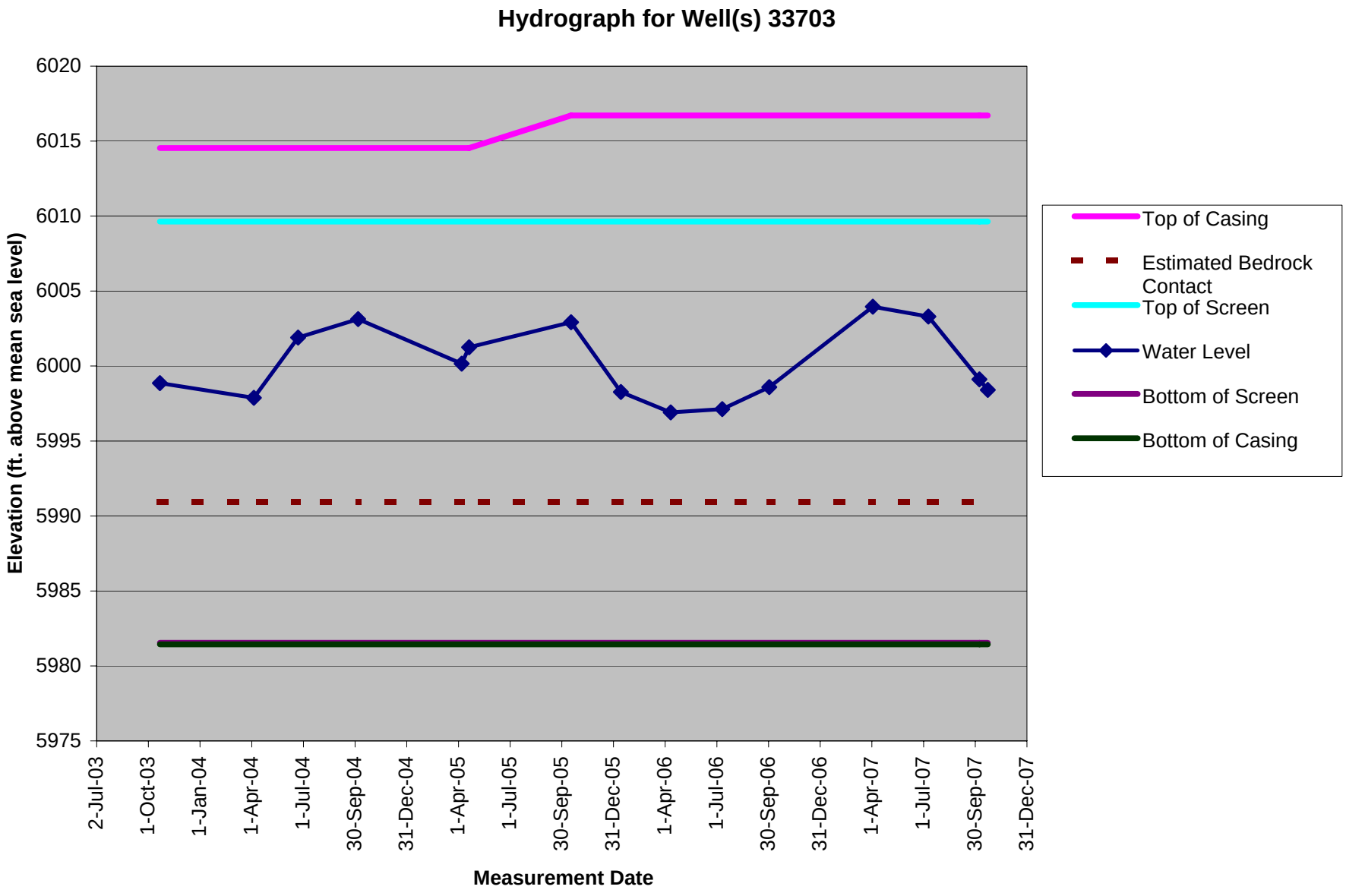

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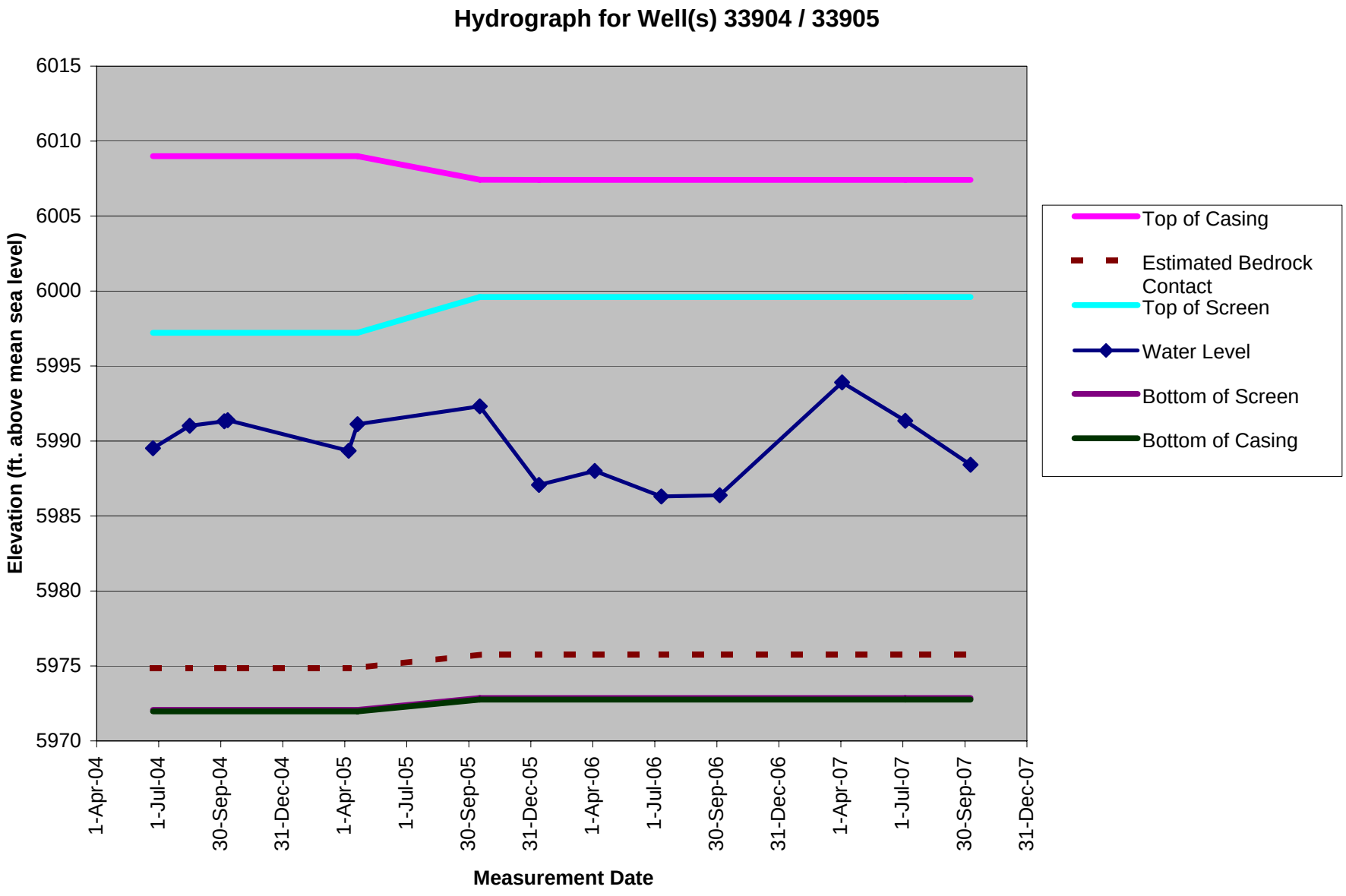

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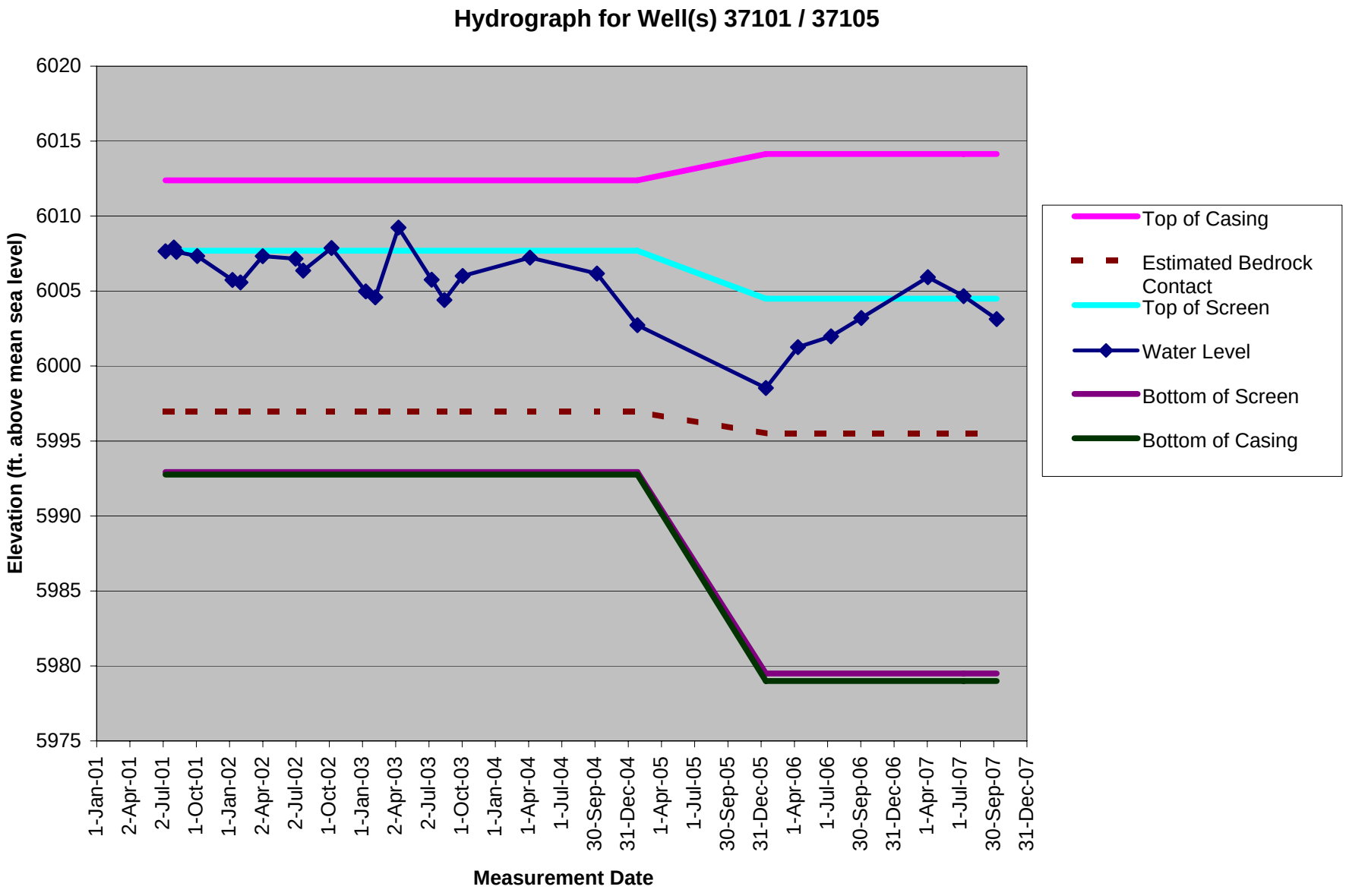

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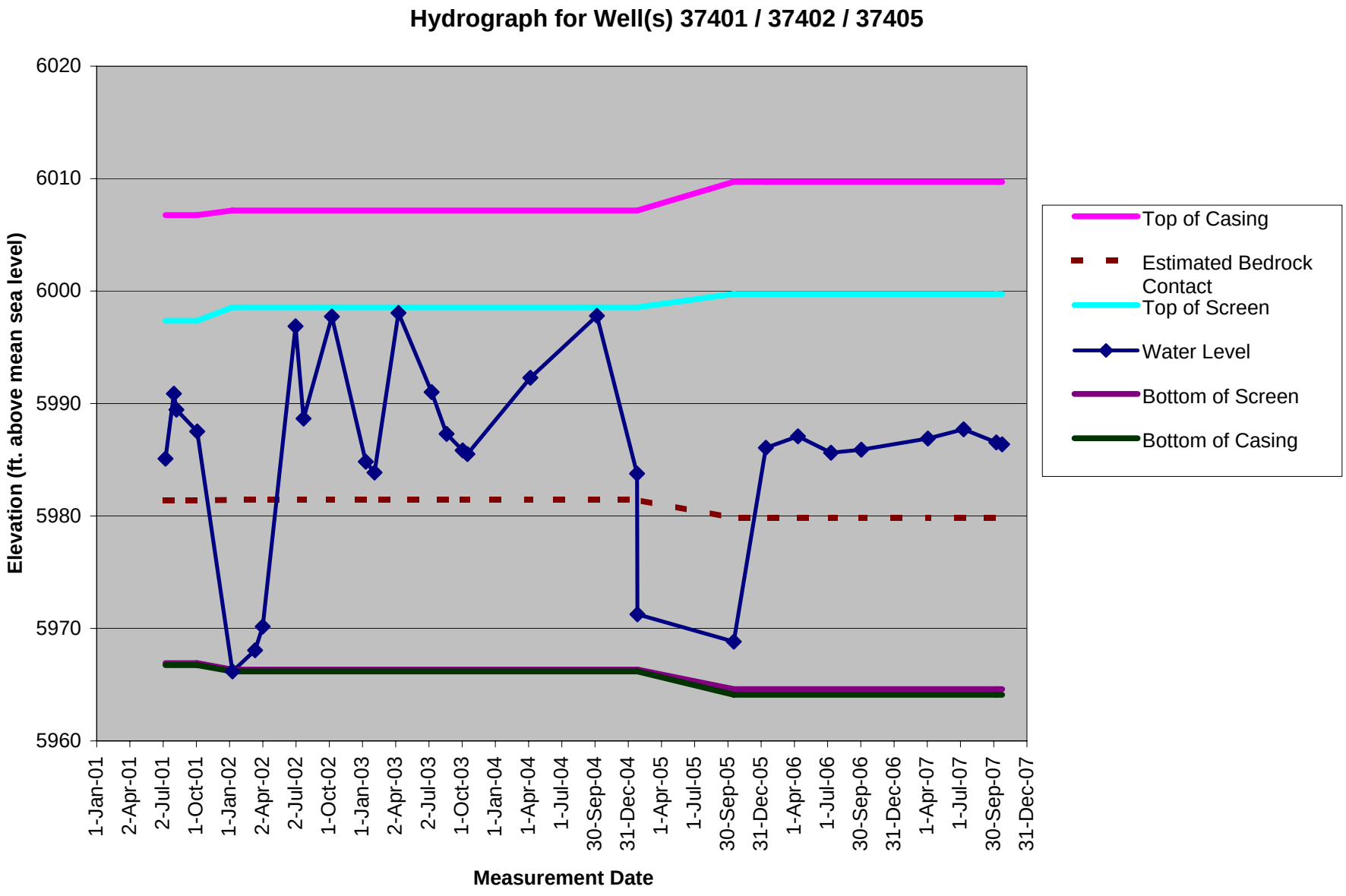

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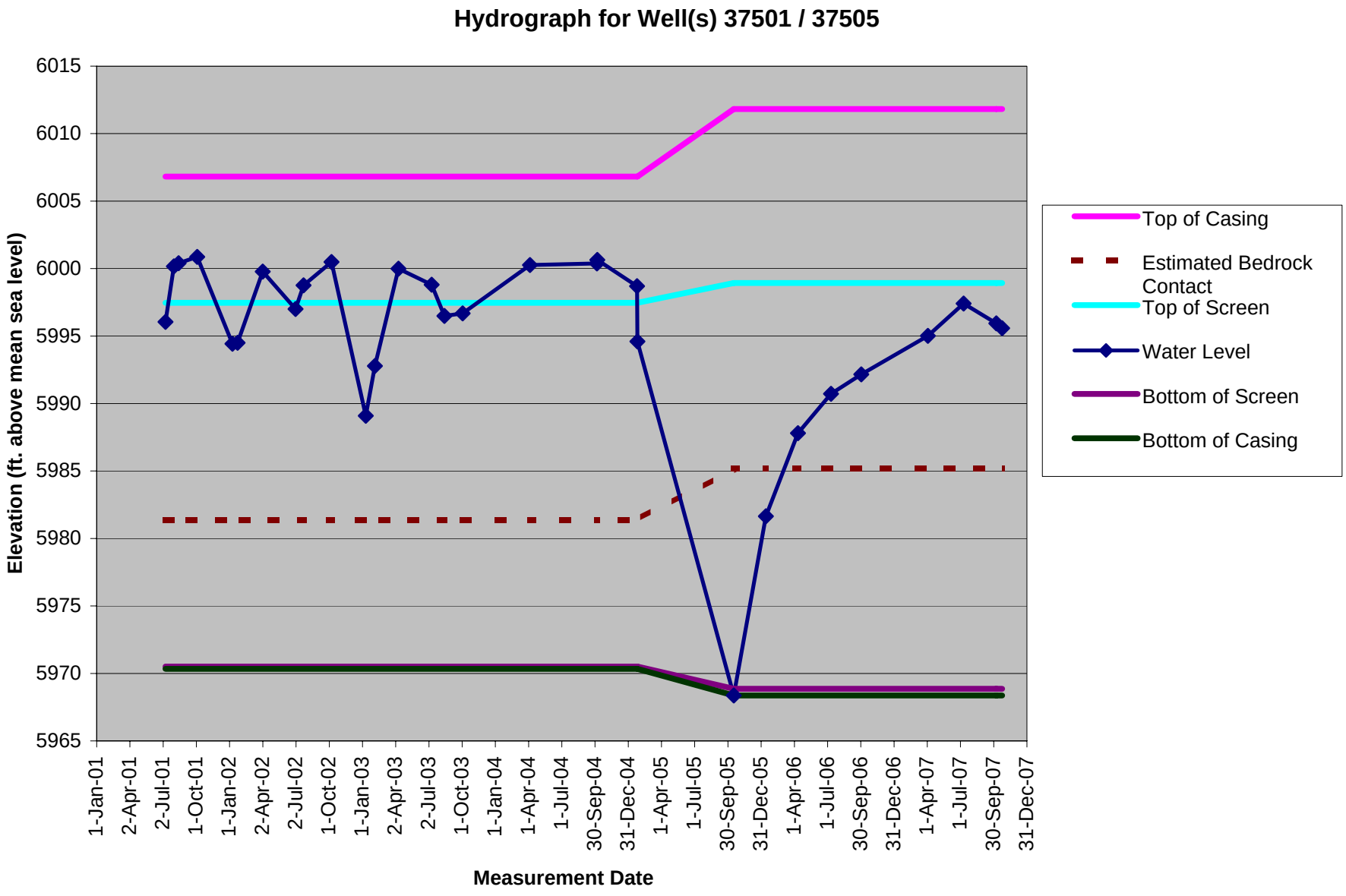

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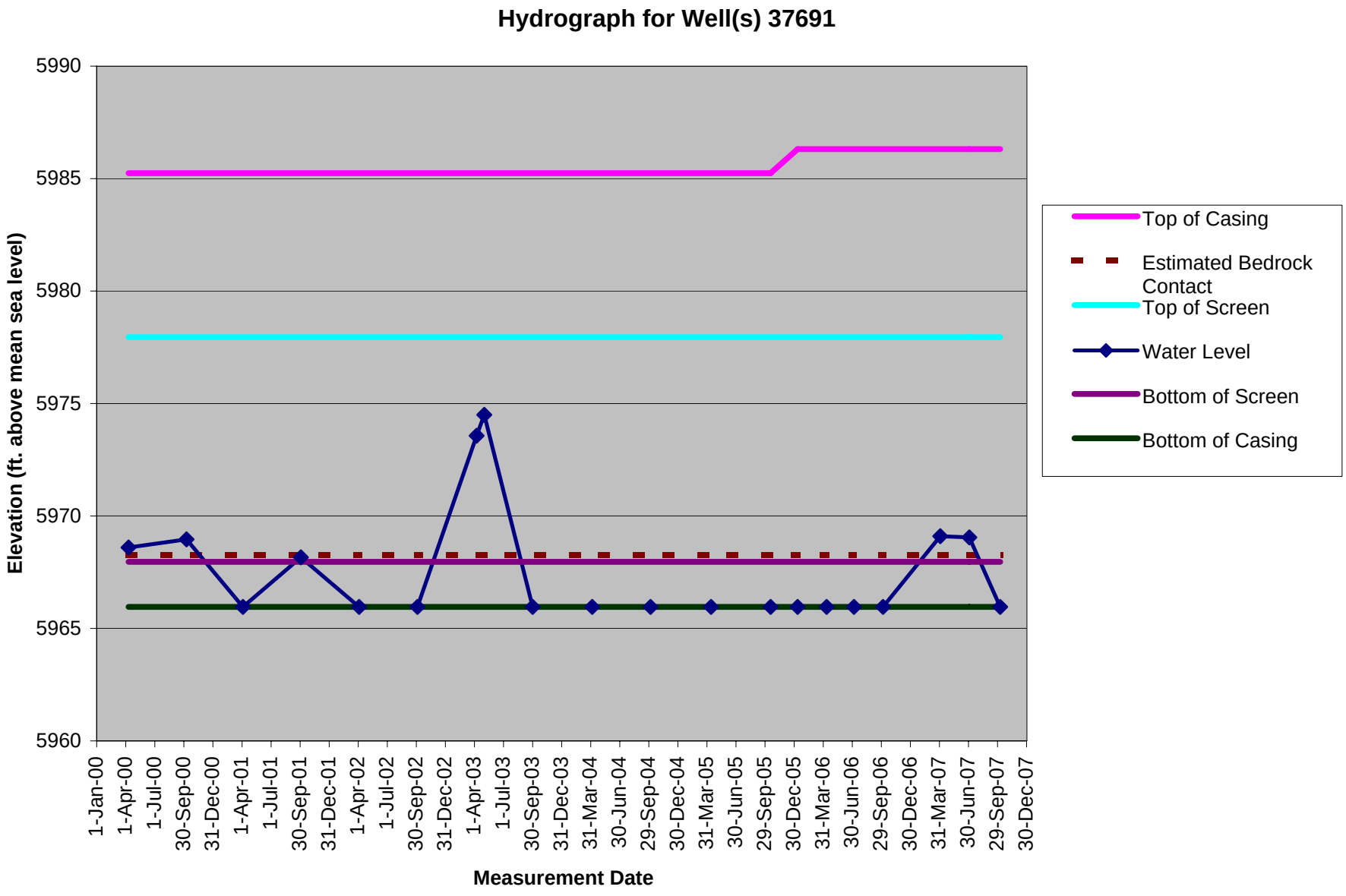

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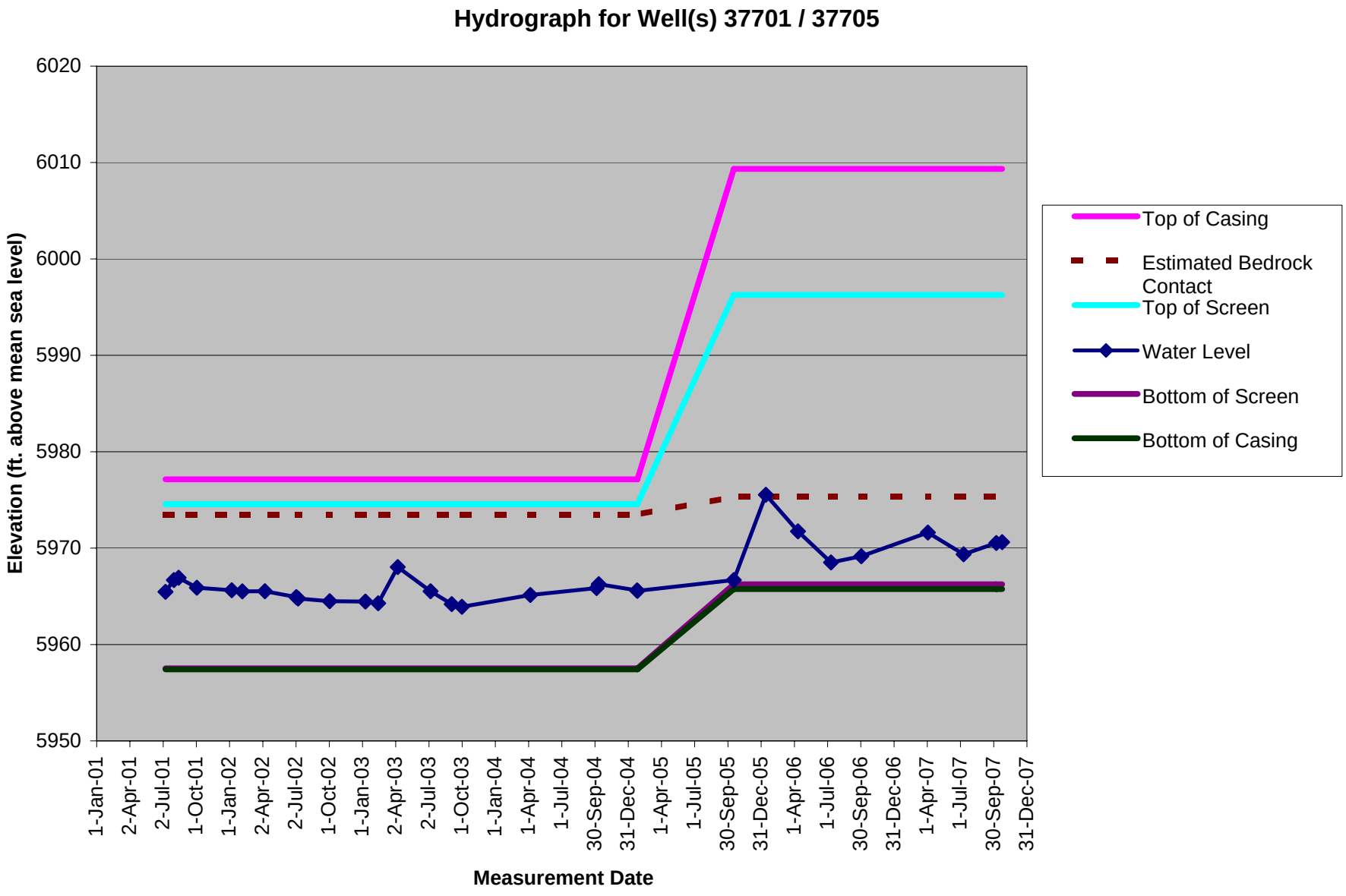

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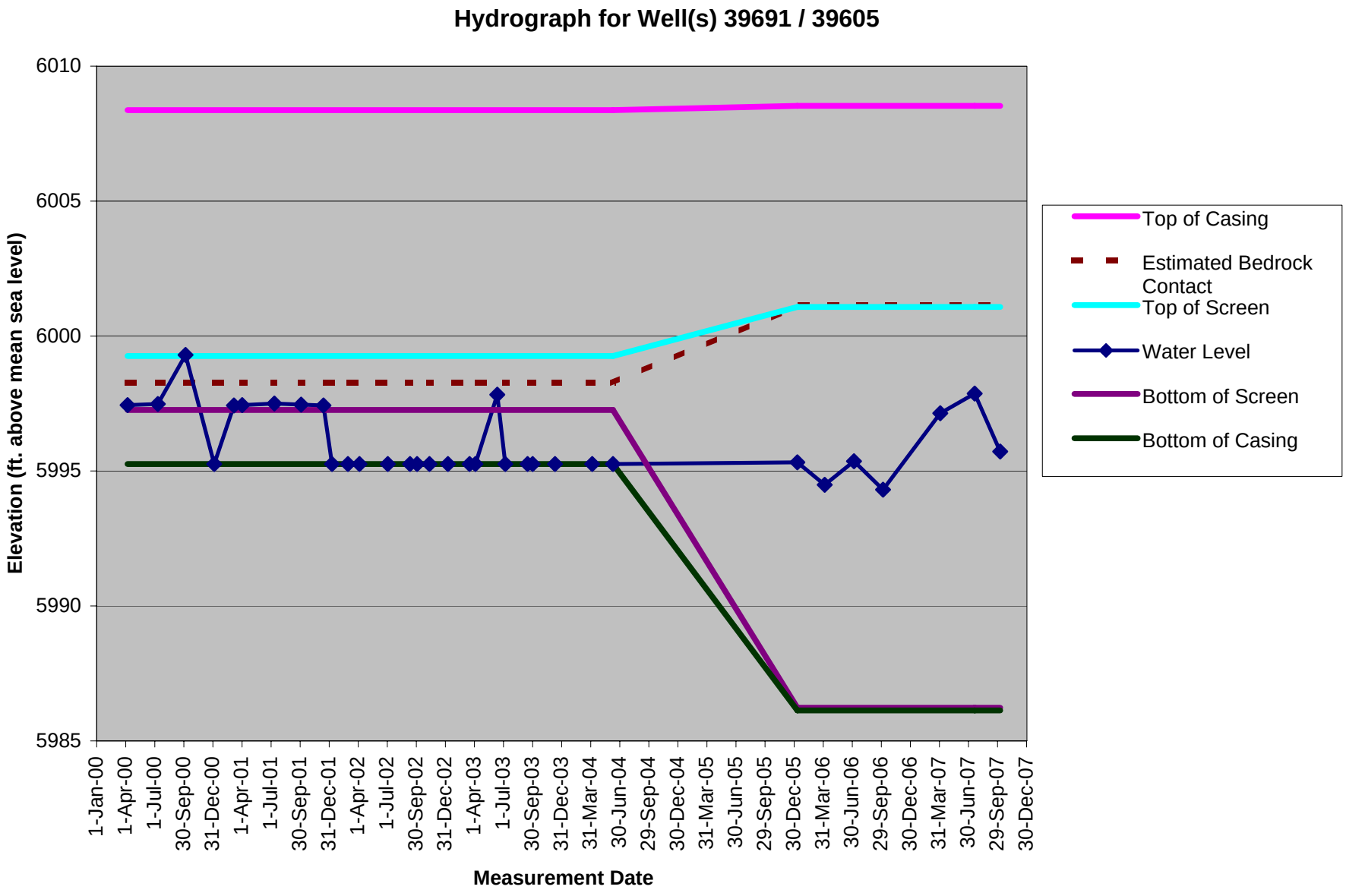

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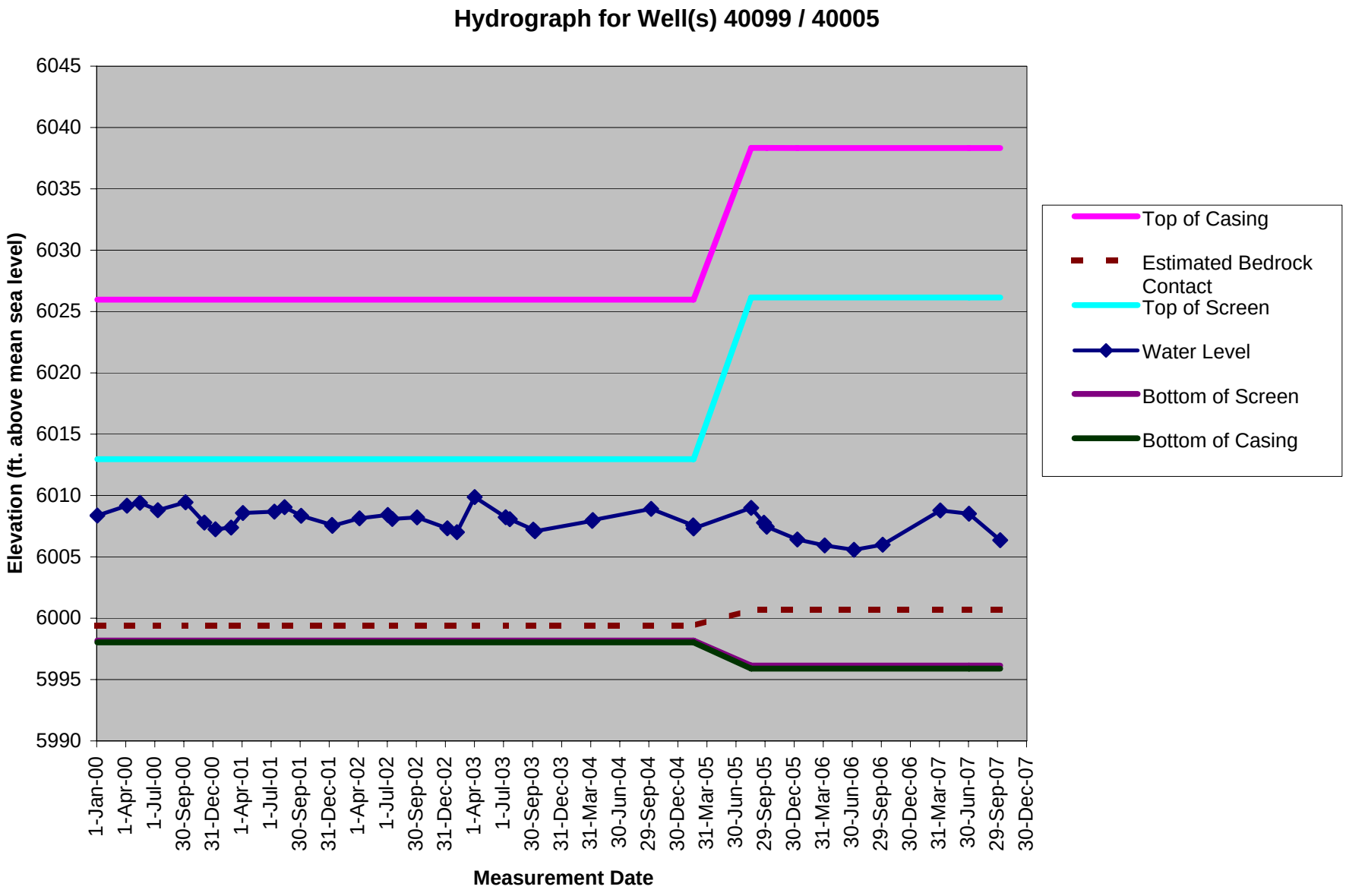

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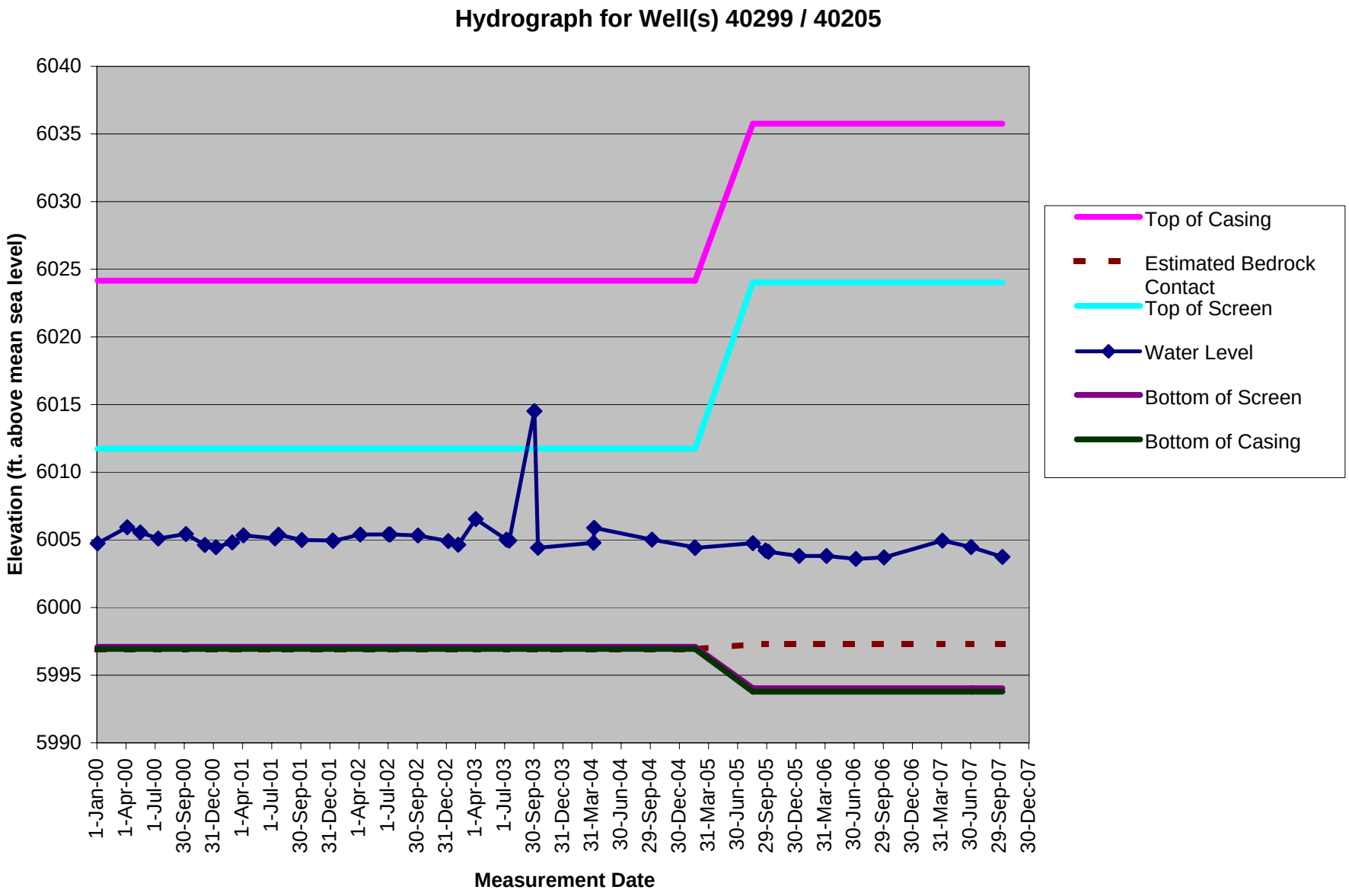

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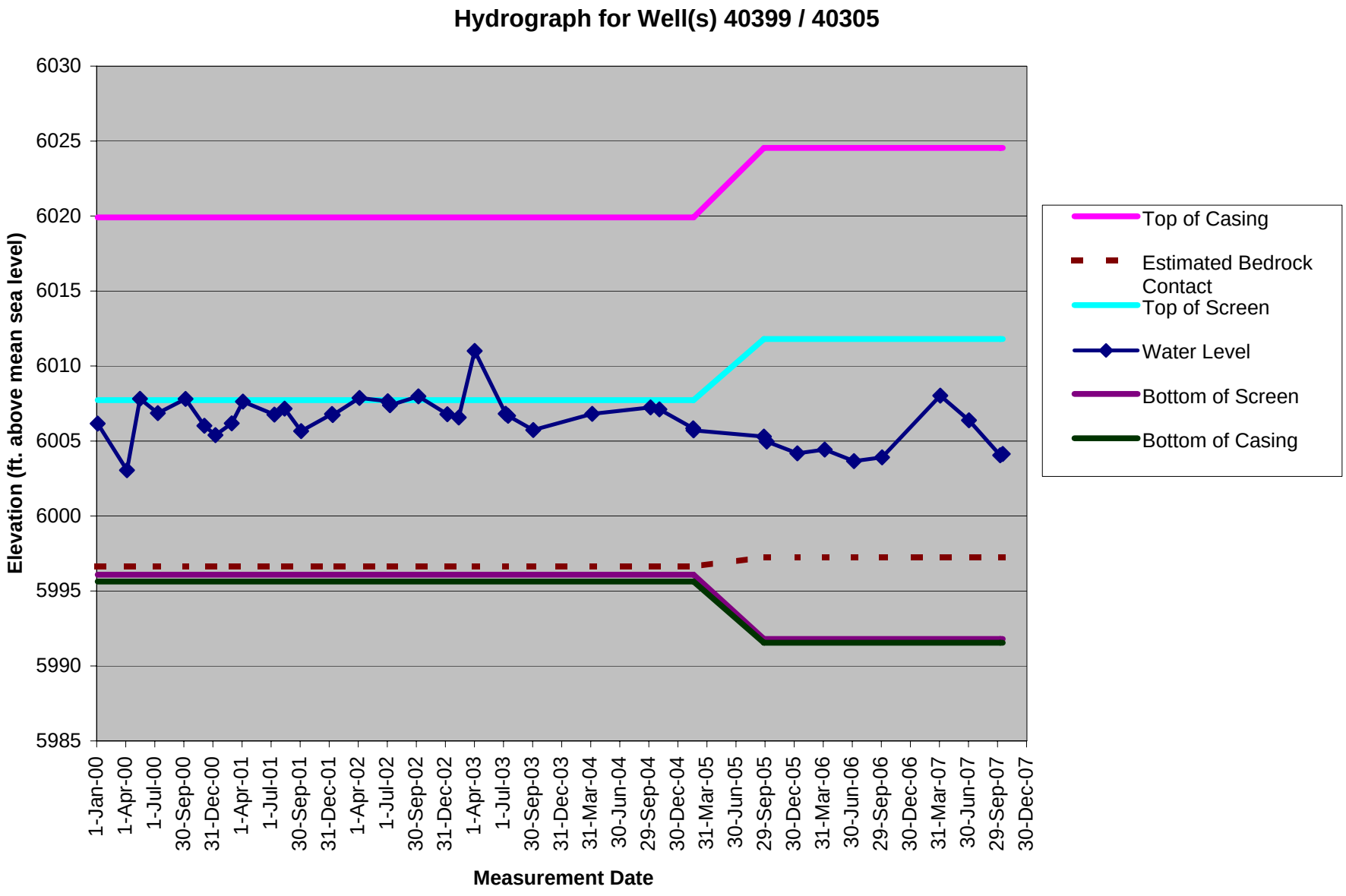

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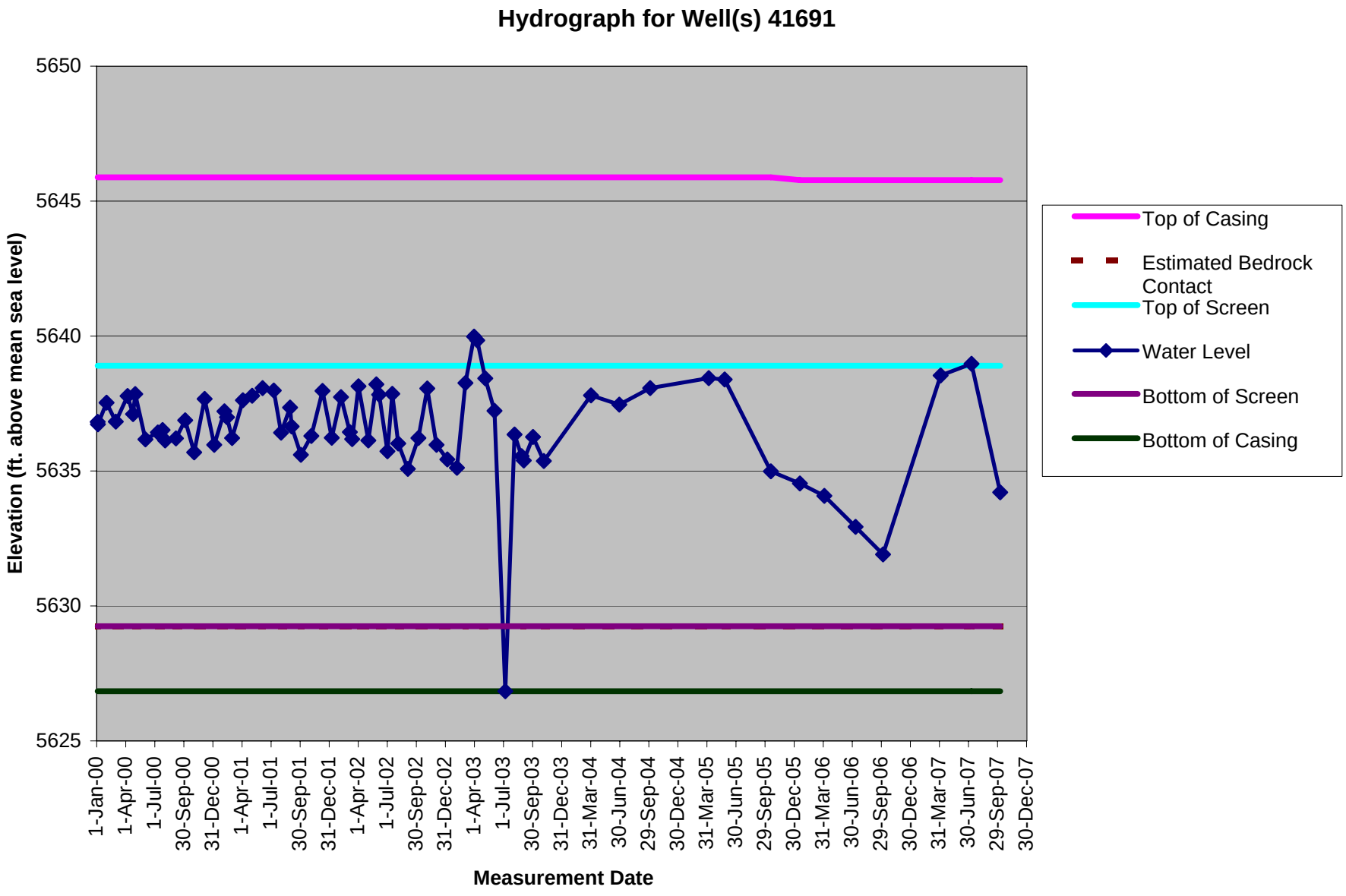

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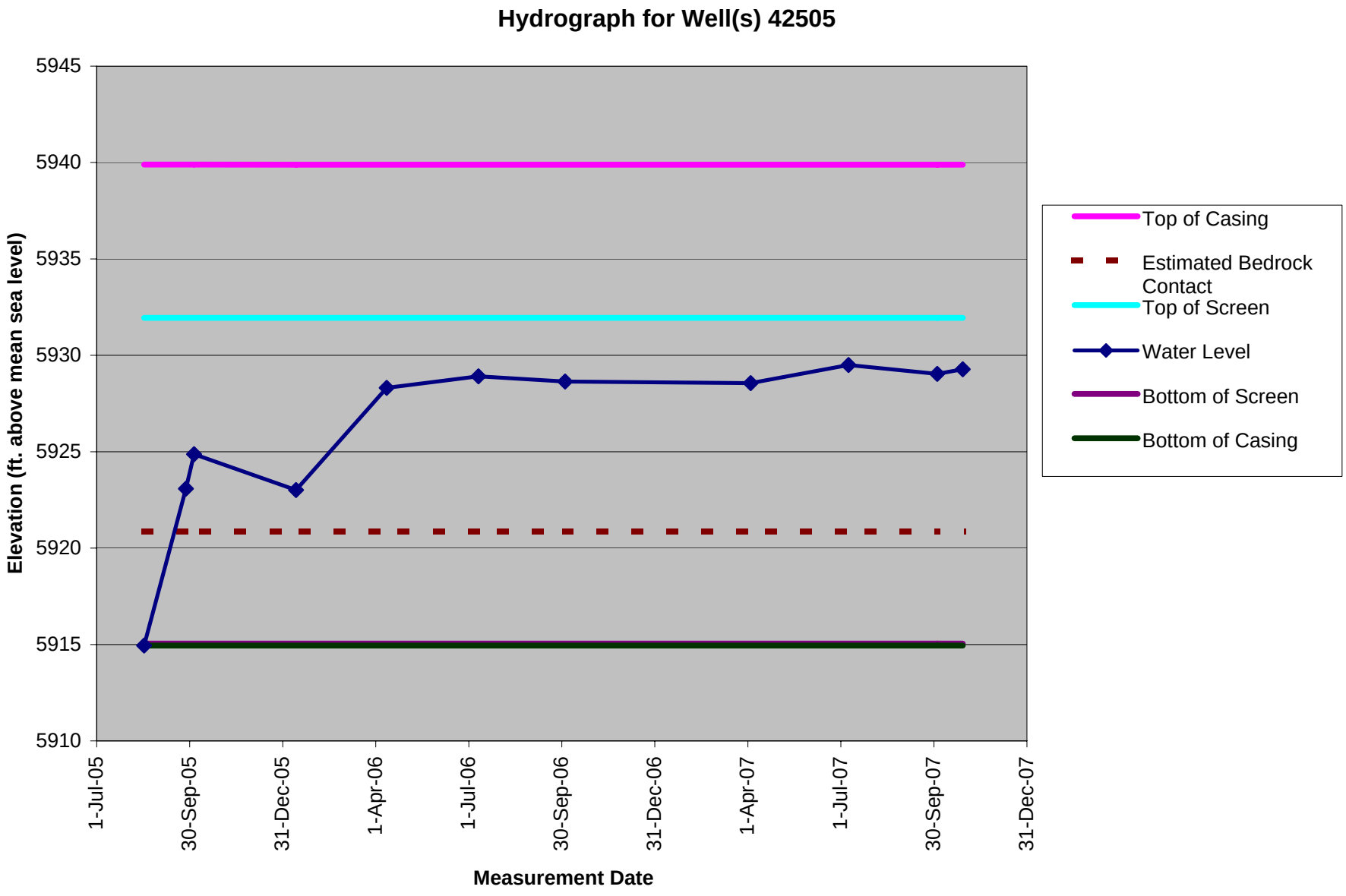

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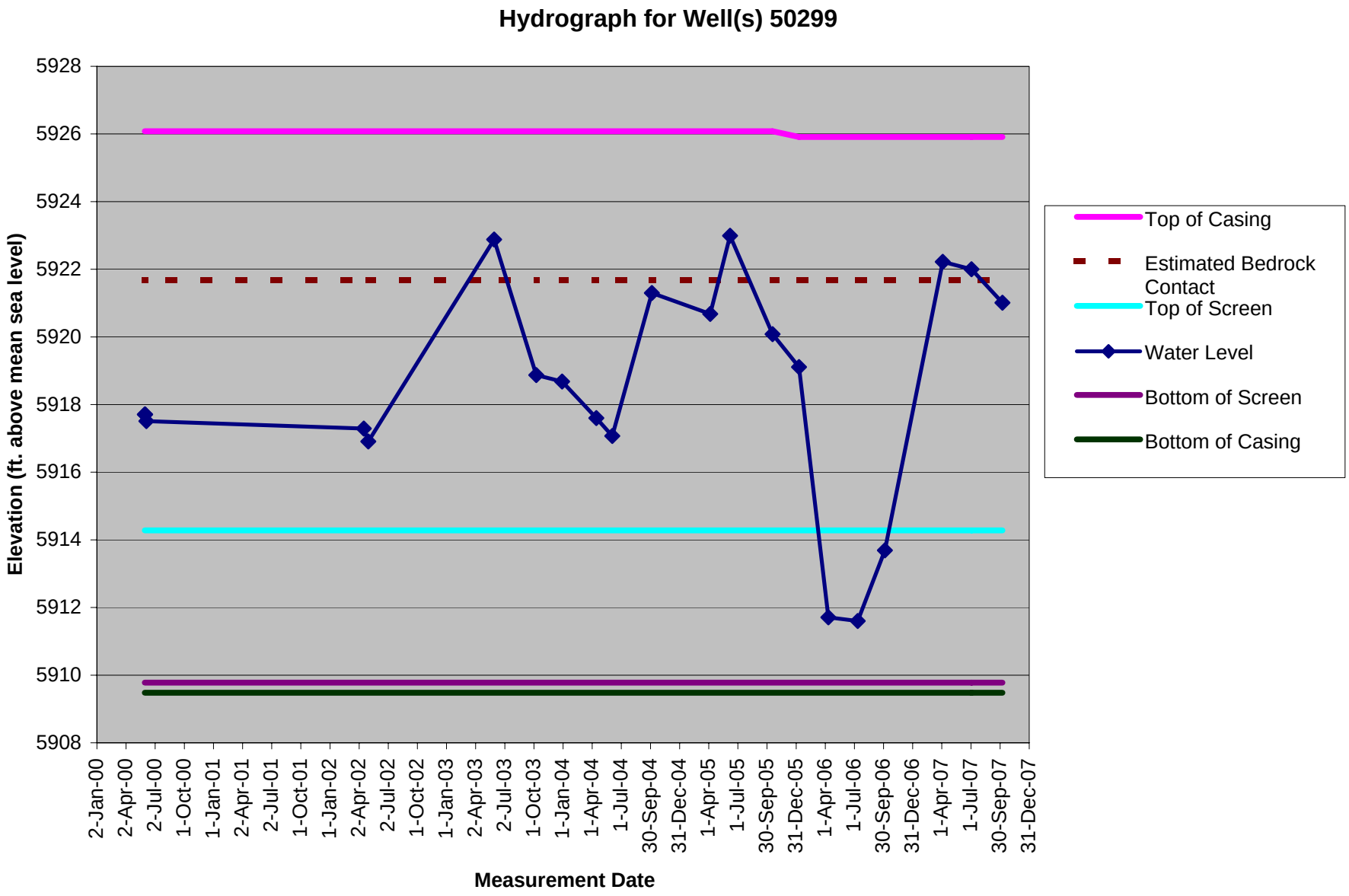

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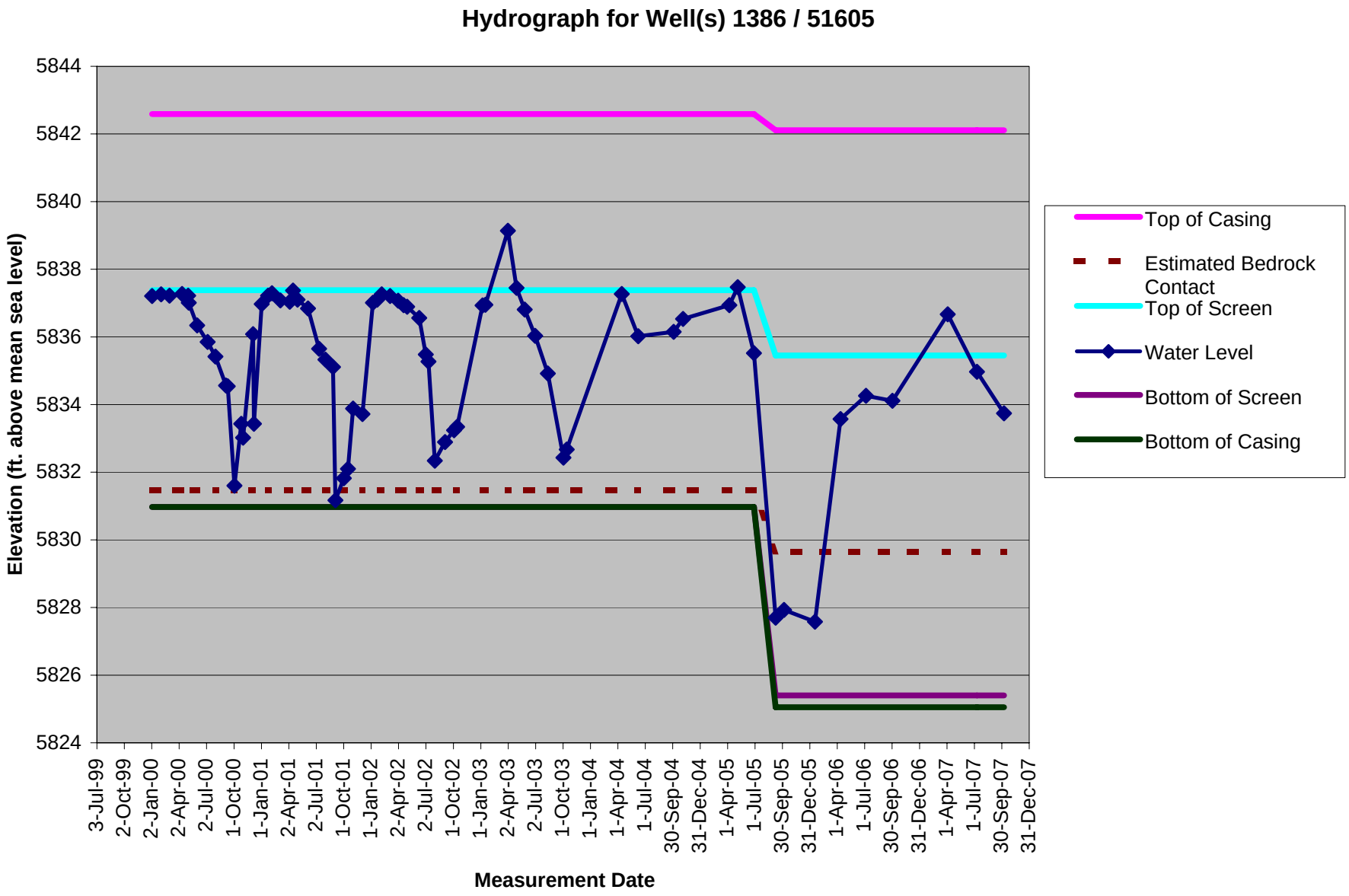

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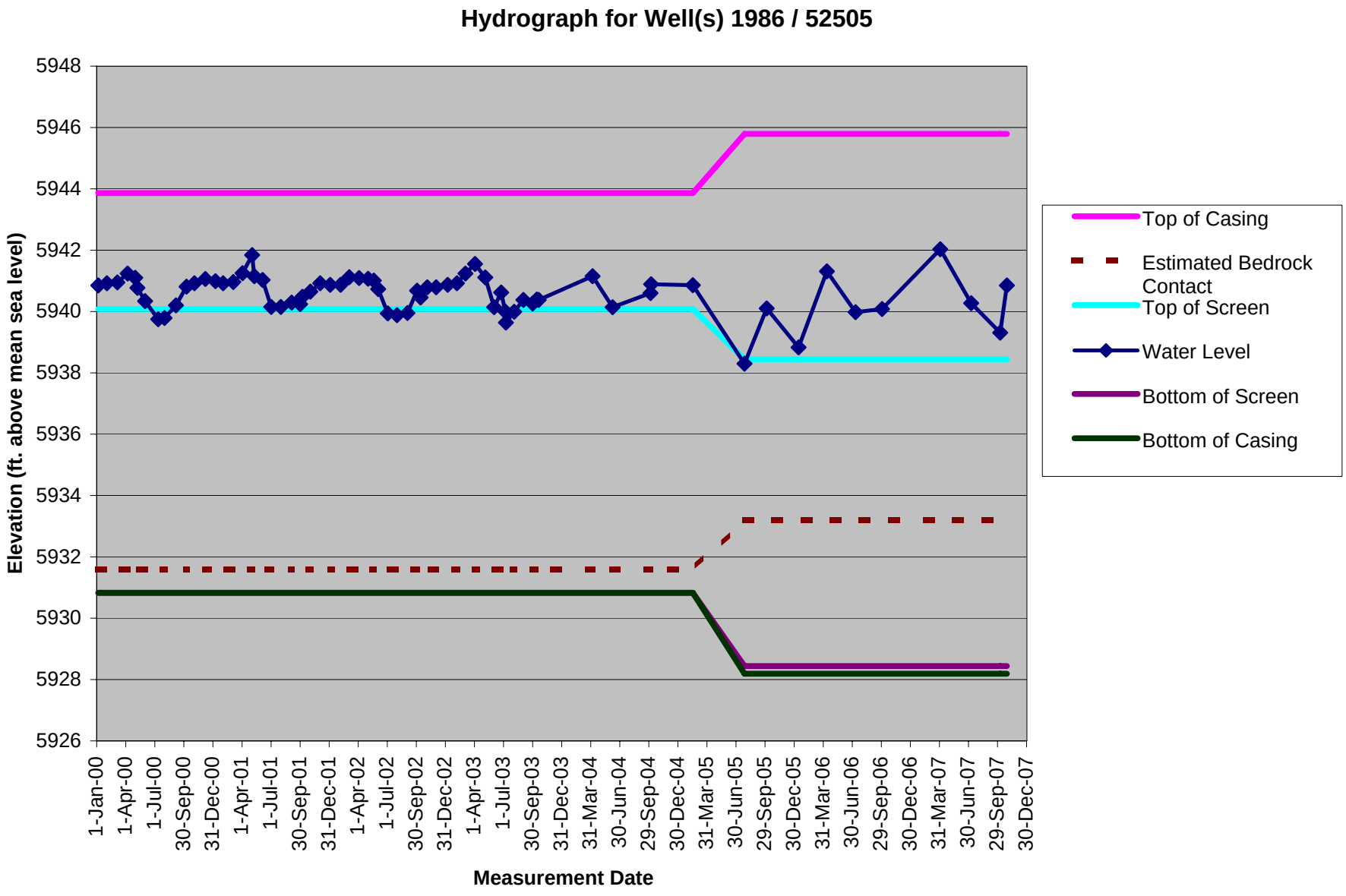

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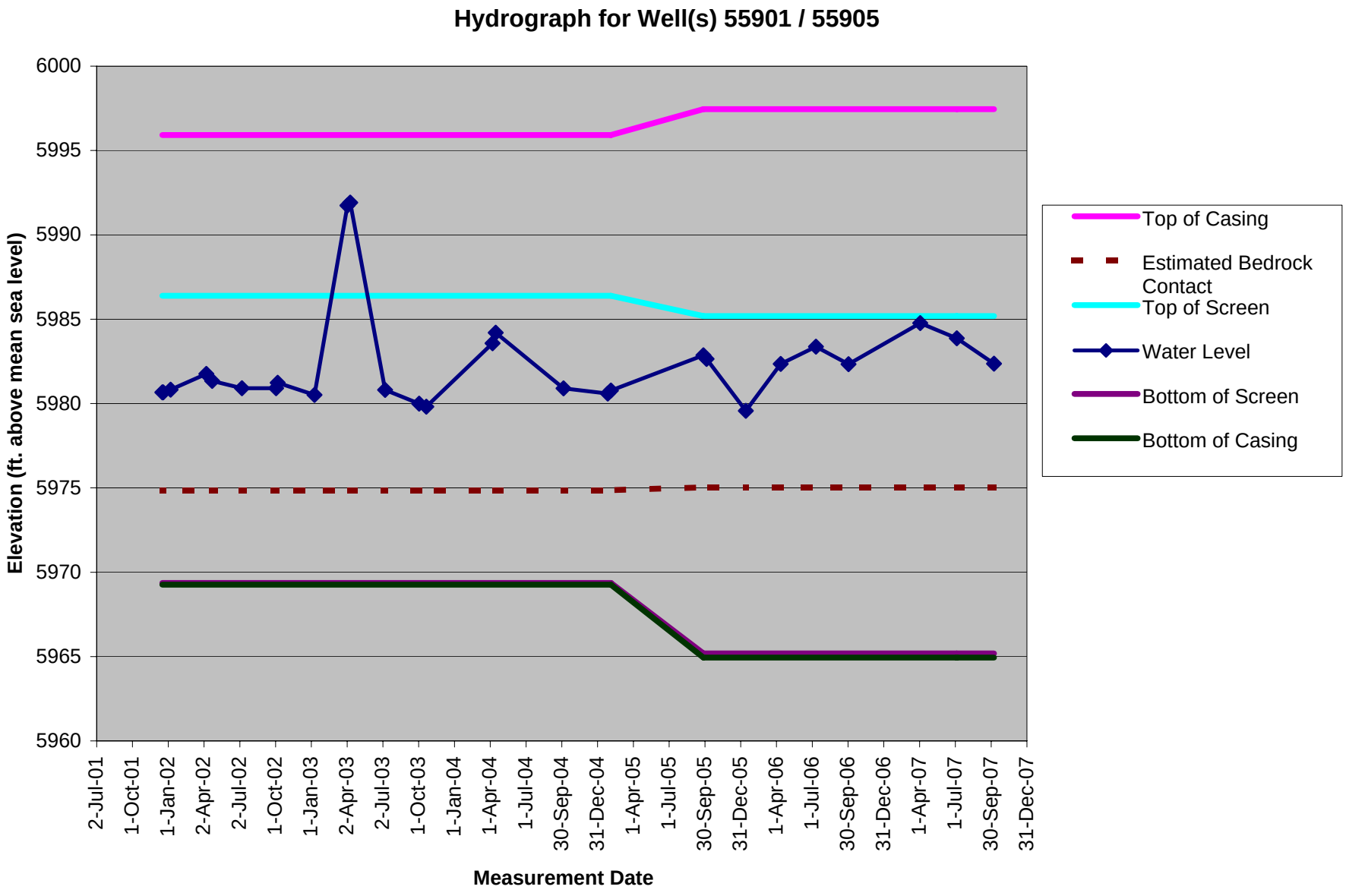

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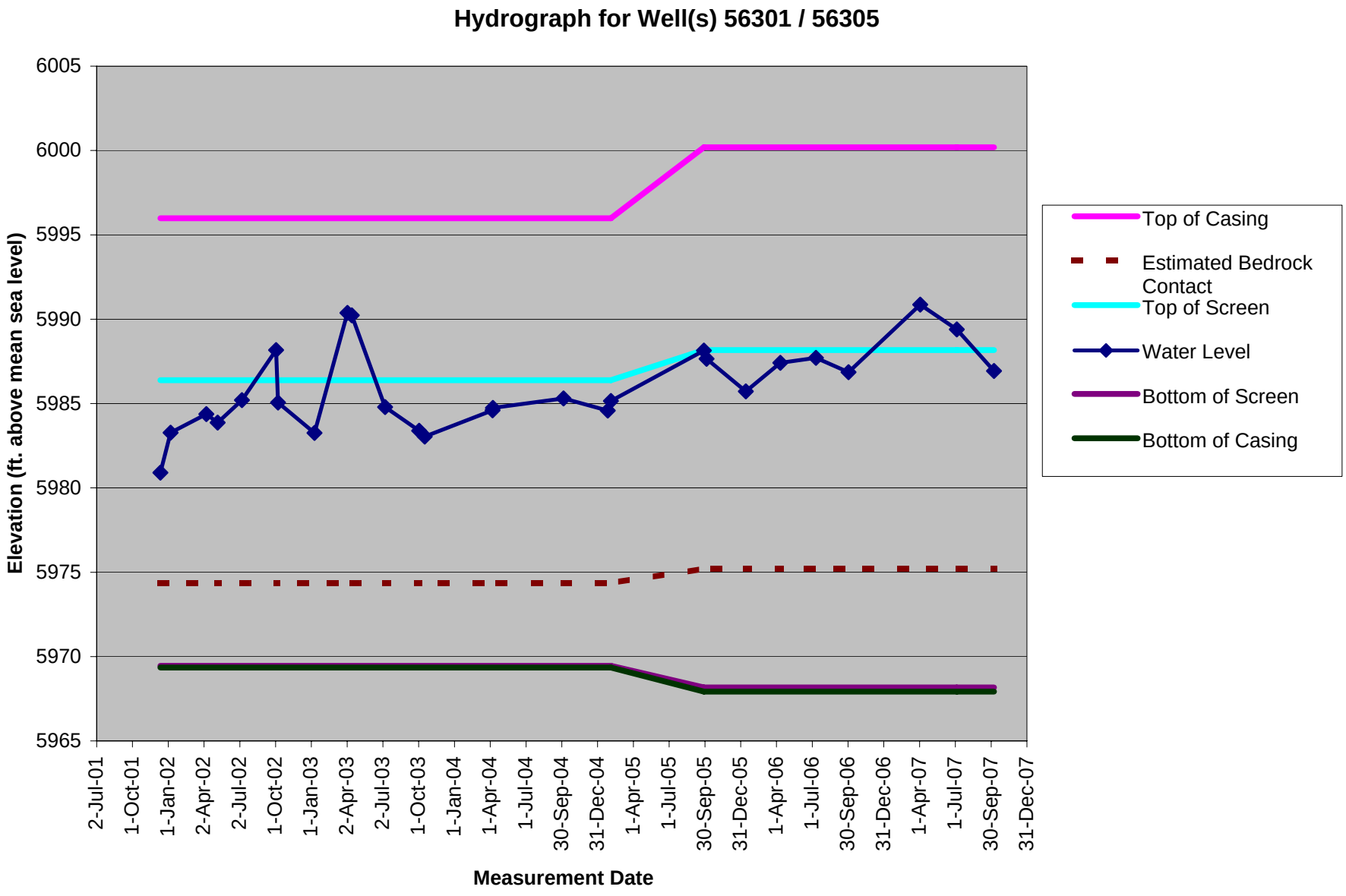

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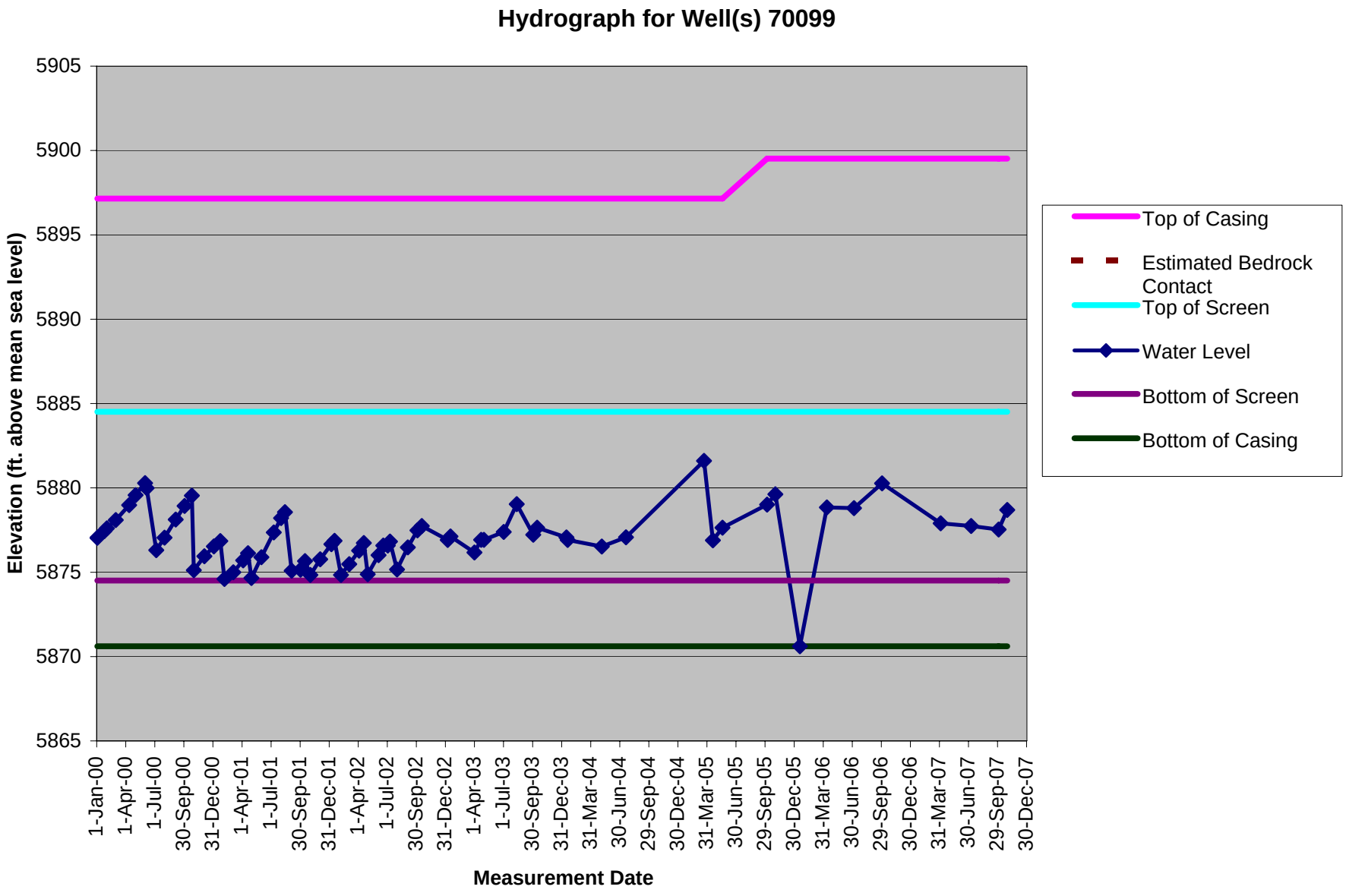

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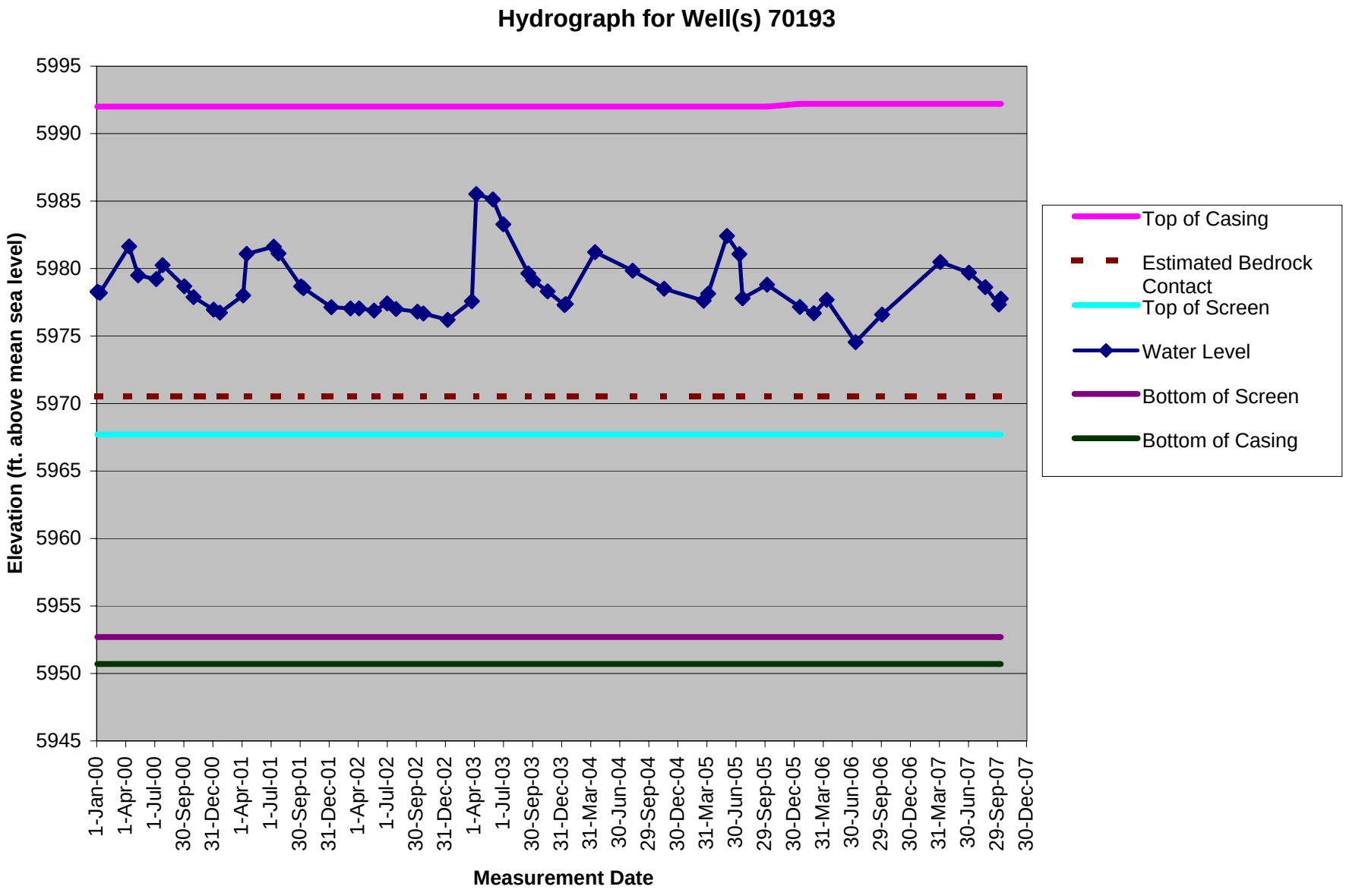

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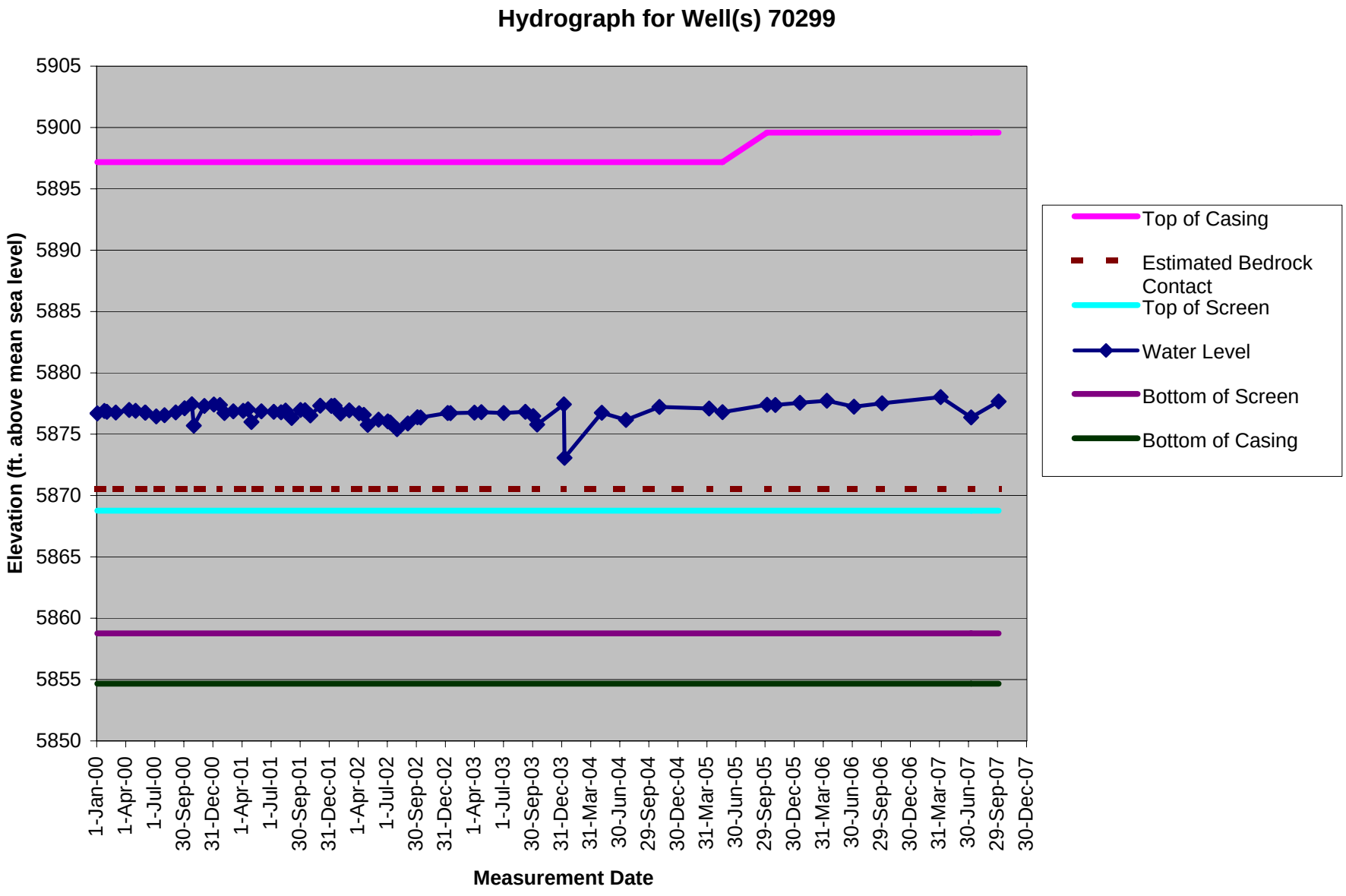

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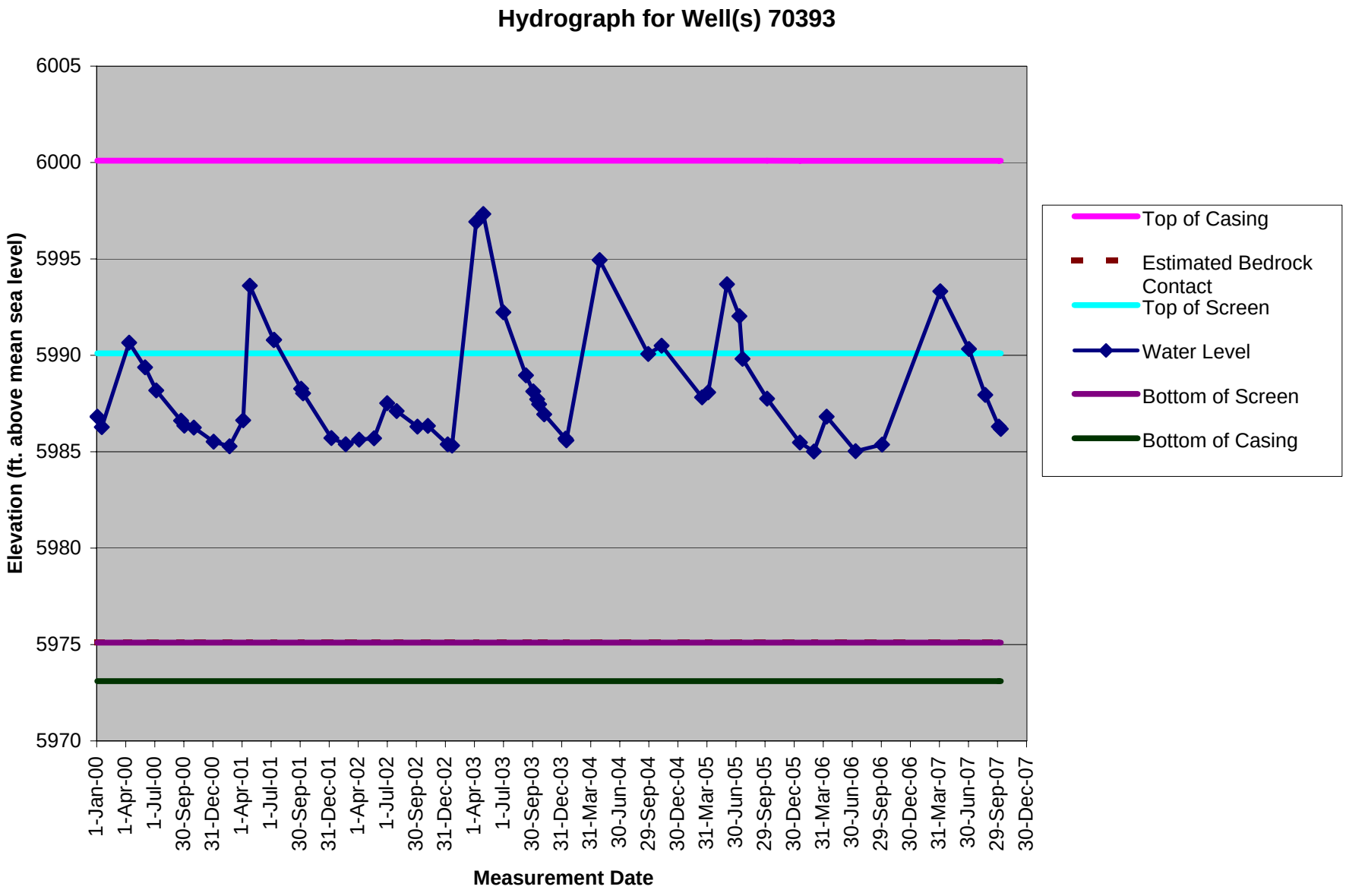

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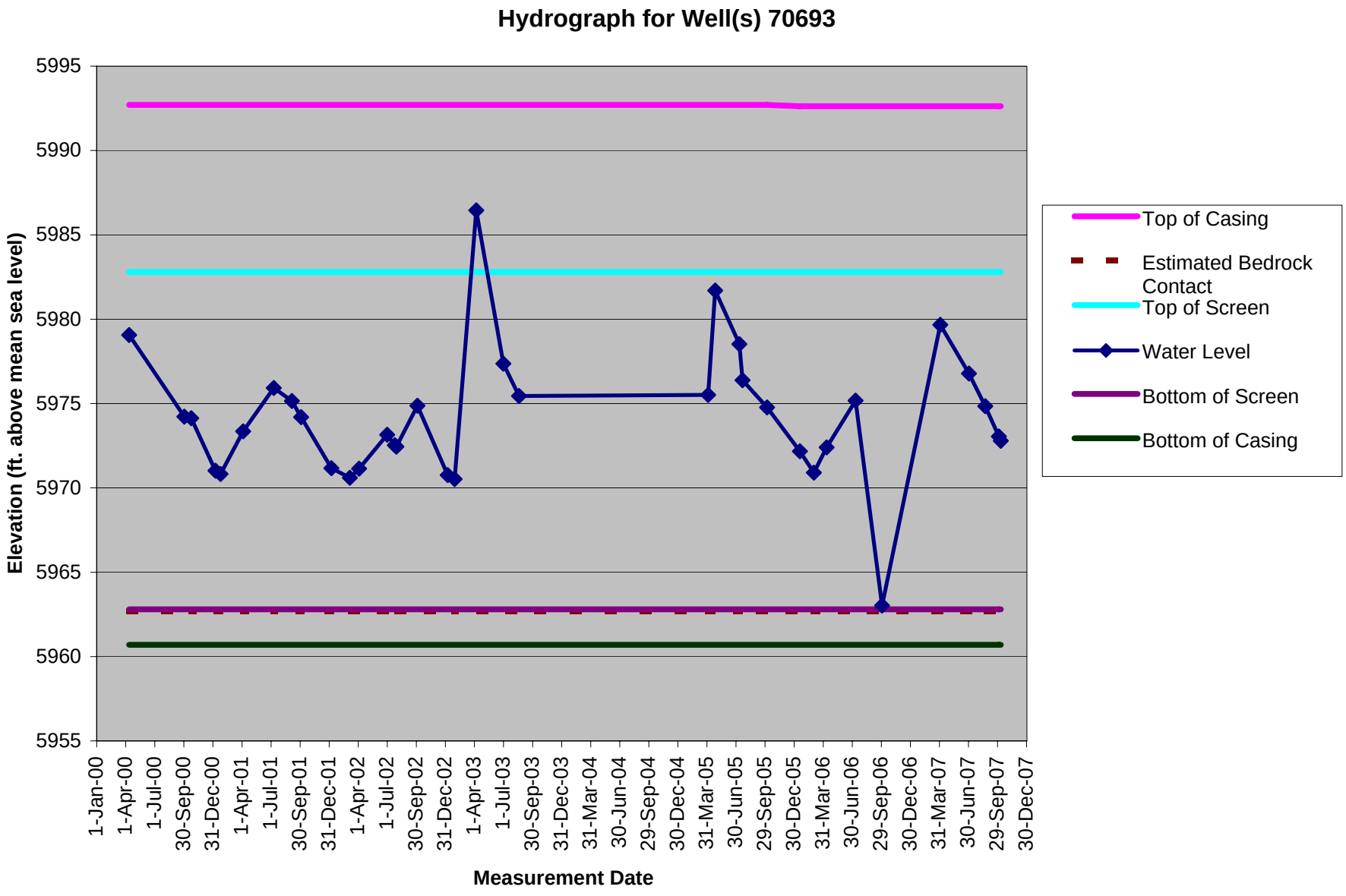

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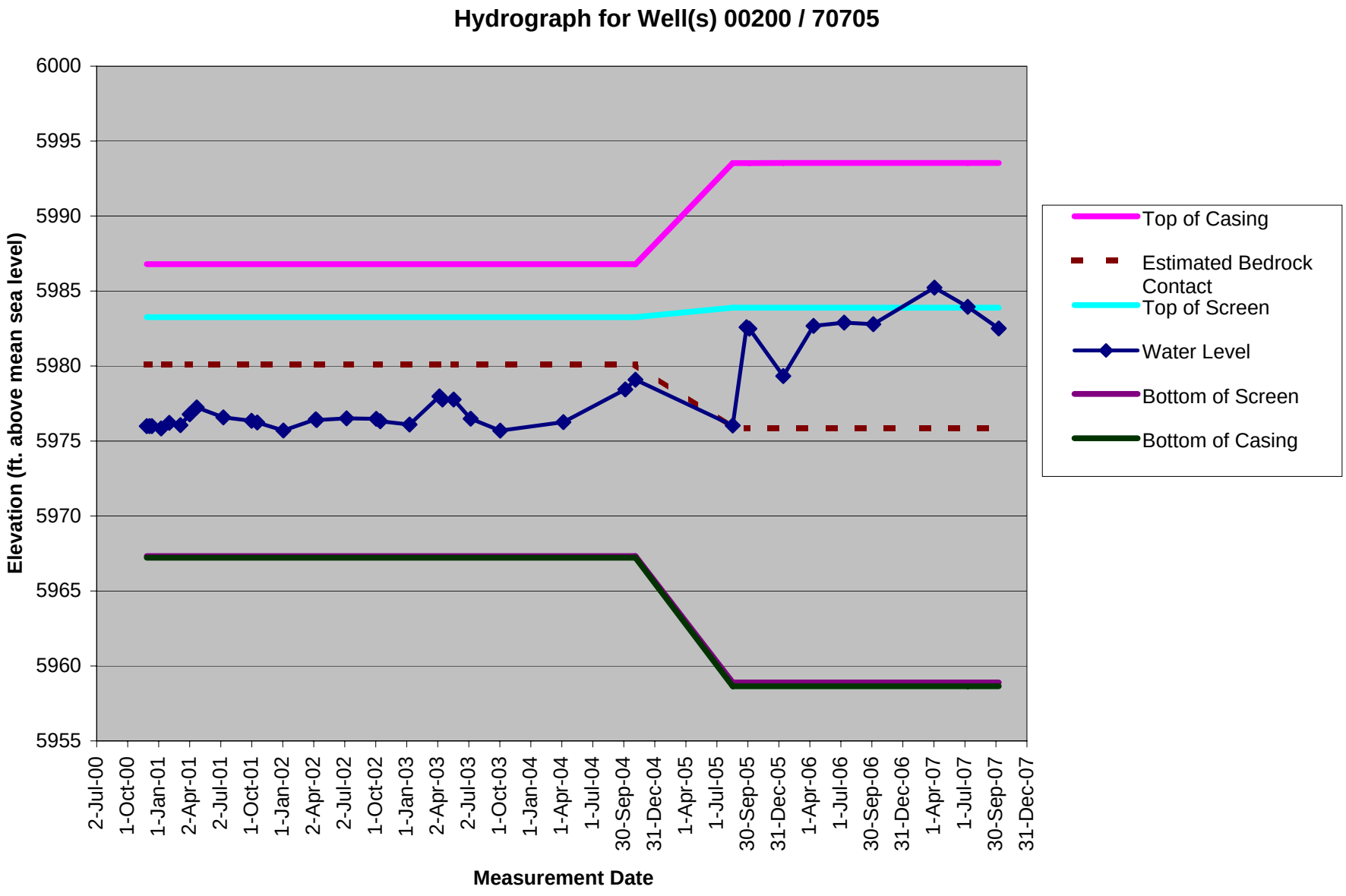

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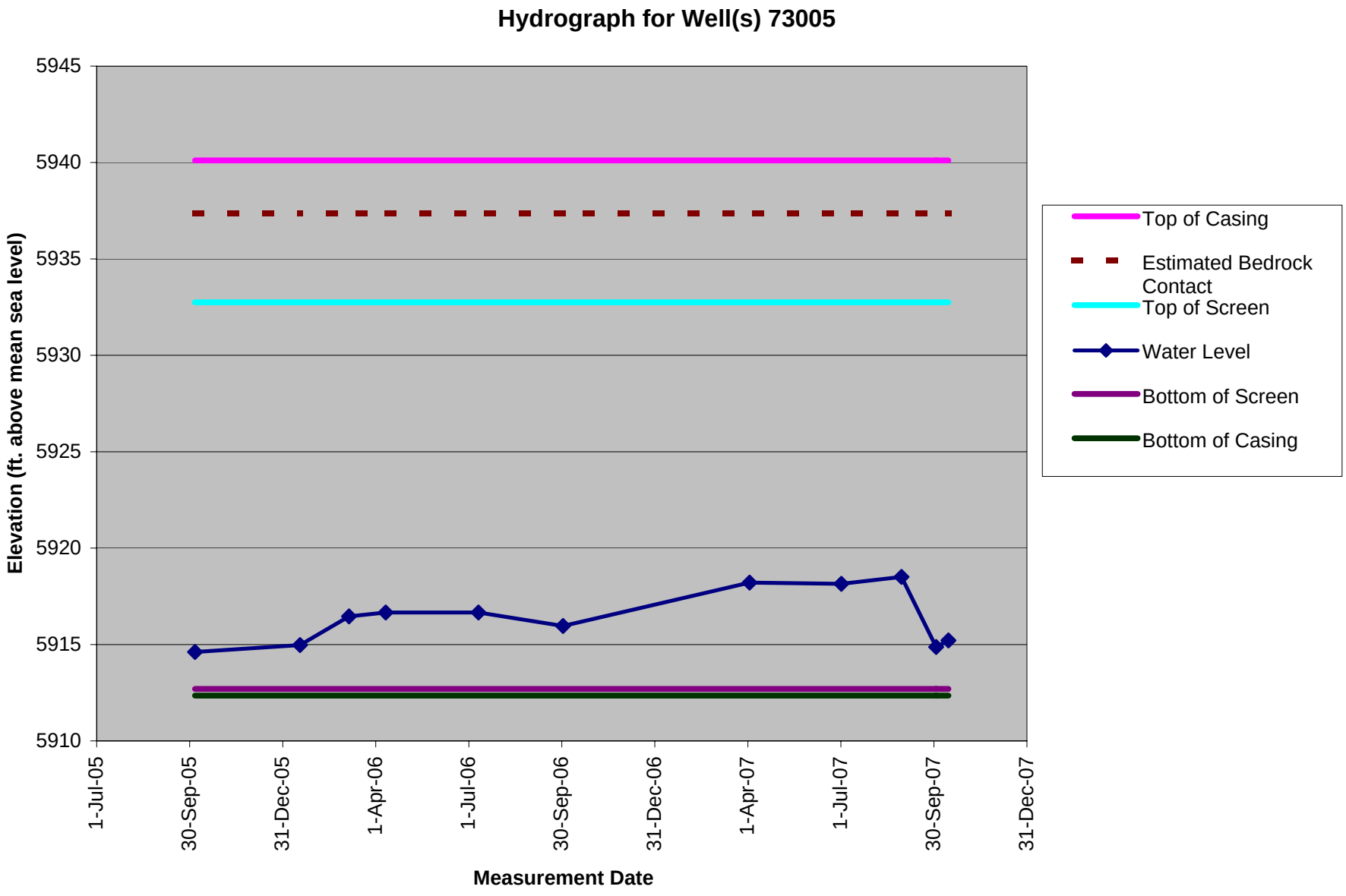

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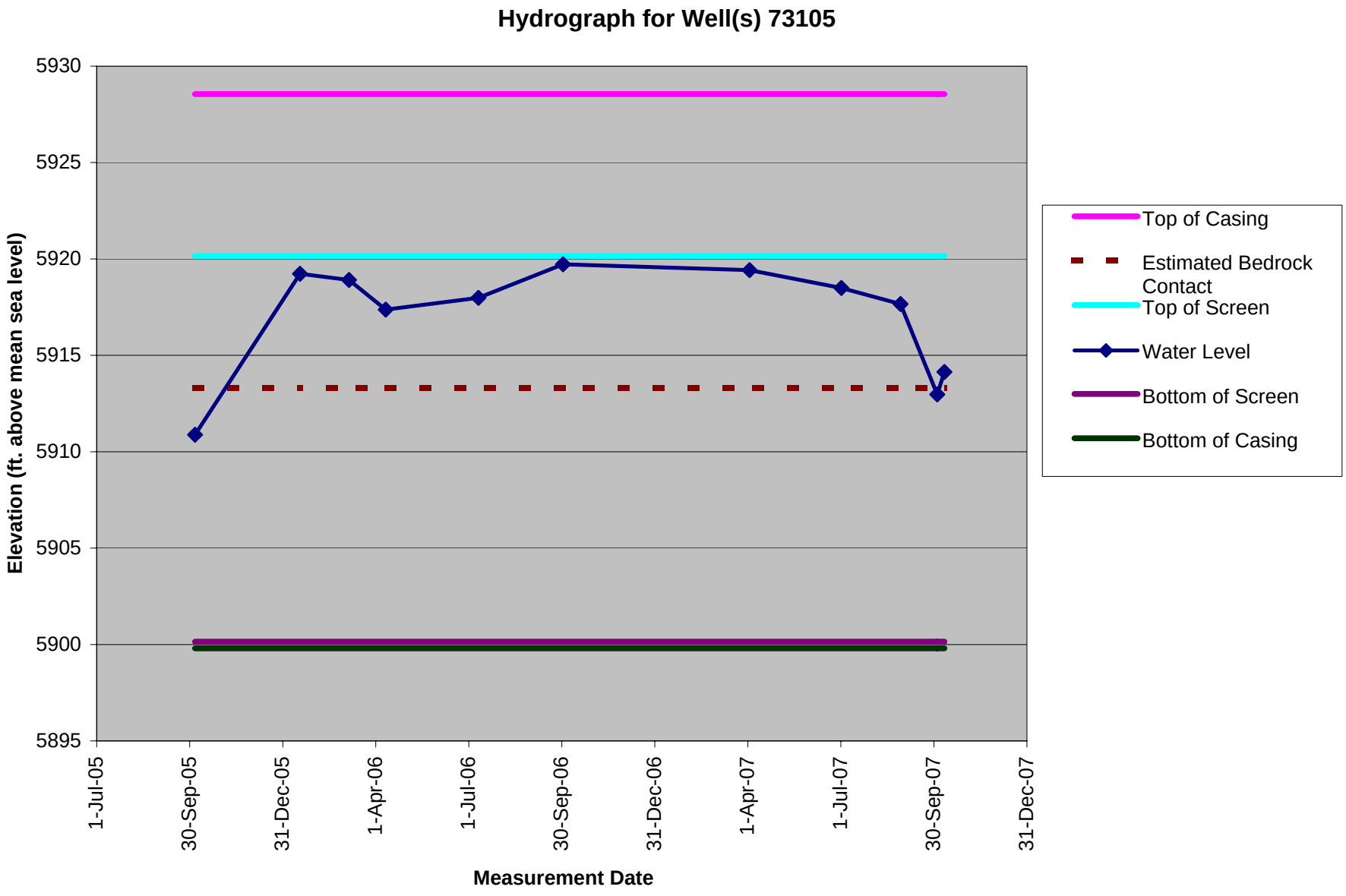

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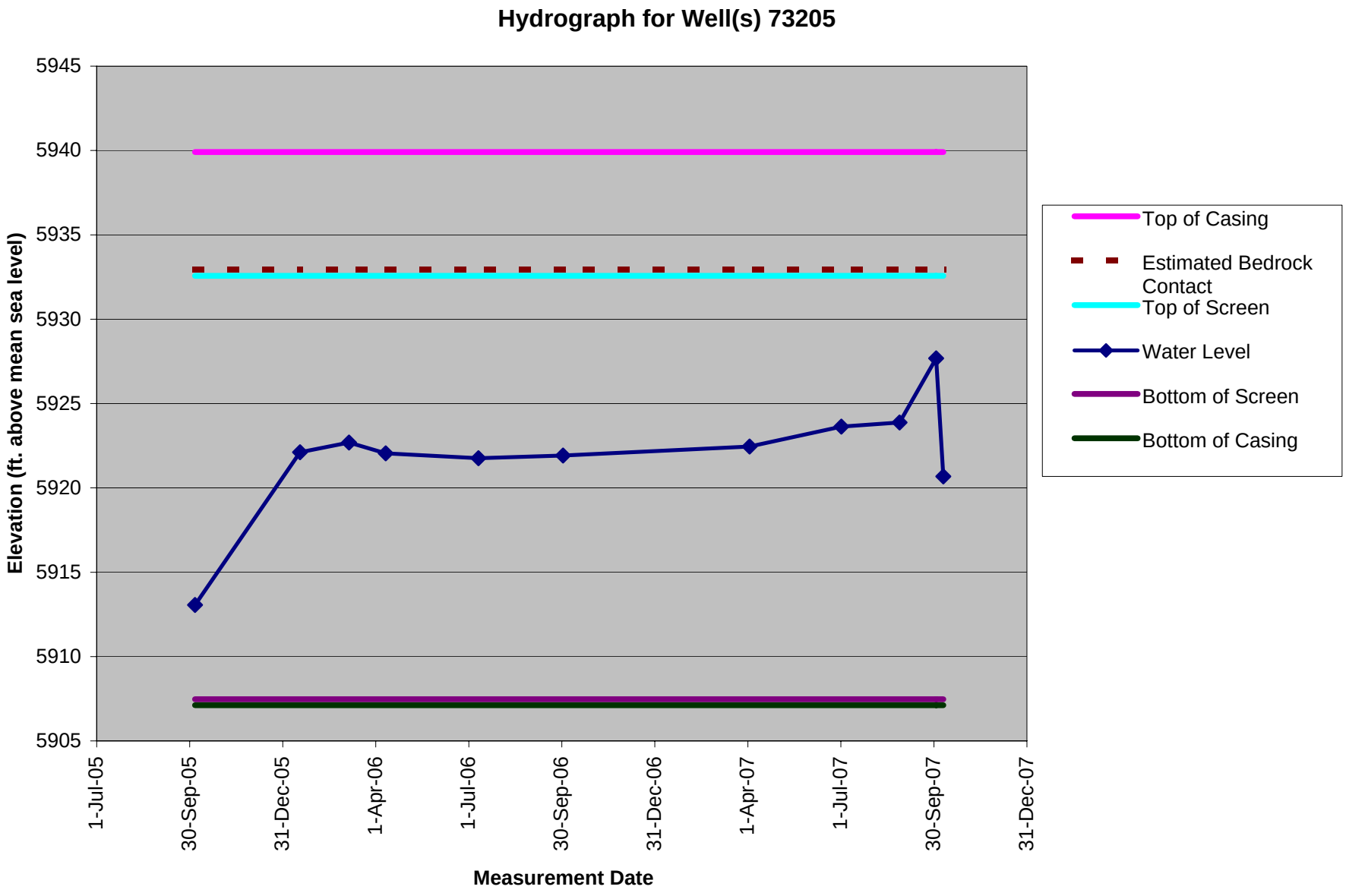

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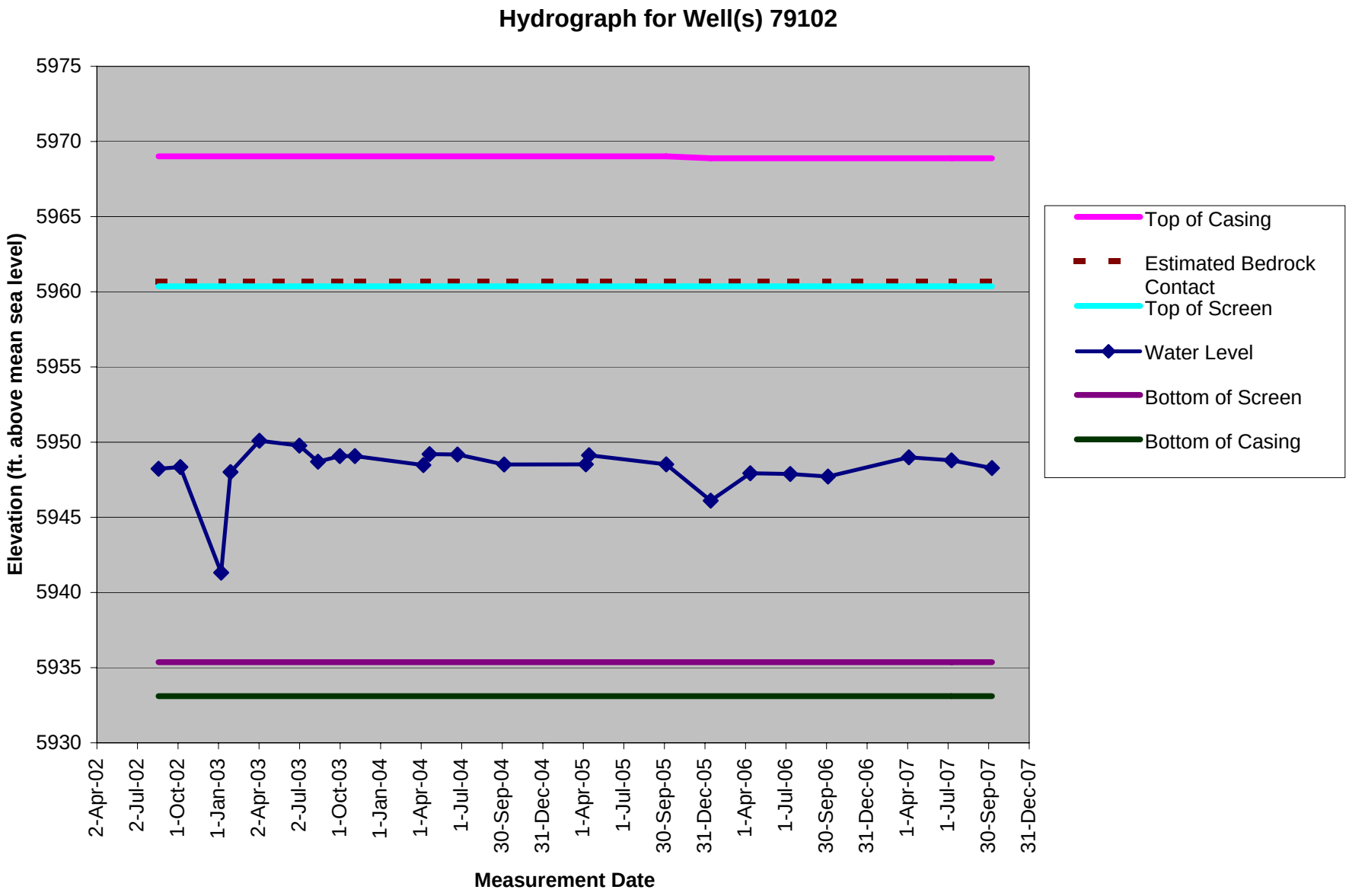

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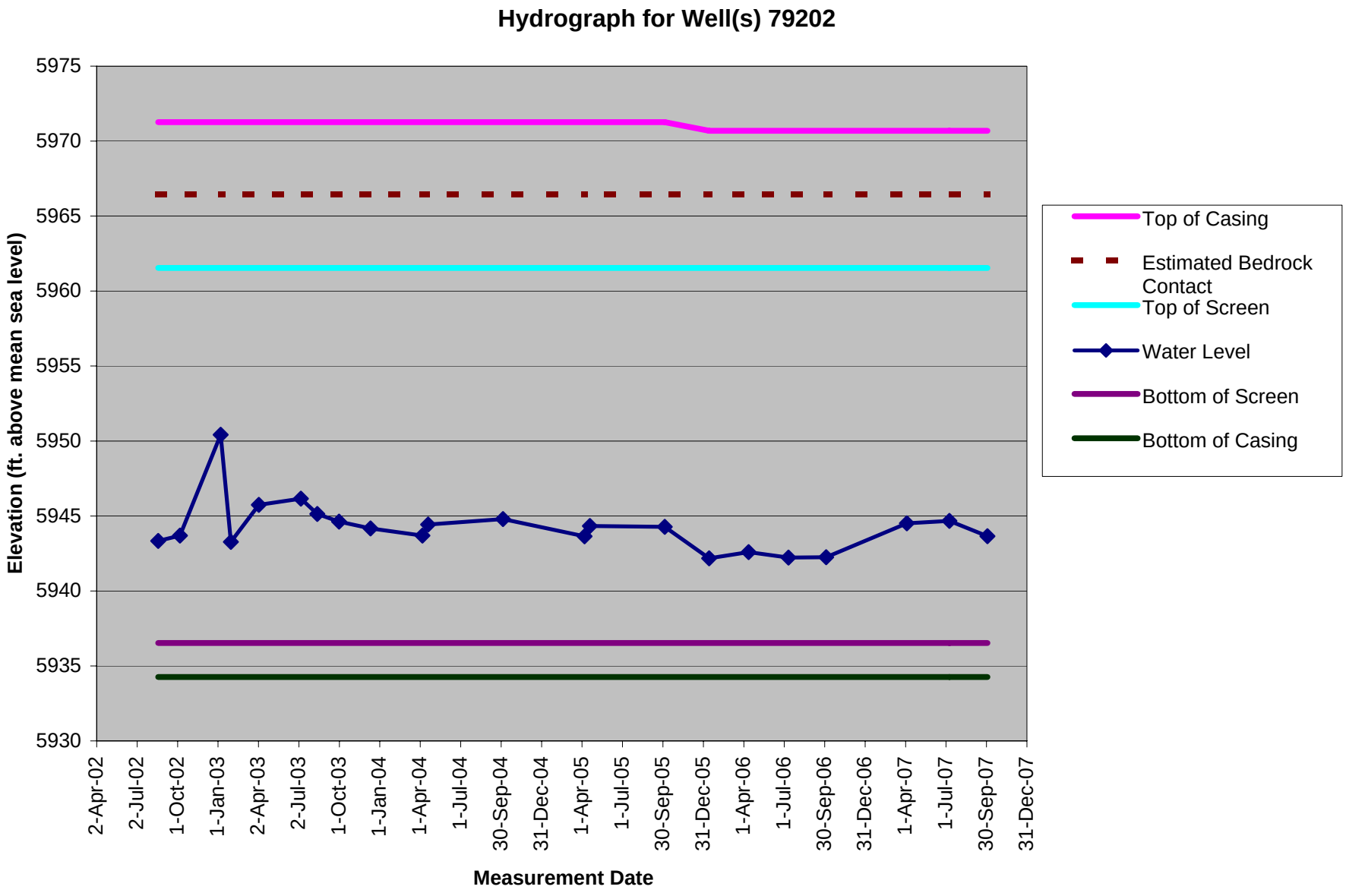

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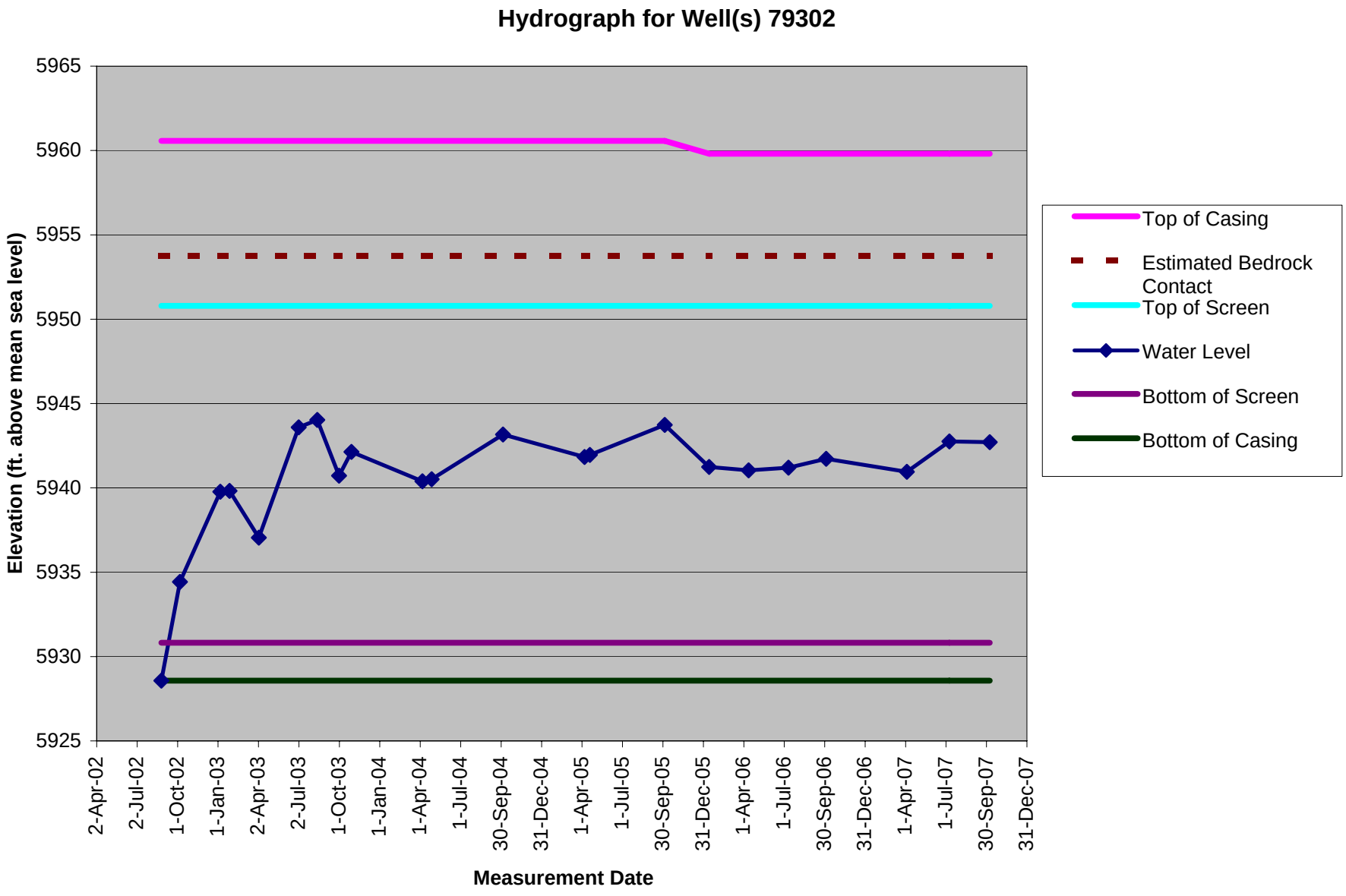

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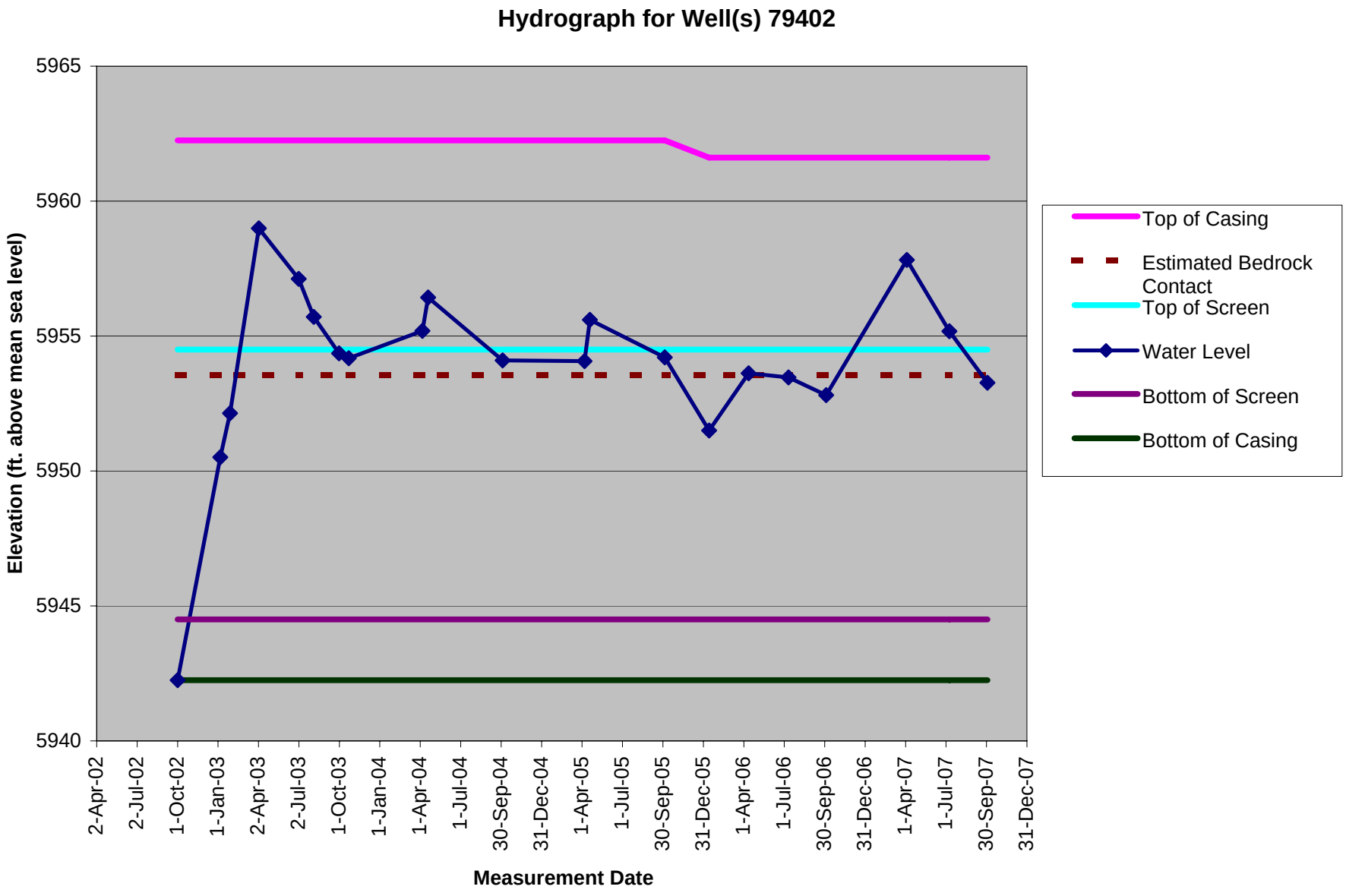

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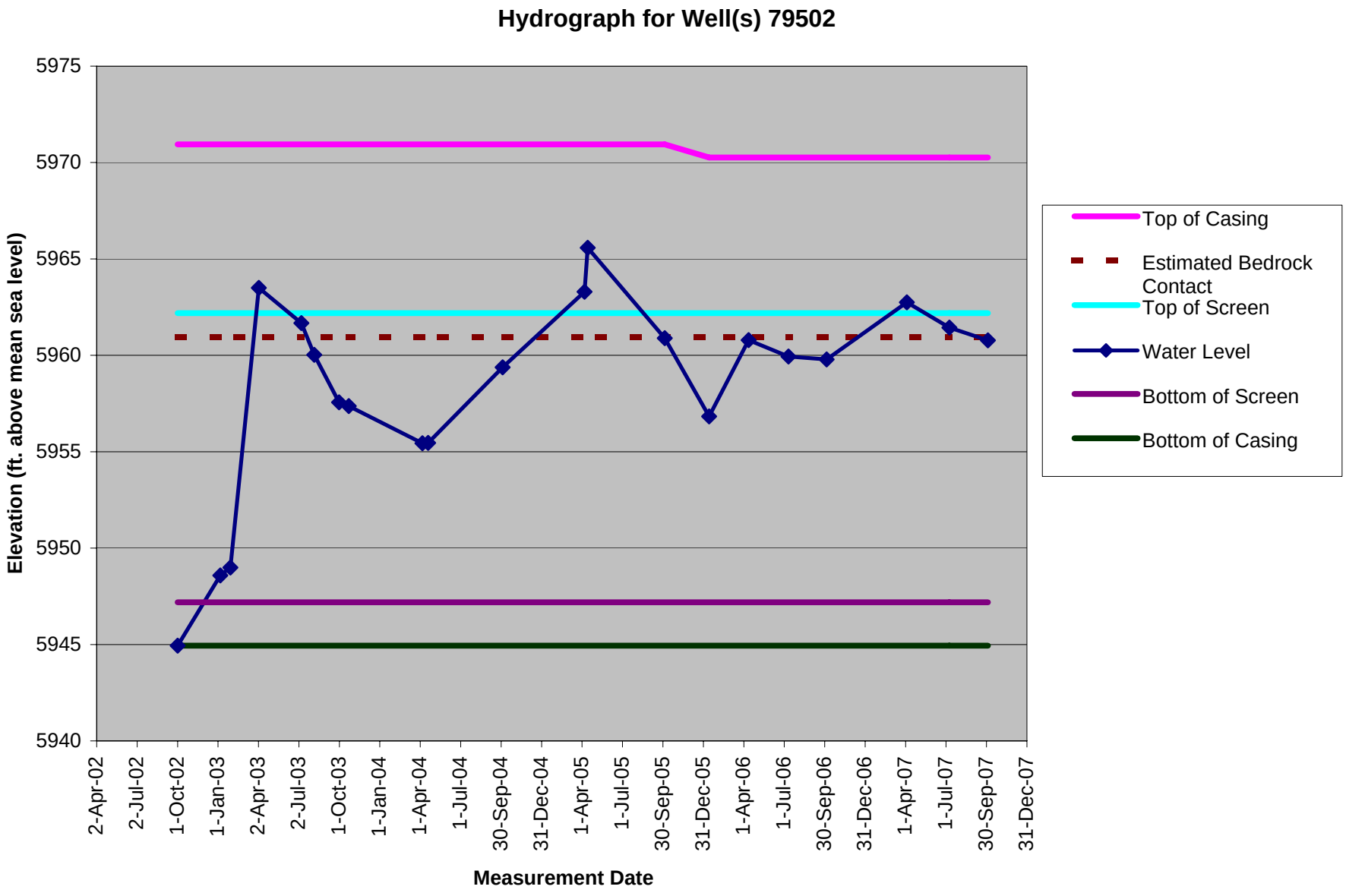

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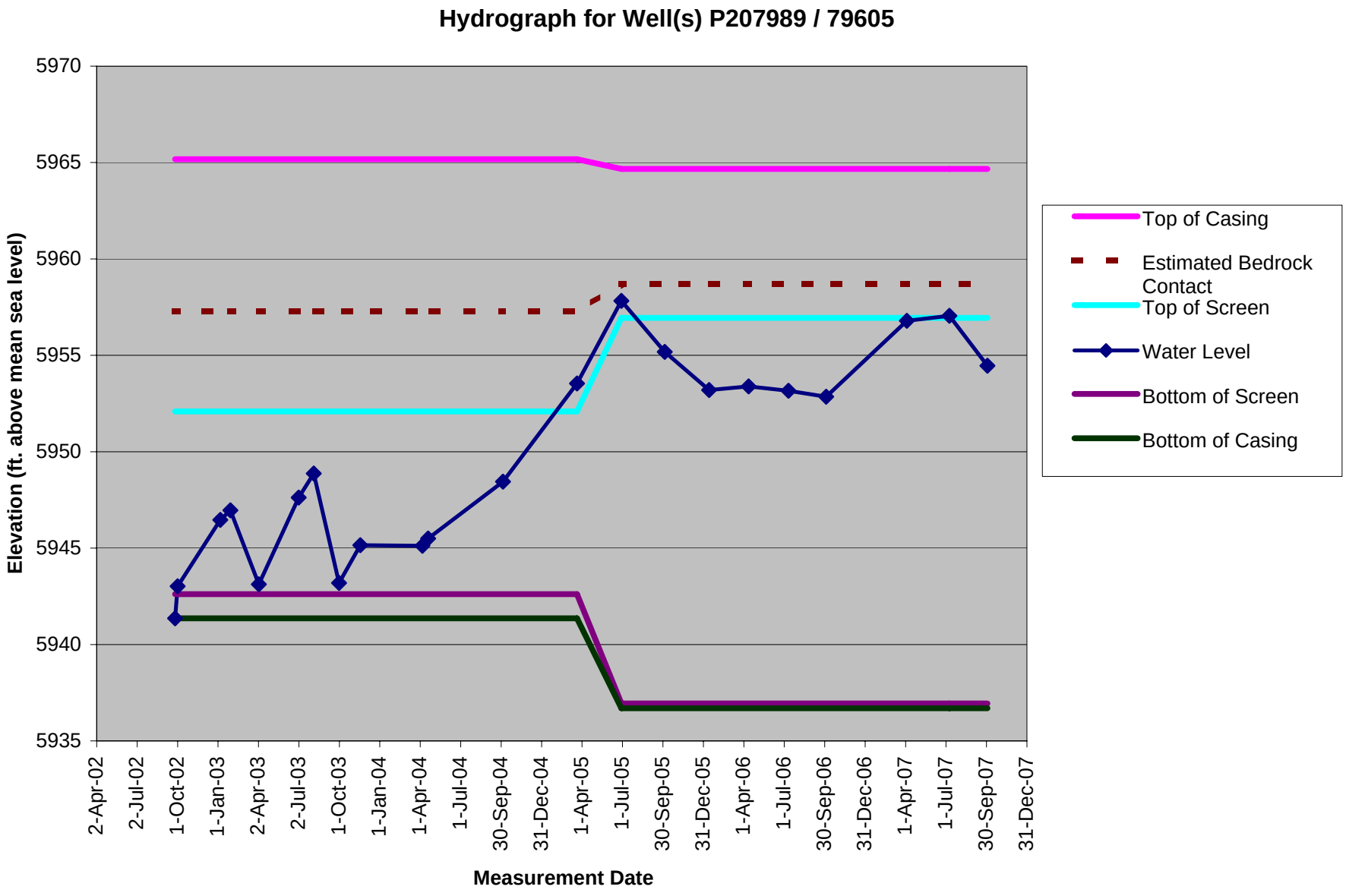

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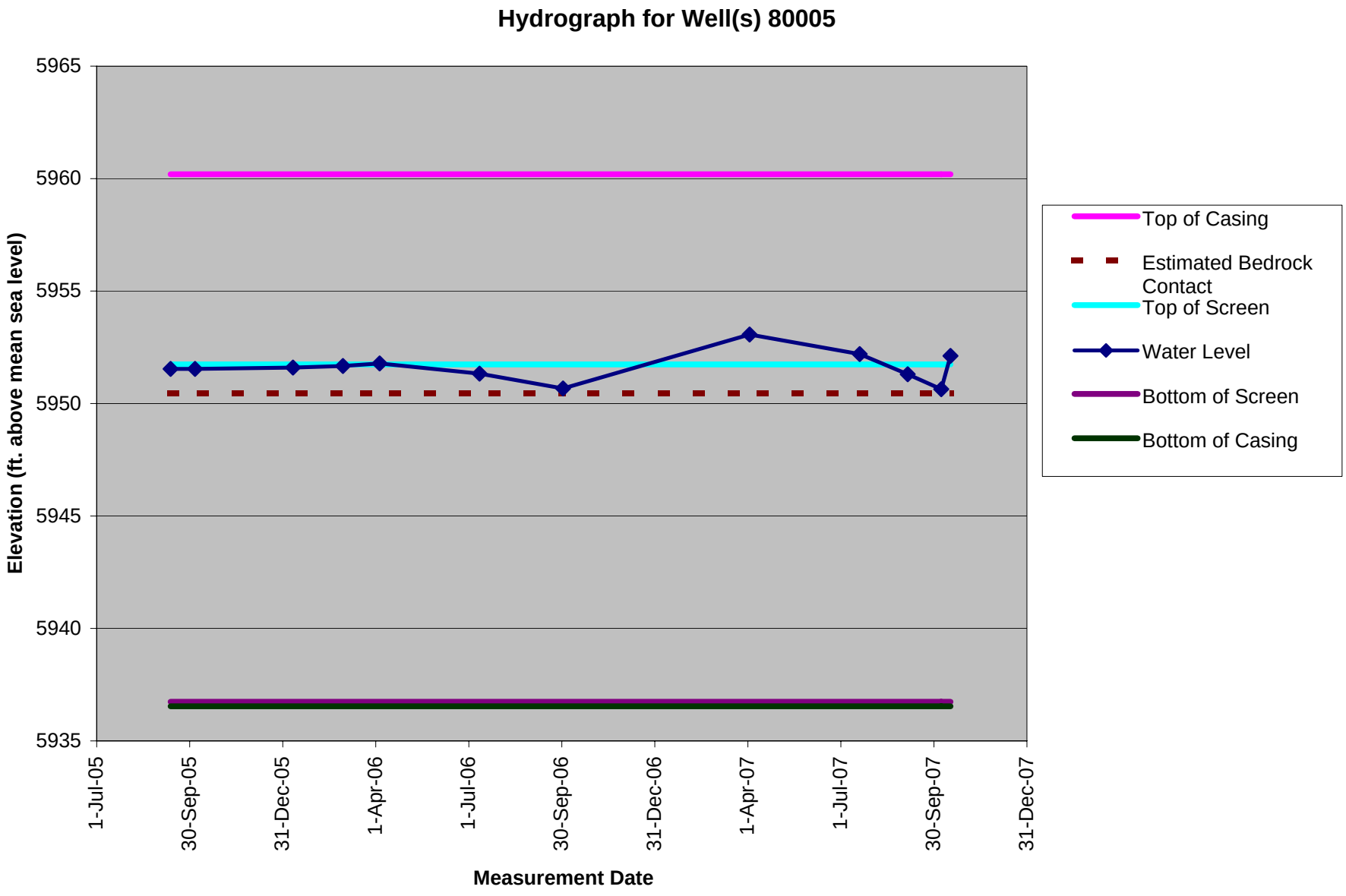

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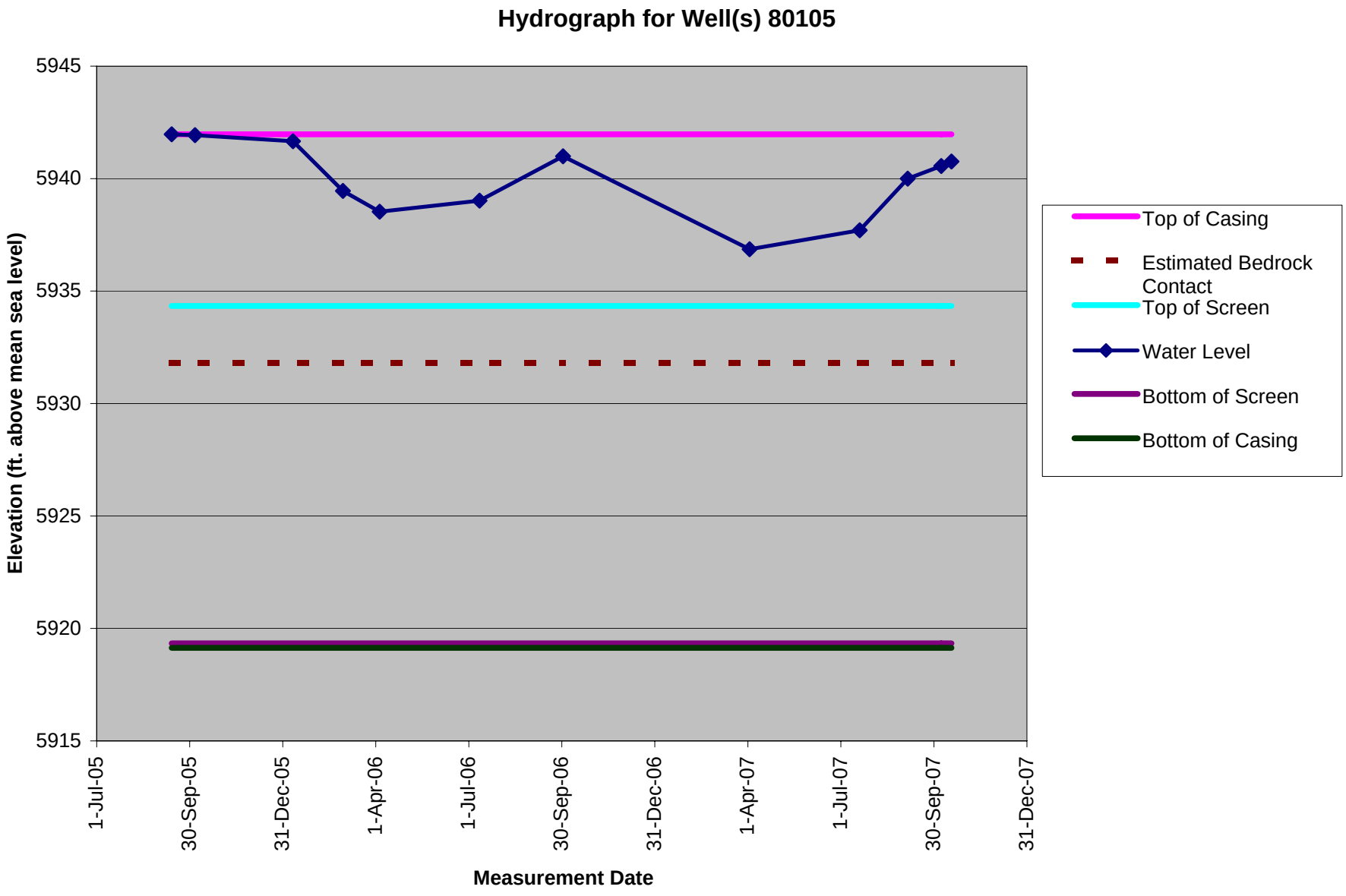

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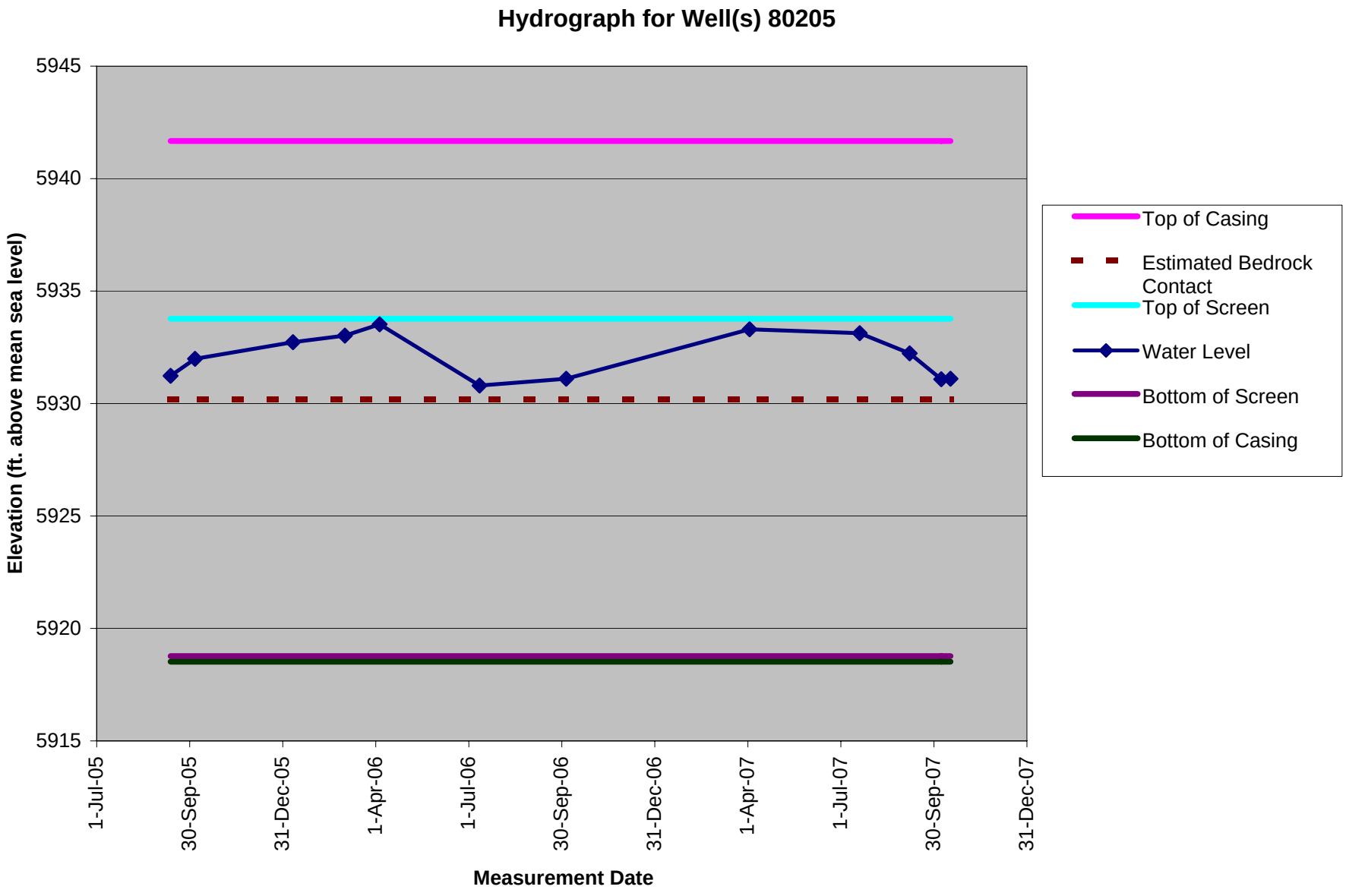

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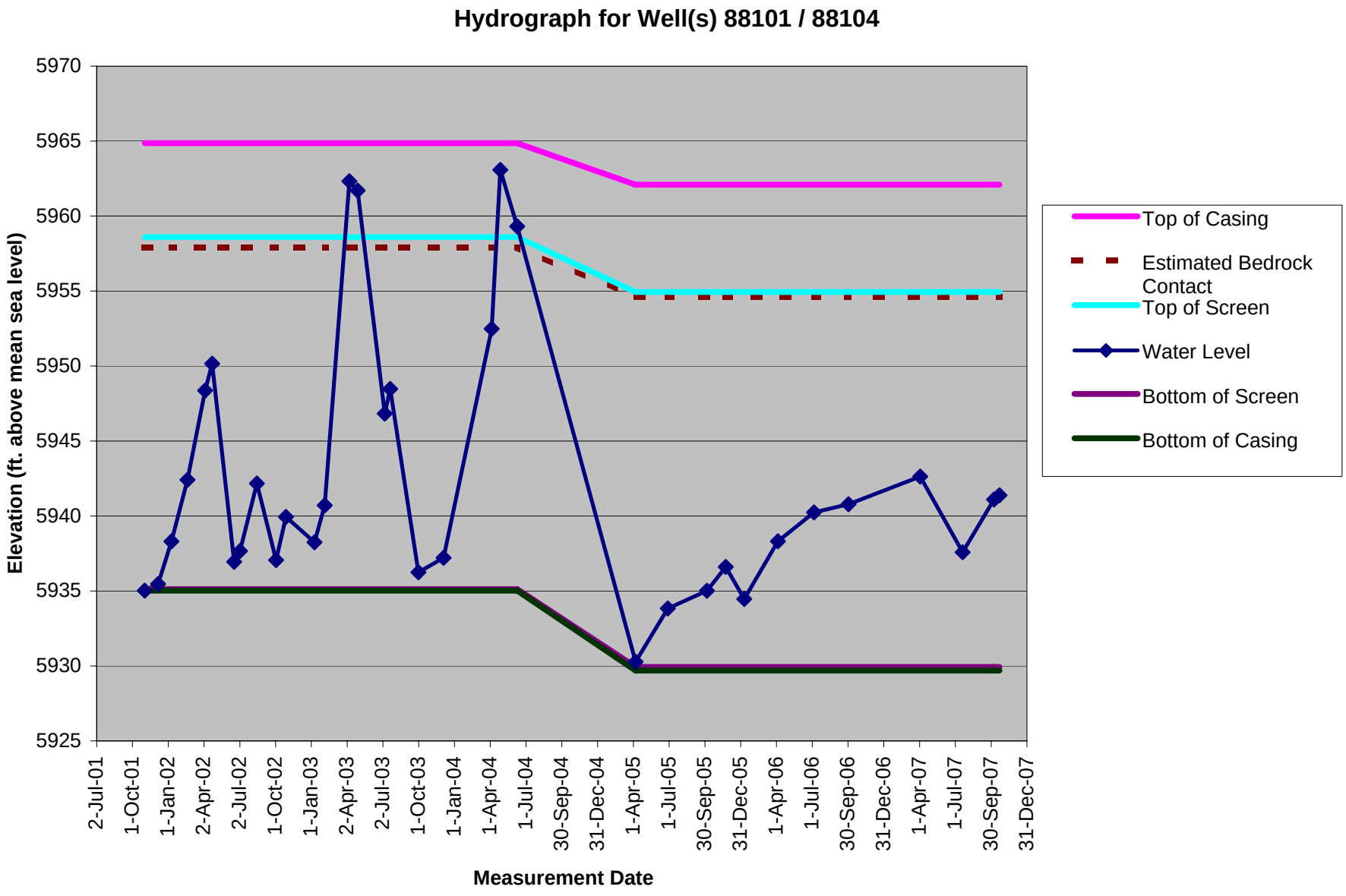

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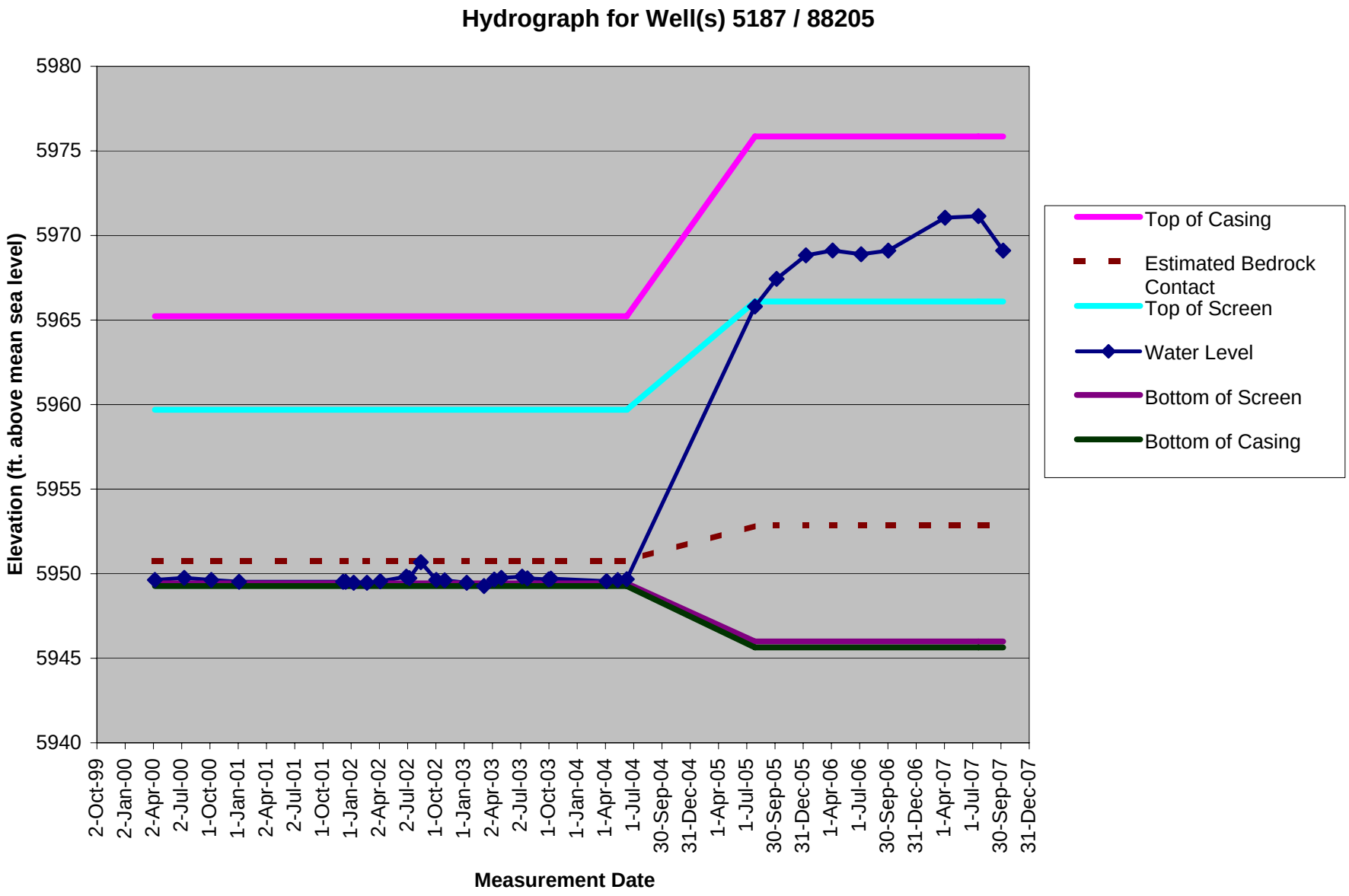

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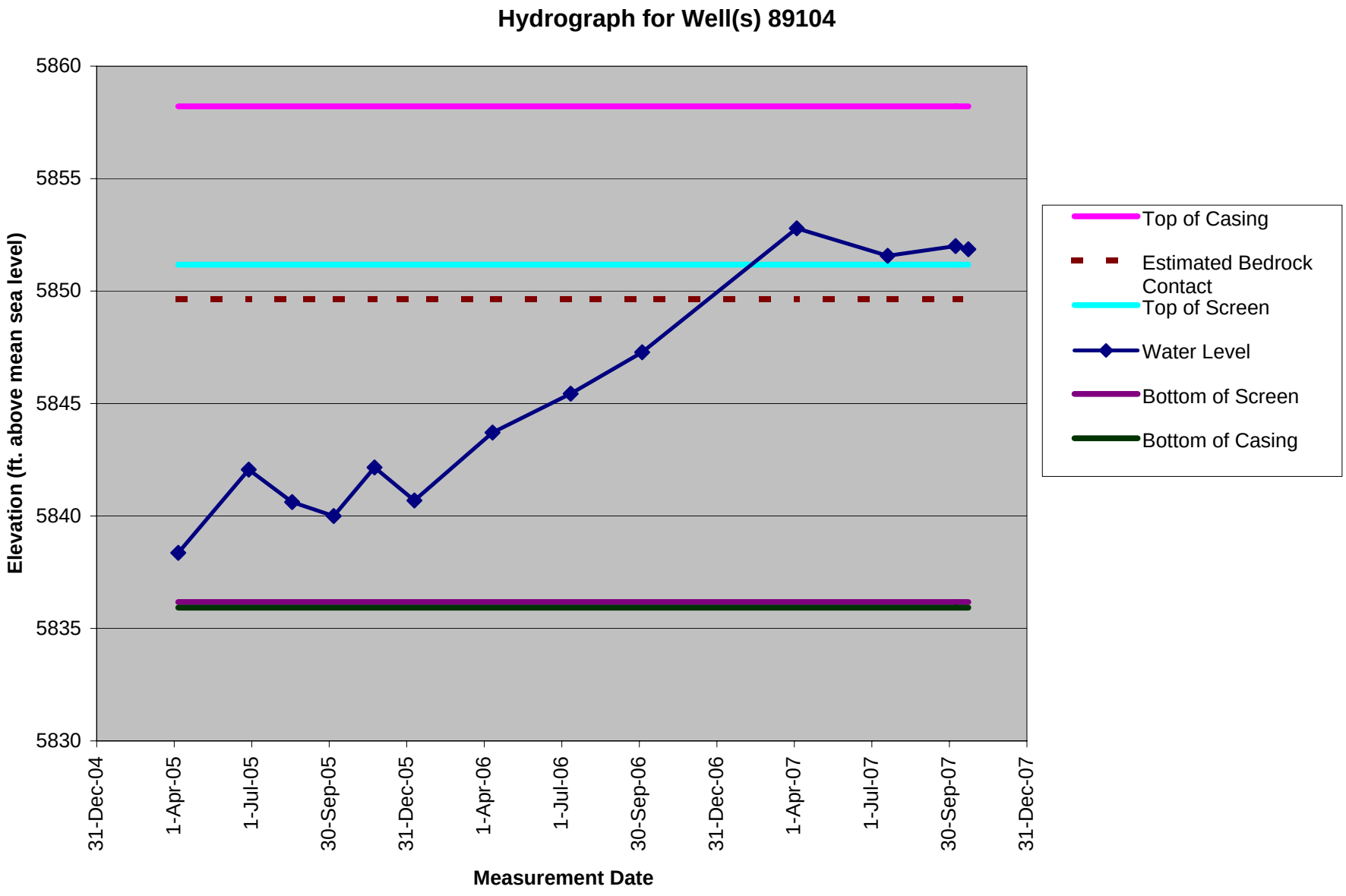

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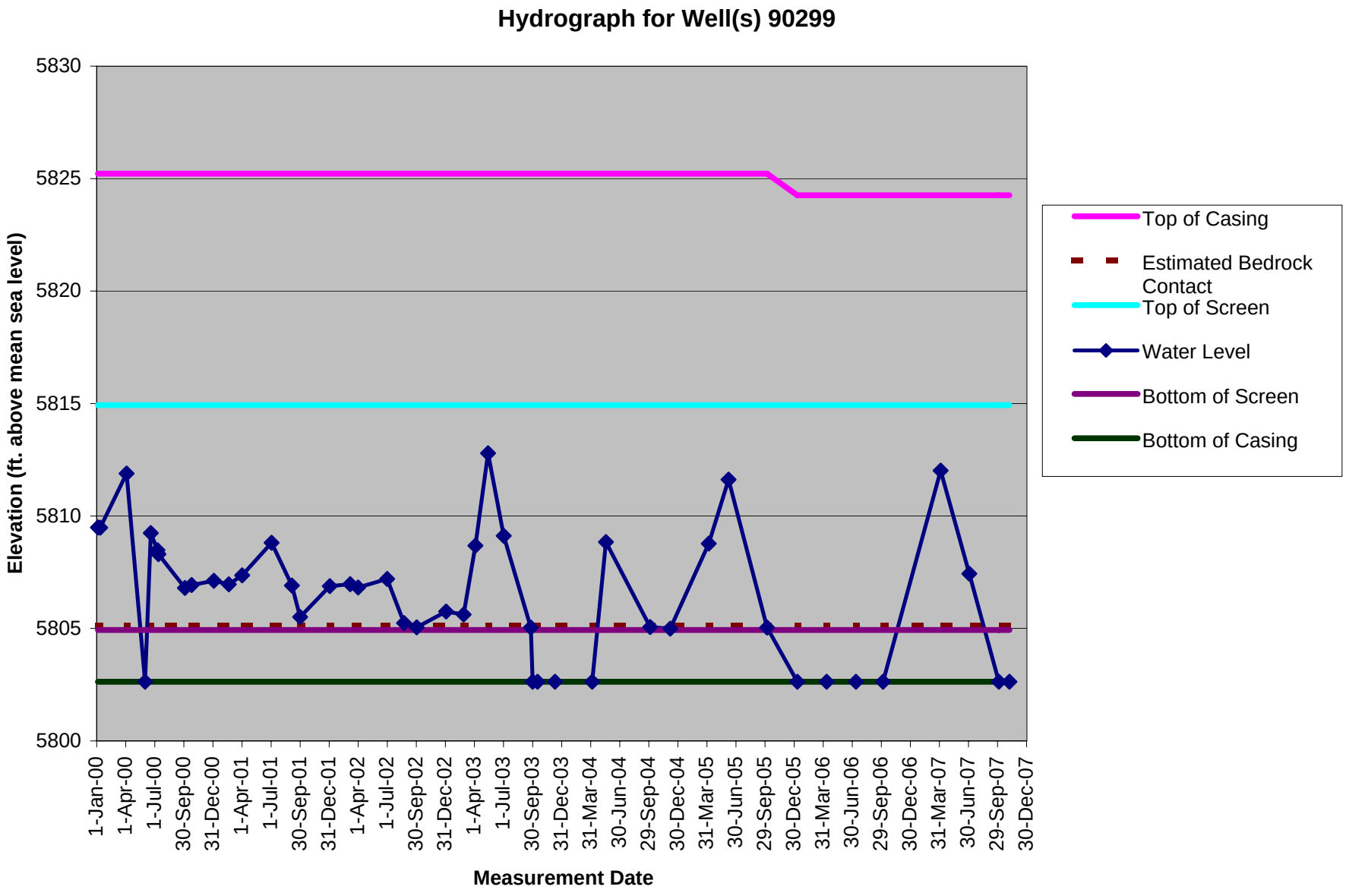

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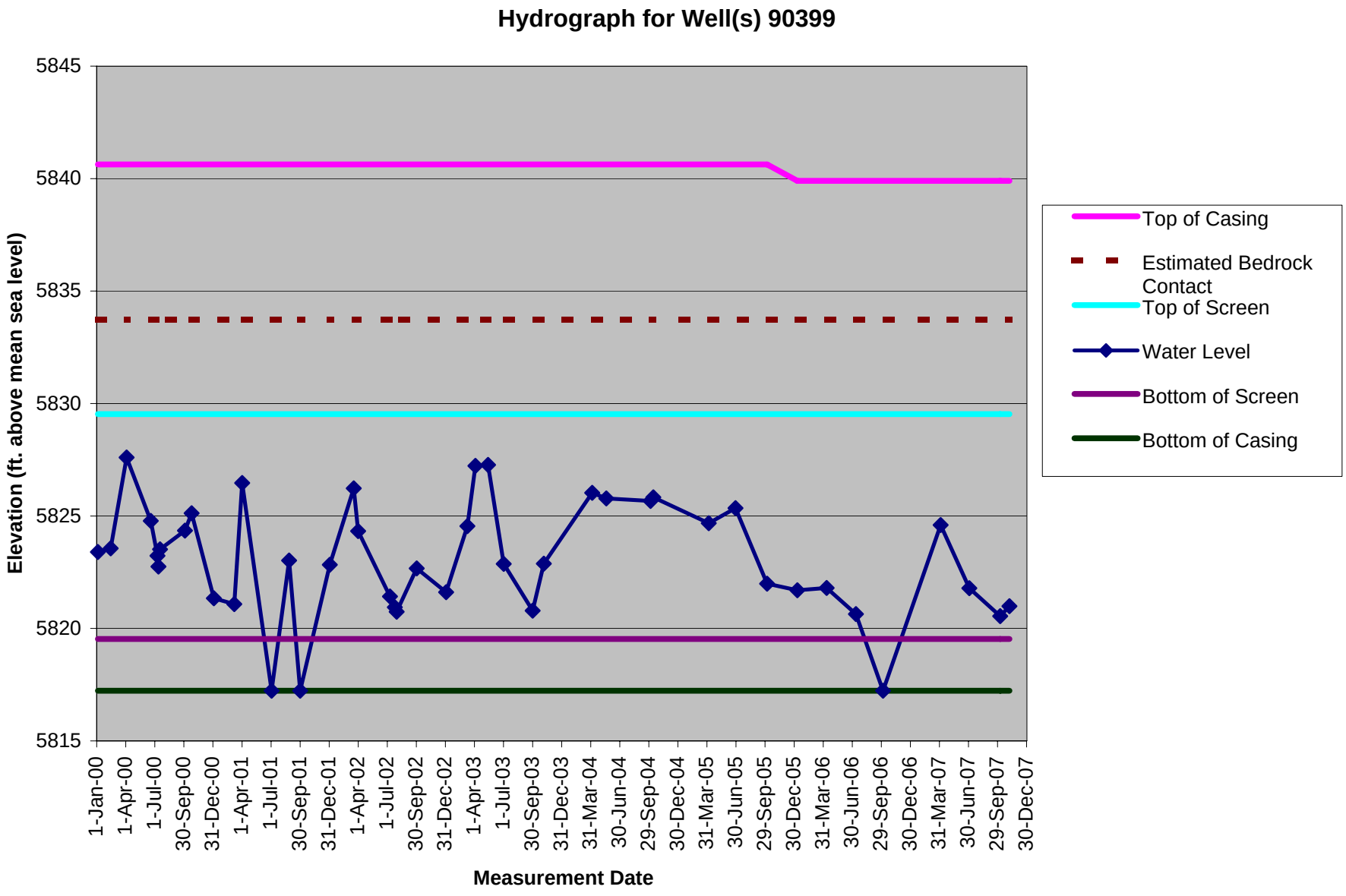

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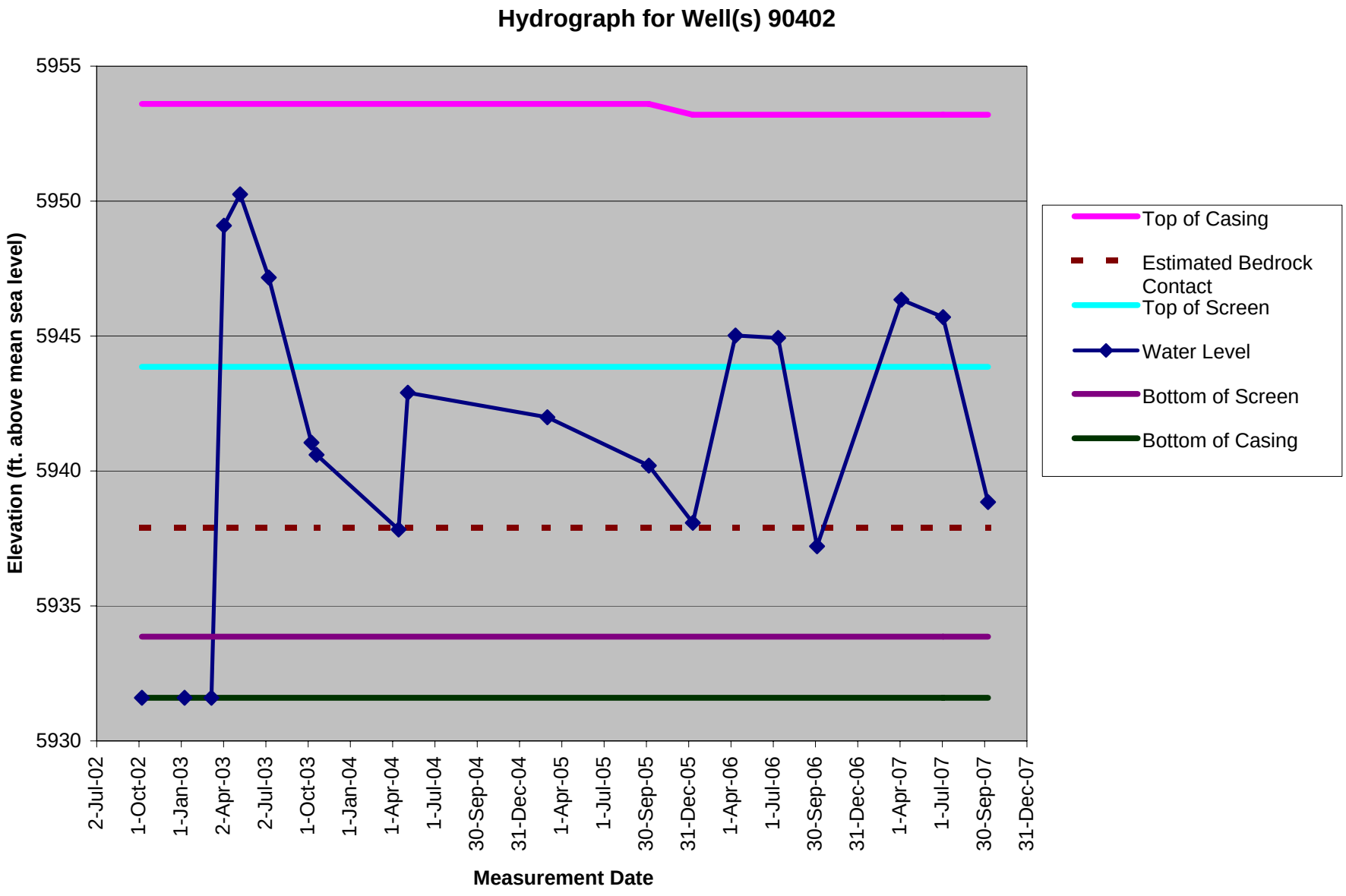

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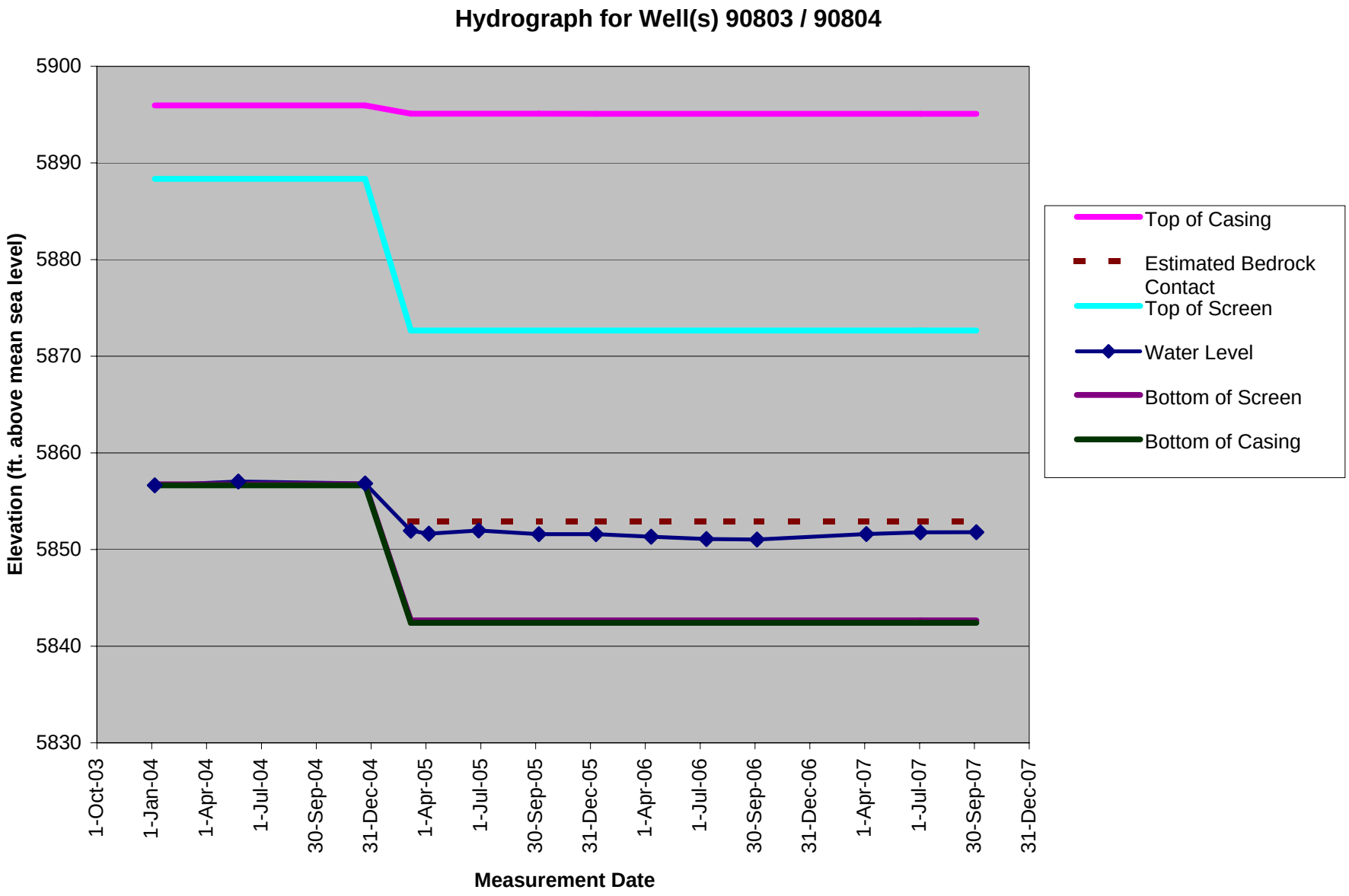

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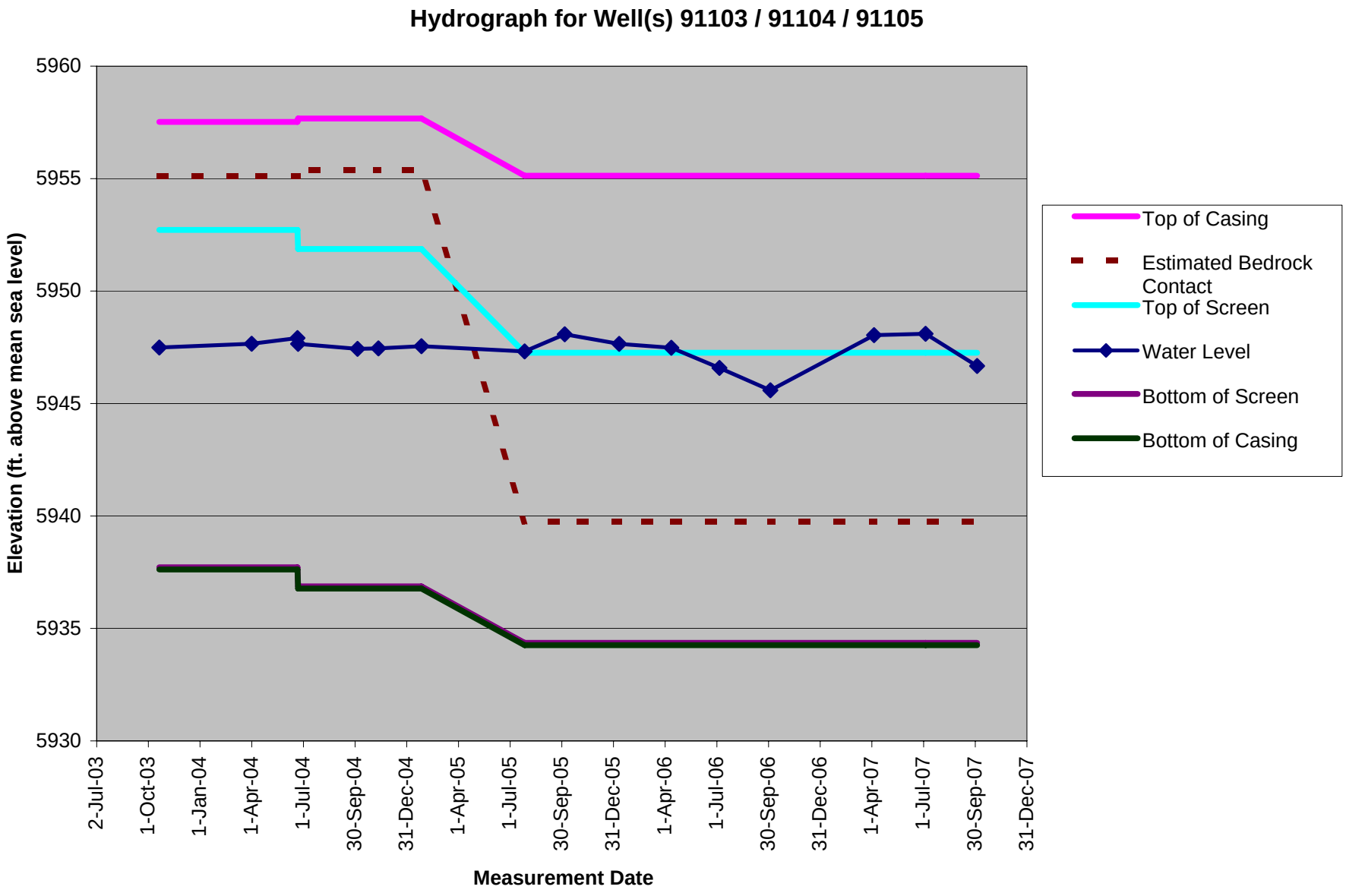

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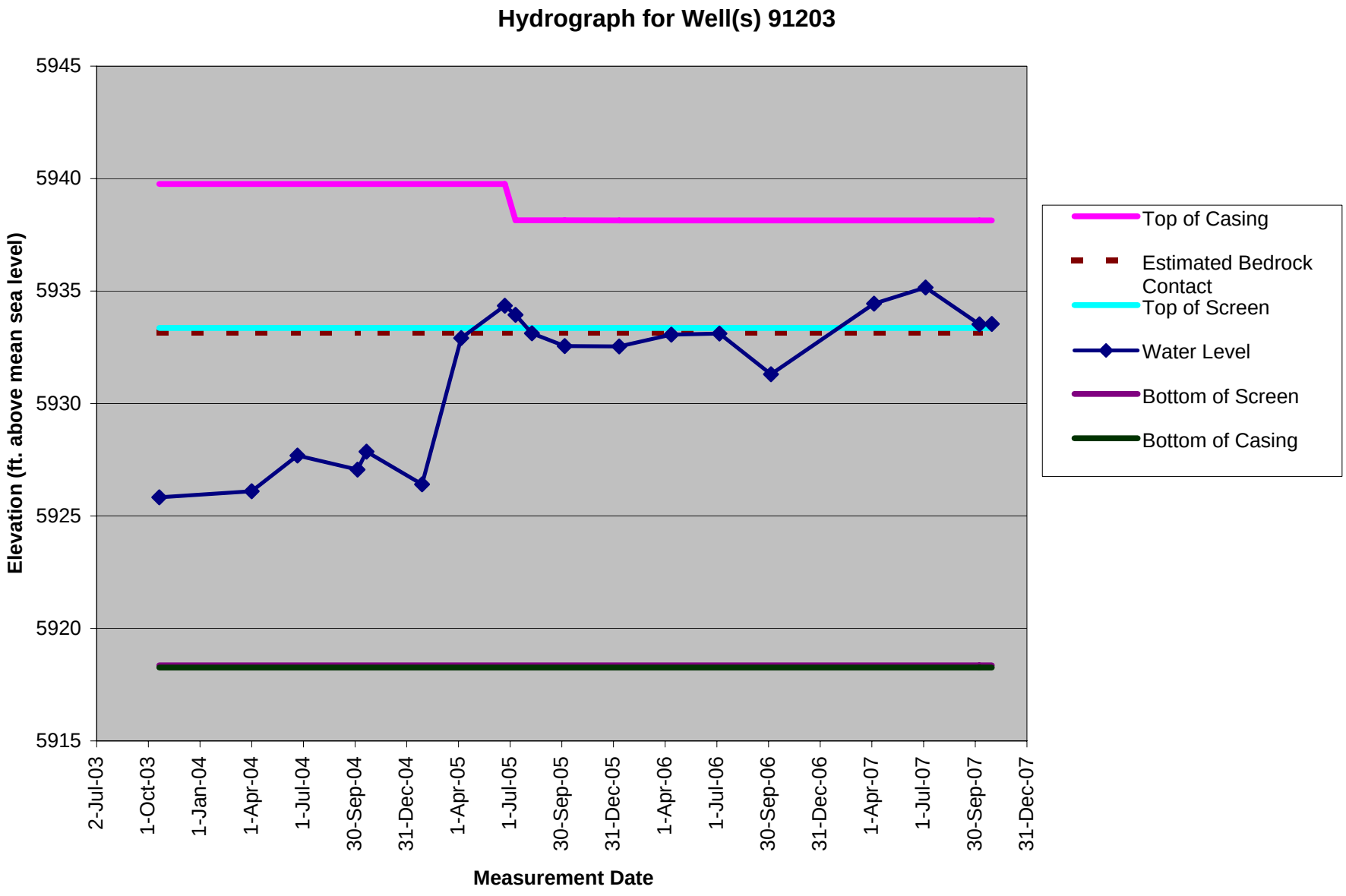

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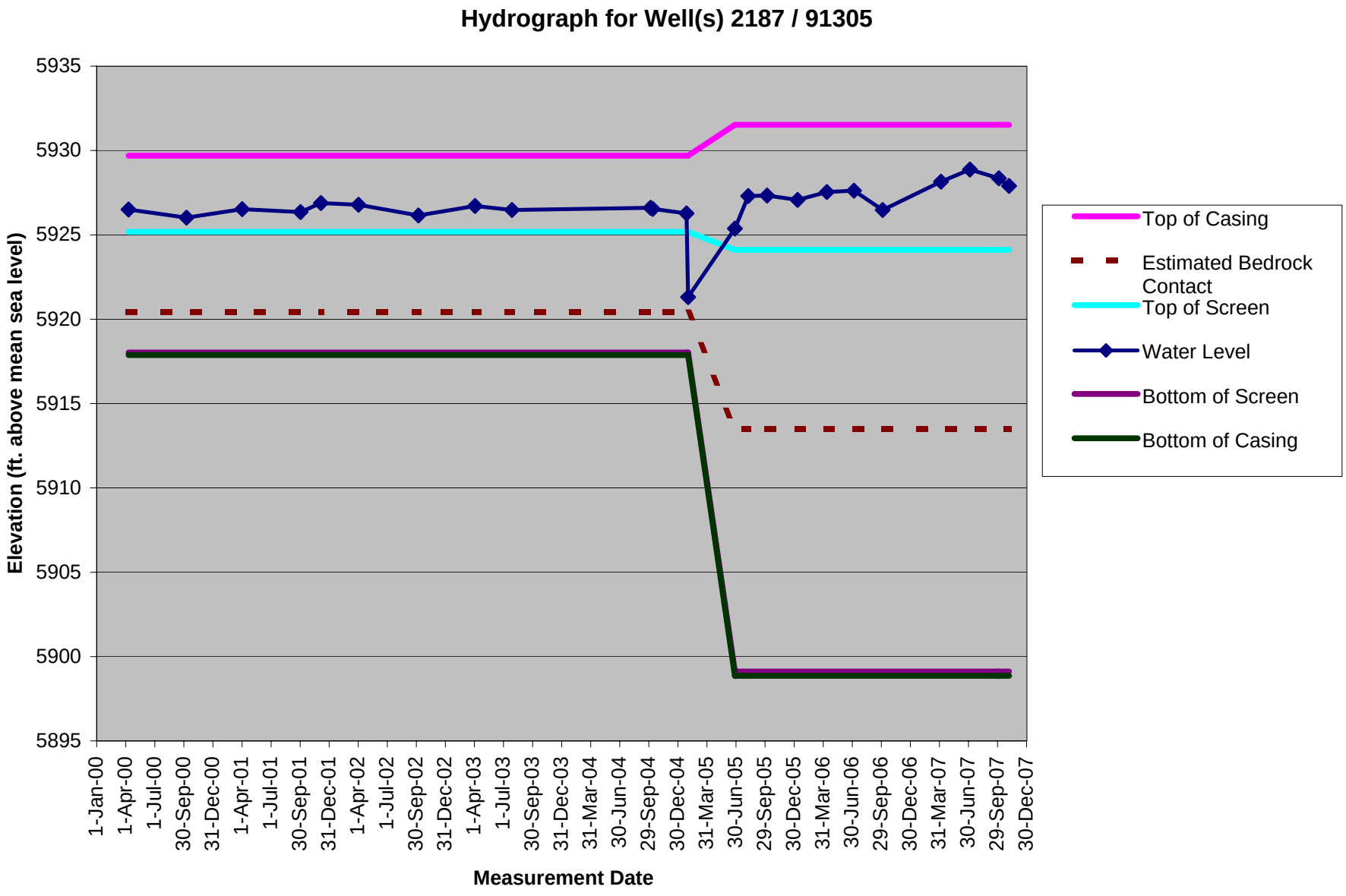

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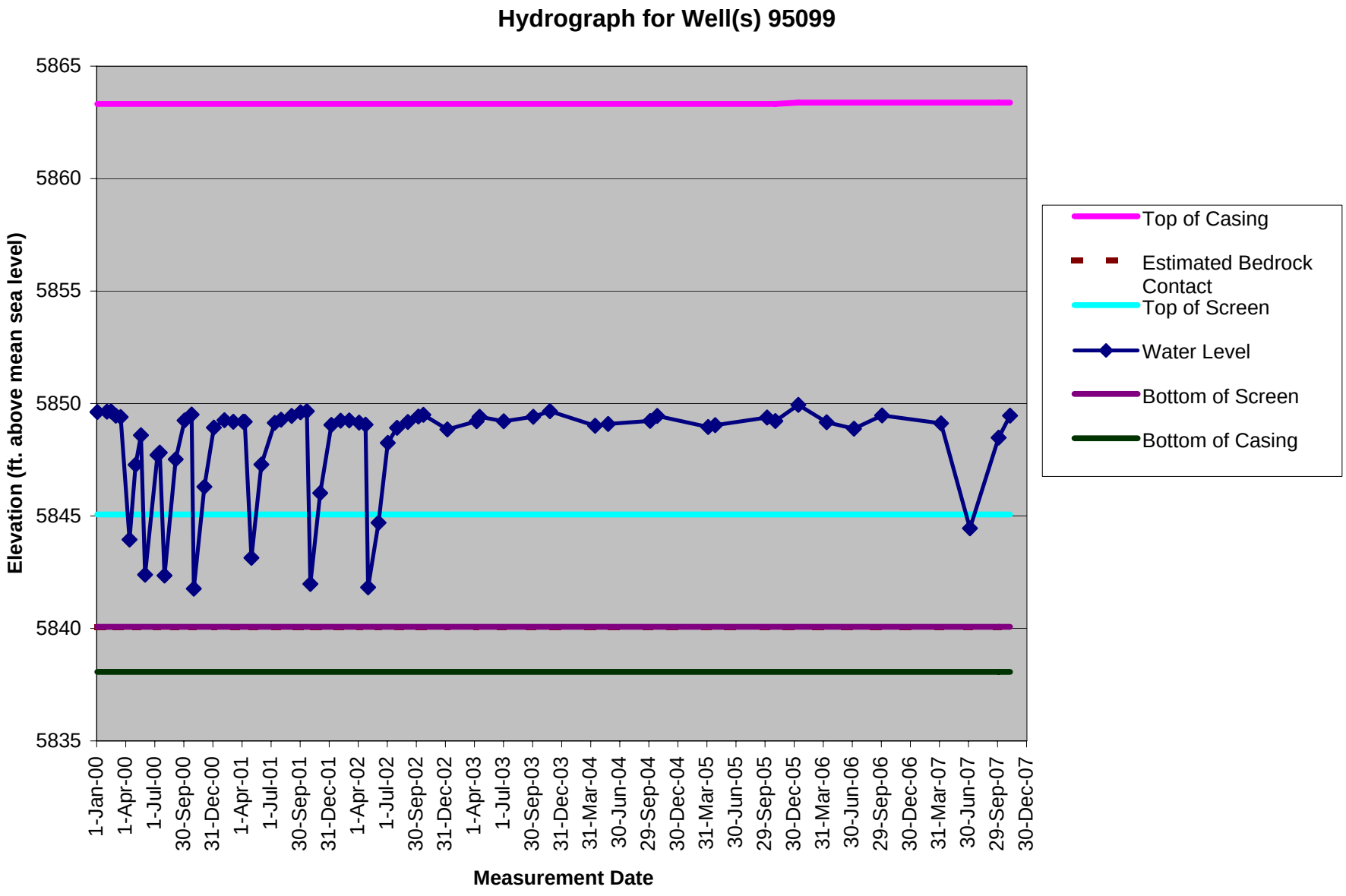

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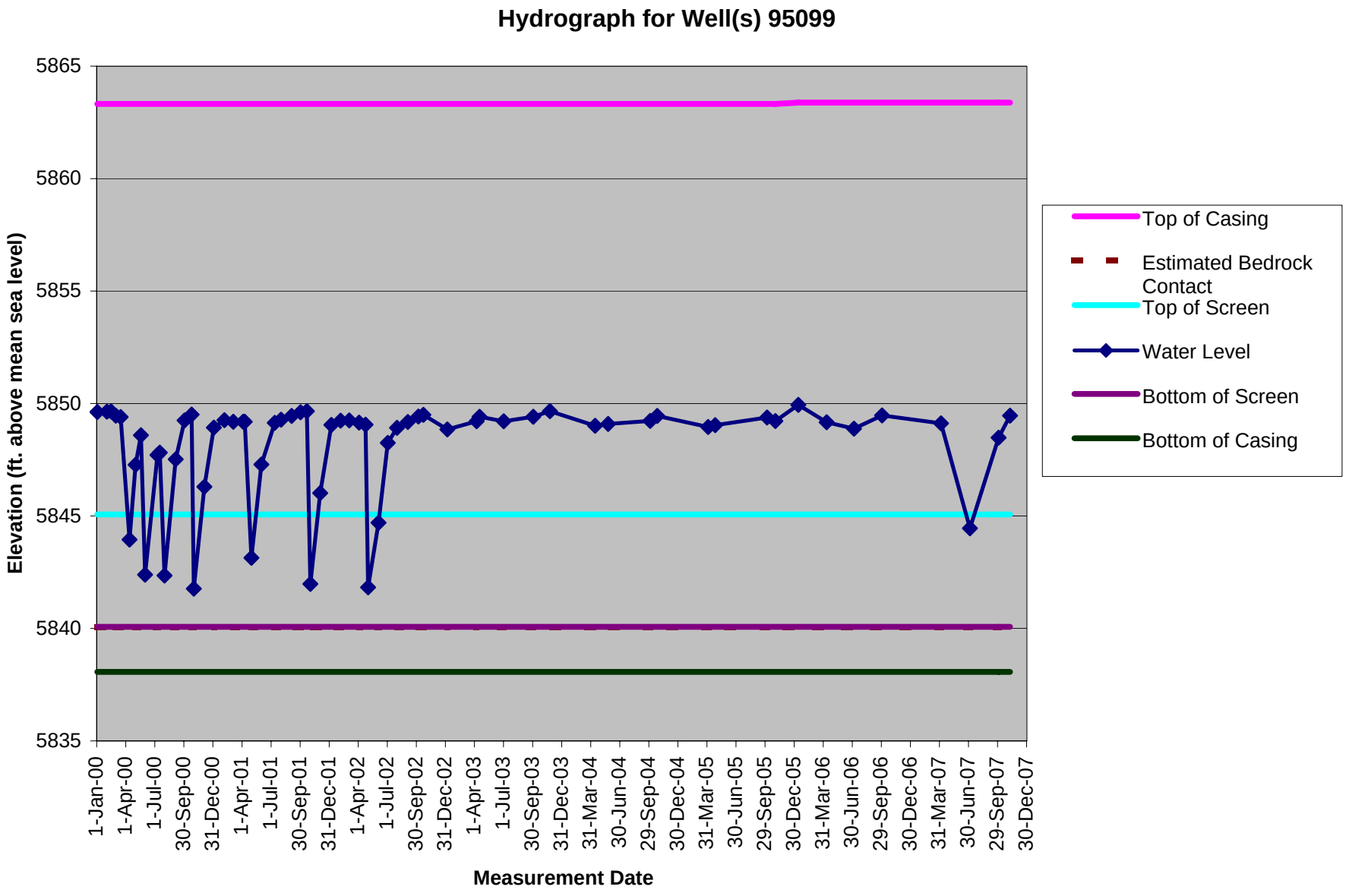

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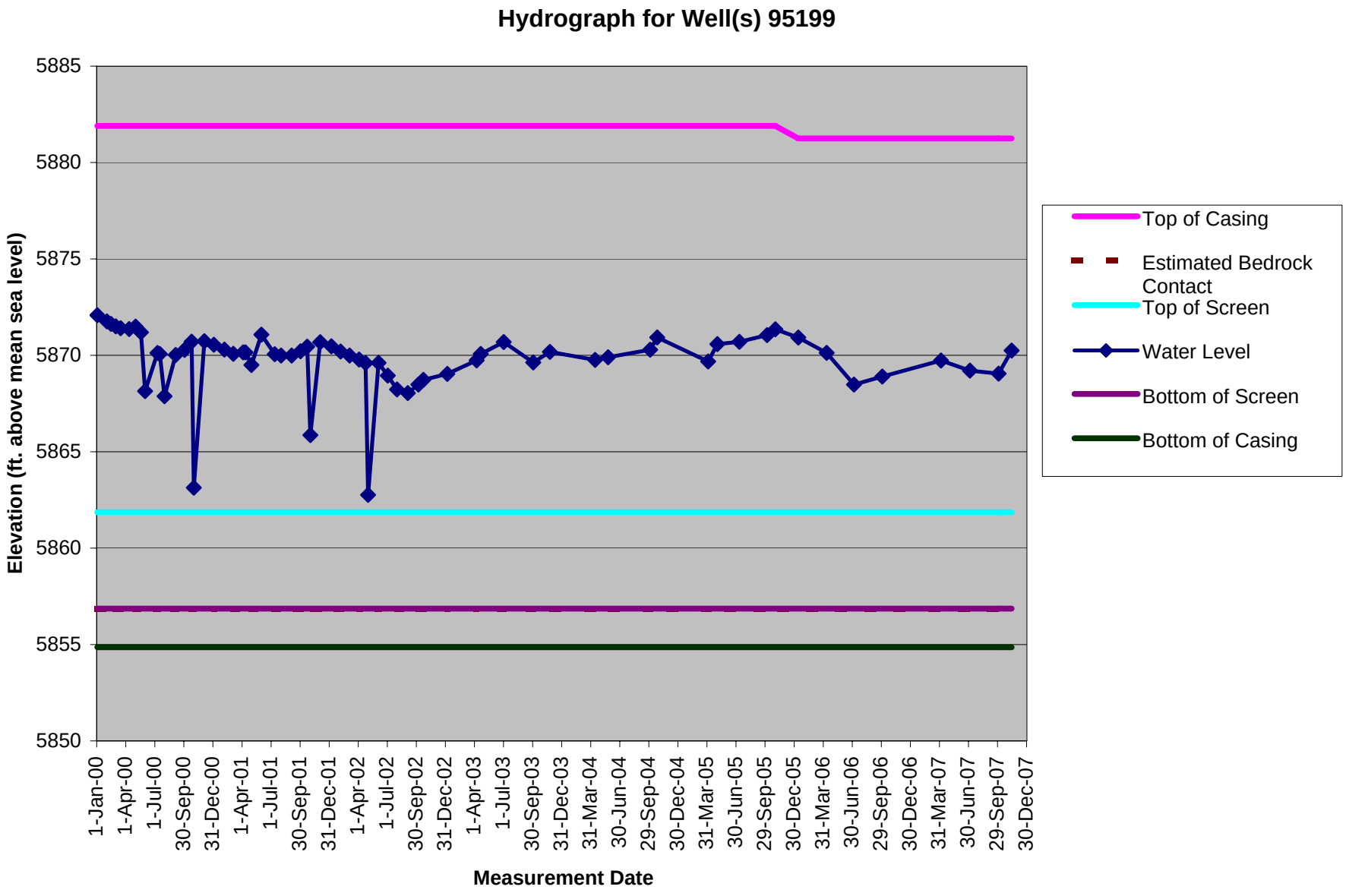

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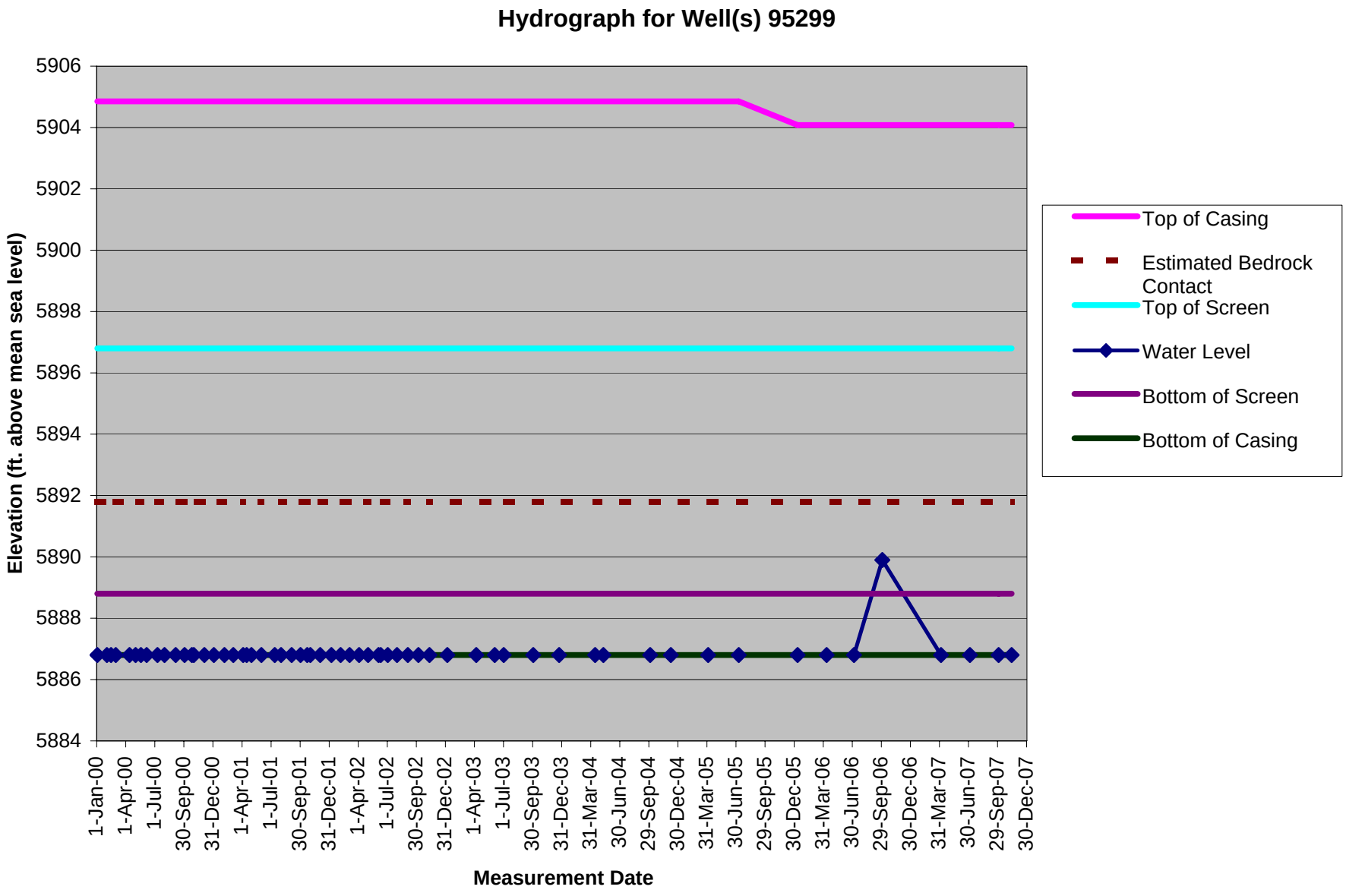

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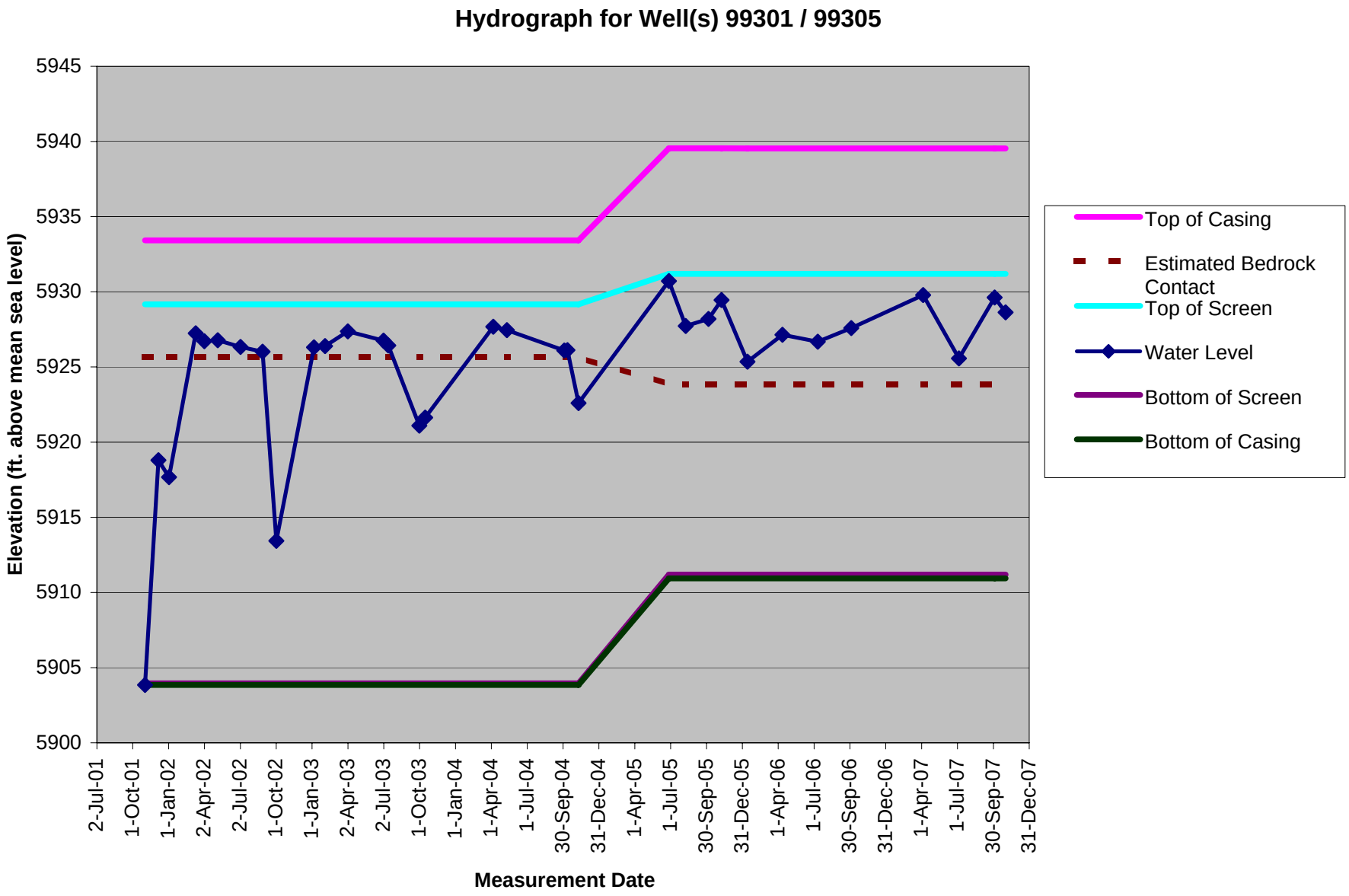

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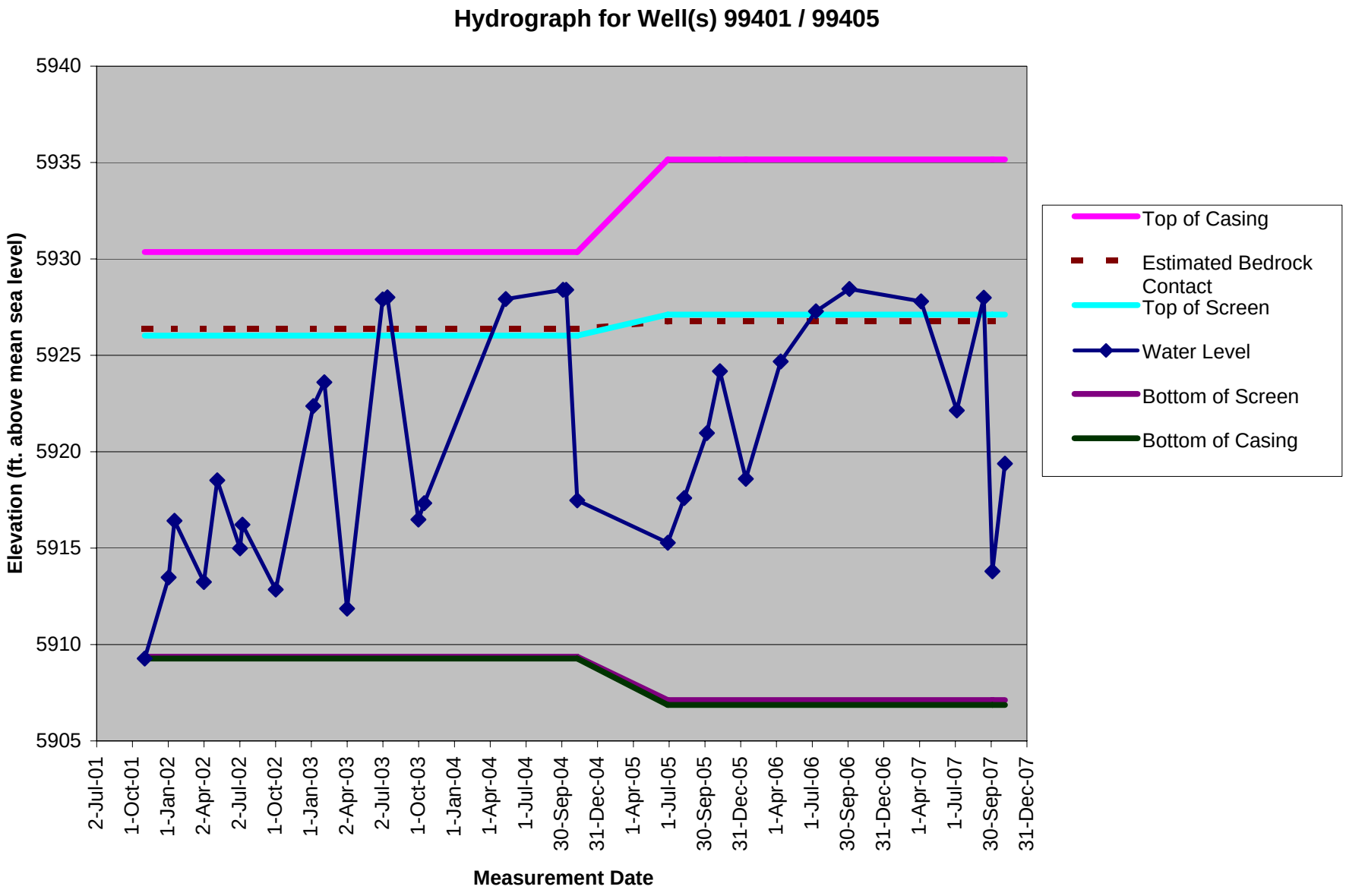
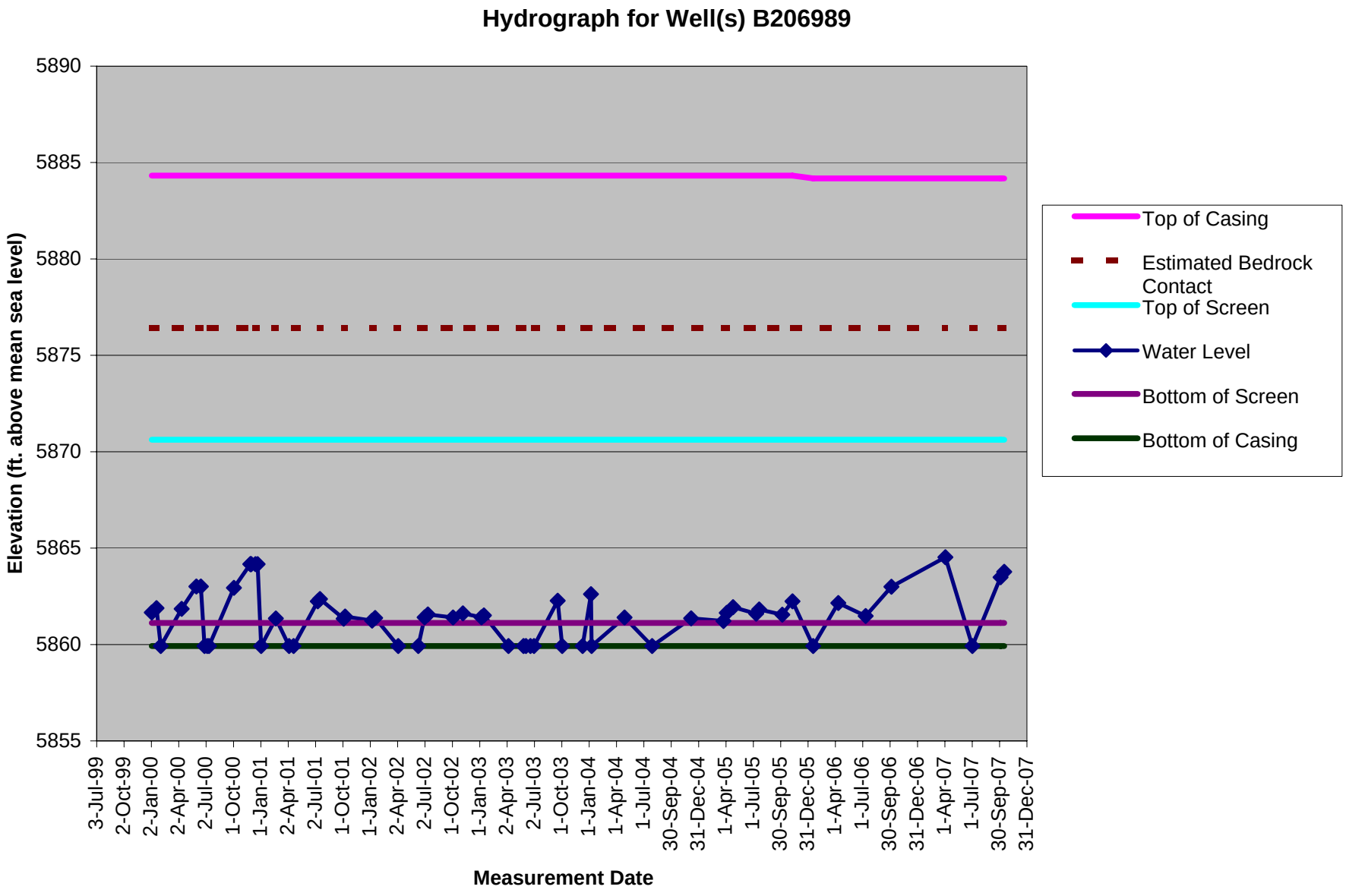
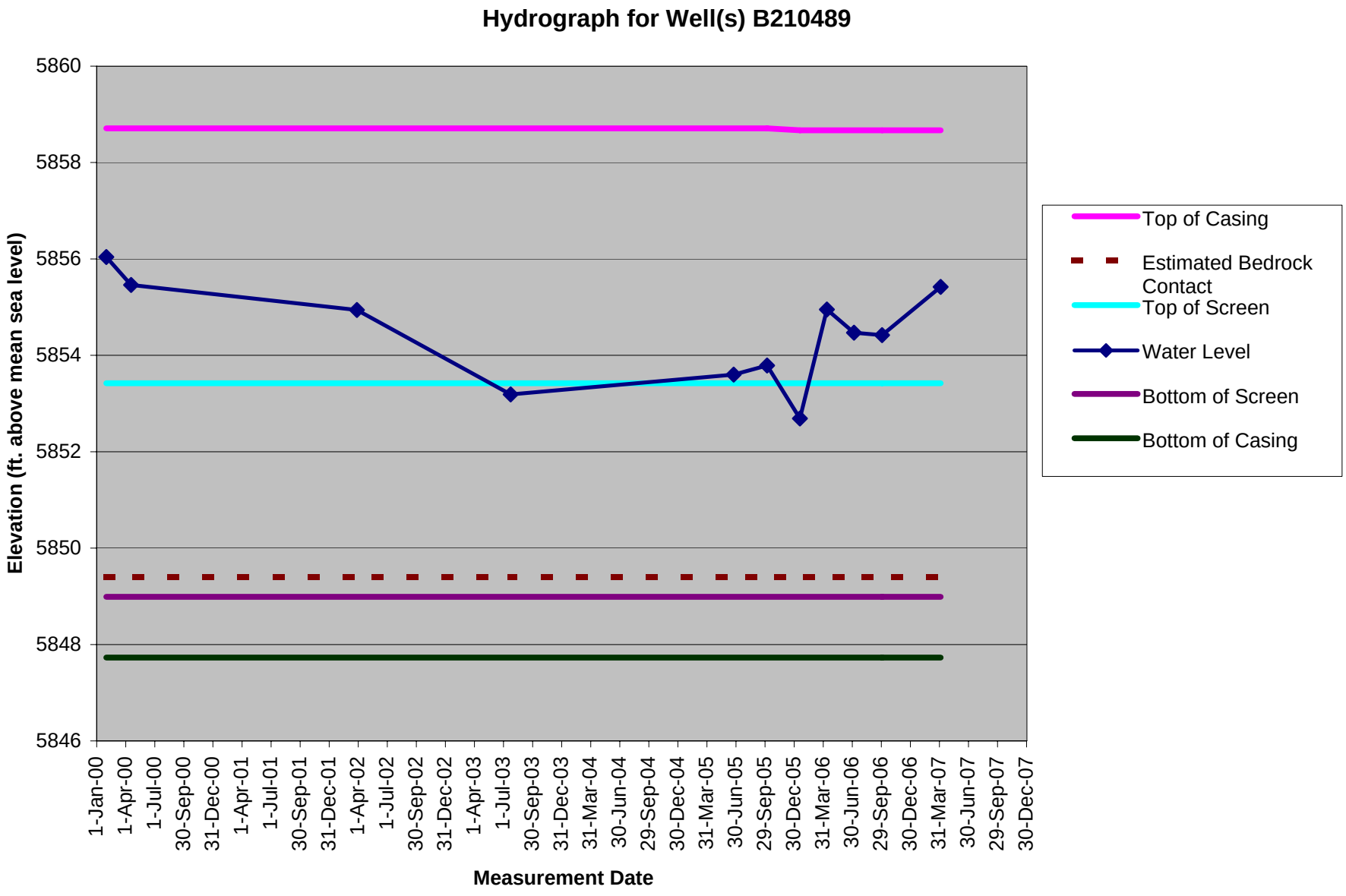


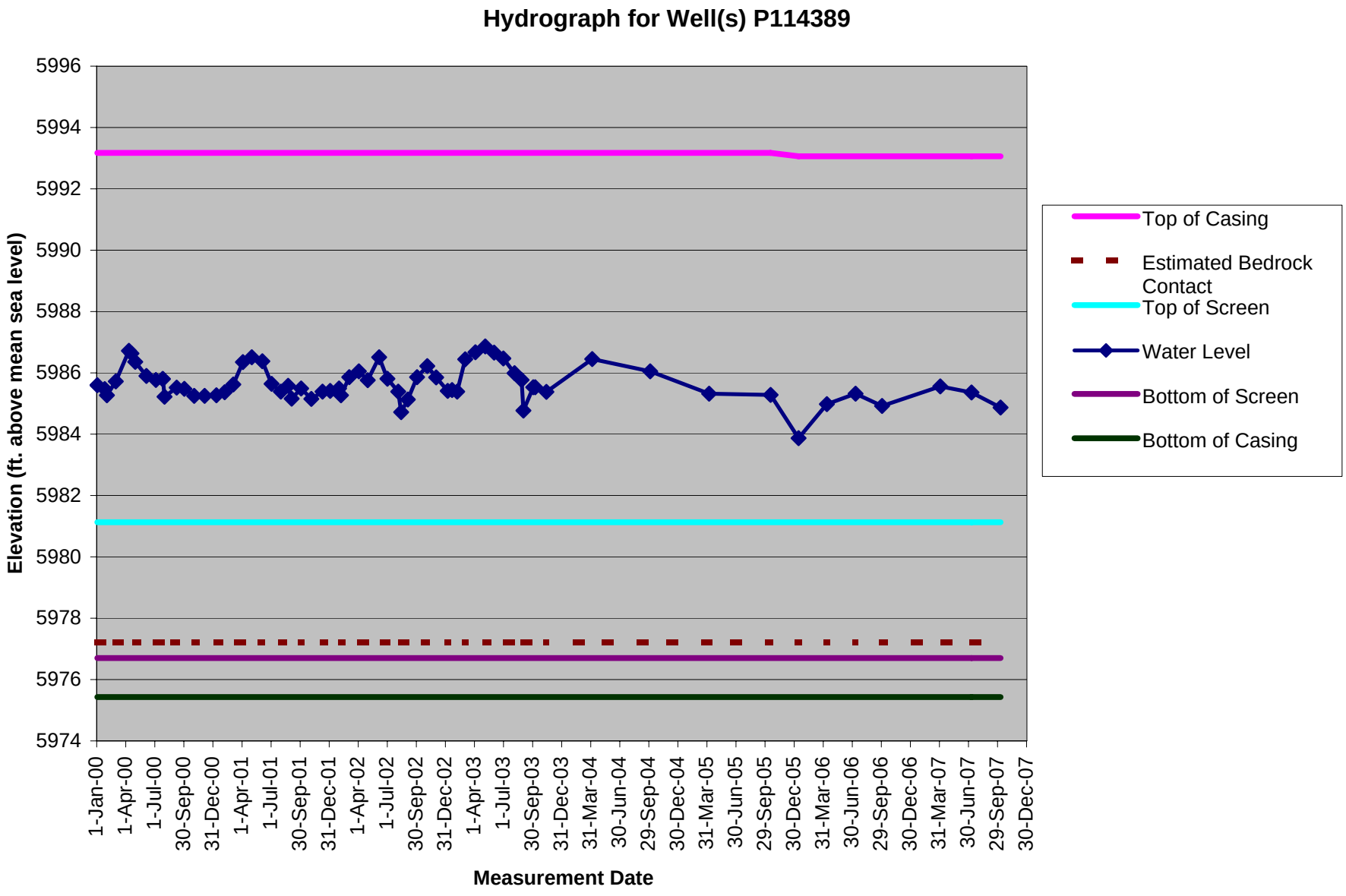
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



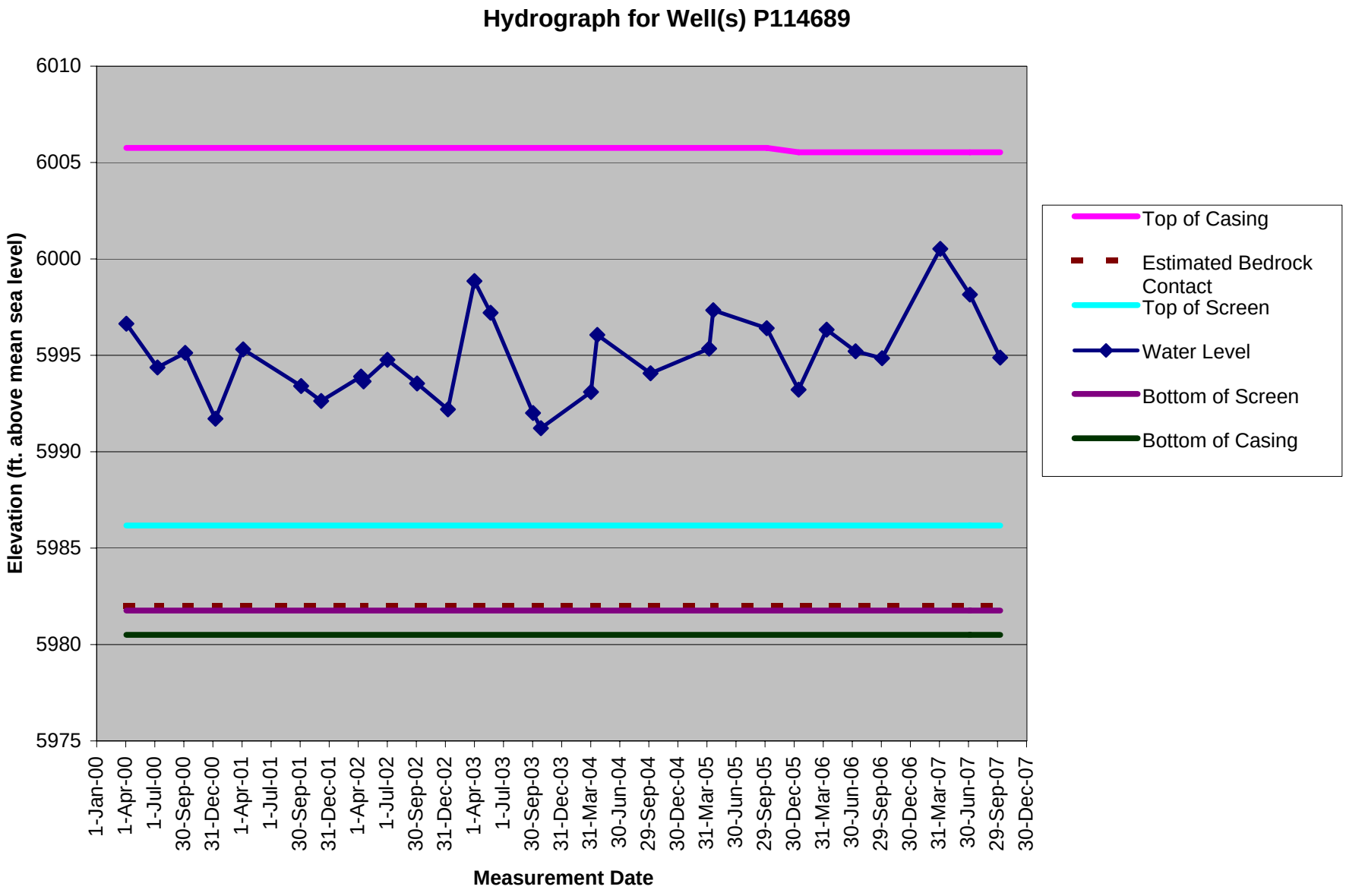
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



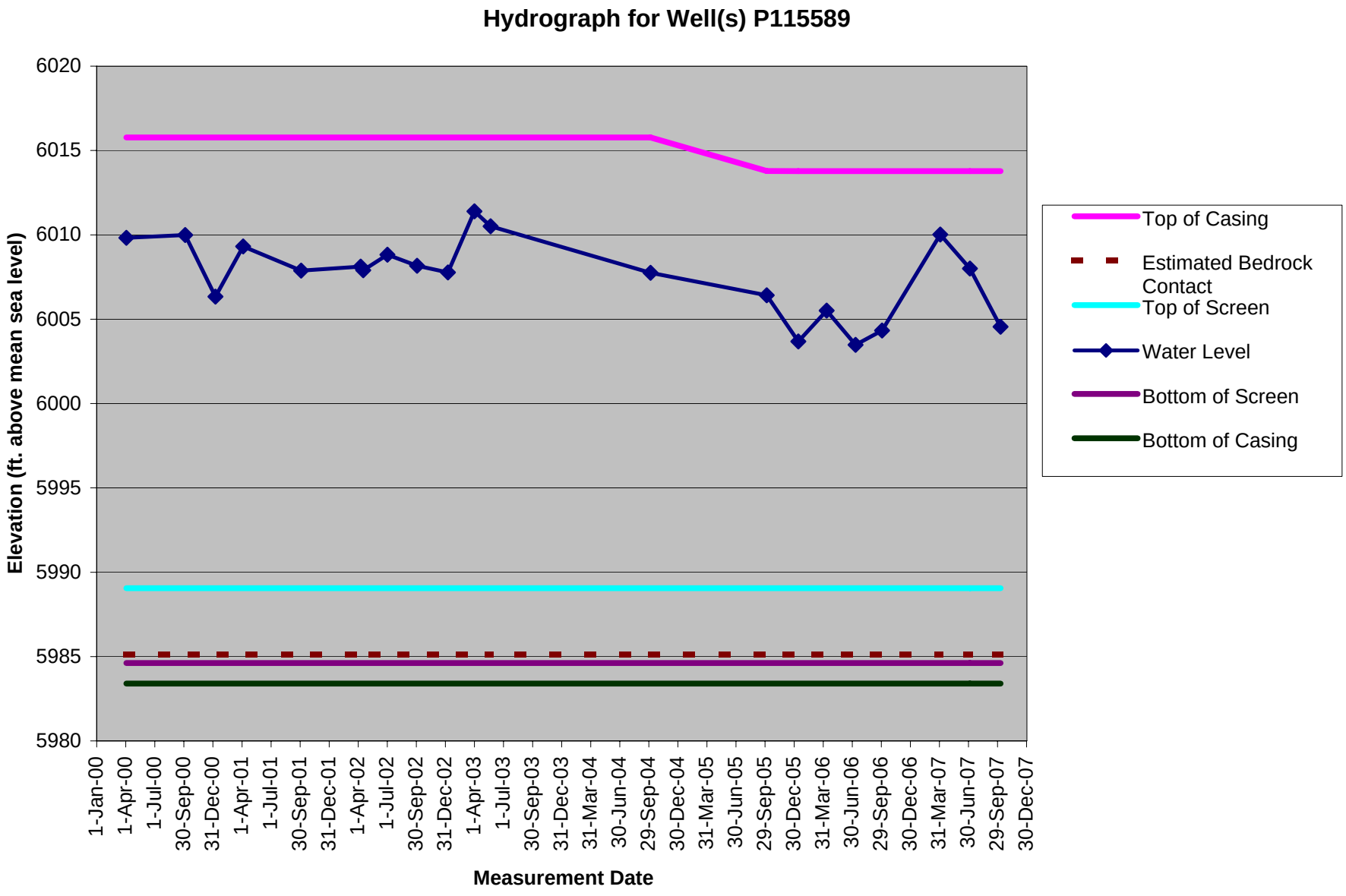
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



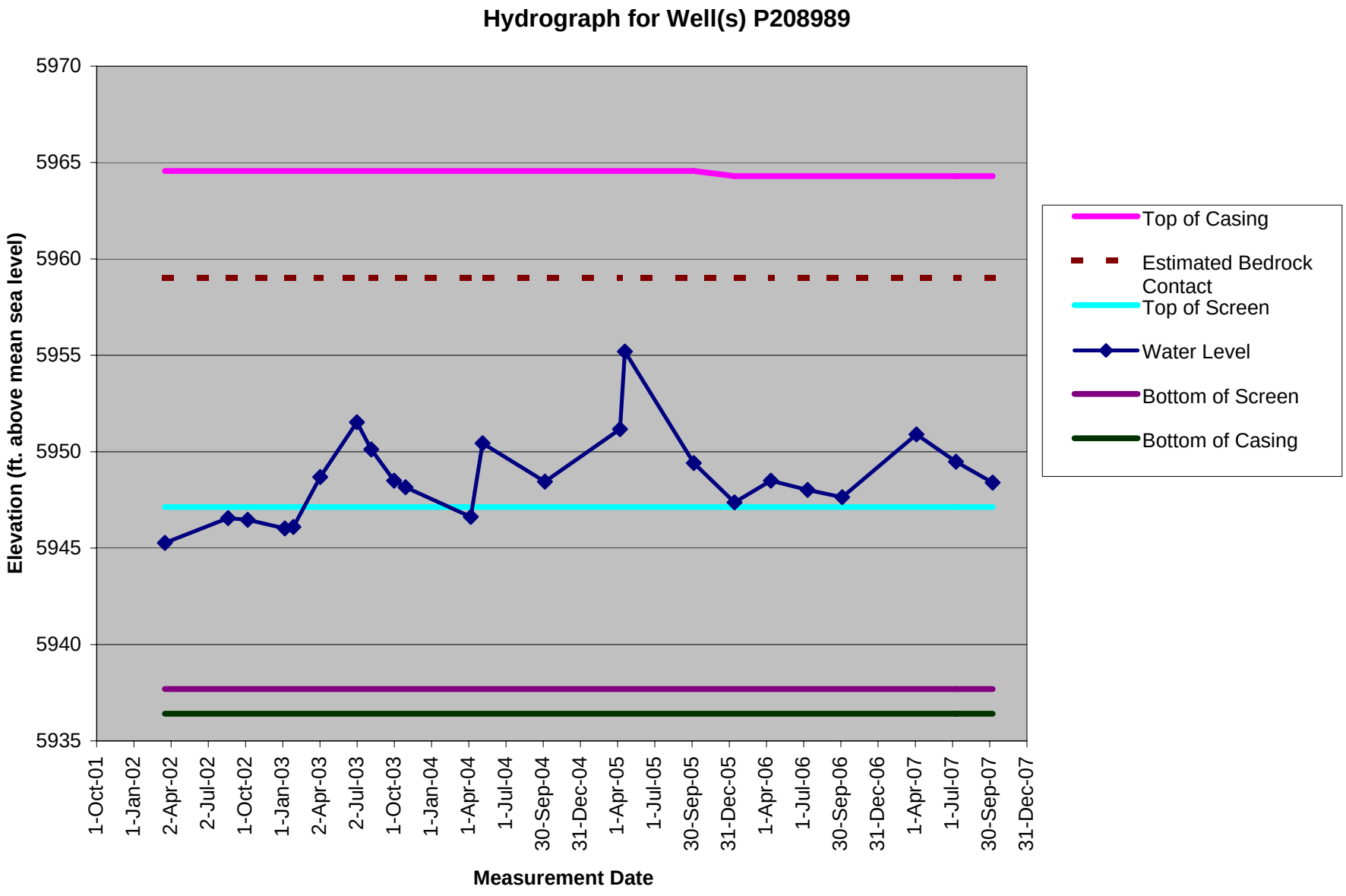
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



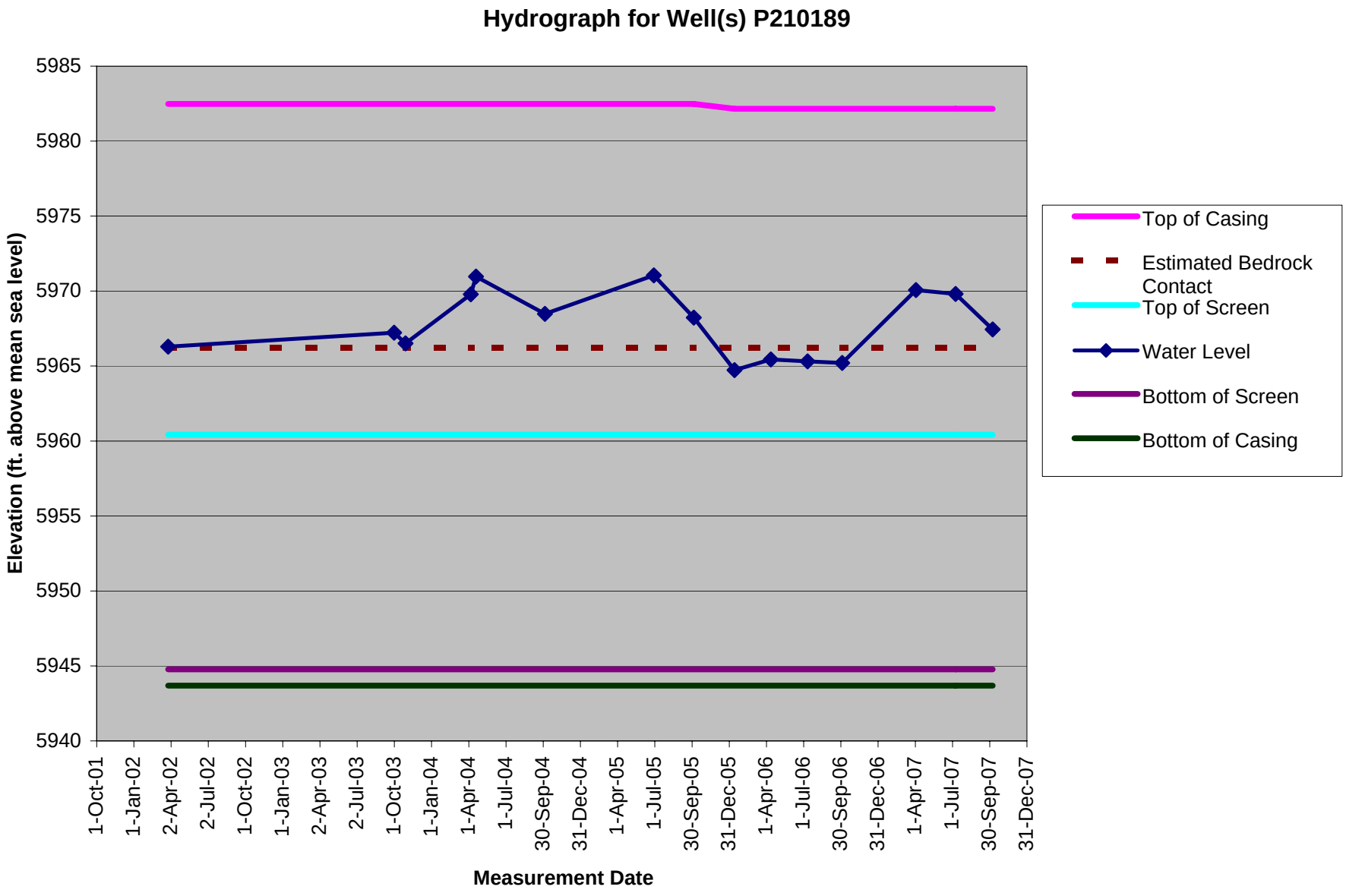
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



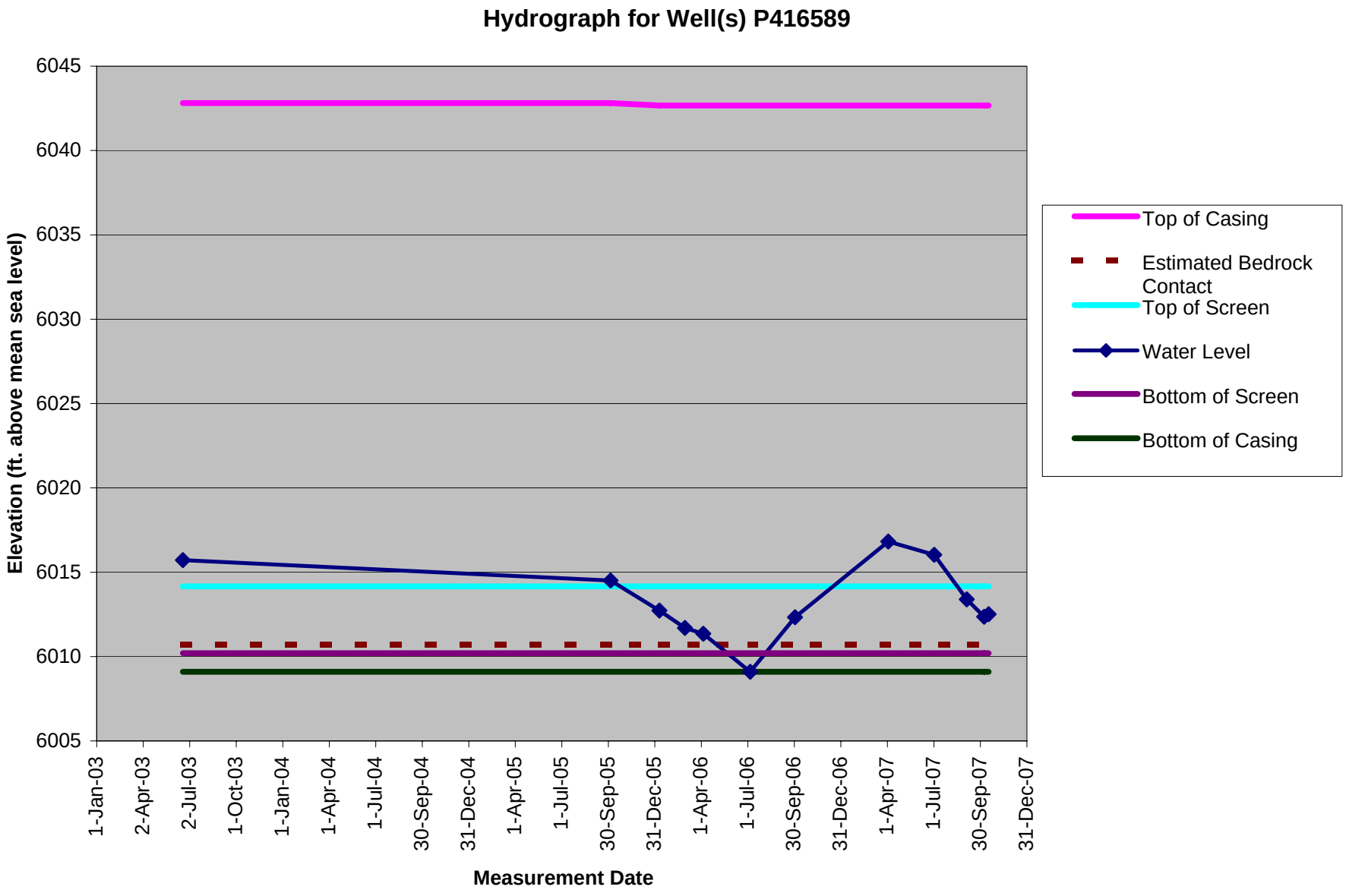
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



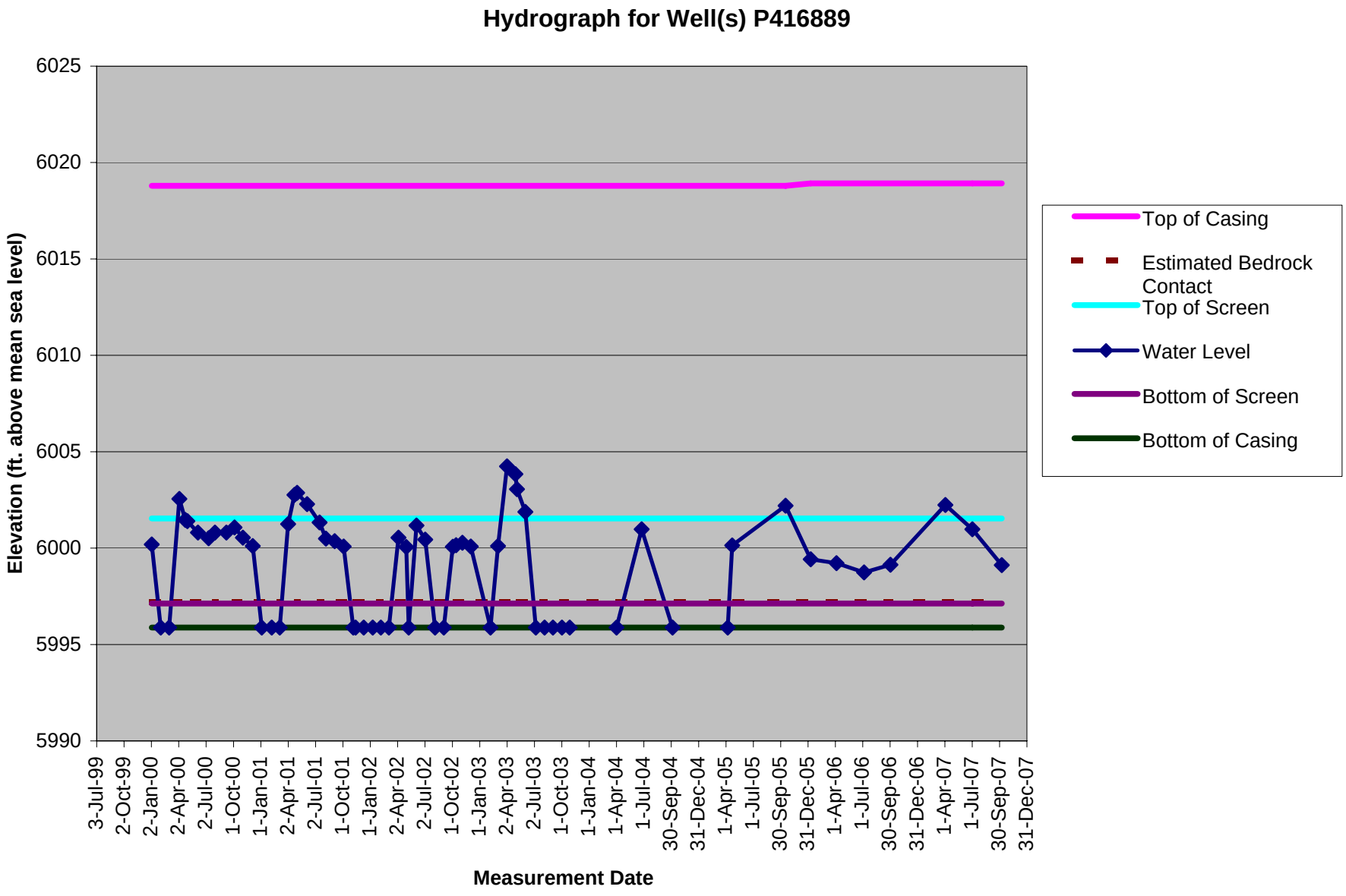
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



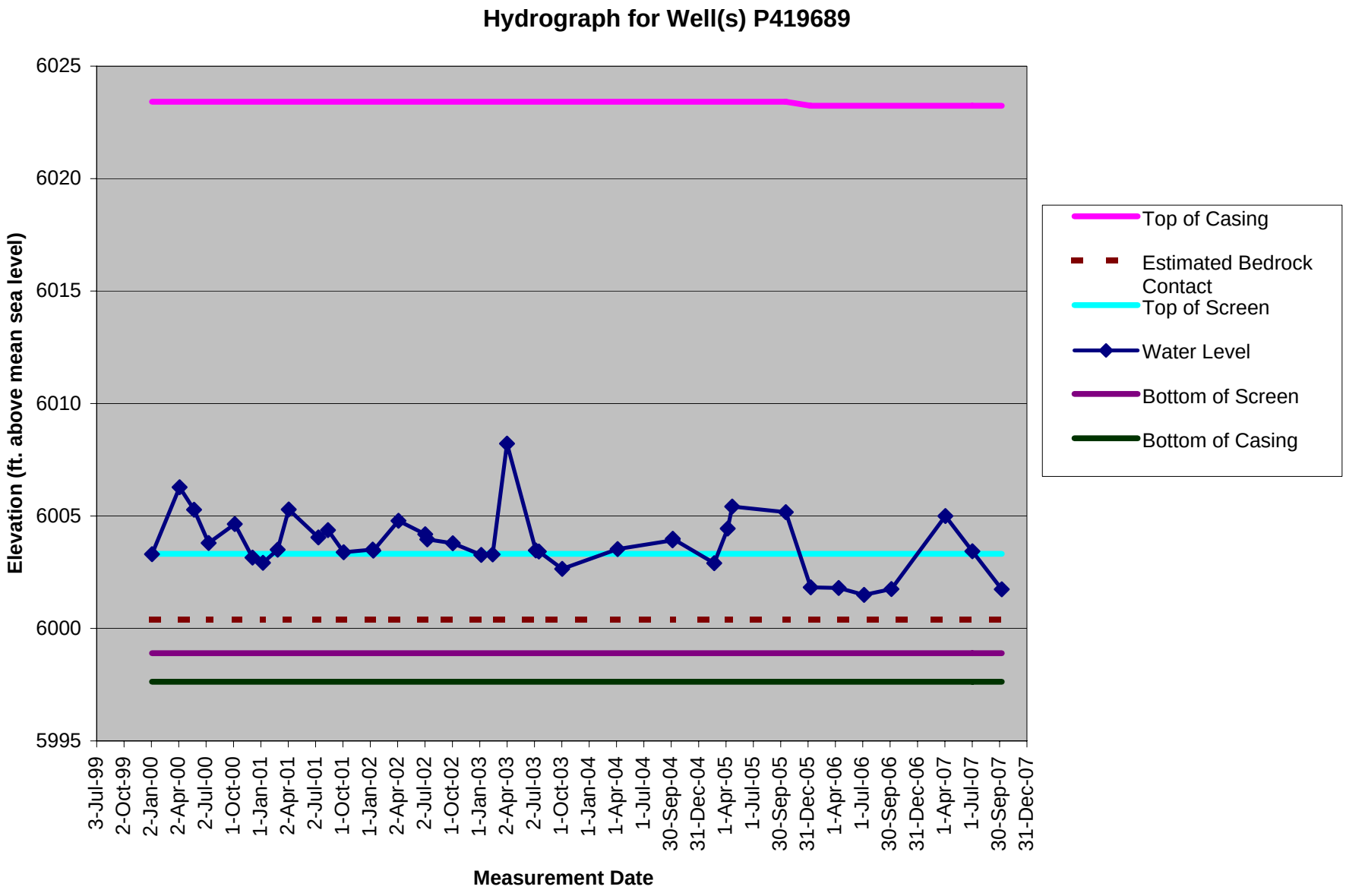
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



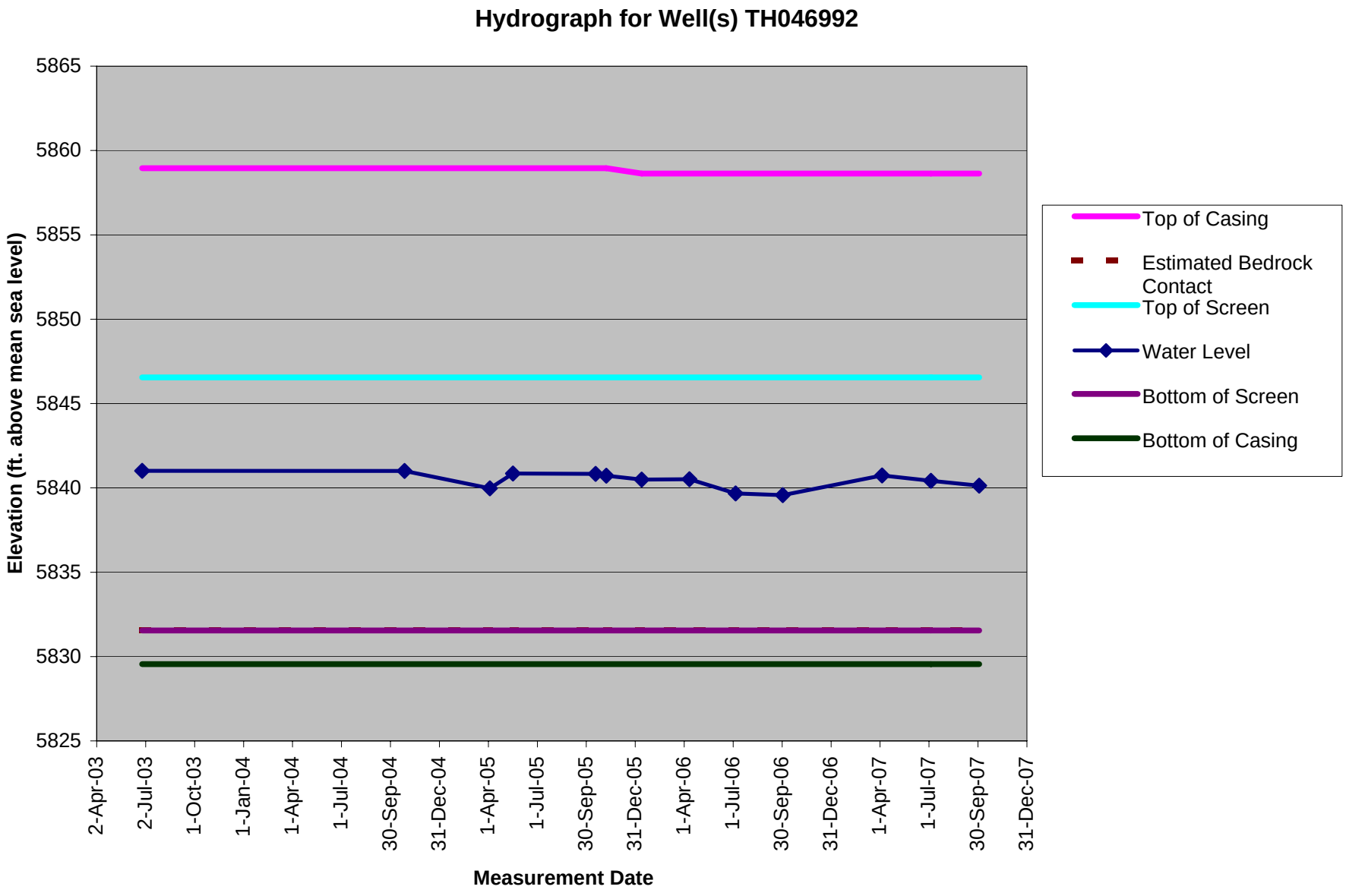
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

A.4.2 Hydrographs for Automated Water Level Data

Continuous, automated water level collection has taken place at the Rocky Flats Site since late 1998, and over time the program has been both expanded and scaled back to include various Site wells. (Shorter-term applications have also been a part of the groundwater monitoring program at Rocky Flats, and predate the subject program by many years.) As with any automated instrumentation, certain problems and errors may occur with this equipment, which can result in inaccurate or missing data; the resulting uncertainties are discussed below. Despite these uncertainties, the main utility of the automated water level collection program is increased resolution of hydrographs, revealing short-term changes in water levels not visible using quarterly water level measurements alone. This finer-scale information can be helpful as the effects of Site closure work their way through the hydrologic system.

In calendar year 2007, this automated equipment was in place at twenty-six ground water wells. All wells currently included in the automated water level collection program are equipped with In-Situ Inc.-brand "MiniTroll®" data loggers. (NOTE: This report does not advocate or recommend the use of any particular brand or type of water level monitoring equipment; this information is only included for completeness.) The MiniTroll® is a downhole instrument comprising a data logger, temperature sensor, pressure transducer, and battery in a self-contained watertight unit. The transducer is vented at the surface, negating the effects of barometric pressure changes. The instrument measures and records water levels at a user-defined frequency, allowing for unattended long-term monitoring. It is programmed and downloaded using a PDA equipped with In-Situ Inc.'s Pocket-Situ® software. (Historically, other models of data loggers and transducers have also been used at the Site.) At the Rocky Flats Site, water levels are measured and recorded every four hours, and the data downloaded on a routine basis—generally twice per year.

The automated water level data are compiled, graphed, and compared to the manual water level hydrograph constructed for the same well. Although a greater number of wells have historically been a part of this network, for simplicity and relevance only those wells with 2007 data will be included in this discussion. Additionally, the network was restructured in late 2007; 24 transducers were removed and 30 were redeployed in a more targeted fashion. Data from transducers installed in late 2007 are not included in this report due to the minimal data collected in that year (less than two weeks). As of February 2008, transducers are in place at 36 Site wells. The automated water level collection program will be used to augment quarterly water level data until water levels stabilize with natural ground water patterns, at which point the program will likely be discontinued.

Three general types of uncertainties in the automated water level data have been recognized; most of the automated water level datasets incorporate some uncertainty. The three classes are referred to as Reference Elevation Uncertainty, Unexplained Uncertainty, and Explained Data Gaps. (A fourth type, related to gradual drift in the data over time. All of these instruments are subject to varying degrees of drift; this is why they are periodically checked and reference levels reset accordingly.) See Table A–29 for a list of uncertainty types present in each hydrograph; the individual hydrographs also indicate whether and which uncertainties apply.

Table A–29. Types of Uncertainties in Automated Water Level Data

Well	Uncertainties		
	Ref.	Unexplained	Explained Gap
0487	X	X	
1786		X	
4087	X		
10304		X	
10394		X	
15399	NONE		
20902		X	
21605		X	
22205	NONE		
23296		X	
37691	X		
40005	NONE		
42505		X	
51605		X	
70099	X	X	X
70193		X	
70299		X	X
70693	X	X	
80205		X	
89104	NONE		
91203	X	X	
95099		X	
95199	NONE		
95299		X	
B206989		X	X
TH046992	NONE		

Reference Elevation Uncertainty ("Ref." on hydrographs) occurs when the user-defined reference elevation was entered incorrectly. When beginning a new test on the MiniTroll®, the manually-measured water level elevation is entered as the starting water level for the test. Any changes in water level for the remainder of the test are measured against this value. Therefore, if the reference elevation is entered incorrectly, the subsequent dataset is correspondingly inaccurate in its entirety. Such uncertainties are usually easy to identify and correct, and all easily-correctable Ref. uncertainties have been fixed on the hydrographs. On the automated water level hydrograph for well 0487, for example, the reference elevation for the period of October 18, 2004 to December 29, 2004 was off by just over 2 feet. The resulting water level curve differed from the manual water level curve by the same amount. This discrepancy was noted in the field logbook, allowing the data to be corrected. After correction, the automated water level curve matched the manual water level curve for that time period.

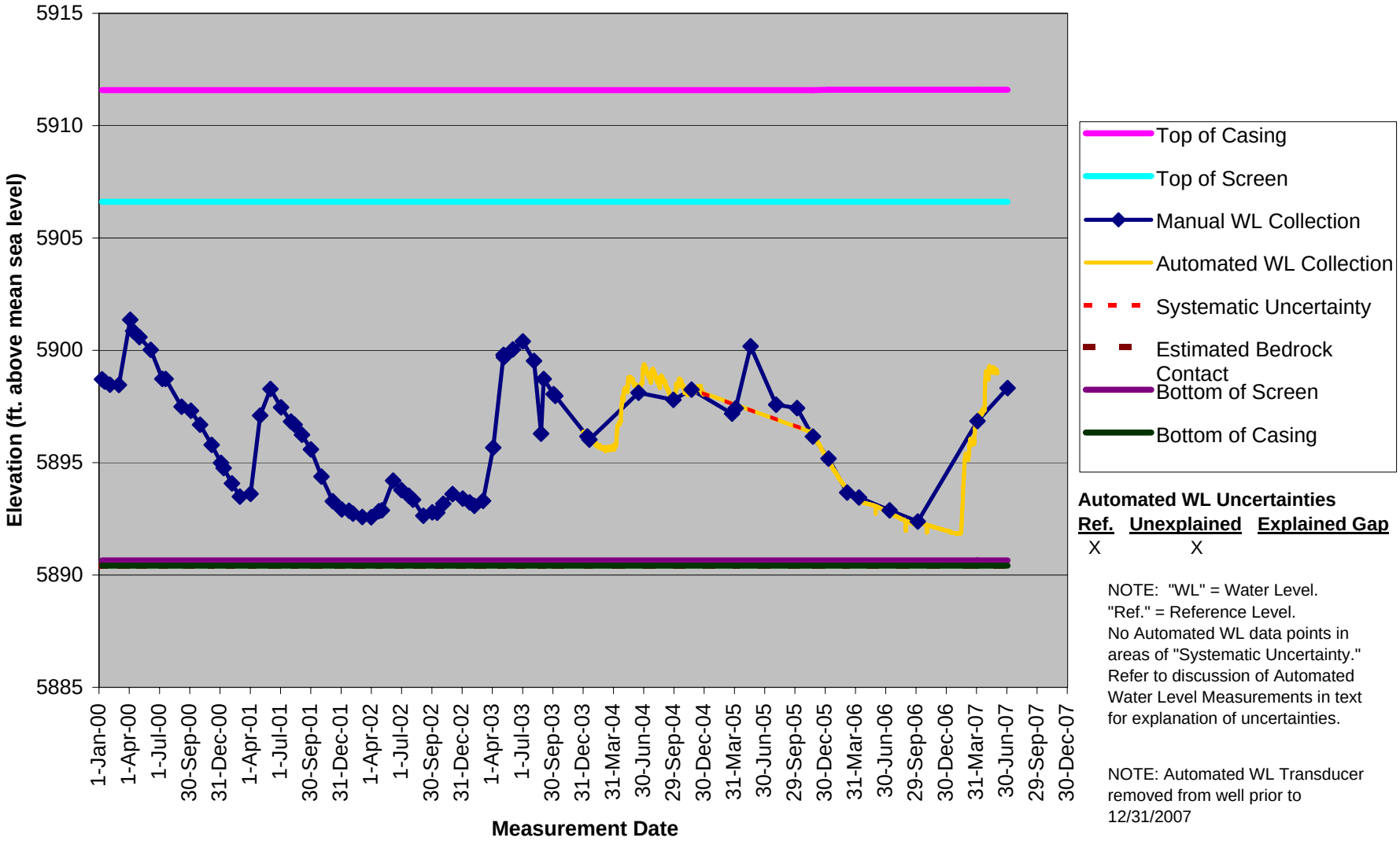
Unexplained Uncertainty ("Unexplained" on hydrographs) occurs when there are data gaps not explained by the field logbook, or when the automated water level curve differs from the manually collected water level data points. Correcting these uncertainties is not a straightforward process, and may not be possible; the most likely explanation is instrument malfunction or drift over time, resulting in inaccurate readings. An example of this type of uncertainty can be seen on the hydrograph for well 10304. This well was equipped with a transducer in November of 2005;

shortly after installation the transducer began recording very erratic water levels with no similarity to the hydrograph constructed using manual water level data. As a matter of fact, in this case these erroneous water level readings range in elevation from almost 20 feet below the bottom of the well casing to over 40 feet above the top of the well casing. Each time data were downloaded and a new test begun, the transducer continued to record these extreme values, despite the reference elevation being corrected at each test start. Due to the extreme and unrealistic values recorded by this transducer and its unresponsiveness to reference elevation changes, these errors are attributed to instrument malfunction. No basis exists for rectifying the data, and there is no intent to do so.

Explained Data Gaps ("Explained Gap" on the hydrographs) are gaps in the data record which are explained by the field logbook. The most common explanation for data gaps are: the instrument batteries failed; there were problems downloading data; and the instrument was removed from the well. For example, the pressure transducer in well 70099 was removed on June 29, 2005 and replaced on October 31 of that same year, with the intervening period representing a data gap.

Gaps in the data record (both explained and unexplained) and sudden drastic changes in water level caused by reference elevation changes are marked as areas of Systematic Uncertainty on the hydrographs. These portions of the curves (marked by a dashed red line) do not represent data recorded by a transducer. Rather, they represent an interpolated (i.e., not data-based) curve between two existing data points; they are included only to enhance hydrograph readability. Portions of a hydrograph that are marked as Systematic Uncertainty should not be interpreted as being representative of actual water levels.

Automated and Manual Water Level Measurements from Well(s) 0487



Automated WL Uncertainties

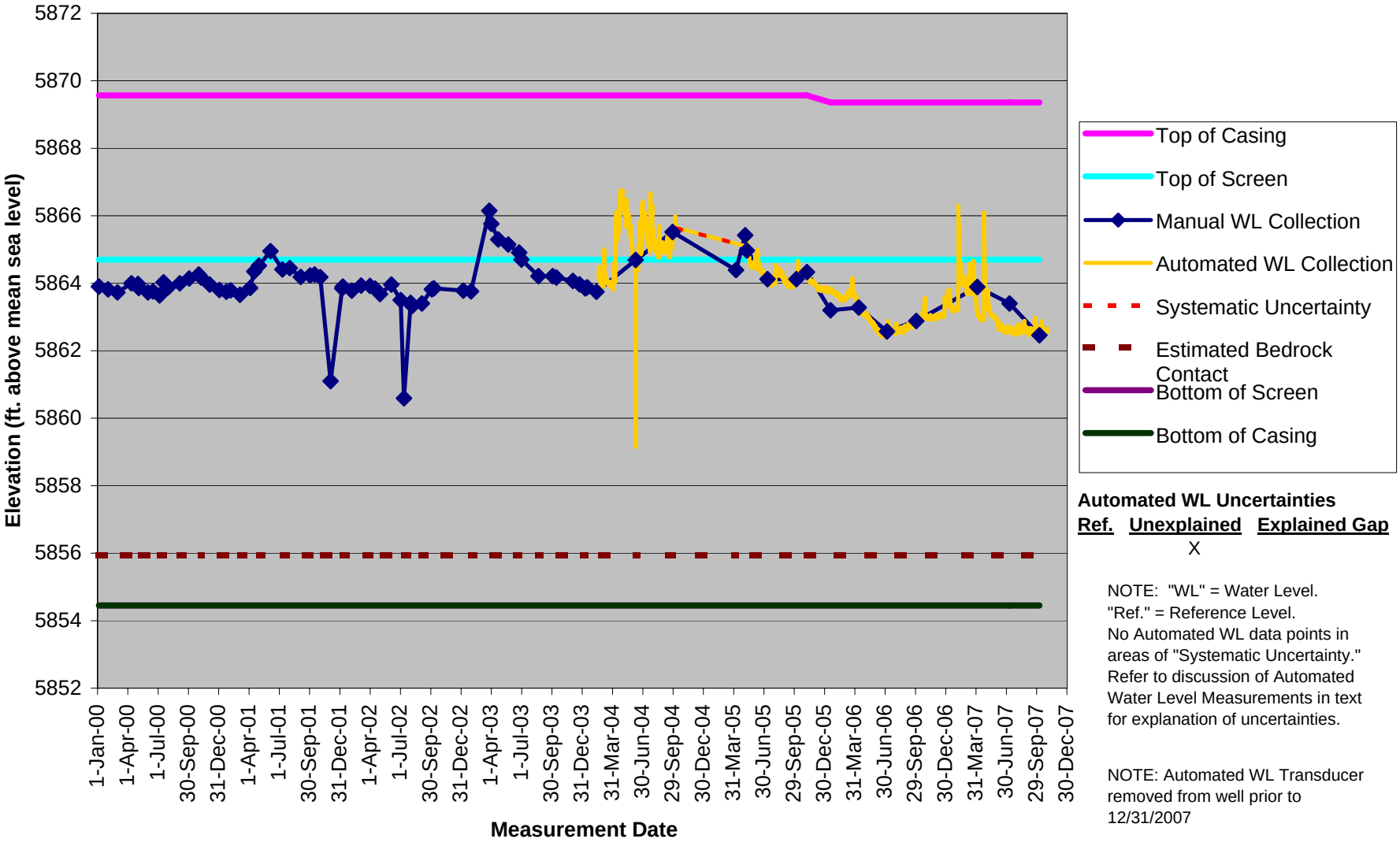
Ref.	Unexplained	Explained Gap
X	X	

NOTE: "WL" = Water Level.
"Ref." = Reference Level.
No Automated WL data points in areas of "Systematic Uncertainty."
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 1786

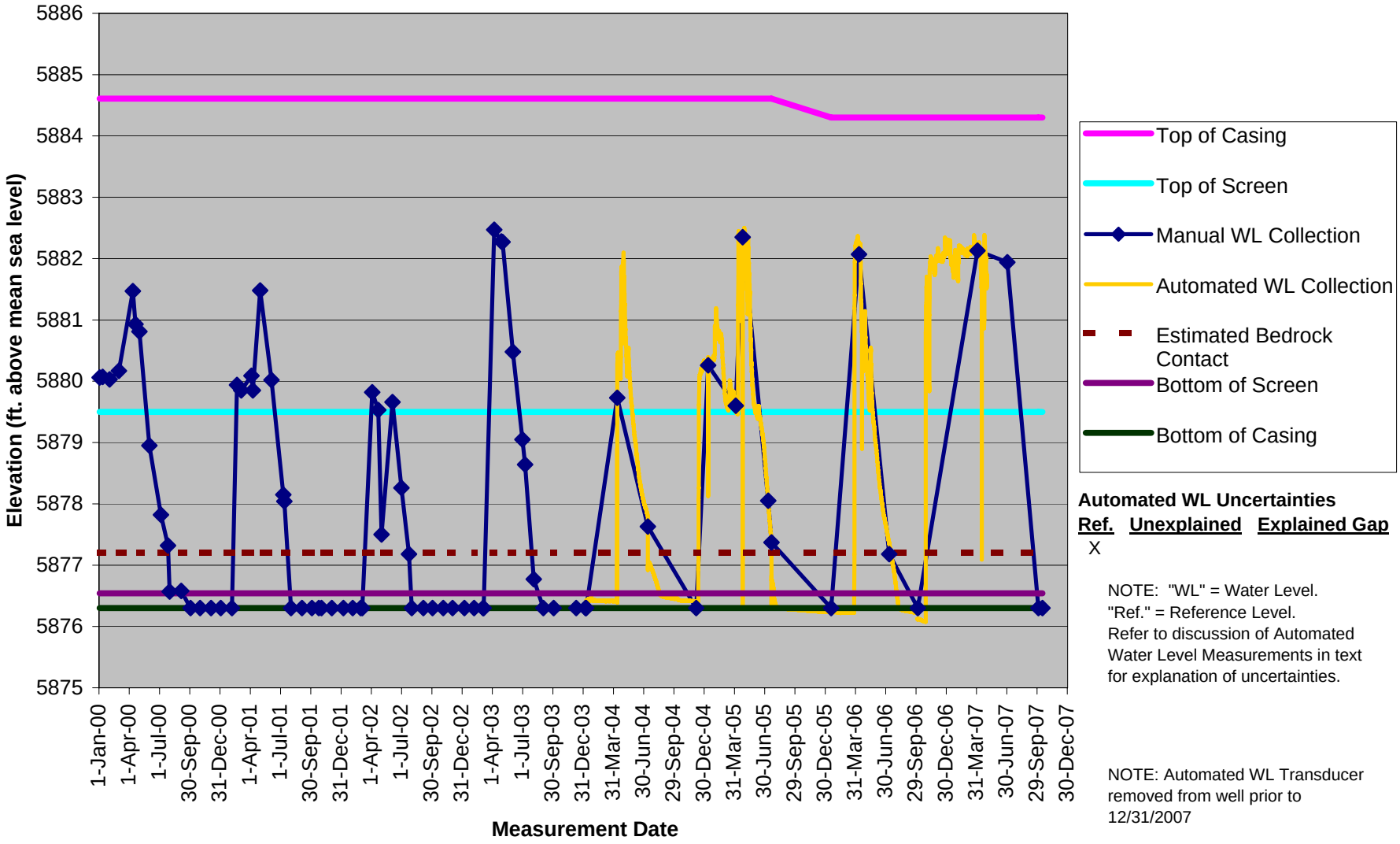


NOTE: "WL" = Water Level.
"Ref." = Reference Level.
No Automated WL data points in areas of "Systematic Uncertainty."
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

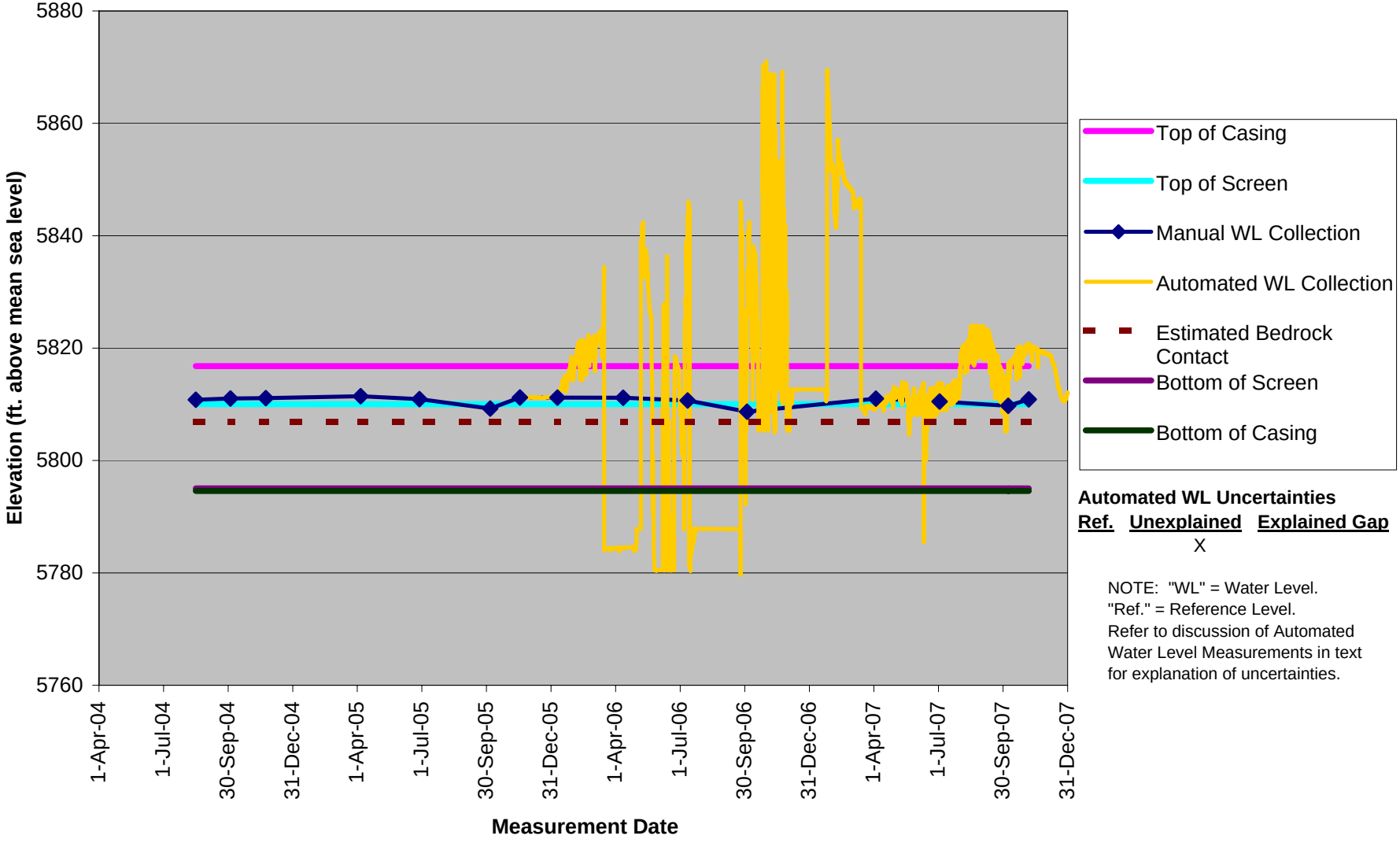
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 4087



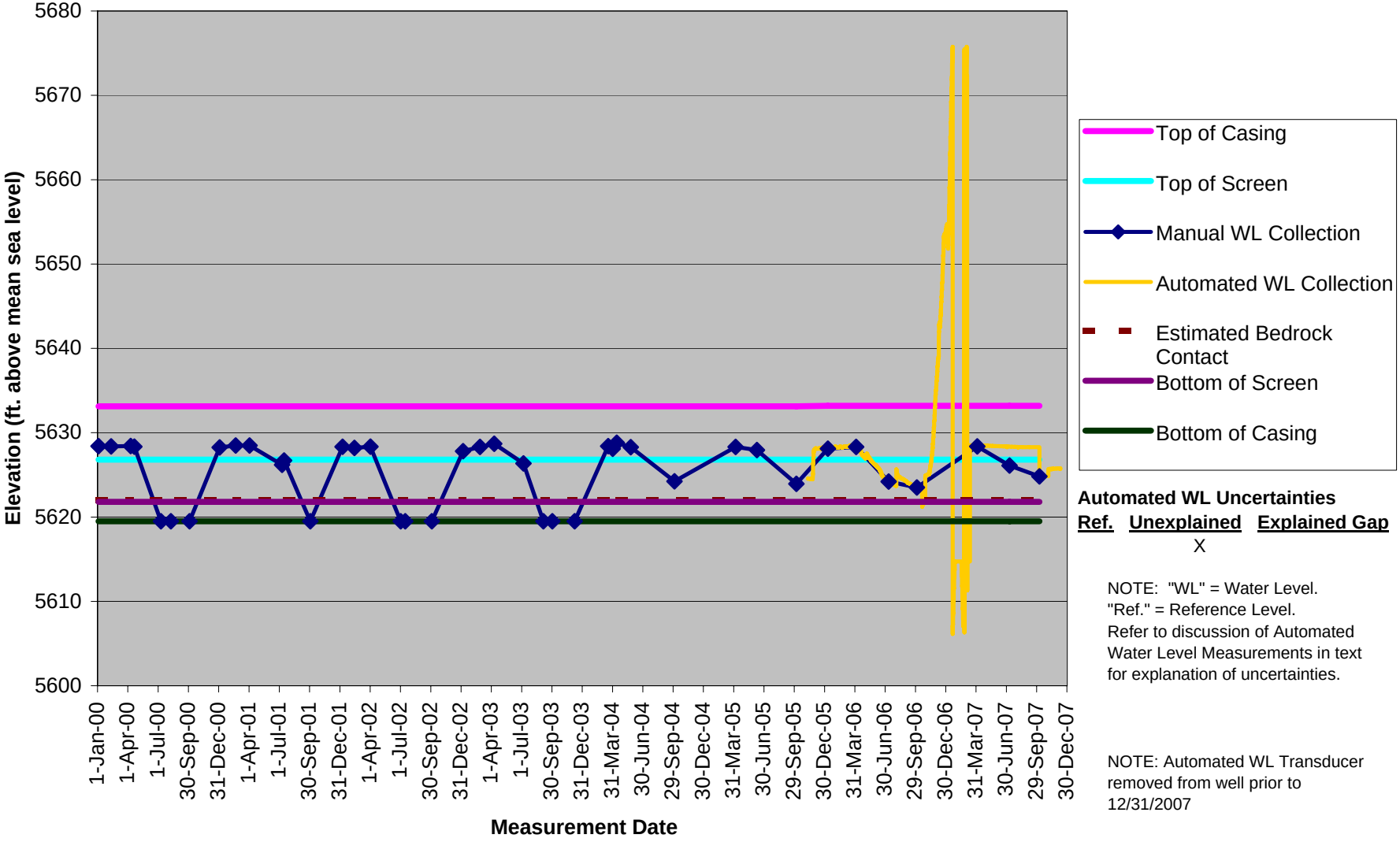
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 10304



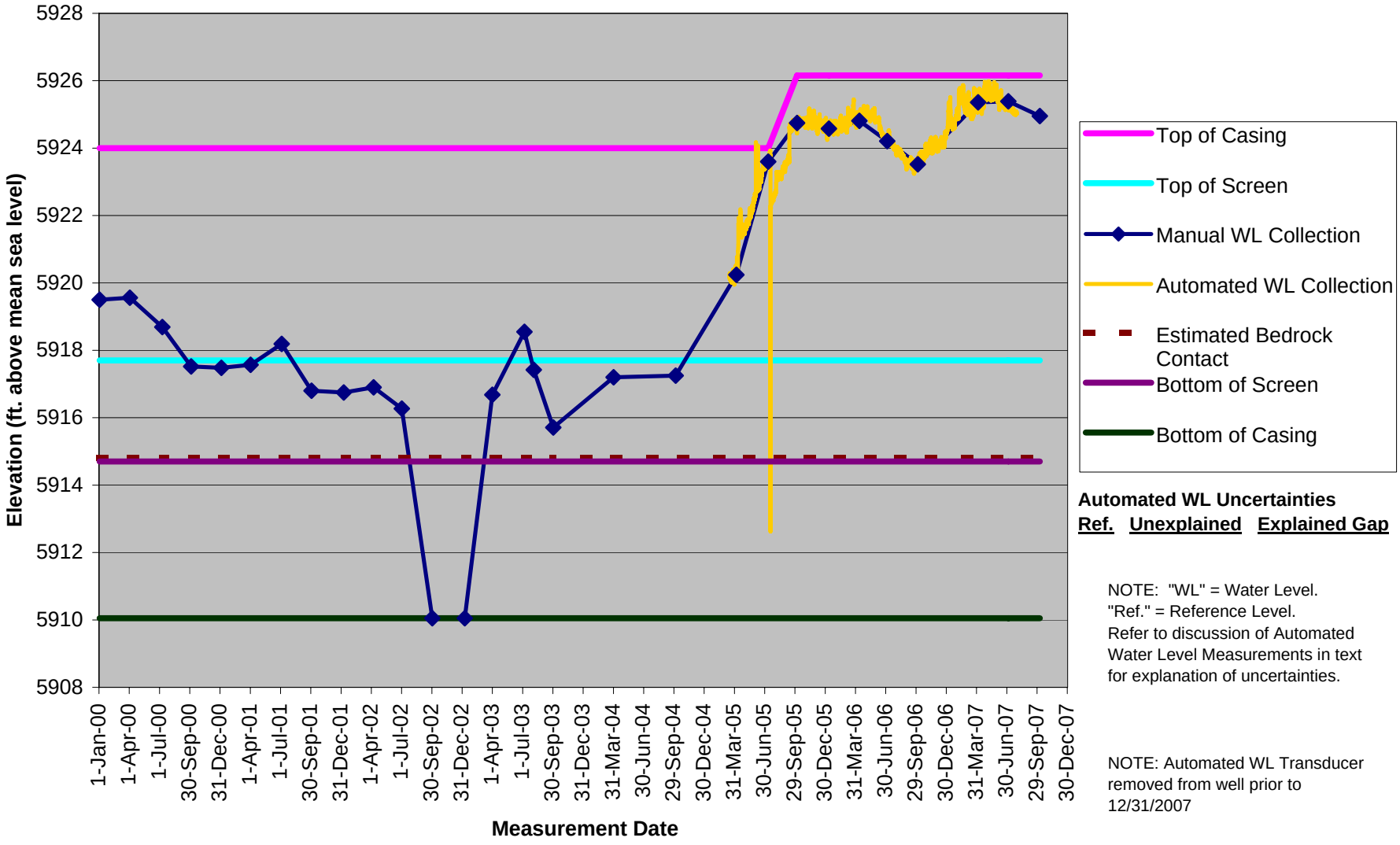
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 10394



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 15399



Automated WL Uncertainties

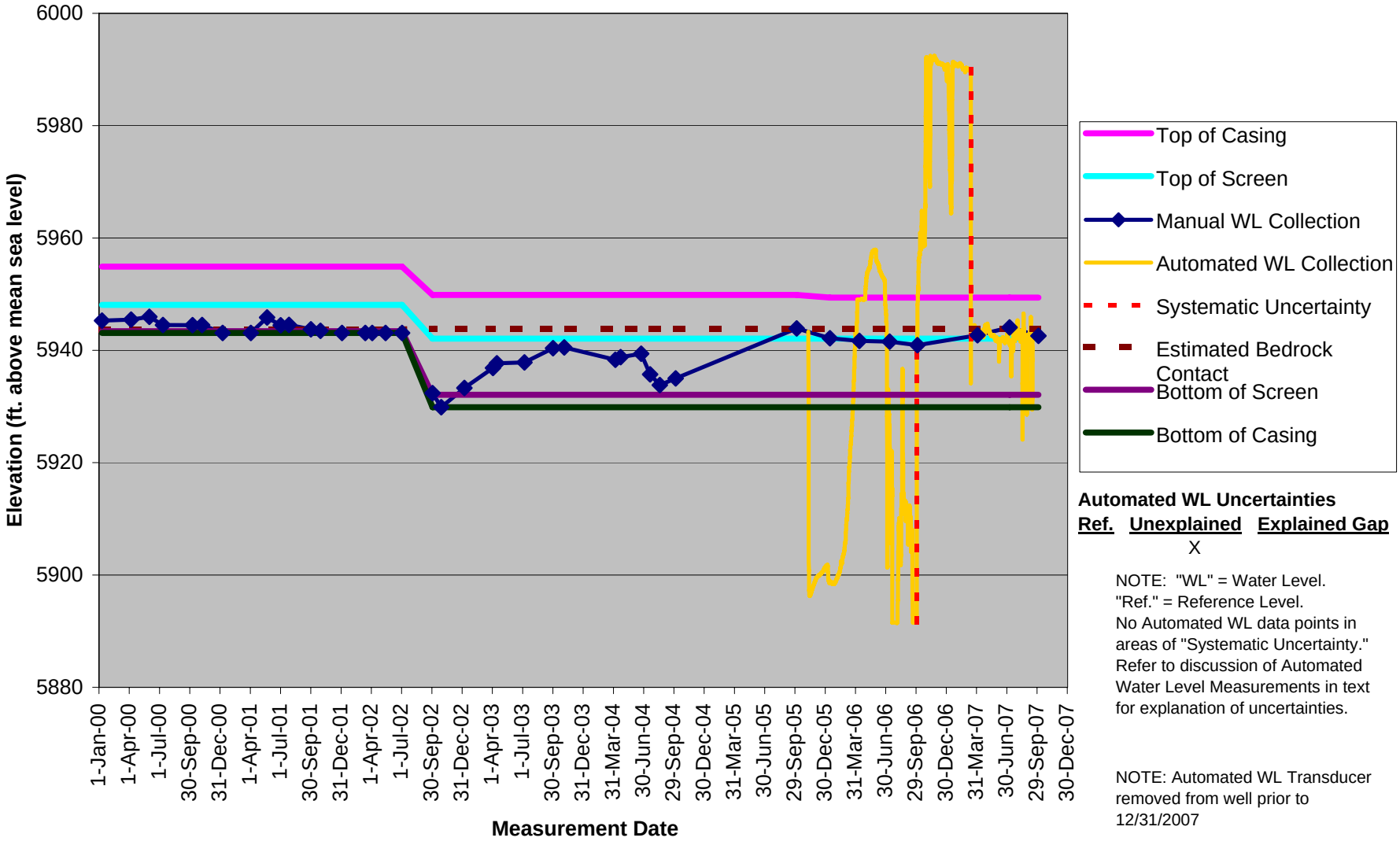
Ref.	Unexplained	Explained Gap

NOTE: "WL" = Water Level.
"Ref." = Reference Level.
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

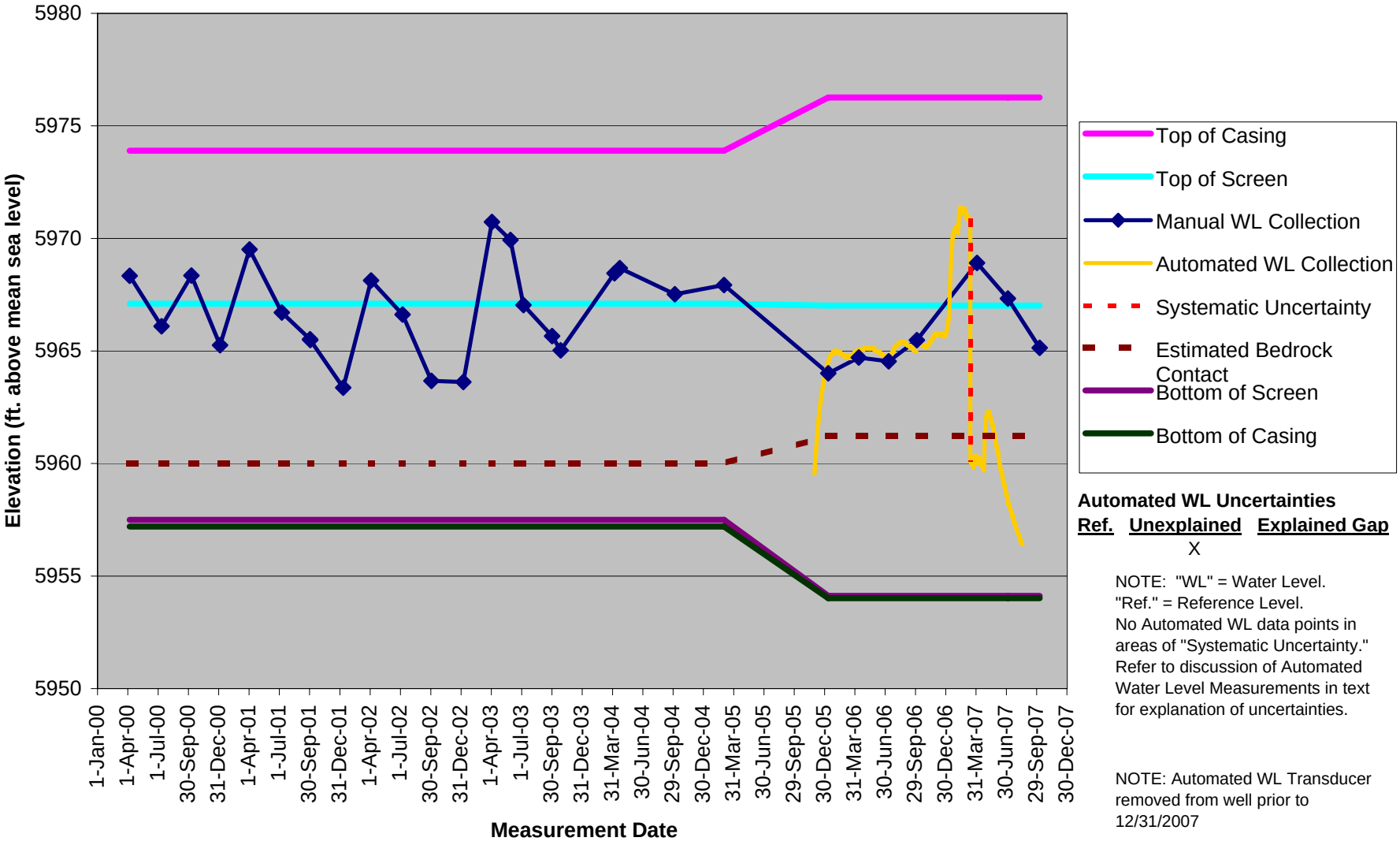
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 20998 / 20902



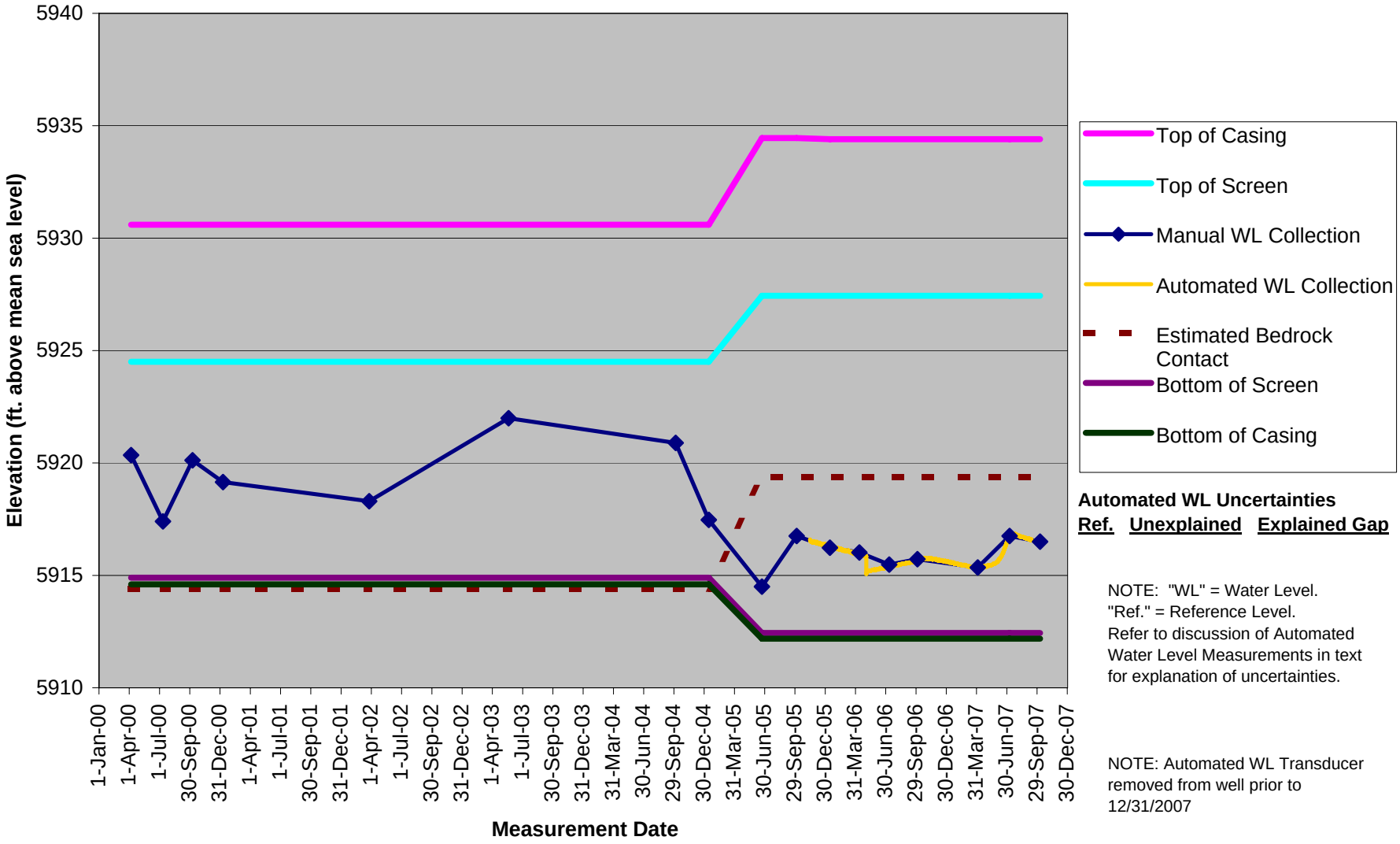
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 21698 / 21605



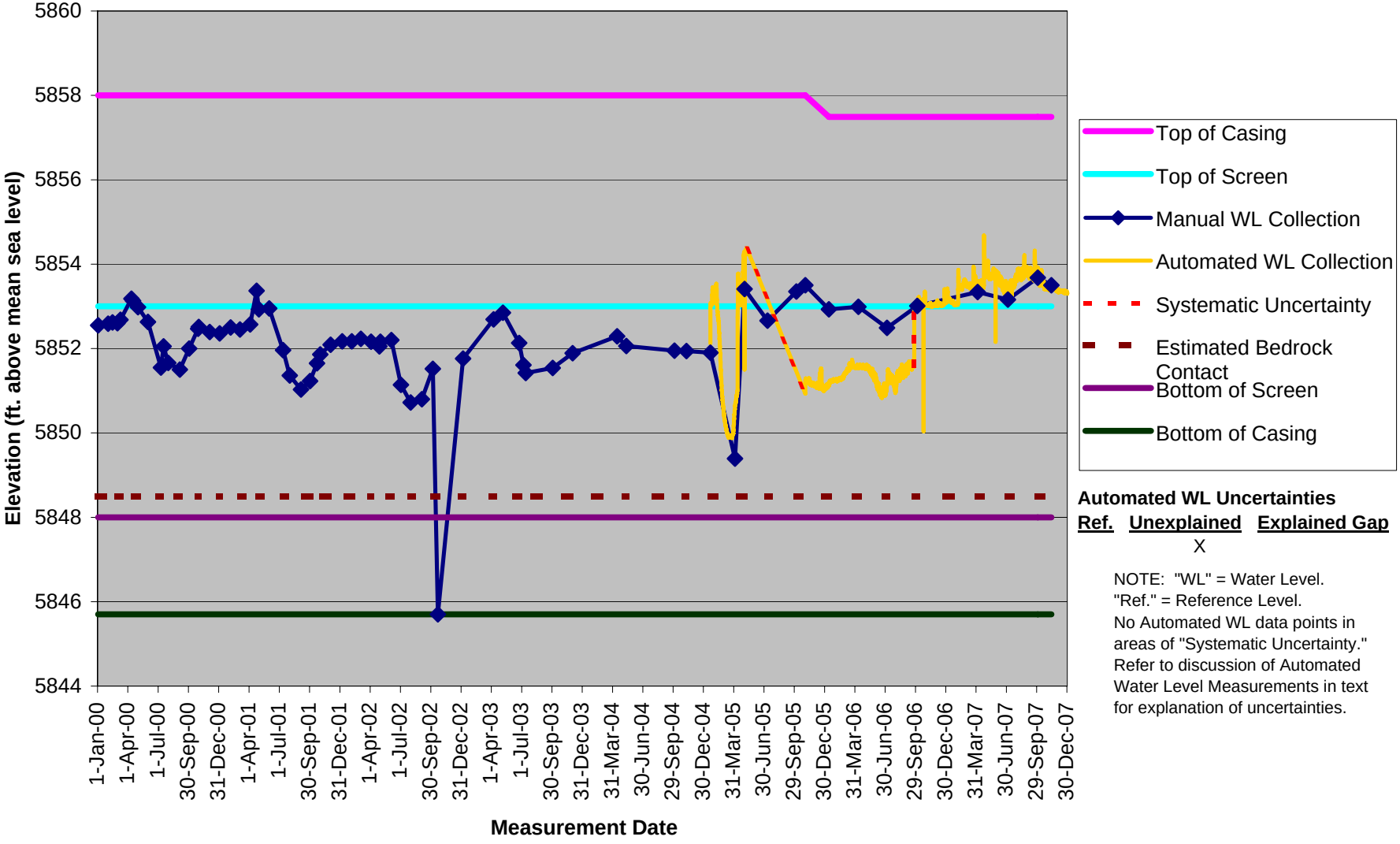
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 22298 / 22205



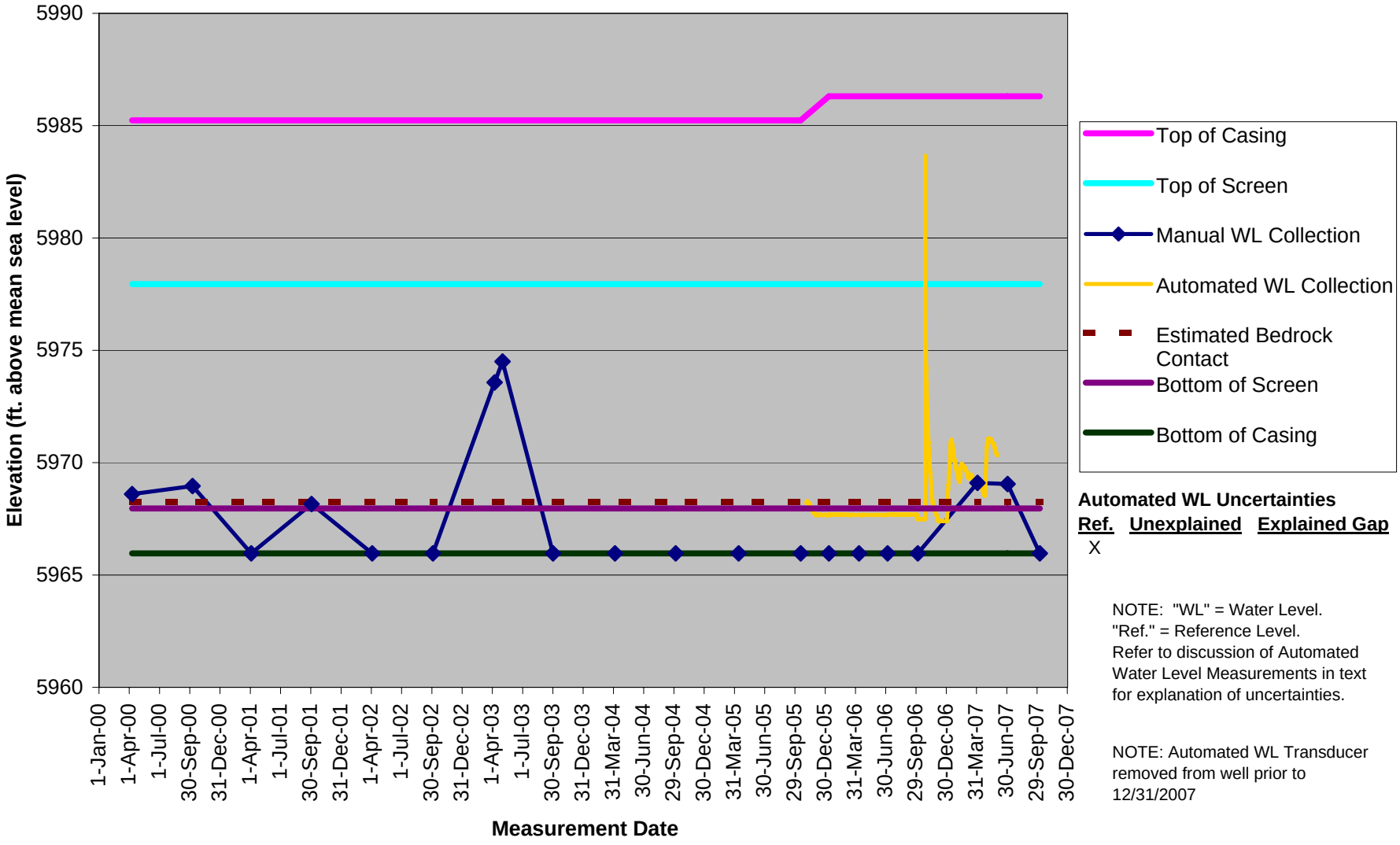
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 23296



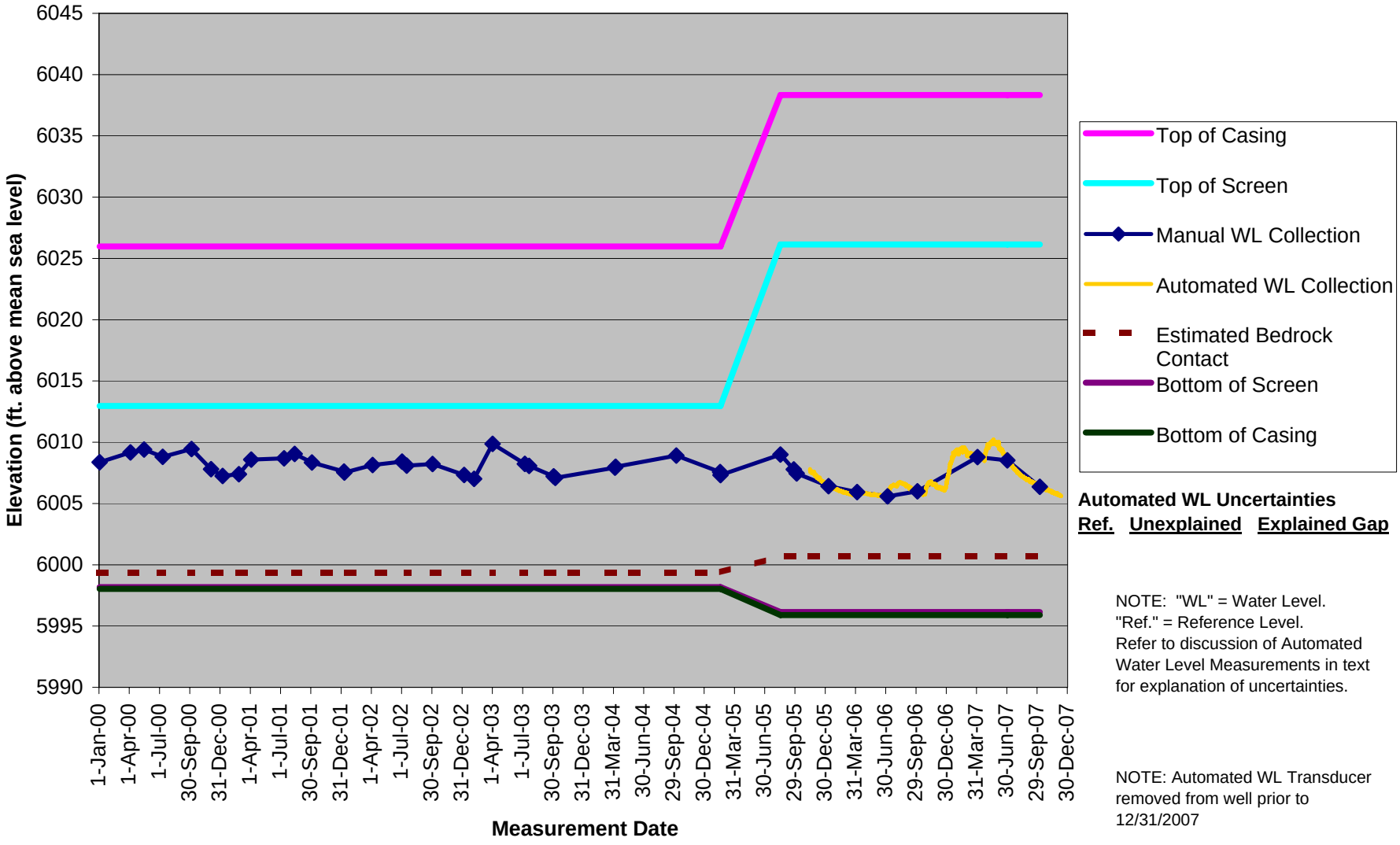
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 37691



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 40099 / 40005

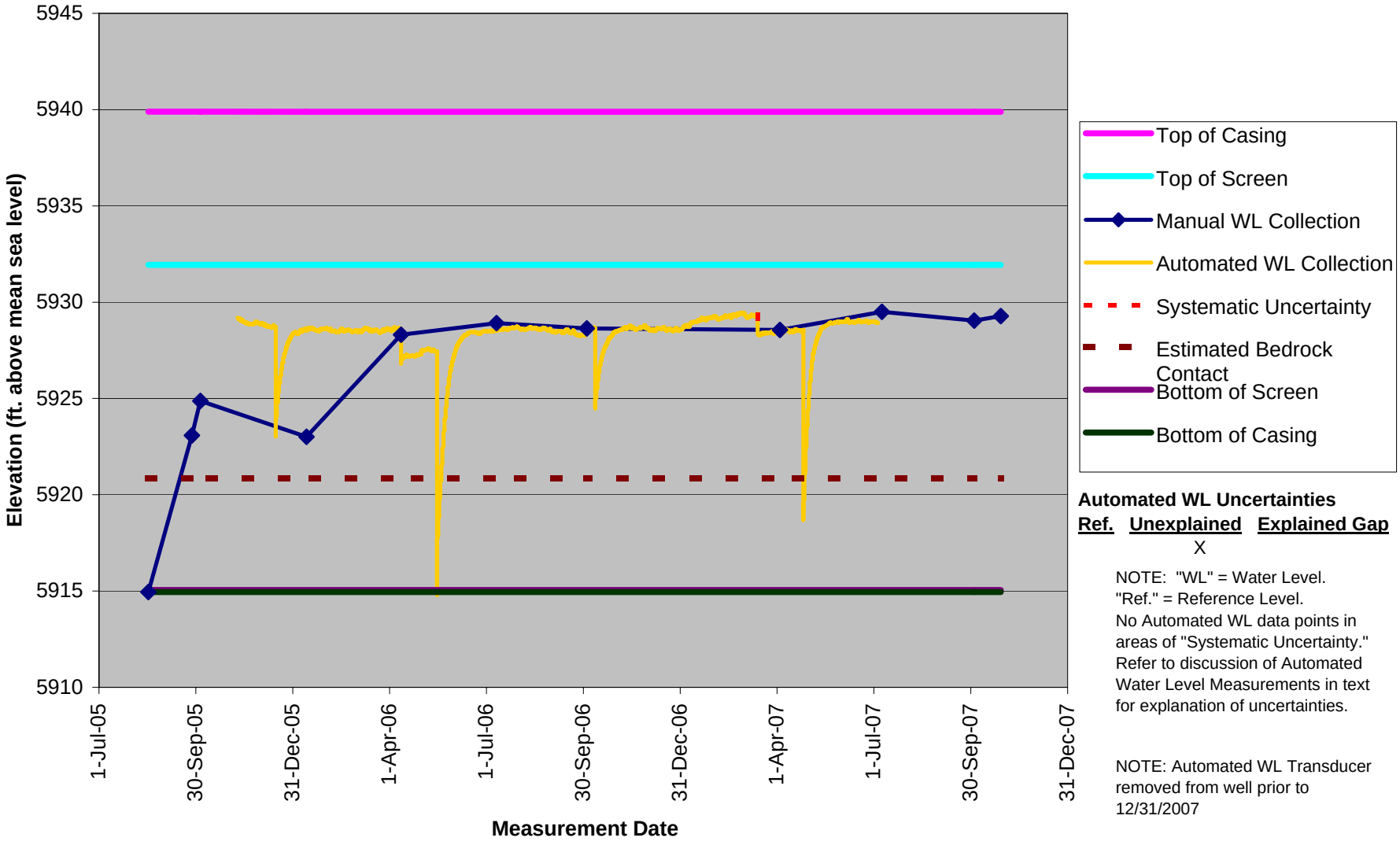


NOTE: "WL" = Water Level.
"Ref." = Reference Level.
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

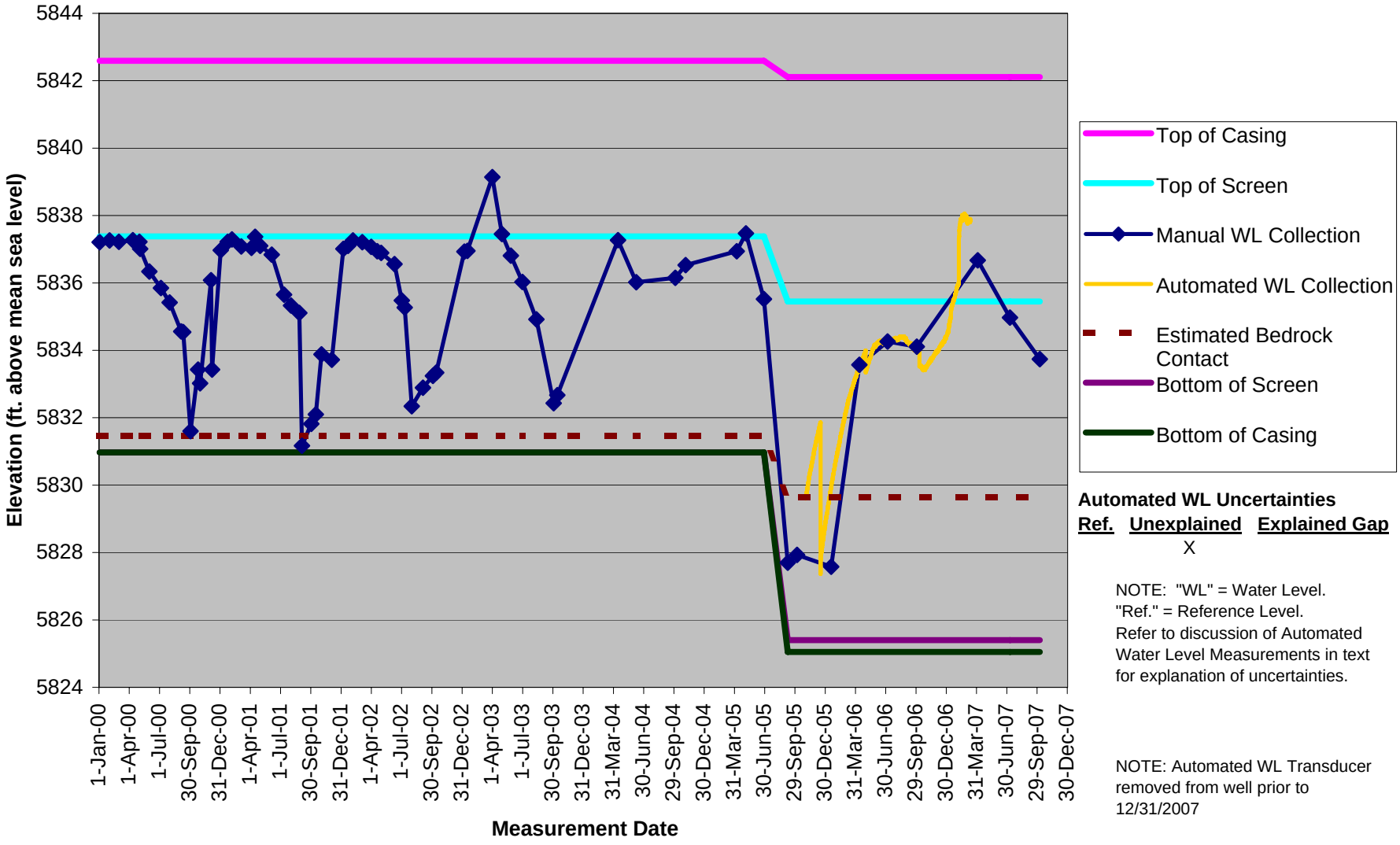
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 42505



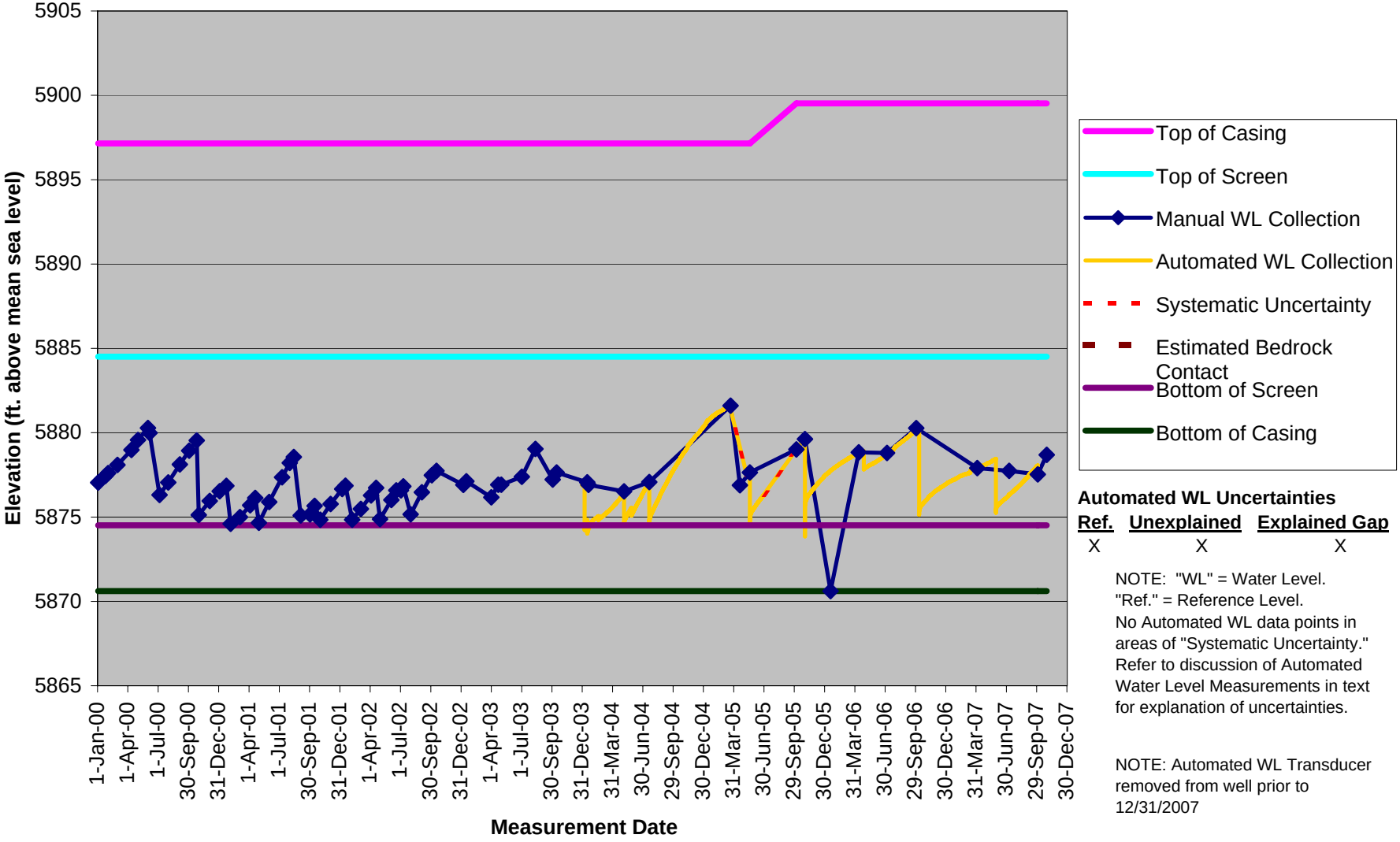
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 1386 / 51605



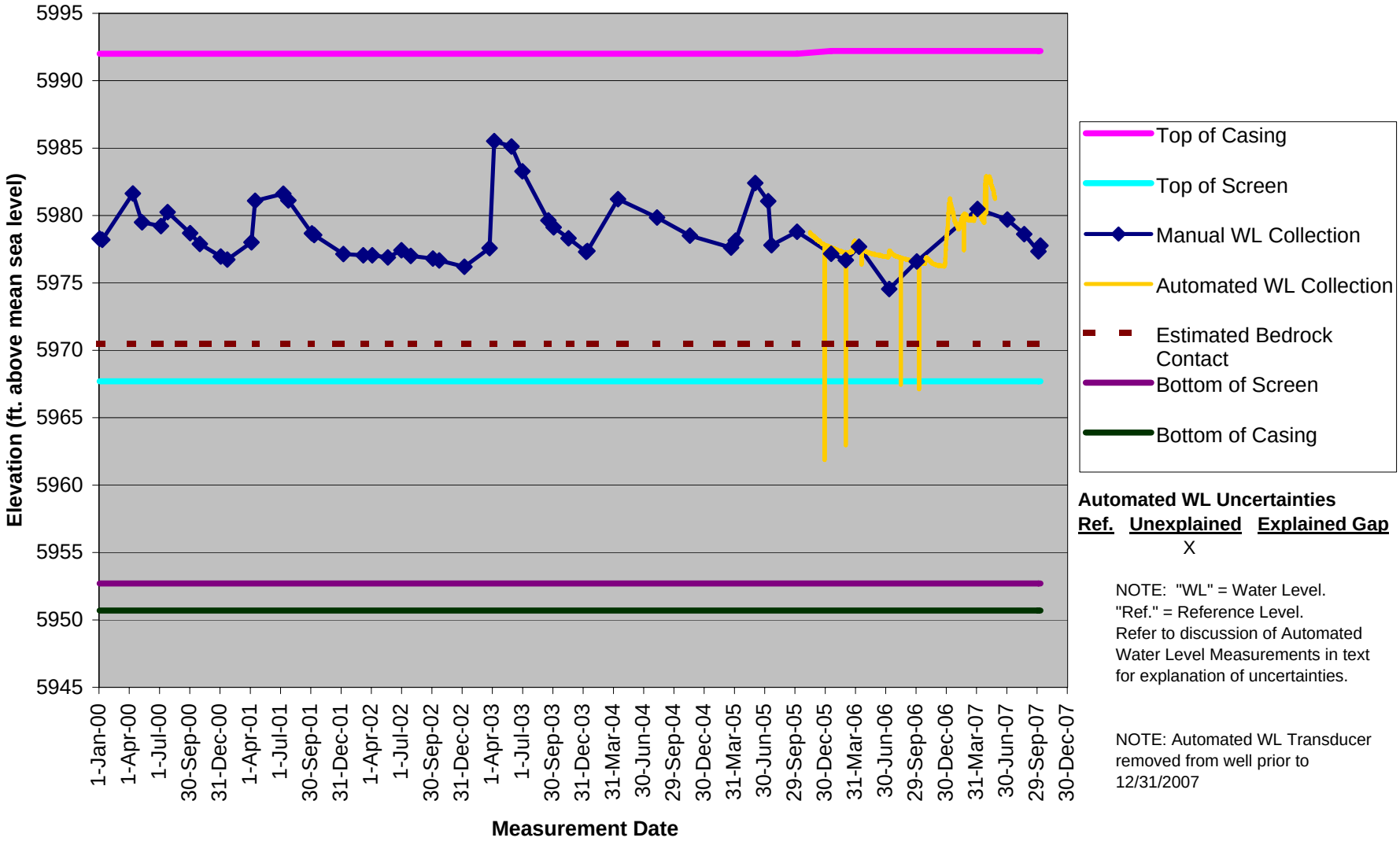
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 70099



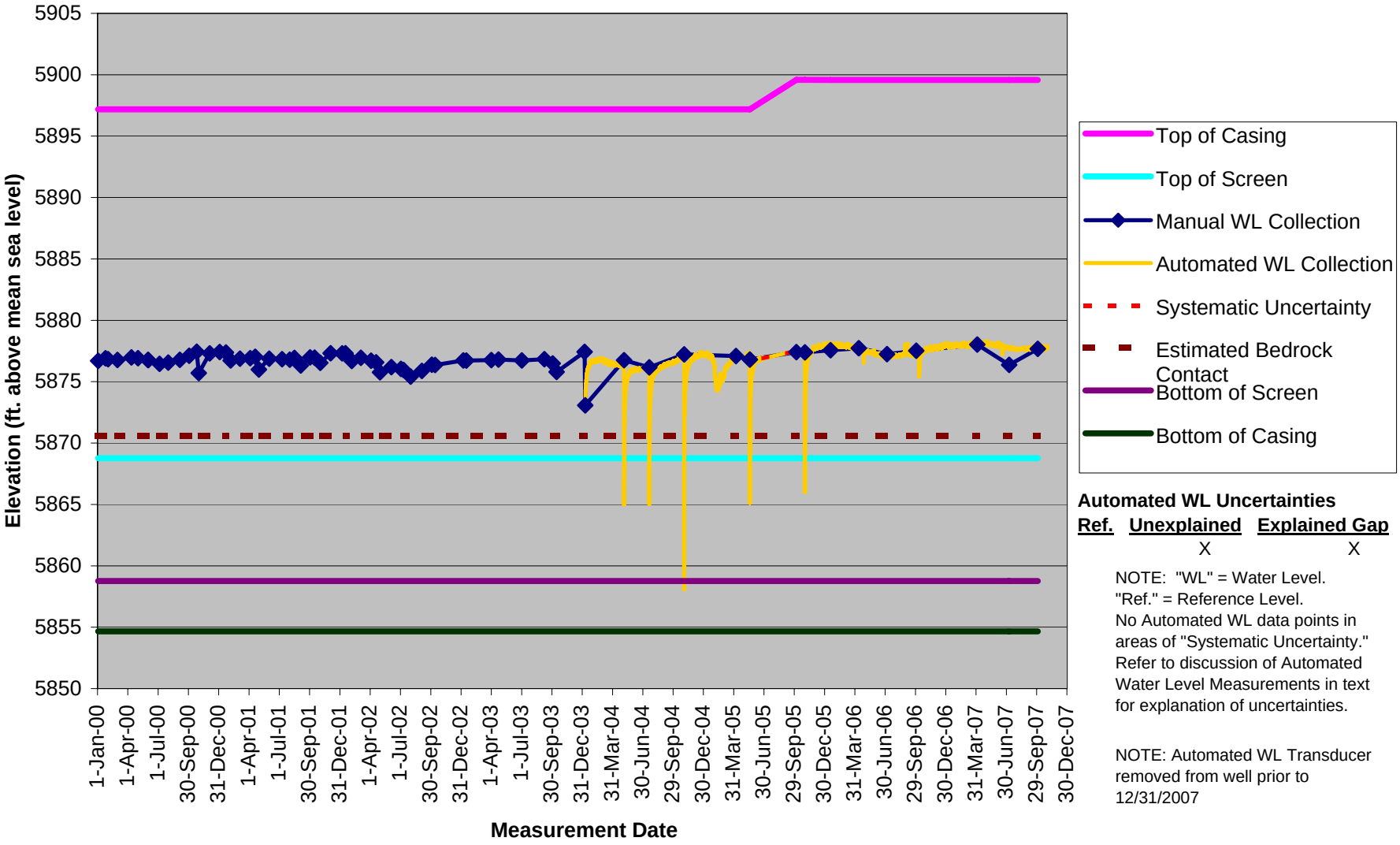
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 70193



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 70299



Automated WL Uncertainties

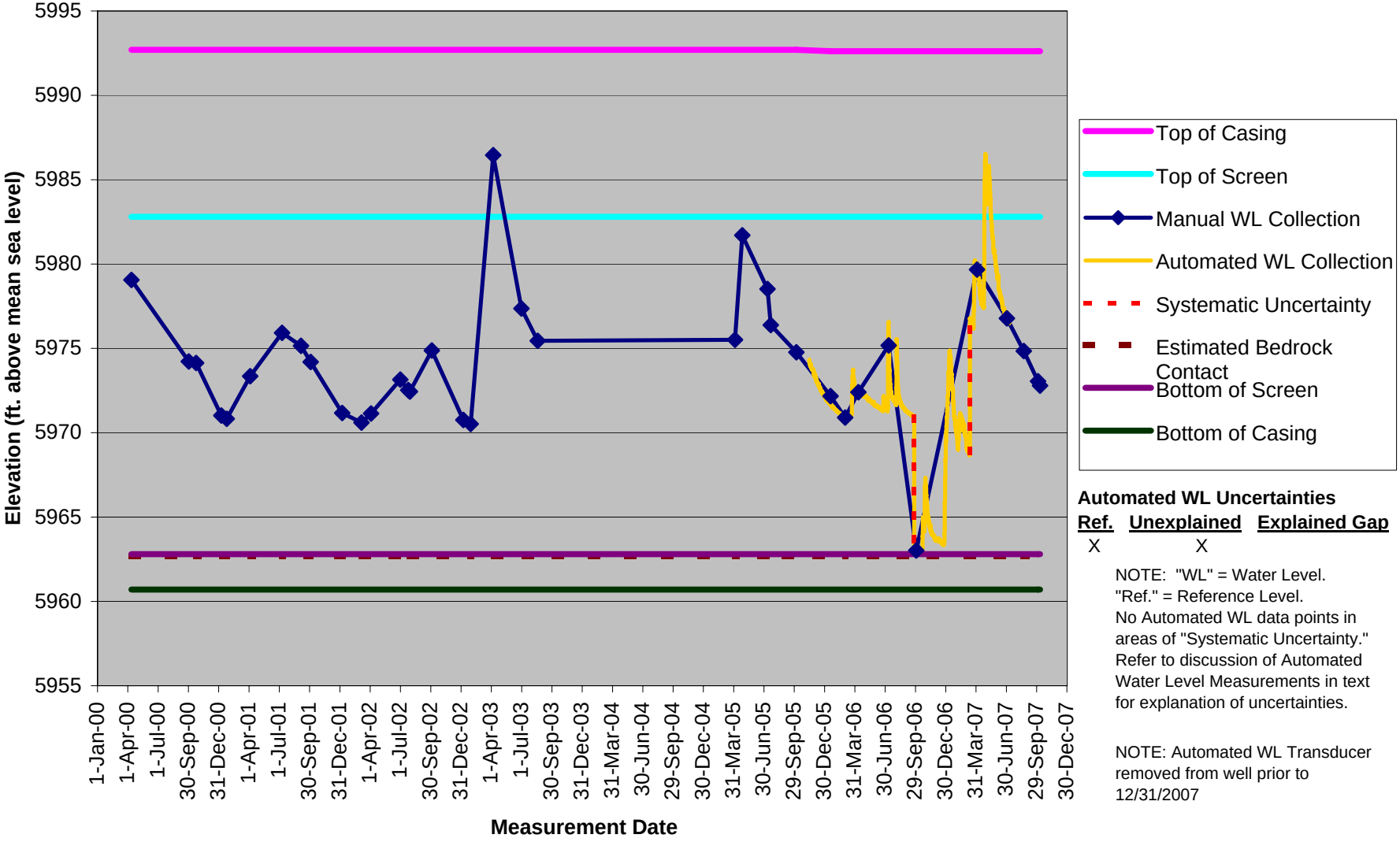
Ref.	Unexplained	Explained Gap
	X	X

NOTE: "WL" = Water Level.
"Ref." = Reference Level.
No Automated WL data points in areas of "Systematic Uncertainty."
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 70693



Automated WL Uncertainties

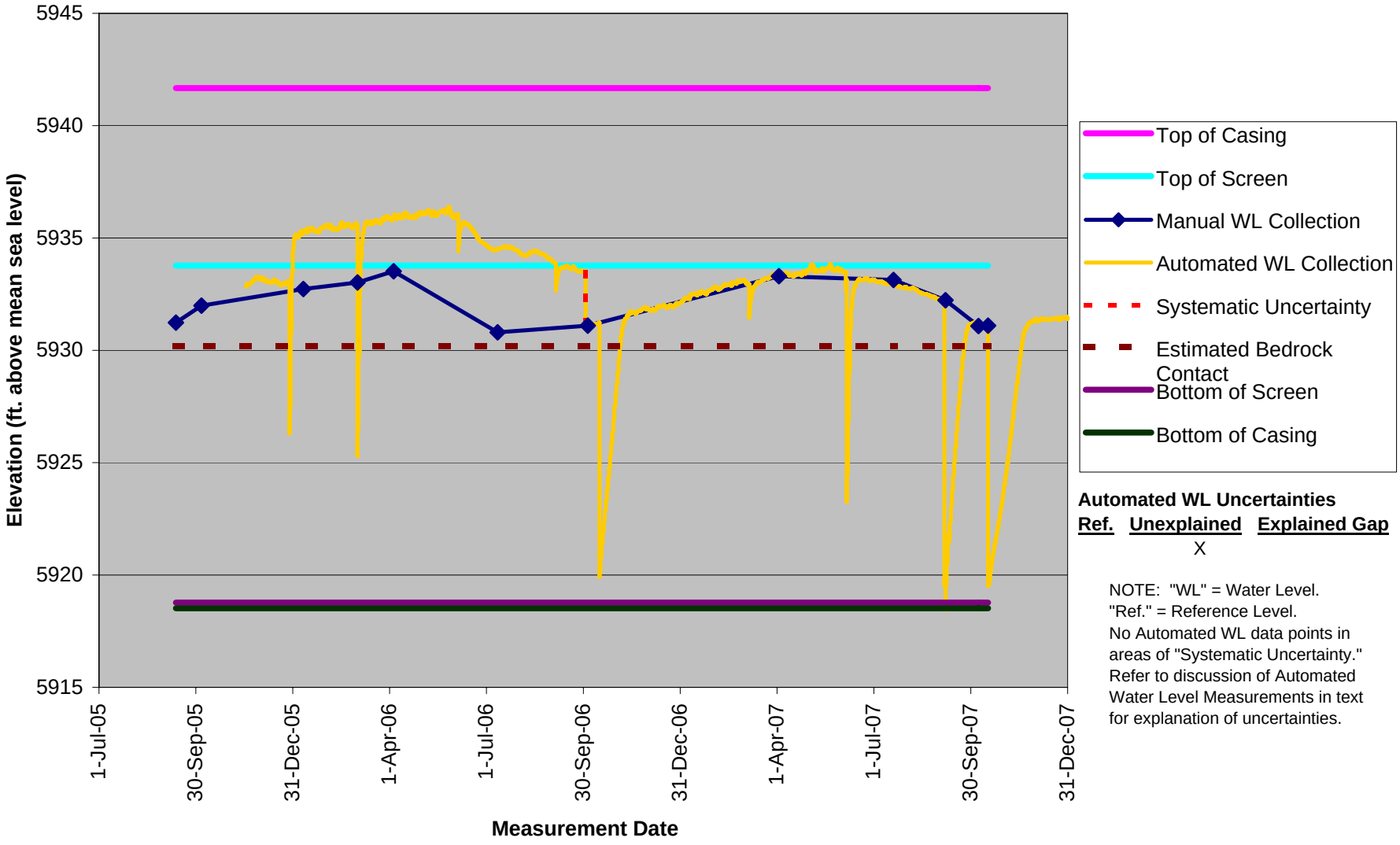
Ref.	Unexplained	Explained Gap
X	X	

NOTE: "WL" = Water Level.
"Ref." = Reference Level.
No Automated WL data points in areas of "Systematic Uncertainty."
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

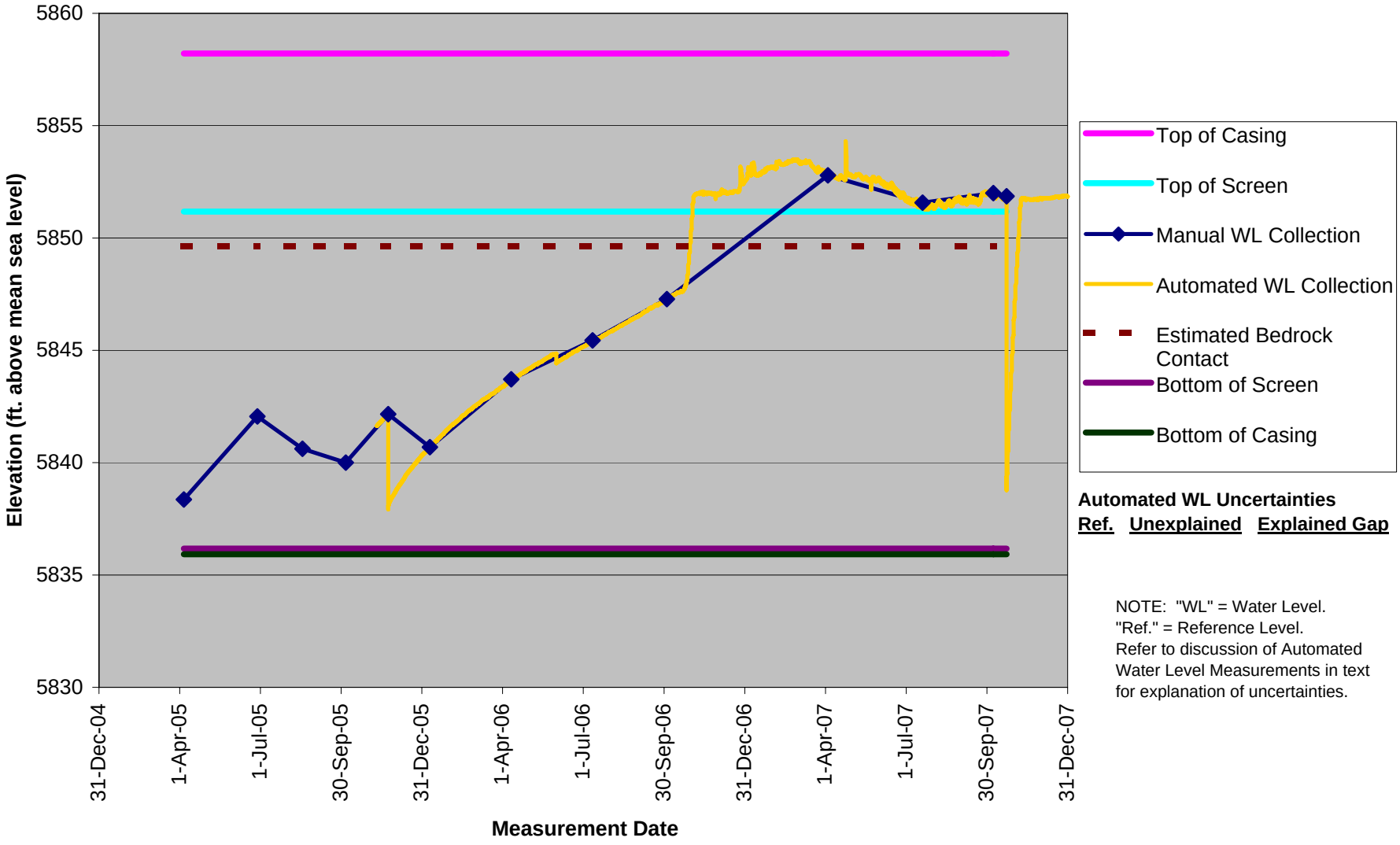
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 80205



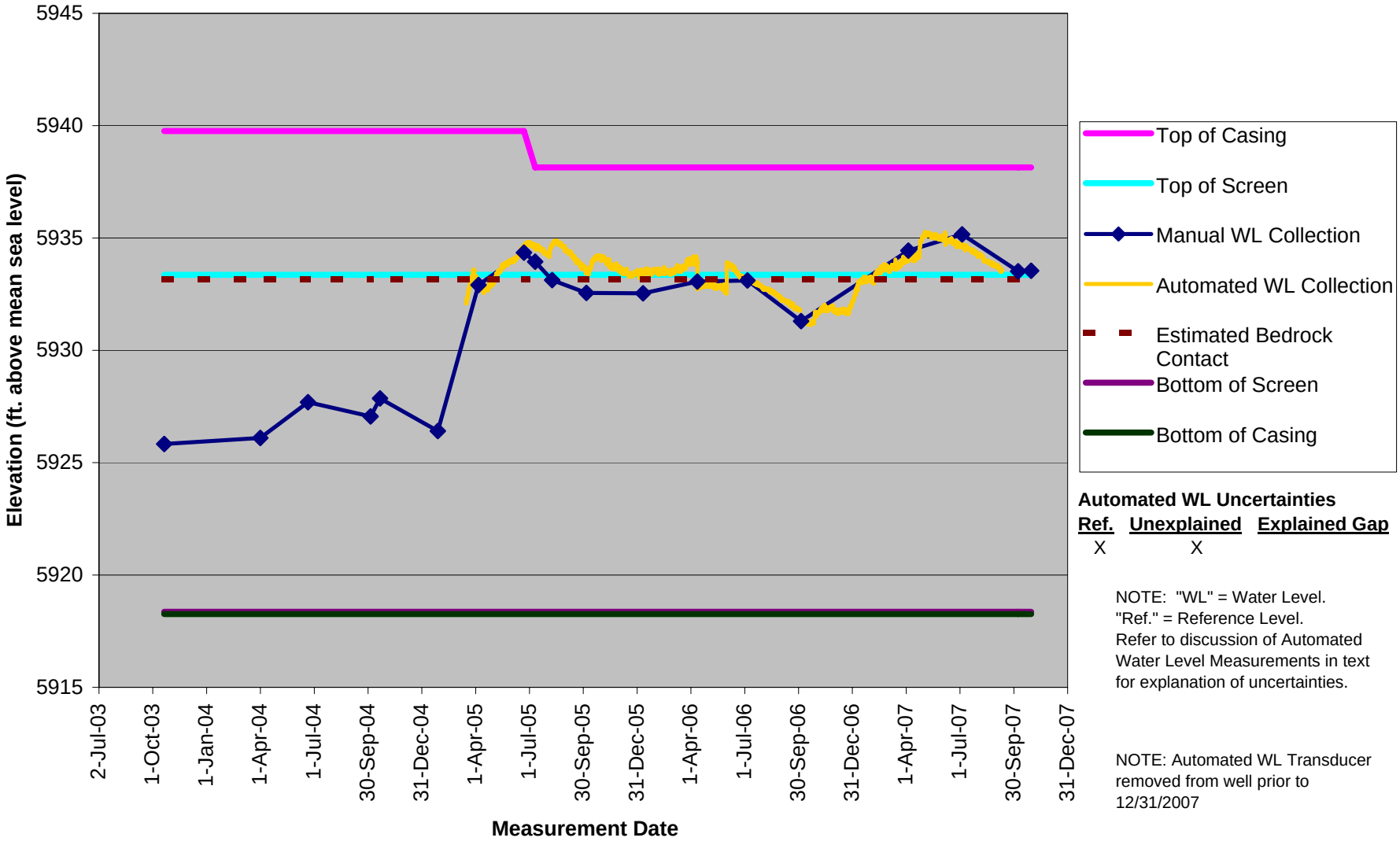
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 89104



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 91203



Automated WL Uncertainties

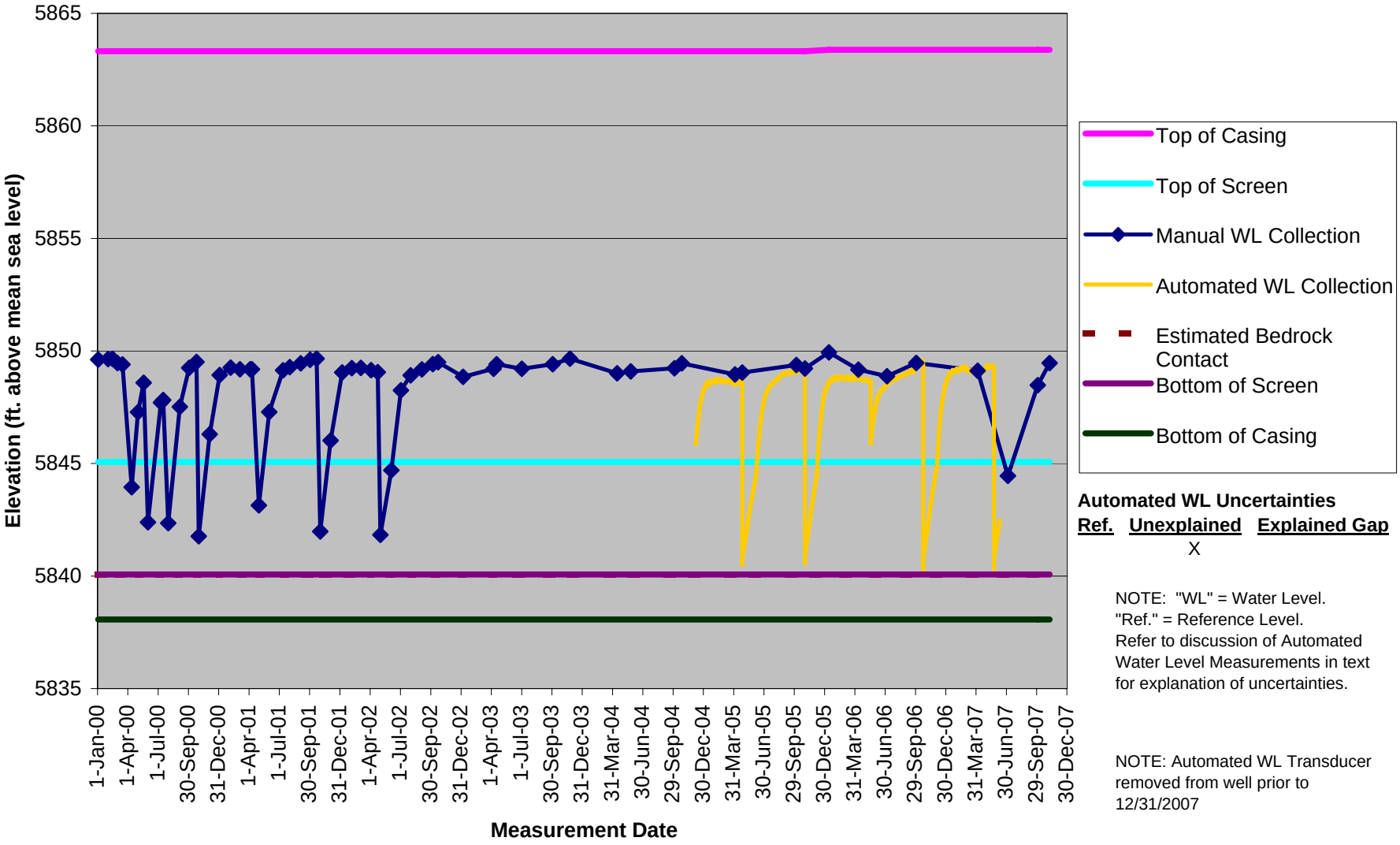
Ref.	Unexplained	Explained Gap
X	X	

NOTE: "WL" = Water Level.
"Ref." = Reference Level.
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

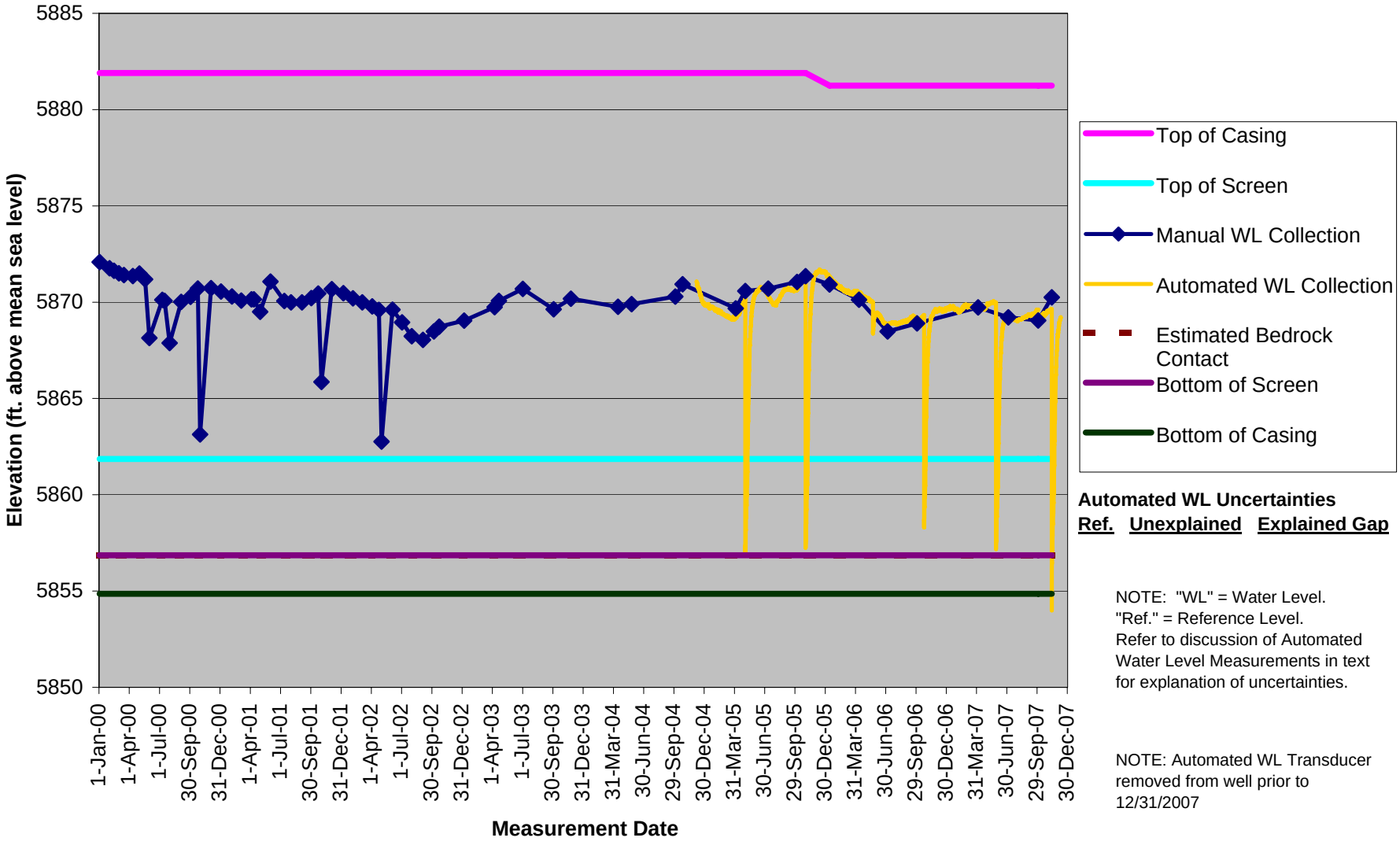
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 95099



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 95199

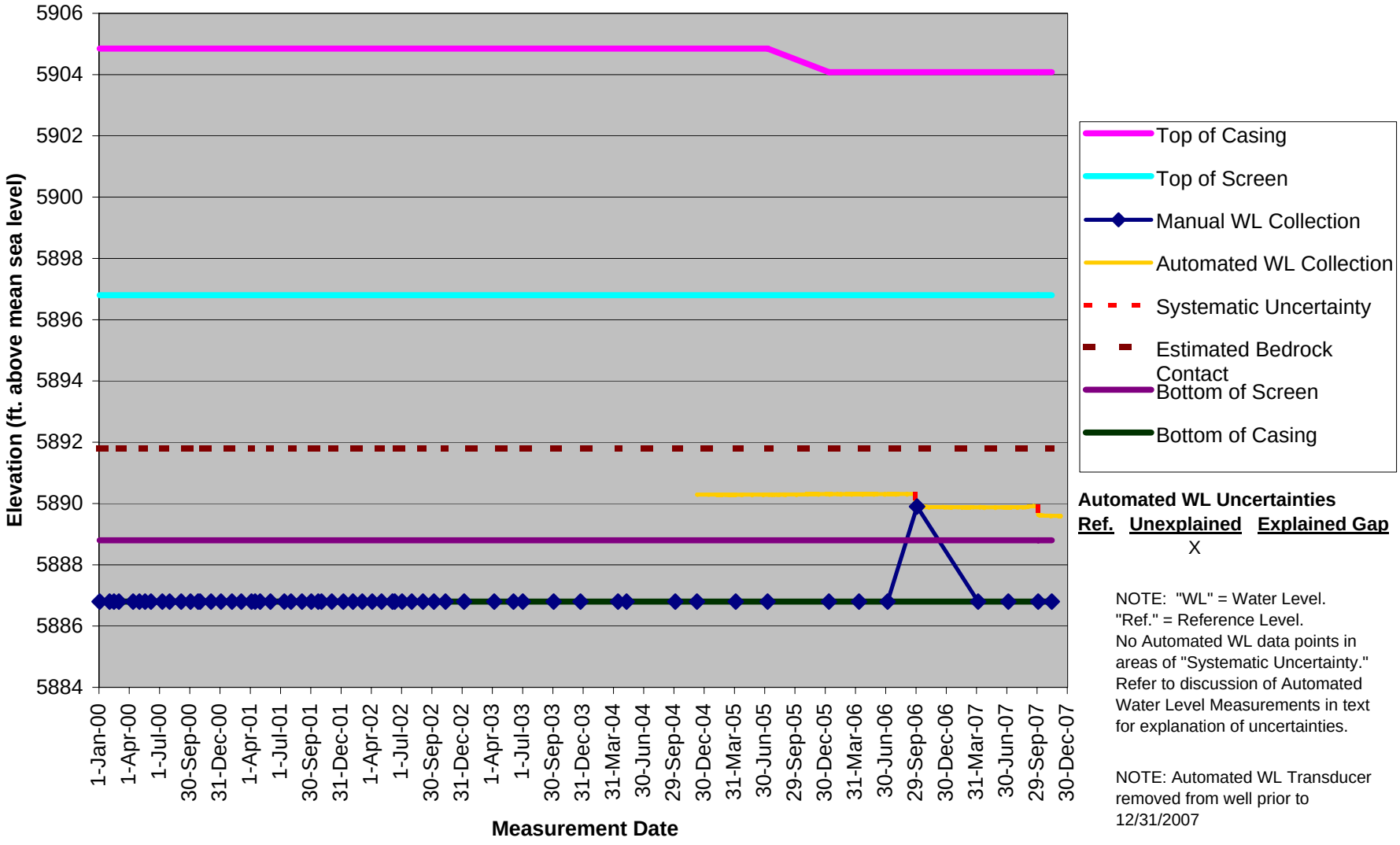


NOTE: "WL" = Water Level.
"Ref." = Reference Level.
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) 95299

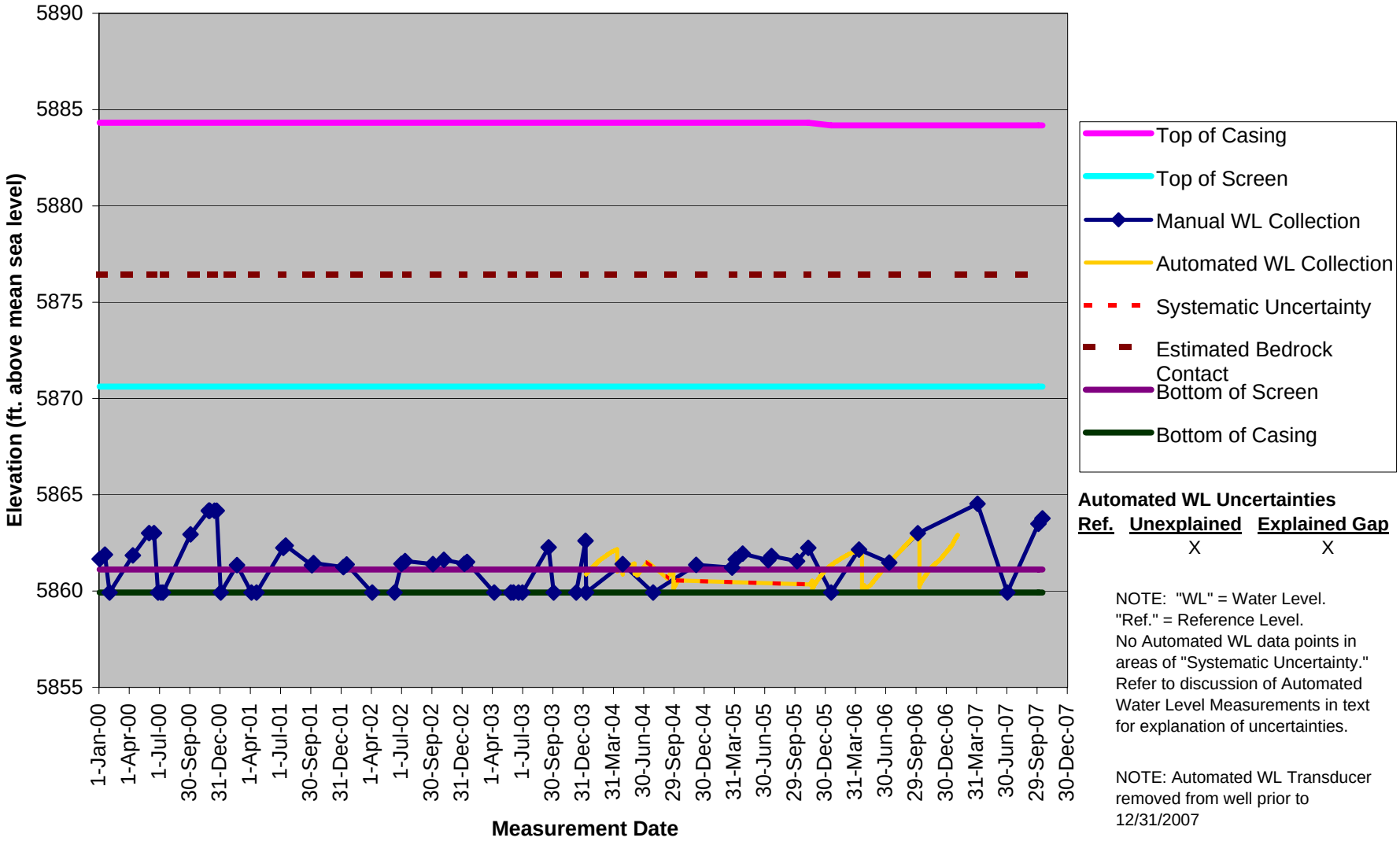


NOTE: "WL" = Water Level.
"Ref." = Reference Level.
No Automated WL data points in areas of "Systematic Uncertainty."
Refer to discussion of Automated Water Level Measurements in text for explanation of uncertainties.

NOTE: Automated WL Transducer removed from well prior to 12/31/2007

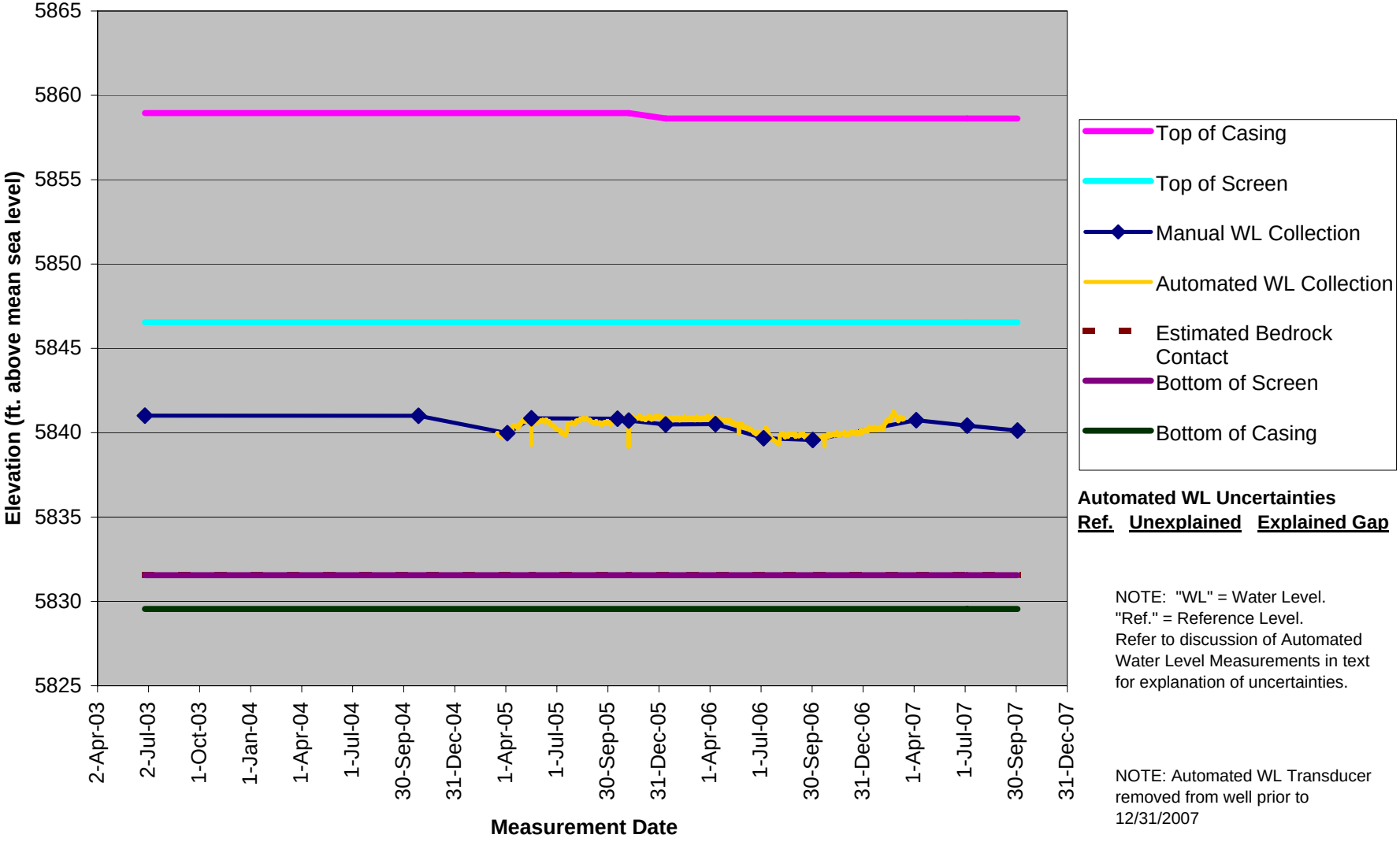
Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) B206989



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Automated and Manual Water Level Measurements from Well(s) TH046992



Source: Calendar Year 2007 Annual Report for the Rocky Flats Site. (See report text for additional information.)

Appendix B

Water-Quality Data

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Appendix B: Water-Quality Data

B.1 Surface-Water Analytical Data Evaluation Methods

B.1.1 30-Day Volume-Weighted Moving Averages

Evaluation of analytical data using 30-day volume-weighted moving averages applies to the POE and POC monitoring objectives. The method is as follows:

- 30-day averages are calculated semi-monthly for each location (within one week of the 15th and last day of each month).
- Calculations are performed using daily time steps. The 30-day average for a particular day is calculated using a 'window' of time, which includes the previous 30 days that had both flow and analytical measurements. Therefore, for a location with continuous flow and complete analytical results, 365 (366 in a leap year) 30-day average values are calculated annually. For a location that flows intermittently, the 30-day window includes the previous 30 days with greater than zero flow. Therefore, the 30-day average at an intermittently flowing location will include more than 30 *calendar* days.
- When no analytical result or measured flow value is available for a particular day, then no 30-day average is calculated for that day. No analytical result may be available either due to a non-sufficient quantity for analysis (referred to as an NSQ condition) or a failed lab analysis. Flow measurement may be missing due to equipment failures or adverse weather conditions (winter freezing).
- When a negative radionuclide result (e.g., −0.002 pCi/L) is returned from the lab due to blank correction, then a value of 0.0 pCi/L is used for calculation purposes. When an undetect is returned from the lab for metals and nitrate analyses, then half the detection limit is used for calculation purposes.
- When a sample has a corresponding duplicate or reanalysis ("re-run'), **AND** *neither* result is greater than the Standard, **THEN** the value used in calculations is the arithmetic average of the two values.
- When a sample has a corresponding duplicate or reanalysis ("re-run'), **AND** *either* result is greater than the Standard, **THEN** an evaluation of the data pair is performed to determine the representativeness of the sample results.[1] The method for determining representativeness is as follows:

  1a. The Relative Percent Difference (RPD) for the metal/nitrate data pair is calculated.

$$RPD(\%) = \frac{|R_1 - R_2|}{(R_1 + R_2)/2} * 100$$

where (Equation B−1)

$R_1 = \text{value of initial result}$

$R_2 = \text{value of duplicate result}$

[1] Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for the calculation of 30-day averages can not be determined with sufficient confidence to make compliance decisions. As such, a evaluation is required to assess the representativeness of the sample and it's usability for compliance decisions.

1b. The Duplicate Error Ratio (DER) for the radionuclide data pair is calculated.

$$DER = \frac{|R_1 - R_2|}{\sqrt{(2\sigma_{R1})^2 + (2\sigma_{R2})^2}}$$

where

$R_1 = \textit{value of initial result}$

$R_2 = \textit{value of duplicate result}$

$2\sigma_{R1} = 2\ \textit{sigma error of initial result}$

$2\sigma_{R2} = 2\ \textit{sigma error of duplicate result}$

(Equation B−2)

2a**.** **IF** the RPD is greater than or equal to 100 percent ([higher result] >= 3× [lower result]), **THEN** the results will be determined to be non-representative. The results will not be used for the calculation of 30-day averages, and no 30-day average values will be computed for the days during which the sample was collected.

2b**.** **IF** the RPD is less than 100 percent ([higher result] < 3× [lower result]), **THEN** the results will be determined to be sufficiently representative. The arithmetic average of the two results will be used for the calculation of 30-day average values.

2c. **IF** the DER is greater than or equal to 1.5, **THEN** the radionuclide results will be determined to be non-representative. The results will not be used for the calculation of 30-day averages, and no 30-day average values will be computed for the days during which the sample was collected.

2d**.** **IF** the DER is less than 1.5, **THEN** the radionuclide results will be determined to be sufficiently representative. The arithmetic average of the two results will be used for the calculation of 30-day average values.

- Each calendar day is assigned the activity or concentration (analytical result in pCi/L, mg/L, or µg/L, as determined above) of the composite sample that was filling at the end of that day (specifically, at 23:59:59).
- Each calendar day has an associated surface-water volume (liters) that was measured by the flow meter. Flow record may contain estimated values for certain conditions.[2]
- The daily surface-water volume is then multiplied by the corresponding activity/concentration to calculate a load (in pCi, mg, or µg) for each day.
- The sum of the daily loads (pCi, mg, or µg) for the preceding 30-days (with both flow and an analytical result) is divided by the sum of the daily surface-water volumes (liters) for the preceding 30 days to calculate the volume-weighted 30-day average (pCi/L, mg/L, or µg/L). The equation can be given as follows:

$$\frac{\sum_{day=0}^{day=-29}[pCi,\ mg,\ \ or\ \mu g]}{\sum_{day=0}^{day=-29}[liters]} = 30day\ Average_{day=0}[pCi/L,\ mg/L\ ,\ or\ \mu g/L]$$

(Equation B−3)

[2] Estimation is required when flow rates exceed the capacity of the flow-control structure (e.g., a flume), winter ice conditions result in an inaccurate measurement, or there is an equipment failure.

- The 30-day average values are then rounded to 2 significant figures. No rounding occurs with the measured input numbers prior to calculation of the rolling 30-day averages. Only the final calculated value is rounded. For example, a calculated value of 0.124 pCi/L would be rounded to 0.12 pCi/L. Similarly, a value of 0.246 pCi/L would be rounded to 0.25 pCi/L.
- These 30-day averages are then compared to the appropriate Standards and reported according to the requirements of the RFLMA.

B.1.2 Rolling 12-Month Volume-Weighted Averages

Evaluation of analytical data using rolling 12-month volume-weighted averages applies to the POE and POC (terminal ponds only) monitoring objectives. The method is as follows:

- Rolling 12-month averages are calculated monthly for each location (on last day of each month).
- Calculations are performed using daily time steps. The rolling 12-month average for a particular day (specifically the last day of each month) is calculated using a 'window' of time which includes the previous 365 calendar days. Therefore, for a location with continuous flow and complete analytical results, 365 daily values are included in each 'window' (12 'windows' per year). For a location that flows intermittently, the rolling 12-month window will include fewer than 365 daily values, since days of zero flow have no applicable analytical result or discharge volume.
- When no analytical result or measured flow value is available for a particular day, then the day is not included in the rolling 12-month 'window'. No analytical result may be available either due to a non-sufficient quantity for analysis (referred to as an NSQ condition) or a failed lab analysis. Flow measurement may also be missing due to equipment failures or adverse weather conditions (winter freezing).
- When a negative radionuclide result (e.g., −0.002 pCi/L) is returned from the lab due to blank correction, then a value of 0.0 pCi/L is used for calculation purposes. When an undetect is returned from the lab for nitrate analyses, then half the detection limit is used for calculation purposes.
- When a sample has a corresponding duplicate or reanalysis ("re-run'), **AND** *neither* result is greater than the Standard, **THEN** the value used in calculations is the arithmetic average of the two values.
- When a sample has a corresponding duplicate or reanalysis ("re-run'), **AND** *either* result is greater than the Standard, **THEN** an evaluation of the data pair is performed to determine the representativeness of the sample result.[3] The method for determining representativeness is as follows:

[3] Significant differences in values for a data pair are an indication of potential problems with sample preparation and/or analysis. Under these circumstances, an applicable value to be used for the calculation of 30-day averages can not be determined with sufficient confidence to make compliance decisions. As such, a evaluation is required to assess the representativeness of the sample and it's usability for compliance decisions.

1a. The Relative Percent Difference (RPD) for the nitrate data pair is calculated.

$$RPD(\%) = \frac{|R_1 - R_2|}{(R_1 + R_2)/2} * 100$$

where (Equation B−4)

$R_1 = value\ of\ initial\ result$

$R_2 = value\ of\ duplicate\ result$

1b. The Duplicate Error Ratio (DER) for the radionuclide data pair is calculated.

$$DER = \frac{|R_1 - R_2|}{\sqrt{(2\sigma_{R1})^2 + (2\sigma_{R2})^2}}$$

where (Equation B−5)

$R_1 = value\ of\ initial\ result$

$R_2 = value\ of\ duplicate\ result$

$2\sigma_{R1} = 2\ sigma\ error\ of\ initial\ result$

$2\sigma_{R2} = 2\ sigma\ error\ of\ duplicate\ result$

2a**.** **IF** the RPD is greater than or equal to 100 percent ([higher result] >= 3× [lower result]), **THEN** the results will be determined to be non-representative. The results will not be used for the calculation of 12-month rolling averages, and no 12-month rolling average values will be computed for the days during which the sample was collected.

2b**.** **IF** the RPD is less than 100 percent ([higher result] < 3× [lower result]), **THEN** the results will be determined to be sufficiently representative. The arithmetic average of the two results will be used for the calculation of 12-month rolling average values.

2c. **IF** the DER is greater than or equal to 1.5, **THEN** the radionuclide results will be determined to be non-representative. The results will not be used for the calculation of 12-month rolling averages, and no 12-month rolling average values will be computed for the days during which the sample was collected.

2d**.** **IF** the DER is less than 1.5, **THEN** the radionuclide results will be determined to be sufficiently representative. The arithmetic average of the two results will be used for the calculation of 12-month rolling average values.

- Each calendar day is assigned the activity or concentration (analytical result in pCi/L or mg/L) of the composite sample that was filling at the end of that day (specifically, at 23:59:59).
- Each calendar day has an associated surface-water volume (liters) that was measured by the flow meter. Flow record may contain estimated values for certain conditions.[4]
- The daily surface-water volume is then multiplied by the corresponding activity to calculate a load (in pCi or mg) for each day.

[4] Estimation is required when flow rates exceed the capacity of the flow-control structure (e.g., a flume), winter ice conditions result in an inaccurate measurement, or there is an equipment failure.

- The sum of the daily loads (pCi or mg) for the preceding 365 calendar-days (with both flow and an analytical result) is divided by the sum of the daily surface-water volumes (liters) for the preceding 365 calendar-days to calculate the 12-month rolling average (pCi/L or mg/L). The equation can be given as follows:

$$\frac{\sum_{day=0}^{day=-364}[pCi\ or\ mg]}{\sum_{day=0}^{day=-364}[liters]} = Rolling\ 12-Month\ Average_{day=0}[pCi/L\ or\ mg/L] \qquad \text{(Equation B−6)}$$

where day = 0 is the last day of each month

- The 12-month rolling average values are then rounded to 2 significant figures. No rounding occurs with the measured input numbers prior to calculation of the rolling 12-month averages. Only the final calculated value is rounded. For example, a calculated value of 0.124 pCi/L would be rounded to 0.12 pCi/L. Similarly, a value of 0.246 pCi/L would be rounded to 0.25 pCi/L.
- These 12-month rolling averages are then compared to the appropriate Standards and reported according to the requirements of the RFLMA.

B.1.3 Volume-Weighted Averages for Various Time Periods (Periodic Averages)

The method is as follows:

- The time-period for the volume-weighted average is selected (e.g., monthly, seasonal, annual, period of sampling).
- When a negative radionuclide result (e.g., −0.002 pCi/L) is returned from the lab due to blank correction, then a value of 0.0 pCi/L is used for calculation purposes. When an undetect is returned from the lab for metals or nitrate analyses, then half the detection limit is used for calculation purposes. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the 'real' value and the 'duplicate'. When a sample has multiple 'real' analyses ('re-runs'), the value used in calculations is the arithmetic average of the multiple 'real' analyses.
- When no analytical result or measured flow value is available for a particular day, then an applicable activity (pCi/L) is estimated based on Pu/Am ratios, recent values on either side of the missing result, the annual volume-weighted average, etc. No analytical result may be available either due to a non-sufficient quantity for analysis (referred to as an NSQ condition) or a failed lab analysis. Flow measurement may be missing due to equipment failures or adverse weather conditions (winter freezing).
- The analytical result (pCi/L, mg/L, or µg/L) for a particular composite sample period[5] is multiplied by the associated flow volume (streamflow in liters) to obtain a load for each composite sample period (pCi, mg, or µg).[6]

[5] When no analytical result is available due to a failed lab analysis or a sample of non-sufficient quantity, the activity for the period of the missing analytical result is estimated. The activity is estimated using the annual or seasonal volume-weighted average or based on the location-specific Pu/Am ratio when only one analyte result is available. The estimation technique is chosen using professional judgment based on location.

[6] When a composite-sample period overlaps the selected time-period for loading, then a proportion of the load for the entire sampling period is calculated based on relative streamflow volume.

- The sum of the individual composite-sampling period loads (for the selected time-period) is calculated in pCi, mg, or µg.
- The sum of the sample-period loads (pCi, mg, or µg) for the selected time-period is divided by the sum of the sample-period surface-water volumes (liters) to calculate the volume-weighted average (pCi/L, mg/L, or µg/L). The equation can be given as follows:

$$\frac{\sum[pCi,\ mg,\ or\ \mu g]}{\sum[liters]} = Periodic\ Average\ [pCi/L,\ mg/L,\ or\ \mu g/L] \qquad \text{(Equation B−6)}$$

B.1.4 Loading Analysis

B.1.4.1 Continuous Flow-Paced Sampling Analytical Results

Load estimation for continuous flow-paced sampling is generally used to evaluate the relative radionuclide loads of tributary monitoring locations and as an estimation of actual loads at specific monitoring locations. The nature of the continuous sampling during all flow conditions allows for more accurate load calculations compared to storm-event sampling. The method is as follows:

- The time-period for loading comparison is selected (e.g., monthly, seasonal, annual).
- When a negative radionuclide result (e.g., −0.002 pCi/L) is returned from the lab due to blank correction, then a value of 0.0 pCi/L is used for calculation purposes. When a sample has a corresponding field duplicate, the value used in calculations is the arithmetic average of the 'real' value and the 'duplicate'. When a sample has multiple 'real' analyses ('re-runs'), the value used in calculations is the arithmetic average of the multiple 'real' analyses.
- When no analytical result or measured flow value is available for a particular day, then an applicable activity (pCi/L) is estimated based on Pu/Am ratios, recent values on either side of the missing result, the annual volume-weighted average, etc. No analytical result may be available either due to a non-sufficient quantity for analysis (referred to as an NSQ condition) or a failed lab analysis. Flow measurement may be missing due to equipment failures or adverse weather conditions (winter freezing).
- The analytical result (pCi/L) for a particular composite sample period[5] is multiplied by the associated flow volume (streamflow in liters) to obtain a load for each composite sample period (pCi).[7]
- The sum of the individual composite-sampling period loads (for the selected time-period) is calculated in pCi.

B.2 SURFACE-WATER SAMPLE COLLECTION METHODS

Location-specific sample collection protocols are detailed in the RFSOG. The telemetry system centrally monitors the status of all automated samplers. Stations determined to have completed composites will be visited for collection, at which time the data from the flow meter will be recorded and downloaded electronically to a lap-top PC to obtain the sampling interval

[7] When a composite-sample period overlaps the selected time-period for loading, then a proportion of the load for the entire sampling period is calculated based on relative streamflow volume.

information. Information regarding missed grabs[8], grab sample flow-pacing, and grab sample volume is recorded directly from the sampler to field logbooks.

The composite-sample bottle is removed from the sampler, sealed, and transported to the Site office for preparation, shipment, and tracking.[9] A clean sample container will then be placed in the sampler for the next targeted sample.[10] Since some composite samples will remain in the field filling for as long as a month, samples will be acidified in the container to a pH<2 following collection from the field. The acidified samples will stand for 24 hours to remove any constituents that may have sorbed to the inside surface of the container.[11]

B.2.1 Sample Types

B.2.1.1 Continuous Flow-Paced Composite Samples

Continuous flow-paced composite samples are collected during all flow conditions. Automated samplers collect grab samples year-round at all times. When a composite sample is removed from the sampler for analysis, the next composite sample starts filling immediately, if flow is available. If the location is dry at the initiation of a new composite sample, the flow meter is programmed to trigger sample collection at the next available flow period. A composite sample consists of multiple grab samples[12] that are flow-paced. In other words, one grab sample is deposited in the sample bottle each time a specified volume of stream discharge is measured by the flow meter. Figure B−1 is an example of flow pacing of grab samples every 4,390 cubic feet of stream discharge for a continuous flow-paced sampling event. The chosen flow pace depends on expected stream discharge, the composite volume desired, and the desired composite-sampling period. Details on the method used to determine the desired flow pace are given below (see Flow Pacing of Automated Samplers: Continuous Flow-Paced Composite Samples).

---

[8] Missed grab samples may be caused by equipment malfunction or the freezing of sample intake lines. Some locations employ self-regulating heat tape systems where AC power is available. Freeze-protection systems are currently in place at the Indiana Street POC locations.
[9] Stoller prepares, ships, and tracks all samples according to the applicable Site QA/QC documents.
[10] Stoller is responsible for the cleaning of sample bottles according to Site QA/QC requirements. All locations have dedicated sample bottles to reduce the risk of cross-contamination. Sample bottle cleaning tools are also dedicated. Clean sample bottles waiting for deployment are stored at the Site office.
[11] For analyses which can not be acidified prior to analysis (i.e., TSS), the required volume is removed from the sample bottle prior to acidification.
[12] Current grab sample volume for continuous flow-paced composite samples is 200ml. This volume was chosen to maximize the number of grabs while achieving adequate repeatability. ISCO® samplers have a sample volume repeatability of ±10ml. Therefore, a volume error of ±5 percent can be expected.

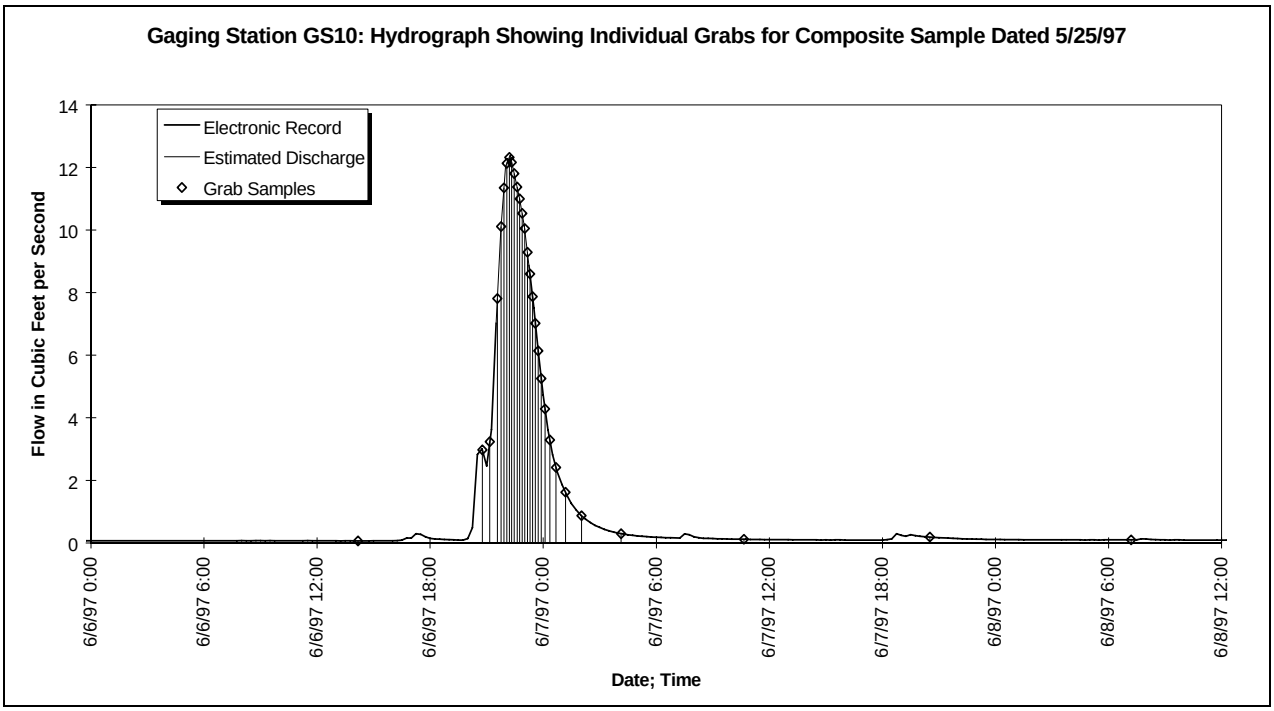


Figure B−1. Example of Hydrograph Showing Continuous Flow-Paced Composite Sampling

Ideally, by flow-pacing composite samples and effectively collecting more frequent grabs during higher flow rates, an analytical result (concentration [e.g., mg/L] or activity [e.g., pCi/L]) that is representative of the entire sampling period is obtained. This result can then be used with the corresponding discharge volume to calculate a constituent load. This sampling protocol is currently utilized at all automated surface-water monitoring locations.

B.2.2 Flow Pacing of Automated Samplers

B.2.2.1 Continuous Flow-Paced Composite Samples

The chosen flow pacing for a composite sample must satisfy the following criteria:

- The composite sample should fill during the specified time-period as determined by the targeted sample collection frequencies.[13]
- The collected sample volume must be adequate such that the location-specific analyses can be completed by the laboratory.[14]

[13] Samples are flow-paced based on average expected discharge rates calculated from historic discharge records. Consequently, samples may fill in periods shorter than the targeted period when flow rates are significantly higher than normal. Similarly, samplers may not fill during the targeted period if flow rates are significantly lower than predicted by historical flow record.

[14] Specific analyses each require some minimum volume of sample for analysis. Therefore, the minimum required sample volume depends on the location-specific analyte suite.

The following steps are used to determine the appropriate flow pace for a continuously collected composite sample.

1. The location-specific targeted time-period for the composite sample must be known.
2. For example, four composite samples are targeted for the month of May at GS10.
3. The expected discharge volume for the targeted time-period must then be calculated using historic flow record.[15] For locations without any historic flow record, professional judgment, estimations related to basin size, and/or record at upstream/downstream locations are used to determine expected discharge volumes.
4. For example, at GS10 the expected discharge volume for May is 5.48 Mgals. In order to collect four composite samples for the month, one composite sample is collected for every 1.37 Mgals.
5. The targeted number of 200 ml grab samples for the composite sample is then determined. The targeted number of grabs is set using professional judgment to collect a volume between the minimum required sample volume[14], and the maximum volume which can be contained in the sample bottle.[16] This allows for variation in total measured discharge (from the expected discharge based on historic record), while still collecting the composite sample in the targeted time-period.
6. For example, at GS10 the composite sample bottles can contain a maximum of 22 liters, and the minimum required sample volume for analysis is 7.0 liters. Consequently, the sampler at GS10 is normally programmed to collect sixty 200 ml grab samples for a targeted composite sample volume of 12 liters.
7. The expected discharge volume is then divided by the targeted number of grab samples to obtain a discharge volume per grab sample. This is the flow pace for the composite sample.

   Continuing the GS10 example, collecting 60 grab samples for a stream discharge of 1.37 Mgals gives a flow pace of 22,833 gallons per grab sample.

[15] The expected discharge volume is the historic average volume. All available flow record after October 1, 1992, is used (data prior to October 1, 1992, is considered less reliable). The actual period of record depends on monitoring location. Professional judgment is used appropriately pace samplers for post-Closure hydrologic conditions.
[16] The Site currently employs 15- and 22-liter composite bottles (carboys).

B.3 Results of Statistical Assessments of Water-Quality Data

This appendix includes statistical output generated by the commercially-available software program, Sanitas™ (Sanitas Technologies 2007). (Note: This report does not recommend the use of any specific software; this information is merely provided for completeness.) Statistical assessments are directed by the *Rocky Flats Legacy Management Agreement* (DOE 2007d). The statistical results published in the report on the second calendar quarter of 2007 (DOE 2007h) are included, followed by results for the fourth quarter.

Statistical output is provided herein for AOC, Boundary, Sentinel, and RCRA well classes. The statistical methods employed include trending calculations and comparison of upgradient and downgradient concentrations. Trending calculations utilize the Seasonal-Kendall method, which has been found (K-H 2004d) to be most appropriate for groundwater at the Rocky Flats Site. Each of the aforementioned well classes was evaluated for trends. Comparisons of upgradient and downgradient water quality were performed using ANOVA methods; only the RCRA wells received this treatment.

In addition, locations supporting the SPPTS were also evaluated for trend.

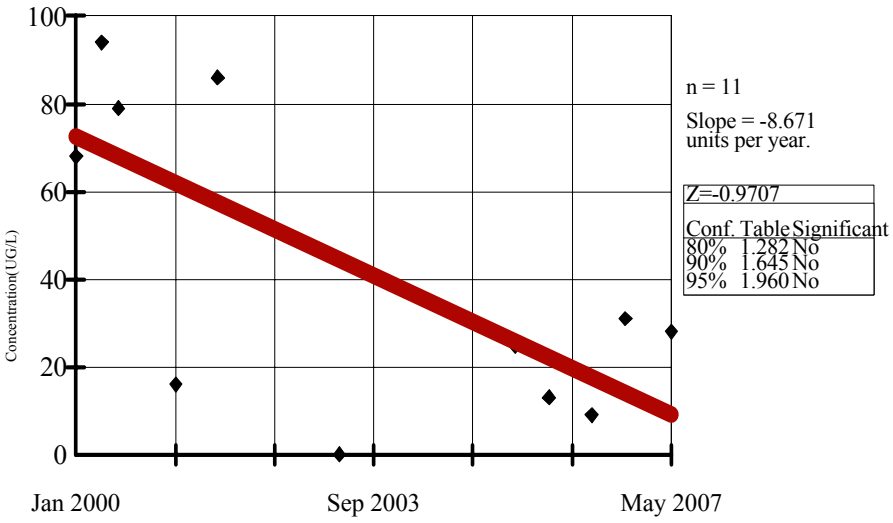
Graphical representations of trends that were calculated to meet a level of significance of at least 80% are included for those wells so evaluated, with one exception: AOC well B206989 trends were plotted despite not meeting this level of significance because this well currently exhibits reportable concentrations of nitrate. Summary tables are also included that describe the results of these calculations for each of the various analytes monitored at each location. Summary ANOVA reports are provided to describe the results of the statistical comparisons of upgradient vs. downgradient water quality in RCRA wells at the two landfills.

Refer to the body of this Annual Report for discussion of trends and groundwater quality in the various areas of interest.

B.3.1 Seasonal-Kendall Trend Plots for 2nd Quarter CY 2007

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 75-35-4 EPA

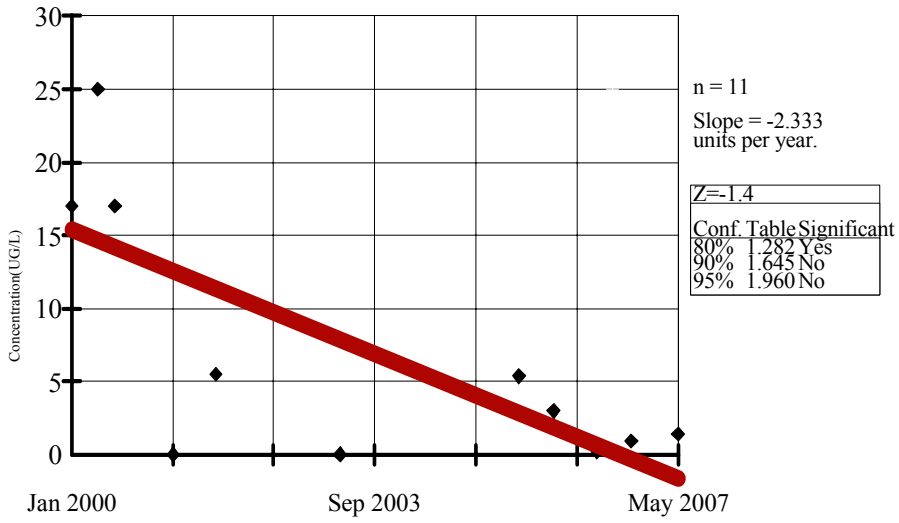
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:10 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 67-66-3 EPA

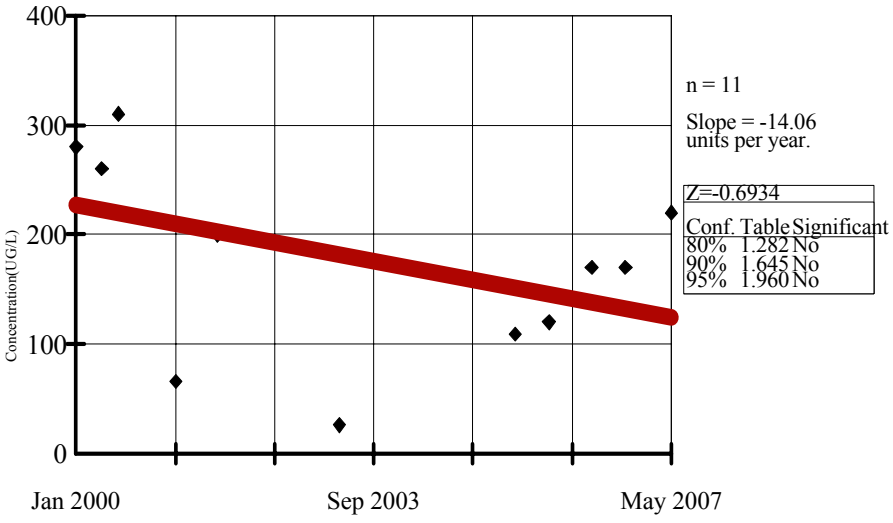
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:10 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 156-59-2 EPA

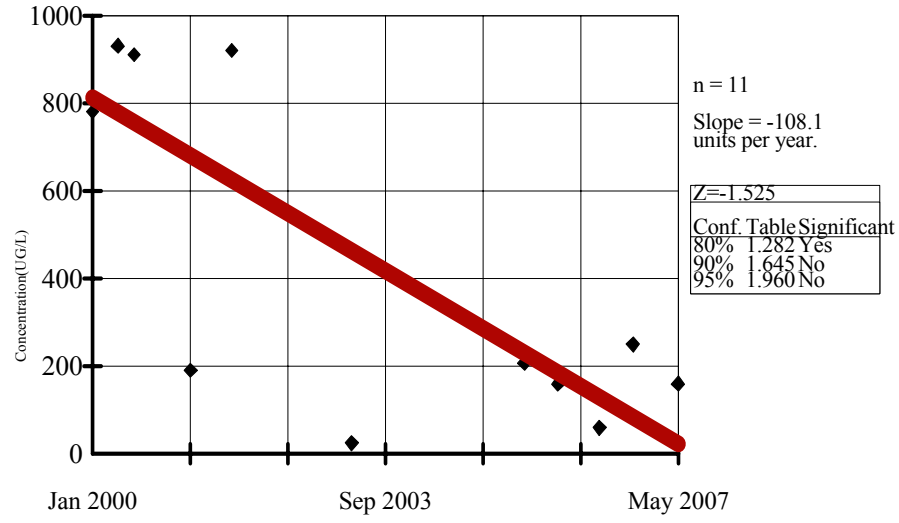
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:10 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 127-18-4 EPA

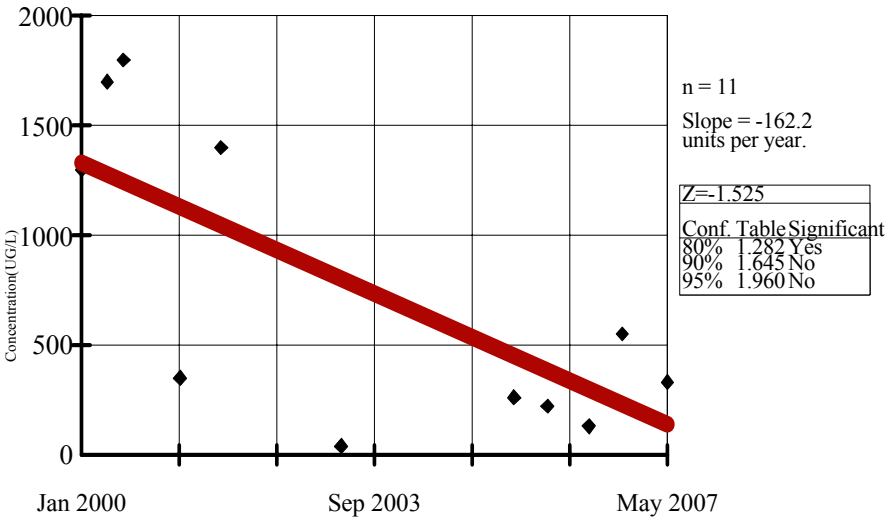
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:11 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 79-01-6 EPA

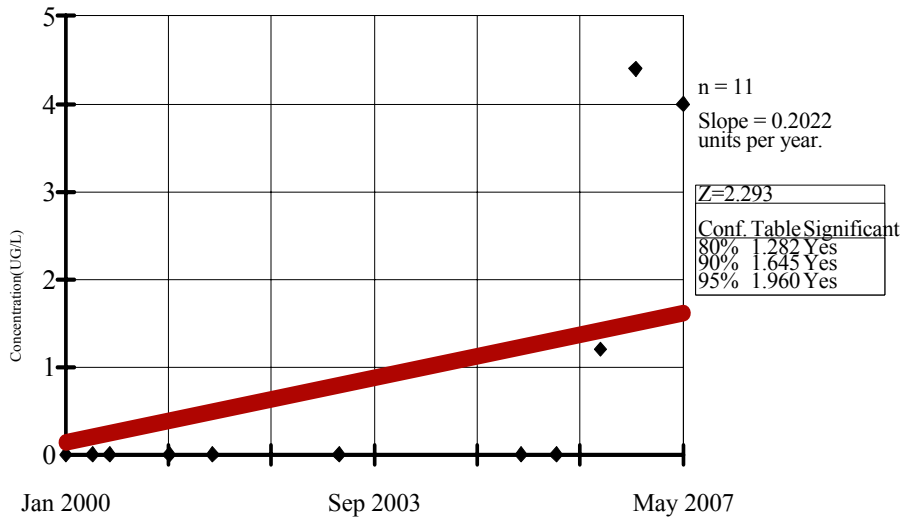
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:14 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 75-01-4 EPA

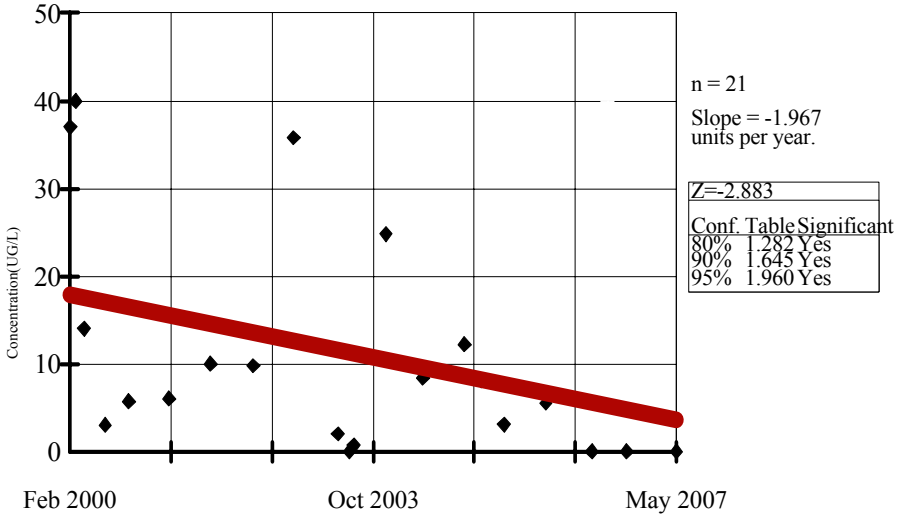
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: VINYL CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: 15699translated001
Date: 9/13/07, 12:14 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 56-23-5 EPA

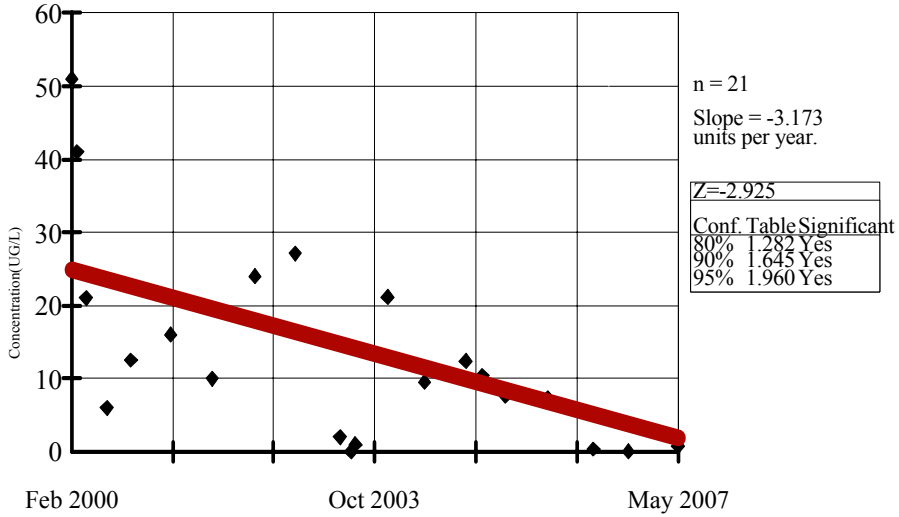
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: 23296translated001
Date: 9/13/07, 12:18 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 67-66-3 EPA

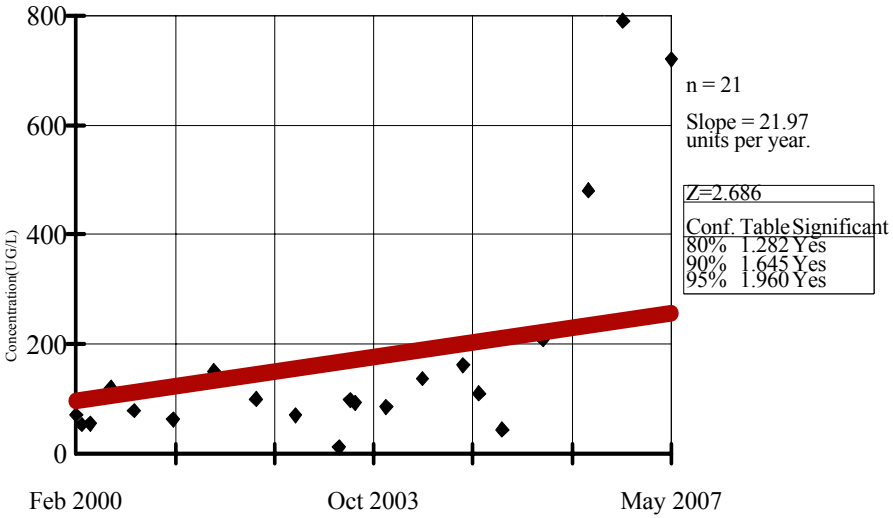
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: 23296translated001
Date: 9/13/07, 12:18 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 156-59-2 EPA

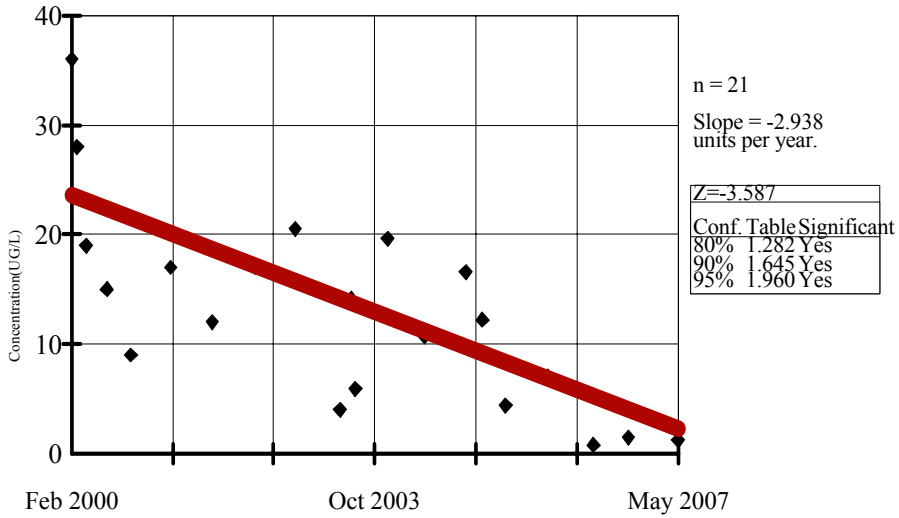
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 23296translated001
Date: 9/13/07, 12:19 PM Client: SM Stoller View: _Batch_

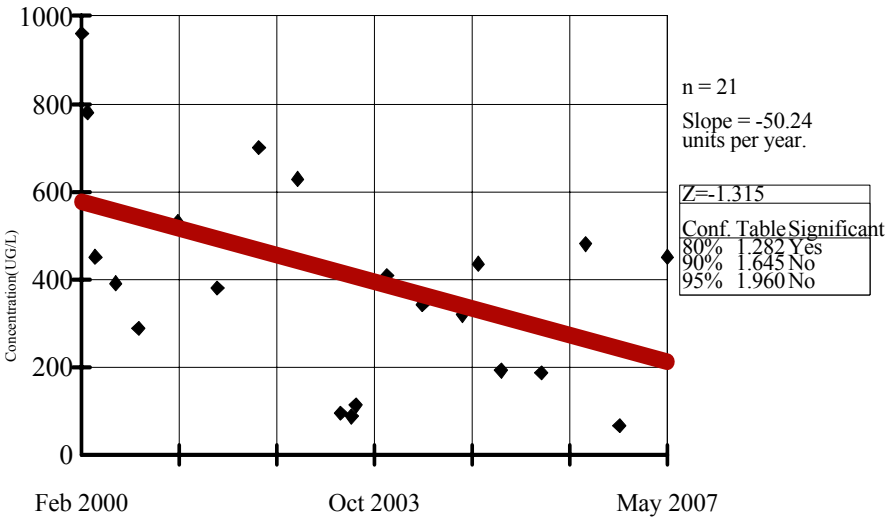
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 127-18-4 EPA

SEASONAL KENDALL SLOPE ESTIMATOR
23296



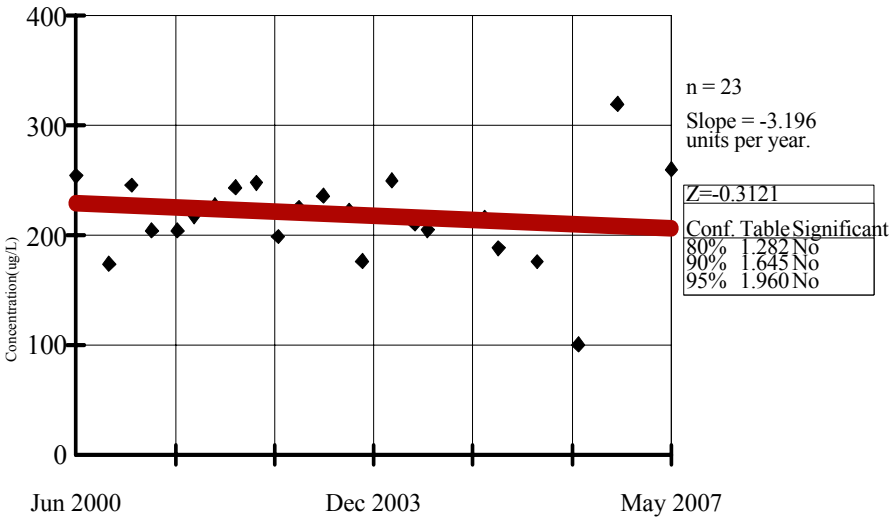
Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 23296translated001
Date: 9/13/07, 12:19 PM Client: SM Stoller View: _Batch_

SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 23296translated001
Date: 9/13/07, 12:25 PM Client: SM Stoller View: _Batch_

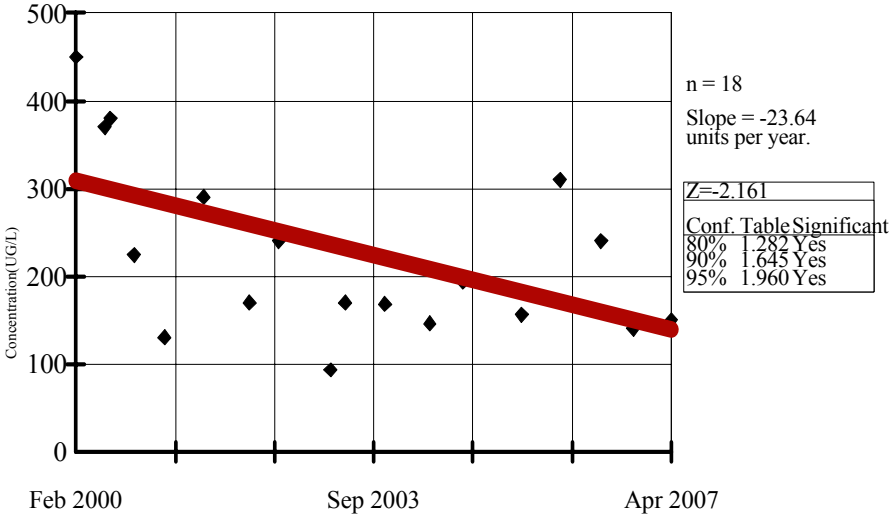
SEASONAL KENDALL SLOPE ESTIMATOR
70099



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: 70099translated
Date: 9/9/07, 3:05 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 56-23-5 EPA

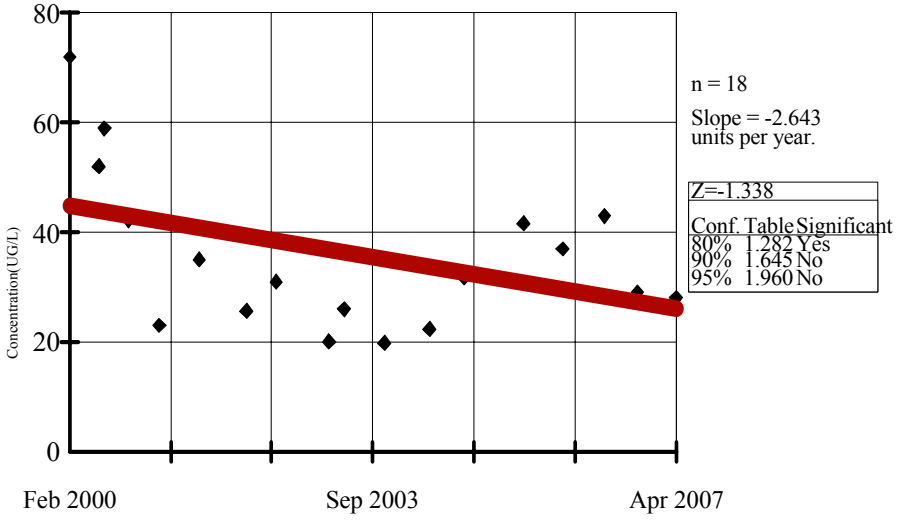
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: 90399translated001
Date: 9/13/07, 12:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 67-66-3 EPA

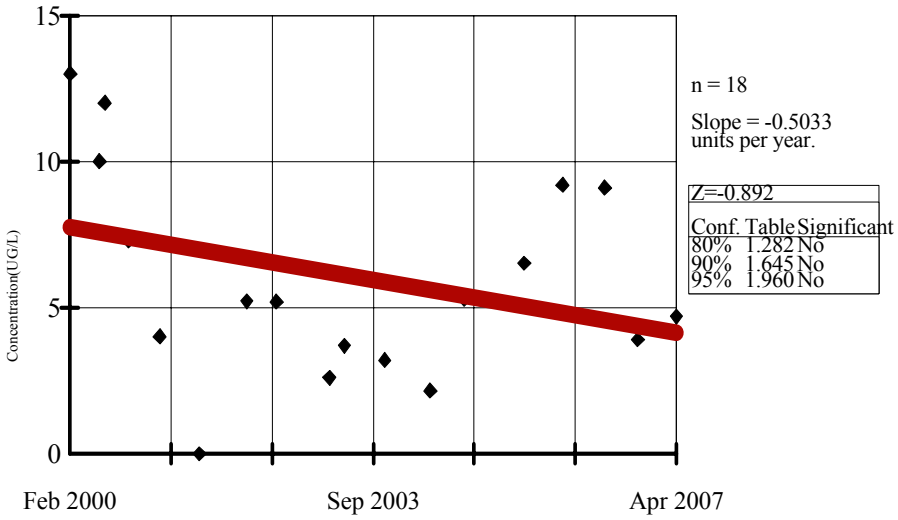
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: 90399translated001
Date: 9/13/07, 12:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 127-18-4 EPA

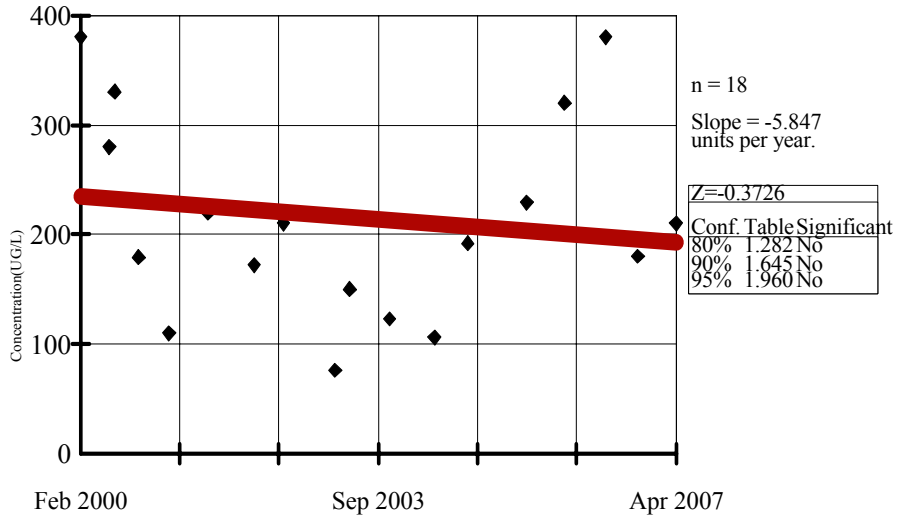
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 90399translated001
Date: 9/13/07, 12:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 79-01-6 EPA

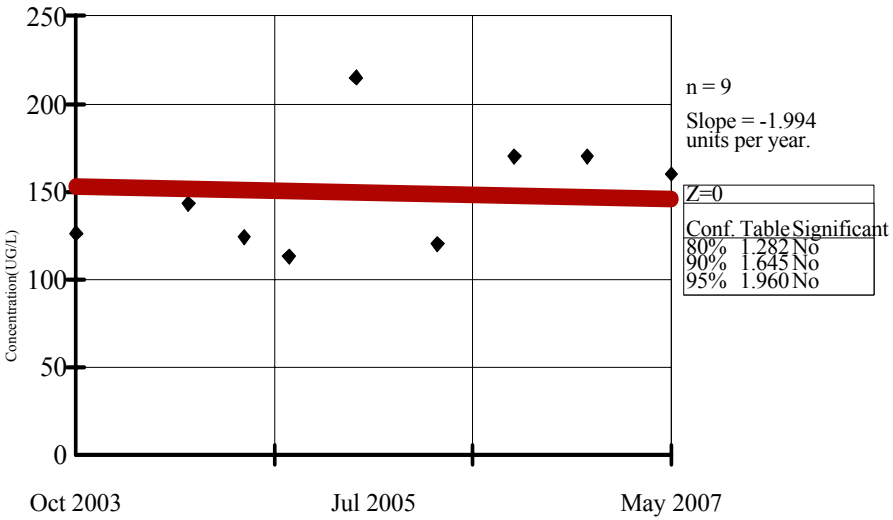
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 90399translated001
Date: 9/13/07, 12:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 56-23-5 EPA

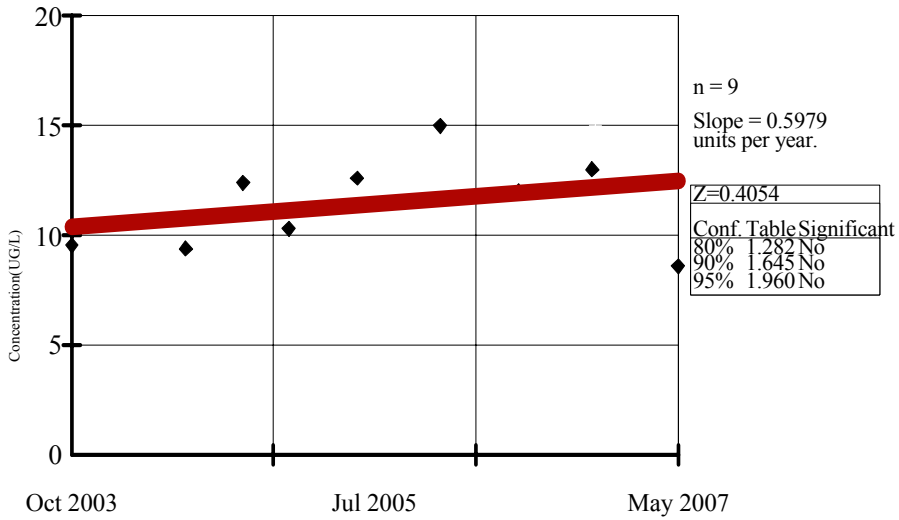
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: 91203translated001
Date: 9/13/07, 12:35 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 67-66-3 EPA

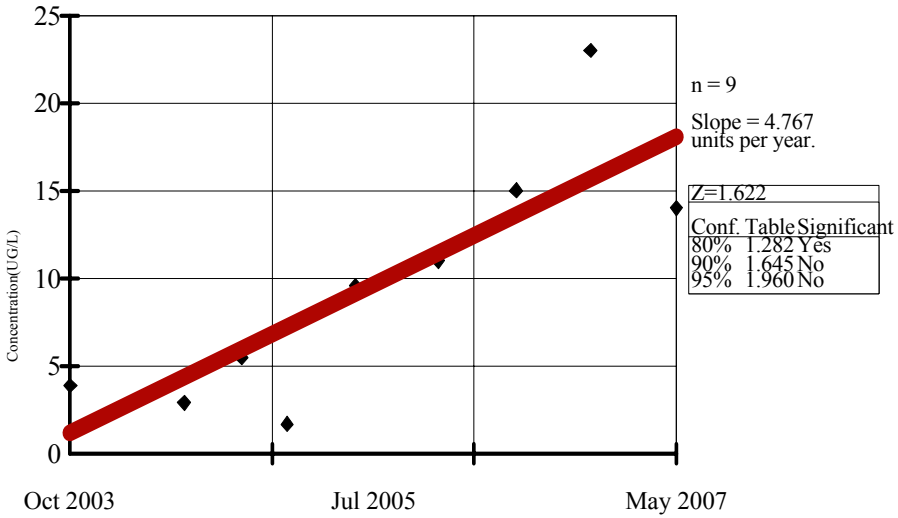
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: 91203translated001
Date: 9/13/07, 12:35 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 127-18-4 EPA

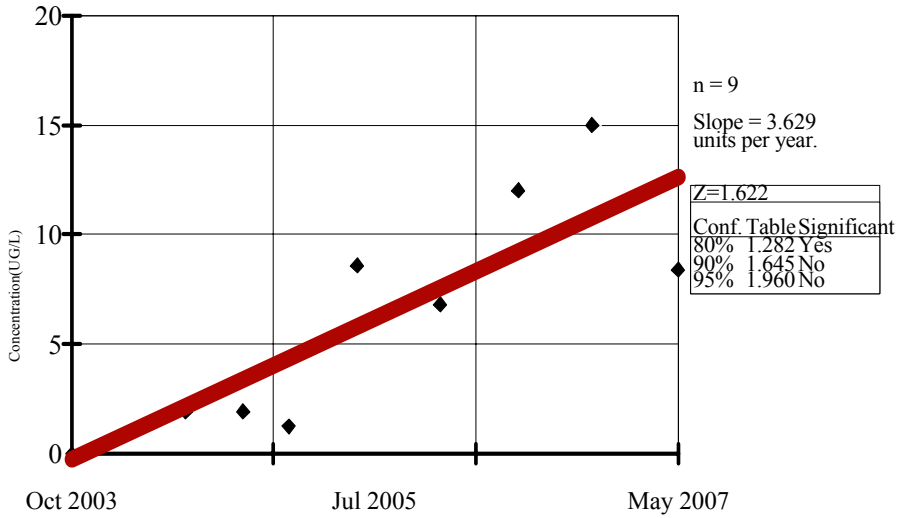
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 91203translated001
Date: 9/13/07, 12:36 PM Client: SM Stoller View: _Batch_

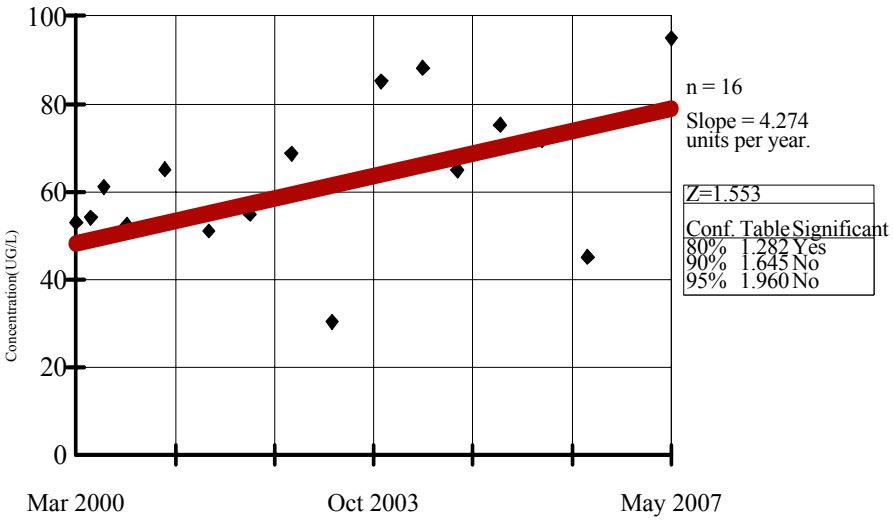
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 79-01-6 EPA

SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 91203translated001
Date: 9/13/07, 12:36 PM Client: SM Stoller View: _Batch_

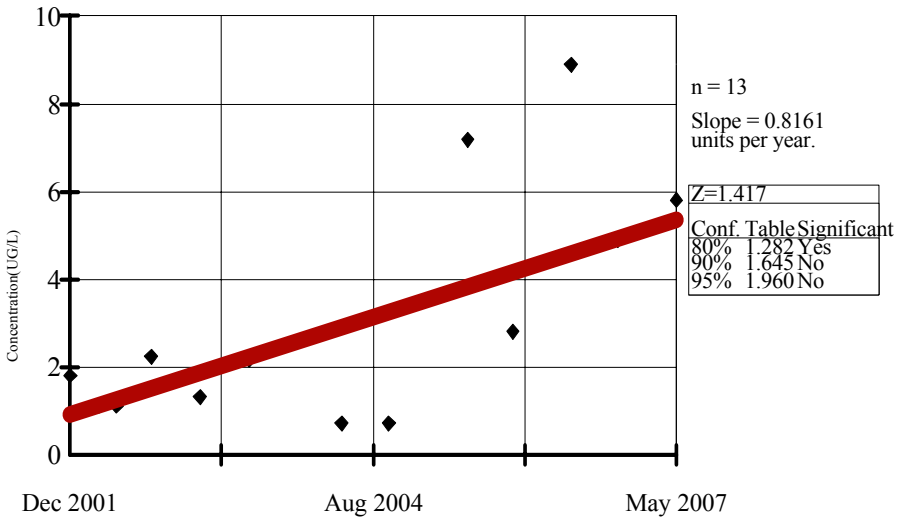
SEASONAL KENDALL SLOPE ESTIMATOR
95199



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 95199translated
Date: 9/9/07, 3:50 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 127-18-4 EPA

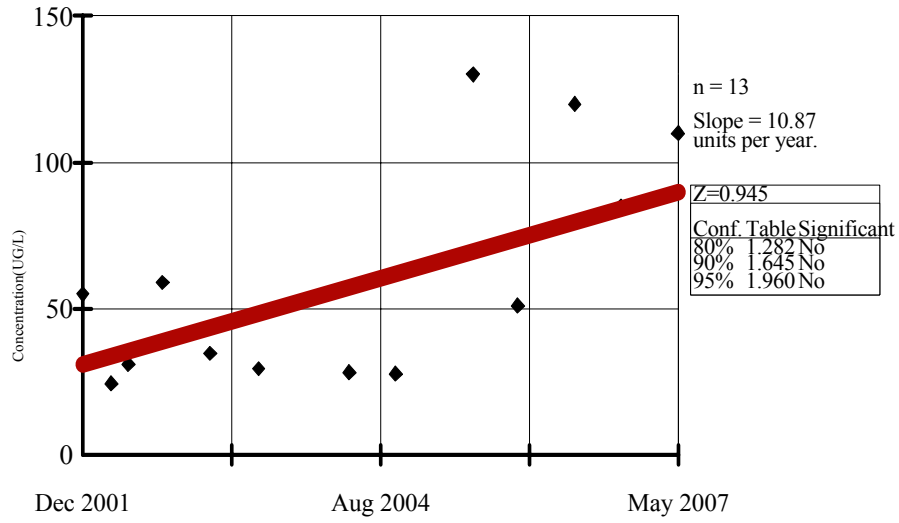
SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 99305translated
Date: 9/9/07, 3:59 PM Client: SM Stoller View: _Batch_

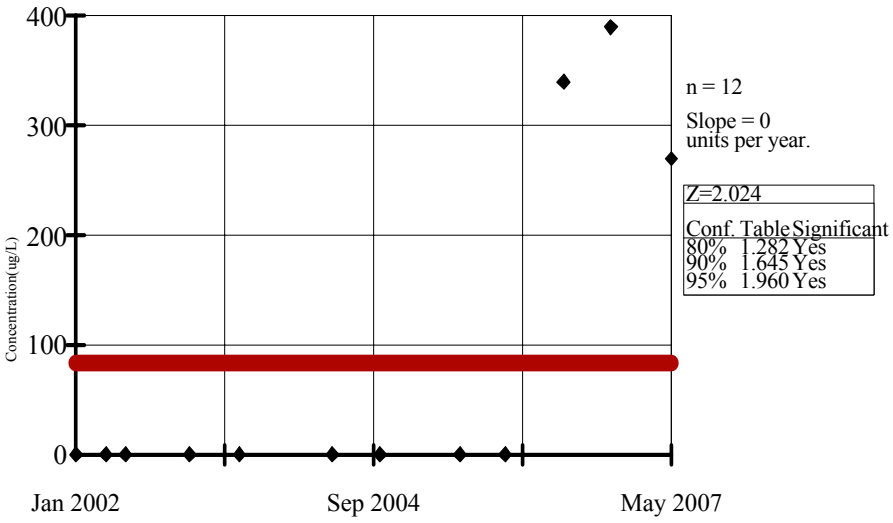
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. CAS# 79-01-6 EPA

SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: 99305translated
Date: 9/9/07, 3:59 PM Client: SM Stoller View: _Batch_

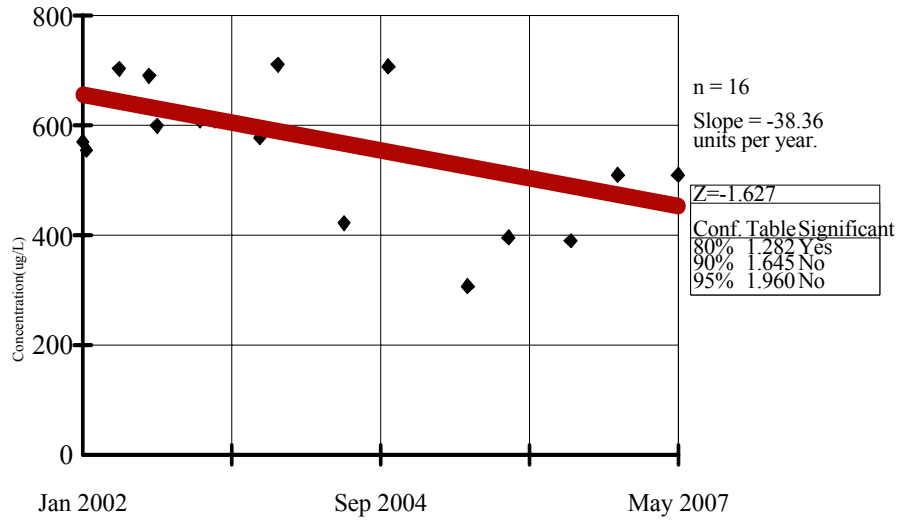
SEASONAL KENDALL SLOPE ESTIMATOR
99405



Constituent: Trichloroethene (ug/L) Facility: Rocky Flats Site Data File: 99405-b-translated001
Date: 9/13/07, 12:37 PM Client: SM Stoller View: _Batch_

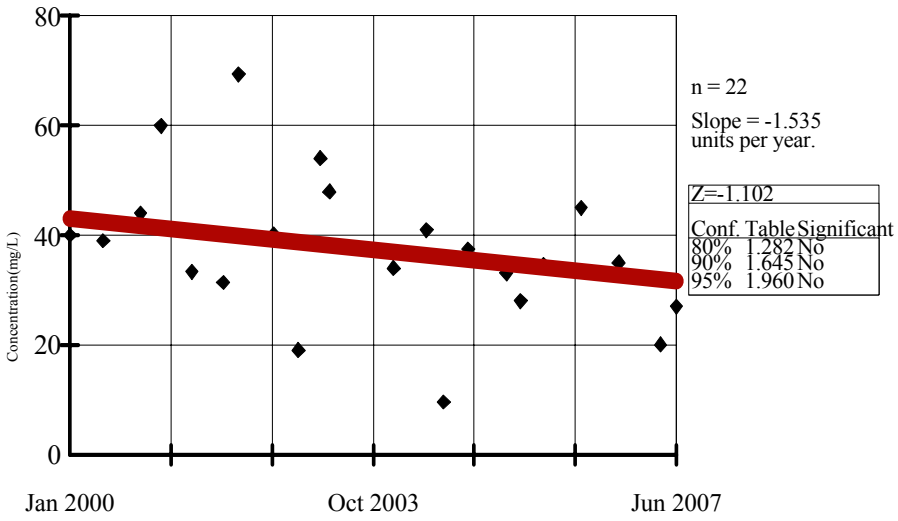
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
99405



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: 99405-b-translated001
Date: 9/13/07, 12:38 PM Client: SM Stoller View: _Batch_

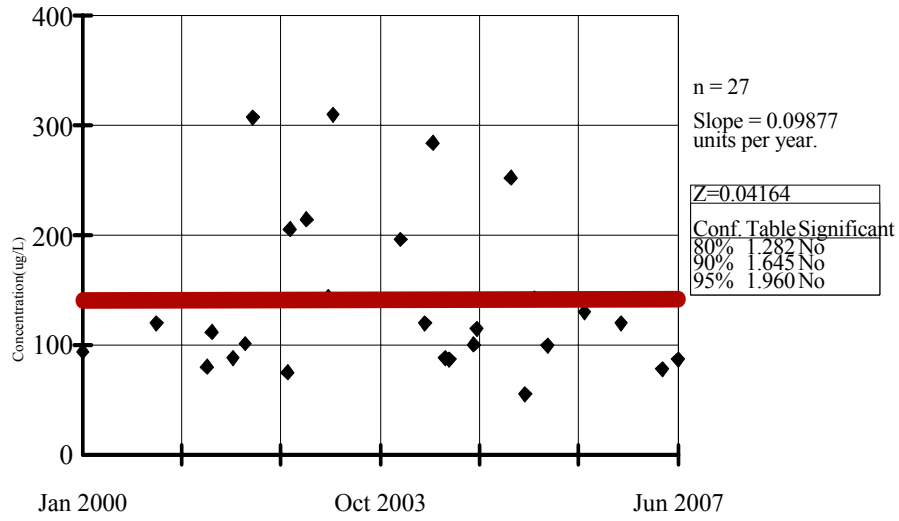
SEASONAL KENDALL SLOPE ESTIMATOR
B206989



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: B206989translated
Date: 9/9/07, 5:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

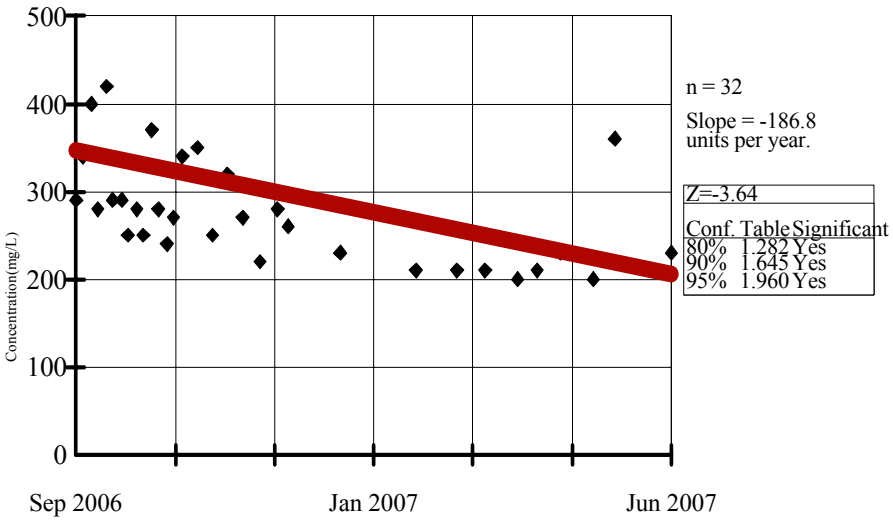
SEASONAL KENDALL SLOPE ESTIMATOR
B206989



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: B206989translated
Date: 9/9/07, 5:31 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

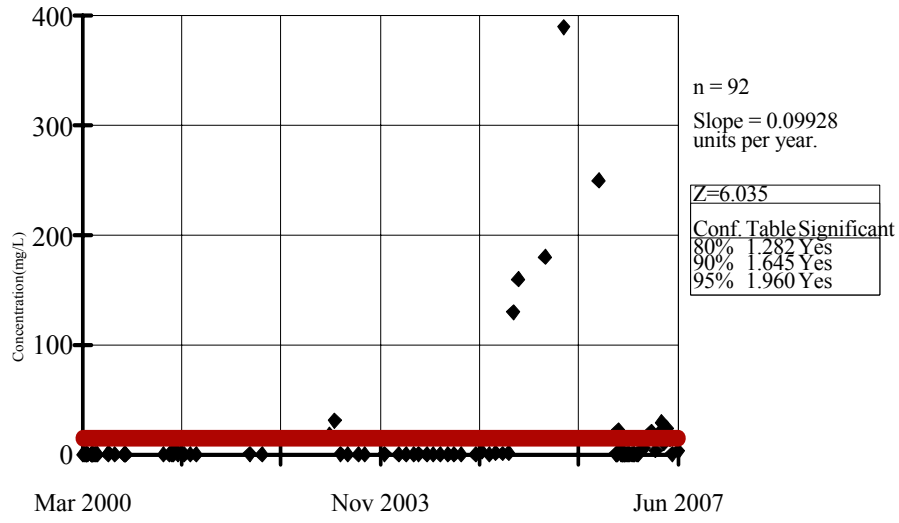
SEASONAL KENDALL SLOPE ESTIMATOR
SPIN



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:40 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

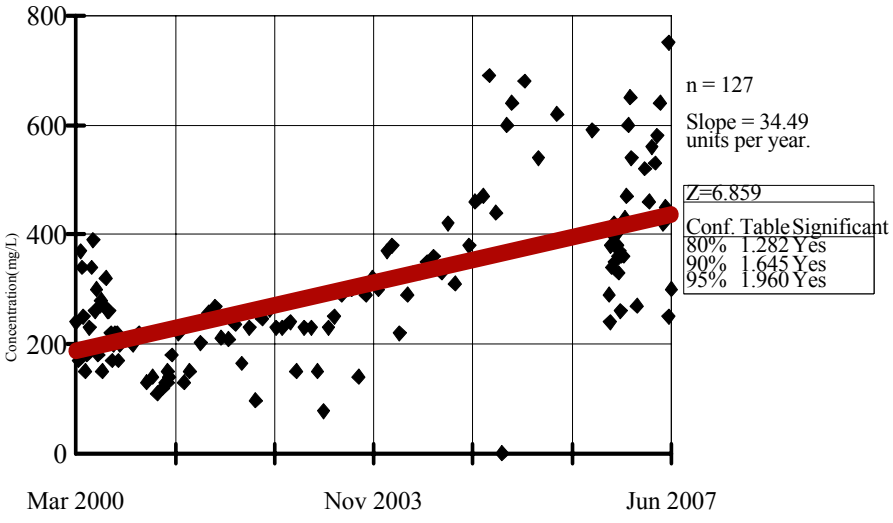
SEASONAL KENDALL SLOPE ESTIMATOR
SPPMM01



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:40 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

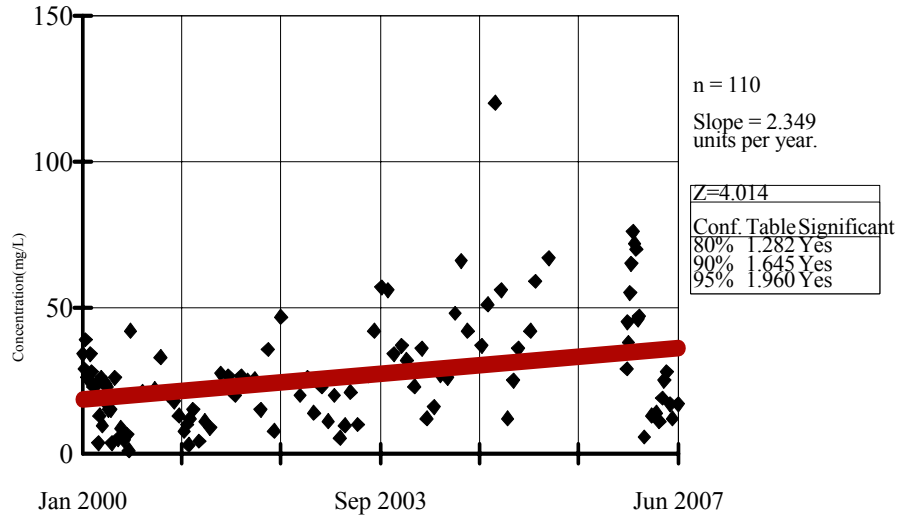
SEASONAL KENDALL SLOPE ESTIMATOR
SPP_D.G.



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:41 PM Client: SM Stoller View: _Batch_

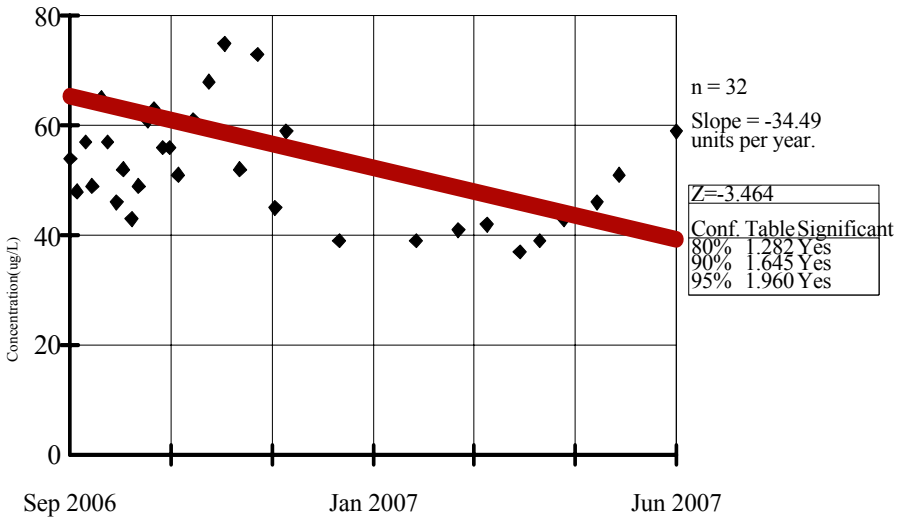
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
GS13



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:41 PM Client: SM Stoller View: _Batch_

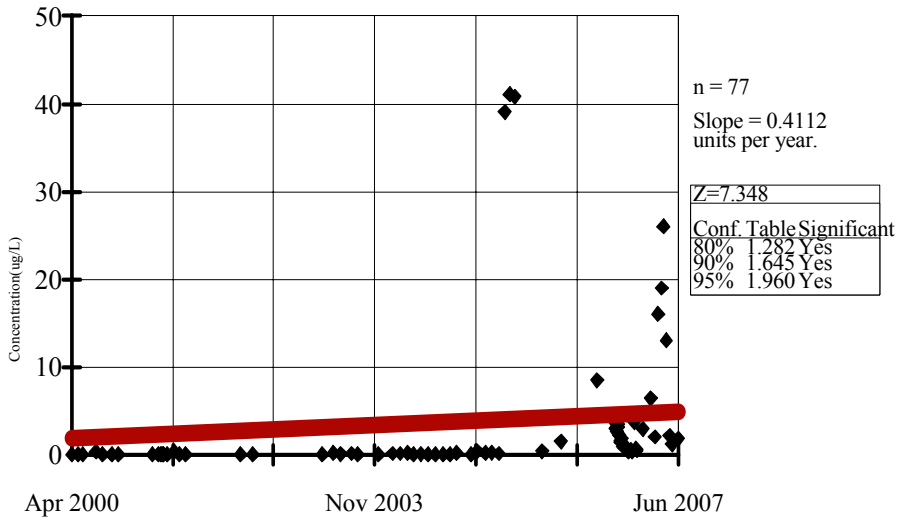
SEASONAL KENDALL SLOPE ESTIMATOR
SPIN



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

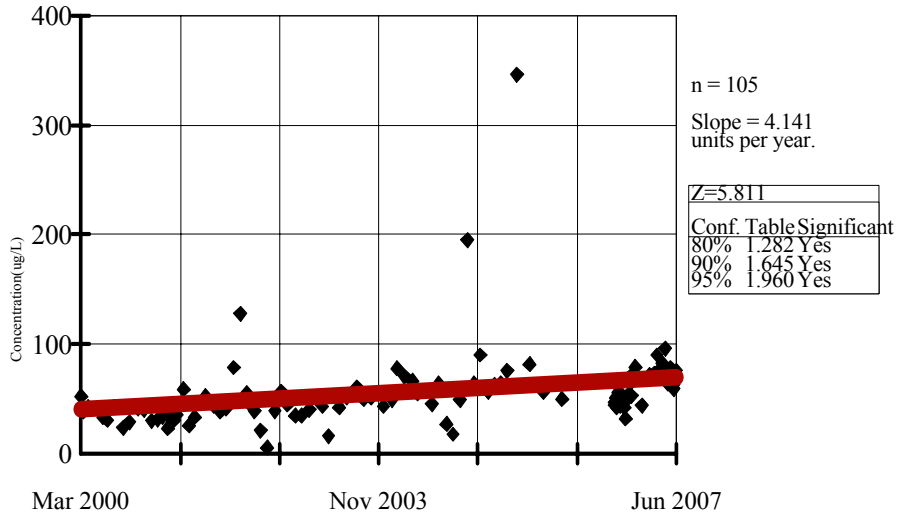
SEASONAL KENDALL SLOPE ESTIMATOR
SPPMM01



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

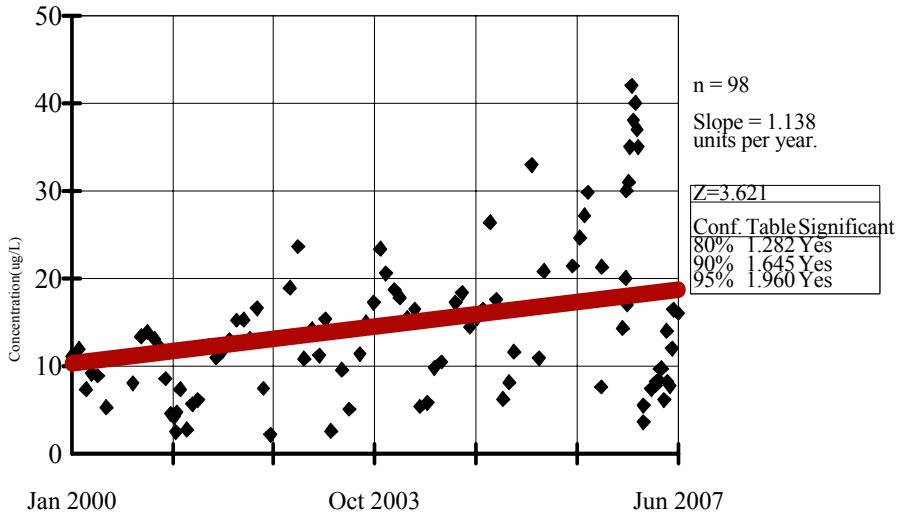
SEASONAL KENDALL SLOPE ESTIMATOR
SPP_D.G.



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
GS13



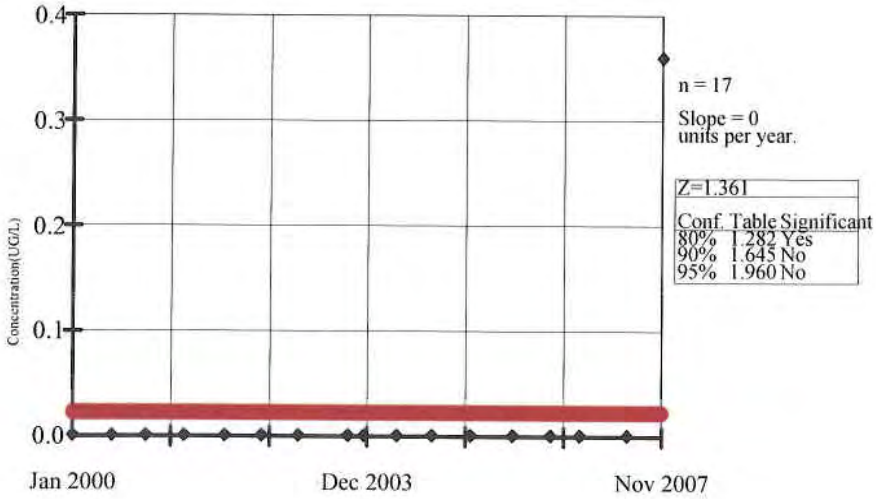
Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTSlocnstranslated001
Date: 9/13/07, 12:42 PM Client: SM Stoller View: _Batch_

B.3.2 Seasonal-Kendall Trend Plots and Summary Tables for 4th Quarter CY 2007

B.3.2.1 AOC Wells

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

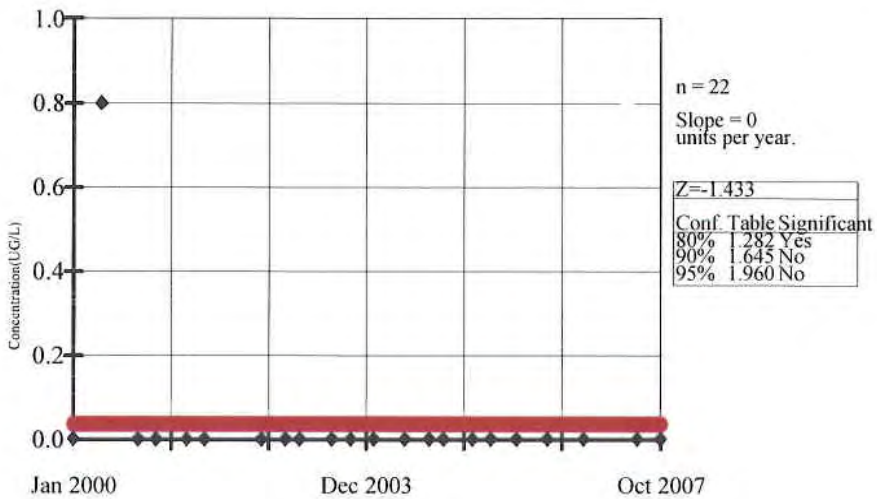
SEASONAL KENDALL SLOPE ESTIMATOR
00997



onstituent: 1,3-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRAN
Date: 3/19/08, 5:09 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
B206989



stituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRA
Date: 3/19/08, 5:14 PM Client: SM Stoller View: _Batch_

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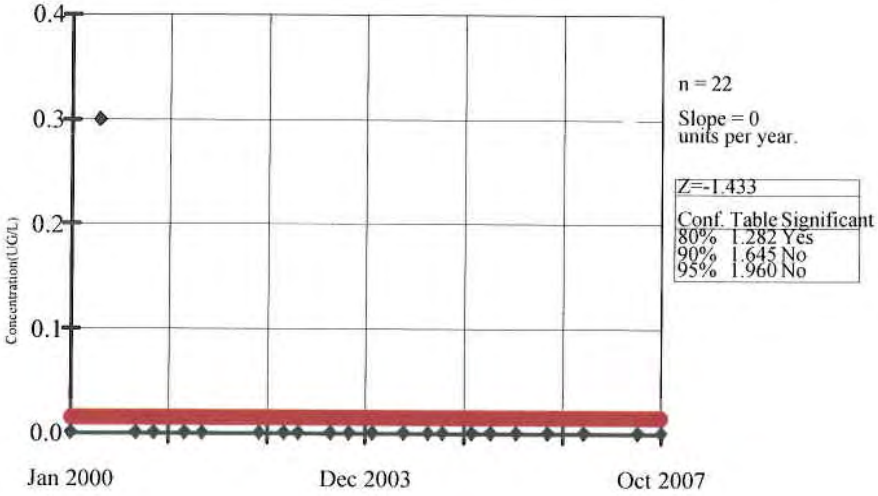
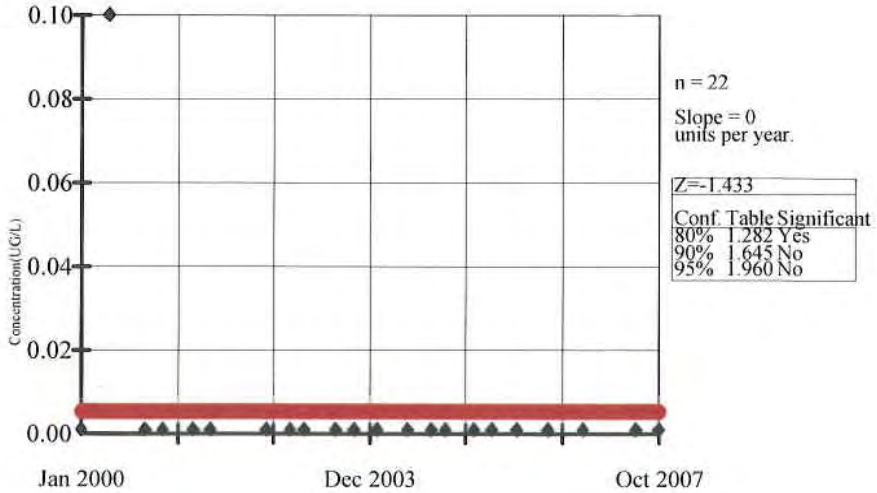
SEASONAL KENDALL SLOPE ESTIMATOR
B206989



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRANS
Date: 3/19/08, 5:17 PM Client: SM Stoller View: _Batch_

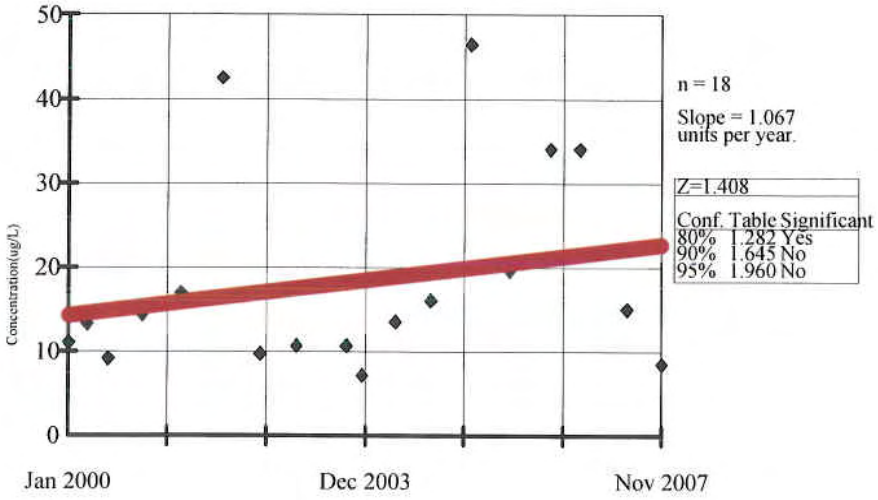
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
B206989



onstituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRAN
Date: 3/19/08, 5:22 PM Client: SM Stoller View: _Batch

SEASONAL KENDALL SLOPE ESTIMATOR
00997



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRANS
Date: 3/19/08, 5:30 PM Client: SM Stoller View: _Batch_

Seasonal Kendall Summary

Date: 3/19/08, 5:57 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,1-TRICHLOROETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 5:57 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1-DICHLOROETHENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,2-Dibromo-3-chloropropane (ug/L)	193	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	997	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	4087	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	10304	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	10594	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	11104	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	42505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	89104	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	B206989	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	4087	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/19/08, 5:57 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DICHLOROBENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	**997**	**17**	**0**	**1.361**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,3-DICHLOROBENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	10304	8	0	0.8944	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 5:57 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,4-DICHLOROBENZENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 5:58 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BROMOMETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	**B206989**	**22**	**0**	**-1.433**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
CHLOROBENZENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Chlorodibromomethane (ug/L)	193	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	997	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	4087	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	10304	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	10594	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	11104	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	42505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	89104	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Chlorodibromomethane (ug/L)	B206989	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	**B206989**	**22**	**0**	**-1.433**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
CHLOROMETHANE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	193	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	997	13	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	4087	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	10304	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	10594	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	11104	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
DIBROMOCHLOROMETHANE (UG/L)	89104	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	B206989	18	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	193	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	997	14	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	4087	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	10304	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	10594	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	11104	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	42505	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	89104	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	B206989	19	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	**B206989**	**22**	**0**	**-1.433**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
NAPHTHALENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	997	17	0	0.8729	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	10594	8	0	0.8944	1.282	No	1.645	No	1.96	No

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
NAPHTHALENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (l193_)		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (l997_)		11	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (l4087		12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (l10304		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (l10594		3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (l11104		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (l89104		2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (lB206989		16	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No

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Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TOLUENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	B206989	22	0	0.8252	1.282	No	1.645	No	1.96	No
Total Xylene (ug/L)	193	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	997	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	4087	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	10304	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	10594	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	11104	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	42505	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	89104	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	B206989	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 5:58 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Trans-1,3-DICHLOROPROPENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	10304	8	0	0.8944	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	193	9	-2.41	-0.9934	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**997**	**18**	**1.067**	**1.408**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Uranium (ug/L)	4087	17	-1.645	-0.806	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	10304	8	0.06528	0.2402	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	10594	10	-2.353	-0.7035	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	11104	8	-4.639	-0.2402	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	B206989	27	-0.3471	-0.2496	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	997	17	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	10304	8	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	10594	8	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	11104	8	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	42505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	89104	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	B206989	22	0	0	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (MG/L)	997	9	-0.09948	-0.596	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (MG/L)	4087	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Seasonal Kendall Summary

Date: 3/19/08, 5:58 PM Facility: Rocky Flats Site

Data File: RFLMA AOC wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Nitrate + Nitrite as Nitrogen (MG/L)	10304	8	0	0.8944	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (MG/L)	10594	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nitrate + Nitrite as Nitrogen (MG/L)	B206989	22	-1.549	-1.276	1.282	No	1.645	No	1.96	No

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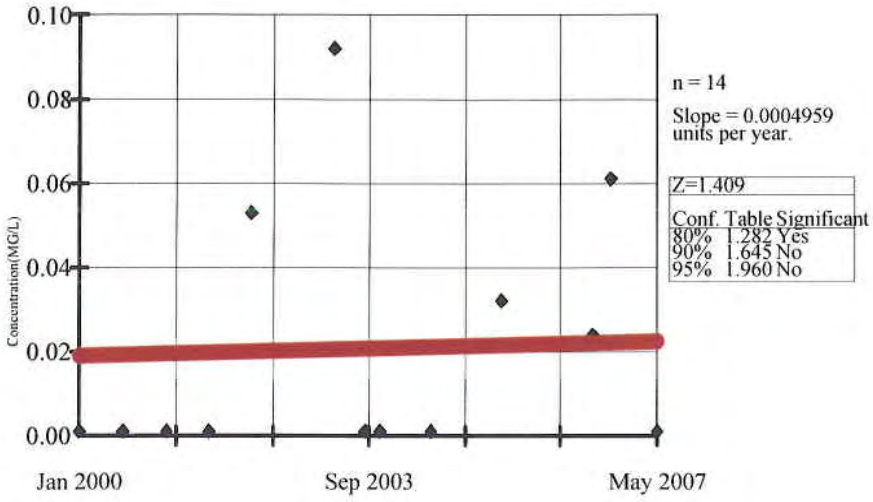
B.3.2.2 Boundary Wells

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

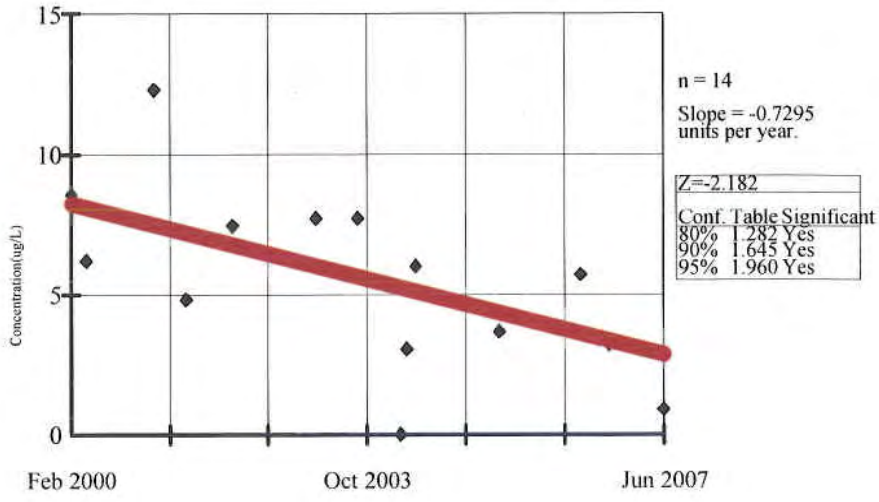
SEASONAL KENDALL SLOPE ESTIMATOR
41691



Constituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: RFLMA B wells TRANS
Date: 3/20/08, 9:56 AM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

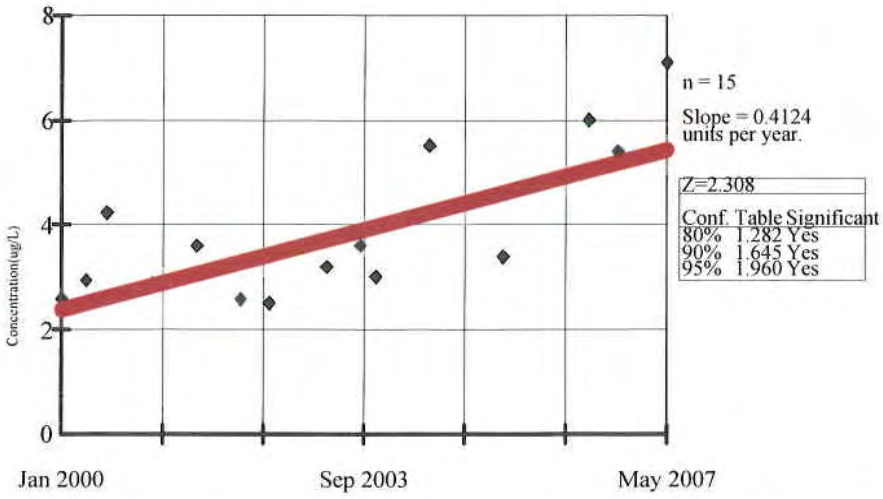
SEASONAL KENDALL SLOPE ESTIMATOR
10394



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA B wells TRANS
Date: 3/20/08, 9:58 AM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
41691



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA B wells TRANS
Date: 3/20/08, 9:58 AM Client: SM Stoller View: _Batch_

Seasonal Kendall Summary

Date: 3/20/08, 10:02 AM Facility: Rocky Flats Site

Data File: RFLMA B wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,1-TRICHLOROETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	41691	14	0	0.8729	1.282	No	1.645	No	1.96	No
1,2-Dibromo-3-chloropropane (ug/L)	10394	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	41691	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	41691	14	0	-0.8729	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	10394	11	0	1.061	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	41691	14	0	1.188	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/20/08, 10:02 AM Facility: Rocky Flats Site

Data File: RFLMA B wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CHLOROBENZENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
Chlorodibromomethane (ug/L)	10394	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	41691	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	10394	8	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	41691	11	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	10394	8	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	41691	11	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	10394	11	0	-0.5547	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	41691	14	0	-0.9479	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	10394	11	0	-1.171	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (MG/L)	10394	10	-0.00431	-0.1732	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (MG/L)	**41691**	**14**	**0.000495**	**1.409**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
PROPANE, 1,2-DIBROMO-3-CHLORO- ((	10394	8	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- ((	41691	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
Total Xylene (ug/L)	10394	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	41691	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/20/08, 10:02 AM Facility: Rocky Flats Site

Data File: RFLMA B wells TRANS Client: SM Stoller

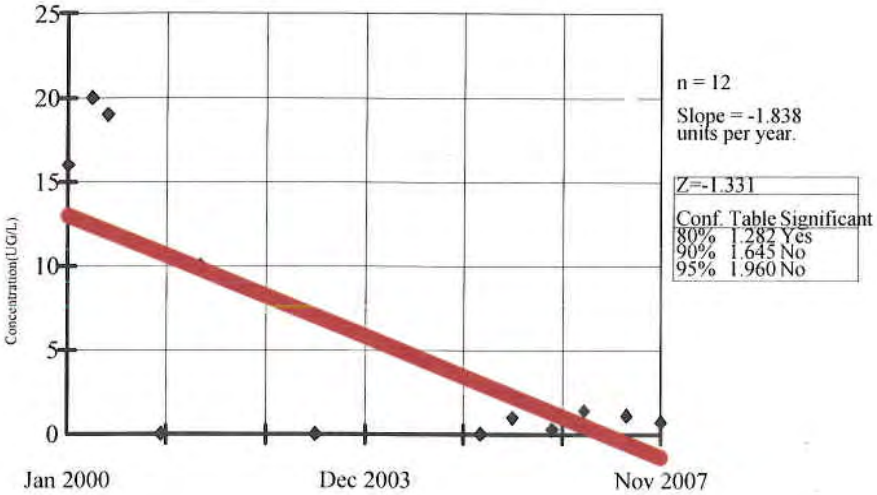
Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Trans-1,2-DICHLOROETHENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	41691	14	0	0.4364	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**10394**	**14**	**-0.7295**	**-2.182**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**41691**	**15**	**0.4124**	**2.308**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
VINYL CHLORIDE (UG/L)	10394	11	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	41691	14	0	0	1.282	No	1.645	No	1.96	No

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

B.3.2.3 Sentinel Wells

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

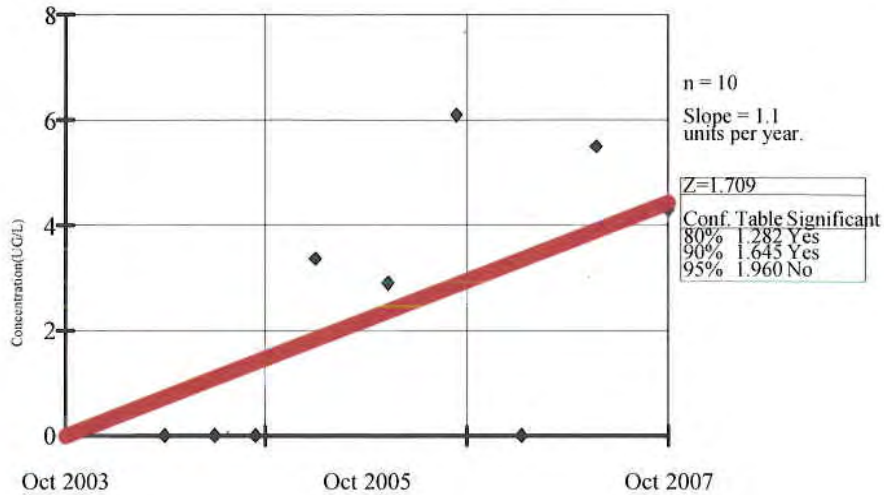
SEASONAL KENDALL SLOPE ESTIMATOR
15699



'onstituent: 1,1,1-TRICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:31 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

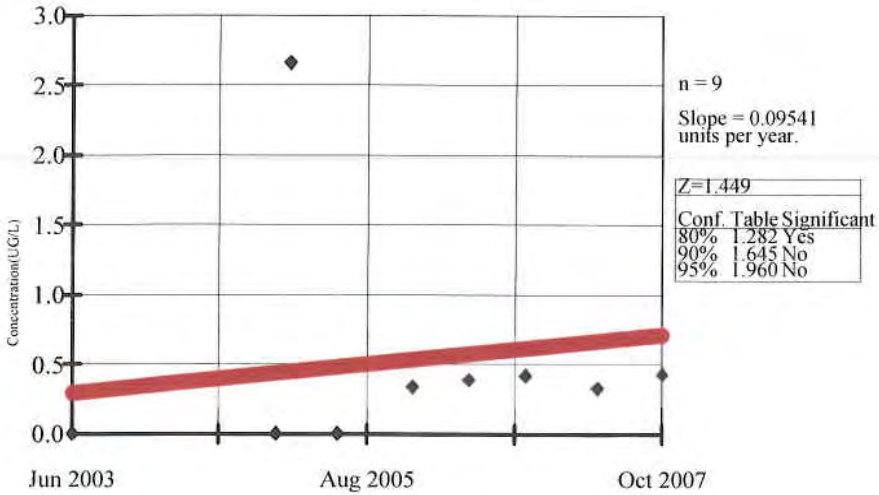
SEASONAL KENDALL SLOPE ESTIMATOR
91203



'onstituent: 1,1,1-TRICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:32 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

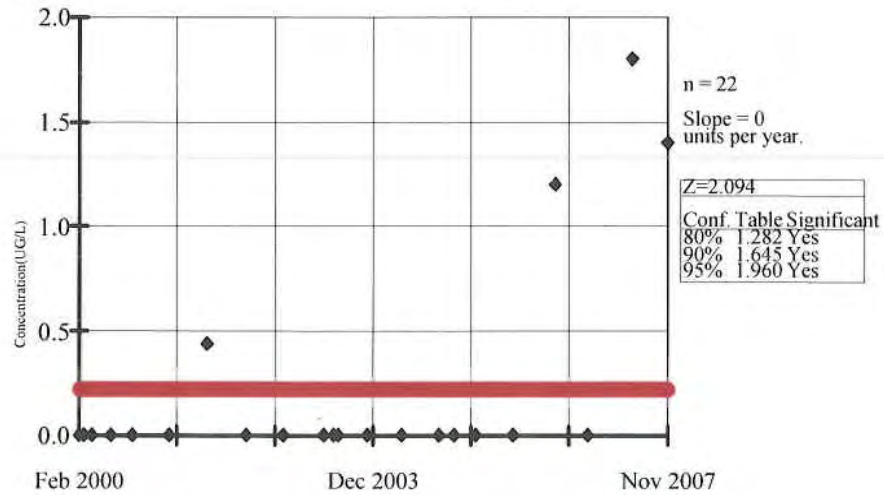
SEASONAL KENDALL SLOPE ESTIMATOR
20505



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:38 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

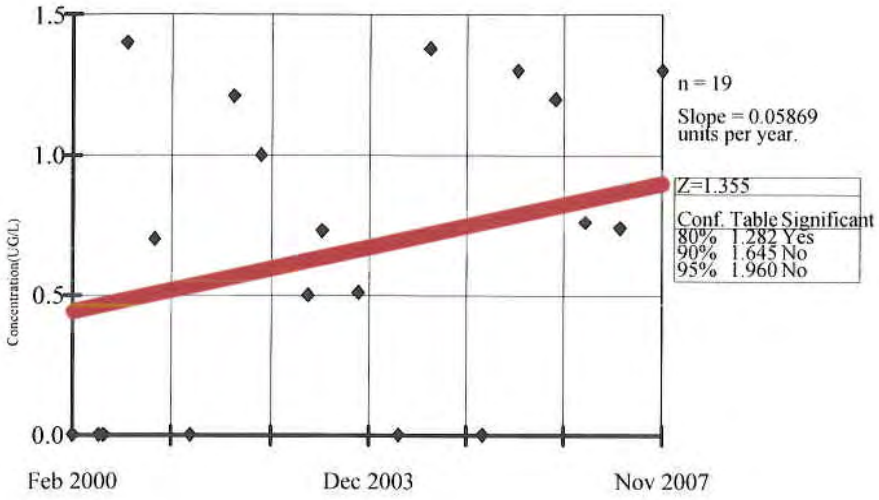
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:39 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

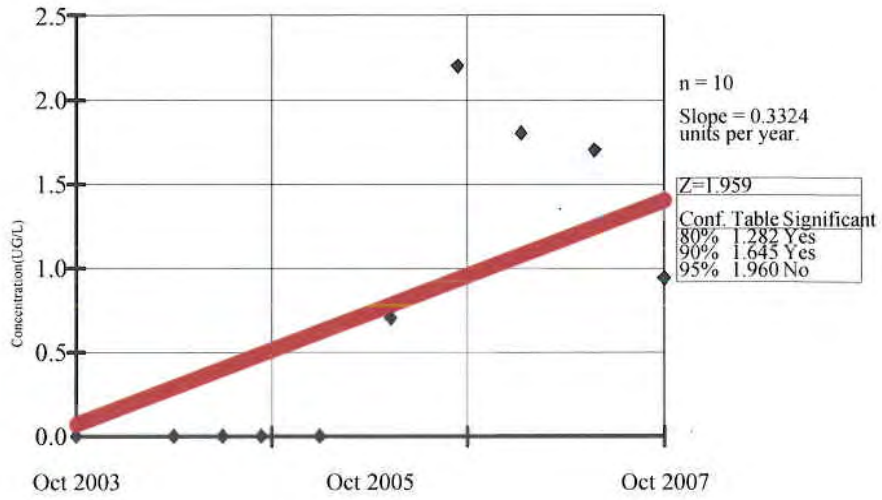
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:40 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

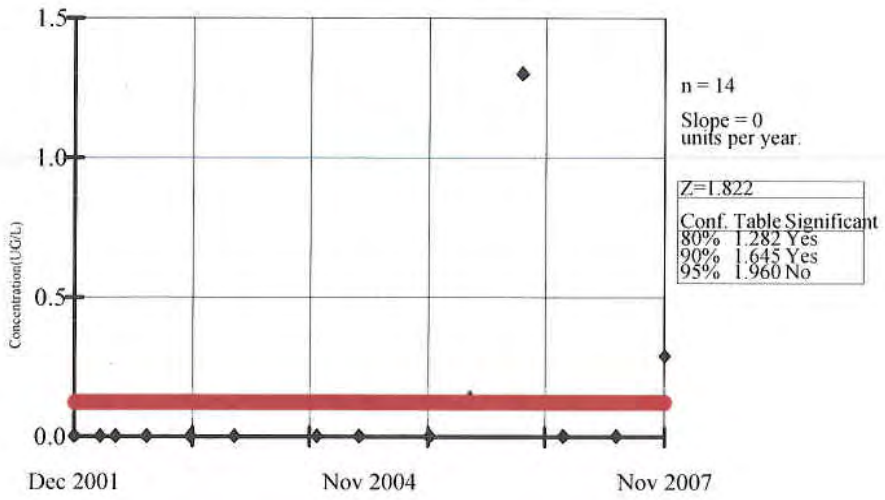
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:40 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

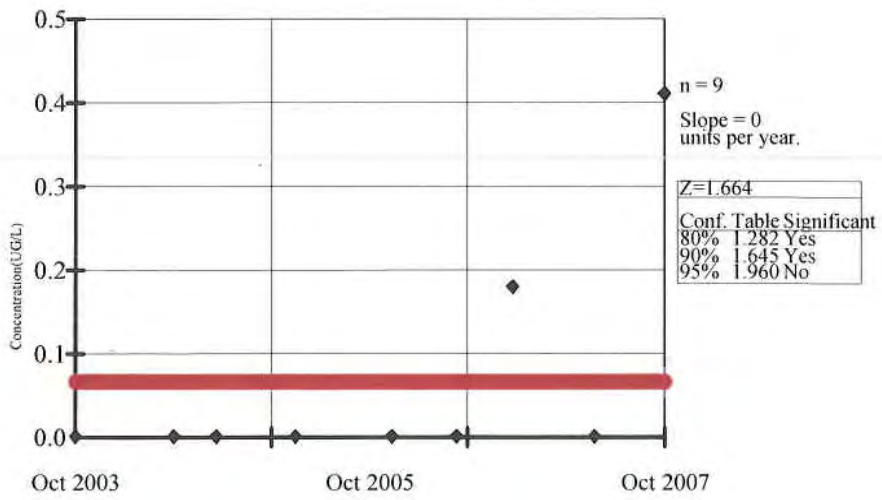
SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:40 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

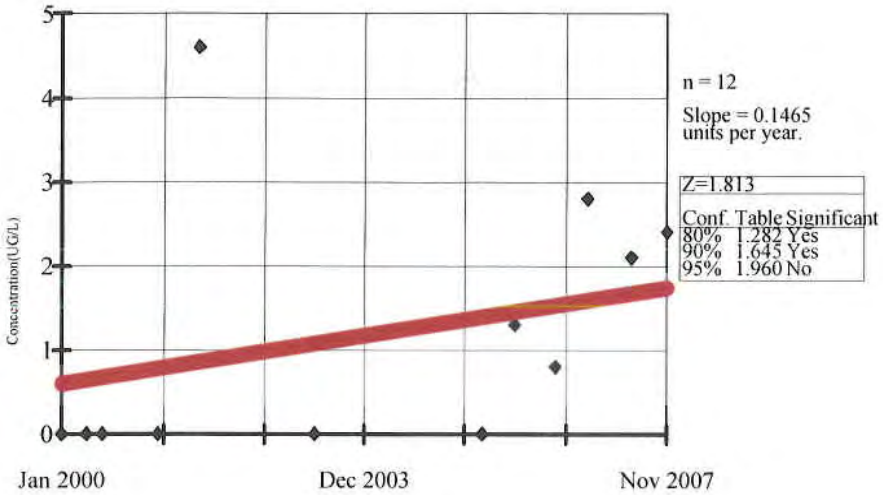
SEASONAL KENDALL SLOPE ESTIMATOR
33703



Constituent: 1,2-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:49 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

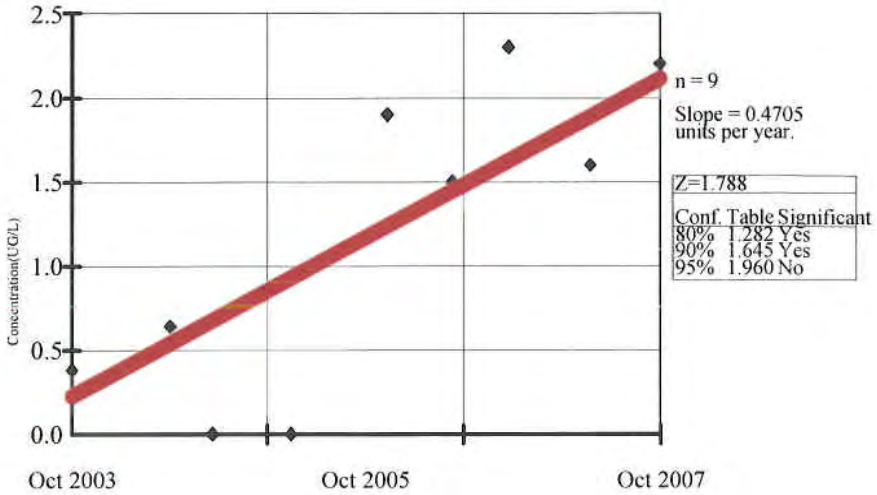
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: 1,2-DICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:51 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

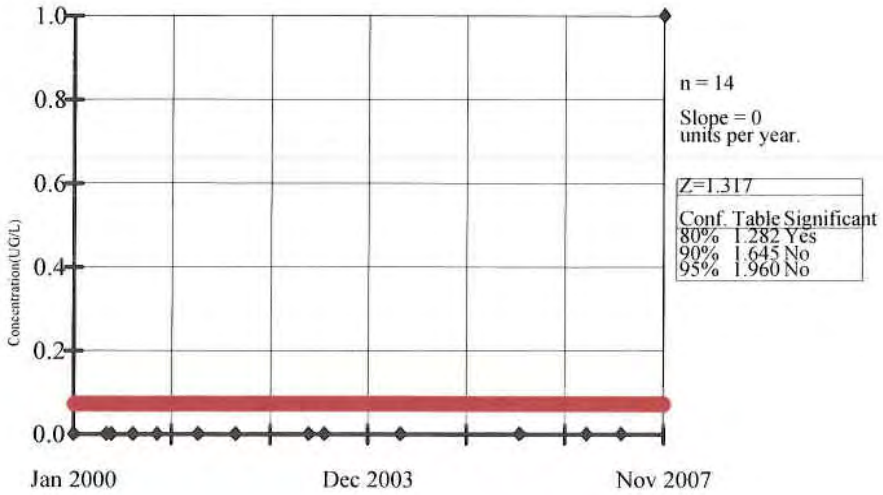
SEASONAL KENDALL SLOPE ESTIMATOR
33703



Constituent: 1,3-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:56 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

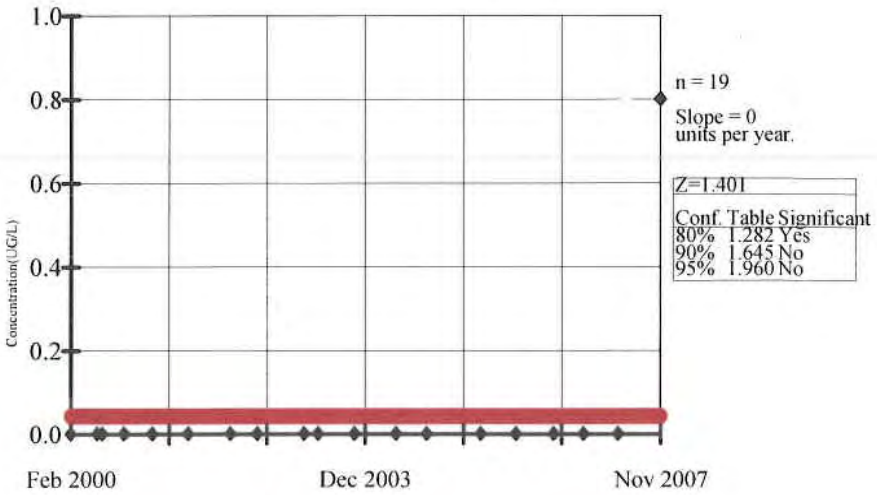
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: 1,3-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:57 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

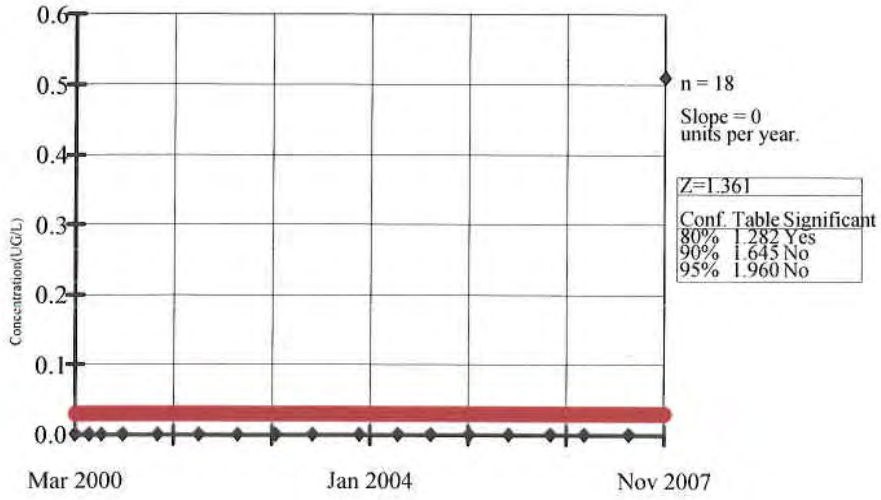
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: 1,3-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:57 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

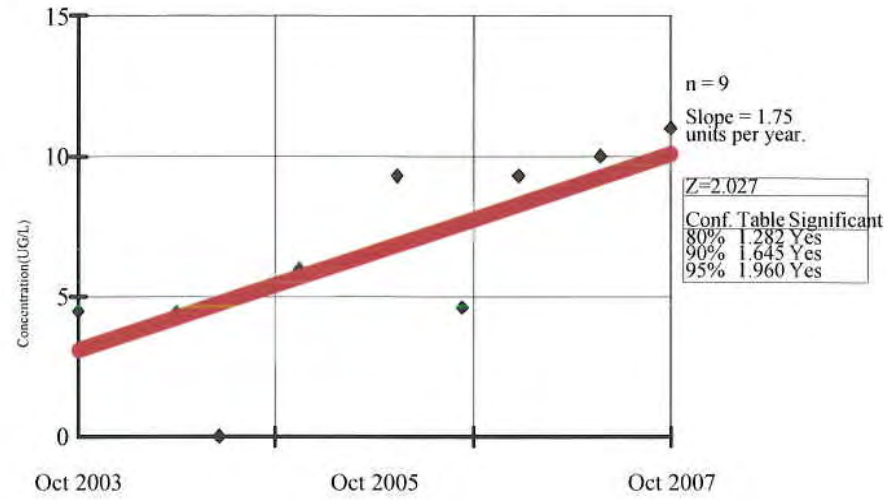
SEASONAL KENDALL SLOPE ESTIMATOR
95099



Constituent: 1,3-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:57 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

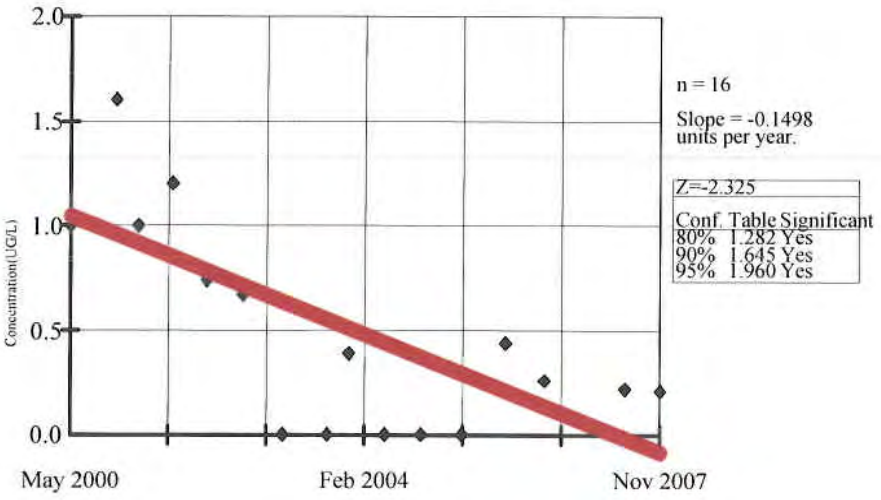
SEASONAL KENDALL SLOPE ESTIMATOR
33703



Constituent: 1,4-DICHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 6:58 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

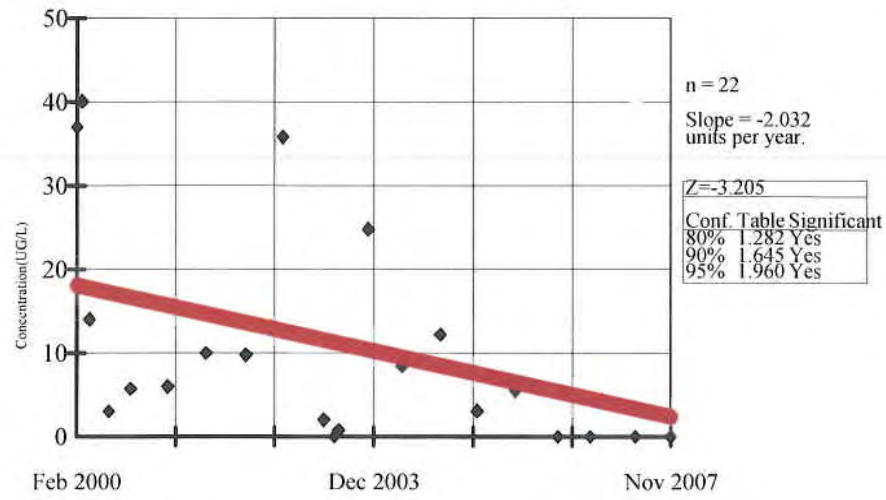
SEASONAL KENDALL SLOPE ESTIMATOR
04091



onstituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:10 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

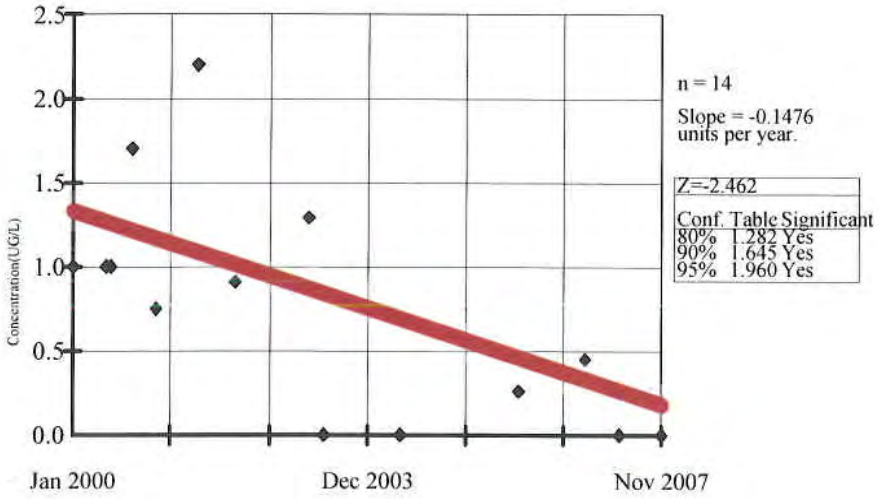
SEASONAL KENDALL SLOPE ESTIMATOR
23296



onstituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:11 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

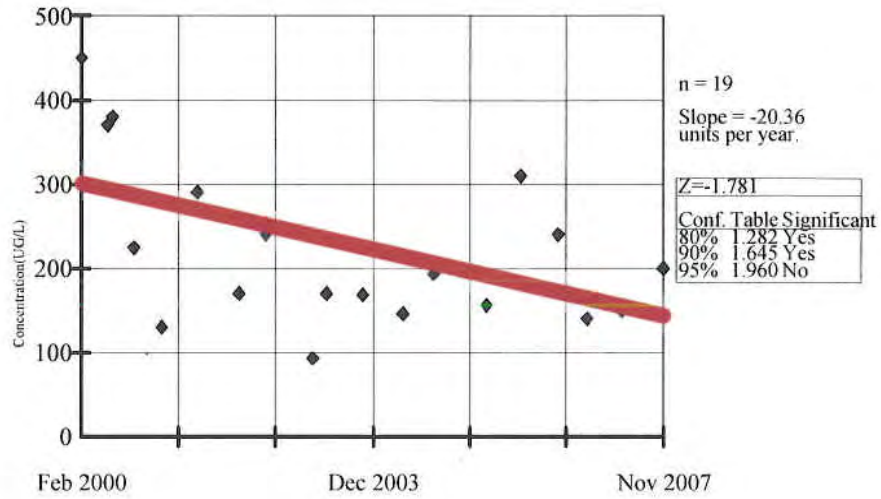
SEASONAL KENDALL SLOPE ESTIMATOR
90299



onstituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN!
Date: 3/22/08, 7:11 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

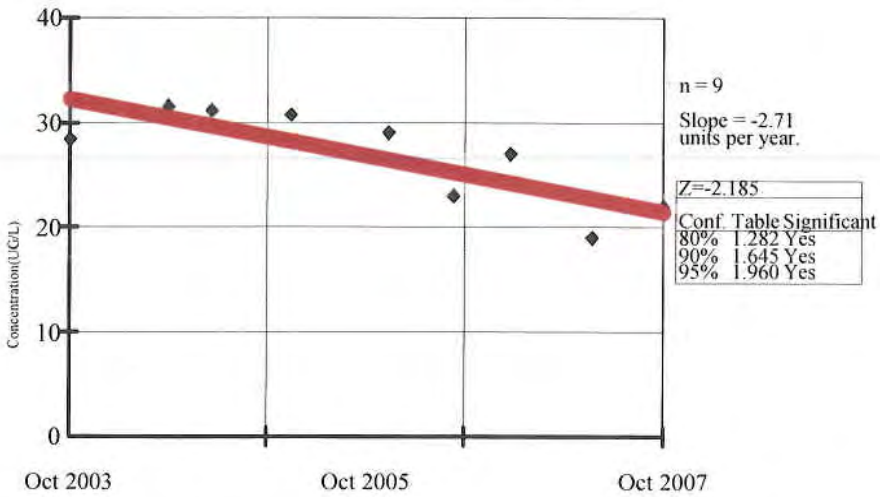
SEASONAL KENDALL SLOPE ESTIMATOR
90399



onstituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN!
Date: 3/22/08, 7:12 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

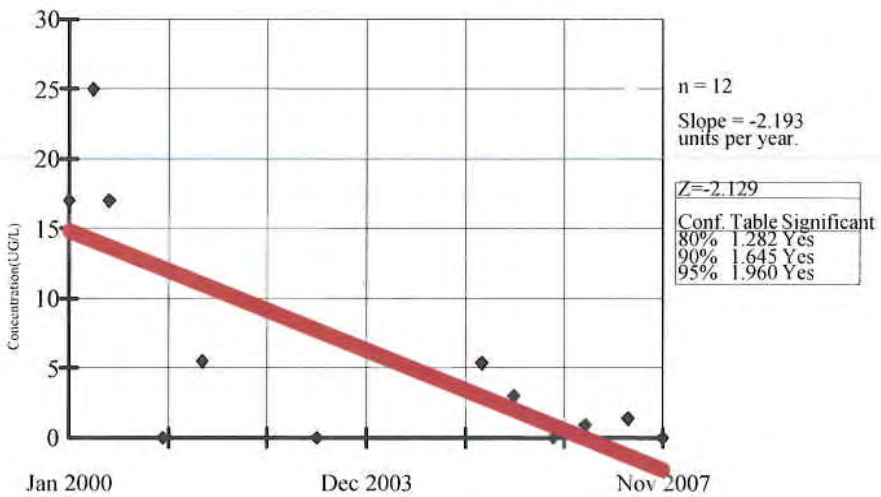
SEASONAL KENDALL SLOPE ESTIMATOR
33703



Constituent: CHLOROBENZENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:13 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

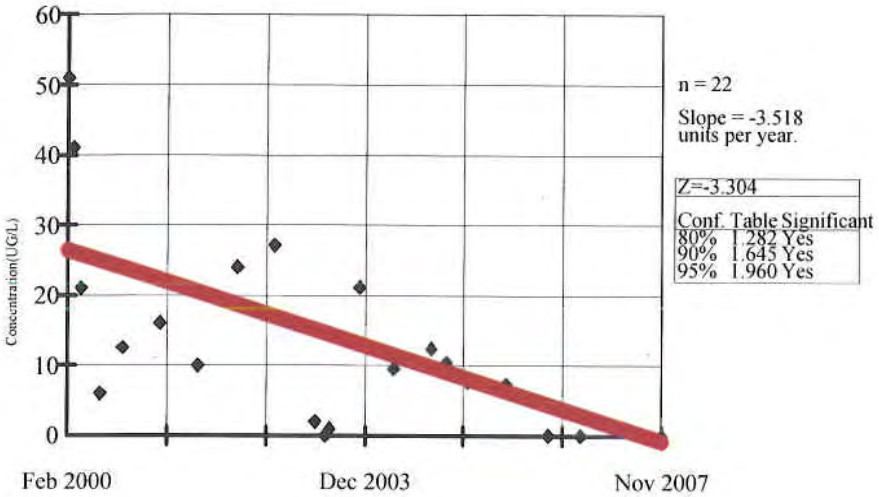
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:18 PM Client: SM Stoller View: _Batch

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

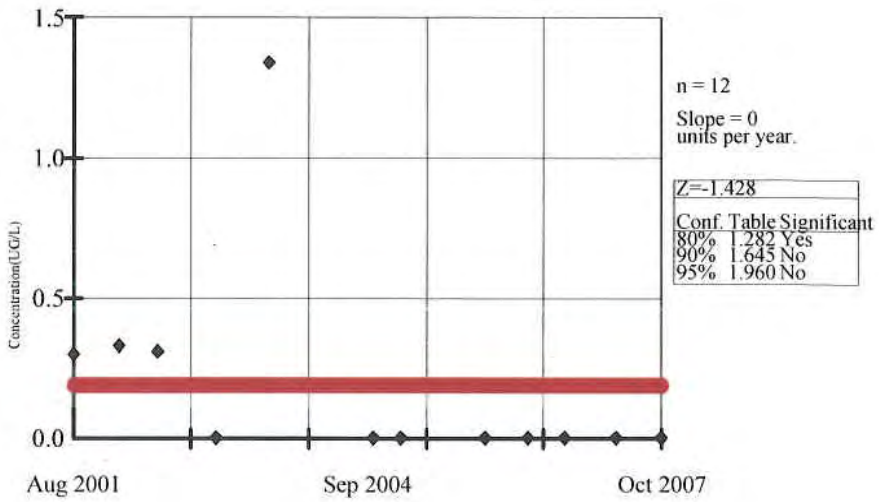
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:18 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

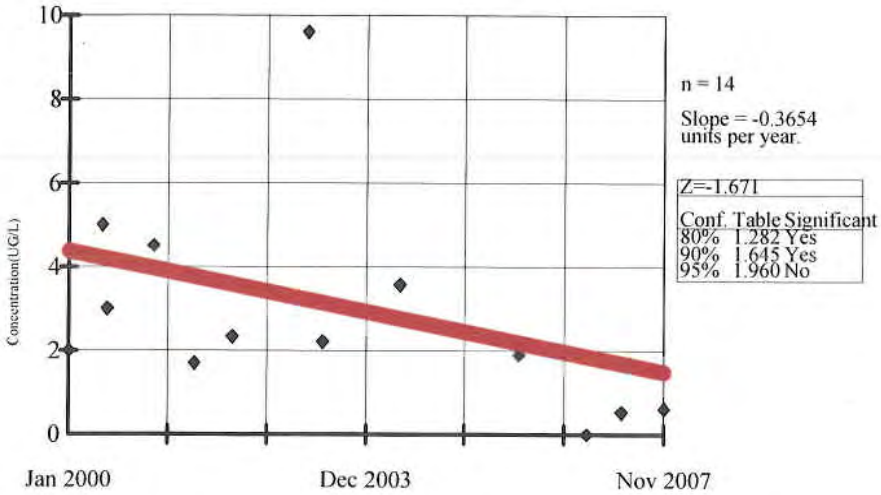
SEASONAL KENDALL SLOPE ESTIMATOR
37705



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:18 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

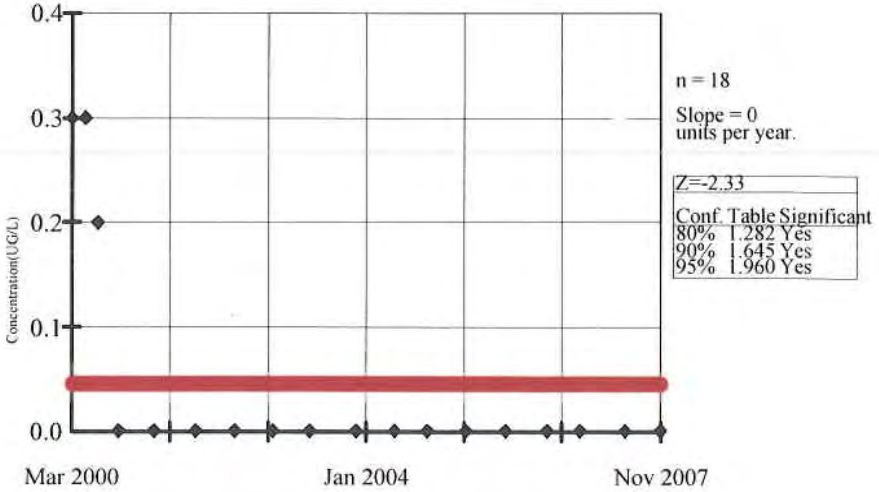
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:19 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

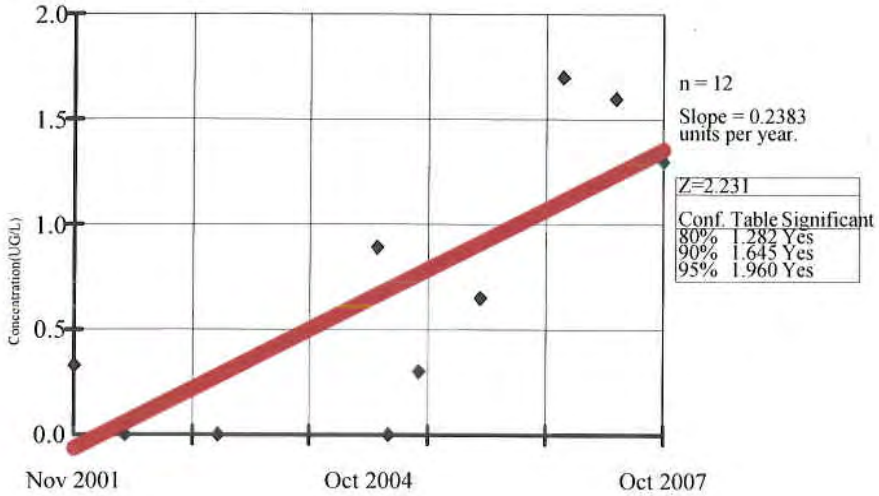
SEASONAL KENDALL SLOPE ESTIMATOR
95099



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:19 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

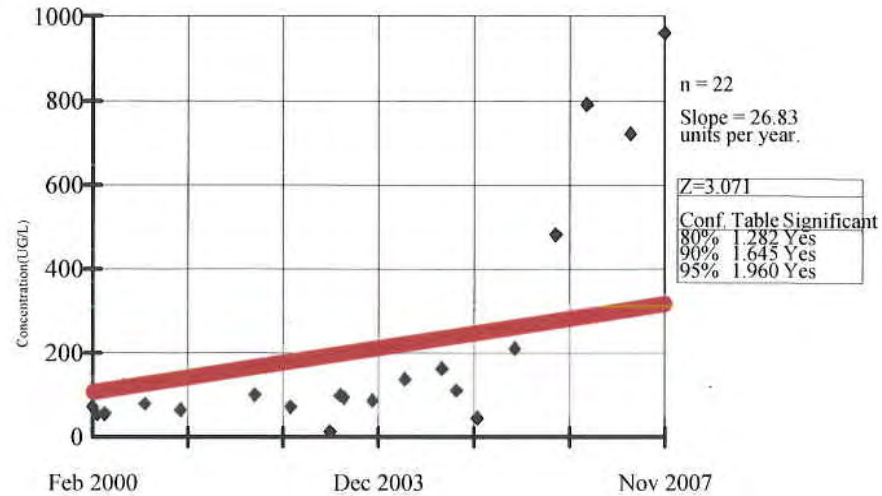
SEASONAL KENDALL SLOPE ESTIMATOR
20705



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:23 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

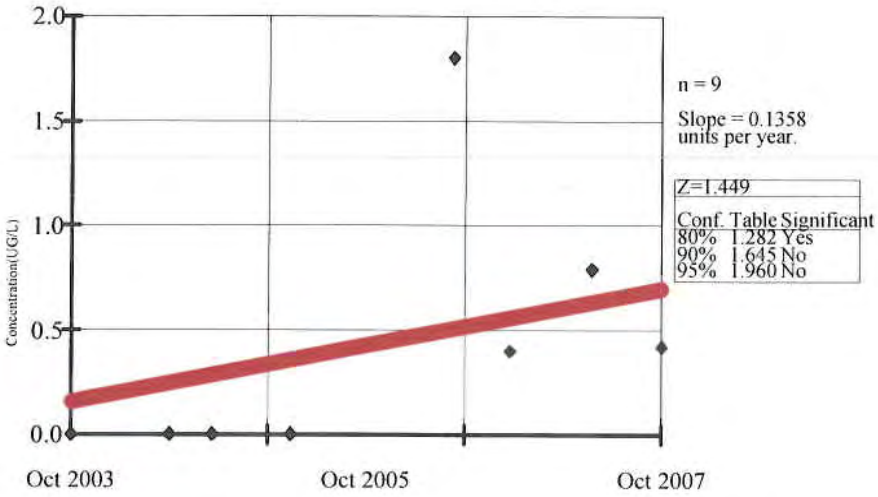
SEASONAL KENDALL SLOPE ESTIMATOR
23296



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:23 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

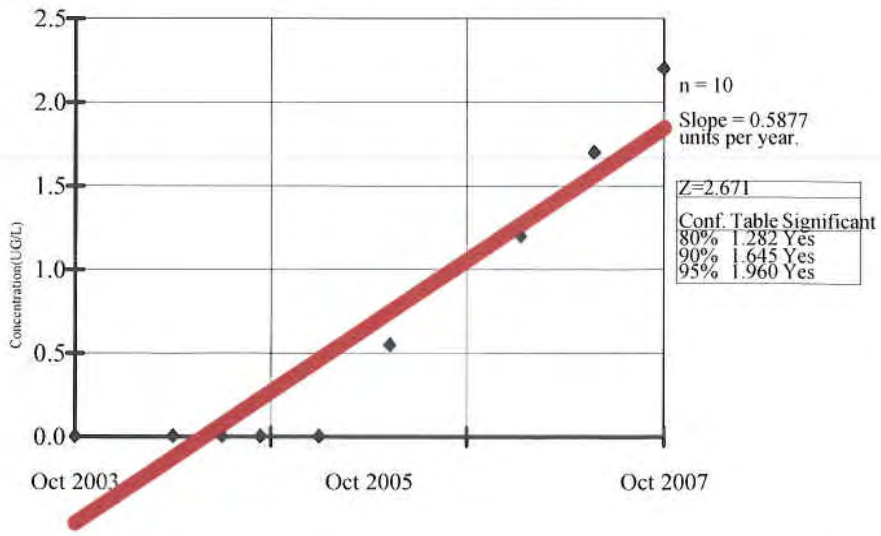
SEASONAL KENDALL SLOPE ESTIMATOR
33703



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:23 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

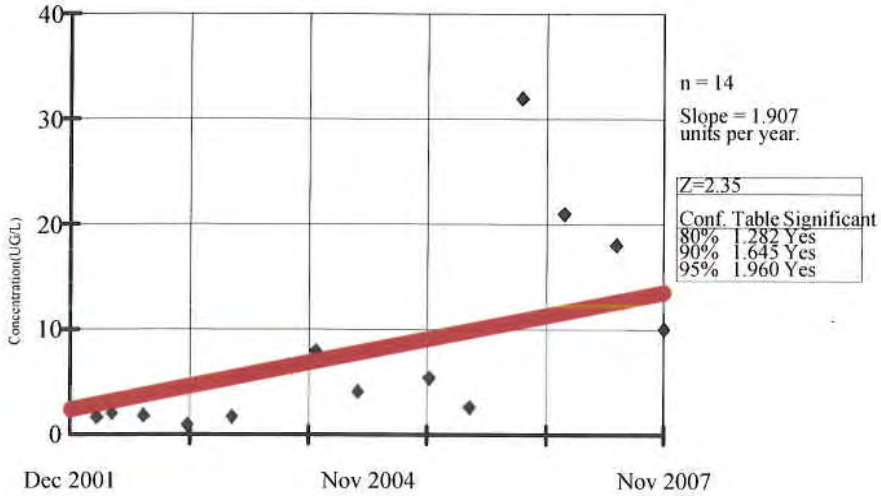
SEASONAL KENDALL SLOPE ESTIMATOR
91203



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:24 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

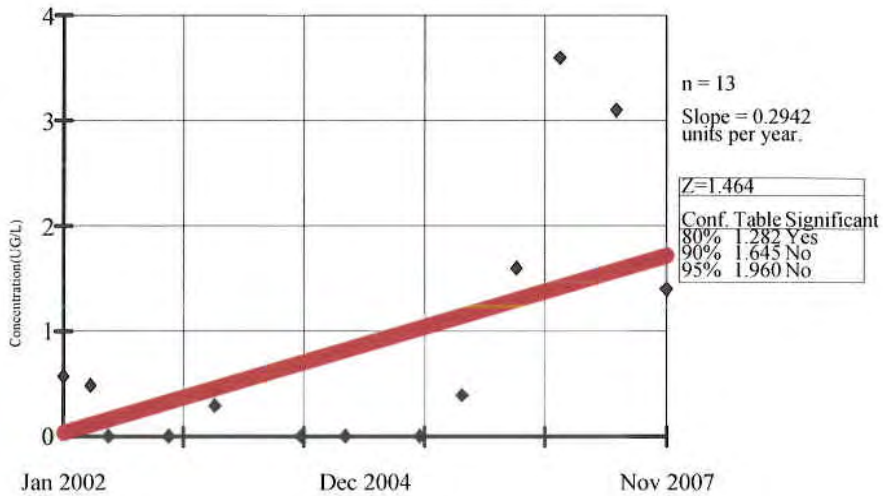
SEASONAL KENDALL SLOPE ESTIMATOR
99305



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:24 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

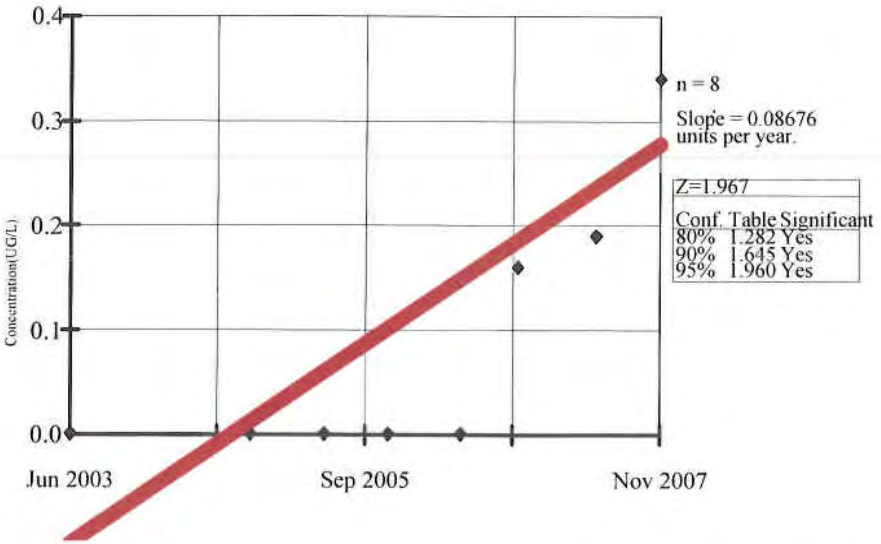
SEASONAL KENDALL SLOPE ESTIMATOR
99405



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:24 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

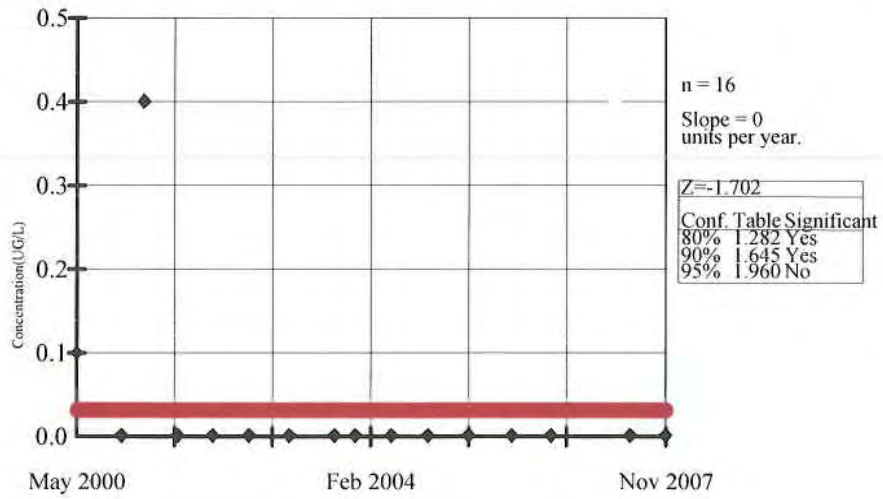
SEASONAL KENDALL SLOPE ESTIMATOR
TH046992



'onstituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:24 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

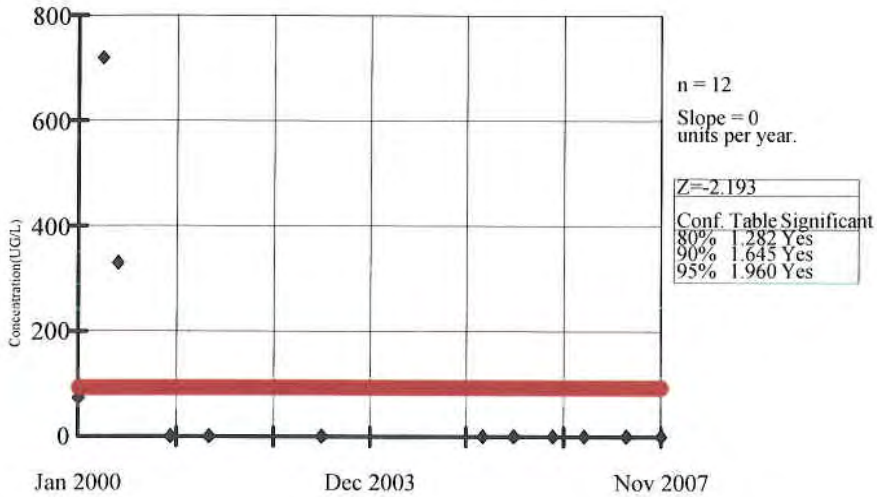
SEASONAL KENDALL SLOPE ESTIMATOR
04091



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:32 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

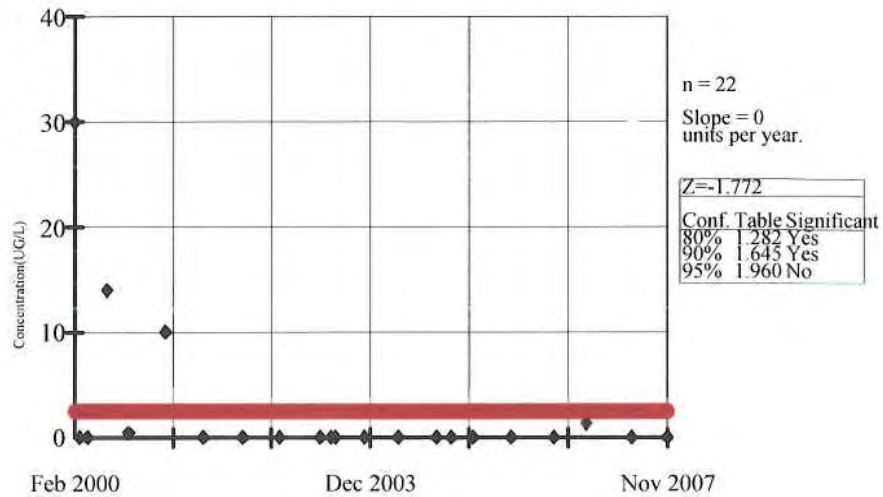
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:32 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

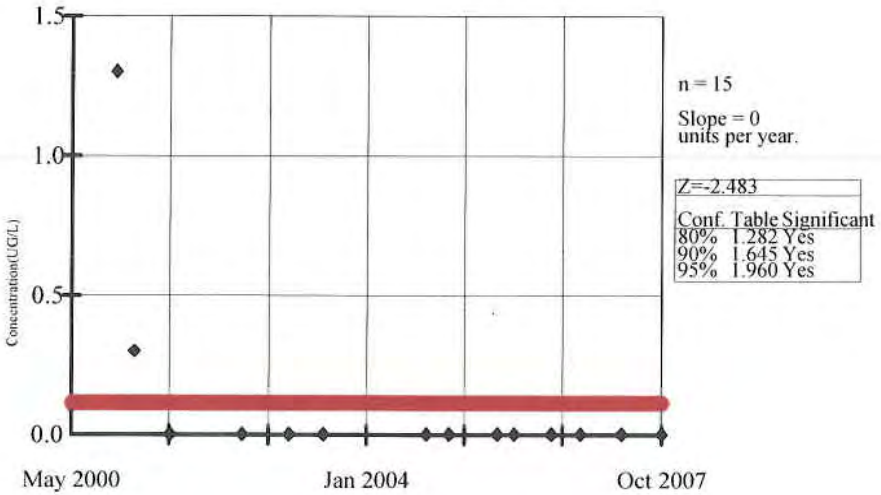
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:32 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

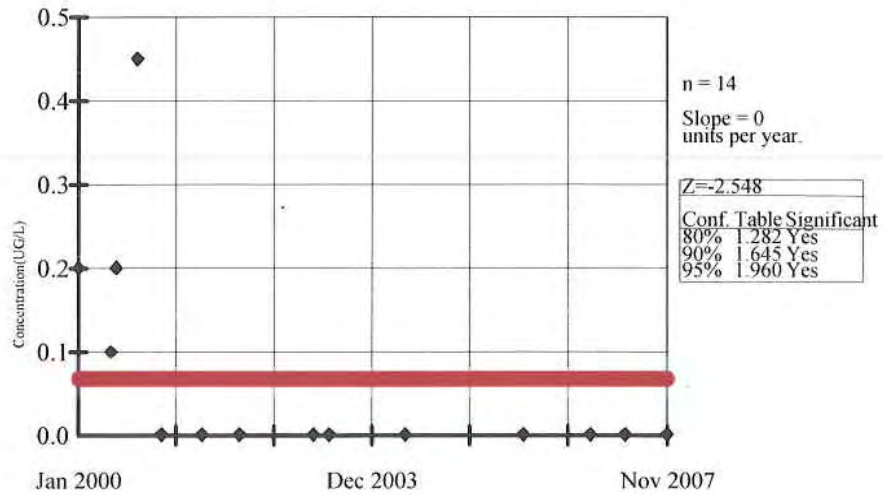
SEASONAL KENDALL SLOPE ESTIMATOR
40305



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:33 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

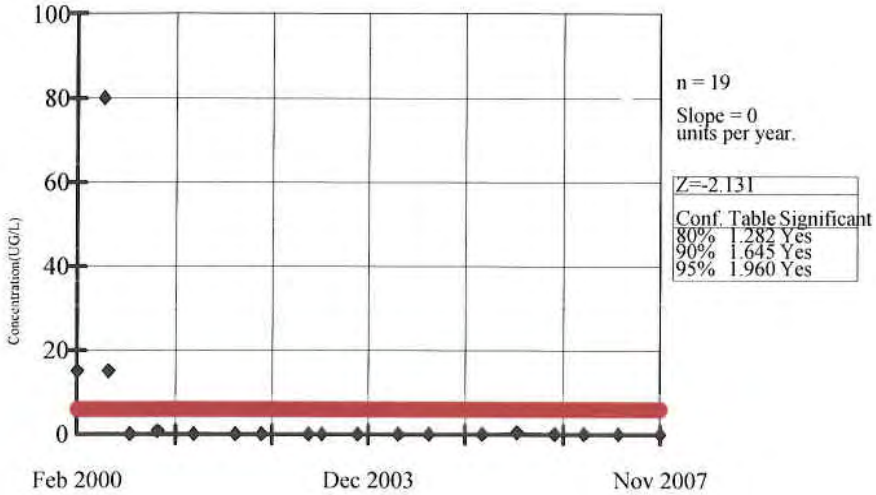
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:33 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

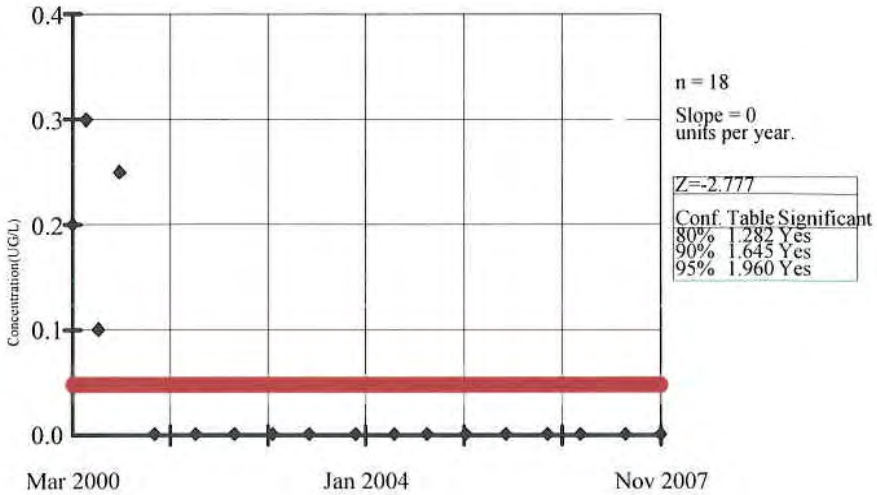
SEASONAL KENDALL SLOPE ESTIMATOR
90399



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:33 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

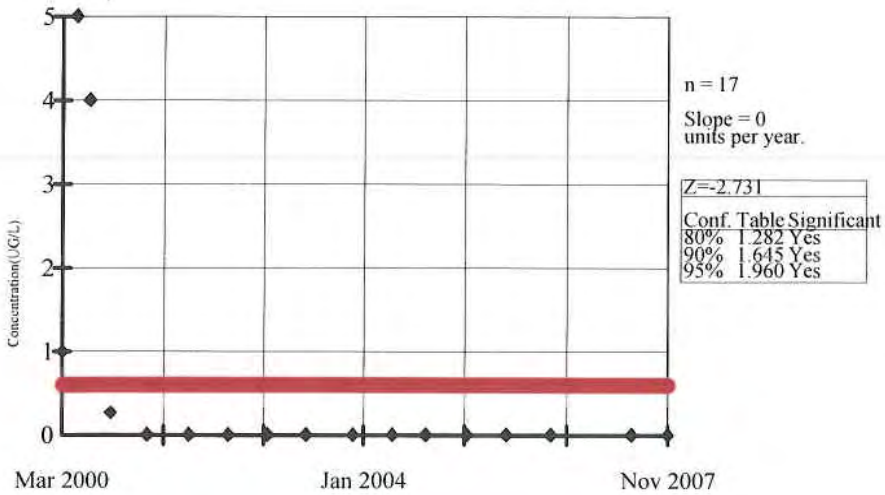
SEASONAL KENDALL SLOPE ESTIMATOR
95099



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:34 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

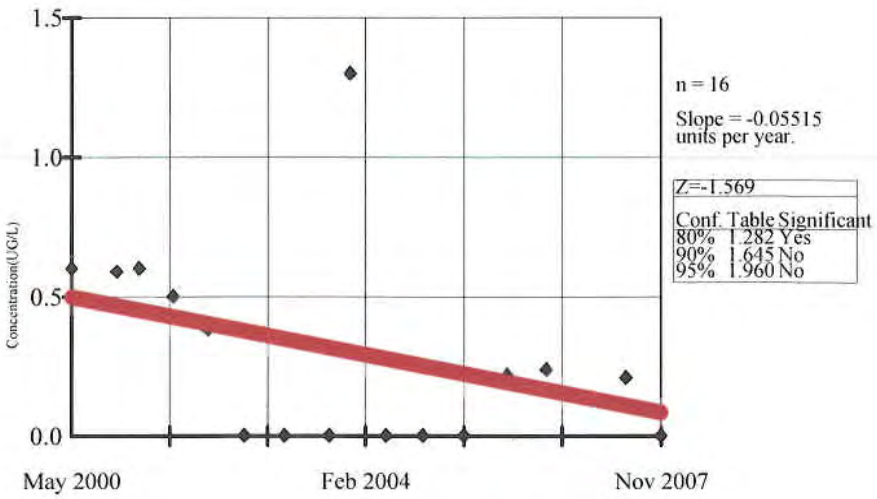
SEASONAL KENDALL SLOPE ESTIMATOR
95199



Constituent: METHYLENE CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:34 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

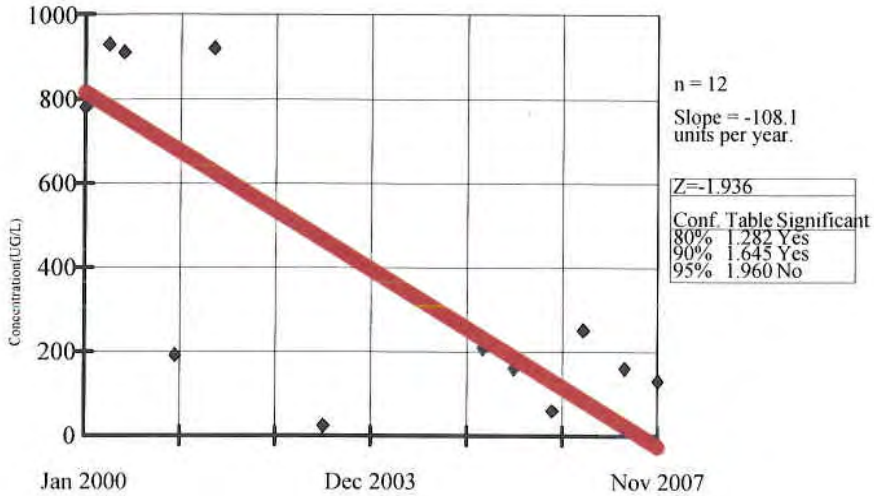
SEASONAL KENDALL SLOPE ESTIMATOR
04091



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

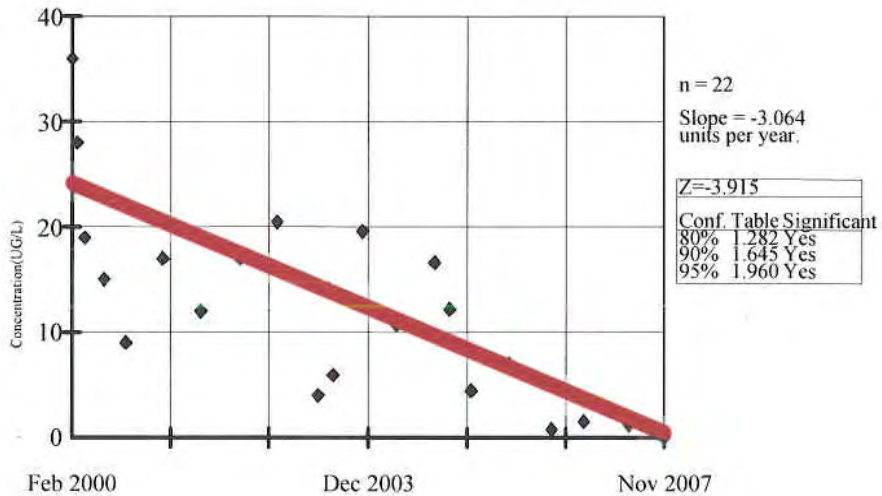
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

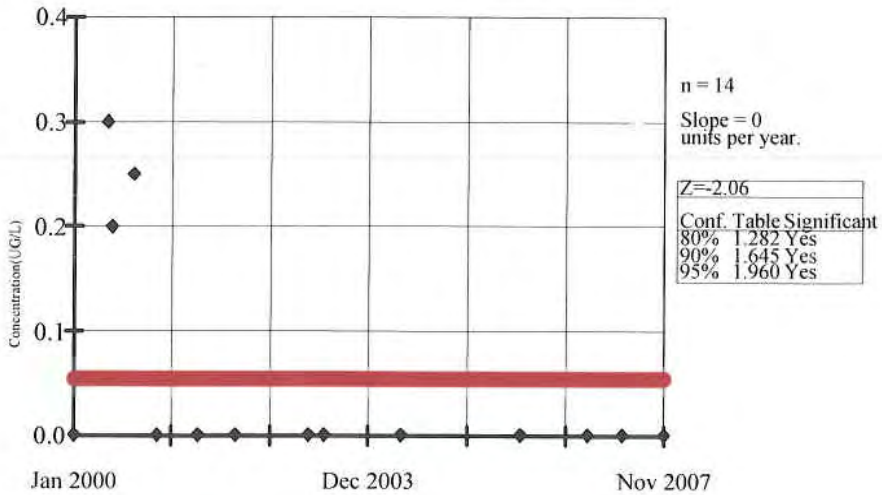
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:42 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

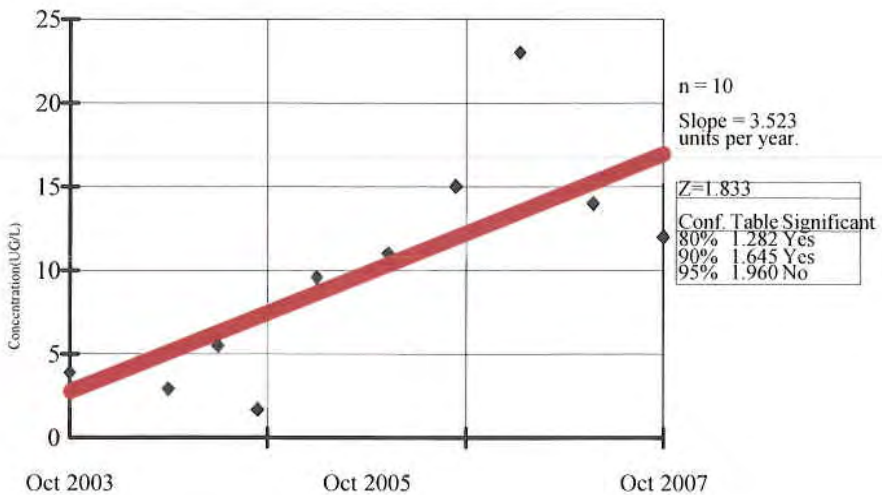
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:43 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

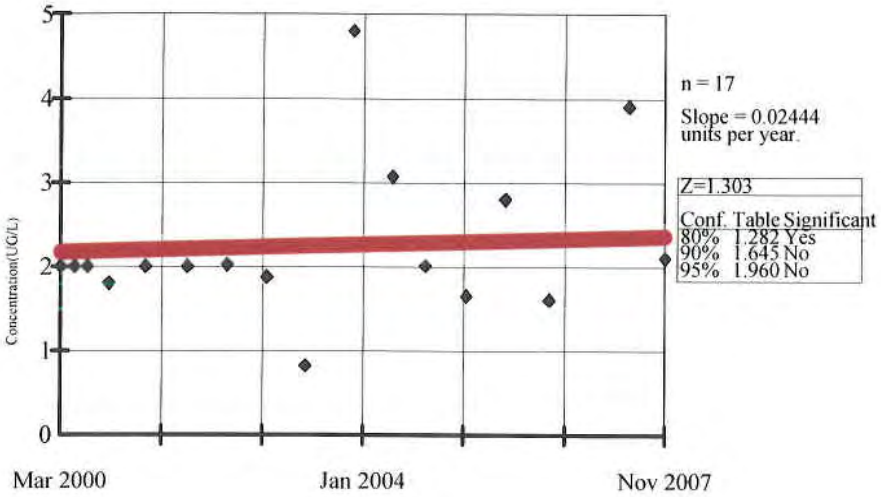
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:43 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

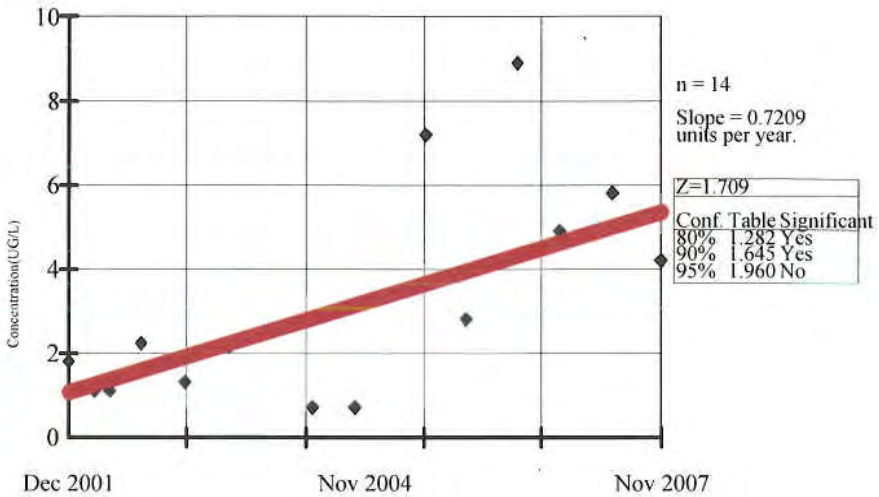
SEASONAL KENDALL SLOPE ESTIMATOR
95199



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:43 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

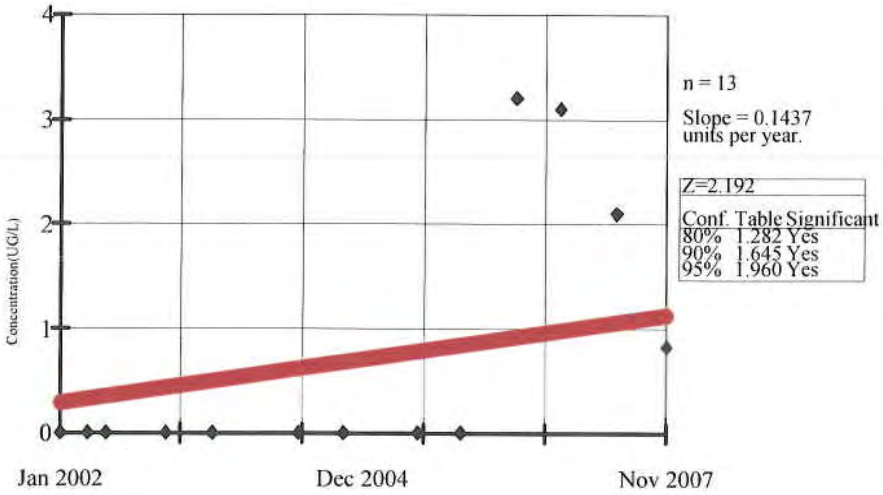
SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:43 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

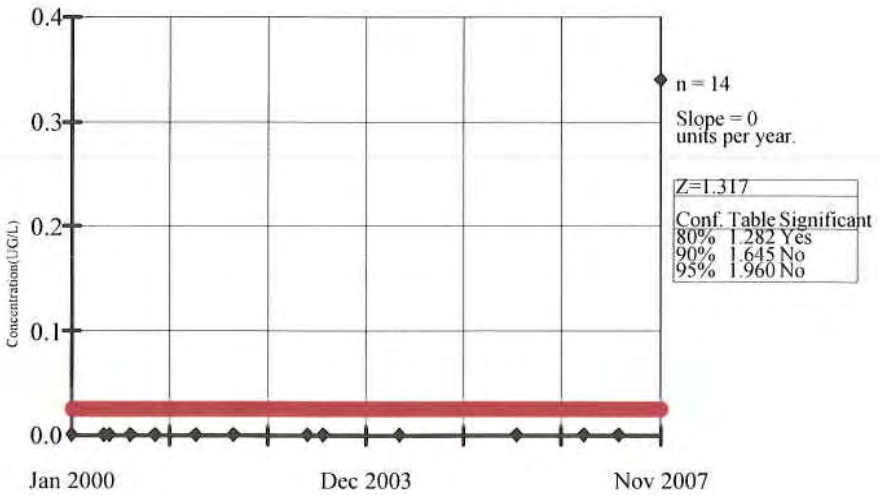
SEASONAL KENDALL SLOPE ESTIMATOR
99405



Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:44 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

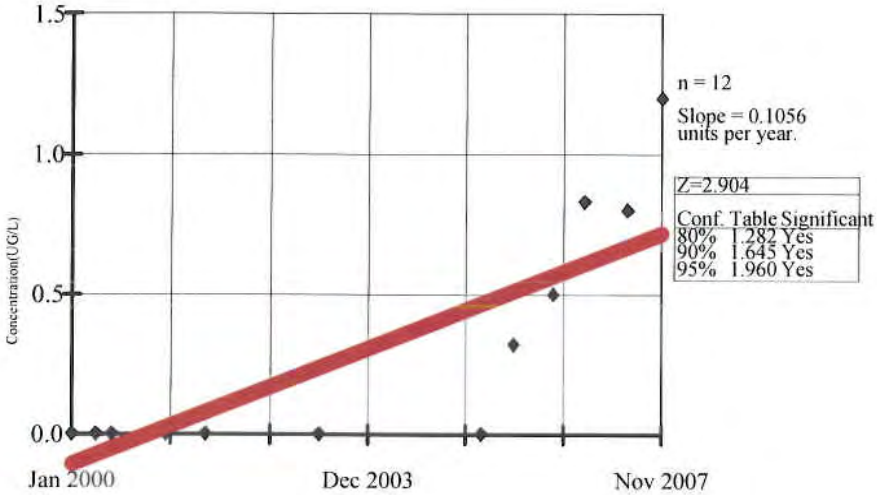
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: TOLUENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:45 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

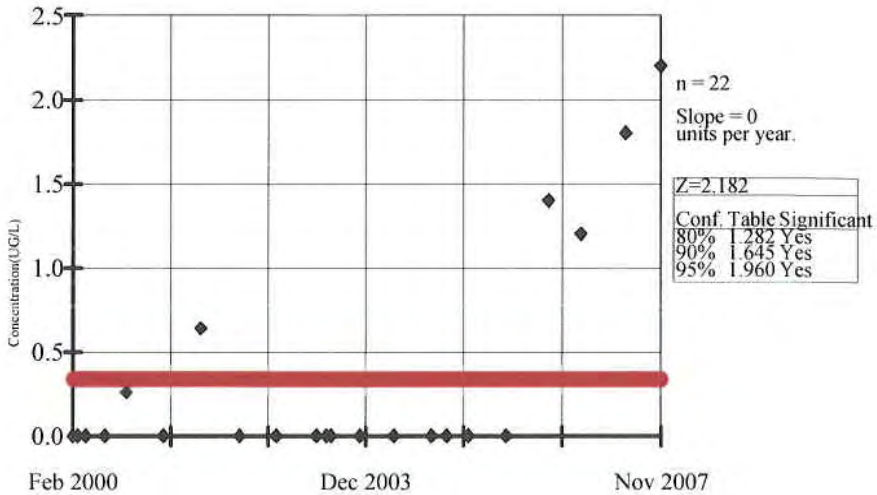
SEASONAL KENDALL SLOPE ESTIMATOR
15699



nstituent: trans-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN
Date: 3/22/08, 7:51 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

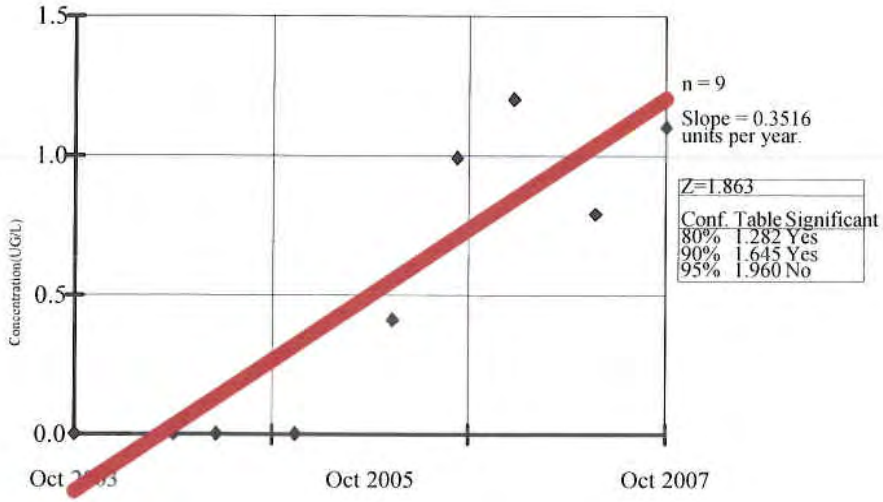
SEASONAL KENDALL SLOPE ESTIMATOR
23296



nstituent: trans-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN
Date: 3/22/08, 7:52 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

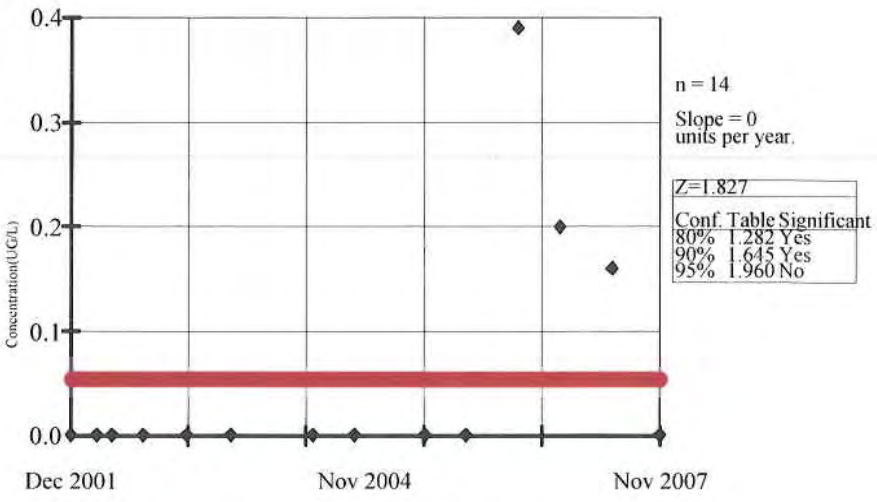
SEASONAL KENDALL SLOPE ESTIMATOR
33703



nstituent: trans-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN
Date: 3/22/08, 7:52 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

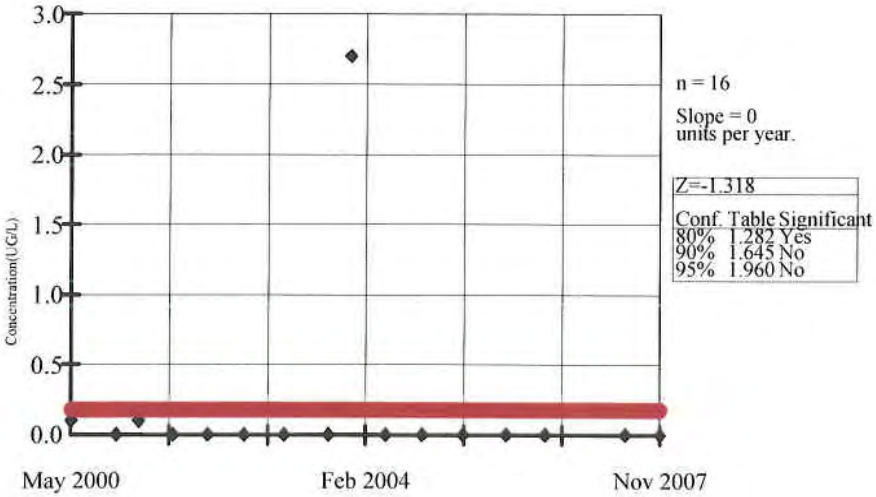
SEASONAL KENDALL SLOPE ESTIMATOR
99305



nstituent: trans-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRAN
Date: 3/22/08, 7:53 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

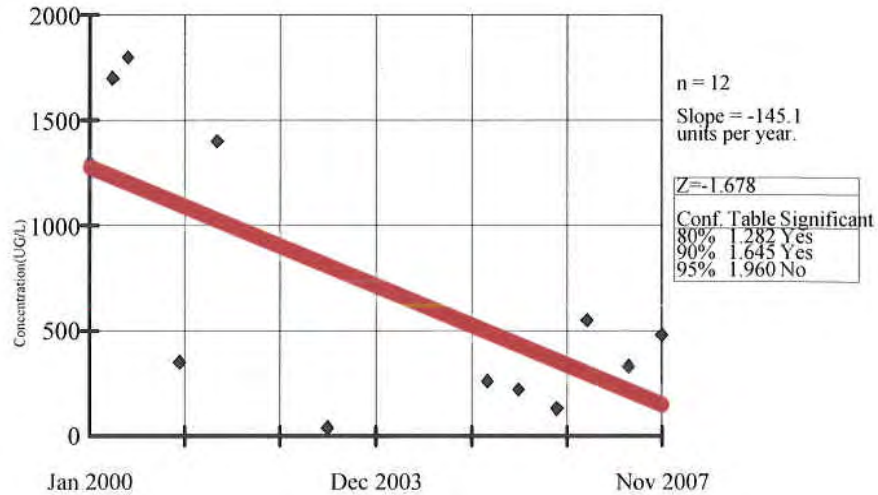
SEASONAL KENDALL SLOPE ESTIMATOR
04091



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:56 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

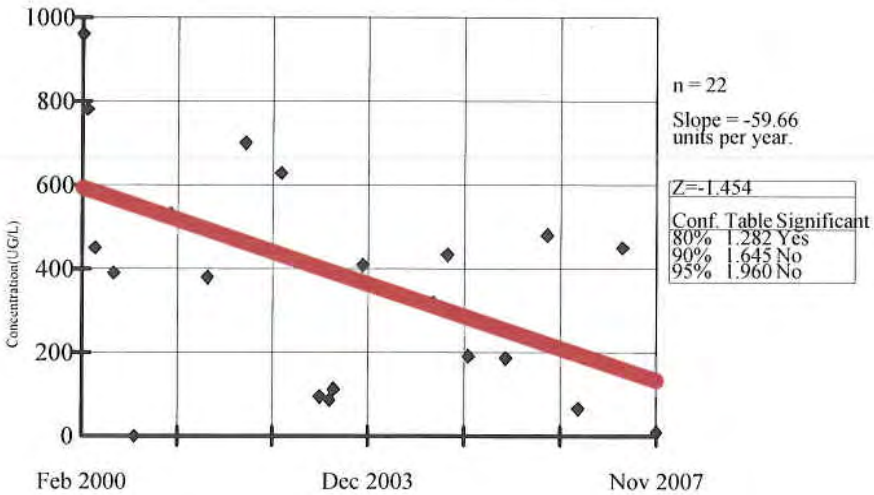
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:56 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

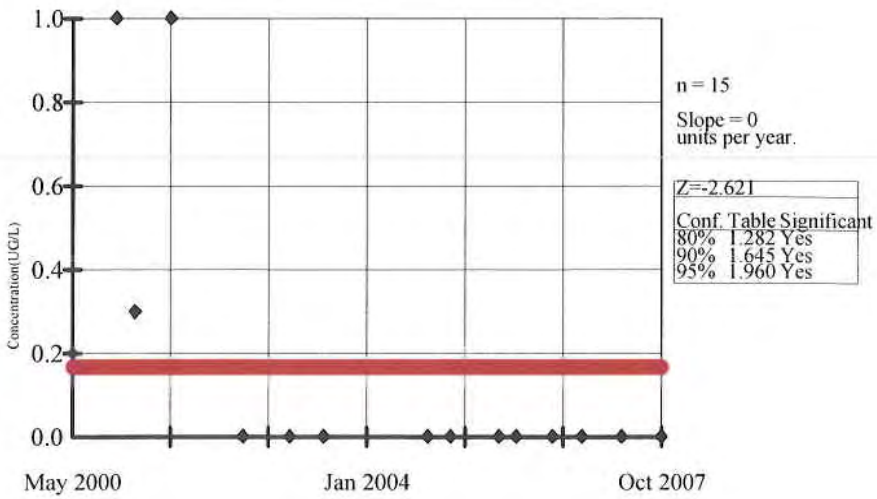
SEASONAL KENDALL SLOPE ESTIMATOR
23296



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:56 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

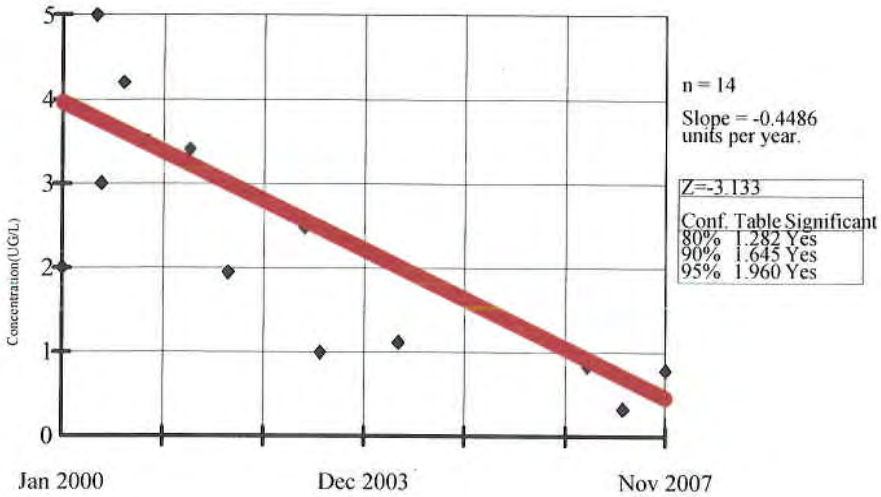
SEASONAL KENDALL SLOPE ESTIMATOR
40305



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:57 PM Client: SM Stoller View: _Batch

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

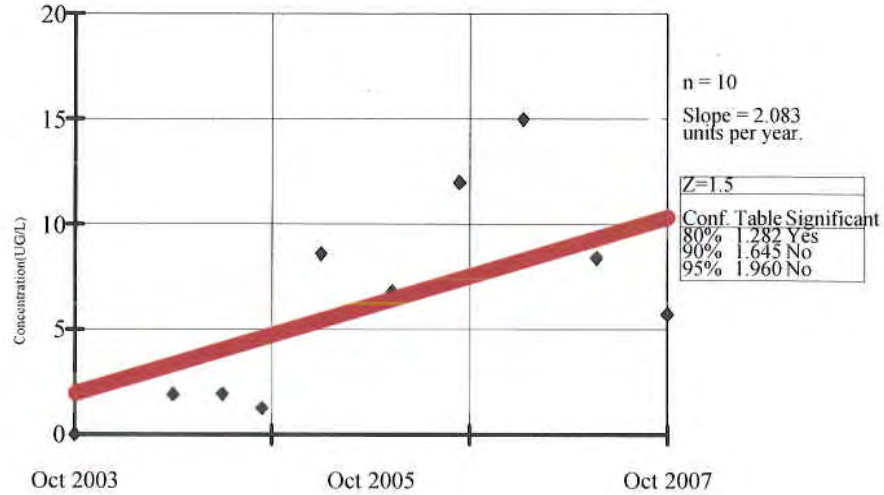
SEASONAL KENDALL SLOPE ESTIMATOR
90299



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:57 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

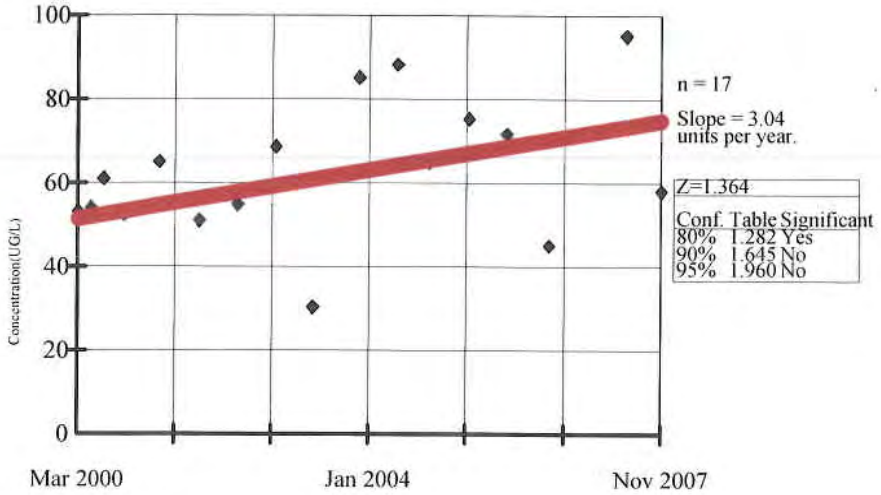
SEASONAL KENDALL SLOPE ESTIMATOR
91203



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:58 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

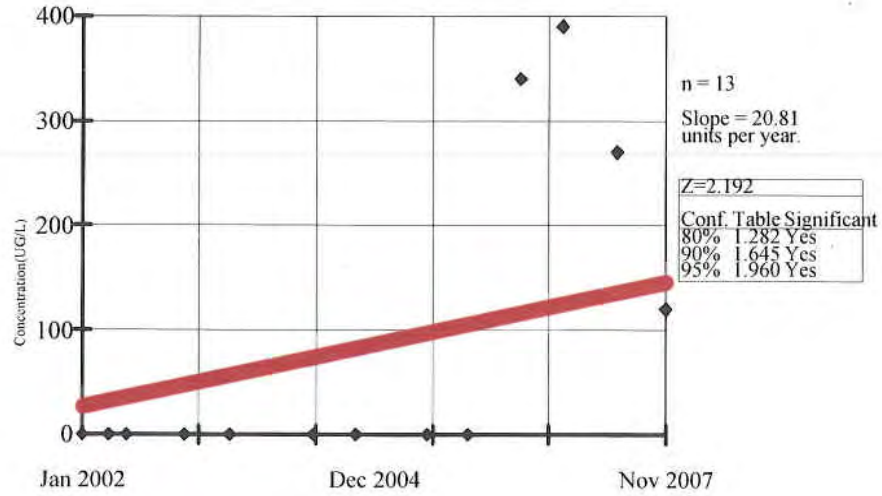
SEASONAL KENDALL SLOPE ESTIMATOR
95199



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:58 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

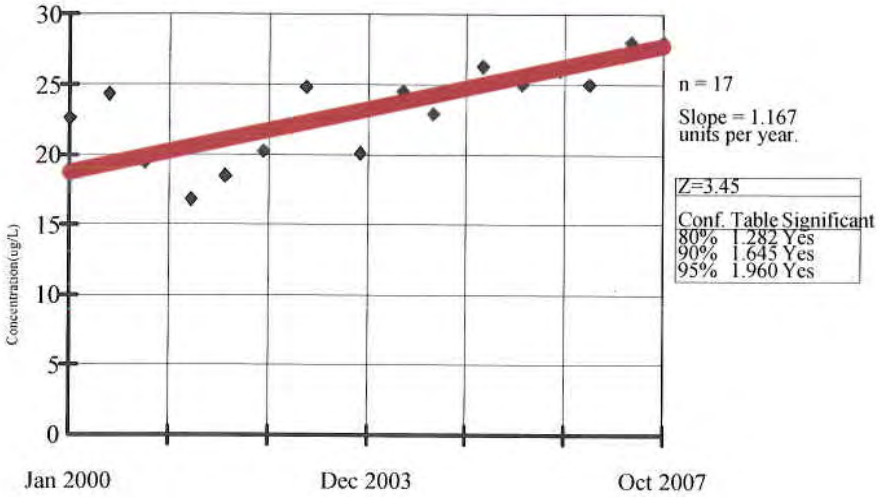
SEASONAL KENDALL SLOPE ESTIMATOR
99405



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:58 PM Client: SM Stoller View: _Batch

v 8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

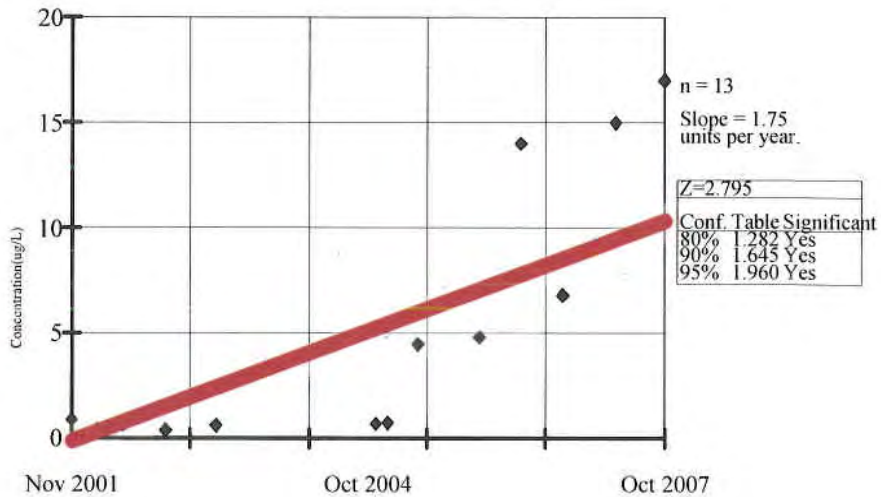
SEASONAL KENDALL SLOPE ESTIMATOR
00797



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:58 PM Client: SM Stoller View: _Batch_

v 8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

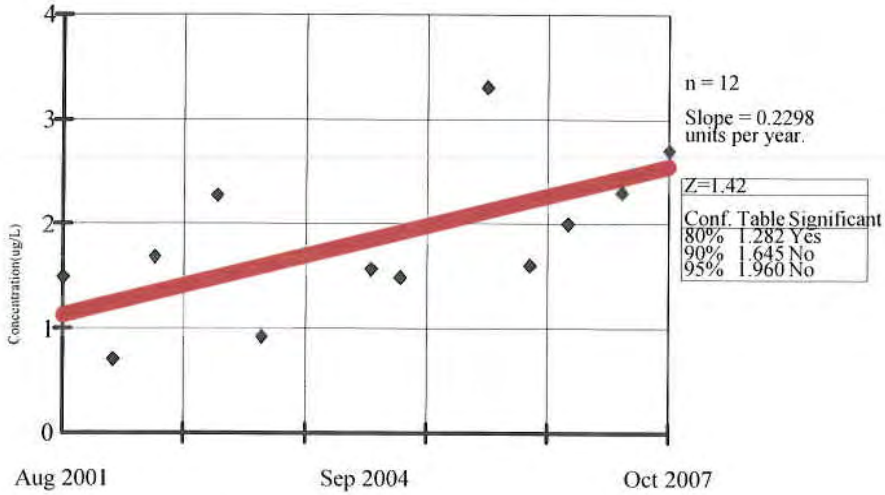
SEASONAL KENDALL SLOPE ESTIMATOR
20705



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:59 PM Client: SM Stoller View: _Batch_

v 8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

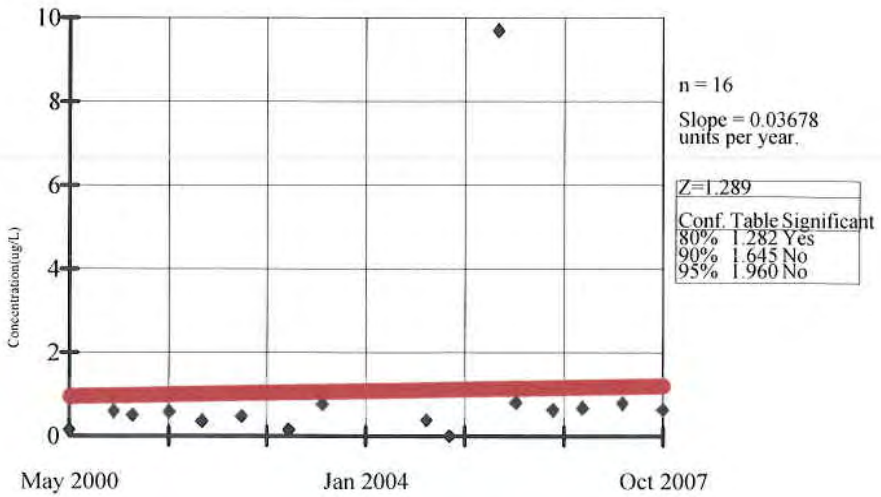
SEASONAL KENDALL SLOPE ESTIMATOR
37505



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:59 PM Client: SM Stoller View: _Batch_

v 8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

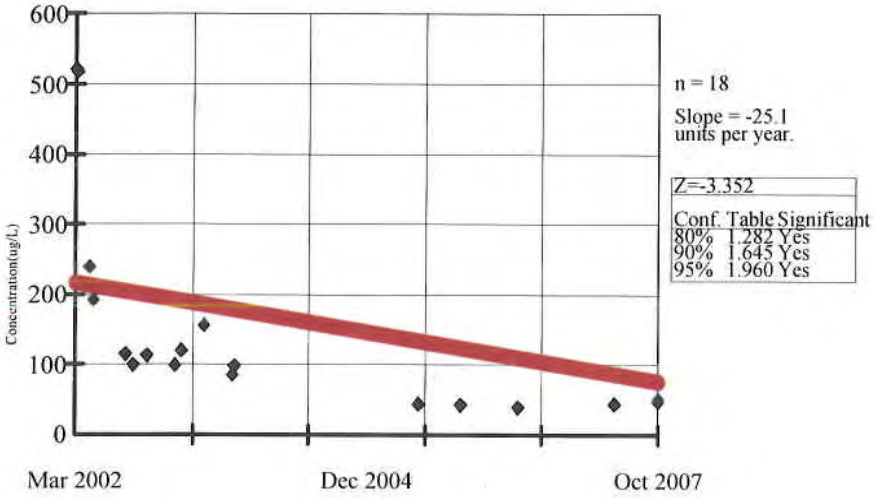
SEASONAL KENDALL SLOPE ESTIMATOR
40305



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 7:59 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

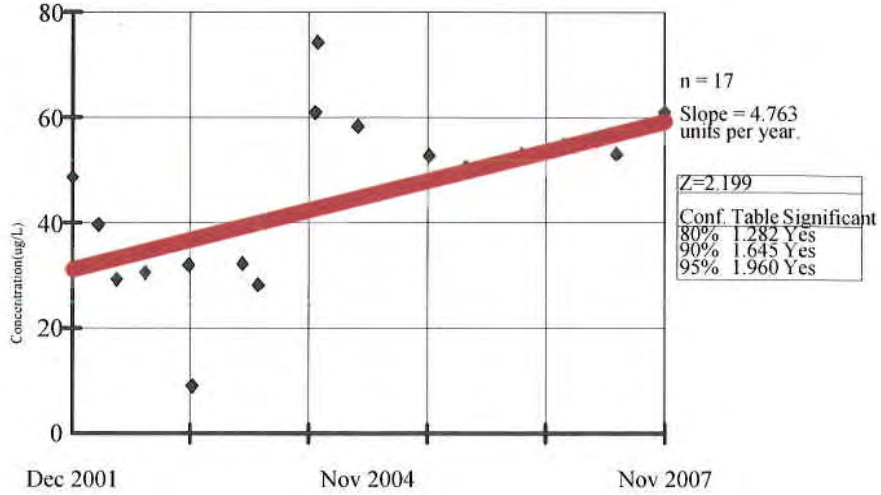
SEASONAL KENDALL SLOPE ESTIMATOR
88104



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:00 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

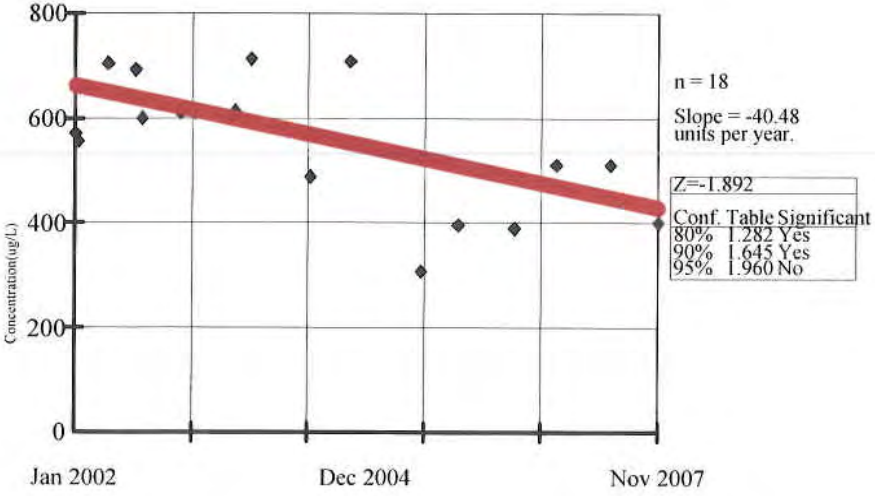
SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:00 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

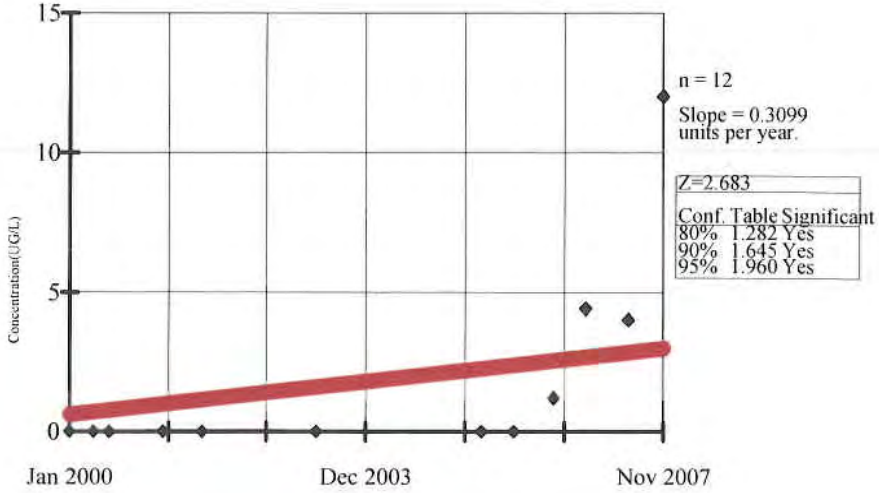
SEASONAL KENDALL SLOPE ESTIMATOR
99405



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:00 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

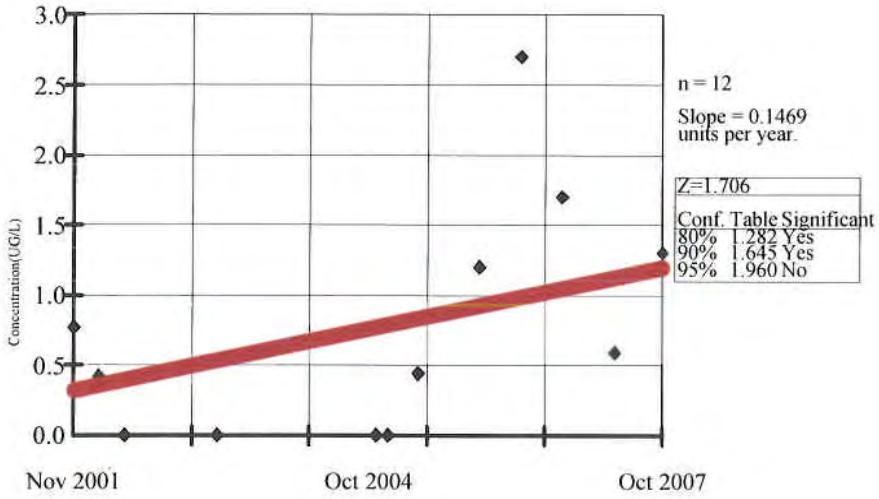
SEASONAL KENDALL SLOPE ESTIMATOR
15699



Constituent: VINYL CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:01 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

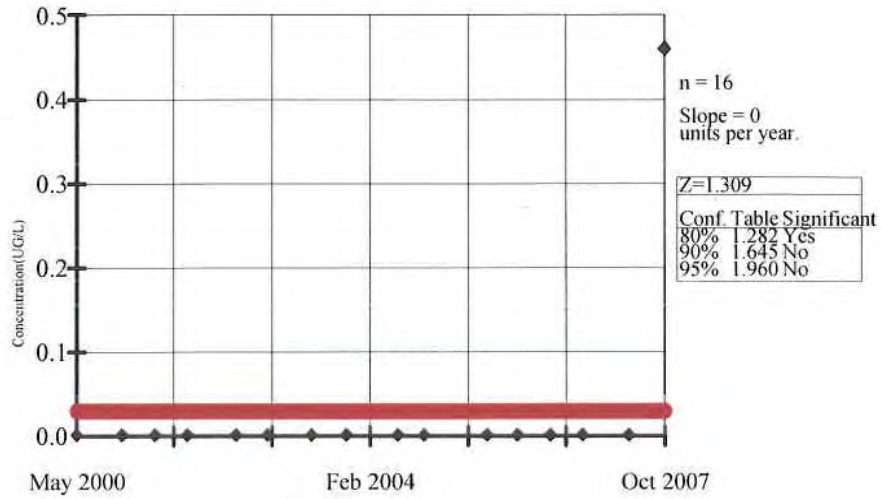
SEASONAL KENDALL SLOPE ESTIMATOR
20705



Constituent: VINYL CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:01 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

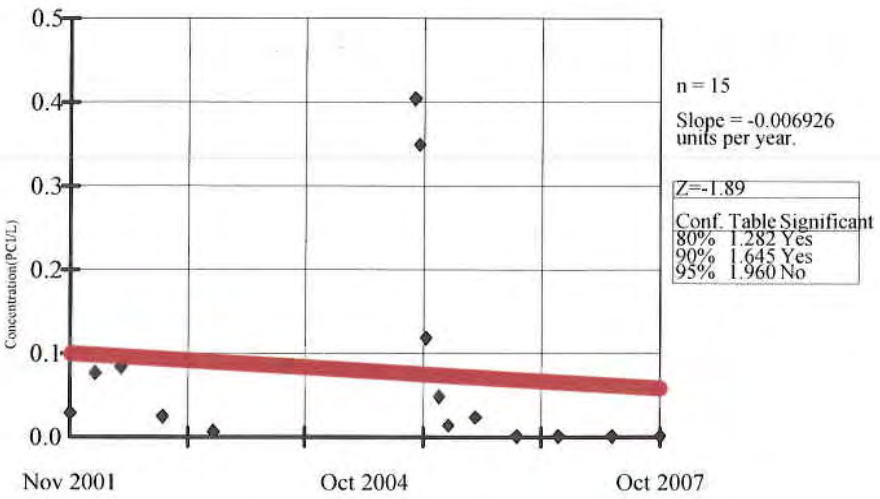
SEASONAL KENDALL SLOPE ESTIMATOR
52505



Constituent: VINYL CHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:02 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

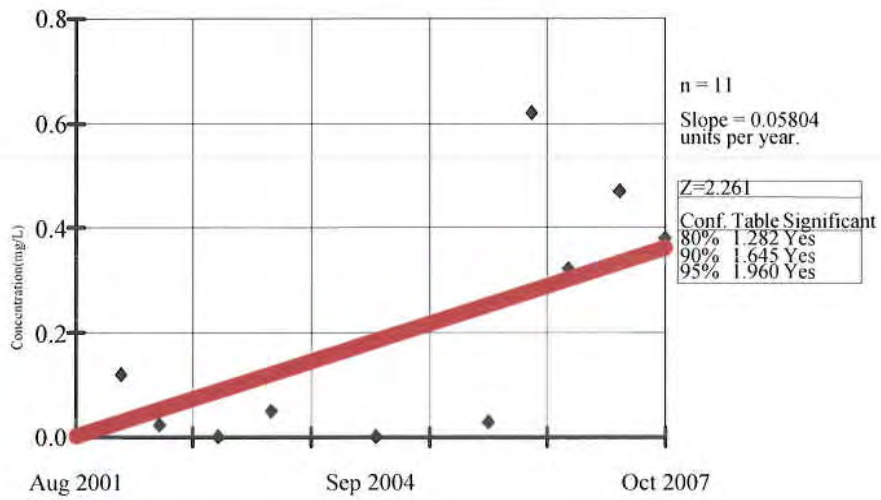
SEASONAL KENDALL SLOPE ESTIMATOR
20705



Constituent: AMERICIUM-241 (PCI/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:08 PM Client: SM Stoller View: _Batch_

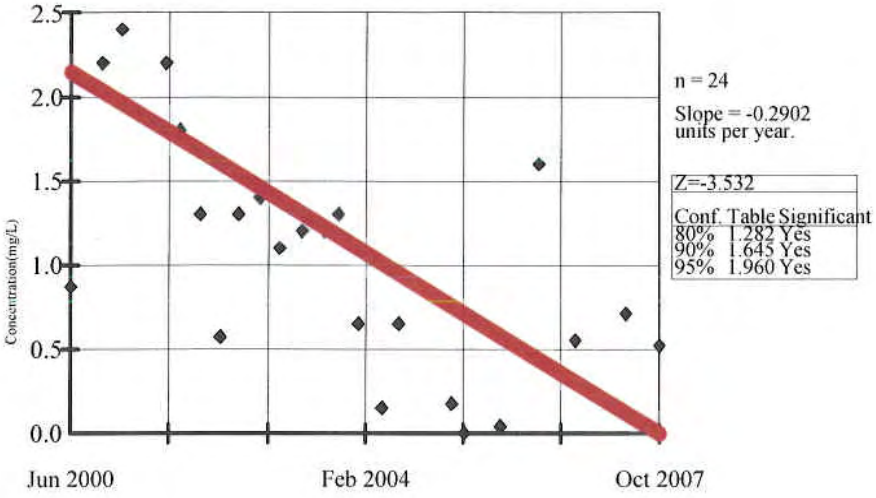
v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
37705



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:13 PM Client: SM Stoller View: _Batch_

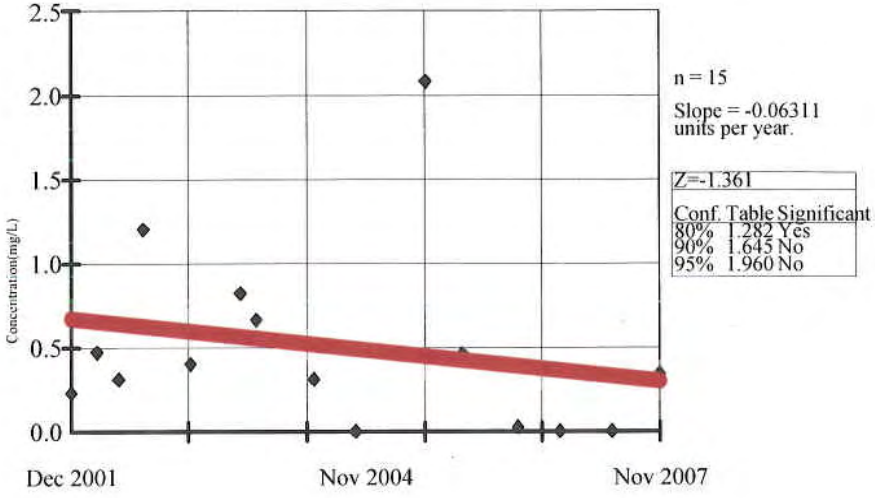
SEASONAL KENDALL SLOPE ESTIMATOR
70099



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:13 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
99305



Constituent: Nitrate + Nitrite as Nitrogen (mg/L) Facility: Rocky Flats Site Data File: RFLMA S wells TRANS
Date: 3/22/08, 8:14 PM Client: SM Stoller View: _Batch_

Seasonal Kendall Summary

Date: 3/24/08, 8:53 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,1-TRICHLOROETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	**15699**	**12**	**-1.838**	**-1.331**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,1,1-TRICHLOROETHANE (UG/L)	20205	12	0	-1.171	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	23296	22	0	-0.5862	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	90399	19	0	-1.121	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	**91203**	**10**	**1.1**	**1.709**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,1,1-TRICHLOROETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,1,1-TRICHLOROETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	TH046992	8	-0.0294	-0.541	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,2,2-TETRACHLOROETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,2-TRICHLOROETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	15699	12	-7.711	-0.9037	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	**20505**	**9**	**0.09541**	**1.449**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,1-DICHLOROETHENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	**23296**	**22**	**0**	**2.094**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
1,1-DICHLOROETHENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	**90399**	**19**	**0.05869**	**1.355**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,1-DICHLOROETHENE (UG/L)	**91203**	**10**	**0.3324**	**1.959**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,1-DICHLOROETHENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1-DICHLOROETHENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	95199	17	-0.00267	-0.4902	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	**99305**	**14**	**0**	**1.822**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,1-DICHLOROETHENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	TH046992	8	-0.3907	-0.2402	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,2-Dibromo-3-chloropropane (ug/L)	797	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-Dibromo-3-chloropropane (ug/L)	4091	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	11502	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	15699	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	20205	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	20505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	20705	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	23296	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	30002	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	33703	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	37405	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	37505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	37705	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	40305	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	52505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	88104	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	90299	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	90399	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	91203	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	91305	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	95099	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	95199	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	99305	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	99405	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	P210089	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	TH046992	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DIBROMOETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	95099	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	95199	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	**33703**	**9**	**0**	**1.664**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,2-DICHLOROBENZENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DICHLOROBENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	**15699**	**12**	**0.1465**	**1.813**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,2-DICHLOROETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	90399	19	0	-0.7006	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DICHLOROETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	99405	13	0	0 .	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	TH046992	8	0	0.8944	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,3-DICHLOROBENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	15699	12	0	1.061	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	**33703**	**9**	**0.4705**	**1.788**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
1,3-DICHLOROBENZENE (UG/L)	37405	12	0	1.061	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	37505	12	0	0.7568	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	**90299**	**14**	**0**	**1.317**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,3-DICHLOROBENZENE (UG/L)	**90399**	**19**	**0**	**1.401**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,3-DICHLOROBENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	**95099**	**18**	**0**	**1.361**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
1,3-DICHLOROBENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	TH046992	8	0	0.8944	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	15699	12	0	1.061	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,4-DICHLOROBENZENE (UG/L)	**33703**	**9**	**1.75**	**2.027**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
1,4-DICHLOROBENZENE (UG/L)	37405	12	0	1.061	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	37505	12	0	1.061	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	15699	12	0	1.061	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	33703	9	0.15	1.035	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	TH046992	8	0.03669	0.4949	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BROMODICHLOROMETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BROMOMETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	52505	15	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	**4091**	**16**	**-0.1498**	**-2.325**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CARBON TETRACHLORIDE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	**23296**	**22**	**-2.032**	**-3.205**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CARBON TETRACHLORIDE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CARBON TETRACHLORIDE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	**90299**	**14**	**-0.1476**	**-2.462**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CARBON TETRACHLORIDE (UG/L)	**90399**	**19**	**-20.36**	**-1.781**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
CARBON TETRACHLORIDE (UG/L)	91203	10	-4.999	-0.8333	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	95099	18	0	-0.9059	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	99405	13	0	1.124	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	**33703**	**9**	**-2.71**	**-2.185**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CHLOROBENZENE (UG/L)	37405	12	0	1.061	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CHLOROBENZENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
Chlorodibromomethane (ug/L)	797	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	4091	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	11502	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	15699	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	20205	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	20505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	20705	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	23296	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	30002	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	33703	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	37405	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	37505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	37705	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	40305	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	52505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	88104	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	90299	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	90399	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	91203	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	91305	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	95099	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	95199	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	99305	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Chlorodibromomethane (ug/L)	99405	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	P210089	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	TH046992	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	4091	16	0	-0.8781	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	**15699**	**12**	**-2.193**	**-2.129**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CHLOROFORM (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	**23296**	**22**	**-3.518**	**-3.304**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CHLOROFORM (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	37405	12	0	-1.061	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	37505	12	0	-1.261	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	**37705**	**12**	**0**	**-1.428**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
CHLOROFORM (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	**90299**	**14**	**-0.3654**	**-1.671**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
CHLOROFORM (UG/L)	90399	19	-1.5	-0.8887	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	91203	10	-1.189	-0.8333	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	**95099**	**18**	**0**	**-2.33**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CHLOROFORM (UG/L)	95199	17	0	0.6555	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	99405	13	0	0.7644	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CHLOROMETHANE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	15699	12	-5.836	-0.1291	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	20505	9	1.022	0.4054	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	**20705**	**12**	**0.2383**	**2.231**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Cis-1,2-DICHLOROETHENE (UG/L)	**23296**	**22**	**26.83**	**3.071**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Cis-1,2-DICHLOROETHENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	**33703**	**9**	**0.1358**	**1.449**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Cis-1,2-DICHLOROETHENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No

Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Cis-1,2-DICHLOROETHENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	40305	15	-0.04437	-0.9848	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	52505	16	0	0.6808	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	90399	19	0.1616	0.8887	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	**91203**	**10**	**0.5877**	**2.671**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Cis-1,2-DICHLOROETHENE (UG/L)	91305	9	2.479	0.4213	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	95199	17	-0.03479	-0.6515	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	**99305**	**14**	**1.907**	**2.35**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Cis-1,2-DICHLOROETHENE (UG/L)	**99405**	**13**	**0.2942**	**1.464**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Cis-1,2-DICHLOROETHENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	**TH046992**	**8**	**0.08676**	**1.967**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
DIBROMOCHLOROMETHANE (UG/L)	797	11	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	4091	13	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	11502	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	15699	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	20205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	20505	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	20705	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	23296	18	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	30002	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	33703	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	37405	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	37505	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	37705	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	40305	10	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	52505	11	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	88104	9	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	90299	10	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	90399	14	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
DIBROMOCHLOROMETHANE (UG/L)	91203	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	91305	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	95099	14	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	95199	14	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	99305	10	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	99405	9	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	P210089	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	TH046992	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	797	12	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	4091	14	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	11502	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	15699	9	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	20205	8	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	20505	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	20705	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	23296	19	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	30002	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	33703	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	37405	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	37505	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	37705	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	40305	11	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	52505	12	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	88104	11	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	90299	11	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	90399	15	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	91203	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	91305	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	95099	15	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	95199	15	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	99305	11	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	99405	10	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	P210089	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	TH046992	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
HEXACHLOROBUTADIENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	52505	16	0	-0.8729	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	797	16	0	-1.25	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	**4091**	**16**	**0**	**-1.702**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
METHYLENE CHLORIDE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	**15699**	**12**	**0**	**-2.193**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
METHYLENE CHLORIDE (UG/L)	**23296**	**22**	**0**	**-1.772**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
METHYLENE CHLORIDE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	**40305**	**15**	**0**	**-2.483**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	**90299**	**14**	**0**	**-2.548**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	**90399**	**19**	**0**	**-2.131**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	**95099**	**18**	**0**	**-2.777**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	**95199**	**17**	**0**	**-2.731**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
METHYLENE CHLORIDE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	797	16	0	0.75	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	37505	12	0	0.3536	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
NAPHTHALENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\797_)		9	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\4091		12	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\11502		3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\15699		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\20205		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\20505		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\20705		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\23296		18	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\30002		5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\33703		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\37405		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\37505		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\37705		7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\40305		10	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\52505		11	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\88104		9	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\90299		9	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\90399		13	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\91203		5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\91305		4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\95099		13	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
PROPANE, 1,2-DIBROMO-3-CHLORO- (\	95199	13	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\	99305	10	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO- (\	99405	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\	P210089	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO- (\	TH046992	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	90299	14	0	0.8781	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	90399	19	0	1.051	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**4091**	**16**	**-0.05515**	**-1.569**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**

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Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TETRACHLOROETHENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	**15699**	**12**	**-108.1**	**-1.936**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
TETRACHLOROETHENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	20505	9	0	-0.8944	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**23296**	**22**	**-3.064**	**-3.915**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TETRACHLOROETHENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	33703	9	0	-1.061	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	37505	12	0	-0.2784	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	40305	15	0.06011	1.092	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**90299**	**14**	**0**	**-2.06**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TETRACHLOROETHENE (UG/L)	90399	19	-0.3065	-0.8887	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**91203**	**10**	**3.523**	**1.833**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
TETRACHLOROETHENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**95199**	**17**	**0.02444**	**1.303**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TETRACHLOROETHENE (UG/L)	**99305**	**14**	**0.7209**	**1.709**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
TETRACHLOROETHENE (UG/L)	**99405**	**13**	**0.1437**	**2.192**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TETRACHLOROETHENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	15699	12	0	1.061	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TOLUENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	**90299**	**14**	**0**	**1.317**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TOLUENE (UG/L)	90399	19	0	0.912	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	95099	18	0	-0.1945	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	95199	17	0	0.9723	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
Total Xylene (ug/L)	797	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	4091	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	11502	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	15699	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	20205	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	20505	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	20705	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	23296	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	30002	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	33703	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	37405	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	37505	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	37705	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	40305	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	45605	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	52505	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Total Xylene (ug/L)	88104	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	90299	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	90399	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	91203	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	91305	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	95099	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	95199	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	99305	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	99405	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	P210089	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	TH046992	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	45605	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	90399	19	0	-0.7006	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TOTAL XYLENES (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	P210089	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	**15699**	**12**	**0.1056**	**2.904**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Trans-1,2-DICHLOROETHENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	20505	9	0	0.9617	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	20705	12	0	0.3536	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	**23296**	**22**	**0**	**2.182**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Trans-1,2-DICHLOROETHENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	**33703**	**9**	**0.3516**	**1.863**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
Trans-1,2-DICHLOROETHENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	91305	9	0	0.5634	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	95199	17	0	0.1456	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	**99305**	**14**	**0**	**1.827**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
Trans-1,2-DICHLOROETHENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Trans-1,3-DICHLOROPROPENE (UG/L)	15699	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	20505	9	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	20705	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	45605	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	91305	9	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	99305	14	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	797	17	0	-0.5807	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**4091**	**16**	**0**	**-1.318**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TRICHLOROETHENE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	**15699**	**12**	**-145.1**	**-1.678**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
TRICHLOROETHENE (UG/L)	20205	12	0	-0.5855	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	20505	9	-2.957	-0.4054	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	20705	12	0	1.071	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**23296**	**22**	**-59.66**	**-1.454**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TRICHLOROETHENE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	33703	9	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TRICHLOROETHENE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**40305**	**15**	**0**	**-2.621**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TRICHLOROETHENE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	52505	16	0	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	88104	14	0	1.018	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**90299**	**14**	**-0.4486**	**-3.133**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TRICHLOROETHENE (UG/L)	90399	19	0.083	0	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**91203**	**10**	**2.083**	**1.5**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TRICHLOROETHENE (UG/L)	91305	9	0	0.3627	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	95099	18	0	-0.7274	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**95199**	**17**	**3.04**	**1.364**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
TRICHLOROETHENE (UG/L)	99305	14	8.997	1.282	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**99405**	**13**	**20.81**	**2.192**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TRICHLOROETHENE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	TH046992	8	0.1871	1.201	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**797**	**17**	**1.167**	**3.45**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	20205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	20505	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	**20705**	**13**	**1.75**	**2.795**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	23296	21	-0.4792	-0.2391	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	37405	14	0.3269	0.9594	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**37505**	**12**	**0.2298**	**1.42**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Uranium (ug/L)	37705	12	0.5384	0.1291	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**40305**	**16**	**0.03678**	**1.289**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Uranium (ug/L)	70099	24	0.8473	0.3427	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	**88104**	**18**	**-25.1**	**-3.352**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	91305	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	**99305**	**17**	**4.763**	**2.199**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**99405**	**18**	**-40.48**	**-1.892**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
Uranium (ug/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	797	16	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
VINYL CHLORIDE (UG/L)	4091	16	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	11502	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	**15699**	**12**	**0.3099**	**2.683**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
VINYL CHLORIDE (UG/L)	20205	12	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	20505	9	-0.7661	-0.8445	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	**20705**	**12**	**0.1469**	**1.706**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
VINYL CHLORIDE (UG/L)	23296	22	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	30002	10	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	33703	9	0	1.109	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	37405	12	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	37505	12	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	37705	12	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	40305	15	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	45605	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	**52505**	**16**	**0**	**1.309**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
VINYL CHLORIDE (UG/L)	88104	14	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	90299	14	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	90399	19	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	91203	10	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	91305	9	0	0.2184	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	95099	18	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	95199	17	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	99305	14	0	1.243	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	99405	13	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	TH046992	8	0	0	1.282	No	1.645	No	1.96	No
M,p-Xylene (ug/L)	40305	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	45605	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	40305	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	45605	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AMERICIUM-241 (PCI/L)	20205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AMERICIUM-241 (PCI/L)	20505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AMERICIUM-241 (PCI/L)	**20705**	**15**	**-0.006926**	**-1.89**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
AMERICIUM-241 (PCI/L)	37405	10	0	0	1.282	No	1.645	No	1.96	No

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Seasonal Kendall Summary

Date: 3/24/08, 8:54 AM Facility: Rocky Flats Site

Data File: RFLMA S wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
AMERICIUM-241 (PCI/L)	37705	10	0	0	1.282	No	1.645	No	1.96	No
Plutonium-239, 240 (pCi/L)	20205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plutonium-239, 240 (pCi/L)	20505	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Plutonium-239, 240 (pCi/L)	20705	15	0	-1.014	1.282	No	1.645	No	1.96	No
Plutonium-239, 240 (pCi/L)	37405	10	0	-1.109	1.282	No	1.645	No	1.96	No
Plutonium-239, 240 (pCi/L)	37705	10	0	0	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (mg/L)	20705	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nitrate + Nitrite as Nitrogen (mg/L)	37405	11	0.1252	0.5963	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (mg/L)	37505	11	-1.586	-0.8944	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (mg/L)	**37705**	**11**	**0.05804**	**2.261**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Nitrate + Nitrite as Nitrogen (mg/L)	**70099**	**24**	**-0.2902**	**-3.532**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Nitrate + Nitrite as Nitrogen (mg/L)	91305	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Nitrate + Nitrite as Nitrogen (mg/L)	**99305**	**15**	**-0.06311**	**-1.361**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
Nitrate + Nitrite as Nitrogen (mg/L)	99405	13	0.1325	0.7087	1.282	No	1.645	No	1.96	No
Nitrate + Nitrite as Nitrogen (mg/L)	P210089	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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B.3.3 Seasonal-Kendall Trend Plots for SPPTS Locations and Well B206989

B.3.3.1 SPPTS Summary Tables

Seasonal Kendall Summary

Date: 3/13/08, 3:02 PM Facility: Rocky Flats Site

Data File: SPPTS data4sanitasTRANS Client: SM Stoller

Constituent	Station	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Nitrate + Nitrite	**GS13**	**112**	**2.694**	**4.418**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Nitrate + Nitrite	**SPIN**	**34**	**-156.5**	**-3.949**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Nitrate + Nitrite	**SPPDISCHAR**	**130**	**35.81**	**7.198**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Nitrate + Nitrite	**SPPMM01**	**94**	**0.08629**	**5.877**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**GS13**	**99**	**1.25**	**3.969**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**SPIN**	**34**	**-24.99**	**-2.971**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**SPPDISCHAR**	**108**	**4.38**	**6.145**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Uranium (ug/L)	**SPPMM01**	**79**	**0.3182**	**6.36**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**

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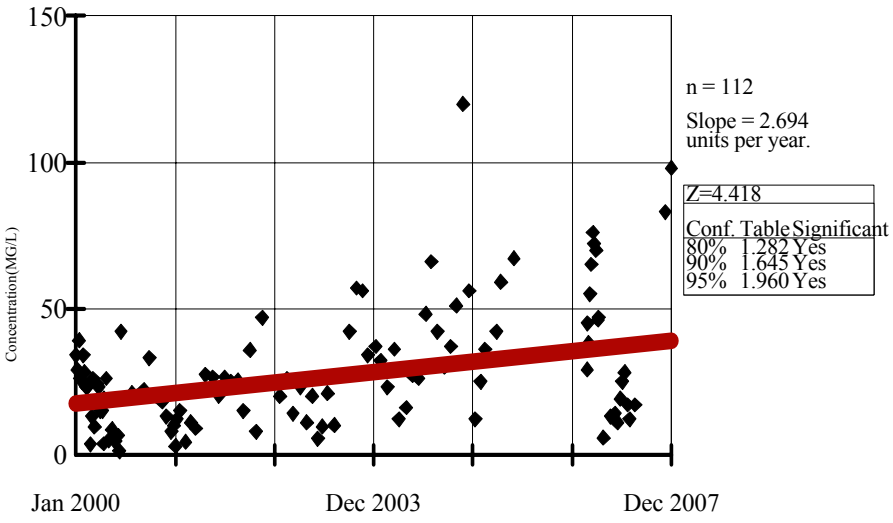
B.3.3.2 SPPTS Trend Plots for Nitrate

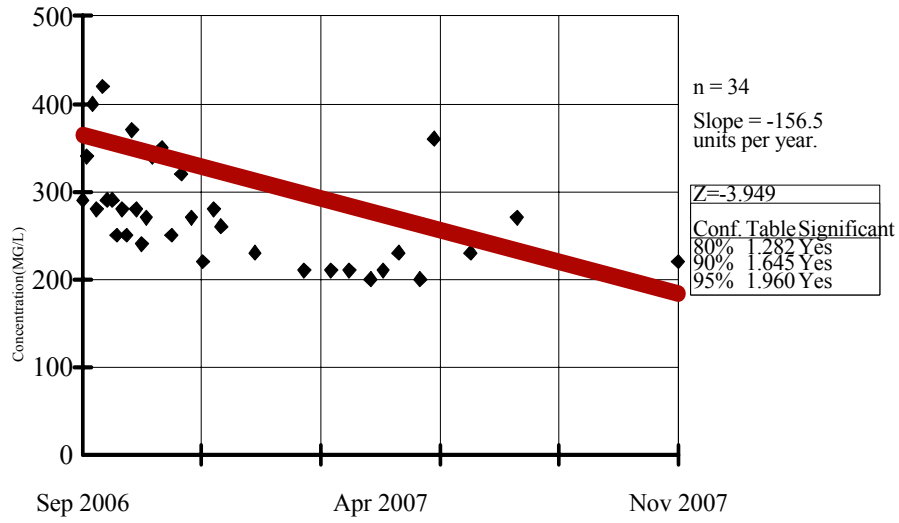
SEASONAL KENDALL SLOPE ESTIMATOR
GS13



onstituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRAN
Date: 3/13/08, 2:58 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

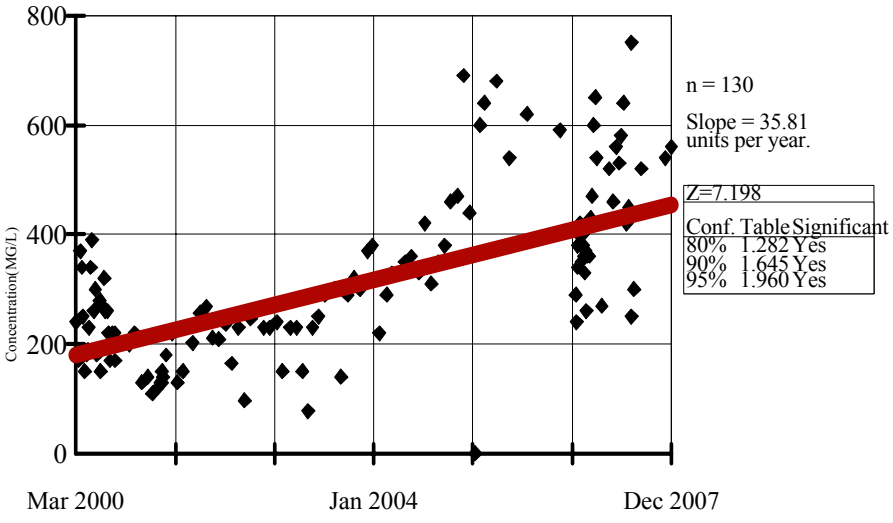
SEASONAL KENDALL SLOPE ESTIMATOR
SPIN



onstituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRAN
Date: 3/13/08, 2:58 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
SPPDISCHAR



onstituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRAN
Date: 3/13/08, 2:58 PM Client: SM Stoller View: _Batch_

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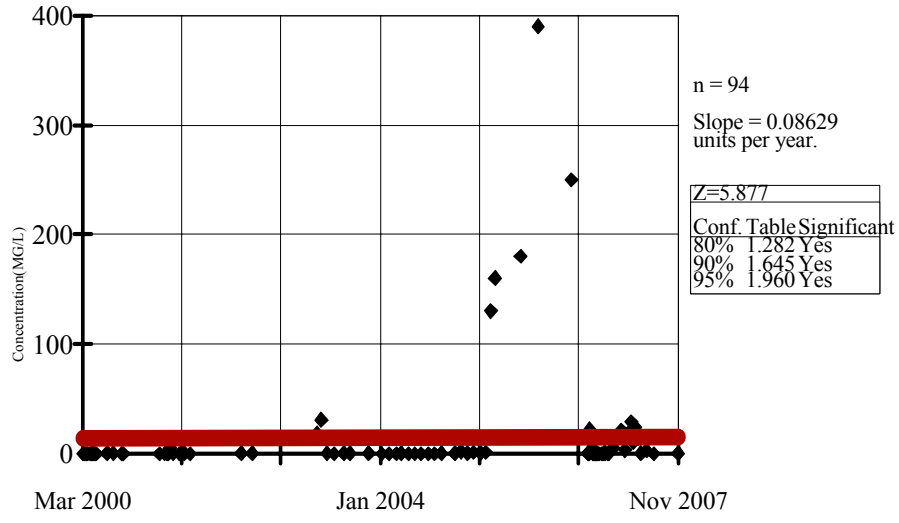
SEASONAL KENDALL SLOPE ESTIMATOR
SPPMM01

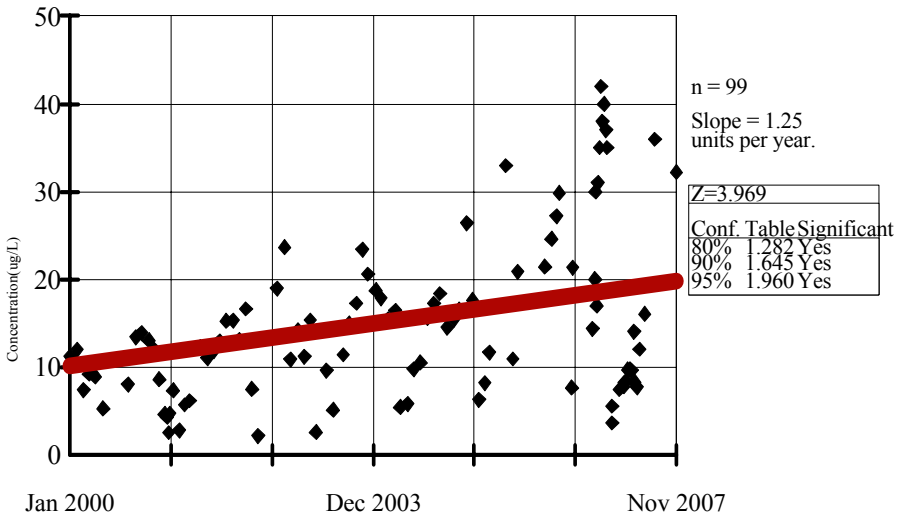


onstituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRAN
Date: 3/13/08, 2:58 PM Client: SM Stoller View: _Batch_

B.3.3.3 SPPTS Trend Plots for Uranium

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

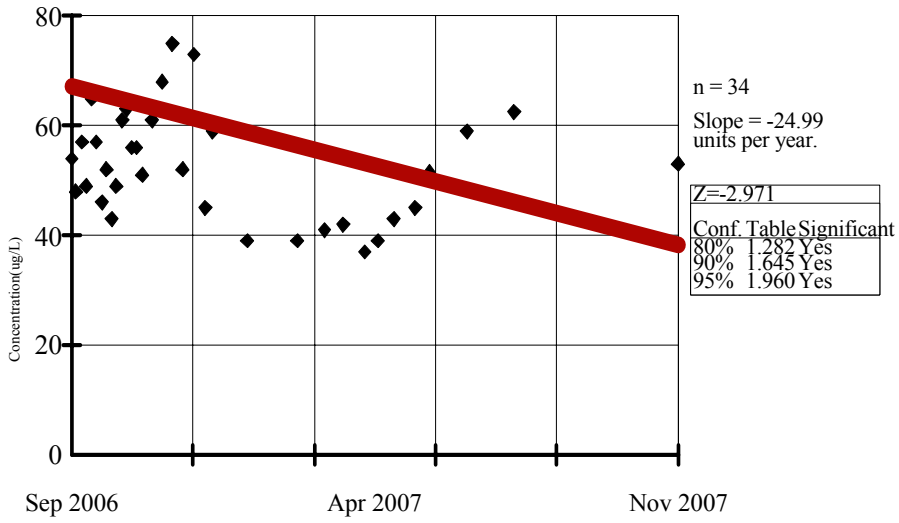
SEASONAL KENDALL SLOPE ESTIMATOR
GS13



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRANS
Date: 3/13/08, 2:59 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

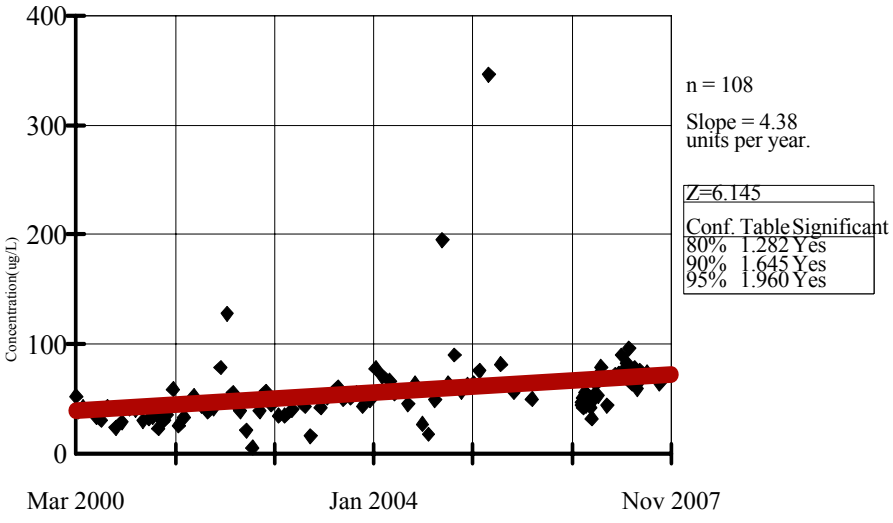
SEASONAL KENDALL SLOPE ESTIMATOR
SPIN



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRANS
Date: 3/13/08, 2:59 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

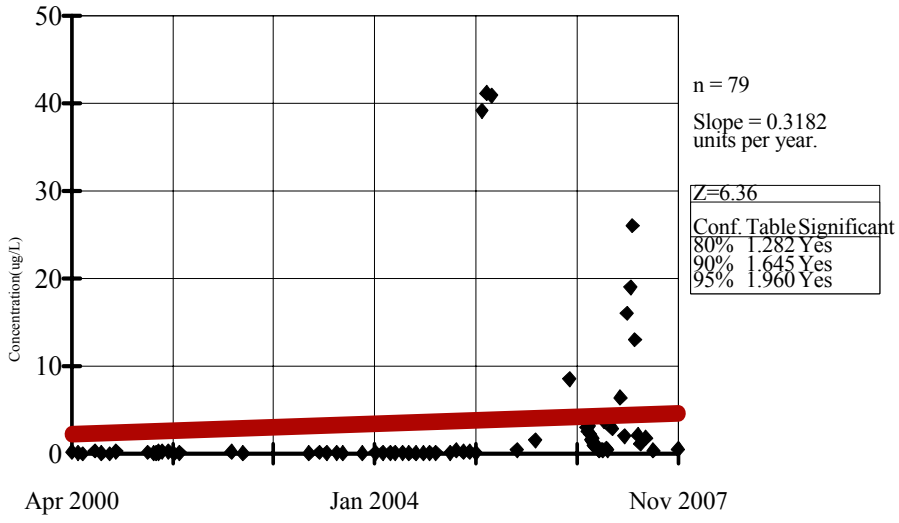
SEASONAL KENDALL SLOPE ESTIMATOR
SPPDISCHAR



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRANS
Date: 3/13/08, 2:59 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
SPPMM01

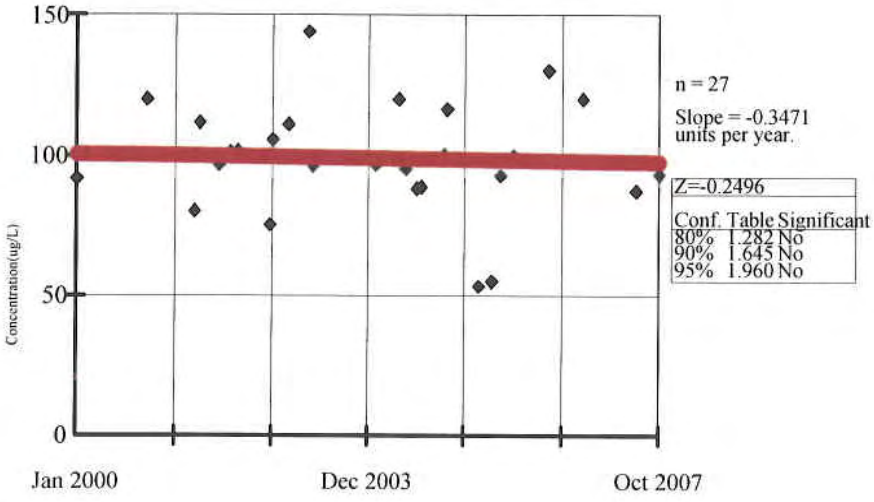


Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: SPPTS data4sanitasTRANS
Date: 3/13/08, 2:59 PM Client: SM Stoller View: _Batch_

B.3.3.4 Trend Plots for Nitrate and Uranium at Well B206989

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

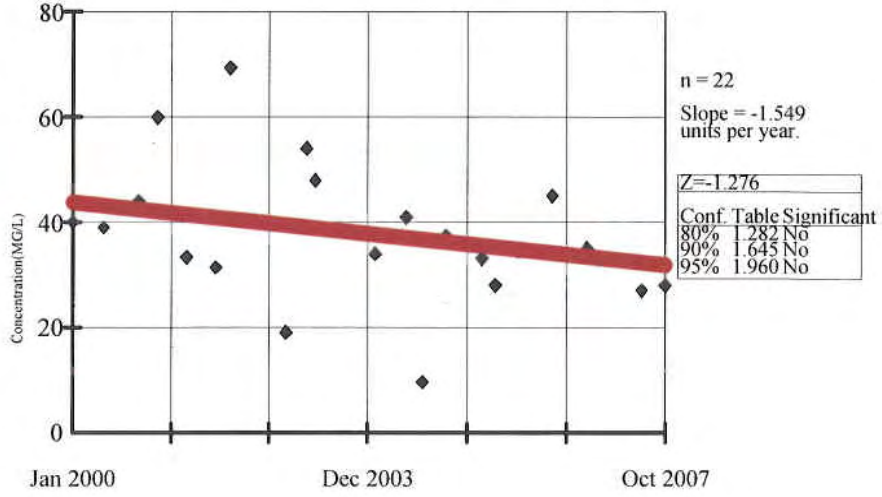
SEASONAL KENDALL SLOPE ESTIMATOR
B206989



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRANS
Date: 3/18/08, 12:01 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
B206989



nstituent: Nitrate + Nitrite as Nitrogen (MG/L) Facility: Rocky Flats Site Data File: RFLMA AOC wells TRAN
Date: 3/18/08, 12:01 PM Client: SM Stoller View: _Batch_

B.3.4 ANOVA and Seasonal-Kendall Results for the PLF and OLF

B.3.4.1 PLF ANOVA Summary

NON-PARAMETRIC ANOVA

Constituent: 1,1,1-TRICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA F

Date: 3/19/08, 12:11 PM Client: SM Stoller View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 89.591
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 6 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 78.392
Adjusted Kruskal-Wallis statistic (H') = 89.591

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-36.012	25.118	No
73105	-36.012	23.810	No
73205	-36.012	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

NON-PARAMETRIC ANOVA

Constituent: 1,1-DICHLOROETHENE (UG/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:12 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 92.718
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 7 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 78.409
Adjusted Kruskal-Wallis statistic (H') = 92.718

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-33.393	25.118	No
73105	-33.393	23.810	No
73205	-33.393	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: Boron (ug/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:16 PM | Client: SM Stoller | View: _Batch_

For observations made between 12/28/2005 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 45.104
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 6 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 45.055
Adjusted Kruskal-Wallis statistic (H') = 45.104

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in 2 of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	13.044	13.230	No
73105	33.981	12.650	Yes
73205	24.981	12.650	Yes

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected.

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Shapiro Francia normality test at alpha = 0.05
W Statistic = 0.3339, W Quantile = 0.957.

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NON-PARAMETRIC ANOVA

Constituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA F

Date: 3/19/08, 12:18 PM Client: SM Stoller View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 55.868
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 5 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 32.724
Adjusted Kruskal-Wallis statistic (H') = 55.868

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-18.333	25.118	No
73105	-18.333	23.810	No
73205	-18.333	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: CHLOROFORM (UG/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:19 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 44.678
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 5 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 21.802
Adjusted Kruskal-Wallis statistic (H') = 44.678

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-12.339	25.118	No
73105	6.938	23.810	No
73205	-12.339	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: CHROMIUM (UG/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:20 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 11.501
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 1 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 4.116
Adjusted Kruskal-Wallis statistic (H') = 11.501

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-9.395	23.406	No
73105	-9.395	22.198	No
73205	-9.395	22.198	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA F

Date: 3/19/08, 12:20 PM Client: SM Stoller View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 11.406
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 2 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 2.312
Adjusted Kruskal-Wallis statistic (H') = 11.406

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-5.238	25.118	No
73105	-5.238	23.810	No
73205	-5.238	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: SELENIUM (UG/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:24 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 75.574
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 6 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 66.128
Adjusted Kruskal-Wallis statistic (H') = 75.574

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in 2 of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	28.806	23.406	Yes
73105	-20.507	22.198	No
73205	51.493	22.198	Yes

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected.

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA F

Date: 3/19/08, 12:25 PM Client: SM Stoller View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 93.143
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 11 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 78.767
Adjusted Kruskal-Wallis statistic (H') = 93.143

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-33.393	25.118	No
73105	-33.393	23.810	No
73205	-33.393	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: TRICHLOROETHENE (UG/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:27 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 100.313
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 5 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 86.355
Adjusted Kruskal-Wallis statistic (H') = 100.313

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in none of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	-34.702	25.118	No
73105	-34.702	23.810	No
73205	-34.702	23.810	No

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected. (Note: In this case, with Anova indicating differences which are not reflected in any of the compliance wells, it should be concluded that it is the median of the Background data which is significantly higher, or that the difference is between background wells.)

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Chi-Square normality test.

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NON-PARAMETRIC ANOVA

Constituent: Uranium (ug/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:35 PM | Client: SM Stoller | View: _Batch_

For observations made between 01/11/2000 and 10/15/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 47.271
Tabulated Chi-Squared value = 11.070 with 5 degrees of freedom at the 5% significance level.

There were 6 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 45.872
Adjusted Kruskal-Wallis statistic (H') = 47.271

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (wells: 70193, 70393, 70693) concentration. The contrast test indicates statistical significance in 3 of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
73005	33.818	23.686	Yes
73105	35.130	22.293	Yes
73205	54.318	22.293	Yes

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected.

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed residuals failed the Shapiro Francia normality test at alpha = 0.05
W Statistic = 0.2832, W Quantile = 0.975.

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Analysis of Variance Summary

Date: 3/19/08, 12:37 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	Calculate	Critical	Signif.	Alpha	Transform	ANOVA	S	Alpha	Method
1,1,1-TRICHLOROETHANE (UG/L	**73005**	**-36.012**	**25.118**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,1,1-TRICHLOROETHANE (UG/L	**73105**	**-36.012**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,1,1-TRICHLOROETHANE (UG/L	**73205**	**-36.012**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,1-DICHLOROETHENE (UG/L)	**73005**	**-33.393**	**25.118**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,1-DICHLOROETHENE (UG/L)	**73105**	**-33.393**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,1-DICHLOROETHENE (UG/L)	**73205**	**-33.393**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
1,3-DICHLOROBENZENE (UG/L)	73005	-1.321	25.118	No	0.016	n/a	No		0.05	NP (normality)
1,3-DICHLOROBENZENE (UG/L)	73105	4.679	23.810	No	0.016	n/a	No		0.05	NP (normality)
1,3-DICHLOROBENZENE (UG/L)	73205	-1.321	23.810	No	0.016	n/a	No		0.05	NP (normality)
Acrolein (ug/L)	73005	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
ARSENIC (UG/L)	73005	3.447	23.406	No	0.016	n/a	No		0.05	NP (normality)
ARSENIC (UG/L)	73105	2.475	22.198	No	0.016	n/a	No		0.05	NP (normality)
ARSENIC (UG/L)	73205	-3.303	22.198	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	73005	-0.671	23.406	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	73105	-0.671	22.198	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	73205	-0.671	22.198	No	0.016	n/a	No		0.05	NP (normality)
Boron (ug/L)	**73005**	**13.044**	**13.230**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
Boron (ug/L)	**73105**	**33.981**	**12.650**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
Boron (ug/L)	**73205**	**24.981**	**12.650**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CADMIUM (UG/L)	73005	5.993	23.406	No	0.016	n/a	No		0.05	NP (normality)
CADMIUM (UG/L)	73105	-8.382	22.198	No	0.016	n/a	No		0.05	NP (normality)
CADMIUM (UG/L)	73205	4.396	22.198	No	0.016	n/a	No		0.05	NP (normality)
CARBON TETRACHLORIDE (UG/	**73005**	**-18.333**	**25.118**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CARBON TETRACHLORIDE (UG/	**73105**	**-18.333**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CARBON TETRACHLORIDE (UG/	**73205**	**-18.333**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CHLOROFORM (UG/L)	**73005**	**-12.339**	**25.118**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CHLOROFORM (UG/L)	**73105**	**6.938**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CHLOROFORM (UG/L)	**73205**	**-12.339**	**23.810**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (normality)**
CHLOROMETHANE (UG/L)	73005	-0.667	25.118	No	0.016	n/a	No		0.05	NP (normality)
CHLOROMETHANE (UG/L)	73105	5.333	23.810	No	0.016	n/a	No		0.05	NP (normality)

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Analysis of Variance Summary

Date: 3/19/08, 12:37 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	Calculate	Critical	Signif.	Alpha	Transform	ANOVA_S	Alpha	Method
CHLOROMETHANE (UG/L)	73205	5.444	23.810	No	0.016	n/a	No	0.05	NP (normality)
CHROMIUM (UG/L)	**73005**	**-9.395**	**23.406**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
CHROMIUM (UG/L)	**73105**	**-9.395**	**22.198**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
CHROMIUM (UG/L)	**73205**	**-9.395**	**22.198**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Cis-1,2-DICHLOROETHENE (UG/l	**73005**	**-5.238**	**25.118**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Cis-1,2-DICHLOROETHENE (UG/l	**73105**	**-5.238**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Cis-1,2-DICHLOROETHENE (UG/l	**73205**	**-5.238**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
COPPER (UG/L)	73005	-5.921	23.406	No	0.016	n/a	No	0.05	NP (normality)
COPPER (UG/L)	73105	-5.921	22.198	No	0.016	n/a	No	0.05	NP (normality)
COPPER (UG/L)	73205	6.412	22.198	No	0.016	n/a	No	0.05	NP (normality)
ETHYLBENZENE (UG/L)	73005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	73105	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	73205	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	73005	-4.697	23.406	No	0.016	n/a	No	0.05	NP (normality)
LEAD (UG/L)	73105	-4.697	22.198	No	0.016	n/a	No	0.05	NP (normality)
LEAD (UG/L)	73205	-4.697	22.198	No	0.016	n/a	No	0.05	NP (normality)
M,p-Xylene (ug/L)	73005	0.000	10.714	No	0.016	n/a	No	0.05	NP (normality)
M,p-Xylene (ug/L)	73105	2.833	9.991	No	0.016	n/a	No	0.05	NP (normality)
M,p-Xylene (ug/L)	73205	0.000	10.714	No	0.016	n/a	No	0.05	NP (normality)
MERCURY (UG/L)	73005	-2.703	22.979	No	0.016	n/a	No	0.05	NP (normality)
MERCURY (UG/L)	73105	-2.703	21.796	No	0.016	n/a	No	0.05	NP (normality)
MERCURY (UG/L)	73205	-2.703	21.796	No	0.016	n/a	No	0.05	NP (normality)
METHYLENE CHLORIDE (UG/L)	73005	-0.604	25.118	No	0.016	n/a	No	0.05	NP (normality)
METHYLENE CHLORIDE (UG/L)	73105	-1.014	23.810	No	0.016	n/a	No	0.05	NP (normality)
METHYLENE CHLORIDE (UG/L)	73205	-2.014	23.810	No	0.016	n/a	No	0.05	NP (normality)
NICKEL (UG/L)	73005	-1.352	23.406	No	0.016	n/a	No	0.05	NP (normality)
NICKEL (UG/L)	73105	4.724	22.198	No	0.016	n/a	No	0.05	NP (normality)
NICKEL (UG/L)	73205	5.947	22.198	No	0.016	n/a	No	0.05	NP (normality)
SELENIUM (UG/L)	**73005**	**28.806**	**23.406**	**Yes**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
SELENIUM (UG/L)	**73105**	**-20.507**	**22.198**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**

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Analysis of Variance Summary

Date: 3/19/08, 12:37 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	Calculate	Critical	Signif.	Alpha	Transform	ANOVA_S	Alpha	Method
SELENIUM (UG/L)	**73205**	**51.493**	**22.198**	**Yes**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
SILVER (UG/L)	73005	-1.342	23.406	No	0.016	n/a	No	0.05	NP (normality)
SILVER (UG/L)	73105	-1.342	22.198	No	0.016	n/a	No	0.05	NP (normality)
SILVER (UG/L)	73205	-1.342	22.198	No	0.016	n/a	No	0.05	NP (normality)
TETRACHLOROETHENE (UG/L)	**73005**	**-33.393**	**25.118**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
TETRACHLOROETHENE (UG/L)	**73105**	**-33.393**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
TETRACHLOROETHENE (UG/L)	**73205**	**-33.393**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
TOLUENE (UG/L)	73005	-2.649	25.118	No	0.016	n/a	No	0.05	NP (normality)
TOLUENE (UG/L)	73105	9.240	23.810	No	0.016	n/a	No	0.05	NP (normality)
TOLUENE (UG/L)	73205	3.518	23.810	No	0.016	n/a	No	0.05	NP (normality)
Total Xylene (ug/L)	73005	-1.958	12.535	No	0.016	n/a	No	0.05	NP (normality)
Total Xylene (ug/L)	73105	-1.958	11.913	No	0.016	n/a	No	0.05	NP (normality)
Total Xylene (ug/L)	73205	-1.958	11.913	No	0.016	n/a	No	0.05	NP (normality)
TOTAL XYLENES (UG/L)	73005	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	73105	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	**73005**	**-34.702**	**25.118**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
TRICHLOROETHENE (UG/L)	**73105**	**-34.702**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
TRICHLOROETHENE (UG/L)	**73205**	**-34.702**	**23.810**	**No**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
ZINC (UG/L)	73005	-1.828	22.979	No	0.016	n/a	No	0.05	NP (normality)
ZINC (UG/L)	73105	14.770	21.796	No	0.016	n/a	No	0.05	NP (normality)
ZINC (UG/L)	73205	-1.508	21.796	No	0.016	n/a	No	0.05	NP (normality)
Uranium (ug/L)	**73005**	**33.818**	**23.686**	**Yes**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Uranium (ug/L)	**73105**	**35.130**	**22.293**	**Yes**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**
Uranium (ug/L)	**73205**	**54.318**	**22.293**	**Yes**	**0.016**	**n/a**	**Yes**	**0.05**	**NP (normality)**

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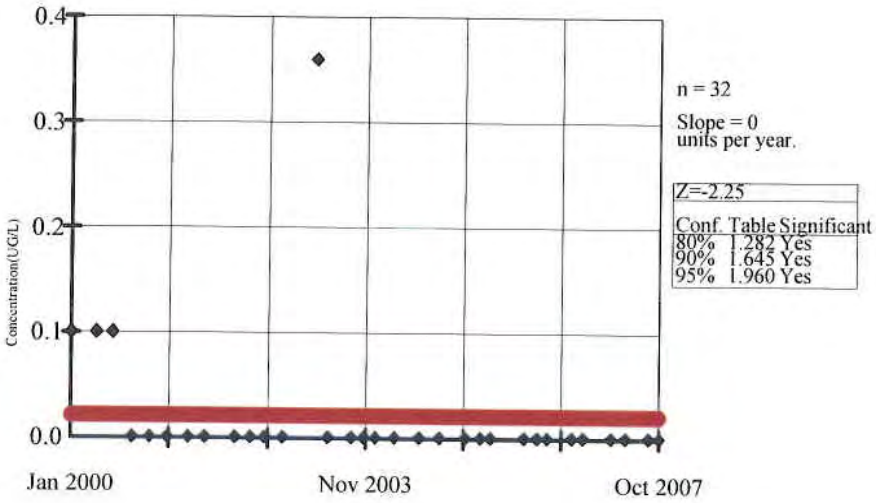
B.3.4.2 PLF S-K Plots

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

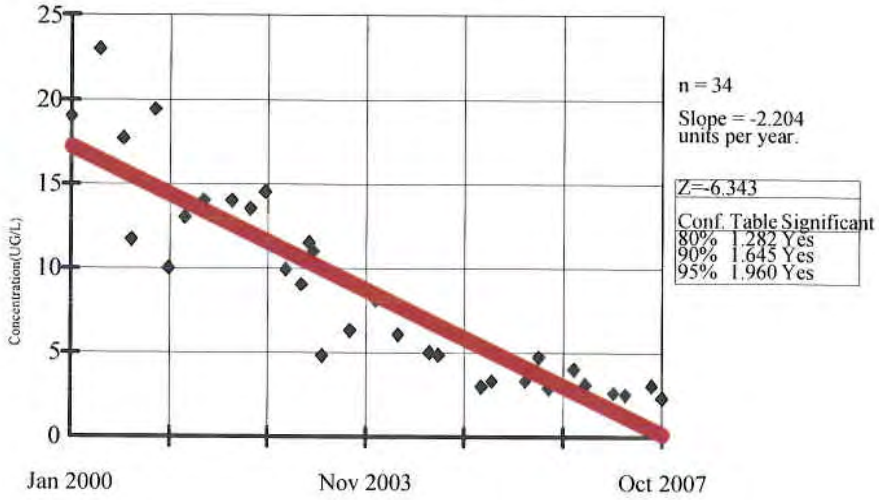
SEASONAL KENDALL SLOPE ESTIMATOR
70193



stituent: 1,1,1-TRICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRA
Date: 3/19/08, 1:53 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

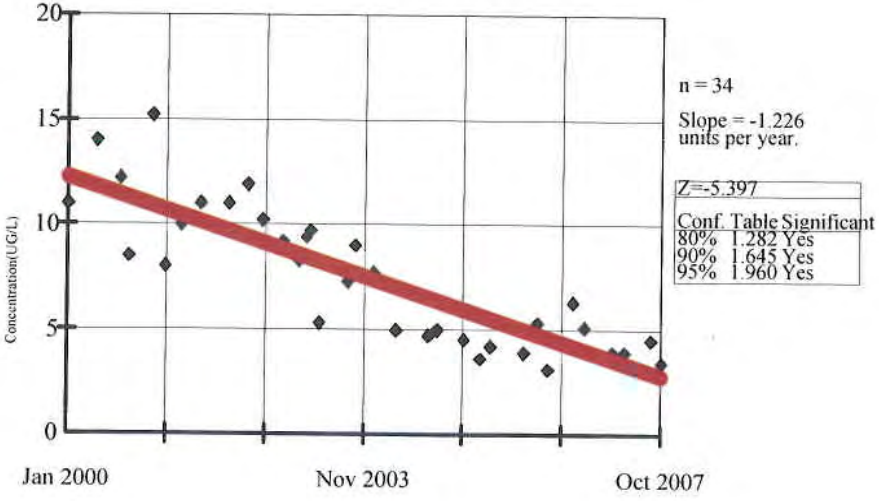
SEASONAL KENDALL SLOPE ESTIMATOR
70393



stituent: 1,1,1-TRICHLOROETHANE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRA
Date: 3/19/08, 1:53 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

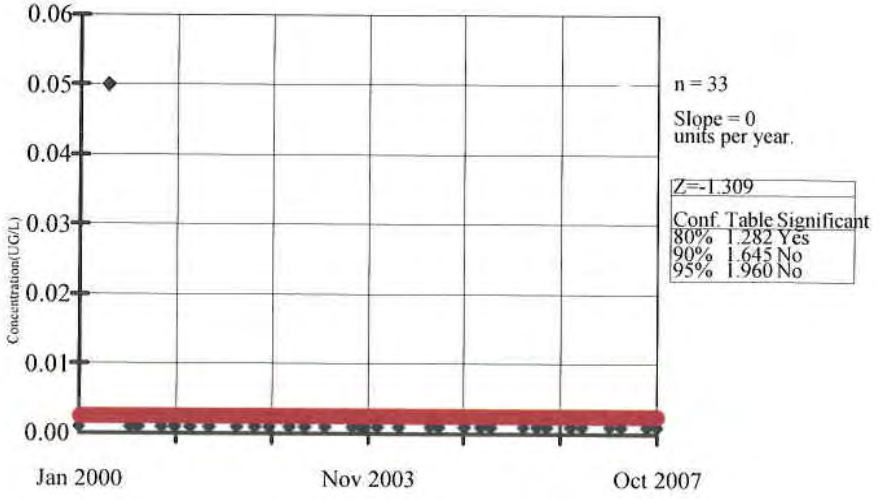
SEASONAL KENDALL SLOPE ESTIMATOR
70393



onstituent: 1,1-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRAN
Date: 3/19/08, 1:55 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

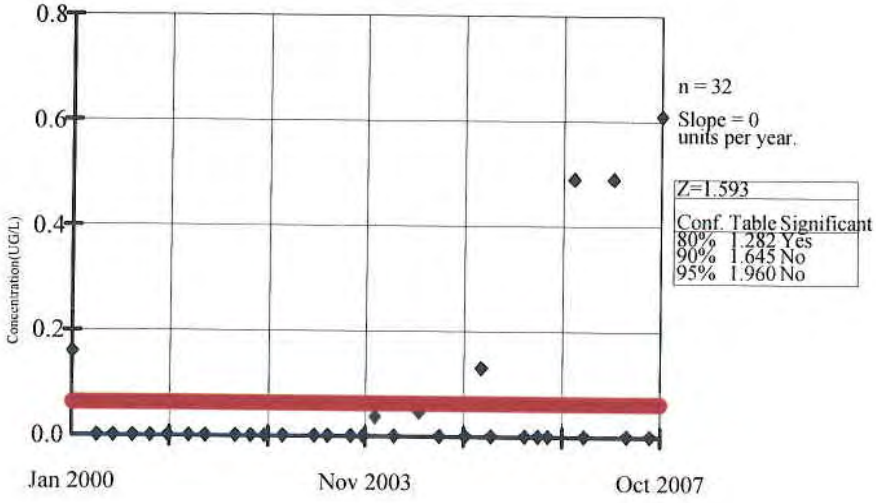
SEASONAL KENDALL SLOPE ESTIMATOR
70393



Constituent: BERYLLIUM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:02 PM Client: SM Stoller View: _Batch

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

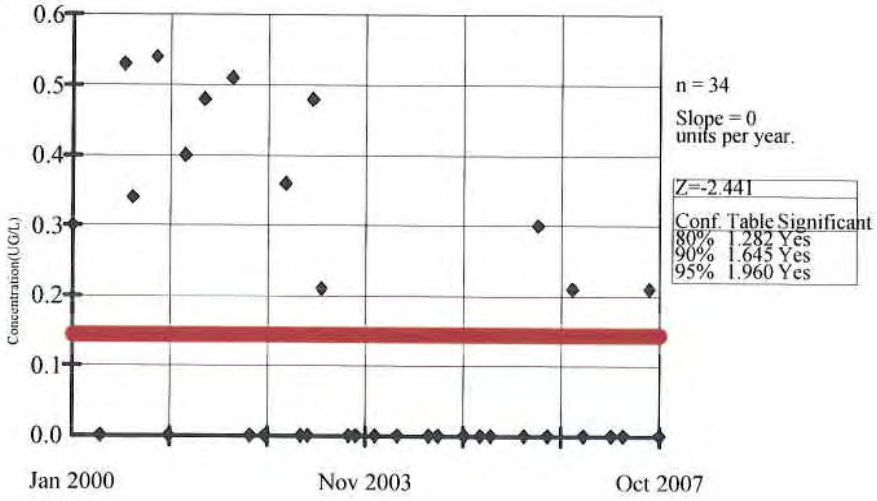
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: CADMIUM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:05 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

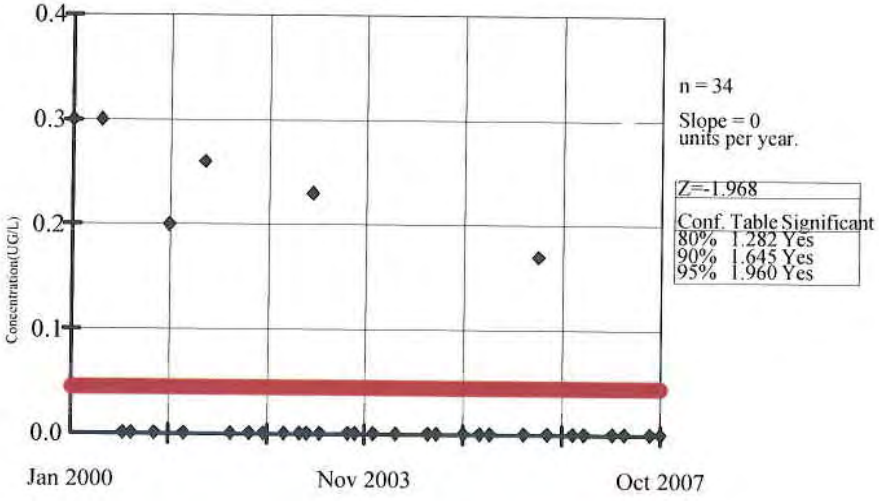
SEASONAL KENDALL SLOPE ESTIMATOR
70393



stituent: CARBON TETRACHLORIDE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRA
Date: 3/19/08, 2:06 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

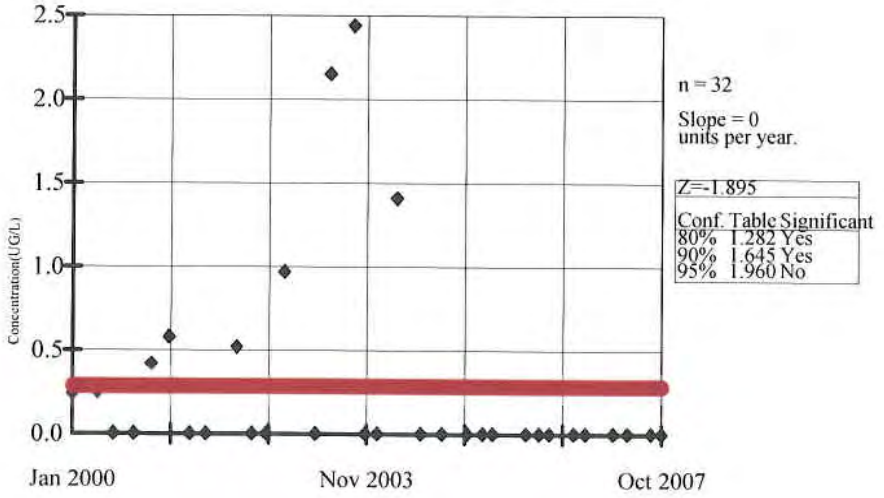
SEASONAL KENDALL SLOPE ESTIMATOR
70393



Constituent: CHLOROFORM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:07 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

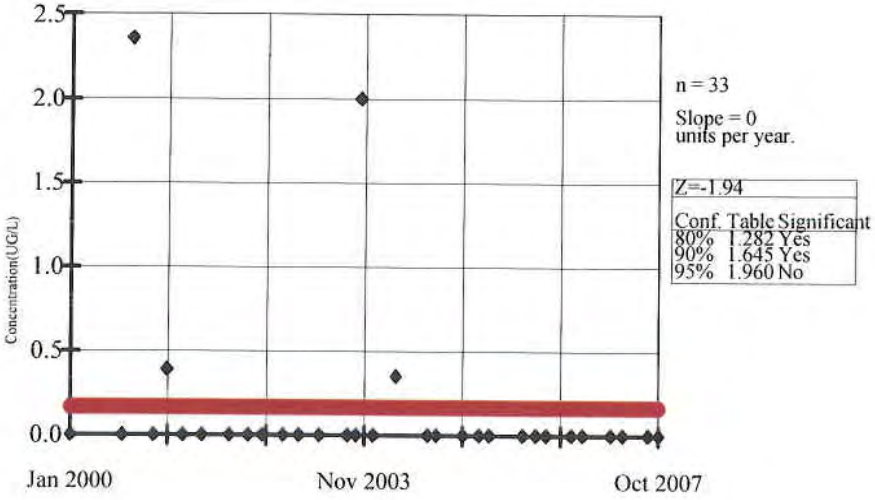
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: CHROMIUM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:08 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

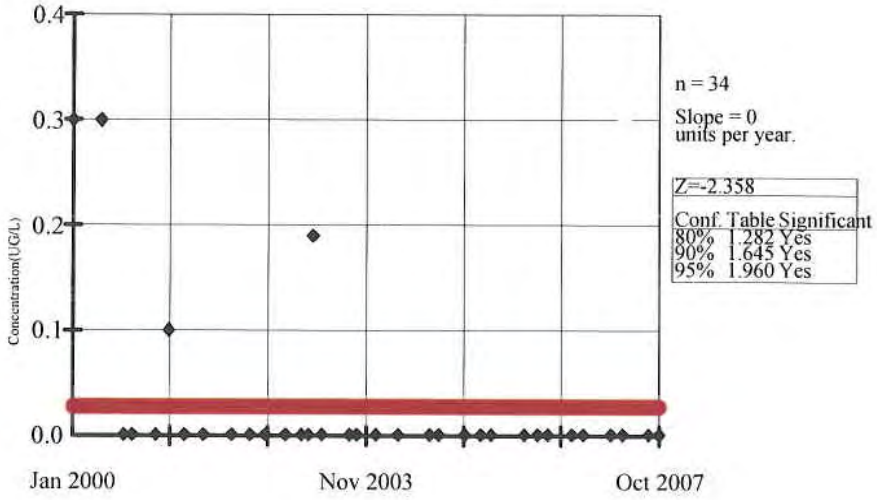
SEASONAL KENDALL SLOPE ESTIMATOR
70393



Constituent: CHROMIUM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:08 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
70393



stituent: cis-1,2-DICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRA
Date: 3/19/08, 2:09 PM Client: SM Stoller View: _Batch_

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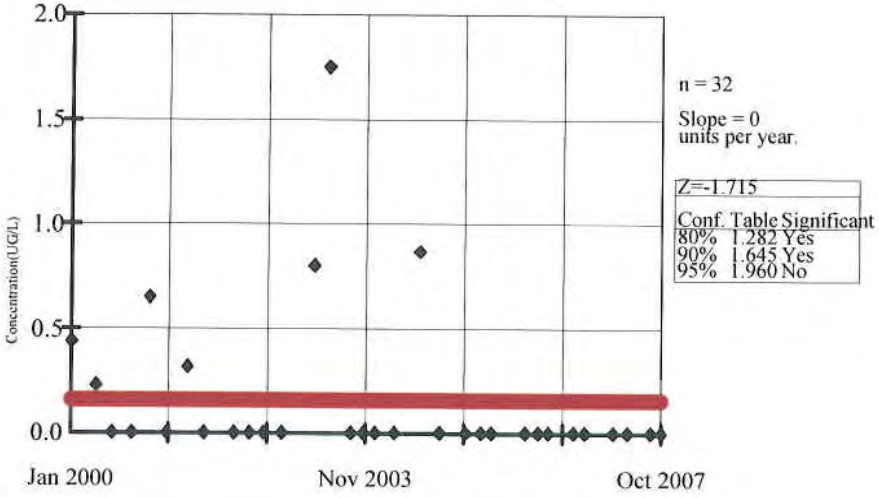
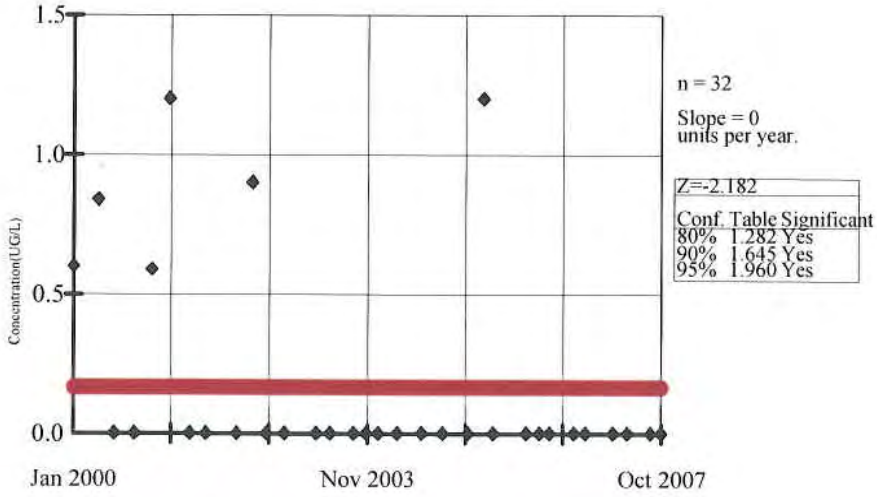
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: COPPER (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:09 PM Client: SM Stoller View: _Batch_

v.8.7.009 For the statistical analyses of ground water by SM Stoller only. EPA

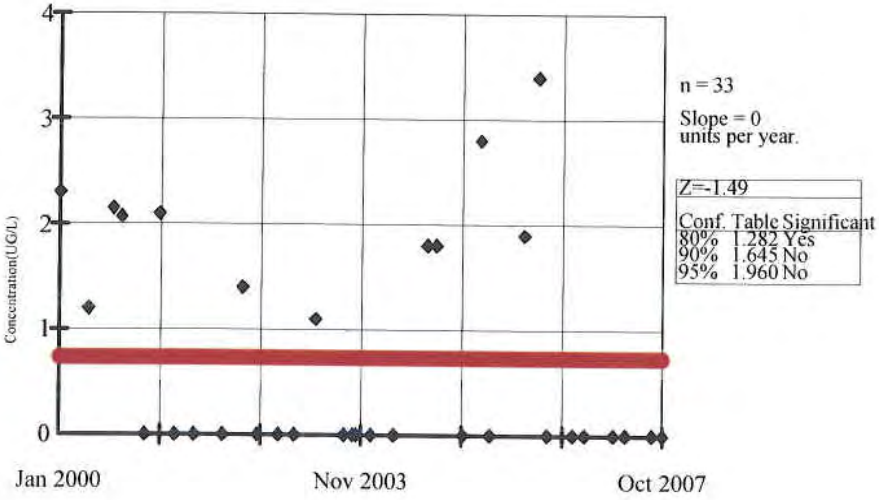
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: NICKEL (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:14 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

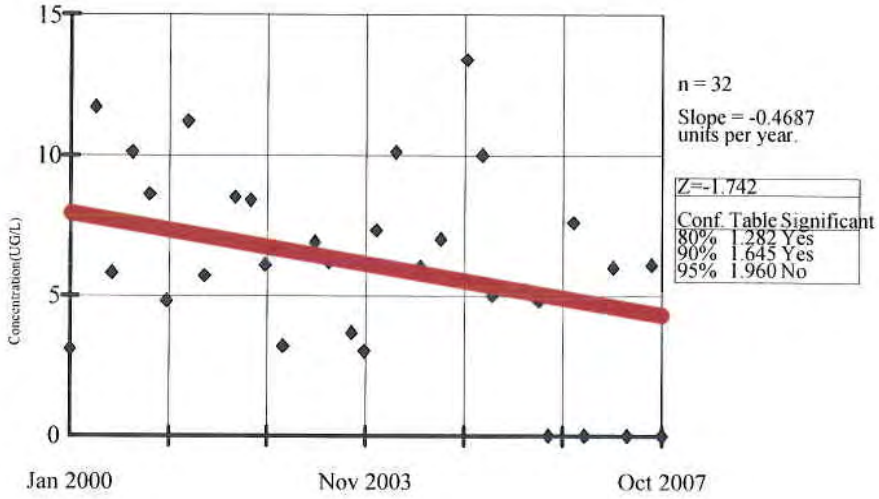
SEASONAL KENDALL SLOPE ESTIMATOR
70393



Constituent: NICKEL (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:14 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

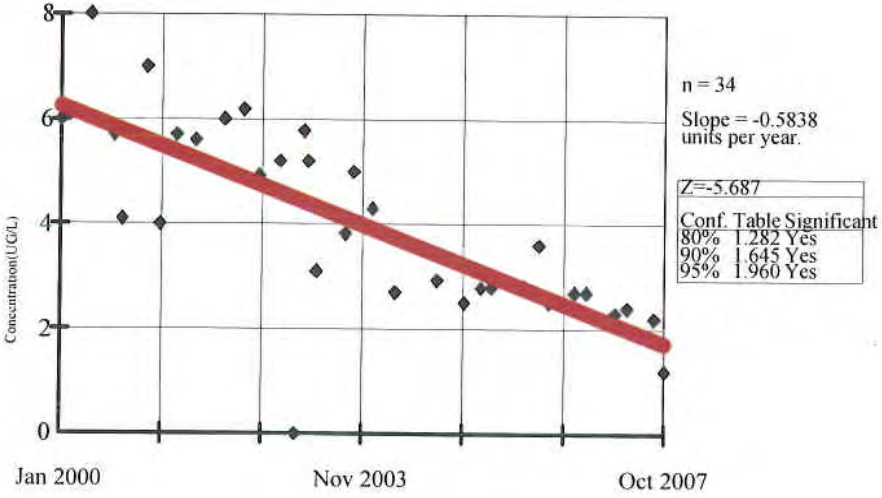
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: SELENIUM (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:16 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

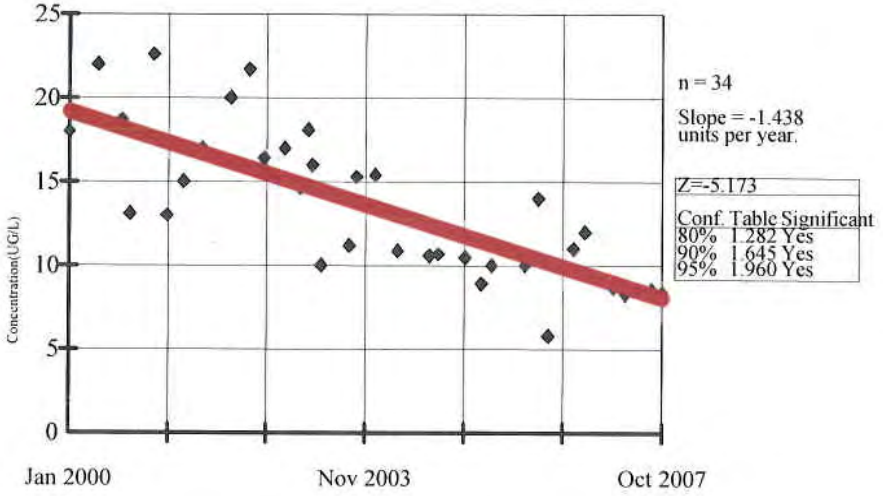
SEASONAL KENDALL SLOPE ESTIMATOR
70393



nstituent: TETRACHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRAN
Date: 3/19/08, 2:18 PM Client: SM Stoller View: _Batch_

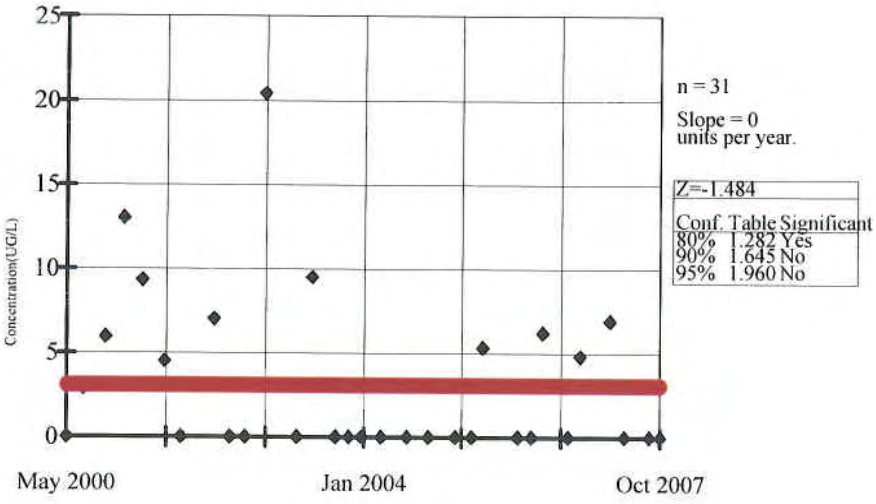
v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
70393



Constituent: TRICHLOROETHENE (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:21 PM Client: SM Stoller View: _Batch

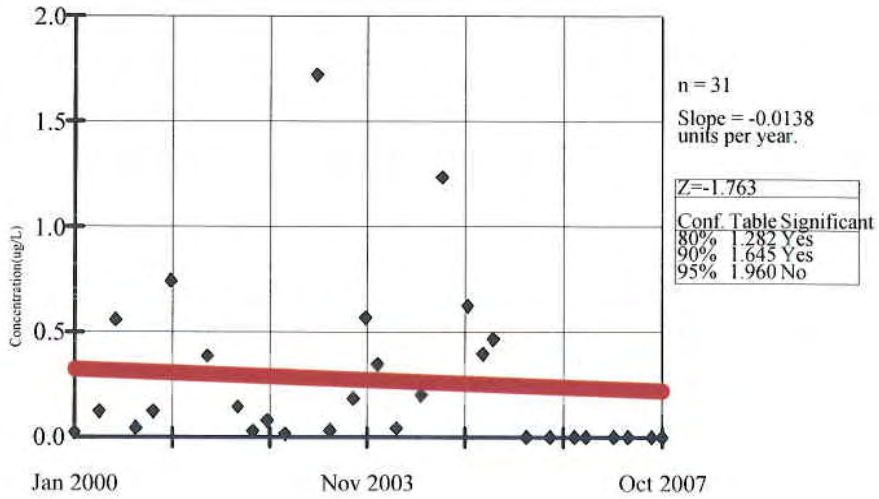
SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: ZINC (UG/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 2:22 PM Client: SM Stoller View: _Batch_

v.8.7.009. For the statistical analyses of ground water by SM Stoller only. EPA

SEASONAL KENDALL SLOPE ESTIMATOR
70193



Constituent: Uranium (ug/L) Facility: Rocky Flats Site Data File: RFLMA RCRA wells TRANS
Date: 3/19/08, 3:07 PM Client: SM Stoller View: _Batch_

B.3.4.3 PLF S-K Summary Tables

Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,1-TRICHLOROETHANE (UG/L)	**70193**	**32**	**0**	**-2.25**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
1,1,1-TRICHLOROETHANE (UG/L)	**70393**	**34**	**-2.204**	**-6.343**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
1,1,1-TRICHLOROETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,1,2,2-TETRACHLOROETHANE (UG/	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,1,2-TRICHLOROETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,1-DICHLOROETHENE (UG/L)	**70393**	**34**	**-1.226**	**-5.397**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
1,1-DICHLOROETHENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,2,4-TRICHLOROBENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2,4-TRICHLOROBENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	70193	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	70393	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	70693	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,2-DIBROMOETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROBENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	70393	33	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DICHLOROPROPANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,2-DICHLOROPROPANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	70193	32	0	0.8729	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	70393	34	0	0.8729	1.282	No	1.645	No	1.96	No
1,3-DICHLOROBENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
1,4-DICHLOROBENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	70193	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	70393	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	70693	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	73005	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	73105	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	73205	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	70193	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	70393	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	70693	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Acrylonitrile (ug/L)	73005	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	73105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	73205	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	70193	32	0	-0.872	1.282	No	1.645	No	1.96	No
ARSENIC (UG/L)	70393	33	0	-0.604	1.282	No	1.645	No	1.96	No
ARSENIC (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
BENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
BERYLLIUM (UG/L)	**70393**	**33**	**0**	**-1.309**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
BERYLLIUM (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	70193	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	70393	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	70693	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BROMODICHLOROMETHANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
BROMODICHLOROMETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
BROMOFORM (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	70393	33	0	0	1.282	No	1.645	No	1.96	No
BROMOMETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	**70193**	**32**	**0**	**1.593**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
CADMIUM (UG/L)	70393	33	0	0	1.282	No	1.645	No	1.96	No
CADMIUM (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
CARBON TETRACHLORIDE (UG/L)	**70393**	**34**	**0**	**-2.441**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CARBON TETRACHLORIDE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CARBON TETRACHLORIDE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
CHLOROBENZENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	70193	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	70393	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	70693	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
CHLOROFORM (UG/L)	**70393**	**34**	**0**	**-1.968**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
CHLOROFORM (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	70193	32	0	0.872	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
CHLOROMETHANE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CHROMIUM (UG/L)	**70193**	**32**	**0**	**-1.895**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
CHROMIUM (UG/L)	**70393**	**33**	**0**	**-1.94**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
CHROMIUM (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
Cis-1,2-DICHLOROETHENE (UG/L)	**70393**	**34**	**0**	**-2.358**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
Cis-1,2-DICHLOROETHENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	**70193**	**32**	**0**	**-1.715**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
COPPER (UG/L)	70393	33	0	0	1.282	No	1.645	No	1.96	No
COPPER (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIBROMOCHLOROMETHANE (UG/L)	70193	23	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	70393	25	0	0	1.282	No	1.645	No	1.96	No
DIBROMOCHLOROMETHANE (UG/L)	70693	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	70193	24	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	70393	26	0	0	1.282	No	1.645	No	1.96	No
ETHYLBENZENE (UG/L)	70693	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
HEXACHLOROBUTADIENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
HEXACHLOROBUTADIENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	70193	32	0	-0.252	1.282	No	1.645	No	1.96	No
LEAD (UG/L)	70393	33	0	-0.317	1.282	No	1.645	No	1.96	No
LEAD (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	70193	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	70393	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	70693	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	73005	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	73105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	73205	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	70193	32	0	-0.462	1.282	No	1.645	No	1.96	No
MERCURY (UG/L)	70393	31	0	0.972	1.282	No	1.645	No	1.96	No
MERCURY (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	70193	32	0	0.239	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	70393	34	0	0.371	1.282	No	1.645	No	1.96	No
METHYLENE CHLORIDE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
NAPHTHALENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
NAPHTHALENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	**70193**	**32**	**0**	**-2.18**	**21.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
NICKEL (UG/L)	**70393**	**33**	**0**	**-1.49**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
NICKEL (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	70193	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	70393	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	70693	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	73005	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	73105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	73205	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PROPANE, 1,2-DIBROMO-3-CHLORO	70193	L) 22	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO	70393	L) 23	0	0	1.282	No	1.645	No	1.96	No
PROPANE, 1,2-DIBROMO-3-CHLORO	70693	L) 7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	**70193**	**32**	**-0.4687**	**-1.74**	**21.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
SELENIUM (UG/L)	70393	33	0	-0.63	51.282	No	1.645	No	1.96	No
SELENIUM (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
SILVER (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
SILVER (UG/L)	70393	33	0	0.657	1.282	No	1.645	No	1.96	No
SILVER (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
STYRENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	70193	32	0	-0.872	1.282	No	1.645	No	1.96	No
TETRACHLOROETHENE (UG/L)	**70393**	**34**	**-0.5838**	**-5.687**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TETRACHLOROETHENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	70193	32	0	0.872	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	70393	34	0	0.771	1.282	No	1.645	No	1.96	No
TOLUENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	70193	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	70393	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	70693	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Total Xylene (ug/L)	73005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	73105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	73205	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	70193	26	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	70393	28	0	0	1.282	No	1.645	No	1.96	No
TOTAL XYLENES (UG/L)	70693	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	73005	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	73105	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	73205	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
Trans-1,2-DICHLOROETHENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	70193	30	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L	70393	32	0	0	1.282	No	1.645	No	1.96	No
Trans-1,3-DICHLOROPROPENE (UG/L	70693	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	73005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	73105	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	73205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	70193	32	0	0.328	1.282	No	1.645	No	1.96	No
TRICHLOROETHENE (UG/L)	**70393**	**34**	**-1.438**	**-5.173**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**Yes**
TRICHLOROETHENE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 3:09 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
VINYL CHLORIDE (UG/L)	70193	32	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	70393	34	0	0	1.282	No	1.645	No	1.96	No
VINYL CHLORIDE (UG/L)	70693	18	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	**70193**	**31**	**0**	**-1.484**	**1.282**	**Yes**	**1.645**	**No**	**1.96**	**No**
ZINC (UG/L)	70393	32	0	-0.589	1.282	No	1.645	No	1.96	No
ZINC (UG/L)	70693	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	73005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	73105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	73205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	**70193**	**31**	**-0.0138**	**-1.763**	**1.282**	**Yes**	**1.645**	**Yes**	**1.96**	**No**
Uranium (ug/L)	70393	33	-0.0020	-1.081	1.282	No	1.645	No	1.96	No
Uranium (ug/L)	70693	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	73005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	73105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	73205	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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B.3.4.4 OLF ANOVA Summary

NON-PARAMETRIC ANOVA

Constituent: Boron (ug/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 12:39 PM | Client: SM Stoller | View: _Batch_

For observations made between 12/28/2005 and 10/18/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 30.086
Tabulated Chi-Squared value = 7.815 with 3 degrees of freedom at the 5% significance level.

There were 5 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 29.842
Adjusted Kruskal-Wallis statistic (H') = 30.086

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (well P416589) concentration. The contrast test indicates statistical significance in 3 of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
80005	12.167	10.570	Yes
80105	27.000	10.570	Yes
80205	14.833	10.570	Yes

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected.

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed data failed Levene's test for equal variances.

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NON-PARAMETRIC ANOVA

Constituent: Uranium (ug/L) | Facility: Rocky Flats Site | Data File: RFLMA F

Date: 3/19/08, 1:00 PM | Client: SM Stoller | View: _Batch_

For observations made between 09/12/2005 and 10/18/2007 the nonparametric analysis of variance test indicates a DIFFERENCE between the medians of the background and compliance data at the 5% significance level. Because the calculated Kruskal-Wallis statistic is greater than the Chi-squared value, we conclude that at least one well has a significantly different median concentration of this constituent when compared to another well.

Calculated Kruskal-Wallis statistic = 22.024
Tabulated Chi-Squared value = 7.815 with 3 degrees of freedom at the 5% significance level.

There were 2 groups of ties in the data, consequently the Kruskal-Wallis statistic (H) was adjusted. The adjusted statistic (H') was utilized to determine if the medians were equal.

Kruskal-Wallis statistic (H) = 21.139
Adjusted Kruskal-Wallis statistic (H') = 22.024

The contrast test was performed to determine if any compliance well concentration was significantly higher than the background (well P416589) concentration. The contrast test indicates statistical significance in 1 of the compliance wells. The critical (contrast) value was computed with 3 degrees of freedom, 3 compliance wells, and a 1.667% error level for each well comparison.

Contrast table:

Well	Difference	Contrast	Significantly Higher?
80005	-1.438	10.597	No
80105	4.507	10.597	No
80205	18.563	10.597	Yes

Where the "Difference" of a well is greater than the "Contrast" (critical value) the hypothesis of a single population should be rejected.

Non-Parametric test was used in lieu of Parametric Anova after the x^6 transformed data failed Levene's test for equal variances.

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Analysis of Variance Summary

Date: 3/19/08, 1:05 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	Calculate	Critical	Signif.	Alpha	Transform	ANOVA	S	Alpha	Method
1,2,4-TRICHLOROBENZENE (UG	80005	0.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
1,2,4-TRICHLOROBENZENE (UG	80105	0.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
1,2,4-TRICHLOROBENZENE (UG	80205	2.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
1,3-DICHLOROBENZENE (UG/L)	80005	1.950	11.127	No	0.016	n/a	No		0.05	NP (normality)
1,3-DICHLOROBENZENE (UG/L)	80105	2.050	11.127	No	0.016	n/a	No		0.05	NP (normality)
1,3-DICHLOROBENZENE (UG/L)	80205	0.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
ARSENIC (UG/L)	80005	-0.106	11.149	No	0.016	n/a	No		0.05	NP (normality)
ARSENIC (UG/L)	80105	-2.056	11.149	No	0.016	n/a	No		0.05	NP (normality)
ARSENIC (UG/L)	80205	-0.006	11.149	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	80005	-2.167	11.149	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	80105	-2.167	11.149	No	0.016	n/a	No		0.05	NP (normality)
BERYLLIUM (UG/L)	80205	-2.167	11.149	No	0.016	n/a	No		0.05	NP (normality)
Boron (ug/L)	**80005**	**12.167**	**10.570**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**
Boron (ug/L)	**80105**	**27.000**	**10.570**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**
Boron (ug/L)	**80205**	**14.833**	**10.570**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**
CADMIUM (UG/L)	80005	-3.556	11.149	No	0.016	n/a	No		0.05	NP (normality)
CADMIUM (UG/L)	80105	-3.156	11.149	No	0.016	n/a	No		0.05	NP (normality)
CADMIUM (UG/L)	80205	0.644	11.149	No	0.016	n/a	No		0.05	NP (normality)
CHLOROFORM (UG/L)	80005	-4.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
CHLOROFORM (UG/L)	80105	-4.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
CHLOROFORM (UG/L)	80205	-4.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
CHROMIUM (UG/L)	80005	-4.333	11.149	No	0.016	n/a	No		0.05	NP (normality)
CHROMIUM (UG/L)	80105	-4.333	11.149	No	0.016	n/a	No		0.05	NP (normality)
CHROMIUM (UG/L)	80205	-2.383	11.149	No	0.016	n/a	No		0.05	NP (normality)
COPPER (UG/L)	80005	1.900	11.149	No	0.016	n/a	No		0.05	NP (normality)
COPPER (UG/L)	80105	0.000	11.149	No	0.016	n/a	No		0.05	NP (normality)
COPPER (UG/L)	80205	2.000	11.149	No	0.016	n/a	No		0.05	NP (normality)
M,p-Xylene (ug/L)	80005	-1.929	9.029	No	0.016	n/a	No		0.05	NP (normality)
M,p-Xylene (ug/L)	80105	0.000	9.029	No	0.016	n/a	No		0.05	NP (normality)
M,p-Xylene (ug/L)	80205	-1.929	9.398	No	0.016	n/a	No		0.05	NP (normality)

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Analysis of Variance Summary

Date: 3/19/08, 1:05 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	Calculate	Critical	Signif.	Alpha	Transform	ANOVA	S	Alpha	Method
NICKEL (UG/L)	80005	-1.394	11.149	No	0.016	n/a	No		0.05	NP (normality)
NICKEL (UG/L)	80105	-1.294	11.149	No	0.016	n/a	No		0.05	NP (normality)
NICKEL (UG/L)	80205	4.856	11.149	No	0.016	n/a	No		0.05	NP (normality)
SELENIUM (UG/L)	80005	-2.167	11.149	No	0.016	n/a	No		0.05	NP (normality)
SELENIUM (UG/L)	80105	-2.167	11.149	No	0.016	n/a	No		0.05	NP (normality)
SELENIUM (UG/L)	80205	1.733	11.149	No	0.016	n/a	No		0.05	NP (normality)
TOLUENE (UG/L)	80005	-1.950	11.127	No	0.016	n/a	No		0.05	NP (normality)
TOLUENE (UG/L)	80105	0.100	11.127	No	0.016	n/a	No		0.05	NP (normality)
TOLUENE (UG/L)	80205	-1.950	11.127	No	0.016	n/a	No		0.05	NP (normality)
TRICHLOROETHENE (UG/L)	80005	2.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
TRICHLOROETHENE (UG/L)	80105	0.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
TRICHLOROETHENE (UG/L)	80205	0.000	11.127	No	0.016	n/a	No		0.05	NP (normality)
ZINC (UG/L)	80005	-1.056	11.149	No	0.016	n/a	No		0.05	NP (normality)
ZINC (UG/L)	80105	-1.056	11.149	No	0.016	n/a	No		0.05	NP (normality)
ZINC (UG/L)	80205	-0.056	11.149	No	0.016	n/a	No		0.05	NP (normality)
Bis[2-ethylhexyl] phthalate (ug/L)	80005	-1.889	10.280	No	0.016	n/a	No		0.05	NP (normality)
Bis[2-ethylhexyl] phthalate (ug/L)	80105	0.361	10.597	No	0.016	n/a	No		0.05	NP (normality)
Bis[2-ethylhexyl] phthalate (ug/L)	80205	-1.889	10.280	No	0.016	n/a	No		0.05	NP (normality)
DIELDRIN (UG/L)	P416589	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
METHOXYCHLOR (UG/L)	P416589	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
N-Nitrosodibutylamine (ug/L)	80105	n/a	n/a	n/a	n/a	n/a	n/a		n/a	n/a
Uranium (ug/L)	**80005**	**-1.438**	**10.597**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**
Uranium (ug/L)	**80105**	**4.507**	**10.597**	**No**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**
Uranium (ug/L)	**80205**	**18.563**	**10.597**	**Yes**	**0.016**	**n/a**	**Yes**		**0.05**	**NP (equality of variance)**

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

B.3.4.5 OLF S-K Summary Tables

Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,1,1-TRICHLOROETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,1-TRICHLOROETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2,2-TETRACHLOROETHANE (UG/	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1,2-TRICHLOROETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,1-DICHLOROETHENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4-TRICHLOROBENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Dibromo-3-chloropropane (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DIBROMOETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
1,2-DIBROMOETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROBENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-DICHLOROPROPANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,3-DICHLOROBENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,4-DICHLOROBENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	80005	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	80205	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrolein (ug/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	80005	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Acrylonitrile (ug/L)	80205	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Acrylonitrile (ug/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ARSENIC (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BERYLLIUM (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMODICHLOROMETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOFORM (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
BROMOMETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BROMOMETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CADMIUM (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CARBON TETRACHLORIDE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROBENZENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Chlorodibromomethane (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROFORM (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHLOROMETHANE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
CHROMIUM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHROMIUM (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Cis-1,2-DICHLOROETHENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
COPPER (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ETHYLBENZENE (UG/L)	P416589	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBUTADIENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
LEAD (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	80105	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
M,p-Xylene (ug/L)	80205	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

v.8.7.009. For the statistical analyses of ground water by SM Stoller only.

Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
M,p-Xylene (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MERCURY (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHYLENE CHLORIDE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NAPHTHALENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NICKEL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	80105	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	80205	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
O-Xylene (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SELENIUM (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
SILVER (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
SILVER (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
STYRENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TETRACHLOROETHENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOLUENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	80005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	80205	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total Xylene (ug/L)	P416589	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	80005	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	80105	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	80205	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL XYLENES (UG/L)	P416589	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,2-DICHLOROETHENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	80005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Trans-1,3-DICHLOROPROPENE (UG/L	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	80205	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Trans-1,3-DICHLOROPROPENE (UG/L	P416589	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TRICHLOROETHENE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
VINYL CHLORIDE (UG/L)	P416589	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	80105	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ZINC (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4,5-Tetrachlorobenzene (ug/L)	80005	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4,5-Tetrachlorobenzene (ug/L)	80105	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4,5-Tetrachlorobenzene (ug/L)	80205	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2,4,5-Tetrachlorobenzene (ug/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Diphenylhydrazine (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Diphenylhydrazine (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Diphenylhydrazine (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
1,2-Diphenylhydrazine (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2, 4-Dimethylphenol (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2, 4-Dimethylphenol (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2, 4-Dimethylphenol (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2, 4-Dimethylphenol (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
2,4,5-TRICHLOROPHENOL (UG/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,5-TRICHLOROPHENOL (UG/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,5-TRICHLOROPHENOL (UG/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,5-TRICHLOROPHENOL (UG/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,6-TRICHLOROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,6-TRICHLOROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,6-TRICHLOROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4,6-TRICHLOROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DICHLOROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DICHLOROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DICHLOROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DICHLOROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROTOLUENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROTOLUENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROTOLUENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,4-DINITROTOLUENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,6-DINITROTOLUENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,6-DINITROTOLUENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,6-DINITROTOLUENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2,6-DINITROTOLUENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLORONAPHTHALENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLORONAPHTHALENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLORONAPHTHALENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
2-CHLORONAPHTHALENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLOROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLOROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLOROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
2-CHLOROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3,3'-DICHLOROBENZIDINE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3,3'-DICHLOROBENZIDINE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3,3'-DICHLOROBENZIDINE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
3,3'-DICHLOROBENZIDINE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDD (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDD (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDD (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDT (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDT (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,4'-DDT (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,6-Dinitro-2-methyl phenol (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,6-Dinitro-2-methyl phenol (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,6-Dinitro-2-methyl phenol (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4,6-Dinitro-2-methyl phenol (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-CHLORO-3-METHYLPHENOL (UG/L	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-CHLORO-3-METHYLPHENOL (UG/L	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-CHLORO-3-METHYLPHENOL (UG/L	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-CHLORO-3-METHYLPHENOL (UG/L	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-NITROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
4-NITROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-NITROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
4-NITROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ACENAPHTHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ACENAPHTHENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ACENAPHTHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ACENAPHTHENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ALDRIN (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ALDRIN (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ALDRIN (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Alpha-BHC (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Alpha-BHC (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Alpha-BHC (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ANTHRACENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ANTHRACENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ANTHRACENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ANTHRACENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benz[a]anthracene (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benz[a]anthracene (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benz[a]anthracene (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benz[a]anthracene (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzidine (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzidine (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzidine (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzidine (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[a]PYRENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[a]PYRENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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BENZO[a]PYRENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[a]PYRENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[b]FLUORANTHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[b]FLUORANTHENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[b]FLUORANTHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[b]FLUORANTHENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzo[g,h,i]Perylene (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzo[g,h,i]Perylene (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzo[g,h,i]Perylene (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Benzo[g,h,i]Perylene (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[k]FLUORANTHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[k]FLUORANTHENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[k]FLUORANTHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BENZO[k]FLUORANTHENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Beta-BHC (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Beta-BHC (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Beta-BHC (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-chloroethyl] ether (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-chloroethyl] ether (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-chloroethyl] ether (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-chloroethyl] ether (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BIS[2-CHLOROISOPROPYL] ETHER (!80005		9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BIS[2-CHLOROISOPROPYL] ETHER (!80105		8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BIS[2-CHLOROISOPROPYL] ETHER (!80205		9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BIS[2-CHLOROISOPROPYL] ETHER (!P416589		8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-ethylhexyl] phthalate (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-ethylhexyl] phthalate (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Bis[2-ethylhexyl] phthalate (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Bis[2-ethylhexyl] phthalate (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BUTYL BENZYL PHTHALATE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BUTYL BENZYL PHTHALATE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BUTYL BENZYL PHTHALATE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
BUTYL BENZYL PHTHALATE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHRYSENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHRYSENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHRYSENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
CHRYSENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dibenz[a,h]anthracene (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dibenz[a,h]anthracene (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dibenz[a,h]anthracene (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Dibenz[a,h]anthracene (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIELDRIN (UG/L)	80005	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIELDRIN (UG/L)	80105	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIELDRIN (UG/L)	80205	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIELDRIN (UG/L)	P416589	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIETHYL PHTHALATE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIETHYL PHTHALATE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIETHYL PHTHALATE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIETHYL PHTHALATE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIMETHYL PHTHALATE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIMETHYL PHTHALATE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIMETHYL PHTHALATE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DIMETHYL PHTHALATE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DI-n-BUTYL PHTHALATE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
DI-n-BUTYL PHTHALATE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DI-n-BUTYL PHTHALATE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
DI-n-BUTYL PHTHALATE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN I (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN I (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN I (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN II (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN II (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN II (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN SULFATE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN SULFATE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDOSULFAN SULFATE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN ALDEHYDE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN ALDEHYDE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ENDRIN ALDEHYDE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORANTHENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORANTHENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORANTHENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORANTHENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
FLUORENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Gamma-BHC [LINDANE] (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Gamma-BHC [LINDANE] (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Gamma-BHC [LINDANE] (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR EPOXIDE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR EPOXIDE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEPTACHLOR EPOXIDE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBENZENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBENZENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBENZENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROBENZENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROCYCLOPENTADIENE (	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROCYCLOPENTADIENE (	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROCYCLOPENTADIENE (	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROCYCLOPENTADIENE (	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROETHANE (UG/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROETHANE (UG/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROETHANE (UG/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HEXACHLOROETHANE (UG/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
INDENO[1,2,3-cd]PYRENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
INDENO[1,2,3-cd]PYRENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
INDENO[1,2,3-cd]PYRENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
INDENO[1,2,3-cd]PYRENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ISOPHORONE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ISOPHORONE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
ISOPHORONE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
ISOPHORONE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHOXYCHLOR (UG/L)	80005	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHOXYCHLOR (UG/L)	80105	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHOXYCHLOR (UG/L)	80205	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
METHOXYCHLOR (UG/L)	P416589	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NITROBENZENE (UG/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NITROBENZENE (UG/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NITROBENZENE (UG/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
NITROBENZENE (UG/L)	P416589	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodibutylamine (ug/L)	80005	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodibutylamine (ug/L)	80105	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodibutylamine (ug/L)	80205	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodibutylamine (ug/L)	P416589	4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodiethylamine (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodiethylamine (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodiethylamine (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodiethylamine (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodimethylamine (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodimethylamine (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodimethylamine (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodimethylamine (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodi-n-propylamine (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodi-n-propylamine (ug/L)	80105	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodi-n-propylamine (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosodi-n-propylamine (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-NITROSODIPHENYLAMINE (UG/L)	80005	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-NITROSODIPHENYLAMINE (UG/L)	80105	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
N-NITROSODIPHENYLAMINE (UG/L)	80205	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-NITROSODIPHENYLAMINE (UG/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosopyrrolidine (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosopyrrolidine (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosopyrrolidine (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
N-Nitrosopyrrolidine (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parathion, ethyl (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parathion, ethyl (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parathion, ethyl (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Parathion, ethyl (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pentachlorobenzene (ug/L)	80005	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pentachlorobenzene (ug/L)	80105	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pentachlorobenzene (ug/L)	80205	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Pentachlorobenzene (ug/L)	P416589	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PENTACHLOROPHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PENTACHLOROPHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PENTACHLOROPHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PENTACHLOROPHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PHENOL (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PHENOL (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PHENOL (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PHENOL (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PYRENE (UG/L)	80005	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PYRENE (UG/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PYRENE (UG/L)	80205	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
PYRENE (UG/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOXAPHENE (UG/L)	80005	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Seasonal Kendall Summary

Date: 3/19/08, 1:52 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
TOXAPHENE (UG/L)	80105	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOXAPHENE (UG/L)	80205	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	P416589	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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B.3.4.6 OLF Summary Table for Boron and Uranium

Seasonal Kendall Summary

Date: 3/20/08, 12:03 PM Facility: Rocky Flats Site

Data File: RFLMA RCRA wells TRANS Client: SM Stoller

Constituent	Well	N	Slope	Z	80%	Sig.	90%	Sig.	95%	Sig.
Boron (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Boron (ug/L)	P416589	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80005	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80105	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	80205	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Uranium (ug/L)	P416589	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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B.4 PARCC Evaluation

This section includes the PARCC tables referenced in Section 3.6 of the report.

Table B-1. Duplicate Error Ratios (DERs) for Radionuclides

Location	Sample Date	Analyte	Real Result	Real 2 Sigma Error	Real Lab Qual	Real Validation	Dup Result	Dup 2 Sigma Error	Dup Lab Qual	Dup Validation	Units	DER
GS10	11/1/2007	Uranium-234	5.580	0.834		valid	5.620	0.858		valid	pCi/L	0.03
GS11	3/11/2007	Uranium-234	2.070	0.271		valid	2.050	0.299		valid	pCi/L	0.05
GS10	11/1/2007	Americium-241	-0.002	0.011	U	valid	-0.003	0.008	U	valid	pCi/L	0.08
GS10	11/1/2007	Uranium-238	4.530	0.713		valid	4.790	0.761		valid	pCi/L	0.25
GS08	3/11/2007	Uranium-234	4.720	0.600		valid	4.970	0.670		valid	pCi/L	0.28
GS03	3/11/2007	Uranium-234	2.330	0.330		valid	2.200	0.303		valid	pCi/L	0.29
GS10	11/1/2007	Uranium-235/236	0.384	0.198		J	0.301	0.184		J	pCi/L	0.31
GS08	3/11/2007	Uranium-235/236	0.238	0.063		valid	0.208	0.066		valid	pCi/L	0.33
GS03	3/11/2007	Uranium-238	1.890	0.276		valid	2.020	0.280		valid	pCi/L	0.33
GS08	3/11/2007	Uranium-238	4.590	0.584		valid	4.290	0.586		valid	pCi/L	0.36
37705	5/3/2007	Americium-241	-0.006	0.010	U	valid	-0.001	0.010	U	valid	pCi/L	0.38
GS11	3/11/2007	Uranium-238	1.890	0.251		valid	1.750	0.261		valid	pCi/L	0.39
GS08	3/11/2007	Plutonium-239, 240	-0.003	0.010	U	valid	-0.011	0.016	U	valid	pCi/L	0.44
37705	5/3/2007	Plutonium-239, 240	0.003	0.005	U	valid	0.006	0.006	U	valid	pCi/L	0.47
20705	10/25/2007	Americium-241	0.002	0.015	U	valid	0.012	0.014	U	valid	pCi/L	0.50
GS03	3/11/2007	Americium-241	-0.005	0.006	U	valid	0.001	0.011	U	valid	pCi/L	0.52
20705	10/25/2007	Plutonium-239, 240	0.002	0.005	U	valid	0.006	0.006	U	valid	pCi/L	0.55
GS08	3/11/2007	Americium-241	-0.004	0.006	U	valid	0.004	0.009	U	valid	pCi/L	0.69
GS11	3/11/2007	Americium-241	0.009	0.007	U	valid	0.001	0.008	U	valid	pCi/L	0.70
GS03	3/11/2007	Uranium-235/236	0.192	0.058		valid	0.125	0.045		J	pCi/L	0.91
GS11	3/11/2007	Uranium-235/236	0.110	0.037		J	0.180	0.060		valid	pCi/L	0.99
GS10	11/1/2007	Plutonium-239, 240	0.004	0.012	U	valid	-0.016	0.012	U	valid	pCi/L	1.20
GS11	3/11/2007	Plutonium-239, 240	-0.023	0.018	U	valid	0.006	0.015	U	valid	pCi/L	1.22
GS03	3/11/2007	Plutonium-239, 240	0.006	0.008	U	valid	-0.015	0.014	U	valid	pCi/L	1.28

LAB_QUALIFIERS

U Analytical result below detection limit.

DATA_VALIDATION_QUALIFIERS

valid Result is valid.

J Estimated value.

Table B-2. Relative Percent Differences (RPDs) for Metals, VOCs/SVOCs, and Water-Quality Analysis

Location	Sample Date	Analyte	Real Result	Real Lab Qual	Real Valid-ation	Dup Result	Dup Lab Qual	Dup Valid-ation	Units	RPD%	Filtered
80105	6/5/2007	Boron	0.12		valid	0.12		valid	mg/L	0.00	Yes
73205	8/28/2007	Boron	0.061		valid	0.06		valid	mg/L	1.65	Yes
P416589	10/17/2007	Boron	0.0066	B	valid	0.0064	B	valid	mg/L	3.08	Yes
80205	3/6/2007	Boron	0.066		valid	0.058		valid	mg/L	12.90	Yes
73205	8/28/2007	Cadmium	0.00079	B	valid	0.00068	B	valid	mg/L	14.97	Yes
73205	8/28/2007	Selenium	0.27		valid	0.26		valid	mg/L	3.77	Yes
20705	10/25/2007	Uranium	0.017		valid	0.017		valid	mg/L	0.00	Yes
37705	5/3/2007	Uranium	0.014		J	0.014		J	mg/L	0.00	Yes
99405	11/5/2007	Uranium	0.4		valid	0.4		valid	mg/L	0.00	Yes
91305	11/5/2007	Uranium	0.054		valid	0.053		valid	mg/L	1.87	Yes
SPPDISCHARGEGALLERY	11/7/2007	Uranium	0.071		valid	0.068		valid	mg/L	4.32	Yes
99305	5/10/2007	Uranium	0.053		valid	0.058		valid	mg/L	9.01	Yes
80205	3/6/2007	Uranium	0.063		valid	0.071		valid	mg/L	11.94	Yes
P416589	10/17/2007	Uranium	0.024	B	valid	0.021	B	valid	mg/L	13.33	Yes
73205	8/28/2007	Uranium	0.12		valid	0.14		valid	mg/L	15.38	Yes
80105	6/5/2007	Uranium	0.022	B	valid	0.026	B	valid	mg/L	16.67	Yes
37705	5/3/2007	Nitrate + Nitrite as Nitrogen	0.47		J	0.47		J	mg/L	0.00	No
99405	11/5/2007	Nitrate + Nitrite as Nitrogen	4.2		valid	4.1		valid	mg/L	2.41	No
91305	11/5/2007	Nitrate + Nitrite as Nitrogen	0.25		valid	0.26		valid	mg/L	3.92	No
GS11	3/11/2007	Nitrate + Nitrite as Nitrogen	5.03		valid	5.33		valid	mg/L	5.79	No
GS03	3/11/2007	Nitrate + Nitrite as Nitrogen	2.96		valid	3.16		valid	mg/L	6.54	No
91203	5/9/2007	1,1,1-Trichloroethane	5.5		J	5.1		J	ug/L	7.55	No
91203	5/9/2007	1,1-Dichloroethene	1.7		J	1.6		J	ug/L	6.06	No
MOUND R2-E	10/9/2007	1,1-Dichloroethene	0.44	J	valid	0.54	J	valid	ug/L	20.41	No
MOUND R2-E	10/9/2007	1,2-Dichloroethane	2.4		valid	2.4		valid	ug/L	0.00	No
80105	6/5/2007	1,3-Dichlorobenzene	0.22	J	valid	0.24	J	valid	ug/L	8.70	No
ET EFFLUENT	10/9/2007	Benzene	0.42	J	valid	0.42	J	valid	ug/L	0.00	No
MOUND R2-E	10/9/2007	Benzene	1.9		valid	1.9		valid	ug/L	0.00	No
91203	5/9/2007	Carbon tetrachloride	160		J	170		J	ug/L	6.06	No
91203	5/9/2007	Chloroform	8.6		J	8.2		J	ug/L	4.76	No
91203	5/9/2007	cis-1,2-Dichloroethene	1.7		J	1.7		J	ug/L	0.00	No
ET EFFLUENT	10/9/2007	cis-1,2-Dichloroethene	22		valid	22		valid	ug/L	0.00	No
91305	11/5/2007	cis-1,2-Dichloroethene	7.6		valid	7.5		valid	ug/L	1.32	No
52505	10/29/2007	cis-1,2-Dichloroethene	0.3	J	valid	0.31	J	valid	ug/L	3.28	No
99305	5/10/2007	cis-1,2-Dichloroethene	18		J	17		J	ug/L	5.71	No
MOUND R2-E	10/9/2007	cis-1,2-Dichloroethene	300		valid	320		valid	ug/L	6.45	No
20705	10/25/2007	cis-1,2-Dichloroethene	1.3		valid	1.2		valid	ug/L	8.00	No
99405	11/5/2007	cis-1,2-Dichloroethene	1.4		J	1.6		valid	ug/L	13.33	No

Table B-2 (continued). Relative Percent Differences (RPDs) for Metals, VOCs/SVOCs, and Water-Quality Analysis

Location	Sample Date	Analyte	Real Result	Real Lab Qual	Real Valid-ation	Dup Result	Dup Lab Qual	Dup Valid-ation	Units	RPD%	Filtered
MOUND R2-E	10/9/2007	Methylene chloride	4.8		valid	5.5		valid	ug/L	13.59	No
91203	5/9/2007	Tetrachloroethene	14		J	14		J	ug/L	0.00	No
ET EFFLUENT	10/9/2007	Tetrachloroethene	9.5		valid	9.7		valid	ug/L	2.08	No
99305	5/10/2007	Tetrachloroethene	5.8		J	5.6		J	ug/L	3.51	No
99405	11/5/2007	Tetrachloroethene	0.83	J	J	0.79	J	valid	ug/L	4.94	No
99305	5/10/2007	trans-1,2-Dichloroethene	0.16	J	J	0.17	J	J	ug/L	6.06	No
99305	5/10/2007	Trichloroethene	110		J	110		J	ug/L	0.00	No
ET EFFLUENT	10/9/2007	Trichloroethene	5.3		valid	5.5		valid	ug/L	3.70	No
91203	5/9/2007	Trichloroethene	8.4		J	7.6		J	ug/L	10.00	No
99405	11/5/2007	Trichloroethene	120		J	91		valid	ug/L	27.49	No
20705	10/25/2007	Vinyl chloride	1.3		valid	1.3		valid	ug/L	0.00	No
52505	10/29/2007	Vinyl chloride	0.46	J	valid	0.46	J	valid	ug/L	0.00	No
ET EFFLUENT	10/9/2007	Vinyl chloride	0.43	J	valid	0.44	J	valid	ug/L	2.30	No
MOUND R2-E	10/9/2007	Vinyl chloride	36		valid	39		valid	ug/L	8.00	No

LAB_QUALIFIERS

U	Analytical result below detection limit.
B	Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
J	Estimated

DATA_VALIDATION_QUALIFIERS

valid	Result is valid.
J	Estimated value.

Table B-3. Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111261	1,1,1-Trichloroethane	MSD	73.0	%REC
07030756	1,1,1-Trichloroethane	MSD	76.0	%REC
07111261	1,1,1-Trichloroethane	MS	79.0	%REC
07030756	1,1,1-Trichloroethane	MS	81.0	%REC
07050928	1,1,1-Trichloroethane	MSD	83.0	%REC
07060977	1,1,1-Trichloroethane	MSD	83.0	%REC
07111261	1,1,1-Trichloroethane	MSD	84.0	%REC
07050893	1,1,1-Trichloroethane	MS	85.0	%REC
07060977	1,1,1-Trichloroethane	MS	85.0	%REC
07030756	1,1,1-Trichloroethane	MSD	85.0	%REC
07101228	1,1,1-Trichloroethane	MS	86.0	%REC
07111263	1,1,1-Trichloroethane	MS	86.0	%REC
07050893	1,1,1-Trichloroethane	MSD	86.0	%REC
07111270	1,1,1-Trichloroethane	MSD	86.0	%REC
07111270	1,1,1-Trichloroethane	MS	87.0	%REC
07111250	1,1,1-Trichloroethane	MSD	88.0	%REC
07111270	1,1,1-Trichloroethane	MSD	88.0	%REC
07030756	1,1,1-Trichloroethane	MS	89.0	%REC
07050875	1,1,1-Trichloroethane	MS	90.0	%REC
07071016	1,1,1-Trichloroethane	MSD	90.0	%REC
07111263	1,1,1-Trichloroethane	MSD	90.0	%REC
07101228	1,1,1-Trichloroethane	MSD	91.0	%REC
07040821	1,1,1-Trichloroethane	MS	92.0	%REC
07050886	1,1,1-Trichloroethane	MS	92.0	%REC
07111250	1,1,1-Trichloroethane	MS	92.0	%REC
07111270	1,1,1-Trichloroethane	MS	92.0	%REC
07050908	1,1,1-Trichloroethane	MSD	92.0	%REC
07111250	1,1,1-Trichloroethane	MSD	93.0	%REC
07050908	1,1,1-Trichloroethane	MS	94.0	%REC
07111250	1,1,1-Trichloroethane	MS	94.0	%REC
07101215	1,1,1-Trichloroethane	MSD	94.0	%REC
07091155	1,1,1-Trichloroethane	MS	95.0	%REC
07101206	1,1,1-Trichloroethane	MS	96.0	%REC
07050886	1,1,1-Trichloroethane	MSD	96.0	%REC
07050928	1,1,1-Trichloroethane	MSD	96.0	%REC
07071016	1,1,1-Trichloroethane	MS	97.0	%REC
07050908	1,1,1-Trichloroethane	MS	98.0	%REC
07040864	1,1,1-Trichloroethane	MSD	98.0	%REC
07040864	1,1,1-Trichloroethane	MS	100.0	%REC
07050928	1,1,1-Trichloroethane	MS	100.0	%REC
07071046	1,1,1-Trichloroethane	MS	100.0	%REC
07040821	1,1,1-Trichloroethane	MSD	100.0	%REC
07081079	1,1,1-Trichloroethane	MS	101.0	%REC
07111261	1,1,1-Trichloroethane	MS	101.0	%REC
07081079	1,1,1-Trichloroethane	MSD	101.0	%REC
07050875	1,1,1-Trichloroethane	MSD	102.0	%REC
07050875	1,1,1-Trichloroethane	MSD	102.0	%REC
07050908	1,1,1-Trichloroethane	MSD	102.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091155	1,1,1-Trichloroethane	MSD	102.0	%REC
07101215	1,1,1-Trichloroethane	MS	103.0	%REC
07071046	1,1,1-Trichloroethane	MSD	103.0	%REC
07050875	1,1,1-Trichloroethane	MS	105.0	%REC
07040821	1,1,1-Trichloroethane	MSD	105.0	%REC
07040821	1,1,1-Trichloroethane	MS	106.0	%REC
07060944	1,1,1-Trichloroethane	MS	106.0	%REC
07081132	1,1,1-Trichloroethane	MS	107.0	%REC
07101206	1,1,1-Trichloroethane	MSD	107.0	%REC
07091151	1,1,1-Trichloroethane	MS	108.0	%REC
07081113	1,1,1-Trichloroethane	MSD	108.0	%REC
07040854	1,1,1-Trichloroethane	MS	109.0	%REC
07040854	1,1,1-Trichloroethane	MSD	109.0	%REC
07081113	1,1,1-Trichloroethane	MS	110.0	%REC
07091157	1,1,1-Trichloroethane	MS	110.0	%REC
07081132	1,1,1-Trichloroethane	MSD	110.0	%REC
07091151	1,1,1-Trichloroethane	MSD	110.0	%REC
07091157	1,1,1-Trichloroethane	MSD	111.0	%REC
07081123	1,1,1-Trichloroethane	MSD	112.0	%REC
07060944	1,1,1-Trichloroethane	MS	113.0	%REC
07060944	1,1,1-Trichloroethane	MSD	113.0	%REC
07060944	1,1,1-Trichloroethane	MSD	115.0	%REC
07081123	1,1,1-Trichloroethane	MS	119.0	%REC
07101228	1,1-Dichloroethene	MSD	51.0	%REC
07101228	1,1-Dichloroethene	MS	55.0	%REC
07040854	1,1-Dichloroethene	MSD	77.0	%REC
07050908	1,1-Dichloroethene	MSD	77.0	%REC
07111250	1,1-Dichloroethene	MSD	77.0	%REC
07111250	1,1-Dichloroethene	MS	79.0	%REC
07101227	1,1-Dichloroethene	MSD	79.0	%REC
07050893	1,1-Dichloroethene	MS	82.0	%REC
07111250	1,1-Dichloroethene	MS	82.0	%REC
07101227	1,1-Dichloroethene	MS	83.0	%REC
07050893	1,1-Dichloroethene	MSD	83.0	%REC
07040821	1,1-Dichloroethene	MS	84.0	%REC
07050928	1,1-Dichloroethene	MSD	84.0	%REC
07111261	1,1-Dichloroethene	MSD	87.0	%REC
07060968	1,1-Dichloroethene	MS	88.0	%REC
07091155	1,1-Dichloroethene	MS	88.0	%REC
07040854	1,1-Dichloroethene	MS	90.0	%REC
07050875	1,1-Dichloroethene	MS	90.0	%REC
07050908	1,1-Dichloroethene	MS	90.0	%REC
07071047	1,1-Dichloroethene	MS	90.0	%REC
07071016	1,1-Dichloroethene	MSD	90.0	%REC
07091155	1,1-Dichloroethene	MSD	90.0	%REC
07101215	1,1-Dichloroethene	MSD	90.0	%REC
07040821	1,1-Dichloroethene	MSD	91.0	%REC
07111250	1,1-Dichloroethene	MSD	91.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07081132	1,1-Dichloroethene	MS	92.0	%REC
07050886	1,1-Dichloroethene	MS	93.0	%REC
07111270	1,1-Dichloroethene	MS	93.0	%REC
07030756	1,1-Dichloroethene	MSD	93.0	%REC
07071047	1,1-Dichloroethene	MSD	93.0	%REC
07050928	1,1-Dichloroethene	MSD	94.0	%REC
07111270	1,1-Dichloroethene	MSD	95.0	%REC
07050875	1,1-Dichloroethene	MS	96.0	%REC
07081079	1,1-Dichloroethene	MS	96.0	%REC
07111261	1,1-Dichloroethene	MS	96.0	%REC
07111263	1,1-Dichloroethene	MS	96.0	%REC
07081132	1,1-Dichloroethene	MSD	96.0	%REC
07060944	1,1-Dichloroethene	MS	97.0	%REC
07010677	1,1-Dichloroethene	MSD	97.0	%REC
07050875	1,1-Dichloroethene	MSD	97.0	%REC
07010677	1,1-Dichloroethene	MS	98.0	%REC
07071016	1,1-Dichloroethene	MS	99.0	%REC
07050908	1,1-Dichloroethene	MS	100.0	%REC
07050928	1,1-Dichloroethene	MS	100.0	%REC
07050875	1,1-Dichloroethene	MSD	100.0	%REC
07050886	1,1-Dichloroethene	MSD	100.0	%REC
07081079	1,1-Dichloroethene	MSD	100.0	%REC
07081113	1,1-Dichloroethene	MSD	100.0	%REC
07111270	1,1-Dichloroethene	MSD	101.0	%REC
07081113	1,1-Dichloroethene	MS	102.0	%REC
07060968	1,1-Dichloroethene	MSD	102.0	%REC
07091151	1,1-Dichloroethene	MSD	102.0	%REC
07111261	1,1-Dichloroethene	MSD	102.0	%REC
07050908	1,1-Dichloroethene	MSD	103.0	%REC
07111263	1,1-Dichloroethene	MSD	103.0	%REC
07030756	1,1-Dichloroethene	MS	104.0	%REC
07060977	1,1-Dichloroethene	MSD	104.0	%REC
07020735	1,1-Dichloroethene	MS	105.0	%REC
07060977	1,1-Dichloroethene	MS	105.0	%REC
07071046	1,1-Dichloroethene	MS	105.0	%REC
07091151	1,1-Dichloroethene	MS	105.0	%REC
07101206	1,1-Dichloroethene	MS	105.0	%REC
07101215	1,1-Dichloroethene	MS	105.0	%REC
07111270	1,1-Dichloroethene	MS	106.0	%REC
07020735	1,1-Dichloroethene	MSD	106.0	%REC
07040864	1,1-Dichloroethene	MSD	106.0	%REC
07040864	1,1-Dichloroethene	MS	107.0	%REC
07060944	1,1-Dichloroethene	MSD	107.0	%REC
07030756	1,1-Dichloroethene	MSD	109.0	%REC
07050873	1,1-Dichloroethene	MSD	110.0	%REC
07050873	1,1-Dichloroethene	MS	111.0	%REC
07071046	1,1-Dichloroethene	MSD	113.0	%REC
07030756	1,1-Dichloroethene	MS	114.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07081123	1,1-Dichloroethene	MSD	114.0	%REC
07060944	1,1-Dichloroethene	MS	115.0	%REC
07081123	1,1-Dichloroethene	MS	115.0	%REC
07060944	1,1-Dichloroethene	MSD	116.0	%REC
07101206	1,1-Dichloroethene	MSD	117.0	%REC
07091157	1,1-Dichloroethene	MSD	119.0	%REC
07060935	1,1-Dichloroethene	MS	122.0	%REC
07060935	1,1-Dichloroethene	MSD	123.0	%REC
07111261	1,1-Dichloroethene	MS	124.0	%REC
07091157	1,1-Dichloroethene	MS	128.0	%REC
07030756	1,2,4-Trichlorobenzene	MS	54.0	%REC
07091151	1,2,4-Trichlorobenzene	MSD	58.0	%REC
07030756	1,2,4-Trichlorobenzene	MSD	60.0	%REC
07091151	1,2,4-Trichlorobenzene	MS	69.0	%REC
07111270	1,2-Dichloropropane	MSD	77.0	%REC
07111250	1,2-Dichloropropane	MSD	79.0	%REC
07050875	1,2-Dichloropropane	MS	80.0	%REC
07111270	1,2-Dichloropropane	MS	80.0	%REC
07111250	1,2-Dichloropropane	MS	81.0	%REC
07050908	1,2-Dichloropropane	MSD	82.0	%REC
07081079	1,2-Dichloropropane	MS	84.0	%REC
07050908	1,2-Dichloropropane	MS	86.0	%REC
07091157	1,2-Dichloropropane	MS	86.0	%REC
07040854	1,2-Dichloropropane	MS	87.0	%REC
07091155	1,2-Dichloropropane	MS	87.0	%REC
07091157	1,2-Dichloropropane	MSD	88.0	%REC
07091151	1,2-Dichloropropane	MS	89.0	%REC
07101206	1,2-Dichloropropane	MS	89.0	%REC
07101228	1,2-Dichloropropane	MS	89.0	%REC
07081079	1,2-Dichloropropane	MSD	89.0	%REC
07091155	1,2-Dichloropropane	MSD	89.0	%REC
07050875	1,2-Dichloropropane	MS	90.0	%REC
07050893	1,2-Dichloropropane	MSD	90.0	%REC
07111263	1,2-Dichloropropane	MSD	90.0	%REC
07111263	1,2-Dichloropropane	MS	91.0	%REC
07050928	1,2-Dichloropropane	MSD	91.0	%REC
07101228	1,2-Dichloropropane	MSD	92.0	%REC
07050893	1,2-Dichloropropane	MS	93.0	%REC
07040854	1,2-Dichloropropane	MSD	93.0	%REC
07050875	1,2-Dichloropropane	MSD	93.0	%REC
07111270	1,2-Dichloropropane	MSD	93.0	%REC
07111261	1,2-Dichloropropane	MS	94.0	%REC
07050875	1,2-Dichloropropane	MSD	94.0	%REC
07111261	1,2-Dichloropropane	MSD	94.0	%REC
07050908	1,2-Dichloropropane	MS	95.0	%REC
07111250	1,2-Dichloropropane	MS	95.0	%REC
07111270	1,2-Dichloropropane	MS	95.0	%REC
07111250	1,2-Dichloropropane	MSD	95.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050928	1,2-Dichloropropane	MS	96.0	%REC
07050886	1,2-Dichloropropane	MS	98.0	%REC
07050908	1,2-Dichloropropane	MSD	98.0	%REC
07071016	1,2-Dichloropropane	MSD	98.0	%REC
07101206	1,2-Dichloropropane	MSD	98.0	%REC
07081132	1,2-Dichloropropane	MS	99.0	%REC
07050928	1,2-Dichloropropane	MSD	99.0	%REC
07091151	1,2-Dichloropropane	MSD	99.0	%REC
07060944	1,2-Dichloropropane	MS	100.0	%REC
07040864	1,2-Dichloropropane	MSD	100.0	%REC
07071046	1,2-Dichloropropane	MSD	100.0	%REC
07081132	1,2-Dichloropropane	MSD	100.0	%REC
07040821	1,2-Dichloropropane	MS	102.0	%REC
07071046	1,2-Dichloropropane	MS	102.0	%REC
07060944	1,2-Dichloropropane	MSD	102.0	%REC
07040864	1,2-Dichloropropane	MS	103.0	%REC
07030756	1,2-Dichloropropane	MSD	103.0	%REC
07050886	1,2-Dichloropropane	MSD	103.0	%REC
07081123	1,2-Dichloropropane	MSD	103.0	%REC
07060977	1,2-Dichloropropane	MS	105.0	%REC
07081113	1,2-Dichloropropane	MS	105.0	%REC
07081113	1,2-Dichloropropane	MSD	105.0	%REC
07060977	1,2-Dichloropropane	MSD	106.0	%REC
07101215	1,2-Dichloropropane	MSD	106.0	%REC
07071016	1,2-Dichloropropane	MS	107.0	%REC
07101215	1,2-Dichloropropane	MS	107.0	%REC
07111261	1,2-Dichloropropane	MS	107.0	%REC
07040821	1,2-Dichloropropane	MSD	107.0	%REC
07111261	1,2-Dichloropropane	MSD	108.0	%REC
07060944	1,2-Dichloropropane	MSD	109.0	%REC
07030756	1,2-Dichloropropane	MS	110.0	%REC
07060944	1,2-Dichloropropane	MS	110.0	%REC
07060935	1,2-Dichloropropane	MSD	110.0	%REC
07030756	1,2-Dichloropropane	MSD	112.0	%REC
07081123	1,2-Dichloropropane	MS	114.0	%REC
07030756	1,2-Dichloropropane	MS	116.0	%REC
07060935	1,2-Dichloropropane	MS	122.0	%REC
07040854	1,3-Dichlorobenzene	MS	76.0	%REC
07111261	1,3-Dichlorobenzene	MSD	81.0	%REC
07040854	1,3-Dichlorobenzene	MSD	82.0	%REC
07111250	1,3-Dichlorobenzene	MS	83.0	%REC
07111250	1,3-Dichlorobenzene	MSD	83.0	%REC
07050875	1,3-Dichlorobenzene	MS	84.0	%REC
07050886	1,3-Dichlorobenzene	MS	84.0	%REC
07091155	1,3-Dichlorobenzene	MS	84.0	%REC
07111261	1,3-Dichlorobenzene	MS	85.0	%REC
07060977	1,3-Dichlorobenzene	MSD	86.0	%REC
07101228	1,3-Dichlorobenzene	MSD	86.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050908	1,3-Dichlorobenzene	MS	88.0	%REC
07081132	1,3-Dichlorobenzene	MS	88.0	%REC
07091151	1,3-Dichlorobenzene	MS	88.0	%REC
07111270	1,3-Dichlorobenzene	MS	88.0	%REC
07050928	1,3-Dichlorobenzene	MSD	88.0	%REC
07111263	1,3-Dichlorobenzene	MSD	88.0	%REC
07101206	1,3-Dichlorobenzene	MS	89.0	%REC
07111263	1,3-Dichlorobenzene	MS	89.0	%REC
07081113	1,3-Dichlorobenzene	MSD	89.0	%REC
07091155	1,3-Dichlorobenzene	MSD	89.0	%REC
07101215	1,3-Dichlorobenzene	MSD	89.0	%REC
07111270	1,3-Dichlorobenzene	MSD	89.0	%REC
07111270	1,3-Dichlorobenzene	MSD	89.0	%REC
07060977	1,3-Dichlorobenzene	MS	90.0	%REC
07081113	1,3-Dichlorobenzene	MS	90.0	%REC
07101215	1,3-Dichlorobenzene	MS	90.0	%REC
07091157	1,3-Dichlorobenzene	MSD	90.0	%REC
07060935	1,3-Dichlorobenzene	MSD	91.0	%REC
07040821	1,3-Dichlorobenzene	MS	92.0	%REC
07050908	1,3-Dichlorobenzene	MS	92.0	%REC
07101228	1,3-Dichlorobenzene	MS	92.0	%REC
07050886	1,3-Dichlorobenzene	MSD	92.0	%REC
07081132	1,3-Dichlorobenzene	MSD	92.0	%REC
07050893	1,3-Dichlorobenzene	MS	93.0	%REC
07071046	1,3-Dichlorobenzene	MS	93.0	%REC
07091157	1,3-Dichlorobenzene	MS	93.0	%REC
07050908	1,3-Dichlorobenzene	MSD	93.0	%REC
07050908	1,3-Dichlorobenzene	MSD	93.0	%REC
07101206	1,3-Dichlorobenzene	MSD	93.0	%REC
07111261	1,3-Dichlorobenzene	MSD	93.0	%REC
07030756	1,3-Dichlorobenzene	MS	94.0	%REC
07050928	1,3-Dichlorobenzene	MS	94.0	%REC
07111261	1,3-Dichlorobenzene	MS	94.0	%REC
07111270	1,3-Dichlorobenzene	MS	94.0	%REC
07050928	1,3-Dichlorobenzene	MSD	94.0	%REC
07111250	1,3-Dichlorobenzene	MSD	94.0	%REC
07111250	1,3-Dichlorobenzene	MS	95.0	%REC
07060935	1,3-Dichlorobenzene	MS	96.0	%REC
07081079	1,3-Dichlorobenzene	MS	96.0	%REC
07030756	1,3-Dichlorobenzene	MSD	96.0	%REC
07040864	1,3-Dichlorobenzene	MSD	96.0	%REC
07050875	1,3-Dichlorobenzene	MS	97.0	%REC
07030756	1,3-Dichlorobenzene	MSD	97.0	%REC
07060944	1,3-Dichlorobenzene	MSD	97.0	%REC
07030756	1,3-Dichlorobenzene	MS	98.0	%REC
07081123	1,3-Dichlorobenzene	MS	98.0	%REC
07071046	1,3-Dichlorobenzene	MSD	98.0	%REC
07081079	1,3-Dichlorobenzene	MSD	98.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091151	1,3-Dichlorobenzene	MSD	98.0	%REC
07050893	1,3-Dichlorobenzene	MSD	99.0	%REC
07081123	1,3-Dichlorobenzene	MSD	99.0	%REC
07040821	1,3-Dichlorobenzene	MSD	99.9	%REC
07050875	1,3-Dichlorobenzene	MSD	101.0	%REC
07040864	1,3-Dichlorobenzene	MS	102.0	%REC
07060944	1,3-Dichlorobenzene	MS	102.0	%REC
07060944	1,3-Dichlorobenzene	MS	102.0	%REC
07060944	1,3-Dichlorobenzene	MSD	103.0	%REC
07071016	1,3-Dichlorobenzene	MSD	105.0	%REC
07071016	1,3-Dichlorobenzene	MS	106.0	%REC
07050875	1,3-Dichlorobenzene	MSD	106.0	%REC
07030756	1,4-Dichlorobenzene	MS	55.0	%REC
07091151	1,4-Dichlorobenzene	MSD	57.0	%REC
07030756	1,4-Dichlorobenzene	MSD	65.0	%REC
07091151	1,4-Dichlorobenzene	MS	68.0	%REC
07030756	2,4,6-Trichlorophenol	MS	60.0	%REC
07030756	2,4,6-Trichlorophenol	MSD	62.0	%REC
07091151	2,4,6-Trichlorophenol	MSD	70.0	%REC
07091151	2,4,6-Trichlorophenol	MS	77.0	%REC
07030756	2,4-Dinitrotoluene	MS	68.0	%REC
07030756	2,4-Dinitrotoluene	MSD	71.0	%REC
07091151	2,4-Dinitrotoluene	MS	83.0	%REC
07091151	2,4-Dinitrotoluene	MSD	83.0	%REC
07091151	2-Chlorophenol	MSD	65.0	%REC
07030756	2-Chlorophenol	MS	66.0	%REC
07030756	2-Chlorophenol	MSD	71.0	%REC
07091151	2-Chlorophenol	MS	75.0	%REC
07030756	4-Chloro-3-methylphenol	MS	50.0	%REC
07030756	4-Chloro-3-methylphenol	MSD	52.0	%REC
07091151	4-Chloro-3-methylphenol	MSD	74.0	%REC
07091151	4-Chloro-3-methylphenol	MS	81.0	%REC
07030756	4-Nitrophenol	MS	66.0	%REC
07030756	4-Nitrophenol	MSD	69.0	%REC
07091151	4-Nitrophenol	MSD	81.0	%REC
07091151	4-Nitrophenol	MS	83.0	%REC
07030756	Acenaphthene	MSD	20.0	%REC
07030756	Acenaphthene	MS	22.0	%REC
07091151	Acenaphthene	MSD	72.0	%REC
07091151	Acenaphthene	MS	78.0	%REC
07040821	Acrolein	MS	92.0	%REC
07040821	Acrolein	MS	92.0	%REC
07040821	Acrolein	MSD	100.0	%REC
07040821	Acrolein	MSD	100.0	%REC
07030756	Anthracene	MSD	10.0	%REC
07030756	Anthracene	MS	11.0	%REC
07091151	Anthracene	MS	85.0	%REC
07091151	Anthracene	MSD	86.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07040866	Arsenic	MS	95.0	%REC
07081123	Arsenic	MSD	96.0	%REC
07101206	Arsenic	MSD	96.0	%REC
07020741	Arsenic	MSD	97.0	%REC
07081132	Arsenic	MSD	97.0	%REC
07020741	Arsenic	MS	98.0	%REC
07050873	Arsenic	MS	98.0	%REC
07081123	Arsenic	MS	98.0	%REC
07010677	Arsenic	MS	98.4	%REC
07071047	Arsenic	MS	98.4	%REC
07081132	Arsenic	MS	99.0	%REC
07020735	Arsenic	MS	100.0	%REC
07101206	Arsenic	MS	100.0	%REC
07050875	Arsenic	MSD	100.0	%REC
07101215	Arsenic	MSD	100.0	%REC
07030789	Arsenic	MS	101.0	%REC
07050875	Arsenic	MS	101.0	%REC
07101196	Arsenic	MS	101.0	%REC
07030756	Arsenic	MS	102.0	%REC
07101215	Arsenic	MS	102.0	%REC
07040826	Arsenic	MS	103.0	%REC
07050884	Arsenic	MS	103.0	%REC
07030756	Arsenic	MSD	103.0	%REC
07030789	Arsenic	MSD	103.0	%REC
07060935	Arsenic	MSD	103.0	%REC
07020731	Arsenic	MS	104.0	%REC
07060935	Arsenic	MS	104.0	%REC
08011346	Arsenic	MS	104.0	%REC
07040864	Arsenic	MSD	104.0	%REC
07091151	Arsenic	MSD	104.0	%REC
07091152	Arsenic	MS	106.0	%REC
07040864	Arsenic	MS	107.0	%REC
07091151	Arsenic	MS	107.0	%REC
07111250	Benzene	MSD	77.0	%REC
07111250	Benzene	MS	81.0	%REC
07111270	Benzene	MSD	81.0	%REC
07101228	Benzene	MS	83.0	%REC
07111270	Benzene	MS	83.0	%REC
07071047	Benzene	MS	85.0	%REC
07071047	Benzene	MSD	85.0	%REC
07101227	Benzene	MSD	85.0	%REC
07050875	Benzene	MS	86.0	%REC
07050908	Benzene	MS	86.0	%REC
07091155	Benzene	MS	86.0	%REC
07050908	Benzene	MSD	86.0	%REC
07050893	Benzene	MS	87.0	%REC
07050893	Benzene	MSD	87.0	%REC
07050928	Benzene	MSD	87.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111263	Benzene	MS	88.0	%REC
07060977	Benzene	MSD	88.0	%REC
07091155	Benzene	MSD	88.0	%REC
07101228	Benzene	MSD	88.0	%REC
07111263	Benzene	MSD	88.0	%REC
07101206	Benzene	MS	89.0	%REC
07101227	Benzene	MS	89.0	%REC
07111261	Benzene	MS	89.0	%REC
07111261	Benzene	MSD	89.0	%REC
07010677	Benzene	MS	90.0	%REC
07040854	Benzene	MS	90.0	%REC
07060977	Benzene	MS	90.0	%REC
07010677	Benzene	MSD	90.0	%REC
07081079	Benzene	MS	91.0	%REC
07071016	Benzene	MSD	91.0	%REC
07040821	Benzene	MS	92.0	%REC
07050875	Benzene	MS	92.0	%REC
07111250	Benzene	MSD	92.0	%REC
07050908	Benzene	MS	93.0	%REC
07111250	Benzene	MS	93.0	%REC
07040854	Benzene	MSD	93.0	%REC
07050928	Benzene	MSD	93.0	%REC
07111270	Benzene	MSD	93.0	%REC
07060968	Benzene	MS	94.0	%REC
07050908	Benzene	MSD	94.0	%REC
07091157	Benzene	MSD	94.0	%REC
07091151	Benzene	MS	95.0	%REC
07091157	Benzene	MS	95.0	%REC
07050875	Benzene	MSD	95.0	%REC
07081079	Benzene	MSD	95.0	%REC
07050928	Benzene	MS	96.0	%REC
07081132	Benzene	MS	96.0	%REC
07111270	Benzene	MS	96.0	%REC
07030756	Benzene	MSD	96.0	%REC
07060944	Benzene	MS	98.0	%REC
07040864	Benzene	MSD	99.0	%REC
07081113	Benzene	MSD	99.0	%REC
07101215	Benzene	MSD	99.0	%REC
07081113	Benzene	MS	100.0	%REC
07040821	Benzene	MSD	100.0	%REC
07050875	Benzene	MSD	100.0	%REC
07111261	Benzene	MS	101.0	%REC
07081132	Benzene	MSD	101.0	%REC
07071016	Benzene	MS	102.0	%REC
07101215	Benzene	MS	102.0	%REC
07091151	Benzene	MSD	102.0	%REC
07040864	Benzene	MS	103.0	%REC
07050886	Benzene	MS	103.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07060944	Benzene	MSD	103.0	%REC
07071046	Benzene	MSD	104.0	%REC
07081123	Benzene	MSD	104.0	%REC
07101206	Benzene	MSD	104.0	%REC
07111261	Benzene	MSD	104.0	%REC
07030756	Benzene	MS	105.0	%REC
07071046	Benzene	MS	105.0	%REC
07030756	Benzene	MSD	106.0	%REC
07060944	Benzene	MSD	106.0	%REC
07060944	Benzene	MS	107.0	%REC
07050886	Benzene	MSD	107.0	%REC
07060968	Benzene	MSD	107.0	%REC
07081123	Benzene	MS	108.0	%REC
07030756	Benzene	MS	109.0	%REC
07020735	Benzene	MS	112.0	%REC
07050873	Benzene	MS	112.0	%REC
07020735	Benzene	MSD	113.0	%REC
07050873	Benzene	MSD	115.0	%REC
07060935	Benzene	MSD	115.0	%REC
07060935	Benzene	MS	118.0	%REC
07081132	Beryllium	MSD	93.0	%REC
07040866	Beryllium	MS	95.0	%REC
07081132	Beryllium	MS	95.0	%REC
08011346	Beryllium	MS	96.2	%REC
07101235	Beryllium	MS	96.5	%REC
07050873	Beryllium	MS	97.0	%REC
07111288	Beryllium	MS	97.0	%REC
07081123	Beryllium	MSD	97.0	%REC
07101206	Beryllium	MSD	98.0	%REC
07060969	Beryllium	MS	98.5	%REC
07010677	Beryllium	MS	98.8	%REC
07081123	Beryllium	MS	99.0	%REC
07020735	Beryllium	MS	100.0	%REC
07030789	Beryllium	MS	100.0	%REC
07050876	Beryllium	MS	100.0	%REC
07101196	Beryllium	MS	100.0	%REC
07020741	Beryllium	MSD	100.0	%REC
07050875	Beryllium	MSD	100.0	%REC
07101215	Beryllium	MSD	100.0	%REC
07040845	Beryllium	MS	101.0	%REC
07071017	Beryllium	MS	101.0	%REC
07071047	Beryllium	MS	101.0	%REC
07071068	Beryllium	MS	101.0	%REC
07091152	Beryllium	MS	101.0	%REC
07091158	Beryllium	MS	101.0	%REC
07020741	Beryllium	MS	102.0	%REC
07050875	Beryllium	MS	102.0	%REC
07050884	Beryllium	MS	102.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07060935	Beryllium	MS	102.0	%REC
07101206	Beryllium	MS	102.0	%REC
07101215	Beryllium	MS	102.0	%REC
07030789	Beryllium	MSD	102.0	%REC
07060935	Beryllium	MSD	102.0	%REC
07091151	Beryllium	MSD	103.0	%REC
07040826	Beryllium	MS	104.0	%REC
08011346	Beryllium	MS	104.0	%REC
07020731	Beryllium	MS	105.0	%REC
07050919	Beryllium	MS	105.0	%REC
07040864	Beryllium	MSD	105.0	%REC
07091151	Beryllium	MS	106.0	%REC
07030756	Beryllium	MS	107.0	%REC
07040864	Beryllium	MS	108.0	%REC
07020718	Beryllium	MS	109.0	%REC
07030756	Beryllium	MSD	110.0	%REC
07040866	Boron	MS	93.0	%REC
07071047	Boron	MS	93.5	%REC
07081123	Boron	MSD	97.0	%REC
07050873	Boron	MS	98.0	%REC
07050875	Boron	MSD	98.0	%REC
07010677	Boron	MS	98.6	%REC
07050875	Boron	MS	99.0	%REC
07081123	Boron	MS	99.0	%REC
07081132	Boron	MSD	99.0	%REC
07101196	Boron	MS	99.2	%REC
07020741	Boron	MS	100.0	%REC
07081132	Boron	MS	101.0	%REC
07101206	Boron	MS	101.0	%REC
07020741	Boron	MSD	101.0	%REC
07101206	Boron	MSD	101.0	%REC
07101215	Boron	MSD	101.0	%REC
07030789	Boron	MS	102.0	%REC
07040826	Boron	MS	102.0	%REC
07060935	Boron	MS	102.0	%REC
07040864	Boron	MSD	102.0	%REC
07091151	Boron	MSD	102.0	%REC
07030756	Boron	MS	103.0	%REC
07050884	Boron	MS	103.0	%REC
07060935	Boron	MSD	103.0	%REC
07040864	Boron	MS	104.0	%REC
07020731	Boron	MS	105.0	%REC
08011346	Boron	MS	105.0	%REC
07030756	Boron	MSD	105.0	%REC
07091151	Boron	MS	106.0	%REC
07101215	Boron	MS	106.0	%REC
07030789	Boron	MSD	106.0	%REC
07091152	Boron	MS	107.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07020735	Boron	MS	114.0	%REC
07050875	Bromodichloromethane	MS	83.0	%REC
07111261	Bromodichloromethane	MS	85.0	%REC
07111261	Bromodichloromethane	MSD	85.0	%REC
07091151	Bromodichloromethane	MS	86.0	%REC
07111270	Bromodichloromethane	MSD	87.0	%REC
07111250	Bromodichloromethane	MS	88.0	%REC
07111270	Bromodichloromethane	MS	88.0	%REC
07081079	Bromodichloromethane	MSD	88.0	%REC
07111250	Bromodichloromethane	MSD	88.0	%REC
07091155	Bromodichloromethane	MS	89.0	%REC
07030756	Bromodichloromethane	MSD	89.0	%REC
07050908	Bromodichloromethane	MSD	89.0	%REC
07050928	Bromodichloromethane	MSD	89.0	%REC
07081079	Bromodichloromethane	MS	90.0	%REC
07060935	Bromodichloromethane	MSD	90.0	%REC
07091155	Bromodichloromethane	MSD	90.0	%REC
07111263	Bromodichloromethane	MSD	90.0	%REC
07040854	Bromodichloromethane	MS	91.0	%REC
07091157	Bromodichloromethane	MS	92.0	%REC
07111263	Bromodichloromethane	MS	92.0	%REC
07101206	Bromodichloromethane	MS	93.0	%REC
07101228	Bromodichloromethane	MS	93.0	%REC
07040854	Bromodichloromethane	MSD	93.0	%REC
07050928	Bromodichloromethane	MSD	93.0	%REC
07050928	Bromodichloromethane	MS	94.0	%REC
07071016	Bromodichloromethane	MSD	94.0	%REC
07111250	Bromodichloromethane	MSD	94.0	%REC
07050875	Bromodichloromethane	MS	95.0	%REC
07050908	Bromodichloromethane	MS	95.0	%REC
07081113	Bromodichloromethane	MS	95.0	%REC
07050875	Bromodichloromethane	MSD	95.0	%REC
07081113	Bromodichloromethane	MSD	95.0	%REC
07030756	Bromodichloromethane	MS	96.0	%REC
07050886	Bromodichloromethane	MS	96.0	%REC
07111250	Bromodichloromethane	MS	96.0	%REC
07111261	Bromodichloromethane	MS	96.0	%REC
07030756	Bromodichloromethane	MSD	96.0	%REC
07091157	Bromodichloromethane	MSD	96.0	%REC
07030756	Bromodichloromethane	MS	97.0	%REC
07050893	Bromodichloromethane	MS	97.0	%REC
07050908	Bromodichloromethane	MS	97.0	%REC
07091151	Bromodichloromethane	MSD	97.0	%REC
07101228	Bromodichloromethane	MSD	97.0	%REC
07050886	Bromodichloromethane	MSD	98.0	%REC
07040864	Bromodichloromethane	MSD	99.0	%REC
07050893	Bromodichloromethane	MSD	99.0	%REC
07050908	Bromodichloromethane	MSD	99.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111270	Bromodichloromethane	MSD	99.0	%REC
07071016	Bromodichloromethane	MS	100.0	%REC
07081132	Bromodichloromethane	MS	100.0	%REC
07101206	Bromodichloromethane	MSD	100.0	%REC
07111261	Bromodichloromethane	MSD	100.0	%REC
07081132	Bromodichloromethane	MSD	101.0	%REC
07040864	Bromodichloromethane	MS	102.0	%REC
07060935	Bromodichloromethane	MS	103.0	%REC
07111270	Bromodichloromethane	MS	103.0	%REC
07050875	Bromodichloromethane	MSD	103.0	%REC
07040821	Bromodichloromethane	MSD	104.0	%REC
07071046	Bromodichloromethane	MS	105.0	%REC
07101215	Bromodichloromethane	MS	105.0	%REC
07071046	Bromodichloromethane	MSD	106.0	%REC
07101215	Bromodichloromethane	MSD	106.0	%REC
07040821	Bromodichloromethane	MS	109.0	%REC
07081123	Bromodichloromethane	MS	109.0	%REC
07081123	Bromodichloromethane	MSD	110.0	%REC
07050873	Cadmium	MS	90.0	%REC
07040866	Cadmium	MS	92.0	%REC
07111288	Cadmium	MS	92.0	%REC
08011346	Cadmium	MS	92.9	%REC
07030788	Cadmium	MS	93.0	%REC
07101196	Cadmium	MS	94.6	%REC
07071047	Cadmium	MS	95.7	%REC
07010677	Cadmium	MS	95.8	%REC
07091152	Cadmium	MS	96.4	%REC
07020735	Cadmium	MS	97.0	%REC
08011346	Cadmium	MS	97.3	%REC
07020718	Cadmium	MS	98.0	%REC
07020731	Cadmium	MS	98.0	%REC
07030789	Cadmium	MS	99.0	%REC
07050884	Cadmium	MS	99.0	%REC
07020741	Cadmium	MSD	99.0	%REC
07060969	Cadmium	MS	99.8	%REC
07071068	Cadmium	MS	99.8	%REC
07091158	Cadmium	MS	99.8	%REC
07040845	Cadmium	MS	100.0	%REC
07040866	Cadmium	MS	100.0	%REC
08011346	Cadmium	MS	100.0	%REC
07020741	Cadmium	MS	101.0	%REC
07101196	Cadmium	MS	101.0	%REC
07101235	Cadmium	MS	101.0	%REC
07030789	Cadmium	MSD	101.0	%REC
07030756	Cadmium	MS	102.0	%REC
07040826	Cadmium	MS	102.0	%REC
07081123	Cadmium	MSD	102.0	%REC
07040826	Cadmium	MS	103.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050884	Cadmium	MS	103.0	%REC
07050919	Cadmium	MS	103.0	%REC
07071017	Cadmium	MS	103.0	%REC
07081123	Cadmium	MS	103.0	%REC
07030756	Cadmium	MSD	103.0	%REC
07050875	Cadmium	MSD	103.0	%REC
07040864	Cadmium	MSD	105.0	%REC
07060935	Cadmium	MSD	105.0	%REC
07081132	Cadmium	MSD	105.0	%REC
07060935	Cadmium	MS	106.0	%REC
07101206	Cadmium	MSD	106.0	%REC
07050875	Cadmium	MS	107.0	%REC
07050876	Cadmium	MS	107.0	%REC
07081132	Cadmium	MS	107.0	%REC
07091151	Cadmium	MSD	108.0	%REC
07040864	Cadmium	MS	109.0	%REC
07101215	Cadmium	MSD	109.0	%REC
07091151	Cadmium	MS	111.0	%REC
07101206	Cadmium	MS	111.0	%REC
07101215	Cadmium	MS	111.0	%REC
07050886	Carbon Tetrachloride	MS	68.0	%REC
07030756	Carbon Tetrachloride	MSD	69.0	%REC
07111261	Carbon Tetrachloride	MSD	69.0	%REC
07030756	Carbon Tetrachloride	MS	75.0	%REC
07111261	Carbon Tetrachloride	MS	75.0	%REC
07030756	Carbon Tetrachloride	MSD	77.0	%REC
07050886	Carbon Tetrachloride	MSD	79.0	%REC
07060977	Carbon Tetrachloride	MSD	80.0	%REC
07111261	Carbon Tetrachloride	MSD	81.0	%REC
07030756	Carbon Tetrachloride	MS	82.0	%REC
07060977	Carbon Tetrachloride	MS	82.0	%REC
07111270	Carbon Tetrachloride	MSD	84.0	%REC
07050928	Carbon Tetrachloride	MSD	85.0	%REC
07101228	Carbon Tetrachloride	MS	87.0	%REC
07111250	Carbon Tetrachloride	MSD	88.0	%REC
07111263	Carbon Tetrachloride	MS	89.0	%REC
07101215	Carbon Tetrachloride	MSD	89.0	%REC
07111270	Carbon Tetrachloride	MS	90.0	%REC
07071016	Carbon Tetrachloride	MSD	90.0	%REC
07101228	Carbon Tetrachloride	MSD	90.0	%REC
07111270	Carbon Tetrachloride	MS	91.0	%REC
07040821	Carbon Tetrachloride	MS	92.0	%REC
07071016	Carbon Tetrachloride	MS	92.0	%REC
07101206	Carbon Tetrachloride	MS	92.0	%REC
07111250	Carbon Tetrachloride	MS	92.0	%REC
07050893	Carbon Tetrachloride	MS	93.0	%REC
07111250	Carbon Tetrachloride	MSD	94.0	%REC
07111263	Carbon Tetrachloride	MSD	95.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111270	Carbon Tetrachloride	MSD	95.0	%REC
07091155	Carbon Tetrachloride	MS	96.0	%REC
07111250	Carbon Tetrachloride	MS	97.0	%REC
07050893	Carbon Tetrachloride	MSD	97.0	%REC
07050875	Carbon Tetrachloride	MS	98.0	%REC
07071046	Carbon Tetrachloride	MS	98.0	%REC
07050928	Carbon Tetrachloride	MSD	99.0	%REC
07111261	Carbon Tetrachloride	MS	100.0	%REC
07040821	Carbon Tetrachloride	MSD	100.0	%REC
07101215	Carbon Tetrachloride	MS	101.0	%REC
07091157	Carbon Tetrachloride	MSD	101.0	%REC
07040864	Carbon Tetrachloride	MSD	102.0	%REC
07101206	Carbon Tetrachloride	MSD	102.0	%REC
07040864	Carbon Tetrachloride	MS	103.0	%REC
07050908	Carbon Tetrachloride	MS	103.0	%REC
07081132	Carbon Tetrachloride	MS	103.0	%REC
07050908	Carbon Tetrachloride	MSD	103.0	%REC
07071046	Carbon Tetrachloride	MSD	103.0	%REC
07050928	Carbon Tetrachloride	MS	104.0	%REC
07050875	Carbon Tetrachloride	MSD	105.0	%REC
07050908	Carbon Tetrachloride	MSD	105.0	%REC
07081079	Carbon Tetrachloride	MSD	105.0	%REC
07091155	Carbon Tetrachloride	MSD	105.0	%REC
07060944	Carbon Tetrachloride	MS	106.0	%REC
07050875	Carbon Tetrachloride	MSD	106.0	%REC
07081113	Carbon Tetrachloride	MSD	106.0	%REC
07081113	Carbon Tetrachloride	MS	107.0	%REC
07050875	Carbon Tetrachloride	MS	108.0	%REC
07081123	Carbon Tetrachloride	MSD	108.0	%REC
07091157	Carbon Tetrachloride	MS	109.0	%REC
07040821	Carbon Tetrachloride	MS	110.0	%REC
07040854	Carbon Tetrachloride	MS	110.0	%REC
07050908	Carbon Tetrachloride	MS	110.0	%REC
07081079	Carbon Tetrachloride	MS	110.0	%REC
07040854	Carbon Tetrachloride	MSD	110.0	%REC
07091151	Carbon Tetrachloride	MS	111.0	%REC
07081132	Carbon Tetrachloride	MSD	112.0	%REC
07091151	Carbon Tetrachloride	MSD	113.0	%REC
07060935	Carbon Tetrachloride	MS	114.0	%REC
07040821	Carbon Tetrachloride	MSD	114.0	%REC
07060944	Carbon Tetrachloride	MSD	114.0	%REC
07060944	Carbon Tetrachloride	MS	115.0	%REC
07060935	Carbon Tetrachloride	MSD	115.0	%REC
07081123	Carbon Tetrachloride	MS	117.0	%REC
07060944	Carbon Tetrachloride	MSD	117.0	%REC
07040854	Chlorobenzene	MS	83.0	%REC
07101206	Chlorobenzene	MS	85.0	%REC
07071047	Chlorobenzene	MSD	85.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07071047	Chlorobenzene	MS	86.0	%REC
07091155	Chlorobenzene	MSD	86.0	%REC
07111261	Chlorobenzene	MSD	86.0	%REC
07050875	Chlorobenzene	MS	87.0	%REC
07030756	Chlorobenzene	MSD	87.0	%REC
07101206	Chlorobenzene	MSD	87.0	%REC
07081132	Chlorobenzene	MS	88.0	%REC
07111270	Chlorobenzene	MSD	88.0	%REC
07050908	Chlorobenzene	MS	89.0	%REC
07091151	Chlorobenzene	MS	89.0	%REC
07111261	Chlorobenzene	MS	89.0	%REC
07040821	Chlorobenzene	MS	90.0	%REC
07111270	Chlorobenzene	MS	90.0	%REC
07091157	Chlorobenzene	MSD	90.0	%REC
07111250	Chlorobenzene	MSD	90.0	%REC
07081079	Chlorobenzene	MS	91.0	%REC
07101227	Chlorobenzene	MS	91.0	%REC
07060935	Chlorobenzene	MSD	91.0	%REC
07101215	Chlorobenzene	MS	92.0	%REC
07111250	Chlorobenzene	MS	92.0	%REC
07111263	Chlorobenzene	MS	92.0	%REC
07040854	Chlorobenzene	MSD	92.0	%REC
07060977	Chlorobenzene	MSD	92.0	%REC
07101215	Chlorobenzene	MSD	92.0	%REC
07101227	Chlorobenzene	MSD	92.0	%REC
07111250	Chlorobenzene	MSD	92.0	%REC
07111261	Chlorobenzene	MSD	92.0	%REC
07111263	Chlorobenzene	MSD	92.0	%REC
07030756	Chlorobenzene	MS	93.0	%REC
07060935	Chlorobenzene	MS	93.0	%REC
07081132	Chlorobenzene	MSD	93.0	%REC
07091151	Chlorobenzene	MSD	94.0	%REC
07060977	Chlorobenzene	MS	95.0	%REC
07091157	Chlorobenzene	MS	95.0	%REC
07101228	Chlorobenzene	MS	95.0	%REC
07111250	Chlorobenzene	MS	95.0	%REC
07030756	Chlorobenzene	MSD	95.0	%REC
07040821	Chlorobenzene	MSD	95.0	%REC
07040864	Chlorobenzene	MSD	95.0	%REC
07050928	Chlorobenzene	MSD	95.0	%REC
07091155	Chlorobenzene	MS	96.0	%REC
07050908	Chlorobenzene	MSD	96.0	%REC
07111270	Chlorobenzene	MSD	96.0	%REC
07030756	Chlorobenzene	MS	97.0	%REC
07050875	Chlorobenzene	MSD	97.0	%REC
07040864	Chlorobenzene	MS	98.0	%REC
07050873	Chlorobenzene	MS	98.0	%REC
07060968	Chlorobenzene	MS	98.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07071046	Chlorobenzene	MS	98.0	%REC
07081113	Chlorobenzene	MS	98.0	%REC
07081079	Chlorobenzene	MSD	98.0	%REC
07081113	Chlorobenzene	MSD	98.0	%REC
07081123	Chlorobenzene	MSD	98.0	%REC
07010677	Chlorobenzene	MS	99.0	%REC
07020735	Chlorobenzene	MS	99.0	%REC
07050875	Chlorobenzene	MS	99.0	%REC
07050928	Chlorobenzene	MS	99.0	%REC
07010677	Chlorobenzene	MSD	99.0	%REC
07050908	Chlorobenzene	MSD	99.0	%REC
07050928	Chlorobenzene	MSD	99.0	%REC
07050908	Chlorobenzene	MS	100.0	%REC
07111270	Chlorobenzene	MS	100.0	%REC
07020735	Chlorobenzene	MSD	100.0	%REC
07071016	Chlorobenzene	MSD	100.0	%REC
07071046	Chlorobenzene	MSD	100.0	%REC
07050893	Chlorobenzene	MS	101.0	%REC
07111261	Chlorobenzene	MS	101.0	%REC
07050873	Chlorobenzene	MSD	101.0	%REC
07071016	Chlorobenzene	MS	103.0	%REC
07081123	Chlorobenzene	MS	103.0	%REC
07101228	Chlorobenzene	MSD	103.0	%REC
07050886	Chlorobenzene	MS	104.0	%REC
07060944	Chlorobenzene	MS	104.0	%REC
07060944	Chlorobenzene	MS	105.0	%REC
07050875	Chlorobenzene	MSD	105.0	%REC
07060944	Chlorobenzene	MSD	105.0	%REC
07060944	Chlorobenzene	MSD	108.0	%REC
07050886	Chlorobenzene	MSD	110.0	%REC
07050893	Chlorobenzene	MSD	112.0	%REC
07060968	Chlorobenzene	MSD	115.0	%REC
07040821	Chloroform	MS	86.0	%REC
07111261	Chloroform	MS	86.0	%REC
07071016	Chloroform	MSD	86.0	%REC
07111261	Chloroform	MSD	86.0	%REC
07050875	Chloroform	MS	87.0	%REC
07111270	Chloroform	MS	87.0	%REC
07050928	Chloroform	MSD	87.0	%REC
07111270	Chloroform	MSD	87.0	%REC
07050886	Chloroform	MS	88.0	%REC
07111250	Chloroform	MS	88.0	%REC
07030756	Chloroform	MSD	88.0	%REC
07111250	Chloroform	MSD	88.0	%REC
07050908	Chloroform	MSD	89.0	%REC
07101228	Chloroform	MS	90.0	%REC
07111263	Chloroform	MSD	90.0	%REC
07081079	Chloroform	MS	91.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091155	Chloroform	MS	91.0	%REC
07111263	Chloroform	MS	91.0	%REC
07050928	Chloroform	MSD	92.0	%REC
07060977	Chloroform	MSD	92.0	%REC
07111250	Chloroform	MSD	92.0	%REC
07050908	Chloroform	MS	93.0	%REC
07091151	Chloroform	MS	93.0	%REC
07050886	Chloroform	MSD	93.0	%REC
07091155	Chloroform	MSD	93.0	%REC
07050893	Chloroform	MS	94.0	%REC
07050928	Chloroform	MS	94.0	%REC
07111250	Chloroform	MS	94.0	%REC
07050908	Chloroform	MS	95.0	%REC
07060977	Chloroform	MS	95.0	%REC
07101206	Chloroform	MS	95.0	%REC
07040821	Chloroform	MSD	95.0	%REC
07050875	Chloroform	MSD	95.0	%REC
07050893	Chloroform	MSD	95.0	%REC
07091157	Chloroform	MSD	95.0	%REC
07030756	Chloroform	MS	96.0	%REC
07040854	Chloroform	MS	96.0	%REC
07101228	Chloroform	MSD	96.0	%REC
07050875	Chloroform	MS	97.0	%REC
07071016	Chloroform	MS	97.0	%REC
07030756	Chloroform	MSD	97.0	%REC
07050908	Chloroform	MSD	97.0	%REC
07081079	Chloroform	MSD	97.0	%REC
07111270	Chloroform	MSD	97.0	%REC
07091157	Chloroform	MS	98.0	%REC
07040854	Chloroform	MSD	98.0	%REC
07030756	Chloroform	MS	99.0	%REC
07111270	Chloroform	MS	100.0	%REC
07111261	Chloroform	MSD	100.0	%REC
07091151	Chloroform	MSD	101.0	%REC
07071046	Chloroform	MS	102.0	%REC
07081132	Chloroform	MS	102.0	%REC
07111261	Chloroform	MS	103.0	%REC
07040864	Chloroform	MSD	103.0	%REC
07071046	Chloroform	MSD	103.0	%REC
07101206	Chloroform	MSD	103.0	%REC
07060935	Chloroform	MS	104.0	%REC
07101215	Chloroform	MS	104.0	%REC
07101215	Chloroform	MSD	104.0	%REC
07060944	Chloroform	MS	105.0	%REC
07050875	Chloroform	MSD	105.0	%REC
07081132	Chloroform	MSD	105.0	%REC
07081113	Chloroform	MS	106.0	%REC
07060944	Chloroform	MSD	106.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07081113	Chloroform	MSD	106.0	%REC
07060935	Chloroform	MSD	108.0	%REC
07040864	Chloroform	MS	109.0	%REC
07081123	Chloroform	MS	110.0	%REC
07060944	Chloroform	MSD	110.0	%REC
07060944	Chloroform	MS	111.0	%REC
07081123	Chloroform	MSD	112.0	%REC
07050873	Chromium	MS	92.0	%REC
07040866	Chromium	MS	93.0	%REC
07101235	Chromium	MS	94.6	%REC
07060969	Chromium	MS	95.6	%REC
08011346	Chromium	MS	95.6	%REC
07111288	Chromium	MS	96.0	%REC
07101196	Chromium	MS	96.3	%REC
07091158	Chromium	MS	96.8	%REC
07050876	Chromium	MS	98.0	%REC
07081123	Chromium	MSD	98.0	%REC
07020735	Chromium	MS	99.0	%REC
07091152	Chromium	MS	99.0	%REC
07020741	Chromium	MSD	99.0	%REC
07010677	Chromium	MS	99.3	%REC
07071047	Chromium	MS	99.3	%REC
07071017	Chromium	MS	99.4	%REC
07071068	Chromium	MS	99.4	%REC
07030789	Chromium	MS	100.0	%REC
07040845	Chromium	MS	100.0	%REC
07081123	Chromium	MS	100.0	%REC
07101206	Chromium	MSD	100.0	%REC
07020731	Chromium	MS	101.0	%REC
07040826	Chromium	MS	101.0	%REC
07081132	Chromium	MSD	101.0	%REC
07020741	Chromium	MS	102.0	%REC
07050884	Chromium	MS	102.0	%REC
07050919	Chromium	MS	102.0	%REC
07030789	Chromium	MSD	102.0	%REC
07050875	Chromium	MSD	102.0	%REC
07101215	Chromium	MSD	102.0	%REC
07030756	Chromium	MS	103.0	%REC
07081132	Chromium	MS	103.0	%REC
08011346	Chromium	MS	103.0	%REC
07030756	Chromium	MSD	103.0	%REC
07060935	Chromium	MSD	103.0	%REC
07091151	Chromium	MSD	103.0	%REC
07060935	Chromium	MS	104.0	%REC
07101206	Chromium	MS	104.0	%REC
07101215	Chromium	MS	104.0	%REC
07040864	Chromium	MSD	104.0	%REC
07050875	Chromium	MS	105.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091151	Chromium	MS	106.0	%REC
07020718	Chromium	MS	107.0	%REC
07040864	Chromium	MS	109.0	%REC
07020741	Copper	MSD	93.0	%REC
07020741	Copper	MS	95.0	%REC
07091151	Copper	MSD	95.0	%REC
07040866	Copper	MS	97.0	%REC
07081123	Copper	MSD	98.0	%REC
07101206	Copper	MSD	98.0	%REC
07030789	Copper	MS	99.0	%REC
07091151	Copper	MS	99.0	%REC
07030789	Copper	MSD	100.0	%REC
07010677	Copper	MS	101.0	%REC
07020735	Copper	MS	101.0	%REC
07081123	Copper	MS	101.0	%REC
07050873	Copper	MS	102.0	%REC
07101206	Copper	MS	102.0	%REC
07081132	Copper	MSD	102.0	%REC
07101215	Copper	MSD	102.0	%REC
07030756	Copper	MS	103.0	%REC
07040826	Copper	MS	103.0	%REC
07071047	Copper	MS	103.0	%REC
07101196	Copper	MS	103.0	%REC
08011346	Copper	MS	103.0	%REC
07030756	Copper	MSD	103.0	%REC
07050875	Copper	MSD	103.0	%REC
07060935	Copper	MS	104.0	%REC
07081132	Copper	MS	104.0	%REC
07060935	Copper	MSD	104.0	%REC
07040864	Copper	MSD	105.0	%REC
07050875	Copper	MS	106.0	%REC
07050884	Copper	MS	106.0	%REC
07101215	Copper	MS	106.0	%REC
07020731	Copper	MS	107.0	%REC
07091152	Copper	MS	108.0	%REC
07040864	Copper	MS	111.0	%REC
07030793	Cyanide	MS	44.0	%REC
07030793	Cyanide	MSD	44.0	%REC
07081106	Cyanide	MS	87.0	%REC
07020720	Cyanide	MS	93.0	%REC
07050878	Cyanide	MS	106.0	%REC
07040854	Ethylbenzene	MS	83.0	%REC
07101206	Ethylbenzene	MS	83.0	%REC
07040821	Ethylbenzene	MS	86.0	%REC
07050908	Ethylbenzene	MS	86.0	%REC
07060977	Ethylbenzene	MSD	86.0	%REC
07111261	Ethylbenzene	MSD	86.0	%REC
07091155	Ethylbenzene	MS	87.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07071016	Ethylbenzene	MSD	87.0	%REC
07050875	Ethylbenzene	MS	88.0	%REC
07101206	Ethylbenzene	MSD	88.0	%REC
07111270	Ethylbenzene	MSD	88.0	%REC
07091155	Ethylbenzene	MSD	89.0	%REC
07040854	Ethylbenzene	MSD	90.0	%REC
07050908	Ethylbenzene	MSD	90.0	%REC
07111263	Ethylbenzene	MS	91.0	%REC
07060977	Ethylbenzene	MS	92.0	%REC
07101228	Ethylbenzene	MS	92.0	%REC
07111270	Ethylbenzene	MS	92.0	%REC
07091157	Ethylbenzene	MSD	93.0	%REC
07050893	Ethylbenzene	MS	94.0	%REC
07091157	Ethylbenzene	MS	94.0	%REC
07111250	Ethylbenzene	MSD	94.0	%REC
07111261	Ethylbenzene	MSD	94.0	%REC
07111263	Ethylbenzene	MSD	94.0	%REC
07050893	Ethylbenzene	MSD	95.0	%REC
07081079	Ethylbenzene	MS	96.0	%REC
07111261	Ethylbenzene	MS	96.0	%REC
07101215	Ethylbenzene	MSD	96.0	%REC
07111250	Ethylbenzene	MSD	96.0	%REC
07111270	Ethylbenzene	MSD	96.0	%REC
07111250	Ethylbenzene	MS	97.0	%REC
07030756	Ethylbenzene	MSD	97.0	%REC
07050875	Ethylbenzene	MS	98.0	%REC
07081132	Ethylbenzene	MS	98.0	%REC
07111250	Ethylbenzene	MS	98.0	%REC
07050928	Ethylbenzene	MSD	98.0	%REC
07111270	Ethylbenzene	MS	99.0	%REC
07071046	Ethylbenzene	MS	100.0	%REC
07101215	Ethylbenzene	MS	100.0	%REC
07050875	Ethylbenzene	MSD	100.0	%REC
07060935	Ethylbenzene	MSD	100.0	%REC
07091151	Ethylbenzene	MS	101.0	%REC
07040864	Ethylbenzene	MSD	101.0	%REC
07081123	Ethylbenzene	MSD	101.0	%REC
07030756	Ethylbenzene	MS	102.0	%REC
07050886	Ethylbenzene	MS	102.0	%REC
07060935	Ethylbenzene	MS	102.0	%REC
07101228	Ethylbenzene	MSD	102.0	%REC
07071046	Ethylbenzene	MSD	103.0	%REC
07081113	Ethylbenzene	MSD	103.0	%REC
07091151	Ethylbenzene	MSD	103.0	%REC
07040864	Ethylbenzene	MS	104.0	%REC
07050928	Ethylbenzene	MS	104.0	%REC
07081113	Ethylbenzene	MS	104.0	%REC
07040821	Ethylbenzene	MSD	104.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050875	Ethylbenzene	MSD	104.0	%REC
07050928	Ethylbenzene	MSD	104.0	%REC
07060944	Ethylbenzene	MS	105.0	%REC
07081123	Ethylbenzene	MS	105.0	%REC
07030756	Ethylbenzene	MSD	106.0	%REC
07060944	Ethylbenzene	MSD	106.0	%REC
07081079	Ethylbenzene	MSD	106.0	%REC
07060944	Ethylbenzene	MS	107.0	%REC
07071016	Ethylbenzene	MS	107.0	%REC
07081132	Ethylbenzene	MSD	107.0	%REC
07111261	Ethylbenzene	MS	108.0	%REC
07050886	Ethylbenzene	MSD	109.0	%REC
07050908	Ethylbenzene	MSD	109.0	%REC
07050908	Ethylbenzene	MS	111.0	%REC
07060944	Ethylbenzene	MSD	111.0	%REC
07030756	Ethylbenzene	MS	112.0	%REC
07040866	Lead	MS	92.0	%REC
07081123	Lead	MSD	93.0	%REC
07050873	Lead	MS	94.0	%REC
07101206	Lead	MSD	94.0	%REC
07081123	Lead	MS	95.0	%REC
07101196	Lead	MS	95.0	%REC
07010677	Lead	MS	95.8	%REC
07020741	Lead	MSD	96.0	%REC
07020735	Lead	MS	97.0	%REC
07020741	Lead	MS	98.0	%REC
07050884	Lead	MS	98.0	%REC
07050875	Lead	MSD	98.0	%REC
07101215	Lead	MSD	98.0	%REC
07091152	Lead	MS	98.5	%REC
07071047	Lead	MS	99.0	%REC
07101206	Lead	MS	99.0	%REC
07081132	Lead	MSD	99.0	%REC
07020731	Lead	MS	100.0	%REC
07040826	Lead	MS	100.0	%REC
07101215	Lead	MS	100.0	%REC
07030789	Lead	MS	101.0	%REC
07050875	Lead	MS	101.0	%REC
07060935	Lead	MS	101.0	%REC
07081132	Lead	MS	101.0	%REC
08011346	Lead	MS	101.0	%REC
07060935	Lead	MSD	101.0	%REC
07030756	Lead	MS	102.0	%REC
07030789	Lead	MSD	102.0	%REC
07030756	Lead	MSD	103.0	%REC
07040864	Lead	MSD	104.0	%REC
07091151	Lead	MSD	106.0	%REC
07040864	Lead	MS	108.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091151	Lead	MS	109.0	%REC
07081123	Mercury	MS	13.0	%REC
07081123	Mercury	MSD	16.0	%REC
07101206	Mercury	MS	34.0	%REC
07101206	Mercury	MSD	34.0	%REC
07040864	Mercury	MS	57.0	%REC
07020735	Mercury	MS	58.5	%REC
07050873	Mercury	MS	61.8	%REC
07040864	Mercury	MSD	64.0	%REC
07071047	Mercury	MS	65.3	%REC
07091151	Mercury	MS	70.0	%REC
07091151	Mercury	MSD	76.0	%REC
07050875	Mercury	MS	84.0	%REC
07050875	Mercury	MSD	86.0	%REC
07101215	Mercury	MS	89.0	%REC
07101215	Mercury	MSD	92.0	%REC
07060935	Mercury	MS	94.0	%REC
07060935	Mercury	MSD	95.0	%REC
07071016	Mercury	MSD	95.0	%REC
07091152	Mercury	MS	95.5	%REC
07030756	Mercury	MS	96.0	%REC
07030789	Mercury	MS	96.0	%REC
07030756	Mercury	MSD	96.0	%REC
07040821	Mercury	MS	99.0	%REC
07050884	Mercury	MS	99.0	%REC
07071016	Mercury	MS	100.0	%REC
07081132	Mercury	MS	100.0	%REC
07040821	Mercury	MSD	100.0	%REC
07081132	Mercury	MSD	100.0	%REC
07010677	Mercury	MS	101.0	%REC
07010677	Mercury	MS	102.0	%REC
07040826	Mercury	MS	103.0	%REC
08011346	Mercury	MS	103.0	%REC
07020731	Mercury	MS	104.0	%REC
07101196	Mercury	MS	104.0	%REC
07020741	Mercury	MS	105.0	%REC
07020741	Mercury	MSD	106.0	%REC
07040866	Mercury	MS	110.0	%REC
07081079	Methylene Chloride	MS	72.0	%REC
07111250	Methylene Chloride	MSD	72.0	%REC
07081079	Methylene Chloride	MSD	73.0	%REC
07111250	Methylene Chloride	MS	76.0	%REC
07050875	Methylene Chloride	MS	77.0	%REC
07101228	Methylene Chloride	MS	79.0	%REC
07040854	Methylene Chloride	MS	80.0	%REC
07111250	Methylene Chloride	MS	80.0	%REC
07111250	Methylene Chloride	MSD	80.0	%REC
07101206	Methylene Chloride	MS	82.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091151	Methylene Chloride	MS	83.0	%REC
07101228	Methylene Chloride	MSD	83.0	%REC
07040821	Methylene Chloride	MS	84.0	%REC
07071016	Methylene Chloride	MSD	84.0	%REC
07091155	Methylene Chloride	MSD	84.0	%REC
07081113	Methylene Chloride	MS	86.0	%REC
07081113	Methylene Chloride	MSD	86.0	%REC
07050908	Methylene Chloride	MSD	87.0	%REC
07060944	Methylene Chloride	MSD	87.0	%REC
07050928	Methylene Chloride	MSD	88.0	%REC
07101206	Methylene Chloride	MSD	88.0	%REC
07111270	Methylene Chloride	MSD	88.0	%REC
07060944	Methylene Chloride	MS	89.0	%REC
07091155	Methylene Chloride	MS	89.0	%REC
07111270	Methylene Chloride	MS	89.0	%REC
07040854	Methylene Chloride	MSD	90.0	%REC
07050928	Methylene Chloride	MSD	90.0	%REC
07050908	Methylene Chloride	MS	91.0	%REC
07050928	Methylene Chloride	MS	91.0	%REC
07050875	Methylene Chloride	MSD	91.0	%REC
07091157	Methylene Chloride	MSD	92.0	%REC
07081132	Methylene Chloride	MS	93.0	%REC
07050908	Methylene Chloride	MS	94.0	%REC
07040864	Methylene Chloride	MSD	94.0	%REC
07111263	Methylene Chloride	MSD	94.0	%REC
07111261	Methylene Chloride	MS	95.0	%REC
07040821	Methylene Chloride	MSD	95.0	%REC
07050908	Methylene Chloride	MSD	95.0	%REC
07071016	Methylene Chloride	MS	96.0	%REC
07081132	Methylene Chloride	MSD	96.0	%REC
07091151	Methylene Chloride	MSD	96.0	%REC
07050875	Methylene Chloride	MS	97.0	%REC
07071046	Methylene Chloride	MS	97.0	%REC
07111263	Methylene Chloride	MS	97.0	%REC
07101215	Methylene Chloride	MSD	97.0	%REC
07040864	Methylene Chloride	MS	98.0	%REC
07091157	Methylene Chloride	MS	98.0	%REC
07101215	Methylene Chloride	MS	98.0	%REC
07030756	Methylene Chloride	MSD	98.0	%REC
07071046	Methylene Chloride	MSD	98.0	%REC
07111261	Methylene Chloride	MSD	98.0	%REC
07050893	Methylene Chloride	MS	99.0	%REC
07050875	Methylene Chloride	MSD	99.0	%REC
07050893	Methylene Chloride	MSD	100.0	%REC
07060944	Methylene Chloride	MS	101.0	%REC
07060977	Methylene Chloride	MS	102.0	%REC
07060977	Methylene Chloride	MSD	102.0	%REC
07111270	Methylene Chloride	MSD	104.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07081123	Methylene Chloride	MS	105.0	%REC
07060944	Methylene Chloride	MSD	106.0	%REC
07081123	Methylene Chloride	MSD	106.0	%REC
07111270	Methylene Chloride	MS	107.0	%REC
07030756	Methylene Chloride	MSD	107.0	%REC
07030756	Methylene Chloride	MS	109.0	%REC
07030756	Methylene Chloride	MS	109.0	%REC
07060935	Methylene Chloride	MSD	111.0	%REC
07050886	Methylene Chloride	MSD	112.0	%REC
07060935	Methylene Chloride	MS	115.0	%REC
07111261	Methylene Chloride	MS	116.0	%REC
07050886	Methylene Chloride	MS	123.0	%REC
07111261	Methylene Chloride	MSD	126.0	%REC
07040866	Nickel	MS	92.0	%REC
07050873	Nickel	MS	92.0	%REC
07081123	Nickel	MSD	93.0	%REC
07081132	Nickel	MSD	93.0	%REC
07081123	Nickel	MS	94.0	%REC
07101196	Nickel	MS	94.1	%REC
07081132	Nickel	MS	95.0	%REC
07091152	Nickel	MS	96.6	%REC
07071047	Nickel	MS	96.7	%REC
07020741	Nickel	MSD	97.0	%REC
07101206	Nickel	MSD	97.0	%REC
07020735	Nickel	MS	98.0	%REC
07030789	Nickel	MS	98.0	%REC
07020741	Nickel	MS	99.0	%REC
07050875	Nickel	MSD	99.0	%REC
07101215	Nickel	MSD	99.0	%REC
07010677	Nickel	MS	99.7	%REC
07020731	Nickel	MS	100.0	%REC
07030756	Nickel	MS	100.0	%REC
07030789	Nickel	MSD	100.0	%REC
07060935	Nickel	MSD	100.0	%REC
07050875	Nickel	MS	101.0	%REC
07050884	Nickel	MS	101.0	%REC
07060935	Nickel	MS	101.0	%REC
07101206	Nickel	MS	101.0	%REC
07101215	Nickel	MS	101.0	%REC
08011346	Nickel	MS	101.0	%REC
07030756	Nickel	MSD	101.0	%REC
07040864	Nickel	MSD	102.0	%REC
07091151	Nickel	MSD	102.0	%REC
07040826	Nickel	MS	103.0	%REC
07091151	Nickel	MS	105.0	%REC
07040864	Nickel	MS	106.0	%REC
07050928	Nitrate	MSD	103.0	%REC
07050928	Nitrate	MS	117.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050875	Nitrate+Nitrite as N	MS	1.4	%REC
07050883	Nitrate+Nitrite as N	MS	68.0	%REC
07101196	Nitrate+Nitrite as N	MS	68.0	%REC
07121313	Nitrate+Nitrite as N	MSD	68.0	%REC
07121313	Nitrate+Nitrite as N	MS	69.0	%REC
07071018	Nitrate+Nitrite as N	MS	70.0	%REC
07050883	Nitrate+Nitrite as N	MSD	72.0	%REC
07071018	Nitrate+Nitrite as N	MSD	73.0	%REC
07111261	Nitrate+Nitrite as N	MS	79.0	%REC
07111270	Nitrate+Nitrite as N	MSD	79.0	%REC
07111261	Nitrate+Nitrite as N	MS	81.0	%REC
07111270	Nitrate+Nitrite as N	MS	81.0	%REC
07101228	Nitrate+Nitrite as N	MS	82.0	%REC
07030773	Nitrate+Nitrite as N	MSD	84.0	%REC
07050873	Nitrate+Nitrite as N	MS	85.0	%REC
07030793	Nitrate+Nitrite as N	MSD	85.0	%REC
07040854	Nitrate+Nitrite as N	MS	86.0	%REC
07040854	Nitrate+Nitrite as N	MSD	86.0	%REC
07060962	Nitrate+Nitrite as N	MSD	86.0	%REC
07030773	Nitrate+Nitrite as N	MS	87.0	%REC
07030788	Nitrate+Nitrite as N	MS	88.0	%REC
07030793	Nitrate+Nitrite as N	MS	88.0	%REC
07050875	Nitrate+Nitrite as N	MS	89.0	%REC
07050890	Nitrate+Nitrite as N	MS	89.0	%REC
07050875	Nitrate+Nitrite as N	MSD	89.0	%REC
07050890	Nitrate+Nitrite as N	MSD	89.0	%REC
07040819	Nitrate+Nitrite as N	MS	90.0	%REC
07111250	Nitrate+Nitrite as N	MS	90.0	%REC
07040819	Nitrate+Nitrite as N	MSD	90.0	%REC
07121313	Nitrate+Nitrite as N	MSD	90.0	%REC
07071018	Nitrate+Nitrite as N	MS	91.0	%REC
07111261	Nitrate+Nitrite as N	MS	91.0	%REC
07101215	Nitrate+Nitrite as N	MSD	91.0	%REC
07111250	Nitrate+Nitrite as N	MSD	91.0	%REC
07111250	Nitrate+Nitrite as N	MSD	91.0	%REC
07060962	Nitrate+Nitrite as N	MS	92.0	%REC
07101215	Nitrate+Nitrite as N	MS	92.0	%REC
07071018	Nitrate+Nitrite as N	MSD	92.0	%REC
07111250	Nitrate+Nitrite as N	MS	93.0	%REC
07111261	Nitrate+Nitrite as N	MS	93.0	%REC
07111250	Nitrate+Nitrite as N	MS	94.0	%REC
07121313	Nitrate+Nitrite as N	MS	94.0	%REC
07050903	Nitrate+Nitrite as N	MSD	94.0	%REC
07050903	Nitrate+Nitrite as N	MS	95.0	%REC
07071068	Nitrate+Nitrite as N	MS	95.0	%REC
07040833	Nitrate+Nitrite as N	MS	96.0	%REC
07071017	Nitrate+Nitrite as N	MS	96.0	%REC
07020727	Nitrate+Nitrite as N	MSD	96.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07101228	Nitrate+Nitrite as N	MSD	96.0	%REC
07040833	Nitrate+Nitrite as N	MSD	97.0	%REC
07111250	Nitrate+Nitrite as N	MSD	97.0	%REC
07071047	Nitrate+Nitrite as N	MS	98.0	%REC
07060935	Nitrate+Nitrite as N	MSD	99.0	%REC
07020727	Nitrate+Nitrite as N	MS	102.0	%REC
07060935	Nitrate+Nitrite as N	MS	102.0	%REC
07060977	Nitrate+Nitrite as N	MSD	102.0	%REC
07060934	Nitrate+Nitrite as N	MSD	103.0	%REC
07040861	Nitrate+Nitrite as N	MS	105.0	%REC
07050908	Nitrate+Nitrite as N	MSD	105.0	%REC
07050908	Nitrate+Nitrite as N	MS	106.0	%REC
07060968	Nitrate+Nitrite as N	MS	106.0	%REC
07040861	Nitrate+Nitrite as N	MSD	106.0	%REC
07060977	Nitrate+Nitrite as N	MS	107.0	%REC
07101227	Nitrate+Nitrite as N	MS	108.0	%REC
07030789	Nitrate+Nitrite as N	MS	109.0	%REC
07020720	Nitrate+Nitrite as N	MS	113.0	%REC
07060934	Nitrate+Nitrite as N	MS	117.0	%REC
07091151	n-Nitroso-di-n-propylamine	MSD	62.0	%REC
07030756	n-Nitroso-di-n-propylamine	MS	69.0	%REC
07091151	n-Nitroso-di-n-propylamine	MS	72.0	%REC
07030756	n-Nitroso-di-n-propylamine	MSD	76.0	%REC
07030756	Pentachlorophenol	MS	85.0	%REC
07091151	Pentachlorophenol	MS	87.0	%REC
07091151	Pentachlorophenol	MSD	88.0	%REC
07030756	Pentachlorophenol	MSD	92.0	%REC
07030756	Phenol	MS	61.0	%REC
07030756	Phenol	MSD	66.0	%REC
07091151	Phenol	MSD	66.0	%REC
07091151	Phenol	MS	80.0	%REC
07030756	Pyrene	MSD	32.0	%REC
07030756	Pyrene	MS	34.0	%REC
07091151	Pyrene	MS	92.0	%REC
07091151	Pyrene	MSD	99.0	%REC
07101196	Selenium	MS	91.2	%REC
07040866	Selenium	MS	92.0	%REC
07030773	Selenium	MS	94.0	%REC
07081123	Selenium	MSD	94.0	%REC
07020741	Selenium	MSD	95.0	%REC
07020731	Selenium	MS	96.0	%REC
07040826	Selenium	MS	96.0	%REC
07081123	Selenium	MS	96.0	%REC
07020741	Selenium	MS	97.0	%REC
07050873	Selenium	MS	97.0	%REC
07030773	Selenium	MSD	98.0	%REC
07050875	Selenium	MSD	98.0	%REC
07091151	Selenium	MSD	98.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07101206	Selenium	MSD	98.0	%REC
07010677	Selenium	MS	98.1	%REC
07081132	Selenium	MSD	99.0	%REC
07020735	Selenium	MS	100.0	%REC
07030789	Selenium	MS	100.0	%REC
07071047	Selenium	MS	100.0	%REC
07081132	Selenium	MS	100.0	%REC
07030756	Selenium	MS	101.0	%REC
07050875	Selenium	MS	101.0	%REC
07091151	Selenium	MS	101.0	%REC
08011346	Selenium	MS	101.0	%REC
07101215	Selenium	MSD	101.0	%REC
07091152	Selenium	MS	102.0	%REC
07101206	Selenium	MS	102.0	%REC
07030756	Selenium	MSD	102.0	%REC
07030789	Selenium	MSD	102.0	%REC
07050884	Selenium	MS	103.0	%REC
07060935	Selenium	MS	103.0	%REC
07101215	Selenium	MS	103.0	%REC
07060935	Selenium	MSD	103.0	%REC
07040864	Selenium	MSD	106.0	%REC
07040864	Selenium	MS	107.0	%REC
07060944	Selenium	MS	133.0	%REC
07060944	Selenium	MSD	138.0	%REC
07030788	Silver	MS	91.0	%REC
07020718	Silver	MS	92.5	%REC
08011346	Silver	MS	93.7	%REC
07060969	Silver	MS	94.8	%REC
07020735	Silver	MS	95.0	%REC
07040866	Silver	MS	95.0	%REC
07101215	Silver	MSD	96.0	%REC
07020741	Silver	MSD	97.0	%REC
07020741	Silver	MS	98.0	%REC
07060935	Silver	MS	98.0	%REC
07101215	Silver	MS	98.0	%REC
07111288	Silver	MS	98.0	%REC
07050875	Silver	MSD	98.0	%REC
07101196	Silver	MS	98.4	%REC
07091158	Silver	MS	98.6	%REC
07050919	Silver	MS	98.7	%REC
07010677	Silver	MS	98.9	%REC
07030789	Silver	MS	99.0	%REC
07060935	Silver	MSD	99.0	%REC
07101196	Silver	MS	99.4	%REC
07071068	Silver	MS	99.6	%REC
08011346	Silver	MS	99.7	%REC
07050884	Silver	MS	100.0	%REC
07071047	Silver	MS	100.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07091151	Silver	MSD	100.0	%REC
07040845	Silver	MS	101.0	%REC
07040866	Silver	MS	101.0	%REC
07050884	Silver	MS	101.0	%REC
07030789	Silver	MSD	101.0	%REC
07081123	Silver	MSD	101.0	%REC
07040826	Silver	MS	102.0	%REC
07050875	Silver	MS	102.0	%REC
07071017	Silver	MS	102.0	%REC
07101235	Silver	MS	102.0	%REC
07081132	Silver	MSD	103.0	%REC
07020731	Silver	MS	104.0	%REC
07040826	Silver	MS	104.0	%REC
07081123	Silver	MS	104.0	%REC
07081132	Silver	MS	104.0	%REC
07091151	Silver	MS	104.0	%REC
08011346	Silver	MS	104.0	%REC
07050876	Silver	MS	105.0	%REC
07050873	Silver	MS	106.0	%REC
07091152	Silver	MS	106.0	%REC
07030756	Silver	MS	107.0	%REC
07040864	Silver	MSD	107.0	%REC
07030756	Silver	MSD	108.0	%REC
07040864	Silver	MS	111.0	%REC
07040821	Styrene	MS	92.0	%REC
07040821	Styrene	MSD	100.0	%REC
07111261	Tetrachloroethene	MSD	66.0	%REC
07040854	Tetrachloroethene	MS	70.0	%REC
07111261	Tetrachloroethene	MSD	71.0	%REC
07040854	Tetrachloroethene	MSD	72.0	%REC
07030756	Tetrachloroethene	MSD	74.0	%REC
07040821	Tetrachloroethene	MS	75.0	%REC
07050893	Tetrachloroethene	MS	77.0	%REC
07030756	Tetrachloroethene	MS	78.0	%REC
07101215	Tetrachloroethene	MSD	80.0	%REC
07091155	Tetrachloroethene	MS	81.0	%REC
07101206	Tetrachloroethene	MS	81.0	%REC
07111261	Tetrachloroethene	MS	81.0	%REC
07111263	Tetrachloroethene	MS	81.0	%REC
07050908	Tetrachloroethene	MS	82.0	%REC
07081132	Tetrachloroethene	MS	83.0	%REC
07030756	Tetrachloroethene	MSD	83.0	%REC
07040821	Tetrachloroethene	MSD	83.0	%REC
07091157	Tetrachloroethene	MS	85.0	%REC
07050893	Tetrachloroethene	MSD	85.0	%REC
07050908	Tetrachloroethene	MSD	85.0	%REC
07111250	Tetrachloroethene	MS	86.0	%REC
07101206	Tetrachloroethene	MSD	86.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111263	Tetrachloroethene	MSD	86.0	%REC
07111270	Tetrachloroethene	MSD	86.0	%REC
07050875	Tetrachloroethene	MS	87.0	%REC
07030756	Tetrachloroethene	MS	88.0	%REC
07111261	Tetrachloroethene	MS	88.0	%REC
07060977	Tetrachloroethene	MSD	88.0	%REC
07091157	Tetrachloroethene	MSD	88.0	%REC
07101215	Tetrachloroethene	MS	89.0	%REC
07050875	Tetrachloroethene	MSD	89.0	%REC
07091155	Tetrachloroethene	MSD	89.0	%REC
07111270	Tetrachloroethene	MS	90.0	%REC
07111270	Tetrachloroethene	MS	90.0	%REC
07111270	Tetrachloroethene	MSD	90.0	%REC
07081132	Tetrachloroethene	MSD	91.0	%REC
07111250	Tetrachloroethene	MSD	92.0	%REC
07050875	Tetrachloroethene	MSD	93.0	%REC
07050875	Tetrachloroethene	MS	94.0	%REC
07091151	Tetrachloroethene	MS	94.0	%REC
07050928	Tetrachloroethene	MSD	94.0	%REC
07081123	Tetrachloroethene	MS	95.0	%REC
07060977	Tetrachloroethene	MS	96.0	%REC
07091151	Tetrachloroethene	MSD	96.0	%REC
07081123	Tetrachloroethene	MSD	97.0	%REC
07060935	Tetrachloroethene	MS	98.0	%REC
07060935	Tetrachloroethene	MSD	98.0	%REC
07071016	Tetrachloroethene	MSD	98.0	%REC
07081113	Tetrachloroethene	MSD	98.0	%REC
07111250	Tetrachloroethene	MSD	99.0	%REC
07081113	Tetrachloroethene	MS	100.0	%REC
07071046	Tetrachloroethene	MSD	100.0	%REC
07040864	Tetrachloroethene	MSD	101.0	%REC
07071016	Tetrachloroethene	MS	102.0	%REC
07050908	Tetrachloroethene	MSD	102.0	%REC
07050928	Tetrachloroethene	MSD	102.0	%REC
07050886	Tetrachloroethene	MS	103.0	%REC
07060944	Tetrachloroethene	MS	103.0	%REC
07071046	Tetrachloroethene	MS	104.0	%REC
07040864	Tetrachloroethene	MS	105.0	%REC
07050908	Tetrachloroethene	MS	105.0	%REC
07050886	Tetrachloroethene	MSD	105.0	%REC
07111250	Tetrachloroethene	MS	106.0	%REC
07050928	Tetrachloroethene	MS	107.0	%REC
07060944	Tetrachloroethene	MSD	107.0	%REC
07060944	Tetrachloroethene	MS	110.0	%REC
07081079	Tetrachloroethene	MS	111.0	%REC
07060944	Tetrachloroethene	MSD	113.0	%REC
07081079	Tetrachloroethene	MSD	117.0	%REC
07101228	Tetrachloroethene	MS	122.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07101228	Tetrachloroethene	MSD	128.0	%REC
07111270	Toluene	MSD	73.0	%REC
07040821	Toluene	MS	77.0	%REC
07111270	Toluene	MS	77.0	%REC
07111261	Toluene	MSD	81.0	%REC
07040854	Toluene	MS	82.0	%REC
07060977	Toluene	MSD	82.0	%REC
07050908	Toluene	MS	83.0	%REC
07111263	Toluene	MS	83.0	%REC
07071047	Toluene	MSD	84.0	%REC
07091155	Toluene	MS	85.0	%REC
07101206	Toluene	MS	85.0	%REC
07111250	Toluene	MSD	85.0	%REC
07111263	Toluene	MSD	85.0	%REC
07060977	Toluene	MS	86.0	%REC
07071047	Toluene	MS	87.0	%REC
07050908	Toluene	MSD	87.0	%REC
07091155	Toluene	MSD	87.0	%REC
07101227	Toluene	MSD	87.0	%REC
07081079	Toluene	MS	88.0	%REC
07040821	Toluene	MSD	88.0	%REC
07040854	Toluene	MSD	88.0	%REC
07101227	Toluene	MS	89.0	%REC
07111261	Toluene	MSD	89.0	%REC
07111270	Toluene	MSD	89.0	%REC
07050875	Toluene	MS	90.0	%REC
07111250	Toluene	MS	90.0	%REC
07081132	Toluene	MS	91.0	%REC
07111261	Toluene	MS	91.0	%REC
07091157	Toluene	MSD	91.0	%REC
07101206	Toluene	MSD	91.0	%REC
07071046	Toluene	MS	92.0	%REC
07101228	Toluene	MS	92.0	%REC
07111270	Toluene	MS	92.0	%REC
07050893	Toluene	MSD	92.0	%REC
07020735	Toluene	MS	93.0	%REC
07030756	Toluene	MSD	93.0	%REC
07071046	Toluene	MSD	93.0	%REC
07050893	Toluene	MS	94.0	%REC
07111250	Toluene	MS	94.0	%REC
07020735	Toluene	MSD	94.0	%REC
07101228	Toluene	MSD	94.0	%REC
07091151	Toluene	MS	95.0	%REC
07101215	Toluene	MSD	95.0	%REC
07111250	Toluene	MSD	95.0	%REC
07010677	Toluene	MSD	96.0	%REC
07040864	Toluene	MSD	96.0	%REC
07081079	Toluene	MSD	96.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07010677	Toluene	MS	97.0	%REC
07060968	Toluene	MS	97.0	%REC
07081132	Toluene	MSD	97.0	%REC
07030756	Toluene	MS	98.0	%REC
07101215	Toluene	MS	98.0	%REC
07060935	Toluene	MSD	98.0	%REC
07091151	Toluene	MSD	98.0	%REC
07040864	Toluene	MS	99.0	%REC
07050875	Toluene	MSD	99.0	%REC
07081123	Toluene	MSD	99.0	%REC
07050928	Toluene	MSD	100.0	%REC
07081123	Toluene	MS	101.0	%REC
07091157	Toluene	MS	101.0	%REC
07050875	Toluene	MSD	101.0	%REC
07050875	Toluene	MS	102.0	%REC
07050886	Toluene	MS	102.0	%REC
07060935	Toluene	MS	102.0	%REC
07060944	Toluene	MS	102.0	%REC
07030756	Toluene	MSD	102.0	%REC
07050908	Toluene	MSD	103.0	%REC
07030756	Toluene	MS	105.0	%REC
07050908	Toluene	MS	105.0	%REC
07050928	Toluene	MS	105.0	%REC
07060944	Toluene	MS	105.0	%REC
07060944	Toluene	MSD	105.0	%REC
07111261	Toluene	MS	106.0	%REC
07050928	Toluene	MSD	106.0	%REC
07071016	Toluene	MSD	106.0	%REC
07050873	Toluene	MS	107.0	%REC
07050886	Toluene	MSD	107.0	%REC
07060944	Toluene	MSD	108.0	%REC
07081113	Toluene	MS	110.0	%REC
07050873	Toluene	MSD	111.0	%REC
07081113	Toluene	MSD	111.0	%REC
07071016	Toluene	MS	113.0	%REC
07060968	Toluene	MSD	114.0	%REC
07040854	trans-1,2-Dichloroethene	MSD	75.0	%REC
07030756	trans-1,2-Dichloroethene	MSD	80.0	%REC
07050893	trans-1,2-Dichloroethene	MS	82.0	%REC
07091155	trans-1,2-Dichloroethene	MS	82.0	%REC
07111250	trans-1,2-Dichloroethene	MSD	82.0	%REC
07050928	trans-1,2-Dichloroethene	MSD	84.0	%REC
07091155	trans-1,2-Dichloroethene	MSD	84.0	%REC
07040854	trans-1,2-Dichloroethene	MS	86.0	%REC
07101228	trans-1,2-Dichloroethene	MS	86.0	%REC
07111250	trans-1,2-Dichloroethene	MS	86.0	%REC
07050893	trans-1,2-Dichloroethene	MSD	86.0	%REC
07071016	trans-1,2-Dichloroethene	MSD	86.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07111250	trans-1,2-Dichloroethene	MS	87.0	%REC
07050908	trans-1,2-Dichloroethene	MSD	87.0	%REC
07040821	trans-1,2-Dichloroethene	MS	88.0	%REC
07101206	trans-1,2-Dichloroethene	MS	88.0	%REC
07101228	trans-1,2-Dichloroethene	MSD	88.0	%REC
07111250	trans-1,2-Dichloroethene	MSD	89.0	%REC
07111261	trans-1,2-Dichloroethene	MSD	90.0	%REC
07050875	trans-1,2-Dichloroethene	MS	91.0	%REC
07050886	trans-1,2-Dichloroethene	MS	91.0	%REC
07081132	trans-1,2-Dichloroethene	MS	91.0	%REC
07111261	trans-1,2-Dichloroethene	MS	91.0	%REC
07050908	trans-1,2-Dichloroethene	MS	93.0	%REC
07091151	trans-1,2-Dichloroethene	MS	93.0	%REC
07111263	trans-1,2-Dichloroethene	MS	93.0	%REC
07040821	trans-1,2-Dichloroethene	MSD	93.0	%REC
07111270	trans-1,2-Dichloroethene	MS	94.0	%REC
07050875	trans-1,2-Dichloroethene	MSD	94.0	%REC
07081132	trans-1,2-Dichloroethene	MSD	94.0	%REC
07111270	trans-1,2-Dichloroethene	MSD	94.0	%REC
07050908	trans-1,2-Dichloroethene	MS	95.0	%REC
07050886	trans-1,2-Dichloroethene	MSD	95.0	%REC
07081113	trans-1,2-Dichloroethene	MS	96.0	%REC
07091157	trans-1,2-Dichloroethene	MS	96.0	%REC
07050875	trans-1,2-Dichloroethene	MSD	96.0	%REC
07050928	trans-1,2-Dichloroethene	MSD	96.0	%REC
07081113	trans-1,2-Dichloroethene	MSD	96.0	%REC
07091151	trans-1,2-Dichloroethene	MSD	96.0	%REC
07091157	trans-1,2-Dichloroethene	MSD	96.0	%REC
07101215	trans-1,2-Dichloroethene	MSD	96.0	%REC
07111263	trans-1,2-Dichloroethene	MSD	96.0	%REC
07060944	trans-1,2-Dichloroethene	MS	97.0	%REC
07071016	trans-1,2-Dichloroethene	MS	97.0	%REC
07111270	trans-1,2-Dichloroethene	MSD	97.0	%REC
07030756	trans-1,2-Dichloroethene	MS	98.0	%REC
07050928	trans-1,2-Dichloroethene	MS	98.0	%REC
07050908	trans-1,2-Dichloroethene	MSD	98.0	%REC
07060977	trans-1,2-Dichloroethene	MSD	98.0	%REC
07071046	trans-1,2-Dichloroethene	MSD	98.0	%REC
07050875	trans-1,2-Dichloroethene	MS	99.0	%REC
07101206	trans-1,2-Dichloroethene	MSD	99.0	%REC
07071046	trans-1,2-Dichloroethene	MS	100.0	%REC
07030756	trans-1,2-Dichloroethene	MSD	101.0	%REC
07060977	trans-1,2-Dichloroethene	MS	102.0	%REC
07101215	trans-1,2-Dichloroethene	MS	102.0	%REC
07111270	trans-1,2-Dichloroethene	MS	102.0	%REC
07060944	trans-1,2-Dichloroethene	MSD	102.0	%REC
07040864	trans-1,2-Dichloroethene	MSD	103.0	%REC
07030756	trans-1,2-Dichloroethene	MS	104.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07040864	trans-1,2-Dichloroethene	MS	105.0	%REC
07060944	trans-1,2-Dichloroethene	MSD	105.0	%REC
07060944	trans-1,2-Dichloroethene	MS	106.0	%REC
07111261	trans-1,2-Dichloroethene	MSD	106.0	%REC
07081123	trans-1,2-Dichloroethene	MSD	107.0	%REC
07081123	trans-1,2-Dichloroethene	MS	108.0	%REC
07111261	trans-1,2-Dichloroethene	MS	117.0	%REC
07060935	trans-1,2-Dichloroethene	MS	122.0	%REC
07060935	trans-1,2-Dichloroethene	MSD	124.0	%REC
07060977	Trichloroethene	MSD	52.0	%REC
07040854	Trichloroethene	MS	74.0	%REC
07040854	Trichloroethene	MSD	75.0	%REC
07060977	Trichloroethene	MS	77.0	%REC
07030756	Trichloroethene	MSD	82.0	%REC
07111250	Trichloroethene	MSD	84.0	%REC
07091157	Trichloroethene	MS	85.0	%REC
07091157	Trichloroethene	MSD	85.0	%REC
07101227	Trichloroethene	MSD	85.0	%REC
07050893	Trichloroethene	MS	86.0	%REC
07101228	Trichloroethene	MS	86.0	%REC
07101228	Trichloroethene	MSD	86.0	%REC
07111261	Trichloroethene	MSD	87.0	%REC
07030756	Trichloroethene	MS	88.0	%REC
07101227	Trichloroethene	MS	88.0	%REC
07071047	Trichloroethene	MSD	88.0	%REC
07091155	Trichloroethene	MSD	88.0	%REC
07071047	Trichloroethene	MS	89.0	%REC
07091155	Trichloroethene	MS	89.0	%REC
07050893	Trichloroethene	MSD	89.0	%REC
07050875	Trichloroethene	MSD	90.0	%REC
07111250	Trichloroethene	MS	92.0	%REC
07111250	Trichloroethene	MS	92.0	%REC
07111261	Trichloroethene	MS	92.0	%REC
07030756	Trichloroethene	MSD	92.0	%REC
07111250	Trichloroethene	MSD	93.0	%REC
07030756	Trichloroethene	MS	94.0	%REC
07050875	Trichloroethene	MS	94.0	%REC
07060968	Trichloroethene	MS	94.0	%REC
07101206	Trichloroethene	MS	94.0	%REC
07050875	Trichloroethene	MSD	94.0	%REC
07050875	Trichloroethene	MS	96.0	%REC
07050928	Trichloroethene	MSD	97.0	%REC
07081132	Trichloroethene	MS	98.0	%REC
07101215	Trichloroethene	MSD	98.0	%REC
07050886	Trichloroethene	MS	100.0	%REC
07091151	Trichloroethene	MS	100.0	%REC
07010677	Trichloroethene	MSD	101.0	%REC
07020735	Trichloroethene	MSD	101.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07010677	Trichloroethene	MS	102.0	%REC
07101215	Trichloroethene	MS	102.0	%REC
07050886	Trichloroethene	MSD	102.0	%REC
07081132	Trichloroethene	MSD	102.0	%REC
07111261	Trichloroethene	MSD	102.0	%REC
07101206	Trichloroethene	MSD	103.0	%REC
07111270	Trichloroethene	MSD	103.0	%REC
07111263	Trichloroethene	MS	104.0	%REC
07091151	Trichloroethene	MSD	104.0	%REC
07040821	Trichloroethene	MS	105.0	%REC
07071046	Trichloroethene	MSD	105.0	%REC
07081123	Trichloroethene	MSD	105.0	%REC
07050873	Trichloroethene	MS	106.0	%REC
07060944	Trichloroethene	MS	106.0	%REC
07040821	Trichloroethene	MSD	106.0	%REC
07050873	Trichloroethene	MSD	106.0	%REC
07050928	Trichloroethene	MSD	106.0	%REC
07081079	Trichloroethene	MSD	106.0	%REC
07111263	Trichloroethene	MSD	106.0	%REC
07050908	Trichloroethene	MS	107.0	%REC
07071046	Trichloroethene	MS	107.0	%REC
07060968	Trichloroethene	MSD	107.0	%REC
07081113	Trichloroethene	MSD	107.0	%REC
07071016	Trichloroethene	MS	108.0	%REC
07111270	Trichloroethene	MS	108.0	%REC
07081123	Trichloroethene	MS	109.0	%REC
07050908	Trichloroethene	MSD	109.0	%REC
07071016	Trichloroethene	MSD	109.0	%REC
07020735	Trichloroethene	MS	110.0	%REC
07050928	Trichloroethene	MS	110.0	%REC
07081079	Trichloroethene	MS	110.0	%REC
07040864	Trichloroethene	MSD	110.0	%REC
07040864	Trichloroethene	MS	112.0	%REC
07081113	Trichloroethene	MS	112.0	%REC
07060944	Trichloroethene	MSD	112.0	%REC
07111261	Trichloroethene	MS	115.0	%REC
07111270	Trichloroethene	MS	115.0	%REC
07111270	Trichloroethene	MSD	116.0	%REC
07060944	Trichloroethene	MS	118.0	%REC
07060935	Trichloroethene	MSD	118.0	%REC
07060944	Trichloroethene	MSD	119.0	%REC
07060935	Trichloroethene	MS	121.0	%REC
07111263	Uranium	MS	83.2	%REC
07111270	Uranium	MS	83.2	%REC
07040866	Uranium	MS	91.0	%REC
07050873	Uranium	MS	91.0	%REC
07060968	Uranium	MS	92.6	%REC
07111250	Uranium	MS	92.9	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050893	Uranium	MS	93.8	%REC
07050875	Uranium	MS	94.0	%REC
07010677	Uranium	MS	95.2	%REC
07040826	Uranium	MS	96.0	%REC
07050908	Uranium	MS	96.0	%REC
07050875	Uranium	MSD	96.0	%REC
07101215	Uranium	MSD	96.0	%REC
07101215	Uranium	MS	97.0	%REC
07101196	Uranium	MS	97.5	%REC
07050884	Uranium	MS	98.0	%REC
07050928	Uranium	MS	98.0	%REC
07060934	Uranium	MS	98.0	%REC
07060935	Uranium	MS	98.0	%REC
07040819	Uranium	MSD	98.0	%REC
07040833	Uranium	MS	99.0	%REC
07081132	Uranium	MSD	99.0	%REC
07091178	Uranium	MSD	99.0	%REC
07111261	Uranium	MS	99.1	%REC
07071047	Uranium	MS	99.3	%REC
07091178	Uranium	MS	100.0	%REC
07121316	Uranium	MS	100.0	%REC
07020741	Uranium	MSD	100.0	%REC
07050928	Uranium	MSD	100.0	%REC
07060934	Uranium	MSD	100.0	%REC
07040819	Uranium	MS	101.0	%REC
07050875	Uranium	MSD	101.0	%REC
07081132	Uranium	MS	102.0	%REC
07081123	Uranium	MSD	102.0	%REC
07020741	Uranium	MS	103.0	%REC
07081123	Uranium	MS	103.0	%REC
07020727	Uranium	MS	104.0	%REC
07020731	Uranium	MS	104.0	%REC
07030789	Uranium	MS	104.0	%REC
07060935	Uranium	MS	104.0	%REC
07091152	Uranium	MS	104.0	%REC
07060935	Uranium	MSD	104.0	%REC
07020735	Uranium	MS	105.0	%REC
07101228	Uranium	MS	105.0	%REC
08011346	Uranium	MS	105.0	%REC
07040833	Uranium	MSD	105.0	%REC
07040861	Uranium	MS	106.0	%REC
07050875	Uranium	MS	106.0	%REC
07030756	Uranium	MS	107.0	%REC
07020727	Uranium	MSD	107.0	%REC
07030756	Uranium	MSD	107.0	%REC
07050883	Uranium	MSD	107.0	%REC
07060942	Uranium	MSD	107.0	%REC
07030773	Uranium	MS	108.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07050883	Uranium	MS	108.0	%REC
07040864	Uranium	MSD	108.0	%REC
07071018	Uranium	MSD	108.0	%REC
07091151	Uranium	MSD	108.0	%REC
07101206	Uranium	MSD	108.0	%REC
07030789	Uranium	MSD	109.0	%REC
07071018	Uranium	MS	110.0	%REC
07030793	Uranium	MSD	110.0	%REC
07091151	Uranium	MS	111.0	%REC
07040864	Uranium	MS	112.0	%REC
07030773	Uranium	MSD	112.0	%REC
07030793	Uranium	MS	113.0	%REC
07060942	Uranium	MS	113.0	%REC
07101206	Uranium	MS	113.0	%REC
07060962	Uranium	MS	118.0	%REC
07040861	Uranium	MSD	120.0	%REC
07060962	Uranium	MSD	121.0	%REC
07040866	Zinc	MS	91.0	%REC
07091151	Zinc	MSD	91.0	%REC
07101196	Zinc	MS	93.3	%REC
07050873	Zinc	MS	94.0	%REC
07091151	Zinc	MS	94.0	%REC
07020741	Zinc	MSD	94.0	%REC
07081123	Zinc	MSD	94.0	%REC
07081123	Zinc	MS	95.0	%REC
07081132	Zinc	MSD	95.0	%REC
07101215	Zinc	MSD	95.0	%REC
07020741	Zinc	MS	96.0	%REC
07081132	Zinc	MS	96.0	%REC
07101206	Zinc	MSD	96.0	%REC
07040864	Zinc	MSD	97.0	%REC
07050875	Zinc	MSD	97.0	%REC
07071047	Zinc	MS	97.7	%REC
07101215	Zinc	MS	98.0	%REC
07020731	Zinc	MS	99.0	%REC
07030789	Zinc	MS	99.0	%REC
07050875	Zinc	MS	99.0	%REC
07091152	Zinc	MS	99.3	%REC
07010677	Zinc	MS	100.0	%REC
07020735	Zinc	MS	100.0	%REC
07030756	Zinc	MS	100.0	%REC
07040826	Zinc	MS	100.0	%REC
07060935	Zinc	MS	100.0	%REC
08011346	Zinc	MS	100.0	%REC
07030789	Zinc	MSD	100.0	%REC
07060935	Zinc	MSD	100.0	%REC
07040864	Zinc	MS	101.0	%REC
07050884	Zinc	MS	101.0	%REC

Table B-3 (continued). Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Recoveries

RIN	Analyte	Result Type	Result	Unit
07101206	Zinc	MS	101.0	%REC
07030756	Zinc	MSD	101.0	%REC

Table B-4. Radionuclide Relative Bias Values for Lab Control Sample (LCS) Data

RESULT_TYPE_CODE	RIN	ANALYTE	RELATIVE_BIAS
LCS	07081106	Americium-241	-0.220
LCS	07030788	Uranium-238	-0.120
LCS	07040826	Americium-241	-0.110
LCS	07040845	Americium-241	-0.110
LCS	07101247	Americium-241	-0.100
LCS	08011351	Americium-241	-0.100
LCS	07050898	Plutonium-239+240	-0.070
LCS	07071017	Plutonium-239+240	-0.070
LCS	07050919	Uranium-238	-0.060
LCS	07060969	Uranium-238	-0.060
LCS	07121316	Gross Alpha	-0.060
LCS	07040826	Plutonium-239+240	-0.040
LCS	07050898	Americium-241	-0.040
LCS	07050919	Plutonium-239+240	-0.040
LCS	07111256	Uranium-238	-0.040
LCS	07020720	Uranium-238	-0.030
LCS	07030788	Americium-241	-0.030
LCS	07050876	Uranium-238	-0.030
LCS	07050877	Uranium-238	-0.030
LCS	07071068	Americium-241	-0.030
LCS	07101196	Plutonium-239+240	-0.030
LCS	07101196	Uranium-238	-0.030
LCS	07101235	Plutonium-239+240	-0.030
LCS	07111288	Uranium-238	-0.030
LCS	07020718	Americium-241	-0.020
LCS	07040826	Plutonium-239+240	-0.020
LCS	07040845	Plutonium-239+240	-0.020
LCS	07071068	Plutonium-239+240	-0.020
LCS	07071068	Uranium-238	-0.020
LCS	08011351	Plutonium-239+240	-0.020
LCS	07040866	Plutonium-239+240	-0.010
LCS	07091158	Americium-241	-0.010
LCS	07101227	Uranium-238	-0.010
LCS	07101235	Americium-241	-0.010
LCS	07111256	Americium-241	-0.010
LCS	07020731	Uranium-238	0.000
LCS	07030788	Uranium-238	0.000
LCS	07050898	Uranium-238	0.000
LCS	07111256	Plutonium-239+240	0.000
LCS	07020720	Plutonium-239+240	0.010
LCS	07020731	Plutonium-239+240	0.010
LCS	07020735	Uranium-238	0.010
LCS	07030788	Plutonium-239+240	0.010
LCS	07091158	Plutonium-239+240	0.010
LCS	07091158	Uranium-238	0.010
LCS	07101227	Uranium-238	0.010
LCS	07101235	Uranium-238	0.010
LCS	07111288	Plutonium-239+240	0.010

Table B-4 (continued). Radionuclide Relative Bias Values for Lab Control Sample (LCS) Data

RESULT_TYPE_CODE	RIN	ANALYTE	RELATIVE_BIAS
LCS	08011346	Plutonium-239+240	0.010
LCS	08011346	Uranium-238	0.010
LCS	07010677	Uranium-238	0.020
LCS	07030789	Plutonium-239+240	0.020
LCS	07060968	Americium-241	0.020
LCS	07010677	Uranium-238	0.030
LCS	07020720	Plutonium-239+240	0.030
LCS	07020731	Americium-241	0.030
LCS	07030788	Americium-241	0.030
LCS	07030789	Uranium-238	0.030
LCS	07040826	Uranium-238	0.030
LCS	07040845	Uranium-238	0.030
LCS	07040866	Uranium-238	0.030
LCS	07050876	Plutonium-239+240	0.030
LCS	07050877	Plutonium-239+240	0.030
LCS	07050884	Americium-241	0.030
LCS	07050919	Uranium-238	0.030
LCS	07050919	Uranium-238	0.030
LCS	07060968	Americium-241	0.030
LCS	07060968	Plutonium-239+240	0.030
LCS	07060969	Plutonium-239+240	0.030
LCS	07091152	Americium-241(g)	0.030
LCS	07101247	Plutonium-239+240	0.030
LCS	07010677	Plutonium-239+240	0.040
LCS	07020718	Uranium-238	0.040
LCS	07050873	Uranium-238	0.040
LCS	07060968	Plutonium-239+240	0.040
LCS	07060969	Plutonium-239+240	0.040
LCS	07071017	Americium-241	0.040
LCS	07071017	Uranium-238	0.040
LCS	07020718	Plutonium-239+240	0.050
LCS	07020720	Americium-241	0.050
LCS	07071047	Uranium-238	0.050
LCS	07111288	Americium-241	0.050
LCS	07121316	Gross Beta	0.050
LCS	07030788	Americium-241	0.060
LCS	07060968	Plutonium-239+240	0.060
LCS	07060969	Plutonium-239+240	0.060
LCS	07101196	Americium-241	0.060
LCS	07010677	Americium-241	0.070
LCS	07030789	Americium-241	0.070
LCS	07050877	Americium-241	0.070
LCS	07060968	Americium-241	0.070
LCS	07060969	Americium-241	0.070
LCS	07050884	Uranium-238	0.090
LCS	07050884	Plutonium-239+240	0.100
LCS	07050919	Americium-241	0.100
LCS	08011346	Americium-241	0.100
LCS	07030788	Plutonium-239+240	0.130
LCS	07050876	Americium-241	0.130

Table B-4 (continued). Radionuclide Relative Bias Values for Lab Control Sample (LCS) Data

RESULT_TYPE_CODE	RIN	ANALYTE	RELATIVE_BIAS
LCS	08011351	Uranium-238	0.160
LCS	07091152	Gross Beta	0.170
LCS	07040866	Americium-241	0.200
LCS	07040866	Americium-241	0.230
LCS	07091152	Gross Alpha	0.230

Table B-5 . Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07020735	Silver	90.0	%REC
LCS	Metals	07060969	Silver	91.4	%REC
LCS	Metals	07020741	Copper	92.0	%REC
LCS	Metals	07050875	Mercury	92.0	%REC
LCS	Metals	07020741	Zinc	93.0	%REC
LCS	Metals	07030773	Selenium	93.0	%REC
LCS	Metals	07101215	Uranium	93.0	%REC
LCS	Metals	07111263	Uranium	93.0	%REC
LCS	Metals	07111270	Uranium	93.0	%REC
LCS	Metals	07060968	Uranium	93.3	%REC
LCS	Metals	07101196	Selenium	93.6	%REC
LCS	Metals	07020741	Selenium	94.0	%REC
LCS	Metals	07020741	Silver	94.0	%REC
LCS	Metals	07030788	Cadmium	94.0	%REC
LCS	Metals	07081132	Beryllium	94.0	%REC
LCS	Metals	07091151	Zinc	94.0	%REC
LCS	Metals	07101215	Silver	94.0	%REC
LCS	Metals	07101196	Zinc	94.1	%REC
LCS	Metals	07020735	Boron	95.0	%REC
LCS	Metals	07020735	Cadmium	95.0	%REC
LCS	Metals	07020735	Chromium	95.0	%REC
LCS	Metals	07020735	Selenium	95.0	%REC
LCS	Metals	07020741	Arsenic	95.0	%REC
LCS	Metals	07020741	Lead	95.0	%REC
LCS	Metals	07040866	Boron	95.0	%REC
LCS	Metals	07040866	Selenium	95.0	%REC
LCS	Metals	07040866	Zinc	95.0	%REC
LCS	Metals	07050873	Silver	95.0	%REC
LCS	Metals	07050893	Uranium	95.0	%REC
LCS	Metals	07060944	Selenium	95.0	%REC
LCS	Metals	07071016	Mercury	95.0	%REC
LCS	Metals	07081132	Nickel	95.0	%REC
LCS	Metals	07101206	Lead	95.0	%REC
LCS	Metals	07030788	Silver	95.4	%REC
LCS	Metals	07050898	Chromium	95.5	%REC
LCS	Metals	07060969	Cadmium	95.5	%REC
LCS	Metals	07101227	Zinc	95.6	%REC
LCS	Metals	08011346	Cadmium	95.6	%REC
LCS	Metals	07020735	Arsenic	96.0	%REC
LCS	Metals	07020735	Beryllium	96.0	%REC
LCS	Metals	07020735	Copper	96.0	%REC
LCS	Metals	07020735	Nickel	96.0	%REC
LCS	Metals	07020741	Nickel	96.0	%REC
LCS	Metals	07050873	Boron	96.0	%REC
LCS	Metals	07050873	Cadmium	96.0	%REC
LCS	Metals	07050873	Copper	96.0	%REC
LCS	Metals	07050873	Zinc	96.0	%REC
LCS	Metals	07081123	Lead	96.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07081123	Nickel	96.0	%REC
LCS	Metals	07081123	Selenium	96.0	%REC
LCS	Metals	07101206	Arsenic	96.0	%REC
LCS	Metals	07101206	Zinc	96.0	%REC
LCS	Metals	07101215	Zinc	96.0	%REC
LCS	Metals	07101227	Nickel	96.5	%REC
LCS	Metals	07020718	Silver	96.6	%REC
LCS	Metals	07050898	Beryllium	96.6	%REC
LCS	Metals	08011346	Beryllium	96.7	%REC
LCS	Metals	08011346	Cadmium	96.7	%REC
LCS	Metals	07020731	Selenium	97.0	%REC
LCS	Metals	07020735	Lead	97.0	%REC
LCS	Metals	07030789	Mercury	97.0	%REC
LCS	Metals	07040866	Arsenic	97.0	%REC
LCS	Metals	07040866	Cadmium	97.0	%REC
LCS	Metals	07040866	Chromium	97.0	%REC
LCS	Metals	07040866	Copper	97.0	%REC
LCS	Metals	07040866	Lead	97.0	%REC
LCS	Metals	07040866	Nickel	97.0	%REC
LCS	Metals	07050873	Arsenic	97.0	%REC
LCS	Metals	07050873	Chromium	97.0	%REC
LCS	Metals	07050873	Lead	97.0	%REC
LCS	Metals	07050873	Selenium	97.0	%REC
LCS	Metals	07081123	Arsenic	97.0	%REC
LCS	Metals	07081123	Boron	97.0	%REC
LCS	Metals	07081132	Arsenic	97.0	%REC
LCS	Metals	07091151	Mercury	97.0	%REC
LCS	Metals	07101206	Beryllium	97.0	%REC
LCS	Metals	07101206	Boron	97.0	%REC
LCS	Metals	07101206	Copper	97.0	%REC
LCS	Metals	07101206	Nickel	97.0	%REC
LCS	Metals	07101215	Arsenic	97.0	%REC
LCS	Metals	07101215	Lead	97.0	%REC
LCS	Metals	07101215	Mercury	97.0	%REC
LCS	Metals	07101227	Copper	97.8	%REC
LCS	Metals	08011346	Chromium	97.9	%REC
LCS	Metals	07020741	Cadmium	98.0	%REC
LCS	Metals	07020741	Chromium	98.0	%REC
LCS	Metals	07040845	Chromium	98.0	%REC
LCS	Metals	07040861	Uranium	98.0	%REC
LCS	Metals	07040864	Selenium	98.0	%REC
LCS	Metals	07040866	Beryllium	98.0	%REC
LCS	Metals	07040866	Silver	98.0	%REC
LCS	Metals	07040866	Uranium	98.0	%REC
LCS	Metals	07050873	Beryllium	98.0	%REC
LCS	Metals	07050873	Nickel	98.0	%REC
LCS	Metals	07060969	Chromium	98.0	%REC
LCS	Metals	07081123	Beryllium	98.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07081123	Zinc	98.0	%REC
LCS	Metals	07081132	Zinc	98.0	%REC
LCS	Metals	07091151	Copper	98.0	%REC
LCS	Metals	07091178	Uranium	98.0	%REC
LCS	Metals	07101196	Arsenic	98.0	%REC
LCS	Metals	07101206	Selenium	98.0	%REC
LCS	Metals	07101215	Nickel	98.0	%REC
LCS	Metals	07101228	Uranium	98.0	%REC
LCS	Metals	07101196	Cadmium	98.2	%REC
LCS	Metals	07060969	Beryllium	98.3	%REC
LCS	Metals	08011346	Silver	98.4	%REC
LCS	Metals	07101235	Chromium	98.5	%REC
LCS	Metals	07101227	Cadmium	98.6	%REC
LCS	Metals	07101227	Uranium	98.6	%REC
LCS	Metals	07101227	Beryllium	98.9	%REC
LCS	Metals	07020735	Zinc	99.0	%REC
LCS	Metals	07020741	Uranium	99.0	%REC
LCS	Metals	07030756	Mercury	99.0	%REC
LCS	Metals	07030789	Chromium	99.0	%REC
LCS	Metals	07030789	Selenium	99.0	%REC
LCS	Metals	07030789	Silver	99.0	%REC
LCS	Metals	07040826	Selenium	99.0	%REC
LCS	Metals	07040826	Uranium	99.0	%REC
LCS	Metals	07040845	Beryllium	99.0	%REC
LCS	Metals	07040864	Boron	99.0	%REC
LCS	Metals	07040864	Zinc	99.0	%REC
LCS	Metals	07050873	Uranium	99.0	%REC
LCS	Metals	07050875	Boron	99.0	%REC
LCS	Metals	07050893	Uranium	99.0	%REC
LCS	Metals	07060935	Uranium	99.0	%REC
LCS	Metals	07060935	Uranium	99.0	%REC
LCS	Metals	07060977	Uranium	99.0	%REC
LCS	Metals	07060977	Uranium	99.0	%REC
LCS	Metals	07081123	Copper	99.0	%REC
LCS	Metals	07091151	Selenium	99.0	%REC
LCS	Metals	07101215	Beryllium	99.0	%REC
LCS	Metals	07101215	Selenium	99.0	%REC
LCS	Metals	08011346	Silver	99.0	%REC
LCS	Metals	07010677	Cadmium	99.1	%REC
LCS	Metals	07101196	Lead	99.1	%REC
LCS	Metals	07071017	Chromium	99.2	%REC
LCS	Metals	07071068	Chromium	99.2	%REC
LCS	Metals	07101196	Silver	99.2	%REC
LCS	Metals	07101196	Nickel	99.3	%REC
LCS	Metals	07101196	Chromium	99.6	%REC
LCS	Metals	07101227	Silver	99.6	%REC
LCS	Metals	07101196	Beryllium	99.8	%REC
LCS	Metals	07121316	Uranium	99.8	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07010677	Beryllium	100.0	%REC
LCS	Metals	07010677	Lead	100.0	%REC
LCS	Metals	07020718	Cadmium	100.0	%REC
LCS	Metals	07020731	Arsenic	100.0	%REC
LCS	Metals	07020731	Cadmium	100.0	%REC
LCS	Metals	07020731	Zinc	100.0	%REC
LCS	Metals	07020741	Beryllium	100.0	%REC
LCS	Metals	07020741	Boron	100.0	%REC
LCS	Metals	07030789	Arsenic	100.0	%REC
LCS	Metals	07030789	Beryllium	100.0	%REC
LCS	Metals	07030789	Boron	100.0	%REC
LCS	Metals	07030789	Cadmium	100.0	%REC
LCS	Metals	07030789	Copper	100.0	%REC
LCS	Metals	07030789	Nickel	100.0	%REC
LCS	Metals	07040819	Uranium	100.0	%REC
LCS	Metals	07050873	Mercury	100.0	%REC
LCS	Metals	07050884	Mercury	100.0	%REC
LCS	Metals	07060935	Beryllium	100.0	%REC
LCS	Metals	07060935	Silver	100.0	%REC
LCS	Metals	07071047	Silver	100.0	%REC
LCS	Metals	07081123	Chromium	100.0	%REC
LCS	Metals	07081132	Boron	100.0	%REC
LCS	Metals	07081132	Lead	100.0	%REC
LCS	Metals	07081132	Mercury	100.0	%REC
LCS	Metals	07081132	Selenium	100.0	%REC
LCS	Metals	07091152	Boron	100.0	%REC
LCS	Metals	07101206	Chromium	100.0	%REC
LCS	Metals	07101215	Copper	100.0	%REC
LCS	Metals	07101227	Boron	100.0	%REC
LCS	Metals	07101227	Chromium	100.0	%REC
LCS	Metals	07101227	Lead	100.0	%REC
LCS	Metals	07101235	Beryllium	100.0	%REC
LCS	Metals	07111263	Uranium	100.0	%REC
LCS	Metals	07111270	Uranium	100.0	%REC
LCS	Metals	08011346	Selenium	100.0	%REC
LCS	Metals	07010677	Arsenic	101.0	%REC
LCS	Metals	07010677	Boron	101.0	%REC
LCS	Metals	07010677	Chromium	101.0	%REC
LCS	Metals	07010677	Silver	101.0	%REC
LCS	Metals	07010677	Uranium	101.0	%REC
LCS	Metals	07030789	Lead	101.0	%REC
LCS	Metals	07030789	Uranium	101.0	%REC
LCS	Metals	07030789	Zinc	101.0	%REC
LCS	Metals	07040821	Mercury	101.0	%REC
LCS	Metals	07040826	Chromium	101.0	%REC
LCS	Metals	07040826	Zinc	101.0	%REC
LCS	Metals	07040864	Arsenic	101.0	%REC
LCS	Metals	07050875	Arsenic	101.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07050883	Uranium	101.0	%REC
LCS	Metals	07060935	Zinc	101.0	%REC
LCS	Metals	07060962	Uranium	101.0	%REC
LCS	Metals	07071017	Beryllium	101.0	%REC
LCS	Metals	07071018	Uranium	101.0	%REC
LCS	Metals	07071047	Cadmium	101.0	%REC
LCS	Metals	07071047	Nickel	101.0	%REC
LCS	Metals	07071068	Beryllium	101.0	%REC
LCS	Metals	07081123	Silver	101.0	%REC
LCS	Metals	07081123	Uranium	101.0	%REC
LCS	Metals	07091151	Silver	101.0	%REC
LCS	Metals	07101196	Boron	101.0	%REC
LCS	Metals	07101215	Chromium	101.0	%REC
LCS	Metals	07101227	Arsenic	101.0	%REC
LCS	Metals	07101227	Selenium	101.0	%REC
LCS	Metals	07101228	Uranium	101.0	%REC
LCS	Metals	07111256	Chromium	101.0	%REC
LCS	Metals	07111288	Beryllium	101.0	%REC
LCS	Metals	08011346	Mercury	101.0	%REC
LCS	Metals	07010677	Nickel	102.0	%REC
LCS	Metals	07010677	Selenium	102.0	%REC
LCS	Metals	07020731	Boron	102.0	%REC
LCS	Metals	07020731	Chromium	102.0	%REC
LCS	Metals	07020731	Lead	102.0	%REC
LCS	Metals	07030756	Selenium	102.0	%REC
LCS	Metals	07030756	Zinc	102.0	%REC
LCS	Metals	07040826	Boron	102.0	%REC
LCS	Metals	07040826	Lead	102.0	%REC
LCS	Metals	07040845	Cadmium	102.0	%REC
LCS	Metals	07040845	Silver	102.0	%REC
LCS	Metals	07040864	Nickel	102.0	%REC
LCS	Metals	07040866	Silver	102.0	%REC
LCS	Metals	07050875	Beryllium	102.0	%REC
LCS	Metals	07050875	Zinc	102.0	%REC
LCS	Metals	07050884	Boron	102.0	%REC
LCS	Metals	07050884	Cadmium	102.0	%REC
LCS	Metals	07050884	Cadmium	102.0	%REC
LCS	Metals	07050884	Selenium	102.0	%REC
LCS	Metals	07050884	Silver	102.0	%REC
LCS	Metals	07060935	Arsenic	102.0	%REC
LCS	Metals	07060935	Copper	102.0	%REC
LCS	Metals	07060935	Mercury	102.0	%REC
LCS	Metals	07071047	Chromium	102.0	%REC
LCS	Metals	07071047	Selenium	102.0	%REC
LCS	Metals	07071068	Cadmium	102.0	%REC
LCS	Metals	07081132	Uranium	102.0	%REC
LCS	Metals	07091152	Selenium	102.0	%REC
LCS	Metals	07101196	Uranium	102.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07101215	Boron	102.0	%REC
LCS	Metals	07111256	Beryllium	102.0	%REC
LCS	Metals	07111288	Chromium	102.0	%REC
LCS	Metals	08011346	Boron	102.0	%REC
LCS	Metals	08011346	Zinc	102.0	%REC
LCS	Metals	07010677	Copper	103.0	%REC
LCS	Metals	07010677	Mercury	103.0	%REC
LCS	Metals	07010677	Zinc	103.0	%REC
LCS	Metals	07020731	Beryllium	103.0	%REC
LCS	Metals	07020731	Copper	103.0	%REC
LCS	Metals	07020731	Nickel	103.0	%REC
LCS	Metals	07020731	Silver	103.0	%REC
LCS	Metals	07020735	Uranium	103.0	%REC
LCS	Metals	07030756	Arsenic	103.0	%REC
LCS	Metals	07040826	Arsenic	103.0	%REC
LCS	Metals	07040826	Beryllium	103.0	%REC
LCS	Metals	07040826	Cadmium	103.0	%REC
LCS	Metals	07040826	Copper	103.0	%REC
LCS	Metals	07040864	Beryllium	103.0	%REC
LCS	Metals	07040864	Lead	103.0	%REC
LCS	Metals	07040866	Cadmium	103.0	%REC
LCS	Metals	07050875	Lead	103.0	%REC
LCS	Metals	07050875	Nickel	103.0	%REC
LCS	Metals	07050875	Selenium	103.0	%REC
LCS	Metals	07050876	Beryllium	103.0	%REC
LCS	Metals	07050876	Chromium	103.0	%REC
LCS	Metals	07050884	Arsenic	103.0	%REC
LCS	Metals	07050884	Lead	103.0	%REC
LCS	Metals	07050884	Silver	103.0	%REC
LCS	Metals	07050884	Zinc	103.0	%REC
LCS	Metals	07050919	Chromium	103.0	%REC
LCS	Metals	07060935	Boron	103.0	%REC
LCS	Metals	07060935	Lead	103.0	%REC
LCS	Metals	07060935	Nickel	103.0	%REC
LCS	Metals	07060935	Uranium	103.0	%REC
LCS	Metals	07071047	Arsenic	103.0	%REC
LCS	Metals	07071047	Beryllium	103.0	%REC
LCS	Metals	07071047	Lead	103.0	%REC
LCS	Metals	07071068	Silver	103.0	%REC
LCS	Metals	07081123	Cadmium	103.0	%REC
LCS	Metals	07081132	Chromium	103.0	%REC
LCS	Metals	07091151	Boron	103.0	%REC
LCS	Metals	07091152	Zinc	103.0	%REC
LCS	Metals	07101196	Copper	103.0	%REC
LCS	Metals	07101235	Cadmium	103.0	%REC
LCS	Metals	07111288	Cadmium	103.0	%REC
LCS	Metals	08011346	Arsenic	103.0	%REC
LCS	Metals	08011346	Cadmium	103.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07010677	Arsenic	104.0	%REC
LCS	Metals	07010677	Boron	104.0	%REC
LCS	Metals	07010677	Copper	104.0	%REC
LCS	Metals	07010677	Mercury	104.0	%REC
LCS	Metals	07010677	Silver	104.0	%REC
LCS	Metals	07030756	Copper	104.0	%REC
LCS	Metals	07030756	Lead	104.0	%REC
LCS	Metals	07030756	Nickel	104.0	%REC
LCS	Metals	07030788	Chromium	104.0	%REC
LCS	Metals	07040826	Mercury	104.0	%REC
LCS	Metals	07040826	Nickel	104.0	%REC
LCS	Metals	07040826	Silver	104.0	%REC
LCS	Metals	07040864	Cadmium	104.0	%REC
LCS	Metals	07040866	Mercury	104.0	%REC
LCS	Metals	07050884	Copper	104.0	%REC
LCS	Metals	07050919	Cadmium	104.0	%REC
LCS	Metals	07050919	Silver	104.0	%REC
LCS	Metals	07060935	Selenium	104.0	%REC
LCS	Metals	07071047	Boron	104.0	%REC
LCS	Metals	07071047	Copper	104.0	%REC
LCS	Metals	07091151	Arsenic	104.0	%REC
LCS	Metals	07091151	Beryllium	104.0	%REC
LCS	Metals	07091152	Cadmium	104.0	%REC
LCS	Metals	07091152	Mercury	104.0	%REC
LCS	Metals	07091158	Chromium	104.0	%REC
LCS	Metals	08011346	Beryllium	104.0	%REC
LCS	Metals	08011346	Lead	104.0	%REC
LCS	Metals	07010677	Beryllium	105.0	%REC
LCS	Metals	07010677	Cadmium	105.0	%REC
LCS	Metals	07020727	Uranium	105.0	%REC
LCS	Metals	07030756	Boron	105.0	%REC
LCS	Metals	07040826	Cadmium	105.0	%REC
LCS	Metals	07040833	Uranium	105.0	%REC
LCS	Metals	07040864	Chromium	105.0	%REC
LCS	Metals	07040864	Copper	105.0	%REC
LCS	Metals	07040864	Mercury	105.0	%REC
LCS	Metals	07050875	Silver	105.0	%REC
LCS	Metals	07050884	Beryllium	105.0	%REC
LCS	Metals	07050884	Chromium	105.0	%REC
LCS	Metals	07050884	Nickel	105.0	%REC
LCS	Metals	07050908	Uranium	105.0	%REC
LCS	Metals	07060935	Chromium	105.0	%REC
LCS	Metals	07071017	Cadmium	105.0	%REC
LCS	Metals	07071017	Silver	105.0	%REC
LCS	Metals	07071047	Mercury	105.0	%REC
LCS	Metals	07071047	Zinc	105.0	%REC
LCS	Metals	07081123	Mercury	105.0	%REC
LCS	Metals	07081132	Copper	105.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07091151	Lead	105.0	%REC
LCS	Metals	07091152	Arsenic	105.0	%REC
LCS	Metals	07091152	Copper	105.0	%REC
LCS	Metals	07091152	Silver	105.0	%REC
LCS	Metals	07091158	Beryllium	105.0	%REC
LCS	Metals	07101196	Cadmium	105.0	%REC
LCS	Metals	07101196	Silver	105.0	%REC
LCS	Metals	08011346	Chromium	105.0	%REC
LCS	Metals	08011346	Copper	105.0	%REC
LCS	Metals	08011346	Nickel	105.0	%REC
LCS	Metals	08011346	Silver	105.0	%REC
LCS	Metals	07010677	Chromium	106.0	%REC
LCS	Metals	07010677	Nickel	106.0	%REC
LCS	Metals	07010677	Selenium	106.0	%REC
LCS	Metals	07020718	Chromium	106.0	%REC
LCS	Metals	07020731	Mercury	106.0	%REC
LCS	Metals	07020735	Mercury	106.0	%REC
LCS	Metals	07020741	Mercury	106.0	%REC
LCS	Metals	07030756	Cadmium	106.0	%REC
LCS	Metals	07030756	Chromium	106.0	%REC
LCS	Metals	07030788	Beryllium	106.0	%REC
LCS	Metals	07040826	Silver	106.0	%REC
LCS	Metals	07040864	Silver	106.0	%REC
LCS	Metals	07050875	Uranium	106.0	%REC
LCS	Metals	07050876	Silver	106.0	%REC
LCS	Metals	07050919	Beryllium	106.0	%REC
LCS	Metals	07050928	Uranium	106.0	%REC
LCS	Metals	07060934	Uranium	106.0	%REC
LCS	Metals	07060935	Cadmium	106.0	%REC
LCS	Metals	07071047	Uranium	106.0	%REC
LCS	Metals	07081132	Cadmium	106.0	%REC
LCS	Metals	07081132	Silver	106.0	%REC
LCS	Metals	07091151	Chromium	106.0	%REC
LCS	Metals	07091151	Nickel	106.0	%REC
LCS	Metals	07091152	Chromium	106.0	%REC
LCS	Metals	07091152	Lead	106.0	%REC
LCS	Metals	07091152	Nickel	106.0	%REC
LCS	Metals	07091152	Uranium	106.0	%REC
LCS	Metals	07101206	Cadmium	106.0	%REC
LCS	Metals	07101215	Cadmium	106.0	%REC
LCS	Metals	07101235	Silver	106.0	%REC
LCS	Metals	07111256	Silver	106.0	%REC
LCS	Metals	07010677	Lead	107.0	%REC
LCS	Metals	07020718	Beryllium	107.0	%REC
LCS	Metals	07020731	Uranium	107.0	%REC
LCS	Metals	07040854	Uranium	107.0	%REC
LCS	Metals	07050875	Copper	107.0	%REC
LCS	Metals	07050876	Cadmium	107.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	Metals	07050886	Uranium	107.0	%REC
LCS	Metals	07050903	Uranium	107.0	%REC
LCS	Metals	07091152	Beryllium	107.0	%REC
LCS	Metals	07091158	Cadmium	107.0	%REC
LCS	Metals	07010677	Zinc	108.0	%REC
LCS	Metals	07030756	Beryllium	108.0	%REC
LCS	Metals	07050875	Cadmium	108.0	%REC
LCS	Metals	07050875	Chromium	108.0	%REC
LCS	Metals	07050884	Uranium	108.0	%REC
LCS	Metals	07050908	Uranium	108.0	%REC
LCS	Metals	07101196	Mercury	108.0	%REC
LCS	Metals	07101206	Mercury	108.0	%REC
LCS	Metals	07101206	Uranium	108.0	%REC
LCS	Metals	07101227	Mercury	108.0	%REC
LCS	Metals	07111256	Cadmium	108.0	%REC
LCS	Metals	07010677	Uranium	109.0	%REC
LCS	Metals	07030756	Silver	109.0	%REC
LCS	Metals	07030756	Uranium	109.0	%REC
LCS	Metals	07030773	Uranium	109.0	%REC
LCS	Metals	07040864	Uranium	109.0	%REC
LCS	Metals	07050886	Uranium	109.0	%REC
LCS	Metals	07050898	Cadmium	109.0	%REC
LCS	Metals	07050903	Uranium	109.0	%REC
LCS	Metals	07091151	Cadmium	109.0	%REC
LCS	Metals	07091151	Uranium	109.0	%REC
LCS	Metals	07091158	Silver	109.0	%REC
LCS	Metals	07111261	Uranium	109.0	%REC
LCS	Metals	08011346	Uranium	109.0	%REC
LCS	Metals	07030793	Uranium	110.0	%REC
LCS	Metals	07050875	Uranium	110.0	%REC
LCS	Metals	07050898	Silver	110.0	%REC
LCS	Metals	07060942	Uranium	110.0	%REC
LCS	Metals	07111261	Uranium	112.0	%REC
LCS	Metals	07111288	Silver	112.0	%REC
LCS	Metals	07040854	Uranium	116.0	%REC
LCS	Metals	07111250	Uranium	120.8	%REC
LCS	Metals	07111250	Uranium	126.5	%REC
LCS	VOCs/SVOCs	07020735	4-Nitrophenol	27.0	%REC
LCS	VOCs/SVOCs	07071047	Phenol	29.0	%REC
LCS	VOCs/SVOCs	07071047	4-Nitrophenol	31.0	%REC
LCS	VOCs/SVOCs	07020735	4-Nitrophenol	32.0	%REC
LCS	VOCs/SVOCs	07020735	Phenol	33.0	%REC
LCS	VOCs/SVOCs	07050873	Phenol	35.0	%REC
LCS	VOCs/SVOCs	07101227	4-Nitrophenol	36.0	%REC
LCS	VOCs/SVOCs	07101227	4-Nitrophenol	36.0	%REC
LCS	VOCs/SVOCs	07020735	Phenol	37.0	%REC
LCS	VOCs/SVOCs	07050873	4-Nitrophenol	42.0	%REC
LCS	VOCs/SVOCs	07030756	1,2,4-Trichlorobenzene	46.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07030756	1,4-Dichlorobenzene	47.0	%REC
LCS	VOCs/SVOCs	07030756	1,4-Dichlorobenzene	48.0	%REC
LCS	VOCs/SVOCs	07030756	1,2,4-Trichlorobenzene	49.0	%REC
LCS	VOCs/SVOCs	07060935	4-Nitrophenol	58.0	%REC
LCS	VOCs/SVOCs	07060935	Pentachlorophenol	59.0	%REC
LCS	VOCs/SVOCs	07030756	4-Nitrophenol	61.0	%REC
LCS	VOCs/SVOCs	07020735	Pentachlorophenol	61.0	%REC
LCS	VOCs/SVOCs	07101215	1,4-Dichlorobenzene	62.0	%REC
LCS	VOCs/SVOCs	07071047	Pyrene	62.0	%REC
LCS	VOCs/SVOCs	07081123	1,4-Dichlorobenzene	63.0	%REC
LCS	VOCs/SVOCs	07081123	1,4-Dichlorobenzene	63.0	%REC
LCS	VOCs/SVOCs	07060935	4-Nitrophenol	63.0	%REC
LCS	VOCs/SVOCs	07030756	2,4,6-Trichlorophenol	64.0	%REC
LCS	VOCs/SVOCs	07060935	1,2,4-Trichlorobenzene	65.0	%REC
LCS	VOCs/SVOCs	07071047	1,4-Dichlorobenzene	65.0	%REC
LCS	VOCs/SVOCs	07020735	2-Chlorophenol	65.0	%REC
LCS	VOCs/SVOCs	07060935	Pentachlorophenol	65.0	%REC
LCS	VOCs/SVOCs	07060935	1,2,4-Trichlorobenzene	66.0	%REC
LCS	VOCs/SVOCs	07091151	1,2,4-Trichlorobenzene	66.0	%REC
LCS	VOCs/SVOCs	07101215	1,2,4-Trichlorobenzene	66.0	%REC
LCS	VOCs/SVOCs	07091151	1,4-Dichlorobenzene	66.0	%REC
LCS	VOCs/SVOCs	07060935	2,4,6-Trichlorophenol	66.0	%REC
LCS	VOCs/SVOCs	07071047	1,2,4-Trichlorobenzene	67.0	%REC
LCS	VOCs/SVOCs	07060935	2,4-Dinitrotoluene	67.0	%REC
LCS	VOCs/SVOCs	07030756	Acenaphthene	67.0	%REC
LCS	VOCs/SVOCs	07020735	Pentachlorophenol	67.0	%REC
LCS	VOCs/SVOCs	07071047	Pentachlorophenol	67.0	%REC
LCS	VOCs/SVOCs	07091157	1,4-Dichlorobenzene	68.0	%REC
LCS	VOCs/SVOCs	07071047	2-Chlorophenol	68.0	%REC
LCS	VOCs/SVOCs	07101227	2-Chlorophenol	68.0	%REC
LCS	VOCs/SVOCs	07030756	4-Nitrophenol	68.0	%REC
LCS	VOCs/SVOCs	07101215	1,4-Dichlorobenzene	69.0	%REC
LCS	VOCs/SVOCs	07060935	2,4,6-Trichlorophenol	69.0	%REC
LCS	VOCs/SVOCs	07030756	2-Chlorophenol	69.0	%REC
LCS	VOCs/SVOCs	07030756	n-Nitroso-di-n-propylamine	69.0	%REC
LCS	VOCs/SVOCs	07030756	Pentachlorophenol	69.0	%REC
LCS	VOCs/SVOCs	07081123	1,2,4-Trichlorobenzene	70.0	%REC
LCS	VOCs/SVOCs	07030756	2,4,6-Trichlorophenol	70.0	%REC
LCS	VOCs/SVOCs	07050873	2-Chlorophenol	70.0	%REC
LCS	VOCs/SVOCs	07101227	2-Chlorophenol	70.0	%REC
LCS	VOCs/SVOCs	07091151	n-Nitroso-di-n-propylamine	70.0	%REC
LCS	VOCs/SVOCs	07030756	Phenol	70.0	%REC
LCS	VOCs/SVOCs	07091157	1,2,4-Trichlorobenzene	71.0	%REC
LCS	VOCs/SVOCs	07101227	1,2,4-Trichlorobenzene	71.0	%REC
LCS	VOCs/SVOCs	07060935	1,4-Dichlorobenzene	71.0	%REC
LCS	VOCs/SVOCs	07060935	1,4-Dichlorobenzene	71.0	%REC
LCS	VOCs/SVOCs	07101227	1,4-Dichlorobenzene	71.0	%REC
LCS	VOCs/SVOCs	07050873	2,4-Dinitrotoluene	71.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07020735	2-Chlorophenol	71.0	%REC
LCS	VOCs/SVOCs	07091151	4-Nitrophenol	71.0	%REC
LCS	VOCs/SVOCs	07101227	n-Nitroso-di-n-propylamine	71.0	%REC
LCS	VOCs/SVOCs	07091151	2,4,6-Trichlorophenol	72.0	%REC
LCS	VOCs/SVOCs	07030756	2,4-Dinitrotoluene	72.0	%REC
LCS	VOCs/SVOCs	07020735	4-Chloro-3-methylphenol	72.0	%REC
LCS	VOCs/SVOCs	07091151	4-Chloro-3-methylphenol	72.0	%REC
LCS	VOCs/SVOCs	07030756	Acenaphthene	72.0	%REC
LCS	VOCs/SVOCs	07101227	n-Nitroso-di-n-propylamine	72.0	%REC
LCS	VOCs/SVOCs	07081123	1,2,4-Trichlorobenzene	73.0	%REC
LCS	VOCs/SVOCs	07101227	1,2,4-Trichlorobenzene	73.0	%REC
LCS	VOCs/SVOCs	07101227	1,4-Dichlorobenzene	73.0	%REC
LCS	VOCs/SVOCs	07060935	2,4-Dinitrotoluene	73.0	%REC
LCS	VOCs/SVOCs	07091151	2-Chlorophenol	73.0	%REC
LCS	VOCs/SVOCs	07091151	2,4-Dinitrotoluene	74.0	%REC
LCS	VOCs/SVOCs	07030756	2,6-Dinitrotoluene	74.0	%REC
LCS	VOCs/SVOCs	07030756	4-Chloro-3-methylphenol	74.0	%REC
LCS	VOCs/SVOCs	07030756	4-Chloro-3-methylphenol	74.0	%REC
LCS	VOCs/SVOCs	07060935	Acenaphthene	74.0	%REC
LCS	VOCs/SVOCs	07091151	Acenaphthene	74.0	%REC
LCS	VOCs/SVOCs	07101215	1,2,4-Trichlorobenzene	75.0	%REC
LCS	VOCs/SVOCs	07020735	2,4-Dinitrotoluene	75.0	%REC
LCS	VOCs/SVOCs	07020735	4-Chloro-3-methylphenol	75.0	%REC
LCS	VOCs/SVOCs	07101215	4-Nitrophenol	75.0	%REC
LCS	VOCs/SVOCs	07101215	4-Nitrophenol	75.0	%REC
LCS	VOCs/SVOCs	07020735	Acenaphthene	75.0	%REC
LCS	VOCs/SVOCs	07071047	Acenaphthene	75.0	%REC
LCS	VOCs/SVOCs	07101215	Acenaphthene	75.0	%REC
LCS	VOCs/SVOCs	07030756	n-Nitroso-di-n-propylamine	75.0	%REC
LCS	VOCs/SVOCs	07060935	4-Chloro-3-methylphenol	76.0	%REC
LCS	VOCs/SVOCs	07101215	2-Chlorophenol	77.0	%REC
LCS	VOCs/SVOCs	07050873	4-Chloro-3-methylphenol	77.0	%REC
LCS	VOCs/SVOCs	07071047	4-Chloro-3-methylphenol	77.0	%REC
LCS	VOCs/SVOCs	07101227	4-Chloro-3-methylphenol	77.0	%REC
LCS	VOCs/SVOCs	07101227	4-Chloro-3-methylphenol	77.0	%REC
LCS	VOCs/SVOCs	07101227	Acenaphthene	77.0	%REC
LCS	VOCs/SVOCs	07101215	n-Nitroso-di-n-propylamine	77.0	%REC
LCS	VOCs/SVOCs	07030756	Pentachlorophenol	77.0	%REC
LCS	VOCs/SVOCs	07050873	Pentachlorophenol	77.0	%REC
LCS	VOCs/SVOCs	07091151	Pentachlorophenol	77.0	%REC
LCS	VOCs/SVOCs	07111261	Tetrachloroethene	77.0	%REC
LCS	VOCs/SVOCs	07111261	1,3-Dichlorobenzene	78.0	%REC
LCS	VOCs/SVOCs	07101215	4-Chloro-3-methylphenol	78.0	%REC
LCS	VOCs/SVOCs	07101227	Acenaphthene	78.0	%REC
LCS	VOCs/SVOCs	07091157	Pentachlorophenol	78.0	%REC
LCS	VOCs/SVOCs	07091151	Phenol	78.0	%REC
LCS	VOCs/SVOCs	07040821	Tetrachloroethene	78.0	%REC
LCS	VOCs/SVOCs	07101215	2,4,6-Trichlorophenol	79.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07020735	2,4-Dinitrotoluene	79.0	%REC
LCS	VOCs/SVOCs	07071047	2,4-Dinitrotoluene	79.0	%REC
LCS	VOCs/SVOCs	07020735	Acenaphthene	79.0	%REC
LCS	VOCs/SVOCs	07060935	Anthracene	79.0	%REC
LCS	VOCs/SVOCs	07050875	Benzene	79.0	%REC
LCS	VOCs/SVOCs	07050886	Carbon Tetrachloride	79.0	%REC
LCS	VOCs/SVOCs	07081123	n-Nitroso-di-n-propylamine	79.0	%REC
LCS	VOCs/SVOCs	07020735	n-Nitrosodipropylamine	79.0	%REC
LCS	VOCs/SVOCs	07040821	Toluene	79.0	%REC
LCS	VOCs/SVOCs	07050886	1,1,1-Trichloroethane	80.0	%REC
LCS	VOCs/SVOCs	07101215	2,4-Dinitrotoluene	80.0	%REC
LCS	VOCs/SVOCs	07030756	2-Chlorophenol	80.0	%REC
LCS	VOCs/SVOCs	07050873	Acenaphthene	80.0	%REC
LCS	VOCs/SVOCs	07060935	Acenaphthene	80.0	%REC
LCS	VOCs/SVOCs	07050886	Bromodichloromethane	80.0	%REC
LCS	VOCs/SVOCs	07060977	Carbon Tetrachloride	80.0	%REC
LCS	VOCs/SVOCs	07060935	n-Nitroso-di-n-propylamine	80.0	%REC
LCS	VOCs/SVOCs	07101215	Phenol	80.0	%REC
LCS	VOCs/SVOCs	07050873	Pyrene	80.0	%REC
LCS	VOCs/SVOCs	07060935	Pyrene	80.0	%REC
LCS	VOCs/SVOCs	07050875	Tetrachloroethene	80.0	%REC
LCS	VOCs/SVOCs	07111261	Tetrachloroethene	80.0	%REC
LCS	VOCs/SVOCs	07111261	Toluene	80.0	%REC
LCS	VOCs/SVOCs	07050886	1,3-Dichlorobenzene	81.0	%REC
LCS	VOCs/SVOCs	07111250	1,3-Dichlorobenzene	81.0	%REC
LCS	VOCs/SVOCs	07081123	2-Chlorophenol	81.0	%REC
LCS	VOCs/SVOCs	07081123	4-Chloro-3-methylphenol	81.0	%REC
LCS	VOCs/SVOCs	07081123	Acenaphthene	81.0	%REC
LCS	VOCs/SVOCs	07050886	Chloroform	81.0	%REC
LCS	VOCs/SVOCs	07101227	1,1-Dichloroethene	82.0	%REC
LCS	VOCs/SVOCs	07101228	1,1-Dichloroethene	82.0	%REC
LCS	VOCs/SVOCs	07091157	2,4-Dinitrotoluene	82.0	%REC
LCS	VOCs/SVOCs	07030756	Anthracene	82.0	%REC
LCS	VOCs/SVOCs	07101228	Benzene	82.0	%REC
LCS	VOCs/SVOCs	07101228	Carbon Tetrachloride	82.0	%REC
LCS	VOCs/SVOCs	07111261	Ethylbenzene	82.0	%REC
LCS	VOCs/SVOCs	07050875	Methylene Chloride	82.0	%REC
LCS	VOCs/SVOCs	07081123	n-Nitroso-di-n-propylamine	82.0	%REC
LCS	VOCs/SVOCs	07091157	n-Nitroso-di-n-propylamine	82.0	%REC
LCS	VOCs/SVOCs	07101227	Pyrene	82.0	%REC
LCS	VOCs/SVOCs	07111263	Tetrachloroethene	82.0	%REC
LCS	VOCs/SVOCs	07111261	1,1,1-Trichloroethane	83.0	%REC
LCS	VOCs/SVOCs	07040821	1,3-Dichlorobenzene	83.0	%REC
LCS	VOCs/SVOCs	07060935	4-Chloro-3-methylphenol	83.0	%REC
LCS	VOCs/SVOCs	07091157	4-Nitrophenol	83.0	%REC
LCS	VOCs/SVOCs	07101215	Acenaphthene	83.0	%REC
LCS	VOCs/SVOCs	07091151	Anthracene	83.0	%REC
LCS	VOCs/SVOCs	07111261	Carbon Tetrachloride	83.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07081079	Methylene Chloride	83.0	%REC
LCS	VOCs/SVOCs	07101215	n-Nitroso-di-n-propylamine	83.0	%REC
LCS	VOCs/SVOCs	07071047	n-Nitrosodipropylamine	83.0	%REC
LCS	VOCs/SVOCs	07030756	Phenol	83.0	%REC
LCS	VOCs/SVOCs	07081123	Phenol	83.0	%REC
LCS	VOCs/SVOCs	07050928	1,1,1-Trichloroethane	84.0	%REC
LCS	VOCs/SVOCs	07111263	1,1,1-Trichloroethane	84.0	%REC
LCS	VOCs/SVOCs	07050928	1,1-Dichloroethene	84.0	%REC
LCS	VOCs/SVOCs	07050875	1,2-Dichloropropane	84.0	%REC
LCS	VOCs/SVOCs	07050875	1,3-Dichlorobenzene	84.0	%REC
LCS	VOCs/SVOCs	07050893	1,3-Dichlorobenzene	84.0	%REC
LCS	VOCs/SVOCs	07101227	2,4-Dinitrotoluene	84.0	%REC
LCS	VOCs/SVOCs	07101215	2-Chlorophenol	84.0	%REC
LCS	VOCs/SVOCs	07081123	4-Chloro-3-methylphenol	84.0	%REC
LCS	VOCs/SVOCs	07081123	Acenaphthene	84.0	%REC
LCS	VOCs/SVOCs	07030756	Anthracene	84.0	%REC
LCS	VOCs/SVOCs	07101215	Anthracene	84.0	%REC
LCS	VOCs/SVOCs	07111250	Benzene	84.0	%REC
LCS	VOCs/SVOCs	07040821	Chlorobenzene	84.0	%REC
LCS	VOCs/SVOCs	07040854	Methylene Chloride	84.0	%REC
LCS	VOCs/SVOCs	07081137	Methylene Chloride	84.0	%REC
LCS	VOCs/SVOCs	07111270	Tetrachloroethene	84.0	%REC
LCS	VOCs/SVOCs	07101206	Toluene	84.0	%REC
LCS	VOCs/SVOCs	07111261	Toluene	84.0	%REC
LCS	VOCs/SVOCs	07050893	trans-1,2-Dichloroethene	84.0	%REC
LCS	VOCs/SVOCs	07050928	trans-1,2-Dichloroethene	84.0	%REC
LCS	VOCs/SVOCs	07050875	1,1-Dichloroethene	85.0	%REC
LCS	VOCs/SVOCs	07050886	1,1-Dichloroethene	85.0	%REC
LCS	VOCs/SVOCs	07111250	1,1-Dichloroethene	85.0	%REC
LCS	VOCs/SVOCs	07111250	1,2-Dichloropropane	85.0	%REC
LCS	VOCs/SVOCs	07040854	1,3-Dichlorobenzene	85.0	%REC
LCS	VOCs/SVOCs	07091157	2,4,6-Trichlorophenol	85.0	%REC
LCS	VOCs/SVOCs	07050928	Benzene	85.0	%REC
LCS	VOCs/SVOCs	07050875	Bromodichloromethane	85.0	%REC
LCS	VOCs/SVOCs	07111263	Carbon Tetrachloride	85.0	%REC
LCS	VOCs/SVOCs	07020735	n-Nitrosodipropylamine	85.0	%REC
LCS	VOCs/SVOCs	07101215	Pyrene	85.0	%REC
LCS	VOCs/SVOCs	07091155	Tetrachloroethene	85.0	%REC
LCS	VOCs/SVOCs	07050875	trans-1,2-Dichloroethene	85.0	%REC
LCS	VOCs/SVOCs	07101228	trans-1,2-Dichloroethene	85.0	%REC
LCS	VOCs/SVOCs	07081137	1,1-Dichloroethene	86.0	%REC
LCS	VOCs/SVOCs	07050893	1,3-Dichlorobenzene	86.0	%REC
LCS	VOCs/SVOCs	07050928	1,3-Dichlorobenzene	86.0	%REC
LCS	VOCs/SVOCs	07081123	2,4,6-Trichlorophenol	86.0	%REC
LCS	VOCs/SVOCs	07081123	2-Chlorophenol	86.0	%REC
LCS	VOCs/SVOCs	07101215	4-Chloro-3-methylphenol	86.0	%REC
LCS	VOCs/SVOCs	07050928	Bromodichloromethane	86.0	%REC
LCS	VOCs/SVOCs	07060977	Bromodichloromethane	86.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07060977	Carbon Tetrachloride	86.0	%REC
LCS	VOCs/SVOCs	07050928	Chloroform	86.0	%REC
LCS	VOCs/SVOCs	07060935	n-Nitroso-di-n-propylamine	86.0	%REC
LCS	VOCs/SVOCs	07101215	Phenol	86.0	%REC
LCS	VOCs/SVOCs	07050875	Toluene	86.0	%REC
LCS	VOCs/SVOCs	07111263	Toluene	86.0	%REC
LCS	VOCs/SVOCs	07111270	Toluene	86.0	%REC
LCS	VOCs/SVOCs	07050886	trans-1,2-Dichloroethene	86.0	%REC
LCS	VOCs/SVOCs	07101228	Trichloroethene	86.0	%REC
LCS	VOCs/SVOCs	07101228	1,1,1-Trichloroethane	87.0	%REC
LCS	VOCs/SVOCs	07040854	1,2-Dichloropropane	87.0	%REC
LCS	VOCs/SVOCs	07050886	1,2-Dichloropropane	87.0	%REC
LCS	VOCs/SVOCs	07050893	1,2-Dichloropropane	87.0	%REC
LCS	VOCs/SVOCs	07101228	1,3-Dichlorobenzene	87.0	%REC
LCS	VOCs/SVOCs	07101227	2,4-Dinitrotoluene	87.0	%REC
LCS	VOCs/SVOCs	07091157	2-Chlorophenol	87.0	%REC
LCS	VOCs/SVOCs	07091157	4-Chloro-3-methylphenol	87.0	%REC
LCS	VOCs/SVOCs	07060935	Anthracene	87.0	%REC
LCS	VOCs/SVOCs	07050893	Benzene	87.0	%REC
LCS	VOCs/SVOCs	07101227	Benzene	87.0	%REC
LCS	VOCs/SVOCs	07040854	Bromodichloromethane	87.0	%REC
LCS	VOCs/SVOCs	07050893	Carbon Tetrachloride	87.0	%REC
LCS	VOCs/SVOCs	07050928	Carbon Tetrachloride	87.0	%REC
LCS	VOCs/SVOCs	07111270	Carbon Tetrachloride	87.0	%REC
LCS	VOCs/SVOCs	07050875	Chloroform	87.0	%REC
LCS	VOCs/SVOCs	07111250	Methylene Chloride	87.0	%REC
LCS	VOCs/SVOCs	07050873	n-Nitroso-di-n-propylamine	87.0	%REC
LCS	VOCs/SVOCs	07081123	Pentachlorophenol	87.0	%REC
LCS	VOCs/SVOCs	07081123	Phenol	87.0	%REC
LCS	VOCs/SVOCs	07101227	Pyrene	87.0	%REC
LCS	VOCs/SVOCs	07101215	Tetrachloroethene	87.0	%REC
LCS	VOCs/SVOCs	07050886	trans-1,2-Dichloroethene	87.0	%REC
LCS	VOCs/SVOCs	07091155	trans-1,2-Dichloroethene	87.0	%REC
LCS	VOCs/SVOCs	07091157	Trichloroethene	87.0	%REC
LCS	VOCs/SVOCs	07101227	Trichloroethene	87.0	%REC
LCS	VOCs/SVOCs	07111270	1,1,1-Trichloroethane	88.0	%REC
LCS	VOCs/SVOCs	07050908	1,2-Dichloropropane	88.0	%REC
LCS	VOCs/SVOCs	07081079	1,2-Dichloropropane	88.0	%REC
LCS	VOCs/SVOCs	07101228	1,2-Dichloropropane	88.0	%REC
LCS	VOCs/SVOCs	07111270	1,3-Dichlorobenzene	88.0	%REC
LCS	VOCs/SVOCs	07101215	2,4,6-Trichlorophenol	88.0	%REC
LCS	VOCs/SVOCs	07101215	2,4-Dinitrotoluene	88.0	%REC
LCS	VOCs/SVOCs	07101215	Anthracene	88.0	%REC
LCS	VOCs/SVOCs	07040821	Benzene	88.0	%REC
LCS	VOCs/SVOCs	07040854	Benzene	88.0	%REC
LCS	VOCs/SVOCs	07050908	Benzene	88.0	%REC
LCS	VOCs/SVOCs	07050875	Chlorobenzene	88.0	%REC
LCS	VOCs/SVOCs	07071047	Chlorobenzene	88.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07111261	Chlorobenzene	88.0	%REC
LCS	VOCs/SVOCs	07040821	Ethylbenzene	88.0	%REC
LCS	VOCs/SVOCs	07111261	Ethylbenzene	88.0	%REC
LCS	VOCs/SVOCs	07020735	Pyrene	88.0	%REC
LCS	VOCs/SVOCs	07091151	Pyrene	88.0	%REC
LCS	VOCs/SVOCs	07030756	Tetrachloroethene	88.0	%REC
LCS	VOCs/SVOCs	07050908	Toluene	88.0	%REC
LCS	VOCs/SVOCs	07111250	Toluene	88.0	%REC
LCS	VOCs/SVOCs	07050893	1,1,1-Trichloroethane	89.0	%REC
LCS	VOCs/SVOCs	07111270	1,1,1-Trichloroethane	89.0	%REC
LCS	VOCs/SVOCs	07091155	1,1-Dichloroethene	89.0	%REC
LCS	VOCs/SVOCs	07111270	1,2-Dichloropropane	89.0	%REC
LCS	VOCs/SVOCs	07111263	1,3-Dichlorobenzene	89.0	%REC
LCS	VOCs/SVOCs	07060935	2-Chlorophenol	89.0	%REC
LCS	VOCs/SVOCs	07091157	Acenaphthene	89.0	%REC
LCS	VOCs/SVOCs	07071047	Benzene	89.0	%REC
LCS	VOCs/SVOCs	07111263	Benzene	89.0	%REC
LCS	VOCs/SVOCs	07111270	Benzene	89.0	%REC
LCS	VOCs/SVOCs	07030756	Carbon Tetrachloride	89.0	%REC
LCS	VOCs/SVOCs	07101206	Chlorobenzene	89.0	%REC
LCS	VOCs/SVOCs	07101227	Chlorobenzene	89.0	%REC
LCS	VOCs/SVOCs	07081137	Chloroform	89.0	%REC
LCS	VOCs/SVOCs	07050875	Ethylbenzene	89.0	%REC
LCS	VOCs/SVOCs	07050928	Methylene Chloride	89.0	%REC
LCS	VOCs/SVOCs	07060944	Methylene Chloride	89.0	%REC
LCS	VOCs/SVOCs	07081123	Pentachlorophenol	89.0	%REC
LCS	VOCs/SVOCs	07081132	Tetrachloroethene	89.0	%REC
LCS	VOCs/SVOCs	07091155	Toluene	89.0	%REC
LCS	VOCs/SVOCs	07101227	Toluene	89.0	%REC
LCS	VOCs/SVOCs	07081137	trans-1,2-Dichloroethene	89.0	%REC
LCS	VOCs/SVOCs	07111250	trans-1,2-Dichloroethene	89.0	%REC
LCS	VOCs/SVOCs	07050886	1,1,1-Trichloroethane	90.0	%REC
LCS	VOCs/SVOCs	07050893	1,1-Dichloroethene	90.0	%REC
LCS	VOCs/SVOCs	07050893	1,1-Dichloroethene	90.0	%REC
LCS	VOCs/SVOCs	07050886	1,3-Dichlorobenzene	90.0	%REC
LCS	VOCs/SVOCs	07081137	1,3-Dichlorobenzene	90.0	%REC
LCS	VOCs/SVOCs	07101206	1,3-Dichlorobenzene	90.0	%REC
LCS	VOCs/SVOCs	07060977	Benzene	90.0	%REC
LCS	VOCs/SVOCs	07091157	Benzene	90.0	%REC
LCS	VOCs/SVOCs	07050886	Carbon Tetrachloride	90.0	%REC
LCS	VOCs/SVOCs	07050873	Chlorobenzene	90.0	%REC
LCS	VOCs/SVOCs	07091155	Chlorobenzene	90.0	%REC
LCS	VOCs/SVOCs	07101228	Chloroform	90.0	%REC
LCS	VOCs/SVOCs	07111263	Chloroform	90.0	%REC
LCS	VOCs/SVOCs	07091155	Ethylbenzene	90.0	%REC
LCS	VOCs/SVOCs	07050908	Methylene Chloride	90.0	%REC
LCS	VOCs/SVOCs	07111250	Methylene Chloride	90.0	%REC
LCS	VOCs/SVOCs	07101227	Pentachlorophenol	90.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07030756	Pyrene	90.0	%REC
LCS	VOCs/SVOCs	07060977	Toluene	90.0	%REC
LCS	VOCs/SVOCs	07071047	Toluene	90.0	%REC
LCS	VOCs/SVOCs	07101228	Toluene	90.0	%REC
LCS	VOCs/SVOCs	07040854	Trichloroethene	90.0	%REC
LCS	VOCs/SVOCs	07050893	Trichloroethene	90.0	%REC
LCS	VOCs/SVOCs	07050875	1,1,1-Trichloroethane	91.0	%REC
LCS	VOCs/SVOCs	07060977	1,1,1-Trichloroethane	91.0	%REC
LCS	VOCs/SVOCs	07050928	1,2-Dichloropropane	91.0	%REC
LCS	VOCs/SVOCs	07081123	2,4,6-Trichlorophenol	91.0	%REC
LCS	VOCs/SVOCs	07081123	Anthracene	91.0	%REC
LCS	VOCs/SVOCs	07081123	Anthracene	91.0	%REC
LCS	VOCs/SVOCs	07060977	Benzene	91.0	%REC
LCS	VOCs/SVOCs	07081137	Benzene	91.0	%REC
LCS	VOCs/SVOCs	07091155	Benzene	91.0	%REC
LCS	VOCs/SVOCs	07050886	Chloroform	91.0	%REC
LCS	VOCs/SVOCs	07111270	Chloroform	91.0	%REC
LCS	VOCs/SVOCs	07050886	Ethylbenzene	91.0	%REC
LCS	VOCs/SVOCs	07101228	Methylene Chloride	91.0	%REC
LCS	VOCs/SVOCs	07101215	Pentachlorophenol	91.0	%REC
LCS	VOCs/SVOCs	07091157	Phenol	91.0	%REC
LCS	VOCs/SVOCs	07040854	Tetrachloroethene	91.0	%REC
LCS	VOCs/SVOCs	07040854	Toluene	91.0	%REC
LCS	VOCs/SVOCs	07050875	Trichloroethene	91.0	%REC
LCS	VOCs/SVOCs	07050886	Trichloroethene	91.0	%REC
LCS	VOCs/SVOCs	07050908	1,1,1-Trichloroethane	92.0	%REC
LCS	VOCs/SVOCs	07050873	1,1-Dichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07111250	1,1-Dichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07111263	1,2-Dichloropropane	92.0	%REC
LCS	VOCs/SVOCs	07081113	1,3-Dichlorobenzene	92.0	%REC
LCS	VOCs/SVOCs	07091155	1,3-Dichlorobenzene	92.0	%REC
LCS	VOCs/SVOCs	07060935	2-Chlorophenol	92.0	%REC
LCS	VOCs/SVOCs	07081123	4-Nitrophenol	92.0	%REC
LCS	VOCs/SVOCs	07091157	Anthracene	92.0	%REC
LCS	VOCs/SVOCs	07111263	Bromodichloromethane	92.0	%REC
LCS	VOCs/SVOCs	07030756	Carbon Tetrachloride	92.0	%REC
LCS	VOCs/SVOCs	07050908	Carbon Tetrachloride	92.0	%REC
LCS	VOCs/SVOCs	07111270	Carbon Tetrachloride	92.0	%REC
LCS	VOCs/SVOCs	07050908	Chlorobenzene	92.0	%REC
LCS	VOCs/SVOCs	07050928	Chlorobenzene	92.0	%REC
LCS	VOCs/SVOCs	07040854	Chloroform	92.0	%REC
LCS	VOCs/SVOCs	07050893	Chloroform	92.0	%REC
LCS	VOCs/SVOCs	07050908	Chloroform	92.0	%REC
LCS	VOCs/SVOCs	07111261	Chloroform	92.0	%REC
LCS	VOCs/SVOCs	07040821	Methylene Chloride	92.0	%REC
LCS	VOCs/SVOCs	07101227	Pentachlorophenol	92.0	%REC
LCS	VOCs/SVOCs	07060935	Phenol	92.0	%REC
LCS	VOCs/SVOCs	07030756	Pyrene	92.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07101215	Pyrene	92.0	%REC
LCS	VOCs/SVOCs	07050893	Tetrachloroethene	92.0	%REC
LCS	VOCs/SVOCs	07050928	Tetrachloroethene	92.0	%REC
LCS	VOCs/SVOCs	07060977	Toluene	92.0	%REC
LCS	VOCs/SVOCs	07081079	Toluene	92.0	%REC
LCS	VOCs/SVOCs	07081132	Toluene	92.0	%REC
LCS	VOCs/SVOCs	07081137	Toluene	92.0	%REC
LCS	VOCs/SVOCs	07050893	trans-1,2-Dichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07050908	trans-1,2-Dichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07050908	trans-1,2-Dichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07071047	Trichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07091155	Trichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07111250	Trichloroethene	92.0	%REC
LCS	VOCs/SVOCs	07030756	1,1,1-Trichloroethane	93.0	%REC
LCS	VOCs/SVOCs	07050893	1,1,1-Trichloroethane	93.0	%REC
LCS	VOCs/SVOCs	07081137	1,1,1-Trichloroethane	93.0	%REC
LCS	VOCs/SVOCs	07050886	1,1-Dichloroethene	93.0	%REC
LCS	VOCs/SVOCs	07050908	1,1-Dichloroethene	93.0	%REC
LCS	VOCs/SVOCs	07060968	1,1-Dichloroethene	93.0	%REC
LCS	VOCs/SVOCs	07101206	1,2-Dichloropropane	93.0	%REC
LCS	VOCs/SVOCs	07111270	1,2-Dichloropropane	93.0	%REC
LCS	VOCs/SVOCs	07111261	1,3-Dichlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07010677	Benzene	93.0	%REC
LCS	VOCs/SVOCs	07050886	Benzene	93.0	%REC
LCS	VOCs/SVOCs	07050908	Benzene	93.0	%REC
LCS	VOCs/SVOCs	07111261	Benzene	93.0	%REC
LCS	VOCs/SVOCs	07111270	Benzene	93.0	%REC
LCS	VOCs/SVOCs	07050886	Bromodichloromethane	93.0	%REC
LCS	VOCs/SVOCs	07111270	Bromodichloromethane	93.0	%REC
LCS	VOCs/SVOCs	07081137	Carbon Tetrachloride	93.0	%REC
LCS	VOCs/SVOCs	07040854	Chlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07081132	Chlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07081137	Chlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07101215	Chlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07111261	Chlorobenzene	93.0	%REC
LCS	VOCs/SVOCs	07111250	Chloroform	93.0	%REC
LCS	VOCs/SVOCs	07050908	Methylene Chloride	93.0	%REC
LCS	VOCs/SVOCs	07060935	Pyrene	93.0	%REC
LCS	VOCs/SVOCs	07050886	Tetrachloroethene	93.0	%REC
LCS	VOCs/SVOCs	07050908	Tetrachloroethene	93.0	%REC
LCS	VOCs/SVOCs	07081132	Tetrachloroethene	93.0	%REC
LCS	VOCs/SVOCs	07111270	Tetrachloroethene	93.0	%REC
LCS	VOCs/SVOCs	07040854	trans-1,2-Dichloroethene	93.0	%REC
LCS	VOCs/SVOCs	07111261	1,1,1-Trichloroethane	94.0	%REC
LCS	VOCs/SVOCs	07050908	1,1-Dichloroethene	94.0	%REC
LCS	VOCs/SVOCs	07040821	1,2-Dichloropropane	94.0	%REC
LCS	VOCs/SVOCs	07081137	1,2-Dichloropropane	94.0	%REC
LCS	VOCs/SVOCs	07050908	1,3-Dichlorobenzene	94.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07091151	1,3-Dichlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07111250	1,3-Dichlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07081123	4-Nitrophenol	94.0	%REC
LCS	VOCs/SVOCs	07030756	Bromodichloromethane	94.0	%REC
LCS	VOCs/SVOCs	07050908	Bromodichloromethane	94.0	%REC
LCS	VOCs/SVOCs	07081137	Bromodichloromethane	94.0	%REC
LCS	VOCs/SVOCs	07101228	Bromodichloromethane	94.0	%REC
LCS	VOCs/SVOCs	07050875	Carbon Tetrachloride	94.0	%REC
LCS	VOCs/SVOCs	07030756	Chlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07050886	Chlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07081132	Chlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07111263	Chlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07111270	Chlorobenzene	94.0	%REC
LCS	VOCs/SVOCs	07060977	Chloroform	94.0	%REC
LCS	VOCs/SVOCs	07060977	Chloroform	94.0	%REC
LCS	VOCs/SVOCs	07111270	Chloroform	94.0	%REC
LCS	VOCs/SVOCs	07060935	Tetrachloroethene	94.0	%REC
LCS	VOCs/SVOCs	07050886	Toluene	94.0	%REC
LCS	VOCs/SVOCs	07050893	Toluene	94.0	%REC
LCS	VOCs/SVOCs	07111250	trans-1,2-Dichloroethene	94.0	%REC
LCS	VOCs/SVOCs	07111250	1,1,1-Trichloroethane	95.0	%REC
LCS	VOCs/SVOCs	07040821	1,1-Dichloroethene	95.0	%REC
LCS	VOCs/SVOCs	07071047	1,1-Dichloroethene	95.0	%REC
LCS	VOCs/SVOCs	07060935	1,3-Dichlorobenzene	95.0	%REC
LCS	VOCs/SVOCs	07101215	1,3-Dichlorobenzene	95.0	%REC
LCS	VOCs/SVOCs	07111270	1,3-Dichlorobenzene	95.0	%REC
LCS	VOCs/SVOCs	07081123	2,4-Dinitrotoluene	95.0	%REC
LCS	VOCs/SVOCs	07081123	2,4-Dinitrotoluene	95.0	%REC
LCS	VOCs/SVOCs	07050893	Bromodichloromethane	95.0	%REC
LCS	VOCs/SVOCs	07081079	Bromodichloromethane	95.0	%REC
LCS	VOCs/SVOCs	07091157	Bromodichloromethane	95.0	%REC
LCS	VOCs/SVOCs	07111261	Bromodichloromethane	95.0	%REC
LCS	VOCs/SVOCs	07111250	Carbon Tetrachloride	95.0	%REC
LCS	VOCs/SVOCs	07111261	Carbon Tetrachloride	95.0	%REC
LCS	VOCs/SVOCs	07050893	Chlorobenzene	95.0	%REC
LCS	VOCs/SVOCs	07050893	Chloroform	95.0	%REC
LCS	VOCs/SVOCs	07050908	Chloroform	95.0	%REC
LCS	VOCs/SVOCs	07091157	Chloroform	95.0	%REC
LCS	VOCs/SVOCs	07111250	Chloroform	95.0	%REC
LCS	VOCs/SVOCs	07050908	Ethylbenzene	95.0	%REC
LCS	VOCs/SVOCs	07081137	Ethylbenzene	95.0	%REC
LCS	VOCs/SVOCs	07101206	Ethylbenzene	95.0	%REC
LCS	VOCs/SVOCs	07101215	Ethylbenzene	95.0	%REC
LCS	VOCs/SVOCs	07111263	Ethylbenzene	95.0	%REC
LCS	VOCs/SVOCs	07111270	Methylene Chloride	95.0	%REC
LCS	VOCs/SVOCs	07081123	Pyrene	95.0	%REC
LCS	VOCs/SVOCs	07060977	Tetrachloroethene	95.0	%REC
LCS	VOCs/SVOCs	07091157	Tetrachloroethene	95.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07111250	Tetrachloroethene	95.0	%REC
LCS	VOCs/SVOCs	07101215	Toluene	95.0	%REC
LCS	VOCs/SVOCs	07111270	Toluene	95.0	%REC
LCS	VOCs/SVOCs	07030756	1,1,1-Trichloroethane	96.0	%REC
LCS	VOCs/SVOCs	07111250	1,1,1-Trichloroethane	96.0	%REC
LCS	VOCs/SVOCs	07091155	1,2-Dichloropropane	96.0	%REC
LCS	VOCs/SVOCs	07050908	1,3-Dichlorobenzene	96.0	%REC
LCS	VOCs/SVOCs	07060977	1,3-Dichlorobenzene	96.0	%REC
LCS	VOCs/SVOCs	07081079	1,3-Dichlorobenzene	96.0	%REC
LCS	VOCs/SVOCs	07081079	Benzene	96.0	%REC
LCS	VOCs/SVOCs	07101206	Benzene	96.0	%REC
LCS	VOCs/SVOCs	07050893	Bromodichloromethane	96.0	%REC
LCS	VOCs/SVOCs	07060935	Chlorobenzene	96.0	%REC
LCS	VOCs/SVOCs	07081079	Chlorobenzene	96.0	%REC
LCS	VOCs/SVOCs	07081079	Chloroform	96.0	%REC
LCS	VOCs/SVOCs	07040854	Ethylbenzene	96.0	%REC
LCS	VOCs/SVOCs	07050928	Ethylbenzene	96.0	%REC
LCS	VOCs/SVOCs	07060977	Ethylbenzene	96.0	%REC
LCS	VOCs/SVOCs	07101215	Pentachlorophenol	96.0	%REC
LCS	VOCs/SVOCs	07060935	Phenol	96.0	%REC
LCS	VOCs/SVOCs	07050893	Tetrachloroethene	96.0	%REC
LCS	VOCs/SVOCs	07081137	Tetrachloroethene	96.0	%REC
LCS	VOCs/SVOCs	07050873	Toluene	96.0	%REC
LCS	VOCs/SVOCs	07050928	Toluene	96.0	%REC
LCS	VOCs/SVOCs	07071016	trans-1,2-Dichloroethene	96.0	%REC
LCS	VOCs/SVOCs	07081132	trans-1,2-Dichloroethene	96.0	%REC
LCS	VOCs/SVOCs	07111263	trans-1,2-Dichloroethene	96.0	%REC
LCS	VOCs/SVOCs	07030756	Trichloroethene	96.0	%REC
LCS	VOCs/SVOCs	07050893	Trichloroethene	96.0	%REC
LCS	VOCs/SVOCs	07050928	1,1,1-Trichloroethane	97.0	%REC
LCS	VOCs/SVOCs	07060944	1,1-Dichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07081132	1,1-Dichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07050875	1,2-Dichloropropane	97.0	%REC
LCS	VOCs/SVOCs	07091157	1,2-Dichloropropane	97.0	%REC
LCS	VOCs/SVOCs	07081132	1,3-Dichlorobenzene	97.0	%REC
LCS	VOCs/SVOCs	07081132	1,3-Dichlorobenzene	97.0	%REC
LCS	VOCs/SVOCs	07030756	Bromodichloromethane	97.0	%REC
LCS	VOCs/SVOCs	07111250	Bromodichloromethane	97.0	%REC
LCS	VOCs/SVOCs	07050873	Chlorobenzene	97.0	%REC
LCS	VOCs/SVOCs	07091157	Chlorobenzene	97.0	%REC
LCS	VOCs/SVOCs	07111250	Chlorobenzene	97.0	%REC
LCS	VOCs/SVOCs	07050893	Ethylbenzene	97.0	%REC
LCS	VOCs/SVOCs	07111270	Ethylbenzene	97.0	%REC
LCS	VOCs/SVOCs	07081132	Methylene Chloride	97.0	%REC
LCS	VOCs/SVOCs	07030756	Tetrachloroethene	97.0	%REC
LCS	VOCs/SVOCs	07050908	Tetrachloroethene	97.0	%REC
LCS	VOCs/SVOCs	07060977	Tetrachloroethene	97.0	%REC
LCS	VOCs/SVOCs	07101206	Tetrachloroethene	97.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07081132	Toluene	97.0	%REC
LCS	VOCs/SVOCs	07060944	trans-1,2-Dichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07081113	trans-1,2-Dichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07111270	trans-1,2-Dichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07050873	Trichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07050928	Trichloroethene	97.0	%REC
LCS	VOCs/SVOCs	07010677	1,1-Dichloroethene	98.0	%REC
LCS	VOCs/SVOCs	07081132	1,1-Dichloroethene	98.0	%REC
LCS	VOCs/SVOCs	07101215	1,1-Dichloroethene	98.0	%REC
LCS	VOCs/SVOCs	07111261	1,2-Dichloropropane	98.0	%REC
LCS	VOCs/SVOCs	07060977	1,3-Dichlorobenzene	98.0	%REC
LCS	VOCs/SVOCs	07030756	Chloroform	98.0	%REC
LCS	VOCs/SVOCs	07050928	Chloroform	98.0	%REC
LCS	VOCs/SVOCs	07091155	Chloroform	98.0	%REC
LCS	VOCs/SVOCs	07101228	Ethylbenzene	98.0	%REC
LCS	VOCs/SVOCs	07111250	Ethylbenzene	98.0	%REC
LCS	VOCs/SVOCs	07050893	Methylene Chloride	98.0	%REC
LCS	VOCs/SVOCs	07081113	Methylene Chloride	98.0	%REC
LCS	VOCs/SVOCs	07101206	Methylene Chloride	98.0	%REC
LCS	VOCs/SVOCs	07081123	Pyrene	98.0	%REC
LCS	VOCs/SVOCs	07101228	Tetrachloroethene	98.0	%REC
LCS	VOCs/SVOCs	07020735	Toluene	98.0	%REC
LCS	VOCs/SVOCs	07071046	Toluene	98.0	%REC
LCS	VOCs/SVOCs	07081132	trans-1,2-Dichloroethene	98.0	%REC
LCS	VOCs/SVOCs	07091157	trans-1,2-Dichloroethene	98.0	%REC
LCS	VOCs/SVOCs	07040864	1,1,1-Trichloroethane	99.0	%REC
LCS	VOCs/SVOCs	07040854	1,1-Dichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07050908	1,2-Dichloropropane	99.0	%REC
LCS	VOCs/SVOCs	07050875	1,3-Dichlorobenzene	99.0	%REC
LCS	VOCs/SVOCs	07060944	1,3-Dichlorobenzene	99.0	%REC
LCS	VOCs/SVOCs	07111250	Benzene	99.0	%REC
LCS	VOCs/SVOCs	07081113	Bromodichloromethane	99.0	%REC
LCS	VOCs/SVOCs	07091155	Bromodichloromethane	99.0	%REC
LCS	VOCs/SVOCs	07111270	Bromodichloromethane	99.0	%REC
LCS	VOCs/SVOCs	07101228	Chlorobenzene	99.0	%REC
LCS	VOCs/SVOCs	07111250	Chlorobenzene	99.0	%REC
LCS	VOCs/SVOCs	07111250	Ethylbenzene	99.0	%REC
LCS	VOCs/SVOCs	07040864	Methylene Chloride	99.0	%REC
LCS	VOCs/SVOCs	07040864	Toluene	99.0	%REC
LCS	VOCs/SVOCs	07050908	Toluene	99.0	%REC
LCS	VOCs/SVOCs	07040821	trans-1,2-Dichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07081079	trans-1,2-Dichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07111261	trans-1,2-Dichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07040821	Trichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07060968	Trichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07081137	Trichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07091151	Trichloroethene	99.0	%REC
LCS	VOCs/SVOCs	07111250	Trichloroethene	99.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07050908	1,1,1-Trichloroethane	100.0	%REC
LCS	VOCs/SVOCs	07071046	1,1,1-Trichloroethane	100.0	%REC
LCS	VOCs/SVOCs	07091155	1,1,1-Trichloroethane	100.0	%REC
LCS	VOCs/SVOCs	07050886	1,2-Dichloropropane	100.0	%REC
LCS	VOCs/SVOCs	07071046	1,2-Dichloropropane	100.0	%REC
LCS	VOCs/SVOCs	07030756	1,3-Dichlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07060944	1,3-Dichlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07071016	1,3-Dichlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07050875	Benzene	100.0	%REC
LCS	VOCs/SVOCs	07060968	Benzene	100.0	%REC
LCS	VOCs/SVOCs	07040864	Bromodichloromethane	100.0	%REC
LCS	VOCs/SVOCs	07040864	Bromodichloromethane	100.0	%REC
LCS	VOCs/SVOCs	07050875	Bromodichloromethane	100.0	%REC
LCS	VOCs/SVOCs	07050908	Bromodichloromethane	100.0	%REC
LCS	VOCs/SVOCs	07111250	Bromodichloromethane	100.0	%REC
LCS	VOCs/SVOCs	07101215	Carbon Tetrachloride	100.0	%REC
LCS	VOCs/SVOCs	07050908	Chlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07060977	Chlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07071016	Chlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07111270	Chlorobenzene	100.0	%REC
LCS	VOCs/SVOCs	07030756	Chloroform	100.0	%REC
LCS	VOCs/SVOCs	07060977	Ethylbenzene	100.0	%REC
LCS	VOCs/SVOCs	07081079	Ethylbenzene	100.0	%REC
LCS	VOCs/SVOCs	07091157	Ethylbenzene	100.0	%REC
LCS	VOCs/SVOCs	07060977	Methylene Chloride	100.0	%REC
LCS	VOCs/SVOCs	07091151	Methylene Chloride	100.0	%REC
LCS	VOCs/SVOCs	07111263	Methylene Chloride	100.0	%REC
LCS	VOCs/SVOCs	07010677	Toluene	100.0	%REC
LCS	VOCs/SVOCs	07060944	trans-1,2-Dichloroethene	100.0	%REC
LCS	VOCs/SVOCs	07071046	trans-1,2-Dichloroethene	100.0	%REC
LCS	VOCs/SVOCs	07101215	trans-1,2-Dichloroethene	100.0	%REC
LCS	VOCs/SVOCs	07030756	Trichloroethene	100.0	%REC
LCS	VOCs/SVOCs	07040864	Trichloroethene	100.0	%REC
LCS	VOCs/SVOCs	07040864	1,1,1-Trichloroethane	101.0	%REC
LCS	VOCs/SVOCs	07040864	1,1-Dichloroethene	101.0	%REC
LCS	VOCs/SVOCs	07111263	1,1-Dichloroethene	101.0	%REC
LCS	VOCs/SVOCs	07040864	1,2-Dichloropropane	101.0	%REC
LCS	VOCs/SVOCs	07091151	1,2-Dichloropropane	101.0	%REC
LCS	VOCs/SVOCs	07060944	Benzene	101.0	%REC
LCS	VOCs/SVOCs	07081132	Benzene	101.0	%REC
LCS	VOCs/SVOCs	07050928	Bromodichloromethane	101.0	%REC
LCS	VOCs/SVOCs	07101206	Bromodichloromethane	101.0	%REC
LCS	VOCs/SVOCs	07091155	Carbon Tetrachloride	101.0	%REC
LCS	VOCs/SVOCs	07111250	Carbon Tetrachloride	101.0	%REC
LCS	VOCs/SVOCs	07030756	Chlorobenzene	101.0	%REC
LCS	VOCs/SVOCs	07060944	Chlorobenzene	101.0	%REC
LCS	VOCs/SVOCs	07081113	Chlorobenzene	101.0	%REC
LCS	VOCs/SVOCs	07071046	Chloroform	101.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07101206	Chloroform	101.0	%REC
LCS	VOCs/SVOCs	07111270	Ethylbenzene	101.0	%REC
LCS	VOCs/SVOCs	07060977	Methylene Chloride	101.0	%REC
LCS	VOCs/SVOCs	07081132	Methylene Chloride	101.0	%REC
LCS	VOCs/SVOCs	07091157	Methylene Chloride	101.0	%REC
LCS	VOCs/SVOCs	07020735	Pyrene	101.0	%REC
LCS	VOCs/SVOCs	07060944	Tetrachloroethene	101.0	%REC
LCS	VOCs/SVOCs	07081123	Tetrachloroethene	101.0	%REC
LCS	VOCs/SVOCs	07111250	Toluene	101.0	%REC
LCS	VOCs/SVOCs	07101206	trans-1,2-Dichloroethene	101.0	%REC
LCS	VOCs/SVOCs	07111270	trans-1,2-Dichloroethene	101.0	%REC
LCS	VOCs/SVOCs	07101215	1,1,1-Trichloroethane	102.0	%REC
LCS	VOCs/SVOCs	07060944	1,1-Dichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07060977	1,1-Dichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07111270	1,1-Dichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07050893	1,2-Dichloropropane	102.0	%REC
LCS	VOCs/SVOCs	07060977	1,2-Dichloropropane	102.0	%REC
LCS	VOCs/SVOCs	07111250	1,2-Dichloropropane	102.0	%REC
LCS	VOCs/SVOCs	07030756	1,3-Dichlorobenzene	102.0	%REC
LCS	VOCs/SVOCs	07071046	1,3-Dichlorobenzene	102.0	%REC
LCS	VOCs/SVOCs	07040864	Benzene	102.0	%REC
LCS	VOCs/SVOCs	07081113	Benzene	102.0	%REC
LCS	VOCs/SVOCs	07081132	Benzene	102.0	%REC
LCS	VOCs/SVOCs	07060944	Bromodichloromethane	102.0	%REC
LCS	VOCs/SVOCs	07040864	Carbon Tetrachloride	102.0	%REC
LCS	VOCs/SVOCs	07050893	Carbon Tetrachloride	102.0	%REC
LCS	VOCs/SVOCs	07050928	Carbon Tetrachloride	102.0	%REC
LCS	VOCs/SVOCs	07071046	Carbon Tetrachloride	102.0	%REC
LCS	VOCs/SVOCs	07060977	Chlorobenzene	102.0	%REC
LCS	VOCs/SVOCs	07091151	Chloroform	102.0	%REC
LCS	VOCs/SVOCs	07050875	Ethylbenzene	102.0	%REC
LCS	VOCs/SVOCs	07060944	Ethylbenzene	102.0	%REC
LCS	VOCs/SVOCs	07081132	Ethylbenzene	102.0	%REC
LCS	VOCs/SVOCs	07060944	Methylene Chloride	102.0	%REC
LCS	VOCs/SVOCs	07071016	Methylene Chloride	102.0	%REC
LCS	VOCs/SVOCs	07091155	Methylene Chloride	102.0	%REC
LCS	VOCs/SVOCs	07050875	Tetrachloroethene	102.0	%REC
LCS	VOCs/SVOCs	07081113	Tetrachloroethene	102.0	%REC
LCS	VOCs/SVOCs	07040864	Toluene	102.0	%REC
LCS	VOCs/SVOCs	07050873	Toluene	102.0	%REC
LCS	VOCs/SVOCs	07060944	trans-1,2-Dichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07060977	trans-1,2-Dichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07050875	Trichloroethene	102.0	%REC
LCS	VOCs/SVOCs	07081113	1,1-Dichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07040864	1,2-Dichloropropane	103.0	%REC
LCS	VOCs/SVOCs	07060944	1,2-Dichloropropane	103.0	%REC
LCS	VOCs/SVOCs	07060977	1,2-Dichloropropane	103.0	%REC
LCS	VOCs/SVOCs	07081132	1,2-Dichloropropane	103.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07040864	1,3-Dichlorobenzene	103.0	%REC
LCS	VOCs/SVOCs	07050886	Benzene	103.0	%REC
LCS	VOCs/SVOCs	07111261	Benzene	103.0	%REC
LCS	VOCs/SVOCs	07111261	Bromodichloromethane	103.0	%REC
LCS	VOCs/SVOCs	07060944	Chlorobenzene	103.0	%REC
LCS	VOCs/SVOCs	07040864	Chloroform	103.0	%REC
LCS	VOCs/SVOCs	07071016	Chloroform	103.0	%REC
LCS	VOCs/SVOCs	07111261	Chloroform	103.0	%REC
LCS	VOCs/SVOCs	07050893	Ethylbenzene	103.0	%REC
LCS	VOCs/SVOCs	07050908	Ethylbenzene	103.0	%REC
LCS	VOCs/SVOCs	07081123	Ethylbenzene	103.0	%REC
LCS	VOCs/SVOCs	07081132	Ethylbenzene	103.0	%REC
LCS	VOCs/SVOCs	07050928	Methylene Chloride	103.0	%REC
LCS	VOCs/SVOCs	07060944	Methylene Chloride	103.0	%REC
LCS	VOCs/SVOCs	07091151	Tetrachloroethene	103.0	%REC
LCS	VOCs/SVOCs	07060935	Toluene	103.0	%REC
LCS	VOCs/SVOCs	07040864	trans-1,2-Dichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07010677	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07020735	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07040864	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07050886	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07060977	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07081132	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07101215	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07111261	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07111263	Trichloroethene	103.0	%REC
LCS	VOCs/SVOCs	07060944	1,1,1-Trichloroethane	104.0	%REC
LCS	VOCs/SVOCs	07111261	1,2-Dichloropropane	104.0	%REC
LCS	VOCs/SVOCs	07091157	1,3-Dichlorobenzene	104.0	%REC
LCS	VOCs/SVOCs	07040864	Benzene	104.0	%REC
LCS	VOCs/SVOCs	07101215	Benzene	104.0	%REC
LCS	VOCs/SVOCs	07091151	Bromodichloromethane	104.0	%REC
LCS	VOCs/SVOCs	07060944	Carbon Tetrachloride	104.0	%REC
LCS	VOCs/SVOCs	07010677	Chlorobenzene	104.0	%REC
LCS	VOCs/SVOCs	07020735	Chlorobenzene	104.0	%REC
LCS	VOCs/SVOCs	07040864	Chlorobenzene	104.0	%REC
LCS	VOCs/SVOCs	07060968	Chlorobenzene	104.0	%REC
LCS	VOCs/SVOCs	07071046	Ethylbenzene	104.0	%REC
LCS	VOCs/SVOCs	07101215	Methylene Chloride	104.0	%REC
LCS	VOCs/SVOCs	07111270	Methylene Chloride	104.0	%REC
LCS	VOCs/SVOCs	07030756	Toluene	104.0	%REC
LCS	VOCs/SVOCs	07060944	Toluene	104.0	%REC
LCS	VOCs/SVOCs	07081123	Toluene	104.0	%REC
LCS	VOCs/SVOCs	07091151	trans-1,2-Dichloroethene	104.0	%REC
LCS	VOCs/SVOCs	07081132	Trichloroethene	104.0	%REC
LCS	VOCs/SVOCs	07111270	Trichloroethene	104.0	%REC
LCS	VOCs/SVOCs	07071016	1,1,1-Trichloroethane	105.0	%REC
LCS	VOCs/SVOCs	07081079	1,1,1-Trichloroethane	105.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07060977	1,1-Dichloroethene	105.0	%REC
LCS	VOCs/SVOCs	07071016	1,1-Dichloroethene	105.0	%REC
LCS	VOCs/SVOCs	07050893	Benzene	105.0	%REC
LCS	VOCs/SVOCs	07071046	Benzene	105.0	%REC
LCS	VOCs/SVOCs	07091151	Benzene	105.0	%REC
LCS	VOCs/SVOCs	07081132	Bromodichloromethane	105.0	%REC
LCS	VOCs/SVOCs	07040864	Carbon Tetrachloride	105.0	%REC
LCS	VOCs/SVOCs	07071046	Chlorobenzene	105.0	%REC
LCS	VOCs/SVOCs	07040864	Chloroform	105.0	%REC
LCS	VOCs/SVOCs	07050875	Chloroform	105.0	%REC
LCS	VOCs/SVOCs	07060935	Ethylbenzene	105.0	%REC
LCS	VOCs/SVOCs	07040864	Methylene Chloride	105.0	%REC
LCS	VOCs/SVOCs	07050875	Methylene Chloride	105.0	%REC
LCS	VOCs/SVOCs	07060944	Tetrachloroethene	105.0	%REC
LCS	VOCs/SVOCs	07050875	Toluene	105.0	%REC
LCS	VOCs/SVOCs	07060944	Toluene	105.0	%REC
LCS	VOCs/SVOCs	07060968	Toluene	105.0	%REC
LCS	VOCs/SVOCs	07060977	Trichloroethene	105.0	%REC
LCS	VOCs/SVOCs	07081113	Trichloroethene	105.0	%REC
LCS	VOCs/SVOCs	07040854	1,1,1-Trichloroethane	106.0	%REC
LCS	VOCs/SVOCs	07040864	1,1-Dichloroethene	106.0	%REC
LCS	VOCs/SVOCs	07050875	1,1-Dichloroethene	106.0	%REC
LCS	VOCs/SVOCs	07081132	1,2-Dichloropropane	106.0	%REC
LCS	VOCs/SVOCs	07060944	1,3-Dichlorobenzene	106.0	%REC
LCS	VOCs/SVOCs	07081123	1,3-Dichlorobenzene	106.0	%REC
LCS	VOCs/SVOCs	07050873	Benzene	106.0	%REC
LCS	VOCs/SVOCs	07050928	Benzene	106.0	%REC
LCS	VOCs/SVOCs	07081123	Benzene	106.0	%REC
LCS	VOCs/SVOCs	07040821	Bromodichloromethane	106.0	%REC
LCS	VOCs/SVOCs	07071016	Carbon Tetrachloride	106.0	%REC
LCS	VOCs/SVOCs	07050928	Chlorobenzene	106.0	%REC
LCS	VOCs/SVOCs	07081123	Chlorobenzene	106.0	%REC
LCS	VOCs/SVOCs	07091151	Chlorobenzene	106.0	%REC
LCS	VOCs/SVOCs	07040821	Chloroform	106.0	%REC
LCS	VOCs/SVOCs	07040864	Ethylbenzene	106.0	%REC
LCS	VOCs/SVOCs	07050886	Ethylbenzene	106.0	%REC
LCS	VOCs/SVOCs	07060944	Ethylbenzene	106.0	%REC
LCS	VOCs/SVOCs	07081113	Ethylbenzene	106.0	%REC
LCS	VOCs/SVOCs	07060935	Methylene Chloride	106.0	%REC
LCS	VOCs/SVOCs	07040864	Tetrachloroethene	106.0	%REC
LCS	VOCs/SVOCs	07060944	Toluene	106.0	%REC
LCS	VOCs/SVOCs	07040864	trans-1,2-Dichloroethene	106.0	%REC
LCS	VOCs/SVOCs	07050908	Trichloroethene	106.0	%REC
LCS	VOCs/SVOCs	07111270	Trichloroethene	106.0	%REC
LCS	VOCs/SVOCs	07050875	1,1,1-Trichloroethane	107.0	%REC
LCS	VOCs/SVOCs	07030756	1,2-Dichloropropane	107.0	%REC
LCS	VOCs/SVOCs	07071016	1,2-Dichloropropane	107.0	%REC
LCS	VOCs/SVOCs	07081113	1,2-Dichloropropane	107.0	%REC

Table B-5 (continued). Lab Control Sample (LCS) Data for Metals, VOCs/SVOCs, and Water-Quality Parameters

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07060944	Benzene	107.0	%REC
LCS	VOCs/SVOCs	07081132	Bromodichloromethane	107.0	%REC
LCS	VOCs/SVOCs	07081113	Carbon Tetrachloride	107.0	%REC
LCS	VOCs/SVOCs	07081132	Carbon Tetrachloride	107.0	%REC
LCS	VOCs/SVOCs	07050886	Chlorobenzene	107.0	%REC
LCS	VOCs/SVOCs	07050893	Chlorobenzene	107.0	%REC
LCS	VOCs/SVOCs	07060944	Chloroform	107.0	%REC
LCS	VOCs/SVOCs	07081132	Chloroform	107.0	%REC
LCS	VOCs/SVOCs	07101215	Chloroform	107.0	%REC
LCS	VOCs/SVOCs	07071046	Methylene Chloride	107.0	%REC
LCS	VOCs/SVOCs	07050886	Tetrachloroethene	107.0	%REC
LCS	VOCs/SVOCs	07050928	Tetrachloroethene	107.0	%REC
LCS	VOCs/SVOCs	07050893	Toluene	107.0	%REC
LCS	VOCs/SVOCs	07091157	Toluene	107.0	%REC
LCS	VOCs/SVOCs	07030756	trans-1,2-Dichloroethene	107.0	%REC
LCS	VOCs/SVOCs	07050875	trans-1,2-Dichloroethene	107.0	%REC
LCS	VOCs/SVOCs	07081123	trans-1,2-Dichloroethene	107.0	%REC
LCS	VOCs/SVOCs	07081079	Trichloroethene	107.0	%REC
LCS	VOCs/SVOCs	07081123	Trichloroethene	107.0	%REC
LCS	VOCs/SVOCs	07060944	1,1,1-Trichloroethane	108.0	%REC
LCS	VOCs/SVOCs	07091157	1,1,1-Trichloroethane	108.0	%REC
LCS	VOCs/SVOCs	07020735	1,1-Dichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07060944	1,1-Dichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07081079	1,1-Dichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07111270	1,1-Dichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07060944	Benzene	108.0	%REC
LCS	VOCs/SVOCs	07071016	Benzene	108.0	%REC
LCS	VOCs/SVOCs	07071046	Bromodichloromethane	108.0	%REC
LCS	VOCs/SVOCs	07081123	Bromodichloromethane	108.0	%REC
LCS	VOCs/SVOCs	07040864	Chlorobenzene	108.0	%REC
LCS	VOCs/SVOCs	07050875	Chlorobenzene	108.0	%REC
LCS	VOCs/SVOCs	07060944	Chlorobenzene	108.0	%REC
LCS	VOCs/SVOCs	07081113	Chloroform	108.0	%REC
LCS	VOCs/SVOCs	07081132	Chloroform	108.0	%REC
LCS	VOCs/SVOCs	07071016	Tetrachloroethene	108.0	%REC
LCS	VOCs/SVOCs	07111250	Tetrachloroethene	108.0	%REC
LCS	VOCs/SVOCs	07050886	Toluene	108.0	%REC
LCS	VOCs/SVOCs	07060977	trans-1,2-Dichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07050873	Trichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07060935	Trichloroethene	108.0	%REC
LCS	VOCs/SVOCs	07101206	1,1,1-Trichloroethane	109.0	%REC
LCS	VOCs/SVOCs	07101215	1,2-Dichloropropane	109.0	%REC
LCS	VOCs/SVOCs	07030756	Benzene	109.0	%REC
LCS	VOCs/SVOCs	07101215	Bromodichloromethane	109.0	%REC
LCS	VOCs/SVOCs	07040854	Carbon Tetrachloride	109.0	%REC
LCS	VOCs/SVOCs	07030756	Ethylbenzene	109.0	%REC
LCS	VOCs/SVOCs	07060944	Ethylbenzene	109.0	%REC
LCS	VOCs/SVOCs	07111261	trans-1,2-Dichloroethene	109.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07050928	Trichloroethene	109.0	%REC
LCS	VOCs/SVOCs	07060944	Trichloroethene	109.0	%REC
LCS	VOCs/SVOCs	07081113	1,1,1-Trichloroethane	110.0	%REC
LCS	VOCs/SVOCs	07111261	1,1-Dichloroethene	110.0	%REC
LCS	VOCs/SVOCs	07050873	Benzene	110.0	%REC
LCS	VOCs/SVOCs	07060935	Bromodichloromethane	110.0	%REC
LCS	VOCs/SVOCs	07111261	1,1-Dichloroethene	111.0	%REC
LCS	VOCs/SVOCs	07081123	1,2-Dichloropropane	111.0	%REC
LCS	VOCs/SVOCs	07050928	1,3-Dichlorobenzene	111.0	%REC
LCS	VOCs/SVOCs	07060944	Bromodichloromethane	111.0	%REC
LCS	VOCs/SVOCs	07060944	Bromodichloromethane	111.0	%REC
LCS	VOCs/SVOCs	07081079	Carbon Tetrachloride	111.0	%REC
LCS	VOCs/SVOCs	07091157	Carbon Tetrachloride	111.0	%REC
LCS	VOCs/SVOCs	07060944	Chloroform	111.0	%REC
LCS	VOCs/SVOCs	07081123	Chloroform	111.0	%REC
LCS	VOCs/SVOCs	07050928	Ethylbenzene	111.0	%REC
LCS	VOCs/SVOCs	07071016	Ethylbenzene	111.0	%REC
LCS	VOCs/SVOCs	07030756	Methylene Chloride	111.0	%REC
LCS	VOCs/SVOCs	07091157	Pyrene	111.0	%REC
LCS	VOCs/SVOCs	07030756	Toluene	111.0	%REC
LCS	VOCs/SVOCs	07050928	Toluene	111.0	%REC
LCS	VOCs/SVOCs	07030756	trans-1,2-Dichloroethene	111.0	%REC
LCS	VOCs/SVOCs	07060944	Trichloroethene	111.0	%REC
LCS	VOCs/SVOCs	07081123	1,1,1-Trichloroethane	112.0	%REC
LCS	VOCs/SVOCs	07081132	1,1,1-Trichloroethane	112.0	%REC
LCS	VOCs/SVOCs	07081132	1,1,1-Trichloroethane	112.0	%REC
LCS	VOCs/SVOCs	07050928	1,2-Dichloropropane	112.0	%REC
LCS	VOCs/SVOCs	07040864	1,3-Dichlorobenzene	112.0	%REC
LCS	VOCs/SVOCs	07030756	Benzene	112.0	%REC
LCS	VOCs/SVOCs	07050875	Carbon Tetrachloride	112.0	%REC
LCS	VOCs/SVOCs	07060944	Carbon Tetrachloride	112.0	%REC
LCS	VOCs/SVOCs	07101206	Carbon Tetrachloride	112.0	%REC
LCS	VOCs/SVOCs	07060944	Chloroform	112.0	%REC
LCS	VOCs/SVOCs	07071046	Tetrachloroethene	112.0	%REC
LCS	VOCs/SVOCs	07081113	Toluene	112.0	%REC
LCS	VOCs/SVOCs	07091151	Toluene	112.0	%REC
LCS	VOCs/SVOCs	07050908	Trichloroethene	112.0	%REC
LCS	VOCs/SVOCs	07040821	1,1,1-Trichloroethane	113.0	%REC
LCS	VOCs/SVOCs	07071046	1,1-Dichloroethene	113.0	%REC
LCS	VOCs/SVOCs	07081123	1,1-Dichloroethene	113.0	%REC
LCS	VOCs/SVOCs	07091151	1,1-Dichloroethene	113.0	%REC
LCS	VOCs/SVOCs	07060935	1,2-Dichloropropane	113.0	%REC
LCS	VOCs/SVOCs	07071016	Bromodichloromethane	113.0	%REC
LCS	VOCs/SVOCs	07060944	Carbon Tetrachloride	113.0	%REC
LCS	VOCs/SVOCs	07111261	Methylene Chloride	113.0	%REC
LCS	VOCs/SVOCs	07060944	Tetrachloroethene	113.0	%REC
LCS	VOCs/SVOCs	07060944	Trichloroethene	113.0	%REC
LCS	VOCs/SVOCs	07071016	Trichloroethene	113.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	VOCs/SVOCs	07071046	Trichloroethene	113.0	%REC
LCS	VOCs/SVOCs	07091151	1,1,1-Trichloroethane	114.0	%REC
LCS	VOCs/SVOCs	07060944	1,2-Dichloropropane	114.0	%REC
LCS	VOCs/SVOCs	07060944	1,2-Dichloropropane	114.0	%REC
LCS	VOCs/SVOCs	07081132	Carbon Tetrachloride	114.0	%REC
LCS	VOCs/SVOCs	07040864	Ethylbenzene	114.0	%REC
LCS	VOCs/SVOCs	07091151	Ethylbenzene	114.0	%REC
LCS	VOCs/SVOCs	07030756	Methylene Chloride	114.0	%REC
LCS	VOCs/SVOCs	07040864	Tetrachloroethene	114.0	%REC
LCS	VOCs/SVOCs	07071016	Toluene	114.0	%REC
LCS	VOCs/SVOCs	07060944	1,1,1-Trichloroethane	115.0	%REC
LCS	VOCs/SVOCs	07050873	1,1-Dichloroethene	115.0	%REC
LCS	VOCs/SVOCs	07030756	1,2-Dichloropropane	115.0	%REC
LCS	VOCs/SVOCs	07020735	Benzene	115.0	%REC
LCS	VOCs/SVOCs	07060935	Carbon Tetrachloride	115.0	%REC
LCS	VOCs/SVOCs	07081123	Carbon Tetrachloride	115.0	%REC
LCS	VOCs/SVOCs	07081123	Methylene Chloride	115.0	%REC
LCS	VOCs/SVOCs	07081079	Tetrachloroethene	115.0	%REC
LCS	VOCs/SVOCs	07050928	trans-1,2-Dichloroethene	115.0	%REC
LCS	VOCs/SVOCs	07091151	Carbon Tetrachloride	116.0	%REC
LCS	VOCs/SVOCs	07050886	Methylene Chloride	116.0	%REC
LCS	VOCs/SVOCs	07050886	Methylene Chloride	116.0	%REC
LCS	VOCs/SVOCs	07111261	Methylene Chloride	116.0	%REC
LCS	VOCs/SVOCs	07060935	trans-1,2-Dichloroethene	116.0	%REC
LCS	VOCs/SVOCs	07060935	1,1,1-Trichloroethane	117.0	%REC
LCS	VOCs/SVOCs	07050928	1,1-Dichloroethene	117.0	%REC
LCS	VOCs/SVOCs	07060935	Benzene	117.0	%REC
LCS	VOCs/SVOCs	07030756	Ethylbenzene	117.0	%REC
LCS	VOCs/SVOCs	07050908	Carbon Tetrachloride	118.0	%REC
LCS	VOCs/SVOCs	07040821	Carbon Tetrachloride	119.0	%REC
LCS	VOCs/SVOCs	07101206	Trichloroethene	119.0	%REC
LCS	VOCs/SVOCs	07111261	Trichloroethene	120.0	%REC
LCS	VOCs/SVOCs	07101206	1,1-Dichloroethene	122.0	%REC
LCS	VOCs/SVOCs	07050893	Methylene Chloride	123.0	%REC
LCS	VOCs/SVOCs	07030756	1,1-Dichloroethene	125.0	%REC
LCS	VOCs/SVOCs	07060935	1,1-Dichloroethene	126.0	%REC
LCS	VOCs/SVOCs	07030756	1,1-Dichloroethene	128.0	%REC
LCS	VOCs/SVOCs	07091157	1,1-Dichloroethene	131.0	%REC
LCS	WQP	07050878	Cyanide	90.0	%REC
LCS	WQP	07091165	Cyanide	90.0	%REC
LCS	WQP	07020720	Cyanide	93.0	%REC
LCS	WQP	07050875	Nitrate+Nitrite as N	94.0	%REC
LCS	WQP	07050890	Nitrate+Nitrite as N	94.0	%REC
LCS	WQP	07050875	Nitrate+Nitrite as N	95.0	%REC
LCS	WQP	07050890	Nitrate+Nitrite as N	95.0	%REC
LCS	WQP	07040819	Nitrate+Nitrite as N	96.0	%REC
LCS	WQP	07050908	Nitrate+Nitrite as N	96.0	%REC
LCS	WQP	07050908	Nitrate+Nitrite as N	96.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	WQP	07101227	Nitrate+Nitrite as N	96.0	%REC
LCS	WQP	07071047	Nitrate+Nitrite as N	97.0	%REC
LCS	WQP	07040819	Nitrate+Nitrite as N	98.0	%REC
LCS	WQP	07121313	Nitrate+Nitrite as N	98.0	%REC
LCS	WQP	07121313	Nitrate+Nitrite as N	98.0	%REC
LCS	WQP	07060962	Nitrate+Nitrite as N	99.0	%REC
LCS	WQP	07020735	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07050883	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07060962	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07060968	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07101215	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07101215	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07121313	Nitrate+Nitrite as N	100.0	%REC
LCS	WQP	07030793	Cyanide	101.0	%REC
LCS	WQP	07030793	Cyanide	101.0	%REC
LCS	WQP	07040833	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07040854	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07050873	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07060977	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07060977	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07101196	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07111261	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07111270	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07121313	Nitrate+Nitrite as N	101.0	%REC
LCS	WQP	07020720	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07030773	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07030773	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07030788	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07040833	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07040854	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07050883	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07050928	Nitrate	102.0	%REC
LCS	WQP	07060934	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	102.0	%REC
LCS	WQP	07040861	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07040861	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07071018	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07071018	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07111261	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07111261	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07111270	Nitrate+Nitrite as N	103.0	%REC
LCS	WQP	07020727	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07050886	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07050893	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07050903	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07060935	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07060935	Nitrate+Nitrite as N	104.0	%REC

RESULT_TYPE_CODE	Analyte Group	RIN	ANALYTE	Result	Units
LCS	WQP	07071017	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07071018	Nitrate+Nitrite as N	104.0	%REC
LCS	WQP	07020727	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07030789	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07050886	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07050893	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07050903	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07050928	Nitrate	105.0	%REC
LCS	WQP	07060934	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07071018	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07101228	Nitrate+Nitrite as N	105.0	%REC
LCS	WQP	07030793	Nitrate+Nitrite as N	106.0	%REC
LCS	WQP	07101228	Nitrate+Nitrite as N	106.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	106.0	%REC
LCS	WQP	07111261	Nitrate+Nitrite as N	106.0	%REC
LCS	WQP	07030793	Nitrate+Nitrite as N	107.0	%REC
LCS	WQP	07071068	Nitrate+Nitrite as N	107.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	107.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	107.0	%REC
LCS	WQP	07060968	Nitrate+Nitrite as N	109.0	%REC
LCS	WQP	07111250	Nitrate+Nitrite as N	109.0	%REC
LCS	WQP	07081106	Cyanide	118.0	%REC

Table B-6. Data Rejected During Verification and Validation

Location	Sample Date	Sample Number	Analyte	Sample Type	Result	2 Sigma Error	Units	Lab Qual	Validation	Detect Limit
80105	06-Mar-07	07030756	N-Nitrosopyrrolidine	F	0.8		ug/L	U	R	0.8
80105	06-Mar-07	07030756	N-Nitrosodibutylamine	F	2		ug/L	U	R	2
80105	06-Mar-07	07030756	N-Nitrosodi-n-propylamine	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Pentachlorobenzene	F	2		ug/L	U	R	2
80105	06-Mar-07	07030756	2,6-Dinitrotoluene	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	4,6-Dinitro-2-methyl phenol	F	20		ug/L	U	R	20
80105	06-Mar-07	07030756	Chrysene	F	1		ug/L	U	R	1
80105	06-Mar-07	07030756	Benzo(k)fluoranthene	F	0.46		ug/L	U	R	0.46
80105	06-Mar-07	07030756	Fluoranthene	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Benzo(b)fluoranthene	F	0.39		ug/L	U	R	0.39
80105	06-Mar-07	07030756	Indeno(1,2,3-cd)pyrene	F	1.5		ug/L	U	R	1.5
80105	06-Mar-07	07030756	Benzo(g,h,i)Perylene	F	1		ug/L	U	R	1
80105	06-Mar-07	07030756	Dimethyl phthalate	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Pyrene	F	0.37		ug/L	U	RJ	0.37
80105	06-Mar-07	07030756	1,2-Diphenylhydrazine	F	0.64		ug/L	U	R	0.64
80105	06-Mar-07	07030756	2,4-Dinitrotoluene	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	2,4-Dichlorophenol	F	1.3		ug/L	U	R	1.3
80105	06-Mar-07	07030756	Anthracene	F	1.9		ug/L	U	RJ	1.9
80105	06-Mar-07	07030756	Hexachlorobenzene	F	2.1		ug/L	U	R	2.1
80105	06-Mar-07	07030756	Bis(2-ethylhexyl) phthalate	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Bis(2-chloroethyl) ether	F	3.9		ug/L	U	R	3.9
80105	06-Mar-07	07030756	Phenol	F	1.4		ug/L	U	R	1.4
80105	06-Mar-07	07030756	Bis(2-chloroisopropyl) ether	F	0.43		ug/L	U	R	0.43
80105	06-Mar-07	07030756	2, 4-Dimethylphenol	F	0.57		ug/L	U	R	0.57
80105	06-Mar-07	07030756	4-Nitrophenol	F	1.7		ug/L	U	R	1.7
80105	06-Mar-07	07030756	Nitrobenzene	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	2,4,5-Trichlorophenol	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	1,2,4,5-Tetrachlorobenzene	F	2		ug/L	U	R	2
80105	06-Mar-07	07030756	2-Chlorophenol	F	0.38		ug/L	U	R	0.38
80105	06-Mar-07	07030756	Benzidine	F	50		ug/L	U	R	50
80105	06-Mar-07	07030756	3,3'-Dichlorobenzidine	F	2		ug/L	U	R	2
80105	06-Mar-07	07030756	2-Chloronaphthalene	F	1.7		ug/L	U	R	1.7
80105	06-Mar-07	07030756	2,4,6-Trichlorophenol	F	5		ug/L	U	R	5

Table B-6 (continued). Data Rejected During Verification and Validation

Location	Sample Date	Sample Number	Analyte	Sample Type	Result	2 Sigma Error	Units	Lab Qual	Validation	Detect Limit
80105	06-Mar-07	07030756	Pentachlorophenol	F	20		ug/L	U	R	20
80105	06-Mar-07	07030756	Fluorene	F	1		ug/L	U	R	1
80105	06-Mar-07	07030756	N-Nitrosodiphenylamine	F	0.44		ug/L	U	R	0.44
80105	06-Mar-07	07030756	Butyl benzyl phthalate	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Benzo(a)pyrene	F	1.3		ug/L	U	R	1.3
80105	06-Mar-07	07030756	Hexachloroethane	F	0.46		ug/L	U	R	0.46
80105	06-Mar-07	07030756	Isophorone	F	1.5		ug/L	U	R	1.5
80105	06-Mar-07	07030756	Hexachlorocyclopentadiene	F	1.5		ug/L	U	R	1.5
80105	06-Mar-07	07030756	Di-n-butyl phthalate	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Diethyl phthalate	F	5		ug/L	U	R	5
80105	06-Mar-07	07030756	Acenaphthene	F	1.7		ug/L	U	RJ	1.7
80105	06-Mar-07	07030756	N-Nitrosodimethylamine	F	1.6		ug/L	U	R	1.6
80105	06-Mar-07	07030756	4-Chloro-3-methylphenol	F	5		ug/L	U	RJ	5
80105	06-Mar-07	07030756	Benz(a)anthracene	F	1.7		ug/L	U	R	1.7
80105	06-Mar-07	07030756	Parathion, ethyl	F	2		ug/L	U	R	2
80105	06-Mar-07	07030756	N-Nitrosodiethylamine	F	1.1		ug/L	U	R	1.1
80105	06-Mar-07	07030756	Dibenz(a,h)anthracene	F	1.4		ug/L	U	R	1.4
80105	06-Mar-07	07030756	2,4-Dinitrophenol	F	20		ug/L	U	R	20
70693	26-Apr-07	07050875	Acrylonitrile	F	1.4		ug/L	U	R	1.4
70693	26-Apr-07	07050875	Acrolein	F	2.8		ug/L	U	R	2.8
73005	30-Apr-07	07050875	Acrylonitrile	F	1.4		ug/L	U	R	1.4
73005	30-Apr-07	07050875	Acrolein	F	2.8		ug/L	U	R	2.8
73005	30-Apr-07	07050875	Acrylonitrile	F	1.4		ug/L	U	R	1.4
73005	30-Apr-07	07050875	Acrolein	F	2.8		ug/L	U	R	2.8
70193	30-Apr-07	07050875	Acrylonitrile	F	1.4		ug/L	U	R	1.4
70193	30-Apr-07	07050875	Acrolein	F	2.8		ug/L	U	R	2.8
OLFSEEP8	23-Aug-07	07081123	Mercury	F	0.000027		mg/L	U	R	0.000027
OLFSEEP8	23-Aug-07	07081123	Mercury	F	0.000027		mg/L	U	R	0.000027
SPPDISCHARGEGALLERY	07-Nov-07	07111261	Nitrate + Nitrite as Nitrogen	D	5.5		mg/L		R	0.019

SAMPLE_TYPE

F = Field Sample

D = Duplicate

DATA_VALIDATION_QUALIFIERS

J Estimated value.

R Unusable result.

Table B-7. Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	3/6/2007	Zinc	0.0086	B		mg/L	valid	0.0045	1.9	No	07030756
E	3/6/2007	Bis(2-ethylhexyl) phthalate	7	J		ug/L	valid	5	1.4	No	07030756
E	5/3/2007	Nitrate + Nitrite as Nitrogen	0.08			mg/L	valid	0.019	4.2	No	07050886
E	5/3/2007	Chloroform	0.75	J		ug/L	valid	0.16	4.7	No	07050886
E	6/5/2007	Chloroform	1.9			ug/L	valid	0.16	11.9	No	07060935
E	6/5/2007	Zinc	0.006	B		mg/L	valid	0.0045	1.3	No	07060935
E	6/11/2007	Chloroform	0.997			ug/L	valid	0.5	2.0	No	07060968
E	6/11/2007	1,3-Dichlorobenzene	0.509			ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Toluene	0.223	J		ug/L	valid	0.5	0.4	No	07060968
E	10/4/2007	Uranium-234	0.0905		0.037	pCi/L	J	0.0766	1.2	No	07101196
E	10/4/2007	Nitrate + Nitrite as Nitrogen	0.057			mg/L	J	0.01	5.7	No	07101196
E	10/17/2007	Chloroform	0.43	J		ug/L	valid	0.16	2.7	No	07101215
E	3/6/2007	Benzo(a)pyrene	1.3	U		ug/L	valid	1.3	1.0	No	07030756
E	3/6/2007	Styrene	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	Ethylbenzene	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	4-Nitrophenol	1.7	U		ug/L	valid	1.7	1.0	No	07030756
E	3/6/2007	Nitrobenzene	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	1,2-Dibromo-3-chloropropane	1.5	U		ug/L	valid	1.5	1.0	No	07030756
E	3/6/2007	2,4,5-Trichlorophenol	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	1,2,4,5-Tetrachlorobenzene	2	U		ug/L	valid	2	1.0	No	07030756
E	3/6/2007	2-Chlorophenol	0.38	U		ug/L	valid	0.38	1.0	No	07030756
E	3/6/2007	1,2-Dichlorobenzene	0.13	U		ug/L	valid	0.13	1.0	No	07030756
E	3/6/2007	m,p-Xylene	0.34	U		ug/L	valid	0.34	1.0	No	07030756
E	3/6/2007	Selenium	0.0049	U		mg/L	valid	0.0049	1.0	No	07030756
E	3/6/2007	Uranium	0.016	U		mg/L	valid	0.016	1.0	No	07030756
E	3/6/2007	Copper	0.0045	U		mg/L	valid	0.0045	1.0	No	07030756
E	3/6/2007	Chromium	0.0026	U		mg/L	valid	0.0026	1.0	No	07030756
E	3/6/2007	Cadmium	0.0005	U		mg/L	valid	0.00045	1.0	No	07030756
E	3/6/2007	Boron	0.0059	U		mg/L	valid	0.0059	1.0	No	07030756
E	3/6/2007	Beryllium	0.0015	U		mg/L	valid	0.0015	1.0	No	07030756
E	3/6/2007	Arsenic	0.0044	U		mg/L	valid	0.0044	1.0	No	07030756
E	3/6/2007	Silver	0.0028	U		mg/L	valid	0.0028	1.0	No	07030756
E	3/6/2007	Nickel	0.0078	U		mg/L	valid	0.0078	1.0	No	07030756
E	3/6/2007	Mercury	3E-05	U		mg/L	valid	0.000027	1.0	No	07030756
E	3/6/2007	Lead	0.0026	U		mg/L	valid	0.0026	1.0	No	07030756
E	3/6/2007	trans-1,3-dichloropropene	0.19	U		ug/L	valid	0.19	1.0	No	07030756

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	3/6/2007	N-Nitrosopyrrolidine	0.8	U		ug/L	valid	0.8	1.0	No	07030756
E	3/6/2007	N-Nitrosodibutylamine	2	U		ug/L	valid	2	1.0	No	07030756
E	3/6/2007	N-Nitrosodi-n-propylamine	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Pentachlorobenzene	2	U		ug/L	valid	2	1.0	No	07030756
E	3/6/2007	2,6-Dinitrotoluene	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	1,3-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	4,6-Dinitro-2-methyl phenol	20	U		ug/L	valid	20	1.0	No	07030756
E	3/6/2007	Chrysene	1	U		ug/L	valid	1	1.0	No	07030756
E	3/6/2007	Benzo(k)fluoranthene	0.46	U		ug/L	valid	0.46	1.0	No	07030756
E	3/6/2007	Fluoranthene	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Benzo(b)fluoranthene	0.39	U		ug/L	valid	0.39	1.0	No	07030756
E	3/6/2007	Indeno(1,2,3-cd)pyrene	1.5	U		ug/L	valid	1.5	1.0	No	07030756
E	3/6/2007	Benzo(g,h,i)Perylene	1	U		ug/L	valid	1	1.0	No	07030756
E	3/6/2007	trans-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07030756
E	3/6/2007	cis-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07030756
E	3/6/2007	Dimethyl phthalate	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Pyrene	0.37	U		ug/L	J	0.37	1.0	No	07030756
E	3/6/2007	Tetrachloroethene	0.2	U		ug/L	J	0.2	1.0	No	07030756
E	3/6/2007	Chlorodibromomethane	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	1,2-Diphenylhydrazine	0.64	U		ug/L	valid	0.64	1.0	No	07030756
E	3/6/2007	2,4-Dinitrotoluene	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	2,4-Dichlorophenol	1.3	U		ug/L	valid	1.3	1.0	No	07030756
E	3/6/2007	1,2,4-Trichlorobenzene	0.32	U		ug/L	valid	0.32	1.0	No	07030756
E	3/6/2007	Anthracene	1.9	U		ug/L	J	1.9	1.0	No	07030756
E	3/6/2007	Hexachlorobenzene	2.1	U		ug/L	valid	2.1	1.0	No	07030756
E	3/6/2007	Bis(2-chloroethyl) ether	3.9	U		ug/L	valid	3.9	1.0	No	07030756
E	3/6/2007	Phenol	1.4	U		ug/L	valid	1.4	1.0	No	07030756
E	3/6/2007	Chlorobenzene	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	Toluene	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	Bis(2-chloroisopropyl) ether	0.43	U		ug/L	valid	0.43	1.0	No	07030756
E	3/6/2007	Acrylonitrile	1.4	U		ug/L	valid	1.4	1.0	No	07030756
E	3/6/2007	1,2-Dichloroethane	0.13	U		ug/L	valid	0.13	1.0	No	07030756
E	3/6/2007	Acrolein	2.8	U		ug/L	valid	2.8	1.0	No	07030756
E	3/6/2007	1,2-Dibromoethane	0.18	U		ug/L	valid	0.18	1.0	No	07030756
E	3/6/2007	1,4-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	2, 4-Dimethylphenol	0.57	U		ug/L	valid	0.57	1.0	No	07030756

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	3/6/2007	o-Xylene	0.19	U		ug/L	valid	0.19	1.0	No	07030756
E	3/6/2007	Benzidine	50	U		ug/L	valid	50	1.0	No	07030756
E	3/6/2007	3,3'-Dichlorobenzidine	2	U		ug/L	valid	2	1.0	No	07030756
E	3/6/2007	2-Chloronaphthalene	1.7	U		ug/L	valid	1.7	1.0	No	07030756
E	3/6/2007	Naphthalene	0.22	U		ug/L	valid	0.22	1.0	No	07030756
E	3/6/2007	Chloromethane	0.3	U		ug/L	valid	0.3	1.0	No	07030756
E	3/6/2007	Bromomethane	0.21	U		ug/L	valid	0.21	1.0	No	07030756
E	3/6/2007	1,1,1-Trichloroethane	0.16	U		ug/L	J	0.16	1.0	No	07030756
E	3/6/2007	Benzene	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	Hexachloroethane	0.46	U		ug/L	valid	0.46	1.0	No	07030756
E	3/6/2007	Chloroform	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	N-Nitrosodimethylamine	1.6	U		ug/L	valid	1.6	1.0	No	07030756
E	3/6/2007	Hexachlorocyclopentadiene	1.5	U		ug/L	valid	1.5	1.0	No	07030756
E	3/6/2007	1,1-Dichloroethene	0.14	U		ug/L	valid	0.14	1.0	No	07030756
E	3/6/2007	Bromodichloromethane	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	Bromoform	0.19	U		ug/L	valid	0.19	1.0	No	07030756
E	3/6/2007	Vinyl chloride	0.17	U		ug/L	valid	0.17	1.0	No	07030756
E	3/6/2007	2,4,6-Trichlorophenol	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Pentachlorophenol	20	U		ug/L	valid	20	1.0	No	07030756
E	3/6/2007	Hexachlorobutadiene	0.12	U		ug/L	valid	0.12	1.0	No	07030756
E	3/6/2007	Fluorene	1	U		ug/L	valid	1	1.0	No	07030756
E	3/6/2007	N-Nitrosodiphenylamine	0.44	U		ug/L	valid	0.44	1.0	No	07030756
E	3/6/2007	Butyl benzyl phthalate	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Di-n-butyl phthalate	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Diethyl phthalate	5	U		ug/L	valid	5	1.0	No	07030756
E	3/6/2007	Acenaphthene	1.7	U		ug/L	J	1.7	1.0	No	07030756
E	3/6/2007	1,1,2,2-Tetrachloroethane	0.2	U		ug/L	valid	0.2	1.0	No	07030756
E	3/6/2007	Trichloroethene	0.16	U		ug/L	valid	0.16	1.0	No	07030756
E	3/6/2007	1,1,2-Trichloroethane	0.32	U		ug/L	valid	0.32	1.0	No	07030756
E	3/6/2007	1,2-Dichloropropane	0.13	U		ug/L	valid	0.13	1.0	No	07030756
E	3/6/2007	Isophorone	1.5	U		ug/L	valid	1.5	1.0	No	07030756
E	3/6/2007	N-Nitrosodiethylamine	1.1	U		ug/L	valid	1.1	1.0	No	07030756
E	3/6/2007	Carbon tetrachloride	0.19	U		ug/L	J	0.19	1.0	No	07030756
E	3/6/2007	Parathion, ethyl	2	U		ug/L	valid	2	1.0	No	07030756
E	3/6/2007	4-Chloro-3-methylphenol	5	U		ug/L	J	5	1.0	No	07030756
E	3/6/2007	Benz(a)anthracene	1.7	U		ug/L	valid	1.7	1.0	No	07030756

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	3/6/2007	Dibenz(a,h)anthracene	1.4	U		ug/L	valid	1.4	1.0	No	07030756
E	3/6/2007	2,4-Dinitrophenol	20	U		ug/L	valid	20	1.0	No	07030756
E	5/3/2007	Carbon tetrachloride	0.19	U		ug/L	valid	0.19	1.0	No	07050886
E	5/3/2007	1,1,2,2-Tetrachloroethane	0.2	U		ug/L	valid	0.2	1.0	No	07050886
E	5/3/2007	Trichloroethene	0.16	U		ug/L	valid	0.16	1.0	No	07050886
E	5/3/2007	1,1,2-Trichloroethane	0.32	U		ug/L	valid	0.32	1.0	No	07050886
E	5/3/2007	1,2-Dichloropropane	0.13	U		ug/L	valid	0.13	1.0	No	07050886
E	5/3/2007	1,1-Dichloroethene	0.14	U		ug/L	valid	0.14	1.0	No	07050886
E	5/3/2007	1,2-Dibromo-3-chloropropane	1.5	U		ug/L	valid	1.5	1.0	No	07050886
E	5/3/2007	1,2-Dichlorobenzene	0.13	U		ug/L	valid	0.13	1.0	No	07050886
E	5/3/2007	Naphthalene	0.22	U		ug/L	valid	0.22	1.0	No	07050886
E	5/3/2007	Hexachlorobutadiene	0.12	U		ug/L	valid	0.12	1.0	No	07050886
E	5/3/2007	1,2-Dibromoethane	0.18	U		ug/L	valid	0.18	1.0	No	07050886
E	5/3/2007	1,4-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07050886
E	5/3/2007	Styrene	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	Ethylbenzene	0.16	U		ug/L	valid	0.16	1.0	No	07050886
E	5/3/2007	1,3-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07050886
E	5/3/2007	trans-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07050886
E	5/3/2007	cis-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07050886
E	5/3/2007	Tetrachloroethene	0.2	U		ug/L	valid	0.2	1.0	No	07050886
E	5/3/2007	Plutonium-239, 240	0.0134	U	0.006	pCi/L	valid	0.0134	1.0	No	07060968
E	5/3/2007	Americium-241	0.0168	U	0.009	pCi/L	valid	0.0168	1.0	No	07060968
E	5/3/2007	Uranium	2E-05	U		mg/L	valid	0.00002	1.0	No	07050886
E	5/3/2007	trans-1,3-dichloropropene	0.19	U		ug/L	valid	0.19	1.0	No	07050886
E	5/3/2007	Total Xylenes	0.19	U		ug/L	valid	0.19	1.0	No	07050886
E	5/3/2007	Chlorodibromomethane	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	1,2,4-Trichlorobenzene	0.32	U		ug/L	valid	0.32	1.0	No	07050886
E	5/3/2007	Chlorobenzene	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	Toluene	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	1,2-Dichloroethane	0.13	U		ug/L	valid	0.13	1.0	No	07050886
E	5/3/2007	Bromodichloromethane	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	Bromoform	0.19	U		ug/L	valid	0.19	1.0	No	07050886
E	5/3/2007	Methylene chloride	0.32	U		ug/L	valid	0.32	1.0	No	07050886
E	5/3/2007	Vinyl chloride	0.17	U		ug/L	valid	0.17	1.0	No	07050886
E	5/3/2007	Benzene	0.16	U		ug/L	valid	0.16	1.0	No	07050886
E	5/3/2007	1,1,1-Trichloroethane	0.16	U		ug/L	valid	0.16	1.0	No	07050886

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	5/3/2007	Bromomethane	0.21	U		ug/L	valid	0.21	1.0	No	07050886
E	5/3/2007	Chloromethane	0.3	U		ug/L	valid	0.3	1.0	No	07050886
E	5/17/2007	Plutonium-239, 240	0.0207	U	0.006	pCi/L	valid	0.0207	1.0	No	07050898
E	5/17/2007	Americium-241	0.0244	U	0.010	pCi/L	valid	0.0244	1.0	No	07050898
E	5/29/2007	Uranium-238	0.0335	U	0.013	pCi/L	valid	0.0335	1.0	No	07050919
E	5/29/2007	Uranium-235/236	0.0312	U	0.010	pCi/L	valid	0.0312	1.0	No	07050919
E	5/29/2007	Uranium-234	0.0269	U	0.012	pCi/L	valid	0.0269	1.0	No	07050919
E	5/29/2007	Plutonium-239, 240	0.019	U	0.007	pCi/L	valid	0.019	1.0	No	07050919
E	5/29/2007	Americium-241	0.0298	U	0.015	pCi/L	valid	0.0298	1.0	No	07050919
E	6/5/2007	Benzo(a)pyrene	1.3	U		ug/L	valid	1.3	1.0	No	07060935
E	6/5/2007	2,4-Dinitrophenol	20	U		ug/L	valid	20	1.0	No	07060935
E	6/5/2007	Dibenz(a,h)anthracene	1.4	U		ug/L	valid	1.4	1.0	No	07060935
E	6/5/2007	N-Nitrosodiethylamine	1.1	U		ug/L	valid	1.1	1.0	No	07060935
E	6/5/2007	Parathion, ethyl	2	U		ug/L	valid	2	1.0	No	07060935
E	6/5/2007	4-Chloro-3-methylphenol	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Acenaphthene	1.7	U		ug/L	valid	1.7	1.0	No	07060935
E	6/5/2007	1,1,2,2-Tetrachloroethane	0.2	U		ug/L	valid	0.2	1.0	No	07060935
E	6/5/2007	Trichloroethene	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	1,1,2-Trichloroethane	0.32	U		ug/L	valid	0.32	1.0	No	07060935
E	6/5/2007	1,2-Dichloropropane	0.13	U		ug/L	valid	0.13	1.0	No	07060935
E	6/5/2007	Isophorone	1.5	U		ug/L	valid	1.5	1.0	No	07060935
E	6/5/2007	Hexachlorocyclopentadiene	1.5	U		ug/L	valid	1.5	1.0	No	07060935
E	6/5/2007	1,1-Dichloroethene	0.14	U		ug/L	valid	0.14	1.0	No	07060935
E	6/5/2007	Bromodichloromethane	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	Bromoform	0.19	U		ug/L	valid	0.19	1.0	No	07060935
E	6/5/2007	Methylene chloride	0.32	U		ug/L	valid	0.32	1.0	No	07060935
E	6/5/2007	Vinyl chloride	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	Chloromethane	0.3	U		ug/L	valid	0.3	1.0	No	07060935
E	6/5/2007	Bromomethane	0.21	U		ug/L	valid	0.21	1.0	No	07060935
E	6/5/2007	1,1,1-Trichloroethane	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	Benzene	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	Hexachloroethane	0.46	U		ug/L	valid	0.46	1.0	No	07060935
E	6/5/2007	N-Nitrosodimethylamine	1.6	U		ug/L	valid	1.6	1.0	No	07060935
E	6/5/2007	2,4,6-Trichlorophenol	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Pentachlorophenol	20	U		ug/L	valid	20	1.0	No	07060935
E	6/5/2007	Hexachlorobutadiene	0.12	U		ug/L	valid	0.12	1.0	No	07060935

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	6/5/2007	Fluorene	1	U		ug/L	valid	1	1.0	No	07060935
E	6/5/2007	N-Nitrosodiphenylamine	0.44	U		ug/L	valid	0.44	1.0	No	07060935
E	6/5/2007	Butyl benzyl phthalate	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Di-n-butyl phthalate	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Diethyl phthalate	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Styrene	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	Ethylbenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	4-Nitrophenol	1.7	U		ug/L	valid	1.7	1.0	No	07060935
E	6/5/2007	Nitrobenzene	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	1,2-Dibromo-3-chloropropane	1.5	U		ug/L	valid	1.5	1.0	No	07060935
E	6/5/2007	2,4,5-Trichlorophenol	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	1,2,4,5-Tetrachlorobenzene	2	U		ug/L	valid	2	1.0	No	07060935
E	6/5/2007	2-Chlorophenol	0.38	U		ug/L	valid	0.38	1.0	No	07060935
E	6/5/2007	1,2-Dichlorobenzene	0.13	U		ug/L	valid	0.13	1.0	No	07060935
E	6/5/2007	m,p-Xylene	0.34	U		ug/L	valid	0.34	1.0	No	07060935
E	6/5/2007	Selenium	0.0049	U		mg/L	valid	0.0049	1.0	No	07060935
E	6/5/2007	Uranium	0.016	U		mg/L	valid	0.016	1.0	No	07060935
E	6/5/2007	Copper	0.0045	U		mg/L	valid	0.0045	1.0	No	07060935
E	6/5/2007	Chromium	0.0026	U		mg/L	valid	0.0026	1.0	No	07060935
E	6/5/2007	Cadmium	0.0005	U		mg/L	valid	0.00045	1.0	No	07060935
E	6/5/2007	Boron	0.0059	U		mg/L	valid	0.0059	1.0	No	07060935
E	6/5/2007	Beryllium	0.0005	U		mg/L	valid	0.00047	1.0	No	07060935
E	6/5/2007	Arsenic	0.0044	U		mg/L	valid	0.0044	1.0	No	07060935
E	6/5/2007	Silver	0.0028	U		mg/L	valid	0.0028	1.0	No	07060935
E	6/5/2007	Nickel	0.0078	U		mg/L	valid	0.0078	1.0	No	07060935
E	6/5/2007	Mercury	3E-05	U		mg/L	valid	0.000027	1.0	No	07060935
E	6/5/2007	Lead	0.0026	U		mg/L	valid	0.0026	1.0	No	07060935
E	6/5/2007	trans-1,3-dichloropropene	0.19	U		ug/L	valid	0.19	1.0	No	07060935
E	6/5/2007	N-Nitrosopyrrolidine	0.8	U		ug/L	valid	0.8	1.0	No	07060935
E	6/5/2007	N-Nitrosodibutylamine	2	U		ug/L	valid	2	1.0	No	07060935
E	6/5/2007	N-Nitrosodi-n-propylamine	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Pentachlorobenzene	2	U		ug/L	valid	2	1.0	No	07060935
E	6/5/2007	2,6-Dinitrotoluene	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	1,3-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	4,6-Dinitro-2-methyl phenol	20	U		ug/L	valid	20	1.0	No	07060935
E	6/5/2007	Chrysene	1	U		ug/L	valid	1	1.0	No	07060935

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	6/5/2007	Benzo(k)fluoranthene	0.46	U		ug/L	valid	0.46	1.0	No	07060935
E	6/5/2007	Fluoranthene	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Benzo(b)fluoranthene	0.39	U		ug/L	valid	0.39	1.0	No	07060935
E	6/5/2007	Indeno(1,2,3-cd)pyrene	1.5	U		ug/L	valid	1.5	1.0	No	07060935
E	6/5/2007	Benzo(g,h,i)Perylene	1	U		ug/L	valid	1	1.0	No	07060935
E	6/5/2007	trans-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07060935
E	6/5/2007	cis-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07060935
E	6/5/2007	Dimethyl phthalate	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Pyrene	0.37	U		ug/L	valid	0.37	1.0	No	07060935
E	6/5/2007	Tetrachloroethene	0.2	U		ug/L	valid	0.2	1.0	No	07060935
E	6/5/2007	Chlorodibromomethane	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	1,2-Diphenylhydrazine	0.64	U		ug/L	valid	0.64	1.0	No	07060935
E	6/5/2007	2,4-Dinitrotoluene	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	2,4-Dichlorophenol	1.3	U		ug/L	valid	1.3	1.0	No	07060935
E	6/5/2007	1,2,4-Trichlorobenzene	0.32	U		ug/L	valid	0.32	1.0	No	07060935
E	6/5/2007	Anthracene	1.9	U		ug/L	valid	1.9	1.0	No	07060935
E	6/5/2007	Hexachlorobenzene	2.1	U		ug/L	valid	2.1	1.0	No	07060935
E	6/5/2007	Bis(2-ethylhexyl) phthalate	5	U		ug/L	valid	5	1.0	No	07060935
E	6/5/2007	Bis(2-chloroethyl) ether	3.9	U		ug/L	valid	3.9	1.0	No	07060935
E	6/5/2007	Phenol	1.4	U		ug/L	valid	1.4	1.0	No	07060935
E	6/5/2007	Chlorobenzene	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	Toluene	0.17	U		ug/L	valid	0.17	1.0	No	07060935
E	6/5/2007	Bis(2-chloroisopropyl) ether	0.43	U		ug/L	valid	0.43	1.0	No	07060935
E	6/5/2007	Acrylonitrile	1.4	U		ug/L	valid	1.4	1.0	No	07060935
E	6/5/2007	1,2-Dichloroethane	0.13	U		ug/L	valid	0.13	1.0	No	07060935
E	6/5/2007	Acrolein	2.8	U		ug/L	valid	2.8	1.0	No	07060935
E	6/5/2007	1,2-Dibromoethane	0.18	U		ug/L	valid	0.18	1.0	No	07060935
E	6/5/2007	1,4-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060935
E	6/5/2007	2, 4-Dimethylphenol	0.57	U		ug/L	valid	0.57	1.0	No	07060935
E	6/5/2007	o-Xylene	0.19	U		ug/L	valid	0.19	1.0	No	07060935
E	6/5/2007	Benzidine	50	U		ug/L	valid	50	1.0	No	07060935
E	6/5/2007	3,3'-Dichlorobenzidine	2	U		ug/L	valid	2	1.0	No	07060935
E	6/5/2007	2-Chloronaphthalene	1.7	U		ug/L	valid	1.7	1.0	No	07060935
E	6/5/2007	Naphthalene	0.22	U		ug/L	valid	0.22	1.0	No	07060935
E	6/5/2007	Benz(a)anthracene	1.7	U		ug/L	valid	1.7	1.0	No	07060935
E	6/5/2007	Carbon tetrachloride	0.19	U		ug/L	valid	0.19	1.0	No	07060935

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	6/11/2007	Carbon tetrachloride	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,1,1-Trichloroethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Nitrate + Nitrite as Nitrogen	0.05	U		mg/L	valid	0.05	1.0	No	07060968
E	6/11/2007	m,p-Xylene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Uranium	5E-05	U		mg/L	valid	0.00005	1.0	No	07060968
E	6/11/2007	trans-1,2-Dichloroethene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	cis-1,2-Dichloroethene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Tetrachloroethene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Chlorodibromomethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2,4-Trichlorobenzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Chlorobenzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2-Dichloroethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2-Dibromoethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,4-Dichlorobenzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Styrene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Ethylbenzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2-Dibromo-3-chloropropane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2-Dichlorobenzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	o-Xylene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Naphthalene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Hexachlorobutadiene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,1,2,2-Tetrachloroethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Trichloroethene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,1,2-Trichloroethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,2-Dichloropropane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	1,1-Dichloroethene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Bromodichloromethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Bromoform	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Methylene chloride	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Vinyl chloride	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Chloromethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Bromomethane	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/11/2007	Benzene	0.5	U		ug/L	valid	0.5	1.0	No	07060968
E	6/26/2007	Carbon tetrachloride	0.19	U		ug/L	valid	0.19	1.0	No	07060977
E	6/26/2007	Chloroform	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	6/26/2007	Benzene	0.16	U		ug/L	valid	0.16	1.0	No	07060977

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	6/26/2007	Bromomethane	0.21	U		ug/L	valid	0.21	1.0	No	07060977
E	6/26/2007	1,1-Dichloroethene	0.14	U		ug/L	valid	0.14	1.0	No	07060977
E	6/26/2007	Bromodichloromethane	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	Bromoform	0.19	U		ug/L	valid	0.19	1.0	No	07060977
E	6/26/2007	Methylene chloride	0.32	U		ug/L	valid	0.32	1.0	No	07060977
E	6/26/2007	Vinyl chloride	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	1,1,2,2-Tetrachloroethane	0.2	U		ug/L	valid	0.2	1.0	No	07060977
E	6/26/2007	Trichloroethene	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	6/26/2007	1,1,2-Trichloroethane	0.32	U		ug/L	valid	0.32	1.0	No	07060977
E	6/26/2007	1,2-Dichloropropane	0.13	U		ug/L	valid	0.13	1.0	No	07060977
E	6/26/2007	1,2-Dibromoethane	0.18	U		ug/L	valid	0.18	1.0	No	07060977
E	6/26/2007	1,4-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	6/26/2007	Styrene	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	Ethylbenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	6/26/2007	trans-1,3-dichloropropene	0.19	U		ug/L	valid	0.19	1.0	No	07060977
E	6/26/2007	Total Xylenes	0.19	U		ug/L	valid	0.19	1.0	No	07060977
E	6/26/2007	1,3-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	6/26/2007	trans-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07060977
E	6/26/2007	cis-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07060977
E	6/26/2007	Tetrachloroethene	0.2	U		ug/L	valid	0.2	1.0	No	07060977
E	6/26/2007	Chlorodibromomethane	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	1,2,4-Trichlorobenzene	0.32	U		ug/L	valid	0.32	1.0	No	07060977
E	6/26/2007	Chlorobenzene	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	Toluene	0.17	U		ug/L	valid	0.17	1.0	No	07060977
E	6/26/2007	1,2-Dichloroethane	0.13	U		ug/L	valid	0.13	1.0	No	07060977
E	6/26/2007	1,2-Dibromo-3-chloropropane	1.5	U		ug/L	valid	1.5	1.0	No	07060977
E	6/26/2007	1,2-Dichlorobenzene	0.13	U		ug/L	valid	0.13	1.0	No	07060977
E	6/26/2007	Naphthalene	0.22	U		ug/L	valid	0.22	1.0	No	07060977
E	6/26/2007	Hexachlorobutadiene	0.12	U		ug/L	valid	0.12	1.0	No	07060977
E	6/26/2007	Chloromethane	0.3	U		ug/L	valid	0.3	1.0	No	07060977
E	6/26/2007	1,1,1-Trichloroethane	0.16	U		ug/L	valid	0.16	1.0	No	07060977
E	10/3/2007	Uranium-234	0.0912	U	0.034	pCi/L	valid	0.0912	1.0	No	07101196
E	10/3/2007	Uranium-235/236	0.0712	U	0.019	pCi/L	valid	0.0712	1.0	No	07101196
E	10/3/2007	Uranium-238	0.08	U	0.018	pCi/L	valid	0.08	1.0	No	07101196
E	10/4/2007	Americium-241	0.0283	U	0.012	pCi/L	valid	0.0283	1.0	No	07101196
E	10/4/2007	Uranium-238	0.0672	U	0.025	pCi/L	valid	0.0672	1.0	No	07101196

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	10/4/2007	Uranium-235/236	0.0599	U	0.032	pCi/L	valid	0.0599	1.0	No	07101196
E	10/4/2007	Plutonium-239, 240	0.0204	U	0.008	pCi/L	valid	0.0204	1.0	No	07101196
E	10/17/2007	Benzo(a)pyrene	0.74	U		ug/L	valid	0.74	1.0	No	07101215
E	10/17/2007	2,4-Dinitrophenol	20	U		ug/L	valid	20	1.0	No	07101215
E	10/17/2007	Dibenz(a,h)anthracene	0.51	U		ug/L	valid	0.51	1.0	No	07101215
E	10/17/2007	Carbon tetrachloride	0.19	U		ug/L	valid	0.19	1.0	No	07101215
E	10/17/2007	4-Chloro-3-methylphenol	2	U		ug/L	valid	2	1.0	No	07101215
E	10/17/2007	Chloromethane	0.3	U		ug/L	J	0.3	1.0	No	07101215
E	10/17/2007	Bromomethane	0.21	U		ug/L	valid	0.21	1.0	No	07101215
E	10/17/2007	1,1,1-Trichloroethane	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	Benzene	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	Hexachloroethane	0.46	U		ug/L	valid	0.46	1.0	No	07101215
E	10/17/2007	1,1-Dichloroethene	0.14	U		ug/L	valid	0.14	1.0	No	07101215
E	10/17/2007	Bromodichloromethane	0.17	U		ug/L	valid	0.17	1.0	No	07101215
E	10/17/2007	Bromoform	0.19	U		ug/L	valid	0.19	1.0	No	07101215
E	10/17/2007	Methylene chloride	0.32	U		ug/L	valid	0.32	1.0	No	07101215
E	10/17/2007	Vinyl chloride	0.17	U		ug/L	valid	0.17	1.0	No	07101215
E	10/17/2007	Acenaphthene	0.28	U		ug/L	valid	0.28	1.0	No	07101215
E	10/17/2007	1,1,2,2-Tetrachloroethane	0.2	U		ug/L	valid	0.2	1.0	No	07101215
E	10/17/2007	Trichloroethene	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	1,1,2-Trichloroethane	0.32	U		ug/L	valid	0.32	1.0	No	07101215
E	10/17/2007	1,2-Dichloropropane	0.13	U		ug/L	valid	0.13	1.0	No	07101215
E	10/17/2007	Isophorone	0.21	U		ug/L	valid	0.21	1.0	No	07101215
E	10/17/2007	Hexachlorocyclopentadiene	1.5	U		ug/L	valid	1.5	1.0	No	07101215
E	10/17/2007	2-Chloronaphthalene	0.31	U		ug/L	valid	0.31	1.0	No	07101215
E	10/17/2007	Naphthalene	0.29	U		ug/L	valid	0.29	1.0	No	07101215
E	10/17/2007	Naphthalene	0.22	U		ug/L	valid	0.22	1.0	No	07101215
E	10/17/2007	2,4,6-Trichlorophenol	0.37	U		ug/L	valid	0.37	1.0	No	07101215
E	10/17/2007	Pentachlorophenol	20	U		ug/L	valid	20	1.0	No	07101215
E	10/17/2007	Hexachlorobutadiene	0.51	U		ug/L	valid	0.51	1.0	No	07101215
E	10/17/2007	Selenium	0.0049	U		mg/L	valid	0.0049	1.0	No	07101215
E	10/17/2007	Uranium	0.016	U		mg/L	valid	0.016	1.0	No	07101215
E	10/17/2007	Copper	0.0045	U		mg/L	valid	0.0045	1.0	No	07101215
E	10/17/2007	Chromium	0.0026	U		mg/L	valid	0.0026	1.0	No	07101215
E	10/17/2007	Cadmium	0.0005	U		mg/L	valid	0.00045	1.0	No	07101215
E	10/17/2007	Boron	0.0059	U		mg/L	valid	0.0059	1.0	No	07101215

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	10/17/2007	Beryllium	0.0005	U		mg/L	valid	0.00047	1.0	No	07101215
E	10/17/2007	Arsenic	0.0044	U		mg/L	J	0.0044	1.0	No	07101215
E	10/17/2007	Silver	0.0028	U		mg/L	valid	0.0028	1.0	No	07101215
E	10/17/2007	Nickel	0.0078	U		mg/L	valid	0.0078	1.0	No	07101215
E	10/17/2007	Mercury	3E-05	U		mg/L	valid	0.000027	1.0	No	07101215
E	10/17/2007	Lead	0.0026	U		mg/L	valid	0.0026	1.0	No	07101215
E	10/17/2007	trans-1,3-dichloropropene	0.19	U		ug/L	valid	0.19	1.0	No	07101215
E	10/17/2007	Total Xylenes	0.19	U		ug/L	valid	0.19	1.0	No	07101215
E	10/17/2007	N-Nitrosodi-n-propylamine	0.35	U		ug/L	valid	0.35	1.0	No	07101215
E	10/17/2007	2,6-Dinitrotoluene	0.23	U		ug/L	valid	0.23	1.0	No	07101215
E	10/17/2007	1,3-Dichlorobenzene	0.29	U		ug/L	valid	0.29	1.0	No	07101215
E	10/17/2007	1,3-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	4,6-Dinitro-2-methyl phenol	0.35	U		ug/L	valid	0.35	1.0	No	07101215
E	10/17/2007	Chrysene	0.54	U		ug/L	valid	0.54	1.0	No	07101215
E	10/17/2007	Benzo(k)fluoranthene	0.46	U		ug/L	valid	0.46	1.0	No	07101215
E	10/17/2007	Fluoranthene	0.2	U		ug/L	valid	0.2	1.0	No	07101215
E	10/17/2007	Benzo(b)fluoranthene	0.39	U		ug/L	valid	0.39	1.0	No	07101215
E	10/17/2007	Indeno(1,2,3-cd)pyrene	0.65	U		ug/L	valid	0.65	1.0	No	07101215
E	10/17/2007	Benzo(g,h,i)Perylene	0.5	U		ug/L	valid	0.5	1.0	No	07101215
E	10/17/2007	trans-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07101215
E	10/17/2007	cis-1,2-Dichloroethene	0.15	U		ug/L	valid	0.15	1.0	No	07101215
E	10/17/2007	Dimethyl phthalate	1	U		ug/L	valid	1	1.0	No	07101215
E	10/17/2007	Pyrene	0.37	U		ug/L	valid	0.37	1.0	No	07101215
E	10/17/2007	Tetrachloroethene	0.2	U		ug/L	valid	0.2	1.0	No	07101215
E	10/17/2007	Chlorodibromomethane	0.17	U		ug/L	valid	0.17	1.0	No	07101215
E	10/17/2007	2,4-Dinitrotoluene	0.25	U		ug/L	valid	0.25	1.0	No	07101215
E	10/17/2007	2,4-Dichlorophenol	1.3	U		ug/L	valid	1.3	1.0	No	07101215
E	10/17/2007	1,2,4-Trichlorobenzene	0.45	U		ug/L	valid	0.45	1.0	No	07101215
E	10/17/2007	1,2,4-Trichlorobenzene	0.32	U		ug/L	valid	0.32	1.0	No	07101215
E	10/17/2007	Anthracene	0.42	U		ug/L	valid	0.42	1.0	No	07101215
E	10/17/2007	Hexachlorobenzene	0.66	U		ug/L	valid	0.66	1.0	No	07101215
E	10/17/2007	Bis(2-ethylhexyl) phthalate	0.56	U		ug/L	valid	0.56	1.0	No	07101215
E	10/17/2007	Bis(2-chloroethyl) ether	0.41	U		ug/L	valid	0.41	1.0	No	07101215
E	10/17/2007	Phenol	0.31	U		ug/L	valid	0.31	1.0	No	07101215
E	10/17/2007	Chlorobenzene	0.17	U		ug/L	valid	0.17	1.0	No	07101215
E	10/17/2007	Toluene	0.17	U		ug/L	valid	0.17	1.0	No	07101215

Table B-7 (continued). Equipment Rinsate Results of Interest

QC Type	Sample Date	Analyte	Result	Lab Qual	Error 2 Sigma	Units	Validation	Detect Limit	Result/ DetLim	Filtered	RIN
E	10/17/2007	Bis(2-chloroisopropyl) ether	0.43	U		ug/L	valid	0.43	1.0	No	07101215
E	10/17/2007	1,2-Dichloroethane	0.13	U		ug/L	valid	0.13	1.0	No	07101215
E	10/17/2007	1,2-Dibromoethane	0.18	U		ug/L	valid	0.18	1.0	No	07101215
E	10/17/2007	1,4-Dichlorobenzene	0.3	U		ug/L	valid	0.3	1.0	No	07101215
E	10/17/2007	1,4-Dichlorobenzene	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	2, 4-Dimethylphenol	0.57	U		ug/L	valid	0.57	1.0	No	07101215
E	10/17/2007	Styrene	0.17	U		ug/L	valid	0.17	1.0	No	07101215
E	10/17/2007	Ethylbenzene	0.16	U		ug/L	valid	0.16	1.0	No	07101215
E	10/17/2007	4-Nitrophenol	1.7	U		ug/L	valid	1.7	1.0	No	07101215
E	10/17/2007	Nitrobenzene	0.81	U		ug/L	valid	0.81	1.0	No	07101215
E	10/17/2007	1,2-Dibromo-3-chloropropane	1.5	U		ug/L	valid	1.5	1.0	No	07101215
E	10/17/2007	2,4,5-Trichlorophenol	0.39	U		ug/L	valid	0.39	1.0	No	07101215
E	10/17/2007	2-Chlorophenol	0.38	U		ug/L	valid	0.38	1.0	No	07101215
E	10/17/2007	1,2-Dichlorobenzene	0.28	U		ug/L	valid	0.28	1.0	No	07101215
E	10/17/2007	1,2-Dichlorobenzene	0.13	U		ug/L	valid	0.13	1.0	No	07101215
E	10/17/2007	3,3'-Dichlorobenzidine	2	U		ug/L	valid	2	1.0	No	07101215
E	10/17/2007	Hexachlorobutadiene	0.12	U		ug/L	valid	0.12	1.0	No	07101215
E	10/17/2007	Fluorene	0.31	U		ug/L	valid	0.31	1.0	No	07101215
E	10/17/2007	N-Nitrosodiphenylamine	0.44	U		ug/L	valid	0.44	1.0	No	07101215
E	10/17/2007	Butyl benzyl phthalate	1	U		ug/L	valid	1	1.0	No	07101215
E	10/17/2007	Di-n-butyl phthalate	1.2	U		ug/L	valid	1.2	1.0	No	07101215
E	10/17/2007	Diethyl phthalate	0.38	U		ug/L	valid	0.38	1.0	No	07101215
E	10/17/2007	Benz(a)anthracene	0.35	U		ug/L	valid	0.35	1.0	No	07101215
E	3/6/2007	Methylene chloride	0.44	J B		ug/L	U	0.32	1.4	No	07030756
E	10/17/2007	Zinc	0.0093	B		mg/L	U	0.0045	2.1	No	07101215

LAB_QUALIFIERS

U Analytical result below detection limit.
B Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
J Estimated

DATA_VALIDATION_QUALIFIERS

valid Result is valid.
J Estimated value.
U Parameter analyzed for but was not detected.

B.5 Automated Surface-Water Sample Collection Field Information

The following tables present the sample collection information by monitoring location for all automated surface-water samples collected during CY 2007. The fields in each table are defined as follows:

- RIN#: The sample number assigned to the specific sampling event. This number corresponds to the sample number stored in SEEPro.
- START DATE-TIME: The date and time of the beginning of the composite (all automated surface-water samples are composite samples).
- END DATE-TIME: The end of the composite sampling period. It is generally the date-time of the first grab sample of the next composite sampling period.
- NUMBER OF GRABS: The total number of individual grab samples comprising the composite sample. For continuous flow-paced samples the grab size is uniformly 200 ml. The grab size for the other sample types varies, but is sized such that an adequate amount of water is collected to complete all required analyses.
- AVERAGE FLOW: The average flow rate (in cfs; for locations with flow measurement) during the sample period. It is calculated by arithmetically averaging the instantaneous flow rates at each grab sample time for the entire composite sample period. If there are gaps in the flow data, resulting in missing FLOW VOLUME values, the AVERAGE FLOW can still be determined if none of the grab samples were collected during the missing flow data period.
- FLOW VOLUME: The total measured surface-water flow volume (in cf; for continuous flow-paced samples only) during the entire composite sampling period.

B.5.1 Location GS01

Table B–8. Sample Collection Information for Samples Collected at GS01: Calendar Year 2007

GS01 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07010677-401	1/9/2007 8:00	1/16/2007 13:08	65	1.490	737551
07020718-411	1/16/2007 13:08	2/7/2007 10:05	67	0.686	659312
07020731-422	2/7/2007 10:05	2/9/2007 11:35	65	6.091	965701
07020731-428	2/9/2007 11:35	2/14/2007 9:44	56	2.161	866576
07030788-441	2/14/2007 9:44	2/26/2007 10:07	89	1.313	1312716
07030789-454	2/26/2007 10:07	3/8/2007 9:18	89	0.741	605619
07030789-462	3/8/2007 9:18	3/12/2007 10:41	110	5.859	774620
07040826-493	3/12/2007 10:41	3/25/2007 10:27	103	1.138	711154
07040826-496	3/25/2007 10:27	4/4/2007 10:05	34	0.582	411004
07040845-509	4/4/2007 10:05	4/17/2007 10:08	25	0.304	301959
07040866-521	4/17/2007 10:08	4/20/2007 10:03	68	4.256	829722
07040866-523	4/20/2007 10:03	4/24/2007 14:36	61	7.733	1452259
07040866-519	4/24/2007 14:36	4/26/2007 10:32	68	36.340	3902321
07050876-541	4/26/2007 10:32	5/1/2007 9:51	80	6.055	1950661
07050884-555	5/1/2007 9:51	5/3/2007 15:30	44	4.298	763302
07050884-556	5/3/2007 15:30	5/6/2007 16:40	70	8.179	1697192
07050919-601	5/6/2007 16:40	5/17/2007 11:18	62	3.846	3094984
07060969-622	5/17/2007 11:18	5/31/2007 11:29	69	2.145	2060881
07060969-625	5/31/2007 11:29	6/20/2007 10:11	92	1.197	1839546
08011351-782	6/20/2007 10:11	1/9/2008 12:40	18	0.675	340744

B.5.2 Location GS03

Table B–9. Sample Collection Information for Samples Collected at GS03: Calendar Year 2007

GS03 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07010677-402	1/11/2007 15:00	2/6/2007 13:34	106	0.229	18245
07020718-412	2/6/2007 13:34	2/7/2007 15:59	57	1.183	108815
07030788-443	2/7/2007 15:59	3/1/2007 14:30	54	0.524	700551
07030788-446	3/1/2007 14:30	3/3/2007 12:21	68	2.592	346934
07030788-448	3/3/2007 12:21	3/5/2007 10:21	91	2.862	471532
07030788-451	3/5/2007 10:21	3/7/2007 11:03	88	3.101	542643
07030789-456	3/7/2007 11:03	3/9/2007 9:39	83	3.059	513699
07030789-461	3/9/2007 9:39	3/11/2007 12:23	74	2.444	444291
07030789-469	3/11/2007 12:23	3/14/2007 11:18	78	2.278	453328
07040826-492	3/14/2007 11:18	3/25/2007 10:07	19	0.566	130333
07040866-529	3/25/2007 10:07	4/25/2007 9:03	110	16.942	962603
07050876-540	4/25/2007 9:03	4/30/2007 12:29	53	2.112	373095
NSQ	4/30/2007 12:29	7/5/2007 12:54	0	NA	144323
07071017-654	7/5/2007 12:54	7/9/2007 16:50	22	0.671	172925
07071017-657	7/9/2007 16:50	7/12/2007 10:46	66	1.747	406884
07071017-661	7/12/2007 10:46	7/16/2007 9:09	68	1.060	341816
07071068-701	7/16/2007 9:09	7/19/2007 13:43	44	0.662	162608
07071068-705	7/19/2007 13:43	7/23/2007 12:37	54	0.826	269482
07071068-708	7/23/2007 12:37	7/30/2007 11:06	92	1.180	338640
08011351-783	7/30/2007 11:06	1/9/2008 12:15	17	0.014	10619

B.5.3 Location GS05

Table B–10. Sample Collection Information for Samples Collected at GS05: Calendar Year 2007

GS05 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07020731	2/8/2007 11:45	2/14/2007 11:38	35	1.007	108815
07030789	2/14/2007 11:38	3/12/2007 11:42	98	4.200	700551
07040826	3/12/2007 11:42	4/4/2007 11:28	33	0.521	356129
07040866	4/4/2007 11:28	4/24/2007 15:50	25	4.141	278332
07050884	4/24/2007 15:50	5/7/2007 11:05	67	6.398	1135085
07101196	5/7/2007 11:05	10/1/2007 12:51	36	0.134	647975
08011346	10/1/2007 12:51	1/4/2008 11:57	28	Missing Flow Data	Missing Flow Data

B.5.4 Location GS08

Table B–11. Sample Collection Information for Samples Collected at GS08: Calendar Year 2007

GS08 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07030788	3/1/2007 12:33	3/3/2007 10:31	56	1.072	167151
07030788	3/3/2007 10:31	3/5/2007 11:47	58	0.960	168234
07030788	3/5/2007 11:47	3/7/2007 11:54	54	1.077	185098
07030789	3/7/2007 11:54	3/9/2007 10:29	56	1.142	189279
07030789	3/9/2007 10:29	3/11/2007 11:39	43	0.834	149135
07030789	3/11/2007 11:39	3/13/2007 15:30	43	0.798	139704
07071017	7/5/2007 9:47	7/9/2007 15:42	49	0.678	244834
07071017	7/9/2007 15:42	7/12/2007 13:30	47	0.799	173669

B.5.5 Location GS10

Table B–12. Sample Collection Information for Samples Collected at GS10: Calendar Year 2007

GS10 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07020718	1/10/2007 13:36	2/8/2007 12:14	80	1.282	242360
07030788	2/8/2007 12:14	3/2/2007 12:04	72	0.143	168626
07040826	3/2/2007 12:04	3/25/2007 11:25	25	0.076	93861
07040845	3/25/2007 11:25	4/17/2007 11:06	26	0.045	81425
07040866	4/17/2007 11:06	4/24/2007 11:25	36	0.284	35774
07040866	4/24/2007 11:25	4/25/2007 11:02	110	7.155	416238
07050876	4/25/2007 11:02	5/1/2007 11:34	47	0.213	69685
07050898	5/1/2007 11:34	5/10/2007 11:58	46	0.128	68840
07050919	5/10/2007 11:58	5/24/2007 11:28	47	0.064	69629
07060969	5/24/2007 11:28	5/31/2007 12:00	48	0.062	35849
07071017	5/31/2007 12:00	7/5/2007 11:05	71	0.051	126526
07071068	7/5/2007 11:05	7/23/2007 12:00	41	0.017	25649
07091158	7/23/2007 12:00	8/6/2007 11:27	50	0.035	30957
07091158	8/6/2007 11:27	8/21/2007 10:30	38	0.017	19738
07091158	8/21/2007 10:30	9/6/2007 10:30	29	0.035	17764
07101196	9/6/2007 10:30	10/1/2007 10:21	34	0.047	33780
07101235	10/1/2007 10:21	10/16/2007 9:02	36	0.028	29158
07111256	10/16/2007 9:02	11/1/2007 11:34	33	0.016	21295
07111288	11/1/2007 11:34	11/20/2007 11:58	41	0.016	25121
08011346	11/20/2007 11:58	1/5/2008 11:44	26	0.016	55723

B.5.6 Location GS11

Table B–13. Collection Information for Samples Collected at GS11: Calendar Year 2007

GS11 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07030788	3/1/2007 11:40	3/5/2007 11:10	66	1.542	453025
07030788	3/5/2007 11:10	3/7/2007 11:36	53	1.584	273148
07030789	3/7/2007 11:36	3/9/2007 10:13	45	1.384	232469
07030789	3/9/2007 10:13	3/11/2007 11:12	43	1.153	201488
07030789	3/11/2007 11:12	3/13/2007 15:30	45	1.174	210231
07071017	7/5/2007 8:48	7/12/2007 11:38	55	0.832	361979
07071017	7/12/2007 11:38	7/16/2007 9:46	45	0.889	298965
07071068	7/16/2007 9:46	7/19/2007 13:11	27	0.605	151486
07071068	7/19/2007 13:11	7/23/2007 11:25	35	0.802	260388
07071068	7/23/2007 11:25	7/26/2007 15:15	57	1.213	315770

B.5.7 Location GS13

Table B–14. Collection Information for Samples Collected at GS13: Calendar Year 2007

GS13 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07030789-455	1/10/2007 11:16	3/8/2007 11:14	78	0.486	2136779
07040826-494	3/8/2007 11:14	3/25/2007 11:07	56	0.487	425029
07040845-508	3/25/2007 11:07	4/12/2007 10:19	34	0.196	267961
07040866-531	4/12/2007 10:19	4/26/2007 11:19	78	5.325	789844
07050919-603	4/26/2007 11:19	5/24/2007 10:59	78	0.451	566501
07071068-709	5/24/2007 10:59	7/30/2007 11:55	15	0.090	152019
07111288-760	7/30/2007 11:55	11/8/2007 8:51	7	0.032	68817
08011351-784	11/8/2007 8:51	1/9/2008 11:38	5	0.184	276440

B.5.8 Location GS31

No samples collected at GS31 during CY 2007.

B.5.9 Location GS51

Table B–15. Sample Collection Information for Samples Collected at GS51: Calendar Year 2007

GS51 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07030788	2/7/2007 13:17	3/2/2007 11:34	61	0.030	18082
07040826	3/2/2007 11:34	4/24/2007 8:21	16	0.035	1771
07040866	4/24/2007 8:21	4/24/2007 14:58	74	0.274	7761
07040866	4/24/2007 14:58	4/25/2007 9:59	36	0.397	11121
07050884	4/25/2007 9:59	5/7/2007 10:00	21	0.029	1522
NSQ	5/7/2007 10:00	1/4/2008 10:52	0; NSQ	NA	24

B.5.10 Location GS59

Table B–16. Sample Collection Information for Samples Collected at GS59: Calendar Year 2007

GS59 RIN#	Start Date-Time	End Date-Time	Number of Grabs	Average Flow [cfs]	Flow Volume [cf]
07020731	1/18/2007 11:39	2/14/2007 12:06	94	Missing Flow Data	Missing Flow Data
07030789	2/14/2007 12:06	3/12/2007 11:15	93	3.988	1720989
07040826	3/12/2007 11:15	4/4/2007 11:01	47	0.734	789172
07040866	4/4/2007 11:01	4/24/2007 15:15	76	2.957	1350649
07050884	4/24/2007 15:15	5/7/2007 10:18	78	10.306	2336880
07101196	5/7/2007 10:18	10/1/2007 12:39	88	0.285	Missing Flow Data
08011346	10/1/2007 12:39	1/4/2008 11:11	23	0.072	Missing Flow Data

B.5.11 Location SW018

Table B–17. Sample Collection Information for Samples Collected at SW018: Calendar Year 2007

SW018 RIN#	Start Date-Time	End Date-Time	Number of Grabs	Average Flow [cfs]	Flow Volume [cf]
07030788	1/10/2007 12:32	2/26/2007 10:59	57	0.105	163533
07040826	2/26/2007 10:59	4/9/2007 10:56	46	0.043	110434
07040866	4/9/2007 10:56	4/25/2007 11:20	29	0.488	64501
07050898	4/25/2007 11:20	5/14/2007 10:19	25	0.046	56367
07071017	5/14/2007 10:19	7/5/2007 11:41	30	0.016	59533
07101235	7/5/2007 11:41	10/4/2007 11:40	20	0.005	26790
07111288	10/4/2007 11:40	11/26/2007 12:04	22	0.008	31135
NA	*11/26/2007 12:04*	*1/28/2008 12:13*	*41*	*Missing Flow Data*	*Missing Flow Data*

Notes: *Italicized* samples are collected, but not routinely analyzed, per the monitoring objective. These samples are only analyzed when warranted by a source evaluation.

B.5.12 Location SW027

Table B–18. Sample Collection Information for Samples Collected at SW027: Calendar Year 2007

SW027 RIN#	Start Date-Time	End Date-Time	Number of Grabs	Average Flow [cfs]	Flow Volume [cf]
NSQ	5/18/2005 12:43	2/21/2007 11:06	11; NSQ	NA	216646
07050876-539	2/21/2007 11:06	4/26/2007 11:41	46	1.523	244093
NSQ	4/26/2007 11:41	1/25/2008 11:15	12; NSQ	NA	3761

B.5.13 Location SW093

Table B–19. Collection Information for Samples Collected at SW093: Calendar Year 2007

SW093 RIN#	Start Date-Time	End Date-Time	Number of Grabs [200ml]	Average Flow [cfs]	Flow Volume [cf]
07020718	2/6/2007 13:31	2/8/2007 11:18	82	1.993	269668
07020731	2/8/2007 11:18	2/19/2007 10:03	89	0.732	449046
07040826	2/19/2007 10:03	3/15/2007 11:32	82	0.333	569576
07040826	3/15/2007 11:32	4/9/2007 11:27	51	0.333	310061
07040866	4/9/2007 11:27	4/19/2007 11:23	47	0.106	70565
07040866	4/19/2007 11:23	4/24/2007 15:31	110	5.969	167155
07040866	4/24/2007 15:31	4/25/2007 10:27	60	7.895	365668
07050876	4/25/2007 10:27	5/1/2007 10:37	82	0.499	180813
07050884	5/1/2007 10:37	5/6/2007 17:00	72	0.910	119432
07050919	5/6/2007 17:00	5/24/2007 10:40	64	0.167	181225
07060969	5/24/2007 10:40	6/19/2007 10:43	35	0.061	81304
07071068	6/19/2007 10:43	7/19/2007 12:45	25	0.007	17554
07091158	7/19/2007 12:45	8/9/2007 13:09	28	0.012	9085
07091158	8/9/2007 13:09	8/27/2007 12:06	50	0.078	20532
07101196	8/27/2007 12:06	10/1/2007 11:32	57	0.012	27134
07111288	10/1/2007 11:32	11/20/2007 12:43	26	0.038	65992
08011346	11/20/2007 12:43	1/5/2008 11:22	26	0.035	91985

B.6 Analytical Results for Water Samples—4th Quarter of CY 2007

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
00193	WL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
00193	WL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
00193	WL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
00193	WL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
00193	WL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
00193	WL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
00193	WL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
00193	WL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
00193	WL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
00193	WL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.81	ug/L	J	F	0.16		valid
00193	WL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
00193	WL	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
00193	WL	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
00193	WL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
00193	WL	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
00193	WL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
00193	WL	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
00193	WL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00193	WL	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
00193	WL	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
00193	WL	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
00193	WL	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
00193	WL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
00193	WL	11/8/2007	07111263	108-88-3	Toluene	N001	0.18	ug/L	J	F	0.17		valid
00193	WL	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
00193	WL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00193	WL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
00193	WL	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
00193	WL	11/8/2007	07111263	7440-61-1	Uranium	0001	36	ug/L		F	0.02		valid
00193	WL	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
00797	WL	10/23/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
00797	WL	10/23/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
00797	WL	10/23/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
00797	WL	10/23/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
00797	WL	10/23/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
00797	WL	10/23/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
00797	WL	10/23/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
00797	WL	10/23/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
00797	WL	10/23/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
00797	WL	10/23/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
00797	WL	10/23/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
00797	WL	10/23/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
00797	WL	10/23/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
00797	WL	10/23/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
00797	WL	10/23/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
00797	WL	10/23/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
00797	WL	10/23/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00797	WL	10/23/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
00797	WL	10/23/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
00797	WL	10/23/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
00797	WL	10/23/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
00797	WL	10/23/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
00797	WL	10/23/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
00797	WL	10/23/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
00797	WL	10/23/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00797	WL	10/23/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
00797	WL	10/23/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
00797	WL	10/23/2007	07101228	7440-61-1	Uranium	0001	28	ug/L		F	0.02		valid
00797	WL	10/23/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
00997	WL	11/14/2007	07111270	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
00997	WL	11/14/2007	07111270	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
00997	WL	11/14/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
00997	WL	11/14/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
00997	WL	11/14/2007	07111270	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
00997	WL	11/14/2007	07111270	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
00997	WL	11/14/2007	07111270	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
00997	WL	11/14/2007	07111270	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
00997	WL	11/14/2007	07111270	541-73-1	1,3-Dichlorobenzene	N001	0.36	ug/L	J	F	0.16		J
00997	WL	11/14/2007	07111270	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
00997	WL	11/14/2007	07111270	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
00997	WL	11/14/2007	07111270	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
00997	WL	11/14/2007	07111270	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
00997	WL	11/14/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00997	WL	11/14/2007	07111270	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
00997	WL	11/14/2007	07111270	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
00997	WL	11/14/2007	07111270	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
00997	WL	11/14/2007	07111270	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.019	mg/L	U	F	0.019		valid
00997	WL	11/14/2007	07111270	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
00997	WL	11/14/2007	07111270	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
00997	WL	11/14/2007	07111270	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
00997	WL	11/14/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
00997	WL	11/14/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
00997	WL	11/14/2007	07111270	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
00997	WL	11/14/2007	07111270	7440-61-1	Uranium	0001	8.5	ug/L		F	0.02		valid
00997	WL	11/14/2007	07111270	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
04091	WL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
04091	WL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
04091	WL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
04091	WL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
04091	WL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
04091	WL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
04091	WL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
04091	WL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
04091	WL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
04091	WL	11/8/2007	07111263	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
04091	WL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N002	0.21	ug/L	J	F	0.19		valid
04091	WL	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
04091	WL	11/8/2007	07111263	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
04091	WL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
04091	WL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
04091	WL	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
04091	WL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
04091	WL	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
04091	WL	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
04091	WL	11/8/2007	07111263	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
04091	WL	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
04091	WL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
04091	WL	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid

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04091	WL	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
04091	WL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
04091	WL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
04091	WL	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
04091	WL	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
04091	WL	11/8/2007	07111263	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
10304	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
10304	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
10304	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
10304	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
10304	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
10304	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
10304	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
10304	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
10304	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
10304	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	0.43	ug/L	J	F	0.16		valid
10304	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
10304	WL	11/6/2007	07111261	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
10304	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
10304	WL	11/6/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
10304	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
10304	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
10304	WL	11/6/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
10304	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
10304	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
10304	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
10304	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
10304	WL	11/6/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
10304	WL	11/6/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.034	mg/L	B	F	0.019		valid
10304	WL	11/6/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
10304	WL	11/6/2007	07111261	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
10304	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
10304	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
10304	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
10304	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N001	0.17	ug/L	J	F	0.16		valid
10304	WL	11/6/2007	07111261	7440-61-1	Uranium	0001	11	ug/L		F	0.02		valid
10304	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
10594	WL	11/1/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
10594	WL	11/1/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
10594	WL	11/1/2007	07111250	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
10594	WL	11/1/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
10594	WL	11/1/2007	07111250	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
10594	WL	11/1/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid

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10594	WL	11/1/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
10594	WL	11/1/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
10594	WL	11/1/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
10594	WL	11/1/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
10594	WL	11/1/2007	07111250	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
10594	WL	11/1/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
10594	WL	11/1/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
10594	WL	11/1/2007	07111250	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
10594	WL	11/1/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
10594	WL	11/1/2007	07111250	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
10594	WL	11/1/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
10594	WL	11/1/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
10594	WL	11/1/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
10594	WL	11/1/2007	07111250	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
10594	WL	11/1/2007	07111250	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
10594	WL	11/1/2007	07111250	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
10594	WL	11/1/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
10594	WL	11/1/2007	07111250	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
10594	WL	11/1/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.2	mg/L		F	0.019		valid
10594	WL	11/1/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.14	mg/L		F	0.019		valid
10594	WL	11/1/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
10594	WL	11/1/2007	07111250	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
10594	WL	11/1/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
10594	WL	11/1/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid

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10594	WL	11/1/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
10594	WL	11/1/2007	07111250	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
10594	WL	11/1/2007	07111250	7440-61-1	Uranium	0001	110	ug/L		F	0.02		J
10594	WL	11/1/2007	07111250	7440-61-1	Uranium	0002	130	ug/L		F	0.02		J
10594	WL	11/1/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
10594	WL	11/1/2007	07111250	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
11104	WL	10/18/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
11104	WL	10/18/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
11104	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
11104	WL	10/18/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
11104	WL	10/18/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
11104	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
11104	WL	10/18/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
11104	WL	10/18/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
11104	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
11104	WL	10/18/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
11104	WL	10/18/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
11104	WL	10/18/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
11104	WL	10/18/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
11104	WL	10/18/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
11104	WL	10/18/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
11104	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
11104	WL	10/18/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
11104	WL	10/18/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
11104	WL	10/18/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
11104	WL	10/18/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
11104	WL	10/18/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
11104	WL	10/18/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
11104	WL	10/18/2007	07101215	7440-61-1	Uranium	0001	40	ug/L		F	0.02		valid
11104	WL	10/18/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
11502	WL	10/15/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
11502	WL	10/15/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
11502	WL	10/15/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
11502	WL	10/15/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
11502	WL	10/15/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
11502	WL	10/15/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
11502	WL	10/15/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
11502	WL	10/15/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
11502	WL	10/15/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
11502	WL	10/15/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
11502	WL	10/15/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid

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11502	WL	10/15/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
11502	WL	10/15/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
11502	WL	10/15/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
11502	WL	10/15/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
11502	WL	10/15/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	67-66-3	Chloroform	N001	0.22	ug/L	J	F	0.16		U
11502	WL	10/15/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
11502	WL	10/15/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
11502	WL	10/15/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
11502	WL	10/15/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
11502	WL	10/15/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
11502	WL	10/15/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
11502	WL	10/15/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	127-18-4	Tetrachloroethene	N001	11	ug/L		F	0.2		valid
11502	WL	10/15/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
11502	WL	10/15/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
11502	WL	10/15/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
11502	WL	10/15/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
11502	WL	10/15/2007	07101215	79-01-6	Trichloroethene	N001	0.52	ug/L	J	F	0.16		valid
11502	WL	10/15/2007	07101215	7440-61-1	Uranium	0001	1.7	ug/L		F	0.02		valid
11502	WL	10/15/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N002	0.7	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
15699	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
15699	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N001	14	ug/L		F	0.14		valid
15699	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N002	32	ug/L		F	0.14		valid
15699	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
15699	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
15699	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
15699	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
15699	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
15699	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
15699	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N001	1.2	ug/L		F	0.13		valid
15699	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N002	2.4	ug/L		F	0.13		valid
15699	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
15699	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
15699	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	0.51	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N002	0.63	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N002	0.53	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	71-43-2	Benzene	N001	0.28	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	71-43-2	Benzene	N002	0.37	ug/L	J	F	0.16		valid
15699	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
15699	WL	11/6/2007	07111261	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid

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15699	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
15699	WL	11/6/2007	07111261	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
15699	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	400	ug/L		F	1.5		valid
15699	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N002	370	ug/L		F	1.5		valid
15699	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
15699	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
15699	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
15699	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
15699	WL	11/6/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
15699	WL	11/6/2007	07111261	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
15699	WL	11/6/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N001	5.7	ug/L		F	0.2		valid
15699	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N002	130	ug/L		F	2		valid
15699	WL	11/6/2007	07111261	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
15699	WL	11/6/2007	07111261	108-88-3	Toluene	N002	0.19	ug/L	J	F	0.17		valid
15699	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	1.4	ug/L		F	0.15		J
15699	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N002	1.2	ug/L		F	0.15		J
15699	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
15699	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N001	130	ug/L		F	1.6		valid
15699	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N002	480	ug/L		F	1.6		valid
15699	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N001	18	ug/L		F	0.17		valid
15699	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N002	12	ug/L		F	0.17		valid
20205	WL	10/29/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
20205	WL	10/29/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
20205	WL	10/29/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
20205	WL	10/29/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
20205	WL	10/29/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
20205	WL	10/29/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
20205	WL	10/29/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
20205	WL	10/29/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
20205	WL	10/29/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
20205	WL	10/29/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
20205	WL	10/29/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
20205	WL	10/29/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
20205	WL	10/29/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
20205	WL	10/29/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
20205	WL	10/29/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
20205	WL	10/29/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
20205	WL	10/29/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
20205	WL	10/29/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
20205	WL	10/29/2007	07111250	75-09-2	Methylene chloride	N001	0.4	ug/L	J B	F	0.32		U
20205	WL	10/29/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
20205	WL	10/29/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
20205	WL	10/29/2007	07111250	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
20205	WL	10/29/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
20205	WL	10/29/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
20205	WL	10/29/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
20205	WL	10/29/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
20205	WL	10/29/2007	07111250	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
20205	WL	10/29/2007	07111250	7440-61-1	Uranium	0001	55	ug/L		F	0.02		J
20205	WL	10/29/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
20505	WL	10/25/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
20505	WL	10/25/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.43	ug/L	J	F	0.14		valid
20505	WL	10/25/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
20505	WL	10/25/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
20505	WL	10/25/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
20505	WL	10/25/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
20505	WL	10/25/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
20505	WL	10/25/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
20505	WL	10/25/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
20505	WL	10/25/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
20505	WL	10/25/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
20505	WL	10/25/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
20505	WL	10/25/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	16	ug/L		F	0.15		valid
20505	WL	10/25/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
20505	WL	10/25/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
20505	WL	10/25/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
20505	WL	10/25/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
20505	WL	10/25/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
20505	WL	10/25/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
20505	WL	10/25/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
20505	WL	10/25/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.22	ug/L	J	F	0.15		valid
20505	WL	10/25/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
20505	WL	10/25/2007	07101228	79-01-6	Trichloroethene	N001	2.6	ug/L		F	0.16		valid
20505	WL	10/25/2007	07101228	7440-61-1	Uranium	0001	12	ug/L		F	0.02		valid
20505	WL	10/25/2007	07101228	75-01-4	Vinyl chloride	N001	0.58	ug/L	J	F	0.17		valid
20705	WL	10/25/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
20705	WL	10/25/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid

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20705	WL	10/25/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
20705	WL	10/25/2007	07101228	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
20705	WL	10/25/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
20705	WL	10/25/2007	07101228	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
20705	WL	10/25/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
20705	WL	10/25/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
20705	WL	10/25/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
20705	WL	10/25/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
20705	WL	10/25/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
20705	WL	10/25/2007	07101228	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
20705	WL	10/25/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
20705	WL	10/25/2007	07101228	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
20705	WL	10/25/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
20705	WL	10/25/2007	07101228	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
20705	WL	10/25/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
20705	WL	10/25/2007	07101228	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
20705	WL	10/25/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	71-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
20705	WL	10/25/2007	07101228	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
20705	WL	10/25/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
20705	WL	10/25/2007	07101228	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
20705	WL	10/25/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
20705	WL	10/25/2007	07101228	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
20705	WL	10/25/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
20705	WL	10/25/2007	07101228	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
20705	WL	10/25/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
20705	WL	10/25/2007	07101228	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
20705	WL	10/25/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
20705	WL	10/25/2007	07101228	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
20705	WL	10/25/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	67-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
20705	WL	10/25/2007	07101228	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
20705	WL	10/25/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	1.3	ug/L		F	0.15		valid
20705	WL	10/25/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N002	1.2	ug/L		D	0.15		valid
20705	WL	10/25/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
20705	WL	10/25/2007	07101228	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		J
20705	WL	10/25/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
20705	WL	10/25/2007	07101228	75-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
20705	WL	10/25/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
20705	WL	10/25/2007	07101228	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
20705	WL	10/25/2007	07101228	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.019	mg/L	U	F	0.019		valid
20705	WL	10/25/2007	07101228	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.019	mg/L	U	D	0.019		valid
20705	WL	10/25/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
20705	WL	10/25/2007	07101228	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
20705	WL	10/25/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
20705	WL	10/25/2007	07101228	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
20705	WL	10/25/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid

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20705	WL	10/25/2007	07101228	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
20705	WL	10/25/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
20705	WL	10/25/2007	07101228	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
20705	WL	10/25/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
20705	WL	10/25/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
20705	WL	10/25/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
20705	WL	10/25/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
20705	WL	10/25/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
20705	WL	10/25/2007	07101228	79-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
20705	WL	10/25/2007	07101228	7440-61-1	Uranium	0001	17	ug/L		F	0.02		valid
20705	WL	10/25/2007	07101228	7440-61-1	Uranium	0002	17	ug/L		D	0.02		valid
20705	WL	10/25/2007	07101228	75-01-4	Vinyl chloride	N001	1.3	ug/L		F	0.17		valid
20705	WL	10/25/2007	07101228	75-01-4	Vinyl chloride	N002	1.3	ug/L		D	0.17		valid
23296	WL	11/13/2007	07111270	71-55-6	1,1,1-Trichloroethane	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N001	2	ug/L	U	F	2		valid
23296	WL	11/13/2007	07111270	79-00-5	1,1,2-Trichloroethane	N001	3.2	ug/L	U	F	3.2		valid
23296	WL	11/13/2007	07111270	75-35-4	1,1-Dichloroethene	N001	1.4	ug/L	J	F	1.4		valid
23296	WL	11/13/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N001	3.2	ug/L	U	F	3.2		valid
23296	WL	11/13/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N001	15	ug/L	U	F	15		valid
23296	WL	11/13/2007	07111270	106-93-4	1,2-Dibromoethane	N001	1.8	ug/L	U	F	1.8		valid
23296	WL	11/13/2007	07111270	95-50-1	1,2-Dichlorobenzene	N001	1.3	ug/L	U	F	1.3		valid
23296	WL	11/13/2007	07111270	107-06-2	1,2-Dichloroethane	N001	1.3	ug/L	U	F	1.3		valid
23296	WL	11/13/2007	07111270	78-87-5	1,2-Dichloropropane	N001	1.3	ug/L	U	F	1.3		valid
23296	WL	11/13/2007	07111270	541-73-1	1,3-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	106-46-7	1,4-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	71-43-2	Benzene	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	75-27-4	Bromodichloromethane	N001	1.7	ug/L	U	F	1.7		valid
23296	WL	11/13/2007	07111270	75-25-2	Bromoform	N001	1.9	ug/L	U	F	1.9		valid
23296	WL	11/13/2007	07111270	74-83-9	Bromomethane	N001	2.1	ug/L	U	F	2.1		valid
23296	WL	11/13/2007	07111270	56-23-5	Carbon tetrachloride	N001	1.9	ug/L	U	F	1.9		valid
23296	WL	11/13/2007	07111270	108-90-7	Chlorobenzene	N001	1.7	ug/L	U	F	1.7		valid
23296	WL	11/13/2007	07111270	124-48-1	Chlorodibromomethane	N001	1.7	ug/L	U	F	1.7		valid
23296	WL	11/13/2007	07111270	67-66-3	Chloroform	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	74-87-3	Chloromethane	N001	3	ug/L	U	F	3		valid
23296	WL	11/13/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N001	960	ug/L		F	6		valid
23296	WL	11/13/2007	07111270	100-41-4	Ethylbenzene	N001	1.6	ug/L	U	F	1.6		valid
23296	WL	11/13/2007	07111270	87-68-3	Hexachlorobutadiene	N001	1.2	ug/L	U	F	1.2		valid
23296	WL	11/13/2007	07111270	75-09-2	Methylene chloride	N001	3.2	ug/L	U	F	3.2		valid
23296	WL	11/13/2007	07111270	91-20-3	Naphthalene	N001	2.2	ug/L	U	F	2.2		valid
23296	WL	11/13/2007	07111270	100-42-5	Styrene	N001	1.7	ug/L	U	F	1.7		valid
23296	WL	11/13/2007	07111270	127-18-4	Tetrachloroethene	N001	2	ug/L	U	F	2		valid
23296	WL	11/13/2007	07111270	108-88-3	Toluene	N001	1.7	ug/L	U	F	1.7		valid
23296	WL	11/13/2007	07111270	1330-20-7	Total Xylenes	N001	1.9	ug/L	U	F	1.9		valid
23296	WL	11/13/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N001	2.2	ug/L	J	F	1.5		valid
23296	WL	11/13/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N001	1.9	ug/L	U	F	1.9		valid
23296	WL	11/13/2007	07111270	79-01-6	Trichloroethene	N001	8.5	ug/L	J	F	1.6		valid
23296	WL	11/13/2007	07111270	7440-61-1	Uranium	0001	17	ug/L		F	0.02		valid
23296	WL	11/13/2007	07111270	75-01-4	Vinyl chloride	N001	4.2	ug/L	J	F	1.7		valid
30002	WL	10/16/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
30002	WL	10/16/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
30002	WL	10/16/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
30002	WL	10/16/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
30002	WL	10/16/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
30002	WL	10/16/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
30002	WL	10/16/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
30002	WL	10/16/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
30002	WL	10/16/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
30002	WL	10/16/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
30002	WL	10/16/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
30002	WL	10/16/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
30002	WL	10/16/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
30002	WL	10/16/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
30002	WL	10/16/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
30002	WL	10/16/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
30002	WL	10/16/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
30002	WL	10/16/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
30002	WL	10/16/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
30002	WL	10/16/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
30002	WL	10/16/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
30002	WL	10/16/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
30002	WL	10/16/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
30002	WL	10/16/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
30002	WL	10/16/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
30002	WL	10/16/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
30002	WL	10/16/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
30002	WL	10/16/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
33703	WL	10/23/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
33703	WL	10/23/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
33703	WL	10/23/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
33703	WL	10/23/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
33703	WL	10/23/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
33703	WL	10/23/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
33703	WL	10/23/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
33703	WL	10/23/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.41	ug/L	J	F	0.13		valid
33703	WL	10/23/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
33703	WL	10/23/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
33703	WL	10/23/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	2.2	ug/L		F	0.16		valid
33703	WL	10/23/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	11	ug/L		F	0.16		valid
33703	WL	10/23/2007	07101228	71-43-2	Benzene	N001	0.49	ug/L	J	F	0.16		valid
33703	WL	10/23/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
33703	WL	10/23/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
33703	WL	10/23/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
33703	WL	10/23/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
33703	WL	10/23/2007	07101228	108-90-7	Chlorobenzene	N001	22	ug/L		F	0.17		valid
33703	WL	10/23/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
33703	WL	10/23/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
33703	WL	10/23/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
33703	WL	10/23/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.42	ug/L	J	F	0.15		valid
33703	WL	10/23/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
33703	WL	10/23/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
33703	WL	10/23/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
33703	WL	10/23/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
33703	WL	10/23/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
33703	WL	10/23/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid

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33703	WL	10/23/2007	07101228	108-88-3	Toluene	N001	0.23	ug/L	J	F	0.17		valid
33703	WL	10/23/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
33703	WL	10/23/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	1.1	ug/L		F	0.15		valid
33703	WL	10/23/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
33703	WL	10/23/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
33703	WL	10/23/2007	07101228	75-01-4	Vinyl chloride	N001	0.4	ug/L	J	F	0.17		valid
37405	WL	10/24/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
37405	WL	10/24/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
37405	WL	10/24/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
37405	WL	10/24/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
37405	WL	10/24/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
37405	WL	10/24/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
37405	WL	10/24/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
37405	WL	10/24/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
37405	WL	10/24/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
37405	WL	10/24/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
37405	WL	10/24/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
37405	WL	10/24/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
37405	WL	10/24/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
37405	WL	10/24/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
37405	WL	10/24/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
37405	WL	10/24/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
37405	WL	10/24/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
37405	WL	10/24/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
37405	WL	10/24/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
37405	WL	10/24/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
37405	WL	10/24/2007	07101228	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	3.3	mg/L		F	0.019		valid
37405	WL	10/24/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
37405	WL	10/24/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
37405	WL	10/24/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
37405	WL	10/24/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
37405	WL	10/24/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
37405	WL	10/24/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
37405	WL	10/24/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
37405	WL	10/24/2007	07101228	7440-61-1	Uranium	0001	3.5	ug/L		F	0.02		valid
37405	WL	10/24/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
37505	WL	10/24/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
37505	WL	10/24/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
37505	WL	10/24/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
37505	WL	10/24/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
37505	WL	10/24/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
37505	WL	10/24/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
37505	WL	10/24/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
37505	WL	10/24/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
37505	WL	10/24/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
37505	WL	10/24/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
37505	WL	10/24/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
37505	WL	10/24/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
37505	WL	10/24/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
37505	WL	10/24/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
37505	WL	10/24/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
37505	WL	10/24/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
37505	WL	10/24/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
37505	WL	10/24/2007	07101228	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	2	mg/L		F	0.019		valid
37505	WL	10/24/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	127-18-4	Tetrachloroethene	N001	0.45	ug/L	J	F	0.2		valid
37505	WL	10/24/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
37505	WL	10/24/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
37505	WL	10/24/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
37505	WL	10/24/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
37505	WL	10/24/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
37505	WL	10/24/2007	07101228	7440-61-1	Uranium	0001	2.7	ug/L		F	0.02		valid
37505	WL	10/24/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
37705	WL	10/24/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
37705	WL	10/24/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
37705	WL	10/24/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
37705	WL	10/24/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
37705	WL	10/24/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
37705	WL	10/24/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
37705	WL	10/24/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
37705	WL	10/24/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
37705	WL	10/24/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
37705	WL	10/24/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
37705	WL	10/24/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
37705	WL	10/24/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
37705	WL	10/24/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
37705	WL	10/24/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
37705	WL	10/24/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
37705	WL	10/24/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
37705	WL	10/24/2007	07101228	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.38	mg/L		F	0.019		valid
37705	WL	10/24/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
37705	WL	10/24/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
37705	WL	10/24/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
37705	WL	10/24/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid

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37705	WL	10/24/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
37705	WL	10/24/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
37705	WL	10/24/2007	07101228	7440-61-1	Uranium	0001	9.7	ug/L		F	0.02		valid
37705	WL	10/24/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
40305	WL	10/16/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
40305	WL	10/16/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
40305	WL	10/16/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
40305	WL	10/16/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
40305	WL	10/16/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
40305	WL	10/16/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
40305	WL	10/16/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
40305	WL	10/16/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
40305	WL	10/16/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
40305	WL	10/16/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
40305	WL	10/16/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
40305	WL	10/16/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
40305	WL	10/16/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.39	ug/L	J	F	0.15		valid
40305	WL	10/16/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
40305	WL	10/16/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
40305	WL	10/16/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
40305	WL	10/16/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	127-18-4	Tetrachloroethene	N001	0.74	ug/L	J	F	0.2		valid
40305	WL	10/16/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
40305	WL	10/16/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
40305	WL	10/16/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
40305	WL	10/16/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
40305	WL	10/16/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
40305	WL	10/16/2007	07101215	7440-61-1	Uranium	0001	0.63	ug/L		F	0.02		valid
40305	WL	10/16/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
42505	WL	10/29/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
42505	WL	10/29/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
42505	WL	10/29/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
42505	WL	10/29/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
42505	WL	10/29/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
42505	WL	10/29/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
42505	WL	10/29/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
42505	WL	10/29/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
42505	WL	10/29/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
42505	WL	10/29/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid

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42505	WL	10/29/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
42505	WL	10/29/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
42505	WL	10/29/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
42505	WL	10/29/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
42505	WL	10/29/2007	07111250	75-09-2	Methylene chloride	N001	0.33	ug/L	J B	F	0.32		U
42505	WL	10/29/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
42505	WL	10/29/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
42505	WL	10/29/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
42505	WL	10/29/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
42505	WL	10/29/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
42505	WL	10/29/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
42505	WL	10/29/2007	07111250	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
42505	WL	10/29/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	71-55-6	1,1,1-Trichloroethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	79-00-5	1,1,2-Trichloroethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	75-35-4	1,1-Dichloroethene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	120-82-1	1,2,4-Trichlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.77	ug/L	U	F	0.77		valid
45605	WL	10/1/2007	07091185	106-93-4	1,2-Dibromoethane	N001	0.25	ug/L	U	F	0.25		valid
45605	WL	10/1/2007	07091185	95-50-1	1,2-Dichlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	107-06-2	1,2-Dichloroethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	78-87-5	1,2-Dichloropropane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	541-73-1	1,3-Dichlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	106-46-7	1,4-Dichlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	71-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	75-25-2	Bromoform	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	74-83-9	Bromomethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	56-23-5	Carbon tetrachloride	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	67-66-3	Chloroform	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	74-87-3	Chloromethane	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	156-59-2	cis-1,2-Dichloroethene	N001	210	ug/L		F	1.7		valid
45605	WL	10/1/2007	07091185	100-41-4	Ethylbenzene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	87-68-3	Hexachlorobutadiene	N001	0.24	ug/L	U	F	0.24		valid
45605	WL	10/1/2007	07091185	M&P XYLENE	m,p-Xylene	N001	0.24	ug/L	U	F	0.24		valid
45605	WL	10/1/2007	07091185	75-09-2	Methylene chloride	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	91-20-3	Naphthalene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	95-47-6	o-Xylene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	127-18-4	Tetrachloroethene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	156-60-5	trans-1,2-Dichloroethene	N001	7.4	ug/L		F	0.17		valid
45605	WL	10/1/2007	07091185	10061-02-6	trans-1,3-dichloropropene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	79-01-6	Trichloroethene	N001	0.17	ug/L	U	F	0.17		valid
45605	WL	10/1/2007	07091185	75-01-4	Vinyl chloride	N001	1.7	ug/L		F	0.17		valid
52505	WL	10/29/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
52505	WL	10/29/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
52505	WL	10/29/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
52505	WL	10/29/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
52505	WL	10/29/2007	07111250	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
52505	WL	10/29/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
52505	WL	10/29/2007	07111250	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
52505	WL	10/29/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
52505	WL	10/29/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
52505	WL	10/29/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
52505	WL	10/29/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
52505	WL	10/29/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
52505	WL	10/29/2007	07111250	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
52505	WL	10/29/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
52505	WL	10/29/2007	07111250	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
52505	WL	10/29/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
52505	WL	10/29/2007	07111250	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
52505	WL	10/29/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
52505	WL	10/29/2007	07111250	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
52505	WL	10/29/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	71-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
52505	WL	10/29/2007	07111250	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
52505	WL	10/29/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
52505	WL	10/29/2007	07111250	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
52505	WL	10/29/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
52505	WL	10/29/2007	07111250	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
52505	WL	10/29/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
52505	WL	10/29/2007	07111250	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
52505	WL	10/29/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
52505	WL	10/29/2007	07111250	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
52505	WL	10/29/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
52505	WL	10/29/2007	07111250	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
52505	WL	10/29/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	67-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
52505	WL	10/29/2007	07111250	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
52505	WL	10/29/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	0.3	ug/L	J	F	0.15		valid
52505	WL	10/29/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N002	0.31	ug/L	J	D	0.15		valid
52505	WL	10/29/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
52505	WL	10/29/2007	07111250	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
52505	WL	10/29/2007	07111250	75-09-2	Methylene chloride	N001	0.36	ug/L	J B	F	0.32		U
52505	WL	10/29/2007	07111250	75-09-2	Methylene chloride	N002	0.34	ug/L	J B	D	0.32		U
52505	WL	10/29/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
52505	WL	10/29/2007	07111250	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
52505	WL	10/29/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
52505	WL	10/29/2007	07111250	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
52505	WL	10/29/2007	07111250	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
52505	WL	10/29/2007	07111250	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
52505	WL	10/29/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid

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52505	WL	10/29/2007	07111250	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
52505	WL	10/29/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
52505	WL	10/29/2007	07111250	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
52505	WL	10/29/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
52505	WL	10/29/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
52505	WL	10/29/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
52505	WL	10/29/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
52505	WL	10/29/2007	07111250	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
52505	WL	10/29/2007	07111250	79-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
52505	WL	10/29/2007	07111250	75-01-4	Vinyl chloride	N001	0.46	ug/L	J	F	0.17		valid
52505	WL	10/29/2007	07111250	75-01-4	Vinyl chloride	N002	0.46	ug/L	J	D	0.17		valid
70099	WL	10/30/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.095	mg/L		F	0.019		valid
70099	WL	10/30/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.52	mg/L		F	0.019		valid
70099	WL	10/30/2007	07111250	7440-61-1	Uranium	0001	260	ug/L		F	0.02		J
70099	WL	10/30/2007	07111250	7440-61-1	Uranium	0002	280	ug/L		F	0.02		J
70193	WL	10/10/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70193	WL	10/10/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	10/10/2007	07101206	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
70193	WL	10/10/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	10/10/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70193	WL	10/10/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70193	WL	10/10/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	10/10/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	10/10/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70193	WL	10/10/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	10/10/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	10/10/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70193	WL	10/10/2007	07101206	7440-43-9	Cadmium	0001	0.61	ug/L	B	F	0.45		valid
70193	WL	10/10/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	10/10/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	10/10/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	10/10/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70193	WL	10/10/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70193	WL	10/10/2007	07101206	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
70193	WL	10/10/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70193	WL	10/10/2007	07101206	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
70193	WL	10/10/2007	07101206	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70193	WL	10/10/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70193	WL	10/10/2007	07101206	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
70193	WL	10/10/2007	07101206	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
70193	WL	10/10/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	10/10/2007	07101206	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
70193	WL	10/10/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70193	WL	10/10/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	10/10/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70193	WL	10/10/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70193	WL	10/10/2007	07101206	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
70193	WL	10/10/2007	07101206	7440-61-1	Uranium	0001	16	ug/L	U	F	16		valid
70193	WL	10/10/2007	07101206	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid

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70193	WL	10/10/2007	07101206	7440-66-6	Zinc	0001	4.5	ug/L	U	F	4.5		valid
70393	WL	10/10/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	2.3	ug/L		F	0.16		valid
70393	WL	10/10/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70393	WL	10/10/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	10/10/2007	07101206	75-35-4	1,1-Dichloroethene	N001	3.4	ug/L		F	0.14		valid
70393	WL	10/10/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	10/10/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70393	WL	10/10/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70393	WL	10/10/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	10/10/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	10/10/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70393	WL	10/10/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	10/10/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	10/10/2007	07101206	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	10/10/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	10/10/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70393	WL	10/10/2007	07101206	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
70393	WL	10/10/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	10/10/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	10/10/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70393	WL	10/10/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70393	WL	10/10/2007	07101206	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
70393	WL	10/10/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
70393	WL	10/10/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70393	WL	10/10/2007	07101206	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
70393	WL	10/10/2007	07101206	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70393	WL	10/10/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70393	WL	10/10/2007	07101206	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
70393	WL	10/10/2007	07101206	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
70393	WL	10/10/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	127-18-4	Tetrachloroethene	N001	1.2	ug/L		F	0.2		valid
70393	WL	10/10/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	10/10/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70393	WL	10/10/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70393	WL	10/10/2007	07101206	79-01-6	Trichloroethene	N001	8.4	ug/L		F	0.16		valid
70393	WL	10/10/2007	07101206	7440-61-1	Uranium	0001	16	ug/L	U	F	16		valid
70393	WL	10/10/2007	07101206	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
70393	WL	10/10/2007	07101206	7440-66-6	Zinc	0001	4.5	ug/L	U	F	4.5		valid
70693	WL	10/10/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	3.2	ug/L		F	0.16		valid
70693	WL	10/10/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
70693	WL	10/10/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	10/10/2007	07101206	75-35-4	1,1-Dichloroethene	N001	4.4	ug/L		F	0.14		valid
70693	WL	10/10/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	10/10/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
70693	WL	10/10/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
70693	WL	10/10/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	10/10/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	10/10/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
70693	WL	10/10/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	10/10/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	10/10/2007	07101206	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
70693	WL	10/10/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	10/10/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
70693	WL	10/10/2007	07101206	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
70693	WL	10/10/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.23	ug/L	J	F	0.19		valid
70693	WL	10/10/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	J	F	0.16		U
70693	WL	10/10/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
70693	WL	10/10/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	J	F	0.15		valid
70693	WL	10/10/2007	07101206	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
70693	WL	10/10/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
70693	WL	10/10/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
70693	WL	10/10/2007	07101206	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
70693	WL	10/10/2007	07101206	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
70693	WL	10/10/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
70693	WL	10/10/2007	07101206	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
70693	WL	10/10/2007	07101206	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
70693	WL	10/10/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	127-18-4	Tetrachloroethene	N001	1.3	ug/L		F	0.2		valid
70693	WL	10/10/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	10/10/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
70693	WL	10/10/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
70693	WL	10/10/2007	07101206	79-01-6	Trichloroethene	N001	3.6	ug/L		F	0.16		valid
70693	WL	10/10/2007	07101206	7440-61-1	Uranium	0001	16	ug/L	U	F	16		valid
70693	WL	10/10/2007	07101206	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
70693	WL	10/10/2007	07101206	7440-66-6	Zinc	0001	4.5	ug/L	U	F	4.5		valid
73005	WL	10/15/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73005	WL	10/15/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
73005	WL	10/15/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
73005	WL	10/15/2007	07101215	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
73005	WL	10/15/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73005	WL	10/15/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
73005	WL	10/15/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73005	WL	10/15/2007	07101215	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
73005	WL	10/15/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	10/15/2007	07101215	95-50-1	1,2-Dichlorobenzene	N002	0.21	ug/L	J B	F	0.13		U
73005	WL	10/15/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	10/15/2007	07101215	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
73005	WL	10/15/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73005	WL	10/15/2007	07101215	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
73005	WL	10/15/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid

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73005	WL	10/15/2007	07101215	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73005	WL	10/15/2007	07101215	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
73005	WL	10/15/2007	07101215	7440-43-9	Cadmium	0001	0.85	ug/L	B	F	0.45		valid
73005	WL	10/15/2007	07101215	7440-43-9	Cadmium	0002	0.64	ug/L	B	F	0.45		valid
73005	WL	10/15/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
73005	WL	10/15/2007	07101215	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		J
73005	WL	10/15/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73005	WL	10/15/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
73005	WL	10/15/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
73005	WL	10/15/2007	07101215	7440-50-8	Copper	0002	4.5	ug/L	U	F	4.5		valid
73005	WL	10/15/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73005	WL	10/15/2007	07101215	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
73005	WL	10/15/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
73005	WL	10/15/2007	07101215	7439-92-1	Lead	0002	2.6	ug/L	U	F	2.6		valid
73005	WL	10/15/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
73005	WL	10/15/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73005	WL	10/15/2007	07101215	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
73005	WL	10/15/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
73005	WL	10/15/2007	07101215	7440-02-0	Nickel	0002	7.8	ug/L	U	F	7.8		valid
73005	WL	10/15/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
73005	WL	10/15/2007	07101215	7440-22-4	Silver	0002	2.8	ug/L	U	F	2.8		valid
73005	WL	10/15/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73005	WL	10/15/2007	07101215	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
73005	WL	10/15/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73005	WL	10/15/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
73005	WL	10/15/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
73005	WL	10/15/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
73005	WL	10/15/2007	07101215	7440-61-1	Uranium	0001	25	ug/L	B	F	16		J
73005	WL	10/15/2007	07101215	7440-61-1	Uranium	0002	25	ug/L	B	F	16		valid
73005	WL	10/15/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
73005	WL	10/15/2007	07101215	7440-66-6	Zinc	0001	7.5	ug/L	B	F	4.5		U
73005	WL	10/15/2007	07101215	7440-66-6	Zinc	0002	14	ug/L	B	F	4.5		U

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73105	WL	10/11/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73105	WL	10/11/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73105	WL	10/11/2007	07101206	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
73105	WL	10/11/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73105	WL	10/11/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73105	WL	10/11/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73105	WL	10/11/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	10/11/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	10/11/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73105	WL	10/11/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	10/11/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73105	WL	10/11/2007	07101206	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
73105	WL	10/11/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	10/11/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
73105	WL	10/11/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73105	WL	10/11/2007	07101206	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
73105	WL	10/11/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73105	WL	10/11/2007	07101206	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
73105	WL	10/11/2007	07101206	75-09-2	Methylene chloride	N001	0.37	ug/L	J	F	0.32		U
73105	WL	10/11/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73105	WL	10/11/2007	07101206	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
73105	WL	10/11/2007	07101206	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
73105	WL	10/11/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73105	WL	10/11/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	10/11/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73105	WL	10/11/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73105	WL	10/11/2007	07101206	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73105	WL	10/11/2007	07101206	7440-61-1	Uranium	0001	22	ug/L	B	F	16		valid
73105	WL	10/11/2007	07101206	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73105	WL	10/11/2007	07101206	7440-66-6	Zinc	0001	4.6	ug/L	B	F	4.5		valid
73205	WL	10/11/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
73205	WL	10/11/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
73205	WL	10/11/2007	07101206	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
73205	WL	10/11/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
73205	WL	10/11/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
73205	WL	10/11/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
73205	WL	10/11/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	10/11/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	10/11/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
73205	WL	10/11/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid

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73205	WL	10/11/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	10/11/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
73205	WL	10/11/2007	07101206	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
73205	WL	10/11/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	10/11/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	10/11/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	10/11/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
73205	WL	10/11/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73205	WL	10/11/2007	07101206	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
73205	WL	10/11/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
73205	WL	10/11/2007	07101206	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
73205	WL	10/11/2007	07101206	75-09-2	Methylene chloride	N001	0.33	ug/L	J	F	0.32		U
73205	WL	10/11/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
73205	WL	10/11/2007	07101206	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
73205	WL	10/11/2007	07101206	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
73205	WL	10/11/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	10/11/2007	07101206	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
73205	WL	10/11/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	10/11/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	10/11/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
73205	WL	10/11/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
73205	WL	10/11/2007	07101206	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
73205	WL	10/11/2007	07101206	7440-61-1	Uranium	0001	120	ug/L		F	16		valid
73205	WL	10/11/2007	07101206	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
73205	WL	10/11/2007	07101206	7440-66-6	Zinc	0001	4.5	ug/L	U	F	4.5		valid
80005	WL	10/18/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	10/18/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	10/18/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80005	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		valid
80005	WL	10/18/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80005	WL	10/18/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80005	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		valid
80005	WL	10/18/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	10/18/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80005	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		valid
80005	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		valid
80005	WL	10/18/2007	07101215	105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80005	WL	10/18/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80005	WL	10/18/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80005	WL	10/18/2007	07101215	120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80005	WL	10/18/2007	07101215	51-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80005	WL	10/18/2007	07101215	121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80005	WL	10/18/2007	07101215	606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80005	WL	10/18/2007	07101215	91-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	10/18/2007	07101215	95-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80005	WL	10/18/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80005	WL	10/18/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	10/18/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid

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80005	WL	10/18/2007	07101215	100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80005	WL	10/18/2007	07101215	83-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80005	WL	10/18/2007	07101215	120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80005	WL	10/18/2007	07101215	56-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	10/18/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	50-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80005	WL	10/18/2007	07101215	205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80005	WL	10/18/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80005	WL	10/18/2007	07101215	207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80005	WL	10/18/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80005	WL	10/18/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80005	WL	10/18/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80005	WL	10/18/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	10/18/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80005	WL	10/18/2007	07101215	85-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80005	WL	10/18/2007	07101215	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
80005	WL	10/18/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	10/18/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80005	WL	10/18/2007	07101215	218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80005	WL	10/18/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80005	WL	10/18/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
80005	WL	10/18/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80005	WL	10/18/2007	07101215	84-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80005	WL	10/18/2007	07101215	131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80005	WL	10/18/2007	07101215	84-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80005	WL	10/18/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	10/18/2007	07101215	86-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	10/18/2007	07101215	118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80005	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80005	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		valid
80005	WL	10/18/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80005	WL	10/18/2007	07101215	67-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80005	WL	10/18/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80005	WL	10/18/2007	07101215	78-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80005	WL	10/18/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
80005	WL	10/18/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80005	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80005	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		valid
80005	WL	10/18/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
80005	WL	10/18/2007	07101215	98-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80005	WL	10/18/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80005	WL	10/18/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80005	WL	10/18/2007	07101215	87-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80005	WL	10/18/2007	07101215	108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80005	WL	10/18/2007	07101215	129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80005	WL	10/18/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
80005	WL	10/18/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80005	WL	10/18/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid

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80005	WL	10/18/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80005	WL	10/18/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80005	WL	10/18/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80005	WL	10/18/2007	07101215	7440-61-1	Uranium	0001	27	ug/L	B	F	16		valid
80005	WL	10/18/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80005	WL	10/18/2007	07101215	7440-66-6	Zinc	0001	5.7	ug/L	B	F	4.5		U
80105	WL	10/18/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	10/18/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	10/18/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80105	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		valid
80105	WL	10/18/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80105	WL	10/18/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80105	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		valid
80105	WL	10/18/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	10/18/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80105	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		valid
80105	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		valid
80105	WL	10/18/2007	07101215	105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80105	WL	10/18/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80105	WL	10/18/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80105	WL	10/18/2007	07101215	120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80105	WL	10/18/2007	07101215	51-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80105	WL	10/18/2007	07101215	121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80105	WL	10/18/2007	07101215	606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80105	WL	10/18/2007	07101215	91-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	10/18/2007	07101215	95-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80105	WL	10/18/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80105	WL	10/18/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	10/18/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80105	WL	10/18/2007	07101215	100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80105	WL	10/18/2007	07101215	83-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80105	WL	10/18/2007	07101215	120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80105	WL	10/18/2007	07101215	56-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	10/18/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	50-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80105	WL	10/18/2007	07101215	205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80105	WL	10/18/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80105	WL	10/18/2007	07101215	207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80105	WL	10/18/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80105	WL	10/18/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80105	WL	10/18/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80105	WL	10/18/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	10/18/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80105	WL	10/18/2007	07101215	85-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80105	WL	10/18/2007	07101215	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
80105	WL	10/18/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	10/18/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid

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80105	WL	10/18/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80105	WL	10/18/2007	07101215	218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80105	WL	10/18/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80105	WL	10/18/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
80105	WL	10/18/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80105	WL	10/18/2007	07101215	84-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80105	WL	10/18/2007	07101215	131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80105	WL	10/18/2007	07101215	84-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80105	WL	10/18/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	10/18/2007	07101215	86-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	10/18/2007	07101215	118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80105	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80105	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		valid
80105	WL	10/18/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80105	WL	10/18/2007	07101215	67-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80105	WL	10/18/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80105	WL	10/18/2007	07101215	78-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80105	WL	10/18/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
80105	WL	10/18/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80105	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80105	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		valid
80105	WL	10/18/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
80105	WL	10/18/2007	07101215	98-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80105	WL	10/18/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80105	WL	10/18/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80105	WL	10/18/2007	07101215	87-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80105	WL	10/18/2007	07101215	108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80105	WL	10/18/2007	07101215	129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80105	WL	10/18/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
80105	WL	10/18/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80105	WL	10/18/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	10/18/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80105	WL	10/18/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80105	WL	10/18/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80105	WL	10/18/2007	07101215	7440-61-1	Uranium	0001	35	ug/L	B	F	16		valid
80105	WL	10/18/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80105	WL	10/18/2007	07101215	7440-66-6	Zinc	0001	5.1	ug/L	B	F	4.5		U
80205	WL	10/17/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/17/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/17/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80205	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		valid
80205	WL	10/17/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	10/17/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80205	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		valid
80205	WL	10/17/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/17/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		valid
80205	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid

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80205	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		valid
80205	WL	10/17/2007	07101215	105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80205	WL	10/17/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80205	WL	10/17/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	10/17/2007	07101215	120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80205	WL	10/17/2007	07101215	51-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80205	WL	10/17/2007	07101215	121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80205	WL	10/17/2007	07101215	606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80205	WL	10/17/2007	07101215	91-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/17/2007	07101215	95-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	10/17/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80205	WL	10/17/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/17/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80205	WL	10/17/2007	07101215	100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80205	WL	10/17/2007	07101215	83-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80205	WL	10/17/2007	07101215	120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80205	WL	10/17/2007	07101215	56-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/17/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	50-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80205	WL	10/17/2007	07101215	205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80205	WL	10/17/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
80205	WL	10/17/2007	07101215	207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	10/17/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80205	WL	10/17/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80205	WL	10/17/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80205	WL	10/17/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/17/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	10/17/2007	07101215	85-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	10/17/2007	07101215	7440-43-9	Cadmium	0001	0.57	ug/L	B	F	0.45		valid
80205	WL	10/17/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/17/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80205	WL	10/17/2007	07101215	218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80205	WL	10/17/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	10/17/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
80205	WL	10/17/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80205	WL	10/17/2007	07101215	84-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	10/17/2007	07101215	131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	10/17/2007	07101215	84-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80205	WL	10/17/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/17/2007	07101215	86-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/17/2007	07101215	118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80205	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80205	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		valid
80205	WL	10/17/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	10/17/2007	07101215	67-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	10/17/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80205	WL	10/17/2007	07101215	78-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	10/17/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
80205	WL	10/17/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/17/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid

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80205	WL	10/17/2007	07101215	91-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		valid
80205	WL	10/17/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
80205	WL	10/17/2007	07101215	98-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80205	WL	10/17/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/17/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80205	WL	10/17/2007	07101215	87-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80205	WL	10/17/2007	07101215	108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/17/2007	07101215	129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	10/17/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
80205	WL	10/17/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/17/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/17/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	10/17/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/17/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/17/2007	07101215	7440-61-1	Uranium	0001	69	ug/L		F	16		valid
80205	WL	10/17/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/17/2007	07101215	7440-66-6	Zinc	0001	5.6	ug/L	B	F	4.5		U
80205	WL	10/18/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/18/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/18/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
80205	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/18/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		valid
80205	WL	10/18/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	10/18/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
80205	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/18/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		valid
80205	WL	10/18/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/18/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
80205	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		valid
80205	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		valid
80205	WL	10/18/2007	07101215	105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
80205	WL	10/18/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
80205	WL	10/18/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	10/18/2007	07101215	120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
80205	WL	10/18/2007	07101215	51-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
80205	WL	10/18/2007	07101215	121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
80205	WL	10/18/2007	07101215	606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
80205	WL	10/18/2007	07101215	91-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/18/2007	07101215	95-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	10/18/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
80205	WL	10/18/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/18/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
80205	WL	10/18/2007	07101215	100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
80205	WL	10/18/2007	07101215	83-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
80205	WL	10/18/2007	07101215	120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
80205	WL	10/18/2007	07101215	56-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/18/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	50-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
80205	WL	10/18/2007	07101215	205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
80205	WL	10/18/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid

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80205	WL	10/18/2007	07101215	207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	10/18/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
80205	WL	10/18/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
80205	WL	10/18/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
80205	WL	10/18/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/18/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	10/18/2007	07101215	85-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	10/18/2007	07101215	7440-43-9	Cadmium	0001	0.57	ug/L	B	F	0.45		valid
80205	WL	10/18/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/18/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80205	WL	10/18/2007	07101215	218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
80205	WL	10/18/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	10/18/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
80205	WL	10/18/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
80205	WL	10/18/2007	07101215	84-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
80205	WL	10/18/2007	07101215	131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
80205	WL	10/18/2007	07101215	84-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
80205	WL	10/18/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/18/2007	07101215	86-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/18/2007	07101215	118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
80205	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
80205	WL	10/18/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		valid
80205	WL	10/18/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
80205	WL	10/18/2007	07101215	67-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid
80205	WL	10/18/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
80205	WL	10/18/2007	07101215	78-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
80205	WL	10/18/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
80205	WL	10/18/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
80205	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
80205	WL	10/18/2007	07101215	91-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		valid
80205	WL	10/18/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
80205	WL	10/18/2007	07101215	98-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
80205	WL	10/18/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
80205	WL	10/18/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
80205	WL	10/18/2007	07101215	87-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
80205	WL	10/18/2007	07101215	108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
80205	WL	10/18/2007	07101215	129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
80205	WL	10/18/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
80205	WL	10/18/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
80205	WL	10/18/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/18/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
80205	WL	10/18/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
80205	WL	10/18/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
80205	WL	10/18/2007	07101215	7440-61-1	Uranium	0001	94	ug/L		F	16		valid
80205	WL	10/18/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
80205	WL	10/18/2007	07101215	7440-66-6	Zinc	0001	4.6	ug/L	B	F	4.5		U
88104	WL	10/22/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid

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88104	WL	10/22/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/22/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
88104	WL	10/22/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/22/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
88104	WL	10/22/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
88104	WL	10/22/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/22/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/22/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/22/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/22/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/22/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
88104	WL	10/22/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/22/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/22/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/22/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
88104	WL	10/22/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
88104	WL	10/22/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/22/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
88104	WL	10/22/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/22/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
88104	WL	10/22/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/22/2007	07101228	127-18-4	Tetrachloroethene	N001	0.22	ug/L	J	F	0.2		valid
88104	WL	10/22/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/22/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/22/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
88104	WL	10/22/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/22/2007	07101228	79-01-6	Trichloroethene	N001	0.24	ug/L	J	F	0.16		valid
88104	WL	10/22/2007	07101228	7440-61-1	Uranium	0001	47	ug/L		F	0.02		valid
88104	WL	10/22/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
88104	WL	10/23/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/23/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
88104	WL	10/23/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/23/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
88104	WL	10/23/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
88104	WL	10/23/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/23/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/23/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
88104	WL	10/23/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/23/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
88104	WL	10/23/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/23/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
88104	WL	10/23/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid

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88104	WL	10/23/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
88104	WL	10/23/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
88104	WL	10/23/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
88104	WL	10/23/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
88104	WL	10/23/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
88104	WL	10/23/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/23/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
88104	WL	10/23/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
88104	WL	10/23/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
88104	WL	10/23/2007	07101228	7440-61-1	Uranium	0001	51	ug/L		F	0.02		valid
88104	WL	10/23/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
89104	WL	10/23/2007	07101228	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
89104	WL	10/23/2007	07101228	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
89104	WL	10/23/2007	07101228	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
89104	WL	10/23/2007	07101228	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
89104	WL	10/23/2007	07101228	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
89104	WL	10/23/2007	07101228	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
89104	WL	10/23/2007	07101228	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
89104	WL	10/23/2007	07101228	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
89104	WL	10/23/2007	07101228	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
89104	WL	10/23/2007	07101228	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
89104	WL	10/23/2007	07101228	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
89104	WL	10/23/2007	07101228	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
89104	WL	10/23/2007	07101228	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
89104	WL	10/23/2007	07101228	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
89104	WL	10/23/2007	07101228	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
89104	WL	10/23/2007	07101228	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
89104	WL	10/23/2007	07101228	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
89104	WL	10/23/2007	07101228	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
89104	WL	10/23/2007	07101228	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
89104	WL	10/23/2007	07101228	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
89104	WL	10/23/2007	07101228	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
89104	WL	10/23/2007	07101228	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
89104	WL	10/23/2007	07101228	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
90299	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
90299	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
90299	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
90299	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
90299	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
90299	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
90299	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
90299	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid

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90299	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
90299	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
90299	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	1	ug/L		F	0.16		valid
90299	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
90299	WL	11/6/2007	07111261	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
90299	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
90299	WL	11/6/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
90299	WL	11/6/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
90299	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
90299	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
90299	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
90299	WL	11/6/2007	07111261	67-66-3	Chloroform	N001	0.61	ug/L	J	F	0.16		valid
90299	WL	11/6/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
90299	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
90299	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
90299	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
90299	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
90299	WL	11/6/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
90299	WL	11/6/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
90299	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
90299	WL	11/6/2007	07111261	108-88-3	Toluene	N001	0.34	ug/L	J	F	0.17		valid
90299	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
90299	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
90299	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
90299	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N001	0.78	ug/L	J	F	0.16		valid
90299	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
90399	WL	11/6/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
90399	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N001	0.87	ug/L	J	F	0.14		valid
90399	WL	11/6/2007	07111261	75-35-4	1,1-Dichloroethene	N002	1.3	ug/L		F	0.14		valid
90399	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
90399	WL	11/6/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
90399	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
90399	WL	11/6/2007	07111261	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
90399	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
90399	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	0.82	ug/L	J	F	0.16		valid
90399	WL	11/6/2007	07111261	541-73-1	1,3-Dichlorobenzene	N002	0.8	ug/L	J	F	0.16		valid
90399	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid

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90399	WL	11/6/2007	07111261	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
90399	WL	11/6/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
90399	WL	11/6/2007	07111261	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
90399	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N001	140	ug/L		F	1.9		valid
90399	WL	11/6/2007	07111261	56-23-5	Carbon tetrachloride	N002	200	ug/L		F	1.9		valid
90399	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	67-66-3	Chloroform	N001	34	ug/L		F	0.16		valid
90399	WL	11/6/2007	07111261	67-66-3	Chloroform	N002	40	ug/L		F	0.16		valid
90399	WL	11/6/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
90399	WL	11/6/2007	07111261	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
90399	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	3.7	ug/L		F	0.15		valid
90399	WL	11/6/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N002	4.2	ug/L		F	0.15		valid
90399	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
90399	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
90399	WL	11/6/2007	07111261	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
90399	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
90399	WL	11/6/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
90399	WL	11/6/2007	07111261	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
90399	WL	11/6/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N001	4.4	ug/L		F	0.2		valid
90399	WL	11/6/2007	07111261	127-18-4	Tetrachloroethene	N002	5.1	ug/L		F	0.2		valid
90399	WL	11/6/2007	07111261	108-88-3	Toluene	N001	0.27	ug/L	J	F	0.17		valid
90399	WL	11/6/2007	07111261	108-88-3	Toluene	N002	0.2	ug/L	J	F	0.17		valid
90399	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
90399	WL	11/6/2007	07111261	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
90399	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
90399	WL	11/6/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
90399	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
90399	WL	11/6/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
90399	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N001	300	ug/L		F	1.6		valid
90399	WL	11/6/2007	07111261	79-01-6	Trichloroethene	N002	370	ug/L		F	1.6		valid
90399	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
90399	WL	11/6/2007	07111261	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	4.3	ug/L		F	0.16		valid
91203	WL	10/30/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
91203	WL	10/30/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
91203	WL	10/30/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.94	ug/L	J	F	0.14		valid
91203	WL	10/30/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
91203	WL	10/30/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
91203	WL	10/30/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
91203	WL	10/30/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
91203	WL	10/30/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
91203	WL	10/30/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
91203	WL	10/30/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
91203	WL	10/30/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
91203	WL	10/30/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
91203	WL	10/30/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
91203	WL	10/30/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid

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91203	WL	10/30/2007	07111250	56-23-5	Carbon tetrachloride	N001	95	ug/L		F	1.9		valid
91203	WL	10/30/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	67-66-3	Chloroform	N001	6.1	ug/L		F	0.16		valid
91203	WL	10/30/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
91203	WL	10/30/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	2.2	ug/L		F	0.15		valid
91203	WL	10/30/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
91203	WL	10/30/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
91203	WL	10/30/2007	07111250	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
91203	WL	10/30/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
91203	WL	10/30/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	127-18-4	Tetrachloroethene	N001	12	ug/L		F	0.2		valid
91203	WL	10/30/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
91203	WL	10/30/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
91203	WL	10/30/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
91203	WL	10/30/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
91203	WL	10/30/2007	07111250	79-01-6	Trichloroethene	N001	5.7	ug/L		F	0.16		valid
91203	WL	10/30/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
91305	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
91305	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N003	0.2	ug/L	U	F	0.2		valid
91305	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
91305	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N003	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
91305	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
91305	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N003	0.14	ug/L	U	F	0.14		valid
91305	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
91305	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N003	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
91305	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
91305	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N003	1.5	ug/L	U	F	1.5		valid
91305	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
91305	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
91305	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N003	0.18	ug/L	U	F	0.18		valid
91305	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
91305	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N003	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
91305	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N003	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
91305	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N003	0.13	ug/L	U	F	0.13		valid
91305	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid

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91305	WL	11/5/2007	07111261	71-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	71-43-2	Benzene	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N003	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
91305	WL	11/5/2007	07111261	75-25-2	Bromoform	N003	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
91305	WL	11/5/2007	07111261	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
91305	WL	11/5/2007	07111261	74-83-9	Bromomethane	N003	0.21	ug/L	U	F	0.21		valid
91305	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
91305	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N003	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N003	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N003	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	67-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	67-66-3	Chloroform	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
91305	WL	11/5/2007	07111261	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
91305	WL	11/5/2007	07111261	74-87-3	Chloromethane	N003	0.3	ug/L	U	F	0.3		valid
91305	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	6.3	ug/L		F	0.15		valid
91305	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N002	7.5	ug/L		D	0.15		valid
91305	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N003	7.6	ug/L		F	0.15		valid
91305	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
91305	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
91305	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N003	0.12	ug/L	U	F	0.12		valid
91305	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
91305	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N003	0.32	ug/L	U	F	0.32		valid
91305	WL	11/5/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
91305	WL	11/5/2007	07111261	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
91305	WL	11/5/2007	07111261	91-20-3	Naphthalene	N003	0.22	ug/L	U	F	0.22		valid
91305	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.074	mg/L		F	0.019		valid
91305	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.26	mg/L		D	0.019		valid
91305	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N003	0.25	mg/L		F	0.019		valid
91305	WL	11/5/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	100-42-5	Styrene	N003	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		J
91305	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
91305	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N003	0.2	ug/L	U	F	0.2		valid
91305	WL	11/5/2007	07111261	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	108-88-3	Toluene	N003	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid

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91305	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N003	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
91305	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
91305	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N003	0.15	ug/L	U	F	0.15		valid
91305	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
91305	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N003	0.19	ug/L	U	F	0.19		valid
91305	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
91305	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N003	0.16	ug/L	U	F	0.16		valid
91305	WL	11/5/2007	07111261	7440-61-1	Uranium	0001	48	ug/L		F	0.02		valid
91305	WL	11/5/2007	07111261	7440-61-1	Uranium	0002	53	ug/L		D	0.02		valid
91305	WL	11/5/2007	07111261	7440-61-1	Uranium	0003	54	ug/L		F	0.02		valid
91305	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
91305	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		valid
91305	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N003	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
95099	WL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
95099	WL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
95099	WL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
95099	WL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
95099	WL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
95099	WL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
95099	WL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
95099	WL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
95099	WL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.59	ug/L	J	F	0.16		valid
95099	WL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N002	0.51	ug/L	J	F	0.16		valid
95099	WL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
95099	WL	11/8/2007	07111263	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
95099	WL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	J	F	0.19		valid
95099	WL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid

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95099	WL	11/8/2007	07111263	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
95099	WL	11/8/2007	07111263	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
95099	WL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
95099	WL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
95099	WL	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
95099	WL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
95099	WL	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
95099	WL	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
95099	WL	11/8/2007	07111263	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
95099	WL	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
95099	WL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
95099	WL	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
95099	WL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
95099	WL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
95099	WL	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
95099	WL	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
95099	WL	11/8/2007	07111263	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
95199	WL	11/13/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
95199	WL	11/13/2007	07111270	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	75-35-4	1,1-Dichloroethene	N001	0.21	ug/L	J	F	0.14		valid
95199	WL	11/13/2007	07111270	75-35-4	1,1-Dichloroethene	N002	0.57	ug/L	J	F	0.14		valid
95199	WL	11/13/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
95199	WL	11/13/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
95199	WL	11/13/2007	07111270	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
95199	WL	11/13/2007	07111270	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
95199	WL	11/13/2007	07111270	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
95199	WL	11/13/2007	07111270	541-73-1	1,3-Dichlorobenzene	N001	0.35	ug/L	J	F	0.16		valid
95199	WL	11/13/2007	07111270	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid

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95199	WL	11/13/2007	07111270	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
95199	WL	11/13/2007	07111270	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
95199	WL	11/13/2007	07111270	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	67-66-3	Chloroform	N002	0.18	ug/L	J	F	0.16		valid
95199	WL	11/13/2007	07111270	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
95199	WL	11/13/2007	07111270	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
95199	WL	11/13/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N001	1.1	ug/L		F	0.15		valid
95199	WL	11/13/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N002	2.2	ug/L		F	0.15		valid
95199	WL	11/13/2007	07111270	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
95199	WL	11/13/2007	07111270	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
95199	WL	11/13/2007	07111270	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
95199	WL	11/13/2007	07111270	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
95199	WL	11/13/2007	07111270	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
95199	WL	11/13/2007	07111270	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
95199	WL	11/13/2007	07111270	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	127-18-4	Tetrachloroethene	N001	0.38	ug/L	J	F	0.2		valid
95199	WL	11/13/2007	07111270	127-18-4	Tetrachloroethene	N002	2.1	ug/L		F	0.2		valid
95199	WL	11/13/2007	07111270	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
95199	WL	11/13/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
95199	WL	11/13/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
95199	WL	11/13/2007	07111270	79-01-6	Trichloroethene	N001	16	ug/L		F	0.16		valid
95199	WL	11/13/2007	07111270	79-01-6	Trichloroethene	N002	58	ug/L		F	0.32		valid
95199	WL	11/13/2007	07111270	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
95199	WL	11/13/2007	07111270	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
99305	WL	11/1/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
99305	WL	11/1/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
99305	WL	11/1/2007	07111250	75-35-4	1,1-Dichloroethene	N002	0.29	ug/L	J	F	0.14		valid
99305	WL	11/1/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
99305	WL	11/1/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
99305	WL	11/1/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid

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99305	WL	11/1/2007	07111250	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
99305	WL	11/1/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
99305	WL	11/1/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
99305	WL	11/1/2007	07111250	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
99305	WL	11/1/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
99305	WL	11/1/2007	07111250	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
99305	WL	11/1/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	6.9	ug/L		F	0.15		valid
99305	WL	11/1/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N002	10	ug/L		F	0.15		valid
99305	WL	11/1/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
99305	WL	11/1/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
99305	WL	11/1/2007	07111250	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
99305	WL	11/1/2007	07111250	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
99305	WL	11/1/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
99305	WL	11/1/2007	07111250	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
99305	WL	11/1/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.019	mg/L	U	F	0.019		valid
99305	WL	11/1/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.34	mg/L		F	0.019		valid
99305	WL	11/1/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	127-18-4	Tetrachloroethene	N001	1.8	ug/L		F	0.2		valid
99305	WL	11/1/2007	07111250	127-18-4	Tetrachloroethene	N002	4.2	ug/L		F	0.2		valid
99305	WL	11/1/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
99305	WL	11/1/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
99305	WL	11/1/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
99305	WL	11/1/2007	07111250	79-01-6	Trichloroethene	N001	27	ug/L		F	0.16		valid
99305	WL	11/1/2007	07111250	79-01-6	Trichloroethene	N002	75	ug/L		F	0.32		valid

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99305	WL	11/1/2007	07111250	7440-61-1	Uranium	0001	63	ug/L		F	0.02		J
99305	WL	11/1/2007	07111250	7440-61-1	Uranium	0002	61	ug/L		F	0.02		J
99305	WL	11/1/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
99305	WL	11/1/2007	07111250	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
99405	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
99405	WL	11/5/2007	07111261	71-55-6	1,1,1-Trichloroethane	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
99405	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
99405	WL	11/5/2007	07111261	79-34-5	1,1,2,2-Tetrachloroethane	N003	0.2	ug/L	U	F	0.2		J
99405	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
99405	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
99405	WL	11/5/2007	07111261	79-00-5	1,1,2-Trichloroethane	N003	0.32	ug/L	U	F	0.32		J
99405	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
99405	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
99405	WL	11/5/2007	07111261	75-35-4	1,1-Dichloroethene	N003	0.14	ug/L	U	F	0.14		J
99405	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
99405	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
99405	WL	11/5/2007	07111261	120-82-1	1,2,4-Trichlorobenzene	N003	0.32	ug/L	U	F	0.32		J
99405	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
99405	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
99405	WL	11/5/2007	07111261	96-12-8	1,2-Dibromo-3-chloropropane	N003	1.5	ug/L	U	F	1.5		J
99405	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
99405	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
99405	WL	11/5/2007	07111261	106-93-4	1,2-Dibromoethane	N003	0.18	ug/L	U	F	0.18		J
99405	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
99405	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
99405	WL	11/5/2007	07111261	95-50-1	1,2-Dichlorobenzene	N003	0.13	ug/L	U	F	0.13		J
99405	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
99405	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
99405	WL	11/5/2007	07111261	107-06-2	1,2-Dichloroethane	N003	0.13	ug/L	U	F	0.13		J
99405	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
99405	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
99405	WL	11/5/2007	07111261	78-87-5	1,2-Dichloropropane	N003	0.13	ug/L	U	F	0.13		J
99405	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	J	F	0.16		valid
99405	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
99405	WL	11/5/2007	07111261	541-73-1	1,3-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
99405	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
99405	WL	11/5/2007	07111261	106-46-7	1,4-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
99405	WL	11/5/2007	07111261	71-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
99405	WL	11/5/2007	07111261	71-43-2	Benzene	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	75-27-4	Bromodichloromethane	N003	0.17	ug/L	U	F	0.17		J
99405	WL	11/5/2007	07111261	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
99405	WL	11/5/2007	07111261	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
99405	WL	11/5/2007	07111261	75-25-2	Bromoform	N003	0.19	ug/L	U	F	0.19		J
99405	WL	11/5/2007	07111261	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
99405	WL	11/5/2007	07111261	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
99405	WL	11/5/2007	07111261	74-83-9	Bromomethane	N003	0.21	ug/L	U	F	0.21		J
99405	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
99405	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
99405	WL	11/5/2007	07111261	56-23-5	Carbon tetrachloride	N003	0.19	ug/L	U	F	0.19		J

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99405	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	108-90-7	Chlorobenzene	N003	0.17	ug/L	U	F	0.17		J
99405	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	124-48-1	Chlorodibromomethane	N003	0.17	ug/L	U	F	0.17		J
99405	WL	11/5/2007	07111261	67-66-3	Chloroform	N001	0.18	ug/L	J	F	0.16		valid
99405	WL	11/5/2007	07111261	67-66-3	Chloroform	N002	0.17	ug/L	J	D	0.16		valid
99405	WL	11/5/2007	07111261	67-66-3	Chloroform	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
99405	WL	11/5/2007	07111261	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
99405	WL	11/5/2007	07111261	74-87-3	Chloromethane	N003	0.3	ug/L	U	F	0.3		J
99405	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N001	1.1	ug/L		F	0.15		valid
99405	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N002	1.6	ug/L		D	0.15		valid
99405	WL	11/5/2007	07111261	156-59-2	cis-1,2-Dichloroethene	N003	1.4	ug/L		F	0.15		J
99405	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
99405	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
99405	WL	11/5/2007	07111261	100-41-4	Ethylbenzene	N003	0.16	ug/L	U	F	0.16		J
99405	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
99405	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
99405	WL	11/5/2007	07111261	87-68-3	Hexachlorobutadiene	N003	0.12	ug/L	U	F	0.12		J
99405	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
99405	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
99405	WL	11/5/2007	07111261	75-09-2	Methylene chloride	N003	0.32	ug/L	U	F	0.32		J
99405	WL	11/5/2007	07111261	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
99405	WL	11/5/2007	07111261	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
99405	WL	11/5/2007	07111261	91-20-3	Naphthalene	N003	0.22	ug/L	U	F	0.22		J
99405	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	3.9	mg/L		F	0.019		valid
99405	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	4.1	mg/L		D	0.019		valid
99405	WL	11/5/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N003	4.2	mg/L		F	0.019		valid
99405	WL	11/5/2007	07111261	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	100-42-5	Styrene	N003	0.17	ug/L	U	F	0.17		J
99405	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N001	0.47	ug/L	J	F	0.2		valid
99405	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N002	0.79	ug/L	J	D	0.2		valid
99405	WL	11/5/2007	07111261	127-18-4	Tetrachloroethene	N003	0.83	ug/L	J	F	0.2		J
99405	WL	11/5/2007	07111261	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
99405	WL	11/5/2007	07111261	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	108-88-3	Toluene	N003	0.17	ug/L	U	F	0.17		J
99405	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
99405	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
99405	WL	11/5/2007	07111261	1330-20-7	Total Xylenes	N003	0.19	ug/L	U	F	0.19		J
99405	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
99405	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
99405	WL	11/5/2007	07111261	156-60-5	trans-1,2-Dichloroethene	N003	0.15	ug/L	U	F	0.15		J
99405	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
99405	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
99405	WL	11/5/2007	07111261	10061-02-6	trans-1,3-dichloropropene	N003	0.19	ug/L	U	F	0.19		J
99405	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N001	69	ug/L		F	0.64		valid
99405	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N002	91	ug/L		D	0.64		valid
99405	WL	11/5/2007	07111261	79-01-6	Trichloroethene	N003	120	ug/L		F	0.64		J
99405	WL	11/5/2007	07111261	7440-61-1	Uranium	0001	440	ug/L		F	0.02		valid
99405	WL	11/5/2007	07111261	7440-61-1	Uranium	0002	400	ug/L		D	0.02		valid
99405	WL	11/5/2007	07111261	7440-61-1	Uranium	0003	400	ug/L		F	0.02		valid
99405	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid

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99405	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		valid
99405	WL	11/5/2007	07111261	75-01-4	Vinyl chloride	N003	0.17	ug/L	U	F	0.17		J
A3INF	SL	12/6/2007	07121313	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	90	mg/L		F	0.96		valid
B206989	WL	10/16/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
B206989	WL	10/16/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
B206989	WL	10/16/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
B206989	WL	10/16/2007	07101215	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
B206989	WL	10/16/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
B206989	WL	10/16/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
B206989	WL	10/16/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
B206989	WL	10/16/2007	07101215	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
B206989	WL	10/16/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
B206989	WL	10/16/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
B206989	WL	10/16/2007	07101215	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
B206989	WL	10/16/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
B206989	WL	10/16/2007	07101215	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		J
B206989	WL	10/16/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
B206989	WL	10/16/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
B206989	WL	10/16/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
B206989	WL	10/16/2007	07101215	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
B206989	WL	10/16/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
B206989	WL	10/16/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
B206989	WL	10/16/2007	07101215	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid

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B206989	WL	10/16/2007	07101215	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	27	mg/L		F	0.38		valid
B206989	WL	10/16/2007	07101215	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	28	mg/L		F	0.38		valid
B206989	WL	10/16/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
B206989	WL	10/16/2007	07101215	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
B206989	WL	10/16/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
B206989	WL	10/16/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
B206989	WL	10/16/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
B206989	WL	10/16/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
B206989	WL	10/16/2007	07101215	7440-61-1	Uranium	0001	89	ug/L		F	0.02		valid
B206989	WL	10/16/2007	07101215	7440-61-1	Uranium	0002	93	ug/L		F	0.02		valid
B206989	WL	10/16/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
B206989	WL	10/16/2007	07101215	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
C2 POND	SL	12/6/2007	07121316	GA	Gross Alpha	N001	4.85	pCi/L		F	4.67	3.71	J
C2 POND	SL	12/6/2007	07121316	GB	Gross Beta	N002	13.7	pCi/L		F	6.24	5.19	J
C2 POND	SL	12/6/2007	07121316	7440-61-1	Uranium	0001	4.7	ug/L		F	0.05		valid
ET EFFLUENT	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
ET EFFLUENT	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
ET EFFLUENT	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
ET EFFLUENT	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
ET EFFLUENT	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
ET EFFLUENT	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
ET EFFLUENT	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
ET EFFLUENT	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	71-43-2	Benzene	N001	0.42	ug/L	J	F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	71-43-2	Benzene	N002	0.42	ug/L	J	D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
ET EFFLUENT	TS	10/9/2007	07101206	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid

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ET EFFLUENT	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	67-66-3	Chloroform	N001	0.25	ug/L	J	F	0.16		U
ET EFFLUENT	TS	10/9/2007	07101206	67-66-3	Chloroform	N002	0.22	ug/L	J	D	0.16		U
ET EFFLUENT	TS	10/9/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
ET EFFLUENT	TS	10/9/2007	07101206	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
ET EFFLUENT	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	22	ug/L		F	0.15		valid
ET EFFLUENT	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N002	22	ug/L		D	0.15		valid
ET EFFLUENT	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
ET EFFLUENT	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N001	1.7	ug/L		F	0.32		U
ET EFFLUENT	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N002	1.9	ug/L		D	0.32		U
ET EFFLUENT	TS	10/9/2007	07101206	91-20-3	Naphthalene	N001	0.42	ug/L	J	F	0.22		valid
ET EFFLUENT	TS	10/9/2007	07101206	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
ET EFFLUENT	TS	10/9/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N001	9.5	ug/L		F	0.2		valid
ET EFFLUENT	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N002	9.7	ug/L		D	0.2		valid
ET EFFLUENT	TS	10/9/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
ET EFFLUENT	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
ET EFFLUENT	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N001	5.3	ug/L		F	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N002	5.5	ug/L		D	0.16		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N001	0.43	ug/L	J	F	0.17		valid
ET EFFLUENT	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N002	0.44	ug/L	J	D	0.17		valid
ET EFFLUENT	TS	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
ET EFFLUENT	TS	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.35	ug/L	J	F	0.14		valid
ET EFFLUENT	TS	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
ET EFFLUENT	TS	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
ET EFFLUENT	TS	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
ET EFFLUENT	TS	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	71-43-2	Benzene	N001	0.35	ug/L	J	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
ET EFFLUENT	TS	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid

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ET EFFLUENT	TS	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
ET EFFLUENT	TS	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	21	ug/L		F	0.15		valid
ET EFFLUENT	TS	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
ET EFFLUENT	TS	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
ET EFFLUENT	TS	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
ET EFFLUENT	TS	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	9.1	ug/L		F	0.2		valid
ET EFFLUENT	TS	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
ET EFFLUENT	TS	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
ET EFFLUENT	TS	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
ET EFFLUENT	TS	11/8/2007	07111263	79-01-6	Trichloroethene	N001	4.4	ug/L		F	0.16		valid
ET EFFLUENT	TS	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.46	ug/L	J	F	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	3.5	ug/L	J	F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	2	ug/L	U	F	2		valid
ET INFLUENT	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
ET INFLUENT	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
ET INFLUENT	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N001	1.4	ug/L	U	F	1.4		valid
ET INFLUENT	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N002	0.54	ug/L	J	D	0.14		valid
ET INFLUENT	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
ET INFLUENT	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	15	ug/L	U	F	15		valid
ET INFLUENT	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
ET INFLUENT	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N001	1.8	ug/L	U	F	1.8		valid
ET INFLUENT	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
ET INFLUENT	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid
ET INFLUENT	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N002	2.4	ug/L		D	0.13		valid
ET INFLUENT	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
ET INFLUENT	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	71-43-2	Benzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	71-43-2	Benzene	N002	1.9	ug/L		D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	75-25-2	Bromoform	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	10/9/2007	07101206	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
ET INFLUENT	TS	10/9/2007	07101206	74-83-9	Bromomethane	N001	2.1	ug/L	U	F	2.1		valid
ET INFLUENT	TS	10/9/2007	07101206	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
ET INFLUENT	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N001	130	ug/L		F	1.9		valid
ET INFLUENT	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
ET INFLUENT	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	67-66-3	Chloroform	N001	71	ug/L		F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	67-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		valid

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ET INFLUENT	TS	10/9/2007	07101206	74-87-3	Chloromethane	N001	3	ug/L	U	F	3		valid
ET INFLUENT	TS	10/9/2007	07101206	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		valid
ET INFLUENT	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	34	ug/L		F	1.5		valid
ET INFLUENT	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N002	320	ug/L		D	1.5		valid
ET INFLUENT	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N001	1.2	ug/L	U	F	1.2		valid
ET INFLUENT	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
ET INFLUENT	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N002	5.5	ug/L		D	0.32		valid
ET INFLUENT	TS	10/9/2007	07101206	91-20-3	Naphthalene	N001	2.2	ug/L	U	F	2.2		valid
ET INFLUENT	TS	10/9/2007	07101206	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
ET INFLUENT	TS	10/9/2007	07101206	100-42-5	Styrene	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N001	270	ug/L		F	2		valid
ET INFLUENT	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
ET INFLUENT	TS	10/9/2007	07101206	108-88-3	Toluene	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
ET INFLUENT	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
ET INFLUENT	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	1.5	ug/L	U	F	1.5		valid
ET INFLUENT	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
ET INFLUENT	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
ET INFLUENT	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N001	2200	ug/L		F	16		valid
ET INFLUENT	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
ET INFLUENT	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N002	39	ug/L		D	0.17		valid
ET INFLUENT	TS	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	2.6	ug/L	J	F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	2	ug/L	U	F	2		valid
ET INFLUENT	TS	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	3.4	ug/L	J	F	1.4		valid
ET INFLUENT	TS	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	15	ug/L	U	F	15		valid
ET INFLUENT	TS	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	1.8	ug/L	U	F	1.8		valid
ET INFLUENT	TS	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	1.3	ug/L	U	F	1.3		valid
ET INFLUENT	TS	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	71-43-2	Benzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	11/8/2007	07111263	75-25-2	Bromoform	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	11/8/2007	07111263	74-83-9	Bromomethane	N001	2.1	ug/L	U	F	2.1		valid
ET INFLUENT	TS	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	110	ug/L		F	1.9		valid
ET INFLUENT	TS	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	11/8/2007	07111263	67-66-3	Chloroform	N001	64	ug/L		F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	74-87-3	Chloromethane	N001	3	ug/L	U	F	3		valid
ET INFLUENT	TS	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	32	ug/L		F	1.5		valid
ET INFLUENT	TS	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	1.6	ug/L	U	F	1.6		valid
ET INFLUENT	TS	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	1.2	ug/L	U	F	1.2		valid
ET INFLUENT	TS	11/8/2007	07111263	75-09-2	Methylene chloride	N001	3.2	ug/L	U	F	3.2		valid
ET INFLUENT	TS	11/8/2007	07111263	91-20-3	Naphthalene	N001	2.2	ug/L	U	F	2.2		valid
ET INFLUENT	TS	11/8/2007	07111263	100-42-5	Styrene	N001	1.7	ug/L	U	F	1.7		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
ET INFLUENT	TS	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	260	ug/L		F	2		valid
ET INFLUENT	TS	11/8/2007	07111263	108-88-3	Toluene	N001	1.7	ug/L	U	F	1.7		valid
ET INFLUENT	TS	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	1.5	ug/L	U	F	1.5		valid
ET INFLUENT	TS	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	1.9	ug/L	U	F	1.9		valid
ET INFLUENT	TS	11/8/2007	07111263	79-01-6	Trichloroethene	N001	2200	ug/L		F	16		valid
ET INFLUENT	TS	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	1.7	ug/L	U	F	1.7		valid
GS01	SL	6/20/2007	08011351	AM-241	Americium-241	N001	-0.000564	pCi/L	HU	F	0.0132	0.0116	valid
GS01	SL	6/20/2007	08011351	PU-239,240	Plutonium-239, 240	N001	0.00378	pCi/L	HU	F	0.0149	0.00454	valid
GS01	SL	6/20/2007	08011351	U-234	Uranium-234	N001	1.03	pCi/L	H	F	0.413	0.277	valid
GS01	SL	6/20/2007	08011351	U-235+236	Uranium-235/236	N001	0.0561	pCi/L	HU	F	0.194	0.0972	valid
GS01	SL	6/20/2007	08011351	U-238	Uranium-238	N001	0.862	pCi/L	H	F	0.246	0.258	valid
GS03	SL	7/30/2007	08011351	AM-241	Americium-241	N001	0.0132	pCi/L	U	F	0.0162	0.0186	valid
GS03	SL	7/30/2007	08011351	PU-239,240	Plutonium-239, 240	N001	0.00471	pCi/L	U	F	0.0148	0.00762	valid
GS03	SL	7/30/2007	08011351	U-234	Uranium-234	N001	1.53	pCi/L		F	0.406	0.354	valid
GS03	SL	7/30/2007	08011351	U-235+236	Uranium-235/236	N001	0.0736	pCi/L	U	F	0.191	0.114	valid
GS03	SL	7/30/2007	08011351	U-238	Uranium-238	N001	1.31	pCi/L		F	0.242	0.347	valid
GS05	SL	10/1/2007	08011346	7440-38-2	Arsenic	N001	7.2	ug/L	B	F	5		valid
GS05	SL	10/1/2007	08011346	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS05	SL	10/1/2007	08011346	7440-42-8	Boron	N001	10	ug/L	U	F	10		valid
GS05	SL	10/1/2007	08011346	7440-43-9	Cadmium	0001	1	ug/L	U	F	1		valid
GS05	SL	10/1/2007	08011346	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
GS05	SL	10/1/2007	08011346	7440-50-8	Copper	0001	3.5	ug/L	B	F	3		valid
GS05	SL	10/1/2007	08011346	7439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		valid
GS05	SL	10/1/2007	08011346	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
GS05	SL	10/1/2007	08011346	7440-02-0	Nickel	0001	1	ug/L	U	F	1		valid
GS05	SL	10/1/2007	08011346	7782-49-2	Selenium	N001	5	ug/L	U	F	5		valid
GS05	SL	10/1/2007	08011346	7440-22-4	Silver	0001	1	ug/L	U	F	1		valid
GS05	SL	10/1/2007	08011346	7440-61-1	Uranium	0001	11	ug/L	B	F	10		valid
GS05	SL	10/1/2007	08011346	7440-61-1	Uranium	N001	13.8	ug/L	B	F	10		valid
GS05	SL	10/1/2007	08011346	U-234	Uranium-234	N001	0.264	pCi/L	U	F	0.4	0.184	valid
GS05	SL	10/1/2007	08011346	U-235+236	Uranium-235/236	N001	-0.0181	pCi/L	U	F	0.188	0.094	valid
GS05	SL	10/1/2007	08011346	U-238	Uranium-238	N001	0.117	pCi/L	U	F	0.239	0.129	valid
GS05	SL	10/1/2007	08011346	7440-66-6	Zinc	0001	3.2	ug/L	B	F	2		valid
GS05	SL	10/23/2007	07101227	71-55-6	1,1,1-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	79-00-5	1,1,2-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	106-93-4	1,2-Dibromoethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	107-06-2	1,2-Dichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	78-87-5	1,2-Dichloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	71-43-2	Benzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	75-27-4	Bromodichloromethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	75-25-2	Bromoform	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	74-83-9	Bromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	56-23-5	Carbon tetrachloride	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	108-90-7	Chlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	124-48-1	Chlorodibromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	67-66-3	Chloroform	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	74-87-3	Chloromethane	N001	0.5	ug/L	HU	F	0.5		valid

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GS05	SL	10/23/2007	07101227	156-59-2	cis-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	100-41-4	Ethylbenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		J
GS05	SL	10/23/2007	07101227	75-09-2	Methylene chloride	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	91-20-3	Naphthalene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	100-42-5	Styrene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	127-18-4	Tetrachloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	108-88-3	Toluene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	1330-20-7	Total Xylenes	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	156-60-5	trans-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	10061-02-6	trans-1,3-dichloropropene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	79-01-6	Trichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS05	SL	10/23/2007	07101227	75-01-4	Vinyl chloride	N001	0.5	ug/L	HU	F	0.5		valid
GS10	SL	10/1/2007	07101235	AM-241	Americium-241	N001	0.0185	pCi/L	U	F	0.0279	0.0148	valid
GS10	SL	10/1/2007	07101235	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	10/1/2007	07101235	7440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		valid
GS10	SL	10/1/2007	07101235	7440-47-3	Chromium	N001	1	ug/L	U	F	1		valid
GS10	SL	10/1/2007	07101235	HARDNESS	Hardness	N001	413	mg/L		F	2		valid
GS10	SL	10/1/2007	07101235	PU-239,240	Plutonium-239, 240	N001	0	pCi/L	U	F	0.016	0.00461	valid
GS10	SL	10/1/2007	07101235	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.200		valid
GS10	SL	10/1/2007	07101192	7440-61-1	Uranium	N001	9.99	ppb		F			valid
GS10	SL	10/1/2007	07101235	U-234	Uranium-234	N001	3.89	pCi/L		F	0.394	0.624	valid
GS10	SL	10/1/2007	07101235	U-235+236	Uranium-235/236	N001	0.184	pCi/L	U	F	0.237	0.111	valid
GS10	SL	10/1/2007	07101235	U-238	Uranium-238	N001	3.8	pCi/L		F	0.264	0.617	valid
GS10	SL	10/16/2007	07111256	AM-241	Americium-241	N001	0.0128	pCi/L	U	F	0.0272	0.0132	valid
GS10	SL	10/16/2007	07111256	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		J
GS10	SL	10/16/2007	07111256	7440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		J
GS10	SL	10/16/2007	07111256	7440-47-3	Chromium	N001	1	ug/L	U	F	1.000		J
GS10	SL	10/16/2007	07111256	HARDNESS	Hardness	N001	551	mg/L		F	2		valid
GS10	SL	10/16/2007	07111256	PU-239,240	Plutonium-239, 240	N001	0.00764	pCi/L	U	F	0.0213	0.00867	valid
GS10	SL	10/16/2007	07111256	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		J
GS10	SL	10/16/2007	07111256	U-234	Uranium-234	N001	5.6	pCi/L		F	0.222	0.748	valid
GS10	SL	10/16/2007	07111256	U-235+236	Uranium-235/236	N001	0.491	pCi/L		F	0.133	0.149	valid
GS10	SL	10/16/2007	07111256	U-238	Uranium-238	N001	4.89	pCi/L		F	0.149	0.669	valid
GS10	SL	11/1/2007	07111288	AM-241	Americium-241	N001	-0.00175	pCi/L	U	F	0.027	0.0113	valid
GS10	SL	11/1/2007	07111288	AM-241	Americium-241	N002	-0.00284	pCi/L	U	D	0.017	0.0076	valid
GS10	SL	11/1/2007	07111288	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	11/1/2007	07111288	7440-41-7	Beryllium	N002	1	ug/L	U	D	1		valid
GS10	SL	11/1/2007	07111288	7440-43-9	Cadmium	0001	0.17	ug/L	B	F	0.11		U
GS10	SL	11/1/2007	07111288	7440-43-9	Cadmium	0002	0.12	ug/L	B	D	0.11		U
GS10	SL	11/1/2007	07111288	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
GS10	SL	11/1/2007	07111288	7440-47-3	Chromium	N002	2	ug/L	U	D	2		valid
GS10	SL	11/1/2007	07111288	HARDNESS	Hardness	N001	512	mg/L		F	2		valid
GS10	SL	11/1/2007	07111288	HARDNESS	Hardness	N002	512	mg/L		D	2		valid
GS10	SL	11/1/2007	07111288	PU-239,240	Plutonium-239, 240	N001	0.00373	pCi/L	U	F	0.0246	0.0116	valid
GS10	SL	11/1/2007	07111288	PU-239,240	Plutonium-239, 240	N002	-0.0162	pCi/L	U	D	0.0164	0.0118	valid
GS10	SL	11/1/2007	07111288	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
GS10	SL	11/1/2007	07111288	7440-22-4	Silver	0002	0.2	ug/L	U	D	0.200		valid
GS10	SL	11/1/2007	07111288	U-234	Uranium-234	N001	5.58	pCi/L		F	0.478	0.834	valid
GS10	SL	11/1/2007	07111288	U-234	Uranium-234	N002	5.62	pCi/L		D	0.514	0.858	valid
GS10	SL	11/1/2007	07111288	U-235+236	Uranium-235/236	N001	0.384	pCi/L		F	0.249	0.198	J
GS10	SL	11/1/2007	07111288	U-235+236	Uranium-235/236	N002	0.301	pCi/L		D	0.268	0.184	J
GS10	SL	11/1/2007	07111288	U-238	Uranium-238	N001	4.53	pCi/L		F	0.298	0.713	valid
GS10	SL	11/1/2007	07111288	U-238	Uranium-238	N002	4.79	pCi/L		D	0.321	0.761	valid

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GS10	SL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
GS10	SL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
GS10	SL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
GS10	SL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.15	ug/L	J	F	0.13		valid
GS10	SL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
GS10	SL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
GS10	SL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
GS10	SL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	4.7	ug/L		F	0.15		valid
GS10	SL	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
GS10	SL	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
GS10	SL	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
GS10	SL	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
GS10	SL	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
GS10	SL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
GS10	SL	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
GS10	SL	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
GS10	SL	11/20/2007	08011346	AM-241	Americium-241	N001	0.0194	pCi/L	U	F	0.0293	0.0141	valid
GS10	SL	11/20/2007	08011346	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS10	SL	11/20/2007	08011346	7440-43-9	Cadmium	0001	0.12	ug/L	B	F	0.11		U
GS10	SL	11/20/2007	08011346	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
GS10	SL	11/20/2007	08011346	HARDNESS	Hardness	N001	530	mg/L		F	2		valid
GS10	SL	11/20/2007	08011346	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
GS10	SL	11/20/2007	08011346	PU-239,240	Plutonium-239, 240	N001	0.0268	pCi/L		F	0.0248	0.0162	J
GS10	SL	11/20/2007	08011346	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.200		valid
GS10	SL	11/20/2007	08011346	U-234	Uranium-234	N001	6.92	pCi/L		F	0.413	0.932	valid
GS10	SL	11/20/2007	08011346	U-235+236	Uranium-235/236	N001	0.262	pCi/L		F	0.194	0.149	J
GS10	SL	11/20/2007	08011346	U-238	Uranium-238	N001	6.06	pCi/L		F	0.246	0.842	valid
GS13	SL	7/30/2007	07111288	U-234	Uranium-234	N001	12.5	pCi/L	H	F	0.519	1.64	valid
GS13	SL	7/30/2007	07111288	U-235+236	Uranium-235/236	N001	0.456	pCi/L	H	F	0.271	0.217	J
GS13	SL	7/30/2007	07111288	U-238	Uranium-238	N001	12	pCi/L	H	F	0.325	1.58	valid
GS13	SL	11/7/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	83	mg/L		F	0.48		valid
GS13	SL	11/8/2007	08011351	U-234	Uranium-234	N001	11.6	pCi/L		F	0.389	1.51	valid
GS13	SL	11/8/2007	08011351	U-235+236	Uranium-235/236	N001	0.634	pCi/L		F	0.183	0.229	valid
GS13	SL	11/8/2007	08011351	U-238	Uranium-238	N001	10.7	pCi/L		F	0.232	1.42	valid
GS13	SL	12/6/2007	07121316	GA	Gross Alpha	N002	20.5	pCi/L		F	18.3	13.7	J
GS13	SL	12/6/2007	07121316	GB	Gross Beta	N003	18.1	pCi/L		F	16.3	11	J
GS13	SL	12/6/2007	07121313	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	98	mg/L		F	0.96		valid

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GS59	SL	10/1/2007	08011346	7440-38-2	Arsenic	N001	12.1	ug/L	B	F	5		valid
GS59	SL	10/1/2007	08011346	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
GS59	SL	10/1/2007	08011346	7440-42-8	Boron	N001	18	ug/L	B	F	10		valid
GS59	SL	10/1/2007	08011346	7440-43-9	Cadmium	0001	1	ug/L	U	F	1		valid
GS59	SL	10/1/2007	08011346	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
GS59	SL	10/1/2007	08011346	7440-50-8	Copper	0001	3	ug/L	U	F	3		valid
GS59	SL	10/1/2007	08011346	7439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		valid
GS59	SL	10/1/2007	08011346	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
GS59	SL	10/1/2007	08011346	7440-02-0	Nickel	0001	1.1	ug/L	B	F	1		valid
GS59	SL	10/1/2007	08011346	7782-49-2	Selenium	N001	6.7	ug/L	B	F	5		valid
GS59	SL	10/1/2007	08011346	7440-22-4	Silver	0001	1	ug/L	U	F	1		valid
GS59	SL	10/1/2007	08011346	7440-61-1	Uranium	0001	14.7	ug/L	B	F	10		valid
GS59	SL	10/1/2007	08011346	7440-61-1	Uranium	N001	10.7	ug/L	B	F	10		valid
GS59	SL	10/1/2007	08011346	U-234	Uranium-234	N001	0.944	pCi/L		F	0.378	0.262	J
GS59	SL	10/1/2007	08011346	U-235+236	Uranium-235/236	N001	0.0343	pCi/L	U	F	0.178	0.0952	valid
GS59	SL	10/1/2007	08011346	U-238	Uranium-238	N001	0.666	pCi/L		F	0.226	0.223	J
GS59	SL	10/1/2007	08011346	7440-66-6	Zinc	0001	2.2	ug/L	B	F	2		valid
GS59	SL	10/23/2007	07101227	71-55-6	1,1,1-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	79-00-5	1,1,2-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	106-93-4	1,2-Dibromoethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	107-06-2	1,2-Dichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	78-87-5	1,2-Dichloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	71-43-2	Benzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	75-27-4	Bromodichloromethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	75-25-2	Bromoform	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	74-83-9	Bromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	56-23-5	Carbon tetrachloride	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	108-90-7	Chlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	124-48-1	Chlorodibromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	67-66-3	Chloroform	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	74-87-3	Chloromethane	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	156-59-2	cis-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	100-41-4	Ethylbenzene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		J
GS59	SL	10/23/2007	07101227	75-09-2	Methylene chloride	N001	0.353	ug/L	HJ	F	0.5		valid
GS59	SL	10/23/2007	07101227	91-20-3	Naphthalene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	100-42-5	Styrene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	127-18-4	Tetrachloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	108-88-3	Toluene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	1330-20-7	Total Xylenes	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	156-60-5	trans-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	10061-02-6	trans-1,3-dichloropropene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	79-01-6	Trichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GS59	SL	10/23/2007	07101227	75-01-4	Vinyl chloride	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	71-55-6	1,1,1-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	79-00-5	1,1,2-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid

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GWISINFNORTH	TS	10/23/2007	07101227	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	106-93-4	1,2-Dibromoethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	107-06-2	1,2-Dichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	78-87-5	1,2-Dichloropropane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-38-2	Arsenic	N001	5	ug/L	U	F	5		J
GWISINFNORTH	TS	10/23/2007	07101227	71-43-2	Benzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		J
GWISINFNORTH	TS	10/23/2007	07101227	7440-42-8	Boron	N001	144	ug/L		F	10		J
GWISINFNORTH	TS	10/23/2007	07101227	75-27-4	Bromodichloromethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	75-25-2	Bromoform	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	74-83-9	Bromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-43-9	Cadmium	0001	1	ug/L	U	F	1		J
GWISINFNORTH	TS	10/23/2007	07101227	56-23-5	Carbon tetrachloride	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	108-90-7	Chlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	124-48-1	Chlorodibromomethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	67-66-3	Chloroform	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	74-87-3	Chloromethane	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-47-3	Chromium	N001	1	ug/L	U	F	1		J
GWISINFNORTH	TS	10/23/2007	07101227	156-59-2	cis-1,2-Dichloroethene	N001	3.19	ug/L	H	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-50-8	Copper	0001	3	ug/L	U	F	3		J
GWISINFNORTH	TS	10/23/2007	07101227	100-41-4	Ethylbenzene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		J
GWISINFNORTH	TS	10/23/2007	07101227	75-09-2	Methylene chloride	N001	0.731	ug/L	HJ	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	91-20-3	Naphthalene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-02-0	Nickel	0001	2.5	ug/L	B	F	1		J
GWISINFNORTH	TS	10/23/2007	07101227	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.11	mg/L	J	F	0.05		U
GWISINFNORTH	TS	10/23/2007	07101227	7782-49-2	Selenium	N001	5	ug/L	U	F	5		J
GWISINFNORTH	TS	10/23/2007	07101227	7440-22-4	Silver	0001	1.1	ug/L	B	F	1		UJ
GWISINFNORTH	TS	10/23/2007	07101227	100-42-5	Styrene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	127-18-4	Tetrachloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	108-88-3	Toluene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	1330-20-7	Total Xylenes	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	156-60-5	trans-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	10061-02-6	trans-1,3-dichloropropene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	79-01-6	Trichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-61-1	Uranium	0001	10	ug/L	U	F	10		J
GWISINFNORTH	TS	10/23/2007	07101227	7440-61-1	Uranium	N001	10	ug/L	U	F	10		J
GWISINFNORTH	TS	10/23/2007	07101227	U-234	Uranium-234	N001	1.79	pCi/L		F	0.188	0.274	valid
GWISINFNORTH	TS	10/23/2007	07101227	U-235+236	Uranium-235/236	N001	0.112	pCi/L	U	F	0.113	0.0636	valid
GWISINFNORTH	TS	10/23/2007	07101227	U-238	Uranium-238	N001	1.62	pCi/L		F	0.126	0.256	valid
GWISINFNORTH	TS	10/23/2007	07101227	75-01-4	Vinyl chloride	N001	1.1	ug/L	H	F	0.5		valid
GWISINFNORTH	TS	10/23/2007	07101227	7440-66-6	Zinc	0001	2	ug/L	U	F	2		J
MOUND R1-0	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	300	ug/L		F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	8	ug/L	U	F	8		valid
MOUND R1-0	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N001	93	ug/L		F	5.6		valid
MOUND R1-0	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	60	ug/L	U	F	60		valid
MOUND R1-0	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N001	7.2	ug/L	U	F	7.2		valid

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MOUND R1-0	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	71-43-2	Benzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	10/9/2007	07101206	75-25-2	Bromoform	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	10/9/2007	07101206	74-83-9	Bromomethane	N001	8.4	ug/L	U	F	8.4		valid
MOUND R1-0	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N001	42	ug/L		F	7.6		valid
MOUND R1-0	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	10/9/2007	07101206	67-66-3	Chloroform	N001	88	ug/L		F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	74-87-3	Chloromethane	N001	12	ug/L	U	F	12		valid
MOUND R1-0	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	5800	ug/L		F	60		valid
MOUND R1-0	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N001	4.8	ug/L	U	F	4.8		valid
MOUND R1-0	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	10/9/2007	07101206	91-20-3	Naphthalene	N001	40	ug/L		F	8.8		valid
MOUND R1-0	TS	10/9/2007	07101206	100-42-5	Styrene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N001	70	ug/L		F	8		valid
MOUND R1-0	TS	10/9/2007	07101206	108-88-3	Toluene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	8.7	ug/L	J	F	6		valid
MOUND R1-0	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N001	93	ug/L		F	6.4		valid
MOUND R1-0	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N001	470	ug/L		F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	270	ug/L		F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	8	ug/L	U	F	8		valid
MOUND R1-0	TS	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	94	ug/L		F	5.6		valid
MOUND R1-0	TS	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	60	ug/L	U	F	60		valid
MOUND R1-0	TS	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	7.2	ug/L	U	F	7.2		valid
MOUND R1-0	TS	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	5.2	ug/L	U	F	5.2		valid
MOUND R1-0	TS	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	71-43-2	Benzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	75-25-2	Bromoform	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	11/8/2007	07111263	74-83-9	Bromomethane	N001	8.4	ug/L	U	F	8.4		valid
MOUND R1-0	TS	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	40	ug/L		F	7.6		valid
MOUND R1-0	TS	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	67-66-3	Chloroform	N001	85	ug/L		F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	74-87-3	Chloromethane	N001	12	ug/L	U	F	12		valid
MOUND R1-0	TS	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	5400	ug/L		F	60		valid
MOUND R1-0	TS	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	6.4	ug/L	U	F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	4.8	ug/L	U	F	4.8		valid
MOUND R1-0	TS	11/8/2007	07111263	75-09-2	Methylene chloride	N001	13	ug/L	U	F	13		valid
MOUND R1-0	TS	11/8/2007	07111263	91-20-3	Naphthalene	N001	8.8	ug/L	U	F	8.8		valid
MOUND R1-0	TS	11/8/2007	07111263	100-42-5	Styrene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	78	ug/L		F	8		valid

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MOUND R1-0	TS	11/8/2007	07111263	108-88-3	Toluene	N001	6.8	ug/L	U	F	6.8		valid
MOUND R1-0	TS	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	6.7	ug/L	J	F	6		valid
MOUND R1-0	TS	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	7.6	ug/L	U	F	7.6		valid
MOUND R1-0	TS	11/8/2007	07111263	79-01-6	Trichloroethene	N001	110	ug/L		F	6.4		valid
MOUND R1-0	TS	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	590	ug/L		F	6.8		valid
MOUND R2-E	TS	10/9/2007	07101206	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
MOUND R2-E	TS	10/9/2007	07101206	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	10/9/2007	07101206	75-35-4	1,1-Dichloroethene	N001	0.44	ug/L	J	F	0.14		valid
MOUND R2-E	TS	10/9/2007	07101206	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	10/9/2007	07101206	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
MOUND R2-E	TS	10/9/2007	07101206	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
MOUND R2-E	TS	10/9/2007	07101206	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	10/9/2007	07101206	107-06-2	1,2-Dichloroethane	N001	2.4	ug/L		F	0.13		valid
MOUND R2-E	TS	10/9/2007	07101206	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	10/9/2007	07101206	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	71-43-2	Benzene	N001	1.9	ug/L		F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	10/9/2007	07101206	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	10/9/2007	07101206	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
MOUND R2-E	TS	10/9/2007	07101206	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	10/9/2007	07101206	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	10/9/2007	07101206	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	10/9/2007	07101206	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
MOUND R2-E	TS	10/9/2007	07101206	156-59-2	cis-1,2-Dichloroethene	N001	300	ug/L		F	1.5		valid
MOUND R2-E	TS	10/9/2007	07101206	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
MOUND R2-E	TS	10/9/2007	07101206	75-09-2	Methylene chloride	N001	4.8	ug/L		F	0.32		valid
MOUND R2-E	TS	10/9/2007	07101206	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
MOUND R2-E	TS	10/9/2007	07101206	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	10/9/2007	07101206	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
MOUND R2-E	TS	10/9/2007	07101206	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	10/9/2007	07101206	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	10/9/2007	07101206	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
MOUND R2-E	TS	10/9/2007	07101206	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	10/9/2007	07101206	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	10/9/2007	07101206	75-01-4	Vinyl chloride	N001	36	ug/L		F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
MOUND R2-E	TS	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	J	F	0.14		valid
MOUND R2-E	TS	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
MOUND R2-E	TS	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
MOUND R2-E	TS	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
MOUND R2-E	TS	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	2.1	ug/L		F	0.13		valid
MOUND R2-E	TS	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
MOUND R2-E	TS	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	71-43-2	Benzene	N001	1.5	ug/L		F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid

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MOUND R2-E	TS	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
MOUND R2-E	TS	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
MOUND R2-E	TS	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	140	ug/L		F	1.5		valid
MOUND R2-E	TS	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
MOUND R2-E	TS	11/8/2007	07111263	75-09-2	Methylene chloride	N001	4.7	ug/L		F	0.32		valid
MOUND R2-E	TS	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
MOUND R2-E	TS	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
MOUND R2-E	TS	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
MOUND R2-E	TS	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
MOUND R2-E	TS	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
MOUND R2-E	TS	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
MOUND R2-E	TS	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	36	ug/L		F	0.17		valid
P210089	WL	10/30/2007	07111250	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
P210089	WL	10/30/2007	07111250	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
P210089	WL	10/30/2007	07111250	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
P210089	WL	10/30/2007	07111250	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
P210089	WL	10/30/2007	07111250	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
P210089	WL	10/30/2007	07111250	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
P210089	WL	10/30/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
P210089	WL	10/30/2007	07111250	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
P210089	WL	10/30/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
P210089	WL	10/30/2007	07111250	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
P210089	WL	10/30/2007	07111250	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
P210089	WL	10/30/2007	07111250	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
P210089	WL	10/30/2007	07111250	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
P210089	WL	10/30/2007	07111250	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
P210089	WL	10/30/2007	07111250	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
P210089	WL	10/30/2007	07111250	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid

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P210089	WL	10/30/2007	07111250	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
P210089	WL	10/30/2007	07111250	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
P210089	WL	10/30/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P210089	WL	10/30/2007	07111250	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
P210089	WL	10/30/2007	07111250	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
P210089	WL	10/30/2007	07111250	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
P210089	WL	10/30/2007	07111250	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
P210089	WL	10/30/2007	07111250	75-09-2	Methylene chloride	N002	0.34	ug/L	J B	F	0.32		U
P210089	WL	10/30/2007	07111250	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
P210089	WL	10/30/2007	07111250	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
P210089	WL	10/30/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	140	mg/L		F	0.96		valid
P210089	WL	10/30/2007	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	140	mg/L		F	0.96		valid
P210089	WL	10/30/2007	07111250	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
P210089	WL	10/30/2007	07111250	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
P210089	WL	10/30/2007	07111250	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P210089	WL	10/30/2007	07111250	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
P210089	WL	10/30/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid
P210089	WL	10/30/2007	07111250	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
P210089	WL	10/30/2007	07111250	7440-61-1	Uranium	0001	16	ug/L		F	0.02		J
P210089	WL	10/30/2007	07111250	7440-61-1	Uranium	0002	18	ug/L		F	0.02		J
P210089	WL	10/30/2007	07111250	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
P210089	WL	10/30/2007	07111250	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	10/17/2007	07101215	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		valid
P416589	WL	10/17/2007	07101215	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	10/17/2007	07101215	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		valid
P416589	WL	10/17/2007	07101215	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
P416589	WL	10/17/2007	07101215	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		valid
P416589	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		valid
P416589	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		valid
P416589	WL	10/17/2007	07101215	120-82-1	1,2,4-Trichlorobenzene	N002	0.45	ug/L	U	D	0.45		valid
P416589	WL	10/17/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
P416589	WL	10/17/2007	07101215	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		valid
P416589	WL	10/17/2007	07101215	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
P416589	WL	10/17/2007	07101215	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		valid
P416589	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		valid
P416589	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		valid

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P416589	WL	10/17/2007	07101215	95-50-1	1,2-Dichlorobenzene	N002	0.28	ug/L	U	D	0.28		valid
P416589	WL	10/17/2007	07101215	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	10/17/2007	07101215	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		valid
P416589	WL	10/17/2007	07101215	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
P416589	WL	10/17/2007	07101215	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		valid
P416589	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		valid
P416589	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	541-73-1	1,3-Dichlorobenzene	N002	0.29	ug/L	U	D	0.29		valid
P416589	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		valid
P416589	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	106-46-7	1,4-Dichlorobenzene	N002	0.3	ug/L	U	D	0.3		valid
P416589	WL	10/17/2007	07101215	105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		valid
P416589	WL	10/17/2007	07101215	105-67-9	2, 4-Dimethylphenol	N002	0.57	ug/L	U	D	0.57		valid
P416589	WL	10/17/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		valid
P416589	WL	10/17/2007	07101215	95-95-4	2,4,5-Trichlorophenol	N002	0.39	ug/L	U	D	0.39		valid
P416589	WL	10/17/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		valid
P416589	WL	10/17/2007	07101215	88-06-2	2,4,6-Trichlorophenol	N002	0.37	ug/L	U	D	0.37		valid
P416589	WL	10/17/2007	07101215	120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		valid
P416589	WL	10/17/2007	07101215	120-83-2	2,4-Dichlorophenol	N002	1.3	ug/L	U	D	1.3		valid
P416589	WL	10/17/2007	07101215	51-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		valid
P416589	WL	10/17/2007	07101215	51-28-5	2,4-Dinitrophenol	N002	20	ug/L	U	D	20		valid
P416589	WL	10/17/2007	07101215	121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		valid
P416589	WL	10/17/2007	07101215	121-14-2	2,4-Dinitrotoluene	N002	0.25	ug/L	U	D	0.25		valid
P416589	WL	10/17/2007	07101215	606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		valid
P416589	WL	10/17/2007	07101215	606-20-2	2,6-Dinitrotoluene	N002	0.23	ug/L	U	D	0.23		valid
P416589	WL	10/17/2007	07101215	91-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	10/17/2007	07101215	91-58-7	2-Chloronaphthalene	N002	0.31	ug/L	U	D	0.31		valid
P416589	WL	10/17/2007	07101215	95-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		valid
P416589	WL	10/17/2007	07101215	95-57-8	2-Chlorophenol	N002	0.38	ug/L	U	D	0.38		valid
P416589	WL	10/17/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		valid
P416589	WL	10/17/2007	07101215	91-94-1	3,3'-Dichlorobenzidine	N002	2	ug/L	U	D	2		valid
P416589	WL	10/17/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	10/17/2007	07101215	534-52-1	4,6-Dinitro-2-methyl phenol	N002	0.35	ug/L	U	D	0.35		valid
P416589	WL	10/17/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		valid
P416589	WL	10/17/2007	07101215	59-50-7	4-Chloro-3-methylphenol	N002	2	ug/L	U	D	2		valid
P416589	WL	10/17/2007	07101215	100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		valid
P416589	WL	10/17/2007	07101215	100-02-7	4-Nitrophenol	N002	1.7	ug/L	U	D	1.7		valid
P416589	WL	10/17/2007	07101215	83-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		valid
P416589	WL	10/17/2007	07101215	83-32-9	Acenaphthene	N002	0.28	ug/L	U	D	0.28		valid
P416589	WL	10/17/2007	07101215	120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		valid
P416589	WL	10/17/2007	07101215	120-12-7	Anthracene	N002	0.42	ug/L	U	D	0.42		valid
P416589	WL	10/17/2007	07101215	56-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	10/17/2007	07101215	56-55-3	Benz(a)anthracene	N002	0.35	ug/L	U	D	0.35		valid
P416589	WL	10/17/2007	07101215	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	71-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	50-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		valid
P416589	WL	10/17/2007	07101215	50-32-8	Benzo(a)pyrene	N002	0.74	ug/L	U	D	0.74		valid
P416589	WL	10/17/2007	07101215	205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		valid
P416589	WL	10/17/2007	07101215	205-99-2	Benzo(b)fluoranthene	N002	0.39	ug/L	U	D	0.39		valid
P416589	WL	10/17/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		valid
P416589	WL	10/17/2007	07101215	191-24-2	Benzo(g,h,i)Perylene	N002	0.5	ug/L	U	D	0.5		valid
P416589	WL	10/17/2007	07101215	207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		valid
P416589	WL	10/17/2007	07101215	207-08-9	Benzo(k)fluoranthene	N002	0.46	ug/L	U	D	0.46		valid

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P416589	WL	10/17/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		valid
P416589	WL	10/17/2007	07101215	111-44-4	Bis(2-chloroethyl) ether	N002	0.41	ug/L	U	D	0.41		valid
P416589	WL	10/17/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		valid
P416589	WL	10/17/2007	07101215	108-60-1	Bis(2-chloroisopropyl) ether	N002	0.43	ug/L	U	D	0.43		valid
P416589	WL	10/17/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		valid
P416589	WL	10/17/2007	07101215	117-81-7	Bis(2-ethylhexyl) phthalate	N002	0.56	ug/L	U	D	0.56		valid
P416589	WL	10/17/2007	07101215	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	10/17/2007	07101215	75-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		valid
P416589	WL	10/17/2007	07101215	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
P416589	WL	10/17/2007	07101215	74-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		valid
P416589	WL	10/17/2007	07101215	85-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		valid
P416589	WL	10/17/2007	07101215	85-68-7	Butyl benzyl phthalate	N002	1	ug/L	U	D	1		valid
P416589	WL	10/17/2007	07101215	7440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.45		valid
P416589	WL	10/17/2007	07101215	7440-43-9	Cadmium	0002	0.45	ug/L	B	D	0.45		valid
P416589	WL	10/17/2007	07101215	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	10/17/2007	07101215	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		valid
P416589	WL	10/17/2007	07101215	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	67-66-3	Chloroform	N001	0.17	ug/L	J	F	0.16		U
P416589	WL	10/17/2007	07101215	67-66-3	Chloroform	N002	0.19	ug/L	J	D	0.16		U
P416589	WL	10/17/2007	07101215	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
P416589	WL	10/17/2007	07101215	74-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		J
P416589	WL	10/17/2007	07101215	218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		valid
P416589	WL	10/17/2007	07101215	218-01-9	Chrysene	N002	0.54	ug/L	U	D	0.54		valid
P416589	WL	10/17/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P416589	WL	10/17/2007	07101215	156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
P416589	WL	10/17/2007	07101215	7440-50-8	Copper	0001	4.5	ug/L	U	F	4.5		valid
P416589	WL	10/17/2007	07101215	7440-50-8	Copper	0002	8.1	ug/L	B	D	4.5		valid
P416589	WL	10/17/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		valid
P416589	WL	10/17/2007	07101215	53-70-3	Dibenz(a,h)anthracene	N002	0.51	ug/L	U	D	0.51		valid
P416589	WL	10/17/2007	07101215	84-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		valid
P416589	WL	10/17/2007	07101215	84-66-2	Diethyl phthalate	N002	0.38	ug/L	U	D	0.38		valid
P416589	WL	10/17/2007	07101215	131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		valid
P416589	WL	10/17/2007	07101215	131-11-3	Dimethyl phthalate	N002	1	ug/L	U	D	1		valid
P416589	WL	10/17/2007	07101215	84-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		valid
P416589	WL	10/17/2007	07101215	84-74-2	Di-n-butyl phthalate	N002	1.2	ug/L	U	D	1.2		valid
P416589	WL	10/17/2007	07101215	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	10/17/2007	07101215	206-44-0	Fluoranthene	N002	0.2	ug/L	U	D	0.2		valid
P416589	WL	10/17/2007	07101215	86-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	10/17/2007	07101215	86-73-7	Fluorene	N002	0.31	ug/L	U	D	0.31		valid
P416589	WL	10/17/2007	07101215	118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		valid
P416589	WL	10/17/2007	07101215	118-74-1	Hexachlorobenzene	N002	0.66	ug/L	U	D	0.66		valid
P416589	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
P416589	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		valid
P416589	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		valid
P416589	WL	10/17/2007	07101215	87-68-3	Hexachlorobutadiene	N002	0.51	ug/L	U	D	0.51		valid
P416589	WL	10/17/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		valid
P416589	WL	10/17/2007	07101215	77-47-4	Hexachlorocyclopentadiene	N002	1.5	ug/L	U	D	1.5		valid
P416589	WL	10/17/2007	07101215	67-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		valid

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P416589	WL	10/17/2007	07101215	67-72-1	Hexachloroethane	N002	0.46	ug/L	U	D	0.46		valid
P416589	WL	10/17/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		valid
P416589	WL	10/17/2007	07101215	193-39-5	Indeno(1,2,3-cd)pyrene	N002	0.65	ug/L	U	D	0.65		valid
P416589	WL	10/17/2007	07101215	78-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		valid
P416589	WL	10/17/2007	07101215	78-59-1	Isophorone	N002	0.21	ug/L	U	D	0.21		valid
P416589	WL	10/17/2007	07101215	7439-92-1	Lead	0001	2.6	ug/L	U	F	2.6		valid
P416589	WL	10/17/2007	07101215	7439-92-1	Lead	0002	2.6	ug/L	U	D	2.6		valid
P416589	WL	10/17/2007	07101215	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
P416589	WL	10/17/2007	07101215	75-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		valid
P416589	WL	10/17/2007	07101215	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
P416589	WL	10/17/2007	07101215	91-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		valid
P416589	WL	10/17/2007	07101215	91-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		valid
P416589	WL	10/17/2007	07101215	91-20-3	Naphthalene	N002	0.29	ug/L	U	D	0.29		valid
P416589	WL	10/17/2007	07101215	7440-02-0	Nickel	0001	7.8	ug/L	U	F	7.8		valid
P416589	WL	10/17/2007	07101215	7440-02-0	Nickel	0002	7.8	ug/L	U	D	7.8		valid
P416589	WL	10/17/2007	07101215	98-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		valid
P416589	WL	10/17/2007	07101215	98-95-3	Nitrobenzene	N002	0.81	ug/L	U	D	0.81		valid
P416589	WL	10/17/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		valid
P416589	WL	10/17/2007	07101215	621-64-7	N-Nitrosodi-n-propylamine	N002	0.35	ug/L	U	D	0.35		valid
P416589	WL	10/17/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		valid
P416589	WL	10/17/2007	07101215	86-30-6	N-Nitrosodiphenylamine	N002	0.44	ug/L	U	D	0.44		valid
P416589	WL	10/17/2007	07101215	87-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		valid
P416589	WL	10/17/2007	07101215	87-86-5	Pentachlorophenol	N002	20	ug/L	U	D	20		valid
P416589	WL	10/17/2007	07101215	108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		valid
P416589	WL	10/17/2007	07101215	108-95-2	Phenol	N002	0.31	ug/L	U	D	0.31		valid
P416589	WL	10/17/2007	07101215	129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		valid
P416589	WL	10/17/2007	07101215	129-00-0	Pyrene	N002	0.37	ug/L	U	D	0.37		valid
P416589	WL	10/17/2007	07101215	7440-22-4	Silver	0001	2.8	ug/L	U	F	2.8		valid
P416589	WL	10/17/2007	07101215	7440-22-4	Silver	0002	2.8	ug/L	U	D	2.8		valid
P416589	WL	10/17/2007	07101215	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
P416589	WL	10/17/2007	07101215	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		valid
P416589	WL	10/17/2007	07101215	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	10/17/2007	07101215	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		valid
P416589	WL	10/17/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
P416589	WL	10/17/2007	07101215	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		valid
P416589	WL	10/17/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
P416589	WL	10/17/2007	07101215	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		valid
P416589	WL	10/17/2007	07101215	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
P416589	WL	10/17/2007	07101215	79-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		valid
P416589	WL	10/17/2007	07101215	7440-61-1	Uranium	0001	24	ug/L	B	F	16		valid
P416589	WL	10/17/2007	07101215	7440-61-1	Uranium	0002	21	ug/L	B	D	16		valid
P416589	WL	10/17/2007	07101215	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
P416589	WL	10/17/2007	07101215	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		valid
P416589	WL	10/17/2007	07101215	7440-66-6	Zinc	0001	8.1	ug/L	B	F	4.5		U
P416589	WL	10/17/2007	07101215	7440-66-6	Zinc	0002	5.8	ug/L	B	D	4.5		U
PLFSEEPINF	TS	10/23/2007	07101227	71-55-6	1,1,1-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	79-00-5	1,1,2-Trichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.5	ug/L	HU	F	0.5		valid

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PLFSEEPINF	TS	10/23/2007	07101227	106-93-4	1,2-Dibromoethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	0.262	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	107-06-2	1,2-Dichloroethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	78-87-5	1,2-Dichloropropane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-38-2	Arsenic	N001	5	ug/L	U	F	5		J
PLFSEEPINF	TS	10/23/2007	07101227	71-43-2	Benzene	N001	2.15	ug/L	H	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		J
PLFSEEPINF	TS	10/23/2007	07101227	7440-42-8	Boron	N001	1490	ug/L		F	10		J
PLFSEEPINF	TS	10/23/2007	07101227	75-27-4	Bromodichloromethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	75-25-2	Bromoform	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	74-83-9	Bromomethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-43-9	Cadmium	0001	1	ug/L	U	F	1		J
PLFSEEPINF	TS	10/23/2007	07101227	56-23-5	Carbon tetrachloride	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	108-90-7	Chlorobenzene	N001	0.481	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	124-48-1	Chlorodibromomethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	67-66-3	Chloroform	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	74-87-3	Chloromethane	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-47-3	Chromium	N001	1.5	ug/L	B	F	1		UJ
PLFSEEPINF	TS	10/23/2007	07101227	156-59-2	cis-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-50-8	Copper	0001	3	ug/L	U	F	3		J
PLFSEEPINF	TS	10/23/2007	07101227	100-41-4	Ethylbenzene	N001	0.136	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		J
PLFSEEPINF	TS	10/23/2007	07101227	75-09-2	Methylene chloride	N001	0.491	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	91-20-3	Naphthalene	N001	24.6	ug/L	H	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-02-0	Nickel	0001	4.7	ug/L	B	F	1		J
PLFSEEPINF	TS	10/23/2007	07101227	7782-49-2	Selenium	N001	5	ug/L	U	F	5		J
PLFSEEPINF	TS	10/23/2007	07101227	7440-22-4	Silver	0001	1	ug/L	U	F	1		J
PLFSEEPINF	TS	10/23/2007	07101227	100-42-5	Styrene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	127-18-4	Tetrachloroethene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	108-88-3	Toluene	N001	0.584	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	1330-20-7	Total Xylenes	N001	3.68	ug/L	H	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	156-60-5	trans-1,2-Dichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	10061-02-6	trans-1,3-dichloropropene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	79-01-6	Trichloroethene	N001	0.5	ug/L	HU	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-61-1	Uranium	0001	10	ug/L	U	F	10		J
PLFSEEPINF	TS	10/23/2007	07101227	7440-61-1	Uranium	N001	10	ug/L	U	F	10		J
PLFSEEPINF	TS	10/23/2007	07101227	U-234	Uranium-234	N001	0.244	pCi/L		F	0.215	0.0913	J
PLFSEEPINF	TS	10/23/2007	07101227	U-235+236	Uranium-235/236	N001	0.0274	pCi/L	U	F	0.129	0.0402	valid
PLFSEEPINF	TS	10/23/2007	07101227	U-238	Uranium-238	N001	0.163	pCi/L		F	0.144	0.0727	J
PLFSEEPINF	TS	10/23/2007	07101227	75-01-4	Vinyl chloride	N001	0.763	ug/L	HJ	F	0.5		valid
PLFSEEPINF	TS	10/23/2007	07101227	7440-66-6	Zinc	0001	2	ug/L	U	F	2		J
PLFSYSEFF	TS	10/23/2007	07101227	71-55-6	1,1,1-Trichloroethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	79-00-5	1,1,2-Trichloroethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	75-35-4	1,1-Dichloroethene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	120-82-1	1,2,4-Trichlorobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	96-12-8	1,2-Dibromo-3-chloropropane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	106-93-4	1,2-Dibromoethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	0.129	ug/L	J	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	95-50-1	1,2-Dichlorobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	107-06-2	1,2-Dichloroethane	N001	0.5	ug/L	U	F	0.5		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
PLFSYSEFF	TS	10/23/2007	07101227	78-87-5	1,2-Dichloropropane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	541-73-1	1,3-Dichlorobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	106-46-7	1,4-Dichlorobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	105-67-9	2, 4-Dimethylphenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	95-95-4	2,4,5-Trichlorophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	88-06-2	2,4,6-Trichlorophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	120-83-2	2,4-Dichlorophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	51-28-5	2,4-Dinitrophenol	N001	20.8	ug/L	U	F	20.8		valid
PLFSYSEFF	TS	10/23/2007	07101227	121-14-2	2,4-Dinitrotoluene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	606-20-2	2,6-Dinitrotoluene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	91-58-7	2-Chloronaphthalene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	95-57-8	2-Chlorophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	91-94-1	3,3'-Dichlorobenzidine	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	534-52-1	4,6-Dinitro-2-methyl phenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	59-50-7	4-Chloro-3-methylphenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	100-02-7	4-Nitrophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	83-32-9	Acenaphthene	N001	2.13	ug/L	J	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	120-12-7	Anthracene	N001	0.339	ug/L	J	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-38-2	Arsenic	N001	5	ug/L	U	F	5		J
PLFSYSEFF	TS	10/23/2007	07101227	56-55-3	Benz(a)anthracene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	71-43-2	Benzene	N001	0.92	ug/L	J	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	50-32-8	Benzo(a)pyrene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	205-99-2	Benzo(b)fluoranthene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	191-24-2	Benzo(g,h,i)Perylene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	207-08-9	Benzo(k)fluoranthene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		J
PLFSYSEFF	TS	10/23/2007	07101227	111-44-4	Bis(2-chloroethyl) ether	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	108-60-1	Bis(2-chloroisopropyl) ether	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	117-81-7	Bis(2-ethylhexyl) phthalate	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-42-8	Boron	N001	1250	ug/L		F	10		J
PLFSYSEFF	TS	10/23/2007	07101227	75-27-4	Bromodichloromethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	75-25-2	Bromoform	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	74-83-9	Bromomethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	85-68-7	Butyl benzyl phthalate	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-43-9	Cadmium	0001	1	ug/L	U	F	1		J
PLFSYSEFF	TS	10/23/2007	07101227	56-23-5	Carbon tetrachloride	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	108-90-7	Chlorobenzene	N001	0.211	ug/L	J	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	124-48-1	Chlorodibromomethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	67-66-3	Chloroform	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	74-87-3	Chloromethane	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-47-3	Chromium	N001	1	ug/L	B	F	1		UJ
PLFSYSEFF	TS	10/23/2007	07101227	218-01-9	Chrysene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	156-59-2	cis-1,2-Dichloroethene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-50-8	Copper	0001	3	ug/L	U	F	3		J
PLFSYSEFF	TS	10/23/2007	07101227	53-70-3	Dibenz(a,h)anthracene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	84-66-2	Diethyl phthalate	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	131-11-3	Dimethyl phthalate	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	84-74-2	Di-n-butyl phthalate	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	100-41-4	Ethylbenzene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	206-44-0	Fluoranthene	N001	0.287	ug/L	J	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	86-73-7	Fluorene	N001	1.53	ug/L	J	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	118-74-1	Hexachlorobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	0.5	ug/L	U	F	0.5		valid

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PLFSYSEFF	TS	10/23/2007	07101227	87-68-3	Hexachlorobutadiene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	77-47-4	Hexachlorocyclopentadiene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	67-72-1	Hexachloroethane	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	193-39-5	Indeno(1,2,3-cd)pyrene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	78-59-1	Isophorone	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	7439-92-1	Lead	0001	2.5	ug/L	U	F	2.5		J
PLFSYSEFF	TS	10/23/2007	07101227	75-09-2	Methylene chloride	N001	0.466	ug/L	J	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	91-20-3	Naphthalene	N001	1.52	ug/L		F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	91-20-3	Naphthalene	N001	4.66	ug/L	J	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-02-0	Nickel	0001	5.1	ug/L	B	F	1		J
PLFSYSEFF	TS	10/23/2007	07101227	98-95-3	Nitrobenzene	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	621-64-7	N-Nitrosodi-n-propylamine	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	87-86-5	Pentachlorophenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	108-95-2	Phenol	N001	10.4	ug/L	U	F	10.4		valid
PLFSYSEFF	TS	10/23/2007	07101227	129-00-0	Pyrene	N001	1.04	ug/L	U	F	1.04		valid
PLFSYSEFF	TS	10/23/2007	07101227	7782-49-2	Selenium	N001	5	ug/L	U	F	5		J
PLFSYSEFF	TS	10/23/2007	07101227	7440-22-4	Silver	0001	1	ug/L	U	F	1		J
PLFSYSEFF	TS	10/23/2007	07101227	100-42-5	Styrene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	127-18-4	Tetrachloroethene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	108-88-3	Toluene	N001	0.239	ug/L	J	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	1330-20-7	Total Xylenes	N001	1.46	ug/L		F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	156-60-5	trans-1,2-Dichloroethene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	10061-02-6	trans-1,3-dichloropropene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	79-01-6	Trichloroethene	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-61-1	Uranium	0001	10	ug/L	U	F	10		J
PLFSYSEFF	TS	10/23/2007	07101227	7440-61-1	Uranium	N001	10	ug/L	U	F	10		J
PLFSYSEFF	TS	10/23/2007	07101227	U-234	Uranium-234	N001	0.984	pCi/L		F	0.239	0.202	valid
PLFSYSEFF	TS	10/23/2007	07101227	U-235+236	Uranium-235/236	N001	0.0913	pCi/L	U	F	0.143	0.0665	valid
PLFSYSEFF	TS	10/23/2007	07101227	U-238	Uranium-238	N001	0.574	pCi/L		F	0.16	0.149	valid
PLFSYSEFF	TS	10/23/2007	07101227	75-01-4	Vinyl chloride	N001	0.5	ug/L	U	F	0.5		valid
PLFSYSEFF	TS	10/23/2007	07101227	7440-66-6	Zinc	0001	2	ug/L	U	F	2		J
POM2	SL	11/8/2007	07111263	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
POM2	SL	11/8/2007	07111263	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
POM2	SL	11/8/2007	07111263	75-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		valid
POM2	SL	11/8/2007	07111263	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
POM2	SL	11/8/2007	07111263	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		valid
POM2	SL	11/8/2007	07111263	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
POM2	SL	11/8/2007	07111263	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
POM2	SL	11/8/2007	07111263	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		valid
POM2	SL	11/8/2007	07111263	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		valid
POM2	SL	11/8/2007	07111263	541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	71-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
POM2	SL	11/8/2007	07111263	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
POM2	SL	11/8/2007	07111263	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
POM2	SL	11/8/2007	07111263	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		valid
POM2	SL	11/8/2007	07111263	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		valid
POM2	SL	11/8/2007	07111263	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
POM2	SL	11/8/2007	07111263	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
POM2	SL	11/8/2007	07111263	156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
POM2	SL	11/8/2007	07111263	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid

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POM2	SL	11/8/2007	07111263	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
POM2	SL	11/8/2007	07111263	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
POM2	SL	11/8/2007	07111263	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
POM2	SL	11/8/2007	07111263	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
POM2	SL	11/8/2007	07111263	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid
POM2	SL	11/8/2007	07111263	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
POM2	SL	11/8/2007	07111263	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
POM2	SL	11/8/2007	07111263	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
POM2	SL	11/8/2007	07111263	79-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		valid
POM2	SL	11/8/2007	07111263	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid
SPIN	TS	11/7/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	220	mg/L		F	1.9		valid
SPIN	TS	11/7/2007	07111261	7440-61-1	Uranium	0001	53	ug/L		F	0.02		valid
SPPDISCHARGEGALLERY	TS	11/7/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	540	mg/L		F	1.9		valid
SPPDISCHARGEGALLERY	TS	11/7/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	5.5	mg/L		D	0.019		R
SPPDISCHARGEGALLERY	TS	11/7/2007	07111261	7440-61-1	Uranium	0001	71	ug/L		F	0.02		valid
SPPDISCHARGEGALLERY	TS	11/7/2007	07111261	7440-61-1	Uranium	0002	68	ug/L		D	0.02		valid
SPPDISCHARGEGALLERY	TS	12/6/2007	07121316	GA	Gross Alpha	N002	25.4	pCi/L		F	8.54	8.34	J
SPPDISCHARGEGALLERY	TS	12/6/2007	07121316	GB	Gross Beta	N003	48.3	pCi/L		F	10.6	11	valid
SPPDISCHARGEGALLERY	TS	12/6/2007	07121313	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	560	mg/L		F	1.9		J
SPPMM01	TS	11/7/2007	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.14	mg/L		F	0.019		valid
SPPMM01	TS	11/7/2007	07111261	7440-61-1	Uranium	0001	0.49	ug/L		F	0.02		valid
SW018	SL	10/4/2007	07111288	AM-241	Americium-241	N001	0.0272	pCi/L	U	F	0.116	0.0464	valid
SW018	SL	10/4/2007	07111288	PU-239,240	Plutonium-239, 240	N001	0	pCi/L	U	F	0.027	0.00983	valid
SW018	SL	11/14/2007	07111270	71-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		valid
SW018	SL	11/14/2007	07111270	79-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		valid
SW018	SL	11/14/2007	07111270	75-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		valid
SW018	SL	11/14/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		valid
SW018	SL	11/14/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		valid
SW018	SL	11/14/2007	07111270	106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		valid
SW018	SL	11/14/2007	07111270	95-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		valid
SW018	SL	11/14/2007	07111270	107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		valid
SW018	SL	11/14/2007	07111270	78-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		valid
SW018	SL	11/14/2007	07111270	541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	71-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	75-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		valid
SW018	SL	11/14/2007	07111270	75-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		valid
SW018	SL	11/14/2007	07111270	74-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		valid
SW018	SL	11/14/2007	07111270	56-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		valid
SW018	SL	11/14/2007	07111270	108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		valid
SW018	SL	11/14/2007	07111270	124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		valid
SW018	SL	11/14/2007	07111270	67-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	74-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		valid
SW018	SL	11/14/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N002	0.17	ug/L	J	F	0.15		J
SW018	SL	11/14/2007	07111270	100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	87-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		valid
SW018	SL	11/14/2007	07111270	75-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		valid
SW018	SL	11/14/2007	07111270	91-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		valid
SW018	SL	11/14/2007	07111270	100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		valid
SW018	SL	11/14/2007	07111270	127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		valid
SW018	SL	11/14/2007	07111270	108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		valid
SW018	SL	11/14/2007	07111270	1330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		valid
SW018	SL	11/14/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		valid
SW018	SL	11/14/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
SW018	SL	11/14/2007	07111270	79-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		valid
SW018	SL	11/14/2007	07111270	75-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		valid
SW093	SL	10/1/2007	07111288	AM-241	Americium-241	N001	0.01	pCi/L	U	F	0.028	0.0141	valid
SW093	SL	10/1/2007	07111288	7440-41-7	Beryllium	N001	1	ug/L	U	F	1		valid
SW093	SL	10/1/2007	07111288	7440-43-9	Cadmium	0001	0.45	ug/L	B	F	0.11		U
SW093	SL	10/1/2007	07111288	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
SW093	SL	10/1/2007	07111288	HARDNESS	Hardness	N001	537	mg/L		F	4		valid
SW093	SL	10/1/2007	07111288	PU-239,240	Plutonium-239, 240	N001	0.00937	pCi/L	U	F	0.0154	0.0103	valid
SW093	SL	10/1/2007	07111288	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
SW093	SL	10/1/2007	07111288	U-234	Uranium-234	N001	4.2	pCi/L		F	0.466	0.67	valid
SW093	SL	10/1/2007	07111288	U-235+236	Uranium-235/236	N001	0.375	pCi/L		F	0.243	0.169	J
SW093	SL	10/1/2007	07111288	U-238	Uranium-238	N001	3.62	pCi/L		F	0.291	0.597	valid
SW093	SL	11/20/2007	08011346	AM-241	Americium-241	N001	0.0104	pCi/L	U	F	0.0232	0.0122	valid
SW093	SL	11/20/2007	08011346	7440-41-7	Beryllium	N001	1	ug/L	U	F	1.000		valid
SW093	SL	11/20/2007	08011346	7440-43-9	Cadmium	0001	0.11	ug/L	U	F	0.11		valid
SW093	SL	11/20/2007	08011346	7440-47-3	Chromium	N001	2	ug/L	U	F	2		valid
SW093	SL	11/20/2007	08011346	HARDNESS	Hardness	N001	679	mg/L		F	2.5		valid
SW093	SL	11/20/2007	08011346	7439-97-6	Mercury	N001	0.03	ug/L	U	F	0.03		valid
SW093	SL	11/20/2007	08011346	PU-239,240	Plutonium-239, 240	N001	0.022	pCi/L		F	0.0204	0.0138	J
SW093	SL	11/20/2007	08011346	7440-22-4	Silver	0001	0.2	ug/L	U	F	0.2		valid
SW093	SL	11/20/2007	08011346	U-234	Uranium-234	N001	3.59	pCi/L		F	0.407	0.617	valid
SW093	SL	11/20/2007	08011346	U-235+236	Uranium-235/236	N001	0.203	pCi/L		F	0.191	0.122	J
SW093	SL	11/20/2007	08011346	U-238	Uranium-238	N001	3.24	pCi/L		F	0.243	0.568	valid
SW093	SL	12/6/2007	07121316	GA	Gross Alpha	N002	6.26	pCi/L		F	3.98	3.09	J
SW093	SL	12/6/2007	07121316	GB	Gross Beta	N003	17.5	pCi/L		F	6.910	5.340	J
SW093	SL	12/6/2007	07121313	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.22	mg/L		F	0.019		valid
TH046992	WL	11/14/2007	07111270	71-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.160		valid
TH046992	WL	11/14/2007	07111270	79-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		valid
TH046992	WL	11/14/2007	07111270	79-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		valid
TH046992	WL	11/14/2007	07111270	75-35-4	1,1-Dichloroethene	N001	1.6	ug/L		F	0.14		valid
TH046992	WL	11/14/2007	07111270	120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		valid
TH046992	WL	11/14/2007	07111270	96-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.500		valid
TH046992	WL	11/14/2007	07111270	106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		valid
TH046992	WL	11/14/2007	07111270	95-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		valid
TH046992	WL	11/14/2007	07111270	107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.130		valid
TH046992	WL	11/14/2007	07111270	78-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.130		valid
TH046992	WL	11/14/2007	07111270	541-73-1	1,3-Dichlorobenzene	N001	0.4	ug/L	J	F	0.16		valid
TH046992	WL	11/14/2007	07111270	106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		valid
TH046992	WL	11/14/2007	07111270	71-43-2	Benzene	N001	0.2	ug/L	J	F	0.16		valid
TH046992	WL	11/14/2007	07111270	75-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		valid
TH046992	WL	11/14/2007	07111270	75-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		valid
TH046992	WL	11/14/2007	07111270	74-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		valid
TH046992	WL	11/14/2007	07111270	56-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.190		valid
TH046992	WL	11/14/2007	07111270	108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.170		valid
TH046992	WL	11/14/2007	07111270	124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		valid
TH046992	WL	11/14/2007	07111270	67-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		valid
TH046992	WL	11/14/2007	07111270	74-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		valid
TH046992	WL	11/14/2007	07111270	156-59-2	cis-1,2-Dichloroethene	N001	0.34	ug/L	J	F	0.15		valid
TH046992	WL	11/14/2007	07111270	100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		valid
TH046992	WL	11/14/2007	07111270	87-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		valid
TH046992	WL	11/14/2007	07111270	75-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		valid
TH046992	WL	11/14/2007	07111270	91-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		valid
TH046992	WL	11/14/2007	07111270	100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		valid
TH046992	WL	11/14/2007	07111270	127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		valid
TH046992	WL	11/14/2007	07111270	108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		valid

LOCATION_CODE	LOCATION_TYPE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	RESULT	UNITS	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
TH046992	WL	11/14/2007	07111270	1330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		valid
TH046992	WL	11/14/2007	07111270	156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		valid
TH046992	WL	11/14/2007	07111270	10061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		valid
TH046992	WL	11/14/2007	07111270	79-01-6	Trichloroethene	N001	0.97	ug/L	J	F	0.16		valid
TH046992	WL	11/14/2007	07111270	75-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		valid

EXPLANATION

SAMPLE_ID

N00x = Sample was not filtered.
000x = Sample was filtered.

WATER_UNIT_OF_MEASURE

mg/L; ppm = milligrams per liter
pCi/L = picocuries per liter
ug/L = micrograms per liter
C = degrees celsius
mS/cm = milliSiemens per centimeter
NTU = normal turbidity units
s.u. = standard pH units
uS/cm = microSiemens per centimeter
umhos/cm = microSiemens per centimeter

SAMPLE_TYPE

F = Field Sample
D = Duplicate

DATA_VALIDATION_QUALIFIERS

valid	Result is valid.
F	Low flow sampling method used.
G	Possible grout contamination, pH > 9.
J	Estimated value.
L	Less than 3 bore volumes purged prior to sampling.
Q	Qualitative result due to sampling technique
R	Unusable result.
U	Parameter analyzed for but was not detected.
X	Location is undefined.
999	Validation not complete

LAB_QUALIFIERS

*	Replicate analysis not within control limits.
+	Correlation coefficient for MSA < 0.995.
>	Result above upper detection limit.
A	TIC is a suspected aldol-condensation product.
B	Inorganic: Result is between the IDL and CRDL. Organic & Radiochemistry: Analyte also found in method blank.
C	Pesticide result confirmed by GC-MS.
D	Analyte determined in diluted sample.
E	Inorganic: Estimate value because of interference, see case narrative. Organic: Analyte exceeded calibration range of the GC-MS.
H	Holding time expired, value suspect.
I	Increased detection limit due to required dilution.
J	Estimated
M	GFAA duplicate injection precision not met.
N	Inorganic or radiochemical: Spike sample recovery not within control limits. Organic: Tentatively identified compund (TIC).
P	> 25% difference in detected pesticide or Arochlor concentrations between 2 columns.
S	Result determined by method of standard addition (MSA).
U	Analytical result below detection limit.
W	Post-digestion spike outside control limits while sample absorbance < 50% of analytical spike absorbance.
X	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Y	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.
Z	Laboratory defined (USEPA CLP organic) qualifier, see case narrative.

LOCATION_TYPE

SL	SURFACE LOCATION
TS	TREATMENT SYSTEM
WL	WELL

B.7 Data for Evaluation of No-Purge vs. Purge Sampling Methods

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
00797 NP	12/12/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
00797 NP	12/12/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.15	ug/L	U	F	0.15		
00797 NP	12/12/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		
00797 NP	12/12/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
00797 NP	12/12/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
00797 NP	12/12/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
00797 NP	12/12/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
00797 NP	12/12/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
00797 NP	12/12/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
00797 NP	12/12/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
00797 NP	12/12/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
00797 NP	12/12/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
00797 NP	12/12/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
00797 NP	12/12/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
00797 NP	12/12/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
00797 NP	12/12/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
00797 NP	12/12/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
00797 NP	12/12/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
00797 NP	12/12/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
00797 NP	12/12/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
00797 NP	12/12/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
00797 NP	12/12/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
00797 NP	12/12/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	000056-23-5	Carbon tetrachloride	N001	0.15	ug/L	U	F	0.15		
00797 NP	12/12/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
00797 NP	12/12/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	000067-66-3	Chloroform	N001	0.19	ug/L	U	F	0.19		
00797 NP	12/12/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	0.19	ug/L	U	F	0.19		
00797 NP	12/12/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
00797 NP	12/12/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
00797 NP	12/12/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
00797 NP	12/12/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
00797 NP	12/12/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000075-09-2	Methylene chloride	N001	0.1	ug/L	U	F	0.1		
00797 NP	12/12/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
00797 NP	12/12/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
00797 NP	12/12/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
00797 NP	12/12/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
00797 NP	12/12/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
00797 NP	12/12/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
00797 NP	12/12/2005	05120281	000127-18-4	Tetrachloroethene	N001	0.19	ug/L	U	F	0.19		
00797 NP	12/12/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
00797 NP	12/12/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
00797 NP	12/12/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
00797 NP	12/12/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
00797 NP	12/12/2005	05120281	000079-01-6	Trichloroethene	N001	0.58	ug/L	J	F	0.2		
00797 NP	12/12/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
00797 NP	12/12/2005	05120281	07440-61-1	Uranium	0001	26	ug/L		F	0.00001		
00797 NP	12/12/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
00797	12/14/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
00797	12/14/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.15	ug/L	U	F	0.15		
00797	12/14/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
00797	12/14/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
00797	12/14/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
00797	12/14/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
00797	12/14/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
00797	12/14/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
00797	12/14/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
00797	12/14/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
00797	12/14/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
00797	12/14/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
00797	12/14/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
00797	12/14/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
00797	12/14/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
00797	12/14/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
00797	12/14/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
00797	12/14/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
00797	12/14/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
00797	12/14/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
00797	12/14/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
00797	12/14/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
00797	12/14/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	000056-23-5	Carbon tetrachloride	N001	0.15	ug/L	U	F	0.15		
00797	12/14/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
00797	12/14/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	000067-66-3	Chloroform	N001	0.19	ug/L	U	F	0.19		
00797	12/14/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	0.19	ug/L	U	F	0.19		
00797	12/14/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
00797	12/14/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
00797	12/14/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
00797	12/14/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
00797	12/14/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000075-09-2	Methylene chloride	N001	0.1	ug/L	U	F	0.1		
00797	12/14/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
00797	12/14/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
00797	12/14/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
00797	12/14/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
00797	12/14/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
00797	12/14/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
00797	12/14/2005	05120281	000127-18-4	Tetrachloroethene	N001	0.19	ug/L	U	F	0.19		
00797	12/14/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
00797	12/14/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
00797	12/14/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
00797	12/14/2005	05120281	000079-01-6	Trichloroethene	N001	0.2	ug/L	U	F	0.2		
00797	12/14/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
00797	12/14/2005	05120281	07440-61-1	Uranium	0001	25	ug/L		F	0.00001		
00797	12/14/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
10594 NP	12/12/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
10594 NP	12/12/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.15	ug/L	U	F	0.15		
10594 NP	12/12/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		
10594 NP	12/12/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
10594 NP	12/12/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
10594 NP	12/12/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10594 NP	12/12/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
10594 NP	12/12/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
10594 NP	12/12/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
10594 NP	12/12/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
10594 NP	12/12/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
10594 NP	12/12/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
10594 NP	12/12/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
10594 NP	12/12/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
10594 NP	12/12/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
10594 NP	12/12/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
10594 NP	12/12/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
10594 NP	12/12/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
10594 NP	12/12/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
10594 NP	12/12/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
10594 NP	12/12/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
10594 NP	12/12/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
10594 NP	12/12/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
10594 NP	12/12/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
10594 NP	12/12/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
10594 NP	12/12/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
10594 NP	12/12/2005	05120281	000056-23-5	Carbon tetrachloride	N001	0.15	ug/L	U	F	0.15		
10594 NP	12/12/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
10594 NP	12/12/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
10594 NP	12/12/2005	05120281	000067-66-3	Chloroform	N001	0.19	ug/L	U	F	0.19		
10594 NP	12/12/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	0.19	ug/L	U	F	0.19		
10594 NP	12/12/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
10594 NP	12/12/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
10594 NP	12/12/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
10594 NP	12/12/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
10594 NP	12/12/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000075-09-2	Methylene chloride	N001	0.1	ug/L	U	F	0.1		
10594 NP	12/12/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
10594 NP	12/12/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
10594 NP	12/12/2005	05120281	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.07	mg/L		F	0.019		
10594 NP	12/12/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
10594 NP	12/12/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
10594 NP	12/12/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
10594 NP	12/12/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
10594 NP	12/12/2005	05120281	000127-18-4	Tetrachloroethene	N001	0.19	ug/L	U	F	0.19		
10594 NP	12/12/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
10594 NP	12/12/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
10594 NP	12/12/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
10594 NP	12/12/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
10594 NP	12/12/2005	05120281	000079-01-6	Trichloroethene	N001	0.51	ug/L	J	F	0.2		
10594 NP	12/12/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
10594 NP	12/12/2005	05120281	07440-61-1	Uranium	0001	91	ug/L		F	0.00001		
10594 NP	12/12/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
10594	12/14/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
10594	12/14/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.15	ug/L	U	F	0.15		
10594	12/14/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		
10594	12/14/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
10594	12/14/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
10594	12/14/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
10594	12/14/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10594	12/14/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
10594	12/14/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
10594	12/14/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
10594	12/14/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
10594	12/14/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
10594	12/14/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
10594	12/14/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
10594	12/14/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
10594	12/14/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
10594	12/14/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
10594	12/14/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
10594	12/14/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
10594	12/14/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
10594	12/14/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
10594	12/14/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
10594	12/14/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
10594	12/14/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
10594	12/14/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
10594	12/14/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
10594	12/14/2005	05120281	000056-23-5	Carbon tetrachloride	N001	0.15	ug/L	U	F	0.15		
10594	12/14/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
10594	12/14/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
10594	12/14/2005	05120281	000067-66-3	Chloroform	N001	0.19	ug/L	U	F	0.19		
10594	12/14/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	0.19	ug/L	U	F	0.19		
10594	12/14/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
10594	12/14/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
10594	12/14/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
10594	12/14/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
10594	12/14/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000075-09-2	Methylene chloride	N001	0.41	ug/L	J	F	0.1		
10594	12/14/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
10594	12/14/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
10594	12/14/2005	05120281	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.04	mg/L	B	F	0.019		
10594	12/14/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
10594	12/14/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
10594	12/14/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
10594	12/14/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
10594	12/14/2005	05120281	000127-18-4	Tetrachloroethene	N001	0.19	ug/L	U	F	0.19		
10594	12/14/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
10594	12/14/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
10594	12/14/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
10594	12/14/2005	05120281	000079-01-6	Trichloroethene	N001	0.2	ug/L	U	F	0.2		
10594	12/14/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
10594	12/14/2005	05120281	07440-61-1	Uranium	0001	95	ug/L		F	0.00001		
10594	12/14/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
90399 NP	12/12/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.15	ug/L	U	D	0.15		
90399 NP	12/12/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.15	ug/L	U	F	0.15		
90399 NP	12/12/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N002	0.15	ug/L	U	D	0.15		
90399 NP	12/12/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		
90399 NP	12/12/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.28	ug/L	U	D	0.28		
90399 NP	12/12/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
90399 NP	12/12/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.28	ug/L	U	D	0.28		
90399 NP	12/12/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N002	0.23	ug/L	U	D	0.23		

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90399 NP	12/12/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	D	0.16		
90399 NP	12/12/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	1.3	ug/L		F	0.21		
90399 NP	12/12/2005	05120281	000075-35-4	1,1-Dichloroethene	N002	1.2	ug/L		D	0.21		
90399 NP	12/12/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000563-58-6	1,1-Dichloropropene	N002	0.16	ug/L	U	D	0.16		
90399 NP	12/12/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
90399 NP	12/12/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N002	0.12	ug/L	U	D	0.12		
90399 NP	12/12/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399 NP	12/12/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	D	0.27		
90399 NP	12/12/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
90399 NP	12/12/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N002	0.12	ug/L	U	D	0.12		
90399 NP	12/12/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
90399 NP	12/12/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N002	0.22	ug/L	U	D	0.22		
90399 NP	12/12/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
90399 NP	12/12/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N002	0.38	ug/L	U	D	0.38		
90399 NP	12/12/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	000106-93-4	1,2-Dibromoethane	N002	0.23	ug/L	U	D	0.23		
90399 NP	12/12/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000107-06-2	1,2-Dichloroethane	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000078-87-5	1,2-Dichloropropane	N002	0.16	ug/L	U	D	0.16		
90399 NP	12/12/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	12/12/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N002	0.14	ug/L	U	D	0.14		
90399 NP	12/12/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000142-28-9	1,3-Dichloropropane	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
90399 NP	12/12/2005	05120281	000594-20-7	2,2-Dichloropropane	N002	0.11	ug/L	U	D	0.11		
90399 NP	12/12/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
90399 NP	12/12/2005	05120281	000078-93-3	2-Butanone	N002	0.56	ug/L	U	D	0.56		
90399 NP	12/12/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000095-49-8	2-Chlorotoluene	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
90399 NP	12/12/2005	05120281	000591-78-6	2-Hexanone	N002	0.19	ug/L	U	D	0.19		
90399 NP	12/12/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000106-43-4	4-Chlorotoluene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
90399 NP	12/12/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N002	0.53	ug/L	U	D	0.53		
90399 NP	12/12/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
90399 NP	12/12/2005	05120281	000067-64-1	Acetone	N002	0.7	ug/L	U	D	0.7		
90399 NP	12/12/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	12/12/2005	05120281	000071-43-2	Benzene	N002	0.17	ug/L	U	D	0.17		
90399 NP	12/12/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
90399 NP	12/12/2005	05120281	000108-86-1	Bromobenzene	N002	0.25	ug/L	U	D	0.25		
90399 NP	12/12/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	12/12/2005	05120281	000074-97-5	Bromochloromethane	N002	0.17	ug/L	U	D	0.17		
90399 NP	12/12/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
90399 NP	12/12/2005	05120281	000075-27-4	Bromodichloromethane	N002	0.14	ug/L	U	D	0.14		
90399 NP	12/12/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000075-25-2	Bromoform	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
90399 NP	12/12/2005	05120281	000074-83-9	Bromomethane	N002	0.96	ug/L	J B	D	0.28		
90399 NP	12/12/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000075-15-0	Carbon Disulfide	N002	0.16	ug/L	U	D	0.16		
90399 NP	12/12/2005	05120281	000056-23-5	Carbon tetrachloride	N001	250	ug/L	D	F	15		
90399 NP	12/12/2005	05120281	000056-23-5	Carbon tetrachloride	N002	250	ug/L	D	D	15		
90399 NP	12/12/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000108-90-7	Chlorobenzene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
90399 NP	12/12/2005	05120281	000124-48-1	Chlorodibromomethane	N002	0.27	ug/L	U	D	0.27		
90399 NP	12/12/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000075-00-3	Chloroethane	N002	0.16	ug/L	U	D	0.16		

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90399 NP	12/12/2005	05120281	000067-66-3	Chloroform	N001	29	ug/L	D	F	1.9		
90399 NP	12/12/2005	05120281	000067-66-3	Chloroform	N002	28	ug/L	D	D	1.9		
90399 NP	12/12/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000074-87-3	Chloromethane	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	3.8	ug/L		F	0.19		
90399 NP	12/12/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N002	3.6	ug/L		D	0.19		
90399 NP	12/12/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	000074-95-3	Dibromomethane	N002	0.23	ug/L	U	D	0.23		
90399 NP	12/12/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
90399 NP	12/12/2005	05120281	000075-71-8	Dichlorodifluoromethane	N002	0.27	ug/L	U	D	0.27		
90399 NP	12/12/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
90399 NP	12/12/2005	05120281	000100-41-4	Ethylbenzene	N002	0.22	ug/L	U	D	0.22		
90399 NP	12/12/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
90399 NP	12/12/2005	05120281	000087-68-3	Hexachlorobutadiene	N002	0.34	ug/L	U	D	0.34		
90399 NP	12/12/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000098-82-8	Isopropylbenzene	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000075-09-2	Methylene chloride	N001	0.1	ug/L	U	F	0.1		
90399 NP	12/12/2005	05120281	000075-09-2	Methylene chloride	N002	0.1	ug/L	U	D	0.1		
90399 NP	12/12/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
90399 NP	12/12/2005	05120281	000091-20-3	Naphthalene	N002	0.25	ug/L	U	D	0.25		
90399 NP	12/12/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
90399 NP	12/12/2005	05120281	000104-51-8	n-Butylbenzene	N002	0.087	ug/L	U	D	0.087		
90399 NP	12/12/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
90399 NP	12/12/2005	05120281	000103-65-1	n-Propylbenzene	N002	0.21	ug/L	U	D	0.21		
90399 NP	12/12/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
90399 NP	12/12/2005	05120281	000099-87-6	p-Isopropyltoluene	N002	0.18	ug/L	U	D	0.18		
90399 NP	12/12/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000135-98-8	sec-Butylbenzene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
90399 NP	12/12/2005	05120281	000100-42-5	Styrene	N002	0.14	ug/L	U	D	0.14		
90399 NP	12/12/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
90399 NP	12/12/2005	05120281	000098-06-6	tert-Butylbenzene	N002	0.24	ug/L	U	D	0.24		
90399 NP	12/12/2005	05120281	000127-18-4	Tetrachloroethene	N001	8.6	ug/L		F	0.19		
90399 NP	12/12/2005	05120281	000127-18-4	Tetrachloroethene	N002	8.8	ug/L		D	0.19		
90399 NP	12/12/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
90399 NP	12/12/2005	05120281	000108-88-3	Toluene	N002	0.2	ug/L	U	D	0.2		
90399 NP	12/12/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
90399 NP	12/12/2005	05120281	001330-20-7	Total Xylenes	N002	0.58	ug/L	U	D	0.58		
90399 NP	12/12/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
90399 NP	12/12/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N002	0.16	ug/L	U	D	0.16		
90399 NP	12/12/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N002	0.23	ug/L	U	D	0.23		
90399 NP	12/12/2005	05120281	000079-01-6	Trichloroethene	N001	280	ug/L	D	F	20		
90399 NP	12/12/2005	05120281	000079-01-6	Trichloroethene	N002	280	ug/L	D	D	20		
90399 NP	12/12/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
90399 NP	12/12/2005	05120281	000075-69-4	Trichlorofluoromethane	N002	0.19	ug/L	U	D	0.19		
90399 NP	12/12/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
90399 NP	12/12/2005	05120281	000075-01-4	Vinyl chloride	N002	0.23	ug/L	U	D	0.23		
90399	12/13/2005	05120281	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.15	ug/L	U	F	0.15		
90399	12/13/2005	05120281	000071-55-6	1,1,1-Trichloroethane	N001	0.17	ug/L	J	F	0.15		
90399	12/13/2005	05120281	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.28	ug/L	U	F	0.28		
90399	12/13/2005	05120281	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.28	ug/L	U	F	0.28		
90399	12/13/2005	05120281	000079-00-5	1,1,2-Trichloroethane	N001	0.23	ug/L	U	F	0.23		
90399	12/13/2005	05120281	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	000075-35-4	1,1-Dichloroethene	N001	1.3	ug/L		F	0.21		
90399	12/13/2005	05120281	000563-58-6	1,1-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	000087-61-6	1,2,3-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
90399	12/13/2005	05120281	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399	12/13/2005	05120281	000120-82-1	1,2,4-Trichlorobenzene	N001	0.12	ug/L	U	F	0.12		
90399	12/13/2005	05120281	000095-63-6	1,2,4-Trimethylbenzene	N001	0.22	ug/L	U	F	0.22		
90399	12/13/2005	05120281	000096-12-8	1,2-Dibromo-3-chloropropane	N001	0.38	ug/L	U	F	0.38		
90399	12/13/2005	05120281	000106-93-4	1,2-Dibromoethane	N001	0.23	ug/L	U	F	0.23		
90399	12/13/2005	05120281	000095-50-1	1,2-Dichlorobenzene	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000107-06-2	1,2-Dichloroethane	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000078-87-5	1,2-Dichloropropane	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	000108-67-8	1,3,5-Trimethylbenzene	N001	0.21	ug/L	U	F	0.21		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399	12/13/2005	05120281	000541-73-1	1,3-Dichlorobenzene	N001	0.14	ug/L	U	F	0.14		
90399	12/13/2005	05120281	000142-28-9	1,3-Dichloropropane	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000106-46-7	1,4-Dichlorobenzene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000594-20-7	2,2-Dichloropropane	N001	0.11	ug/L	U	F	0.11		
90399	12/13/2005	05120281	000078-93-3	2-Butanone	N001	0.56	ug/L	U	F	0.56		
90399	12/13/2005	05120281	000095-49-8	2-Chlorotoluene	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000591-78-6	2-Hexanone	N001	0.19	ug/L	U	F	0.19		
90399	12/13/2005	05120281	000106-43-4	4-Chlorotoluene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000108-10-1	4-Methyl-2-Pentanone	N001	0.53	ug/L	U	F	0.53		
90399	12/13/2005	05120281	000067-64-1	Acetone	N001	0.7	ug/L	U	F	0.7		
90399	12/13/2005	05120281	000071-43-2	Benzene	N001	0.17	ug/L	U	F	0.17		
90399	12/13/2005	05120281	000108-86-1	Bromobenzene	N001	0.25	ug/L	U	F	0.25		
90399	12/13/2005	05120281	000074-97-5	Bromochloromethane	N001	0.17	ug/L	U	F	0.17		
90399	12/13/2005	05120281	000075-27-4	Bromodichloromethane	N001	0.14	ug/L	U	F	0.14		
90399	12/13/2005	05120281	000075-25-2	Bromoform	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000074-83-9	Bromomethane	N001	0.28	ug/L	U	F	0.28		
90399	12/13/2005	05120281	000075-15-0	Carbon Disulfide	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	000056-23-5	Carbon tetrachloride	N001	310	ug/L	D	F	3		
90399	12/13/2005	05120281	000108-90-7	Chlorobenzene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000124-48-1	Chlorodibromomethane	N001	0.27	ug/L	U	F	0.27		
90399	12/13/2005	05120281	000075-00-3	Chloroethane	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	000067-66-3	Chloroform	N001	37	ug/L		F	0.19		
90399	12/13/2005	05120281	000074-87-3	Chloromethane	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000156-59-2	cis-1,2-Dichloroethene	N001	3.3	ug/L		F	0.19		
90399	12/13/2005	05120281	010061-01-5	cis-1,3-Dichloropropene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000074-95-3	Dibromomethane	N001	0.23	ug/L	U	F	0.23		
90399	12/13/2005	05120281	000075-71-8	Dichlorodifluoromethane	N001	0.27	ug/L	U	F	0.27		
90399	12/13/2005	05120281	000100-41-4	Ethylbenzene	N001	0.22	ug/L	U	F	0.22		
90399	12/13/2005	05120281	000087-68-3	Hexachlorobutadiene	N001	0.34	ug/L	U	F	0.34		
90399	12/13/2005	05120281	000098-82-8	Isopropylbenzene	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000075-09-2	Methylene chloride	N001	0.44	ug/L	J	F	0.1		
90399	12/13/2005	05120281	000091-20-3	Naphthalene	N001	0.25	ug/L	U	F	0.25		
90399	12/13/2005	05120281	000104-51-8	n-Butylbenzene	N001	0.087	ug/L	U	F	0.087		
90399	12/13/2005	05120281	000103-65-1	n-Propylbenzene	N001	0.21	ug/L	U	F	0.21		
90399	12/13/2005	05120281	000099-87-6	p-Isopropyltoluene	N001	0.18	ug/L	U	F	0.18		
90399	12/13/2005	05120281	000135-98-8	sec-Butylbenzene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	000100-42-5	Styrene	N001	0.14	ug/L	U	F	0.14		
90399	12/13/2005	05120281	000098-06-6	tert-Butylbenzene	N001	0.24	ug/L	U	F	0.24		
90399	12/13/2005	05120281	000127-18-4	Tetrachloroethene	N001	9.2	ug/L		F	0.19		
90399	12/13/2005	05120281	000108-88-3	Toluene	N001	0.2	ug/L	U	F	0.2		
90399	12/13/2005	05120281	001330-20-7	Total Xylenes	N001	0.58	ug/L	U	F	0.58		
90399	12/13/2005	05120281	000156-60-5	trans-1,2-Dichloroethene	N001	0.16	ug/L	U	F	0.16		
90399	12/13/2005	05120281	010061-02-6	trans-1,3-dichloropropene	N001	0.23	ug/L	U	F	0.23		
90399	12/13/2005	05120281	000079-01-6	Trichloroethene	N001	320	ug/L	D	F	4		
90399	12/13/2005	05120281	000075-69-4	Trichlorofluoromethane	N001	0.19	ug/L	U	F	0.19		
90399	12/13/2005	05120281	000075-01-4	Vinyl chloride	N001	0.23	ug/L	U	F	0.23		
21505 NP	24-May-06	06050385	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
21505 NP	24-May-06	06050385	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
21505 NP	24-May-06	06050385	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
21505 NP	24-May-06	06050385	000075-34-3	1,1-Dichloroethane	N002	1.2	ug/L		F	0.16		
21505 NP	24-May-06	06050385	000075-35-4	1,1-Dichloroethene	N002	1.5	ug/L		F	0.14		
21505 NP	24-May-06	06050385	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
21505 NP	24-May-06	06050385	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
21505 NP	24-May-06	06050385	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
21505 NP	24-May-06	06050385	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
21505 NP	24-May-06	06050385	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
21505 NP	24-May-06	06050385	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
21505 NP	24-May-06	06050385	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
21505 NP	24-May-06	06050385	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
21505 NP	24-May-06	06050385	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
21505 NP	24-May-06	06050385	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
21505 NP	24-May-06	06050385	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
21505 NP	24-May-06	06050385	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
21505 NP	24-May-06	06050385	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
21505 NP	24-May-06	06050385	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
21505 NP	24-May-06	06050385	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
21505 NP	24-May-06	06050385	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
21505 NP	24-May-06	06050385	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
21505 NP	24-May-06	06050385	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
21505 NP	24-May-06	06050385	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
21505 NP	24-May-06	06050385	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
21505 NP	24-May-06	06050385	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
21505 NP	24-May-06	06050385	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
21505 NP	24-May-06	06050385	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
21505 NP	24-May-06	06050385	000067-66-3	Chloroform	N002	0.66	ug/L	J	F	0.16		U
21505 NP	24-May-06	06050385	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
21505 NP	24-May-06	06050385	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
21505 NP	24-May-06	06050385	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
21505 NP	24-May-06	06050385	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
21505 NP	24-May-06	06050385	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
21505 NP	24-May-06	06050385	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
21505 NP	24-May-06	06050385	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000127-18-4	Tetrachloroethene	N002	4.6	ug/L		F	0.2		
21505 NP	24-May-06	06050385	000108-88-3	Toluene	N002	0.17	ug/L	J	F	0.17		
21505 NP	24-May-06	06050385	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
21505 NP	24-May-06	06050385	000079-01-6	Trichloroethene	N002	25	ug/L		F	0.16		
21505 NP	24-May-06	06050385	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
21505 NP	24-May-06	06050385	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000156-59-2	cis-1,2-Dichloroethene	N002	3.2	ug/L		F	0.15		
21505 NP	24-May-06	06050385	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
21505 NP	24-May-06	06050385	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
21505 NP	24-May-06	06050385	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
21505 NP	24-May-06	06050385	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
21505 NP	24-May-06	06050385	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
21505	24-May-06	06050385	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
21505	24-May-06	06050385	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
21505	24-May-06	06050385	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
21505	24-May-06	06050385	000075-34-3	1,1-Dichloroethane	N001	0.6	ug/L	J	F	0.16		
21505	24-May-06	06050385	000075-35-4	1,1-Dichloroethene	N001	0.6	ug/L	J	F	0.14		
21505	24-May-06	06050385	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
21505	24-May-06	06050385	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
21505	24-May-06	06050385	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
21505	24-May-06	06050385	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
21505	24-May-06	06050385	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
21505	24-May-06	06050385	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
21505	24-May-06	06050385	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
21505	24-May-06	06050385	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
21505	24-May-06	06050385	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
21505	24-May-06	06050385	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
21505	24-May-06	06050385	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
21505	24-May-06	06050385	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
21505	24-May-06	06050385	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
21505	24-May-06	06050385	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
21505	24-May-06	06050385	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
21505	24-May-06	06050385	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
21505	24-May-06	06050385	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
21505	24-May-06	06050385	000067-64-1	Acetone	N001	6.4	ug/L	J	F	1.9		J
21505	24-May-06	06050385	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
21505	24-May-06	06050385	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
21505	24-May-06	06050385	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
21505	24-May-06	06050385	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
21505	24-May-06	06050385	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
21505	24-May-06	06050385	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
21505	24-May-06	06050385	000067-66-3	Chloroform	N001	0.29	ug/L	J	F	0.16		U
21505	24-May-06	06050385	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
21505	24-May-06	06050385	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
21505	24-May-06	06050385	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
21505	24-May-06	06050385	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
21505	24-May-06	06050385	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
21505	24-May-06	06050385	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
21505	24-May-06	06050385	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000127-18-4	Tetrachloroethene	N001	1.3	ug/L		F	0.2		
21505	24-May-06	06050385	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
21505	24-May-06	06050385	000079-01-6	Trichloroethene	N001	8.9	ug/L		F	0.16		
21505	24-May-06	06050385	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
21505	24-May-06	06050385	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000156-59-2	cis-1,2-Dichloroethene	N001	1.5	ug/L		F	0.15		
21505	24-May-06	06050385	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
21505	24-May-06	06050385	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
21505	24-May-06	06050385	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
21505	24-May-06	06050385	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
21505	24-May-06	06050385	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
10992 NP	31-May-06	06060394	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
10992 NP	31-May-06	06060394	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
10992 NP	31-May-06	06060394	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
10992 NP	31-May-06	06060394	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
10992 NP	31-May-06	06060394	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
10992 NP	31-May-06	06060394	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
10992 NP	31-May-06	06060394	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
10992 NP	31-May-06	06060394	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
10992 NP	31-May-06	06060394	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10992 NP	31-May-06	06060394	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
10992 NP	31-May-06	06060394	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
10992 NP	31-May-06	06060394	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
10992 NP	31-May-06	06060394	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
10992 NP	31-May-06	06060394	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
10992 NP	31-May-06	06060394	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10992 NP	31-May-06	06060394	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
10992 NP	31-May-06	06060394	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
10992 NP	31-May-06	06060394	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
10992 NP	31-May-06	06060394	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
10992 NP	31-May-06	06060394	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
10992 NP	31-May-06	06060394	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
10992 NP	31-May-06	06060394	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10992 NP	31-May-06	06060394	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
10992 NP	31-May-06	06060394	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
10992 NP	31-May-06	06060394	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
10992 NP	31-May-06	06060394	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
10992 NP	31-May-06	06060394	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
10992 NP	31-May-06	06060394	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
10992 NP	31-May-06	06060394	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
10992 NP	31-May-06	06060394	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
10992 NP	31-May-06	06060394	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
10992 NP	31-May-06	06060394	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
10992 NP	31-May-06	06060394	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
10992 NP	31-May-06	06060394	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
10992 NP	31-May-06	06060394	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
10992 NP	31-May-06	06060394	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
10992 NP	31-May-06	06060394	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
10992 NP	31-May-06	06060394	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10992 NP	31-May-06	06060394	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
10992 NP	31-May-06	06060394	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
10992 NP	31-May-06	06060394	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
10992 NP	31-May-06	06060394	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10992 NP	31-May-06	06060394	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
10992	31-May-06	06060394	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
10992	31-May-06	06060394	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
10992	31-May-06	06060394	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
10992	31-May-06	06060394	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
10992	31-May-06	06060394	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
10992	31-May-06	06060394	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
10992	31-May-06	06060394	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
10992	31-May-06	06060394	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
10992	31-May-06	06060394	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10992	31-May-06	06060394	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
10992	31-May-06	06060394	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
10992	31-May-06	06060394	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
10992	31-May-06	06060394	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
10992	31-May-06	06060394	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
10992	31-May-06	06060394	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10992	31-May-06	06060394	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
10992	31-May-06	06060394	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
10992	31-May-06	06060394	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
10992	31-May-06	06060394	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
10992	31-May-06	06060394	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
10992	31-May-06	06060394	000067-64-1	Acetone	N001	99	ug/L		F	1.9		J
10992	31-May-06	06060394	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
10992	31-May-06	06060394	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
10992	31-May-06	06060394	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10992	31-May-06	06060394	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
10992	31-May-06	06060394	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
10992	31-May-06	06060394	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
10992	31-May-06	06060394	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
10992	31-May-06	06060394	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
10992	31-May-06	06060394	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
10992	31-May-06	06060394	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
10992	31-May-06	06060394	000075-09-2	Methylene chloride	N001	0.46	ug/L	JB	F	0.32		
10992	31-May-06	06060394	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
10992	31-May-06	06060394	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
10992	31-May-06	06060394	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
10992	31-May-06	06060394	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
10992	31-May-06	06060394	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10992	31-May-06	06060394	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
10992	31-May-06	06060394	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
10992	31-May-06	06060394	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
10992	31-May-06	06060394	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10992	31-May-06	06060394	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
90402 NP	12-Jun-06	06060405	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
90402 NP	12-Jun-06	06060405	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
90402 NP	12-Jun-06	06060405	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
90402 NP	12-Jun-06	06060405	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000075-35-4	1,1-Dichloroethene	N002	0.27	ug/L	J	F	0.14		J
90402 NP	12-Jun-06	06060405	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
90402 NP	12-Jun-06	06060405	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
90402 NP	12-Jun-06	06060405	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
90402 NP	12-Jun-06	06060405	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
90402 NP	12-Jun-06	06060405	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90402 NP	12-Jun-06	06060405	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
90402 NP	12-Jun-06	06060405	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
90402 NP	12-Jun-06	06060405	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
90402 NP	12-Jun-06	06060405	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
90402 NP	12-Jun-06	06060405	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
90402 NP	12-Jun-06	06060405	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90402 NP	12-Jun-06	06060405	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
90402 NP	12-Jun-06	06060405	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
90402 NP	12-Jun-06	06060405	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
90402 NP	12-Jun-06	06060405	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
90402 NP	12-Jun-06	06060405	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
90402 NP	12-Jun-06	06060405	000067-64-1	Acetone	N002	5.1	ug/L	J	F	1.9		J
90402 NP	12-Jun-06	06060405	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
90402 NP	12-Jun-06	06060405	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
90402 NP	12-Jun-06	06060405	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
90402 NP	12-Jun-06	06060405	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
90402 NP	12-Jun-06	06060405	000056-23-5	Carbon tetrachloride	N002	10	ug/L		F	0.19		
90402 NP	12-Jun-06	06060405	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90402 NP	12-Jun-06	06060405	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
90402 NP	12-Jun-06	06060405	000067-66-3	Chloroform	N002	2.7	ug/L		F	0.16		J
90402 NP	12-Jun-06	06060405	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
90402 NP	12-Jun-06	06060405	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
90402 NP	12-Jun-06	06060405	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
90402 NP	12-Jun-06	06060405	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
90402 NP	12-Jun-06	06060405	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
90402 NP	12-Jun-06	06060405	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
90402 NP	12-Jun-06	06060405	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000127-18-4	Tetrachloroethene	N002	9.7	ug/L		F	0.2		
90402 NP	12-Jun-06	06060405	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
90402 NP	12-Jun-06	06060405	000079-01-6	Trichloroethene	N002	17	ug/L		F	0.16		J
90402 NP	12-Jun-06	06060405	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
90402 NP	12-Jun-06	06060405	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000156-59-2	cis-1,2-Dichloroethene	N002	0.24	ug/L	J	F	0.15		J
90402 NP	12-Jun-06	06060405	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
90402 NP	12-Jun-06	06060405	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
90402 NP	12-Jun-06	06060405	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
90402 NP	12-Jun-06	06060405	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90402 NP	12-Jun-06	06060405	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
90402	12-Jun-06	06060405	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90402	12-Jun-06	06060405	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90402	12-Jun-06	06060405	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90402	12-Jun-06	06060405	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000075-35-4	1,1-Dichloroethene	N001	0.24	ug/L	J	F	0.14		J
90402	12-Jun-06	06060405	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90402	12-Jun-06	06060405	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90402	12-Jun-06	06060405	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90402	12-Jun-06	06060405	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90402	12-Jun-06	06060405	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90402	12-Jun-06	06060405	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90402	12-Jun-06	06060405	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90402	12-Jun-06	06060405	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90402	12-Jun-06	06060405	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90402	12-Jun-06	06060405	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90402	12-Jun-06	06060405	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90402	12-Jun-06	06060405	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90402	12-Jun-06	06060405	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90402	12-Jun-06	06060405	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90402	12-Jun-06	06060405	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90402	12-Jun-06	06060405	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90402	12-Jun-06	06060405	000067-64-1	Acetone	N001	2.4	ug/L	J	F	1.9		J
90402	12-Jun-06	06060405	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90402	12-Jun-06	06060405	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90402	12-Jun-06	06060405	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90402	12-Jun-06	06060405	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90402	12-Jun-06	06060405	000056-23-5	Carbon tetrachloride	N001	10	ug/L		F	0.19		
90402	12-Jun-06	06060405	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90402	12-Jun-06	06060405	000067-66-3	Chloroform	N001	2.7	ug/L		F	0.16		J
90402	12-Jun-06	06060405	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90402	12-Jun-06	06060405	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90402	12-Jun-06	06060405	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90402	12-Jun-06	06060405	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90402	12-Jun-06	06060405	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90402	12-Jun-06	06060405	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90402	12-Jun-06	06060405	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90402	12-Jun-06	06060405	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000127-18-4	Tetrachloroethene	N001	11	ug/L		F	0.2		
90402	12-Jun-06	06060405	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90402	12-Jun-06	06060405	000079-01-6	Trichloroethene	N001	16	ug/L		F	0.16		J
90402	12-Jun-06	06060405	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90402	12-Jun-06	06060405	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000156-59-2	cis-1,2-Dichloroethene	N001	0.16	ug/L	J	F	0.15		J
90402	12-Jun-06	06060405	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90402	12-Jun-06	06060405	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90402	12-Jun-06	06060405	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90402	12-Jun-06	06060405	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90402	12-Jun-06	06060405	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
90399 NP	13-Jun-06	06060405	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
90399 NP	13-Jun-06	06060405	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
90399 NP	13-Jun-06	06060405	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
90399 NP	13-Jun-06	06060405	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000075-35-4	1,1-Dichloroethene	N002	1	ug/L		F	0.14		
90399 NP	13-Jun-06	06060405	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
90399 NP	13-Jun-06	06060405	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
90399 NP	13-Jun-06	06060405	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
90399 NP	13-Jun-06	06060405	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
90399 NP	13-Jun-06	06060405	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	13-Jun-06	06060405	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
90399 NP	13-Jun-06	06060405	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
90399 NP	13-Jun-06	06060405	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
90399 NP	13-Jun-06	06060405	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
90399 NP	13-Jun-06	06060405	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
90399 NP	13-Jun-06	06060405	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	13-Jun-06	06060405	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
90399 NP	13-Jun-06	06060405	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
90399 NP	13-Jun-06	06060405	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
90399 NP	13-Jun-06	06060405	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
90399 NP	13-Jun-06	06060405	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
90399 NP	13-Jun-06	06060405	000067-64-1	Acetone	N002	5.6	ug/L	J	F	1.9		
90399 NP	13-Jun-06	06060405	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
90399 NP	13-Jun-06	06060405	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
90399 NP	13-Jun-06	06060405	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
90399 NP	13-Jun-06	06060405	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
90399 NP	13-Jun-06	06060405	000056-23-5	Carbon tetrachloride	N002	210	ug/L		F	1.9		
90399 NP	13-Jun-06	06060405	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
90399 NP	13-Jun-06	06060405	000067-66-3	Chloroform	N002	39	ug/L		F	0.16		
90399 NP	13-Jun-06	06060405	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
90399 NP	13-Jun-06	06060405	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
90399 NP	13-Jun-06	06060405	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
90399 NP	13-Jun-06	06060405	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399 NP	13-Jun-06	06060405	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
90399 NP	13-Jun-06	06060405	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
90399 NP	13-Jun-06	06060405	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000127-18-4	Tetrachloroethene	N002	8.2	ug/L		F	0.2		
90399 NP	13-Jun-06	06060405	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
90399 NP	13-Jun-06	06060405	000079-01-6	Trichloroethene	N002	350	ug/L		F	1.6		
90399 NP	13-Jun-06	06060405	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
90399 NP	13-Jun-06	06060405	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000156-59-2	cis-1,2-Dichloroethene	N002	3.8	ug/L		F	0.15		
90399 NP	13-Jun-06	06060405	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	13-Jun-06	06060405	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	13-Jun-06	06060405	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	13-Jun-06	06060405	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90399 NP	13-Jun-06	06060405	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
90399	13-Jun-06	06060405	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90399	13-Jun-06	06060405	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90399	13-Jun-06	06060405	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90399	13-Jun-06	06060405	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000075-35-4	1,1-Dichloroethene	N001	1.2	ug/L		F	0.14		
90399	13-Jun-06	06060405	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90399	13-Jun-06	06060405	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90399	13-Jun-06	06060405	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399	13-Jun-06	06060405	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90399	13-Jun-06	06060405	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	13-Jun-06	06060405	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90399	13-Jun-06	06060405	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90399	13-Jun-06	06060405	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90399	13-Jun-06	06060405	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90399	13-Jun-06	06060405	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90399	13-Jun-06	06060405	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	13-Jun-06	06060405	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90399	13-Jun-06	06060405	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90399	13-Jun-06	06060405	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90399	13-Jun-06	06060405	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90399	13-Jun-06	06060405	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90399	13-Jun-06	06060405	000067-64-1	Acetone	N001	2.7	ug/L	J	F	1.9		
90399	13-Jun-06	06060405	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90399	13-Jun-06	06060405	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90399	13-Jun-06	06060405	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90399	13-Jun-06	06060405	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90399	13-Jun-06	06060405	000056-23-5	Carbon tetrachloride	N001	240	ug/L		F	1.9		
90399	13-Jun-06	06060405	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90399	13-Jun-06	06060405	000067-66-3	Chloroform	N001	43	ug/L		F	0.16		
90399	13-Jun-06	06060405	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90399	13-Jun-06	06060405	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90399	13-Jun-06	06060405	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90399	13-Jun-06	06060405	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90399	13-Jun-06	06060405	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90399	13-Jun-06	06060405	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90399	13-Jun-06	06060405	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000127-18-4	Tetrachloroethene	N001	9.1	ug/L		F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399	13-Jun-06	06060405	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90399	13-Jun-06	06060405	000079-01-6	Trichloroethene	N001	380	ug/L		F	1.6		
90399	13-Jun-06	06060405	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90399	13-Jun-06	06060405	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000156-59-2	cis-1,2-Dichloroethene	N001	4.4	ug/L		F	0.15		
90399	13-Jun-06	06060405	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	13-Jun-06	06060405	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90399	13-Jun-06	06060405	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	13-Jun-06	06060405	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90399	13-Jun-06	06060405	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
B206989 NP	10-Oct-06	06100523	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	36	mg/L		F	0.19		
B206989 NP	10-Oct-06	06100523	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	10-Oct-06	06100523	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
B206989 NP	10-Oct-06	06100523	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
B206989 NP	10-Oct-06	06100523	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	10-Oct-06	06100523	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	10-Oct-06	06100523	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
B206989 NP	10-Oct-06	06100523	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
B206989 NP	10-Oct-06	06100523	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
B206989 NP	10-Oct-06	06100523	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	10-Oct-06	06100523	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
B206989 NP	10-Oct-06	06100523	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
B206989 NP	10-Oct-06	06100523	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
B206989 NP	10-Oct-06	06100523	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	10-Oct-06	06100523	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	10-Oct-06	06100523	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	10-Oct-06	06100523	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
B206989 NP	10-Oct-06	06100523	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	10-Oct-06	06100523	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
B206989 NP	10-Oct-06	06100523	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
B206989 NP	10-Oct-06	06100523	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
B206989 NP	10-Oct-06	06100523	000067-64-1	Acetone	N001	70	ug/L		F	1.9		U
B206989 NP	10-Oct-06	06100523	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
B206989 NP	10-Oct-06	06100523	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
B206989 NP	10-Oct-06	06100523	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
B206989 NP	10-Oct-06	06100523	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
B206989 NP	10-Oct-06	06100523	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
B206989 NP	10-Oct-06	06100523	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
B206989 NP	10-Oct-06	06100523	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
B206989 NP	10-Oct-06	06100523	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
B206989 NP	10-Oct-06	06100523	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
B206989 NP	10-Oct-06	06100523	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
B206989 NP	10-Oct-06	06100523	000075-09-2	Methylene chloride	N001	0.51	ug/L	J B	F	0.32		U
B206989 NP	10-Oct-06	06100523	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
B206989 NP	10-Oct-06	06100523	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
B206989 NP	10-Oct-06	06100523	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
B206989 NP	10-Oct-06	06100523	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B206989 NP	10-Oct-06	06100523	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
B206989 NP	10-Oct-06	06100523	07440-61-1	Uranium	0001	110	ug/L		F	0.00004		
B206989 NP	10-Oct-06	06100523	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	10-Oct-06	06100523	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	10-Oct-06	06100523	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	10-Oct-06	06100523	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	10-Oct-06	06100523	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	10-Oct-06	06100523	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
B206989	10-Oct-06	06100523	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	35	mg/L		F	0.19		
B206989	10-Oct-06	06100523	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
B206989	10-Oct-06	06100523	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
B206989	10-Oct-06	06100523	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
B206989	10-Oct-06	06100523	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
B206989	10-Oct-06	06100523	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
B206989	10-Oct-06	06100523	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
B206989	10-Oct-06	06100523	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
B206989	10-Oct-06	06100523	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
B206989	10-Oct-06	06100523	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	10-Oct-06	06100523	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
B206989	10-Oct-06	06100523	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
B206989	10-Oct-06	06100523	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
B206989	10-Oct-06	06100523	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
B206989	10-Oct-06	06100523	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
B206989	10-Oct-06	06100523	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	10-Oct-06	06100523	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
B206989	10-Oct-06	06100523	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
B206989	10-Oct-06	06100523	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
B206989	10-Oct-06	06100523	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
B206989	10-Oct-06	06100523	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
B206989	10-Oct-06	06100523	000067-64-1	Acetone	N002	18	ug/L		F	1.9		U
B206989	10-Oct-06	06100523	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
B206989	10-Oct-06	06100523	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
B206989	10-Oct-06	06100523	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
B206989	10-Oct-06	06100523	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
B206989	10-Oct-06	06100523	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
B206989	10-Oct-06	06100523	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
B206989	10-Oct-06	06100523	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
B206989	10-Oct-06	06100523	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
B206989	10-Oct-06	06100523	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
B206989	10-Oct-06	06100523	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
B206989	10-Oct-06	06100523	000075-09-2	Methylene chloride	N002	0.57	ug/L	J B	F	0.32		U
B206989	10-Oct-06	06100523	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
B206989	10-Oct-06	06100523	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
B206989	10-Oct-06	06100523	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
B206989	10-Oct-06	06100523	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
B206989	10-Oct-06	06100523	07440-61-1	Uranium	0002	120	ug/L		F	0.00004		

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B206989	10-Oct-06	06100523	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
B206989	10-Oct-06	06100523	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	10-Oct-06	06100523	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
B206989	10-Oct-06	06100523	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	10-Oct-06	06100523	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
B206989	10-Oct-06	06100523	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
73005 NP	10-Oct-06	06100523	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
73005 NP	10-Oct-06	06100523	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
73005 NP	10-Oct-06	06100523	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
73005 NP	10-Oct-06	06100523	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
73005 NP	10-Oct-06	06100523	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
73005 NP	10-Oct-06	06100523	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
73005 NP	10-Oct-06	06100523	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
73005 NP	10-Oct-06	06100523	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
73005 NP	10-Oct-06	06100523	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
73005 NP	10-Oct-06	06100523	000541-73-1	1,3-Dichlorobenzene	N001	2.1	ug/L		F	0.16		
73005 NP	10-Oct-06	06100523	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
73005 NP	10-Oct-06	06100523	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
73005 NP	10-Oct-06	06100523	000067-64-1	Acetone	N001	65	ug/L		F	1.9		U
73005 NP	10-Oct-06	06100523	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		
73005 NP	10-Oct-06	06100523	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		
73005 NP	10-Oct-06	06100523	07429-90-5	Aluminum	0001	18	ug/L	U	F	0.018		
73005 NP	10-Oct-06	06100523	07440-36-0	Antimony	0001	3.1	ug/L	U	F	0.0031		
73005 NP	10-Oct-06	06100523	07440-38-2	Arsenic	0001	4.4	ug/L	U	F	0.0044		
73005 NP	10-Oct-06	06100523	07440-39-3	Barium	0001	100	ug/L		F	0.001		
73005 NP	10-Oct-06	06100523	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	07440-41-7	Beryllium	0001	1.5	ug/L	U	F	0.0015		
73005 NP	10-Oct-06	06100523	07440-42-8	Boron	0001	29	ug/L	B	F	0.0059		
73005 NP	10-Oct-06	06100523	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	10-Oct-06	06100523	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
73005 NP	10-Oct-06	06100523	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
73005 NP	10-Oct-06	06100523	07440-43-9	Cadmium	0001	0.45	ug/L	U	F	0.00045		
73005 NP	10-Oct-06	06100523	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
73005 NP	10-Oct-06	06100523	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
73005 NP	10-Oct-06	06100523	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
73005 NP	10-Oct-06	06100523	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	10-Oct-06	06100523	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
73005 NP	10-Oct-06	06100523	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
73005 NP	10-Oct-06	06100523	07440-47-3	Chromium	0001	2.6	ug/L	U	F	0.0026		
73005 NP	10-Oct-06	06100523	07440-48-4	Cobalt	0001	1.2	ug/L	B	F	0.0012		
73005 NP	10-Oct-06	06100523	07440-50-8	Copper	0001	4.5	ug/L	U	F	0.0045		
73005 NP	10-Oct-06	06100523	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
73005 NP	10-Oct-06	06100523	07439-92-1	Lead	0001	2.6	ug/L	U	F	0.0026		
73005 NP	10-Oct-06	06100523	07439-93-2	Lithium	0001	84	ug/L		F	0.0026		
73005 NP	10-Oct-06	06100523	07439-96-5	Manganese	0001	14	ug/L		F	0.0018		
73005 NP	10-Oct-06	06100523	07439-97-6	Mercury	0001	0.027	ug/L	U	F	0.000027		J
73005 NP	10-Oct-06	06100523	000075-09-2	Methylene chloride	N001	0.5	ug/L	J B	F	0.32		U
73005 NP	10-Oct-06	06100523	07439-98-7	Molybdenum	0001	5.3	ug/L	U	F	0.0053		
73005 NP	10-Oct-06	06100523	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
73005 NP	10-Oct-06	06100523	07440-02-0	Nickel	0001	7.8	ug/L	U	F	0.0078		
73005 NP	10-Oct-06	06100523	07782-49-2	Selenium	0001	10	ug/L	B	F	0.0049		
73005 NP	10-Oct-06	06100523	07440-22-4	Silver	0001	2.8	ug/L	U	F	0.0028		
73005 NP	10-Oct-06	06100523	07440-24-6	Strontium	0001	750	ug/L		F	0.0003		
73005 NP	10-Oct-06	06100523	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
73005 NP	10-Oct-06	06100523	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
73005 NP	10-Oct-06	06100523	07440-28-0	Thallium	0001	4.9	ug/L	U	F	0.0049		
73005 NP	10-Oct-06	06100523	07440-31-5	Tin	0001	5.8	ug/L	U	F	0.0058		
73005 NP	10-Oct-06	06100523	000108-88-3	Toluene	N001	0.28	ug/L	J	F	0.17		U
73005 NP	10-Oct-06	06100523	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		

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73005 NP	10-Oct-06	06100523	07440-61-1	Uranium	0001	16	ug/L	B	F	0.016		
73005 NP	10-Oct-06	06100523	07440-62-2	Vanadium	0001	2.5	ug/L	U	F	0.0025		
73005 NP	10-Oct-06	06100523	000108-05-4	Vinyl Acetate	N001	0.94	ug/L	U	F	0.94		
73005 NP	10-Oct-06	06100523	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
73005 NP	10-Oct-06	06100523	07440-66-6	Zinc	0001	6.4	ug/L	B	F	0.0045		
73005 NP	10-Oct-06	06100523	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005 NP	10-Oct-06	06100523	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
73005 NP	10-Oct-06	06100523	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		
73005 NP	10-Oct-06	06100523	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		
73005 NP	10-Oct-06	06100523	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005 NP	10-Oct-06	06100523	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
73005	11-Oct-06	06100523	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
73005	11-Oct-06	06100523	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
73005	11-Oct-06	06100523	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
73005	11-Oct-06	06100523	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
73005	11-Oct-06	06100523	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
73005	11-Oct-06	06100523	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
73005	11-Oct-06	06100523	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
73005	11-Oct-06	06100523	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
73005	11-Oct-06	06100523	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
73005	11-Oct-06	06100523	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
73005	11-Oct-06	06100523	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
73005	11-Oct-06	06100523	000067-64-1	Acetone	N001	2	ug/L	J	F	1.9		U
73005	11-Oct-06	06100523	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		
73005	11-Oct-06	06100523	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		
73005	11-Oct-06	06100523	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
73005	11-Oct-06	06100523	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
73005	11-Oct-06	06100523	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
73005	11-Oct-06	06100523	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
73005	11-Oct-06	06100523	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
73005	11-Oct-06	06100523	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
73005	11-Oct-06	06100523	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
73005	11-Oct-06	06100523	000075-09-2	Methylene chloride	N001	0.49	ug/L	J B	F	0.32		U
73005	11-Oct-06	06100523	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
73005	11-Oct-06	06100523	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
73005	11-Oct-06	06100523	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	000108-05-4	Vinyl Acetate	N001	0.94	ug/L	U	F	0.94		
73005	11-Oct-06	06100523	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
73005	11-Oct-06	06100523	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005	11-Oct-06	06100523	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
73005	11-Oct-06	06100523	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		
73005	11-Oct-06	06100523	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		
73005	11-Oct-06	06100523	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005	11-Oct-06	06100523	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
73005	28-Nov-06	06110594	07429-90-5	Aluminum	0001	95.2	ug/L	B	F	0.068		
73005	28-Nov-06	06110594	07440-36-0	Antimony	0001	5	ug/L	B	F	0.004		U
73005	28-Nov-06	06110594	07440-38-2	Arsenic	0001	7.1	ug/L	B	F	0.006		
73005	28-Nov-06	06110594	07440-39-3	Barium	0001	97	ug/L	B	F	0.001		
73005	28-Nov-06	06110594	07440-41-7	Beryllium	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07440-42-8	Boron	0001	39.5	ug/L		F	0.01		
73005	28-Nov-06	06110594	07440-43-9	Cadmium	0001	1.8	ug/L	B	F	0.001		
73005	28-Nov-06	06110594	07440-47-3	Chromium	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07440-48-4	Cobalt	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07440-50-8	Copper	0001	3	ug/L	U	F	0.003		
73005	28-Nov-06	06110594	07439-92-1	Lead	0001	2.5	ug/L	U	F	0.0025		
73005	28-Nov-06	06110594	07439-93-2	Lithium	0001	85.5	ug/L	B	F	0.002		

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73005	28-Nov-06	06110594	07439-96-5	Manganese	0001	18.3	ug/L		F	0.002		
73005	28-Nov-06	06110594	07439-97-6	Mercury	0001	0.06	ug/L	U	F	0.00006		
73005	28-Nov-06	06110594	07439-98-7	Molybdenum	0001	2	ug/L	U	F	0.002		
73005	28-Nov-06	06110594	07440-02-0	Nickel	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07782-49-2	Selenium	0001	6	ug/L	U	F	0.006		
73005	28-Nov-06	06110594	07440-22-4	Silver	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07440-24-6	Strontium	0001	895	ug/L		F	0.001		
73005	28-Nov-06	06110594	07440-28-0	Thallium	0001	14.7	ug/L	B	F	0.005		
73005	28-Nov-06	06110594	07440-31-5	Tin	0001	2.5	ug/L	U	F	0.0025		
73005	28-Nov-06	06110594	07440-61-1	Uranium	0001	52.3	ug/L	J	F	0.01		
73005	28-Nov-06	06110594	07440-62-2	Vanadium	0001	1	ug/L	U	F	0.001		
73005	28-Nov-06	06110594	07440-66-6	Zinc	0001	6.8	ug/L	B	F	0.002		U
90399 NP	01-Nov-06	06110565	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90399 NP	01-Nov-06	06110565	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90399 NP	01-Nov-06	06110565	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90399 NP	01-Nov-06	06110565	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000075-35-4	1,1-Dichloroethene	N001	0.34	ug/L	J	F	0.14		
90399 NP	01-Nov-06	06110565	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90399 NP	01-Nov-06	06110565	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90399 NP	01-Nov-06	06110565	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399 NP	01-Nov-06	06110565	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90399 NP	01-Nov-06	06110565	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	01-Nov-06	06110565	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90399 NP	01-Nov-06	06110565	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90399 NP	01-Nov-06	06110565	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90399 NP	01-Nov-06	06110565	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90399 NP	01-Nov-06	06110565	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90399 NP	01-Nov-06	06110565	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	01-Nov-06	06110565	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90399 NP	01-Nov-06	06110565	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90399 NP	01-Nov-06	06110565	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90399 NP	01-Nov-06	06110565	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90399 NP	01-Nov-06	06110565	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90399 NP	01-Nov-06	06110565	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
90399 NP	01-Nov-06	06110565	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90399 NP	01-Nov-06	06110565	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90399 NP	01-Nov-06	06110565	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90399 NP	01-Nov-06	06110565	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90399 NP	01-Nov-06	06110565	000056-23-5	Carbon tetrachloride	N001	120	ug/L		F	1.3		
90399 NP	01-Nov-06	06110565	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90399 NP	01-Nov-06	06110565	000067-66-3	Chloroform	N001	28	ug/L		F	0.16		
90399 NP	01-Nov-06	06110565	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90399 NP	01-Nov-06	06110565	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90399 NP	01-Nov-06	06110565	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90399 NP	01-Nov-06	06110565	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90399 NP	01-Nov-06	06110565	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90399 NP	01-Nov-06	06110565	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90399 NP	01-Nov-06	06110565	000100-42-5	Styrene	N001	1.2	ug/L		F	0.17		
90399 NP	01-Nov-06	06110565	000127-18-4	Tetrachloroethene	N001	3.5	ug/L		F	0.2		
90399 NP	01-Nov-06	06110565	000108-88-3	Toluene	N001	0.27	ug/L	J	F	0.17		U
90399 NP	01-Nov-06	06110565	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90399 NP	01-Nov-06	06110565	000079-01-6	Trichloroethene	N001	170	ug/L		F	1.1		
90399 NP	01-Nov-06	06110565	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90399 NP	01-Nov-06	06110565	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000156-59-2	cis-1,2-Dichloroethene	N001	2.4	ug/L		F	0.15		

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90399 NP	01-Nov-06	06110565	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	01-Nov-06	06110565	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	01-Nov-06	06110565	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	01-Nov-06	06110565	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90399 NP	01-Nov-06	06110565	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
90399	02-Nov-06	06110565	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90399	02-Nov-06	06110565	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90399	02-Nov-06	06110565	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90399	02-Nov-06	06110565	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000075-35-4	1,1-Dichloroethene	N001	0.76	ug/L	J	F	0.14		
90399	02-Nov-06	06110565	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90399	02-Nov-06	06110565	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90399	02-Nov-06	06110565	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399	02-Nov-06	06110565	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90399	02-Nov-06	06110565	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	02-Nov-06	06110565	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90399	02-Nov-06	06110565	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90399	02-Nov-06	06110565	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90399	02-Nov-06	06110565	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90399	02-Nov-06	06110565	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90399	02-Nov-06	06110565	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	02-Nov-06	06110565	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90399	02-Nov-06	06110565	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90399	02-Nov-06	06110565	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90399	02-Nov-06	06110565	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90399	02-Nov-06	06110565	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90399	02-Nov-06	06110565	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
90399	02-Nov-06	06110565	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90399	02-Nov-06	06110565	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90399	02-Nov-06	06110565	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90399	02-Nov-06	06110565	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90399	02-Nov-06	06110565	000056-23-5	Carbon tetrachloride	N001	140	ug/L		F	1.3		
90399	02-Nov-06	06110565	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90399	02-Nov-06	06110565	000067-66-3	Chloroform	N001	29	ug/L		F	0.16		
90399	02-Nov-06	06110565	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90399	02-Nov-06	06110565	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90399	02-Nov-06	06110565	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90399	02-Nov-06	06110565	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90399	02-Nov-06	06110565	000075-09-2	Methylene chloride	N001	0.34	ug/L	J B	F	0.32		U
90399	02-Nov-06	06110565	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90399	02-Nov-06	06110565	000100-42-5	Styrene	N001	1.1	ug/L		F	0.17		
90399	02-Nov-06	06110565	000127-18-4	Tetrachloroethene	N001	3.9	ug/L		F	0.2		
90399	02-Nov-06	06110565	000108-88-3	Toluene	N001	0.2	ug/L	J	F	0.17		U
90399	02-Nov-06	06110565	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90399	02-Nov-06	06110565	000079-01-6	Trichloroethene	N001	180	ug/L		F	1.1		
90399	02-Nov-06	06110565	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90399	02-Nov-06	06110565	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000156-59-2	cis-1,2-Dichloroethene	N001	2.5	ug/L		F	0.15		
90399	02-Nov-06	06110565	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	02-Nov-06	06110565	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399	02-Nov-06	06110565	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90399	02-Nov-06	06110565	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	02-Nov-06	06110565	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90399	02-Nov-06	06110565	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		
10992 NP	01-Nov-06	06110565	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
10992 NP	01-Nov-06	06110565	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
10992 NP	01-Nov-06	06110565	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
10992 NP	01-Nov-06	06110565	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
10992 NP	01-Nov-06	06110565	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
10992 NP	01-Nov-06	06110565	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
10992 NP	01-Nov-06	06110565	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
10992 NP	01-Nov-06	06110565	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
10992 NP	01-Nov-06	06110565	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10992 NP	01-Nov-06	06110565	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
10992 NP	01-Nov-06	06110565	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
10992 NP	01-Nov-06	06110565	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
10992 NP	01-Nov-06	06110565	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
10992 NP	01-Nov-06	06110565	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
10992 NP	01-Nov-06	06110565	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10992 NP	01-Nov-06	06110565	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
10992 NP	01-Nov-06	06110565	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
10992 NP	01-Nov-06	06110565	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
10992 NP	01-Nov-06	06110565	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
10992 NP	01-Nov-06	06110565	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
10992 NP	01-Nov-06	06110565	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
10992 NP	01-Nov-06	06110565	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
10992 NP	01-Nov-06	06110565	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
10992 NP	01-Nov-06	06110565	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
10992 NP	01-Nov-06	06110565	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
10992 NP	01-Nov-06	06110565	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
10992 NP	01-Nov-06	06110565	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
10992 NP	01-Nov-06	06110565	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
10992 NP	01-Nov-06	06110565	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
10992 NP	01-Nov-06	06110565	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
10992 NP	01-Nov-06	06110565	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
10992 NP	01-Nov-06	06110565	000075-09-2	Methylene chloride	N001	0.47	ug/L	J B	F	0.32		U
10992 NP	01-Nov-06	06110565	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
10992 NP	01-Nov-06	06110565	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
10992 NP	01-Nov-06	06110565	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
10992 NP	01-Nov-06	06110565	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
10992 NP	01-Nov-06	06110565	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10992 NP	01-Nov-06	06110565	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
10992 NP	01-Nov-06	06110565	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
10992 NP	01-Nov-06	06110565	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
10992 NP	01-Nov-06	06110565	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10992 NP	01-Nov-06	06110565	010061-02-6	trans-1,3-dichloropropene	N001	0.8	ug/L	U	F	0.8		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10992	01-Nov-06	06110565	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
10992	01-Nov-06	06110565	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
10992	01-Nov-06	06110565	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
10992	01-Nov-06	06110565	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
10992	01-Nov-06	06110565	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
10992	01-Nov-06	06110565	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
10992	01-Nov-06	06110565	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
10992	01-Nov-06	06110565	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
10992	01-Nov-06	06110565	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10992	01-Nov-06	06110565	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
10992	01-Nov-06	06110565	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
10992	01-Nov-06	06110565	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
10992	01-Nov-06	06110565	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
10992	01-Nov-06	06110565	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
10992	01-Nov-06	06110565	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10992	01-Nov-06	06110565	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
10992	01-Nov-06	06110565	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
10992	01-Nov-06	06110565	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
10992	01-Nov-06	06110565	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
10992	01-Nov-06	06110565	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
10992	01-Nov-06	06110565	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
10992	01-Nov-06	06110565	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
10992	01-Nov-06	06110565	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
10992	01-Nov-06	06110565	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
10992	01-Nov-06	06110565	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
10992	01-Nov-06	06110565	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
10992	01-Nov-06	06110565	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
10992	01-Nov-06	06110565	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
10992	01-Nov-06	06110565	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
10992	01-Nov-06	06110565	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
10992	01-Nov-06	06110565	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
10992	01-Nov-06	06110565	000075-09-2	Methylene chloride	N002	0.4	ug/L	J	F	0.32		U
10992	01-Nov-06	06110565	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
10992	01-Nov-06	06110565	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
10992	01-Nov-06	06110565	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
10992	01-Nov-06	06110565	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
10992	01-Nov-06	06110565	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10992	01-Nov-06	06110565	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
10992	01-Nov-06	06110565	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
10992	01-Nov-06	06110565	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
10992	01-Nov-06	06110565	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10992	01-Nov-06	06110565	010061-02-6	trans-1,3-dichloropropene	N002	0.8	ug/L	U	F	0.8		
4087 NP	16-Apr-07	07040854	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.47	mg/L		F	0.019		
4087 NP	16-Apr-07	07040854	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
4087 NP	16-Apr-07	07040854	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
4087 NP	16-Apr-07	07040854	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
4087 NP	16-Apr-07	07040854	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
4087 NP	16-Apr-07	07040854	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
4087 NP	16-Apr-07	07040854	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
4087 NP	16-Apr-07	07040854	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
4087 NP	16-Apr-07	07040854	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
4087 NP	16-Apr-07	07040854	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
4087 NP	16-Apr-07	07040854	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
4087 NP	16-Apr-07	07040854	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
4087 NP	16-Apr-07	07040854	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
4087 NP	16-Apr-07	07040854	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
4087 NP	16-Apr-07	07040854	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
4087 NP	16-Apr-07	07040854	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
4087 NP	16-Apr-07	07040854	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
4087 NP	16-Apr-07	07040854	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
4087 NP	16-Apr-07	07040854	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
4087 NP	16-Apr-07	07040854	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
4087 NP	16-Apr-07	07040854	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
4087 NP	16-Apr-07	07040854	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
4087 NP	16-Apr-07	07040854	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
4087 NP	16-Apr-07	07040854	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
4087 NP	16-Apr-07	07040854	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
4087 NP	16-Apr-07	07040854	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
4087 NP	16-Apr-07	07040854	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
4087 NP	16-Apr-07	07040854	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
4087 NP	16-Apr-07	07040854	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
4087 NP	16-Apr-07	07040854	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
4087 NP	16-Apr-07	07040854	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
4087 NP	16-Apr-07	07040854	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
4087 NP	16-Apr-07	07040854	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
4087 NP	16-Apr-07	07040854	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
4087 NP	16-Apr-07	07040854	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
4087 NP	16-Apr-07	07040854	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
4087 NP	16-Apr-07	07040854	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
4087 NP	16-Apr-07	07040854	07440-61-1	Uranium	0002	28	ug/L		F	0.00002		J
4087 NP	16-Apr-07	07040854	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
4087 NP	16-Apr-07	07040854	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
4087 NP	16-Apr-07	07040854	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
4087 NP	16-Apr-07	07040854	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
4087 NP	16-Apr-07	07040854	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
4087 NP	16-Apr-07	07040854	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
4087	16-Apr-07	07040854	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.36	mg/L		F	0.019		
4087	16-Apr-07	07040854	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
4087	16-Apr-07	07040854	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
4087	16-Apr-07	07040854	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
4087	16-Apr-07	07040854	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
4087	16-Apr-07	07040854	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
4087	16-Apr-07	07040854	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
4087	16-Apr-07	07040854	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
4087	16-Apr-07	07040854	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
4087	16-Apr-07	07040854	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
4087	16-Apr-07	07040854	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
4087	16-Apr-07	07040854	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
4087	16-Apr-07	07040854	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
4087	16-Apr-07	07040854	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
4087	16-Apr-07	07040854	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
4087	16-Apr-07	07040854	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
4087	16-Apr-07	07040854	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
4087	16-Apr-07	07040854	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
4087	16-Apr-07	07040854	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
4087	16-Apr-07	07040854	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
4087	16-Apr-07	07040854	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
4087	16-Apr-07	07040854	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
4087	16-Apr-07	07040854	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
4087	16-Apr-07	07040854	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
4087	16-Apr-07	07040854	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
4087	16-Apr-07	07040854	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
4087	16-Apr-07	07040854	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
4087	16-Apr-07	07040854	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
4087	16-Apr-07	07040854	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
4087	16-Apr-07	07040854	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
4087	16-Apr-07	07040854	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
4087	16-Apr-07	07040854	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
4087	16-Apr-07	07040854	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
4087	16-Apr-07	07040854	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
4087	16-Apr-07	07040854	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
4087	16-Apr-07	07040854	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
4087	16-Apr-07	07040854	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
4087	16-Apr-07	07040854	07440-61-1	Uranium	0001	30	ug/L		F	0.00002		J
4087	16-Apr-07	07040854	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
4087	16-Apr-07	07040854	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
4087	16-Apr-07	07040854	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
4087	16-Apr-07	07040854	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
4087	16-Apr-07	07040854	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
4087	16-Apr-07	07040854	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Apr-07	07040854	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	20	mg/L		F	0.19		
B206989 NP	16-Apr-07	07040854	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Apr-07	07040854	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
B206989 NP	16-Apr-07	07040854	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Apr-07	07040854	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B206989 NP	16-Apr-07	07040854	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Apr-07	07040854	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
B206989 NP	16-Apr-07	07040854	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
B206989 NP	16-Apr-07	07040854	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Apr-07	07040854	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Apr-07	07040854	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
B206989 NP	16-Apr-07	07040854	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
B206989 NP	16-Apr-07	07040854	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Apr-07	07040854	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Apr-07	07040854	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Apr-07	07040854	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Apr-07	07040854	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Apr-07	07040854	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Apr-07	07040854	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
B206989 NP	16-Apr-07	07040854	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
B206989 NP	16-Apr-07	07040854	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
B206989 NP	16-Apr-07	07040854	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
B206989 NP	16-Apr-07	07040854	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
B206989 NP	16-Apr-07	07040854	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Apr-07	07040854	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
B206989 NP	16-Apr-07	07040854	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
B206989 NP	16-Apr-07	07040854	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Apr-07	07040854	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
B206989 NP	16-Apr-07	07040854	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
B206989 NP	16-Apr-07	07040854	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
B206989 NP	16-Apr-07	07040854	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
B206989 NP	16-Apr-07	07040854	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Apr-07	07040854	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Apr-07	07040854	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
B206989 NP	16-Apr-07	07040854	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Apr-07	07040854	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Apr-07	07040854	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
B206989 NP	16-Apr-07	07040854	07440-61-1	Uranium	0001	78	ug/L		F	0.00002		J
B206989 NP	16-Apr-07	07040854	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Apr-07	07040854	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Apr-07	07040854	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Apr-07	07040854	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Apr-07	07040854	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Apr-07	07040854	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
B206989	26-Jun-07	07060977	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	27	mg/L		F	0.19		
B206989	26-Jun-07	07060977	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
B206989	26-Jun-07	07060977	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
B206989	26-Jun-07	07060977	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
B206989	26-Jun-07	07060977	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
B206989	26-Jun-07	07060977	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
B206989	26-Jun-07	07060977	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B206989	26-Jun-07	07060977	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
B206989	26-Jun-07	07060977	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
B206989	26-Jun-07	07060977	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989	26-Jun-07	07060977	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
B206989	26-Jun-07	07060977	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
B206989	26-Jun-07	07060977	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
B206989	26-Jun-07	07060977	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
B206989	26-Jun-07	07060977	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
B206989	26-Jun-07	07060977	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989	26-Jun-07	07060977	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
B206989	26-Jun-07	07060977	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
B206989	26-Jun-07	07060977	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
B206989	26-Jun-07	07060977	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
B206989	26-Jun-07	07060977	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
B206989	26-Jun-07	07060977	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
B206989	26-Jun-07	07060977	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
B206989	26-Jun-07	07060977	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
B206989	26-Jun-07	07060977	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
B206989	26-Jun-07	07060977	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
B206989	26-Jun-07	07060977	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
B206989	26-Jun-07	07060977	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
B206989	26-Jun-07	07060977	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
B206989	26-Jun-07	07060977	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
B206989	26-Jun-07	07060977	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
B206989	26-Jun-07	07060977	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
B206989	26-Jun-07	07060977	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
B206989	26-Jun-07	07060977	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
B206989	26-Jun-07	07060977	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
B206989	26-Jun-07	07060977	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
B206989	26-Jun-07	07060977	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
B206989	26-Jun-07	07060977	07440-61-1	Uranium	0001	87	ug/L		F	0.00002		
B206989	26-Jun-07	07060977	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989	26-Jun-07	07060977	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989	26-Jun-07	07060977	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
B206989	26-Jun-07	07060977	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989	26-Jun-07	07060977	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989	26-Jun-07	07060977	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
90299 NP	18-Apr-07	07040864	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
90299 NP	18-Apr-07	07040864	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
90299 NP	18-Apr-07	07040864	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
90299 NP	18-Apr-07	07040864	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
90299 NP	18-Apr-07	07040864	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
90299 NP	18-Apr-07	07040864	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
90299 NP	18-Apr-07	07040864	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
90299 NP	18-Apr-07	07040864	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
90299 NP	18-Apr-07	07040864	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90299 NP	18-Apr-07	07040864	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
90299 NP	18-Apr-07	07040864	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
90299 NP	18-Apr-07	07040864	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
90299 NP	18-Apr-07	07040864	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
90299 NP	18-Apr-07	07040864	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
90299 NP	18-Apr-07	07040864	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90299 NP	18-Apr-07	07040864	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
90299 NP	18-Apr-07	07040864	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
90299 NP	18-Apr-07	07040864	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
90299 NP	18-Apr-07	07040864	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
90299 NP	18-Apr-07	07040864	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
90299 NP	18-Apr-07	07040864	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
90299 NP	18-Apr-07	07040864	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
90299 NP	18-Apr-07	07040864	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
90299 NP	18-Apr-07	07040864	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
90299 NP	18-Apr-07	07040864	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
90299 NP	18-Apr-07	07040864	000056-23-5	Carbon tetrachloride	N002	0.48	ug/L	J	F	0.19		
90299 NP	18-Apr-07	07040864	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
90299 NP	18-Apr-07	07040864	000067-66-3	Chloroform	N002	1.6	ug/L		F	0.16		
90299 NP	18-Apr-07	07040864	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
90299 NP	18-Apr-07	07040864	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
90299 NP	18-Apr-07	07040864	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
90299 NP	18-Apr-07	07040864	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
90299 NP	18-Apr-07	07040864	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
90299 NP	18-Apr-07	07040864	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
90299 NP	18-Apr-07	07040864	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
90299 NP	18-Apr-07	07040864	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
90299 NP	18-Apr-07	07040864	000079-01-6	Trichloroethene	N002	0.93	ug/L	J	F	0.16		
90299 NP	18-Apr-07	07040864	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
90299 NP	18-Apr-07	07040864	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90299 NP	18-Apr-07	07040864	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
90299 NP	18-Apr-07	07040864	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
90299 NP	18-Apr-07	07040864	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
90299 NP	18-Apr-07	07040864	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90299 NP	18-Apr-07	07040864	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
90299	18-Apr-07	07040864	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90299	18-Apr-07	07040864	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90299	18-Apr-07	07040864	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90299	18-Apr-07	07040864	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
90299	18-Apr-07	07040864	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90299	18-Apr-07	07040864	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90299	18-Apr-07	07040864	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90299	18-Apr-07	07040864	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90299	18-Apr-07	07040864	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90299	18-Apr-07	07040864	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90299	18-Apr-07	07040864	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90299	18-Apr-07	07040864	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90299	18-Apr-07	07040864	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90299	18-Apr-07	07040864	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90299	18-Apr-07	07040864	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90299	18-Apr-07	07040864	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90299	18-Apr-07	07040864	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90299	18-Apr-07	07040864	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90299	18-Apr-07	07040864	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90299	18-Apr-07	07040864	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90299	18-Apr-07	07040864	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
90299	18-Apr-07	07040864	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90299	18-Apr-07	07040864	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90299	18-Apr-07	07040864	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90299	18-Apr-07	07040864	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90299	18-Apr-07	07040864	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
90299	18-Apr-07	07040864	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90299	18-Apr-07	07040864	000067-66-3	Chloroform	N001	0.53	ug/L	J	F	0.16		
90299	18-Apr-07	07040864	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90299	18-Apr-07	07040864	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90299	18-Apr-07	07040864	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90299	18-Apr-07	07040864	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90299	18-Apr-07	07040864	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90299	18-Apr-07	07040864	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90299	18-Apr-07	07040864	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
90299	18-Apr-07	07040864	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90299	18-Apr-07	07040864	000079-01-6	Trichloroethene	N001	0.32	ug/L	J	F	0.16		
90299	18-Apr-07	07040864	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90299	18-Apr-07	07040864	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90299	18-Apr-07	07040864	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90299	18-Apr-07	07040864	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90299	18-Apr-07	07040864	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90299	18-Apr-07	07040864	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90299	18-Apr-07	07040864	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
90399 NP	18-Apr-07	07040864	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
90399 NP	18-Apr-07	07040864	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
90399 NP	18-Apr-07	07040864	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
90399 NP	18-Apr-07	07040864	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000075-35-4	1,1-Dichloroethene	N002	0.71	ug/L	J	F	0.14		
90399 NP	18-Apr-07	07040864	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
90399 NP	18-Apr-07	07040864	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
90399 NP	18-Apr-07	07040864	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
90399 NP	18-Apr-07	07040864	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
90399 NP	18-Apr-07	07040864	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	18-Apr-07	07040864	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
90399 NP	18-Apr-07	07040864	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
90399 NP	18-Apr-07	07040864	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
90399 NP	18-Apr-07	07040864	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
90399 NP	18-Apr-07	07040864	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
90399 NP	18-Apr-07	07040864	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	18-Apr-07	07040864	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399 NP	18-Apr-07	07040864	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
90399 NP	18-Apr-07	07040864	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
90399 NP	18-Apr-07	07040864	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
90399 NP	18-Apr-07	07040864	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
90399 NP	18-Apr-07	07040864	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
90399 NP	18-Apr-07	07040864	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
90399 NP	18-Apr-07	07040864	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
90399 NP	18-Apr-07	07040864	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
90399 NP	18-Apr-07	07040864	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
90399 NP	18-Apr-07	07040864	000056-23-5	Carbon tetrachloride	N002	150	ug/L		F	1.9		
90399 NP	18-Apr-07	07040864	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
90399 NP	18-Apr-07	07040864	000067-66-3	Chloroform	N002	27	ug/L		F	0.16		
90399 NP	18-Apr-07	07040864	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
90399 NP	18-Apr-07	07040864	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
90399 NP	18-Apr-07	07040864	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
90399 NP	18-Apr-07	07040864	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
90399 NP	18-Apr-07	07040864	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
90399 NP	18-Apr-07	07040864	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
90399 NP	18-Apr-07	07040864	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000127-18-4	Tetrachloroethene	N002	4.7	ug/L		F	0.2		
90399 NP	18-Apr-07	07040864	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
90399 NP	18-Apr-07	07040864	000079-01-6	Trichloroethene	N002	210	ug/L		F	1.6		
90399 NP	18-Apr-07	07040864	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
90399 NP	18-Apr-07	07040864	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000156-59-2	cis-1,2-Dichloroethene	N002	2.4	ug/L		F	0.15		
90399 NP	18-Apr-07	07040864	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
90399 NP	18-Apr-07	07040864	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
90399 NP	18-Apr-07	07040864	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
90399 NP	18-Apr-07	07040864	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90399 NP	18-Apr-07	07040864	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
90399	18-Apr-07	07040864	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90399	18-Apr-07	07040864	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90399	18-Apr-07	07040864	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90399	18-Apr-07	07040864	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000075-35-4	1,1-Dichloroethene	N001	0.74	ug/L	J	F	0.14		
90399	18-Apr-07	07040864	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90399	18-Apr-07	07040864	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90399	18-Apr-07	07040864	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399	18-Apr-07	07040864	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90399	18-Apr-07	07040864	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	18-Apr-07	07040864	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90399	18-Apr-07	07040864	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90399	18-Apr-07	07040864	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90399	18-Apr-07	07040864	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90399	18-Apr-07	07040864	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90399	18-Apr-07	07040864	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	18-Apr-07	07040864	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90399	18-Apr-07	07040864	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90399	18-Apr-07	07040864	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
90399	18-Apr-07	07040864	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399	18-Apr-07	07040864	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90399	18-Apr-07	07040864	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90399	18-Apr-07	07040864	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
90399	18-Apr-07	07040864	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90399	18-Apr-07	07040864	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90399	18-Apr-07	07040864	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90399	18-Apr-07	07040864	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90399	18-Apr-07	07040864	000056-23-5	Carbon tetrachloride	N001	150	ug/L		F	1.9		
90399	18-Apr-07	07040864	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90399	18-Apr-07	07040864	000067-66-3	Chloroform	N001	28	ug/L		F	0.16		
90399	18-Apr-07	07040864	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90399	18-Apr-07	07040864	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90399	18-Apr-07	07040864	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90399	18-Apr-07	07040864	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90399	18-Apr-07	07040864	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90399	18-Apr-07	07040864	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90399	18-Apr-07	07040864	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000127-18-4	Tetrachloroethene	N001	4.7	ug/L		F	0.2		
90399	18-Apr-07	07040864	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90399	18-Apr-07	07040864	000079-01-6	Trichloroethene	N001	210	ug/L		F	1.6		
90399	18-Apr-07	07040864	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90399	18-Apr-07	07040864	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000156-59-2	cis-1,2-Dichloroethene	N001	2.5	ug/L		F	0.15		
90399	18-Apr-07	07040864	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90399	18-Apr-07	07040864	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90399	18-Apr-07	07040864	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90399	18-Apr-07	07040864	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90399	18-Apr-07	07040864	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
73005 NP	30-Apr-07	07050875	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
73005 NP	30-Apr-07	07050875	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
73005 NP	30-Apr-07	07050875	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
73005 NP	30-Apr-07	07050875	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
73005 NP	30-Apr-07	07050875	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
73005 NP	30-Apr-07	07050875	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
73005 NP	30-Apr-07	07050875	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
73005 NP	30-Apr-07	07050875	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
73005 NP	30-Apr-07	07050875	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
73005 NP	30-Apr-07	07050875	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
73005 NP	30-Apr-07	07050875	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
73005 NP	30-Apr-07	07050875	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
73005 NP	30-Apr-07	07050875	000107-02-8	Acrolein	N001	2.8	ug/L	U	F	2.8		R
73005 NP	30-Apr-07	07050875	000107-13-1	Acrylonitrile	N001	1.4	ug/L	U	F	1.4		R
73005 NP	30-Apr-07	07050875	07429-90-5	Aluminum	0001	18	ug/L	U	F	0.018		
73005 NP	30-Apr-07	07050875	07440-36-0	Antimony	0001	3.1	ug/L	U	F	0.0031		
73005 NP	30-Apr-07	07050875	07440-38-2	Arsenic	0001	4.4	ug/L	U	F	0.0044		
73005 NP	30-Apr-07	07050875	07440-39-3	Barium	0001	100	ug/L		F	0.001		
73005 NP	30-Apr-07	07050875	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	07440-41-7	Beryllium	0001	1.5	ug/L	U	F	0.0015		
73005 NP	30-Apr-07	07050875	07440-42-8	Boron	0001	32	ug/L		F	0.0059		
73005 NP	30-Apr-07	07050875	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
73005 NP	30-Apr-07	07050875	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		

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73005 NP	30-Apr-07	07050875	07440-43-9	Cadmium	0001	0.46	ug/L	B	F	0.00045		
73005 NP	30-Apr-07	07050875	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
73005 NP	30-Apr-07	07050875	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
73005 NP	30-Apr-07	07050875	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
73005 NP	30-Apr-07	07050875	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
73005 NP	30-Apr-07	07050875	07440-47-3	Chromium	0001	2.6	ug/L	U	F	0.0026		
73005 NP	30-Apr-07	07050875	07440-48-4	Cobalt	0001	1.2	ug/L	U	F	0.0012		
73005 NP	30-Apr-07	07050875	07440-50-8	Copper	0001	4.5	ug/L	U	F	0.0045		
73005 NP	30-Apr-07	07050875	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
73005 NP	30-Apr-07	07050875	07439-92-1	Lead	0001	2.6	ug/L	U	F	0.0026		
73005 NP	30-Apr-07	07050875	07439-93-2	Lithium	0001	76	ug/L		F	0.0026		
73005 NP	30-Apr-07	07050875	07439-96-5	Manganese	0001	1.8	ug/L	U	F	0.0018		
73005 NP	30-Apr-07	07050875	07439-97-6	Mercury	0001	0.027	ug/L	U	F	0.000027		J
73005 NP	30-Apr-07	07050875	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
73005 NP	30-Apr-07	07050875	07439-98-7	Molybdenum	0001	5.3	ug/L	U	F	0.0053		
73005 NP	30-Apr-07	07050875	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
73005 NP	30-Apr-07	07050875	07440-02-0	Nickel	0001	7.8	ug/L	U	F	0.0078		
73005 NP	30-Apr-07	07050875	07782-49-2	Selenium	0001	6.9	ug/L	B	F	0.0049		J
73005 NP	30-Apr-07	07050875	07440-22-4	Silver	0001	2.8	ug/L	U	F	0.0028		
73005 NP	30-Apr-07	07050875	07440-24-6	Strontium	0001	580	ug/L		F	0.0003		
73005 NP	30-Apr-07	07050875	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
73005 NP	30-Apr-07	07050875	07440-28-0	Thallium	0001	4.9	ug/L	U	F	0.0049		
73005 NP	30-Apr-07	07050875	07440-31-5	Tin	0001	5.8	ug/L	U	F	0.0058		
73005 NP	30-Apr-07	07050875	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	07440-61-1	Uranium	0001	17	ug/L	B	F	0.016		
73005 NP	30-Apr-07	07050875	07440-62-2	Vanadium	0001	2.5	ug/L	U	F	0.0025		
73005 NP	30-Apr-07	07050875	000108-05-4	Vinyl Acetate	N001	0.94	ug/L	U	F	0.94		
73005 NP	30-Apr-07	07050875	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
73005 NP	30-Apr-07	07050875	07440-66-6	Zinc	0001	8.9	ug/L	B	F	0.0045		U
73005 NP	30-Apr-07	07050875	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005 NP	30-Apr-07	07050875	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
73005 NP	30-Apr-07	07050875	M&P XYLENE	m,p-Xylene	N001	0.34	ug/L	U	F	0.34		
73005 NP	30-Apr-07	07050875	000095-47-6	o-Xylene	N001	0.19	ug/L	U	F	0.19		
73005 NP	30-Apr-07	07050875	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005 NP	30-Apr-07	07050875	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
73005	30-Apr-07	07050875	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
73005	30-Apr-07	07050875	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
73005	30-Apr-07	07050875	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
73005	30-Apr-07	07050875	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
73005	30-Apr-07	07050875	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
73005	30-Apr-07	07050875	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
73005	30-Apr-07	07050875	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
73005	30-Apr-07	07050875	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
73005	30-Apr-07	07050875	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
73005	30-Apr-07	07050875	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
73005	30-Apr-07	07050875	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
73005	30-Apr-07	07050875	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
73005	30-Apr-07	07050875	000107-02-8	Acrolein	N002	2.8	ug/L	U	F	2.8		**R**
73005	30-Apr-07	07050875	000107-13-1	Acrylonitrile	N002	1.4	ug/L	U	F	1.4		**R**
73005	30-Apr-07	07050875	07429-90-5	Aluminum	0002	18	ug/L	U	F	0.018		
73005	30-Apr-07	07050875	07440-36-0	Antimony	0002	3.1	ug/L	U	F	0.0031		
73005	30-Apr-07	07050875	07440-38-2	Arsenic	0002	4.4	ug/L	U	F	0.0044		
73005	30-Apr-07	07050875	07440-39-3	Barium	0002	87	ug/L		F	0.001		
73005	30-Apr-07	07050875	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	07440-41-7	Beryllium	0002	1.5	ug/L	U	F	0.0015		
73005	30-Apr-07	07050875	07440-42-8	Boron	0002	32	ug/L		F	0.0059		
73005	30-Apr-07	07050875	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73005	30-Apr-07	07050875	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
73005	30-Apr-07	07050875	07440-43-9	Cadmium	0002	0.45	ug/L	U	F	0.00045		
73005	30-Apr-07	07050875	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
73005	30-Apr-07	07050875	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
73005	30-Apr-07	07050875	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
73005	30-Apr-07	07050875	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
73005	30-Apr-07	07050875	07440-47-3	Chromium	0002	2.6	ug/L	U	F	0.0026		
73005	30-Apr-07	07050875	07440-48-4	Cobalt	0002	1.2	ug/L	U	F	0.0012		
73005	30-Apr-07	07050875	07440-50-8	Copper	0002	4.5	ug/L	U	F	0.0045		
73005	30-Apr-07	07050875	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
73005	30-Apr-07	07050875	07439-92-1	Lead	0002	2.6	ug/L	U	F	0.0026		
73005	30-Apr-07	07050875	07439-93-2	Lithium	0002	76	ug/L		F	0.0026		
73005	30-Apr-07	07050875	07439-96-5	Manganese	0002	1.8	ug/L	U	F	0.0018		
73005	30-Apr-07	07050875	07439-97-6	Mercury	0002	0.027	ug/L	U	F	0.000027		J
73005	30-Apr-07	07050875	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
73005	30-Apr-07	07050875	07439-98-7	Molybdenum	0002	5.3	ug/L	U	F	0.0053		
73005	30-Apr-07	07050875	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
73005	30-Apr-07	07050875	07440-02-0	Nickel	0002	7.8	ug/L	U	F	0.0078		
73005	30-Apr-07	07050875	07782-49-2	Selenium	0002	7.4	ug/L	B	F	0.0049		J
73005	30-Apr-07	07050875	07440-22-4	Silver	0002	2.8	ug/L	U	F	0.0028		
73005	30-Apr-07	07050875	07440-24-6	Strontium	0002	520	ug/L		F	0.0003		
73005	30-Apr-07	07050875	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
73005	30-Apr-07	07050875	07440-28-0	Thallium	0002	4.9	ug/L	U	F	0.0049		
73005	30-Apr-07	07050875	07440-31-5	Tin	0002	5.8	ug/L	U	F	0.0058		
73005	30-Apr-07	07050875	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	07440-61-1	Uranium	0002	19	ug/L	B	F	0.016		
73005	30-Apr-07	07050875	07440-62-2	Vanadium	0002	2.5	ug/L	U	F	0.0025		
73005	30-Apr-07	07050875	000108-05-4	Vinyl Acetate	N002	0.94	ug/L	U	F	0.94		
73005	30-Apr-07	07050875	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
73005	30-Apr-07	07050875	07440-66-6	Zinc	0002	9.4	ug/L	B	F	0.0045		U
73005	30-Apr-07	07050875	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
73005	30-Apr-07	07050875	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
73005	30-Apr-07	07050875	M&P XYLENE	m,p-Xylene	N002	0.34	ug/L	U	F	0.34		
73005	30-Apr-07	07050875	000095-47-6	o-Xylene	N002	0.19	ug/L	U	F	0.19		
73005	30-Apr-07	07050875	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
73005	30-Apr-07	07050875	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
73005 NP	15-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
73005 NP	15-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
73005 NP	15-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
73005 NP	15-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
73005 NP	15-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
73005 NP	15-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
73005 NP	15-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
73005 NP	15-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
73005 NP	15-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
73005 NP	15-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
73005 NP	15-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
73005 NP	15-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
73005 NP	15-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
73005 NP	15-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
73005 NP	15-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
73005 NP	15-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
73005 NP	15-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
73005 NP	15-Oct-07	07101215	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
73005 NP	15-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		J
73005 NP	15-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73005 NP	15-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
73005 NP	15-Oct-07	07101215	000067-64-1	Acetone	N001	4.7	ug/L	J B	F	1.9		U
73005 NP	15-Oct-07	07101215	07429-90-5	Aluminum	0001	18	ug/L	U	F	0.018		
73005 NP	15-Oct-07	07101215	07440-36-0	Antimony	0001	3.1	ug/L	U	F	0.0031		
73005 NP	15-Oct-07	07101215	07440-38-2	Arsenic	0001	4.4	ug/L	U	F	0.0044		J
73005 NP	15-Oct-07	07101215	07440-39-3	Barium	0001	81	ug/L		F	0.001		
73005 NP	15-Oct-07	07101215	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	07440-41-7	Beryllium	0001	0.47	ug/L	U	F	0.00047		
73005 NP	15-Oct-07	07101215	07440-42-8	Boron	0001	32	ug/L		F	0.0059		
73005 NP	15-Oct-07	07101215	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
73005 NP	15-Oct-07	07101215	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
73005 NP	15-Oct-07	07101215	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
73005 NP	15-Oct-07	07101215	07440-43-9	Cadmium	0001	0.85	ug/L	B	F	0.00045		
73005 NP	15-Oct-07	07101215	07440-70-2	Calcium	0001	91000	ug/L		F	0.034		
73005 NP	15-Oct-07	07101215	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
73005 NP	15-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
73005 NP	15-Oct-07	07101215	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
73005 NP	15-Oct-07	07101215	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
73005 NP	15-Oct-07	07101215	07440-47-3	Chromium	0001	2.6	ug/L	U	F	0.0026		
73005 NP	15-Oct-07	07101215	07440-48-4	Cobalt	0001	1.4	ug/L	B	F	0.0012		
73005 NP	15-Oct-07	07101215	07440-50-8	Copper	0001	4.5	ug/L	U	F	0.0045		
73005 NP	15-Oct-07	07101215	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		J
73005 NP	15-Oct-07	07101215	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
73005 NP	15-Oct-07	07101215	07439-89-6	Iron	0001	22	ug/L	U	F	0.022		
73005 NP	15-Oct-07	07101215	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
73005 NP	15-Oct-07	07101215	07439-92-1	Lead	0001	2.6	ug/L	U	F	0.0026		
73005 NP	15-Oct-07	07101215	07439-93-2	Lithium	0001	75	ug/L		F	0.0026		
73005 NP	15-Oct-07	07101215	07439-95-4	Magnesium	0001	19000	ug/L		F	0.043		
73005 NP	15-Oct-07	07101215	07439-96-5	Manganese	0001	7.5	ug/L	B	F	0.0018		
73005 NP	15-Oct-07	07101215	07439-97-6	Mercury	0001	0.027	ug/L	U	F	0.000027		
73005 NP	15-Oct-07	07101215	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
73005 NP	15-Oct-07	07101215	07439-98-7	Molybdenum	0001	5.3	ug/L	U	F	0.0053		
73005 NP	15-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
73005 NP	15-Oct-07	07101215	07440-02-0	Nickel	0001	7.8	ug/L	U	F	0.0078		
73005 NP	15-Oct-07	07101215	07440-09-7	Potassium	0001	3500	ug/L		F	0.24		
73005 NP	15-Oct-07	07101215	07782-49-2	Selenium	0001	8.9	ug/L	B	F	0.0049		
73005 NP	15-Oct-07	07101215	07631-86-9	Silica	0001	19000	ug/L		F	0.13		
73005 NP	15-Oct-07	07101215	07440-22-4	Silver	0001	2.8	ug/L	U	F	0.0028		
73005 NP	15-Oct-07	07101215	07440-23-5	Sodium	0001	78000	ug/L		F	0.092		
73005 NP	15-Oct-07	07101215	07440-24-6	Strontium	0001	650	ug/L		F	0.0003		
73005 NP	15-Oct-07	07101215	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
73005 NP	15-Oct-07	07101215	07440-28-0	Thallium	0001	4.9	ug/L	U	F	0.0049		
73005 NP	15-Oct-07	07101215	07440-31-5	Tin	0001	5.8	ug/L	U	F	0.0058		
73005 NP	15-Oct-07	07101215	07440-32-6	Titanium	0001	1	ug/L	U	F	0.001		
73005 NP	15-Oct-07	07101215	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
73005 NP	15-Oct-07	07101215	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
73005 NP	15-Oct-07	07101215	07440-61-1	Uranium	0001	25	ug/L	B	F	0.016		J
73005 NP	15-Oct-07	07101215	07440-62-2	Vanadium	0001	2.5	ug/L	U	F	0.0025		
73005 NP	15-Oct-07	07101215	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	07440-66-6	Zinc	0001	7.5	ug/L	B	F	0.0045		U
73005 NP	15-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
73005 NP	15-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
73005 NP	15-Oct-07	07101215	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
73005 NP	15-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
73005 NP	15-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		

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73005 NP	15-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
73005	15-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
73005	15-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
73005	15-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
73005	15-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
73005	15-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
73005	15-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
73005	15-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
73005	15-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
73005	15-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
73005	15-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
73005	15-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
73005	15-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N002	0.21	ug/L	J B	F	0.13		U
73005	15-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
73005	15-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
73005	15-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
73005	15-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
73005	15-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
73005	15-Oct-07	07101215	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
73005	15-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		J
73005	15-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
73005	15-Oct-07	07101215	000067-64-1	Acetone	N002	2.2	ug/L	J B	F	1.9		U
73005	15-Oct-07	07101215	07429-90-5	Aluminum	0002	18	ug/L	U	F	0.018		
73005	15-Oct-07	07101215	07440-36-0	Antimony	0002	3.1	ug/L	U	F	0.0031		
73005	15-Oct-07	07101215	07440-38-2	Arsenic	0002	4.4	ug/L	U	F	0.0044		J
73005	15-Oct-07	07101215	07440-39-3	Barium	0002	43	ug/L		F	0.001		
73005	15-Oct-07	07101215	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	07440-41-7	Beryllium	0002	0.47	ug/L	U	F	0.00047		
73005	15-Oct-07	07101215	07440-42-8	Boron	0002	34	ug/L		F	0.0059		
73005	15-Oct-07	07101215	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
73005	15-Oct-07	07101215	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
73005	15-Oct-07	07101215	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
73005	15-Oct-07	07101215	07440-43-9	Cadmium	0002	0.64	ug/L	B	F	0.00045		
73005	15-Oct-07	07101215	07440-70-2	Calcium	0002	100000	ug/L		F	0.034		
73005	15-Oct-07	07101215	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
73005	15-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
73005	15-Oct-07	07101215	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
73005	15-Oct-07	07101215	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		J
73005	15-Oct-07	07101215	07440-47-3	Chromium	0002	2.6	ug/L	U	F	0.0026		
73005	15-Oct-07	07101215	07440-48-4	Cobalt	0002	4.2	ug/L	B	F	0.0012		
73005	15-Oct-07	07101215	07440-50-8	Copper	0002	4.5	ug/L	U	F	0.0045		
73005	15-Oct-07	07101215	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		J
73005	15-Oct-07	07101215	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
73005	15-Oct-07	07101215	07439-89-6	Iron	0002	22	ug/L	U	F	0.022		
73005	15-Oct-07	07101215	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
73005	15-Oct-07	07101215	07439-92-1	Lead	0002	2.6	ug/L	U	F	0.0026		
73005	15-Oct-07	07101215	07439-93-2	Lithium	0002	88	ug/L		F	0.0026		
73005	15-Oct-07	07101215	07439-95-4	Magnesium	0002	22000	ug/L		F	0.043		
73005	15-Oct-07	07101215	07439-96-5	Manganese	0002	47	ug/L		F	0.0018		
73005	15-Oct-07	07101215	07439-97-6	Mercury	0002	0.027	ug/L	U	F	0.000027		
73005	15-Oct-07	07101215	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
73005	15-Oct-07	07101215	07439-98-7	Molybdenum	0002	5.3	ug/L	U	F	0.0053		
73005	15-Oct-07	07101215	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
73005	15-Oct-07	07101215	07440-02-0	Nickel	0002	7.8	ug/L	U	F	0.0078		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
73005	15-Oct-07	07101215	07440-09-7	Potassium	0002	3400	ug/L		F	0.24		
73005	15-Oct-07	07101215	07782-49-2	Selenium	0002	8.1	ug/L	B	F	0.0049		
73005	15-Oct-07	07101215	07631-86-9	Silica	0002	19000	ug/L		F	0.13		
73005	15-Oct-07	07101215	07440-22-4	Silver	0002	2.8	ug/L	U	F	0.0028		
73005	15-Oct-07	07101215	07440-23-5	Sodium	0002	130000	ug/L		F	0.092		
73005	15-Oct-07	07101215	07440-24-6	Strontium	0002	750	ug/L		F	0.0003		
73005	15-Oct-07	07101215	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
73005	15-Oct-07	07101215	07440-28-0	Thallium	0002	4.9	ug/L	U	F	0.0049		
73005	15-Oct-07	07101215	07440-31-5	Tin	0002	5.8	ug/L	U	F	0.0058		
73005	15-Oct-07	07101215	07440-32-6	Titanium	0002	1.2	ug/L	B	F	0.001		
73005	15-Oct-07	07101215	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
73005	15-Oct-07	07101215	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
73005	15-Oct-07	07101215	07440-61-1	Uranium	0002	25	ug/L	B	F	0.016		
73005	15-Oct-07	07101215	07440-62-2	Vanadium	0002	2.5	ug/L	U	F	0.0025		
73005	15-Oct-07	07101215	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	07440-66-6	Zinc	0002	14	ug/L	B	F	0.0045		U
73005	15-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
73005	15-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
73005	15-Oct-07	07101215	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
73005	15-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
73005	15-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
73005	15-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
B206989 NP	16-Oct-07	07101215	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	27	mg/L		F	0.38		
B206989 NP	16-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
B206989 NP	16-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
B206989 NP	16-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
B206989 NP	16-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
B206989 NP	16-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
B206989 NP	16-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
B206989 NP	16-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Oct-07	07101215	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
B206989 NP	16-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		J
B206989 NP	16-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
B206989 NP	16-Oct-07	07101215	000067-64-1	Acetone	N001	4	ug/L	J B	F	1.9		U
B206989 NP	16-Oct-07	07101215	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
B206989 NP	16-Oct-07	07101215	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Oct-07	07101215	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
B206989 NP	16-Oct-07	07101215	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
B206989 NP	16-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Oct-07	07101215	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B206989 NP	16-Oct-07	07101215	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
B206989 NP	16-Oct-07	07101215	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		J
B206989 NP	16-Oct-07	07101215	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
B206989 NP	16-Oct-07	07101215	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Oct-07	07101215	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
B206989 NP	16-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
B206989 NP	16-Oct-07	07101215	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
B206989 NP	16-Oct-07	07101215	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
B206989 NP	16-Oct-07	07101215	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
B206989 NP	16-Oct-07	07101215	07440-61-1	Uranium	0001	89	ug/L		F	0.00002		
B206989 NP	16-Oct-07	07101215	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
B206989 NP	16-Oct-07	07101215	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
B206989 NP	16-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
B206989 NP	16-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
B206989 NP	16-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
B206989	16-Oct-07	07101215	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	28	mg/L		F	0.38		
B206989	16-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
B206989	16-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
B206989	16-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
B206989	16-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
B206989	16-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
B206989	16-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
B206989	16-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
B206989	16-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
B206989	16-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	16-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
B206989	16-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
B206989	16-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
B206989	16-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
B206989	16-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
B206989	16-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	16-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
B206989	16-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
B206989	16-Oct-07	07101215	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
B206989	16-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		J
B206989	16-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
B206989	16-Oct-07	07101215	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
B206989	16-Oct-07	07101215	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
B206989	16-Oct-07	07101215	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
B206989	16-Oct-07	07101215	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
B206989	16-Oct-07	07101215	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
B206989	16-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
B206989	16-Oct-07	07101215	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
B206989	16-Oct-07	07101215	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		J

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
B206989	16-Oct-07	07101215	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		J
B206989	16-Oct-07	07101215	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
B206989	16-Oct-07	07101215	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
B206989	16-Oct-07	07101215	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
B206989	16-Oct-07	07101215	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
B206989	16-Oct-07	07101215	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
B206989	16-Oct-07	07101215	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
B206989	16-Oct-07	07101215	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
B206989	16-Oct-07	07101215	07440-61-1	Uranium	0002	93	ug/L		F	0.00002		
B206989	16-Oct-07	07101215	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
B206989	16-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
B206989	16-Oct-07	07101215	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
B206989	16-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
B206989	16-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
B206989	16-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
80205 NP	17-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
80205 NP	17-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
80205 NP	17-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
80205 NP	17-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
80205 NP	17-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
80205 NP	17-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
80205 NP	17-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
80205 NP	17-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
80205 NP	17-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		
80205 NP	17-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
80205 NP	17-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
80205 NP	17-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
80205 NP	17-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
80205 NP	17-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		
80205 NP	17-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
80205 NP	17-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
80205 NP	17-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
80205 NP	17-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		
80205 NP	17-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
80205 NP	17-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		
80205 NP	17-Oct-07	07101215	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		
80205 NP	17-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
80205 NP	17-Oct-07	07101215	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		
80205 NP	17-Oct-07	07101215	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		
80205 NP	17-Oct-07	07101215	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		
80205 NP	17-Oct-07	07101215	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		
80205 NP	17-Oct-07	07101215	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		
80205 NP	17-Oct-07	07101215	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		
80205 NP	17-Oct-07	07101215	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
80205 NP	17-Oct-07	07101215	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		
80205 NP	17-Oct-07	07101215	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		
80205 NP	17-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		J
80205 NP	17-Oct-07	07101215	000091-57-6	2-Methylnaphthalene	N001	0.29	ug/L	U	F	0.29		
80205 NP	17-Oct-07	07101215	000095-48-7	2-Methylphenol	N001	0.98	ug/L	U	F	0.98		
80205 NP	17-Oct-07	07101215	000088-74-4	2-Nitroaniline	N001	0.32	ug/L	U	F	0.32		
80205 NP	17-Oct-07	07101215	000088-75-5	2-Nitrophenol	N001	2	ug/L	U	F	2		
80205 NP	17-Oct-07	07101215	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		
80205 NP	17-Oct-07	07101215	000099-09-2	3-Nitroaniline	N001	2	ug/L	U	F	2		

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80205 NP	17-Oct-07	07101215	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		
80205 NP	17-Oct-07	07101215	000101-55-3	4-Bromophenyl phenyl ether	N001	0.43	ug/L	U	F	0.43		
80205 NP	17-Oct-07	07101215	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		
80205 NP	17-Oct-07	07101215	000106-47-8	4-Chloroaniline	N001	2	ug/L	U	F	2		
80205 NP	17-Oct-07	07101215	007005-72-3	4-Chlorophenyl phenyl ether	N001	0.65	ug/L	U	F	0.65		
80205 NP	17-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
80205 NP	17-Oct-07	07101215	000106-44-5	4-Methylphenol	N001	0.74	ug/L	U	F	0.74		
80205 NP	17-Oct-07	07101215	000100-01-6	4-Nitroaniline	N001	1	ug/L	U	F	1		
80205 NP	17-Oct-07	07101215	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		
80205 NP	17-Oct-07	07101215	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		
80205 NP	17-Oct-07	07101215	000208-96-8	Acenaphthylene	N001	0.49	ug/L	U	F	0.49		
80205 NP	17-Oct-07	07101215	000067-64-1	Acetone	N001	3.5	ug/L	J B	F	1.9		U
80205 NP	17-Oct-07	07101215	07429-90-5	Aluminum	0001	18	ug/L	U	F	0.018		
80205 NP	17-Oct-07	07101215	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		
80205 NP	17-Oct-07	07101215	07440-36-0	Antimony	0001	3.1	ug/L	U	F	0.0031		
80205 NP	17-Oct-07	07101215	07440-38-2	Arsenic	0001	4.4	ug/L	U	F	0.0044		J
80205 NP	17-Oct-07	07101215	07440-39-3	Barium	0001	70	ug/L		F	0.001		
80205 NP	17-Oct-07	07101215	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		
80205 NP	17-Oct-07	07101215	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		
80205 NP	17-Oct-07	07101215	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		
80205 NP	17-Oct-07	07101215	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		
80205 NP	17-Oct-07	07101215	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		
80205 NP	17-Oct-07	07101215	000065-85-0	Benzoic acid	N001	20	ug/L	U	F	20		
80205 NP	17-Oct-07	07101215	000100-51-6	Benzyl alcohol	N001	0.45	ug/L	U	F	0.45		
80205 NP	17-Oct-07	07101215	07440-41-7	Beryllium	0001	0.47	ug/L	U	F	0.00047		
80205 NP	17-Oct-07	07101215	000111-91-1	Bis(2-chloroethoxy)methane	N001	0.32	ug/L	U	F	0.32		
80205 NP	17-Oct-07	07101215	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		
80205 NP	17-Oct-07	07101215	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		
80205 NP	17-Oct-07	07101215	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		
80205 NP	17-Oct-07	07101215	07440-42-8	Boron	0001	71	ug/L		F	0.0059		
80205 NP	17-Oct-07	07101215	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
80205 NP	17-Oct-07	07101215	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
80205 NP	17-Oct-07	07101215	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
80205 NP	17-Oct-07	07101215	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		
80205 NP	17-Oct-07	07101215	07440-43-9	Cadmium	0001	0.57	ug/L	B	F	0.00045		
80205 NP	17-Oct-07	07101215	07440-70-2	Calcium	0001	250000	ug/L		F	0.034		
80205 NP	17-Oct-07	07101215	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
80205 NP	17-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
80205 NP	17-Oct-07	07101215	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
80205 NP	17-Oct-07	07101215	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80205 NP	17-Oct-07	07101215	07440-47-3	Chromium	0001	2.6	ug/L	U	F	0.0026		
80205 NP	17-Oct-07	07101215	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		
80205 NP	17-Oct-07	07101215	07440-48-4	Cobalt	0001	1.2	ug/L	U	F	0.0012		
80205 NP	17-Oct-07	07101215	07440-50-8	Copper	0001	4.5	ug/L	U	F	0.0045		
80205 NP	17-Oct-07	07101215	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		
80205 NP	17-Oct-07	07101215	000117-84-0	Di-n-octyl phthalate	N001	0.35	ug/L	U	F	0.35		
80205 NP	17-Oct-07	07101215	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		
80205 NP	17-Oct-07	07101215	000132-64-9	Dibenzofuran	N001	0.29	ug/L	U	F	0.29		
80205 NP	17-Oct-07	07101215	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		J
80205 NP	17-Oct-07	07101215	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		
80205 NP	17-Oct-07	07101215	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		
80205 NP	17-Oct-07	07101215	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		
80205 NP	17-Oct-07	07101215	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		
80205 NP	17-Oct-07	07101215	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		
80205 NP	17-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
80205 NP	17-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		
80205 NP	17-Oct-07	07101215	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		
80205 NP	17-Oct-07	07101215	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		
80205 NP	17-Oct-07	07101215	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		

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80205 NP	17-Oct-07	07101215	07439-89-6	Iron	0001	22	ug/L	U	F	0.022		
80205 NP	17-Oct-07	07101215	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		
80205 NP	17-Oct-07	07101215	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
80205 NP	17-Oct-07	07101215	07439-92-1	Lead	0001	2.6	ug/L	U	F	0.0026		
80205 NP	17-Oct-07	07101215	07439-93-2	Lithium	0001	180	ug/L		F	0.0026		
80205 NP	17-Oct-07	07101215	07439-95-4	Magnesium	0001	84000	ug/L		F	0.043		
80205 NP	17-Oct-07	07101215	07439-96-5	Manganese	0001	1.8	ug/L	U	F	0.0018		
80205 NP	17-Oct-07	07101215	07439-97-6	Mercury	0001	0.027	ug/L	U	F	0.000027		
80205 NP	17-Oct-07	07101215	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
80205 NP	17-Oct-07	07101215	07439-98-7	Molybdenum	0001	5.3	ug/L	U	F	0.0053		
80205 NP	17-Oct-07	07101215	000621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		
80205 NP	17-Oct-07	07101215	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		
80205 NP	17-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
80205 NP	17-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		
80205 NP	17-Oct-07	07101215	07440-02-0	Nickel	0001	7.8	ug/L	U	F	0.0078		
80205 NP	17-Oct-07	07101215	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		
80205 NP	17-Oct-07	07101215	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		
80205 NP	17-Oct-07	07101215	000085-01-8	Phenanthrene	N001	0.26	ug/L	U	F	0.26		
80205 NP	17-Oct-07	07101215	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		
80205 NP	17-Oct-07	07101215	07440-09-7	Potassium	0001	5200	ug/L		F	0.24		
80205 NP	17-Oct-07	07101215	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		
80205 NP	17-Oct-07	07101215	07782-49-2	Selenium	0001	4.9	ug/L	U	F	0.0049		
80205 NP	17-Oct-07	07101215	07631-86-9	Silica	0001	23000	ug/L		F	0.13		
80205 NP	17-Oct-07	07101215	07440-22-4	Silver	0001	2.8	ug/L	U	F	0.0028		
80205 NP	17-Oct-07	07101215	07440-23-5	Sodium	0001	190000	ug/L		F	0.092		
80205 NP	17-Oct-07	07101215	07440-24-6	Strontium	0001	2600	ug/L		F	0.0003		
80205 NP	17-Oct-07	07101215	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
80205 NP	17-Oct-07	07101215	07440-28-0	Thallium	0001	4.9	ug/L	U	F	0.0049		
80205 NP	17-Oct-07	07101215	07440-31-5	Tin	0001	5.8	ug/L	U	F	0.0058		
80205 NP	17-Oct-07	07101215	07440-32-6	Titanium	0001	1.7	ug/L	B	F	0.001		
80205 NP	17-Oct-07	07101215	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
80205 NP	17-Oct-07	07101215	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
80205 NP	17-Oct-07	07101215	07440-61-1	Uranium	0001	69	ug/L		F	0.016		
80205 NP	17-Oct-07	07101215	07440-62-2	Vanadium	0001	2.5	ug/L	U	F	0.0025		
80205 NP	17-Oct-07	07101215	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	07440-66-6	Zinc	0001	5.6	ug/L	B	F	0.0045		U
80205 NP	17-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
80205 NP	17-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
80205 NP	17-Oct-07	07101215	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
80205 NP	17-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
80205 NP	17-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
80205 NP	17-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
80205	18-Oct-07	07101215	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
80205	18-Oct-07	07101215	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
80205	18-Oct-07	07101215	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
80205	18-Oct-07	07101215	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
80205	18-Oct-07	07101215	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
80205	18-Oct-07	07101215	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
80205	18-Oct-07	07101215	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
80205	18-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
80205	18-Oct-07	07101215	000120-82-1	1,2,4-Trichlorobenzene	N001	0.45	ug/L	U	F	0.45		
80205	18-Oct-07	07101215	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
80205	18-Oct-07	07101215	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
80205	18-Oct-07	07101215	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
80205	18-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
80205	18-Oct-07	07101215	000095-50-1	1,2-Dichlorobenzene	N001	0.28	ug/L	U	F	0.28		
80205	18-Oct-07	07101215	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
80205	18-Oct-07	07101215	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
80205	18-Oct-07	07101215	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		

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80205	18-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000541-73-1	1,3-Dichlorobenzene	N001	0.29	ug/L	U	F	0.29		
80205	18-Oct-07	07101215	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
80205	18-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000106-46-7	1,4-Dichlorobenzene	N001	0.3	ug/L	U	F	0.3		
80205	18-Oct-07	07101215	000105-67-9	2, 4-Dimethylphenol	N001	0.57	ug/L	U	F	0.57		
80205	18-Oct-07	07101215	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
80205	18-Oct-07	07101215	000095-95-4	2,4,5-Trichlorophenol	N001	0.39	ug/L	U	F	0.39		
80205	18-Oct-07	07101215	000088-06-2	2,4,6-Trichlorophenol	N001	0.37	ug/L	U	F	0.37		
80205	18-Oct-07	07101215	000120-83-2	2,4-Dichlorophenol	N001	1.3	ug/L	U	F	1.3		
80205	18-Oct-07	07101215	000051-28-5	2,4-Dinitrophenol	N001	20	ug/L	U	F	20		
80205	18-Oct-07	07101215	000121-14-2	2,4-Dinitrotoluene	N001	0.25	ug/L	U	F	0.25		
80205	18-Oct-07	07101215	000606-20-2	2,6-Dinitrotoluene	N001	0.23	ug/L	U	F	0.23		
80205	18-Oct-07	07101215	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
80205	18-Oct-07	07101215	000091-58-7	2-Chloronaphthalene	N001	0.31	ug/L	U	F	0.31		
80205	18-Oct-07	07101215	000095-57-8	2-Chlorophenol	N001	0.38	ug/L	U	F	0.38		
80205	18-Oct-07	07101215	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		J
80205	18-Oct-07	07101215	000091-57-6	2-Methylnaphthalene	N001	0.29	ug/L	U	F	0.29		
80205	18-Oct-07	07101215	000095-48-7	2-Methylphenol	N001	0.98	ug/L	U	F	0.98		
80205	18-Oct-07	07101215	000088-74-4	2-Nitroaniline	N001	0.32	ug/L	U	F	0.32		
80205	18-Oct-07	07101215	000088-75-5	2-Nitrophenol	N001	2	ug/L	U	F	2		
80205	18-Oct-07	07101215	000091-94-1	3,3'-Dichlorobenzidine	N001	2	ug/L	U	F	2		
80205	18-Oct-07	07101215	000099-09-2	3-Nitroaniline	N001	2	ug/L	U	F	2		
80205	18-Oct-07	07101215	000534-52-1	4,6-Dinitro-2-methyl phenol	N001	0.35	ug/L	U	F	0.35		
80205	18-Oct-07	07101215	000101-55-3	4-Bromophenyl phenyl ether	N001	0.43	ug/L	U	F	0.43		
80205	18-Oct-07	07101215	000059-50-7	4-Chloro-3-methylphenol	N001	2	ug/L	U	F	2		
80205	18-Oct-07	07101215	000106-47-8	4-Chloroaniline	N001	2	ug/L	U	F	2		
80205	18-Oct-07	07101215	007005-72-3	4-Chlorophenyl phenyl ether	N001	0.65	ug/L	U	F	0.65		
80205	18-Oct-07	07101215	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
80205	18-Oct-07	07101215	000106-44-5	4-Methylphenol	N001	0.74	ug/L	U	F	0.74		
80205	18-Oct-07	07101215	000100-01-6	4-Nitroaniline	N001	1	ug/L	U	F	1		
80205	18-Oct-07	07101215	000100-02-7	4-Nitrophenol	N001	1.7	ug/L	U	F	1.7		
80205	18-Oct-07	07101215	000083-32-9	Acenaphthene	N001	0.28	ug/L	U	F	0.28		
80205	18-Oct-07	07101215	000208-96-8	Acenaphthylene	N001	0.49	ug/L	U	F	0.49		
80205	18-Oct-07	07101215	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
80205	18-Oct-07	07101215	07429-90-5	Aluminum	0001	18	ug/L	U	F	0.018		
80205	18-Oct-07	07101215	000120-12-7	Anthracene	N001	0.42	ug/L	U	F	0.42		
80205	18-Oct-07	07101215	07440-36-0	Antimony	0001	3.1	ug/L	U	F	0.0031		
80205	18-Oct-07	07101215	07440-38-2	Arsenic	0001	4.4	ug/L	U	F	0.0044		J
80205	18-Oct-07	07101215	07440-39-3	Barium	0001	61	ug/L		F	0.001		
80205	18-Oct-07	07101215	000056-55-3	Benz(a)anthracene	N001	0.35	ug/L	U	F	0.35		
80205	18-Oct-07	07101215	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000050-32-8	Benzo(a)pyrene	N001	0.74	ug/L	U	F	0.74		
80205	18-Oct-07	07101215	000205-99-2	Benzo(b)fluoranthene	N001	0.39	ug/L	U	F	0.39		
80205	18-Oct-07	07101215	000191-24-2	Benzo(g,h,i)Perylene	N001	0.5	ug/L	U	F	0.5		
80205	18-Oct-07	07101215	000207-08-9	Benzo(k)fluoranthene	N001	0.46	ug/L	U	F	0.46		
80205	18-Oct-07	07101215	000065-85-0	Benzoic acid	N001	20	ug/L	U	F	20		
80205	18-Oct-07	07101215	000100-51-6	Benzyl alcohol	N001	0.45	ug/L	U	F	0.45		
80205	18-Oct-07	07101215	07440-41-7	Beryllium	0001	0.47	ug/L	U	F	0.00047		
80205	18-Oct-07	07101215	000111-91-1	Bis(2-chloroethoxy)methane	N001	0.32	ug/L	U	F	0.32		
80205	18-Oct-07	07101215	000111-44-4	Bis(2-chloroethyl) ether	N001	0.41	ug/L	U	F	0.41		
80205	18-Oct-07	07101215	000108-60-1	Bis(2-chloroisopropyl) ether	N001	0.43	ug/L	U	F	0.43		
80205	18-Oct-07	07101215	000117-81-7	Bis(2-ethylhexyl) phthalate	N001	0.56	ug/L	U	F	0.56		
80205	18-Oct-07	07101215	07440-42-8	Boron	0001	69	ug/L		F	0.0059		
80205	18-Oct-07	07101215	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
80205	18-Oct-07	07101215	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
80205	18-Oct-07	07101215	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
80205	18-Oct-07	07101215	000085-68-7	Butyl benzyl phthalate	N001	1	ug/L	U	F	1		
80205	18-Oct-07	07101215	07440-43-9	Cadmium	0001	0.57	ug/L	B	F	0.00045		
80205	18-Oct-07	07101215	07440-70-2	Calcium	0001	250000	ug/L		F	0.034		
80205	18-Oct-07	07101215	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
80205	18-Oct-07	07101215	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
80205	18-Oct-07	07101215	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		

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80205	18-Oct-07	07101215	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
80205	18-Oct-07	07101215	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		J
80205	18-Oct-07	07101215	07440-47-3	Chromium	0001	2.6	ug/L	U	F	0.0026		
80205	18-Oct-07	07101215	000218-01-9	Chrysene	N001	0.54	ug/L	U	F	0.54		
80205	18-Oct-07	07101215	07440-48-4	Cobalt	0001	2.6	ug/L	B	F	0.0012		
80205	18-Oct-07	07101215	07440-50-8	Copper	0001	4.5	ug/L	U	F	0.0045		
80205	18-Oct-07	07101215	000084-74-2	Di-n-butyl phthalate	N001	1.2	ug/L	U	F	1.2		
80205	18-Oct-07	07101215	000117-84-0	Di-n-octyl phthalate	N001	0.35	ug/L	U	F	0.35		
80205	18-Oct-07	07101215	000053-70-3	Dibenz(a,h)anthracene	N001	0.51	ug/L	U	F	0.51		
80205	18-Oct-07	07101215	000132-64-9	Dibenzofuran	N001	0.29	ug/L	U	F	0.29		
80205	18-Oct-07	07101215	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		J
80205	18-Oct-07	07101215	000084-66-2	Diethyl phthalate	N001	0.38	ug/L	U	F	0.38		
80205	18-Oct-07	07101215	000131-11-3	Dimethyl phthalate	N001	1	ug/L	U	F	1		
80205	18-Oct-07	07101215	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000206-44-0	Fluoranthene	N001	0.2	ug/L	U	F	0.2		
80205	18-Oct-07	07101215	000086-73-7	Fluorene	N001	0.31	ug/L	U	F	0.31		
80205	18-Oct-07	07101215	000118-74-1	Hexachlorobenzene	N001	0.66	ug/L	U	F	0.66		
80205	18-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
80205	18-Oct-07	07101215	000087-68-3	Hexachlorobutadiene	N001	0.51	ug/L	U	F	0.51		
80205	18-Oct-07	07101215	000077-47-4	Hexachlorocyclopentadiene	N001	1.5	ug/L	U	F	1.5		
80205	18-Oct-07	07101215	000067-72-1	Hexachloroethane	N001	0.46	ug/L	U	F	0.46		
80205	18-Oct-07	07101215	000193-39-5	Indeno(1,2,3-cd)pyrene	N001	0.65	ug/L	U	F	0.65		
80205	18-Oct-07	07101215	07439-89-6	Iron	0001	27	ug/L	B	F	0.022		U
80205	18-Oct-07	07101215	000078-59-1	Isophorone	N001	0.21	ug/L	U	F	0.21		
80205	18-Oct-07	07101215	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
80205	18-Oct-07	07101215	07439-92-1	Lead	0001	2.6	ug/L	U	F	0.0026		
80205	18-Oct-07	07101215	07439-93-2	Lithium	0001	190	ug/L		F	0.0026		
80205	18-Oct-07	07101215	07439-95-4	Magnesium	0001	82000	ug/L		F	0.043		
80205	18-Oct-07	07101215	07439-96-5	Manganese	0001	4.8	ug/L	B	F	0.0018		
80205	18-Oct-07	07101215	07439-97-6	Mercury	0001	0.027	ug/L	U	F	0.000027		
80205	18-Oct-07	07101215	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
80205	18-Oct-07	07101215	07439-98-7	Molybdenum	0001	5.3	ug/L	U	F	0.0053		
80205	18-Oct-07	07101215	000621-64-7	N-Nitrosodi-n-propylamine	N001	0.35	ug/L	U	F	0.35		
80205	18-Oct-07	07101215	000086-30-6	N-Nitrosodiphenylamine	N001	0.44	ug/L	U	F	0.44		
80205	18-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
80205	18-Oct-07	07101215	000091-20-3	Naphthalene	N001	0.29	ug/L	U	F	0.29		
80205	18-Oct-07	07101215	07440-02-0	Nickel	0001	7.8	ug/L	U	F	0.0078		
80205	18-Oct-07	07101215	000098-95-3	Nitrobenzene	N001	0.81	ug/L	U	F	0.81		
80205	18-Oct-07	07101215	000087-86-5	Pentachlorophenol	N001	20	ug/L	U	F	20		
80205	18-Oct-07	07101215	000085-01-8	Phenanthrene	N001	0.26	ug/L	U	F	0.26		
80205	18-Oct-07	07101215	000108-95-2	Phenol	N001	0.31	ug/L	U	F	0.31		
80205	18-Oct-07	07101215	07440-09-7	Potassium	0001	5900	ug/L		F	0.24		
80205	18-Oct-07	07101215	000129-00-0	Pyrene	N001	0.37	ug/L	U	F	0.37		
80205	18-Oct-07	07101215	07782-49-2	Selenium	0001	8.6	ug/L	B	F	0.0049		
80205	18-Oct-07	07101215	07631-86-9	Silica	0001	23000	ug/L		F	0.13		
80205	18-Oct-07	07101215	07440-22-4	Silver	0001	2.8	ug/L	U	F	0.0028		
80205	18-Oct-07	07101215	07440-23-5	Sodium	0001	190000	ug/L		F	0.092		
80205	18-Oct-07	07101215	07440-24-6	Strontium	0001	2600	ug/L		F	0.0003		
80205	18-Oct-07	07101215	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
80205	18-Oct-07	07101215	07440-28-0	Thallium	0001	4.9	ug/L	U	F	0.0049		
80205	18-Oct-07	07101215	07440-31-5	Tin	0001	5.8	ug/L	U	F	0.0058		
80205	18-Oct-07	07101215	07440-32-6	Titanium	0001	1.4	ug/L	B	F	0.001		
80205	18-Oct-07	07101215	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
80205	18-Oct-07	07101215	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
80205	18-Oct-07	07101215	07440-61-1	Uranium	0001	94	ug/L		F	0.016		
80205	18-Oct-07	07101215	07440-62-2	Vanadium	0001	2.5	ug/L	U	F	0.0025		
80205	18-Oct-07	07101215	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	07440-66-6	Zinc	0001	4.6	ug/L	B	F	0.0045		U
80205	18-Oct-07	07101215	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
80205	18-Oct-07	07101215	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
80205	18-Oct-07	07101215	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
80205	18-Oct-07	07101215	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
80205	18-Oct-07	07101215	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
80205	18-Oct-07	07101215	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
80205	18-Oct-07	07101215	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
88104 NP	22-Oct-07	07101228	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
88104 NP	22-Oct-07	07101228	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
88104 NP	22-Oct-07	07101228	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
88104 NP	22-Oct-07	07101228	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
88104 NP	22-Oct-07	07101228	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
88104 NP	22-Oct-07	07101228	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
88104 NP	22-Oct-07	07101228	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
88104 NP	22-Oct-07	07101228	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
88104 NP	22-Oct-07	07101228	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
88104 NP	22-Oct-07	07101228	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
88104 NP	22-Oct-07	07101228	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
88104 NP	22-Oct-07	07101228	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
88104 NP	22-Oct-07	07101228	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
88104 NP	22-Oct-07	07101228	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
88104 NP	22-Oct-07	07101228	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
88104 NP	22-Oct-07	07101228	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
88104 NP	22-Oct-07	07101228	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
88104 NP	22-Oct-07	07101228	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
88104 NP	22-Oct-07	07101228	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
88104 NP	22-Oct-07	07101228	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
88104 NP	22-Oct-07	07101228	000067-64-1	Acetone	N001	2.4	ug/L	J	F	1.9		
88104 NP	22-Oct-07	07101228	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
88104 NP	22-Oct-07	07101228	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
88104 NP	22-Oct-07	07101228	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
88104 NP	22-Oct-07	07101228	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
88104 NP	22-Oct-07	07101228	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
88104 NP	22-Oct-07	07101228	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
88104 NP	22-Oct-07	07101228	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
88104 NP	22-Oct-07	07101228	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
88104 NP	22-Oct-07	07101228	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
88104 NP	22-Oct-07	07101228	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
88104 NP	22-Oct-07	07101228	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
88104 NP	22-Oct-07	07101228	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
88104 NP	22-Oct-07	07101228	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
88104 NP	22-Oct-07	07101228	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
88104 NP	22-Oct-07	07101228	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
88104 NP	22-Oct-07	07101228	07440-61-1	Uranium	0001	51	ug/L		F	0.00002		
88104 NP	22-Oct-07	07101228	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
88104 NP	22-Oct-07	07101228	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
88104 NP	22-Oct-07	07101228	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
88104 NP	22-Oct-07	07101228	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		J
88104 NP	22-Oct-07	07101228	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
88104 NP	22-Oct-07	07101228	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
88104 NP	22-Oct-07	07101228	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
88104	23-Oct-07	07101228	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
88104	23-Oct-07	07101228	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
88104	23-Oct-07	07101228	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
88104	23-Oct-07	07101228	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
88104	23-Oct-07	07101228	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
88104	23-Oct-07	07101228	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
88104	23-Oct-07	07101228	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
88104	23-Oct-07	07101228	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
88104	23-Oct-07	07101228	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
88104	23-Oct-07	07101228	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
88104	23-Oct-07	07101228	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
88104	23-Oct-07	07101228	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
88104	23-Oct-07	07101228	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
88104	23-Oct-07	07101228	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
88104	23-Oct-07	07101228	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
88104	23-Oct-07	07101228	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
88104	23-Oct-07	07101228	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
88104	23-Oct-07	07101228	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
88104	23-Oct-07	07101228	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
88104	23-Oct-07	07101228	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
88104	23-Oct-07	07101228	000067-64-1	Acetone	N001	3.1	ug/L	J	F	1.9		
88104	23-Oct-07	07101228	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
88104	23-Oct-07	07101228	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
88104	23-Oct-07	07101228	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
88104	23-Oct-07	07101228	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
88104	23-Oct-07	07101228	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
88104	23-Oct-07	07101228	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
88104	23-Oct-07	07101228	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
88104	23-Oct-07	07101228	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
88104	23-Oct-07	07101228	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		J
88104	23-Oct-07	07101228	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
88104	23-Oct-07	07101228	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
88104	23-Oct-07	07101228	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
88104	23-Oct-07	07101228	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000127-18-4	Tetrachloroethene	N001	0.22	ug/L	J	F	0.2		
88104	23-Oct-07	07101228	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
88104	23-Oct-07	07101228	000079-01-6	Trichloroethene	N001	0.24	ug/L	J	F	0.16		
88104	23-Oct-07	07101228	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
88104	23-Oct-07	07101228	07440-61-1	Uranium	0001	47	ug/L		F	0.00002		
88104	23-Oct-07	07101228	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
88104	23-Oct-07	07101228	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
88104	23-Oct-07	07101228	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
88104	23-Oct-07	07101228	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		J
88104	23-Oct-07	07101228	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
88104	23-Oct-07	07101228	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
88104	23-Oct-07	07101228	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
P210089 NP	30-Oct-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	140	mg/L		F	0.96		
P210089 NP	30-Oct-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
P210089 NP	30-Oct-07	07111250	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
P210089 NP	30-Oct-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
P210089 NP	30-Oct-07	07111250	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
P210089 NP	30-Oct-07	07111250	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		J
P210089 NP	30-Oct-07	07111250	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
P210089 NP	30-Oct-07	07111250	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
P210089 NP	30-Oct-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
P210089 NP	30-Oct-07	07111250	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
P210089 NP	30-Oct-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
P210089 NP	30-Oct-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
P210089 NP	30-Oct-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
P210089 NP	30-Oct-07	07111250	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
P210089 NP	30-Oct-07	07111250	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
P210089 NP	30-Oct-07	07111250	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
P210089 NP	30-Oct-07	07111250	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
P210089 NP	30-Oct-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
P210089 NP	30-Oct-07	07111250	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
P210089 NP	30-Oct-07	07111250	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
P210089 NP	30-Oct-07	07111250	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
P210089 NP	30-Oct-07	07111250	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
P210089 NP	30-Oct-07	07111250	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
P210089 NP	30-Oct-07	07111250	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
P210089 NP	30-Oct-07	07111250	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
P210089 NP	30-Oct-07	07111250	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
P210089 NP	30-Oct-07	07111250	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
P210089 NP	30-Oct-07	07111250	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
P210089 NP	30-Oct-07	07111250	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
P210089 NP	30-Oct-07	07111250	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
P210089 NP	30-Oct-07	07111250	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
P210089 NP	30-Oct-07	07111250	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
P210089 NP	30-Oct-07	07111250	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
P210089 NP	30-Oct-07	07111250	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
P210089 NP	30-Oct-07	07111250	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
P210089 NP	30-Oct-07	07111250	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
P210089 NP	30-Oct-07	07111250	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
P210089 NP	30-Oct-07	07111250	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
P210089 NP	30-Oct-07	07111250	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
P210089 NP	30-Oct-07	07111250	07440-61-1	Uranium	0001	16	ug/L		F	0.00002		J
P210089 NP	30-Oct-07	07111250	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
P210089 NP	30-Oct-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
P210089 NP	30-Oct-07	07111250	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
P210089 NP	30-Oct-07	07111250	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
P210089 NP	30-Oct-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
P210089 NP	30-Oct-07	07111250	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
P210089	30-Oct-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	140	mg/L		F	0.96		
P210089	30-Oct-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
P210089	30-Oct-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
P210089	30-Oct-07	07111250	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
P210089	30-Oct-07	07111250	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		J
P210089	30-Oct-07	07111250	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
P210089	30-Oct-07	07111250	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
P210089	30-Oct-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
P210089	30-Oct-07	07111250	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
P210089	30-Oct-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
P210089	30-Oct-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
P210089	30-Oct-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
P210089	30-Oct-07	07111250	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
P210089	30-Oct-07	07111250	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
P210089	30-Oct-07	07111250	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
P210089	30-Oct-07	07111250	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
P210089	30-Oct-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
P210089	30-Oct-07	07111250	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
P210089	30-Oct-07	07111250	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
P210089	30-Oct-07	07111250	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
P210089	30-Oct-07	07111250	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
P210089	30-Oct-07	07111250	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
P210089	30-Oct-07	07111250	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
P210089	30-Oct-07	07111250	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
P210089	30-Oct-07	07111250	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
P210089	30-Oct-07	07111250	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
P210089	30-Oct-07	07111250	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
P210089	30-Oct-07	07111250	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
P210089	30-Oct-07	07111250	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
P210089	30-Oct-07	07111250	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
P210089	30-Oct-07	07111250	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
P210089	30-Oct-07	07111250	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
P210089	30-Oct-07	07111250	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
P210089	30-Oct-07	07111250	000075-09-2	Methylene chloride	N002	0.34	ug/L	J B	F	0.32		U
P210089	30-Oct-07	07111250	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
P210089	30-Oct-07	07111250	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
P210089	30-Oct-07	07111250	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
P210089	30-Oct-07	07111250	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
P210089	30-Oct-07	07111250	07440-61-1	Uranium	0002	18	ug/L		F	0.00002		J
P210089	30-Oct-07	07111250	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
P210089	30-Oct-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
P210089	30-Oct-07	07111250	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
P210089	30-Oct-07	07111250	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
P210089	30-Oct-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
P210089	30-Oct-07	07111250	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
70099 NP	30-Oct-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.095	mg/L		F	0.019		
70099 NP	30-Oct-07	07111250	07440-61-1	Uranium	0001	260	ug/L		F	0.00002		J
70099	30-Oct-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.52	mg/L		F	0.019		
70099	30-Oct-07	07111250	07440-61-1	Uranium	0002	280	ug/L		F	0.00002		J
10594 NP	01-Nov-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.2	mg/L		F	0.019		
10594 NP	01-Nov-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10594 NP	01-Nov-07	07111250	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
10594 NP	01-Nov-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
10594 NP	01-Nov-07	07111250	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
10594 NP	01-Nov-07	07111250	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		J
10594 NP	01-Nov-07	07111250	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
10594 NP	01-Nov-07	07111250	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
10594 NP	01-Nov-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
10594 NP	01-Nov-07	07111250	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
10594 NP	01-Nov-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
10594 NP	01-Nov-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10594 NP	01-Nov-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
10594 NP	01-Nov-07	07111250	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
10594 NP	01-Nov-07	07111250	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
10594 NP	01-Nov-07	07111250	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
10594 NP	01-Nov-07	07111250	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
10594 NP	01-Nov-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
10594 NP	01-Nov-07	07111250	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
10594 NP	01-Nov-07	07111250	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
10594 NP	01-Nov-07	07111250	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
10594 NP	01-Nov-07	07111250	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
10594 NP	01-Nov-07	07111250	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
10594 NP	01-Nov-07	07111250	000067-64-1	Acetone	N001	3.1	ug/L	J	F	1.9		
10594 NP	01-Nov-07	07111250	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
10594 NP	01-Nov-07	07111250	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
10594 NP	01-Nov-07	07111250	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
10594 NP	01-Nov-07	07111250	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
10594 NP	01-Nov-07	07111250	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
10594 NP	01-Nov-07	07111250	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
10594 NP	01-Nov-07	07111250	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
10594 NP	01-Nov-07	07111250	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
10594 NP	01-Nov-07	07111250	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
10594 NP	01-Nov-07	07111250	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
10594 NP	01-Nov-07	07111250	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
10594 NP	01-Nov-07	07111250	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
10594 NP	01-Nov-07	07111250	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
10594 NP	01-Nov-07	07111250	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
10594 NP	01-Nov-07	07111250	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
10594 NP	01-Nov-07	07111250	07440-61-1	Uranium	0001	110	ug/L		F	0.00002		J
10594 NP	01-Nov-07	07111250	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10594 NP	01-Nov-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
10594 NP	01-Nov-07	07111250	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
10594 NP	01-Nov-07	07111250	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
10594 NP	01-Nov-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
10594 NP	01-Nov-07	07111250	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
10594	01-Nov-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.14	mg/L		F	0.019		
10594	01-Nov-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
10594	01-Nov-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
10594	01-Nov-07	07111250	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
10594	01-Nov-07	07111250	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		J
10594	01-Nov-07	07111250	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
10594	01-Nov-07	07111250	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
10594	01-Nov-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
10594	01-Nov-07	07111250	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
10594	01-Nov-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
10594	01-Nov-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10594	01-Nov-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
10594	01-Nov-07	07111250	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
10594	01-Nov-07	07111250	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
10594	01-Nov-07	07111250	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
10594	01-Nov-07	07111250	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
10594	01-Nov-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
10594	01-Nov-07	07111250	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
10594	01-Nov-07	07111250	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
10594	01-Nov-07	07111250	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
10594	01-Nov-07	07111250	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
10594	01-Nov-07	07111250	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
10594	01-Nov-07	07111250	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
10594	01-Nov-07	07111250	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
10594	01-Nov-07	07111250	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
10594	01-Nov-07	07111250	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
10594	01-Nov-07	07111250	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
10594	01-Nov-07	07111250	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
10594	01-Nov-07	07111250	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
10594	01-Nov-07	07111250	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
10594	01-Nov-07	07111250	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
10594	01-Nov-07	07111250	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
10594	01-Nov-07	07111250	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
10594	01-Nov-07	07111250	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
10594	01-Nov-07	07111250	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
10594	01-Nov-07	07111250	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
10594	01-Nov-07	07111250	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
10594	01-Nov-07	07111250	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
10594	01-Nov-07	07111250	07440-61-1	Uranium	0002	130	ug/L		F	0.00002		J
10594	01-Nov-07	07111250	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10594	01-Nov-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
10594	01-Nov-07	07111250	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
10594	01-Nov-07	07111250	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
10594	01-Nov-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
10594	01-Nov-07	07111250	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
99305 NP	01-Nov-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.019	mg/L	U	F	0.019		
99305 NP	01-Nov-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
99305 NP	01-Nov-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	15	ug/L		F	0.79		
99305 NP	01-Nov-07	07111250	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
99305 NP	01-Nov-07	07111250	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		J
99305 NP	01-Nov-07	07111250	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
99305 NP	01-Nov-07	07111250	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
99305 NP	01-Nov-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
99305 NP	01-Nov-07	07111250	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
99305 NP	01-Nov-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
99305 NP	01-Nov-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
99305 NP	01-Nov-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
99305 NP	01-Nov-07	07111250	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
99305 NP	01-Nov-07	07111250	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
99305 NP	01-Nov-07	07111250	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
99305 NP	01-Nov-07	07111250	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
99305 NP	01-Nov-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
99305 NP	01-Nov-07	07111250	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
99305 NP	01-Nov-07	07111250	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
99305 NP	01-Nov-07	07111250	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
99305 NP	01-Nov-07	07111250	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
99305 NP	01-Nov-07	07111250	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
99305 NP	01-Nov-07	07111250	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
99305 NP	01-Nov-07	07111250	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
99305 NP	01-Nov-07	07111250	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
99305 NP	01-Nov-07	07111250	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
99305 NP	01-Nov-07	07111250	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
99305 NP	01-Nov-07	07111250	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
99305 NP	01-Nov-07	07111250	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
99305 NP	01-Nov-07	07111250	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
99305 NP	01-Nov-07	07111250	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000075-71-8	Dichlorodifluoromethane	N001	0.87	ug/L	J	F	0.31		
99305 NP	01-Nov-07	07111250	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
99305 NP	01-Nov-07	07111250	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
99305 NP	01-Nov-07	07111250	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
99305 NP	01-Nov-07	07111250	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
99305 NP	01-Nov-07	07111250	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000127-18-4	Tetrachloroethene	N001	1.8	ug/L		F	0.2		
99305 NP	01-Nov-07	07111250	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
99305 NP	01-Nov-07	07111250	000079-01-6	Trichloroethene	N001	27	ug/L		F	0.16		
99305 NP	01-Nov-07	07111250	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
99305 NP	01-Nov-07	07111250	07440-61-1	Uranium	0001	63	ug/L		F	0.00002		J
99305 NP	01-Nov-07	07111250	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N001	6.9	ug/L		F	0.15		
99305 NP	01-Nov-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
99305 NP	01-Nov-07	07111250	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
99305 NP	01-Nov-07	07111250	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
99305 NP	01-Nov-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
99305 NP	01-Nov-07	07111250	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
99305	01-Nov-07	07111250	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.34	mg/L		F	0.019		
99305	01-Nov-07	07111250	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
99305	01-Nov-07	07111250	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	27	ug/L		F	0.79		
99305	01-Nov-07	07111250	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
99305	01-Nov-07	07111250	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		J
99305	01-Nov-07	07111250	000075-35-4	1,1-Dichloroethene	N002	0.29	ug/L	J	F	0.14		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
99305	01-Nov-07	07111250	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
99305	01-Nov-07	07111250	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
99305	01-Nov-07	07111250	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
99305	01-Nov-07	07111250	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
99305	01-Nov-07	07111250	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
99305	01-Nov-07	07111250	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
99305	01-Nov-07	07111250	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
99305	01-Nov-07	07111250	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
99305	01-Nov-07	07111250	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
99305	01-Nov-07	07111250	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
99305	01-Nov-07	07111250	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
99305	01-Nov-07	07111250	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
99305	01-Nov-07	07111250	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
99305	01-Nov-07	07111250	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
99305	01-Nov-07	07111250	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
99305	01-Nov-07	07111250	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
99305	01-Nov-07	07111250	000067-64-1	Acetone	N002	6.9	ug/L	J	F	1.9		
99305	01-Nov-07	07111250	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
99305	01-Nov-07	07111250	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
99305	01-Nov-07	07111250	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
99305	01-Nov-07	07111250	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
99305	01-Nov-07	07111250	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
99305	01-Nov-07	07111250	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
99305	01-Nov-07	07111250	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
99305	01-Nov-07	07111250	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
99305	01-Nov-07	07111250	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
99305	01-Nov-07	07111250	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
99305	01-Nov-07	07111250	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
99305	01-Nov-07	07111250	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
99305	01-Nov-07	07111250	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000127-18-4	Tetrachloroethene	N002	4.2	ug/L		F	0.2		
99305	01-Nov-07	07111250	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
99305	01-Nov-07	07111250	000079-01-6	Trichloroethene	N002	75	ug/L		F	0.32		
99305	01-Nov-07	07111250	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
99305	01-Nov-07	07111250	07440-61-1	Uranium	0002	61	ug/L		F	0.00002		J
99305	01-Nov-07	07111250	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000156-59-2	cis-1,2-Dichloroethene	N002	10	ug/L		F	0.15		
99305	01-Nov-07	07111250	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
99305	01-Nov-07	07111250	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
99305	01-Nov-07	07111250	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
99305	01-Nov-07	07111250	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
99305	01-Nov-07	07111250	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
91305 NP	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	0.074	mg/L		F	0.019		
91305 NP	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
91305 NP	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
91305 NP	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
91305 NP	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N001	0.26	ug/L	J	F	0.16		
91305 NP	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
91305 NP	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
91305 NP	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
91305 NP	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
91305 NP	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
91305 NP	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
91305 NP	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
91305 NP	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
91305 NP	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
91305 NP	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
91305 NP	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
91305 NP	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
91305 NP	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
91305 NP	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
91305 NP	05-Nov-07	07111261	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
91305 NP	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
91305 NP	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
91305 NP	05-Nov-07	07111261	000067-64-1	Acetone	N001	8.7	ug/L	J B	F	1.9		U
91305 NP	05-Nov-07	07111261	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
91305 NP	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
91305 NP	05-Nov-07	07111261	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
91305 NP	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
91305 NP	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
91305 NP	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
91305 NP	05-Nov-07	07111261	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
91305 NP	05-Nov-07	07111261	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
91305 NP	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
91305 NP	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
91305 NP	05-Nov-07	07111261	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
91305 NP	05-Nov-07	07111261	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
91305 NP	05-Nov-07	07111261	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		J
91305 NP	05-Nov-07	07111261	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
91305 NP	05-Nov-07	07111261	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
91305 NP	05-Nov-07	07111261	07440-61-1	Uranium	0001	48	ug/L		F	0.00002		
91305 NP	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N001	6.3	ug/L		F	0.15		
91305 NP	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
91305 NP	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
91305 NP	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
91305 NP	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
91305 NP	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
91305	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N003	0.25	mg/L		F	0.019		
91305	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N003	0.2	ug/L	U	F	0.2		
91305	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N003	0.79	ug/L	U	F	0.79		
91305	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N003	0.32	ug/L	U	F	0.32		
91305	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N003	0.39	ug/L	J	F	0.16		
91305	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N003	0.14	ug/L	U	F	0.14		
91305	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N003	0.15	ug/L	U	F	0.15		
91305	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N003	0.18	ug/L	U	F	0.18		
91305	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N003	0.27	ug/L	U	F	0.27		
91305	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N003	0.32	ug/L	U	F	0.32		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
91305	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N003	0.14	ug/L	U	F	0.14		
91305	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N003	1.5	ug/L	U	F	1.5		
91305	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N003	0.18	ug/L	U	F	0.18		
91305	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N003	0.13	ug/L	U	F	0.13		
91305	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N003	0.13	ug/L	U	F	0.13		
91305	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N003	0.13	ug/L	U	F	0.13		
91305	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N003	0.14	ug/L	U	F	0.14		
91305	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N003	0.15	ug/L	U	F	0.15		
91305	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N003	0.2	ug/L	U	F	0.2		
91305	05-Nov-07	07111261	000078-93-3	2-Butanone	N003	1.8	ug/L	U	F	1.8		
91305	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000591-78-6	2-Hexanone	N003	1.4	ug/L	U	F	1.4		
91305	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N003	0.49	ug/L	U	F	0.49		
91305	05-Nov-07	07111261	000067-64-1	Acetone	N003	5.1	ug/L	J B	F	1.9		U
91305	05-Nov-07	07111261	000071-43-2	Benzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000108-86-1	Bromobenzene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N003	0.1	ug/L	U	F	0.1		
91305	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000075-25-2	Bromoform	N003	0.19	ug/L	U	F	0.19		
91305	05-Nov-07	07111261	000074-83-9	Bromomethane	N003	0.21	ug/L	U	F	0.21		
91305	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N003	0.45	ug/L	U	F	0.45		
91305	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N003	0.19	ug/L	U	F	0.19		
91305	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000075-00-3	Chloroethane	N003	0.41	ug/L	U	F	0.41		
91305	05-Nov-07	07111261	000067-66-3	Chloroform	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000074-87-3	Chloromethane	N003	0.3	ug/L	U	F	0.3		
91305	05-Nov-07	07111261	000074-95-3	Dibromomethane	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N003	0.31	ug/L	U	F	0.31		
91305	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N003	0.12	ug/L	U	F	0.12		
91305	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N003	0.19	ug/L	U	F	0.19		
91305	05-Nov-07	07111261	000075-09-2	Methylene chloride	N003	0.32	ug/L	U	F	0.32		
91305	05-Nov-07	07111261	000091-20-3	Naphthalene	N003	0.22	ug/L	U	F	0.22		
91305	05-Nov-07	07111261	000100-42-5	Styrene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N003	0.2	ug/L	U	F	0.2		
91305	05-Nov-07	07111261	000108-88-3	Toluene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	001330-20-7	Total Xylenes	N003	0.19	ug/L	U	F	0.19		
91305	05-Nov-07	07111261	000079-01-6	Trichloroethene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N003	0.29	ug/L	U	F	0.29		
91305	05-Nov-07	07111261	07440-61-1	Uranium	0003	54	ug/L		F	0.00002		
91305	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N003	7.6	ug/L		F	0.15		
91305	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N003	0.14	ug/L	U	F	0.14		
91305	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N003	0.17	ug/L	U	F	0.17		
91305	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N003	0.16	ug/L	U	F	0.16		
91305	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N003	0.15	ug/L	U	F	0.15		
91305	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N003	0.19	ug/L	U	F	0.19		
91305 Dup	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	0.26	mg/L		D	0.019		
91305 Dup	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		
91305 Dup	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	D	0.79		
91305 Dup	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		
91305 Dup	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N002	0.38	ug/L	J	D	0.16		
91305 Dup	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		
91305 Dup	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	D	0.15		
91305 Dup	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	D	0.18		
91305 Dup	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	D	0.27		
91305 Dup	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		
91305 Dup	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	D	0.14		
91305 Dup	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
91305 Dup	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		
91305 Dup	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		
91305 Dup	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		
91305 Dup	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		
91305 Dup	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	D	0.14		
91305 Dup	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	D	0.15		
91305 Dup	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	D	0.2		
91305 Dup	05-Nov-07	07111261	000078-93-3	2-Butanone	N002	1.8	ug/L	U	D	1.8		
91305 Dup	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	D	1.4		
91305 Dup	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	D	0.49		
91305 Dup	05-Nov-07	07111261	000067-64-1	Acetone	N002	5.2	ug/L	J B	D	1.9		U
91305 Dup	05-Nov-07	07111261	000071-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	D	0.1		
91305 Dup	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000075-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		
91305 Dup	05-Nov-07	07111261	000074-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		
91305 Dup	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	D	0.45		
91305 Dup	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		
91305 Dup	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000075-00-3	Chloroethane	N002	0.41	ug/L	U	D	0.41		
91305 Dup	05-Nov-07	07111261	000067-66-3	Chloroform	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000074-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		
91305 Dup	05-Nov-07	07111261	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	D	0.31		
91305 Dup	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		
91305 Dup	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	D	0.19		
91305 Dup	05-Nov-07	07111261	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		
91305 Dup	05-Nov-07	07111261	000091-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		
91305 Dup	05-Nov-07	07111261	000100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	D	0.2		
91305 Dup	05-Nov-07	07111261	000108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		
91305 Dup	05-Nov-07	07111261	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	D	0.29		
91305 Dup	05-Nov-07	07111261	07440-61-1	Uranium	0002	53	ug/L		D	0.00002		
91305 Dup	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N002	7.5	ug/L		D	0.15		
91305 Dup	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	D	0.14		
91305 Dup	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	D	0.17		
91305 Dup	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	D	0.16		
91305 Dup	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		
91305 Dup	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		
99405 NP	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N001	3.9	mg/L		F	0.019		
99405 NP	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
99405 NP	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
99405 NP	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
99405 NP	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
99405 NP	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
99405 NP	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
99405 NP	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
99405 NP	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
99405 NP	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
99405 NP	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
99405 NP	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
99405 NP	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
99405 NP	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
99405 NP	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
99405 NP	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
99405 NP	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N001	0.5	ug/L	J	F	0.16		
99405 NP	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
99405 NP	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
99405 NP	05-Nov-07	07111261	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
99405 NP	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
99405 NP	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
99405 NP	05-Nov-07	07111261	000067-64-1	Acetone	N001	18	ug/L	B	F	1.9		U
99405 NP	05-Nov-07	07111261	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
99405 NP	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
99405 NP	05-Nov-07	07111261	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
99405 NP	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
99405 NP	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
99405 NP	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
99405 NP	05-Nov-07	07111261	000067-66-3	Chloroform	N001	0.18	ug/L	J	F	0.16		
99405 NP	05-Nov-07	07111261	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
99405 NP	05-Nov-07	07111261	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
99405 NP	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
99405 NP	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
99405 NP	05-Nov-07	07111261	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
99405 NP	05-Nov-07	07111261	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
99405 NP	05-Nov-07	07111261	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N001	0.47	ug/L	J	F	0.2		
99405 NP	05-Nov-07	07111261	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
99405 NP	05-Nov-07	07111261	000079-01-6	Trichloroethene	N001	69	ug/L		F	0.64		
99405 NP	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
99405 NP	05-Nov-07	07111261	07440-61-1	Uranium	0001	440	ug/L		F	0.00002		
99405 NP	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N001	1.1	ug/L		F	0.15		
99405 NP	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
99405 NP	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
99405 NP	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
99405 NP	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
99405 NP	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
99405	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N003	4.2	mg/L		F	0.019		
99405	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N003	0.2	ug/L	U	F	0.2		J
99405	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N003	0.79	ug/L	U	F	0.79		J
99405	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N003	0.32	ug/L	U	F	0.32		J
99405	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N003	0.14	ug/L	U	F	0.14		J
99405	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N003	0.15	ug/L	U	F	0.15		J
99405	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N003	0.18	ug/L	U	F	0.18		J
99405	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N003	0.27	ug/L	U	F	0.27		J
99405	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N003	0.32	ug/L	U	F	0.32		J
99405	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N003	0.14	ug/L	U	F	0.14		J
99405	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N003	1.5	ug/L	U	F	1.5		J
99405	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N003	0.18	ug/L	U	F	0.18		J
99405	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N003	0.13	ug/L	U	F	0.13		J
99405	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N003	0.13	ug/L	U	F	0.13		J
99405	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N003	0.13	ug/L	U	F	0.13		J

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
99405	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N003	0.14	ug/L	U	F	0.14		J
99405	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N003	0.15	ug/L	U	F	0.15		J
99405	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N003	0.2	ug/L	U	F	0.2		J
99405	05-Nov-07	07111261	000078-93-3	2-Butanone	N003	1.8	ug/L	U	F	1.8		J
99405	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000591-78-6	2-Hexanone	N003	1.4	ug/L	U	F	1.4		J
99405	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N003	0.49	ug/L	U	F	0.49		J
99405	05-Nov-07	07111261	000067-64-1	Acetone	N003	3.8	ug/L	J B	F	1.9		UJ
99405	05-Nov-07	07111261	000071-43-2	Benzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000108-86-1	Bromobenzene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N003	0.1	ug/L	U	F	0.1		J
99405	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000075-25-2	Bromoform	N003	0.19	ug/L	U	F	0.19		J
99405	05-Nov-07	07111261	000074-83-9	Bromomethane	N003	0.21	ug/L	U	F	0.21		J
99405	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N003	0.45	ug/L	U	F	0.45		J
99405	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N003	0.19	ug/L	U	F	0.19		J
99405	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000075-00-3	Chloroethane	N003	0.41	ug/L	U	F	0.41		J
99405	05-Nov-07	07111261	000067-66-3	Chloroform	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000074-87-3	Chloromethane	N003	0.3	ug/L	U	F	0.3		J
99405	05-Nov-07	07111261	000074-95-3	Dibromomethane	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N003	0.31	ug/L	U	F	0.31		J
99405	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N003	0.12	ug/L	U	F	0.12		J
99405	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N003	0.19	ug/L	U	F	0.19		J
99405	05-Nov-07	07111261	000075-09-2	Methylene chloride	N003	0.32	ug/L	U	F	0.32		J
99405	05-Nov-07	07111261	000091-20-3	Naphthalene	N003	0.22	ug/L	U	F	0.22		J
99405	05-Nov-07	07111261	000100-42-5	Styrene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N003	0.83	ug/L	J	F	0.2		J
99405	05-Nov-07	07111261	000108-88-3	Toluene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	001330-20-7	Total Xylenes	N003	0.19	ug/L	U	F	0.19		J
99405	05-Nov-07	07111261	000079-01-6	Trichloroethene	N003	120	ug/L		F	0.64		J
99405	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N003	0.29	ug/L	U	F	0.29		J
99405	05-Nov-07	07111261	07440-61-1	Uranium	0003	400	ug/L		F	0.00002		
99405	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N003	1.4	ug/L		F	0.15		J
99405	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N003	0.14	ug/L	U	F	0.14		J
99405	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N003	0.17	ug/L	U	F	0.17		J
99405	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N003	0.16	ug/L	U	F	0.16		J
99405	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N003	0.15	ug/L	U	F	0.15		J
99405	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N003	0.19	ug/L	U	F	0.19		J
99405 Dup	05-Nov-07	07111261	NO3+NO2 AS N	Nitrate + Nitrite as Nitrogen	N002	4.1	mg/L		D	0.019		
99405 Dup	05-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	D	0.2		
99405 Dup	05-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	D	0.79		
99405 Dup	05-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	D	0.32		
99405 Dup	05-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	D	0.14		
99405 Dup	05-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	D	0.15		
99405 Dup	05-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	D	0.18		
99405 Dup	05-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	D	0.27		
99405 Dup	05-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	D	0.32		
99405 Dup	05-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	D	0.14		
99405 Dup	05-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	D	1.5		
99405 Dup	05-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	D	0.18		
99405 Dup	05-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	D	0.13		
99405 Dup	05-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	D	0.13		
99405 Dup	05-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	D	0.13		
99405 Dup	05-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	D	0.14		
99405 Dup	05-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
99405 Dup	05-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	D	0.15		
99405 Dup	05-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	D	0.2		
99405 Dup	05-Nov-07	07111261	000078-93-3	2-Butanone	N002	1.8	ug/L	U	D	1.8		
99405 Dup	05-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	D	1.4		
99405 Dup	05-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	D	0.49		
99405 Dup	05-Nov-07	07111261	000067-64-1	Acetone	N002	1.9	ug/L	U	D	1.9		
99405 Dup	05-Nov-07	07111261	000071-43-2	Benzene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	D	0.1		
99405 Dup	05-Nov-07	07111261	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000075-25-2	Bromoform	N002	0.19	ug/L	U	D	0.19		
99405 Dup	05-Nov-07	07111261	000074-83-9	Bromomethane	N002	0.21	ug/L	U	D	0.21		
99405 Dup	05-Nov-07	07111261	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	D	0.45		
99405 Dup	05-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	D	0.19		
99405 Dup	05-Nov-07	07111261	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000075-00-3	Chloroethane	N002	0.41	ug/L	U	D	0.41		
99405 Dup	05-Nov-07	07111261	000067-66-3	Chloroform	N002	0.17	ug/L	J	D	0.16		
99405 Dup	05-Nov-07	07111261	000074-87-3	Chloromethane	N002	0.3	ug/L	U	D	0.3		
99405 Dup	05-Nov-07	07111261	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	D	0.31		
99405 Dup	05-Nov-07	07111261	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	D	0.12		
99405 Dup	05-Nov-07	07111261	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	D	0.19		
99405 Dup	05-Nov-07	07111261	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	D	0.32		
99405 Dup	05-Nov-07	07111261	000091-20-3	Naphthalene	N002	0.22	ug/L	U	D	0.22		
99405 Dup	05-Nov-07	07111261	000100-42-5	Styrene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000127-18-4	Tetrachloroethene	N002	0.79	ug/L	J	D	0.2		
99405 Dup	05-Nov-07	07111261	000108-88-3	Toluene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	D	0.19		
99405 Dup	05-Nov-07	07111261	000079-01-6	Trichloroethene	N002	91	ug/L		D	0.64		
99405 Dup	05-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	D	0.29		
99405 Dup	05-Nov-07	07111261	07440-61-1	Uranium	0002	400	ug/L		D	0.00002		
99405 Dup	05-Nov-07	07111261	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N002	1.6	ug/L		D	0.15		
99405 Dup	05-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	D	0.14		
99405 Dup	05-Nov-07	07111261	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	D	0.17		
99405 Dup	05-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	D	0.16		
99405 Dup	05-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	D	0.15		
99405 Dup	05-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	D	0.19		
15699 NP	06-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
15699 NP	06-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
15699 NP	06-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
15699 NP	06-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N001	5.3	ug/L		F	0.16		
15699 NP	06-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N001	14	ug/L		F	0.14		
15699 NP	06-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
15699 NP	06-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
15699 NP	06-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
15699 NP	06-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
15699 NP	06-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
15699 NP	06-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
15699 NP	06-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
15699 NP	06-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
15699 NP	06-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N001	1.2	ug/L		F	0.13		
15699 NP	06-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
15699 NP	06-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
15699 NP	06-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N001	0.51	ug/L	J	F	0.16		
15699 NP	06-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
15699 NP	06-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
15699 NP	06-Nov-07	07111261	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
15699 NP	06-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
15699 NP	06-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
15699 NP	06-Nov-07	07111261	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
15699 NP	06-Nov-07	07111261	000071-43-2	Benzene	N001	0.28	ug/L	J	F	0.16		
15699 NP	06-Nov-07	07111261	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
15699 NP	06-Nov-07	07111261	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
15699 NP	06-Nov-07	07111261	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
15699 NP	06-Nov-07	07111261	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
15699 NP	06-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
15699 NP	06-Nov-07	07111261	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
15699 NP	06-Nov-07	07111261	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
15699 NP	06-Nov-07	07111261	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
15699 NP	06-Nov-07	07111261	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
15699 NP	06-Nov-07	07111261	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
15699 NP	06-Nov-07	07111261	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
15699 NP	06-Nov-07	07111261	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
15699 NP	06-Nov-07	07111261	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000127-18-4	Tetrachloroethene	N001	5.7	ug/L		F	0.2		
15699 NP	06-Nov-07	07111261	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
15699 NP	06-Nov-07	07111261	000079-01-6	Trichloroethene	N001	130	ug/L		F	1.6		
15699 NP	06-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
15699 NP	06-Nov-07	07111261	000075-01-4	Vinyl chloride	N001	18	ug/L		F	0.17		
15699 NP	06-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N001	400	ug/L		F	1.5		
15699 NP	06-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
15699 NP	06-Nov-07	07111261	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
15699 NP	06-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
15699 NP	06-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N001	1.4	ug/L		F	0.15		J
15699 NP	06-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
15699	06-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N002	0.7	ug/L	J	F	0.16		
15699	06-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
15699	06-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
15699	06-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
15699	06-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N002	7.5	ug/L		F	0.16		
15699	06-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N002	32	ug/L		F	0.14		
15699	06-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
15699	06-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
15699	06-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
15699	06-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
15699	06-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
15699	06-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
15699	06-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
15699	06-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
15699	06-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N002	2.4	ug/L		F	0.13		
15699	06-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
15699	06-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
15699	06-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N002	0.63	ug/L	J	F	0.16		
15699	06-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
15699	06-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N002	0.53	ug/L	J	F	0.16		
15699	06-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
15699	06-Nov-07	07111261	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
15699	06-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
15699	06-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		

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15699	06-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
15699	06-Nov-07	07111261	000067-64-1	Acetone	N002	3.4	ug/L	J B	F	1.9		U
15699	06-Nov-07	07111261	000071-43-2	Benzene	N002	0.37	ug/L	J	F	0.16		
15699	06-Nov-07	07111261	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
15699	06-Nov-07	07111261	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
15699	06-Nov-07	07111261	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
15699	06-Nov-07	07111261	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
15699	06-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
15699	06-Nov-07	07111261	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
15699	06-Nov-07	07111261	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
15699	06-Nov-07	07111261	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
15699	06-Nov-07	07111261	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
15699	06-Nov-07	07111261	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
15699	06-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
15699	06-Nov-07	07111261	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
15699	06-Nov-07	07111261	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
15699	06-Nov-07	07111261	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
15699	06-Nov-07	07111261	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000127-18-4	Tetrachloroethene	N002	130	ug/L		F	2		
15699	06-Nov-07	07111261	000108-88-3	Toluene	N002	0.19	ug/L	J	F	0.17		
15699	06-Nov-07	07111261	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
15699	06-Nov-07	07111261	000079-01-6	Trichloroethene	N002	480	ug/L		F	1.6		
15699	06-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
15699	06-Nov-07	07111261	000075-01-4	Vinyl chloride	N002	12	ug/L		F	0.17		
15699	06-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N002	370	ug/L		F	1.5		
15699	06-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
15699	06-Nov-07	07111261	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
15699	06-Nov-07	07111261	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
15699	06-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
15699	06-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
15699	06-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N002	1.2	ug/L		F	0.15		J
15699	06-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
90399 NP	06-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
90399 NP	06-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
90399 NP	06-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
90399 NP	06-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N001	0.87	ug/L	J	F	0.14		
90399 NP	06-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
90399 NP	06-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
90399 NP	06-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
90399 NP	06-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
90399 NP	06-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	06-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
90399 NP	06-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
90399 NP	06-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
90399 NP	06-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
90399 NP	06-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
90399 NP	06-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	06-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N001	0.82	ug/L	J	F	0.16		
90399 NP	06-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
90399 NP	06-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
90399 NP	06-Nov-07	07111261	000078-93-3	2-Butanone	N001	16	ug/L		F	1.8		
90399 NP	06-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
90399 NP	06-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
90399 NP	06-Nov-07	07111261	000067-64-1	Acetone	N001	9.6	ug/L	J B	F	1.9		U
90399 NP	06-Nov-07	07111261	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399 NP	06-Nov-07	07111261	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
90399 NP	06-Nov-07	07111261	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
90399 NP	06-Nov-07	07111261	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
90399 NP	06-Nov-07	07111261	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
90399 NP	06-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N001	140	ug/L		F	1.9		
90399 NP	06-Nov-07	07111261	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
90399 NP	06-Nov-07	07111261	000067-66-3	Chloroform	N001	34	ug/L		F	0.16		
90399 NP	06-Nov-07	07111261	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
90399 NP	06-Nov-07	07111261	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
90399 NP	06-Nov-07	07111261	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
90399 NP	06-Nov-07	07111261	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
90399 NP	06-Nov-07	07111261	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
90399 NP	06-Nov-07	07111261	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
90399 NP	06-Nov-07	07111261	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000127-18-4	Tetrachloroethene	N001	4.4	ug/L		F	0.2		
90399 NP	06-Nov-07	07111261	000108-88-3	Toluene	N001	0.27	ug/L	J	F	0.17		
90399 NP	06-Nov-07	07111261	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
90399 NP	06-Nov-07	07111261	000079-01-6	Trichloroethene	N001	300	ug/L		F	1.6		
90399 NP	06-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
90399 NP	06-Nov-07	07111261	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N001	3.7	ug/L		F	0.15		
90399 NP	06-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
90399 NP	06-Nov-07	07111261	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
90399 NP	06-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
90399 NP	06-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
90399 NP	06-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
90399	06-Nov-07	07111261	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
90399	06-Nov-07	07111261	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
90399	06-Nov-07	07111261	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
90399	06-Nov-07	07111261	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000075-35-4	1,1-Dichloroethene	N002	1.3	ug/L		F	0.14		
90399	06-Nov-07	07111261	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
90399	06-Nov-07	07111261	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
90399	06-Nov-07	07111261	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
90399	06-Nov-07	07111261	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
90399	06-Nov-07	07111261	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399	06-Nov-07	07111261	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
90399	06-Nov-07	07111261	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
90399	06-Nov-07	07111261	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
90399	06-Nov-07	07111261	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
90399	06-Nov-07	07111261	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
90399	06-Nov-07	07111261	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
90399	06-Nov-07	07111261	000541-73-1	1,3-Dichlorobenzene	N002	0.8	ug/L	J	F	0.16		
90399	06-Nov-07	07111261	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
90399	06-Nov-07	07111261	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
90399	06-Nov-07	07111261	000078-93-3	2-Butanone	N002	2.8	ug/L	J	F	1.8		
90399	06-Nov-07	07111261	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
90399	06-Nov-07	07111261	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
90399	06-Nov-07	07111261	000067-64-1	Acetone	N002	2.5	ug/L	J B	F	1.9		U
90399	06-Nov-07	07111261	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
90399	06-Nov-07	07111261	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
90399	06-Nov-07	07111261	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
90399	06-Nov-07	07111261	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
90399	06-Nov-07	07111261	000056-23-5	Carbon tetrachloride	N002	200	ug/L		F	1.9		
90399	06-Nov-07	07111261	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
90399	06-Nov-07	07111261	000067-66-3	Chloroform	N002	40	ug/L		F	0.16		
90399	06-Nov-07	07111261	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
90399	06-Nov-07	07111261	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
90399	06-Nov-07	07111261	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
90399	06-Nov-07	07111261	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
90399	06-Nov-07	07111261	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
90399	06-Nov-07	07111261	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
90399	06-Nov-07	07111261	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000127-18-4	Tetrachloroethene	N002	5.1	ug/L		F	0.2		
90399	06-Nov-07	07111261	000108-88-3	Toluene	N002	0.2	ug/L	J	F	0.17		
90399	06-Nov-07	07111261	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
90399	06-Nov-07	07111261	000079-01-6	Trichloroethene	N002	370	ug/L		F	1.6		
90399	06-Nov-07	07111261	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
90399	06-Nov-07	07111261	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000156-59-2	cis-1,2-Dichloroethene	N002	4.2	ug/L		F	0.15		
90399	06-Nov-07	07111261	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
90399	06-Nov-07	07111261	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
90399	06-Nov-07	07111261	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
90399	06-Nov-07	07111261	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
90399	06-Nov-07	07111261	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
04091 NP	08-Nov-07	07111263	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
04091 NP	08-Nov-07	07111263	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
04091 NP	08-Nov-07	07111263	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
04091 NP	08-Nov-07	07111263	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
04091 NP	08-Nov-07	07111263	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
04091 NP	08-Nov-07	07111263	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
04091 NP	08-Nov-07	07111263	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
04091 NP	08-Nov-07	07111263	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
04091 NP	08-Nov-07	07111263	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
04091 NP	08-Nov-07	07111263	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
04091 NP	08-Nov-07	07111263	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
04091 NP	08-Nov-07	07111263	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
04091 NP	08-Nov-07	07111263	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
04091 NP	08-Nov-07	07111263	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
04091 NP	08-Nov-07	07111263	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
04091 NP	08-Nov-07	07111263	000541-73-1	1,3-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
04091 NP	08-Nov-07	07111263	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
04091 NP	08-Nov-07	07111263	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
04091 NP	08-Nov-07	07111263	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
04091 NP	08-Nov-07	07111263	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
04091 NP	08-Nov-07	07111263	000067-64-1	Acetone	N001	1.9	ug/L	U	F	1.9		
04091 NP	08-Nov-07	07111263	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
04091 NP	08-Nov-07	07111263	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
04091 NP	08-Nov-07	07111263	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
04091 NP	08-Nov-07	07111263	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
04091 NP	08-Nov-07	07111263	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
04091 NP	08-Nov-07	07111263	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
04091 NP	08-Nov-07	07111263	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
04091 NP	08-Nov-07	07111263	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
04091 NP	08-Nov-07	07111263	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
04091 NP	08-Nov-07	07111263	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
04091 NP	08-Nov-07	07111263	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
04091 NP	08-Nov-07	07111263	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
04091 NP	08-Nov-07	07111263	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
04091 NP	08-Nov-07	07111263	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
04091 NP	08-Nov-07	07111263	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
04091 NP	08-Nov-07	07111263	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
04091 NP	08-Nov-07	07111263	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
04091 NP	08-Nov-07	07111263	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
04091 NP	08-Nov-07	07111263	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
04091 NP	08-Nov-07	07111263	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
04091 NP	08-Nov-07	07111263	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
04091 NP	08-Nov-07	07111263	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
04091	08-Nov-07	07111263	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
04091	08-Nov-07	07111263	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
04091	08-Nov-07	07111263	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
04091	08-Nov-07	07111263	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
04091	08-Nov-07	07111263	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
04091	08-Nov-07	07111263	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
04091	08-Nov-07	07111263	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
04091	08-Nov-07	07111263	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
04091	08-Nov-07	07111263	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
04091	08-Nov-07	07111263	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
04091	08-Nov-07	07111263	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
04091	08-Nov-07	07111263	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
04091	08-Nov-07	07111263	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
04091	08-Nov-07	07111263	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
04091	08-Nov-07	07111263	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
04091	08-Nov-07	07111263	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
04091	08-Nov-07	07111263	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
04091	08-Nov-07	07111263	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
04091	08-Nov-07	07111263	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
04091	08-Nov-07	07111263	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
04091	08-Nov-07	07111263	000067-64-1	Acetone	N002	2.3	ug/L	J	F	1.9		
04091	08-Nov-07	07111263	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
04091	08-Nov-07	07111263	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
04091	08-Nov-07	07111263	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
04091	08-Nov-07	07111263	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
04091	08-Nov-07	07111263	000056-23-5	Carbon tetrachloride	N002	0.21	ug/L	J	F	0.19		
04091	08-Nov-07	07111263	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
04091	08-Nov-07	07111263	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
04091	08-Nov-07	07111263	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
04091	08-Nov-07	07111263	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
04091	08-Nov-07	07111263	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
04091	08-Nov-07	07111263	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
04091	08-Nov-07	07111263	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
04091	08-Nov-07	07111263	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
04091	08-Nov-07	07111263	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		
04091	08-Nov-07	07111263	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
04091	08-Nov-07	07111263	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
04091	08-Nov-07	07111263	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
04091	08-Nov-07	07111263	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
04091	08-Nov-07	07111263	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
04091	08-Nov-07	07111263	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
04091	08-Nov-07	07111263	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
04091	08-Nov-07	07111263	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
95099 NP	08-Nov-07	07111263	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
95099 NP	08-Nov-07	07111263	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
95099 NP	08-Nov-07	07111263	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
95099 NP	08-Nov-07	07111263	000075-34-3	1,1-Dichloroethane	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000075-35-4	1,1-Dichloroethene	N001	0.14	ug/L	U	F	0.14		
95099 NP	08-Nov-07	07111263	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
95099 NP	08-Nov-07	07111263	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
95099 NP	08-Nov-07	07111263	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
95099 NP	08-Nov-07	07111263	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
95099 NP	08-Nov-07	07111263	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
95099 NP	08-Nov-07	07111263	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
95099 NP	08-Nov-07	07111263	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
95099 NP	08-Nov-07	07111263	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
95099 NP	08-Nov-07	07111263	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
95099 NP	08-Nov-07	07111263	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
95099 NP	08-Nov-07	07111263	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
95099 NP	08-Nov-07	07111263	000541-73-1	1,3-Dichlorobenzene	N001	0.59	ug/L	J	F	0.16		
95099 NP	08-Nov-07	07111263	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
95099 NP	08-Nov-07	07111263	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
95099 NP	08-Nov-07	07111263	000078-93-3	2-Butanone	N001	2.8	ug/L	J	F	1.8		
95099 NP	08-Nov-07	07111263	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
95099 NP	08-Nov-07	07111263	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
95099 NP	08-Nov-07	07111263	000067-64-1	Acetone	N001	5.4	ug/L	J	F	1.9		
95099 NP	08-Nov-07	07111263	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
95099 NP	08-Nov-07	07111263	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
95099 NP	08-Nov-07	07111263	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
95099 NP	08-Nov-07	07111263	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
95099 NP	08-Nov-07	07111263	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	J	F	0.19		
95099 NP	08-Nov-07	07111263	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
95099 NP	08-Nov-07	07111263	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
95099 NP	08-Nov-07	07111263	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
95099 NP	08-Nov-07	07111263	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
95099 NP	08-Nov-07	07111263	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
95099 NP	08-Nov-07	07111263	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
95099 NP	08-Nov-07	07111263	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
95099 NP	08-Nov-07	07111263	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000127-18-4	Tetrachloroethene	N001	0.2	ug/L	U	F	0.2		
95099 NP	08-Nov-07	07111263	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
95099 NP	08-Nov-07	07111263	000079-01-6	Trichloroethene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		
95099 NP	08-Nov-07	07111263	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000156-59-2	cis-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
95099 NP	08-Nov-07	07111263	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
95099 NP	08-Nov-07	07111263	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
95099 NP	08-Nov-07	07111263	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
95099 NP	08-Nov-07	07111263	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
95099 NP	08-Nov-07	07111263	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
95099	08-Nov-07	07111263	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
95099	08-Nov-07	07111263	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
95099	08-Nov-07	07111263	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
95099	08-Nov-07	07111263	000075-34-3	1,1-Dichloroethane	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000075-35-4	1,1-Dichloroethene	N002	0.14	ug/L	U	F	0.14		
95099	08-Nov-07	07111263	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
95099	08-Nov-07	07111263	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
95099	08-Nov-07	07111263	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
95099	08-Nov-07	07111263	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
95099	08-Nov-07	07111263	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
95099	08-Nov-07	07111263	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
95099	08-Nov-07	07111263	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
95099	08-Nov-07	07111263	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
95099	08-Nov-07	07111263	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
95099	08-Nov-07	07111263	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
95099	08-Nov-07	07111263	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
95099	08-Nov-07	07111263	000541-73-1	1,3-Dichlorobenzene	N002	0.51	ug/L	J	F	0.16		
95099	08-Nov-07	07111263	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
95099	08-Nov-07	07111263	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
95099	08-Nov-07	07111263	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
95099	08-Nov-07	07111263	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
95099	08-Nov-07	07111263	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
95099	08-Nov-07	07111263	000067-64-1	Acetone	N002	4.6	ug/L	J	F	1.9		
95099	08-Nov-07	07111263	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
95099	08-Nov-07	07111263	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
95099	08-Nov-07	07111263	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
95099	08-Nov-07	07111263	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
95099	08-Nov-07	07111263	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
95099	08-Nov-07	07111263	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
95099	08-Nov-07	07111263	000067-66-3	Chloroform	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
95099	08-Nov-07	07111263	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
95099	08-Nov-07	07111263	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
95099	08-Nov-07	07111263	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
95099	08-Nov-07	07111263	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
95099	08-Nov-07	07111263	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
95099	08-Nov-07	07111263	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000127-18-4	Tetrachloroethene	N002	0.2	ug/L	U	F	0.2		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
95099	08-Nov-07	07111263	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
95099	08-Nov-07	07111263	000079-01-6	Trichloroethene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
95099	08-Nov-07	07111263	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000156-59-2	cis-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
95099	08-Nov-07	07111263	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		
95099	08-Nov-07	07111263	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
95099	08-Nov-07	07111263	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
95099	08-Nov-07	07111263	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
95099	08-Nov-07	07111263	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		
95199 NP	13-Nov-07	07111270	000630-20-6	1,1,1,2-Tetrachloroethane	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000071-55-6	1,1,1-Trichloroethane	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000079-34-5	1,1,2,2-Tetrachloroethane	N001	0.2	ug/L	U	F	0.2		
95199 NP	13-Nov-07	07111270	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N001	0.79	ug/L	U	F	0.79		
95199 NP	13-Nov-07	07111270	000079-00-5	1,1,2-Trichloroethane	N001	0.32	ug/L	U	F	0.32		
95199 NP	13-Nov-07	07111270	000075-34-3	1,1-Dichloroethane	N001	0.51	ug/L	J	F	0.16		
95199 NP	13-Nov-07	07111270	000075-35-4	1,1-Dichloroethene	N001	0.21	ug/L	J	F	0.14		
95199 NP	13-Nov-07	07111270	000563-58-6	1,1-Dichloropropene	N001	0.15	ug/L	U	F	0.15		
95199 NP	13-Nov-07	07111270	000087-61-6	1,2,3-Trichlorobenzene	N001	0.18	ug/L	U	F	0.18		
95199 NP	13-Nov-07	07111270	000096-18-4	1,2,3-Trichloropropane	N001	0.27	ug/L	U	F	0.27		
95199 NP	13-Nov-07	07111270	000120-82-1	1,2,4-Trichlorobenzene	N001	0.32	ug/L	U	F	0.32		
95199 NP	13-Nov-07	07111270	000095-63-6	1,2,4-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
95199 NP	13-Nov-07	07111270	000096-12-8	1,2-Dibromo-3-chloropropane	N001	1.5	ug/L	U	F	1.5		
95199 NP	13-Nov-07	07111270	000106-93-4	1,2-Dibromoethane	N001	0.18	ug/L	U	F	0.18		
95199 NP	13-Nov-07	07111270	000095-50-1	1,2-Dichlorobenzene	N001	0.13	ug/L	U	F	0.13		
95199 NP	13-Nov-07	07111270	000107-06-2	1,2-Dichloroethane	N001	0.13	ug/L	U	F	0.13		
95199 NP	13-Nov-07	07111270	000078-87-5	1,2-Dichloropropane	N001	0.13	ug/L	U	F	0.13		
95199 NP	13-Nov-07	07111270	000108-67-8	1,3,5-Trimethylbenzene	N001	0.14	ug/L	U	F	0.14		
95199 NP	13-Nov-07	07111270	000541-73-1	1,3-Dichlorobenzene	N001	0.35	ug/L	J	F	0.16		
95199 NP	13-Nov-07	07111270	000142-28-9	1,3-Dichloropropane	N001	0.15	ug/L	U	F	0.15		
95199 NP	13-Nov-07	07111270	000106-46-7	1,4-Dichlorobenzene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000594-20-7	2,2-Dichloropropane	N001	0.2	ug/L	U	F	0.2		
95199 NP	13-Nov-07	07111270	000078-93-3	2-Butanone	N001	1.8	ug/L	U	F	1.8		
95199 NP	13-Nov-07	07111270	000095-49-8	2-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000591-78-6	2-Hexanone	N001	1.4	ug/L	U	F	1.4		
95199 NP	13-Nov-07	07111270	000106-43-4	4-Chlorotoluene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000108-10-1	4-Methyl-2-Pentanone	N001	0.49	ug/L	U	F	0.49		
95199 NP	13-Nov-07	07111270	000067-64-1	Acetone	N001	9.2	ug/L	J	F	1.9		
95199 NP	13-Nov-07	07111270	000071-43-2	Benzene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000108-86-1	Bromobenzene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000074-97-5	Bromochloromethane	N001	0.1	ug/L	U	F	0.1		
95199 NP	13-Nov-07	07111270	000075-27-4	Bromodichloromethane	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000075-25-2	Bromoform	N001	0.19	ug/L	U	F	0.19		
95199 NP	13-Nov-07	07111270	000074-83-9	Bromomethane	N001	0.21	ug/L	U	F	0.21		
95199 NP	13-Nov-07	07111270	000075-15-0	Carbon Disulfide	N001	0.45	ug/L	U	F	0.45		
95199 NP	13-Nov-07	07111270	000056-23-5	Carbon tetrachloride	N001	0.19	ug/L	U	F	0.19		
95199 NP	13-Nov-07	07111270	000108-90-7	Chlorobenzene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000124-48-1	Chlorodibromomethane	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000075-00-3	Chloroethane	N001	0.41	ug/L	U	F	0.41		
95199 NP	13-Nov-07	07111270	000067-66-3	Chloroform	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000074-87-3	Chloromethane	N001	0.3	ug/L	U	F	0.3		
95199 NP	13-Nov-07	07111270	000074-95-3	Dibromomethane	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000075-71-8	Dichlorodifluoromethane	N001	0.31	ug/L	U	F	0.31		
95199 NP	13-Nov-07	07111270	000100-41-4	Ethylbenzene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000087-68-3	Hexachlorobutadiene	N001	0.12	ug/L	U	F	0.12		
95199 NP	13-Nov-07	07111270	000098-82-8	Isopropylbenzene	N001	0.19	ug/L	U	F	0.19		
95199 NP	13-Nov-07	07111270	000075-09-2	Methylene chloride	N001	0.32	ug/L	U	F	0.32		
95199 NP	13-Nov-07	07111270	000091-20-3	Naphthalene	N001	0.22	ug/L	U	F	0.22		
95199 NP	13-Nov-07	07111270	000100-42-5	Styrene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000127-18-4	Tetrachloroethene	N001	0.38	ug/L	J	F	0.2		
95199 NP	13-Nov-07	07111270	000108-88-3	Toluene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	001330-20-7	Total Xylenes	N001	0.19	ug/L	U	F	0.19		
95199 NP	13-Nov-07	07111270	000079-01-6	Trichloroethene	N001	16	ug/L		F	0.16		
95199 NP	13-Nov-07	07111270	000075-69-4	Trichlorofluoromethane	N001	0.29	ug/L	U	F	0.29		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
95199 NP	13-Nov-07	07111270	000075-01-4	Vinyl chloride	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000156-59-2	cis-1,2-Dichloroethene	N001	1.1	ug/L		F	0.15		
95199 NP	13-Nov-07	07111270	010061-01-5	cis-1,3-Dichloropropene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000104-51-8	n-Butylbenzene	N001	0.14	ug/L	U	F	0.14		
95199 NP	13-Nov-07	07111270	000103-65-1	n-Propylbenzene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000099-87-6	p-Isopropyltoluene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000135-98-8	sec-Butylbenzene	N001	0.17	ug/L	U	F	0.17		
95199 NP	13-Nov-07	07111270	000098-06-6	tert-Butylbenzene	N001	0.16	ug/L	U	F	0.16		
95199 NP	13-Nov-07	07111270	000156-60-5	trans-1,2-Dichloroethene	N001	0.15	ug/L	U	F	0.15		
95199 NP	13-Nov-07	07111270	010061-02-6	trans-1,3-dichloropropene	N001	0.19	ug/L	U	F	0.19		
95199	13-Nov-07	07111270	000630-20-6	1,1,1,2-Tetrachloroethane	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000071-55-6	1,1,1-Trichloroethane	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000079-34-5	1,1,2,2-Tetrachloroethane	N002	0.2	ug/L	U	F	0.2		
95199	13-Nov-07	07111270	000076-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	N002	0.79	ug/L	U	F	0.79		
95199	13-Nov-07	07111270	000079-00-5	1,1,2-Trichloroethane	N002	0.32	ug/L	U	F	0.32		
95199	13-Nov-07	07111270	000075-34-3	1,1-Dichloroethane	N002	0.91	ug/L	J	F	0.16		
95199	13-Nov-07	07111270	000075-35-4	1,1-Dichloroethene	N002	0.57	ug/L	J	F	0.14		
95199	13-Nov-07	07111270	000563-58-6	1,1-Dichloropropene	N002	0.15	ug/L	U	F	0.15		
95199	13-Nov-07	07111270	000087-61-6	1,2,3-Trichlorobenzene	N002	0.18	ug/L	U	F	0.18		
95199	13-Nov-07	07111270	000096-18-4	1,2,3-Trichloropropane	N002	0.27	ug/L	U	F	0.27		
95199	13-Nov-07	07111270	000120-82-1	1,2,4-Trichlorobenzene	N002	0.32	ug/L	U	F	0.32		
95199	13-Nov-07	07111270	000095-63-6	1,2,4-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
95199	13-Nov-07	07111270	000096-12-8	1,2-Dibromo-3-chloropropane	N002	1.5	ug/L	U	F	1.5		
95199	13-Nov-07	07111270	000106-93-4	1,2-Dibromoethane	N002	0.18	ug/L	U	F	0.18		
95199	13-Nov-07	07111270	000095-50-1	1,2-Dichlorobenzene	N002	0.13	ug/L	U	F	0.13		
95199	13-Nov-07	07111270	000107-06-2	1,2-Dichloroethane	N002	0.13	ug/L	U	F	0.13		
95199	13-Nov-07	07111270	000078-87-5	1,2-Dichloropropane	N002	0.13	ug/L	U	F	0.13		
95199	13-Nov-07	07111270	000108-67-8	1,3,5-Trimethylbenzene	N002	0.14	ug/L	U	F	0.14		
95199	13-Nov-07	07111270	000541-73-1	1,3-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000142-28-9	1,3-Dichloropropane	N002	0.15	ug/L	U	F	0.15		
95199	13-Nov-07	07111270	000106-46-7	1,4-Dichlorobenzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000594-20-7	2,2-Dichloropropane	N002	0.2	ug/L	U	F	0.2		
95199	13-Nov-07	07111270	000078-93-3	2-Butanone	N002	1.8	ug/L	U	F	1.8		
95199	13-Nov-07	07111270	000095-49-8	2-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000591-78-6	2-Hexanone	N002	1.4	ug/L	U	F	1.4		
95199	13-Nov-07	07111270	000106-43-4	4-Chlorotoluene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000108-10-1	4-Methyl-2-Pentanone	N002	0.49	ug/L	U	F	0.49		
95199	13-Nov-07	07111270	000067-64-1	Acetone	N002	1.9	ug/L	U	F	1.9		
95199	13-Nov-07	07111270	000071-43-2	Benzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000108-86-1	Bromobenzene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000074-97-5	Bromochloromethane	N002	0.1	ug/L	U	F	0.1		
95199	13-Nov-07	07111270	000075-27-4	Bromodichloromethane	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000075-25-2	Bromoform	N002	0.19	ug/L	U	F	0.19		
95199	13-Nov-07	07111270	000074-83-9	Bromomethane	N002	0.21	ug/L	U	F	0.21		
95199	13-Nov-07	07111270	000075-15-0	Carbon Disulfide	N002	0.45	ug/L	U	F	0.45		
95199	13-Nov-07	07111270	000056-23-5	Carbon tetrachloride	N002	0.19	ug/L	U	F	0.19		
95199	13-Nov-07	07111270	000108-90-7	Chlorobenzene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000124-48-1	Chlorodibromomethane	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000075-00-3	Chloroethane	N002	0.41	ug/L	U	F	0.41		
95199	13-Nov-07	07111270	000067-66-3	Chloroform	N002	0.18	ug/L	J	F	0.16		
95199	13-Nov-07	07111270	000074-87-3	Chloromethane	N002	0.3	ug/L	U	F	0.3		
95199	13-Nov-07	07111270	000074-95-3	Dibromomethane	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000075-71-8	Dichlorodifluoromethane	N002	0.31	ug/L	U	F	0.31		
95199	13-Nov-07	07111270	000100-41-4	Ethylbenzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000087-68-3	Hexachlorobutadiene	N002	0.12	ug/L	U	F	0.12		
95199	13-Nov-07	07111270	000098-82-8	Isopropylbenzene	N002	0.19	ug/L	U	F	0.19		
95199	13-Nov-07	07111270	000075-09-2	Methylene chloride	N002	0.32	ug/L	U	F	0.32		
95199	13-Nov-07	07111270	000091-20-3	Naphthalene	N002	0.22	ug/L	U	F	0.22		
95199	13-Nov-07	07111270	000100-42-5	Styrene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000127-18-4	Tetrachloroethene	N002	2.1	ug/L		F	0.2		
95199	13-Nov-07	07111270	000108-88-3	Toluene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	001330-20-7	Total Xylenes	N002	0.19	ug/L	U	F	0.19		
95199	13-Nov-07	07111270	000079-01-6	Trichloroethene	N002	58	ug/L		F	0.32		
95199	13-Nov-07	07111270	000075-69-4	Trichlorofluoromethane	N002	0.29	ug/L	U	F	0.29		
95199	13-Nov-07	07111270	000075-01-4	Vinyl chloride	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000156-59-2	cis-1,2-Dichloroethene	N002	2.2	ug/L		F	0.15		
95199	13-Nov-07	07111270	010061-01-5	cis-1,3-Dichloropropene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000104-51-8	n-Butylbenzene	N002	0.14	ug/L	U	F	0.14		

LOCATION CODE	DATE SAMPLED	LAB REQUISITION NUMBER	CAS	ANALYTE	SAMPLE ID	ORIGINAL RESULT	ORIGINAL UNIT OF MEASURE	LAB QUALIFIERS	SAMPLE TYPE	DETECTION LIMIT	UNCER-TAINTY	DATA VALIDATION QUALIFIERS
95199	13-Nov-07	07111270	000103-65-1	n-Propylbenzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000099-87-6	p-Isopropyltoluene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000135-98-8	sec-Butylbenzene	N002	0.17	ug/L	U	F	0.17		
95199	13-Nov-07	07111270	000098-06-6	tert-Butylbenzene	N002	0.16	ug/L	U	F	0.16		
95199	13-Nov-07	07111270	000156-60-5	trans-1,2-Dichloroethene	N002	0.15	ug/L	U	F	0.15		
95199	13-Nov-07	07111270	010061-02-6	trans-1,3-dichloropropene	N002	0.19	ug/L	U	F	0.19		

Appendix C

Landfill Inspection Forms—Fourth Quarter CY 2007

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Appendix C: Landfill Inspection Forms

C.1 Original Landfill

ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

INSPECTION FORM

INSPECTOR: J. McLaughlin DATE: 10/31/07 TIME: 0900 REVIEWED BY: Gary Sgarlli

TEMPERATURE: 45 °F WEATHER CONDITIONS: Overcast REVIEW DATE: 10/31/07

METEOROLOGICAL STATION LOCATION: NREL

SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	WPC Slump
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 7 crack Berm 4 depression
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 1	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 2	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 3	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 4 depression
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 4 depression
DIVERSION BERM 6	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 7	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 7 / EPC Slump

Settlement Plates on Top of cover to be inspected for integrity.
During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?
☐ Yes ☐ No

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

A small crack above seep #7 was noted on 10/1/07. It is expected to be an extension of the original berm #1 crack that wasn't repaired during the project. It has been flagged and GPS'ed and will be monitored for further movement.

SLOPE STABILITY

REGION	EVIDENCE OF ~~SEEPS?~~ CRACKS	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER? (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	Seep #7 + #4
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Seep #2 + #3
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
WEST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	WPC Slump
EAST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Berm #7 / EPC Slump
COVER SEEPS (IF PRESENT)	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Below
			☐ Yes ☐ No	
			☐ Yes ☐ No	

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Seep #7 continues to be dry. Seep #4 is still flowing steadily along berm #3. Seeps #1, #2, and #3 were wet during the inspection due to a .10 precipitation event the previous day. Seep #8 continues to show steady artesian flow.

SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None at this time.

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT*?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?
COVER- WEST		☐ Yes ☐ No		
COVER - EAST		☐ Yes ☐ No		
DIVERSION BERM 1		☐ Yes ☐ No		
DIVERSION BERM 2		☐ Yes ☐ No		
DIVERSION BERM 3		☐ Yes ☐ No		
DIVERSION BERM 4		☐ Yes ☐ No		
DIVERSION BERM 5		☐ Yes ☐ No		
DIVERSION BERM 6		☐ Yes ☐ No		
DIVERSION BERM 7		☐ Yes ☐ No		
WEST PERIMETER CHANNEL		☐ Yes ☐ No		
EAST PERIMETER CHANNEL		☐ Yes ☐ No		
UPPER BUTTERESS FILL SIDESLOPE		☐ Yes ☐ No		
LOWER BUTTRESS FILL SIDESLPOE		☐ Yes ☐ No		

* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

No vegetation inspection is required for the month of October. It will be performed in November. The grass in the area of the berm #1 repairs is coming in nicely.

STORMWATER MANAGEMENT STRUCTURES

CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 2	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 3	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 6	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 7	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No
CHECK DAMS	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
WEST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
EAST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Depressions in berms are due to settling and require no maintenance at this time.

STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal Sediment
DIVERSION BERM OUTFALL 2	
DIVERSION BERM OUTFALL 3	
DIVERSION BERM OUTFALL 4	
DIVERSION BERM OUTFALL 5	
DIVERSION BERM OUTFALL 6	
DIVERSION BERM OUTFALL 7	Fair / End of berm has slumped into EPC.
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal Sediment
EAST PERIMETER CHANNEL OUTFALL	
FRENCH DRAIN OUTFALL (SID)	

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None at this time.

"RUN-ON" CONTROL

AREA	ADVERSELY AFFECTING OLF?		
NORTH OF THE ORIGINAL LANDFILL	☐ Yes	☒ No	COMMENT: —
WEST OF THE WEST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
EAST OF THE EAST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
NORTH OF WOMAN CREEK	☐ Yes	☒ No	COMMENT: —

MAINTENANCE REQUIRED

None.

INSTITUTIONAL CONTROLS

ITEM				
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF UNAUTHORIZED ENTRY?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	☐ Yes	☒ No	COMMENT:	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	☐ Yes	☒ No	COMMENT:	—

OTHER DEFICIENCIES/PHOTO LOG

None.

ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
1" Precipitation Event	10/15/07	Special Inspection	10/15/07	Nothing significant to report
		JM		

INSPECTOR SIGNATURE: [signature] DATE: 10/31/07

REVIEWER SIGNATURE: [signature] DATE: 10/31/07

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ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

INSPECTION FORM

INSPECTOR: J. McLaughlin DATE: 11/28/07 TIME: 0900 REVIEWED BY: Jorge Sgrill

TEMPERATURE: 29°F WEATHER CONDITIONS: Overcast REVIEW DATE: 11-29-07

METEOROLOGICAL STATION LOCATION: NREL

SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	WPL slump
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm #7 crack Berm #4 Depression
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 1	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 2	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 3	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 4 depression
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 4 depression
DIVERSION BERM 6	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 7	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm 7 / EPL slump

Settlement Plates on Top of cover to be inspected for integrity.
During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?
☒ Yes ☐ No

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Small crack above Seep #7 (noted in previous inspection) remains unchanged.

SLOPE STABILITY

REGION	EVIDENCE OF ~~SEEPS?~~ cracks?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER? (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	Seeps #7 + #4
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Seeps #2 + #3
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
WEST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	WPC slump
EAST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Berm #7 / EPC slump
COVER SEEPS (IF PRESENT)	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	See below
			~~☐ Yes ☐ No~~	
			~~☐ Yes ☐ No~~	

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Seep #7 is still dry. There remains to be continuous flow along berm #3 from seep #4. Seep #8 continues to show steady flow. All other seeps appear to be inactive due to ≈ 1" of snow on the ground.

SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None at this time.

OLF Vegetation Survey

VEGETATION

11/14/07 Jody K Nelson

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT*?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?	
COVER- WEST	none to good	☒ Yes ☐ No	0 - 90%	CEDH, CIAR, KOSCI, SAIBI, PODBI, ERCH,	2%
COVER - EAST	none to good	☒ Yes ☐ No	0 - 100%	CEDH, KOSCI, SAIBI, CIARI, VETHI,	2%
DIVERSION BERM 1	none to good	☒ Yes ☐ No	0 - 85%	CEDH, KOSCI, SAIBI, CIARI,	1%
DIVERSION BERM 2	none ~~sparse~~ to good 11/14/07	☒ Yes ☐ No	0 - 90%	CIARI, CEDH, KOSCI, SAIBI, VETHI,	1%
DIVERSION BERM 3	sparse to moderate	☒ Yes ☐ No	5 - 60%	CIARI, CEDH, KOSCI, SAIBI, SOAR, VETHI, SAEXI, SAMMI	1%
DIVERSION BERM 4	sparse to moderate	☒ Yes ☐ No	5 - 55%	CEDH, KOSCI, SAIBI, HYPEI	~25% (mostly SAIBI & KOSCI)
DIVERSION BERM 5	sparse to moderate	☒ Yes ☐ No	5 - 70%	CEDH, KOSCI, SAIBI VETHI, VERBI, HYPEI,	3%
DIVERSION BERM 6	sparse to moderate	☒ Yes ☐ No	5 - 60%	CEDH, SAIBI, HYPEI, CIARI,	<1%
DIVERSION BERM 7	sparse to good	☒ Yes ☐ No	5 - 80%	SAIBI, CEDH, CIARI, ERCH, HYPEI	2%
WEST PERIMETER CHANNEL	~~none sparse~~ to good 11/14/07	☒ Yes ☐ No	0 - 90%	CEDH, CIARI, SAIBI, KOSCI BRTEI	1%
EAST PERIMETER CHANNEL	none to good	☒ Yes ☐ No	0 - 90%	CEDH, SAIBI, VETHI, KOSCI,	1%
UPPER BUTTERESS FILL SIDESLOPE Flat area on top	sparse to moderate	☒ Yes ☐ No	5 - 60%	KOSCI, SAIBI, BRTEI, VETHI, CEDH, LIDAI,	1%
LOWER BUTTRESS FILL SIDESLPOE side slope	sparse to good	☒ Yes ☐ No	5 - 90%	KOSCI, SAIBI, BRTEI, VETHI LIDAI,	4%

* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED / COMMENTS

Schedule OLF to be sprayed next spring for weed control

11/14/07 [signature]

STORMWATER MANAGEMENT STRUCTURES

CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 2	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 3	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 6	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 7	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No
CHECK DAMS	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
WEST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
EAST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Berm depressions are due to settling. No maintenance is required at this time.

STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal sediment
DIVERSION BERM OUTFALL 2	
DIVERSION BERM OUTFALL 3	
DIVERSION BERM OUTFALL 4	
DIVERSION BERM OUTFALL 5	
DIVERSION BERM OUTFALL 6	
DIVERSION BERM OUTFALL 7	Fair / End of berm has slid into EPC
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal sediment
EAST PERIMETER CHANNEL OUTFALL	
FRENCH DRAIN OUTFALL (SID)	

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None.

"RUN-ON" CONTROL

AREA	ADVERSELY AFFECTING OLF?			
NORTH OF THE ORIGINAL LANDFILL	☐ Yes	☒ No	COMMENT:	–
WEST OF THE WEST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT:	–
EAST OF THE EAST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT:	–
NORTH OF WOMAN CREEK	☐ Yes	☒ No	COMMENT:	–

MAINTENANCE REQUIRED

None.

INSTITUTIONAL CONTROLS

ITEM				
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF UNAUTHORIZED ENTRY?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	☐ Yes	☒ No	COMMENT:	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	☐ Yes	☒ No	COMMENT:	—

OTHER DEFICIENCIES/PHOTO LOG

None.

ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
–	–	Survey consolidation monitors	11/3/07	Second monthly survey

INSPECTOR SIGNATURE: [signature] DATE: 11/28/07

REVIEWER SIGNATURE: [signature] DATE: 11-29-07

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ORIGINAL LANDFILL – MONITORING AND MAINTENANCE PROGRAM

INSPECTION FORM

INSPECTOR: J McLaughlin DATE: 12/19/07 TIME: 0930 REVIEWED BY: Linda L. Kaiser

TEMPERATURE: 40°F WEATHER CONDITIONS: clear → lt. wind REVIEW DATE: 12/20/07

METEOROLOGICAL STATION LOCATION: NREL Wind Site

SUBSIDENCE / CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	WPL Slump
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm #7 crack Berm #4 Depression
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 1	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 2	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 3	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm #4 Depression
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm #4 Depression
DIVERSION BERM 6	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
DIVERSION BERM 7	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	Berm #7 / EPL Slump

Settlement Plates on Top of cover to be inspected for integrity.
During Year 1, they will be surveyed quarterly, and annually thereafter.

Integrity intact?
☒ Yes ☐ No

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

No significant changes in slumps or depressions noted in previous inspections.

SLOPE STABILITY

REGION	EVIDENCE OF ~~SEEPS~~? cracks?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER? (DESCRIBE BELOW)
COVER – WEST	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	Seeps #7 + #4
COVER – EAST	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Seeps #2, #3, + #8
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	--
WEST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	WPC Slump
EAST PERIMETER CHANNEL SIDESLOPES	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	Berm #7 / EPC Slump
COVER SEEPS (IF PRESENT)	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	See below
			~~☐ Yes ☐ No~~	
			~~☐ Yes ☐ No~~	

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

Seep #7 was saturated during the inspection, but had no surface flow. Seeps #4 + #8 were flowing ≈ 5 gallons / minute. Seeps #2 + #3 were saturated, but were not flowing. There has been considerable snowmelt in the last week, which has contributed to the seeps.

SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
BUTTRESS FILL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
BUTTRESS FILL SIDESLOPE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None

No vegetation inspection required per the M+M Plan.

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT*?	PERCENTAGE OF GRASS VERSUS BARE GROUND?	PERCENTAGE OF UNWANTED VEGETATION?
COVER- WEST		☐ Yes ☐ No		
COVER - EAST		☐ Yes ☐ No		
DIVERSION BERM 1		☐ Yes ☐ No		
DIVERSION BERM 2		☐ Yes ☐ No		
DIVERSION BERM 3		☐ Yes ☐ No		
DIVERSION BERM 4		☐ Yes ☐ No		
DIVERSION BERM 5		☐ Yes ☐ No	Jm	
DIVERSION BERM 6		☐ Yes ☐ No		
DIVERSION BERM 7		☐ Yes ☐ No		
WEST PERIMETER CHANNEL		☐ Yes ☐ No		
EAST PERIMETER CHANNEL		☐ Yes ☐ No		
UPPER BUTTERESS FILL SIDESLOPE		☐ Yes ☐ No		
LOWER BUTTRESS FILL SIDESLPOE		☐ Yes ☐ No		

* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

STORMWATER MANAGEMENT STRUCTURES

CHANNELS / LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM 1	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 2	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 3	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 4	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 5	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 6	☐ Yes ☒ No	☒ Yes ☐ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
DIVERSION BERM 7	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
CHECK DAMS	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
WEST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No
EAST PERIMETER CHANNEL	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	☒ Yes ☐ No	☒ Yes ☐ No	☒ Yes ☐ No

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

No maintenance required pending outcome of Geo-technical investigation.

STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION / SEDIMENT DEPTH
DIVERSION BERM OUTFALL 1	Good / Minimal sediment
DIVERSION BERM OUTFALL 2	
DIVERSION BERM OUTFALL 3	
DIVERSION BERM OUTFALL 4	
DIVERSION BERM OUTFALL 5	
DIVERSION BERM OUTFALL 6	
DIVERSION BERM OUTFALL 7	Fair / End of Berm #7 has slid into EPC.
WEST PERIMETER CHANNEL OUTFALL	Good / Minimal sediment
EAST PERIMETER CHANNEL OUTFALL	
FRENCH DRAIN OUTFALL (SID)	

OTHER DEFICIENCIES?

None

MAINTENANCE REQUIRED / COMMENTS/PHOTO LOG

None at this time. Repairs will be made during next OLF construction project.

"RUN-ON" CONTROL

AREA	ADVERSELY AFFECTING OLF?		
NORTH OF THE ORIGINAL LANDFILL	☐ Yes	☒ No	COMMENT: —
WEST OF THE WEST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
EAST OF THE EAST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
NORTH OF WOMAN CREEK	☐ Yes	☒ No	COMMENT: —

MAINTENANCE REQUIRED

None.

INSTITUTIONAL CONTROLS

ITEM			
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	☐ Yes	☒ No	COMMENT: —
EVIDENCE OF CONSTRUCTION OF ROADS, TRAILS ON COVER OR BUILDINGS?	☐ Yes	☒ No	COMMENT: —
EVIDENCE OF UNAUTHORIZED ENTRY?	☐ Yes	☒ No	COMMENT: —
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	☐ Yes	☒ No	COMMENT: —
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	☐ Yes	☒ No	COMMENT: —

OTHER DEFICIENCIES/PHOTO LOG

None.

ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
Erosion matting out of place by WPC	12/19/07	Replaced and secured	12/29/07	McLaughlin + Nelson
		Phase 1 of Geo-Technical Investigation	12/3/07-12/7/07	Seismic Testing
		Survey settlement monuments and consolidation monitors	12/3/07	Quarterly survey
			12/3/07	Monthly survey
		JM		

INSPECTOR SIGNATURE: [signature] DATE: 12/19/07

REVIEWER SIGNATURE: Linda L. Kami DATE: 12/20/07

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C.2 Present Landfill

PRESENT LANDFILL – MONITORING AND MAINTENANCE PROGRAM

INSPECTION FORM

INSPECTOR: J McLaughlin DATE: 10/31/07 TIME: 11.00 REVIEWED BY: Gene Spall

TEMPERATURE: 45° F WEATHER CONDITIONS: Overcast REVIEW DATE: 10-31-07

METEOROLOGICAL STATION LOCATION: NREL

SUBSIDENCE/CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
TOP OF COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH SEEP*	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–

Settlement Plates and side-slope monitoring points to be inspected for integrity.
During Year 1, they will be surveyed quarterly, and annually thereafter

Integrity intact?
☒ Yes ☐ No

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

SLOPE STABILITY

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER (DESCRIBE BELOW)
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
PERIMETER CHANNEL OUTER SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
PERIMETER CHANNEL OUTER SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
EAST FACE SLOPE – CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	
EAST FACE SLOPE – NORTH SEEP*	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No	

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

Seep area is saturated but not flowing.

* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
TOP OF COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
EAST FACE SLOPE -- CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	—
	VENT CAPS IN PLACE & SECURE?	**STANDPIPES IN GOOD CONDITION?**	**BIRDS OR INSECTS IN VENT CAPS?**	
COVER – BAROMETRIC VENTS	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	—

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

10/25/07

PLF. Veg Survey
Jody Nelson

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT*?	OTHER (DESCRIBE BELOW)	
TOP OF COVER - WEST	good	☒ Yes ☐ No	VETHI, CEDII, KOSCI,	<1%
TOP OF COVER - EAST	moderate to good	☒ Yes ☐ No	VETHI, CIARI, COARI, CEDII, HYPEI,	<1%
EAST FACE SLOPE - NORTH	none to moderate	☒ Yes ☐ No	CIARI, SAIBI, VETHI, LIDAI, HYPEI, SARXI, CEDII,	~3%
EAST FACE SLOPE - SOUTH	none to moderate	☒ Yes ☐ No	SAIBI, HYPEI, KOSCI, CIARI, VETHI, CEDII	~2%
EAST FACE SLOPE - CENTRAL	none to moderate	☒ Yes ☐ No	HYPEI, CIARI, SAMI, COARI, CEDII, VETHI, LIDAI	~5%
COVER SIDESLOPE - NORTH	moderate to good	☒ Yes ☐ No	LIDAI, BRTEI, CEDII, COARI,	<1%
COVER SIDESLOPE - SOUTH	sparse to good	☒ Yes ☐ No	KOSCI, LIDAI, BRTEI, VETHI, CEDII,	<1%
VEGETATION-LINED PERIMETER CHANNEL - NORTH	none to moderate	☐ Yes ☒ No		
VEGETATION-LINED PERIMETER CHANNEL - SOUTH	sparse to good	☒ Yes ☐ No	CEDII, CIARI, HYPEI,	<1%

* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

Woody plants will be sprayed next late spring/early summer

SEEP TREATMENT SYSTEM

REGION	EVIDENCE OF PLUGGING, OBSTRUCTIONS, OR EXCESS DEBRIS?	EVIDENCE OF CRACKS OR DETERIORATION?	OTHER (DESCRIBE BELOW)
GWIS INLET PIPES	☐ Yes ☒ No	☐ Yes ☒ No	–
STRIP DRAIN INLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
NORTH MANHOLE OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
SOUTH MANHOLE OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
TREATMENT UNIT	☐ Yes ☒ No	☐ Yes ☒ No	–
TREATMENT UNIT OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
NORTH MANHOLE	☐ Yes ☒ No	☒ Yes ☐ No	Small hairline cracks in cement
SOUTH MANHOLE	☐ Yes ☒ No	☒ Yes ☐ No	Small hairline cracks in cement
TREATMENT UNIT GRATING	NA	☐ Yes ☒ No	–

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

STORMWATER MANAGEMENT STRUCTURES

CHANNELS/LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
VEGETATION-LINED PERIMETER CHANNEL – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
RIPRAP-LINED PERIMETER CHANNEL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
C350-LINED EAST FACE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
EAST FACE RIPRAP CHANNEL – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
EAST FACE RIPRAP CHANNEL – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION/SEDIMENT DEPTH
DIVERSION BERM OUTFALL – NORTH	Good Condition / No sediment
DIVERSION BERM OUTFALL – SOUTH	↓
CULVERT 1 OUTFALL	
CULVERT 2 OUTFALL	
SOUTHWEST CULVERT OUTFALL	

CULVERTS

CHECK EACH STRUCTURE FOR BLOCKAGE, SURROUNDING CONDITIONS, BREACHING, SEDIMENT BUILD-UP, AND INLET/OUTLET CONDITIONS.

STRUCTURE	CONDITION
CULVERT 1	Good condition / No sediment
CULVERT 2	↓
SOUTHWEST CULVERT	

MAINTENANCE REQUIRED/PHOTO LOG

None.

"RUN-ON" EROSION CONTROL

AREA	ADVERSELY AFFECTING PLF?		
RUN-ON INTO PERIMETER CHANNEL – NORTH	☐ Yes	☒ No	COMMENT: —
RUN-ON INTO PERIMETER CHANNEL – SOUTH	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY CULVERT 1	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY NORTHEAST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY RIPRAP	☐ Yes	☒ No	COMMENT: —

MAINTENANCE REQUIRED/PHOTO LOG

None.

INSTITUTIONAL CONTROLS

ITEM				
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF CONSTRUCTION OF ROADS OR TRAILS ON COVER OR BUILDINGS?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF UNAUTHORIZED ENTRY?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	☐ Yes	☒ No	COMMENT:	—
DISRUPTION OR DAMAGE OF SEEP TREATMENT SYSTEM?	☐ Yes	☒ No	COMMENT:	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	☐ Yes	☒ No	COMMENT:	—

OTHER DEFICIENCIES/PHOTO LOG

None.

ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS
		Jm		

INSPECTOR SIGNATURE: _____ DATE: 10/31/07

REVIEWER SIGNATURE: _____ DATE: 10-31-07

PRESENT LANDFILL – MONITORING AND MAINTENANCE PROGRAM

INSPECTION FORM

INSPECTOR: J. McLaughlin DATE: 11/29/07 TIME: 1100 REVIEWED BY: Amy Sywolle

TEMPERATURE: 29°F WEATHER CONDITIONS: Overcast + Cold REVIEW DATE: 11-29-07

METEOROLOGICAL STATION LOCATION: NREL

SUBSIDENCE/CONSOLIDATION

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF DEPRESSIONS?	EVIDENCE OF SINK HOLES?	EVIDENCE OF PONDING?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
TOP OF COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH SEEP*	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–

Settlement Plates and side-slope monitoring points to be inspected for integrity.
During Year 1, they will be surveyed quarterly, and annually thereafter

Integrity intact?
☒ Yes ☐ No

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

SLOPE STABILITY

REGION	EVIDENCE OF CRACKS?	EVIDENCE OF BLOCK OR CIRCULAR FAILURE?	EVIDENCE OF SEEPS?	OTHER (DESCRIBE BELOW)
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
PERIMETER CHANNEL OUTER SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
PERIMETER CHANNEL OUTER SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH SEEP*	☐ Yes ☒ No	☐ Yes ☒ No	☒ Yes ☐ No	–

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

Evidence of seep is present in form of discolored soil. The seep area is fairly dry at this time.

* AREA OF SEEP IS OUTSIDE OF LANDFILL COVER AND EAST OF THE COVER ANCHOR TRENCH

SOIL COVER

REGION	EVIDENCE OF SOIL DEPOSITION OR EROSION?	EVIDENCE OF EROSION RILLS/GULLIES?	EVIDENCE OF BURROWING ANIMALS?	OTHER (DESCRIBE BELOW)
TOP OF COVER – WEST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
TOP OF COVER – EAST	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
COVER SIDESLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
EAST FACE SLOPE – CENTRAL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
AREA WHERE EAST SLOPE CENTRAL MEETS EAST SLOPE SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	–
	VENT CAPS IN PLACE & SECURE?	**STANDPIPES IN GOOD CONDITION?**	**BIRDS OR INSECTS IN VENT CAPS?**	
COVER – BAROMETRIC VENTS	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☒ No	–

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

11/27/07 PLF Veg Survey
Jody K Nelson

VEGETATION

REGION	CONDITION OF GRASS	UNWANTED VEGETATION PRESENT*?	OTHER (DESCRIBE BELOW)	
TOP OF COVER – WEST	good	☒ Yes ☐ No	CEDI, HYPEI, VETHI,	<1%
TOP OF COVER – EAST	moderate to good	☒ Yes ☐ No	CEDI, VETHI, CIARI, HYPEI,	<1%
EAST FACE SLOPE – NORTH	none to moderate	☒ Yes ☐ No	VETHI, HYPEI, CEDI, CIARI, SAIBI	2%
EAST FACE SLOPE – SOUTH	none to moderate	☒ Yes ☐ No	CEDI, SAIBI, KOSCI, HYPEI, VETHI, CIARI	1%
EAST FACE SLOPE – CENTRAL	none to moderate	☒ Yes ☐ No	CIARI, HYPEI, CEDI, VETHI, COARI,	4%
COVER SIDESLOPE – NORTH	moderate to good	☒ Yes ☐ No	KOSCI, SAIBI, CEDI, VETHI, LIDAI HYPEI	<1%
COVER SIDESLOPE – SOUTH	Sparse to good	☒ Yes ☐ No	COARI, LIDAI VETHI, KOSCI, CEDI, HYPEI	<1%
VEGETATION-LINED PERIMETER CHANNEL – NORTH	none to moderate	☐ Yes ☒ No		
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	Sparse to good	☒ Yes ☐ No	CIARI, HYPEI,	<1%

* Unwanted vegetation includes weeds and deep-rooting trees.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

Saw large jackrabbit on SW side of PLF near S. perimeter channel – Cow over top of cover.

11/27/07

SEEP TREATMENT SYSTEM

REGION	EVIDENCE OF PLUGGING, OBSTRUCTIONS, OR EXCESS DEBRIS?	EVIDENCE OF CRACKS OR DETERIORATION?	OTHER (DESCRIBE BELOW)
GWIS INLET PIPES	☐ Yes ☒ No	☐ Yes ☒ No	–
STRIP DRAIN INLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
NORTH MANHOLE OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
SOUTH MANHOLE OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
TREATMENT UNIT	☐ Yes ☒ No	☐ Yes ☒ No	–
TREATMENT UNIT OUTLET PIPE	☐ Yes ☒ No	☐ Yes ☒ No	–
NORTH MANHOLE	☐ Yes ☒ No	☒ Yes ☐ No	Hairline cracks in cement
SOUTH MANHOLE	☐ Yes ☒ No	☒ Yes ☐ No	Hairline cracks in cement
TREATMENT UNIT GRATING	NA	☐ Yes ☒ No	–

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

STORMWATER MANAGEMENT STRUCTURES

CHANNELS/LINING

STRUCTURE	EVIDENCE OF EXCESSIVE EROSION, GULLYING, SCOUR, OR UNDERMINING?	EVIDENCE OF SETTLEMENT/ SUBSIDENCE OR DEPRESSIONS?	EVIDENCE OF BREACHING OR BANK FAILURE?	EVIDENCE OF BURROWING ANIMALS?	EVIDENCE OF SEDIMENT BUILD-UP OR OTHER BLOCKAGE?	EVIDENCE OF LINING DETERIORATION, HOLES, RIPS, OR SEPARATION?	EVIDENCE OF LINING DISPLACEMENT?
DIVERSION BERM	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
VEGETATION-LINED PERIMETER CHANNEL – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
VEGETATION-LINED PERIMETER CHANNEL – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
RIPRAP-LINED PERIMETER CHANNEL	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
C350-LINED EAST FACE	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
EAST FACE RIPRAP CHANNEL – NORTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
EAST FACE RIPRAP CHANNEL – SOUTH	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No	

OTHER DEFICIENCIES?

None.

MAINTENANCE REQUIRED/COMMENTS/PHOTO LOG

None.

STORMWATER MANAGEMENT STRUCTURES (CONTINUED)

OUTFALLS

CHECK EACH STRUCTURE FOR EXCESSIVE EROSION AND SEDIMENT DEPTH. IF SEDIMENT DEPTH IS COMPROMISING THE DESIGN CHARACTERISTICS, REMOVE SEDIMENT.

STRUCTURE	CONDITION/SEDIMENT DEPTH
DIVERSION BERM OUTFALL – NORTH	Good condition / No sediment
DIVERSION BERM OUTFALL – SOUTH	↓
CULVERT 1 OUTFALL	
CULVERT 2 OUTFALL	
SOUTHWEST CULVERT OUTFALL	

CULVERTS

CHECK EACH STRUCTURE FOR BLOCKAGE, SURROUNDING CONDITIONS, BREACHING, SEDIMENT BUILD-UP, AND INLET/OUTLET CONDITIONS.

STRUCTURE	CONDITION
CULVERT 1	Good condition / No sediment
CULVERT 2	↓
SOUTHWEST CULVERT	

MAINTENANCE REQUIRED/PHOTO LOG

None.

"RUN-ON" EROSION CONTROL

AREA	ADVERSELY AFFECTING PLF?		
RUN-ON INTO PERIMETER CHANNEL – NORTH	☐ Yes	☒ No	COMMENT: —
RUN-ON INTO PERIMETER CHANNEL – SOUTH	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY CULVERT 1	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY NORTHEAST PERIMETER CHANNEL	☐ Yes	☒ No	COMMENT: —
NATURAL DRAINAGE FED BY RIPRAP	☐ Yes	☒ No	COMMENT: —

MAINTENANCE REQUIRED/PHOTO LOG

None.

INSTITUTIONAL CONTROLS

ITEM				
EVIDENCE OF EXCAVATION(S) OF COVER AND IMMEDIATE VICINITY OF COVER?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF CONSTRUCTION OF ROADS OR TRAILS ON COVER OR BUILDINGS?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF UNAUTHORIZED ENTRY?	☐ Yes	☒ No	COMMENT:	—
EVIDENCE OF DRILLING OF WELLS OR USE OF GROUNDWATER?	☐ Yes	☒ No	COMMENT:	—
DISRUPTION OR DAMAGE OF SEEP TREATMENT SYSTEM?	☐ Yes	☒ No	COMMENT:	—
DAMAGE OR REMOVAL OF ANY SIGNAGE OR GROUNDWATER MONITORING WELLS?	☐ Yes	☒ No	COMMENT:	—

OTHER DEFICIENCIES/PHOTO LOG

None.

ACTION ITEMS

DEFICIENCY	DATE NOTED	ACTION	DATE COMPLETED	COMMENTS

INSPECTOR SIGNATURE: _____ DATE: 11/28/07

REVIEWER SIGNATURE: _____ DATE: 11-29-07

There is no inspection report for December 2007. The PLF inspection schedule was changed to quarterly in accordance with the revised PLF M&M Plan.

Appendix D

Data Evaluation Flowcharts Reproduced from RFLMA and the RFSOG

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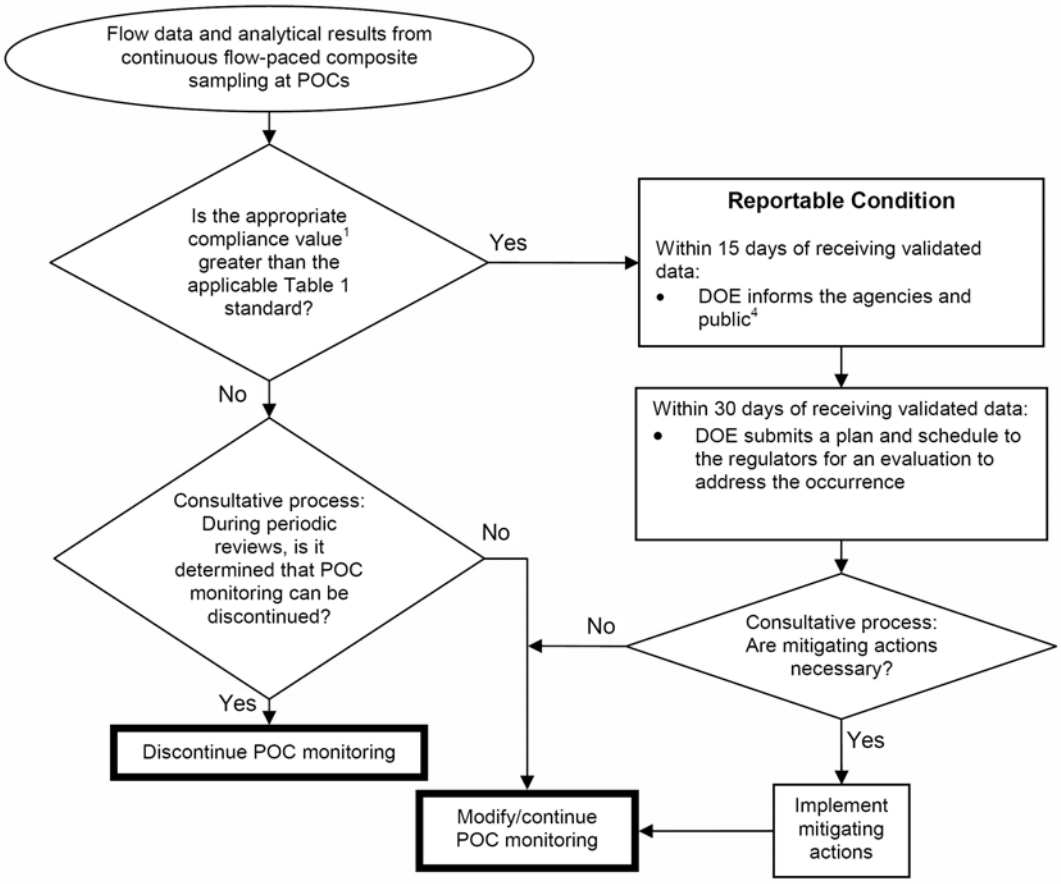
Appendix D: Data Evaluation Flowcharts Reproduced from the RFLMA and the RFSOG

D.1 Points of Compliance



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

[1] Appropriate Compliance Values by locations and analytes (see Table 2 for reference)

- All Indiana Street POCs:
  - plutonium, americium, uranium → 30-day average[2]
- All Terminal Pond POCs:
  - plutonium, americium, uranium → 12-month rolling average[3]
- Walnut Creek at Indiana Street POCs:
  - nitrate → 85th percentile of 30-day averages[3] for previous calendar year
- Walnut Creek Terminal Pond POCs:
  - nitrate → 12-month rolling average[2]

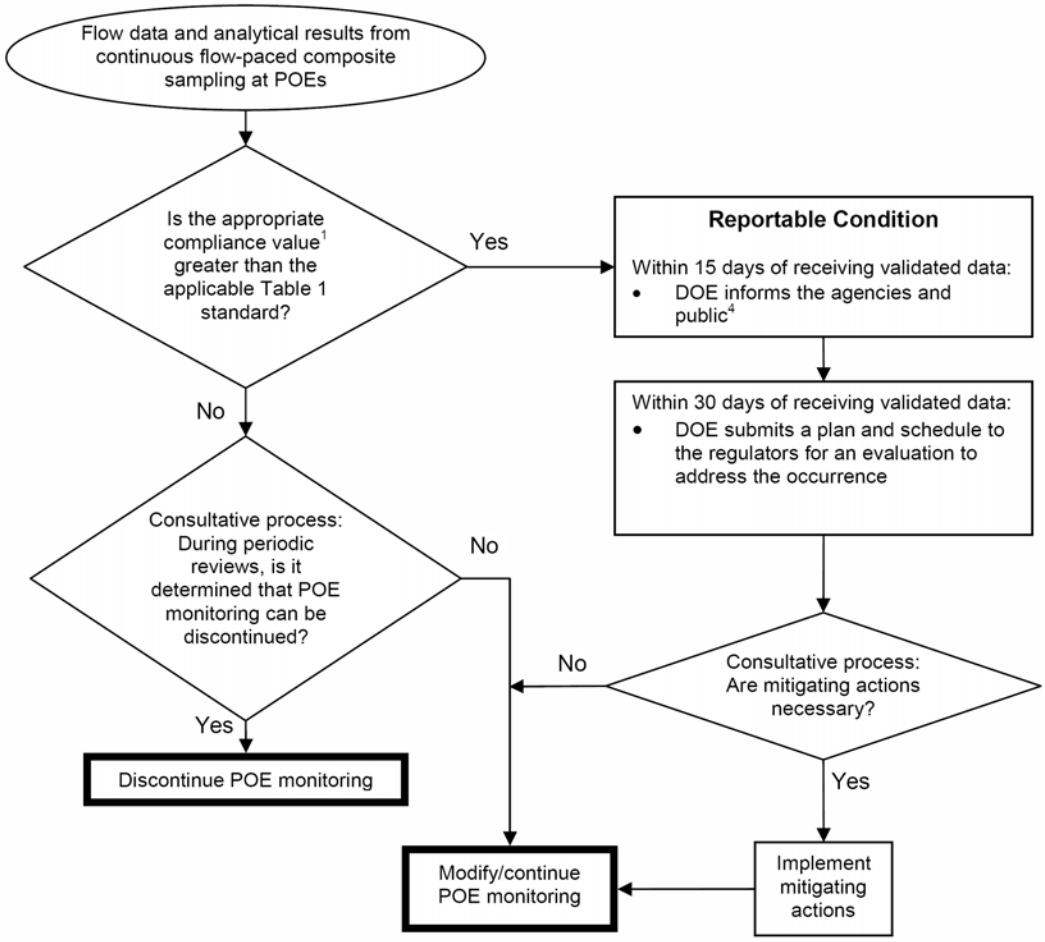
[2] The 30-day average for a particular day is calculated as a volume-weighted average of a "window" of time containing the previous 30 days with measurable flow. Each day has its own discharge volume (measured with a flow meter) and activity/concentration (from the sample carboy in place at the end of that day). Therefore, there are 365 30-day moving averages for a location that flows all year. At locations that have intermittent flows, 30-day averages are reported as averages of the previous 30 days of greater than zero flow. For days where no analytical result is available, either due to failed laboratory analysis or non-sufficient quantity (NSQ) for analysis, no 30-day average is reported.

[3] The 12-month rolling average for the last day of a particular month is calculated as a volume-weighted average of a "window" of time containing the previous 12 months. Each 12-month "window" includes daily discharge volumes (measured with a flow meter) and daily activities/concentrations (from the sample carboy in place at the end of that day). Therefore, there are twelve 12-month rolling averages for a given calendar year. Days with no flow or no analytical result, either due to failed laboratory analysis or NSQ for analysis, are not included in the average. When no flow has occurred in the previous 12 months, no 12-month rolling average is reported.

[4] Agencies: EPA, CDPHE, and USFWS
Public: Cities of Broomfield, Northglenn, Thornton, and Westminster; Rocky Flats Stewardship Council (RFSC)

Figure 5. Points of Compliance

D.2 Points of Evaluation



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

[1] Appropriate Compliance Values by analytes (see Table 2 for reference)
- plutonium, americium, uranium → 12-month rolling average[2]
- dissolved Cd and Ag, total Be and Cr → 85th percentile of 30-day averages[3] for previous calendar year

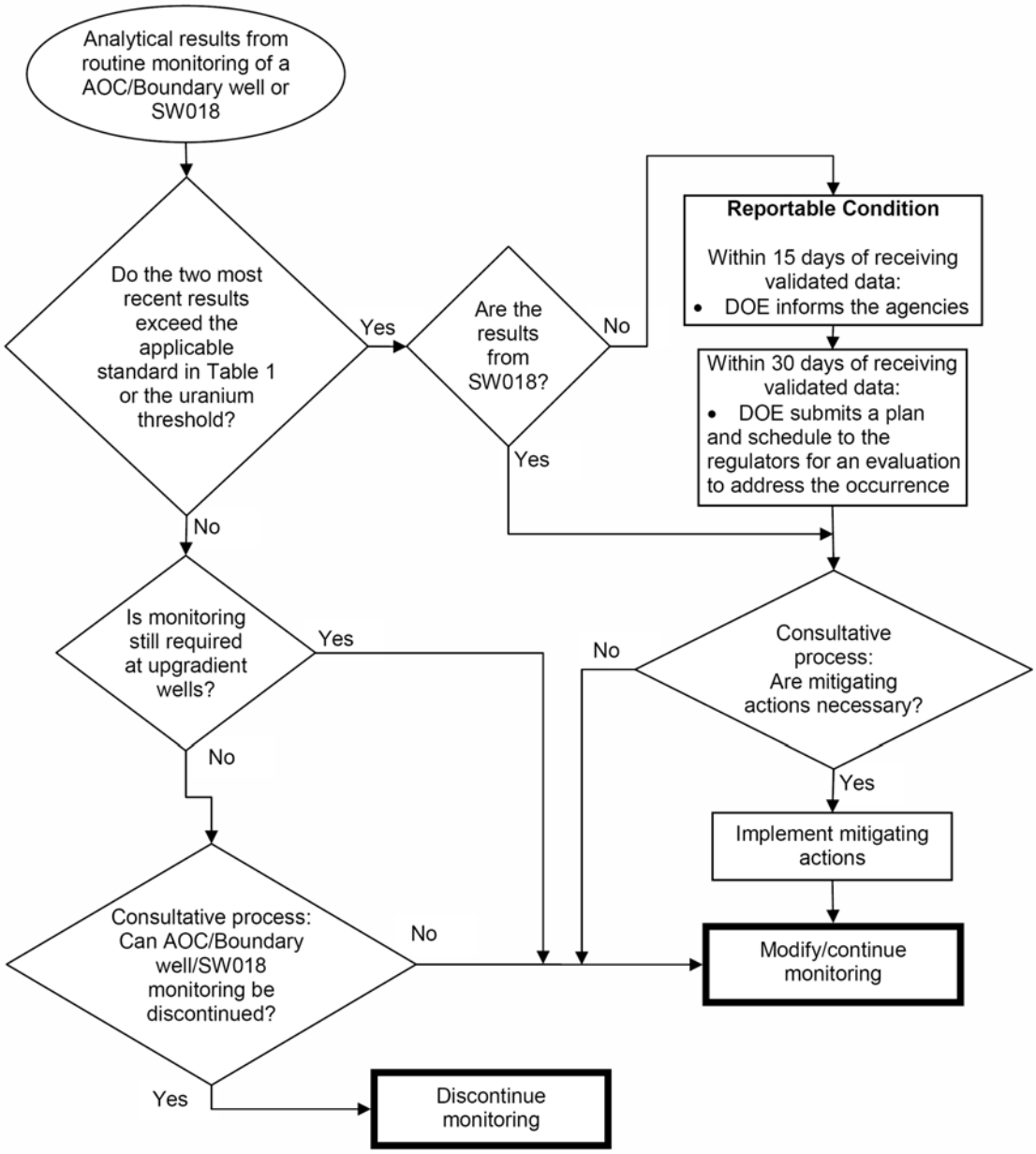
[2] The 30-day average for a particular day is calculated as a volume-weighted average of a "window" of time containing the previous 30-days with measurable flow. Each day has its own discharge volume (measured with a flow meter) and activity/concentration (from the sample carboy in place at the end of that day). Therefore, there are 365 30 day moving averages for a location that flows all year. At locations that have intermittent flows, 30-day averages are reported as averages of the previous 30 days of greater than zero flow. For days where no analytical result is available, either due to failed laboratory analysis or NSQ for analysis, no 30-day average is reported.

[3] The 12-month rolling average for the last day of a particular month is calculated as a volume-weighted average of a "window" of time containing the previous 12 months. Each 12-month "window" includes daily discharge volumes (measured with a flow meter) and daily activities/concentrations (from the sample carboy in place at the end of that day). Therefore, there are twelve 12-month rolling averages for a given calendar year. Days with no flow or no analytical result, either due to failed laboratory analysis or NSQ for analysis, are not included in the average. When no flow has occurred in the previous 12 months, no 12-month rolling average is reported.

[4] Agencies: EPA, CDPHE, and USFWS
Public: Cities of Broomfield, Northglenn, Thornton, and Westminster; Rocky Flats Stewardship Council (RFSC)

Figure 6. Points of Evaluation

D.3 Area of Concern Wells, Boundary Wells, and SW018

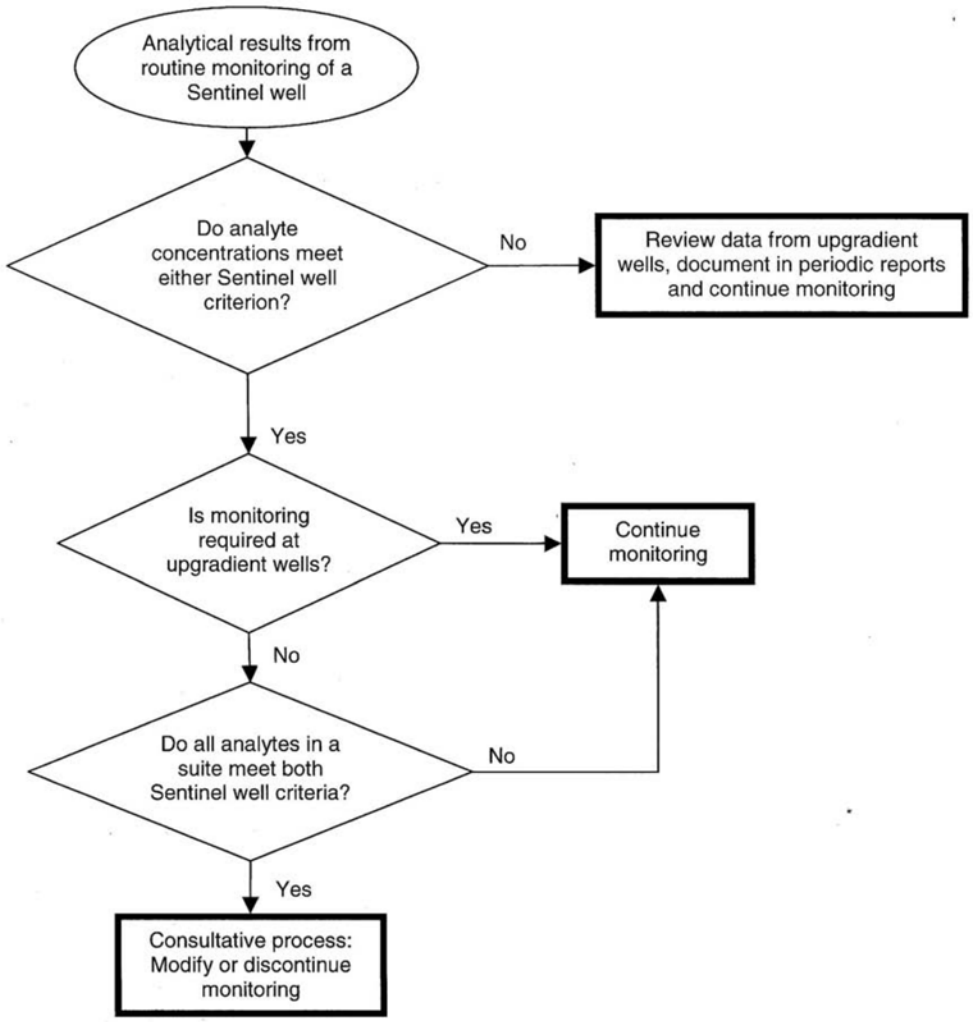


Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

- AOC wells and location SW018 are sampled twice each year; see Table 2.
- Boundary wells are sampled once each year; see Table 2. These wells are not part of the remedy, but are a component of operational monitoring.
- Decisions related to uranium in ground water are based upon a 16 ug/L threshold for Boundary wells (basis: the 11 pCi/L standard) and a 120 ug/L threshold for AOC wells (basis: a grand mean of results from Site-wide high-resolution uranium analyses performed in the late 1990s through mid-2000s), rather than the standard in Table 1.

Figure 7. Area of Concern Wells, Boundary Wells, and SW018

D.4 Sentinel Wells



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

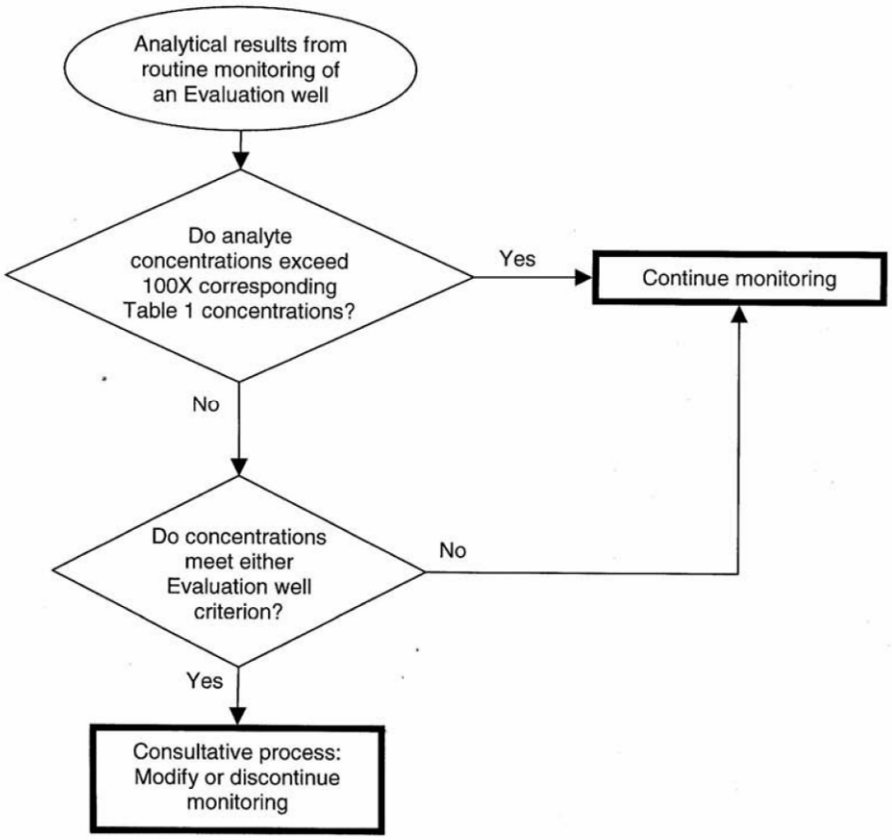
- Sentinel wells are sampled twice each year; see Table 2.
- Decisions related to uranium are based upon a 120 ug/L threshold for AOC wells (basis: a grand mean of results from Site-wide high-resolution uranium analyses performed in the late 1990s through mid-2000s), rather than the standard in Table 1.

Sentinel Well Criteria

1. The 85th percentile concentration of an analyte *is less than or equal to* the corresponding concentration in Table 1 or, for uranium, the 85th percentile concentration does not exceed 2x120 ug/L or the highest calendar year 2005 concentration, whichever is higher.
2. Analyte concentrations exhibit an indeterminate or statistically-significant *decreasing* trend at the 95% confidence level.

Figure 8. Sentinel Wells

D.5 Evaluation Wells



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

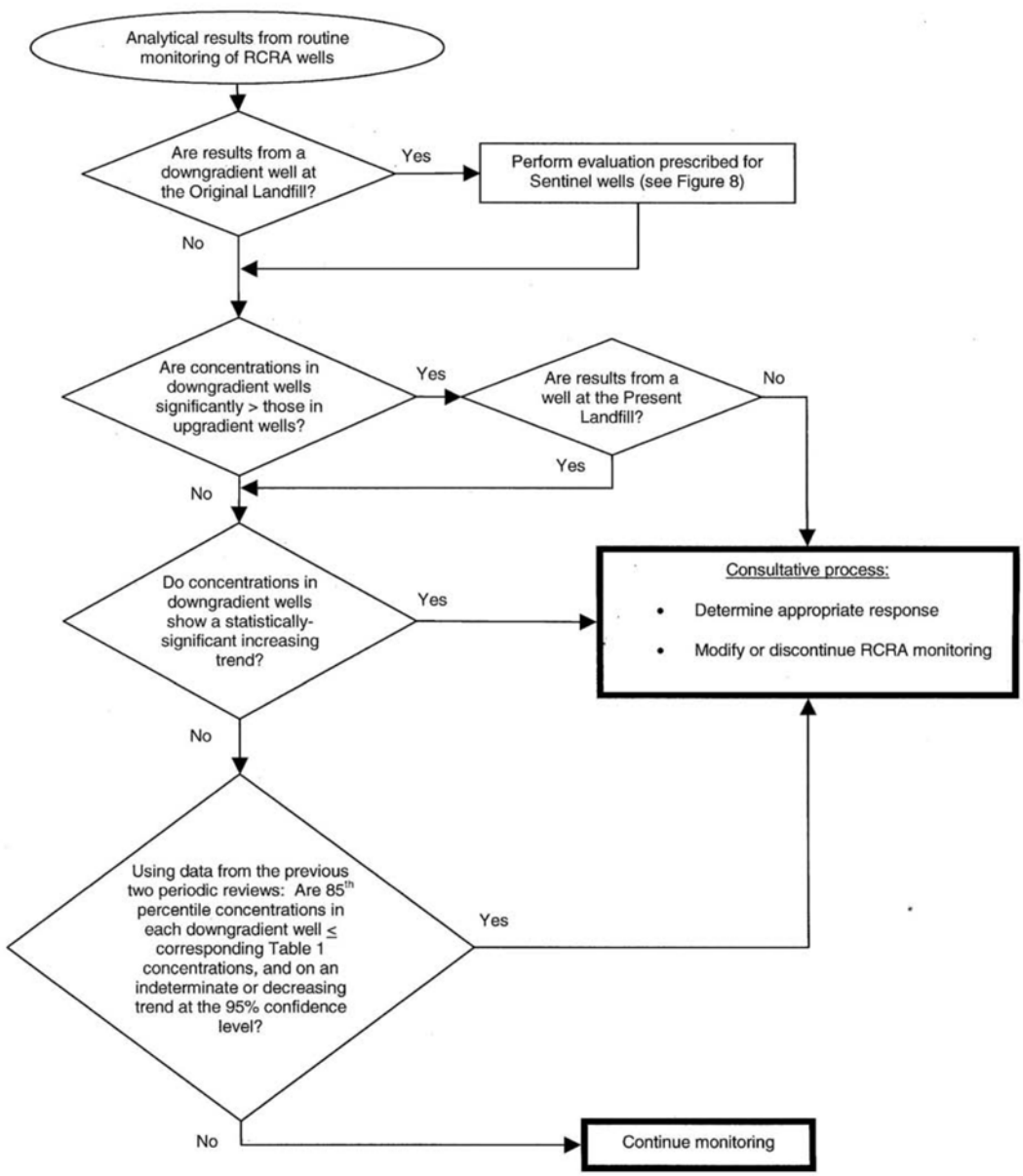
- Evaluation wells are listed in Table 2.

Evaluation Well Criteria:

1. The 85th percentile concentration of an analyte *is less than or equal to* the corresponding concentration in Table 1, or, for uranium, 240 ug/L or highest pre-CY05 concentration, whichever is higher.
2. Analyte concentrations exhibit an indeterminate or statistically-significant *decreasing* trend at the 95% confidence level.

Figure 9. Evaluation Wells

D.6 RCRA Wells



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.
RCRA wells are sampled quarterly; see Table 2.

Figure 10. RCRA Wells

D.7 Groundwater Treatment Systems

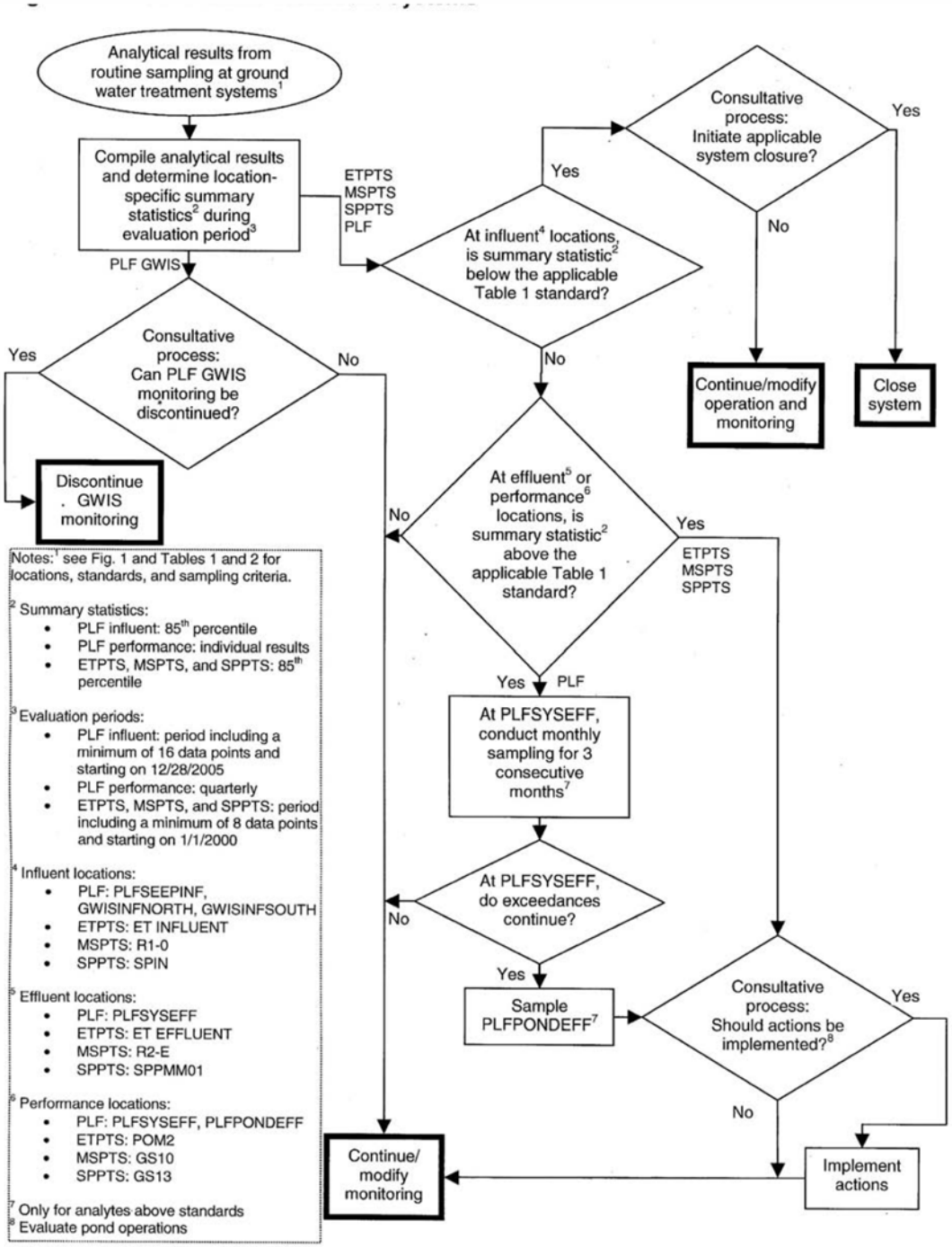


Figure 11. Groundwater Treatment Systems

D.8 Original Landfill Surface Water

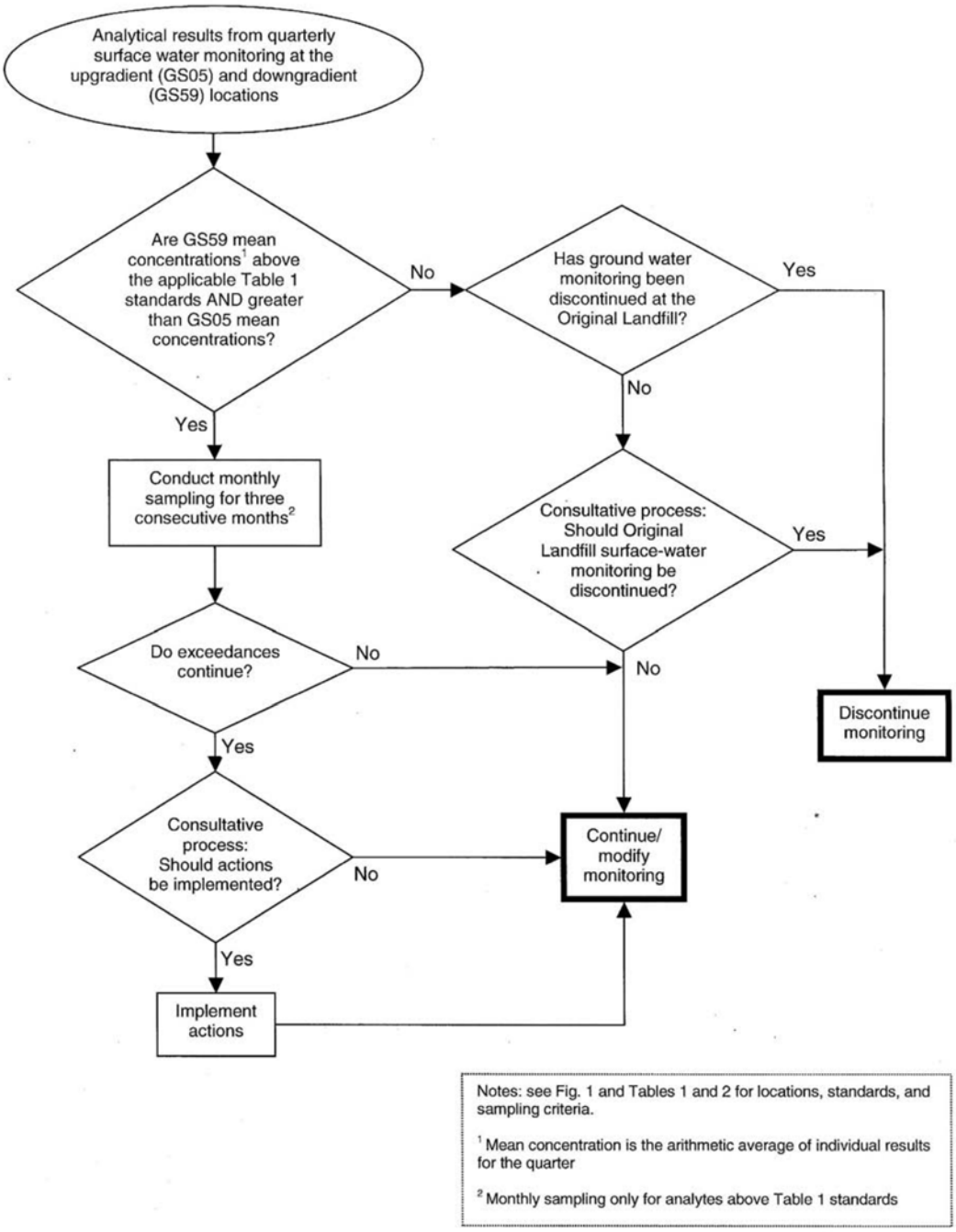
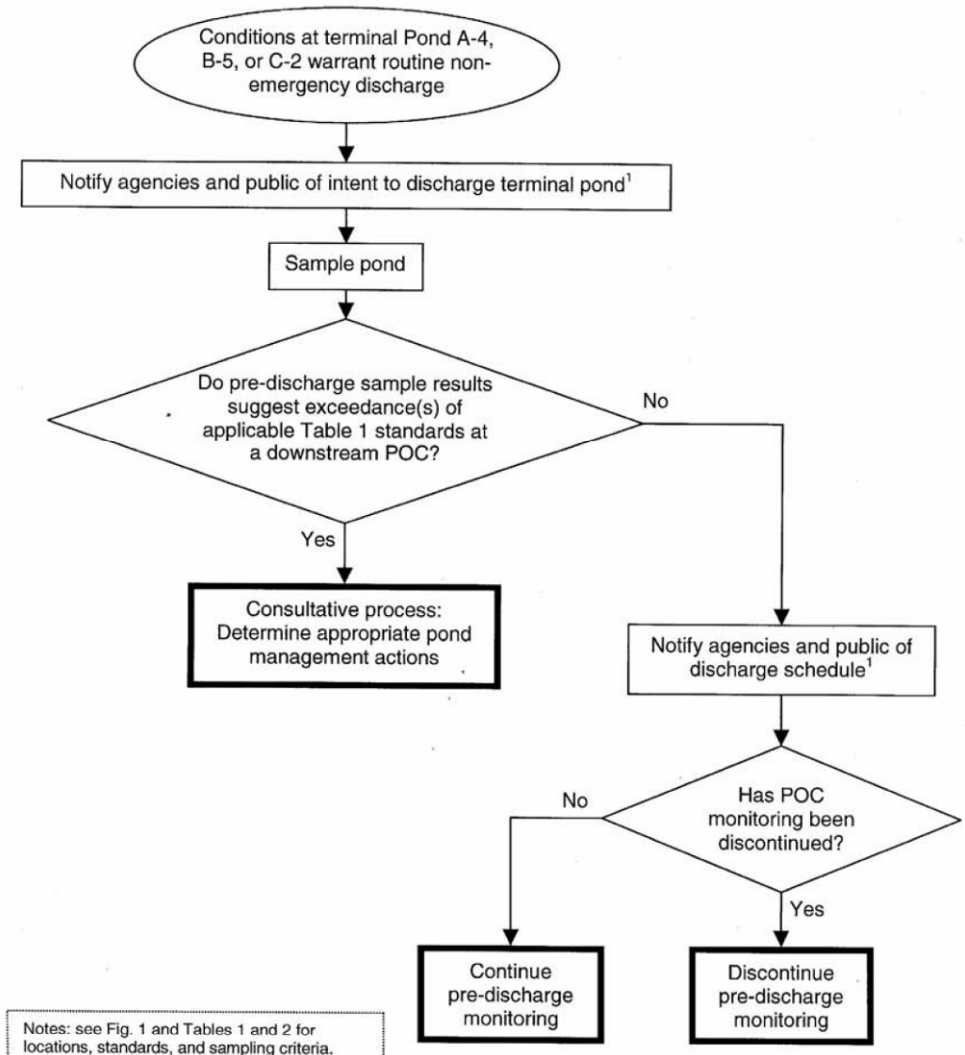


Figure 12. Original Landfill Surface Water

D.9 Pre-discharge Pond Sampling



Notes: see Fig. 1 and Tables 1 and 2 for locations, standards, and sampling criteria.

[1] Notification recipients:

- CDPHE
- EPA
- USFWS
- City of Broomfield
- City of Northglenn
- City of Thornton
- City of Westminster

Pre-discharge monitoring is not part of the remedy, but is a component of operational monitoring.

Figure 13. Pre-discharge Pond Sampling

D.10 Investigative Monitoring

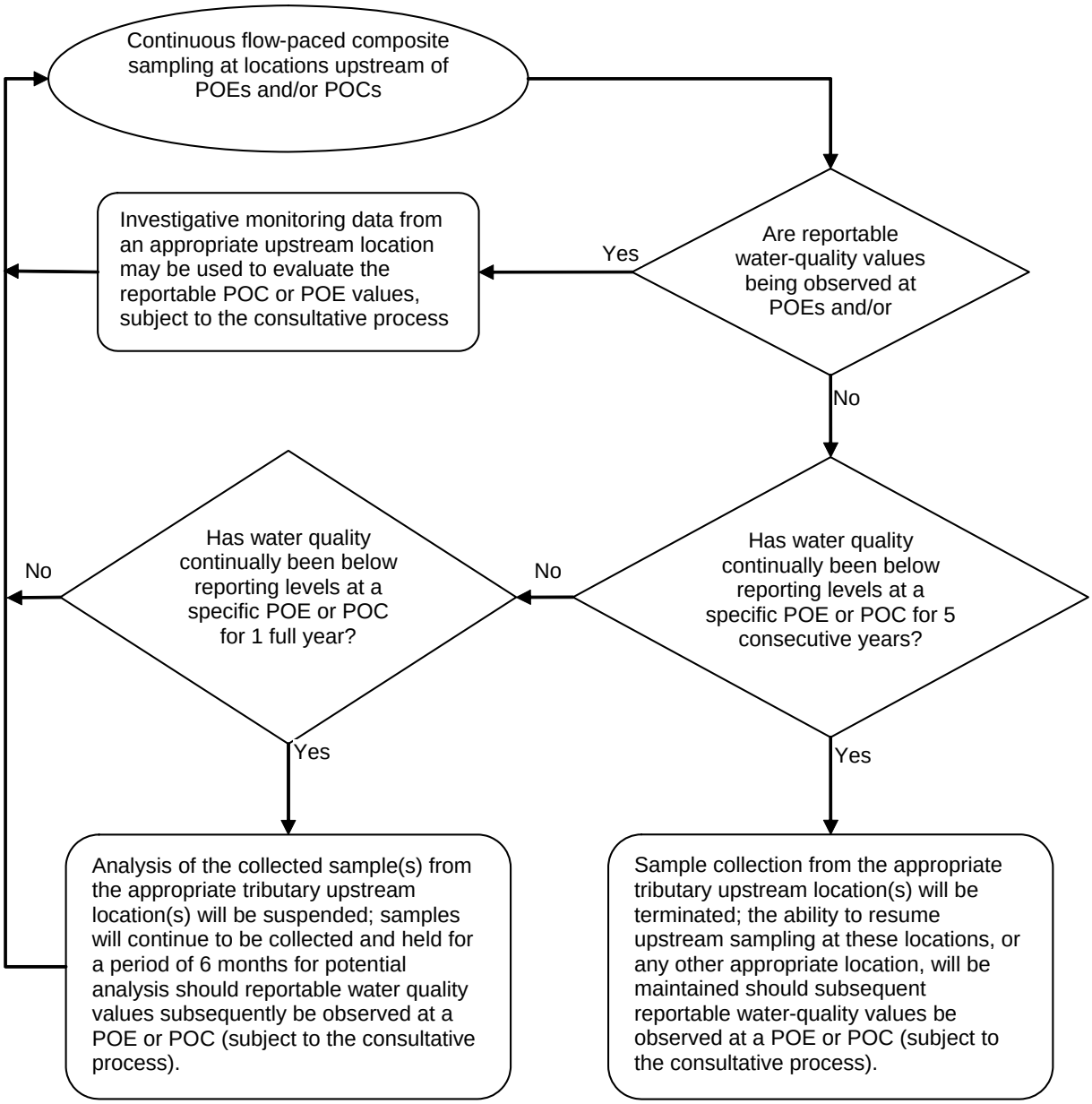


Figure 6-15. Investigative Monitoring Flowchart (from the RFSOG)

Appendix E

LANL Report: "Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters

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Appendix E: LANL Report: *Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters*

Thermal Ionization Mass Spectrometry Uranium Results for October 2007 RFETS Waters

Prepared by: **Deborah Norman, Mike Murrell, and David Janecky**

Experimental Approach

Seven water samples were received at LANL and processed for uranium TIMS measurements. Aliquots of the samples were spiked with a ^{233}U spike, equilibrated by fuming with perchloric acid, and then chemically processed using ion-exchange columns to isolate and purify a uranium fraction. The processed samples were loaded onto triple filaments for analysis by thermal ionization mass spectrometry using a VG Sector 54 mass spectrometer. A chemistry process blank was also run that contained negligible uranium. NIST U standard U960 was analyzed as a QA check of the instrument.

Results

The sample results are tabulated in Table 1. Table 2 shows the 2007 sample results compared to previous LANL results at the same locations. A plot of $^{236}U/^{238}U$ vs. $^{235}U/^{238}U$ is shown in Figure 1. A plot of $^{234}U/^{238}U$ vs. $^{235}U/^{238}U$ is shown in Figure 2. Plots of sample data within the envelope of natural, depleted and enriched compositions are shown in Figure 3. Table 3 shows calculated fractions of depleted, enriched and natural uranium for this set of sample analyses, while Table 4 shows the 2007 sample calculated fractions compared to previous LANL results at the same locations.

Table 1. New Thermal Ionization Mass Spectrometry Uranium Results

Sample ID	U (ng per g)	(+/-) (%)	238/235	(+/-) (%)	234/238 (e-6)	(+/-) (%)	236/238 (e-6)	(+/-) (%)
GS03	3.71	0.4	149.3	0.3	63.5	0.5	11.9	1
GS10	10.1	0.4	149.5	0.4	62.7	0.5	16.0	0.8
80205	79.2	0.3	137.9	0.3	76.6	0.5	BDL	
10594	103	0.4	139.8	0.3	71.0	0.5	1.5	2
SPP DISC	62.0	0.4	115.8	0.3	84.5	1.0	44.0	1
99405	439	0.4	138.1	0.4	74.8	0.5	BDL	
2547	9.99	0.4	148.0	0.4	63.0	0.5	16.1	0.7

Table 2. Comparison of Current with Previous Results

Sample ID	U (ng per g)	(+/-) (%)	238/235	(+/-) (%)	234/238 (e-6)	(+/-) (%)	236/238 (e-6)	(+/-) (%)
GS03 -02	2.2	5	153	5	62	25	9	8
GS03 -07	3.71	0.4	149.3	0.3	63.5	0.5	11.9	1.0
GS10 -02	9.4	4	153	5	61	25	11	8
GS10 -05	13.2	0.2	157.2	0.1	57.5	0.2	18.6	0.2
GS10 -07	10.1	0.4	149.5	0.4	62.7	0.5	16.0	0.8
2547	9.99	0.4	148.0	0.4	63.0	0.5	16.1	0.7
SPP DISC -02	41	5	128	5	78	25	24	8
SPP DISC-07	62.0	0.4	115.8	0.3	84.5	1.0	44.0	1.0
10594	108	5	142	5	78	25	BDL	
10594	128	5	139	5	84	25	BDL	
10594	132	5	140	5	88	25	BDL	
10594	123	5	137	5	80	25	BDL	
10594	103	0.4	139.8	0.3	71.0	0.5	1.5	2.0
99405 -05	396	0.2	138.0	0.1	74.8	0.2	BDL	
99405 -07	439	0.4	138.1	0.4	74.8	0.5	BDL	

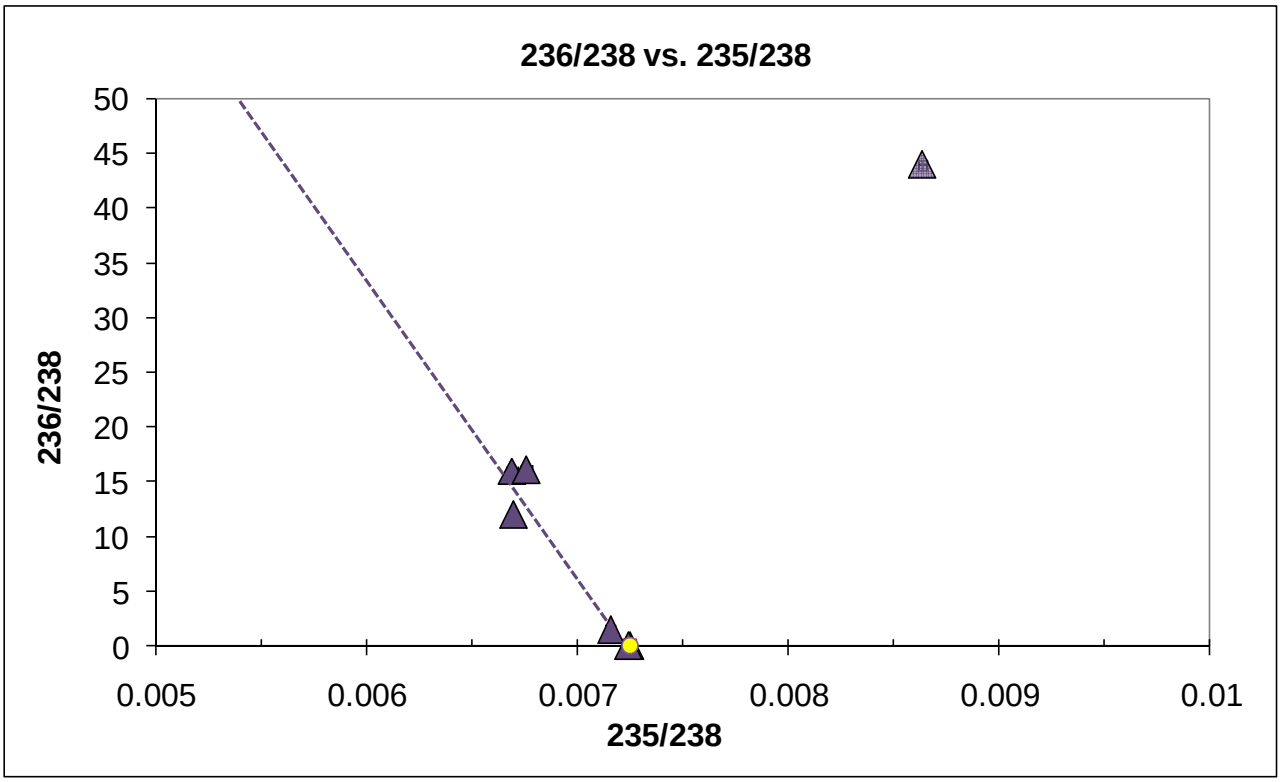


Figure 1. Thermal ionization mass spectrometry uranium results for 2007 RFETS waters. The blue dotted line is a two component mixing line between natural uranium and depleted uranium. These samples generally indicate natural U or the addition of 0-30% of a depleted U component and 0.0-0.1% enriched U component. In contrast, the SPP Discharge location indicates the presence of the addition of about 57% depleted U component and 0.43% of an enriched U component.

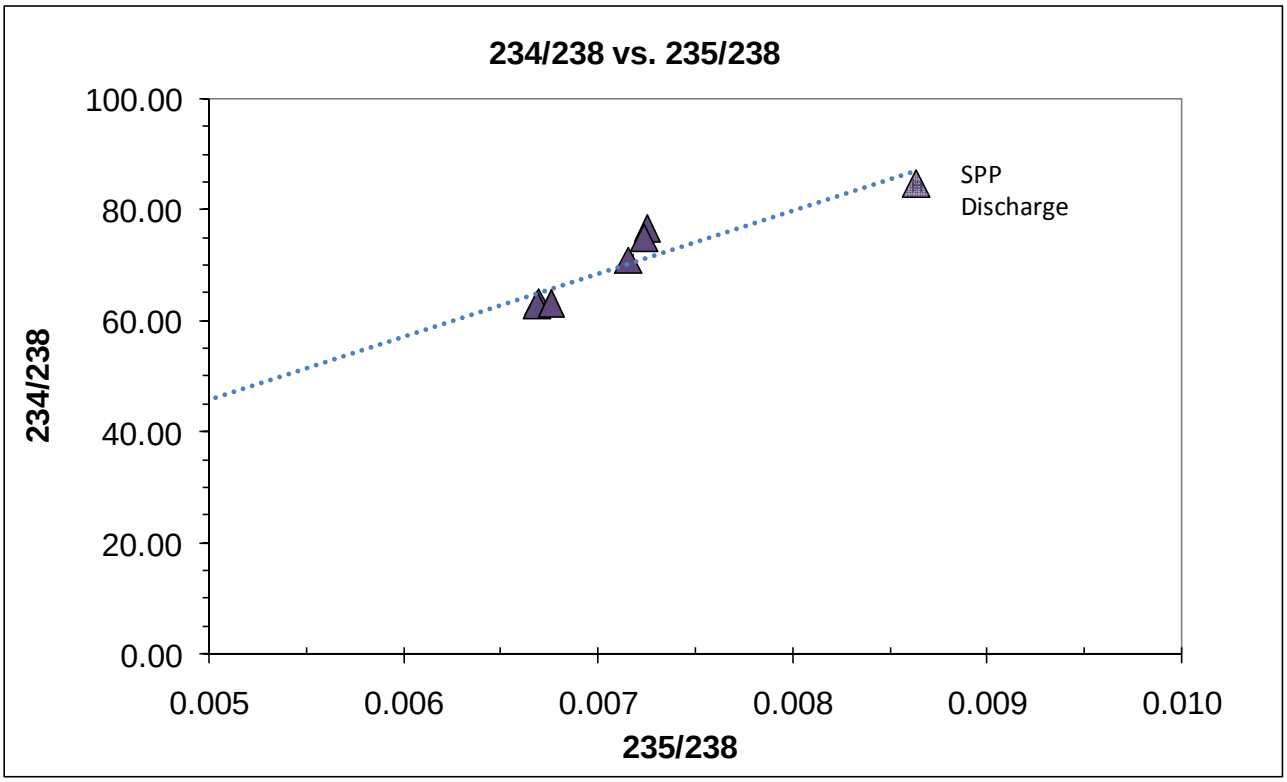
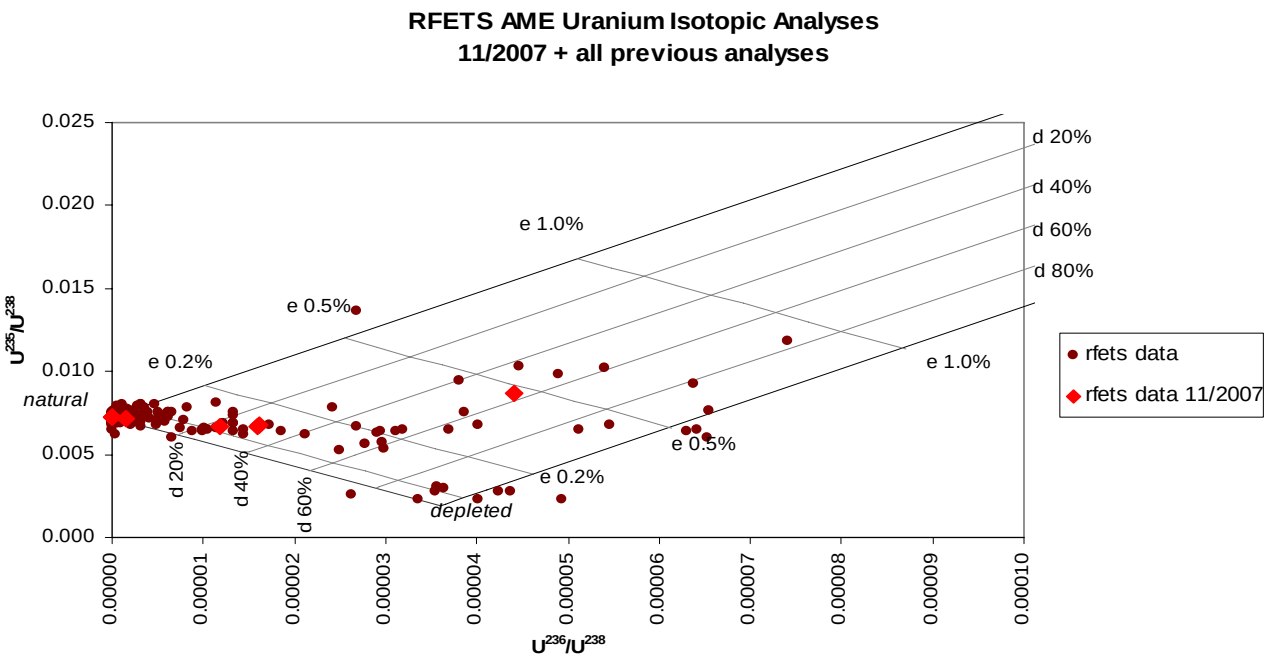


Figure 2. Thermal ionization mass spectrometry uranium results for RFETS waters. The $^{234}U/^{238}U$ results can be used to indicate flow paths and indentify end members.



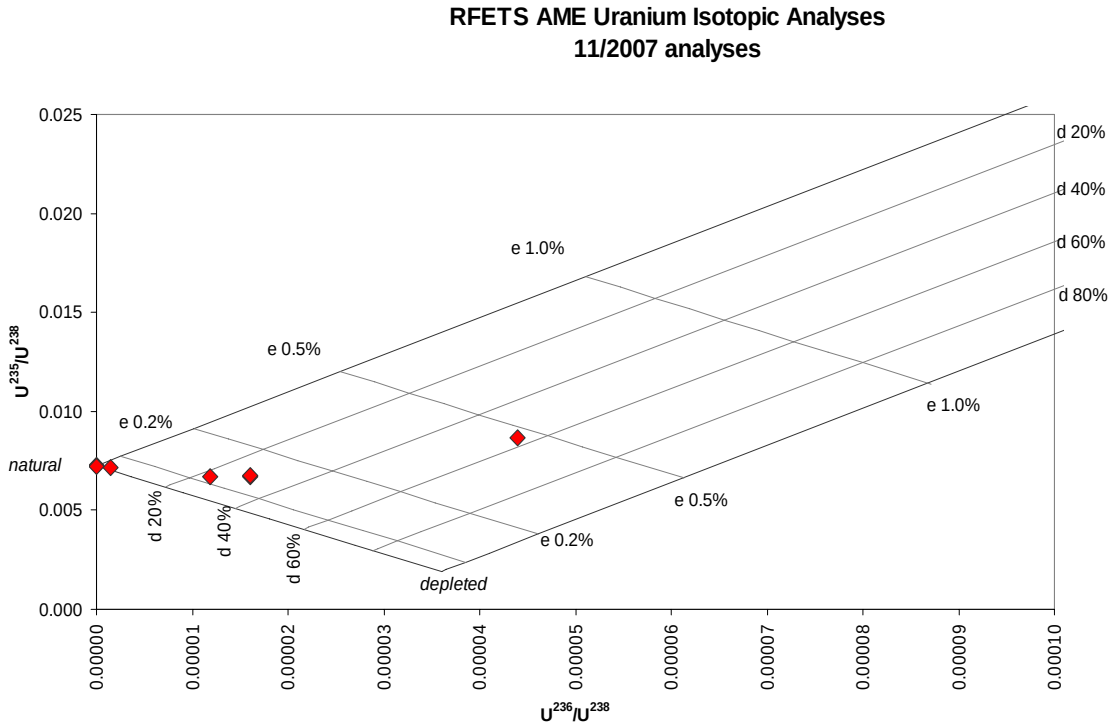


Figure 3. Isotopic results relative to calculated mixing between natural, depleted and enriched Uranium. Upper diagram shows new data from this report, with all previously measured samples. Lower diagram shows only the new sample analyses.

Table 3. Current Calculated Fractions of Depleted, Enriched and Natural Uranium Components

Sample	Location	Easting	Northing	Sample Date	depleted	enriched	natural
GS03	GS03	2093618.4	753645.5	7/9/2007	23.0%	0.07%	76.9%
GS10	GS10	2086741.3	750328.6	7/23/2007	29.4%	0.10%	70.5%
80205	80205	2082324.4	747535.6	9/7/2007	0.0%	0.00%	100.0%
10594	10594	2086746.4	752124.3	9/11/2007	3.1%	0.01%	96.8%
SPP Discharge gallery	SPP Discharge gallery	2085350.1	751764.4	9/12/2007	56.7%	0.43%	42.9%
99405	99405	2085584.8	749862.7	9/12/2007	0.1%	0.00%	99.9%
2547	GS10	2086741.3	750328.6	10/1/2007	29.0%	0.10%	70.9%

Table 4. Comparison of Current with Previous Results

Sample	Location	Easting	Northing	Sample Date	depleted	enriched	natural
80205	80205	2,082,324.4	747,535.6	9/7/2007	0.0%	0.00%	100.0%
15-239	SPP Disc	2,085,339.4	751,751.4	6/18/2002	32.6%	0.23%	67.2%
SPP Disc	SPP Disc	2,085,350.1	751,764.4	9/12/2007	56.7%	0.43%	42.9%
99405	99405	2,085,584.8	749,862.7	8/8/2005	0.1%	0.00%	99.9%
99405	99405	2,085,584.8	749,862.7	9/12/2007	0.1%	0.00%	99.9%
514-005	GS10	2,086,741.0	750,326.0	5/1/2002	22.1%	0.04%	77.8%
GS10	GS10	2,086,741.0	750,326.0	8/11/2005	36.2%	0.10%	63.7%
GS10	GS10	2,086,741.3	750,328.6	7/23/2007	29.4%	0.10%	70.5%
2547	GS10	2,086,741.3	750,328.6	10/1/2007	29.0%	0.10%	70.9%
16-24	10594	2,086,746.5	752,124.3	6/22/1999	1.9%	0.00%	98.1%
21-87	10594	2,086,746.5	752,124.3	12/7/1999	0.3%	0.00%	99.7%
7-120	10594	2,086,746.5	752,124.3	2/7/2000	0.0%	0.00%	100.0%
15-191	10594	2,086,746.5	752,124.3	6/8/2000	0.3%	0.01%	99.6%
10594	10594	2,086,746.4	752,124.3	9/11/2007	3.1%	0.01%	96.8%
514-002	GS03	2,093,622.1	753,639.9	5/1/2002	21.5%	0.04%	78.5%
GS03	GS03	2,093,618.4	753,645.5	7/9/2007	23.0%	0.07%	76.9%

Discussion

In comparing calculated fraction results, the greatest change is in the SPP Discharge Gallery. The fractions of depleted and enriched U components have increased by a factor of approximately 1.7-1.9 (Table 4), while the total concentration of U has increased by a factor of 1.5 (Table 2). This could indicate that the flow of water with natural U is decreased and/or that the contaminated source is drying out, both of which would increase the proportions of contaminant U component.

Sample 80205 is in the area of the original landfill, where samples with both natural U component and relatively contaminated samples have previously been analyzed.

Appendix F

Modeling Reports

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Appendix F: Modeling Reports

F.1 Report: *Industrial Area Post-Closure (2007) Integrated Surface-Subsurface Hydrologic and Hydraulic Flow System Assessment and Model Update, Rocky Flats Site*

January 28, 2008

MEMORANDUM

TO: John Boylan, S.M. Stoller

FROM: Bob Prucha, Integrated Hydro Systems, LLC

SUBJECT: Industrial Area Post-Closure (2007) Integrated Surface-Subsurface Hydrologic and Hydraulic Flow System Assessment and Model Update, Rocky Flats Site

This memorandum summarizes results of a post-closure integrated surface-subsurface hydrologic and hydraulic flow system assessment of the former Industrial Area (IA) at the Rocky Flats Site. Available post-closure data were evaluated and former integrated hydrologic flow models were updated. Model results were then assessed to see whether any significant changes from previous post-closure simulations have occurred.

This memorandum only summarizes updates to the IA VOC flow model that reflect post-closure configuration modifications to the system. Changes to model input for two other models are described in more detail in two concurrent, but separate, memoranda.

1.0 Scope of Work

The contract that Integrated Hydro Systems (IHS) received from S.M. Stoller (Stoller) in August-September 2005 defined most of the anticipated work in three general categories as follows:

1) Update existing computer models as new data become available;
2) Report results of site modeling, including in the Annual Site Surveillance and Maintenance Report; and
3) Develop new computer models as required.

Details associated with each of these tasks are described below:

1) Integrated surface/subsurface flow models developed in support of Rocky Flats Environmental Technology Site (RFETS) closure were last summarized in the report "Summary of Hydrologic Flow and Fate and Transport Modeling Conducted at the Rocky Flats Environmental Technology Site," dated October 2005. Computer models that could be updated using recent post-closure monitoring data include the following:
    - Site-Wide Water Balance (SWWB) model that covers the entire former RFETS property (Figure 1);
    - IA Volatile Organic Compound (VOC) higher-resolution SWWB model, which was the basis for VOC fate/transport modeling (Figures 1 and 2);
    - Original Landfill (OLF) model and Present Landfill (PLF) model (Figure 2);
    - Local, high-resolution integrated flow models for key former building areas (881/883, 771, 444-same as OLF model, 371, and 991) (Figure 2);
    - Local, high-resolution Mound Site Plume Treatment System (MSPTS) integrated flow model (Figure 2); and
    - VOC transport models for each plume area (Figure 3).

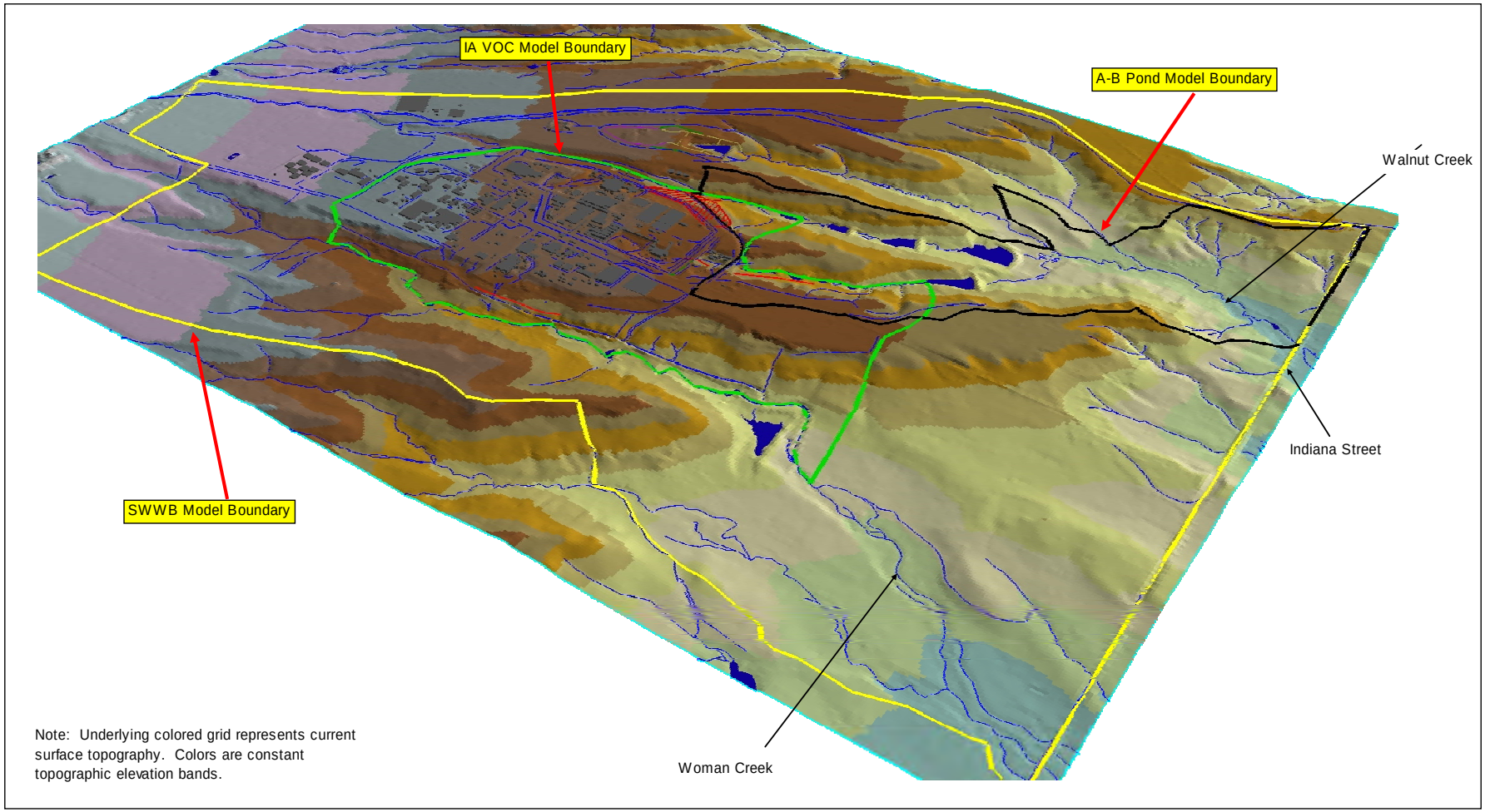
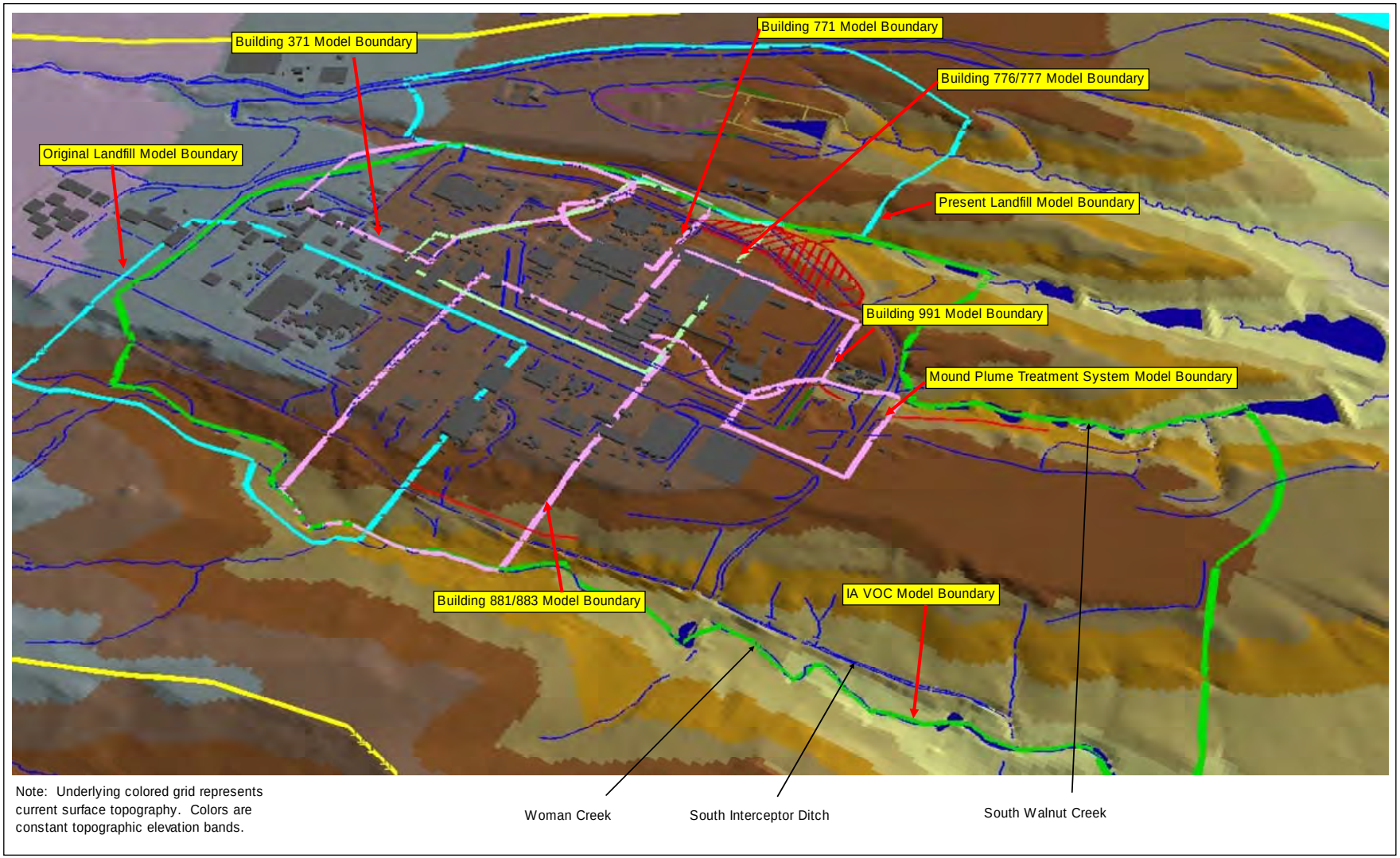
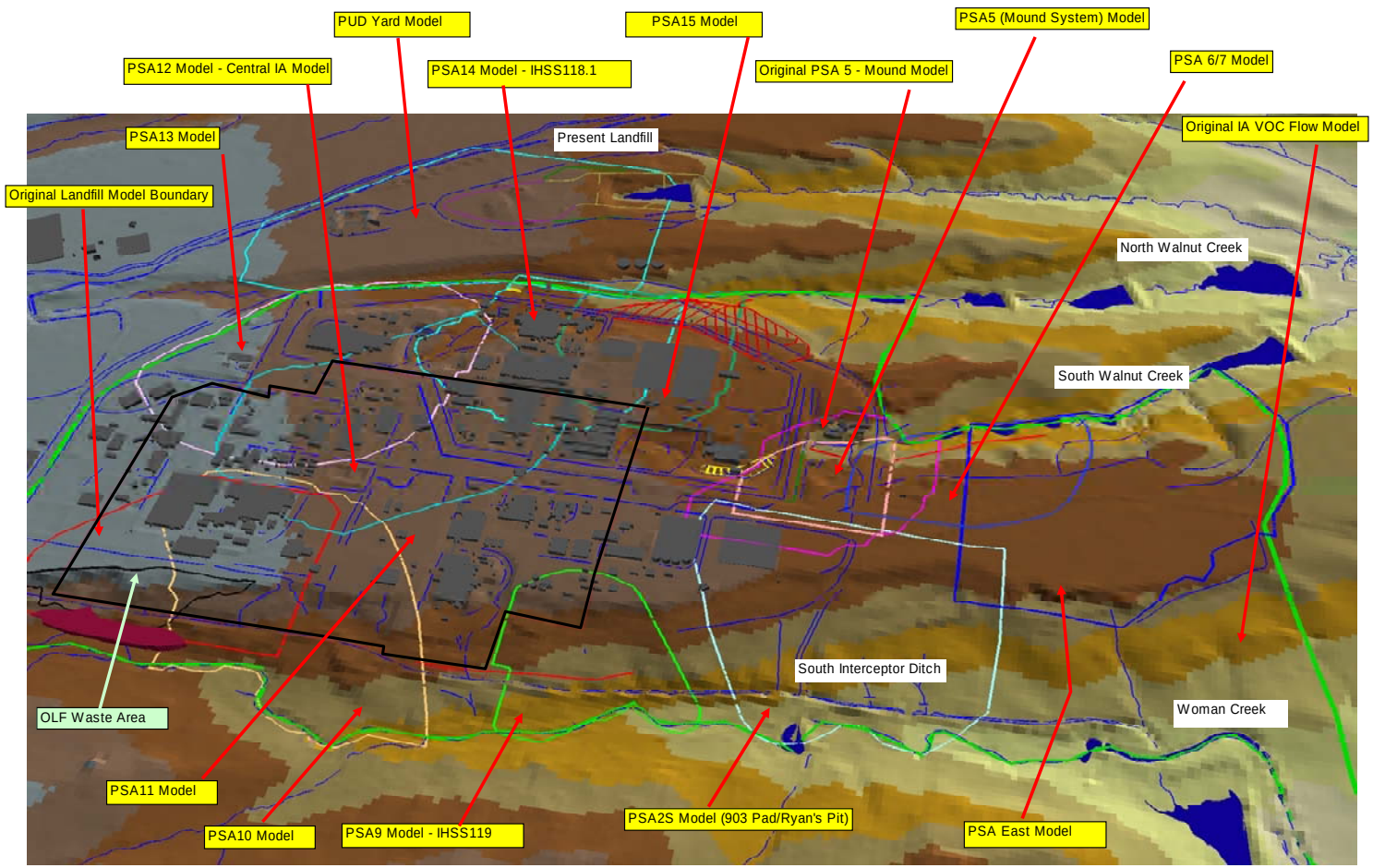


Figure 1. SWWB and IA VOC model boundaries. Surface topography shown is from 2001.



Note: Underlying colored grid represents current surface topography. Colors are constant topographic elevation bands.

Figure 2. Local integrated flow model boundaries, including the IA VOC model boundary. Topography shown is from 2001.



Note: Underlying colored grid represents current surface topography. Colors are constant topographic elevation bands.

Figure 3. Individual VOC plume model areas. Modeled with RT3D within the Ground Water Modeling System Interface. Topography shown is for 2001.

2) The reports on updated models will, at a minimum, consist of memorandums or letter reports. More detailed reporting in the form of white papers or bound volumes may be requested depending on the complexity of the updating effort. The reports will describe the actions involved in the updating, reference relevant previous reports, document the model inputs that have been updated, and provide the updated model results.

3) Two possible new models were suggested in late 2005: a localized, high-resolution VOC fate/transport model for the East Trenches Plume Treatment System, and another to simulate enhanced bioremediation at any of the Solar Ponds, East Trenches, or Mound Site Plume Treatment Systems. Based on April 2007 discussions with John Boylan (Stoller), these options do not seem warranted and thus will not be pursued further at this point.

The original 2005 scope did not define specific modeling objectives, basis, or approach for updating any of the models listed above. Stoller outlined several objectives and the basis for the model updates was subsequently defined as follows:

- Assess and report relative changes to the flow conditions and contaminant distributions between observed pre-closure (2000) and post-closure (2005/2006) based on available data.
- Assess and report differences between former post-closure simulated conditions and contaminant distributions (last updated October 2005) and available post-closure (post-December 2005) data.
- Update appropriate models given time/budget limitations, and specifically for areas where deviations between previous simulated post-closure and current observed post-closure conditions are significant. Focus on the U.S. Department of Energy (DOE)-retained land; it includes most of the former IA, the PLF, the OLF, and terminal ponds. Do not update models if they adequately simulate post-closure conditions, or they were not originally designed to simulate flow or transport realistically enough to capture post-closure conditions.
- Document the evaluation and model updates as follows:
    - Document reasons for any deviations, for example, because of different post-closure condition model input assumptions (such as climate or land configuration details), model limitations, model error, or interim conditions. Note that former post-closure simulations assumed things such as fully established mesic vegetation, which is not the case currently.
    - Document model updates including changes to flow and fate/transport conceptualizations, model input, and in model performance.
- Identify any data gaps in the current post-closure monitoring network.

2.0 Model Update and Evaluation Approach

The following approach to updating, simulating, and reporting was defined based on discussions with Stoller:

1) Obtain recent relevant digital data, plots, and reports from Stoller (or others) that present both recently observed surface water and ground water flow conditions and VOC contaminant distributions. Other contaminants, such as uranium (or other actinides) were not modeled as part of the former integrated flow and VOC fate/transport work and therefore were not updated in this effort.

2) Assess changes since closure (December 2005) based on actual data. Review and compare post-closure observed flow conditions against pre-closure flow conditions (i.e., Water Year [WY] 2000 data used in the former SWWB and localized flow models). Compare current post-closure surface flow gage and ground water level data with pre-closure conditions. If time and budget permits it, and the results of updated flow modeling indicate it is warranted, compare pre- and post-closure VOC distributions in both surface water and ground water. Note significant deviations.

3) Assess pre- and post-closure simulated flow conditions for both surface water and ground water flow systems against recent post-closure observation data at current post-closure monitoring points (i.e., surface water flow gages and ground water wells) for the different models outlined above. If warranted (as described above), compare simulated pre- and post-closure contaminant distributions in ground water against recently observed post-closure contaminant data. Note significant deviations, along with possible reasons why these deviations occur.

4) Discuss results of this initial data and former model performance evaluation with Stoller before proceeding with any modifications/updates to former models. Make model updates or modifications to former post-closure assumed data input (i.e., climate, land configuration details, and so forth) given time and budget limitations.

5) Assess updated model performance against observed post-closure data, and modify input to improve performance if necessary. Several factors affect the ability of any updated model to simulate post-closure conditions adequately. Where significant deviations between simulated and observed post-closure conditions are found, model input will be changed, to the extent possible and reasonable, to improve model simulation of post-closure conditions. The conceptual understanding and key factors affecting simulated flow conditions will be described for any significant deviations. Some of the more important factors are listed below:

    a) The quality and quantity (spatial and temporal) of post-closure data are considerably less than pre-closure conditions. This is consistent with the post-closure, compliance-based monitoring network, but it limits the ability to assess whether post-closure models are adequately capturing the true hydrologic and hydraulic response of the system. In addition, this also limits the ability to recalibrate these models if their results are not capturing true flow conditions adequately.

    b) Former simulated post-closure conditions were hypothetical in nature. For example, post-closure conditions were simulated by repeating the September 1999 to September 2000 15-minute precipitation data sequence for several years, until the integrated flow system response stabilized to imposed initial conditions. This limits the ability to compare actual observed post-closure conditions to previous simulated post-closure conditions.

    c) Other factors, such as not simulating actual closure configuration modifications as they occurred (over the years), limit the model's ability to capture the more short-term dynamic behavior of the system. The previous post-closure modeling assumed stabilized hydrologic conditions (i.e., years after closure), well after the effects of localized disturbances to the hydrologic flow system subsided (i.e., dust suppression water application, topographic changes, and vegetation changes). However, the current model updates were performed only a short time after closure, before the systems have fully stabilized.

3.0 Modeling Data Requirements

The following information was requested from Stoller for the purposes of evaluating the current flow system and changes from pre-closure conditions, as well as updating former integrated models:

- Topography – This is a critical model update and typically has a direct impact on local flow conditions. These data were provided as 2-foot interval contours in an Arcview geographic information system (GIS) "line" shapefile with elevation attributes, and required conversion into a spatial grid using Arcview Spatial Analyst software.
- Seep and slump areas – Several Arcview shapefiles were provided showing all recently observed post-closure seeps and slump areas.
- Available post-closure continuous ground water level monitoring data (i.e., Troll data) were provided.
- Periodic ground water level measurements – Datasets of post-closure ground water well water level measurements were provided.
- VOC data – Periodic VOC concentration data (including location ID, coordinates, concentrations, and time) were provided.
- Surface water flow data at all gages – Spreadsheets of 15-minute interval flow data were provided.
- Surface water data – Surface water analytical data (including location ID, coordinates, concentrations, and time) were provided.
- Surface water channel configuration/operation modifications to weirs, dams, operations, pond bathymetry, or operations such as transfer amounts/dates or releases were not provided, although most of this information is associated with the A- and B-pond series, the present Landfill Pond, and C-pond. These were not part of this evaluation given the focus on VOCs, primarily within the former IA.
- Climate data – Unheated precipitation data at various surface water gage locations were provided. Temperature, wind speed, humidity, and solar radiation data were also requested, but the site climate station no longer exists. Details of data obtained from the nearby National Renewable Energy Laboratory (NREL) climate station in Golden are described in Section 4.0.
- Vegetation coverage – Former long-term post-closure simulations assumed fully established vegetation. The site vegetation was still developing as of May 2007; however, a map reflecting the post-closure vegetation density was provided.
- Extent of ponded water area immediately south of former Building 371 – A GIS shapefile was provided.

4.0 Post-Closure Data Evaluation

Several datasets were reviewed to assess differences between actual and assumed (based on closure design criteria) post-closure hydrologic flow conditions. Key datasets reviewed include the following:

- Land configuration changes:
    - Land surface topography;
    - Vegetation;

  - Surface drainage;
  - Seeps and ponded surface water areas; and
  - Soils.
- External model stresses:
  - Climate, including precipitation and potential evapotranspiration (ET) (PET) input data.
- Hydrologic and hydraulic data:
  - Ground water; and
  - Surface water.

A brief review of these datasets as they relate to developing a defensible conceptual and numerical model is described below. Specifically, the review of data focuses on the following:

- Data quality and quantity as needed to develop models; and
- Deviations in trends from former datasets used as the basis for developing both pre- and post-closure model input.

Land Configuration Changes

Land Surface Topography

The post-closure land surface topography has changed since the integrated flow models were last updated in September 2005 (the "as-built" topography differs slightly from the design topography). Closure is defined as October 15, 2005 (contractor's declaration of completion) and December 7, 2005 (DOE's acceptance of declaration). The latest post-closure topographic surface was provided as 2-foot contours derived from a high-resolution flyover image taken in June 2006. The 2-foot contour Arcview shapefile was converted into an Arcview 3.3 surface grid format using Spatial Analyst software. This surface grid was then subtracted from the September 2005 (design release 12) closure topographic surface in GIS to show the spatial change in elevation. Results are shown on Figure 4.

Results of the topographic comparison indicate only localized areas of change. These include areas around former Building 371 (most notably an increase in elevation on the northeast side), the borrow-pit area just west of the former IA (a 10- to 20-foot decrease in elevation [the pit was enlarged to provide additional fill material elsewhere]), both increases and decreases just south of the former Building 881 area, slight increases (less than 10 feet) in the Building 400 area, and both increases and decreases in the OLF area mainly due to modifications in surface drainage.

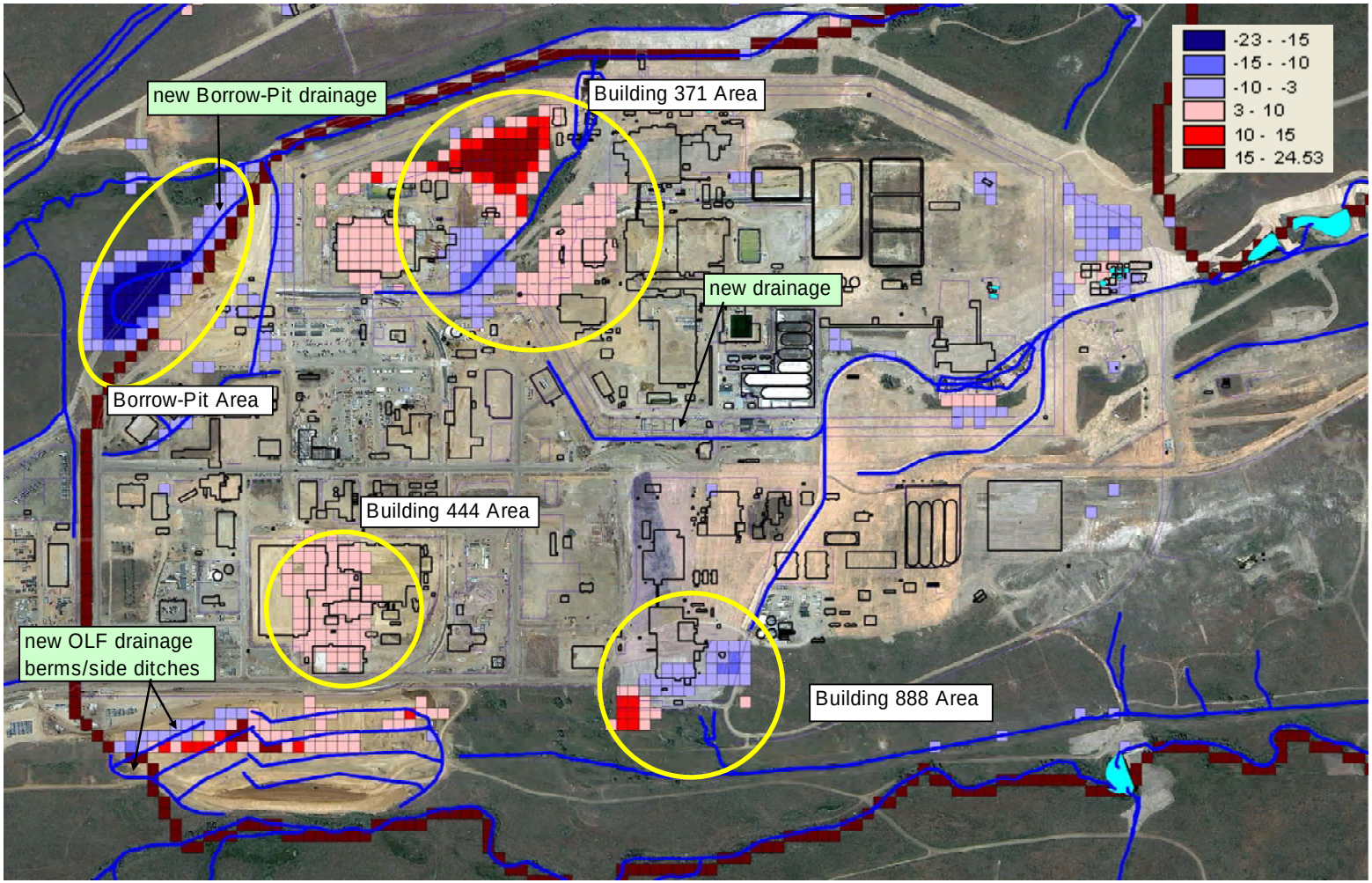


Figure 4. Change in surface topography (feet) between September 2005 closure plans (Site grading plan, design release 12) and actual post-closure conditions in 2006. The dark red squares represent the IA VOC model boundary. Red areas indicate an increase in actual surface elevation relative to plans, and blue areas indicate a decrease in actual surface elevation relative to plans. Cell sizes shown are 60 feet by 60 feet. Surface drainage is shown with blue lines. Photo background is from prior to closure.

Vegetation

The vegetation types and coverage densities across the Site are important in influencing the amount and locations of actual ET (AET). Former post-closure simulations assumed a uniform vegetation type (xeric) in all reconfigured areas, primarily over the former IA. Vegetation coverage over nonmodified areas remained variable based on preexisting vegetation coverages. This was documented in the former SWWB modeling (K-H, 2002).

Current (as of spring 2007) vegetation distributions and coverage densities over the reconfigured areas of the former IA were provided by Stoller, and are shown on Figure 5. Current coverage densities as a percentage of fully established vegetation densities range from 10% to nearly 70%. Much of the former IA remains well below 50% of fully established coverage densities, particularly over the OLF where it is approximately 20%. These low densities suggest that less water is lost to transpiration, which, despite being partially compensated by increased soil evaporation, would cause ground water levels to increase compared to a scenario where vegetation is fully established. For actual conditions, many of the revegetated areas were in fact former impervious paved areas or building sites. Thus, whether actual ground water levels increase is determined by a combination of a number of factors compared to pre-closure conditions (i.e., the elimination of leaky pipe inflow, post-closure precipitation, reconfigured soil compaction, AET rates, and the reconfigured surface topography).

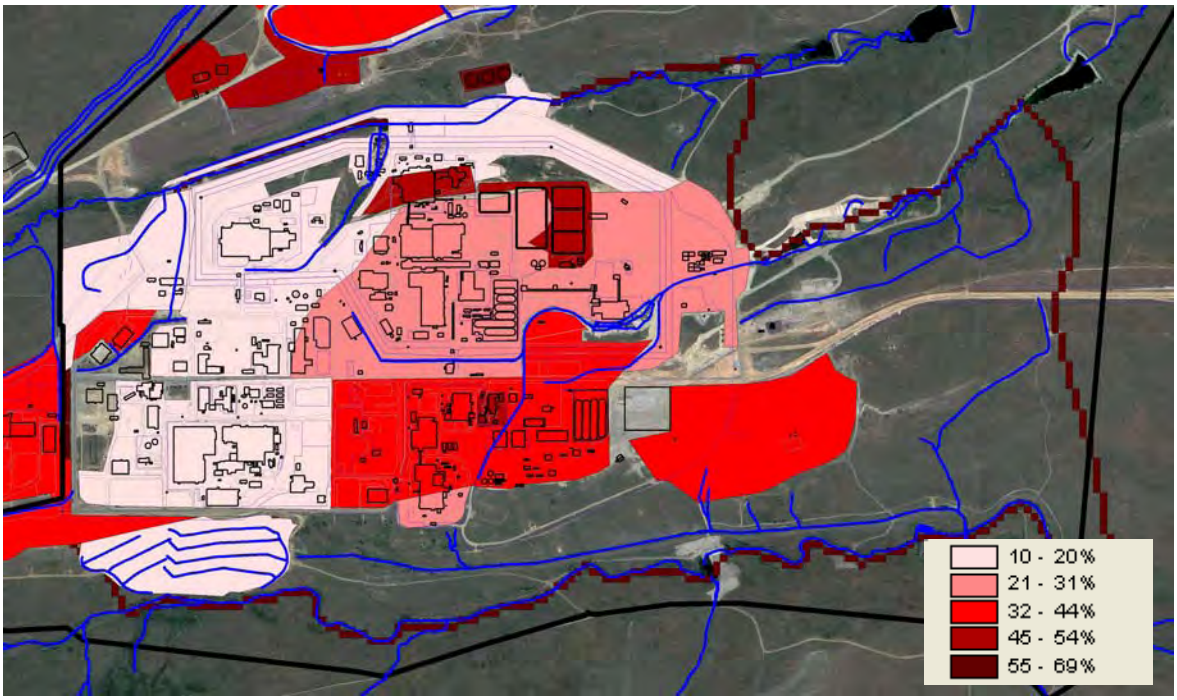


Figure 5. Current (spring 2007) vegetation coverage densities.

The actual vegetation coverage densities over regraded areas are considerably less than nearby fully established densities on similar slopes. This will result in less overall ET and a greater percentage of soil evaporation compared to plant transpiration and interception. This is a complex hydrologic process and it is difficult to adjust appropriate parameter values to represent the actual condition. For example, although crop coefficient values can be scaled based on coverage densities, the leaf area index (LAI) values and root depths with time probably also contribute to AET losses. Ultimately, however, the lack of fully established vegetation will reduce overall AET losses, causing local ground water levels to increase.

Surface Drainage

The current surface drainage within the former IA is largely the same as former post-closure assumptions (September 2005). The main modifications are shown on Figure 4, and are located in the OLF area where surface berms and side drainage ditches were constructed, and in the central former IA where a pre-existing surface drainage ditch was retained, extending from approximately the former Building 707 area directly east to where it connects with Functional Channel 4 (FC-4). Also, the additional excavation at the western end of the borrow pit just west of former Building 371 (FC-1) shows a surface drainage feature at the toe of the slope that intercepts the drainage feature at the eastern edge of the pit (which was included in previous model simulations). These surface drainage features do not constitute major changes to the site and are not expected to produce any significant hydrologic changes to the system over what was previously simulated.

Seeps and Ponded Surface Water Areas

Numerous seep areas had been previously mapped throughout the former IA as shown on Figure 6, although most of these seep areas remained inactive during previous modeling (1999 through 2005). Some of these seeps were occasionally active during more intense annual precipitation periods, typically in the spring time. Inspection of aerial photos prior to site development (photos from 1930s and 1950s) indicated many of these seep areas existed prior to development. Natural seep areas often occur in slump areas, along steeper hillslope areas. Ground water is forced out at seep areas, where bedrock has been exposed along the slump surfaces.

After Site closure, several new slumps, seeps, and ponded surface water bodies developed within the former IA. Active seeps during spring 2007 were noted in the FC-1 borrow pit area, OLF area, FC-2, FC-4, and 881 Hillside area (yellow and black circles on Figure 6). Stoller provided these seep locations in an Arcview shapefile coverage. Information was also provided on several new or recent slumps in the former IA, specifically in the OLF area, on the south side of FC-4 near former Building 991, and northeast of the former Solar Ponds, as shown on Figure 6 (red lines). (Note: The slump area near the former Solar Ponds pre-dates closure.)

Most of the new seeps are not related to slumps; however, seeps have developed at the large slump south of FC-4, and in the OLF along the more recently constructed lower western and eastern drainage ditches. The large slump associated with FC-4 is related to the removal of the French drain outlet (previously designated as surface water sampling point SW056), which appeared to provide continuous ground water drainage into the channel. Other seeps appear to be associated with land configuration modifications, such as changes in surface elevation (e.g., FC-1 borrow pit). It is possible that new seeps in the 881 Hillside, or along FC-2 areas shown on Figure 6, may simply be remnants of dust-suppression water, or possibly leaky subsurface utilities/corridors left in place. These areas typically occur where surface topography is eroded into or is near the weathered bedrock surface. The lower hydraulic conductivity of the underlying bedrock compared to overlying unconsolidated material forces ground water to discharge at the surface.

Seep development in the OLF is addressed in a separate post-closure hydrologic assessment and model update memorandum specific to this landfill.

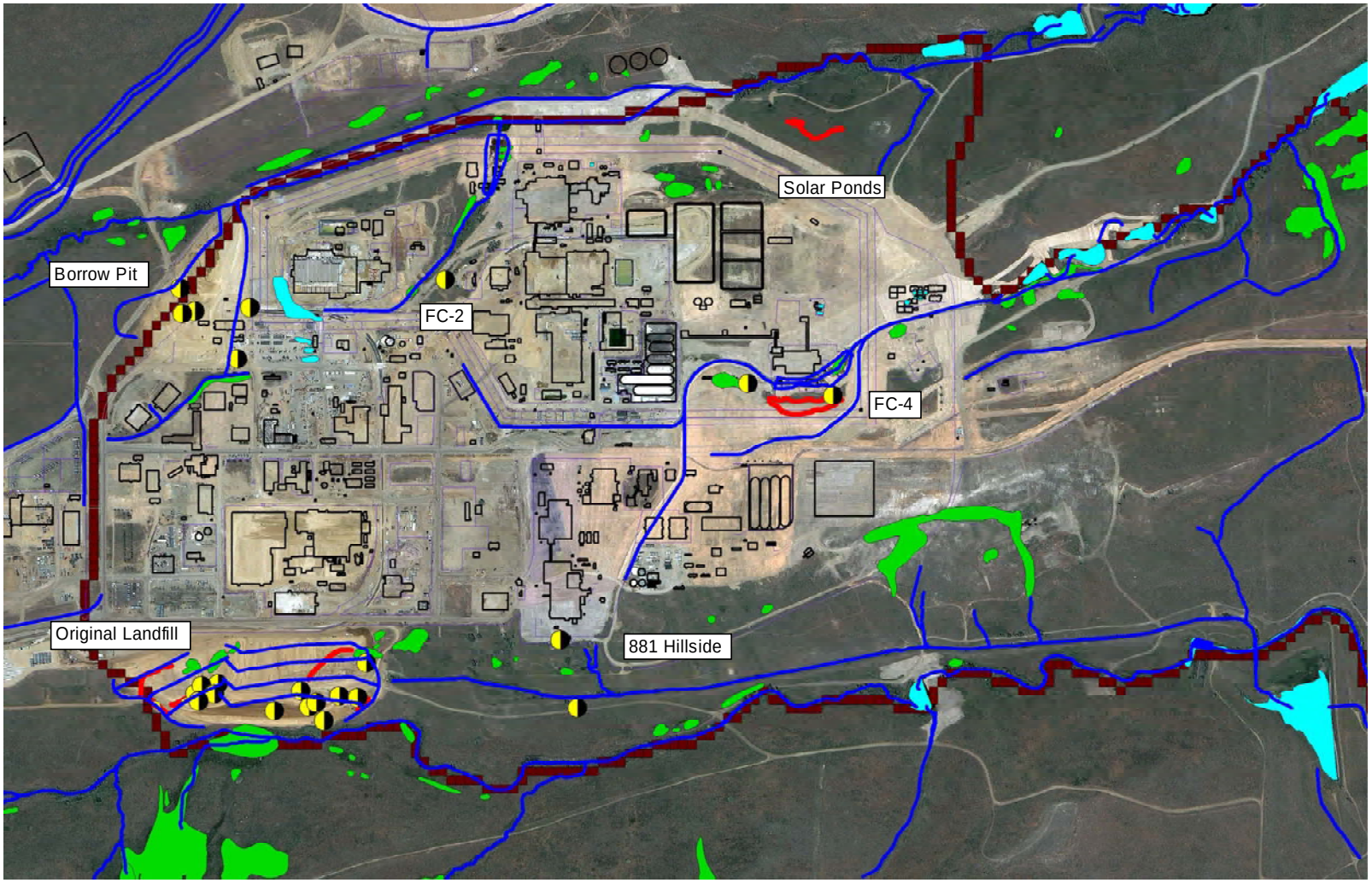


Figure 6. Pre- (green) and post-closure (yellow and black circles) seep locations, recent and post-closure slumps (red lines), and surface water ponds (light blue). The dark red cells represent the IA VOC model boundary. Most pre-closure seeps shown were not active during previously modeled period (1999 through 2005). Although recent, the slump northeast of the former Solar Ponds was first observed prior to Site closure.

No information was provided on the rates of flow from any of the seeps, although the flow from OLF Seep #7 appeared to be well above 1 gallon per minute (gpm) during a May 2007 site visit. This may be due to the relatively high precipitation and snowfall during late 2006 and early 2007. Other seeps in the FC-1 borrow pit area did not show active surface discharge, but surface soils were moist.

Surface ponding has been observed just southwest of former Building 371, where there is a local depression in the surface topography. Water probably ponds here due to well-compacted surface soils and the lack of drainage from the area. Despite the potential overcompaction, the nearby seep in the FC-1 borrow pit to the west appears to be activated by slow discharge from the largest of the ponds via a shallow deposit of gravelly railroad ballast remaining from Site closure.

Soils

With changes in the surface topography, especially where fill dirt was added to the former topography (i.e., positive [red] areas on Figure 4), new soil types must be defined. For the purpose of this modeling update effort, any new soil fill was assumed to be Rocky Flats Alluvium. No other information on soil modifications were provided, or are known at this point.

External Model Stresses

Climate

Previous integrated flow modeling at RFETS relied heavily on the use of a high-quality climate dataset from October 1, 1999, through October 1, 2000. Essential climate data for modeling are precipitation, temperature, solar radiation, relative humidity, and wind speed. The last four data types are used to calculate PET rates at the site, which is subsequently included in the model as input.

Previous evaluation of RFETS pre-closure climate data indicated the following important characteristics for precipitation:

- Data showed that annual precipitation across the RFETS site varied spatially by more than 100% based on available local gage data.

- Durations of most precipitation events are very short (i.e., less than 1-hour duration). As a result, reproducing the resulting hydrologic response requires good characterization of the short-term precipitation data (i.e., over hours, not 1 day).

As a result, precipitation data were carefully developed for the 1999 to 2000 time period, and later for the validation period of 2000 to 2001, using NREL meteorological (met) station data and local RFETS measurements at multiple monitoring points with non-snow-melting precipitation gages. SWEs were calculated for the RFETS data using the met station heated precipitation gage data. These RFETS data were spatially distributed and collected every 15 minutes.

In addition to the precipitation data, a considerable effort was made to calculate PET at hourly time intervals. It was essential that the PET was calculated based on accurate and complete wind speed, solar radiation, relative humidity, and temperature data so that it could be synchronized with the 15-minute precipitation data. For example, when precipitation events occur, the cloud cover and typically cooler temperatures reduce the PET temporarily and this in turn reduces the AET.

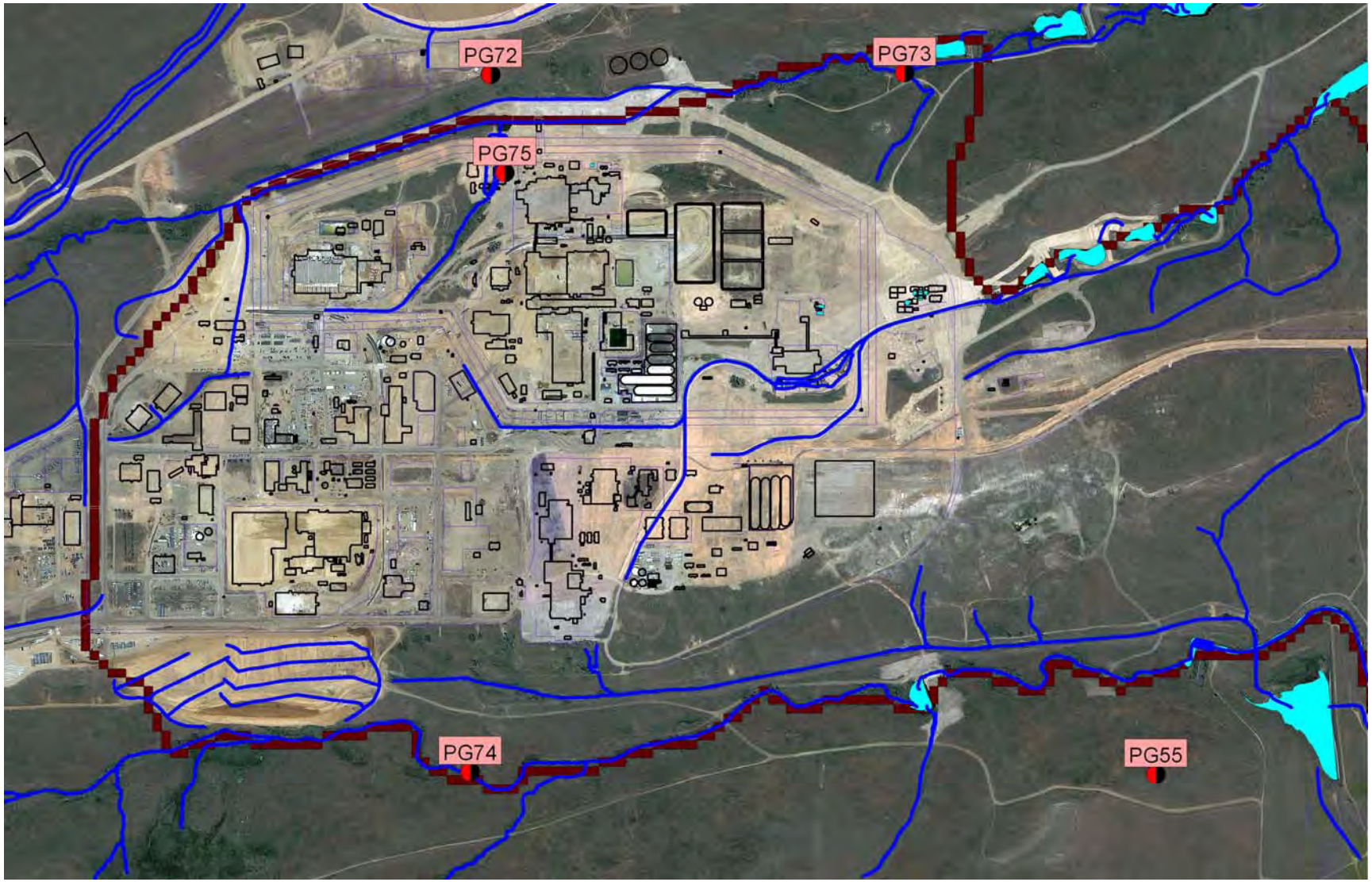


Figure 7. Site precipitation gage locations (unheated). Photo background is from pre-closure. PG75 is a planned replacement for PG72.

It was important to carefully prepare accurate spatially and temporally synchronized precipitation and PET datasets. Although time consuming, this is one reason why the former pre-closure model was able to reproduce both the surface water and ground water system responses so well.

Unfortunately, the post-closure climate data are not available for the Site at a similar quality and quantity as for pre-closure. Although precipitation data are still collected at a number of site locations, the precipitation gages are unheated and therefore winter SWEs cannot be determined. Figure 7 shows the locations of the current precipitation gages.

Precipitation data at only one gage were evaluated, and this was only for rainfall precipitation, not SWEs because of unheated gages. Monthly precipitation totals at gage PG72 for 2005 to 2006 are compared in Figure 8 to the former October 1999 to October 2000 time period used to drive previous integrated flow modeling. From this plot it is clear that precipitation during the former 1999-2000 time period for most months was considerably higher than for the 2005-2006 time period. Only non-snow months (May through September) can really be compared.

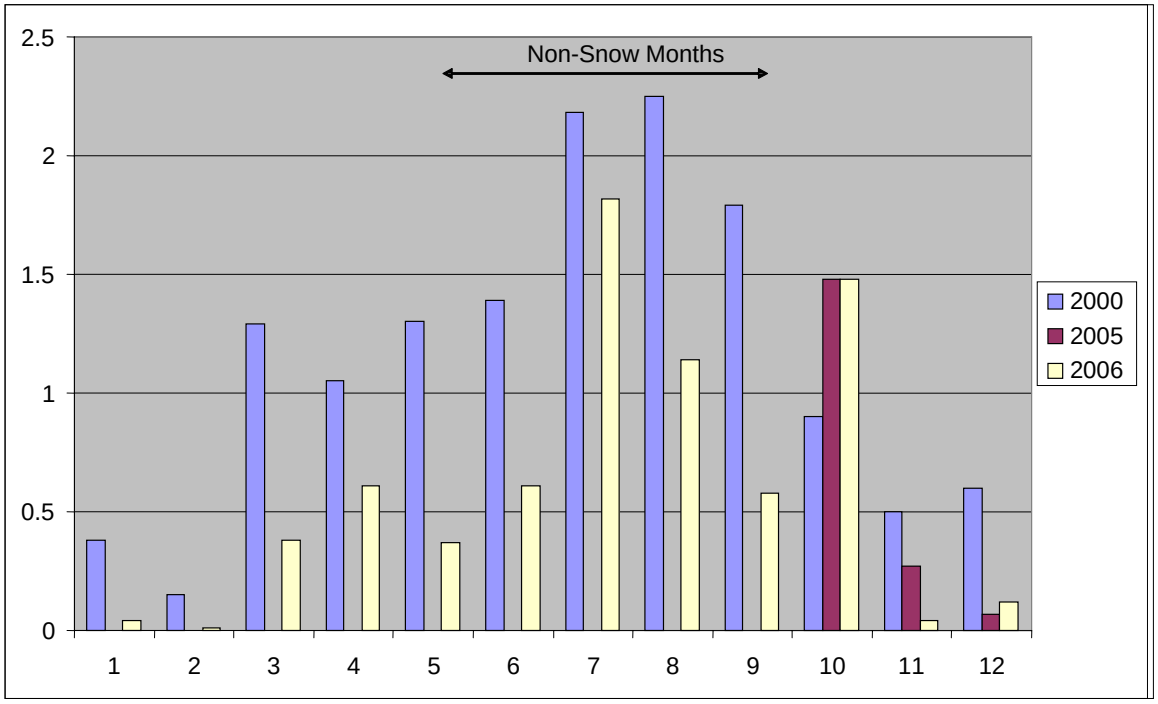


Figure 8. 2005/2006 monthly precipitation totals (inches) for precipitation gage PG72 compared to Year 2000 months (given on x axis – 1 represents January). Data are only shown from 10/2005 through 12/2006 for PG72 because this represented the simulated time period. Data for Year 2000 months are from the former site climate station (heated gage), so measurements for the winter months are much higher than the unheated PG72 measurements.

The difference between Site precipitation data for the 1999-2000 and 2005-2006 time periods suggests that post-closure ground water levels and surface flow/levels could be lower compared to long-term projections from the former 2005 integrated models that utilized the 1999-2000 climate data. However, the limited quantity and unheated local precipitation gage data over the hydrologic year prevent using it to develop detailed model input for the post-closure time period. Rather than attempt to use the Site's unheated gage precipitation, the nearby NREL climate station data were used to drive the model simulations to assess post-closure hydrologic conditions with the updated integrated flow model. Details of the collection, synthesis, evaluation,

and conversion of these data into model input are described in IHS's July 2007 memorandum to Stoller that summarizes results of the OLF model updates and evaluation.

Figure 9 summarizes monthly precipitation data and calculated PET based on several climate parameters provided in the NREL data from late 2002 through May 2007, and former Site gage data from 1999 to 2000. No NREL data are shown for October 2000 through October 10, 2002, because they had errors. Figure 10 summarizes the annual precipitation by year, and Figure 11 shows a comparison by year of precipitation from October through January to help explain the difference in precipitation during this period.

Results of these data show that the October 2006 through January 2007 period had nearly twice the amount of precipitation as previous years. In addition, the cumulative PET over this same time period remained relatively low. The combination of higher precipitation and lower PET likely promoted higher recharge rates to the ground water flow system in winter/early spring 2007. This can be seen in areas such as the OLF, for example, where a number of seeps have been observed. Despite this higher period of precipitation, the annual precipitation amounts (Figure 10) indicate 2005 and 2006 were largely the same (~15 inches) as the 1999-2000 time period. The 2004 annual precipitation was approximately 40% higher (~21 inches) and 2003 was approximately 50% less than the 1999-2000 time period.

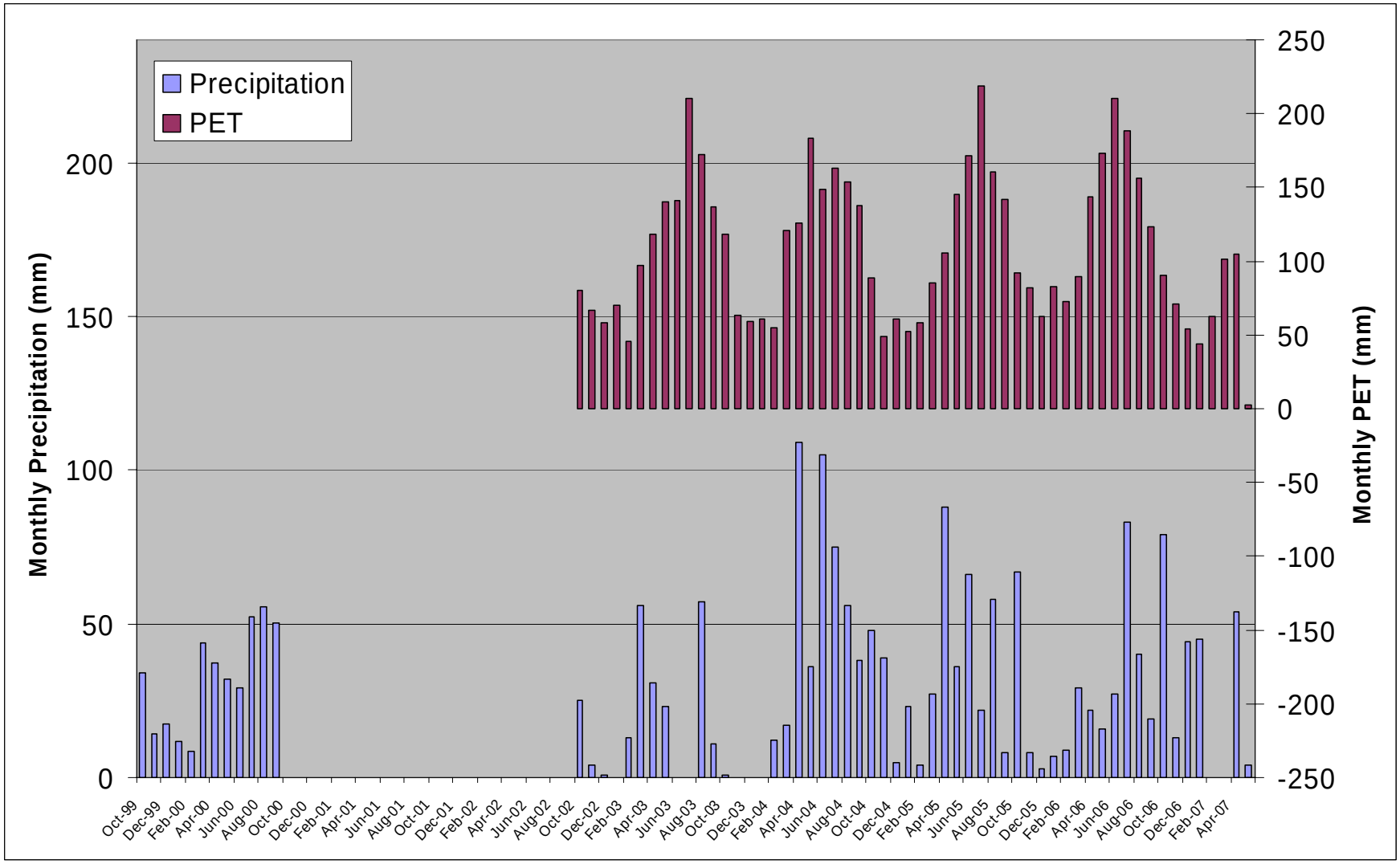


Figure 9. Monthly precipitation and calculated PET data based on NREL wind station data for late 2002 through 2007. The 1999 to 2000 data are from a combination of actual Site surface water gage data and the former Site climate station. Precipitation data for 2003 may be low.

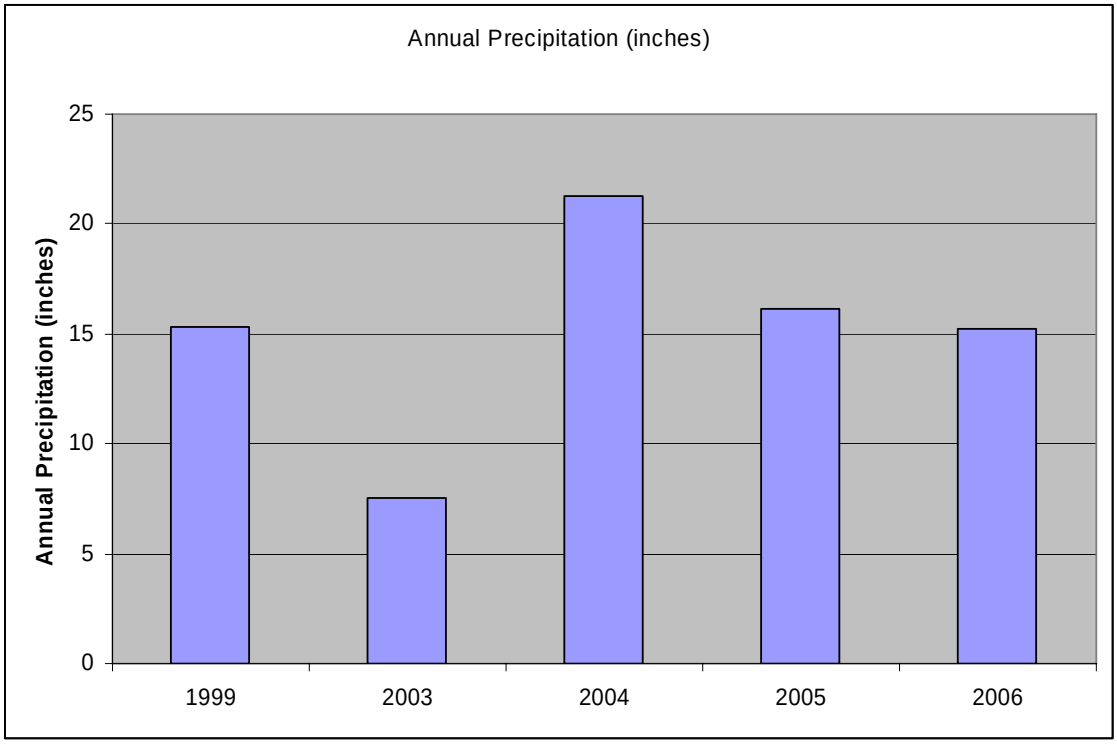


Figure 10. Annual precipitation (inches). All data are from the NREL station, except 1999 data which are based on a spatial average of actual Site data.

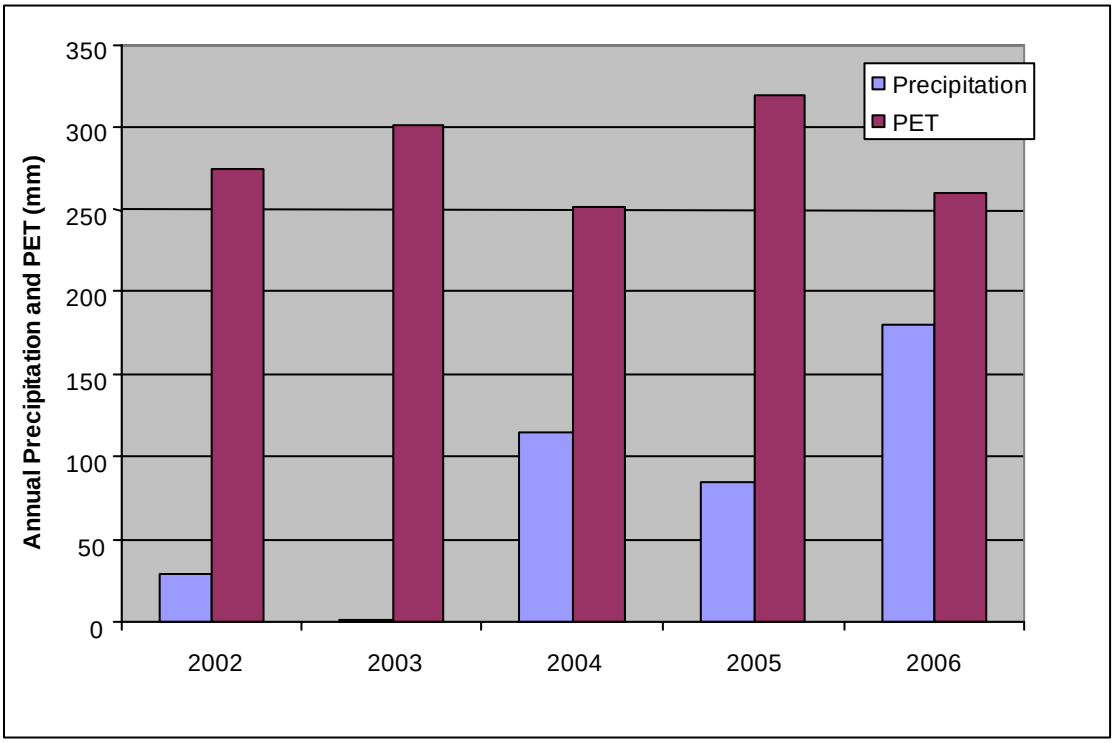


Figure 11. Comparison of total precipitation and PET from October through January each year based on NREL wind station data.

Hydrologic and Hydraulic Data

Ground Water

Data from continuously monitored and quarterly measured ground water levels were obtained from Stoller for post-closure conditions. The quantity of wells has been significantly reduced, which in turn affects the ability to evaluate and understand the response of ground water levels and flow directions due to closure. In addition, many of the current (i.e., post-closure monitoring network) wells were installed sometime in 2005, and therefore present little or no "baseline" data that might highlight the change between pre- and post-closure conditions.

Figure 12 shows the locations of quarterly measured ground water wells. The colors represent the change in average annual ground water levels from the October 1999 – October 2000 (pre-closure) time period relative to the October 2005 – October 2006 time period (post-closure). Red colors indicate an increase (rise) in ground water levels (in feet), and blue colors indicate a decrease. Yellow indicates that little change in water level (i.e., less than 3 feet) has occurred between pre- and post-closure.

Most areas indicate increases or decreases in levels of less than 10 feet. The former Building 771 and 444 areas, for example, show an average annual decrease in levels, while others such as former Buildings 371 and 881 and the former Solar Ponds area indicate a general increase in levels. Ground water levels in areas not heavily modified during Site closure, such as east of the 903 Pad and in the mesa area just upgradient of the East Trenches Plume Treatment System (ETPTS), changed little (i.e., less than 3 feet), as expected. This lack of change in unchanged areas suggests that the diminished precipitation for the 2005-2006 time period compared to 1999-2000 may not have impacted ground water levels much, especially in deeper ground water areas.

The relatively small change in ground water levels suggests that general flow gradient directions remain largely the same as predicted by the former post-closure models. Locally, for example near or at former building locations where soils were placed over building remnants and subsurface drains were disrupted or removed, directions of flow could be altered. However, at the scale of the IA, flow directions over pre-existing VOC plume areas are not considered to have changed, especially given the relatively small changes in ground water levels. Note that the spatial resolution of available quarterly monitored data is not sufficient to capture all of the surface water features and remaining subsurface features, and does not justify preparing potentiometric surface maps for either the unconsolidated or bedrock stratigraphic units.

The post-closure continuous ground water level monitoring data provided (Figure 13) are of limited value mainly because few continuous records exist that fully encompass pre-closure through post-closure (i.e., pre-December 2005 through May 2007, including enough of the early data to establish a "baseline"). Many wells that were continuously monitored prior to closure were abandoned in 2005, while others were installed in 2005. In addition, after careful review of available continuous water level data from which obvious outliers were removed by Stoller, many of the data indicate significant discontinuities, where water levels rapidly rise or drop over a very short time frame. While some of these are clearly due to sampling events (i.e., rapid declines followed by slow asymptotic recovery), many cannot be explained and as a result the data quality is suspect.

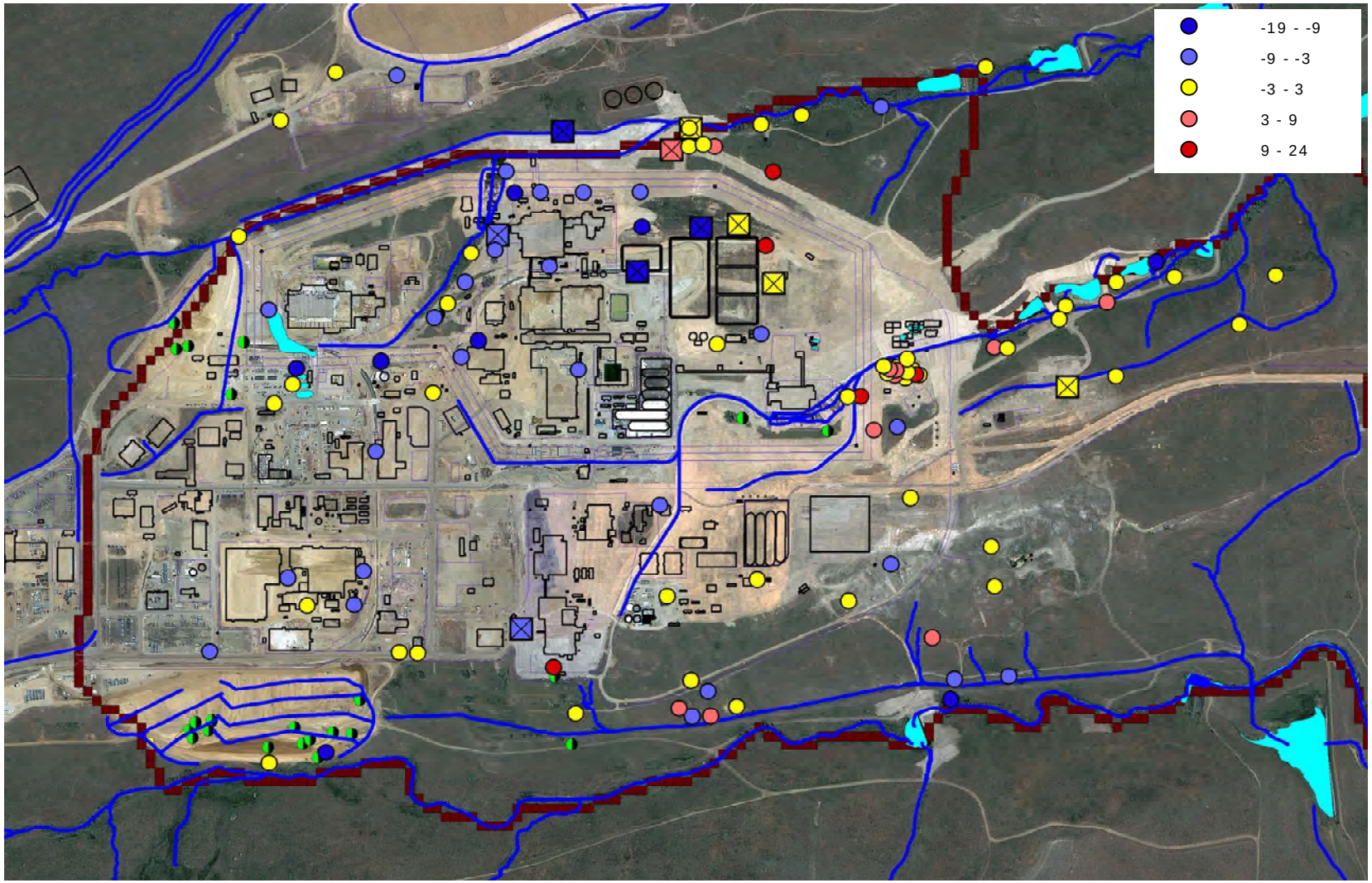


Figure 12. Approximate change in average annual ground water levels (feet) from (October) 1999-2000 to 2005-2006. Circles are wells screening unconsolidated materials, and squares are wells screening bedrock. Photo background pre-dates Site closure. Light blue features indicate surface water; note several puddles south of former Building 371, as described in the text. Black-green circles are post-closure seep areas.

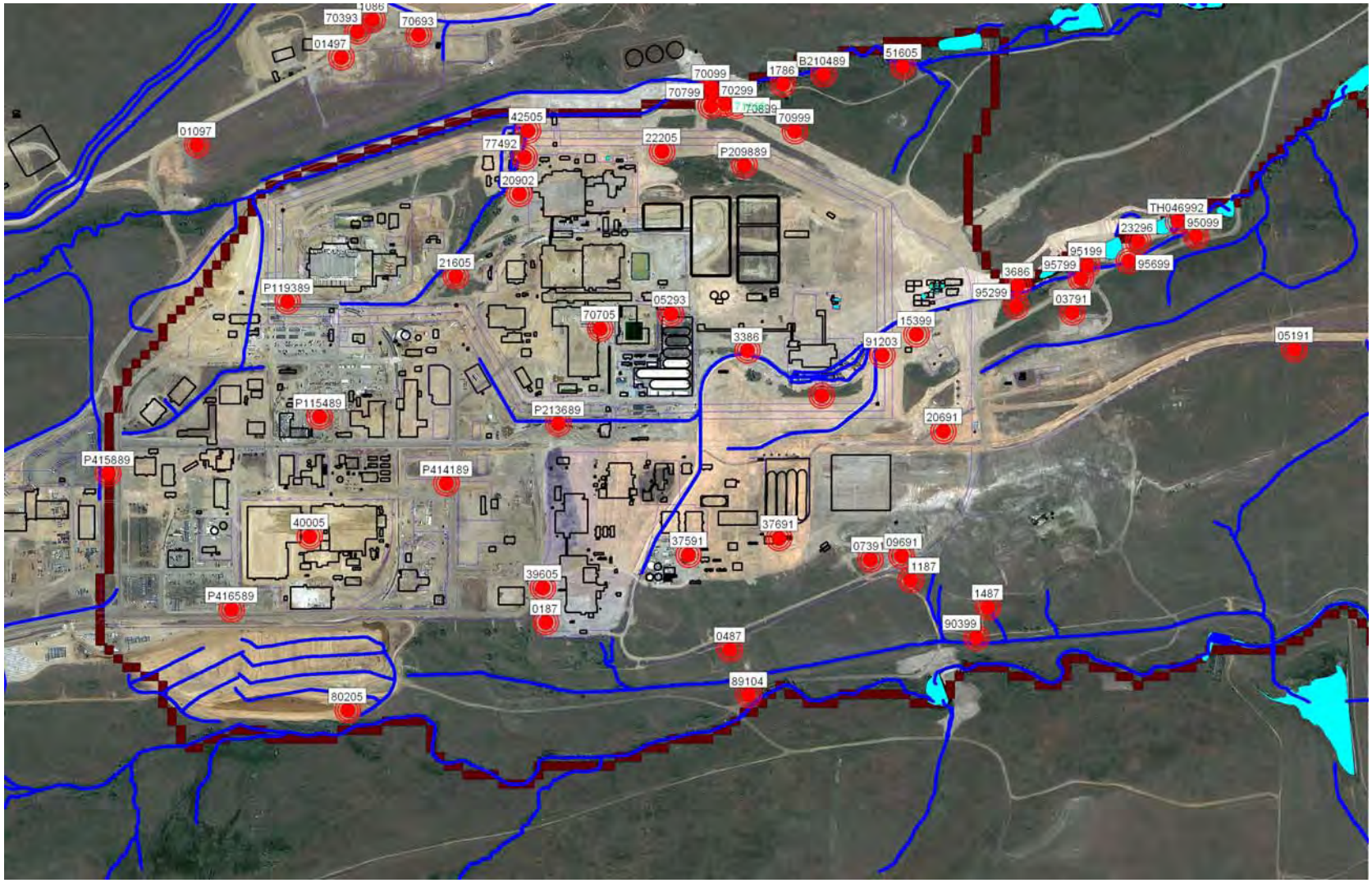


Figure 13. Locations of continuously monitored ground water wells through time in the IA. Most of those shown no longer exist. Photo background pre-dates closure.

Despite the limitations of using the continuously monitored data, a review of wells with post-closure data does not generally indicate clearly increasing or decreasing trends that might be attributed to Site closure. Most of the change in ground water levels can be attributed to the significant variability in climate from 2002 through May 2007, as indicated earlier.

Surface Water

Only those surface water flow gage locations shown on Figure 14 can be compared against simulated flow because they lie within the IA VOC integrated flow model boundary indicated by the dark red squares. Locations GS51, SW018, GS10, and SW027 record surface flows in the channels shown. The remaining locations, ETrSys, Mound Sys, and SPPSys, reflect effluent flow data for the ETPTS, MSPTS, and Solar Ponds Plume Treatment System (SPPTS), respectively.

Review of post-closure surface water flow data (Figure 15) from October 2005 through May 2007 indicates that flow was recorded in each of these gages. SW027, along the South Interceptor Ditch (SID) just upstream of Pond C-2, flowed only during February, March, and April 2007. This flow was in response to a combination of direct runoff, relatively high ground water recharge, and subsequent surface discharge caused by the significant precipitation events from October 2006 through January 2007 (Figure 11). Higher flows also occurred in SW018 (FC-2) and GS10 (FC-4) over the same time period, although the flow record at SW018 is incomplete. The observed range of baseflow in GS10 (~2 to 5 gpm) is lower than pre-closure flows (~24 to 31 gpm during 1999-2000), while the partially complete data from SW018 suggest post-closure baseflows were more variable (~5 to 15 gpm). Although no gage existed at SW018 during 1999-2000, previous simulations of pre-closure flows at this location were approximately 5 gpm. A peak flow of 543 gpm occurred at SW018 on April 24, 2007, and three times since closure flows exceeded 200 gpm. At GS10, flows exceeded 300 gpm for 6 days, and peaked on April 24, 2007, at 5,419 gpm. It is unclear what produced the relatively high post-closure baseflow rates at SW018, where it was expected that removal of pavement in the area would have reduced the overall inflow (i.e., fast runoff) to FC-2. The additional flow may be from increased ground water discharge through backfill material associated with former subsurface utility corridors and piping (not accounted for in the integrated flow model), combined with the continuing drainage of dust-suppression water.

Figure 14. Surface water flow gage locations within the IA model boundary. Photo background pre-dates Site closure.

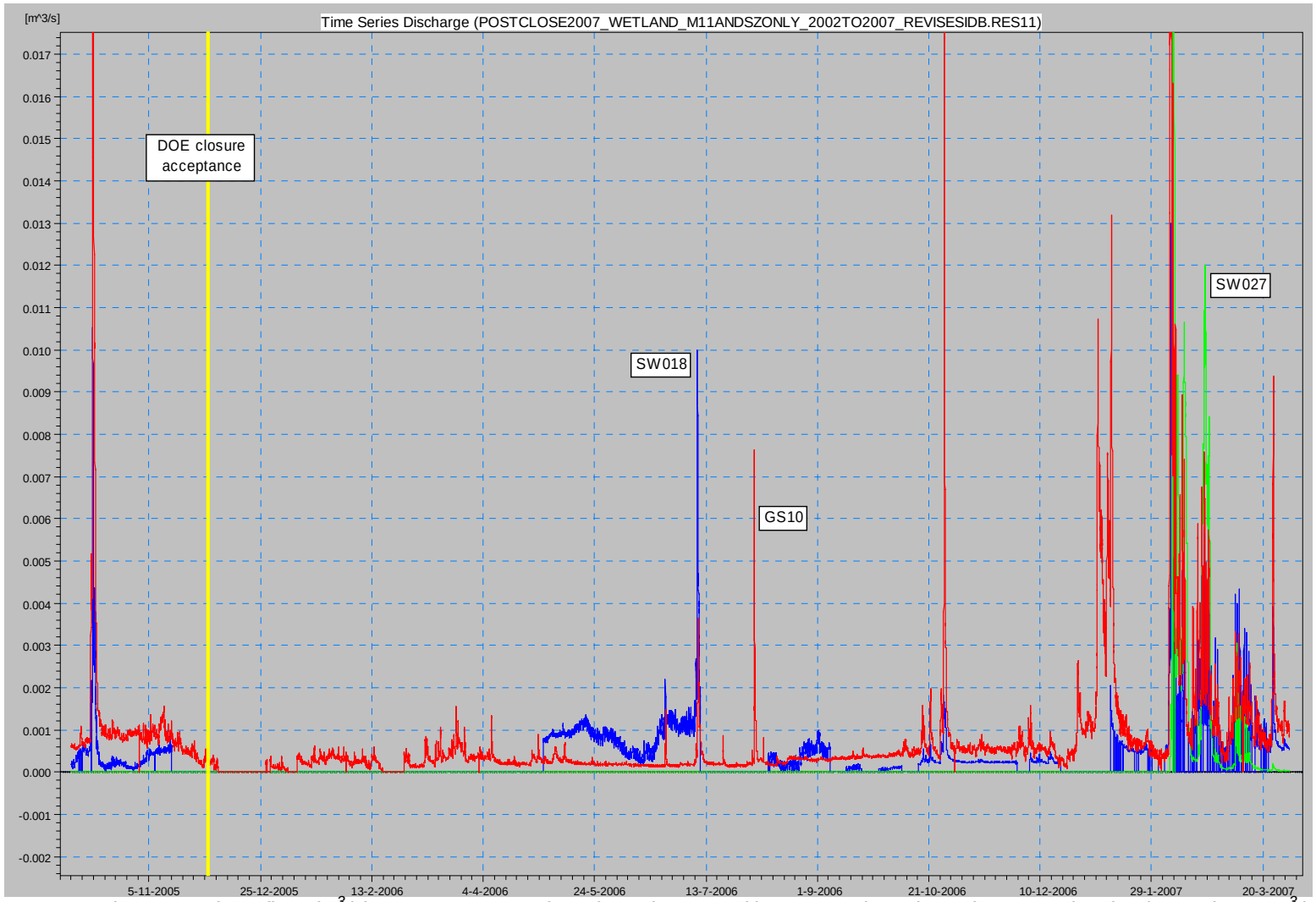


Figure 15. Post-closure surface flow (m^3/s) at gages GS10 (South Walnut Creek), SW018 (FC-2), and SW027 (SID). (Note that 1 m^3/s equals 15,837 gpm.) Dates are shown using day-month-year convention. Note episodic flow at SW018 (blue curve), near-continuous flow at GS10 (red), and lack of flow at SW027 (green) until fall/winter 2006.

Post-closure surface water flow rates clearly declined compared to pre-closure rates. For example, pre-closure annual flow through GS10 (1999-2000) was approximately 4.1 x 10^7 gallons per year (gal/yr), while average annual post-closure flow (October 2005 to October 2006) was only approximately 3.7 x 10^6 gal/yr. This represents nearly a 10-fold reduction in flow. This reduction is mostly due to the removal of the Sewage Treatment Plant (imported water) contributions and a significant reduction in surface runoff from impervious surfaces. Variability in peak flow response is also reduced. This is likely due to the combined result of impervious surface and culvert removal, addition of rip-rap, and added surface storage in the wetlands upstream in FC-4.

Results of former post-closure simulations, documented in the September 2005 "Summary of Hydrologic Flow and Fate and Transport Modeling Conducted at the Rocky Flats Environmental Technology Site," showed pre- and post-closure simulated annual flows at SW027 being 8.0 x 10^6 gal/yr and 7.0 x 10^5 gal/yr, respectively. This represents a reduction to less than 10% of pre-closure flows in the SID. Former modeling also showed that surface water flow within the SID was sensitive to ground water levels along the ditch margins. The fact that surface flows at SW027 were recorded for a sustained period of time (February and March 2007) while no other flows were recorded otherwise suggests this is mostly due to snowmelt runoff and temporary discharge of ground water along the SID caused by higher ground water levels. Former model input probably does not accurately reflect local hydrogeologic conditions along the SID, or the SID profile based on former surveyed sections, to adequately capture the actual flow characteristics reflected in observed flow data.

Observed post-closure effluent flow data are also available for the SPPTS, ETPTS, and MSPTS as indicated on Figure 16. Effluent flows, measured at the effluent manhole flumes, are largely similar to pre-closure conditions with the exception of the MSPTS, which increased approximately 10-fold due to a tie-in of a storm drain corridor to the interceptor trench. These data also indicate a notable increase in discharge from the ETPTS during late summer 2006. Based on communication with Stoller, this is erroneous; alternate flow measurements (from data collected by instruments housed in the instrument vault installed in 2006) indicate the average flow over this period was approximately 0.8 gpm. Otherwise, manhole flume flow data for these systems indicate flow rates were relatively stable throughout the year and averaged approximately 1 gpm for the SPPTS and MSPTS, and approximately 2 to 3 gpm for the ETPTS. Fluctuations can be largely attributed to seasonal variations in climate, ground water recharge, and AET.

5.0 IA VOC Model Updates

After review of available post-closure data, assessment of changes due to closure, review of former long-term post-closure flow modeling results, and discussion with Stoller about immediate needs, the following models were updated:

- IA VOC flow model;
- OLF model; and
- MSPTS model.

As noted previously, this memorandum summarizes updates to the IA VOC flow model that reflect post-closure configuration modifications to the system. Changes to the model input for the OLF and MSPTS models are described in more detail in two concurrent, but separate, memoranda. Areas external to the IA VOC flow model were not evaluated due to relative importance (the VOC model area encompasses VOC plumes of interest) and time constraints. In addition, VOC concentration data were not evaluated as part of this study due to the findings of the flow model.

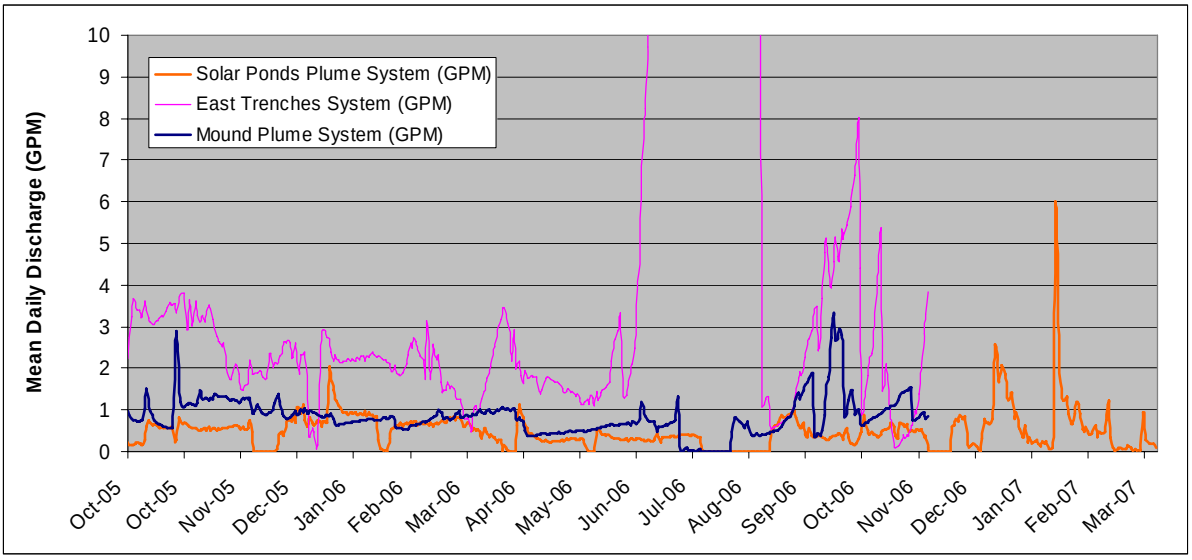


Figure 16. Post-closure mean daily discharge flow rates (gpm) for the ground water treatment systems. The flows shown for the ETPTS in June-August 2006 time period are not accurate; average flow over the period from May 15 through September 15, 2006, based on the instrument vault data rather than data from the manhole flume, was approximately 0.8 gpm.

The only major modification to the former post-closure IA VOC model configuration (last updated in September 2005) was updating the surface topography (Figure 4) and using post-closure climate data from the NREL station to generate a more realistic post-closure hydrologic and hydraulic response. This allows a more direct comparison between available observed post-closure hydrologic data and model-simulated conditions. The nearby NREL station climate data were used to develop a high-quality, continuous climate sequence from October 2002 through May 2007.

Minor changes were also made to the MIKE11 flow channel input to more accurately simulate infiltration and ET of water in the FC-2 and FC-4 wetland areas. This was done by specifying activation of the flood option in the MIKE11 network input file. Other minor surface water drainage features could also have been specified explicitly using the one-dimensional surface water channel flow model MIKE11. However, because the MikeSHE overland flow module calculates 2-dimensional surface flow based on the supplied surface topography based on a diffusive-wave approximation, many of the surface water drainage features not explicitly included as MIKE11 channels are adequately simulated in the model.

With regard to vegetation at the Site, the current vegetation coverage densities are far from fully established. The former post-closure model (Figure 5) assumed vegetation would be fully established. If fully established, the vegetation would cause greater ET-driven ground water loss from the unsaturated and ground water systems, which in turn would reduce ground water levels. Hence, the decreased post-closure vegetation coverage is expected to produce higher ground water levels, based on former modeling. Although it would have been more accurate to simulate post-closure flow conditions by specifying the time-varying vegetation coverage, this information was unavailable. In addition, the specification of ET parameters is complex and would have required an considerable time to undertake the careful and iterative process required to determine appropriate (i.e., calibrated) values for these parameters (i.e., LAI, root depths with time, interception storage for each plant type, crop coefficients with time, and several other more empirical parameters). As such, fully established vegetation coverage was assumed for the post-

closure simulations conducted. In some areas, less than expected modeled flows (i.e., at SW018) can be partly explained by the assumption that vegetation is fully established.

Many different types of model output simulated by the updated post-closure IA VOC flow model are available. The following output is specifically discussed to address objectives stated earlier:

- Ground water levels:
    - Comparison of simulated to actual post-closure water levels;
    - Simulated surface seep areas; and
    - Simulated flow directions.
- Surface flow rates at gaged locations.
- Flow rates from passive ground water treatment systems.

Simulated Ground Water Conditions

Simulated ground water depths are shown on Figure 17, and the difference between mean simulated depths from October 2005 through April 2007 and observed mean annual levels based on quarterly measurements for available post-closure wells is shown on Figure 18. Results indicate several areas developed seeps, as previously noted, including the FC-1 borrow pit area in the northwestern part of the model area, FC-2, and FC-4. All three of these areas were predicted in former modeling to produce seeps, primarily due to the shallow bedrock that forces nearby ground water inflow to discharge at the surface from adjacent steeper slopes. Ground water depths generally increase away from surface channels, except in the central portion of the former IA (western FC-4 area) where depths are generally less than 5 feet below grade. Ground water depths are at least 20 feet over many former buildings (e.g., 444, 371, 881, and 771) and beneath the mesa extending east from the 903 Pad area.

Simulated ground water levels are generally within 3 feet of observed levels throughout the IA VOC flow model boundary. These differences are similar to previous model simulations of the 1999-2000 year. Notable deviations occur in groups of wells in the former Building 444 area, south of Building 881 and at the 881 Hillside French drain, generally along the FC-2 drainage, and in the western portion of the former Solar Ponds area. In each of these areas, ground water is oversimulated (i.e., simulated depths are higher than actual) between 3 and 9 feet, while in the Building 881 and 881 Hillside area water levels are both oversimulated and undersimulated by more than 9 feet in localized areas. This suggests that the measured water levels may be affected by residual infrastructure or other artifacts of closure. In the Building 444 and Building 881/881 Hillside areas, it is possible that ground water drains more freely than is simulated due to the continuing effectiveness of some subsurface pipelines and utility corridors. In the former Solar Ponds area, the weathered bedrock hydraulic conductivity values may be locally higher than in other areas, which would help drain away ground water from this area (i.e., lowering ground water levels more than predicted by the model). In both the former Building 444 and Solar Ponds areas, it is possible that surface soils were overcompacted and ground water levels decline because of lower surface infiltration and subsequent ground water recharge.

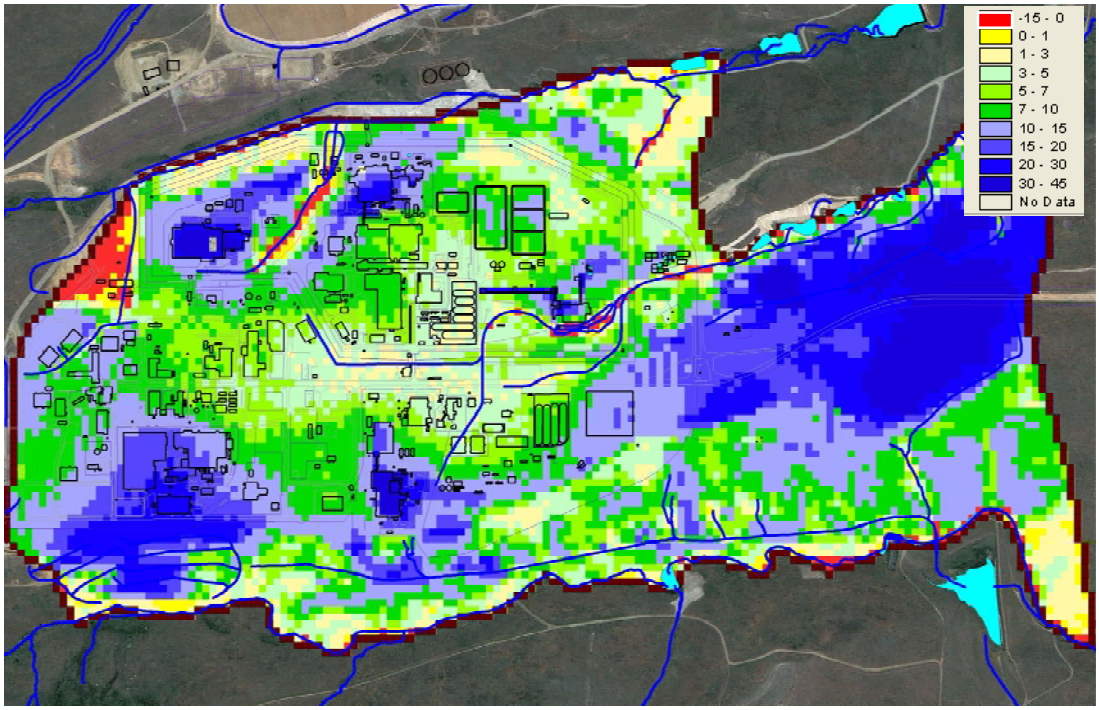


Figure 17. Average annual simulated ground water depths (feet below ground surface) (October 2005 to May 2007). Photo background is from pre-closure era.

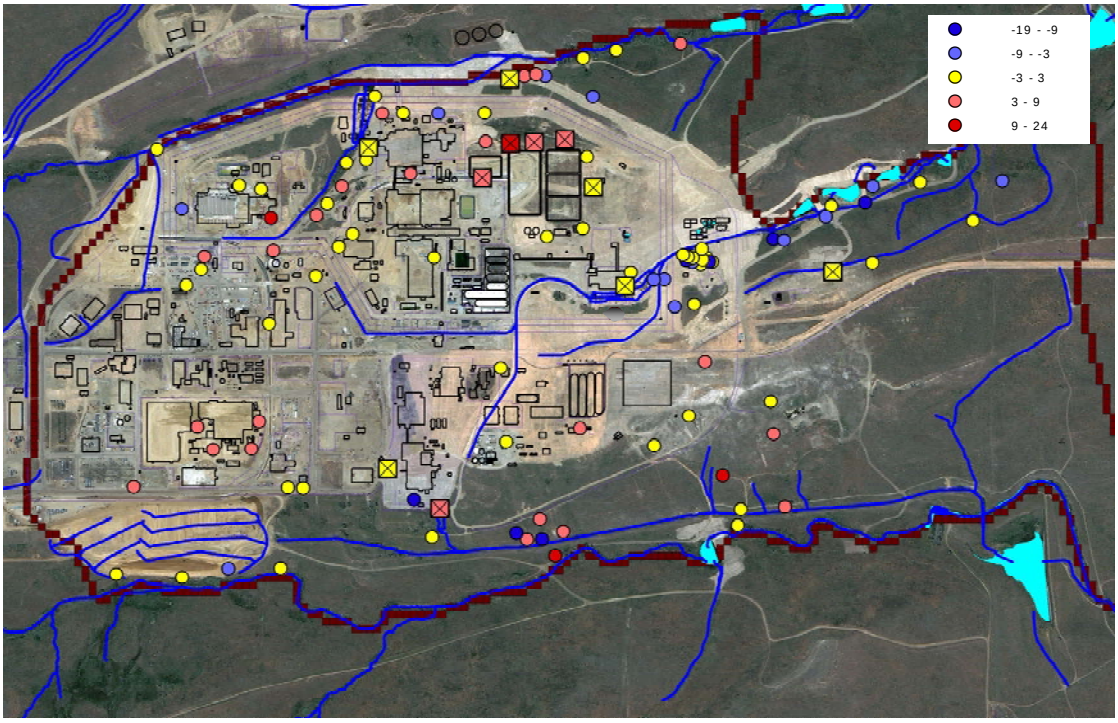


Figure 18. Difference between simulated post-closure average annual water level depths and observed average annual water levels (feet). Simulated depths shown in red (positive) are greater (i.e., ground water is predicted to be shallower) than observed, while simulated heads shown in blue (negative) are less (deeper) than observed. Circles represent wells screened in the unconsolidated material, and squares represent wells screened within the bedrock. Photo background is from pre-closure era.

One area in both the current and former post-closure models that deviates from actual post-closure (2005-2007) hydrologic conditions is the borrow pit (FC-1) west of the former Building 371 area. Former pre-closure (September 2005) evaluation of this area indicated borrow pit excavation depths would intercept the weathered bedrock surface (based on excavation plans and borehole information) and cause ground water to seep out around the edge and on the bottom of the pit, just above the weathered bedrock (Figure 17). However, a visit to this area (May 14, 2007) revealed only surface wetness in some areas, but no significant continuous baseflow that could be attributed to intercepted bedrock (Figure 19). No ground water monitoring wells or surface flow gages are located within FC-1; the closest wells are at the northern junction of FC-1 and North Walnut Creek, and east of the pit on the western edge of the Building 371 area. Given the very low vegetation coverage (Figure 5) in this area and the relatively high October 2006 through January 2007 precipitation (Figure 11) that has clearly led to increased seepage throughout the OLF, the lack of seepage in the borrow pit is surprising. Several factors could cause this, including an incorrect final surface topography, ill-constrained previously interpolated bedrock surface for the area, or overcompaction of surrounding soils that would promote runoff over recharge. Hydrologic conditions in this area do not affect existing VOC plumes in the former IA.

Figure 19. FC-1 borrow pit area (May 14, 2007). View is from southern Building 371 area to the northwest across the pit.

Simulated post-closure ground water elevations shown on Figure 20 are compared against data from several observed continuously monitored ground water wells. Results show that simulated levels and amplitudes compare well with observed data at most locations, although there is little overlap in time between the observed and simulated data. Simulated ground water response does not reflect actual dynamics well in the Building 444/OLF area and south of the former Building 881 area, probably because the subsurface complexity is not captured well in the model.

Simulated Ground Water Flow Directions

Ground water flow directions are important in assessing possible changes to the long-term contaminant migration directions and possible surface discharge. Evaluation of inter-annual (year to year) and intra-annual (seasonal) variability in ground water levels for pre-closure suggested relatively uniform temporal fluctuations in levels throughout the Site, which in turn implies relatively uniform flow patterns and directions. In other words, ground water levels in most Site wells rise similarly in response to precipitation recharge, and then decline due to the combined effects of ET and drainage. Despite the spatial differences in seasonal ground water level increases/decreases, no major ground water mounds or sinks were created in the post-closure

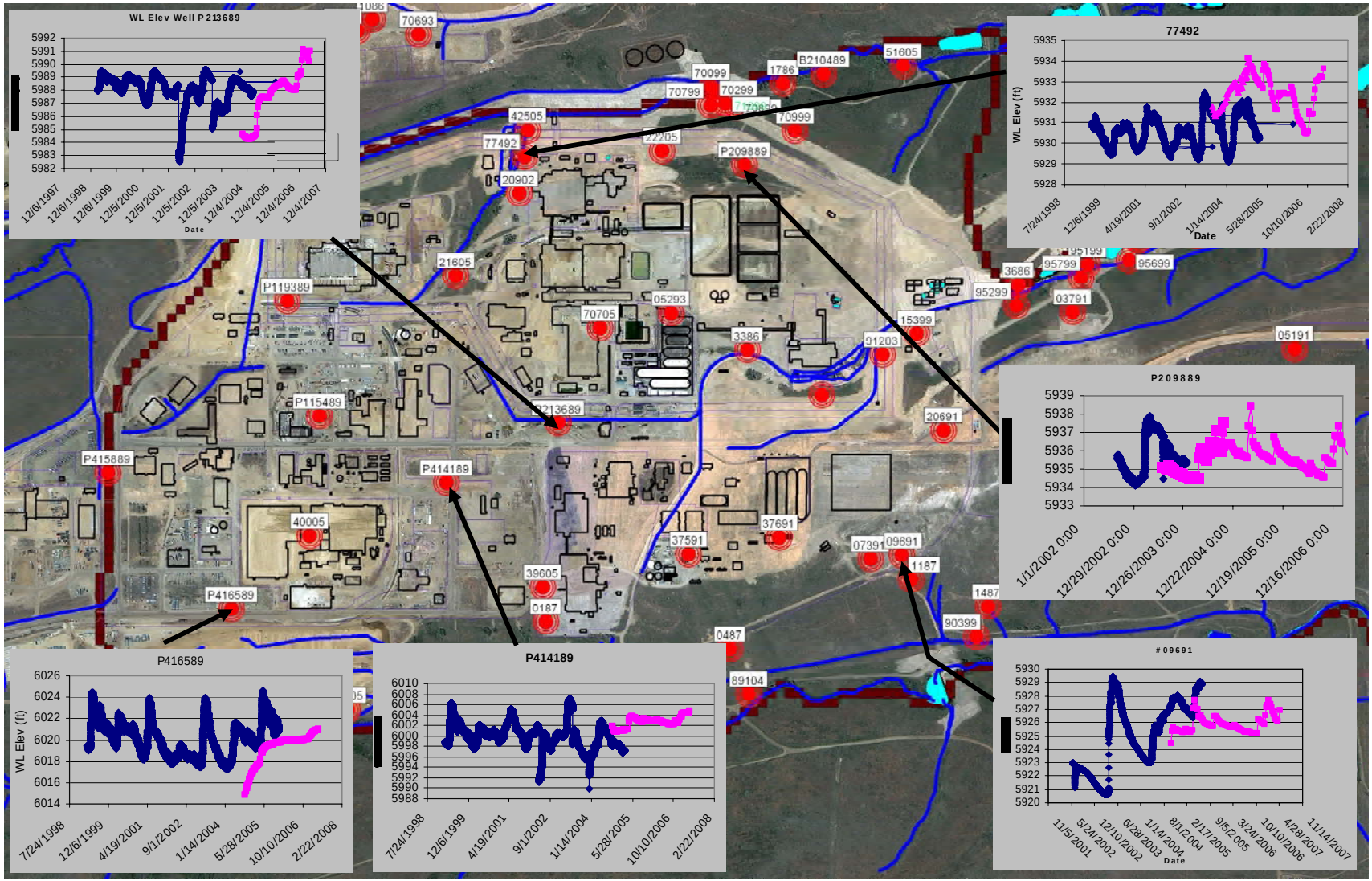


Figure 20. Simulated ground water elevations (pink) and observed continuously monitored ground water level data (blue) (feet amsl). Note: Most wells shown no longer exist, and of those shown with water level graphs, only well P416589 (upgradient OLF) remains.

simulation that alter local ground water flow paths significantly from average annual flow directions.

Therefore, it is reasonable to assume that long-term contaminant migration pathways are generally consistent with average annual post-closure flow directions previously estimated. This does not imply that short-term hydrologic perturbations to the ground water flow system caused by more extreme climatic events will not temporarily cause ground water flow directions to deviate from the estimated average annual flow directions. However, ground water levels recover to their respective seasonal cycles typically within months or shorter time periods. Post-closure simulations that were conducted produced ground water flow paths similar to the long-term flow paths determined in previous modeling described in the "Summary of Hydrologic Flow and Fate and Transport Modeling Conducted at the Rocky Flats Environmental Technology Site," dated September 2005.

Simulated Surface Water Conditions

Simulated surface flow is compared to observed flow at gages GS10, SW018, and SW027 located within the IA VOC model boundary. Results for GS10 are shown on Figure 21. The estimated annual reduction in simulated post-closure surface flow at GS10 (37 x 10^6 to 0.9 x 10^6 gal/yr) is similar to the observed reduction (32 x 10^6 to 3 x 10^6 gal/yr) from water year 2000 (October 1999 to October 2000) to water year 2006. The updated model actually predicts a greater discharge at GS10 than the former post-closure model (0.9 x 10^6 gal/yr compared to the previously predicted 0.17 x 10^6 gal/yr). The updated model also reflects a similar reduction in the observed reduction in baseflow (from approximately 15 to 32 gpm during water year 2000 to approximately 3 to 8 gpm for water year 2006), although post-closure simulated baseflows were slightly lower, ranging from 1 to 3 gpm. Simulated daily flows do not capture the peaky, higher flow rates measured at GS10 as indicated on Figure 21. This is probably due to a number of factors, including use of NREL station rainfall data instead of local data, assuming fully established vegetation that would have increased ground water levels in the area, and specifying soil hydraulic properties that are more like undisturbed areas, rather than more likely compacted soils due to closure.

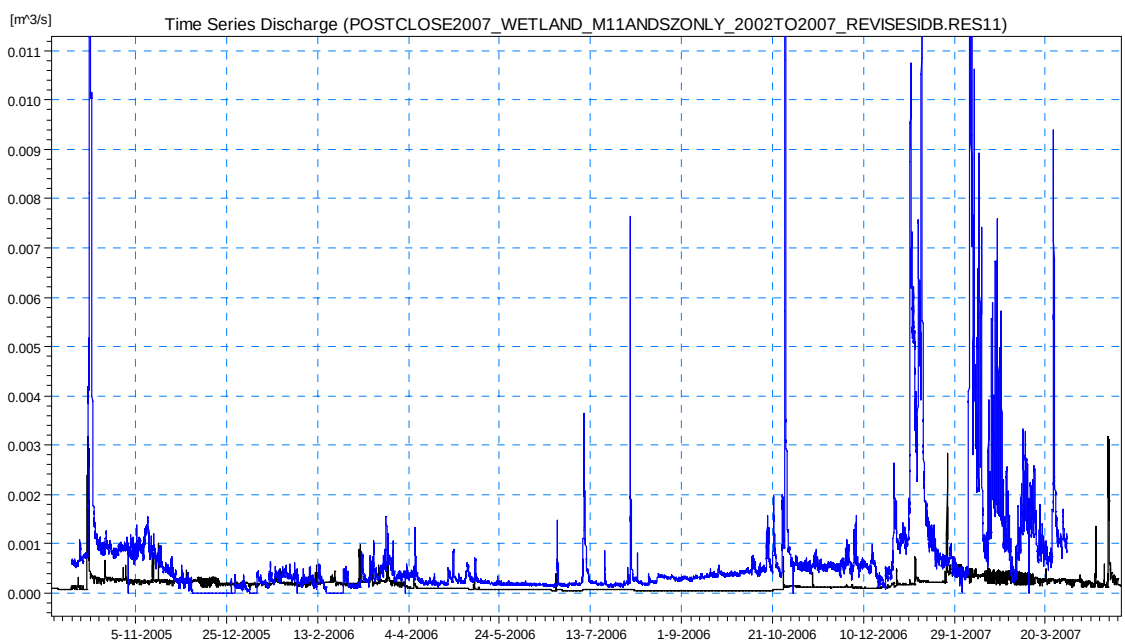


Figure 21. Simulated (black) and observed (blue) post-closure surface flow at GS10 (m^3/s). (Note that 1 m^3/s equals 15,837 gpm.)

Several reasons may explain the differences between simulated and observed flow at GS10, including the following:

- Former post-closure modeling assumed fully established vegetation. The current lack of fully established vegetation within the wetlands upstream and west of GS10 (as indicated on Figure 22) does not evapotranspire as much surface water as assumed by the model. Thus, the model underestimates flow at GS10.

Figure 22. FC-4 wetland area (May 14, 2007) from the slumping hillside. View is to the north.

- The NREL data, although from near the site, may not accurately reflect actual precipitation in the drainage basin flowing into GS10.
- Former and updated post-closure simulated flow at GS10 is very sensitive to the topographic surface configuration of the FC-4 wetland berms and routing of water through the drainage. The model assumes surface water fully fills each bermed area before flowing into the next area, based on designed berm heights. Based on field inspection (Figure 22), it is clear that the berms are not uniform in height and that berm features have been modified (variously notched and undercut). This would promote a greater throughflow of water to GS10 than originally assumed by the model, which would increase peaky flow responses at GS10.
- Surface soils within the drainage could have been compacted more than assumed for the Rocky Flats Alluvium fill material, leading to greater runoff.
- The post-closure seepage from the slumping hillside south of FC-4 (south of former Building 991) may be greater than was produced by the former French drain outfall (visually estimated prior to Site closure at 1 to 2 gpm).

Results of a comparison of (updated) simulated surface flow to observed flow at SW018 are presented on Figure 23. Only minor surface water discharge, as baseflow, is simulated at SW018 (approximately 0.3 gpm). Post-closure observed data are only intermittently available, but indicate both baseflow and direct runoff components. The baseflow appears to range from about 1.5 to 8 gpm. The model calculates some baseflow upgradient of this gage; however, it reinfiltrates, or lost to AET by the time it reaches SW018. Like at the GS10 gage, a combination of factors probably cause the model to under-estimate both the baseflow and direct runoff here, for example using NREL rainfall data, assuming fully established vegetation, and assuming no soil-compaction due to closure activities in the area, It is also possible that higher observed baseflow in this area may be caused by preferential drainage pathways from remnant subsurface utilities, utility corridors left in place, or corridors not fully disrupted near FC-2. The model does, however, simulate average annual heads reasonably well (Figure 18) in the area.

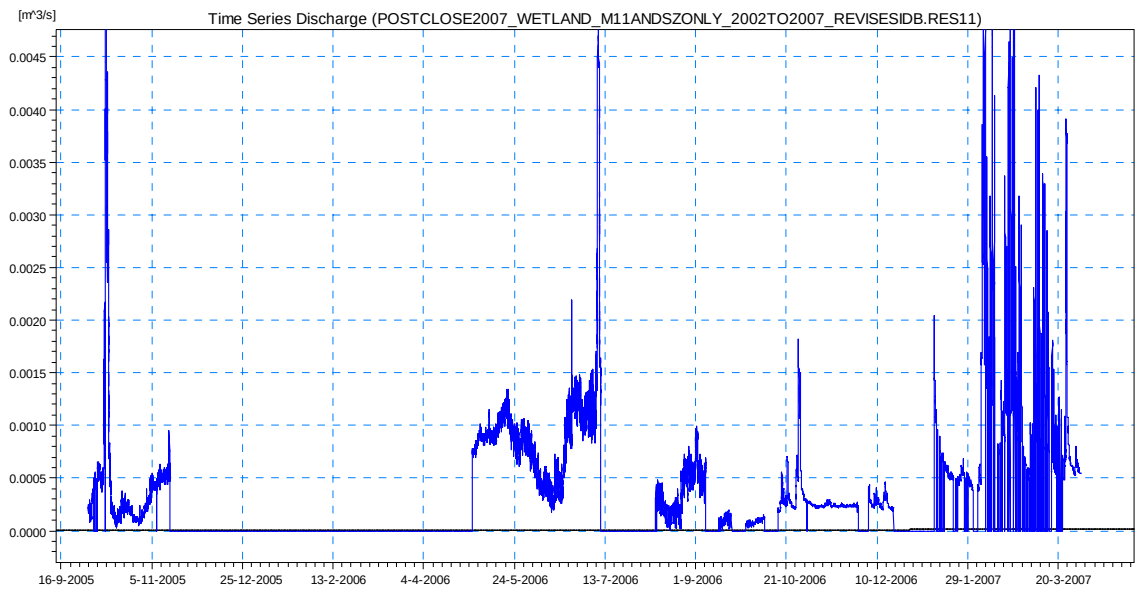


Figure 23. Simulated (black – approximately 0.3 gpm) and observed (blue) post-closure surface flow at SW018 (m^3/s). (Note that 1 m^3/s equals 15,837 gpm.)

The updated post-closure model produces approximately 1 x 10^6 gal/yr at SW027 (Figure 24), mostly as baseflow. The observed flow was zero for late 2005 through most of 2006; however, a sustained flow rate (above 50 gpm) was observed for most of February and March 2007. The model did not capture this dynamic. Pre-closure flows at this gage for water year 2000 were approximately 8 x 10^6 gal/yr, although most of this flow was due to inflow from drains tied to paved areas (e.g., the former Building 444 area).

Results of former modeling suggested that surface flows at SW027 are very sensitive to ground water levels along the entire length of the SID, with lateral inflows occurring along the entire length. Therefore, it is likely that simulated ground water levels are slightly higher than actual levels; this discrepancy generates enough simulated lateral inflow to produce the additional simulated flow at SW027. The sources of the significant amount of flow during February and March 2007 are uncertain, but given the long duration over which it was sustained and the heavy precipitation of the preceding months, it is clear the mechanism is related to discharge of rising ground water along the SID combined with short-term precipitation runoff mostly due to snowmelt.

Results of (updated) simulated discharge at the MSPTS, ETPTS, and SPPTS are compared to observed discharge on Figure 25. (A separate model was developed for the MSPTS area that more accurately represents the flow system, compared to the coarser-grid IA VOC flow model. Refer to the separate Mound report.) Despite this, the simulated volume of effluent discharge is similar to the mean daily observed discharge rates at each treatment system. Simulated discharges are shown with symbols that match the color of the observed discharges (curves without symbols). Simulated flows at the MSPTS and SPPTS reproduce the average observed flow rates, while the simulated ETPTS discharge is lower than observed discharges. In all cases, the simulated discharges do not adequately capture the short-term fluctuations in observed discharge rates. The most likely explanation is that the relatively coarse (60-foot) model grid does not capture localized features that control the near-trench flow dynamics.

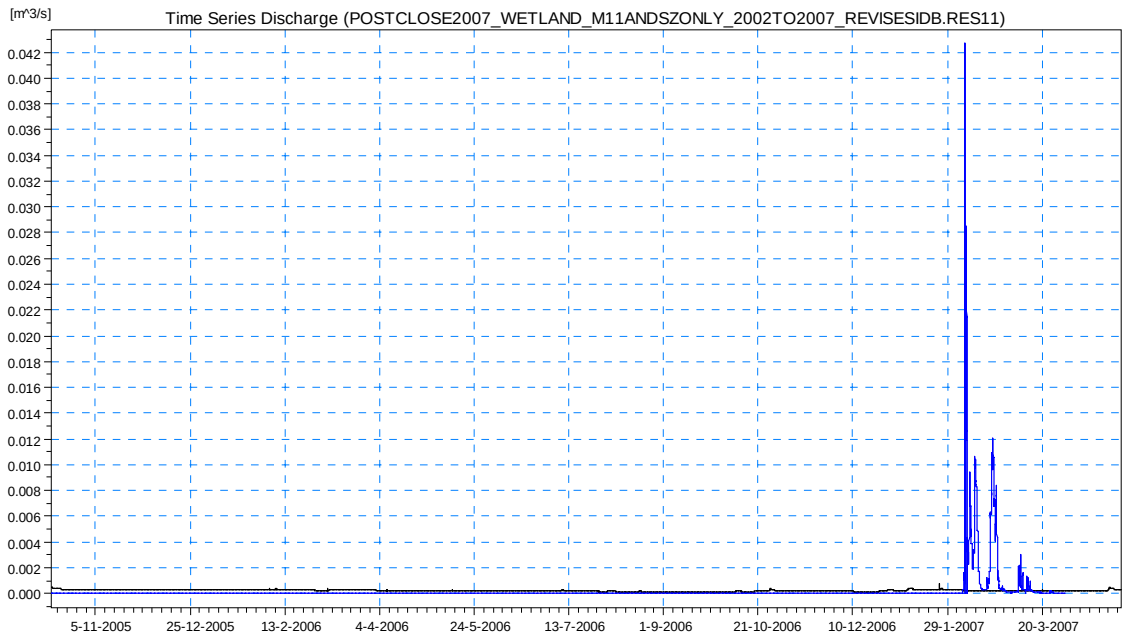


Figure 24. Simulated (black – nearly zero) and observed (blue) post-closure surface flow at SW027 (m^3/s). (Note that 1 m^3/s equals 15,837 gpm.)

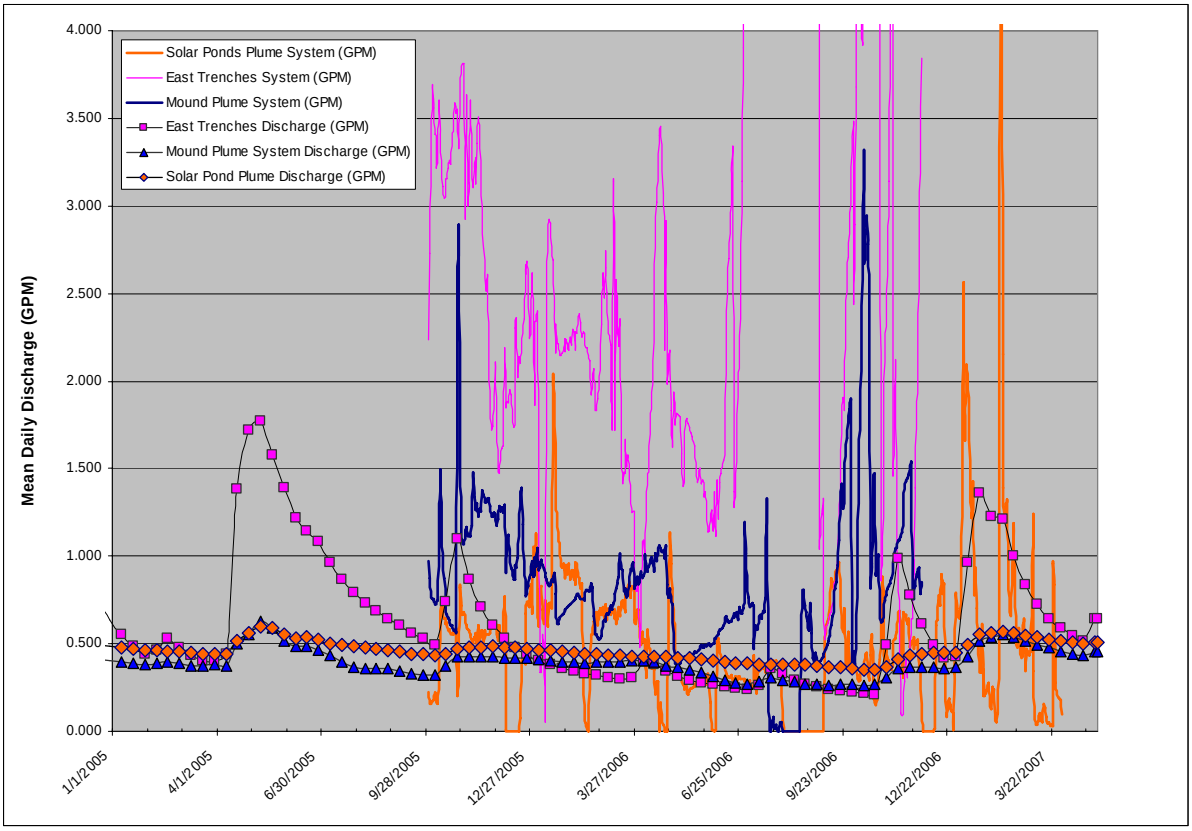


Figure 25. Simulated (lines with symbols) and observed (only lines – colored same as simulated with symbols) MSPTS, ETPTS, and SPPTS discharge (mean daily gpm). The flows shown for the ETPTS in June-August 2006 time period are not accurate; average flow over the period from May 15 through September 15, 2006, based on the instrument vault data rather than data from the manhole flume, was approximately 0.8 gpm.

6.0 Conclusions

Several conclusions can be made based on this work:

1) No major data gaps in post-closure hydrologic monitoring or VOC ground water monitoring were identified after reviewing the post-closure Site data, or through evaluation of updated model simulations.

2) The most recent post-closure surface topographic changes incorporated in the integrated IA VOC flow model showed only minor differences compared to the September 2005 planning version used in the former post-closure modeling. No major changes in ground water flow directions were identified due to the land surface topographic changes.

3) Post-closure VOC concentration data trends were not evaluated here. However, review of available post-closure hydrologic data, and comparison of previous and current post-closure modeling indicate that estimated ground water flow paths in plume areas have not changed significantly. In addition, discussions with Stoller also indicated that post-closure VOC concentrations do not deviate significantly from previously-mapped VOC distributions ("plumes") or pathways as of May 2007. The VOC fate and transport pathways in ground water are not expected to deviate significantly from former estimates derived through reactive transport modeling (K-H, 2004).

4) Simulated post-closure ground water levels compare well with the observed time-averaged levels within the IA VOC model boundary. The model simulates slightly higher than actual levels in wells screened in the unconsolidated material in the former Building 444 area, and in bedrock wells just north of the former Solar Ponds, though flow directions remain the same. Ground water flow directions, and hence contaminant transport pathways, are similar to former long-term simulated results.

5) Simulated post-closure surface water flows at gages GS10 (FC-4), SW018 (FC-2), and SW027 (eastern end of the SID) generally reflect the significant reduction in observed flows following closure. The model underestimates flows at all three locations. This is probably due to a combination of factors including partially established vegetation, differences between site climate data and the NREL site, higher surface discharge caused by remnant dust-suppression water used during decommissioning, and/or possible preferential pathways created by subsurface features or utility corridors left intact following closure. Detailed closure information and hydrologic/hydraulic information are insufficient to clearly identify the mechanisms leading to the differences between simulated and observed flow rates at these surface gages, as well as discharge from the treatment systems.

7.0 References

Kaiser-Hill Company, LLC, 2002, Site-Wide Water Balance Model Report for the Rocky Flats Environmental Technology Site, Golden, Colorado, May.

Kaiser-Hill Company, LLC, 2004, Final Fate and Transport Modeling of Volatile Organic Compounds at the Rocky Flats Environmental Technology Site, Golden, Colorado, April.

F.2 Report: *Mound Site Plume Treatment System Post-Closure (2007) Integrated Surface-Subsurface Hydrologic Flow System Assessment and Model Update, Rocky Flats Site*

January 28, 2008

MEMORANDUM

TO: John Boylan, S.M. Stoller

FROM: Bob Prucha, Integrated Hydro Systems, LLC

SUBJECT: Mound Site Plume Treatment System Post-Closure (2007) Integrated Surface-Subsurface Hydrologic Flow System Assessment and Model Update, Rocky Flats Site

This memorandum summarizes results of a post-closure integrated surface-subsurface hydrologic flow system assessment of the Mound Site Plume Treatment System (MSPTS) area. Available post-closure data have been evaluated and the former localized MSPTS integrated hydrologic flow model has been updated with new information since closure. The date of closure (U.S. Department of Energy [DOE] acceptance of contractor's declaration of completion) has been defined as December 8, 2005. Updated model results were assessed and compared to both previous post-closure simulations and actual hydrologic conditions in the area.

The scope of work was originally defined by S.M. Stoller (Stoller) (September 2005) and then modified to meet immediate needs in May and June 2007. This memorandum supplements the former Industrial Area (IA) post-closure hydrologic and hydraulic assessment summarized in a recent memorandum submitted to Stoller (dated July 2, 2007) entitled "Draft Post-Closure (2007) Integrated Surface-Subsurface Hydrologic & Hydraulic Flow System Assessment and Model Update."

Information in this memorandum is organized as follows:

1) Post-closure data evaluation;
2) Model updates and simulations; and
3) Conclusions.

1.0 Post-Closure Data Evaluation

Figure 1 shows the location of key features associated with the MSPTS area. To accurately represent the local-scale ground water capture zones associated with the MSPTS collection trench and associated French drain, a fully integrated hydrologic flow model was developed using a 10-foot by 10-foot grid. The increased grid resolution also allowed for improved simulation of local hydraulic effects around an additional trench that was created when a 72-inch storm drain pipe was removed during Site closure, and which was subsequently backfilled and tied into the MSPTS collection trench in approximately March 2005. Figure 1 shows the locations and features included in the integrated model domain of the MSPTS.

The model extent was defined so that inferred volatile organic compound (VOC) sources (i.e., Mound Site and Oil Burn Pit #2), current observations, and estimated contaminant distributions (plumes) could be modeled. Lateral boundary conditions are located far enough away from plume areas and do not influence flow or fate/transport calculations in these areas.

Key features affecting the local ground water response within the model area include the MSPTS ground water collection trench, the pre-existing French drain that connects to it at its western end, the corridor of backfill material associated with a former 72-inch storm drain pipe, and its gravel

drain connection to the MSPTS trench. Other features within the model that may have affected the surface and subsurface hydrology include a temporary surface drainage ditch that conveyed water for up to several months in 2005 (yellow line in Figure 1), excavation areas associated with the Mound Plume Individual Hazardous Substance Site (IHSS) and the Oil Burn Pit #2 IHSS, the Arapahoe Sandstone (outlined in light blue lines in Figure 1) that subcrops the unconsolidated material, and the construction of Functional Channel (FC)-5 that merges with FC-4 from the south (located west of 72-inch drain).

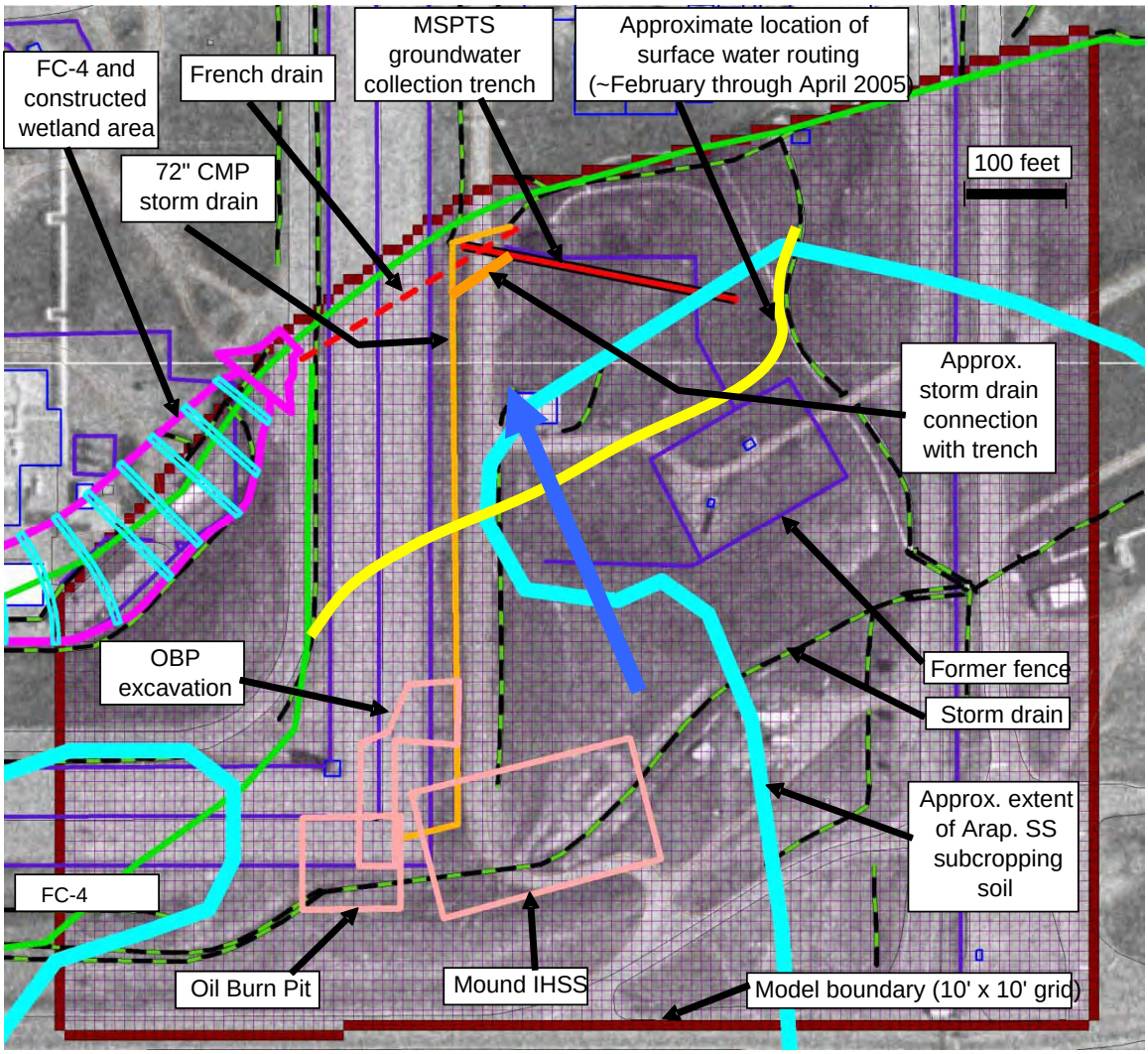


Figure 1. Integrated flow model boundary, grid, and Mound Plume area features. General groundwater flow direction is indicated by blue arrow.

Details and assumptions associated with the MSPTS area features are described below. Some of the feature detail within the model area are not well known and may affect the ability of the model to reproduce actual MSPTS discharge.

- Although the spatial location and length of the approximately 300-foot-long French drain were determined based on an older hard-copy diagram, no information was available on its depth or slope. It was assumed the drain was emplaced at the weathered bedrock surface within the unconsolidated material.
- The exact location of the gravel drain connecting the backfilled corridor from the former

72-inch storm drain to the MSPTS ground water collection trench was not available, although it is relatively close to that shown in Figure 1, based on available photographs. The approximate location and extent of the MSPTS ground water collection trench shown on Figure 1 are generalized, as this feature is not exactly linear.

- The depth of the backfill material in the corridor associated with the former 72-inch storm drain is not known. Based on its size and typical depths for other drains, the bottom depth was assumed to extend at least 10 feet below pre-closure grade. Greater depths were assigned to some areas of the corridor to maintain a relatively constant grade. No information was available on the saturated zone hydraulic properties of the storm drain backfill material, so this was varied as a calibration parameter.

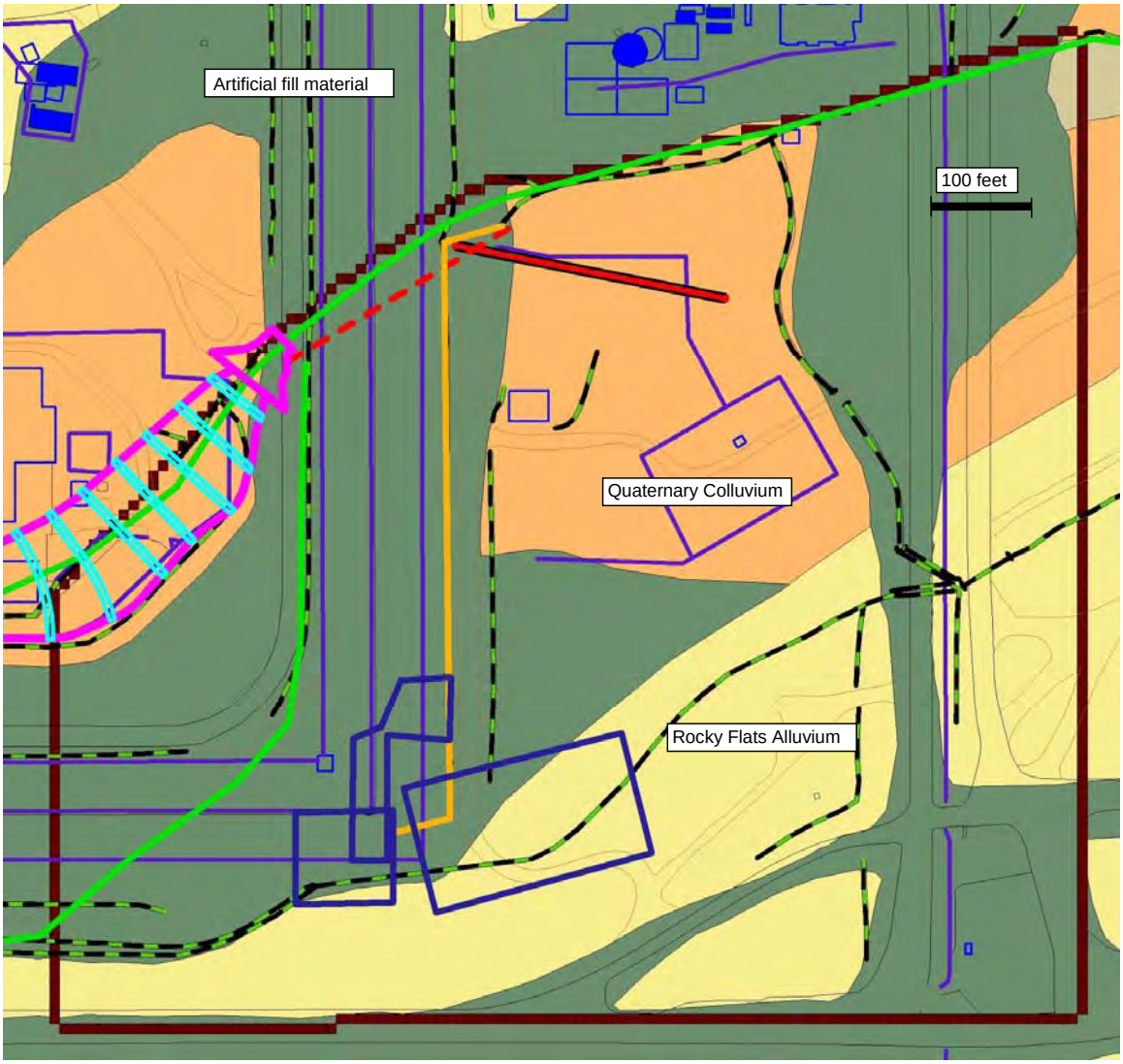


Figure 2. Pre-closure surface geology

- Hydraulic properties for the MSPTS ground water collection trench and French drain were not available. However, based on observations during construction of the system, very little flow was noted in the MSPTS trench, but when the French drain was intercepted, a substantial amount of flow was encountered. This may be due to higher saturated hydraulic conductivity values associated with the artificial fill material of the berm drained by the French drain, compared to the Quaternary Colluvium (Figure 2). As was done in the former Site-Wide Water Balance modeling, the surface geology (1995) shown on Figure 2 is assumed to represent the entire unconsolidated interval down to

the weathered bedrock surface. This may not accurately reflect the screened-zone geology of wells monitoring ground water within the unconsolidated materials, especially in areas of artificial fill. However, artificial fill is generally composed of Rocky Flats Alluvium and their properties are very similar.

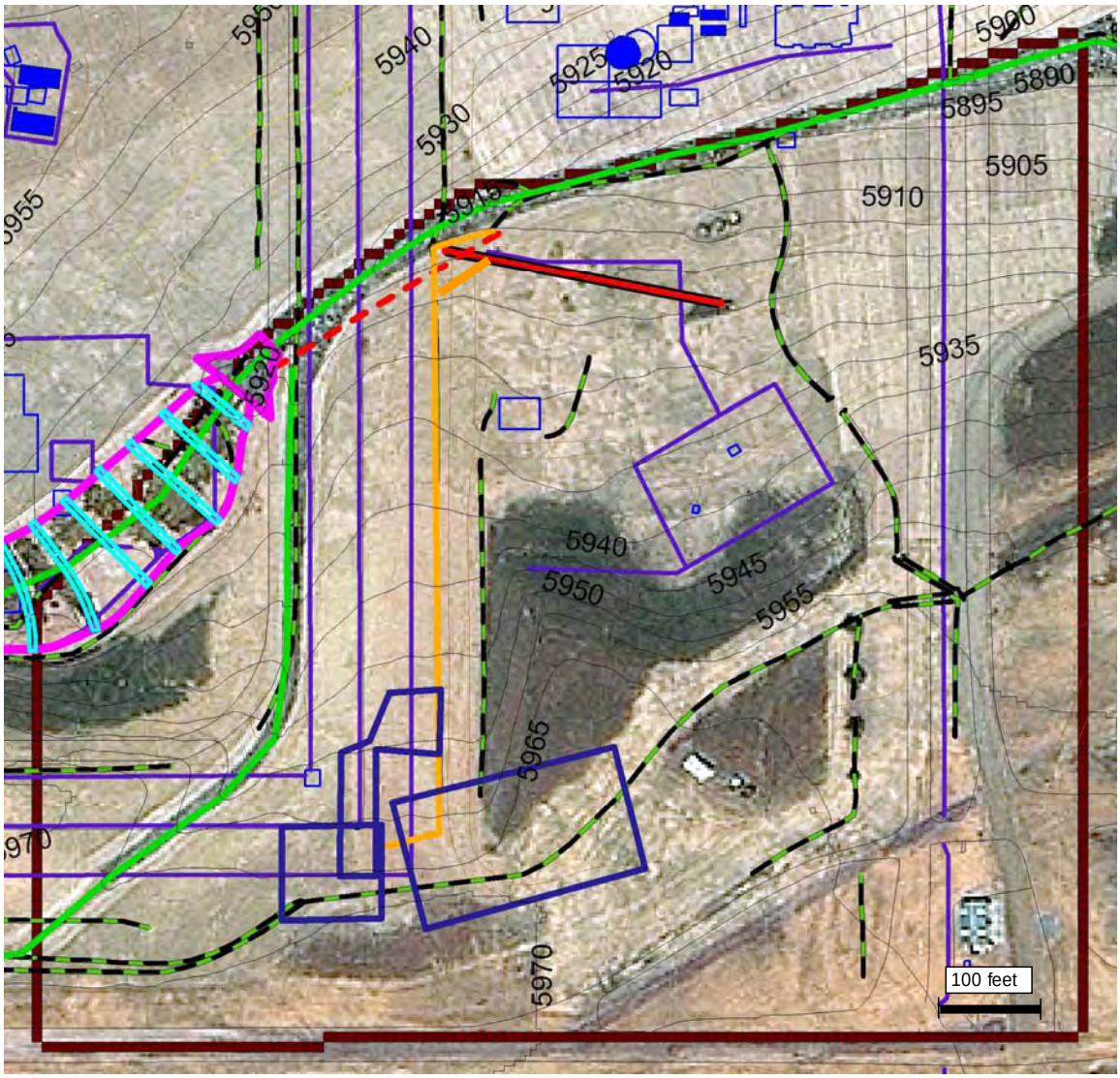


Figure 3. 2005 aerial photo of Mound Plume area. Darker shading indicates areas of dense vegetation (grasses).

- Vegetation coverage was signficantly altered, as indicated by the aerial photograph from 2005 shown on Figure 3. Most of the vegetation over the model area appears to have been regraded, although this took place over an extended period of time. The impact of this is an anticipated increase in the potential for ground water recharge over this area.
- Despite the regrading associated with closure, and excavations related to Oil Burn Pit #2 and the Mound Plume, the as-built post-closure topography (2007) differed very little compared to the former model input used in May 2005 (design topography). Changes were generally less than approximately 1 foot, and up to approximately 3 feet in some localized areas.
- The addition of many new boreholes and one new well in the Mound Plume area during 2005 provided additional geologic information on the weathered bedrock depth. This

information was used to revise the former May 2005 top of weathered bedrock surface and is shown on Figure 4. Changes average less than 1 to 3 feet across the model area.

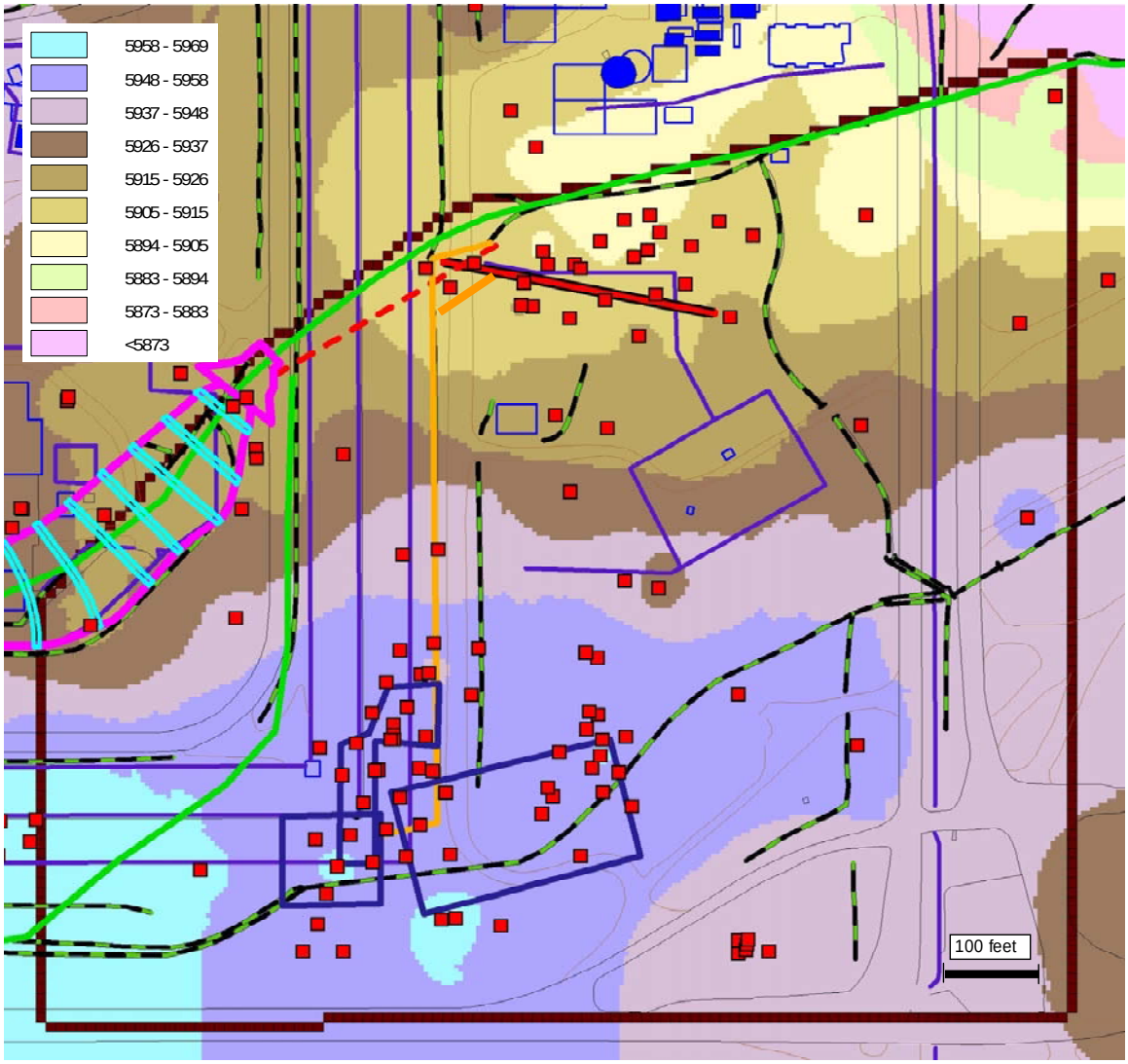


Figure 4. Revised top of weathered bedrock elevation (feet amsl) (control points shown as red squares). Legend indicates elevation in feet msl.

Post-Closure Hydrologic Observations

Several types of post-closure data were reviewed and compared to pre-closure conditions to assess the relative change to hydrologic conditions in the area. These include the following:

- Previous evaluation of site climate data indicated annual precipitation could be nearly twice as large in mesa areas to the north and west, compared to lower drainage areas within the former Rocky Flats Environmental Technology Site (RFETS), such as where the MSPTS is located. Despite this potential difference, the National Renewable Energy Laboratory (NREL) wind station climate data were used in this hydrologic evaluation and revised post-closure model simulations because they are more complete during periods of snow than the local data at unheated precipitation gage locations. A more detailed

description of the NREL wind station climate data is presented in the IA VOC model update memorandum dated January 14, 2008.

- A saturated ground surface area, near the junction of what is believed to be the backfilled trench from the former 72-inch storm drain and the new gravel drain connecting it to the collection trench, was observed on a field visit during May 2007 (personal communication with John Boylan, Stoller). This suggests that the disruption of the backfilled corridor to the north of this junction, combined with possible higher, localized upgradient recharge rates related to excavations, and lack of vegetation may cause ground water levels to rise to near the ground surface at this location. No ground water wells or other subsurface data are available to confirm this is the case.
- Post-closure quarterly monitored ground water level data (average of quarterly measurements during 2006) show very little change has occurred compared to pre-closure data (average of ground water levels from October 1999 to October 2000), as shown on Figure 5. Although many pre-closure wells have been removed, data on Figure 5 suggest that in those wells that remain, ground water levels generally changed less than 3 feet. The exceptions to this are well 00897 (located upgradient of the MSPTS, near the Mound Site source area), where average ground water levels decreased approximately 4 feet, and several wells in the immediate area of the trench, where average ground water levels increased approximately 4 to 8.5 feet. The post-closure increase in ground water levels near the trench may suggest that ground water levels increased in a localized area just upgradient of the trench, possibly due to localized regrading, lack of vegetation, and climate variability; or may reflect the increased volume of ground water that has been routed to the trench since mid-2005. The pre- and post-closure monitoring over the area is not sufficiently detailed to support firm conclusions regarding the change in ground water levels.

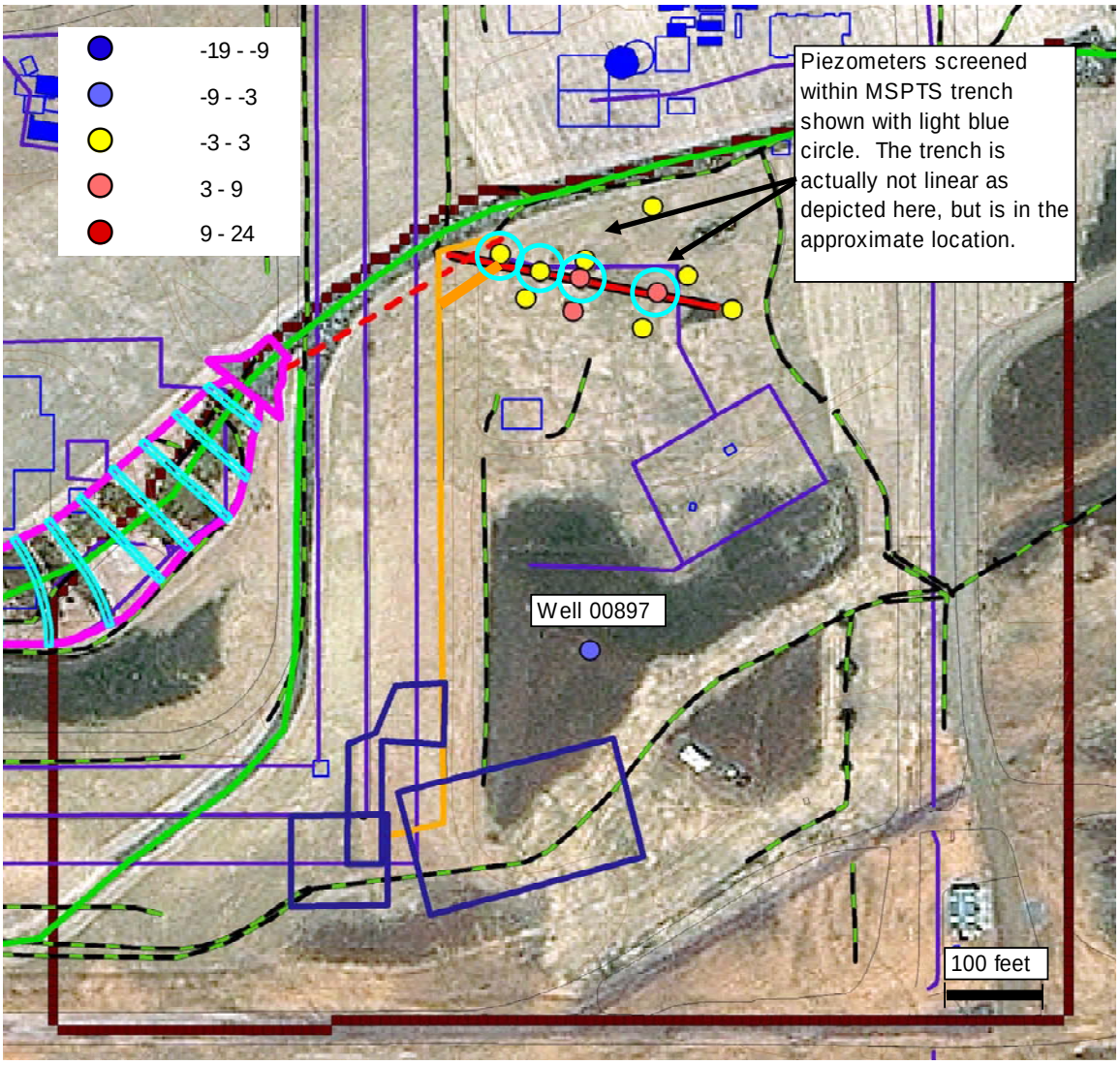


Figure 5. Comparison of average annual ground water monitoring well water levels (feet) (1999/2000 and 2006/2007). The legend shows the difference between simulated and observed levels (feet). Positive numbers (red) indicate water levels increased over the time period, and negative numbers indicate they decreased.

- Post-closure quarterly ground water level data also indicate only minor annual variability for 2006 as shown on Figure 6. Water levels vary less than 3 feet over the year, based on quarterly measurements, although they likely vary more in direct response to precipitation recharge events combined with drainage and evapotranspiration (ET) dynamics. Still, these data suggest that ground water levels over the Mound Site Plume area remained relatively stable throughout the year (2006).

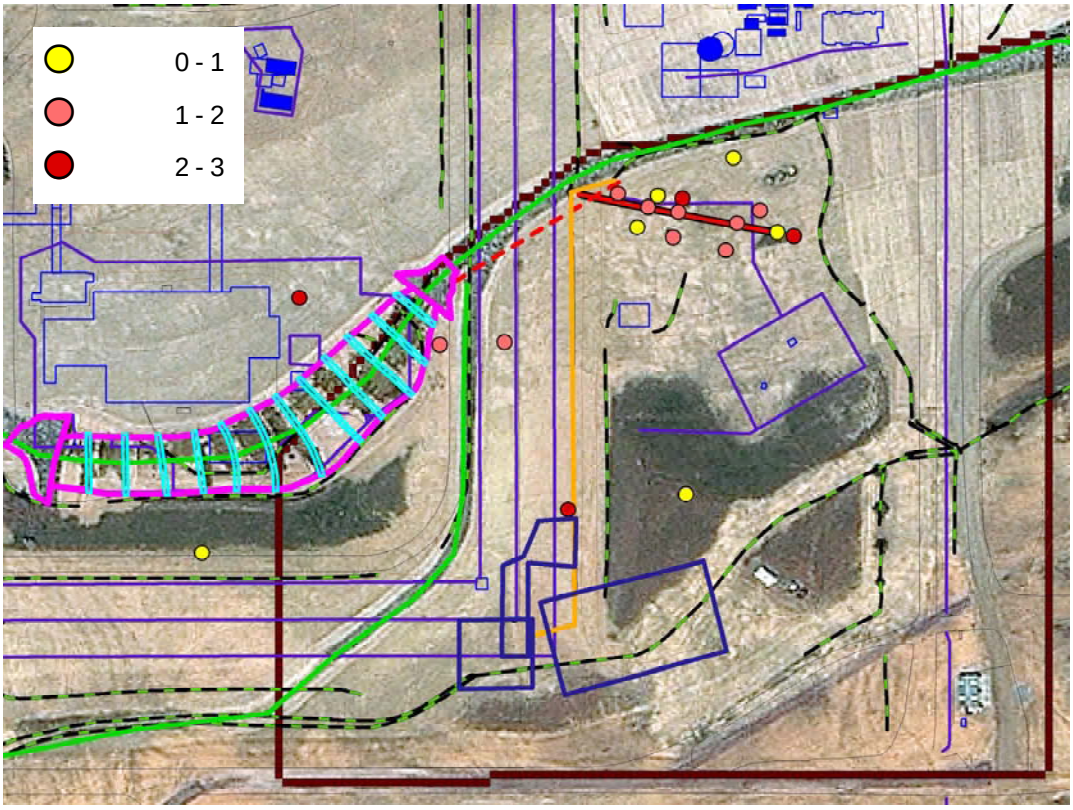


Figure 6. Observed post-closure (2006) variability in quarterly monitored ground water levels (feet) (mostly January, April, July, and October). The legend shows the magnitude of variability in feet.

- Continuously monitored (electronically logged at x-hour intervals??) ground water level data are available for only one well (well 91203) within the Mound Plume model boundary. These data are shown on Figure 7 and suggest ground water levels have declined in this location following closure, despite some obvious errors in the data (i.e., the abrupt changes in ground water levels at four different times). A comparison against quarterly measured data indicates the overall trend in continuously monitored data is consistent with the quarterly measurements. Two of the abrupt shifts coincide with quarterly measurements, when the transducer output is typically reset to physically measured ground water levels. This suggests these Troll dataloggers may have been reprogrammed on those occasions using incorrect reference elevations, and/or they may be experiencing drift problems typical of such transducer-based units.

  The transducer data indicate ground water levels declined from approximately March 2006 to March 2007. This occurred even during spring 2006 recharge events (typically March through May), which caused increased ground water levels in most other continuously monitored wells within the IA; and it also occurred over the higher-than-normal October 2006 through January 2007 period of precipitation (mostly snow). Therefore, this area appears to be dewatering since closure. This may be due to a combination of factors including:

  - Localized ground water drainage,
  - A lowering of ground water related to removal of the 72-inch storm sewer,
  - The tie-in of the backfill material corridor to the MSPTS ground water collection trench,

- o A possible increase of ET associated with installation of FC-5 nearby, which has yielded few surface flows to date, but where ground water levels are relatively shallow, and
- o The lack of infiltration from the former Central Avenue Ditch.

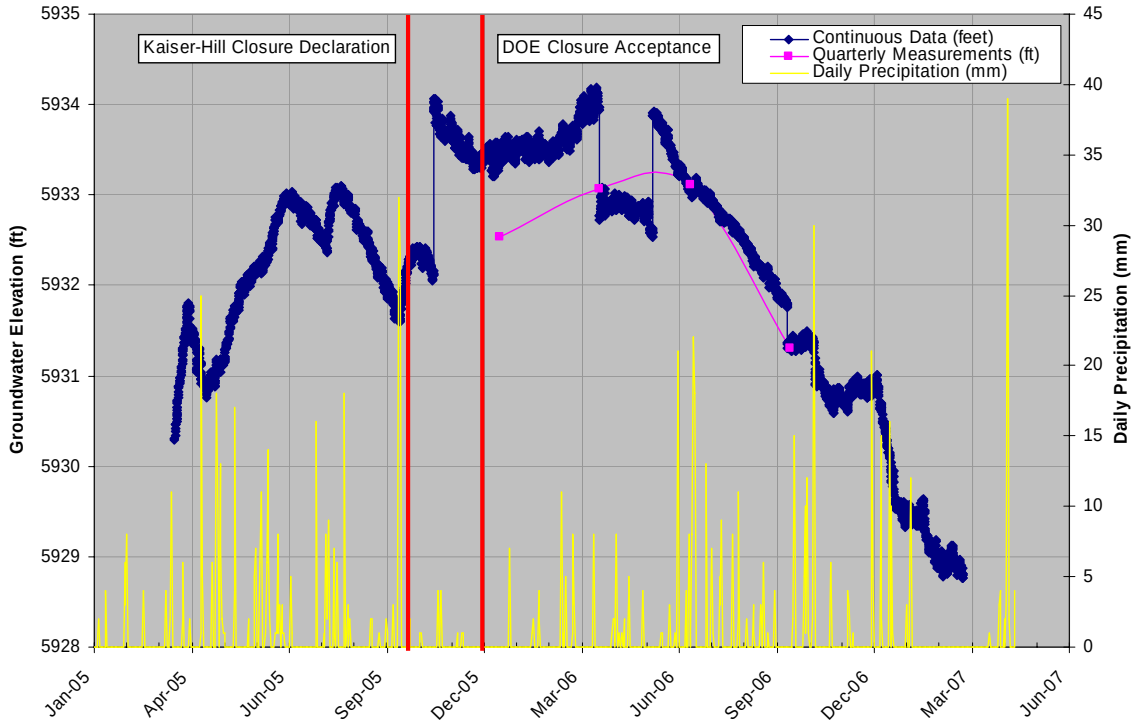


Figure 7. Observed pre- and post-closure ground water levels at continuously monitored well 91203. The red lines indicate respective closure dates.

- Estimated mean daily discharge in gallons per minute (gpm) from the MSPTS during the period January 2000 through March 2007 is shown on Figure 8. Red lines indicate the March 2005 and December 2005 dates when the storm drain was removed and the backfill material was connected to the MSPTS ground water collection trench, and DOE's acceptance of Site closure, respectively.

Several observations can be made about the discharge response from 2000 to 2007. The overall MSPTS discharge response is complex, but appears to be related to several factors, including intra-annual climate variability, land surface topography modifications, surface water routing across the area, and, perhaps most importantly, connection of the former 72-inch storm drain backfill material with the MSPTS ground water collection trench. These are described in more detail below.

- o The mean daily MSPTS discharge is quite variable over the entire period, ranging from approximately 0.1 to over 10 gpm. In most years, but more so before March 2005, average discharge drops to well below 0.5 gpm during late summer, when ET is highest and recharge is relatively low. Discharge rates increase abruptly, typically during spring time, when ground water recharge is highest and ground water levels increase in direct response to most large precipitation events. This is better illustrated on Figure 9, where daily precipitation data are compared against average daily MSPTS discharge rates. Most larger precipitation events clearly result in a relatively rapid response in the MSPTS discharge. Some events, for example the 30 millimeters per day (mm/day) (1.2 inches per day [in/day]) event during October 2006, do not affect discharge significantly, though this could also be due to differences in

precipitation recorded at the NREL wind station compared to actual MSPTS conditions described above.

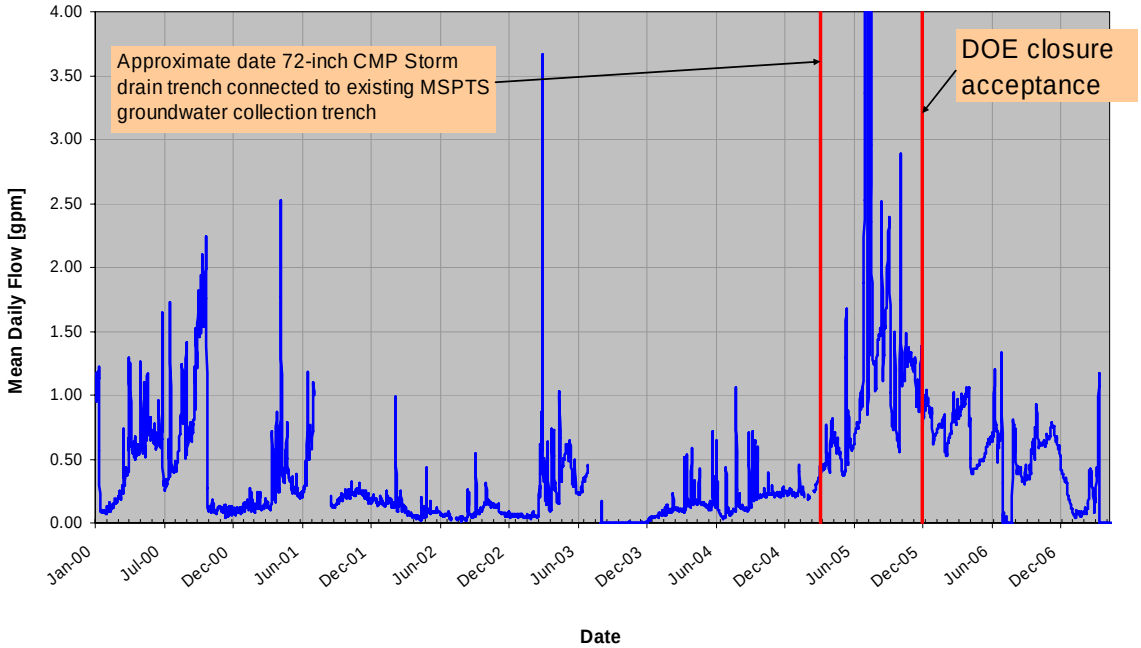


Figure 8. Measured pre- and post-closure (2000 to March 2007) MSPTS effluent discharge (gpm).

- One interesting aspect of the MSPTS discharge response to precipitation is that the duration of this response is limited to 1 to 2 days. This response seems much faster than might be attributed to a ground water response based on review of continuous ground water level monitoring data throughout the former IA. Ground water response (i.e., ground water level increases) to precipitation typically takes weeks to months to show notable increases, and then decreases in response to drainage. The fast discharge response at the MSPTS suggests there may be a surface water connection, or localized areas adjacent to the MSPTS/French drain that exhibit very permeable soils (or possibly macropores) that are rapidly recharged, possibly due to localized interception of surface overland flow.

- The MSPTS discharge increased significantly following connection of the former 72-inch storm drain backfill material to the MSPTS ground water collection trench (approximately March 2005). Average monthly discharge continued to increase from March to approximately October 2005, and then decreased erratically through January 2007. This response may be due to a decrease in the volume of ground water available within and adjacent to the backfill material associated with the 72-inch storm drain as it dewatered (personal communication with John Boylan, Stoller). The connection of the Oil Burn Pit #2 with the storm drain backfill, and the connection of this backfill material to the MSPTS, is substantiated by the notable increase in the VOC daughter product cis-1,2-dichloroethene detected in the MSPTS influent in April 2005. The increase is probably due to Hydrogen Release Compound™ (HRC) that was added to the Oil Burn Pit #2 source area backfill material. Other reasons for the significant increase in MSPTS discharge over this time period may be the following:

    - Routing of surface water through a temporarily unlined ditch crossing the former storm drain and immediately upgradient of the MSPTS ground

water collection trench (see Figure 1) from approximately February through April 2005 (or longer) likely caused localized surface water recharge of ground water through leakage. It is interesting that the increase in the MSPTS trench discharge took place over many months, peaking in approximately October 2005, approximately 7 months after connection to the storm drain backfill material. This is a relatively long period of time to see an increase in flow due to the connection. It also suggests the delay could be caused by the relatively slow ground water mounding in the area and subsequent flow through the artificial fill and Quaternary Colluvium to the MSPTS. The mounded ground water effects would have taken months to reach the trench, and cause MSPTS discharge to increase and decrease as observed on Figures 8 and 9.

- The lack of vegetation could locally increase recharge (i.e., through decreased ET) and thus ground water levels. The amount of pre- and post-closure ground water level data in the area is insufficient to confirm this occurred; however, it probably contributed to increased post-closure MSPTS discharge. As vegetation density increased following Site closure, recharge and ground water levels would show a corresponding decrease.
- Excavations in the area could have provided a more direct means by which ground water levels could have been recharged. Although this would have been localized, the increase in ground water levels could have resulted in increased ground water levels near the storm drain backfill material, French drain, and collection trench.

There is not sufficient continuously-monitored ground water level data from this area to confirm any of these hypotheses.

The overall response shown on Figure 9 suggests that the MSPTS discharge rate may eventually stabilize to a rate similar to that prior to connection of the storm drain backfill material to the MSPTS trench. This seems further supported by the low rates in February 2007 (less than 0.1 gpm), which are similar to those associated with the period prior to connection of the backfill material. In addition, the discharge rate during 2000 appears similar to that observed post-closure. This may further suggest that the several years preceding the storm drain backfill material connection in March 2005 produced lower-than-average ground water levels, and hence discharge.

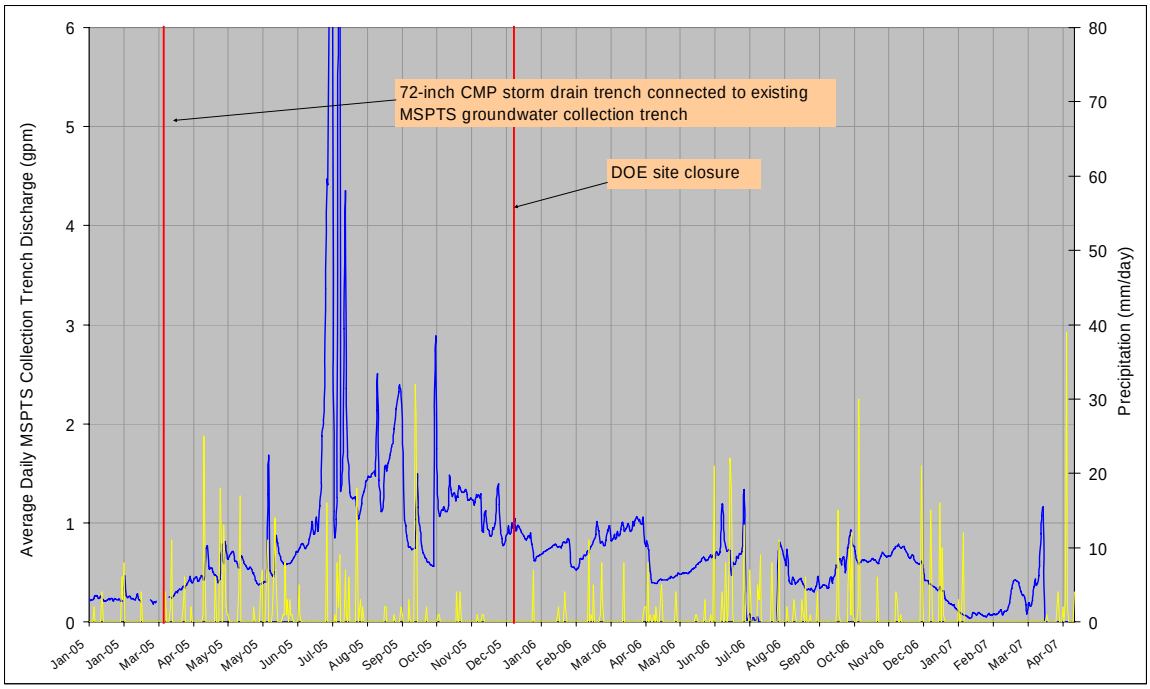


Figure 9. Comparison of MSPTS ground water collection trench discharge (gpm) shown with blue line to NREL station daily precipitation (mm/day) shown with vertical yellow lines.

2.0 Model Updates and Simulations

The localized MSPTS integrated flow model was originally established during March 2005, primarily to assess ground water flow paths in the vicinity of the Mound Site Plume and the approximate capture zone associated with the then-current configuration of the ground water collection trench. Recommendations based on this initial modeling work suggested that the permeable backfill material associated with a nearby 72-inch storm drain be physically connected to the existing MSPTS ground water collection trench to increase the potential capture of VOCs in the area. This was reported in the final Interim Measure/Interim Remedial Action document for ground water at RFETS by Kaiser-Hill (June 21, 2005). The MSPTS model was then updated again in May 2005 to reflect updates to the closure topography in the area. Simulated results showed ground water level and flow direction changes were negligible because the topographic change was minor in the Mound Site area.

Based on a review of available post-closure data and former modeling input and assumptions, the following data were revised and specified in the updated model:

- Surface topography;
- Bedrock surface;
- Former storm drain backfill material connection with the MSPTS ground water collection trench; and
- Climate data based on the NREL wind station climate data.

Initial updated model simulations were run for two separate time periods: one for pre-closure conditions from October 2003 to April 2005, and the other for post-closure conditions from April 1, 2005, to May 1, 2007. Two simulations were required because of the change in the surface topography and connection of the storm sewer backfill material to the existing MSPTS ground water collection trench from pre- to post-closure conditions. In reality, the change in surface

topography did not happen instantaneously on April 1, 2005, but over a longer period of time, beginning before and ending after April 2005. Detailed records of the changes in surface topography were unavailable, but are generally considered to have a smaller impact on local hydrologic response compared to other factors.

Results of the initial updated model simulations indicate the following:

- Average annual simulated water levels at available post-closure quarterly monitored wells compare well with observed average annual ground water levels (2006) as shown on Figure 10. The quarterly monitored ground water levels do not reflect the relatively rapid seasonal ground water level fluctuations during the year, but do reflect reasonable average values that can be compared against average simulated annual ground water levels. The spatial distribution of current ground water level data in the area is not sufficient to capture the localized hydrologic response of key features, for example, along the former storm drain backfill material, French drain, or MSPTS ground water collection trench.

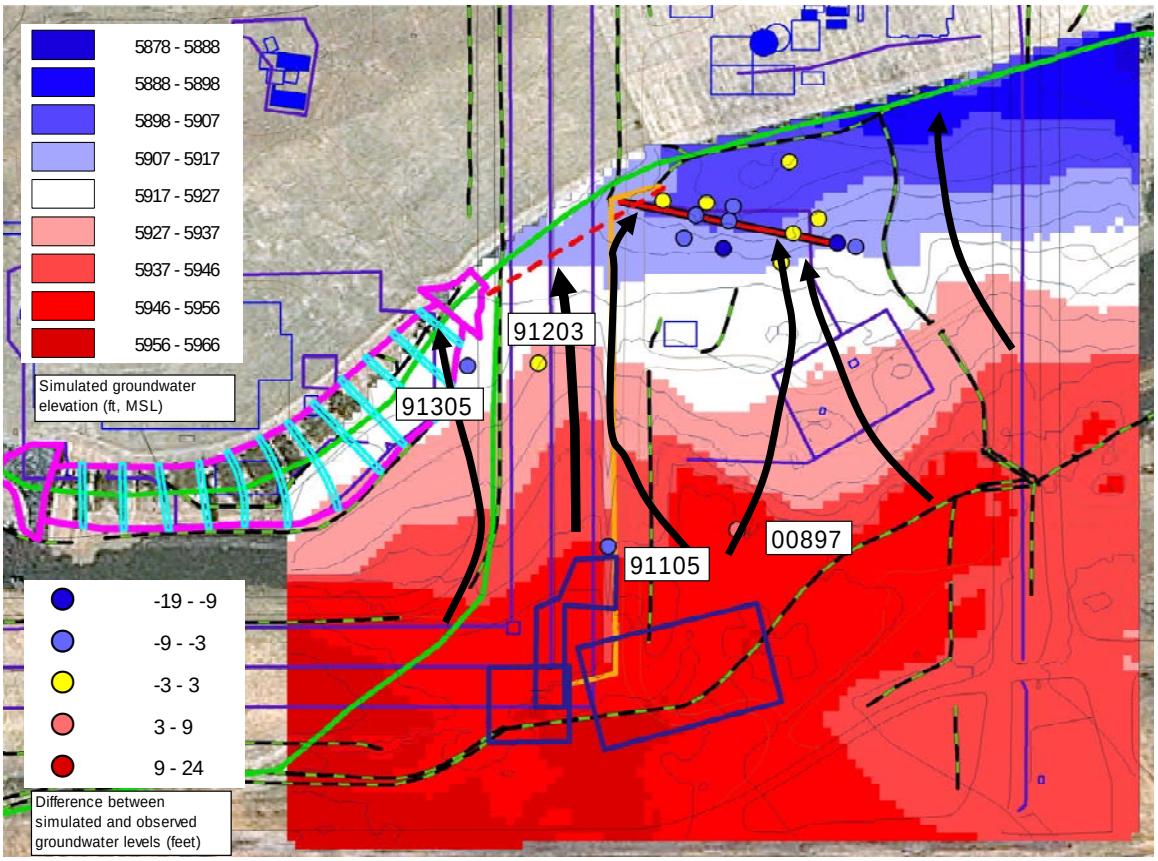


Figure 10. Difference in average annual simulated and observed (2006) ground water levels (feet) shown with color-coded circles (lower legend). Simulated ground water elevations are shown in color gradients (upper legend). Black arrows indicate approximate ground water flow paths.

In upgradient wells, it is clear that the model undersimulates (underestimates) ground water levels at wells 91305 and 91105, but oversimulates (overestimates) ground water levels at well 00897 (by approximately 9 feet). Well 00897 is located just east of 91105, near the Mound Site source area. At well 91105, located very close to the former 72-inch storm drain (shown as an orange line on Figure 10), simulated ground water levels are

too low (-3 to -9 feet), suggesting simulated discharge to this former drain backfill material may be too high. Ground water flow directions indicate most ground water immediately south of the French drain/MSPTS ground water collection trench is likely intercepted by this system. Ground water flow at well 91305 does not appear to be intercepted, consistent with pre-closure predictions.

- Simulated MSPTS discharge using a drain constant of 1.0 x 10^{-6} 1/s for both the French drain and trench, and a hydraulic conductivity value of 0.0001 meter per second (m/s) for the storm drain backfill material, produced approximately 1 to 2 gpm of flow from 2002 through 2007. Although this is similar in magnitude to the observed average annual discharge rate from the system, it does not reflect the observed short-term, peaky discharge response well. This short-term response is directly related to larger storm events throughout each year. In addition, it does not capture the lower discharge rate prior to the connection of the storm drain backfill material with the MSPTS trench as shown on Figure 11. Simulated discharge does respond to changes in climate that roughly correlate with observed data; however, the timing of specific peak discharges do not correlate well. This is likely due in large part to differences between climate at the NREL wind station (approximately 2 miles away) and at the MSPTS area. It could also be due to localized surface infiltration as well.

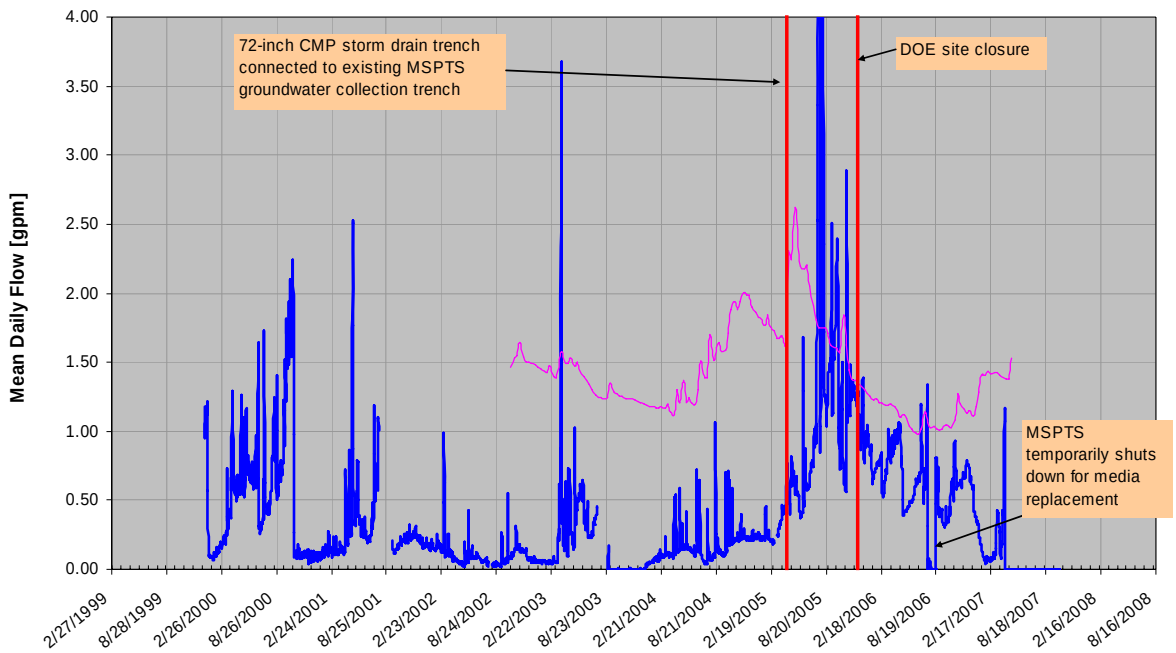


Figure 11. Observed and simulated discharge from the MSPTS (gpm). The dark blue line is observed discharge, while the magenta line is simulated discharge. The vertical red lines indicate the storm drain connection date and site closure date.

Based on the initial simulations, several modifications were made to assess the sensitivity of simulated pre- and post-closure discharge rates and annual ground water levels throughout the year to varying model inputs. Specific modifications included the following:

- Hydraulic conductivity values for the artificial fill and former storm drain backfill material were increased to promote larger and faster lateral inflows to the storm drain backfill material corridor, which in turn would provide increased inflow to the MSPTS.

- Drain constants along the French drain and MSPTS ground water collection trench were initially decreased to reduce overall discharge from the MSPTS. In subsequent simulations they were also spatially varied to be more consistent with observations during initial construction. Most of the initial MSPTS trench flow came after connection with the French drain (approximately 2 gpm).
- Input to the model vegetation database was adjusted to reflect the low post-closure coverage density.
- Localized ground water mounding in response to temporary surface water routing from the 700 Area from February through April 2005 was simulated to be approximately concurrent with the connection of the storm drain backfill material to the MSPTS ground water collection trench.
- Hydraulic conductivity values for the weathered bedrock were decreased (Arapahoe Sandstone was assumed to be equivalent to the claystone bedrock material). Specifying lower values may cause the MSPTS to be more effective at capturing shallow ground water flow that might otherwise bypass it in the weathered bedrock.

Results of these sensitivity simulations indicated the following:

- Adjusting the hydraulic conductivity values of the artificial fill material and storm drain backfill material had only minor effects on the simulated response on the MSPTS discharge. Neither the magnitude nor the short-term fluctuations (i.e., peaky response) changed significantly. Higher values caused uphill shallow ground water levels to drop slightly, and near-MSPTS levels to increase slightly as expected.
- Decreasing drain constants in the French drain and MSPTS trench had a direct effect on decreasing the MSPTS discharge magnitude, but had no effect on the short-term fluctuations. The peaky response in observed discharge could not be accurately reproduced. In addition, the notable increase in post-closure (storm drain backfill material connected to MSPTS) discharge was not simulated.
- Lowering the hydraulic conductivity of the Arapahoe Sandstone had only limited effects on the MSPTS discharge. The model oversimulated ground water levels in uphill (upgradient) wells from the MSPTS (i.e., well 00897). Lower hydraulic conductivity values reduced the uphill drainage of shallow ground water through the Arapahoe Sandstone.
- Simulating reduced vegetation for post-closure conditions did cause the MSPTS discharge to increase, but only by approximately a factor of 1.5 (see Figure 12).
- Simulating ground water recharge caused by the temporary surface water routing from the 700 Area along with reduced vegetation also caused an increase in MSPTS discharge as shown on Figure 12. However, the simulated increase in discharge (approximately twice) is much lower than that observed (about 10-fold).

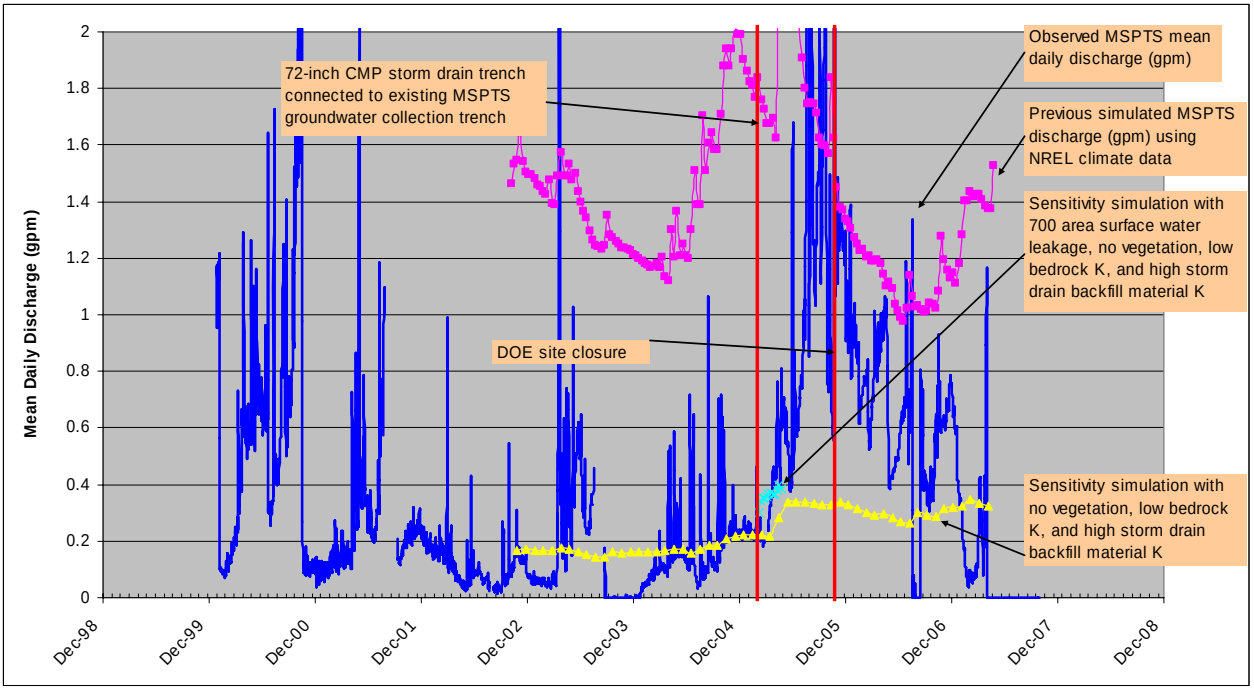


Figure 12. Simulated versus observed MSPTS ground water discharge (mean daily gpm) (K represents hydraulic conductivity).

3.0 Conclusions

Review of post-closure data suggests that ground water levels in the vicinity of the MSPTS have not changed significantly since closure in late 2005. However, the volume of MSPTS discharge increased significantly following closure. The lack of a similar observed response in ground water levels measured in the post-closure ground water monitoring well network suggests that the increased MSPTS discharge may be localized, and may even be somehow reflecting the faster-responding stage height in FC-4, or even FC-5 surface flow. In other words, the increased discharge may be due to a local mechanism that is simply not captured by the post-closure monitoring wells.

Review of the previous MSPTS model used to simulate post-closure conditions indicated that it reproduced observed post-closure ground water levels well. However, this model did not reproduce the significant increase in MSPTS discharge rates following connection of the former 72-inch storm drain backfill material with the MSPTS trench after March 2005. This model also did not simulate the peaky discharge response of the MSPTS, which clearly responds to many precipitation events throughout the year. As a result, several sensitivity simulations were made to this model's input to assess which factors affect simulated MSPTS discharge, while continuing to reproduce observed average annual ground water levels in the MSPTS vicinity.

Based on the sensitivity analyses, several conclusions can be made:

1) The peaky response of the MSPTS ground water discharge is difficult to reproduce in the model. Two likely reasons for the peaky response are:
    a. The MSPTS is connected to surface water (i.e., the French drain could have been intercepted by FC-5 or FC-4).
    b. The soils adjacent to the MSPTS are much more permeable than assumed in the model. Both the pre- and post-closure discharge response is peaky.

2) The source of the VOCs detected in well 91305 remains uncertain. It is possible that flows from this source area are not captured by the MSPTS (including the French drain).

3) The former 72-inch storm drain backfill material corridor likely acts as a preferential conduit for ground water flow to the MSPTS. However, model simulations indicate the areal extent over which ground water is captured is likely small because of the limited extent of permeable backfill material, and because much of this material is surrounded by lower permeability weathered bedrock material.

4) Results of modeling suggest that the significant increase in MSPTS discharge following the March 2005 time frame is likely due to a combination of factors including:

    a. Connection with the former storm drain backfill material;

    b. Regrading and lack of vegetation coverage in the area; and

    c. Routing of 700 Area surface water immediately upgradient of the MSPTS from west to east.

F.3 Report: *Original Landfill Post-Closure (2007) Integrated Surface-Subsurface Hydrologic Flow System Assessment and Model Update, Rocky Flats Site*

January 28, 2008

MEMORANDUM

TO: John Boylan, S.M. Stoller Corporation

FROM: Bob Prucha, Integrated Hydro Systems, LLC

SUBJECT: Original Landfill Post-Closure (2007) Integrated Surface-Subsurface Hydrologic Flow System Assessment and Model Update, Rocky Flats Site

This memorandum summarizes the results of a post-closure integrated surface-subsurface hydrologic flow system assessment for the Original Landfill (OLF) area at the Rocky Flats Site. Specifically, post-closure observed data have been evaluated and the former OLF integrated hydrologic flow model (Kaiser-Hill, 2005) has been updated with new information since closure of the Rocky Flats Site. The date of closure (U.S. Department of Energy [DOE] acceptance of contractor's declaration of completion) has been defined as December 7, 2005. Updated model results were assessed and compared to both previous post-closure simulations and actual observed hydrologic conditions in the area. Although simulations show a good correlation with observed conditions, some revisions were made to the model to improve the correlation. For example, with the revised post-closure model, a shallow subsurface drain was simulated in one seep area to evaluate the hydrologic impact of the proposed routing of surface discharge away from this area.

The scope of work was originally defined by S.M. Stoller Corporation (Stoller) in September 2005 and then modified to meet immediate needs in April and May 2007. This memorandum supplements the former Industrial Area (IA)-wide post-closure hydrologic and hydraulic assessment summarized in a recent memorandum submitted to Stoller on January 28, 2008, entitled "Industrial Area Post-Closure (2007) Integrated Surface-Subsurface Hydrologic and Hydraulic Flow System Assessment and Model Update."

Information in this memorandum is organized as follows:

1) Post-closure observed data evaluation;
2) Model updates and simulations; and
3) Conclusions.

1.0 Post-Closure Observed Data Evaluation

Figure 1 shows the location of key features associated with the OLF as follows:

- Approximate extent of the landfill waste;
- Boreholes with geologic information;
- Ground water wells;
- Surface drainage features including Woman Creek to the south (blue line) and surface channels created by berms extending to the western and eastern sides of the OLF; and
- Clay toe buttress.

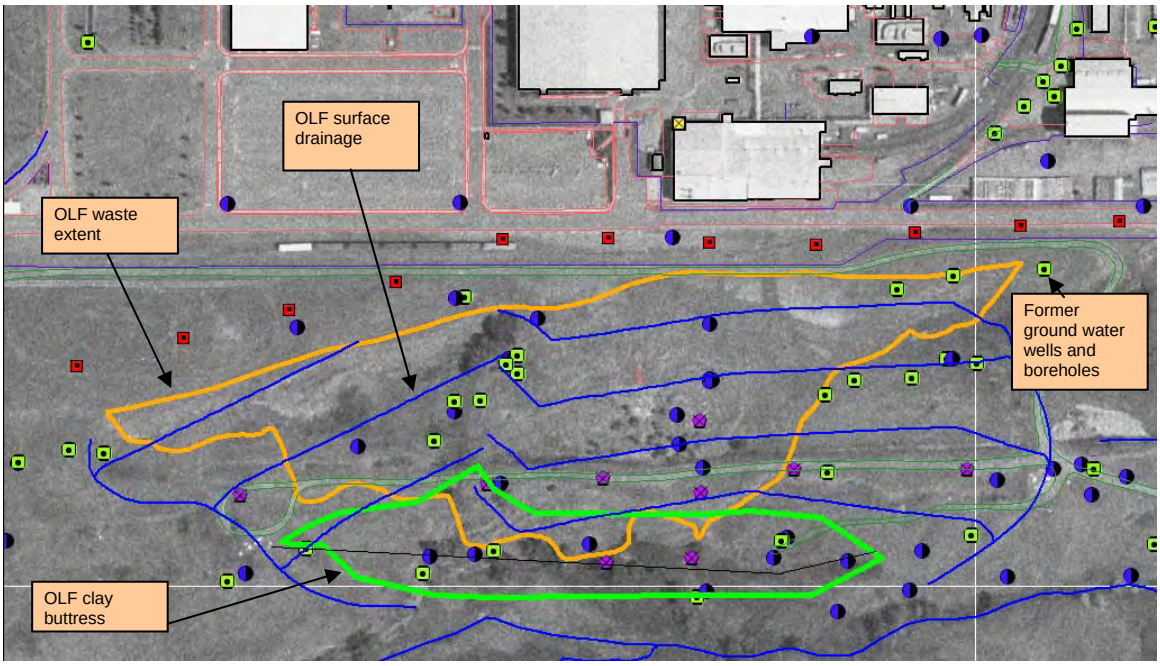


Figure 1. OLF features. Red squares represent recent boreholes drilled in support of the landfill closure design. All other symbols are former boreholes in the area. Photo background represents conditions prior to Site closure.

Figure 2 shows pre-existing seep areas in the OLF area, along with current seeps as of May 2007. Some of the recent seeps are likely related to former seep areas, such as Seep #7, located just above the clay buttress and below the former larger seep area located approximately 100 feet uphill to the north. Several photos were taken of the Seep #7 area as shown on Figures 3 and 4. During a visit to the OLF in May 2007, Seep #7 flow rates appeared to be approximately 5 to 10 gallons per minute (gpm) based on visual inspection. A current seep complex at the northeastern corner of the landfill, along the surface drainage berm, sits just downhill (south) of another former seep complex.

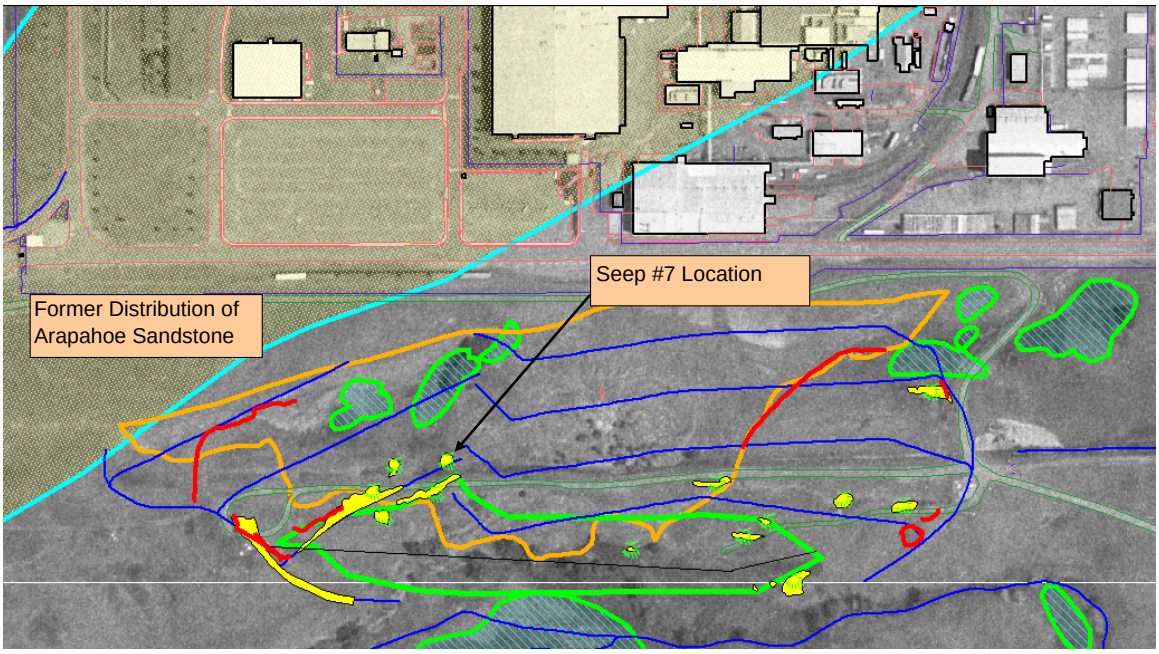


Figure 2. Mapped seep locations. Former seep locations (pre-closure, from seep mapping efforts in the mid-1990s) are shown in green, and post-closure (spring 2007) seep locations are shown in yellow with a green boundary. Slump locations mapped in early 2007 are shown with red lines. Upper-left portion of figure with different shading marks approximate edge of Arapahoe Sandstone discussed later. Photo base is from pre-closure era.

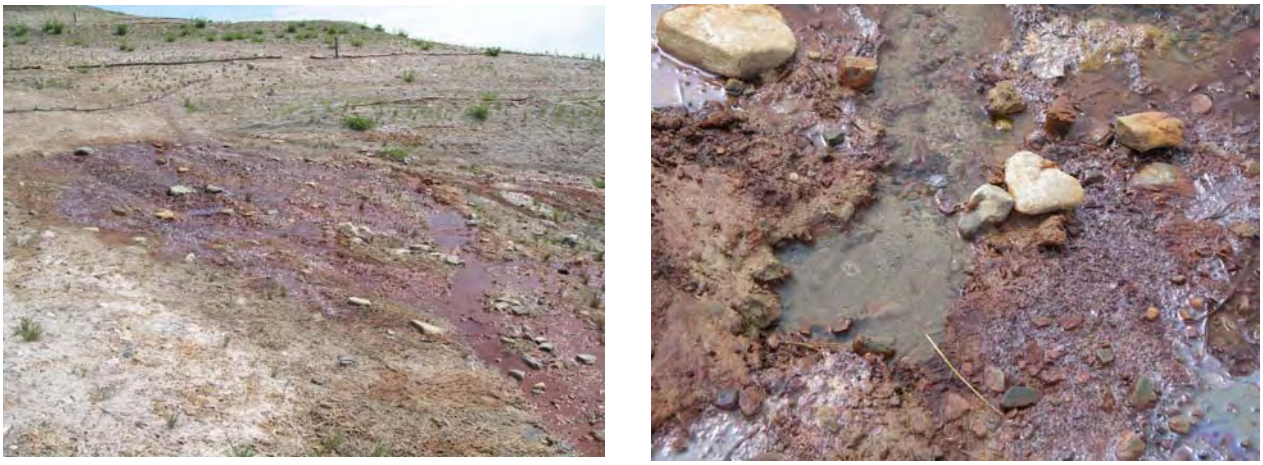


Figure 3. Seep #7 area. Seep surface discharge is over an approximately 20-foot x 20-foot area (May 2007).

Figure 4. Surface runoff from Seep #7 into the western side channel (OLF diversion Berm #3). Picture is taken from the west drainage channel looking east along the Berm #3 channel toward Seep #7, which is located approximately 430 feet away.

Despite the apparent correlations between current and former seep locations, several new seep areas appear to have developed for a combination of reasons:

- The OLF area vegetation coverage density is only approximately 20 percent established. This sparse vegetation effectively promotes infiltration and recharge of local ground water that would otherwise have been intercepted or transpired to the atmosphere by fully established vegetation.
- Perhaps the single most important factor determining seep formation is the depth to the weathered bedrock, or the thickness of the unconsolidated material. Figure 5 compares the locations of recent seeps to a map of the depth to the weathered bedrock. This surface was created by subtracting the current surface topography, with the more recent side channels and surface berms, from a carefully estimated (interpolated) weathered bedrock surface constructed using geologic borehole information available as of March 2005. More recent seep locations not explained by former seep locations correlate well with areas where weathered bedrock is relatively shallow. These shallow bedrock areas are generally adjacent to thicker unconsolidated materials which provide a source of ground water that is forced to discharge where the unconsolidated material starts to thin. This situation is most evident along the lower (southernmost) portions of the side channels where, as shown on Figure 5, the weathered bedrock is nearly at the ground surface. The much lower permeability of the weathered bedrock compared to the unconsolidated material forces ground water to the surface in these areas.

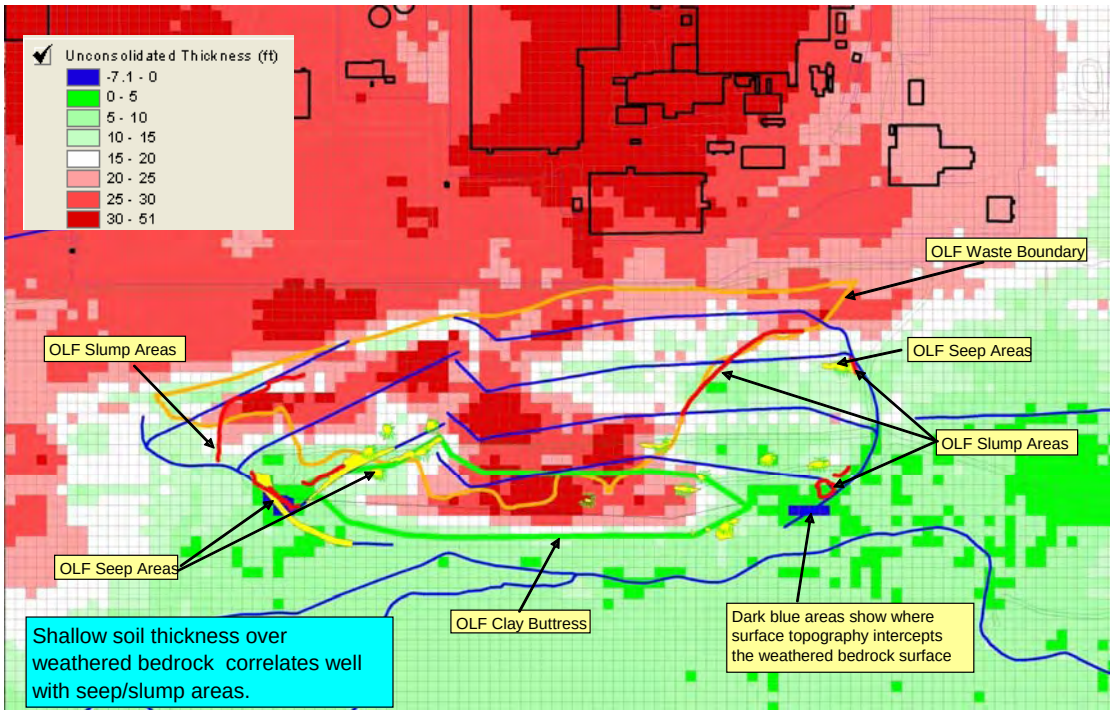


Figure 5. Updated post-closure depth to weathered bedrock, or thickness of unconsolidated material (feet), using the post-closure surface topography from the June 2006 flyover.

- Snow accumulation during December 2006 through February 2007 along and downhill of berms, and subsequent melting, could have caused significant localized ground water recharge in some areas. Because most surface flow in the OLF bermed channels is reported to have occurred during snowmelt, additional focused recharge along these channels or at their interception with the side channels may have also led to increased ground water saturation at the ground surface. This may be especially true for another continuously flowing seep observed May 14, 2007, located just below the eastern end of the clay buttress and estimated to discharge between 5 and 10 gpm. The fact that this still flows, and Seep #7 doesn't by the end of summer 2007, suggests it probably drains a larger uphill area impacted than Seep #7.
- Higher precipitation from late 2006 to approximately April 2007 is likely the cause of increased seep discharge and number of seeps.
- Some of the seeps may be related to the lower permeability of the clay buttress, which may cause perched ground water conditions above (i.e., the westernmost end of the buttress may reflect these conditions).
- Seeps along the central and western portion of the northern edge of the clay buttress seem most related to Seep #7, which discharges mainly from the central area and then flows down the local bermed channel (Diversion Ditch #3) to the western side channel. The area where Berm #3 meets the western channel has also been subject to slumping, and coincides with an area of former seeps (as per John Boylan, Stoller). Seep #7 appears to have been flowing for some time, and the water does not infiltrate into the fill material and the gravel drain installed on the upgradient side of the clay buttress to address flow from this seep. This suggests that the Seep #7 gravel drain, and/or the

engineered gravel drain beneath the buttress, may not effectively drain ground water upgradient of the buttress into the alluvium along Woman Creek. No monitoring data exist to verify this condition; however, ground water flow beneath the clay buttress through the gravel is limited, not by the high permeability of the gravel, but by the relatively lower permeability of the alluvium where the gravel terminates. The intent of this gravel drain was to drain any ground water that might otherwise build up behind the buttress through the alluvium. However, flow within the gravel drain could be impeded by either the relatively low alluvium permeability, or possibly by reduced drain permeability due to the inflow of finer particulates (i.e., clogging due to accumulating silt/clay) over time.

Figure 6 shows the current (yellow symbols) and former (red symbols) ground water monitoring well locations in the OLF area. The significant reduction in the number of monitoring wells limits the ability to assess the effects of land configuration changes and post-closure conditions on the ground water flow system.

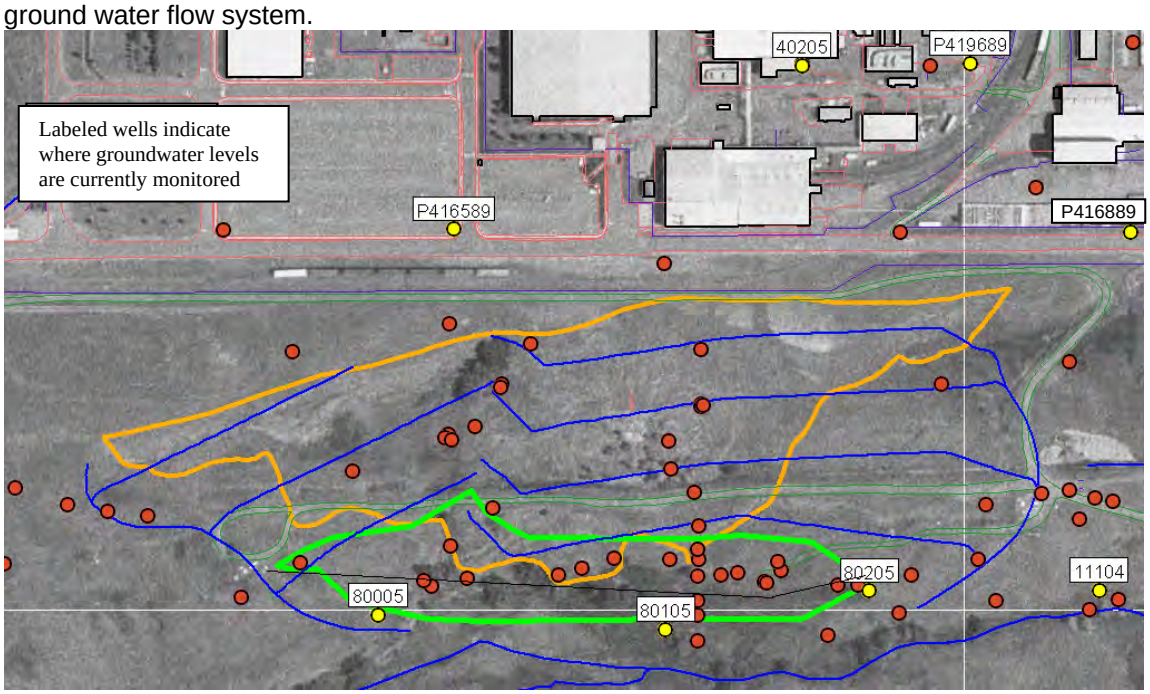


Figure 6. Current OLF area ground water monitoring well locations (yellow) and former locations (red). Ground water levels are only monitored in the current well locations. Photo base from pre-closure era.

Three wells, 80005, 80105, and 80205, are located below the clay buttress, and one well, P416589, is located upgradient (from P416589 south and downhill to Walnut Creek) in the former Building 440 area. Of these wells, only P416589 existed prior to closure. Post-closure ground water level data for these wells are shown on Figure 7 from approximately September 2005 to November 2006. Despite the expected seasonal change in ground water levels, pre-closure data for well P416589 suggest that no significant change in ground water elevation in the area (at least upgradient of the OLF) has occurred. In addition, data indicate that the responses in wells P416589 and 80105 (downgradient of the center of the buttress) are similar. Wells downgradient of the east and west ends of the buttress (80205 and 80005, respectively) show a similar although inverted response. This inversion at 80205 and 80005 may reflect the localized effects on ground water levels monitored by these wells from focused recharge from the nearby east and west perimeter channels.

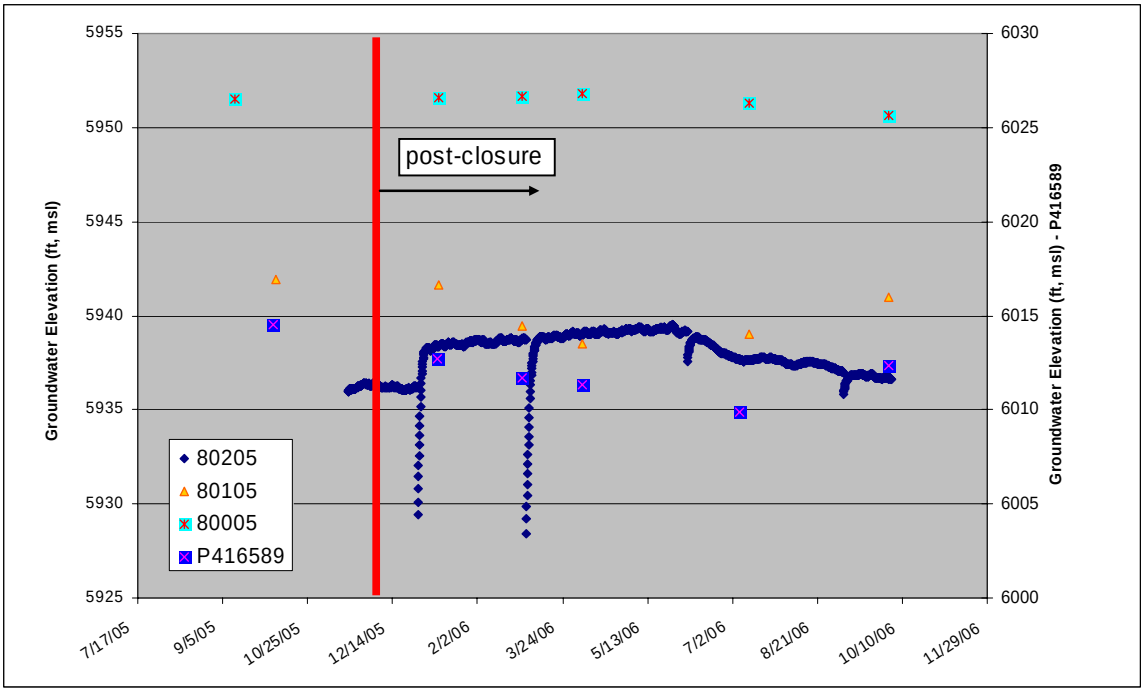


Figure 7. Post-closure ground water monitoring well water levels (ft amsl)

Surface water flow rates in the OLF diversion berms and perimeter channels are not measured. During May 2007, visual inspection of continuously flowing seeps (i.e., Seep #7 and the seep located just below the eastern end of the clay buttress, since named Seep #8) suggested a total combined ground water discharge of 10 to 20 gpm was occurring throughout the OLF area at that time.

2.0 Model Updates and Simulations

The last pre-closure OLF model simulations of planned post-closure conditions including the clay buttress, regraded topographic surface, and subsurface gravel drain (beneath the buttress) were performed in March 2005. These simulations did not show significant seepage, except for wet year conditions. General conclusions at the time were as follows:

- Seeps may occur in areas where weathered bedrock is shallow, depending on climatic conditions.

- Seeps might occur upgradient of the clay buttress if the gravel drain were to fail, either by lower-than-expected permeability of the underlying valley fill alluvial material, or reduced permeability caused by inflow of fine particulates.

The current post-closure information indicate three changes to the previous modeling that could be considered for updates:

1. New surface topography and surface drainage system;
2. Approximately 20 percent vegetation cover instead of fully established vegetation; and
3. Post-closure climate conditions.

Two preliminary simulations were conducted to evaluate the post-closure conditions. In the first simulation only the surface topography was updated, while in the second the surface topography and vegetation coverage were updated. The hydrologic response in both simulations was driven

using the 1999-2000 climate year data because these data have been carefully assessed and synchronized in time (i.e., precipitation, temperature, and potential evapotranspiration [PET]). In addition, initially the time required to develop a new post-closure dataset was considered significant.

Initial simulations with just the new surface topography modification showed that most observed seep locations were well simulated (Figure 8). These seeps mainly occur where the thickness of unconsolidated material overlying the weathered bedrock surface is relatively shallow. This generally occurs where the surface topography was modified, or lowered to accommodate the surface drainage features. This is most pronounced along the southern ends of the side channels, which were originally not included in the previous OLF closure configuration (March 2005 version).

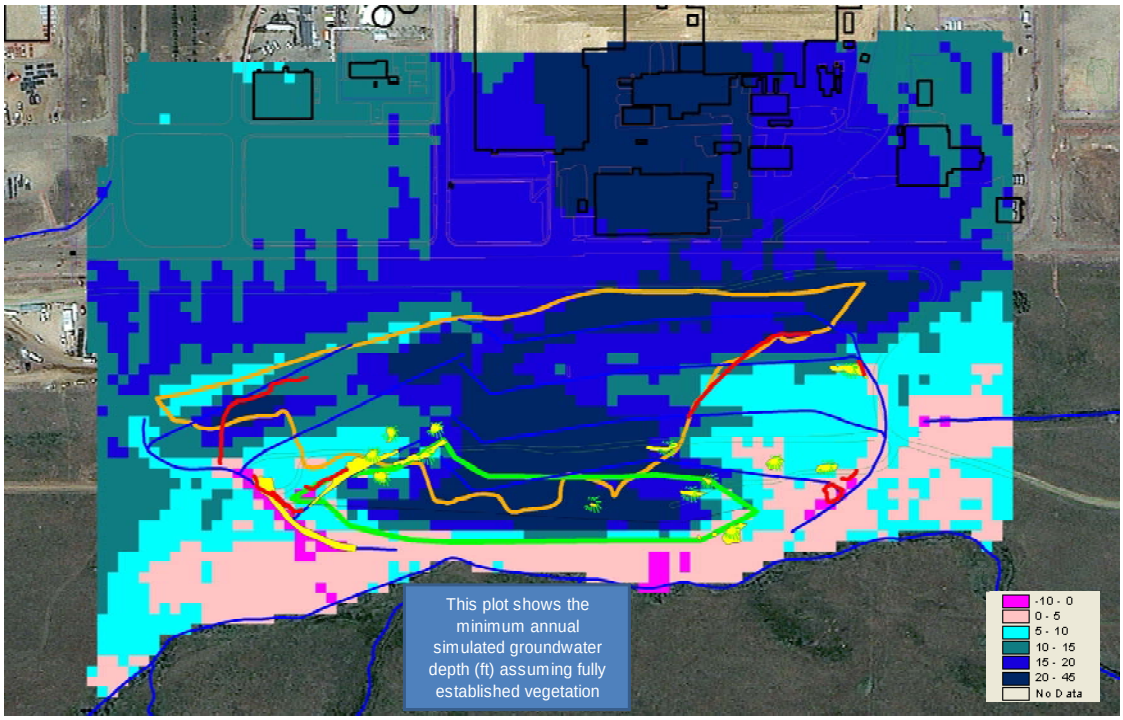


Figure 8. Minimum annual simulated ground water depth (feet) for updated model with only topographic modification and using 1999-2000 climate dataset. Observed seeps are shown in yellow, simulated seep areas are pink. Other features are as defined on previous figures. Photo base is from pre-closure era.

Results from the second simulation, which added vegetation updates, showed significant seep development, largely in areas where weathered bedrock is shallow, or over the footprint of the clay buttress as shown on Figure 9. Initial simulations also indicated that surface discharge at Seep #7 could not be reproduced. Because of the significant and continuous amount of discharge at this location compared to other seeps, the following available data were carefully reviewed for this area:

- 1937 aerial photograph;
- 1951 aerial photograph;
- Detailed borehole logs in the area (Figure 10); and
- Former mapped Arapahoe Sandstone distribution (Figure 2).

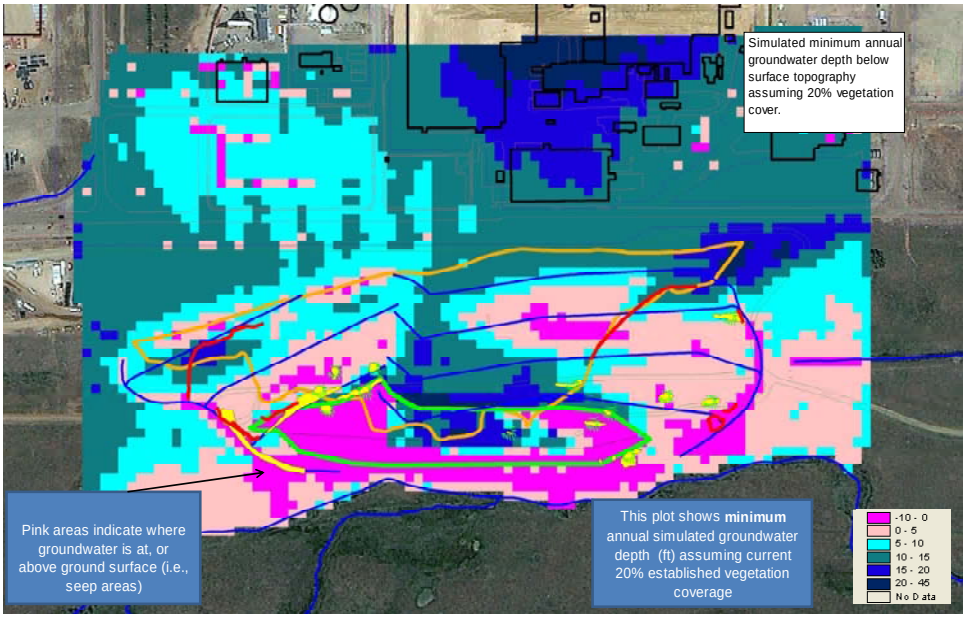


Figure 9. Minimum annual simulated ground water depth for model with topographic modification, 20% vegetation coverage, and using 1999-2000 climate dataset. Observed seeps are shown in yellow, simulated seep areas in pink. Other features as defined on previous figures. Much of the clay buttress shows saturation at the surface due to its flat topography and ponding of precipitation above clay material specified in the model at the surface. Photo base from pre-closure era.

Results of this review suggest that a sandstone body (informally referenced in historical site geologic reports as the Arapahoe Sandstone #1) immediately subcrops the unconsolidated material just north and west of Seep #7, as shown on Figure 10a. As illustrated on Figure 10b, this sandstone body increases in depth toward the east. The shallow or exposed sandstone along the former topographic face of the slope before Site development (visible on 1937 and 1951 aerial photographs) probably caused the former seep flow in this area. Reconfiguration of the OLF surface topography during closure likely caused the former seep to discharge at Seep #7.

The upgradient northern and western extent and configuration of the sandstone body are uncertain. However, it is likely connected to the larger generally southwest-northeast trending Arapahoe Sandstone body 200 to 300 feet northwest of Seep #7 (Figure 2). This Arapahoe Sandstone body is based on former mapping (EG&G, 1995) and extends generally northeast more than 4,000 feet. This body was included in the former OLF model, but did not extend to the Seep #7 area. Evaluation of available detailed borehole logs in the area suggests it probably does extend to the Seep #7 area. Figure 11 shows the distribution of the modified sandstone body subcropping the unconsolidated material, and its configuration and likely intersection with the previously mapped Arapahoe Sandstone (#1) body to the northwest.

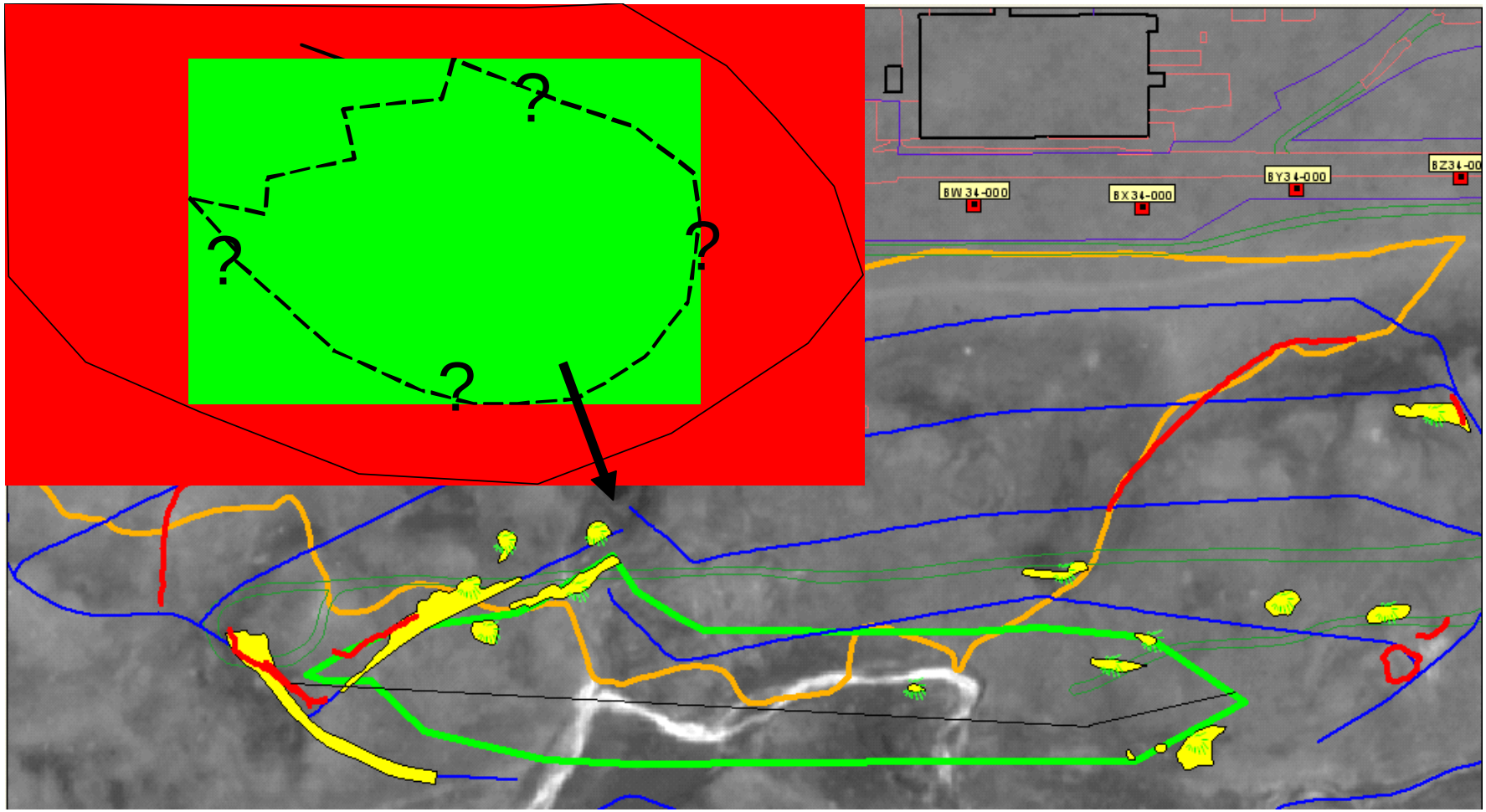


Figure 10a. Approximate location of sandstone (green) subcropping unconsolidated material, and trace of the lower extent of the sandstone (red) embedded in claystone/siltstone (below the contact between bedrock and unconsolidated material). A 1937 aerial map is shown. The sandstone plunges toward the east. This sandstone may be the source of the Seep #7 discharge.

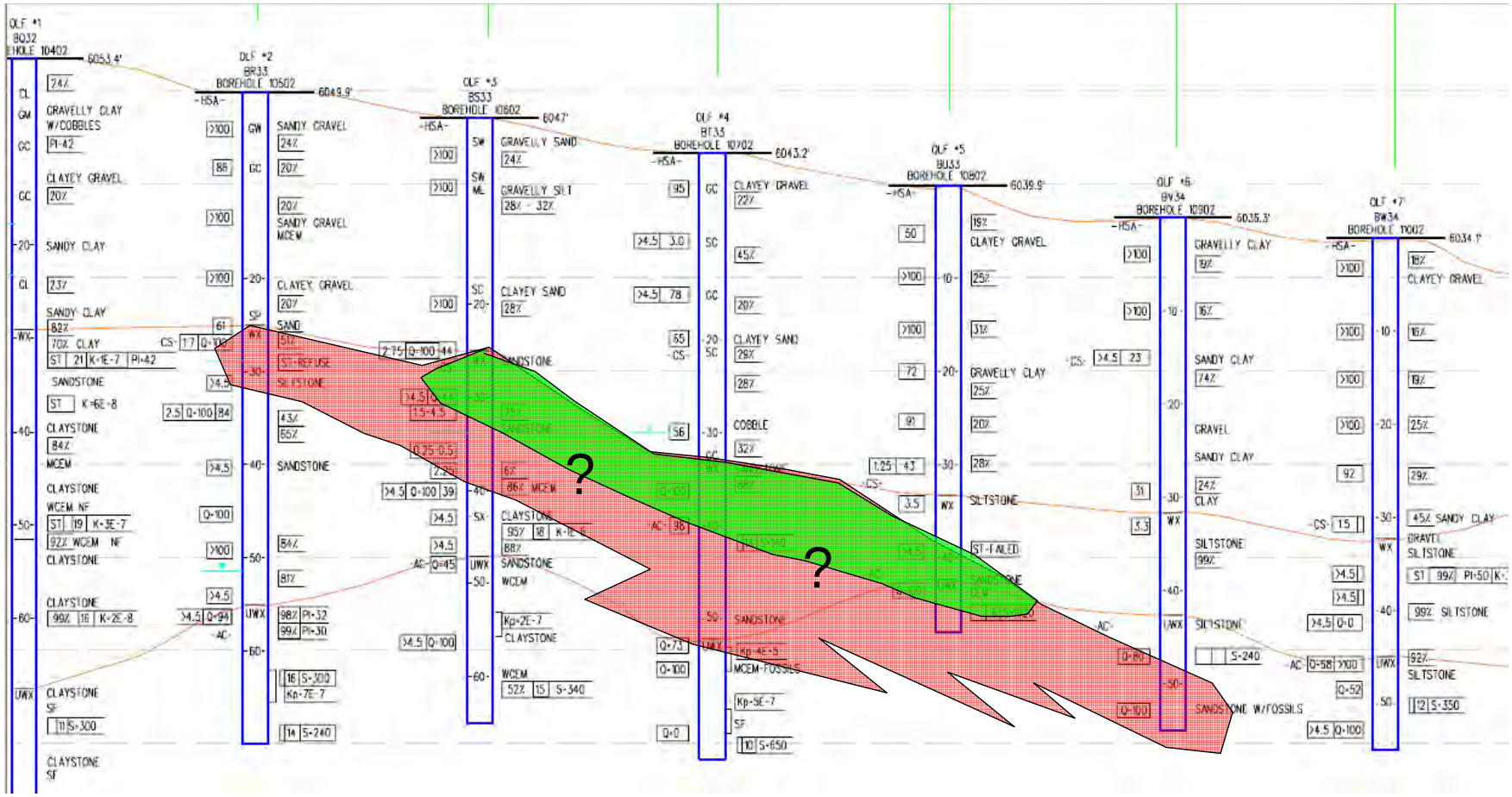


Figure 10b. West-east cross-section through boreholes just north of the OLF waste area and along the top of the slope. Borehole locations (blue), geologic data (text), and upper and lower contacts for the weathered bedrock (orange) are shown. This plot shows the approximate location and configuration of the continuous sandstone body referenced in Figure 10a.

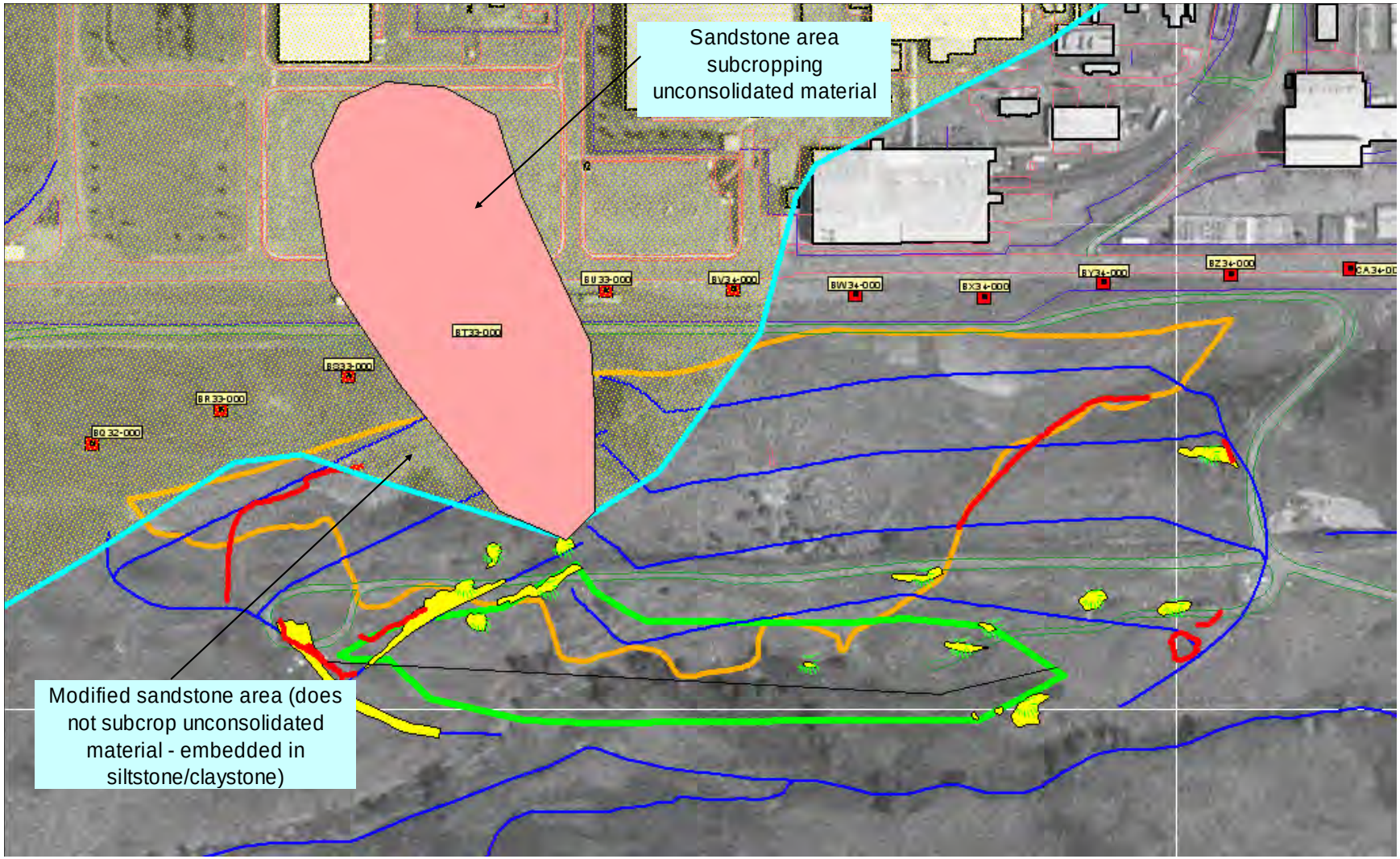


Figure 11. Extent of subcropping sandstone body at the OLF (pink) and its configuration and intersection with the former Arapahoe Sandstone #1 body to the northwest (northwest of light blue line). Compare with Figure 2, which shows previously mapped estimate of sandstone distribution. Photo background is from pre-closure era.

To generate the Seep #7 discharge area and flow rates requires that a pathway from the weathered bedrock to the surface topography exists through the unconsolidated and waste materials. Therefore, another modification made to the model, in addition to the extension of the higher-permeability sandstone body to the Seep #7 location, was to add a near-vertical permeable conduit to the surface to allow the former seep area to drain to the surface to reproduce observed surface discharge. Such a conduit could have developed during cut-and-fill operations associated with the OLF cover emplacement, although this area is relatively thick. It is more likely that the waste material in the OLF offers preferential pathways not typical of the natural Rocky Flats Alluvium (used as the cover material and assumed in former Site-Wide Water Balance modeling to have more uniform hydraulic properties).

Initial, localized simulations with the new sandstone body configuration suggested that the former hydraulic conductivity values (7.88 x 10^{-6} meter per second [m/s]) were too low to generate the observed surface discharge rates at Seep #7. As a result, these values were increased to between 1.0 x 10^{-5} and 1.0 x 10^{-6} m/s. The higher values were assigned to sandstone in model layer 3 (layers 1 and 2 are unconsolidated, and 3 and 4 are bedrock) which immediately subcrops the unconsolidated material. These are likely to be more weathered than the lower (1.0 x 10^{-6} m/s) sandstone that connects with the larger southwest-northeast trending Arapahoe Sandstone body to the northwest.

Climate Data Update (2002 to 2007)

High-quality, continuous post-closure climate data were obtained from the nearby (approximately 2 miles northwest of the IA) National Renewable Energy Laboratory (NREL) National Wind Technology Center (NWTC) M2 Tower station located at the western edge of the NWTC Site, approximately 7 miles west of Broomfield and 5 miles south of Boulder along Highway 93. The tower is 82 meters high and located at 39° 54' 38.34" N and 105° 14' 5.28" W (datum WGS84), with its base at an elevation of 6,085 feet (1,855 meters) above mean sea level (msl). These data were available online at http://www.nrel.gov/midc/nwtc_m2/.

Several datasets, measured every minute from October 1, 2001, to May 1, 2007, were downloaded from the NREL climate data weblink and include the following:

- Precipitation (heated gage provided snow water equivalent);
- Ambient air temperature (2-meter height);
- Dew point temperature;
- Wind speed (2-meter height);
- Relative humidity;
- Specific humidity;
- Total hemispheric shortwave irradiance measured with Precision Spectral Pyranometer (solar radiation); and
- Station atmospheric pressure.

The large volume of data required development of an MS Access database and several queries to format this information into model input using the MIKE SHE code format. The following model input was prepared:

- Fifteen-minute-interval precipitation data from October 1, 2002, to May 1, 2007. The downloaded data from October 1, 2001, to October 1, 2002, were not useable (anomalously high values) and were therefore omitted from the database;
- Hourly air temperature from October 1, 2002, to May 1, 2007; and
- Other hourly climate data including solar radiation, dew point temperature, wind speed, relative and specific humidity, and atmospheric pressure.

All of the hourly climate data and hourly precipitation sums using the 15-minute data were then compiled into an input dataset for use in the program REF-ET version 2.01.14 (Allen, 2000) to calculate hourly PET data for input into MIKE SHE. The hourly PET values calculated using this program represent those calculated using the full American Society of Civil Engineers Penman-Monteith equations for a reference grass crop. The MIKE SHE program uses this information, along with the vegetation Leaf Area Index (LAI), crop coefficients, root depths as a function of time, and several empirical parameters that control the effects of factors such as root densities with depth, plant interception, and the relative effects of soil evaporation compared to plant transpiration to calculate actual ET (AET). The new climate data represent high-quality information that can be expected to produce reasonably accurate input to the model.

Figure 12 shows long-term (several years) hourly temperature, precipitation, and PET data for the NREL wind site. For the purpose of modeling, it is significant that these data are highly correlated. For example, the PET and temperature often drop sharply during and shortly after each precipitation event. This can be important in capturing the infiltration and ground water recharge processes at the Site. This effect is more obvious on Figure 13, which shows only a month of data from August 1, 2005, to September 1, 2005.

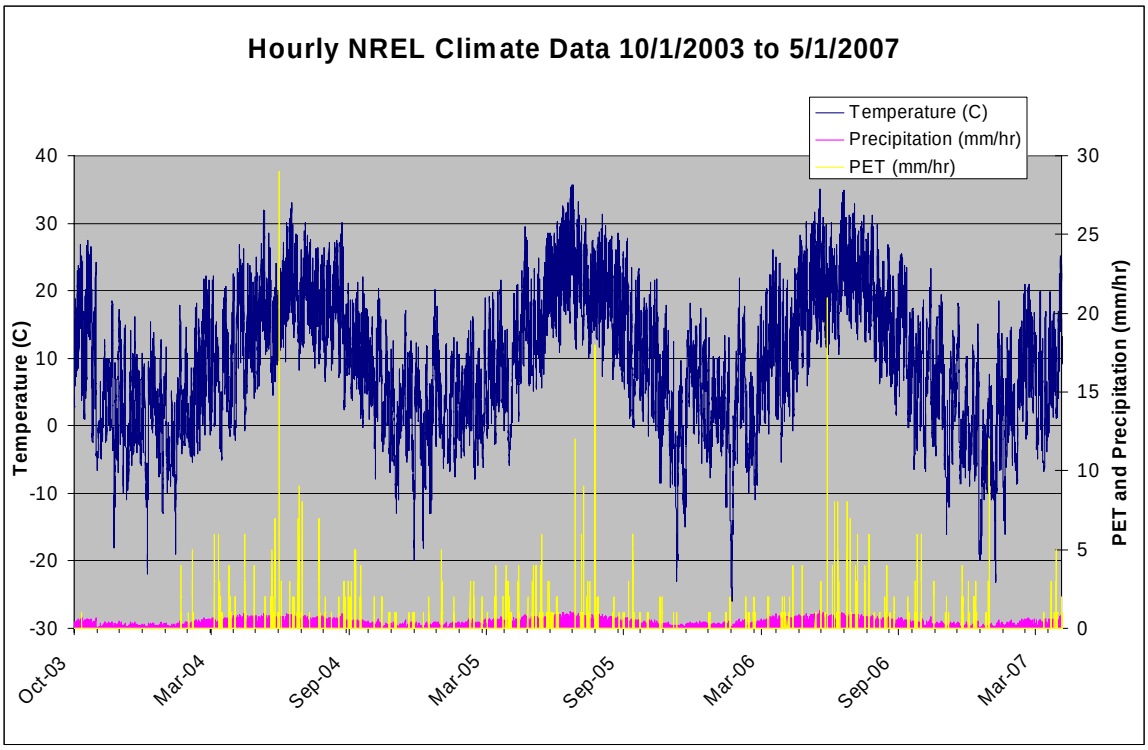


Figure 12. Hourly NREL temperature, precipitation, and PET data from October 1, 2003, to May 1, 2007

Field observations indicated that seeps within the OLF were more active due to the apparent higher precipitation from October 2006 to spring 2007. The NREL data were assessed to evaluate whether there were notable differences between the 2005/2006 and 2006/2007 time periods. Figures 14 and 15 present climate data for the two periods. It is clear that the fall 2006/winter 2007 time period exhibited notably higher precipitation compared to preceding years with subsequent snowmelt events that likely led to much greater recharge rates. This is also apparent in the decreased PET amounts over the same time period.

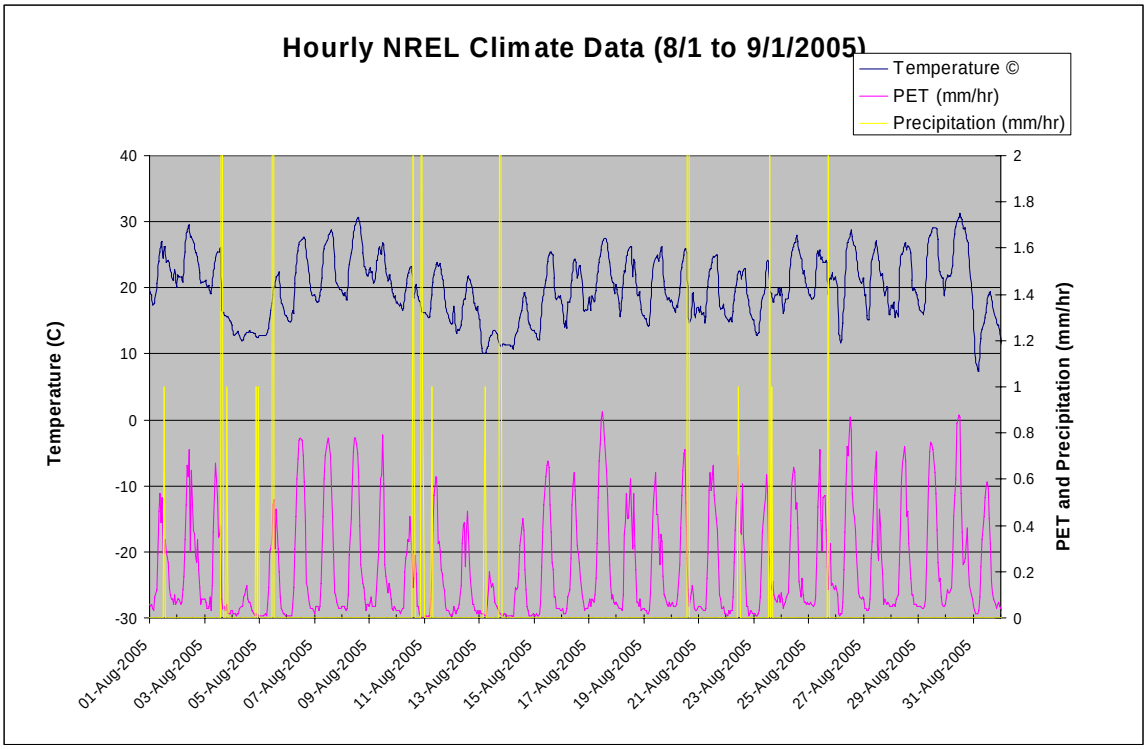


Figure 13. Hourly NREL climate data from August 1 to September 1, 2005

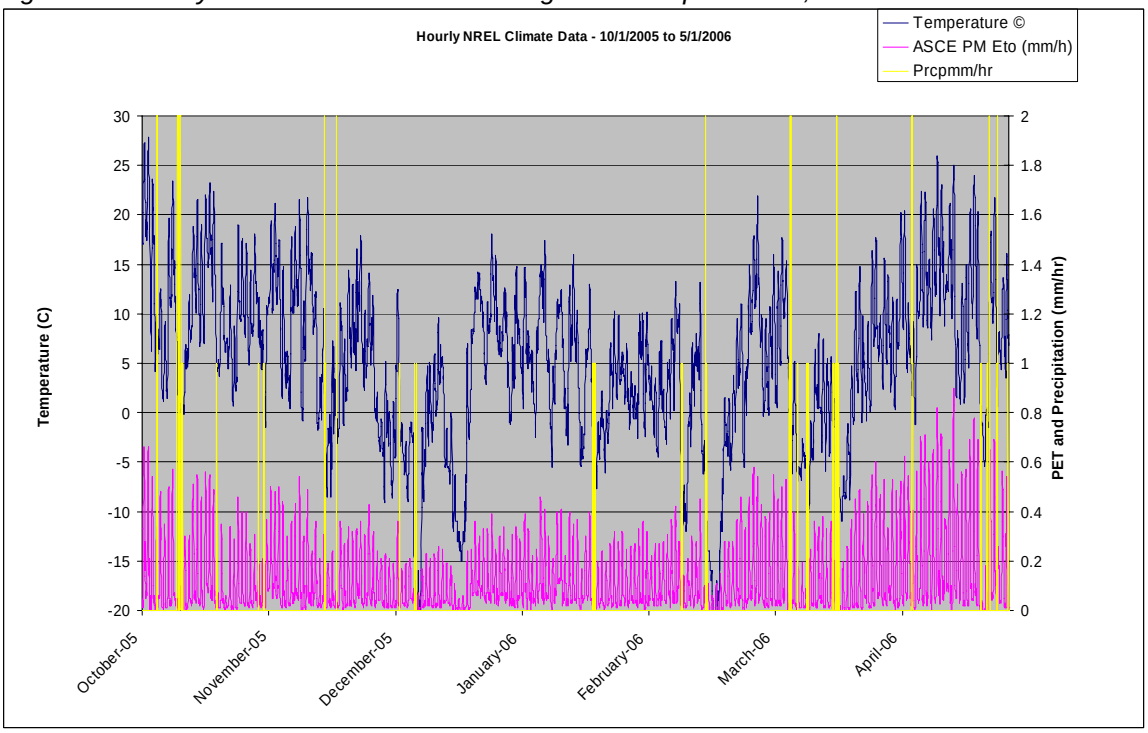


Figure 14. Fall 2005 to spring 2006 NREL climate data

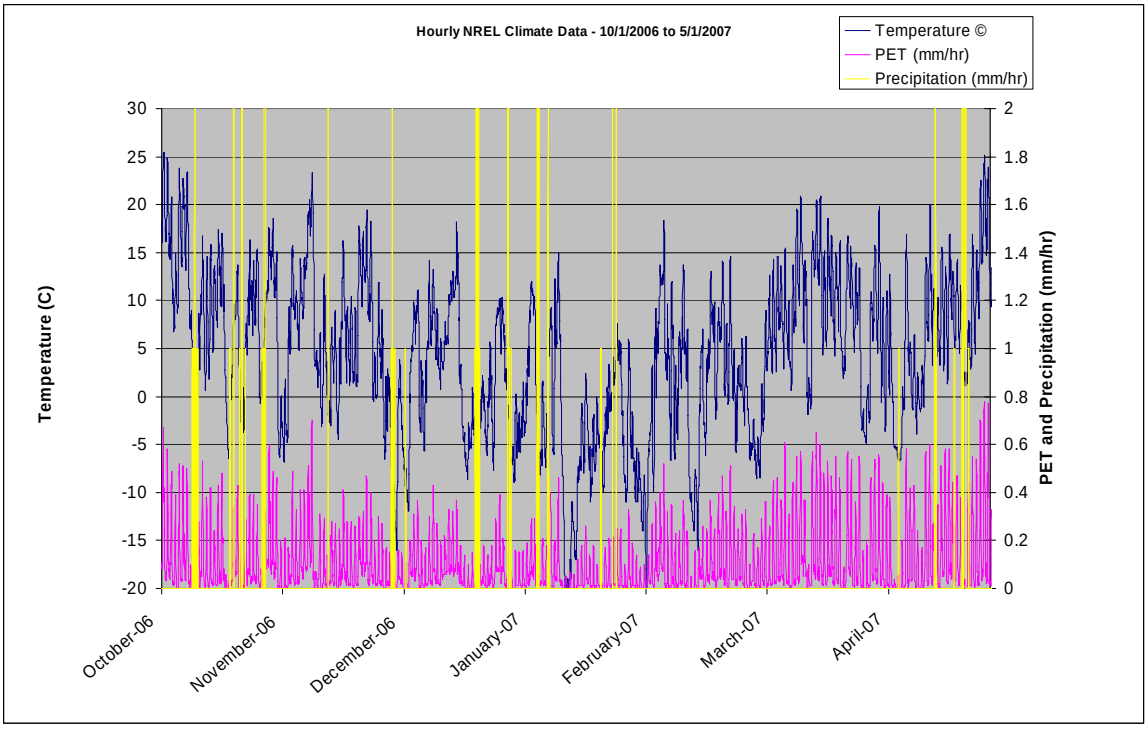


Figure 15. Fall 2006 to spring 2007 NREL climate data

Two longer-term simulations with the Arapahoe Sandstone revision described above were conducted using the updated 2003 to 2007 NREL climate dataset. This allows a more direct comparison between model-generated output and actual, more recent field observations of seep areas. One aspect that could not be accounted for in the model that might limit the comparability between simulated results and actual field observations is actual land configuration features modified during closure (as opposed to design configuration), and exactly how the features changed (i.e., building removal, pavement removal, drain removal, and OLF closure features). Another factor not accounted for is the quantity, timing, and locations of dust suppression water application during site closure activities. Finally, although geographically very close, NREL climate is not identical to that at the OLF.

Simulated ground water depths for both updated model runs are shown on Figures 16 and 17. The first model simulation (Figure 16), with the new sandstone modification and climate update, shows that ground water seepage occurs at Seep #7. The second model simulation (Figure 17) incorporates the constructed gravel drain to route ground water from the Seep #7 area into the gravel drain beneath the clay buttress. This simulation produced discharge at Seep #7 (less than 1 gpm) that is somewhat lower than observed (5 to 10 gpm), although the simulated areal discharge areas are similar. One reason for the lower simulated rates may be higher localized hydraulic conductivities than specified in the model. Another reason may be the configuration of the sandstone body (i.e., it may be much larger and therefore drain a much larger area than specified in the model).

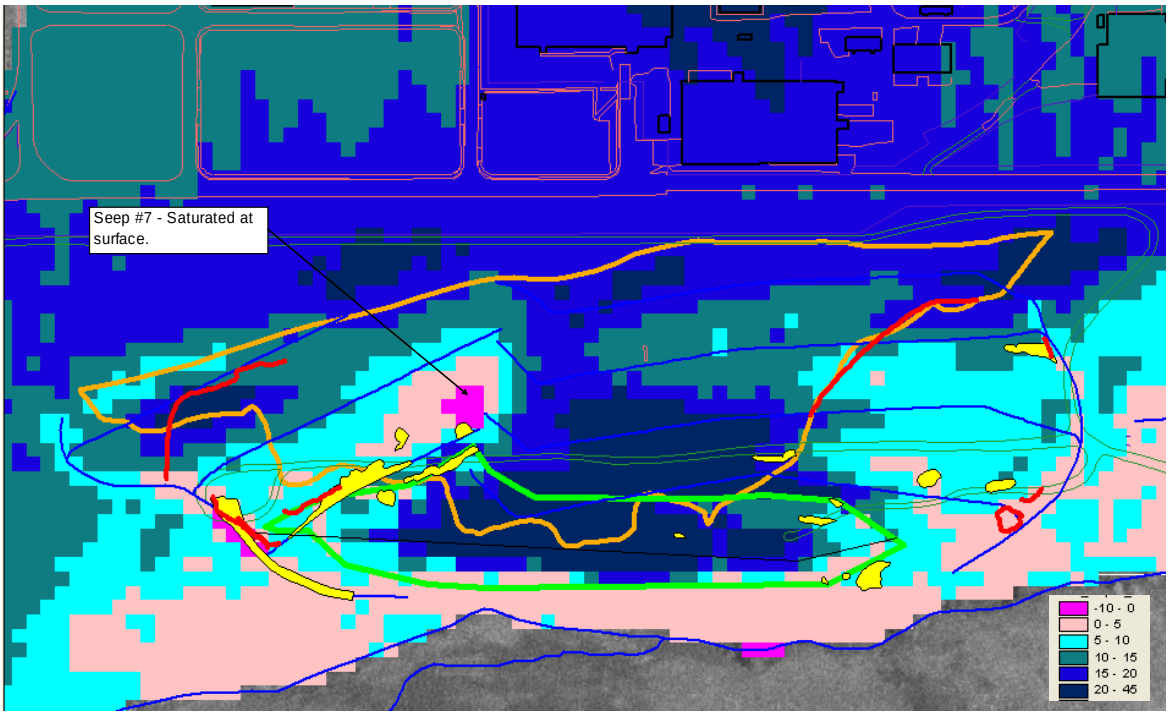


Figure 16. Simulated ground water depths (feet) for May 2007. Includes revision to sandstone and climate.

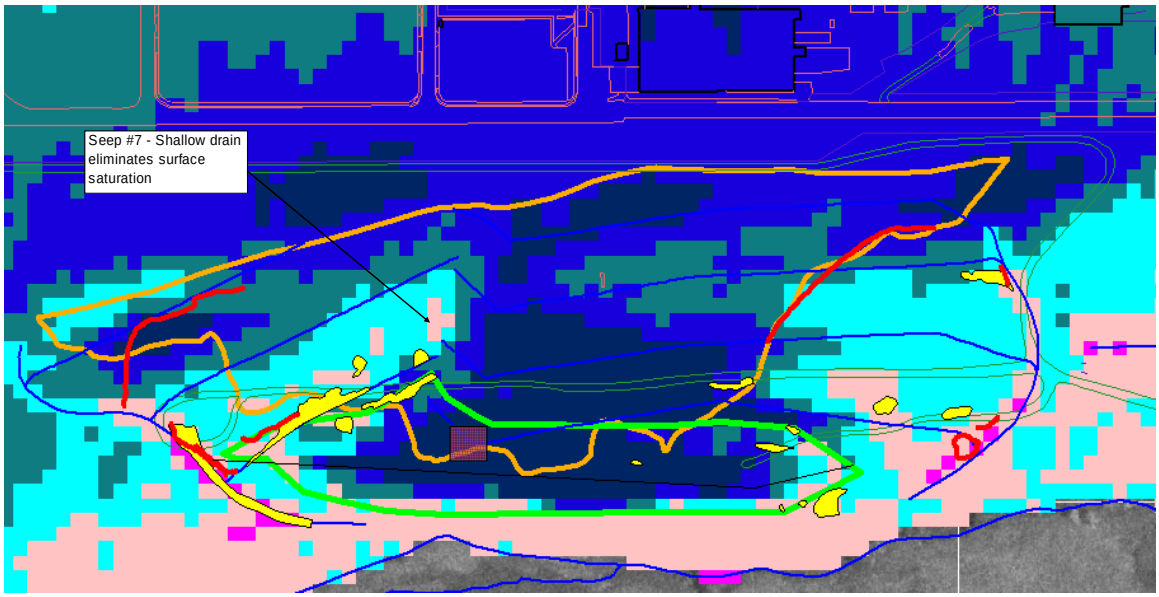


Figure 17. Simulated ground water depths (feet) for May 2007 with shallow drain (2 meters depth) at Seep #7 location. Includes revision to sandstone and climate.

3.0 Conclusions

Several conclusions based on evaluation of available post-closure data and updated model simulations are summarized as follows:

1) Many of the seeps identified in the OLF area occur in areas where weathered bedrock is relatively shallow (i.e., 0 to 10 feet). The updated model simulates approximate seep locations and discharge rates well.
2) Some seeps, such as Seep #7, are not related to shallow bedrock, but more likely associated with pre-existing seeps associated with subcropping sandstone bodies. One reason for the relatively continuous surface discharge in these areas may be due to the higher permeability of the sandstone compared to surrounding lower permeability bedrock. Surface discharge at Seep #7 likely makes its way to the surface through the landfill waste via a preferential pathway.
3) Simulated groundwater flow directions are similar between former post-closure simulations (March 2005) and the updated post-closure model described here. As a result, VOC pathways in groundwater are generally the same as indicated in previous modeling (Kaiser-Hill, 2004), though this previous fate and transport modeling did not consider discharge to the surface as seeps.
4) It is likely that the total seep discharge as of May 2007 is relatively high (i.e., estimated visually at 10 to 20 gpm total) for several reasons:
    a. More than twice the average precipitation from October 2006 through January 2007 fell mostly as snowfall and caused significant snowmelt, surface runoff, and ponding.
    b. Low vegetation coverage (approximately 20 percent of fully established) decreases the amount of ET loss and leads to increased ground water levels.
    c. Surface flow over the OLF is channelized; however, these channels together with very small-scale local depressions (or larger ones on the plateau to the northwest) can focus infiltration that leads to increased recharge to the shallow ground water flow system, which in turn increases the potential for surface discharge as seep flow.
    d. Significant topographic modifications along side channels have greatly reduced the depth to weathered bedrock, and in some instances have intercepted it. This forces nearby, localized discharge of ground water to the surface.
    e. The constructed gravel drain beneath the clay buttress may not drain upgradient ground water as efficiently as planned. This may increase the seepage that occurs at the surface just uphill and on the western buttress area.
5) Constructing a shallow subsurface drain over the extent of the Seep #7 area, which routes flow past the buttress either directly over it, or via a pipe to the side channels could be effective at:
    a. Reducing surface discharge in this location and, probably more importantly,
    b. Reducing direct surface runoff from Seep #7, along the berm and into the side channel, which is already experiencing slumping and seepage due to the shallow weathered bedrock depths resulting from the steep cuts.
6) To assess its performance, an effort should be made to obtain continuously monitored ground water pressures (i.e., Troll data) within the gravel drain beneath the clay buttress, particularly downgradient of Seep #7. This information could be useful in assessing how efficiently the gravel drain is routing upgradient ground water beneath the buttress and into the Woman Creek valley fill alluvium to the south.

4.0 References

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Appendix G

Treatability Studies for the Solar Ponds Plume at Rocky Flats, Phase 2

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Appendix G: Report: *Treatability Studies for the Solar Ponds Plume at Rocky Flats, Phase 2*

Final Report

Treatability Studies for the Solar Ponds Plume at Rocky Flats Phase 2

Prepared for

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November 16, 2007

1. Executive Summary

Treatability studies evaluating the viability of biological removal of nitrate for the Solar Ponds Plume at Rocky Flats were conducted by Colorado State University. Results indicated that near complete (i.e., greater than 99.9%) removal of nitrate from site groundwater is possible under study conditions.

The study was conducted in two stages. First, a laboratory batch reactor study was conducted to evaluate treatment performance using various sources of inoculum, carbon sources, and nutrient addition. Results from the batch reactor study were used to select treatment employed for the second stage, an on-site treatability study. The field study comprised two reactors containing differing substrate media: (1) pea gravel and (2) Jaeger Environmental NOR-PAC polypropylene packing media (NOR-PAC).

Results from the laboratory batch study indicated that nitrate reduction can be achieved using either wastewater treatment plant sludge or manure/soil as inoculum. This study also indicated that either methanol or ethanol would be effective as a carbon source, but addition of nutrients did not appear to provide substantial improvement in treatment.

The field study indicated that a bioreactor approach, using methanol as the carbon source and either pea gravel or NOR-PAC media as substrate, could be effective in reducing nitrate concentrations. Using water from the SPIN source as influent, nitrate concentrations were reduced in both reactors from 250-350 mg/L as N to less than 0.1 mg/L as N. Results were similar using Discharge Gallery water as influent, with nitrate concentrations reduced from 480-520 mg/L as N to less than 0.1 mg/L as N. Removal of uranium was also observed in both reactors.

Given the near complete removal of nitrate observed, optimization studies were conducted to resolve treatment performance with (1) a lower injection rate of methanol and/or (2) an increase in influent flow rate (i.e., a shorter residence time). Results indicated that decreasing the methanol injection rate from 1.6% to 0.8% (by volume) increased the effluent nitrate concentrations only slightly (to 0.2 mg/L as N). However, increasing the influent flow rate from 50 to 100 mL/min resulted in significant breakthrough of nitrate from both reactors. This result illustrates the sensitivity of the treatment to residence time in the reactors.

Upon decommission of the reactors, biofilm was observed only in the upstream half of the reactors. This may suggest that additional treatment capacity is possible in the test reactors given additional time for biofilm growth in the downstream portion of the reactors. It is possible that higher flow rates could have been accommodated in the test reactors had development of biofilm been achieved over the entire length of the reactors.

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3. Introduction

A treatability study was conducted by Colorado State University (CSU) evaluating treatment of groundwater in the Solar Ponds Plume site at Rocky Flats. The primary concerns with the Solar Ponds Plume are elevated concentrations of nitrate and uranium in groundwater and long-term cost and maintenance for the existing water treatment system. This report presents methods and results for the treatability study conducted by CSU.

The work discussed herein builds on Phase 1 research conducted in the fall of 2006. Specifically, Phase 2 attempted to address issues associated with the fall 2006 work through: (1) larger reactor vessels and longer target residence times, (2) design of reactors to prevent hydraulic short circuiting, (3) improved temperature control, and (4) evaluation of nutrients occurring in site groundwater. The Phase 2 study included two tasks. First, a laboratory study was conducted to screen various parameters (carbon source, addition of nutrients, and inoculum source). Second, an on-site treatability study was completed.

The existing collection and treatment system consists of an interceptor trench to collect groundwater downgradient of the former Solar Ponds. The interceptor trench terminates at the SPIN (collection well) at the low elevation point of the trench which contains a solar powered downhole pump. Water collected in the SPIN is pumped into the existing treatment cell where nitrate is removed biologically and uranium is removed using zero valent iron. The effluent is discharged downgradient at the discharge gallery (DG).

3.1 Study Objectives

The primary objective of the work conducted by CSU was to evaluate various treatment parameters, optimizing reduction of nitrate levels to meet the drinking water standard of 10 mg/L as N. In particular, the study was conducted to evaluate (1) substrate media and (2) other additives that would achieve biological reduction of nitrate in an engineered treatment cell. Two types of substrate media were evaluated: pea gravel and Jaeger Environmental NOR-PAC polypropylene packings (NOR-PAC). Evaluation of other additives included various carbon sources and alternative ingredients that could potentially boost biological activity.

To meet this objective, the study was divided into two stages. The first stage consisted of a preliminary laboratory study evaluating various combinations of potential additives. Following this, a field treatability study was conducted to resolve treatment effectiveness under on-site conditions.

3.1.1 Preliminary Laboratory Study

The preliminary laboratory study, which was conducted to provide information in support of on-site treatability study design, included two tasks. First, a geochemical assessment of groundwater (untreated influent) was conducted to evaluate potentially limiting factors that may affect performance of the field scale reactors. Following this, batch tests were completed to evaluate the relative nitrate removal efficacy of various combinations of inoculum, carbon source, and nutrient addition.

3.1.2 Field Treatability Study

The field treatability study was conducted in three phases to provide design information and performance operating information for a full scale biotreatment system for the Solar Ponds Plume. The first phase focused on treating groundwater collected from the Solar Ponds Plume intercept trench (referred to as SPIN), the second phase focused on treatment of water collected from the Discharge Gallery (DG), and the third phase evaluated treatment response to decreasing the carbon source concentration and increasing the flow rate.

4. Methods

4.1 Laboratory Batch Studies

Twenty five reactors were used to test various combinations of inoculum, carbon source, and other additives. Site water was collected on March 21, 2007 from the SPIN and DG for use in the batch reactors. Inoculum consisted of either wastewater treatment sludge or a mixture of animal manure and soil. Denatured ethanol or methanol (each at 2 percent by volume) was used as the carbon source (Fisher Scientific, Fair Lawn, NJ). Other additives were evaluated, including orthophosphate (10 mg/L as PO_4) (Fisher Scientific, Fair Lawn, NJ), yeast energizer (0.1 g/L)(J.D. Carlson, Kent, OH), whey (0.1 g/L)(Solgar Vitamin and Herb, Leonia, N.J.), and corn syrup (0.1 g/L)(ACH, Memphis, TN). The experimental design matrix is shown in Table 1. The experimental design was developed through discussion with Stoller personnel and Dr. Bruce Wielinga (GeoMatrix, Denver, CO). Additives were selected based on literature review and likelihood of use at the Rocky Flats site. Several treatments were tested in triplicate (noted by "3X" in Table 1) to evaluate repeatability of the experiment. To economize on the number of reactors, only four reactors were used to test DG water. It was hypothesized that the two sources (either SPIN or DG) would behave alike with respect to nutrient addition and alternate carbon sources. The four reactors testing water collected from the DG were included primarily as proof-of-process testing.

The batch test was conducted in 1L amber glass serum bottles (Figure 1). The cap of each reactor included two ports: one used as a vent, the other for sampling. The vent line was submersed in water, preventing atmospheric oxygen from entering the reactor. The initial headspace in the reactors was purged using nitrogen gas.

Performance evaluation consisted of collecting samples and analyzing for nitrate. An initial (time 0) sample was collected from each reactor and subsequent samples were collected weekly thereafter until sustained nitrate reduction was observed. Samples were collected via displacement of water by injecting an inert gas (e.g., nitrogen) into the reactor vessel head space. Displaced water was collected from the sample port for analysis. Analysis for nitrate was conducted via colorimetric methods (Hach Co., Loveland, CO). The method is based on cadmium-mediated reduction of nitrate to nitrite which reacts with sulfanilic acid, which in turn combines with gentisic acid to form an amber color. Analysis was performed using a Hach DR-3000 (Hach Method 8039). Reported precision is ±7.6% (Hach Co. 2004).

Table 1 . Experimental Matrix for Batch Studies

Inoculum	*None*	*Sewage sludge*	*Manure /soil*
Water Additives	SPIN Water		
None	X	X	X
Ethanol	X	3X	3X
Ethanol + phosphate		3X	
Methanol + phosphate		X	
Ethanol + phosphate + yeast energizer		X	
Ethanol + Whey	X	X	X
Ethanol + Corn Syrup		X	X
Methanol + phosphate + yeast energizer			X
	Discharge Gallery Water		
Ethanol + phosphate + yeast energizer		3X	X

Following this initial study, select flasks (based on performance in the initial study) were evaluated for their ability to reduce nitrate in a residence time of 64 hours. The initial study required development of nitrate reducing consortia and therefore provided no information regarding steady state reaction rates. The second step was included to evaluate nitrate reduction rates in the presence of an established microbial community. To accomplish this, a nitrate spiking solution was added to select reactors. The spiking solution was prepared by adding sodium nitrate ($NaNO_3$) to de-ionized water. In select reactors, the spiking solution was used to increase nitrate levels to approximately 300 mg/L, simulating nitrate levels present in SPIN groundwater. After 64 hours a sample was collected and analyzed for nitrate. Results are discussed in Section 5.1.

Figure 1. Example of a batch reactor used in the preliminary studies to evaluate carbon source, inoculum and nutrient addition.

4.2 Field Treatability Studies

Following the laboratory studies, a field treatability study was conducted. The field treatability study comprised two reactors, containing either pea gravel or NOR-PAC media. To provide a steady source of water for the reactors, a holding tank was used. Tasks related to the field treatability study included reactor design and construction, installation, inoculation, sampling and analysis, and tracer studies. Each task is described in this section.

4.2.1 Reactor Design and Construction

For the field treatability study, two reactors were fabricated at CSU. Reactor design was based on either pea gravel or NOR-PAC media (Table 2) as substrate. Reactor bodies were constructed of PVC and were closed at both ends by blind flanges (see Appendix B). Influent and effluent lines were connected via ports installed into the flanges at each end of the reactors. To prevent gas buildup within the reactors, vent ports were installed in the PVC reactor body. Reactor specifications are shown in Table 3 and drawings are included in Appendix A.

4.2.2 Reactor Installation

The test reactors were installed on May 15-18, 2007. Installation was completed without incident and flow through the reactors was initiated on May 21 using SPIN water. A schematic illustration of the system layout is shown in Appendix A. Field installation photos are included in Appendix B. On May 31, the reactors and inlet reservoir were covered with wood chips to insulate the system from temperature variability.

Inoculation of the reactors was completed on May 25. Prior to the inoculation, flow from the holding tank through the reactors had been continuous for four days (May 21-25). Each reactor was inoculated using a mixture of approximately 5 gallons of wastewater treatment plant sludge and 1 kg of soil. The sludge was obtained from the aeration basin at the Drake Water Reclamation Facility in Fort Collins, Colorado. Site soils (collected from the DG) were included as an additional source of nitrate reducing bacteria that have acclimated to site-specific conditions. Following inoculation, 1.6 percent methanol (by volume), approximately 0.5 oz. yeast energizer (J.D. Carlson, Kent, OH) and approximately 125 g Na_2HPO_4 (Fisher Scientific, Fair Lawn, N.J.) were injected into each reactor (inoculants and additives were selected based on results from the laboratory batch studies). The yeast energizer and phosphate were added to aid the system during startup but were not added during the routine study. Following inoculation, the initial volume of SPIN water was recirculated through the reactors for four days to improve distribution of the inoculum and allow microbes to establish on the reactor media before initiating normal operation. On May 29, recirculation was stopped and normal operating flow through the reactors was initiated.

Table 2. Substrate media specifications.

Media	Surface area (ft^2/ft^3)	Void ratio (%)	Bulk density (lb/ft^3)
NOR-PAC (5/8")	101[1]	88[1]	7[1]
Pea gravel	200[2]	30[2]	100[2]

[1] – Manufacturer supplied data (Jaeger Environmental).
[2] – Estimated values.

Table 3. Reactor specifications.

Dimensions	NOR-PAC Reactor	Pea Gravel Reactor
Diameter - interior	15" (38 cm)	26.875" (68 cm)
Length	72" (183 cm)	73.5" (187 cm)
Volume	55 gal (208 L)	178 gal (674 L)
Pore volume	48 gal (182 L)	53 gal (201 L)
Target Residence time	64 hours	64 hours
Residence time measured	37 hours	36 hours

4.2.3 Sampling and Analysis

The primary method of performance analysis was comparison of nitrate concentration between the influent and the reactor effluents. Other data collected included physical parameters and methanol concentration.

Routine monitoring was completed at least once per week throughout the study. Routine monitoring included collecting water samples and measuring physical properties in the influent tank and effluent from each reactor. Water samples were stored on ice and transported to CSU for nitrate analysis within 48 hours. Nitrate concentrations were determined by Ion Chromatography (IC) (Metrohm Ltd., Herisau, Switzerland). Physical parameters (temperature, specific conductance, dissolved oxygen concentration, pH, and oxidation-reduction potential) were monitored using a hand-held multiparameter sonde meter (YSI, Yellow Springs, OH). Flow-through cells were installed in effluent lines from both reactors for physical parameter measurements using the sonde. The sonde was calibrated immediately prior to each sampling event and calibration was checked following measurement (see Appendix F).

Throughout the study, water temperatures were logged at 15 minute intervals using automatic data loggers (Onset Computer, Pocasset, MA). These temperature sensors were placed in the SPIN, influent holding tank, and effluent flow cells for each reactor.

Additional data collected included levels of methanol, Total Organic Carbon (TOC), Total Suspended Solids (TSS), and dissolved uranium. Methanol concentrations were measured in the influent and effluent lines once approximate steady-state conditions were achieved. Methanol analysis was conducted either at the CSU Center for Contaminant Hydrology (CCH) or at Severn-Trent Laboratories (STL), Denver, Colorado. Methanol analysis at the CCH was completed using headspace injection techniques and Gas Chromatography (GC) with a Flame Ionization Detector (FID). STL analyzed for methanol via method SW846 8015B. Other analytes (TOC, TSS, dissolved uranium) were also evaluated (STL) after steady-state conditions were achieved.

4.2.4 Residence Time Determination

Tracer studies were conducted to estimate the average hydraulic residence time in each reactor. An initial study was conducted in the laboratory prior to field deployment, evaluating the NOR-PAC media reactor. Testing of the pea gravel reactor in the laboratory was not completed due to expected differences in gravel characteristics between laboratory gravel and gravel to be used in the field treatability study. An *in situ* tracer study was conducted in late June, approximately one month after the field treatability study began. The NOR-PAC and pea gravel reactors were both evaluated as part of this study. Methods and results of the tracer studies are discussed in Appendix C.

In the laboratory study, as shown in Appendix C, the residence time in the NOR-PAC reactor was measured to be approximately 68 hours. In the field study, results indicated a residence time of approximately 37 hours in both the gravel and NOR-PAC reactors. The shorter residence time achieved in the field is likely attributable to (1) settlement of media creating selective flow paths and (2) restricted treatment volume within the reactors due to buildup of evolved gasses.

5. Results

5.1 Laboratory Batch Studies

Preliminary laboratory studies included treatment of water from the SPIN, treatment of water from the DG, and kinetics analysis. Four of the treatments were prepared in triplicate. A comparison of results from triplicate samples is presented in Appendix E. In addition, a geochemical analysis of SPIN water was conducted. Each of these is discussed in this section.

5.1.1 SPIN Water Batch Study

The control reactors (i.e., those to which no inoculum or other amendments were added) maintained relatively constant nitrate concentrations over the two week study. Results indicate that addition of both sludge and ethanol was effective in reducing nitrate concentration (Figure 2). Used alone, however, neither ethanol nor sludge were effective in removing nitrate.

Both carbon sources (ethanol or methanol) yielded similar nitrate removal rates (Figure 3) and comparison of inocula indicated that manure/soil can remove nitrate in the absence of an additional carbon source (Figure 4). Addition of whey, yeast energizer, or corn syrup did not provide substantial improvement in nitrate removal when tested with ethanol as the primary carbon source (Figure 5), but addition of ethanol as a carbon source improved nitrate removal using either inoculum (Figure 6). Note that whey, yeast energizer and corn syrup were not tested as the primary carbon source since it was determined that handling issues would preclude stand-alone use at the Rocky Flats Site (e.g., cold temperature application). Addition of carbon source and amendments to reactors inoculated with manure/soil indicated no clear benefit of additional amendments, but indicated that methanol, when combined with phosphate and yeast energizer, could potentially outperform ethanol in terms of nitrate removal (Figure 7). Note that a direct comparison of carbon source and additives was not made using the manure/soil inoculum.

The most promising treatments from the SPIN water portion of the preliminary batch study are shown in Figure 8. These results suggested that using either sludge or manure/soil as inoculum, when combined with either ethanol or methanol as a carbon source, would be effective in reducing nitrate concentrations in water from the SPIN. Use of manure/soil with no additional carbon provided significant nitrate reduction as well. In general, the results also suggested that adding whey, yeast energizer, phosphate, or corn syrup provided no clear advantage.

5.1.2 DG Water Batch Study

All of the reactors which tested DG water indicated high fractional removal of nitrate (Figure 9). The reactor testing manure/soil inoculum indicated faster removal but overall treatment between inocula was similar. This result supports the results outlined above, indicating that either inoculum would be effective for nitrate removal.

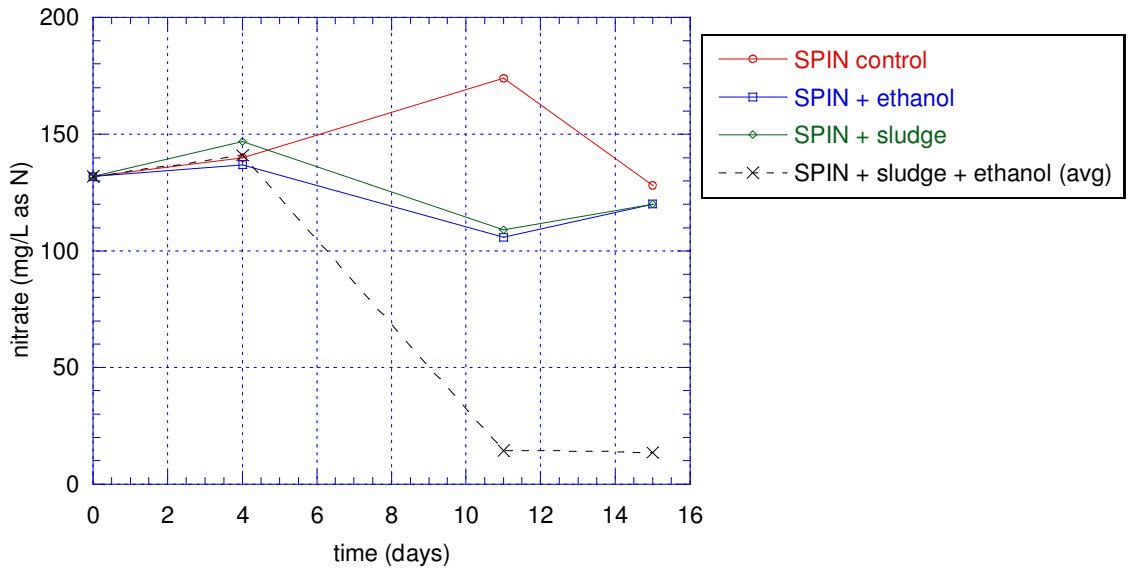


Figure 2. Comparison of nitrate concentration (mg/L as N) as a function of time in the control reactors and those testing sludge and ethanol. The data posted for SPIN + sludge + ethanol is the average nitrate concentration from triplicate reactors.

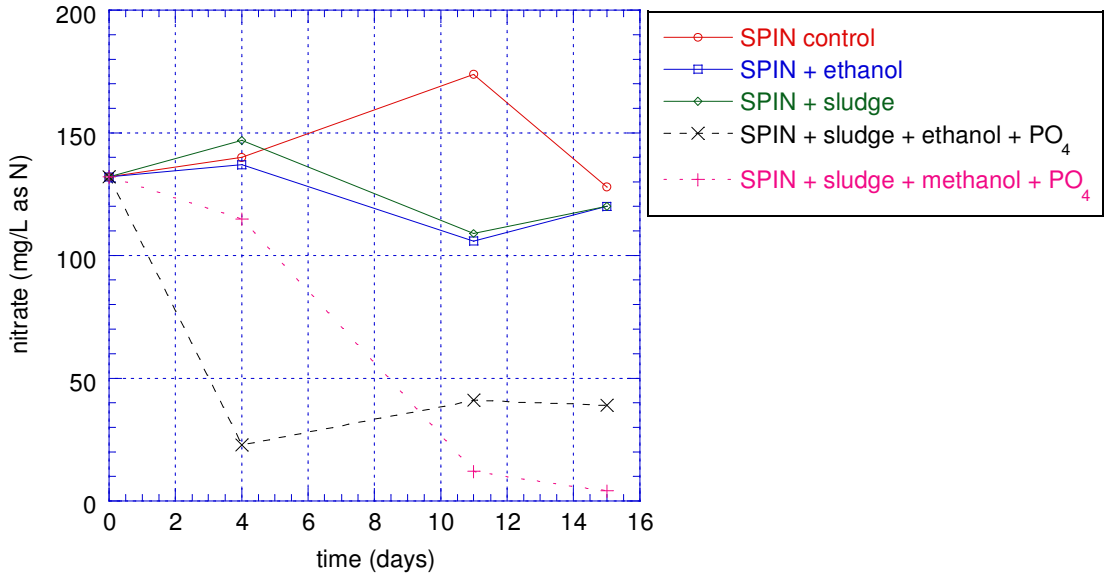


Figure 3. Comparison of ethanol to methanol as a carbon source for reducing nitrate in the batch reactors. Also included are control reactor concentrations. The data posted for SPIN + sludge + ethanol + PO_4 are the average nitrate concentration from triplicate reactors.

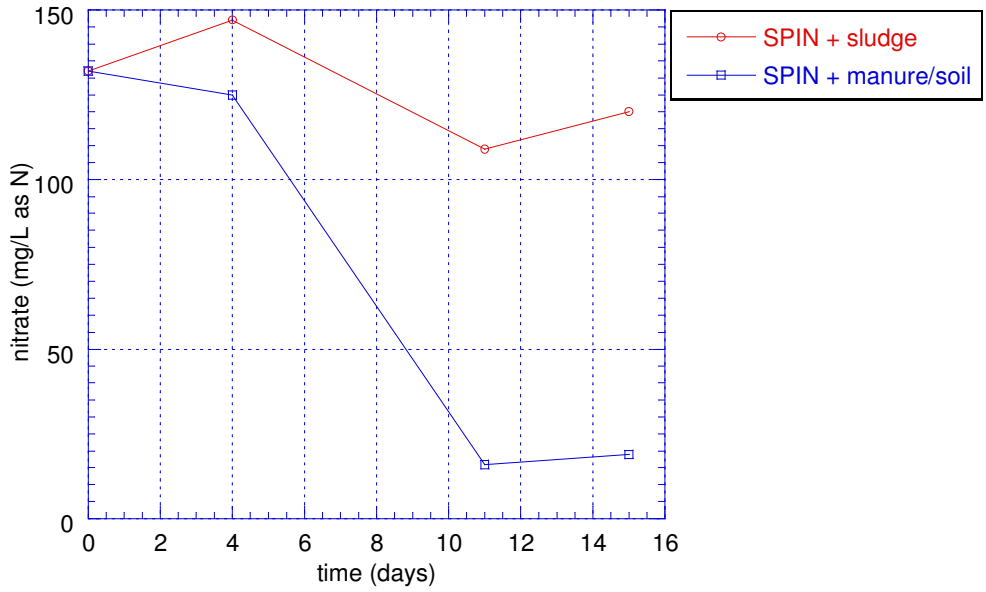


Figure 4. Comparison of nitrate removal using differing inocula. Note that no additional carbon source was added.

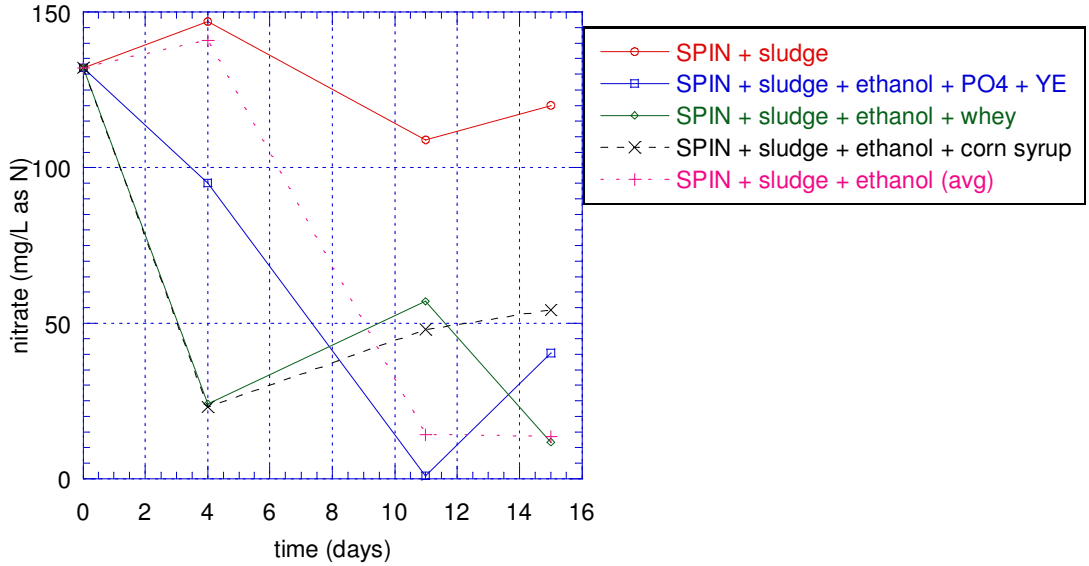


Figure 5. Comparison of nitrate removal using the additives yeast energizer (YE), whey, and corn syrup (CS).

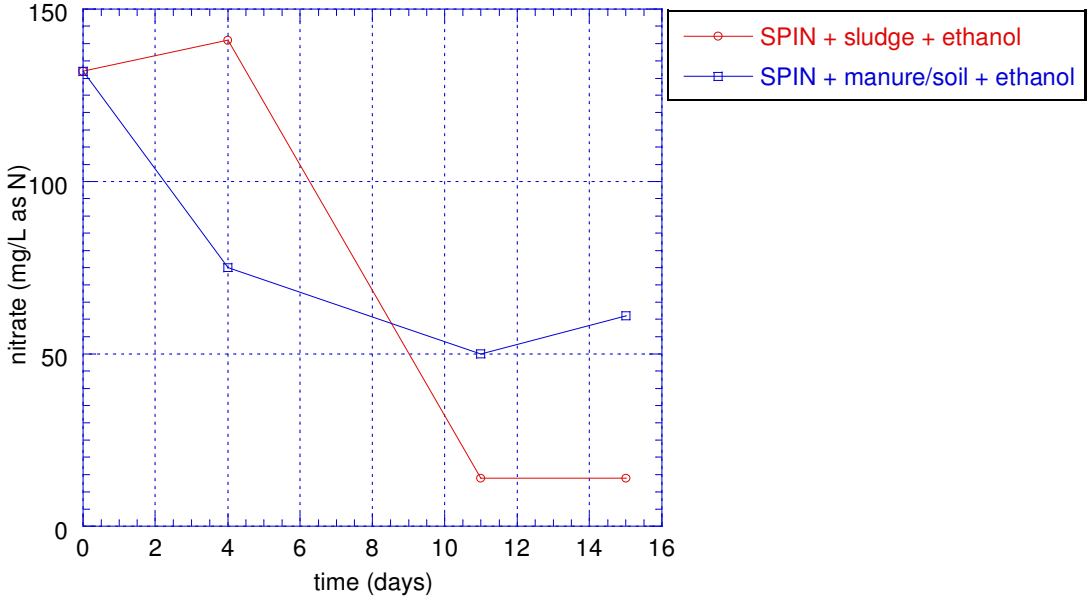


Figure 6. Comparison of nitrate removal for different inocula in the presence of added carbon source. The data sets posted indicate the average nitrate concentration from triplicate reactors.

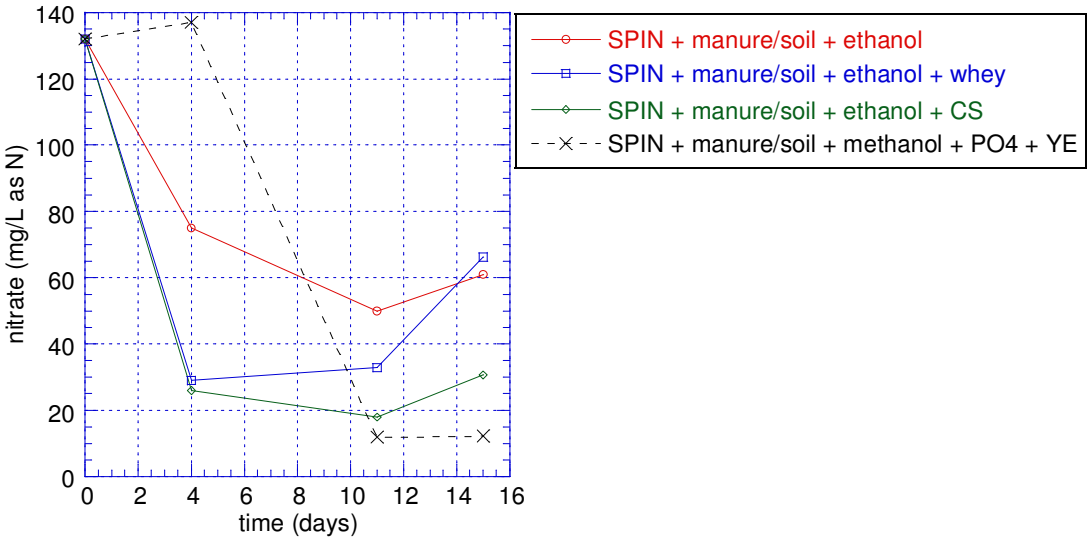


Figure 7. Comparison of nitrate removal using manure/soil inoculum with the amendments whey, corn syrup (CS), and yeast energizer (YE) and methanol as the carbon source. The data posted for SPIN + manure/soil + ethanol are the average nitrate concentration from triplicate reactors.

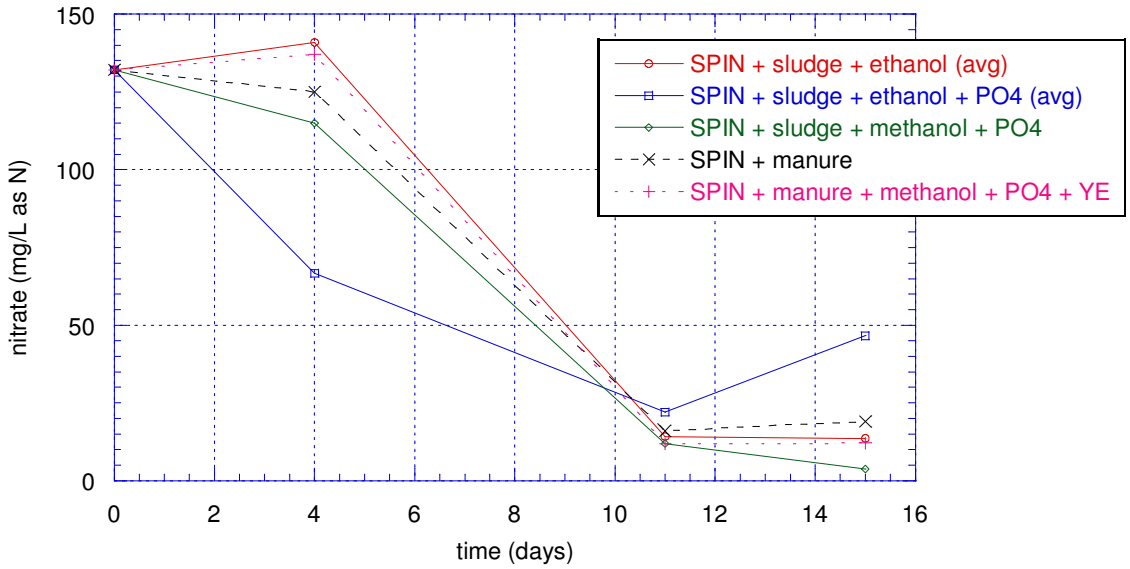


Figure 8. Summary of most promising treatments in the preliminary batch study.

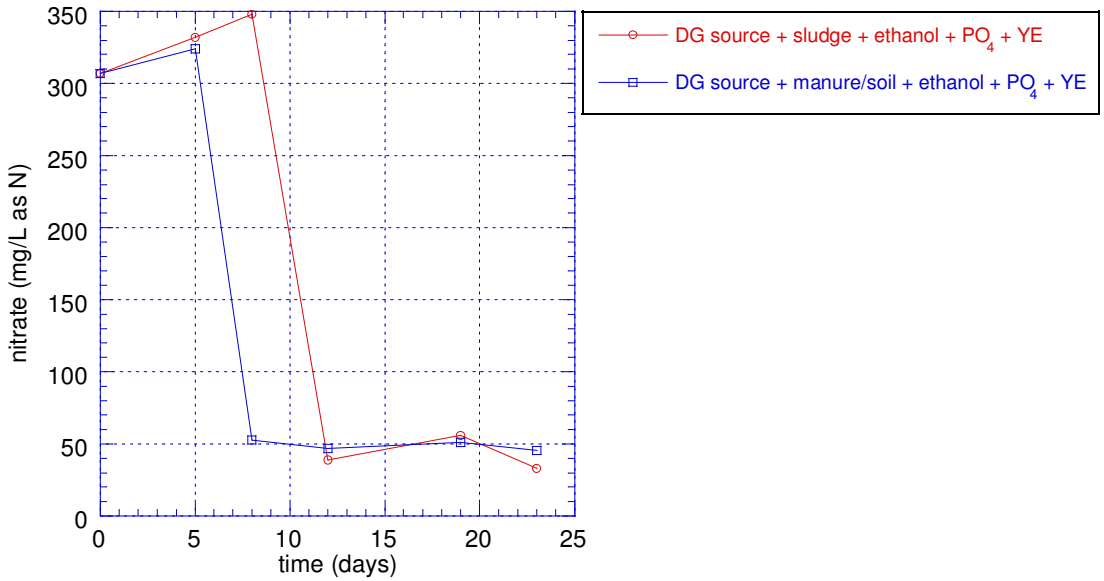


Figure 9. Comparison of nitrate removal using the DG source water, PO_4, yeast energizer (YE) and differing inoculum. The data posted for DG source + sludge + ethanol + PO_4 + YE are the average nitrate concentration from triplicate reactors.

5.1.3 Reaction Kinetics

Following the initial laboratory study, ten reactors were selected to evaluate reaction kinetics by adding nitrate (and amendments as required) and measuring nitrate concentration after the target 64 hour field reactor residence time. Results were largely inconclusive, suggesting possible contamination of the reactors with sulfide formed from reduction of dissolved sulfate present in groundwater at the site. However, results did suggest that using methanol as a carbon source may have advantages since the two reactors testing methanol as a carbon source removed the highest fraction of nitrate in the 64 hour test. Table 4 contains a summary of the results after 64 hours. The limited nitrate removal observed during this test does not imply that sulfide or other toxicity would be a concern in a flow-through reactor since scavenging of sulfide or advective losses of toxic components may result in removal of these compounds from the system.

Table 4. Nitrate concentration (mg/L as N) after 64 hours in the laboratory batch reactors.

Reactor ID	Nitrate concentration (mg/L as N)
SPIN control	426
SPIN + ethanol	385
SPIN + ethanol + sludge	328
SPIN + ethanol + sludge	299
SPIN + ethanol + sludge + PO_4	281
SPIN + methanol + sludge+ PO_4	1.63
SPIN + ethanol + manure/soil	311
SPIN + methanol + manure/soil + PO_4 + YE	84.9
DG + ethanol + sludge + PO_4 + YE	336
DG + ethanol + manure/soil + PO_4 + YE	258

5.1.4 Groundwater Geochemical Analysis

Water quality analysis of samples taken from the SPIN on April 30, 2007 indicated a calcium chloride type water. Relatively high iron, manganese, and the presence of nitrite (Table 5) suggest mildly reducing conditions, although physical measurements taken from the holding tank suggest oxidizing conditions (see Appendix D). Uranium concentration was moderate (34 µg/L), but strontium concentration was high (2.4 mg/L). Nitrate concentration was within the expected range (220 mg/L as N). Phosphate was not detected in the sample collected. Geochemical speciation (Visual Minteq 2.52) indicated supersaturation with respect to $UO_{2(amorphous)}$ and uraninite, suggesting that uranium precipitation may be expected in the treatability reactors. Barite was also calculated to be supersaturated and may precipitated in the treatability reactors.

Table 5. Water quality analysis highlights from the SPIN source.

Analyte	result	units
Barium	220	µg/L
Boron	110	µg/L
Calcium	300	mg/L
Cadmium	1	µg/L
Iron	29	µg/L
Potassium	7.7	mg/L
Lithium	170	µg/L
Magnesium	80	mg/L
Manganese	26	µg/L
Sodium	400	mg/L
Nickel	9.1	µg/L
Silica	160	mg/L
Strontium	2.4	mg/L
Titanium	1.8	µg/L
Uranium	34	µg/L
Zinc	50	µg/L
Zirconium	3.6	µg/L
Chloride	530	mg/L
Fluoride	0.77	mg/L
Nitrite	1.1	mg/L
Nitrate (as N)	220	mg/L
Sulfate	150	mg/L

5.2 Field Treatability Studies

The test reactors were installed on May 15-18, 2007 (See Appendix A). An initial study, evaluating treatment of SPIN water, commenced on May 29. On July 24, the SPIN study was terminated and a second study was started using water from the DG. The DG study was continued for two weeks. Following this, a final study was conducted evaluating alternative rates of influent flow and methanol injection. Each of these is discussed below.

5.2.1 SPIN Water Treatability Study

Background Conditions

On May 29, continuous flow was initiated using SPIN water (the system had been operating in recirculation mode since May 25). The system conditions at the time of startup were as follows:

- flow rate through each reactor = 50 mL/min.
- methanol injection rate = 0.8 mL/min (1.6 % by volume of the total flow into each reactor)
- influent pH at startup (holding tank) = 6.8
- influent temperature (holding tank) = 13.7 ^{o}C

Comparison of temperature conditions between the SPIN and the holding tank indicated that minor temperature increases (1-2°C) occurred when water was pumped to the holding tank (see Appendix D). Influent nitrate concentration at the startup of the experiment was approximately 350 mg/L as N and ranged between 250-350 mg/L as N throughout the 55 day experiment (Figure 10). Nitrate loading rates to the reactors ranged from 18 to 25 g/d as N. For the SPIN water study, each reactor treated approximately 20 pore volumes of water.

Nitrate Removal

Results indicate that both reactors achieved significant nitrate removal, reaching levels of approximately 0.1 mg/L as N (Figure 10). This is well below the target level of 10 mg/L as N and indicates nitrate reduction of greater than 99.9%. Nitrate concentrations remained low for the remainder of the experiment with the exception of a brief period around 30-35 days, in which an increase is apparent in both reactors. It is hypothesized that the fluorescein tracer temporarily interfered with nitrate reduction (the tracer was injected on day 28). These nitrate levels returned to low values by day 50 in both reactors.

Other Constituents

Water samples were collected on day 55 of the experiment and analyzed for additional constituents. Analysis was conducted by a commercial laboratory (STL). Results are included in Table 6.

Table 6. Analytical results for samples collected at the conclusion of the SPIN treatability study.

Location	Uranium (µg/L)	TSS (mg/L)	TOC (mg/L)	Alkalinity (mg/L as $CaCO_3$)	Methanol (mg/L)
Influent (SPIN)	55	4.8	6.9[1]	258	12,640[2]
NOR-PAC effluent	13	6.9	7500	592	3300
Gravel effluent	3.5	42	3500	550	2400

[1] Sample taken from holding tank, prior to methanol injection
[2] Value calculated based on injection rate

Both reactors indicate reduced uranium concentrations when compared to the influent level. Apparent uranium removal may be attributed to precipitation in the reactor. Total suspended solids (TSS), total organic carbon (TOC), and alkalinity increased through both reactors. TSS increases in the reactor testing pea gravel media could potentially lead to plugging. Influent TOC levels reflect conditions upstream of the methanol injection point. As such, TOC increases are attributed to methanol and associated bioreactor products. The alkalinity increase may be due to several factors including addition of conjugate bases of organic acids. Methanol was detected in the effluent stream from both reactors. It is also noted that the selected methanol injection rate of 1.6 percent exceeds the stoichiometric requirement for the system and includes a safety factor. Through more detailed analysis, sufficient reduction may be possible at a lower methanol feed rate.

Physical parameters

Measured temperature data indicates that the reactors were well insulated by the blanket of wood chips (see Appendix D, figure D1). A minor temperature increase was noted in the holding tank and the reactors relative to the SPIN. Measurement of temperature in the SPIN was discontinued when access to the datalogger was lost.

Conductivity (see Appendix D, figure D3) decreased from the influent (approximately 4500 µS/cm) to the effluent in both reactors (approximately 2500-3000 µS/cm). This decrease is likely due to loss of nitrate (to nitrogen/nitrogen oxide gas phases) and/or precipitation of ionic species as solid phases.

Dissolved oxygen (see Appendix D, figure D2) decreased through the reactors (from approximately 4 mg/L to 2 mg/L) although high variability in measurement was observed. Limitations of the membrane electrode method combined with the flow cell approach used for measurement of dissolved oxygen likely resulted in the relatively high effluent concentrations measured.

In general, pH values (see Appendix D, figure D4) were slightly higher in the effluent from both reactors. Measured values were typically 6.9 in the influent and 7.2 in the reactor effluents.

Oxidation reduction potential (see Appendix D, figure D5) decreased from a typically positive value in the influent to a negative value (approximately -300 mV vs Ag/AgCl) in the effluent from both reactors. When corrected to reference the standard hydrogen electrode (+200 mV), these values are consistent with nitrate reducing conditions.

Summary of SPIN Study Results

Overall, the experiment indicated that nitrate concentrations in the SPIN can be reduced in bioreactors containing both media types to very low concentrations using methanol as a carbon source. In terms of daily loading, nitrate was removed at a rate ranging from 18 25 g/d as N depending on variability in influent concentration.

The long term sustainability of this treatment approach was not tested.

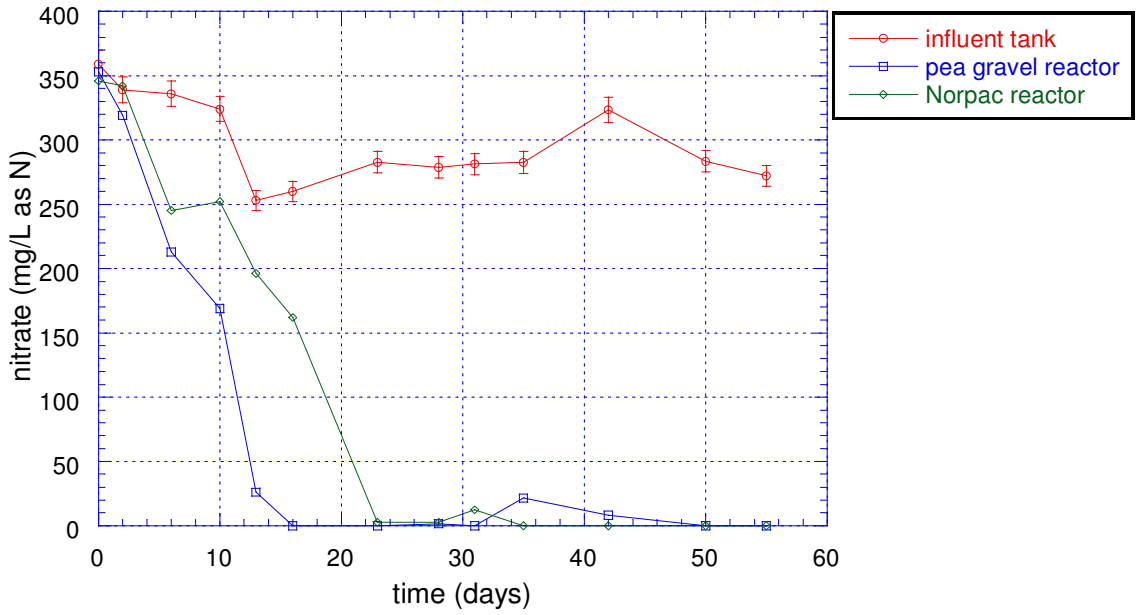


Figure 10. Nitrate (as N) concentrations in the influent holding tank (red), and the effluent from each test reactor (blue: pea gravel, green: NOR-PAC) as a function of time. The experiment testing the water collected in the SPIN was conducted over 55 days.

5.2.2 DG Water Treatability Study

Background Conditions

After reaching apparent steady-state using SPIN water, the study was continued for 14 days (July 24 – August 7) using water collected at the DG flume. Initial conditions were as follows:

- flow rate through each reactor = 50 mL/min.
- methanol injection rate = 0.8 mL/min (1.6% by volume of the total flow into each reactor)
- influent pH at startup = 7.1
- influent temperature = 12.9 ^{o}C

Water was collected from the DG at the flume discharge using a polyethylene funnel and tubing. The DG water was collected in 15 gallon polyethylene tanks and transported to the SPPTS, where it was transferred to the holding tank. Since the holding tank was not operating as a flow through cell as in the SPIN portion of the study, temperature increased in the holding tank throughout this portion of the study (Appendix D, figure D6). The holding tank was filled on July 24 and refilled on July 26, 28, 29, and 31. For the DG water study, each reactor treated approximately 5 pore volumes of water.

Concerns were raised as to the stability of nitrate in the holding tank for the DG study. In particular, with the holding tank no longer operating in flow-through mode, microbes present in the DG water might begin to reduce nitrate. To evaluate the potential for nitrate reduction in the holding tank, water samples were collected during the initial filling of the holding tank with DG water (July 26). The samples were stored in the holding tank for 12 days and then analyzed for nitrate. After this time, the change in nitrate levels was approximately 1.4 percent. These results indicated that nitrate levels in the holding tank should be stable over relatively short duration (14 days) of the DG study. This result was confirmed with analysis of DG study samples (Figure 11), which indicated steady nitrate levels in the holding tank.

Nitrate Removal

Influent nitrate concentrations over the 14 days of the experiment ranged from 480 mg/L as N to 550 mg/L as N. Both types of media continued to perform effectively (Figure 11), reducing nitrate to detection limits (0.1 mg/L). Nitrate removal rates ranged from approximately 34 g/day to 40 g/day as N.

Other constituents

At the conclusion of the 14-day DG experiment, water samples were collected from the influent tank and effluent lines from each reactor to be analyzed for uranium, TSS, TOC, alkalinity, and methanol (Table 7). Analysis was conducted by a commercial laboratory (STL).

Table 7. Analytical results for samples collected at the conclusion DG portion of the field treatability study.

Location	Uranium (µg/L)	TSS (mg/L)	TOC (mg/L)	Alkalinity (mg/L as $CaCO_3$)	Methanol (mg/L)
Influent (DG)	68	<10	9.7[1]	307	12,640[2]
NOR-PAC effluent	36	19	12,000	760	<100
Gravel effluent	24	67	5500	1030	<100

[1] Sample taken from holding tank, prior to methanol injection
[2] Value calculated based on injection rate

For the DG study, the nitrate loading to the columns increased by a factor of approximately 1.5 relative to the SPIN study. All methanol was removed in the DG study, whereas methanol remained in the effluent of both reactors in the SPIN study. It seems possible that microbial metabolism required more methanol in the DG study to complete treatment of the higher nitrate loading. Uranium concentrations decreased in both reactors, although not to the same extent observed during the SPIN experiment. This may be attributable to the higher nitrate loading or the shorter time of experimental duration. Increased values of TSS, TOC, and alkalinity were noted during this phase of the experiment. Of particular note is the increase in TOC in the NOR-PAC reactor (9.7 mg/L in the influent to 12,000 mg/L in the effluent). It is possible that this increase in TOC can be traced back to addition of methanol, even though methanol was not detected in the effluent. Effluent TOC would therefore represent a biologically-processed form of the injected methanolic carbon. This explanation is supported by the relatively high TSS observed in the effluent from the NOR-PAC reactor (19 mg/L vs. 6.9 mg/L during the SPIN test).

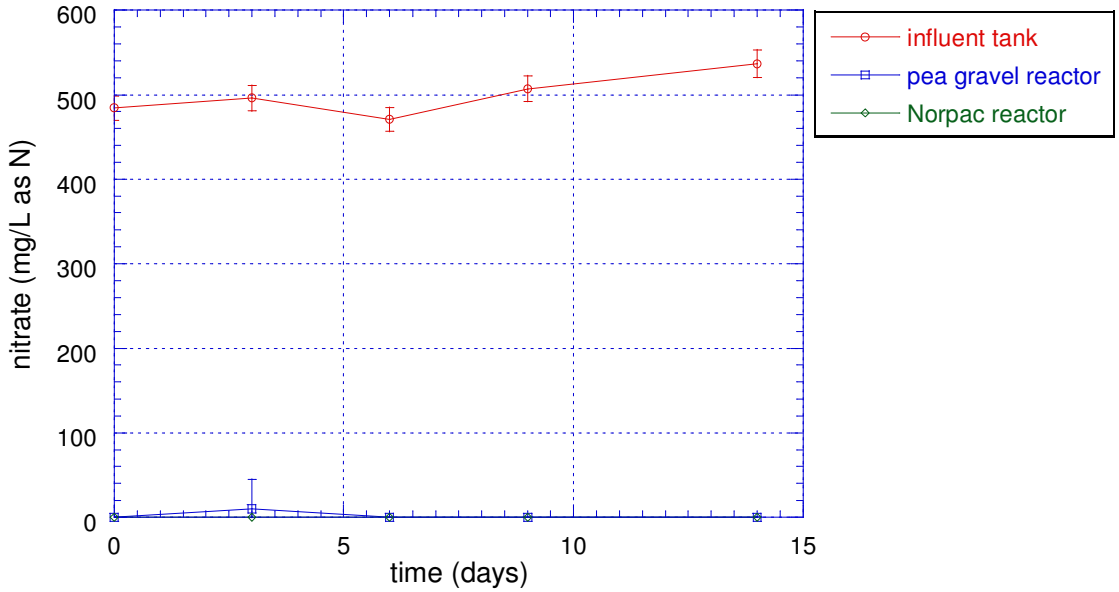


Figure 11. DG study nitrate concentrations in the influent holding tank (red) and effluent from each test reactor (blue: pea gravel, green: NOR-PAC) as a function of time.

Physical Parameters

Temperatures measured (see Appendix D, figure D6) during the DG phase of the experiment were higher than during the SPIN source phase due to the lack of continuous pumping from the source (see Appendix D for graphics). This elevated temperature may not be representative of operating conditions in a full-scale system. Nitrate removal rates at these elevated temperatures may also not be representative of full-scale operation.

Conductivity (see Appendix D, figure D8) decreased from the influent (approximately 5750 µS/cm) to the effluent in both reactors (approximately 3000 - 3300 µS/cm). This decrease is likely due to loss of nitrate (to nitrogen/nitrogen oxide gas phases) and/or precipitation of ionic species as solid phases on the surface of the media.

Dissolved oxygen (see Appendix D, figure D7) decreased through the reactors (from approximately 5 mg/L to 2 mg/L), although some variability in measurement was observed. Limitations of the membrane electrode method combined with the flow cell approach used for measurement of dissolved oxygen likely resulted in the relatively high effluent concentrations measured.

pH measurements (see Appendix D, figure D9) were approximately neutral (7.0) in the influent and the effluent from both reactors. Treatment of nitrate resulted in a negligible change in pH.

Oxidation reduction potential (see Appendix D, figure D10) decreased from a typically positive value in the influent (range 0 to 100 mV vs Ag/AgCl) to a negative value (approximately -300 mV vs Ag/AgCl) in the effluent from both reactors. These values are consistent with nitrate reducing conditions.

Summary of DG Study Results

Overall, the experiment indicated that nitrate concentrations in the DG can be reduced in bioreactors containing either substrate media to very low concentrations using methanol as a carbon source. In terms of daily loading, nitrate removal rates ranged from 34 g/day to 40 g/d depending on variability in influent concentration.

The long term sustainability of this treatment approach was not tested.

5.2.3 Flow Optimization Treatability Studies

Following the primary studies to test viability of a bioreactor approach for treating nitrate in the Solar Ponds Plume, a series of tests (using water from the SPIN) were conducted to evaluate the influence of decreased methanol concentration and increased flow rate on nitrate removal.

First, the methanol injection rate was decreased by a factor of two (to 0.4 mL/min). At the decreased methanol injection rate, nitrate levels in the effluent of both reactors increased only slightly, to approximately 0.2 mg/L as N after 7 days (Table 8). This result suggests that, at nitrate levels found in the SPIN, methanol injection rates could be reduced without significant effects on nitrate removal. It should be noted that decreased methanol was not evaluated for the higher nitrate concentration found in the DG water. As such, a reduced methanol injection rate may not be sufficient for treatment of DG water.

Following this, the influent flow rate was increased by a factor of two (to 100 mL/min). At the increased flow rate, nitrate levels increased in the effluent from both reactors. After 7 days, nitrate levels remained below 10 mg/L as N in the NOR-PAC reactor, but were higher than the target concentration in the gravel reactor. With reduced methanol and high flow rate, effluent nitrate increased in both reactors to levels well above treatment guidelines. This result emphasizes the importance of residence time for nitrate removal.

Table 8. Nitrate concentrations for flow rate and methanol injection rates.

		flow rate to reactors (mL/min)	
		50	**100**
Methanol injection rate (mL/min)	**0.8**	Influent = 298 mg/L as N NOR-PAC = <0.1 mg/L as N Gravel = <0.1 mg/L as N	Influent = 247 mg/L as N NOR-PAC = 5.0 mg/L as N Gravel = 46.1 mg/L as N
	0.4	Influent = 244 mg/L as N NOR-PAC = 0.2 mg/L as N Gravel = 0.2 mg/L as N	Influent = 248 mg/L as N NOR-PAC = 107 mg/L as N Gravel = 35.4 mg/L as N

As part of the optimization studies, water samples were collected and sent to a commercial laboratory for methanol analysis. Results are shown in Table 9. Methanol analytical results did not provide a clear indication of the rate of methanol use. Methanol levels in the influent samples were less than calculated methanol concentration for the given flow rates. Also, effluent methanol levels were close to or higher than influent methanol levels. These results may indicate that incomplete mixing occurred in the lines prior to the sampling point.

Table 9. Measured methanol concentrations in influent and effluent from each reactor.

Water flow rate (mL/min):	100	100
Methanol rate (mL/min):	0.8	0.4
	Methanol Concentration (mg/L)	
Influent (calculated) [1]	10,100	5,050
Influent (measured)	2,700	2,300
NOR-PAC effluent	3,900	860
Gravel effluent	820	2,400

[1] – Value calculated based on methanol and water injection rates, assuming methanol has a density of 0.791 grams per milliliter.

5.3 Methanol Usage

A plot showing average methanol usage versus time is shown in Figure 12. Methanol usage rates fluctuated throughout the study. This fluctuation is likely attributable to peristaltic tubing wear. One deviation from normal methanol injection rates was observed at day 50, when the methanol reservoir for the NOR-PAC reactor had become disconnected. As such, methanol was not injected into the NOR-PAC reactor for a short time. For the optimization study (day 70), the methanol injection rate was halved for one week. Following this one-week study, the methanol rate was restored to normal levels.

With the fluctuations noted in methanol usage rate, nitrate reduction results remained stable. These results indicate that system performance, under conditions of the field treatability study, is relatively insensitive to the rate of methanol injection over the ranges measured.

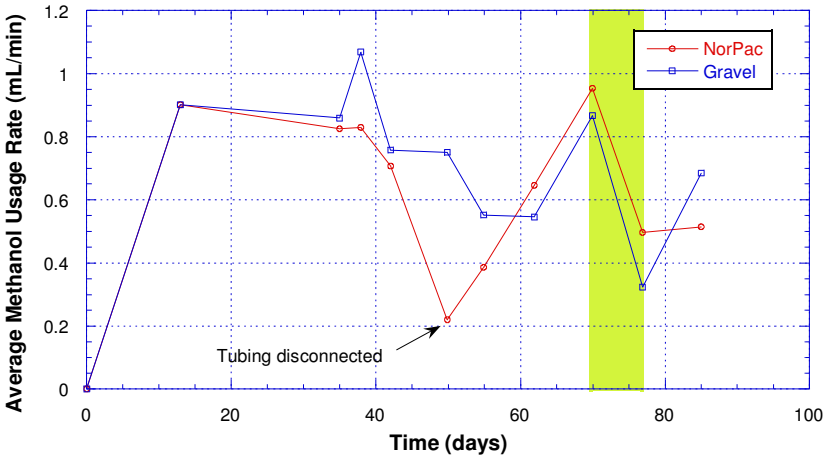


Figure 12. Methanol usage vs. time. The highlighted region (days 70 to 77) indicates the portion of the optimization study which was operated at a reduced methanol injection rate.

5.3.1 Reactor Decommissioning

On September 11, 2007, flow to the reactors was stopped and the reactors were left to drain overnight. On September 12, both reactors were opened and all of the substrate media removed. During removal, the media was inspected for evidence of plugging, short circuit flow, or biofouling. General observations are as follows:

- Biofilm was apparent in the influent tubing downstream of the point of methanol injection. This indicates that biological activity may be beginning before flow reaches the reactors, using the tubing wall as substrate.
- Significant volumes of biosolids were present in the influent header tank of each reactor (Figure 13), possibly resulting from biological activity in the influent tubing and header tank of each reactor. No attempt to identify the organisms within the biosolids was made.
- For both reactors, visible inspection indicated that biofilm was generally limited to the upstream ½ of the reactor (shown in Figure 13). Analysis of the biofilm composition was beyond the scope of this project.
- No evidence was observed indicating short circuiting of flow or plugging of the reactors. However, several semi-cohesive clods of apparently biofouled media were observed at the influent end of the pea gravel reactor, suggesting that pea gravel media may be subject to biofouling over time. Rigorous evaluation of the degree of reactor biofouling was difficult through a visual approach since opening of the reactors resulted in substantial disturbance to the media.

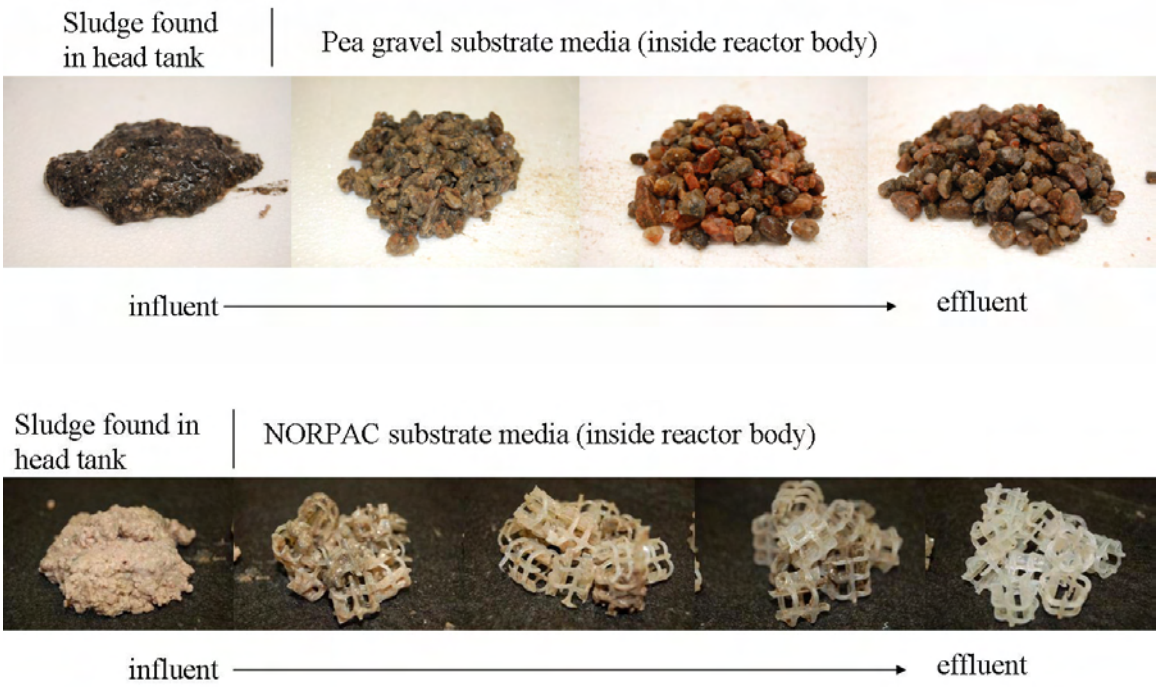


Figure 13. Photographs showing biofilm development on substrate media – gravel (top) and NOR-PAC (bottom).

6. Conclusions and Design Recommendations

The Phase 2 Treatability Studies indicated that biological reduction of nitrate in the Solar Ponds Plume appears to be a viable approach using methanol as a carbon source. Under conditions of the study, both media types (pea gravel and NOR-PAC) proved amenable to nitrate removal to levels below the target concentration of 10 mg/L as N. This was achieved without addition of supplemental nutrients (such as yeast energizer, phosphate, whey or corn syrup), suggesting that this may not be required to achieve treatment objectives. In addition to this, several observations were made during the experiment that may be pertinent to design of a full-scale treatment system. These are described below.

6.1 System Design Parameters

Reactor design notes include oxygen exclusion, temperature control, and venting:

- For nitrate reduction to occur, dissolved oxygen in the system must be depleted.
- Biological systems are very sensitive to temperature fluctuations. Burial of the reactors could aid in both air exclusion and temperature control.
- Biological processes lead to formation of gases, such as CO_2, N_2, or NO_x. Accumulation of gases in the reactor could lead to problems related to pressure buildup and restricted water flow paths. As such, it is advisable to include a vent into the system design. The gas vent should allow gas to escape while precluding oxygen entry into the system. Additionally, gas trapping within the pore spaces of a reactor packed with a media such as pea gravel may result in short circuiting of flow and diminished treatment over time.

The reactor design could also include components that will aid in future troubleshooting. For example, sample ports over the length of the reactor will aid in determining where nitrate reduction is occurring, hence the portion of the reactor that is biologically active. Flow restrictions due to biofouling or gas accumulation could perhaps be identified via pressure measurements over the length of the reactor body. Finally, the plan should include monitoring of flow rate and average hydraulic residence time. All of the above will aid in resolving reactor performance.

For the field treatability study, a holding tank was used to regulate flow. Due to the unsteady nature of flow originating from the SPIN, a holding tank was necessary to achieve a steady flow through the reactors (for this same reason, the hydraulic residence time in the holding tank in the field treatability study is unknown). Irregular flow conditions could be harmful to a biological system. For the permanent treatment system, a flow-regulating holding tank may be necessary if unsteady flow conditions are expected.

Both pea gravel and NOR-PAC media performed adequately as substrate. Primary advantages of pea gravel include cost effectiveness and availability. The NOR-PAC media, although more expensive ($71.88 per cubic foot), provided several advantages. Due to the higher porosity of NOR-PAC, a smaller reactor volume is required to achieve

a similar pore volume (hence the different reactor sizes used for the Phase 2 study). In theory, the higher porosity also facilitates venting of gasses that are generated within the reactor. NOR-PAC is available as sinking or floating media (i.e., specific gravity >1 or <1). As such, either of these, or a combination thereof, could be used to control settlement. As a final note, the NOR-PAC polypropylene packing media selected for the study is 5/8-inch. The media is available in other sizes that may be more appropriate for a larger scale field treatment system.

6.2 Inoculation and Carbon Source

Inoculation of the reactors followed a "safe" approach, using multiple sources of potential nitrate reducing bacteria. Inoculum consisted of (1) 5 gallons of activated sludge, collected from the aeration basin of the Drake Water Reclamation Facility in Fort Collins and (2) 1 kg of soil collected from the DG, which had presumably been in contact with high-nitrate water. The inculum was mixed with 1.6 percent methanol, 0.5 oz. yeast energizer, and approximately 125 g Na_2HPO_4 (nutrients were not added on a continuous basis, but were added at the beginning to initiate biological activity). This mixture was then poured into each reactor via a port near the upstream end. The quantity of inoculum added was approximately one-tenth of the total reactor pore volume. The inoculum was circulated for four days to improve distribution of inoculum and allow microbes to become established.

Technical-grade methanol (99% purity) performed adequately as a carbon source. Although the target methanol injection rate was 2 percent, the actual rate achieved was approximately 1.6 percent and fluctuated notably. The required methanol injection rate is related to the influent loading of nitrate (and other potentially biologically reducible constituents, such as uranium). At this injection rate, methanol performed satisfactorily, even under the higher nitrate concentration present in the DG water. As a design consideration, distributing methanol throughout the reactor requires that the methanol be well-mixed with the reactor influent. For the field treatability study, methanol was injected into the influent flow line well upstream of the reactor to provide adequate mixing time. However, biofouling was noted in the injection line downstream of the methanol injection point, indicating that biological activity initiated upstream of the reactors. To achieve adequate mixing with minimal biofouling, this could perhaps be resolved by including a mixing cell, constructed of glass (or other material that is unlikely to function as biological substrate), immediately upstream of the reactor inlet. Finally, methanol flammability and volatility should be considered in planning of storage and handling.

6.3 Reactor Performance Notes

Tracer studies were conducted to monitor the residence time in the field reactors. At a flow rate of 50 mL/min, the measured residence time in the reactors was approximately 37 hours (½ of the target residence time of 64 hours). Although shorter than the target residence time, near complete removal of nitrate was achieved. At a flow rate of 100 mL/min (actual residence time not measured), reactor performance declined significantly.

Although not targeted for treatment, uranium concentrations were substantially reduced by the reactors used in these studies. It may be possible to achieve satisfactory uranium removal in a single cell treatment system (i.e., similar to full-scale reactors used in these studies) rather than employing a second cell for uranium removal, as the SPPTS currently does.

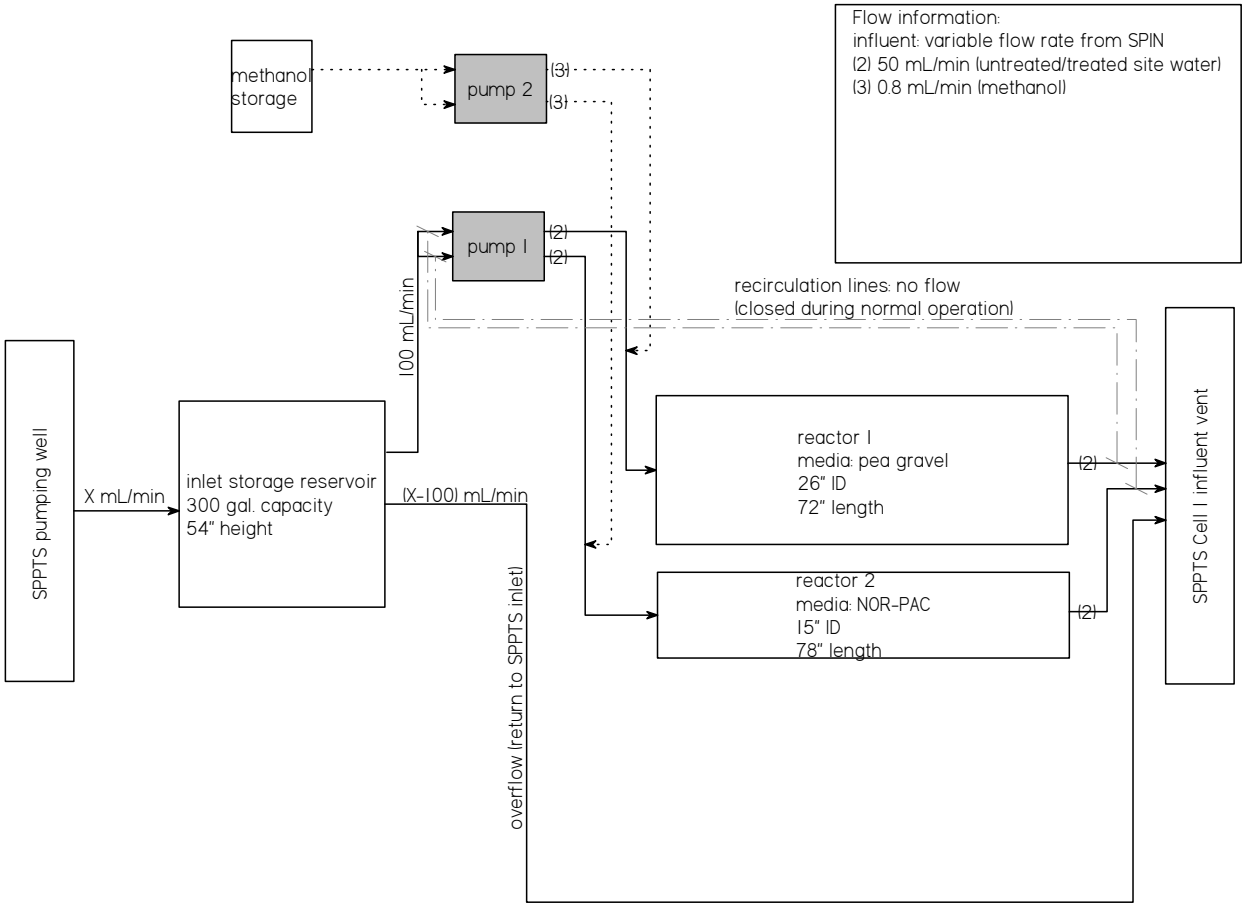
At the conclusion of the Phase 2 treatability study, some biofilm was noted on the substrate media, although it did not appear to inhibit flow. In a permanent system, it should be expected that biofilm will eventually build up to a degree that will impede flow and inhibit reactor performance. The Phase 2 treatability study did not generate data sufficient to predict rates of biofilm formation in a full-scale treatment system. Nevertheless, system design and operations planning should therefore anticipate replacement of substrate or removal of biofilm from substrate media.

6.4 Site Conditions

Site conditions should also be considered in final treatment system design. In particular, key site attributes include lack of utility infrastructure and storage facilities. For the laboratory study, a trailer was used for storage of materials and to protect sensitive system components (e.g., peristaltic pumps) from the elements. Power requirements were satisfied via solar power. The solar power supply was adequate for the Phase 2 treatability study (April to August 2007), but was not sufficient for Phase 1 (September to November 2006). For year round treatment, passive feed systems would be ideal.

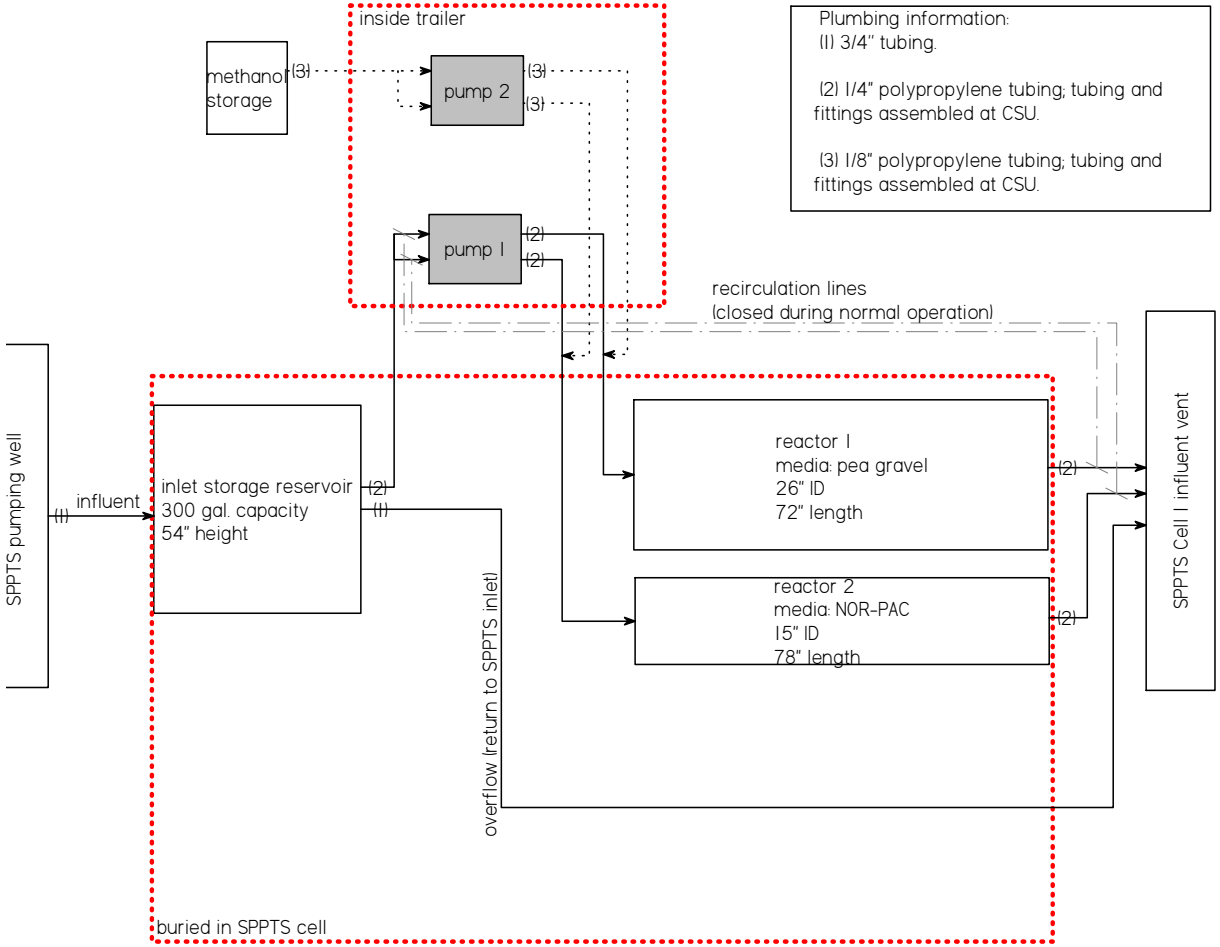
APPENDIX A: REACTOR DESIGN AND LAYOUT ILLUSTRATIONS

System Layout 1: Flow Information



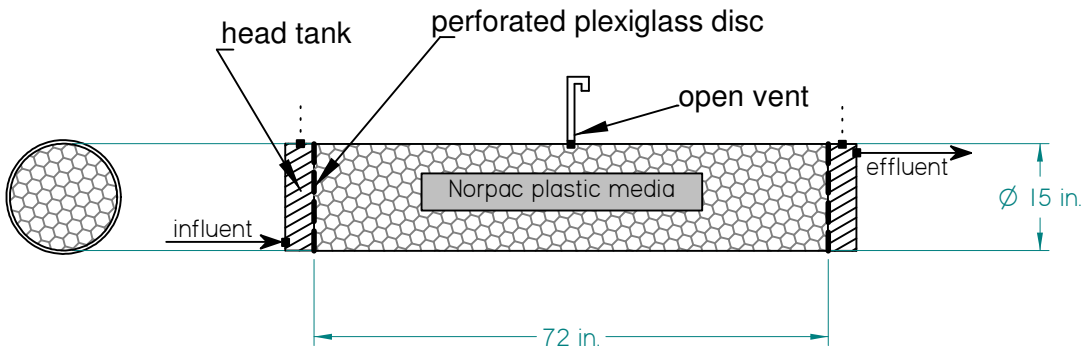
Note: All flow routed back into SPPTS Cell 1 to ensure adequate treatment for nitrate and uranium.

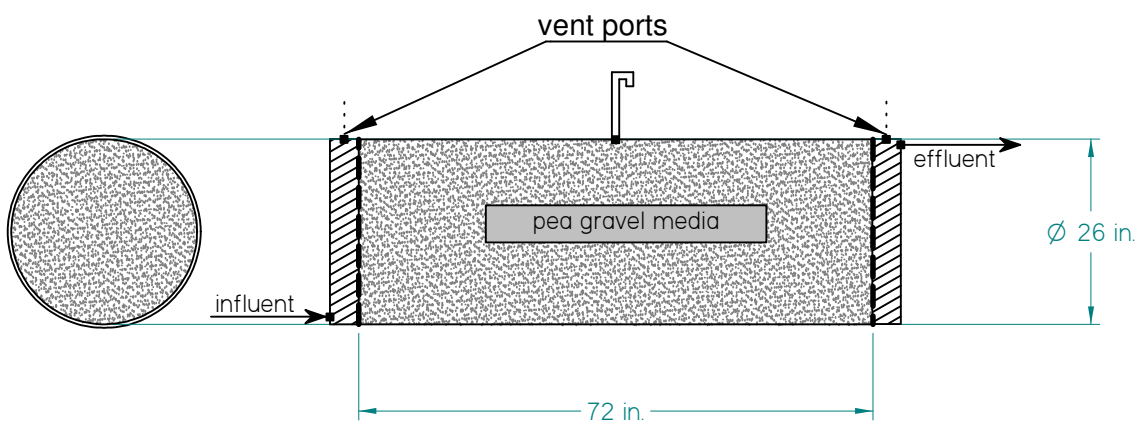
System Layout 2: Plumbing Information



Note: All flow routed back into SPPTS Cell 1 to ensure adequate treatment for nitrate and uranium

Reactor Design Schematic





Notes: (1) dimenstions refer to inside of reactor; (2) open vent (near center) and vent ports (upstream and downstream head tanks) are included on both reactors, but only labeled on one; (3) the head tank refers to the open area at the end of each reactor used to distribute head pressure upstream and downstream of the reactor; (4) the perforated plexiglass disc is added to distribute flow throughout the entire cross section of media.

APPENDIX B: REACTOR INSTALLATION PHOTOS

Installation of the treatability reactors. Clockwise from upper left: 1) setting foundational support for reactors, 2) setting reactors, 3) wood chips covering reactors for temperature regulation, 4) reactors in place.

APPENDIX C: TRACER STUDY METHODS AND RESULTS

Tracer Study Methods

The average hydraulic residence time in each reactor was measured by injecting a spike of tracer in the influent and measuring the effluent concentration over time. The tracer used was Fluorescein, a fluorescent water-soluble dye. Effluent concentrations were monitored using a spectrometer and fiber optic cable. The spectrometer emits light through a fiber optic cable, which is submersed in the sample. Through this, the spectrometer measures the intensity of fluorescence over a range of wavelengths. The fluorescein dye fluoresces at a known wavelength (approximately 520 nano-meters); the fluorescein concentration can be monitored by recording intensity of fluorescence at that wavelength. For all studies, a total of 2 liters of water containing 100 mg/L of fluorescein (0.2 grams total fluorescein) were injected.

Laboratory Study

The objective of the laboratory study was to verify the ability of the reactor to achieve the target residence time of 64 hours. In particular, the study was conducted to validate the reactor design in the laboratory, where changes could easily be made to correct any apparent problems. City of Fort Collins tap water was used for the study. The study was conducted at a flow rate of 100 mL/min, or double the calculated flow rate needed to achieve target residence time. This was done to accelerate results and facilitate rapid deployment to the field. Under conditions used for the laboratory study, a residence time of 32 hours would be equivalent to a 64-hour residence time at a flow rate of 50 mL/min. Only the NOR-PAC reactor was tested in the laboratory. It was determined that testing the pea gravel reactor in the laboratory would not represent field conditions since the source of pea gravel for use in the field treatability studies had yet to be determined.

For the laboratory study, a flow-through cell was constructed such that the spectrometer could take continuous readings directly from the reactor effluent stream. The effluent tracer concentration was logged continuously by computer throughout the study. Results are discussed below.

Field Study

The objective of the field study was to resolve actual residence times in both reactors. The field study commenced on June 29, 2007 and continued for 7 days. Water obtained from the SPIN was used for the tracer study, and the water flow rate was 50 mL per minute (the same as was targeted for the actual treatability study).

In the field study, continuously logging effluent samples via computer would not allow for simultaneous testing of both reactors. As such, an auto-sampler (ISCO, Lincoln, NE) was used to collect samples from the effluent of both reactors. The auto-sampler collected samples (approximately 20-mL in volume) at 6-hour time intervals. The samples were returned to the laboratory and measured in a single batch at the conclusion of the study.

Tracer Study Results

Mean hydraulic residence times were estimated through two tracer studies. An initial tracer study was conducted in the laboratory, in which only the NOR-PAC reactor was evaluated. The second tracer study was conducted in the field; both reactors were evaluated as part of the field study. Results of both studies are discussed below.

Laboratory Study

As described in detail in the methods section, effluent tracer concentration is measured as intensity of fluorescence. To determine mean hydraulic residence time, effluent concentration data is plotted as normalized cumulative intensity (i.e., the sum of measured intensity values through the given time over the sum of all measured intensity values) versus time. The mean residence time is the time at which 50 percent of the cumulative measured intensity was detected in the effluent. As shown in Figure 14, the measured mean residence time was 34.2 hours. Corrected for flow rate (as discussed in the Methods section) the residence time is 68.4 hours, thus meeting the objective of achieving a residence time greater than 64 hours. Following this study the reactors were deployed to the field.

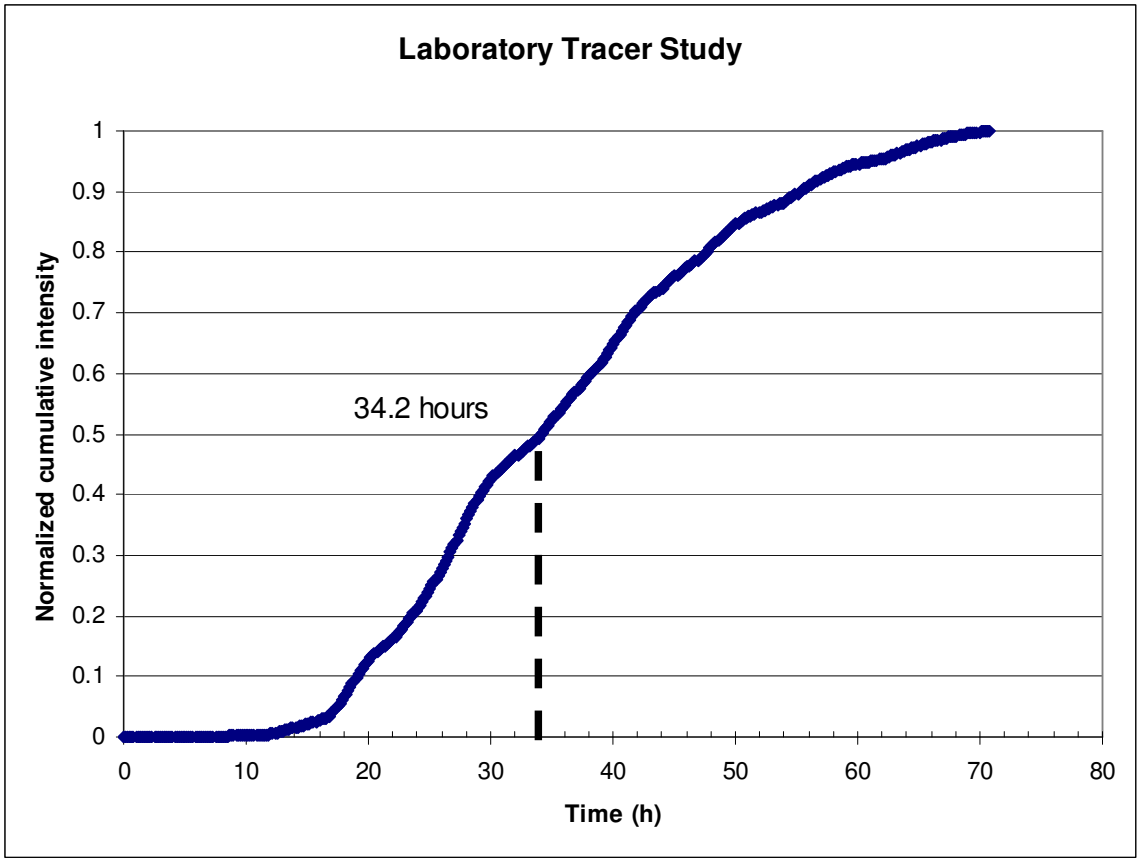


Figure 14. Laboratory tracer study results.

Field Study

Effluent tracer concentration versus time for the NOR-PAC reactor is shown in Figure 15. The effluent concentration shows an initial spike, peaking at approximately 24 hours, followed by a gradual declining period. In general, this follows the expected pattern for tracer flow through a column. Figure 16 shows normalized cumulative concentration (through 50 percent removal) versus time. From this, the mean residence time in the reactor is approximately 37 hours. This is approximately 54% of the residence time achieved in the laboratory (recalling that the residence time measured in the laboratory, when corrected for the flow rate differential, was 68 hours). This likely indicates that ideal plug flow conditions were no longer present in the reactors at the time of the tracer study. The field tracer study was conducted on June 29, approximately 6 weeks after the media was loaded into the reactors. During this time, conditions within the reactor may have changed due to (1) reduction of media volume in which flow occurs and (2) formation of selective flow paths. An effective reduction in reactor volume could result from gas build-up within the reactor that is not vented. Selective flow paths could form due to settlement of the reactor media. It is possible that a combination of these factors eventually led to a reduced mean residence time.

Effluent tracer concentration versus time for the pea gravel reactor is shown in Figure 17. The effluent concentration in the pea gravel reactor shows two spikes followed by a rapid decline in concentration and a very low level of tailing. This is not typical for column studies, and likely indicates some abnormal flow pattern in the reactor. The actual cause of this is not certain, but our hypothesis is that this is due to both (1) development of preferential flow paths due to media settlement and (2) gas build-up within the reactors causing further flow-path restrictions. The two peaks may indicate two primary flow pathways: through the open channel and through the gravel media. Figure 18 shows normalized cumulative concentration (through 50 percent removal) versus time. From this, the mean residence time in the reactor is approximately 37 hours. This is similar in magnitude to that measured in the NOR-PAC reactor, but significantly below that measured in the laboratory study (note that the gravel reactor was not tested in the laboratory). This seems to indicate that selective flow patterns are present in the reactor.

A mass balance was conducted for both reactors. The total mass of tracer injected into each reactor was 0.2 grams. Recovered tracer mass, calculated by integrating the area under the curve of concentration versus time, was 0.17 grams from the NOR-PAC reactor and 0.19 grams from the pea gravel reactor. These mass balance values indicate that most of the tracer was indeed recovered from both reactors over the period in which samples were collected and analyzed for tracer concentration. From this, it does not appear that apparent residence times are biased by ending the study prematurely.

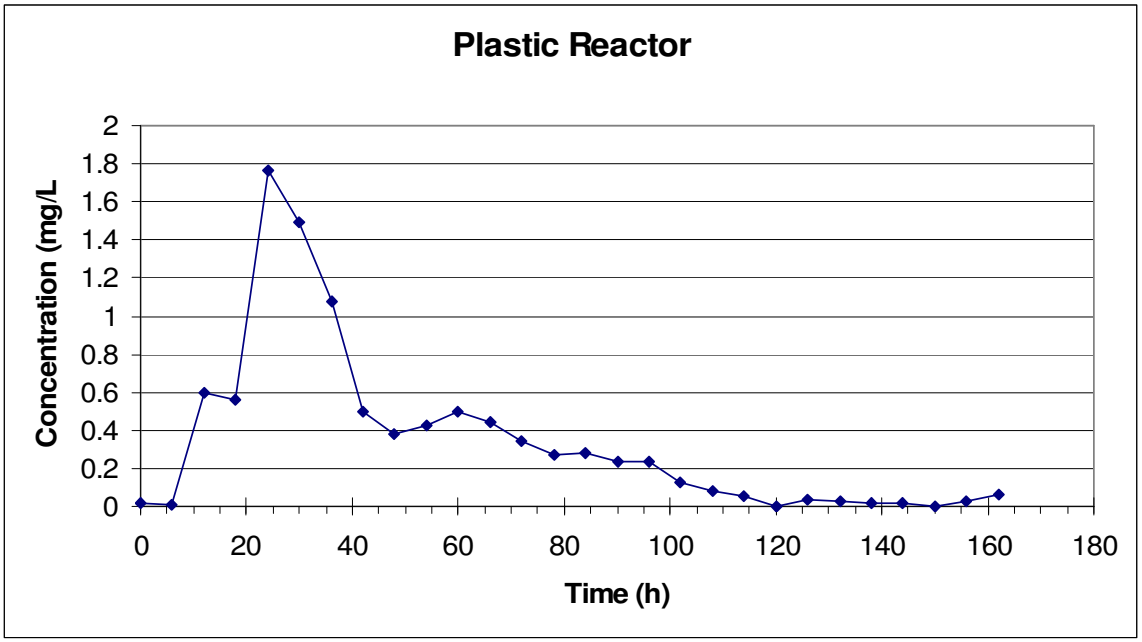


Figure 15. Effluent tracer concentration versus time for the reactor containing NOR-PAC media.

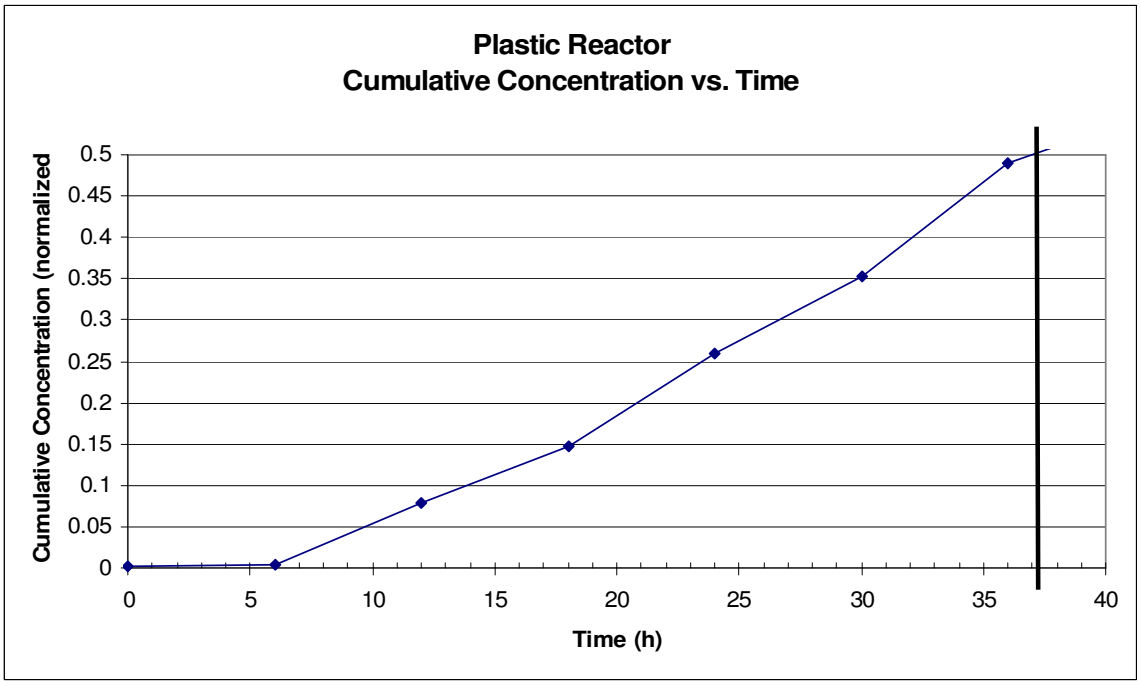


Figure 16. Normalized cumulative concentration versus time for the reactor containing NOR-PAC media.

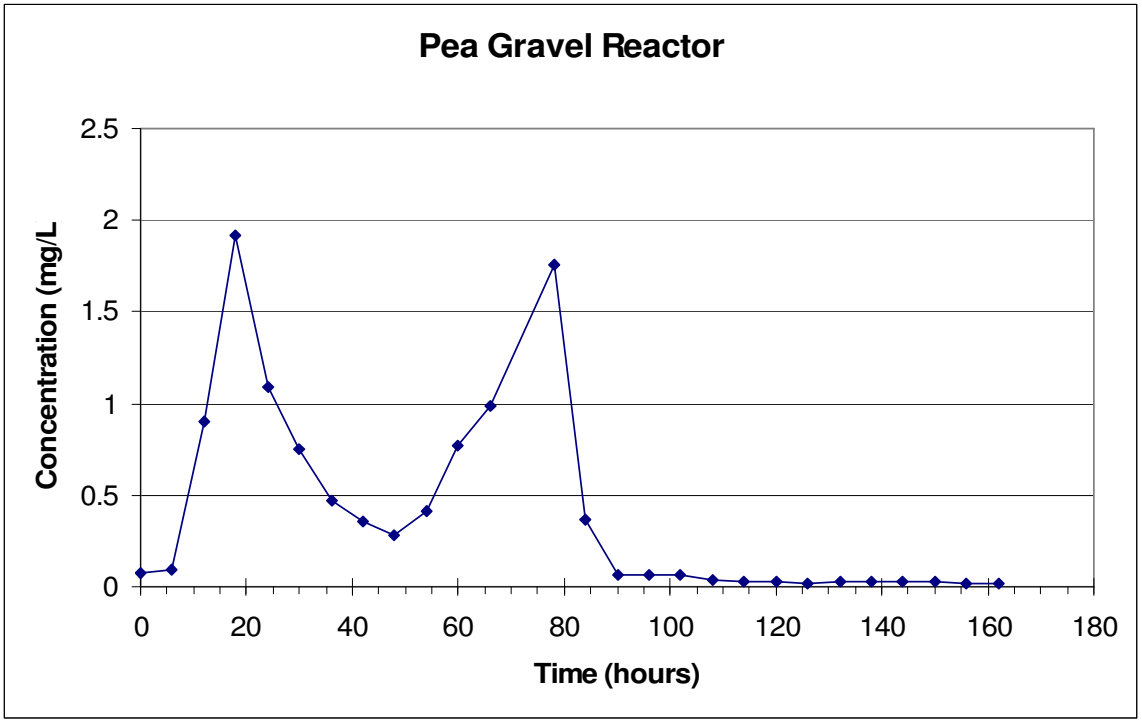


Figure 17. Effluent tracer concentration versus time for the reactor containing pea gravel.

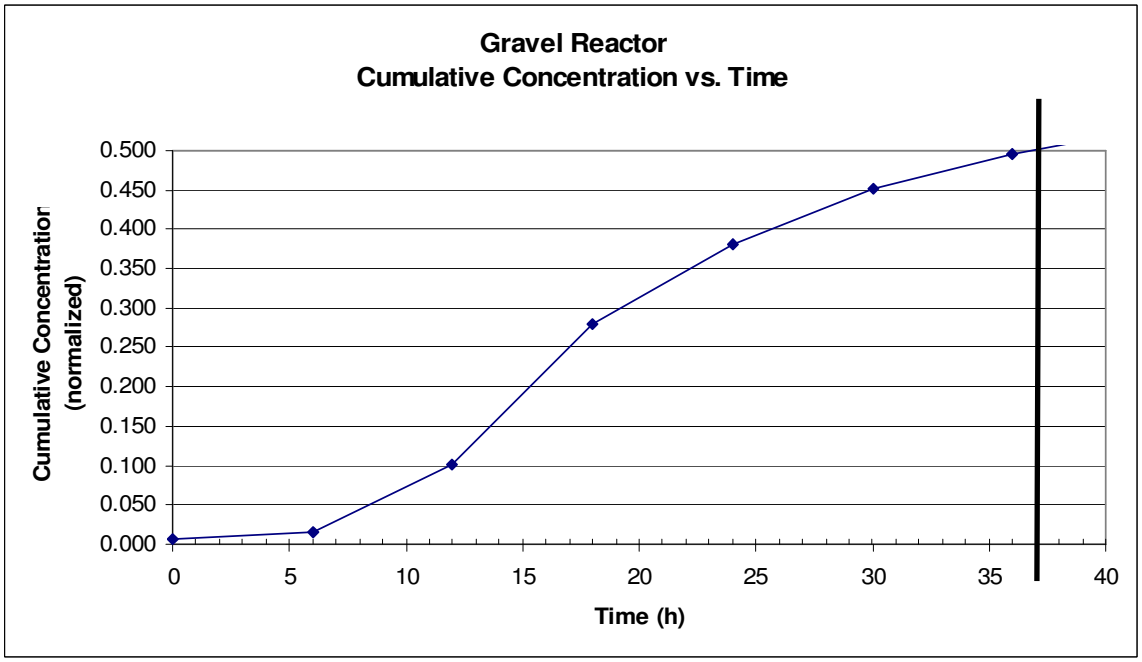


Figure 18. Normalized cumulative concentration versus time for the reactor containing pea gravel.

APPENDIX D: PHYSICAL PARAMETER MEASUREMENTS

Physical Parameters: SPIN study

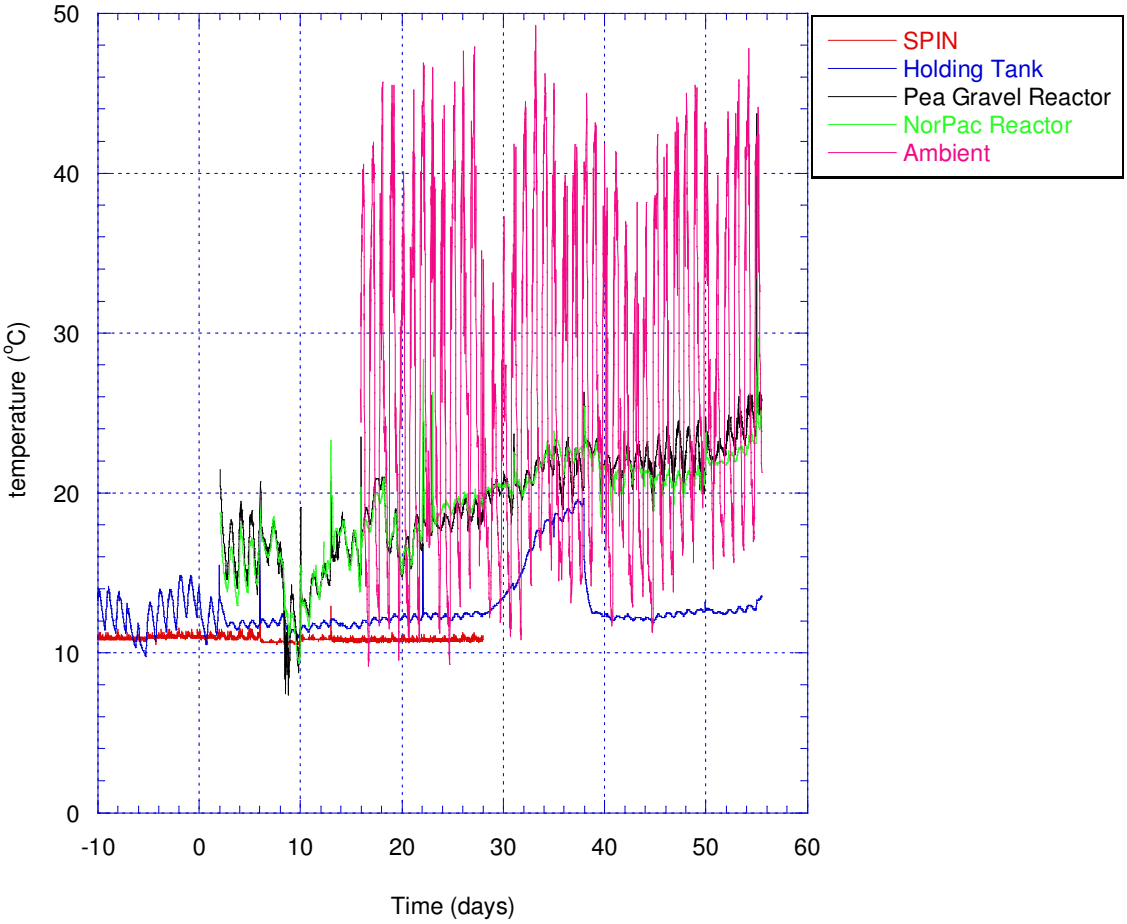


Figure D1 (top). Temperature data collected during the experiment using the SPIN source. Plot includes data collected prior to initiation of the experiment (prior to day 14) in the SPIN and holding tank. Also included is ambient (air) temperature data using an unshielded thermistor. Note: extended temperature increase measured in the holding tank (day 30-39) corresponds to low pumping rate from the SPIN to the holding tank; temperature measurement in the SPIN was discontinued when access to the downhole datalogger was lost.

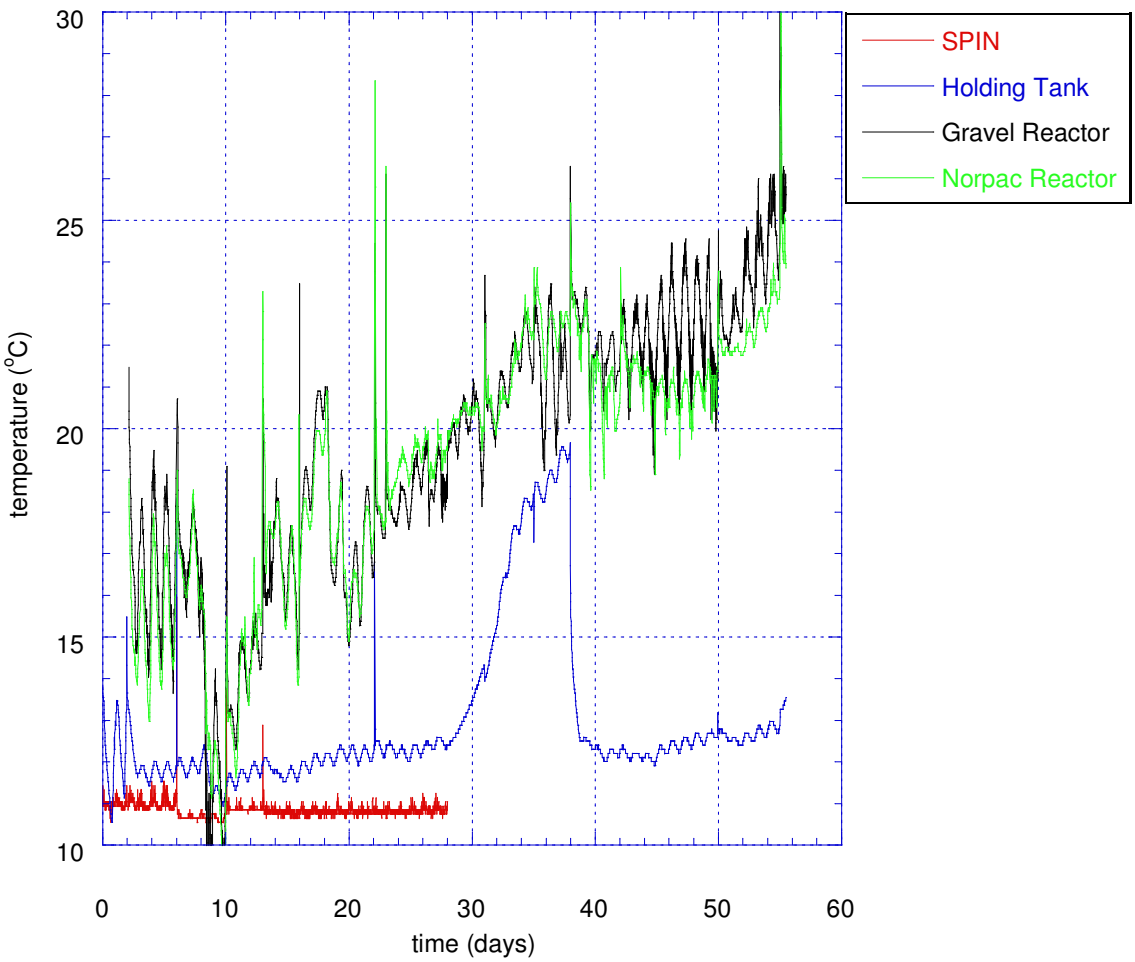


Figure D1 (bottom). Temperature data collected during the experiment using the SPIN source. This plot is an edited version of data plotted above (see Figure D1 (top)), with the pre-experiment data and the ambient temperature data removed. Note: extended temperature increase measured in the holding tank (day 30-40) corresponds to low pumping rate from the SPIN to the holding tank; temperature measurement in the SPIN was discontinued when access to the downhole datalogger was lost. Short term spikes in temperature correspond to times when datalogger was recovered for data retrieval.

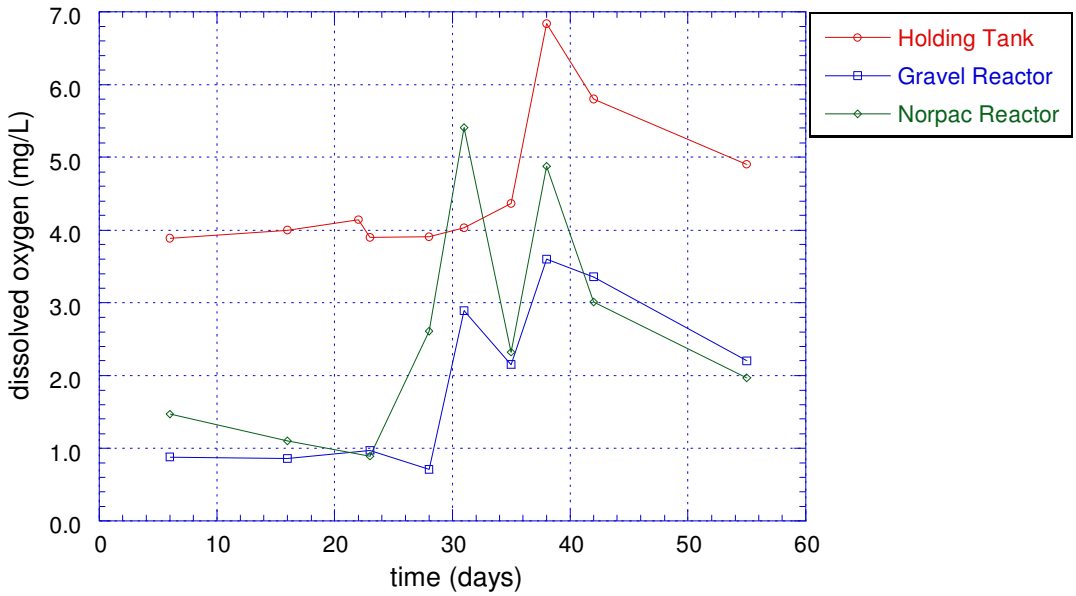


Figure D2. Dissolved oxygen concentrations measured in the influent and effluent from the test reactors using the SPIN source.

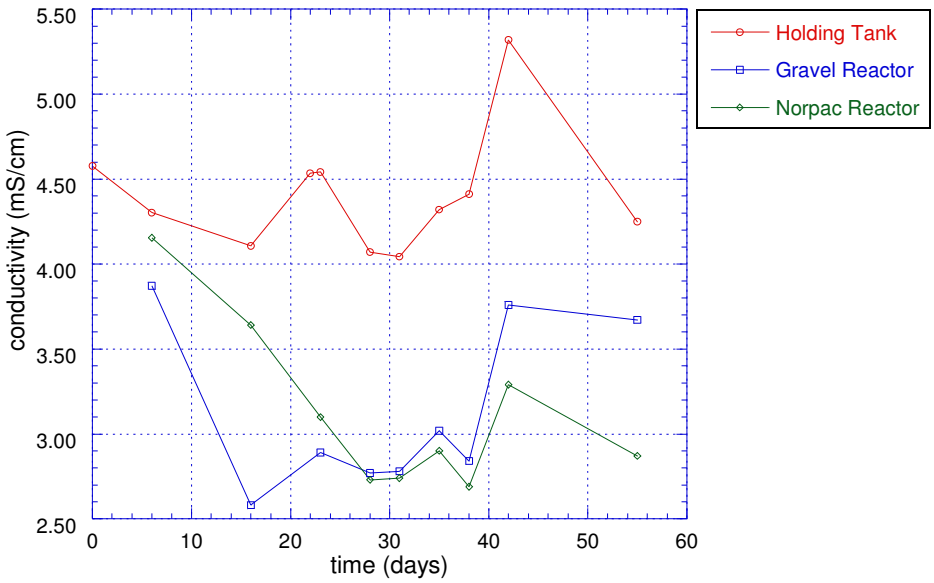


Figure D3. Specific conductivity measured in the influent and effluent from the reactors during the SPIN source portion of the testing.

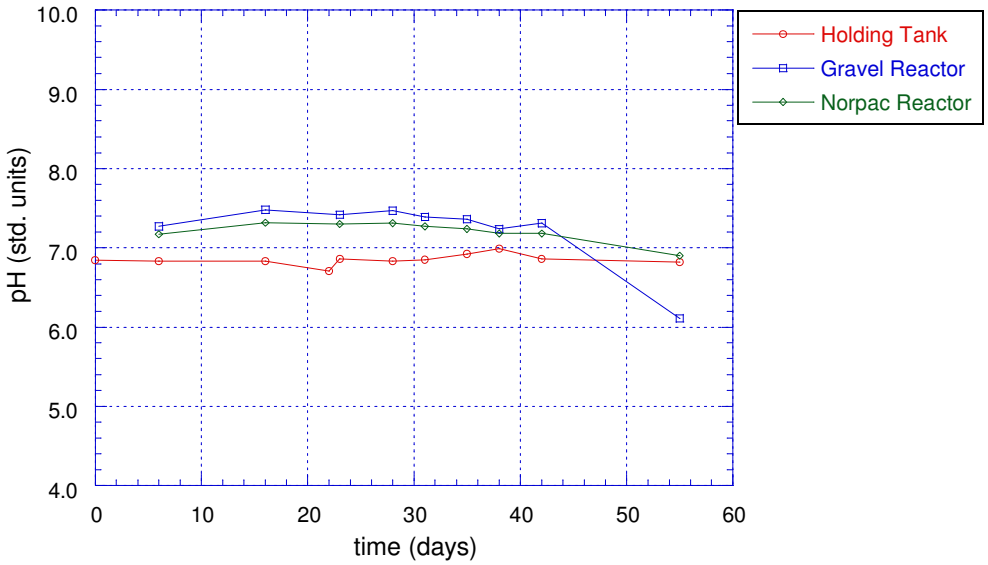


Figure D4. pH measured in the influent and effluent from the reactors during the SPIN source portion of the testing.

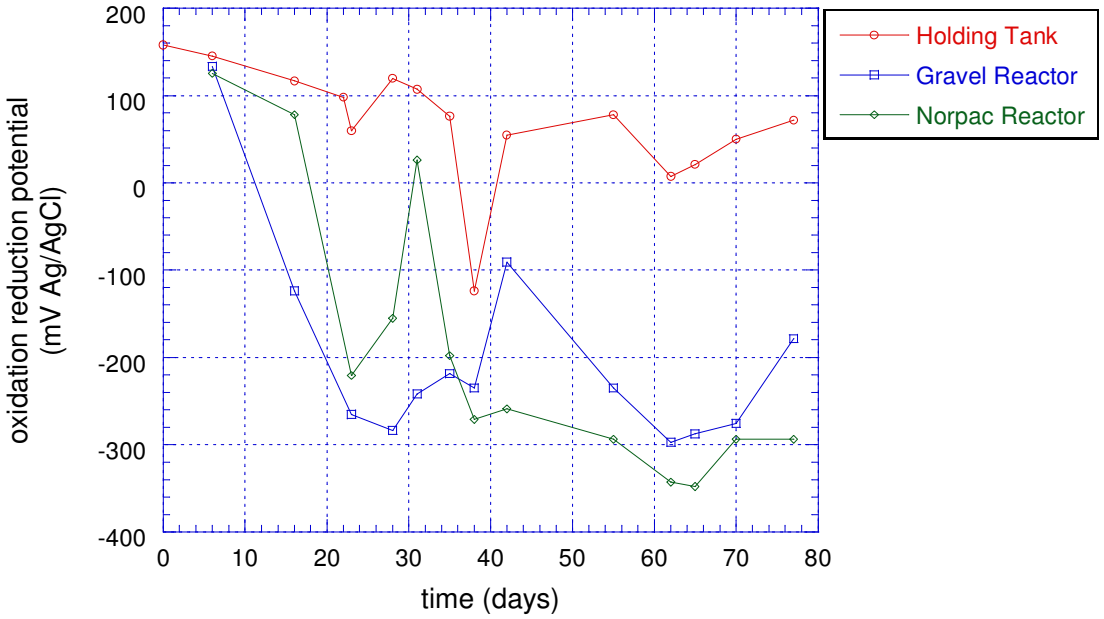


Figure D5. Oxidation reduction potential (ORP) measured in the influent and effluent from the reactors during the SPIN source portion of the testing.

Physical Parameters: DG Study

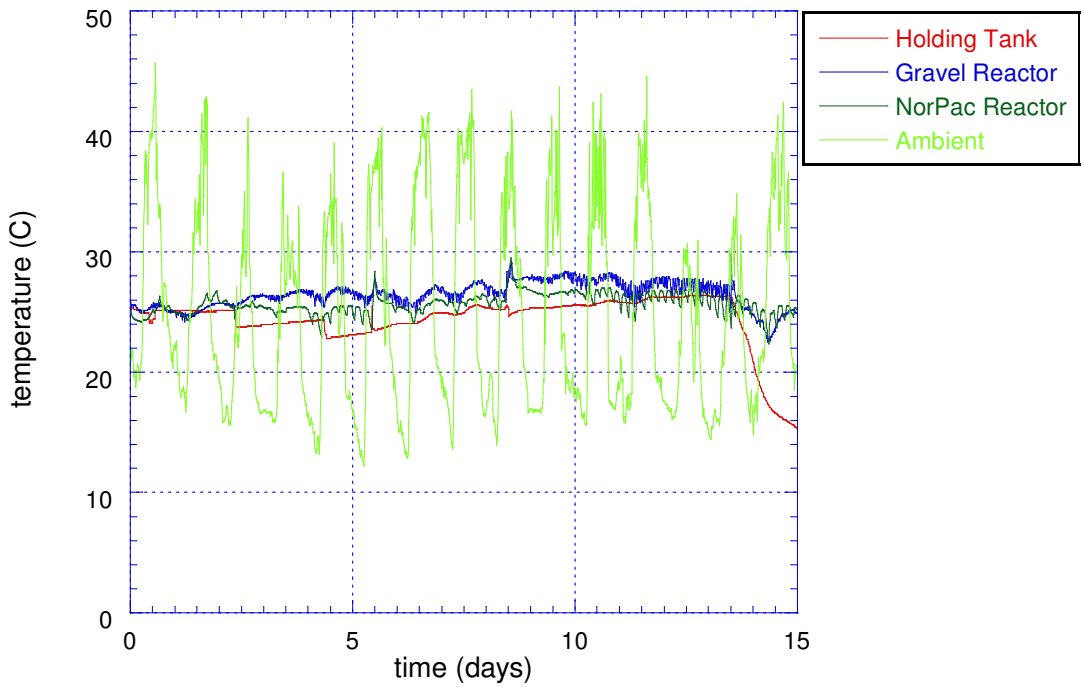


Figure D6. Temperature measured in the influent and effluent from the reactors during the DG source portion of the testing. Also included is ambient air temperature for comparison.

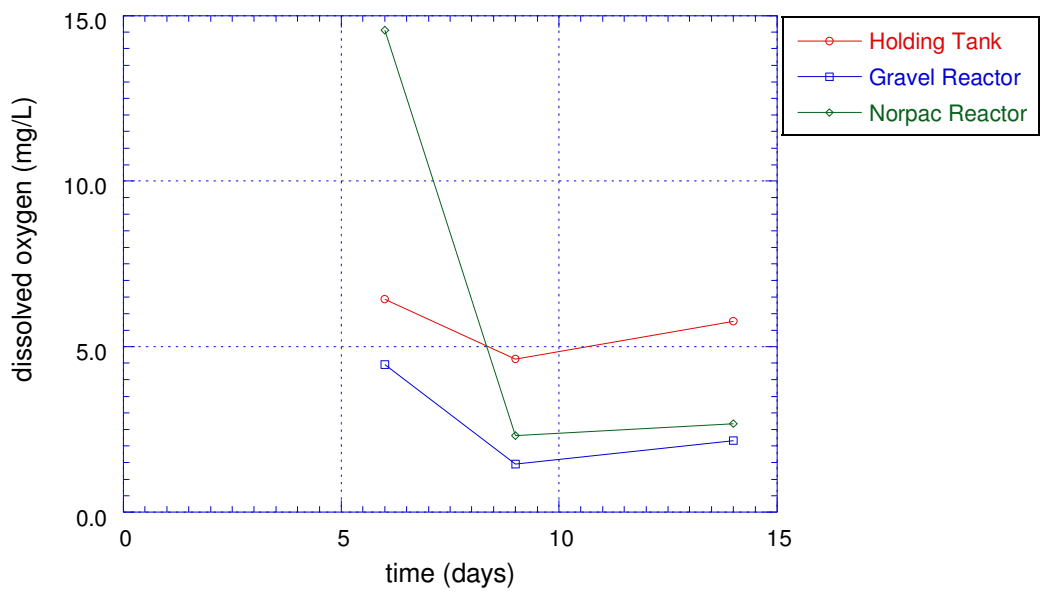


Figure D7. Dissolved oxygen concentration measured in the influent and effluent from the reactors during the DG source portion of the testing.

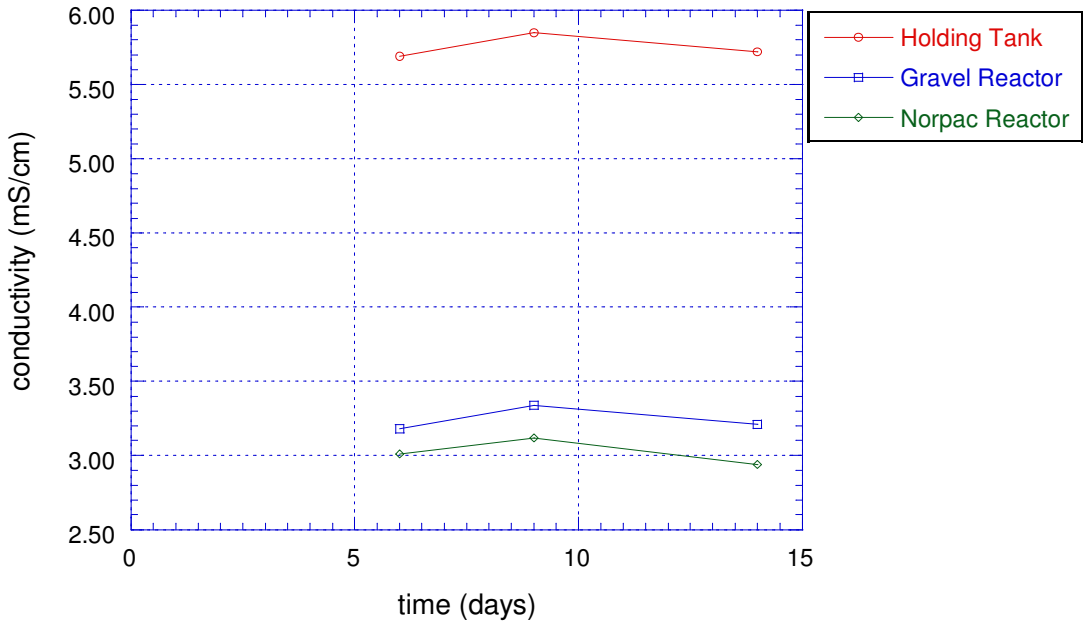


Figure D8. Conductivity measured in the influent and effluent from the reactors during the DG source portion of the testing

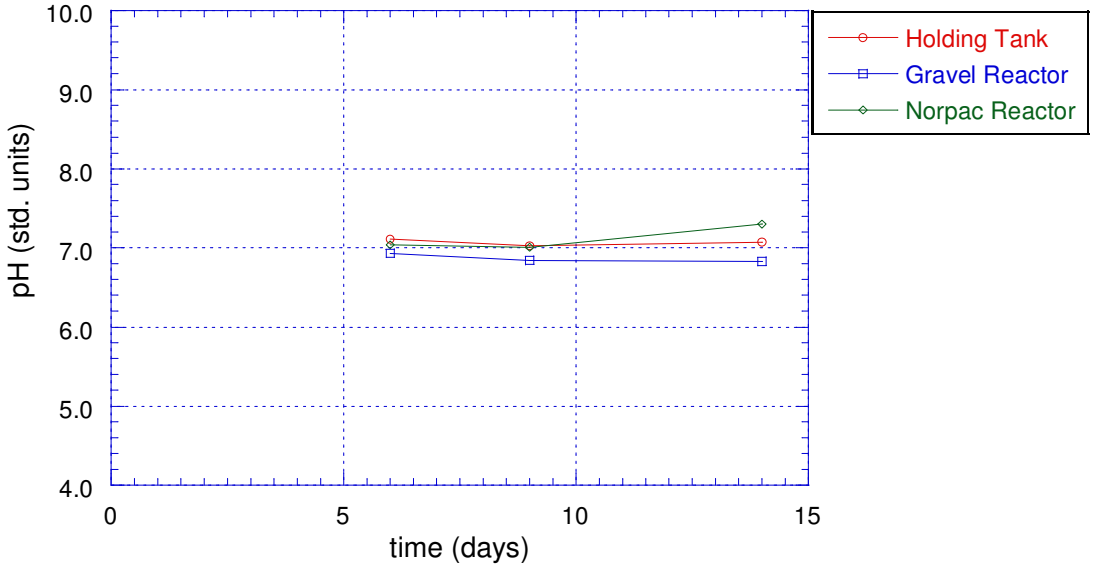


Figure D9. pH measured in the influent and effluent from the reactors during the DG source portion of the testing

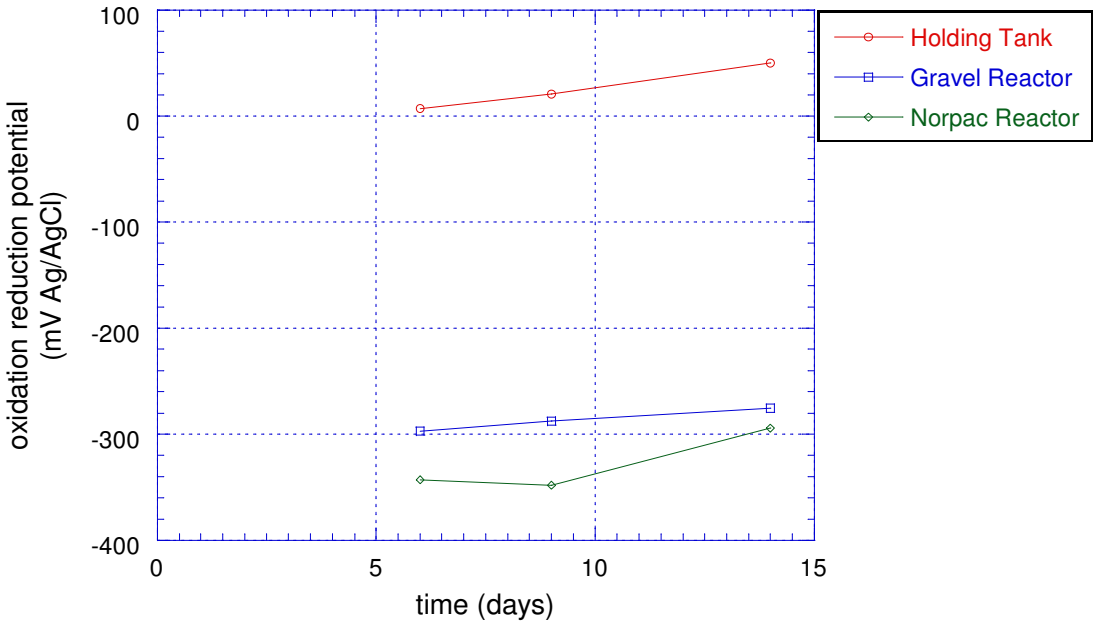
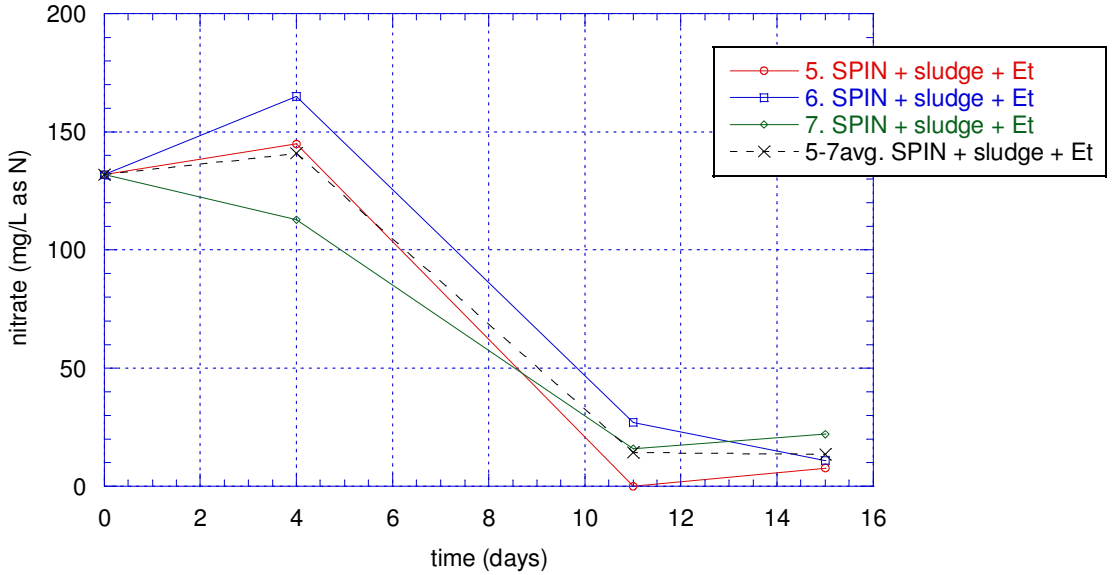


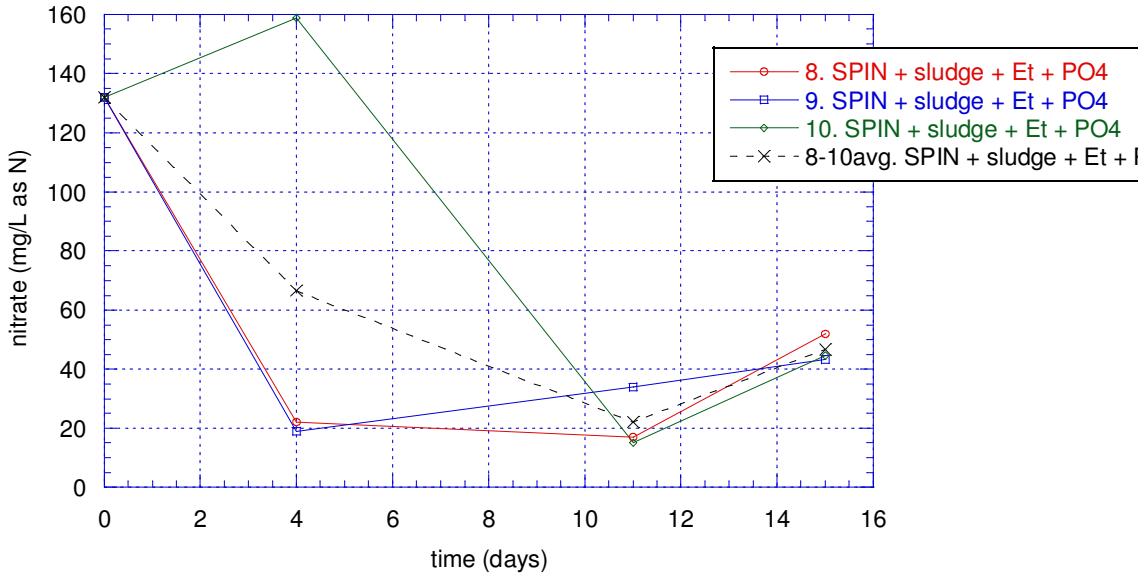
Figure D10. Oxidation reduction potential (ORP) measured in the influent and effluent from the reactors during the DG source portion of the testing

APPENDIX E: GRAPHICS FROM TRIPLICATE BATCH REACTORS

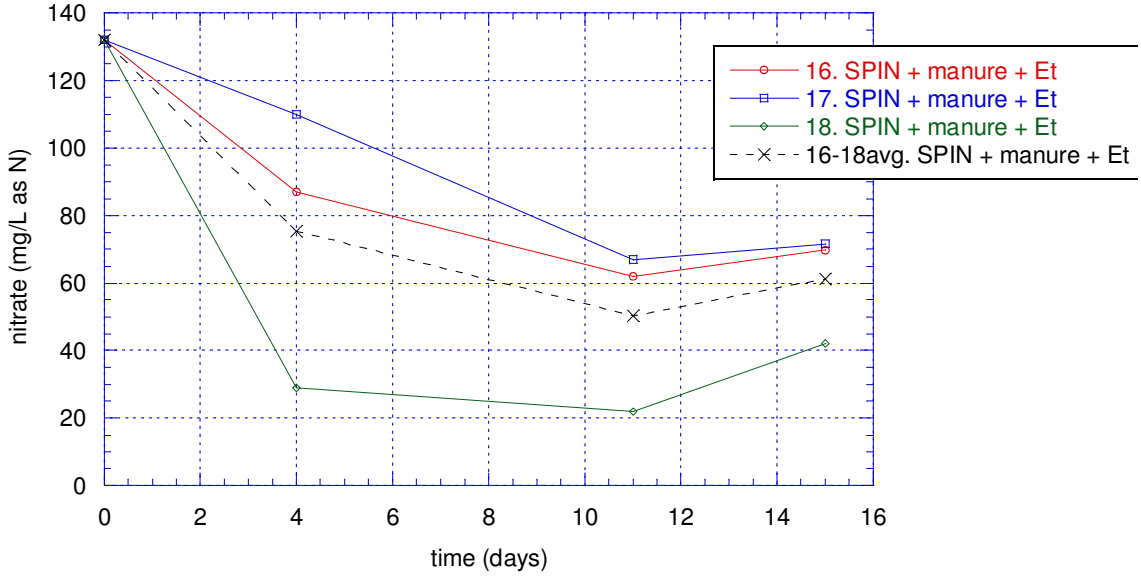
Triplicate reactors 5-7: SPIN water + sludge + ethanol (Et)



Triplicate reactors 8-10: SPIN + sludge + ethanol (Et) + phosphate (PO4)



Triplicate reactors 16-18: SPIN + manure + ethanol (Et)



Triplicate reactors 22-24: DG + sludge + ethanol (ET) + phosphate (PO4) + yeast energizer (YE)

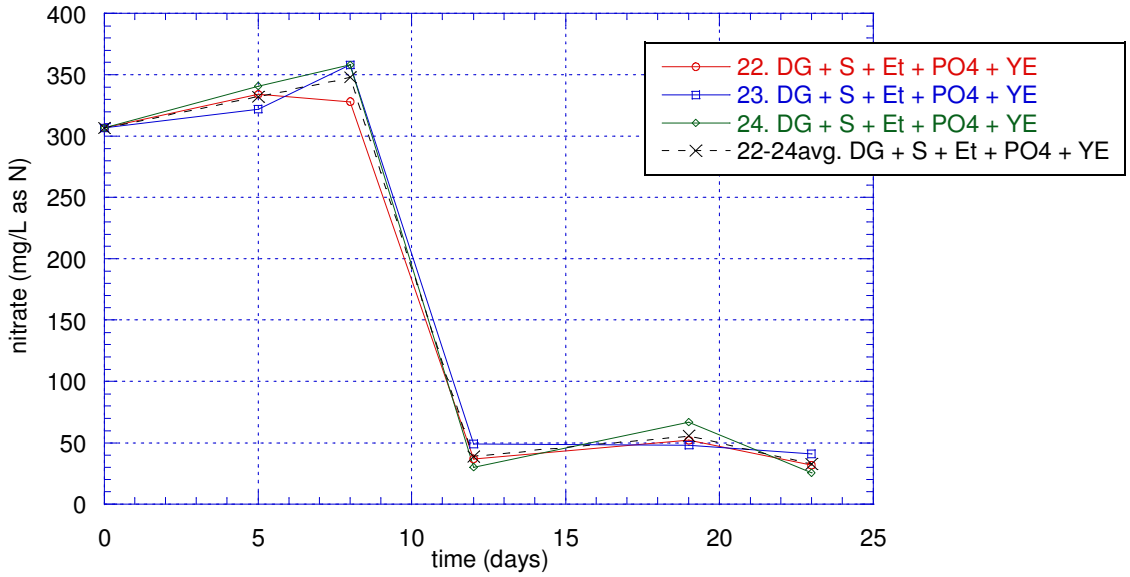


Table F-1. Nitrate concentrations (mg/L as N) for triplicate reactors, with calculated averages and standard deviations.

	3/21/07	3/26/07	3/29/07	4/2/07	4/9/07	4/13/07
5. SPIN + sludge + Et			132	145	0	7.8
6. SPIN + sludge + Et			132	165	27	11
7. SPIN + sludge + Et			132	113	16	22
		Avg.:	**132**	**141**	**14**	**14**
		St.Dev.:	**0**	**26**	**14**	**7**
8. SPIN + sludge + Et + PO4			132	22	17	52
9. SPIN + sludge + Et + PO4			132	19	34	43.2
10. SPIN + sludge + Et + PO4			132	159	15	44.6
		Avg.:	**132**	**67**	**22**	**47**
		St.Dev.:	**0**	**80**	**10**	**5**
16. SPIN + manure + Et			132	87	62	69.8
17. SPIN + manure + Et			132	110	67	71.6
18. SPIN + manure + Et			132	29	22	42.2
		Avg.:	**132**	**75**	**50**	**61**
		St.Dev.:	**0**	**42**	**25**	**16**
22. DG + S + Et + PO4 + YE	307	334	328	37	52	31.8
23. DG + S + Et + PO4 + YE	307	322	358	49	48	41
24. DG + S + Et + PO4 + YE	307	341	358	30	67	25.6
Avg.:	**307**	**332**	**348**	**39**	**56**	**33**
St.Dev.:	**0**	**10**	**17**	**10**	**10**	**8**

APPENDIX F: DATA GENERATED THROUGHOUT STUDY

Data collected from the SPIN on March 29, 2007 used the geochemical speciation analysis.

EXECUTIVE SUMMARY - Detection Highlights

D7C300147

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
CSU-SPT-03 03/29/07 15:00 001				
Barium	220 J	10	ug/L	SW846 6010B
Boron	110	100	ug/L	SW846 6010B
Calcium	300000 J	200	ug/L	SW846 6010B
Cadmium	1.0 B	5.0	ug/L	SW846 6010B
Iron	29 B	100	ug/L	SW846 6010B
Potassium	7700	3000	ug/L	SW846 6010B
Lithium	170	10	ug/L	SW846 6010B
Magnesium	80000 J	200	ug/L	SW846 6010B
Manganese	26	10	ug/L	SW846 6010B
Sodium	400000	1000	ug/L	SW846 6010B
Nickel	9.1 B	40	ug/L	SW846 6010B
Silica	16000	1100	ug/L	SW846 6010B
Silicon	7300	500	ug/L	SW846 6010B
Strontium	2400 J	10	ug/L	SW846 6010B
Titanium	1.8 B	10	ug/L	SW846 6010B
Uranium	34 B	60	ug/L	SW846 6010B
Zinc	50 J	20	ug/L	SW846 6010B
Zirconium	3.6 B	15	ug/L	SW846 6010B
Chloride	530 Q	150	mg/L	SW846 9056
Fluoride	0.77 B,G	2.0	mg/L	SW846 9056
Sulfate	150 Q	25	mg/L	SW846 9056
Nitrate	220 Q	25	mg/L	SW846 9056
Bromide	1.0 G	0.40	mg/L	SW846 9056
Nitrite	1.1 G	1.0	mg/L	SW846 9056

Data collected from the Holding Tank and test reactor effluent on July 23, 2007 during the SPIN testing.

EXECUTIVE SUMMARY - Detection Highlights

07G230203

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
HOLDING TANK 07/23/07 13:30 001				
Uranium	55	2.0	ug/L	SW846 6020
Total Suspended Solids	4.5	4.0	mg/L	MCAWW 160.2
Total Organic Carbon	6.9	1.0	mg/L	MCAWW 415.1
Chloride	510 Q	150	mg/L	SW846 9056
Fluoride	0.75 B,G	2.0	mg/L	SW846 9056
Sulfate	180 Q	25	mg/L	SW846 9056
Nitrate	280 Q	25	mg/L	SW846 9056
Bromide	1.2 G	0.40	mg/L	SW846 9056
Nitrite	0.53 B,G	1.0	mg/L	SW846 9056
Ammonia as N	0.025 B	0.10	mg/L	MCAWW 350.1
PLASTIC 07/23/07 13:30 002				
Uranium	13	2.0	ug/L	SW846 6020
Total Suspended Solids	22 G	5.0	mg/L	MCAWW 160.2
Total Organic Carbon	7500 Q	400	mg/L	MCAWW 415.1
Chloride	510 Q	150	mg/L	SW846 9056
Fluoride	0.31 B,G	2.0	mg/L	SW846 9056
Sulfate	50 Q	10	mg/L	SW846 9056
Bromide	1.1 G	0.40	mg/L	SW846 9056
Ammonia as N	0.53	0.10	mg/L	MCAWW 350.1
GRAVEL 07/23/07 13:30 003				
Uranium	3.5	1.0	ug/L	SW846 6020
Total Suspended Solids	42 G	10	mg/L	MCAWW 160.2
Total Organic Carbon	3500 Q	100	mg/L	MCAWW 415.1
Chloride	550 Q	150	mg/L	SW846 9056
Fluoride	0.23 B,G	2.0	mg/L	SW846 9056
Sulfate	1.5 B,G	10	mg/L	SW846 9056
Nitrate	2.5 G	1.0	mg/L	SW846 9056
Bromide	4.8 G	0.40	mg/L	SW846 9056
Ammonia as N	0.27	0.10	mg/L	MCAWW 350.1

STL Denver is part of Severn Trent Laboratories, Inc.

Nitrate results collected from the SPPTS treatability test reactors.

	Nitrate (mg/L as NO3)		
	Influent (mg/L)	Plastic (mg/L)	Gravel (mg/L)
5/29/07	1590	1531	1564
5/31/07	1501	1513	1413
6/4/07	1486	1085	943
6/8/07	1435.75	1114.316	747.606
6/11/07	1120.031	869.492	116.203
6/14/07	1149.442	719.564	nd
6/21/07	1252.131	12.348	0.819
6/26/07	1234.893	12.831	6.846
6/29/07	1245.76	56.142	0
7/3/07	1251.072	0.839	94.481
7/10/07	1431.933	0.831	36.606
7/18/07	1255.75	0.5	0.5
7/23/07	1204.318	0.5	0.5
7/23/07	1216.08	nd	nd
7/23/07	1211.762	nd	nd
7/23/07	1188.136	nd	nd
7/23/07	1201.294	nd	nd
7/24/07	2143.859	no meas.	no meas.
7/27/07	2196.758	nd	43.964
7/30/07	2085.5	nd	nd
8/2/07	2245.922	nd	nd
8/7/07	2350.06	nd	1.447
8/7/07	2363.575	nd	1.977
8/7/07	2405.025	no meas.	no meas.
8/7/07	2387.576	no meas.	no meas.
8/14/07	1082.234	0.808	0.767
8/22/07	1096.06	22.272	204.032
8/29/07	1100	473.174	157

Physical parameters collected during the SPPTS treatability study

Date:		Temperature C	Conductivity SpCond mS/cm	Conductivity Cond mS/cm	Dissolved Oxygen DO % %	Dissolved Oxygen DO mg/L	Dissolved Oxygen DO ch	PH	ORP	Alkalinity
05/25/07	Holding Tank	13.72	4.576		152		54.3	6.84	158	
06/04/07	Holding Tank	11.86	4.304		36.4	3.89	36.9	6.83	145.5	
6/14/2007	Holding Tank	11.69	4.106	3.062	37.4	4	37	6.83	117	
6/20/2007	Holding Tank	12.27	4.535	3.433	39.2	4.14	36	6.71	98	
6/21/2007	Holding Tank	12.5	4.542	3.458	37.2	3.9	36	6.86	60	
6/26/2007	Holding Tank	12.47	4.074	3.099	37.1	3.905	35.5	6.825	119.5	
6/29/2007	Holding Tank	13.61	4.043	3.163	39.3	4.03	36	6.85	107	258 mg/L as CaCO3
7/3/2007	Holding Tank	15.73	4.32	3.55	44.63	4.37	37	6.92	76.33	
7/6/2007	Holding Tank	15.83	4.4105	3.6375	70	6.835	40	6.99	-124	
7/10/2007	Holding Tank	12.22	5.3215	4.022	55.05	5.8	40	6.855	54.5	
7/23/2007	Holding Tank	12.86	4.25033	3.26533	47.0333	4.9	40	6.82	78	
7/30/2007	Holding Tank	22.71	5.689	5.4405	75.9	6.435	48	7.11	7	
8/2/2007	Holding Tank	23.49	5.845	5.68	55.4	4.63	44	7.03	21	
8/7/2007	Holding Tank	25.22	5.718	5.742	71.4	5.77	45	7.07	50	
8/14/2007	Holding Tank	19.45	4.372	3.909	64.43	5.84	44.33	6.8967	71.67	
8/22/2007	Holding Tank	13.41	4.3545	3.3905	38.35	3.945	40	6.9	56	
8/29/2007	Holding Tank	13.25	4.449	3.451	38.1	3.94	40.5	6.87	46	
9/11/2007	Holding Tank	12.77	4.7575	3.646	38.65	4.035	38	6.8	66	

Norpak Eff.

Date:		Temperature C	Conductivity SpCond mS/cm	Conductivity Cond mS/cm	Dissolved Oxygen DO % %	Dissolved Oxygen DO mg/L	Dissolved Oxygen DO ch	PH	ORP	Alkalinity
05/25/07	Norpak eff.									
06/04/07	Norpak eff.	17.41	4.154		15.8	1.47	36.9	7.17	125.2	
6/14/2007	Norpak eff.	15.12	3.637	2.951	11.1	1.1	35	7.32	78	
6/20/2007	Norpak eff.									
6/21/2007	Norpak eff.	18.44	3.102	2.713	9.6	0.89	34	7.3	-221	
6/26/2007	Norpak eff.	19.74	2.7335	2.4585	28.75	2.605	34.5	7.305	-155	
6/29/2007	Norpak eff.	20.86	2.738	2.522	61.1	5.41	38	7.27	26	592 mg/L as CaCO3
7/3/2007	Norpak eff.	23.90	2.90	2.84	27.7	2.32	36	7.24	-198	
7/6/2007	Norpak eff.	27.3	2.6945	2.813	62	4.88	39	7.18	-271	
7/10/2007	Norpak eff.	23.17	3.292	3.177	35.6	3.01	38	7.18	-259	
7/23/2007	Norpak eff.	25.32	2.87	2.887	24.2	1.97	99	6.9	-294	
7/30/2007	Norpak eff.	26.9	3.008	3.117	184	14.56	77	7.04	-343	
8/2/2007	Norpak eff.	26.58	3.118	3.213	29.1	2.32	42	7.01	-348	
8/7/2007	Norpak eff.	26.39	2.938	3.016	33.5	2.67	40	7.3	-294	
8/14/2007	Norpak eff.	18.863	2.9863	2.636	25	2.303	40	7.01	-294	
8/22/2007	Norpak eff.	20.81	3.2835	3.021	39.75	3.52	40	7.15	-275.5	
8/29/2007	Norpak eff.	20.65	3.902666667	3.578666667	28.7	2.546666667	38	7	-185.333333	
9/11/2007	Norpak eff.	18.82	4.7305	4.1725	26.15	2.4	37	6.835	-7	

Pea Gravel Eff.

Date:		Temperature C	Conductivity SpCond mS/cm	Conductivity Cond mS/cm	Dissolved Oxygen DO % %	Dissolved Oxygen DO mg/L	Dissolved Oxygen DO ch	PH	ORP	Alkalinity
05/25/07	Pea Gravel eff.									
06/04/07	Pea Gravel eff.	17.33	3.873		9.3	0.88	35.9	7.27	133.3	
6/14/2007	Pea Gravel eff.	15.41	2.582	2.109	8.7	0.86	35	7.48	-124	
6/20/2007	Pea Gravel eff.									
6/21/2007	Pea Gravel eff.	18.12	2.894	2.514	10.3	0.97	34	7.42	-265	
6/26/2007	Pea Gravel eff.	18.98	2.77	2.4515	7.7	0.71	33	7.47	-283.5	
6/29/2007	Pea Gravel eff.	20.77	2.78	2.555	32.6	2.89	36	7.39	-242	550 mg/L as CaCO3
7/3/2007	Pea Gravel eff.	21.77	3.015	2.83	24.7	2.15	35.33	7.36	-218.67	
7/6/2007	Pea Gravel eff.	21.54	2.842	2.6545	41.1	3.595	38	7.24	-235	
7/10/2007	Pea Gravel eff.	21.83	3.76	3.54	38.8	3.36	37.33	7.31	-91	
7/23/2007	Pea Gravel eff.	25.55	3.6715	3.71	27.15	2.195	35.5	6.11	-235	
7/30/2007	Pea Gravel eff.	26.09	3.178	3.2445	55.6	4.465	45.5	6.93	-297	
8/2/2007	Pea Gravel eff.	27.17	3.336	3.475	18.567	1.46	40.33	6.84	-287.67	
8/7/2007	Pea Gravel eff.	27.16	3.207	3.3395	27.55	2.165	40	6.825	-275.5	
8/14/2007	Pea Gravel eff.	19.18	3.976	3.534	29.567	2.7	40	5.94	-178.33	
8/22/2007	Pea Gravel eff.	22.835	4.101	3.9315	25.15	2.135	38.5	7.08	-283	
8/29/2007	Pea Gravel eff.	22.84	3.528	3.3825	16.3	1.385	38	7.04	-277	
9/11/2007	Pea Gravel eff.	21.985	4.603	4.338	28.25	2.44	37	7	-98.5	

date	SPIN	Holding Tank	Gravel Reactor	Norpac Reactor	Ambient
5/18/2007 0:12	10.85	13.46			
5/18/2007 0:12	11.04	13.46			
5/18/2007 0:12	10.85	13.46			
5/18/2007 0:12	10.85	13.46			
5/18/2007 0:13	10.94	13.56			
5/18/2007 0:13	10.85	13.65			
5/18/2007 0:13	10.85	13.65			
5/18/2007 0:13	11.04	13.37			
5/18/2007 0:14	10.94	13.37			
5/18/2007 0:14	10.94	13.37			
5/18/2007 0:14	11.04	13.56			
5/18/2007 0:14	10.94	13.37			
5/18/2007 0:15	11.04	13.37			
5/18/2007 0:15	10.94	13.27			
5/18/2007 0:15	10.85	13.27			
5/18/2007 0:15	10.94	13.27			
5/18/2007 0:16	10.85	13.27			
5/18/2007 0:16	10.85	13.37			
5/18/2007 0:16	10.94	13.37			
5/18/2007 0:16	10.85	13.27			
5/18/2007 0:17	10.94	13.37			
5/18/2007 0:17	10.94	13.37			
5/18/2007 0:17	10.85	13.27			
5/18/2007 0:17	10.94	13.27			
5/18/2007 0:18	11.04	13.27			
5/18/2007 0:18	10.85	13.17			
5/18/2007 0:18	11.14	13.17			
5/18/2007 0:18	10.85	13.08			
5/18/2007 0:19	10.85	13.08			
5/18/2007 0:19	11.04	13.08			
5/18/2007 0:19	10.85	12.98			
5/18/2007 0:19	10.85	12.88			
5/18/2007 0:20	10.94	12.88			
5/18/2007 0:20	10.85	12.79			
5/18/2007 0:20	10.94	12.69			
5/18/2007 0:20	10.85	12.59			
5/18/2007 0:21	10.85	12.59			
5/18/2007 0:21	11.04	12.5			
5/18/2007 0:21	10.85	12.5			
5/18/2007 0:21	10.85	12.4			
5/18/2007 0:22	10.94	12.4			
5/18/2007 0:22	10.85	12.3			
5/18/2007 0:22	10.85	12.21			
5/18/2007 0:22	10.94	12.21			
5/18/2007 0:23	10.85	12.21			
5/18/2007 0:23	10.85	12.11			
5/18/2007 0:23	10.85	12.11			
5/18/2007 0:23	10.85	12.01			
5/19/2007 0:00	10.94	12.01			
5/19/2007 0:00	10.85	11.92			
5/19/2007 0:00	10.85	11.92			
5/19/2007 0:00	10.94	11.82			
5/19/2007 0:01	10.94	11.82			
5/19/2007 0:01	10.85	11.82			
5/19/2007 0:01	10.94	11.82			
5/19/2007 0:01	10.85	11.72			
5/19/2007 0:02	10.85	11.72			
5/19/2007 0:02	10.94	11.72			
5/19/2007 0:02	10.85	11.72			
5/19/2007 0:02	10.85	11.63			
5/19/2007 0:03	10.94	11.63			
5/19/2007 0:03	10.85	11.53			
5/19/2007 0:03	10.85	11.53			
5/19/2007 0:03	10.85	11.53			
5/19/2007 0:04	10.85	11.53			
5/19/2007 0:04	10.94	11.43			
5/19/2007 0:04	10.85	11.43			
5/19/2007 0:04	10.85	11.43			
5/19/2007 0:05	10.94	11.43			
5/19/2007 0:05	10.85	11.33			
5/19/2007 0:05	10.85	11.33			
5/19/2007 0:05	10.94	11.33			
5/19/2007 0:06	10.85	11.33			
5/19/2007 0:06	10.85	11.33			
5/19/2007 0:06	10.94	11.53			
5/19/2007 0:06	10.85	11.72			
5/19/2007 0:07	10.85	11.82			
5/19/2007 0:07	10.94	12.01			
5/19/2007 0:07	10.85	12.11			
5/19/2007 0:07	10.85	12.21			
5/19/2007 0:08	10.94	12.5			
5/19/2007 0:08	10.85	12.59			
5/19/2007 0:08	11.04	12.59			
5/19/2007 0:08	10.94	12.88			
5/19/2007 0:09	10.85	12.98			

5/19/2007 0:09	11.24	13.08			
5/19/2007 0:09	10.94	13.17			
5/19/2007 0:09	10.85	13.27			
5/19/2007 0:10	11.14	13.37			
5/19/2007 0:10	10.94	13.46			
5/19/2007 0:10	10.85	13.46			
5/19/2007 0:10	11.04	13.56			
5/19/2007 0:11	10.94	13.56			
5/19/2007 0:11	10.85	13.56			
5/19/2007 0:11	10.94	13.65			
5/19/2007 0:11	10.85	13.46			
5/19/2007 0:12	10.85	13.27			
5/19/2007 0:12	10.94	13.56			
5/19/2007 0:12	10.94	13.75			
5/19/2007 0:12	10.94	13.75			
5/19/2007 0:13	11.14	13.75			
5/19/2007 0:13	10.94	13.65			
5/19/2007 0:13	10.85	13.85			
5/19/2007 0:13	11.04	13.85			
5/19/2007 0:14	10.94	13.75			
5/19/2007 0:14	10.94	13.94			
5/19/2007 0:14	11.04	13.94			
5/19/2007 0:14	10.85	13.75			
5/19/2007 0:15	11.24	13.65			
5/19/2007 0:15	10.94	13.65			
5/19/2007 0:15	10.85	13.56			
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5/19/2007 0:16	10.94	13.65			
5/19/2007 0:17	10.85	13.56			
5/19/2007 0:17	11.14	13.65			
5/19/2007 0:17	10.94	13.56			
5/19/2007 0:17	10.85	13.46			
5/19/2007 0:18	11.14	13.46			
5/19/2007 0:18	10.94	13.46			
5/19/2007 0:18	10.85	13.37			
5/19/2007 0:18	11.24	13.37			
5/19/2007 0:19	10.94	13.27			
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5/19/2007 0:19	10.94	13.27			
5/19/2007 0:19	10.85	13.17			
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5/19/2007 0:20	10.94	13.08			
5/19/2007 0:20	10.85	12.98			
5/19/2007 0:20	10.85	12.88			
5/19/2007 0:21	11.04	12.88			
5/19/2007 0:21	10.85	12.79			
5/19/2007 0:21	10.85	12.69			
5/19/2007 0:21	10.94	12.69			
5/19/2007 0:22	10.85	12.59			
5/19/2007 0:22	10.94	12.59			
5/19/2007 0:22	10.94	12.5			
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5/20/2007 0:00	10.94	12.21			
5/20/2007 0:00	10.94	12.21			
5/20/2007 0:01	10.85	12.11			
5/20/2007 0:01	10.94	12.11			
5/20/2007 0:01	10.94	12.01			
5/20/2007 0:01	10.85	12.01			
5/20/2007 0:02	10.94	12.01			
5/20/2007 0:02	10.94	11.92			
5/20/2007 0:02	10.85	11.92			
5/20/2007 0:02	10.94	11.82			
5/20/2007 0:03	10.85	11.82			
5/20/2007 0:03	10.85	11.72			
5/20/2007 0:03	10.94	11.72			
5/20/2007 0:03	10.94	11.72			
5/20/2007 0:04	10.85	11.63			
5/20/2007 0:04	10.94	11.63			
5/20/2007 0:04	10.94	11.63			
5/20/2007 0:04	10.85	11.53			
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5/20/2007 0:05	10.85	11.43			
5/20/2007 0:05	10.94	11.43			
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5/20/2007 0:06	10.85	11.43			
5/20/2007 0:06	11.04	11.63			
5/20/2007 0:06	10.94	11.92			
5/20/2007 0:07	10.85	12.11			

5/20/2007 0:07	11.04	12.21			
5/20/2007 0:07	10.94	12.3			
5/20/2007 0:07	10.85	12.4			
5/20/2007 0:08	11.24	12.59			
5/20/2007 0:08	10.94	12.69			
5/20/2007 0:08	10.94	12.88			
5/20/2007 0:08	11.04	12.98			
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5/20/2007 0:09	11.04	13.27			
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5/20/2007 0:10	10.94	13.46			
5/20/2007 0:10	11.04	13.56			
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5/20/2007 0:10	10.94	13.75			
5/20/2007 0:11	10.94	13.85			
5/20/2007 0:11	10.94	13.75			
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5/20/2007 0:11	11.14	13.85			
5/20/2007 0:12	10.94	13.85			
5/20/2007 0:12	10.85	13.85			
5/20/2007 0:12	11.24	13.85			
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5/20/2007 0:13	10.94	14.04			
5/20/2007 0:13	11.14	14.13			
5/20/2007 0:13	10.94	14.13			
5/20/2007 0:13	11.04	14.13			
5/20/2007 0:14	11.04	14.04			
5/20/2007 0:14	10.94	13.94			
5/20/2007 0:14	10.85	13.85			
5/20/2007 0:14	10.94	13.85			
5/20/2007 0:15	10.94	13.85			
5/20/2007 0:15	10.85	13.75			
5/20/2007 0:15	10.94	13.75			
5/20/2007 0:15	10.94	13.65			
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5/20/2007 0:16	11.04	13.56			
5/20/2007 0:16	10.85	13.46			
5/20/2007 0:16	10.85	13.37			
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5/20/2007 0:17	10.94	13.27			
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5/20/2007 0:20	11.04	12.79			
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5/20/2007 0:20	10.94	12.69			
5/20/2007 0:21	10.85	12.59			
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5/20/2007 0:21	10.85	12.4			
5/20/2007 0:22	10.85	12.4			
5/20/2007 0:22	10.94	12.3			
5/20/2007 0:22	10.85	12.3			
5/20/2007 0:22	10.85	12.21			
5/20/2007 0:23	10.94	12.21			
5/20/2007 0:23	10.85	12.11			
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5/21/2007 0:03	10.85	11.53			
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5/21/2007 0:04	10.85	11.43			
5/21/2007 0:05	10.94	11.43			

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5/21/2007 0:05	10.94	11.33			
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5/21/2007 0:06	10.85	11.24			
5/21/2007 0:06	10.94	11.33			
5/21/2007 0:06	10.85	11.53			
5/21/2007 0:07	10.85	11.63			
5/21/2007 0:07	11.04	11.72			
5/21/2007 0:07	10.94	11.92			
5/21/2007 0:07	10.85	12.01			
5/21/2007 0:08	10.94	12.11			
5/21/2007 0:08	10.94	12.21			
5/21/2007 0:08	10.85	12.3			
5/21/2007 0:08	10.85	12.11			
5/21/2007 0:09	10.94	12.4			
5/21/2007 0:09	10.85	12.5			
5/21/2007 0:09	11.14	12.59			
5/21/2007 0:09	11.14	12.69			
5/21/2007 0:10	10.94	12.98			
5/21/2007 0:10	11.24	13.08			
5/21/2007 0:10	11.04	13.17			
5/21/2007 0:10	10.94	13.27			
5/21/2007 0:11	11.43	13.27			
5/21/2007 0:11	11.33	13.46			
5/21/2007 0:11	10.94	13.56			
5/21/2007 0:11	10.94	13.46			
5/21/2007 0:12	11.04	13.46			
5/21/2007 0:12	10.94	13.46			
5/21/2007 0:12	11.14	13.46			
5/21/2007 0:12	11.14	13.75			
5/21/2007 0:13	10.94	13.56			
5/21/2007 0:13	11.24	13.56			
5/21/2007 0:13	10.94	13.56			
5/21/2007 0:13	10.85	13.65			
5/21/2007 0:14	11.04	13.85			
5/21/2007 0:14	10.94	13.75			
5/21/2007 0:14	10.85	13.65			
5/21/2007 0:14	10.94	13.46			
5/21/2007 0:15	10.94	13.37			
5/21/2007 0:15	10.85	13.37			
5/21/2007 0:15	10.94	13.27			
5/21/2007 0:15	10.94	13.27			
5/21/2007 0:16	10.85	13.46			
5/21/2007 0:16	11.04	13.37			
5/21/2007 0:16	10.94	13.46			
5/21/2007 0:16	10.85	13.37			
5/21/2007 0:17	10.94	13.37			
5/21/2007 0:17	10.94	13.37			
5/21/2007 0:17	10.85	13.37			
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6/6/2007 0:07	10.65	11.72	16.52	15.95	
6/6/2007 0:07	10.65	11.72	16.24	15.86	
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6/6/2007 0:08	10.65	11.72	15.28	15.76	
6/6/2007 0:08	10.75	11.82	15	15.76	
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6/6/2007 0:09	10.75	11.82	15.76	15.95	
6/6/2007 0:10	10.75	11.92	15.57	15.95	
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6/6/2007 0:10	10.75	11.92	16.05	15.95	
6/6/2007 0:10	10.65	11.92	16.81	15.95	
6/6/2007 0:11	10.75	11.92	16.71	15.95	
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6/6/2007 0:13	10.65	12.21	15.86	15.86	
6/6/2007 0:14	10.65	12.21	16.52	15.95	
6/6/2007 0:14	10.75	12.21	16.24	15.95	
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6/7/2007 0:20	10.55	11.33	12.59	11.92	
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6/7/2007 0:21	10.55	11.33	12.3	11.53	
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6/9/2007 0:10	10.94	11.43	12.98	12.11	
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6/9/2007 0:11	10.85	11.53	13.46	12.5	
6/9/2007 0:11	10.85	11.53	13.65	12.69	
6/9/2007 0:12	10.85	11.53	13.75	12.79	
6/9/2007 0:12	10.85	11.63	13.75	12.88	
6/9/2007 0:12	10.85	11.63	13.85	13.08	
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6/9/2007 0:13	10.85	11.63	14.23	13.56	
6/9/2007 0:13	10.85	11.63	14.52	13.65	
6/9/2007 0:14	10.85	11.72	14.61	13.85	
6/9/2007 0:14	11.04	11.72	14.33	14.04	
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6/15/2007 0:14	10.85	12.11	19.28	18.71	40.65
6/15/2007 0:15	10.85	12.11	19.28	18.81	39.73
6/15/2007 0:15	10.85	12.11	19.38	18.81	41.58
6/15/2007 0:15	10.85	12.11	19.47	18.9	41.69
6/15/2007 0:15	10.75	12.11	19.57	19	41.11
6/15/2007 0:16	10.75	12.11	19.57	19.09	39.62
6/15/2007 0:16	10.94	12.21	19.66	19.19	41.93
6/15/2007 0:16	10.85	12.21	19.76	19.28	41.34
6/15/2007 0:16	10.85	12.21	19.85	19.28	39.96
6/15/2007 0:17	10.94	12.21	19.85	19.38	40.99
6/15/2007 0:17	10.85	12.21	19.95	19.47	39.73
6/15/2007 0:17	10.75	12.21	20.04	19.47	40.53
6/15/2007 0:17	10.75	12.21	20.04	19.57	34.8
6/15/2007 0:18	10.94	12.21	20.14	19.57	32.81
6/15/2007 0:18	10.85	12.21	20.23	19.66	38.16
6/15/2007 0:18	10.85	12.21	20.23	19.66	33.74
6/15/2007 0:18	10.94	12.21	20.33	19.76	35.22
6/15/2007 0:19	11.04	12.21	20.33	19.76	32.5
6/15/2007 0:19	10.85	12.21	20.42	19.76	31.88
6/15/2007 0:19	10.75	12.21	20.42	19.85	27.37
6/15/2007 0:19	10.85	12.21	20.52	19.85	26.29
6/15/2007 0:20	10.85	12.21	20.52	19.85	24.06
6/15/2007 0:20	10.75	12.21	20.62	19.95	21.47
6/15/2007 0:20	10.94	12.21	20.62	19.95	20.04
6/15/2007 0:20	10.75	12.21	20.62	19.95	20.14
6/15/2007 0:21	10.75	12.21	20.62	19.95	20.23
6/15/2007 0:21	10.75	12.21	20.71	19.95	20.71
6/15/2007 0:21	10.94	12.11	20.71	19.95	20.04
6/15/2007 0:21	10.75	12.21	20.71	19.95	19.19
6/15/2007 0:22	10.75	12.21	20.81	19.95	19
6/15/2007 0:22	10.75	12.11	20.81	19.95	18.14
6/15/2007 0:22	10.85	12.11	20.81	19.95	17.38
6/15/2007 0:22	10.75	12.11	20.81	19.95	17.38
6/15/2007 0:23	10.75	12.11	20.9	19.95	17
6/15/2007 0:23	10.85	12.11	20.9	19.95	16.71
6/15/2007 0:23	10.85	12.11	20.9	19.95	16.43
6/15/2007 0:23	10.75	12.11	20.9	19.95	16.14
6/16/2007 0:00	10.75	12.11	20.9	19.95	16.14
6/16/2007 0:00	10.85	12.11	20.9	19.95	15.47
6/16/2007 0:00	10.65	12.11	20.9	19.95	15.66
6/16/2007 0:00	10.75	12.01	20.9	19.95	15.28
6/16/2007 0:01	10.75	12.01	20.9	19.95	14.52
6/16/2007 0:01	10.85	12.01	20.9	19.95	13.85
6/16/2007 0:01	10.65	12.01	20.9	19.95	13.94
6/16/2007 0:01	10.75	12.01	20.9	19.95	14.23
6/16/2007 0:02	10.85	12.01	20.9	19.95	13.65
6/16/2007 0:02	10.75	12.01	20.9	19.95	13.17
6/16/2007 0:02	10.75	12.01	20.9	19.95	13.08
6/16/2007 0:02	10.75	12.01	20.9	19.85	13.08
6/16/2007 0:03	10.85	12.01	20.9	19.85	13.08
6/16/2007 0:03	10.65	12.01	20.9	19.85	12.88
6/16/2007 0:03	10.75	12.01	20.9	19.85	12.98

6/16/2007 0:03	10.75	11.92	20.9	19.85	13.46
6/16/2007 0:04	10.85	11.92	20.81	19.76	14.23
6/16/2007 0:04	10.65	11.92	20.81	19.76	13.85
6/16/2007 0:04	10.75	11.92	20.81	19.76	12.98
6/16/2007 0:04	10.75	11.92	20.81	19.66	12.79
6/16/2007 0:05	10.85	11.92	20.81	19.66	12.3
6/16/2007 0:05	10.65	11.92	20.71	19.66	11.72
6/16/2007 0:05	10.75	11.92	20.71	19.66	12.01
6/16/2007 0:05	10.85	11.92	20.71	19.57	13.65
6/16/2007 0:06	10.65	11.92	20.62	19.57	15.19
6/16/2007 0:06	10.65	11.92	20.62	19.57	17.67
6/16/2007 0:06	10.75	11.92	20.52	19.47	19.57
6/16/2007 0:06	10.85	11.92	20.52	19.47	22.62
6/16/2007 0:07	10.75	11.92	20.52	19.47	25.81
6/16/2007 0:07	10.75	11.92	20.52	19.47	27.86
6/16/2007 0:07	10.75	11.92	20.42	19.38	30.56
6/16/2007 0:07	10.85	11.92	20.42	19.38	33.01
6/16/2007 0:08	10.75	11.92	20.42	19.38	34.37
6/16/2007 0:08	10.75	11.92	20.33	19.38	34.59
6/16/2007 0:08	10.85	11.92	20.33	19.38	37.06
6/16/2007 0:08	10.75	11.92	20.33	19.38	36.51
6/16/2007 0:09	10.75	11.92	20.23	19.38	36.19
6/16/2007 0:09	10.75	12.01	20.23	19.47	38.71
6/16/2007 0:09	10.85	12.01	20.23	19.38	35.76
6/16/2007 0:09	10.75	12.01	20.23	19.47	29.95
6/16/2007 0:10	10.75	12.01	20.33	19.47	33.85
6/16/2007 0:10	10.94	12.01	20.33	19.47	35.76
6/16/2007 0:10	10.94	12.01	20.33	19.57	36.51
6/16/2007 0:10	10.85	12.01	20.42	19.57	37.06
6/16/2007 0:11	10.85	12.01	20.42	19.57	37.06
6/16/2007 0:11	10.85	12.11	20.52	19.66	38.27
6/16/2007 0:11	10.65	12.11	20.52	19.66	31.68
6/16/2007 0:11	10.65	12.11	20.62	19.76	28.36
6/16/2007 0:12	10.75	12.11	20.71	19.76	35.12
6/16/2007 0:12	10.85	12.11	20.71	19.76	40.53
6/16/2007 0:12	10.85	12.11	20.81	19.76	43
6/16/2007 0:12	10.75	12.11	20.81	19.85	42.05
6/16/2007 0:13	10.94	12.11	20.9	19.85	43.36
6/16/2007 0:13	10.85	12.11	20.9	19.85	44.46
6/16/2007 0:13	10.75	12.21	21	19.95	45.33
6/16/2007 0:13	11.04	12.21	21	19.95	44.58
6/16/2007 0:14	10.94	12.21	20.9	20.14	45.7
6/16/2007 0:14	10.85	12.21	20.9	20.23	41.58
6/16/2007 0:14	10.75	12.21	20.9	20.42	35.86
6/16/2007 0:14	10.85	12.21	20.81	20.52	33.74
6/16/2007 0:15	10.75	12.21	20.81	20.62	31.88
6/16/2007 0:15	10.75	12.21	20.81	20.71	30.56
6/16/2007 0:15	10.75	12.21	20.81	20.71	29.15
6/16/2007 0:15	10.65	12.21	20.81	20.71	26.49
6/16/2007 0:16	10.65	12.21	20.81	20.81	26.2
6/16/2007 0:16	10.75	12.21	20.81	20.81	26.59
6/16/2007 0:16	11.04	12.21	20.9	20.9	26.39
6/16/2007 0:16	10.85	12.21	20.9	20.9	25.32
6/16/2007 0:17	10.75	12.21	20.9	20.9	28.26
6/16/2007 0:17	10.75	12.21	21	20.81	26.68
6/16/2007 0:17	10.85	12.21	21	20.71	26.59
6/16/2007 0:17	10.75	12.21	20.9	20.71	24.45
6/16/2007 0:18	10.75	12.21	20.9	20.52	23.77
6/16/2007 0:18	10.85	12.21	20.71	20.33	24.16
6/16/2007 0:18	10.85	12.21	20.62	20.14	24.06
6/16/2007 0:18	10.75	12.21	20.42	19.95	23.48
6/16/2007 0:19	10.75	12.21	20.23	19.76	23.48
6/16/2007 0:19	10.85	12.21	19.95	19.66	23.2
6/16/2007 0:19	10.85	12.21	19.76	19.47	23.48
6/16/2007 0:19	10.75	12.21	19.57	19.28	22.81
6/16/2007 0:20	10.75	12.21	19.38	19.19	22.62
6/16/2007 0:20	10.85	12.21	19.19	19.09	23
6/16/2007 0:20	10.75	12.21	19	18.9	23.2
6/16/2007 0:20	10.75	12.21	18.81	18.81	23.97
6/16/2007 0:21	10.94	12.21	18.71	18.62	24.74
6/16/2007 0:21	10.75	12.21	18.52	18.43	23.39
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6/16/2007 0:22	10.85	12.11	18.05	18.05	22.62
6/16/2007 0:22	10.75	12.11	17.86	17.95	21.57
6/16/2007 0:22	10.75	12.11	17.76	17.86	21.19
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6/16/2007 0:23	10.75	12.11	17.38	17.48	22.62
6/16/2007 0:23	10.75	12.11	17.19	17.38	22.53
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6/17/2007 0:00	10.85	12.11	16.81	17.09	19.09
6/17/2007 0:00	10.75	12.11	16.71	17.09	17.48
6/17/2007 0:01	10.75	12.11	16.71	17.09	16.62
6/17/2007 0:01	10.75	12.11	16.62	17	14.71
6/17/2007 0:01	10.85	12.11	16.62	17	15.66
6/17/2007 0:01	10.65	12.11	16.62	17	15

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6/17/2007 0:02	10.85	12.01	16.52	16.9	13.65
6/17/2007 0:02	10.65	12.01	16.52	16.9	13.65
6/17/2007 0:03	10.75	12.01	16.52	16.9	12.5
6/17/2007 0:03	10.75	12.01	16.52	16.9	12.59
6/17/2007 0:03	10.85	12.01	16.52	16.9	12.88
6/17/2007 0:03	10.75	12.01	16.52	16.9	12.5
6/17/2007 0:04	10.75	12.01	16.52	16.9	11.92
6/17/2007 0:04	10.85	12.01	16.43	16.9	12.5
6/17/2007 0:04	10.85	12.01	16.43	16.9	12.59
6/17/2007 0:04	10.75	12.01	16.43	16.81	12.98
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6/17/2007 0:05	10.85	11.92	16.43	16.81	11.92
6/17/2007 0:05	10.65	11.92	16.43	16.81	11.82
6/17/2007 0:05	10.75	11.92	16.33	16.81	11.53
6/17/2007 0:06	10.75	11.92	16.33	16.81	12.5
6/17/2007 0:06	10.85	11.92	16.33	16.81	14.9
6/17/2007 0:06	10.75	11.92	16.33	16.81	18.05
6/17/2007 0:06	10.75	11.92	16.33	16.81	21.57
6/17/2007 0:07	10.85	11.92	16.33	16.81	24.26
6/17/2007 0:07	10.75	11.92	16.24	16.71	27.17
6/17/2007 0:07	10.75	11.92	16.24	16.71	29.25
6/17/2007 0:07	10.75	11.92	16.24	16.71	32.19
6/17/2007 0:08	10.85	11.92	16.24	16.81	34.48
6/17/2007 0:08	10.65	11.92	16.24	16.81	35.76
6/17/2007 0:08	10.75	12.01	16.24	16.81	35.54
6/17/2007 0:08	10.75	12.01	16.24	16.81	36.51
6/17/2007 0:09	10.85	12.01	16.33	16.9	38.49
6/17/2007 0:09	10.75	12.01	16.33	16.9	38.6
6/17/2007 0:09	10.85	12.01	16.33	16.9	37.06
6/17/2007 0:09	10.85	12.01	16.43	17	32.7
6/17/2007 0:10	10.75	12.01	16.43	17	36.73
6/17/2007 0:10	10.75	12.01	16.52	17.09	39.84
6/17/2007 0:10	10.85	12.11	16.52	17.09	39.28
6/17/2007 0:10	10.75	12.11	16.62	17.19	39.73
6/17/2007 0:11	10.75	12.11	16.71	17.19	38.94
6/17/2007 0:11	10.75	12.11	16.71	17.28	39.62
6/17/2007 0:11	10.85	12.11	16.81	17.38	40.42
6/17/2007 0:11	10.75	12.11	16.9	17.38	42.64
6/17/2007 0:12	10.75	12.11	17	17.38	43.84
6/17/2007 0:12	10.85	12.21	17.09	17.48	42.64
6/17/2007 0:12	11.04	12.21	17.09	17.48	44.33
6/17/2007 0:12	10.85	12.21	17.19	17.48	38.49
6/17/2007 0:13	10.94	12.21	17.19	17.48	43.24
6/17/2007 0:13	11.24	12.21	17.28	17.48	45.45
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6/17/2007 0:13	10.94	12.21	17.28	17.38	38.83
6/17/2007 0:14	10.94	12.3	17.28	17.38	42.16
6/17/2007 0:14	11.14	12.3	17.28	17.48	42.88
6/17/2007 0:14	10.94	12.3	17.38	17.48	34.48
6/17/2007 0:14	10.94	12.3	17.38	17.57	32.29
6/17/2007 0:15	11.04	12.3	17.48	17.57	32.6
6/17/2007 0:15	10.94	12.3	17.57	17.67	33.01
6/17/2007 0:15	10.94	12.3	17.67	17.76	31.27
6/17/2007 0:15	10.85	12.3	17.76	17.76	35.33
6/17/2007 0:16	10.85	12.3	17.76	17.86	32.39
6/17/2007 0:16	10.75	12.3	17.86	17.95	34.8
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6/17/2007 0:16	10.94	12.3	18.05	18.05	45.45
6/17/2007 0:17	10.75	12.3	18.14	18.14	43.6
6/17/2007 0:17	10.75	12.3	18.14	18.24	44.21
6/17/2007 0:17	10.85	12.4	18.24	18.24	41.81
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6/17/2007 0:18	10.75	12.4	18.33	18.33	37.94
6/17/2007 0:18	10.75	12.4	18.43	18.43	41.93
6/17/2007 0:18	10.85	12.4	18.43	18.52	40.76
6/17/2007 0:18	10.75	12.4	18.43	18.52	38.05
6/17/2007 0:19	10.75	12.4	18.52	18.62	39.05
6/17/2007 0:19	10.94	12.4	18.52	18.62	33.33
6/17/2007 0:19	10.94	12.4	18.62	18.62	31.78
6/17/2007 0:19	10.75	12.4	18.62	18.71	29.25
6/17/2007 0:20	10.75	12.4	18.71	18.71	24.84
6/17/2007 0:20	10.94	12.4	18.81	18.71	24.93
6/17/2007 0:20	10.85	12.4	18.81	18.71	24.06
6/17/2007 0:20	10.85	12.3	18.81	18.71	26.2
6/17/2007 0:21	10.85	12.3	18.9	18.71	24.45
6/17/2007 0:21	10.85	12.3	18.9	18.62	21.28
6/17/2007 0:21	10.75	12.3	19	18.52	25.32
6/17/2007 0:21	10.75	12.3	19	18.43	24.64
6/17/2007 0:22	10.85	12.3	18.9	18.33	23.68
6/17/2007 0:22	10.85	12.3	18.81	18.24	23.68
6/17/2007 0:22	10.75	12.3	18.71	18.05	23.39
6/17/2007 0:22	10.75	12.3	18.52	17.95	23.58
6/17/2007 0:23	10.85	12.3	18.24	17.76	23.58
6/17/2007 0:23	10.75	12.3	18.05	17.67	23.2
6/17/2007 0:23	10.75	12.3	17.76	17.57	22.91
6/17/2007 0:23	10.85	12.3	17.57	17.48	21.86
6/18/2007 0:00	10.75	12.3	17.38	17.38	20.52

6/18/2007 0:00	10.75	12.3	17.19	17.19	20.14
6/18/2007 0:00	10.75	12.3	17	17.09	21.47
6/18/2007 0:00	10.75	12.3	16.9	17	21.76
6/18/2007 0:01	10.75	12.3	16.71	16.9	21.38
6/18/2007 0:01	10.75	12.3	16.52	16.81	21.28
6/18/2007 0:01	10.85	12.3	16.43	16.71	21.19
6/18/2007 0:01	10.85	12.3	16.24	16.62	19.47
6/18/2007 0:02	10.75	12.21	16.14	16.52	18.24
6/18/2007 0:02	10.85	12.21	16.05	16.52	17.67
6/18/2007 0:02	10.85	12.21	16.05	16.52	17.76
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6/18/2007 0:03	10.75	12.21	15.95	16.52	15.19
6/18/2007 0:03	10.75	12.21	15.95	16.52	14.13
6/18/2007 0:03	10.65	12.21	16.05	16.52	13.85
6/18/2007 0:03	10.65	12.21	16.05	16.52	13.46
6/18/2007 0:04	10.75	12.21	16.05	16.52	12.59
6/18/2007 0:04	10.75	12.11	16.05	16.52	11.33
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6/18/2007 0:04	10.65	12.11	16.05	16.52	9.57
6/18/2007 0:05	10.75	12.11	16.05	16.52	9.77
6/18/2007 0:05	10.85	12.11	16.05	16.43	9.77
6/18/2007 0:05	10.75	12.11	16.05	16.43	9.77
6/18/2007 0:05	10.65	12.11	16.05	16.33	10.16
6/18/2007 0:06	10.75	12.11	15.95	16.33	11.33
6/18/2007 0:06	10.85	12.01	15.95	16.24	13.17
6/18/2007 0:06	10.65	12.01	15.86	16.24	15.19
6/18/2007 0:06	10.75	12.01	15.86	16.14	17.86
6/18/2007 0:07	10.75	12.01	15.76	16.14	18.81
6/18/2007 0:07	10.85	12.01	15.76	16.05	21.76
6/18/2007 0:07	10.75	12.01	15.66	16.05	23.77
6/18/2007 0:07	10.75	12.01	15.66	15.95	25.9
6/18/2007 0:08	10.75	12.01	15.57	15.86	27.67
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6/18/2007 0:08	10.75	12.01	15.38	15.66	30.26
6/18/2007 0:08	10.75	12.11	15.28	15.57	30.36
6/18/2007 0:09	10.85	12.11	15.19	15.47	29.75
6/18/2007 0:09	10.85	12.11	15.09	15.28	27.37
6/18/2007 0:09	10.75	12.11	15	15.19	26.68
6/18/2007 0:09	10.75	12.11	15	15.09	24.06
6/18/2007 0:10	10.85	12.11	14.9	15.09	28.16
6/18/2007 0:10	10.75	12.11	14.9	15	30.76
6/18/2007 0:10	10.85	12.11	14.9	15	30.76
6/18/2007 0:10	11.04	12.11	14.8	14.9	31.88
6/18/2007 0:11	11.04	12.11	14.8	14.9	29.95
6/18/2007 0:11	10.85	12.11	14.8	14.9	31.68
6/18/2007 0:11	10.85	12.21	14.8	14.9	30.46
6/18/2007 0:11	10.85	12.21	14.8	14.9	30.66
6/18/2007 0:12	10.85	12.21	14.8	15	32.6
6/18/2007 0:12	10.85	12.21	14.8	15	30.86
6/18/2007 0:12	10.85	12.21	14.9	15.09	34.8
6/18/2007 0:12	10.85	12.21	14.9	15.09	35.86
6/18/2007 0:13	10.85	12.21	15	15.19	35.44
6/18/2007 0:13	10.85	12.21	15	15.28	35.86
6/18/2007 0:13	11.04	12.21	15	15.38	35.65
6/18/2007 0:13	10.85	12.3	15.09	15.57	36.51
6/18/2007 0:14	10.75	12.3	15.09	15.66	35.65
6/18/2007 0:14	10.94	12.3	15.19	15.76	35.76
6/18/2007 0:14	10.94	12.3	15.19	15.86	37.17
6/18/2007 0:14	10.94	12.3	15.28	15.95	38.71
6/18/2007 0:15	10.94	12.3	15.28	16.05	39.05
6/18/2007 0:15	10.85	12.3	15.28	16.05	40.07
6/18/2007 0:15	10.85	12.3	15.38	16.14	39.96
6/18/2007 0:15	10.75	12.3	15.38	16.14	38.27
6/18/2007 0:16	10.75	12.3	15.38	16.14	39.16
6/18/2007 0:16	10.85	12.3	15.47	16.14	38.71
6/18/2007 0:16	10.94	12.4	15.47	16.24	37.6
6/18/2007 0:16	10.85	12.4	15.57	16.24	31.17
6/18/2007 0:17	11.04	12.4	15.57	16.24	35.76
6/18/2007 0:17	11.14	12.4	15.66	16.33	36.19
6/18/2007 0:17	10.85	12.4	15.76	16.33	35.97
6/18/2007 0:17	10.85	12.4	15.86	16.33	31.68
6/18/2007 0:18	10.94	12.4	15.86	16.33	30.05
6/18/2007 0:18	11.04	12.4	15.95	16.33	33.74
6/18/2007 0:18	10.85	12.4	16.05	16.33	32.91
6/18/2007 0:18	10.85	12.4	16.14	16.33	32.5
6/18/2007 0:19	10.85	12.4	16.24	16.33	30.56
6/18/2007 0:19	10.85	12.4	16.33	16.43	26.39
6/18/2007 0:19	10.75	12.4	16.43	16.43	26.1
6/18/2007 0:19	10.75	12.4	16.43	16.43	23.48
6/18/2007 0:20	10.75	12.4	16.52	16.43	22.14
6/18/2007 0:20	10.75	12.4	16.62	16.52	20.04
6/18/2007 0:20	10.75	12.4	16.71	16.52	19
6/18/2007 0:20	10.85	12.3	16.71	16.52	17.67
6/18/2007 0:21	10.85	12.3	16.81	16.52	17.38
6/18/2007 0:21	10.75	12.3	16.9	16.62	17.67
6/18/2007 0:21	10.75	12.3	16.9	16.62	16.71
6/18/2007 0:21	10.85	12.3	17	16.62	15.86
6/18/2007 0:22	10.65	12.3	17	16.62	15.09
6/18/2007 0:22	10.75	12.3	17.09	16.62	14.33

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6/19/2007 0:00	10.75	12.21	17.19	16.52	13.08
6/19/2007 0:00	10.85	12.21	17.28	16.52	12.69
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6/19/2007 0:02	10.75	12.11	17.09	16.43	11.04
6/19/2007 0:03	10.75	12.11	17.09	16.33	12.69
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6/19/2007 0:04	10.65	12.01	16.71	16.24	11.92
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6/19/2007 0:05	10.75	12.01	16.33	16.05	11.33
6/19/2007 0:06	10.75	11.92	16.24	15.95	12.88
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6/19/2007 0:06	10.75	11.92	16.05	15.86	20.14
6/19/2007 0:07	10.94	11.92	15.86	15.76	23.97
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6/19/2007 0:07	10.75	12.01	15.76	15.76	29.35
6/19/2007 0:07	10.75	12.01	15.66	15.66	31.27
6/19/2007 0:08	10.85	12.01	15.57	15.66	33.95
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6/19/2007 0:11	10.75	12.11	15.47	15.66	34.16
6/19/2007 0:11	10.94	12.11	15.57	15.66	33.54
6/19/2007 0:11	10.94	12.11	15.66	15.76	35.33
6/19/2007 0:12	10.85	12.21	15.76	15.76	34.59
6/19/2007 0:12	10.85	12.21	15.86	15.86	35.01
6/19/2007 0:12	11.04	12.21	15.86	15.86	36.08
6/19/2007 0:12	10.85	12.21	16.05	15.95	36.19
6/19/2007 0:13	10.75	12.21	16.14	16.05	36.73
6/19/2007 0:13	11.04	12.21	16.14	16.14	37.38
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6/19/2007 0:14	10.75	12.3	16.52	16.43	39.73
6/19/2007 0:14	10.75	12.3	16.62	16.52	39.84
6/19/2007 0:14	10.65	12.3	16.71	16.62	40.42
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6/19/2007 0:15	10.94	12.3	17	16.9	41.34
6/19/2007 0:15	10.75	12.3	17.09	17	39.28
6/19/2007 0:15	10.85	12.3	17.19	17.09	36.3
6/19/2007 0:16	10.94	12.3	17.19	17.19	33.54
6/19/2007 0:16	10.94	12.3	17.28	17.19	35.33
6/19/2007 0:16	10.75	12.3	17.38	17.28	33.64
6/19/2007 0:16	10.75	12.3	17.48	17.38	45.2
6/19/2007 0:17	10.85	12.4	17.57	17.38	45.2
6/19/2007 0:17	10.75	12.4	17.67	17.48	35.76
6/19/2007 0:17	10.75	12.4	17.67	17.48	41.23
6/19/2007 0:17	10.85	12.4	17.76	17.57	40.99
6/19/2007 0:18	10.85	12.4	17.86	17.67	35.12
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6/19/2007 0:21	10.75	12.3	18.43	18.05	18.33
6/19/2007 0:21	10.85	12.3	18.52	18.05	18.14
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6/19/2007 0:22	10.75	12.3	18.52	18.14	17.57
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6/19/2007 0:23	11.04	12.21	18.62	18.14	17.57
6/19/2007 0:23	10.75	12.21	18.62	18.14	17.48
6/19/2007 0:23	10.75	12.21	18.62	18.14	17.76
6/20/2007 0:00	10.75	12.21	18.62	18.14	17.67
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6/20/2007 0:02	10.75	12.11	18.43	18.05	12.88
6/20/2007 0:02	10.75	12.11	18.33	17.95	13.37
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6/20/2007 0:05	10.75	12.01	17.67	17.67	10.75
6/20/2007 0:05	10.75	12.01	17.67	17.57	10.65
6/20/2007 0:05	10.85	12.01	17.57	17.57	10.94
6/20/2007 0:06	10.75	12.01	17.48	17.57	12.11
6/20/2007 0:06	10.75	12.01	17.38	17.48	14.71
6/20/2007 0:06	10.75	12.01	17.28	17.48	16.9
6/20/2007 0:06	10.85	12.01	17.28	17.38	20.81
6/20/2007 0:07	10.75	12.01	17.19	17.38	25.22
6/20/2007 0:07	10.75	12.01	17.09	17.28	26.68
6/20/2007 0:07	10.75	12.01	17.09	17.28	29.65
6/20/2007 0:07	10.75	12.01	17	17.19	31.47
6/20/2007 0:08	10.75	12.01	16.9	17.19	35.44
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6/20/2007 0:08	10.85	12.01	16.81	17.09	37.38
6/20/2007 0:08	10.75	12.01	16.71	17	40.07
6/20/2007 0:09	10.75	12.11	16.71	17	39.73
6/20/2007 0:09	10.75	12.11	16.62	17	39.96
6/20/2007 0:09	10.85	12.11	16.52	17	38.6
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6/20/2007 0:12	10.75	12.3	16.62	17.57	41.23
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6/20/2007 0:12	10.94	12.4	16.71		43.24
6/20/2007 0:13	10.85	12.3	16.81		42.88
6/20/2007 0:13	10.75	16.81			43.84
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6/20/2007 0:13	10.85	16.81			44.46
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6/20/2007 0:14	10.75		24.45		44.33
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6/20/2007 0:14	10.85		22.72	28.36	46.21
6/20/2007 0:15	10.75	12.79	20.62	25.81	46.85
6/20/2007 0:15	10.75	12.4	19.57	24.84	44.33
6/20/2007 0:15	10.85	12.4	19	24.26	46.08
6/20/2007 0:15	10.75	12.4	18.62	23.68	46.59
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6/20/2007 0:18	10.85	12.5	18.14	19.95	35.22
6/20/2007 0:18	10.94	12.5	18.14	18.81	38.16
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6/20/2007 0:19	10.85	12.5	18.05	18.24	26.68
6/20/2007 0:19	10.85	12.5	18.05	18.24	25.81
6/20/2007 0:20	10.85	12.5	18.05	18.24	25.71
6/20/2007 0:20	10.75	12.5	18.05	18.14	24.26
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6/20/2007 0:22	10.75	12.5	18.14	18.05	20.04
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6/20/2007 0:22	10.75	12.4	18.14	18.05	17.57
6/20/2007 0:23	10.75	12.4	18.05	18.05	17.38
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6/20/2007 0:23	10.75	12.4	18.05	18.05	17
6/21/2007 0:00	10.85	12.4	18.05	17.95	18.05
6/21/2007 0:00	10.85	12.4	18.05	17.95	19.28
6/21/2007 0:00	10.85	12.4	17.95	17.95	18.43
6/21/2007 0:00	10.75	12.4	17.95	17.95	17.38
6/21/2007 0:01	10.75	12.4	17.95	17.95	18.14
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6/21/2007 0:01	10.75	12.3	17.86	17.95	20.04
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6/21/2007 0:02	10.85	12.3	17.76	17.95	22.62
6/21/2007 0:02	10.75	12.3	17.76	17.86	19.57
6/21/2007 0:02	10.75	12.3	17.67	17.86	18.62
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6/21/2007 0:03	10.75	12.3	17.57	17.86	16.62
6/21/2007 0:04	10.85	12.21	17.57	17.86	20.62
6/21/2007 0:04	10.85	12.21	17.57	17.95	19.19
6/21/2007 0:04	10.75	12.21	17.48	17.86	17.28
6/21/2007 0:04	10.85	12.21	17.48	17.76	17.38
6/21/2007 0:05	10.85	12.21	17.48	17.76	19.09
6/21/2007 0:05	10.75	12.21	17.48	17.76	17.57
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6/21/2007 0:06	10.85	12.21	17.38	17.76	16.81
6/21/2007 0:06	10.75	12.21	17.38	17.67	18.24
6/21/2007 0:06	10.75	12.21	17.38	17.67	20.23
6/21/2007 0:06	10.85	12.11	17.38	17.67	24.26
6/21/2007 0:07	10.75	12.11	17.38	17.67	28.95
6/21/2007 0:07	10.75	12.11	17.38	17.67	29.45
6/21/2007 0:07	10.75	12.11	17.38	17.57	32.29
6/21/2007 0:07	11.04	12.11	17.38	17.57	34.9
6/21/2007 0:08	10.75	12.11	17.38	17.57	36.73
6/21/2007 0:08	10.75	12.11	17.38	17.57	38.27
6/21/2007 0:08	10.85	12.21	17.38	17.57	38.38
6/21/2007 0:08	10.85	12.11	17.38	17.57	38.05
6/21/2007 0:09	10.75	12.21	17.38	17.67	39.16
6/21/2007 0:09	10.75	12.11	17.38	17.76	39.05
6/21/2007 0:09	10.85	12.21	17.38	17.67	37.27
6/21/2007 0:09	10.75	12.21	17.38	17.67	33.22
6/21/2007 0:10	10.75	12.21	17.48	17.76	37.82
6/21/2007 0:10	10.75	12.21	17.48	17.76	39.39
6/21/2007 0:10	10.75	12.21	17.48	17.76	40.53
6/21/2007 0:10	10.75	12.21	17.57	17.76	40.53
6/21/2007 0:11	10.94	12.21	17.57	17.86	41.11
6/21/2007 0:11	10.94	12.21	18.52	17.86	42.16
6/21/2007 0:11	10.75	12.3	19.57	17.86	43.36
6/21/2007 0:11	10.75	12.3	26.1	17.76	44.58
6/21/2007 0:12	10.75	12.3	19.28	17.76	43
6/21/2007 0:12	10.65	12.4	19.76	26.29	35.65
6/21/2007 0:12	10.65	12.4	19.09	20.14	33.85
6/21/2007 0:12	10.75	12.3	18.52	20.42	33.43
6/21/2007 0:13	10.85	12.4	18.43	19.95	36.84
6/21/2007 0:13	10.65	12.4	18.33	19.66	40.76
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6/21/2007 0:13	10.75	12.4	18.43	19.66	38.16
6/21/2007 0:14	10.94	12.4	18.43	19.38	33.54
6/21/2007 0:14	10.85	12.4	18.43	19.19	33.64
6/21/2007 0:14	10.94	12.4	18.43	19	36.95
6/21/2007 0:14	10.94	12.4	18.43	18.81	43.12
6/21/2007 0:15	10.75	12.4	18.43	18.71	41.23
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6/21/2007 0:15	10.94	12.4	18.43	19	32.09
6/21/2007 0:16	10.75	12.4	18.43	18.71	29.95
6/21/2007 0:16	10.85	12.4	18.43	18.62	28.66
6/21/2007 0:16	10.94	12.4	18.33	18.52	28.56
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6/21/2007 0:20	10.75	12.5	18.14	18.05	24.16
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6/21/2007 0:21	10.75	12.4	18.05	18.24	19.28
6/21/2007 0:21	10.75	12.4	18.14	18.33	20.52
6/21/2007 0:21	10.85	12.4	18.14	18.33	23.2
6/21/2007 0:22	10.75	12.4	18.05	18.33	24.06
6/21/2007 0:22	10.75	12.4	18.05	18.33	23.58
6/21/2007 0:22	10.75	12.4	17.95	18.33	22.62
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6/21/2007 0:23	10.75	12.4	18.05	18.52	20.33
6/21/2007 0:23	10.75	12.4	18.05	18.33	19.19
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6/22/2007 0:00	10.75	12.4	17.95	18.43	18.71
6/22/2007 0:00	10.75	12.4	17.95	18.43	18.62
6/22/2007 0:00	10.75	12.3	17.95	18.43	18.62
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6/22/2007 0:03	10.75	12.3	17.76	18.62	16.14
6/22/2007 0:03	10.75	12.3	17.76	18.62	15.86
6/22/2007 0:03	10.85	12.3	17.76	18.62	15.19
6/22/2007 0:03	10.75	12.3	17.76	18.62	14.13
6/22/2007 0:04	10.75	12.3	17.76	18.62	12.21
6/22/2007 0:04	10.85	12.21	17.86	18.62	11.53
6/22/2007 0:04	10.75	12.21	17.86	18.62	12.4
6/22/2007 0:04	10.75	12.21	17.86	18.62	12.88
6/22/2007 0:05	10.75	12.21	17.76	18.62	12.88
6/22/2007 0:05	10.85	12.21	17.76	18.62	12.11
6/22/2007 0:05	10.75	12.21	17.76	18.71	11.33
6/22/2007 0:05	10.75	12.21	17.76	18.71	11.24
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6/22/2007 0:09	10.75	12.11	17.76	18.81	31.98
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6/22/2007 0:10	10.85	12.11	17.86	18.9	38.16
6/22/2007 0:10	10.85	12.21	17.86	18.9	38.94
6/22/2007 0:10	10.85	12.21	17.86	19	33.85
6/22/2007 0:11	10.75	12.21	17.86	19	27.08
6/22/2007 0:11	10.75	12.21	17.86	19	25.71
6/22/2007 0:11	10.85	12.21	17.95	19	26.68
6/22/2007 0:11	10.75	12.21	17.95	19	28.85
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6/22/2007 0:13	10.85	12.21	18.05	19.19	37.82
6/22/2007 0:13	10.75	12.21	18.14	19.19	38.27
6/22/2007 0:14	10.85	12.21	18.24	19.19	38.38
6/22/2007 0:14	10.85	12.21	18.43	19.28	36.51
6/22/2007 0:14	10.75	12.3	18.14	19.28	35.44
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6/22/2007 0:15	10.85	12.3	18.43	19.09	42.05

6/22/2007 0:15	10.75	12.3	18.43	19.09	42.52
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6/22/2007 0:16	11.04	12.3	18.33	19.09	35.76
6/22/2007 0:16	10.85	12.3	18.52	19.09	29.25
6/22/2007 0:16	10.75	12.3	18.71	19.09	30.56
6/22/2007 0:16	11.04	12.3	18.52	19.19	38.6
6/22/2007 0:17	10.94	12.3	18.52	19.28	39.39
6/22/2007 0:17	10.75	12.3	18.52	19.19	36.95
6/22/2007 0:17	11.04	12.3	18.52	19.19	25.9
6/22/2007 0:17	10.94	12.3	18.52	19.19	25.9
6/22/2007 0:18	10.85	12.4	18.62	19.19	25.71
6/22/2007 0:18	10.85	12.4	18.62	19.38	23.77
6/22/2007 0:18	10.85	12.4	18.62	19.38	23.29
6/22/2007 0:18	10.94	12.4	18.62	19.38	26.98
6/22/2007 0:19	10.75	12.4	18.62	19.28	27.67
6/22/2007 0:19	10.75	12.4	18.62	19.38	23.68
6/22/2007 0:19	10.85	12.4	18.62	19.38	23.1
6/22/2007 0:19	10.85	12.3	18.62	19.38	20.81
6/22/2007 0:20	10.75	12.4	18.62	19.38	18.52
6/22/2007 0:20	10.85	12.4	18.52	19.47	17.86
6/22/2007 0:20	10.75	12.3	18.52	19.57	17.57
6/22/2007 0:20	10.75	12.3	18.62	19.57	17.28
6/22/2007 0:21	10.75	12.3	18.52	19.47	16.52
6/22/2007 0:21	10.75	12.3	18.52	19.38	16.9
6/22/2007 0:21	10.75	12.3	18.52	19.38	15.95
6/22/2007 0:21	10.75	12.3	18.52	19.38	14.9
6/22/2007 0:22	10.85	12.3	18.52	19.28	15.57
6/22/2007 0:22	10.85	12.3	18.52	19.28	14.52
6/22/2007 0:22	10.75	12.3	18.52	19.28	13.85
6/22/2007 0:22	10.75	12.3	18.52	19.28	13.85
6/22/2007 0:23	10.75	12.3	18.52	19.28	13.08
6/22/2007 0:23	10.85	12.3	18.52	19.28	12.88
6/22/2007 0:23	10.75	12.3	18.43	19.38	12.88
6/22/2007 0:23	10.75	12.21	18.52	19.28	12.79
6/23/2007 0:00	10.75	12.3	18.43	19.28	12.5
6/23/2007 0:00	10.85	12.21	18.43	19.28	13.46
6/23/2007 0:00	10.75	12.21	18.43	19.28	13.56
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6/23/2007 0:03	10.85	12.11	18.24	19.19	12.01
6/23/2007 0:03	10.65	12.11	18.14	19.19	11.72
6/23/2007 0:03	10.75	12.11	18.14	19.19	12.11
6/23/2007 0:03	10.75	12.11	18.14	19.19	11.43
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6/23/2007 0:05	10.85	12.11	18.05	19	9.67
6/23/2007 0:05	10.75	12.11	18.05	19	9.67
6/23/2007 0:05	10.75	12.11	17.95	19	9.87
6/23/2007 0:05	10.75	12.11	17.95	19	10.75
6/23/2007 0:06	10.75	12.01	17.86	19	12.11
6/23/2007 0:06	10.75	12.01	17.86	18.9	15.66
6/23/2007 0:06	10.75	12.01	17.76	18.9	17.67
6/23/2007 0:06	10.85	12.01	17.76	18.9	20.23
6/23/2007 0:07	10.85	12.01	17.76	18.9	24.06
6/23/2007 0:07	10.75	12.01	17.76	18.81	24.45
6/23/2007 0:07	10.75	12.01	17.76	18.81	26.29
6/23/2007 0:07	10.85	12.01	17.76	18.81	28.26
6/23/2007 0:08	10.75	12.01	17.57	18.81	31.98
6/23/2007 0:08	10.75	12.01	17.57	18.81	35.44
6/23/2007 0:08	10.85	12.01	17.57	18.71	36.62
6/23/2007 0:08	10.85	12.01	17.57	18.71	35.12
6/23/2007 0:09	10.75	12.01	17.57	18.62	35.01
6/23/2007 0:09	10.85	12.01	17.67	18.71	36.62
6/23/2007 0:09	10.94	12.01	17.67	18.71	34.48
6/23/2007 0:09	10.75	12.01	17.67	18.71	30.26
6/23/2007 0:10	10.75	12.01	17.76	18.81	32.91
6/23/2007 0:10	10.94	12.01	17.76	18.81	35.65
6/23/2007 0:10	10.94	12.11	17.86	18.81	36.08
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6/23/2007 0:11	10.75	12.11	17.95	18.9	37.82
6/23/2007 0:11	10.75	12.11	17.95	18.9	37.17
6/23/2007 0:12	10.85	12.11	18.05	18.9	38.49
6/23/2007 0:12	10.85	12.11	18.05	18.9	38.83
6/23/2007 0:12	10.75	12.11	18.14	18.9	40.19
6/23/2007 0:12	10.75	12.21	18.14	18.9	39.5
6/23/2007 0:13	11.14	12.21	18.14	18.9	40.3
6/23/2007 0:13	10.94	12.21	18.24	19	43.12
6/23/2007 0:13	10.85	12.21	18.24	19	43.72

6/23/2007 0:13	10.85	12.21	18.33	19	42.4
6/23/2007 0:14	10.85	12.21	18.33	19	43
6/23/2007 0:14	10.75	12.21	18.33	19.09	44.21
6/23/2007 0:14	10.75	12.21	18.43	19.19	42.64
6/23/2007 0:14	10.85	12.3	18.43	19.38	43.24
6/23/2007 0:15	10.94	12.3	18.52	19.38	43.12
6/23/2007 0:15	10.94	12.3	18.52	19.28	42.88
6/23/2007 0:15	10.85	12.3	18.62	19.28	43.97
6/23/2007 0:15	11.14	12.3	18.62	19.28	43.72
6/23/2007 0:16	10.85	12.3	18.62	19.28	44.09
6/23/2007 0:16	10.85	12.3	18.71	19.28	43.72
6/23/2007 0:16	10.94	12.3	18.9	19.28	44.21
6/23/2007 0:16	10.85	12.3	18.71	19.28	44.83
6/23/2007 0:17	10.85	12.4	18.81	19.38	45.7
6/23/2007 0:17	10.85	12.4	18.9	19.38	44.58
6/23/2007 0:17	10.75	12.4	18.9	19.38	42.76
6/23/2007 0:17	10.75	12.4	18.9	19.38	40.76
6/23/2007 0:18	10.75	12.4	19	19.57	37.06
6/23/2007 0:18	10.85	12.4	18.81	19.47	40.76
6/23/2007 0:18	10.75	12.4	19	19.47	38.71
6/23/2007 0:18	10.75	12.4	19.19	19.47	37.82
6/23/2007 0:19	10.85	12.4	19.09	19.47	35.44
6/23/2007 0:19	11.04	12.4	18.9	19.57	31.47
6/23/2007 0:19	10.85	12.4	19.09	19.57	30.86
6/23/2007 0:19	10.85	12.4	19.28	19.57	28.66
6/23/2007 0:20	11.04	12.4	19	19.57	27.17
6/23/2007 0:20	10.85	12.4	19.09	19.57	25.9
6/23/2007 0:20	10.85	12.4	19.19	19.57	24.35
6/23/2007 0:20	10.85	12.4	19.28	19.66	22.62
6/23/2007 0:21	10.75	12.4	19.28	19.76	22.91
6/23/2007 0:21	10.75	12.4	19.28	19.85	22.24
6/23/2007 0:21	10.75	12.4	19.28	19.76	21
6/23/2007 0:21	10.94	12.4	19.28	19.66	20.04
6/23/2007 0:22	10.85	12.4	19.28	19.66	19.28
6/23/2007 0:22	10.75	12.4	19.28	19.66	19.19
6/23/2007 0:22	10.85	12.4	19.38	19.66	19.19
6/23/2007 0:22	10.85	12.4	19.28	19.57	19
6/23/2007 0:23	10.75	12.4	19.28	19.66	18.81
6/23/2007 0:23	10.75	12.4	19.28	19.66	19
6/23/2007 0:23	10.85	12.4	19.28	19.66	17.76
6/23/2007 0:23	10.75	12.4	19.09	19.66	17.86
6/24/2007 0:00	10.75	12.4	19.19	19.57	19.38
6/24/2007 0:00	10.75	12.4	19.47	19.57	19.28
6/24/2007 0:00	10.85	12.4	19.38	19.57	18.14
6/24/2007 0:00	10.75	12.3	19.38	19.57	16.33
6/24/2007 0:01	10.75	12.3	19.28	19.57	15.76
6/24/2007 0:01	10.75	12.3	19.19	19.57	16.9
6/24/2007 0:01	10.75	12.3	19.09	19.76	16.14
6/24/2007 0:01	10.75	12.3	19.09	19.66	15.57
6/24/2007 0:02	10.75	12.3	19.09	19.57	15.19
6/24/2007 0:02	10.85	12.3	19.09	19.57	14.71
6/24/2007 0:02	10.85	12.3	19	19.57	15
6/24/2007 0:02	10.75	12.3	19	19.57	14.33
6/24/2007 0:03	10.75	12.3	19	19.57	14.04
6/24/2007 0:03	10.85	12.3	19	19.57	14.42
6/24/2007 0:03	10.75	12.21	18.9	19.57	15.38
6/24/2007 0:03	10.75	12.21	18.9	19.66	15.28
6/24/2007 0:04	10.75	12.21	18.9	19.66	14.71
6/24/2007 0:04	10.75	12.21	18.9	19.57	15.66
6/24/2007 0:04	10.75	12.21	18.9	19.47	16.24
6/24/2007 0:04	10.75	12.21	18.9	19.47	15.86
6/24/2007 0:05	10.75	12.21	18.81	19.47	15.57
6/24/2007 0:05	10.65	12.21	18.81	19.47	14.33
6/24/2007 0:05	10.75	12.21	18.81	19.47	13.75
6/24/2007 0:05	10.75	12.21	18.81	19.47	12.88
6/24/2007 0:06	10.85	12.21	18.81	19.47	13.94
6/24/2007 0:06	10.75	12.21	18.81	19.38	16.24
6/24/2007 0:06	10.75	12.21	18.81	19.38	18.62
6/24/2007 0:06	10.75	12.11	18.81	19.38	21.76
6/24/2007 0:07	10.85	12.11	18.62	19.38	26.68
6/24/2007 0:07	10.75	12.11	18.71	19.38	28.75
6/24/2007 0:07	10.75	12.11	18.71	19.28	30.96
6/24/2007 0:07	10.85	12.11	18.71	19.28	34.16
6/24/2007 0:08	10.85	12.11	18.52	19.28	36.19
6/24/2007 0:08	10.75	12.11	18.62	19.28	37.94
6/24/2007 0:08	10.85	12.11	18.62	19.28	39.28
6/24/2007 0:08	10.94	12.11	18.62	19.28	38.71
6/24/2007 0:09	10.75	12.11	18.52	19.19	38.6
6/24/2007 0:09	10.75	12.21	18.43	19.19	38.83
6/24/2007 0:09	11.04	12.21	18.62	19.19	39.84
6/24/2007 0:09	10.94	12.21	18.62	19.28	33.85
6/24/2007 0:10	10.85	12.21	18.62	19.28	36.62
6/24/2007 0:10	10.85	12.21	18.62	19.28	40.3
6/24/2007 0:10	10.85	12.21	18.71	19.28	40.76
6/24/2007 0:10	10.75	12.21	18.71	19.38	40.76
6/24/2007 0:11	10.94	12.21	18.81	19.38	40.19
6/24/2007 0:11	10.85	12.21	18.81	19.38	40.3
6/24/2007 0:11	10.75	12.21	18.9	19.38	41.34
6/24/2007 0:11	10.75	12.3	18.9	19.38	41.81

6/24/2007 0:12	10.85	12.3	18.9	19.57	44.09
6/24/2007 0:12	11.24	12.3	19	19.47	43.72
6/24/2007 0:12	10.94	12.3	19.09	19.47	45.33
6/24/2007 0:12	10.85	12.3	19	19.47	40.53
6/24/2007 0:13	10.85	12.3	19.09	19.47	37.6
6/24/2007 0:13	11.14	12.3	19.09	19.57	40.19
6/24/2007 0:13	10.94	12.3	19.19	19.57	46.47
6/24/2007 0:13	11.14	12.3	19.28	19.66	46.72
6/24/2007 0:14	11.04	12.4	19.28	19.66	47.63
6/24/2007 0:14	10.85	12.4	19.38	19.66	44.33
6/24/2007 0:14	11.04	12.4	19.38	19.66	39.84
6/24/2007 0:14	11.14	12.4	19.38	19.66	34.27
6/24/2007 0:15	10.85	12.4	19.47	19.66	32.29
6/24/2007 0:15	10.85	12.4	19.47	19.66	31.17
6/24/2007 0:15	10.94	12.4	19.57	19.76	30.36
6/24/2007 0:15	10.94	12.4	19.57	19.76	29.85
6/24/2007 0:16	10.85	12.4	19.28	19.76	30.86
6/24/2007 0:16	10.85	12.4	19.28	19.76	32.81
6/24/2007 0:16	10.94	12.4	19.28	19.85	34.48
6/24/2007 0:16	10.75	12.4	19.38	20.04	38.49
6/24/2007 0:17	10.75	12.4	19.38	19.95	37.06
6/24/2007 0:17	10.94	12.4	19.38	19.76	38.05
6/24/2007 0:17	10.94	12.4	19.57	19.76	35.86
6/24/2007 0:17	10.94	12.4	19.57	19.76	32.6
6/24/2007 0:18	11.04	12.5	19.66	19.76	30.76
6/24/2007 0:18	10.94	12.4	19.57	19.76	32.19
6/24/2007 0:18	10.85	12.5	19.57	19.76	28.75
6/24/2007 0:18	10.85	12.5	19.38	19.85	33.12
6/24/2007 0:19	10.85	12.5	19.66	19.76	33.54
6/24/2007 0:19	10.94	12.5	19.76	19.76	33.74
6/24/2007 0:19	10.85	12.5	19.85	19.76	30.36
6/24/2007 0:19	10.85	12.5	19.85	19.76	29.25
6/24/2007 0:20	10.85	12.5	19.85	19.76	28.26
6/24/2007 0:20	10.75	12.5	19.76	19.76	26.68
6/24/2007 0:20	10.75	12.5	19.76	19.76	26
6/24/2007 0:20	10.85	12.5	19.76	19.76	26.29
6/24/2007 0:21	10.85	12.5	19.66	19.76	26
6/24/2007 0:21	10.75	12.5	19.66	19.85	25.9
6/24/2007 0:21	10.85	12.5	19.47	19.85	25.9
6/24/2007 0:21	10.94	12.4	19.28	19.95	25.42
6/24/2007 0:22	10.75	12.5	19.19	19.85	24.93
6/24/2007 0:22	10.75	12.4	19	19.57	25.22
6/24/2007 0:22	10.85	12.4	18.9	19.47	25.32
6/24/2007 0:22	10.75	12.4	18.9	19.28	25.61
6/24/2007 0:23	10.75	12.4	19	19.19	25.42
6/24/2007 0:23	10.85	12.4	18.62	19.09	25.9
6/24/2007 0:23	10.94	12.4	18.14	19	26.2
6/24/2007 0:23	10.85	12.4	17.95	19	26.2
6/25/2007 0:00	10.85	12.4	17.67	18.9	26.2
6/25/2007 0:00	10.94	12.4	17.86	19	25.9
6/25/2007 0:00	10.85	12.4	18.05	19	26.1
6/25/2007 0:00	10.75	12.4	18.05	19	26.2
6/25/2007 0:01	10.85	12.4	18.14	19	26.1
6/25/2007 0:01	10.94	12.4	18.24	19	25.61
6/25/2007 0:01	10.85	12.4	18.24	18.81	21.57
6/25/2007 0:01	10.75	12.4	18.33	18.71	19.66
6/25/2007 0:02	10.94	12.4	18.33	18.9	18.24
6/25/2007 0:02	10.75	12.4	18.43	19	17.57
6/25/2007 0:02	10.75	12.4	18.43	19.09	17.76
6/25/2007 0:02	10.75	12.4	18.52	19.19	16.14
6/25/2007 0:03	10.85	12.4	18.52	19.09	15.86
6/25/2007 0:03	10.85	12.4	18.52	19.19	15.28
6/25/2007 0:03	10.75	12.4	18.52	19.19	15.19
6/25/2007 0:03	10.75	12.4	18.52	19.09	14.9
6/25/2007 0:04	10.65	12.4	18.52	19	15
6/25/2007 0:04	10.65	12.4	18.52	19.09	16.43
6/25/2007 0:04	10.75	12.4	18.52	19.09	14.9
6/25/2007 0:04	10.75	12.4	18.43	19.09	15.28
6/25/2007 0:05	10.85	12.4	18.52	19.09	15.38
6/25/2007 0:05	10.75	12.3	18.52	19.09	15
6/25/2007 0:05	10.75	12.3	18.52	19.09	14.04
6/25/2007 0:05	10.85	12.3	18.43	19	14.33
6/25/2007 0:06	10.75	12.3	18.43	19	15.47
6/25/2007 0:06	10.75	12.3	18.43	18.9	18.05
6/25/2007 0:06	10.75	12.3	18.43	18.81	19.95
6/25/2007 0:06	10.85	12.3	18.43	18.9	23
6/25/2007 0:07	10.65	12.3	18.43	19	28.66
6/25/2007 0:07	10.75	12.3	18.43	19	29.95
6/25/2007 0:07	10.75	12.3	18.43	19	33.22
6/25/2007 0:07	10.85	12.3	18.33	19	36.08
6/25/2007 0:08	10.75	12.3	18.33	19	38.49
6/25/2007 0:08	10.75	12.3	18.33	19	40.53
6/25/2007 0:08	10.94	12.3	18.33	18.9	41.93
6/25/2007 0:08	10.75	12.3	18.24	18.81	43.24
6/25/2007 0:09	10.75	12.3	18.24	18.9	42.76
6/25/2007 0:09	10.94	12.3	18.24	18.9	42.16
6/25/2007 0:09	10.94	12.3	18.33	18.9	41.23
6/25/2007 0:09	10.75	12.3	18.33	19	35.33
6/25/2007 0:10	10.85	12.3	18.43	19	38.38

6/25/2007 0:10	11.04	12.3	18.43	18.81	41.58
6/25/2007 0:10	10.85	12.3	18.43	19	41.58
6/25/2007 0:10	10.85	12.3	18.52	19	41.11
6/25/2007 0:11	10.85	12.3	18.52	19.09	42.16
6/25/2007 0:11	10.75	12.4	18.62	19.09	41.58
6/25/2007 0:11	10.75	12.4	18.62	19.09	40.99
6/25/2007 0:11	10.75	12.4	18.62	19.09	41.93
6/25/2007 0:12	11.14	12.4	18.71	19.09	41.58
6/25/2007 0:12	10.85	12.4	18.81	19.19	42.05
6/25/2007 0:12	10.85	12.4	18.81	19.09	42.64
6/25/2007 0:12	10.85	12.4	18.71	19.19	43.24
6/25/2007 0:13	10.94	12.4	18.9	19.19	43.84
6/25/2007 0:13	10.85	12.4	18.9	19.28	44.09
6/25/2007 0:13	11.04	12.4	18.81	19.28	45.96
6/25/2007 0:13	11.24	12.5	18.9	19.38	45.2
6/25/2007 0:14	10.85	12.5	19	19.38	46.85
6/25/2007 0:14	10.85	12.5	19.09	19.38	45.83
6/25/2007 0:14	10.85	12.5	19.19	19.38	46.08
6/25/2007 0:14	10.85	12.5	19.19	19.38	47.37
6/25/2007 0:15	10.75	12.5	19.09	19.47	45.7
6/25/2007 0:15	10.75	12.5	19.19	19.57	46.85
6/25/2007 0:15	10.94	12.5	19.28	19.57	45.45
6/25/2007 0:15	10.85	12.59	19.28	19.57	47.89
6/25/2007 0:16	10.85	12.59	19.28	19.57	46.98
6/25/2007 0:16	11.14	12.59	19.38	19.57	36.95
6/25/2007 0:16	10.94	12.59	19.47	19.66	36.95
6/25/2007 0:16	10.85	12.59	19.38	19.66	39.05
6/25/2007 0:17	10.85	12.59	19.47	19.85	35.76
6/25/2007 0:17	10.94	12.59	19.47	20.04	35.01
6/25/2007 0:17	10.85	12.59	19.47	20.23	33.43
6/25/2007 0:17	10.94	12.59	19.66	19.85	32.39
6/25/2007 0:18	10.85	12.59	19.47	19.76	32.29
6/25/2007 0:18	10.94	12.59	19.47	19.76	32.5
6/25/2007 0:18	10.85	12.59	19.47	19.76	37.71
6/25/2007 0:18	11.04	12.59	19.47	19.85	40.42
6/25/2007 0:19	10.85	12.59	19.57	19.85	36.08
6/25/2007 0:19	10.85	12.59	19.47	19.76	34.27
6/25/2007 0:19	10.94	12.59	19.47	19.76	33.95
6/25/2007 0:19	10.94	12.59	19.38	19.76	30.86
6/25/2007 0:20	10.85	12.59	19.38	19.76	29.25
6/25/2007 0:20	10.85	12.59	19.47	19.76	27.27
6/25/2007 0:20	10.85	12.59	19.47	19.76	27.08
6/25/2007 0:20	10.94	12.59	19.47	19.76	26.29
6/25/2007 0:21	10.75	12.59	19.47	19.76	25.42
6/25/2007 0:21	10.94	12.59	19.47	19.76	24.35
6/25/2007 0:21	10.94	12.59	19.38	19.85	23.87
6/25/2007 0:21	10.75	12.59	19.28	19.76	22.91
6/25/2007 0:22	10.75	12.59	19.38	19.85	23.1
6/25/2007 0:22	10.85	12.59	19.38	19.85	23.1
6/25/2007 0:22	10.94	12.59	19.28	19.85	23.1
6/25/2007 0:22	10.75	12.59	19	19.85	23.39
6/25/2007 0:23	10.75	12.59	19	19.76	23.39
6/25/2007 0:23	10.85	12.59	19.19	19.76	23.39
6/25/2007 0:23	10.75	12.59	18.9	19.66	23.58
6/25/2007 0:23	10.75	12.59	18.43	19.57	23.48
6/26/2007 0:00	10.75	12.5	18.05	19.47	23.48
6/26/2007 0:00	10.85	12.5	18.9	19.38	23.29
6/26/2007 0:00	10.75	12.5	18.81	19.38	23.48
6/26/2007 0:00	10.75	12.5	18.33	19.28	23.29
6/26/2007 0:01	10.94	12.5	17.86	19	22.91
6/26/2007 0:01	10.85	12.5	18.9	19.28	21.76
6/26/2007 0:01	10.75	12.5	18.52	19.19	21.66
6/26/2007 0:01	10.75	12.5	18.24	19.28	20.14
6/26/2007 0:02	10.75	12.5	17.95	19.28	20.04
6/26/2007 0:02	10.65	12.5	17.76	19.28	19.85
6/26/2007 0:02	10.75	12.5	18.62	19.09	18.81
6/26/2007 0:02	10.75	12.5	18.9	19	18.52
6/26/2007 0:03	10.94	12.5	18.62	19.38	19.76
6/26/2007 0:03	10.75	12.5	18.33	19.47	19.85
6/26/2007 0:03	10.85	12.5	18.14	19.47	19
6/26/2007 0:03	10.85	12.5	18.9	19.47	18.62
6/26/2007 0:04	10.85	12.5	18.62	19.47	17.28
6/26/2007 0:04	10.75	12.4	18.43	19.47	15.95
6/26/2007 0:04	10.75	12.4	18.71	19.47	15.47
6/26/2007 0:04	10.85	12.4	18.81	19.38	16.52
6/26/2007 0:05	10.75	12.4	18.62	19.38	17.57
6/26/2007 0:05	10.75	12.4	18.33	19.38	17.09
6/26/2007 0:05	10.75	12.4	18.24	19.38	17.57
6/26/2007 0:05	10.85	12.4	18.81	19.47	17.57
6/26/2007 0:06	10.75	12.4	18.62	19.47	17.95
6/26/2007 0:06	10.85	12.4	18.43	19.47	18.43
6/26/2007 0:06	10.85	12.4	18.71	19.47	19.38
6/26/2007 0:06	10.75	12.4	18.62	19.47	19.66
6/26/2007 0:07	10.75	12.4	18.43	19.28	23
6/26/2007 0:07	10.94	12.4	18.05	19.19	27.47
6/26/2007 0:07	10.94	12.3	18.71	19.28	31.06
6/26/2007 0:07	10.85	12.3	18.52	19.28	31.78
6/26/2007 0:08	10.94	12.3	18.33	19.38	34.16
6/26/2007 0:08	11.04	12.3	18.14	19.38	35.12

6/26/2007 0:08	10.94	12.3	18.71	19.38	31.47
6/26/2007 0:08	10.94	12.3	18.52	19.47	28.56
6/26/2007 0:09	10.94	12.4	18.43	19.47	29.35
6/26/2007 0:09	10.94	12.3	18.24	19.47	28.66
6/26/2007 0:09	10.75	12.4	18.24	19.47	23.39
6/26/2007 0:09	10.75	12.4	18.81	19.47	20.04
6/26/2007 0:10	10.75	12.4	18.81	19.57	19.85
6/26/2007 0:10	10.85	12.4	18.62	19.57	21.47
6/26/2007 0:10	10.75	12.3	18.81	19.57	23.29
6/26/2007 0:10	10.85	12.4	18.9	19.57	26.2
6/26/2007 0:11	11.04	12.4	18.33	19.57	21.76
6/26/2007 0:11	10.85	12.4	18.9	19.57	21.38
6/26/2007 0:11		12.4	18.52	19.57	23
6/26/2007 0:11		12.4	19.28	19.47	24.64
6/26/2007 0:12		12.4	19.57		24.26
6/26/2007 0:12		12.4	19.95		25.71
6/26/2007 0:12		12.4	19.95		27.96
6/26/2007 0:12		12.4	19.85	19.95	29.35
6/26/2007 0:13		12.4	19.66	19.95	30.26
6/26/2007 0:13		12.4	19.57	19.85	34.59
6/26/2007 0:13		12.4	19.57	19.85	31.68
6/26/2007 0:13		12.4	19.57	19.85	24.93
6/26/2007 0:14		12.4	19.47	19.76	22.53
6/26/2007 0:14		12.4	19.57	19.85	21.47
6/26/2007 0:14		12.4	19.66	19.76	19.95
6/26/2007 0:14		12.4	19.76	19.85	19
6/26/2007 0:15		12.4	19.76	19.85	19
6/26/2007 0:15		12.4	19.66	19.95	18.33
6/26/2007 0:15		12.4	19.66	19.85	18.14
6/26/2007 0:15		12.4	19.66	19.85	17.95
6/26/2007 0:16		12.4	19.66	19.85	18.43
6/26/2007 0:16		12.4	19.66	19.85	19.19
6/26/2007 0:16		12.4	19.66	19.85	19.66
6/26/2007 0:16		12.4	19.76	19.85	20.33
6/26/2007 0:17		12.5	19.76	19.85	21.95
6/26/2007 0:17		12.4	19.66	19.95	22.53
6/26/2007 0:17		12.5	19.66	19.95	22.91
6/26/2007 0:17		12.5	19.76	19.95	23.39
6/26/2007 0:18		12.5	19.76	19.95	22.81
6/26/2007 0:18		12.5	19.66	19.95	22.43
6/26/2007 0:18		12.5	19.76	19.95	21.66
6/26/2007 0:18		12.5	19.76	19.95	21.09
6/26/2007 0:19		12.5	19.85	19.95	20.33
6/26/2007 0:19		12.5	19.95	19.95	19.47
6/26/2007 0:19		12.5	19.85	20.04	19.09
6/26/2007 0:19		12.5	19.95	20.04	18.52
6/26/2007 0:20		12.5	19.95	20.04	18.05
6/26/2007 0:20		12.5	20.04	20.14	17.76
6/26/2007 0:20		12.5	19.95	20.04	17.19
6/26/2007 0:20		12.5	19.95	20.14	16.71
6/26/2007 0:21		12.5	20.04	20.14	17.19
6/26/2007 0:21		12.5	20.14	20.14	17.48
6/26/2007 0:21		12.5	20.14	20.23	17.28
6/26/2007 0:21		12.5	20.04	20.23	16.62
6/26/2007 0:22		12.5	20.04	20.23	16.71
6/26/2007 0:22		12.5	20.04	20.23	17.38
6/26/2007 0:22		12.59	20.14	20.23	17.76
6/26/2007 0:22		12.59	20.14	20.23	17.86
6/26/2007 0:23		12.59	20.14	20.23	17.57
6/26/2007 0:23		12.59	20.04	20.23	17.19
6/26/2007 0:23		12.59	20.04	20.23	16.24
6/26/2007 0:23		12.59	20.14	20.33	15.95
6/27/2007 0:00		12.59	20.14	20.33	15.38
6/27/2007 0:00		12.59	20.04	20.23	14.9
6/27/2007 0:00		12.59	20.04	20.23	14.9
6/27/2007 0:00		12.59	20.04	20.23	14.8
6/27/2007 0:01		12.59	20.04	20.23	14.8
6/27/2007 0:01		12.59	20.14	20.23	15.28
6/27/2007 0:01		12.59	20.14	20.23	15.47
6/27/2007 0:01		12.59	19.95	20.23	15.76
6/27/2007 0:02		12.59	19.85	20.23	15.09
6/27/2007 0:02		12.59	19.85	20.23	14.33
6/27/2007 0:02		12.59	19.85	20.23	13.75
6/27/2007 0:02		12.59	19.95	20.23	13.46
6/27/2007 0:03		12.59	19.85	20.23	13.37
6/27/2007 0:03		12.59	19.85	20.23	13.27
6/27/2007 0:03		12.59	19.76	20.23	12.88
6/27/2007 0:03		12.59	19.76	20.14	12.4
6/27/2007 0:04		12.69	19.76	20.23	12.21
6/27/2007 0:04		12.69	19.66	20.23	12.5
6/27/2007 0:04		12.69	19.66	20.23	12.5
6/27/2007 0:04		12.69	19.66	20.14	12.59
6/27/2007 0:05		12.69	19.57	20.14	12.79
6/27/2007 0:05		12.69	19.57	20.14	13.17
6/27/2007 0:05		12.69	19.47	20.14	13.08
6/27/2007 0:05		12.69	19.57	20.14	12.98
6/27/2007 0:06		12.69	19.47	20.14	13.37
6/27/2007 0:06		12.69	19.47	20.04	14.04
6/27/2007 0:06		12.69	19.47	20.14	14.23

6/27/2007 0:06		12.69	19.47	20.14	14.42
6/27/2007 0:07		12.69	19.47	20.14	14.8
6/27/2007 0:07		12.69	19.38	20.23	15
6/27/2007 0:07		12.69	19.28	20.14	16.05
6/27/2007 0:07		12.69	19.38	20.14	17.09
6/27/2007 0:08		12.69	19.38	20.23	20.9
6/27/2007 0:08		12.69	19.38	20.14	19.66
6/27/2007 0:08		12.69	19.38	20.14	20.33
6/27/2007 0:08		12.79	19.47	20.23	18.81
6/27/2007 0:09		12.79	19.57	20.23	18.71
6/27/2007 0:09		12.79	19.66	20.23	18.33
6/27/2007 0:09		12.79	19.76	20.23	18.71
6/27/2007 0:09		12.79	19.85	20.23	22.72
6/27/2007 0:10		12.79	19.85	20.23	27.67
6/27/2007 0:10		12.79	19.85	20.23	22.81
6/27/2007 0:10		12.79	19.95	20.23	21.38
6/27/2007 0:10		12.79	20.04	20.23	26
6/27/2007 0:11		12.79	20.04	20.23	25.22
6/27/2007 0:11		12.79	20.14	20.23	32.09
6/27/2007 0:11		12.79	20.04	20.33	26
6/27/2007 0:11		12.79	20.04	20.33	24.35
6/27/2007 0:12		12.79	20.14	20.33	33.12
6/27/2007 0:12		12.88	20.14	20.33	27.57
6/27/2007 0:12		12.88	20.23	20.42	31.06
6/27/2007 0:12		12.88	20.23	20.42	28.46
6/27/2007 0:13		12.88	20.33	20.42	27.67
6/27/2007 0:13		12.88	20.42	20.42	28.66
6/27/2007 0:13		12.88	20.33	20.42	31.06
6/27/2007 0:13		12.88	20.33	20.42	26.78
6/27/2007 0:14		12.88	20.42	20.42	24.26
6/27/2007 0:14		12.88	20.42	20.42	24.06
6/27/2007 0:14		12.88	20.52	20.42	24.06
6/27/2007 0:14		12.88	20.42	20.42	24.35
6/27/2007 0:15		12.88	20.42	20.33	25.13
6/27/2007 0:15		12.88	20.42	20.42	25.13
6/27/2007 0:15		12.88	20.52	20.42	26.78
6/27/2007 0:15		12.88	20.52	20.42	26
6/27/2007 0:16		12.98	20.42	20.42	25.32
6/27/2007 0:16		12.98	20.33	20.42	26.59
6/27/2007 0:16		12.98	20.33	20.42	26.1
6/27/2007 0:16		12.98	20.42	20.42	26
6/27/2007 0:17		12.98	20.42	20.42	25.71
6/27/2007 0:17		12.98	20.52	20.42	26.78
6/27/2007 0:17		12.98	20.42	20.52	26.39
6/27/2007 0:17		12.98	20.52	20.52	25.32
6/27/2007 0:18		12.98	20.62	20.52	24.35
6/27/2007 0:18		12.98	20.52	20.52	23.68
6/27/2007 0:18		12.98	20.62	20.52	22.91
6/27/2007 0:18		12.98	20.71	20.62	22.24
6/27/2007 0:19		12.98	20.81	20.62	21.57
6/27/2007 0:19		12.98	20.81	20.62	21.09
6/27/2007 0:19		12.98	20.71	20.62	20.62
6/27/2007 0:19		13.08	20.71	20.62	20.33
6/27/2007 0:20		13.08	20.71	20.62	20.04
6/27/2007 0:20		13.08	20.81	20.62	19.76
6/27/2007 0:20		13.08	20.81	20.62	19.09
6/27/2007 0:20		13.08	20.71	20.62	18.43
6/27/2007 0:21		13.08	20.62	20.62	18.43
6/27/2007 0:21		13.08	20.71	20.52	18.52
6/27/2007 0:21		13.08	20.71	20.52	18.43
6/27/2007 0:21		13.08	20.71	20.62	18.33
6/27/2007 0:22		13.08	20.62	20.52	18.05
6/27/2007 0:22		13.08	20.42	20.52	18.24
6/27/2007 0:22		13.08	20.42	20.52	17.86
6/27/2007 0:22		13.08	20.42	20.52	17.57
6/27/2007 0:23		13.08	20.42	20.52	17.38
6/27/2007 0:23		13.08	20.42	20.52	17.48
6/27/2007 0:23		13.08	20.33	20.52	17.48
6/27/2007 0:23		13.08	20.33	20.52	17.19
6/28/2007 0:00		13.17	20.23	20.52	17.19
6/28/2007 0:00		13.17	20.14	20.42	17.09
6/28/2007 0:00		13.17	20.14	20.42	17.09
6/28/2007 0:00		13.17	20.14	20.52	16.71
6/28/2007 0:01		13.17	20.14	20.62	16.24
6/28/2007 0:01		13.17	20.23	20.62	15.57
6/28/2007 0:01		13.17	20.23	20.62	15.47
6/28/2007 0:01		13.17	20.23	20.62	15.66
6/28/2007 0:02		13.17	20.14	20.52	15.57
6/28/2007 0:02		13.17	20.14	20.52	15.47
6/28/2007 0:02		13.17	20.14	20.52	15.47
6/28/2007 0:02		13.17	20.04	20.42	15.57
6/28/2007 0:03		13.17	20.04	20.42	15.38
6/28/2007 0:03		13.17	19.95	20.42	15.38
6/28/2007 0:03		13.27	19.85	20.33	15.19
6/28/2007 0:03		13.27	19.85	20.33	15
6/28/2007 0:04		13.27	19.95	20.33	14.61
6/28/2007 0:04		13.27	19.95	20.33	13.65
6/28/2007 0:04		13.27	19.95	20.33	13.17
6/28/2007 0:04		13.27	19.95	20.33	12.5

6/28/2007 0:05		13.27	19.95	20.33	11.92
6/28/2007 0:05		13.27	20.04	20.33	11.92
6/28/2007 0:05		13.27	20.04	20.33	11.92
6/28/2007 0:05		13.27	20.04	20.33	12.21
6/28/2007 0:06		13.27	20.04	20.33	13.17
6/28/2007 0:06		13.27	20.04	20.33	14.42
6/28/2007 0:06		13.37	19.95	20.33	15.38
6/28/2007 0:06		13.37	19.95	20.52	15.95
6/28/2007 0:07		13.37	19.95	20.52	16.43
6/28/2007 0:07		13.37	19.95	20.52	17.57
6/28/2007 0:07		13.37	19.95	20.52	17.38
6/28/2007 0:07		13.37	19.95	20.52	18.24
6/28/2007 0:08		13.37	20.04	20.42	23.1
6/28/2007 0:08		13.37	20.04	20.42	28.16
6/28/2007 0:08		13.37	20.14	20.42	28.36
6/28/2007 0:08		13.37	20.14	20.42	28.36
6/28/2007 0:09		13.37	20.14	20.42	22.53
6/28/2007 0:09		13.37	20.23	20.42	22.05
6/28/2007 0:09		13.37	20.23	20.33	24.06
6/28/2007 0:09		13.37	20.33	20.33	24.64
6/28/2007 0:10		13.46	20.42	20.33	25.03
6/28/2007 0:10		13.46	20.33	20.33	31.37
6/28/2007 0:10		13.46	20.42	20.33	31.06
6/28/2007 0:10		13.46	20.42	20.33	26.2
6/28/2007 0:11		13.46	20.52	20.33	25.81
6/28/2007 0:11		13.46	20.62	20.33	29.95
6/28/2007 0:11		13.46	20.52	20.33	32.5
6/28/2007 0:11		13.46	20.52	20.33	34.59
6/28/2007 0:12		13.46	20.62	20.33	34.06
6/28/2007 0:12		13.46	20.62	20.42	33.85
6/28/2007 0:12		13.46	20.71	20.42	35.97
6/28/2007 0:12		13.46	20.81	20.52	34.59
6/28/2007 0:13		13.46	20.9	20.52	35.86
6/28/2007 0:13		13.56	20.9	20.52	35.44
6/28/2007 0:13		13.56	20.81	20.52	37.27
6/28/2007 0:13		13.56	20.9	20.52	36.95
6/28/2007 0:14		13.56	21	20.52	31.06
6/28/2007 0:14		13.56	21.19	20.52	27.96
6/28/2007 0:14		13.56	20.9	20.52	26.49
6/28/2007 0:14		13.56	21	20.52	25.32
6/28/2007 0:15		13.56	21.09	20.52	25.13
6/28/2007 0:15		13.56	21	20.42	24.55
6/28/2007 0:15		13.56	20.81	20.42	25.42
6/28/2007 0:15		13.56	20.81	20.42	26.39
6/28/2007 0:16		13.65	20.81	20.33	26.68
6/28/2007 0:16		13.65	20.71	20.33	27.47
6/28/2007 0:16		13.65	20.52	20.33	27.76
6/28/2007 0:16		13.65	20.52	20.33	27.96
6/28/2007 0:17		13.65	20.52	20.42	27.86
6/28/2007 0:17		13.65	20.62	20.42	27.57
6/28/2007 0:17		13.65	20.62	20.42	27.96
6/28/2007 0:17		13.65	20.52	20.42	27.96
6/28/2007 0:18		13.65	20.52	20.42	27.86
6/28/2007 0:18		13.65	20.52	20.52	26.78
6/28/2007 0:18		13.65	20.62	20.52	26
6/28/2007 0:18		13.75	20.71	20.62	24.93
6/28/2007 0:19		13.75	20.71	20.62	24.16
6/28/2007 0:19		13.75	20.81	20.62	23.48
6/28/2007 0:19		13.75	20.71	20.62	22.91
6/28/2007 0:19		13.75	20.71	20.52	22.81
6/28/2007 0:20		13.75	20.81	20.52	21.86
6/28/2007 0:20		13.75	20.81	20.52	20.62
6/28/2007 0:20		13.75	20.9	20.52	19.85
6/28/2007 0:20		13.75	20.71	20.52	19.38
6/28/2007 0:21		13.85	20.71	20.52	18.33
6/28/2007 0:21		13.75	20.71	20.52	18.33
6/28/2007 0:21		13.85	20.71	20.52	18.81
6/28/2007 0:21		13.85	20.71	20.52	18.05
6/28/2007 0:22		13.85	20.62	20.52	17.38
6/28/2007 0:22		13.85	20.62	20.62	16.33
6/28/2007 0:22		13.85	20.62	20.52	16.05
6/28/2007 0:22		13.85	20.62	20.52	15.76
6/28/2007 0:23		13.85	20.62	20.52	15.76
6/28/2007 0:23		13.85	20.52	20.52	14.9
6/28/2007 0:23		13.85	20.52	20.52	14.9
6/28/2007 0:23		13.85	20.52	20.52	15.47
6/29/2007 0:00		13.85	20.42	20.52	15.86
6/29/2007 0:00		13.94	20.33	20.52	16.24
6/29/2007 0:00		13.94	20.33	20.52	16.14
6/29/2007 0:00		13.94	20.23	20.52	16.05
6/29/2007 0:01		13.94	20.23	20.52	15.66
6/29/2007 0:01		13.94	20.14	20.52	14.61
6/29/2007 0:01		13.94	20.04	20.42	14.33
6/29/2007 0:01		13.94	19.95	20.42	13.85
6/29/2007 0:02		13.94	19.85	20.42	13.85
6/29/2007 0:02		13.94	19.76	20.42	14.33
6/29/2007 0:02		14.04	19.66	20.33	14.13
6/29/2007 0:02		14.04	19.66	20.33	13.85
6/29/2007 0:03		14.04	19.76	20.33	13.37

6/29/2007 0:03		14.04	19.66	20.33	11.82
6/29/2007 0:03		14.04	19.57	20.23	11.63
6/29/2007 0:03		14.04	19.47	20.23	11.92
6/29/2007 0:04		14.04	19.57	20.14	11.33
6/29/2007 0:04		14.04	19.57	20.14	11.04
6/29/2007 0:04		14.04	19.38	20.14	11.14
6/29/2007 0:04		14.04	19.28	20.14	12.01
6/29/2007 0:05		14.13	19.19	20.04	13.08
6/29/2007 0:05		14.13	19.09	20.04	12.01
6/29/2007 0:05		14.13	19.19	20.04	12.4
6/29/2007 0:05		14.13	19	20.04	11.53
6/29/2007 0:06		14.13	18.81	19.95	12.21
6/29/2007 0:06		14.13	19	19.85	14.71
6/29/2007 0:06		14.13	18.9	19.76	18.05
6/29/2007 0:06		14.13	18.71	19.66	19.85
6/29/2007 0:07		14.13	18.52	19.66	23.29
6/29/2007 0:07		14.13	18.33	19.57	24.45
6/29/2007 0:07		14.23	18.14	19.57	25.13
6/29/2007 0:07		14.23	18.43	19.47	27.67
6/29/2007 0:08		14.23	18.71	19.95	29.65
6/29/2007 0:08		14.23	18.62	19.95	31.37
6/29/2007 0:08		14.23	18.62	20.04	32.09
6/29/2007 0:08		14.23	19	20.04	31.68
6/29/2007 0:09		14.23	19	19.95	32.6
6/29/2007 0:09		14.23	19	19.95	33.74
6/29/2007 0:09		14.23	19.09	19.95	32.5
6/29/2007 0:09		14.23	19.09	19.95	27.27
6/29/2007 0:10		14.23	19.38	19.95	30.15
6/29/2007 0:10		14.33	19.47	19.95	33.54
6/29/2007 0:10		14.33	19.47	19.95	33.43
6/29/2007 0:10		14.33	19.57	19.95	33.33
6/29/2007 0:11		14.33	19.66	19.95	33.85
6/29/2007 0:11		14.33	19.76	19.95	33.95
6/29/2007 0:11		14.33	19.85	19.95	34.9
6/29/2007 0:11			20.04	19.95	32.91
6/29/2007 0:12					
6/29/2007 0:12		14.04			35.54
6/29/2007 0:12		13.94			35.44
6/29/2007 0:12		14.04			36.08
6/29/2007 0:13		14.04	23.68	22.14	36.95
6/29/2007 0:13		14.04	22.53	22.53	37.6
6/29/2007 0:13		14.04	22.81	21.66	38.05
6/29/2007 0:13		14.04	22.81	21.19	40.19
6/29/2007 0:14		14.04	22.72	21	41.81
6/29/2007 0:14		14.04	22.43	20.9	40.99
6/29/2007 0:14		14.04	21.66	20.81	36.84
6/29/2007 0:14		14.04	21.19	20.81	32.39
6/29/2007 0:15		14.04	21	20.71	30.15
6/29/2007 0:15		14.04	20.71	20.71	29.85
6/29/2007 0:15		14.13	20.71	20.71	29.55
6/29/2007 0:15		14.13	20.62	20.71	29.65
6/29/2007 0:16		14.13	20.52	20.71	30.05
6/29/2007 0:16		14.13	20.52	20.71	34.48
6/29/2007 0:16		14.13	20.52	20.62	35.22
6/29/2007 0:16		14.13	20.52	20.62	31.27
6/29/2007 0:17		14.13	20.52	20.62	31.57
6/29/2007 0:17		14.13	20.52	20.62	32.5
6/29/2007 0:17		14.23	20.52	20.62	41.58
6/29/2007 0:17		14.23	20.62	20.62	29.25
6/29/2007 0:18		14.23	20.62	20.62	28.26
6/29/2007 0:18		14.23	20.62	20.62	28.06
6/29/2007 0:18		14.23	20.42	21.09	27.96
6/29/2007 0:18		14.23	20.42	21.09	28.06
6/29/2007 0:19		14.23	20.62	21.19	27.37
6/29/2007 0:19		14.33	20.62	21.19	25.9
6/29/2007 0:19		14.33	20.62	21.28	25.61
6/29/2007 0:19		14.33	20.62	20.81	25.51
6/29/2007 0:20		14.33	20.71	20.71	23.97
6/29/2007 0:20		14.33	20.62	20.71	23
6/29/2007 0:20		14.42	20.71	20.71	22.33
6/29/2007 0:20		14.42	20.62	20.62	21.47
6/29/2007 0:21		14.42	20.62	20.62	20.42
6/29/2007 0:21		14.42	20.62	20.62	19.76
6/29/2007 0:21		14.42	20.62	20.62	19.09
6/29/2007 0:21		14.42	20.62	20.62	18.81
6/29/2007 0:22		14.52	20.71	20.62	18.33
6/29/2007 0:22		14.52	20.62	20.62	17.57
6/29/2007 0:22		14.52	20.62	20.62	17.09
6/29/2007 0:22		14.52	20.62	20.52	16.43
6/29/2007 0:23		14.52	20.62	20.52	16.14
6/29/2007 0:23		14.61	20.62	20.52	16.05
6/29/2007 0:23		14.61	20.52	20.52	15.86
6/29/2007 0:23		14.61	20.52	20.52	16.43
6/30/2007 0:00		14.61	20.52	20.52	16.05
6/30/2007 0:00		14.61	20.52	20.52	16.24
6/30/2007 0:00		14.61	20.42	20.71	15.38
6/30/2007 0:00		14.61	20.42	20.71	15
6/30/2007 0:01		14.71	20.42	20.71	15.66
6/30/2007 0:01		14.71	20.42	20.81	15.66

6/30/2007 0:01		14.71	20.33	20.81	15.47
6/30/2007 0:01		14.71	20.33	20.71	15.47
6/30/2007 0:02		14.71	20.33	20.62	14.42
6/30/2007 0:02		14.71	20.33	20.62	13.94
6/30/2007 0:02		14.8	20.23	20.62	13.75
6/30/2007 0:02		14.8	20.23	20.52	13.85
6/30/2007 0:03		14.8	20.23	20.52	13.37
6/30/2007 0:03		14.8	20.14	20.52	13.75
6/30/2007 0:03		14.8	20.14	20.42	12.79
6/30/2007 0:03		14.8	20.14	20.42	12.69
6/30/2007 0:04		14.9	20.14	20.42	12.5
6/30/2007 0:04		14.9	20.14	20.33	12.01
6/30/2007 0:04		14.9	20.04	20.33	11.33
6/30/2007 0:04		14.9	20.04	20.33	11.43
6/30/2007 0:05		14.9	20.04	20.33	11.14
6/30/2007 0:05		14.9	20.04	20.33	11.14
6/30/2007 0:05		14.9	19.95	20.23	11.53
6/30/2007 0:05		15	19.95	20.23	11.24
6/30/2007 0:06		15	19.95	20.23	10.85
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6/30/2007 0:06		15	19.85	20.14	15.47
6/30/2007 0:06		15	19.95	20.23	19.19
6/30/2007 0:07		15	19.85	20.23	22.53
6/30/2007 0:07		15	19.85	20.23	23.97
6/30/2007 0:07		15	19.76	20.14	23.77
6/30/2007 0:07		15	19.76	20.14	27.47
6/30/2007 0:08		15.09	19.85	20.14	29.75
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6/30/2007 0:08		15.09	19.85	20.04	32.81
6/30/2007 0:08		15.09	19.57	20.04	33.12
6/30/2007 0:09		15.09	19.66	19.85	33.22
6/30/2007 0:09		15.09	19.76	19.95	33.54
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6/30/2007 0:13		15.38	20.33	20.14	42.4
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6/30/2007 0:15		15.57	20.62	20.23	43.36
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6/30/2007 0:16		15.66	20.81	20.33	44.33
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6/30/2007 0:23		16.33	21.28	20.9	23.1
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7/1/2007 0:14		17	21.28	20.9	42.52
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7/1/2007 0:22		17.67	22.24	21.95	22.53
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7/2/2007 0:07		17.48	21.57	21.86	18.81
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7/2/2007 0:11		17.76	21.57	22.05	41.11
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7/2/2007 0:11		17.86	21.66	21.95	41.58
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7/2/2007 0:19		18.33	22.81	23.1	37.06
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7/2/2007 0:20		18.33	22.81	22.91	31.17

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7/2/2007 0:22		18.33	22.62	22.62	21.38
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7/3/2007 0:08		18.14	21.38	22.33	38.83
7/3/2007 0:09		18.14	21.09	22.33	39.16
7/3/2007 0:09		18.24	21.19	22.33	39.62
7/3/2007 0:09		18.24	21.28	22.33	39.84
7/3/2007 0:09		18.24	21.19	22.33	39.16
7/3/2007 0:10		18.24	21.19	22.33	35.44
7/3/2007 0:10		18.24	21.28	22.33	37.71
7/3/2007 0:10		18.33	21.38	22.24	39.96
7/3/2007 0:10		18.33	21.47	22.24	41.58
7/3/2007 0:11		18.33	21.47	22.24	42.88
7/3/2007 0:11		18.43	21.47	22.24	44.33
7/3/2007 0:11		18.43	21.47	22.24	45.2
7/3/2007 0:11		18.43	21.57	22.14	43.72
7/3/2007 0:12		17.86	21.66	22.24	45.58
7/3/2007 0:12		17.28	22.14	22.53	39.16
7/3/2007 0:12		18.14	22.91	23.87	37.82
7/3/2007 0:12		18.24	22.33	23.87	37.27
7/3/2007 0:13		18.43	22.53	23.58	34.59
7/3/2007 0:13		18.43	22.72	23.2	34.8
7/3/2007 0:13		18.52	22.91	23.1	33.22
7/3/2007 0:13		18.52	23	23	33.54
7/3/2007 0:14		18.62	23.2	23	39.28
7/3/2007 0:14		18.62	23.39	23	40.53
7/3/2007 0:14		18.62	23.2	23	40.76
7/3/2007 0:14		18.62	23	23	39.16
7/3/2007 0:15		18.71	23.29	23	36.3
7/3/2007 0:15		18.71	22.81	23	37.6
7/3/2007 0:15		18.71	22.53	23.1	29.85
7/3/2007 0:15		18.71	22.62	23.1	30.66
7/3/2007 0:16		18.71	22.72	23.1	33.95
7/3/2007 0:16		18.71	23.1	23.1	30.86
7/3/2007 0:16		18.71	22.81	23.1	27.67
7/3/2007 0:16		18.71	22.72	23.2	26
7/3/2007 0:17		18.71	22.72	23.2	25.22
7/3/2007 0:17		18.71	22.81	23.29	24.45
7/3/2007 0:17		18.71	22.91	23.39	21.95
7/3/2007 0:17		18.71	22.91	23.48	20.04
7/3/2007 0:18		18.71	22.72	23.58	19.28
7/3/2007 0:18		18.71	22.72	23.58	19.57

7/3/2007 0:18		18.71	22.72	23.68	20.62
7/3/2007 0:18		18.71	22.72	23.87	20.23
7/3/2007 0:19		18.71	22.62	23.58	19.66
7/3/2007 0:19		18.71	22.53	23.48	20.71
7/3/2007 0:19		18.71	22.53	23.39	21.47
7/3/2007 0:19		18.71	22.43	23.29	21.76
7/3/2007 0:20		18.62	22.43	23.29	22.05
7/3/2007 0:20		18.62	22.43	23.29	21.19
7/3/2007 0:20		18.62	22.33	23.2	20.52
7/3/2007 0:20		18.62	22.33	23.2	19.66
7/3/2007 0:21		18.62	22.33	23.2	19.57
7/3/2007 0:21		18.62	22.33	23.2	19.28
7/3/2007 0:21		18.62	22.24	23.1	18.62
7/3/2007 0:21		18.52	22.24	23.1	17.86
7/3/2007 0:22		18.52	22.24	23.1	17.48
7/3/2007 0:22		18.52	22.14	23.1	18.52
7/3/2007 0:22		18.52	22.14	23.1	19.76
7/3/2007 0:22		18.52	22.05	23	19.57
7/3/2007 0:23		18.52	22.05	23	18.52
7/3/2007 0:23		18.52	22.05	23	17.38
7/3/2007 0:23		18.43	21.95	23	16.9
7/3/2007 0:23		18.43	21.86	23	17.67
7/4/2007 0:00		18.43	21.76	23	16.62
7/4/2007 0:00		18.43	21.86	23	14.61
7/4/2007 0:00		18.43	21.76	23	14.52
7/4/2007 0:00		18.43	21.76	23	16.24
7/4/2007 0:01		18.43	21.47	22.91	16.33
7/4/2007 0:01		18.43	21.47	22.91	16.9
7/4/2007 0:01		18.43	21.28	22.91	16.05
7/4/2007 0:01		18.43	20.9	22.91	15.76
7/4/2007 0:02		18.43	21.09	22.91	16.9
7/4/2007 0:02		18.43	20.81	22.81	16.9
7/4/2007 0:02		18.33	21	22.81	16.71
7/4/2007 0:02		18.33	20.81	22.72	16.9
7/4/2007 0:03		18.33	20.52	22.72	16.9
7/4/2007 0:03		18.33	20.23	22.62	16.81
7/4/2007 0:03		18.33	20.62	22.62	16.43
7/4/2007 0:03		18.33	20.33	22.53	16.33
7/4/2007 0:04		18.33	20.04	22.53	16.52
7/4/2007 0:04		18.33	20.52	22.43	15.95
7/4/2007 0:04		18.33	20.33	22.43	15.66
7/4/2007 0:04		18.33	20.04	22.33	16.14
7/4/2007 0:05		18.33	20.33	22.24	16.24
7/4/2007 0:05		18.33	19.95	22.24	15.86
7/4/2007 0:05		18.24	19.76	22.14	15.09
7/4/2007 0:05		18.24	19.57	22.14	14.8
7/4/2007 0:06		18.24	19.38	22.05	14.61
7/4/2007 0:06		18.24	19.28	22.05	14.61
7/4/2007 0:06		18.24	19.76	21.95	17.09
7/4/2007 0:06		18.24	19.47	21.95	19.38
7/4/2007 0:07		18.24	19.28	21.86	22.33
7/4/2007 0:07		18.24	19.19	21.86	25.42
7/4/2007 0:07		18.24	19.19	21.76	28.16
7/4/2007 0:07		18.24	19.19	21.76	28.66
7/4/2007 0:08		18.24	19.09	21.66	30.05
7/4/2007 0:08		18.24	19	21.66	28.26
7/4/2007 0:08		18.24	19	21.57	30.76
7/4/2007 0:08		18.24	19	21.47	33.54
7/4/2007 0:09		18.24	19	21.47	33.95
7/4/2007 0:09		18.24	19	21.38	34.06
7/4/2007 0:09		18.33	19.95	21.38	34.69
7/4/2007 0:09		18.33	19.76	21.28	34.59
7/4/2007 0:10		18.33	19.76	21.28	30.15
7/4/2007 0:10		18.33	19.76	21.19	32.5
7/4/2007 0:10		18.43	19.76	21.19	34.59
7/4/2007 0:10		18.43	19.85	21.19	34.59
7/4/2007 0:11		18.43	19.95	21.19	34.06
7/4/2007 0:11		18.43	20.62	21.19	36.19
7/4/2007 0:11		18.43	20.52	21.19	36.62
7/4/2007 0:11		18.52	20.62	21.19	37.06
7/4/2007 0:12		18.52	20.71	21.19	38.49
7/4/2007 0:12		18.52	20.81	21.28	38.38
7/4/2007 0:12		18.52	20.9	21.28	33.54
7/4/2007 0:12		18.62	21	21.38	37.6
7/4/2007 0:13		18.62	21.19	21.38	39.39
7/4/2007 0:13		18.62	21.28	21.38	36.95
7/4/2007 0:13		18.62	21.38	21.47	38.94
7/4/2007 0:13		18.71	21.57	21.57	33.95
7/4/2007 0:14		18.71	21.66	21.57	30.66
7/4/2007 0:14		18.71	21.76	21.66	39.84
7/4/2007 0:14		18.71	21.95	21.66	31.57
7/4/2007 0:14		18.71	22.05	21.76	39.39
7/4/2007 0:15		18.81	22.14	21.86	39.16
7/4/2007 0:15		18.81	22.33	21.95	38.49
7/4/2007 0:15		18.81	22.43	21.95	34.06
7/4/2007 0:15		18.81	22.43	22.05	33.01
7/4/2007 0:16		18.81	22.62	22.05	30.76
7/4/2007 0:16		18.81	22.72	22.14	29.55
7/4/2007 0:16		18.81	22.72	22.14	29.95

7/4/2007 0:16		18.81	22.81	22.24	30.26
7/4/2007 0:17		18.9	22.91	22.33	31.17
7/4/2007 0:17		18.9	23	22.33	30.76
7/4/2007 0:17		18.9	23.1	22.43	30.05
7/4/2007 0:17		18.9	23.2	22.43	29.55
7/4/2007 0:18		18.9	23	22.53	30.56
7/4/2007 0:18		18.9	23.1	22.53	31.17
7/4/2007 0:18		18.9	23.1	22.53	31.06
7/4/2007 0:18		18.9	23.1	22.62	33.95
7/4/2007 0:19		19	23	22.62	38.27
7/4/2007 0:19		19	23.1	22.62	39.16
7/4/2007 0:19		19	23.1	22.62	33.33
7/4/2007 0:19		19	23.1	22.72	36.08
7/4/2007 0:20		19	23.2	22.72	31.98
7/4/2007 0:20		19	23.2	22.72	29.25
7/4/2007 0:20		19	23.29	22.72	25.32
7/4/2007 0:20		19	23.39	22.72	23.29
7/4/2007 0:21		19	23.39	22.81	22.05
7/4/2007 0:21		19	23.48	22.81	21.95
7/4/2007 0:21		19	23.48	22.81	22.43
7/4/2007 0:21		19	23.48	22.81	20.71
7/4/2007 0:22		19	23.39	22.81	19
7/4/2007 0:22		19	23.29	22.81	18.24
7/4/2007 0:22		19	23.2	22.81	18.62
7/4/2007 0:22		19	23	22.81	18.81
7/4/2007 0:23		19	22.81	22.81	18.43
7/4/2007 0:23		19	22.62	22.72	16.81
7/4/2007 0:23		18.9	22.53	22.72	16.52
7/4/2007 0:23		18.9	22.53	22.72	16.05
7/5/2007 0:00		18.9	22.43	22.72	16.43
7/5/2007 0:00		18.9	22.24	22.72	16.24
7/5/2007 0:00		18.9	22.14	22.72	17.28
7/5/2007 0:00		18.9	22.05	22.72	17.28
7/5/2007 0:01		18.9	21.86	22.72	15.95
7/5/2007 0:01		18.9	21.76	22.72	15
7/5/2007 0:01		18.9	21.76	22.72	15.76
7/5/2007 0:01		18.9	21.66	22.62	14.9
7/5/2007 0:02		18.81	21.95	22.62	15.19
7/5/2007 0:02		18.81	21.86	22.62	14.71
7/5/2007 0:02		18.81	21.76	22.62	14.71
7/5/2007 0:02		18.81	21.57	22.62	15.28
7/5/2007 0:03		18.81	21.38	22.62	15.28
7/5/2007 0:03		18.81	21.28	22.62	15.66
7/5/2007 0:03		18.81	21.09	22.62	15.47
7/5/2007 0:03		18.81	21	22.53	15.19
7/5/2007 0:04		18.81	20.9	22.53	14.33
7/5/2007 0:04		18.81	20.81	22.53	13.56
7/5/2007 0:04		18.81	20.71	22.53	13.17
7/5/2007 0:04		18.71	20.71	22.43	14.42
7/5/2007 0:05		18.71	20.62	22.43	14.61
7/5/2007 0:05		18.71	20.42	22.43	14.61
7/5/2007 0:05		18.71	20.23	22.43	13.75
7/5/2007 0:05		18.71	20.14	22.33	13.65
7/5/2007 0:06		18.71	19.95	22.33	13.65
7/5/2007 0:06		18.71	19.85	22.33	14.71
7/5/2007 0:06		18.71	19.76	22.24	16.33
7/5/2007 0:06		18.71	19.66	22.24	19.09
7/5/2007 0:07		18.71	19.57	22.24	22.43
7/5/2007 0:07		18.71	19.47	22.14	27.76
7/5/2007 0:07		18.71	19.47	22.14	28.46
7/5/2007 0:07		18.71	19.38	22.14	32.81
7/5/2007 0:08		18.71	19.38	22.05	35.54
7/5/2007 0:08		18.71	20.23	22.05	37.27
7/5/2007 0:08		18.71	20.04	21.95	38.6
7/5/2007 0:08		18.81	19.95	21.95	38.71
7/5/2007 0:09		18.81	19.95	21.95	39.05
7/5/2007 0:09		18.81	19.85	21.95	39.84
7/5/2007 0:09		18.81	19.85	21.86	38.6
7/5/2007 0:09		18.81	19.85	21.86	37.71
7/5/2007 0:10		18.9	19.95	21.86	31.98
7/5/2007 0:10		18.9	19.95	21.86	33.85
7/5/2007 0:10		18.9	20.04	21.86	36.4
7/5/2007 0:10		18.9	20.14	21.86	35.54
7/5/2007 0:11		19	20.33	21.86	36.4
7/5/2007 0:11		19	20.42	21.86	36.62
7/5/2007 0:11		19	20.62	21.95	36.84
7/5/2007 0:11		19.09	20.81	21.95	37.6
7/5/2007 0:12		19.09	21	21.95	37.49
7/5/2007 0:12		19.09	21.09	21.95	37.49
7/5/2007 0:12		19.09	21.28	22.05	38.16
7/5/2007 0:12		19.19	21.47	22.05	38.38
7/5/2007 0:13		19.19	21.66	22.14	38.38
7/5/2007 0:13		19.19	21.76	22.14	39.96
7/5/2007 0:13		19.28	21.95	22.24	40.19
7/5/2007 0:13		19.28	22.14	22.24	41.81
7/5/2007 0:14		19.28	22.24	22.33	40.3
7/5/2007 0:14		19.28	22.33	22.33	35.54
7/5/2007 0:14		19.38	22.43	22.43	40.53
7/5/2007 0:14		19.38	22.53	22.53	40.76

7/5/2007 0:15		19.38	22.72	22.53	40.53
7/5/2007 0:15		19.38	22.81	22.62	33.74
7/5/2007 0:15		19.38	22.81	22.62	29.75
7/5/2007 0:15		19.47	22.62	22.72	30.66
7/5/2007 0:16		19.47	22.43	22.72	33.43
7/5/2007 0:16		19.47	22.14	22.81	34.06
7/5/2007 0:16		19.47	21.86	22.81	34.06
7/5/2007 0:16		19.47	21.66	22.81	33.64
7/5/2007 0:17		19.47	21.47	22.81	33.43
7/5/2007 0:17		19.47	21.38	22.81	36.51
7/5/2007 0:17		19.47	21.28	22.81	40.19
7/5/2007 0:17		19.47	21.19	22.81	41.58
7/5/2007 0:18		19.47	22.05	22.81	39.96
7/5/2007 0:18		19.47	21.95	22.72	33.64
7/5/2007 0:18		19.47	21.86	22.62	31.57
7/5/2007 0:18		19.57	21.76	22.62	29.95
7/5/2007 0:19		19.57	21.57	22.53	28.95
7/5/2007 0:19		19.57	21.47	22.53	28.56
7/5/2007 0:19		19.57	21.38	22.43	31.17
7/5/2007 0:19		19.57	21.38	22.43	31.17
7/5/2007 0:20		19.57	21.38	22.43	27.17
7/5/2007 0:20		19.57	21.38	22.43	24.74
7/5/2007 0:20		19.57	21.47	22.43	23.1
7/5/2007 0:20		19.57	21.57	22.43	22.24
7/5/2007 0:21		19.57	21.66	22.43	21.95
7/5/2007 0:21		19.57	21.66	22.43	21.86
7/5/2007 0:21		19.57	21.76	22.43	22.14
7/5/2007 0:21		19.57	21.86	22.43	21.76
7/5/2007 0:22		19.57	21.86	22.43	20.42
7/5/2007 0:22		19.47	21.95	22.53	19.09
7/5/2007 0:22		19.47	21.95	22.53	18.33
7/5/2007 0:22		19.47	22.05	22.53	18.33
7/5/2007 0:23		19.47	22.05	22.53	17.48
7/5/2007 0:23		19.47	22.05	22.53	17.09
7/5/2007 0:23		19.47	22.14	22.62	18.71
7/5/2007 0:23		19.47	22.14	22.62	17.76
7/6/2007 0:00		19.47	22.43	22.62	18.05
7/6/2007 0:00		19.47	22.53	22.72	17
7/6/2007 0:00		19.47	22.43	22.72	16.14
7/6/2007 0:00		19.47	22.33	22.72	16.43
7/6/2007 0:01		19.47	22.33	22.72	16.14
7/6/2007 0:01		19.47	22.24	22.72	15.47
7/6/2007 0:01		19.47	22.14	22.81	15.66
7/6/2007 0:01		19.47	22.05	22.81	17.57
7/6/2007 0:02		19.38	21.95	22.81	16.71
7/6/2007 0:02		19.38	21.86	22.81	16.05
7/6/2007 0:02		19.38	21.86	22.81	15.28
7/6/2007 0:02		19.38	21.76	22.81	14.52
7/6/2007 0:03		19.38	21.76	22.81	14.71
7/6/2007 0:03		19.38	21.66	22.81	14.42
7/6/2007 0:03		19.38	21.57	22.81	14.33
7/6/2007 0:03		19.38	21.57	22.81	14.8
7/6/2007 0:04		19.28	21.47	22.81	14.33
7/6/2007 0:04		19.28	21.38	22.81	14.61
7/6/2007 0:04		19.28	21.28	22.81	14.9
7/6/2007 0:04		19.28	21.19	22.81	14.52
7/6/2007 0:05		19.28	21.09	22.72	14.71
7/6/2007 0:05		19.28	21	22.72	14.71
7/6/2007 0:05		19.28	20.9	22.72	14.52
7/6/2007 0:05		19.28	20.81	22.72	14.8
7/6/2007 0:06		19.19	20.71	22.62	14.71
7/6/2007 0:06		19.28	20.62	22.62	15
7/6/2007 0:06		19.28	20.52	22.62	16.71
7/6/2007 0:06		19.28	20.42	22.62	20.33
7/6/2007 0:07		19.28	20.33	22.62	22.91
7/6/2007 0:07		19.28	20.33	22.53	26.98
7/6/2007 0:07		19.28	20.23	22.53	28.06
7/6/2007 0:07		19.28	20.23	22.53	31.17
7/6/2007 0:08		19.28	20.23	22.53	36.51
7/6/2007 0:08		19.28	20.14	22.53	37.94
7/6/2007 0:08		19.28	20.14	22.43	36.95
7/6/2007 0:08		19.28	20.14	22.43	36.95
7/6/2007 0:09		19.38	20.14	22.43	37.6
7/6/2007 0:09		19.38	20.14	22.43	37.6
7/6/2007 0:09		19.38	20.23	22.33	37.94
7/6/2007 0:09		19.38	20.23	22.33	37.27
7/6/2007 0:10		19.38	20.23	22.33	32.19
7/6/2007 0:10		19.66	20.33	22.33	35.22
7/6/2007 0:10		19.66	20.33	22.24	38.38
7/6/2007 0:10		18.62	25.51	22.24	38.38
7/6/2007 0:11		18.33	26.29	22.72	38.49
7/6/2007 0:11		16.71	22.72	23.1	39.62
7/6/2007 0:11		16.05	23.48	24.55	40.65
7/6/2007 0:11		15.86	25.13	25.42	40.42
7/6/2007 0:12		15.66	25.42	25.32	39.05
7/6/2007 0:12		15.47	25.13	24.74	39.62
7/6/2007 0:12		15.38	24.55	24.06	39.39
7/6/2007 0:12		15.28	24.06	23.77	38.71
7/6/2007 0:13		15.09	23.87	23.68	40.65

7/6/2007 0:13		15.09	23.87	23.77	40.65
7/6/2007 0:13		15	23.77	23.77	40.07
7/6/2007 0:13		14.9	23.77	23.48	39.96
7/6/2007 0:14		14.8	23.58	23.39	39.5
7/6/2007 0:14		14.71	23.48	23.39	39.84
7/6/2007 0:14		14.61	23.48	23.29	40.3
7/6/2007 0:14		14.61	23.1	23.29	40.42
7/6/2007 0:15		14.52	23.1	23.2	40.76
7/6/2007 0:15		14.42	23.1	23.2	40.88
7/6/2007 0:15		14.42	23.1	23.29	41.46
7/6/2007 0:15		14.33	23.2	23.29	41.81
7/6/2007 0:16		14.33	23.29	23.39	41.81
7/6/2007 0:16		14.23	23.29	23.29	43.24
7/6/2007 0:16		14.23	23.29	23.29	43.12
7/6/2007 0:16		14.13	23.29	23.2	43.36
7/6/2007 0:17		14.13	23.29	23.1	43.6
7/6/2007 0:17		14.13	23.29	23	43.97
7/6/2007 0:17		14.04	23.29	22.91	44.95
7/6/2007 0:17		14.04	23.29	23	43.36
7/6/2007 0:18		13.94	23.29	23	42.52
7/6/2007 0:18		13.94	23.29	23	35.65
7/6/2007 0:18		13.85	23.29	23	40.07
7/6/2007 0:18		13.85	23.29	23	34.48
7/6/2007 0:19		13.85	23.29	23	33.22
7/6/2007 0:19		13.75	23.29	23.1	32.09
7/6/2007 0:19		13.75	23.29	23.1	30.05
7/6/2007 0:19		13.75	23.29	23.1	33.43
7/6/2007 0:20		13.65	23.29	23.1	30.05
7/6/2007 0:20		13.65	23.2	23	27.37
7/6/2007 0:20		13.65	23.2	22.91	25.42
7/6/2007 0:20		13.56	23.2	22.81	24.16
7/6/2007 0:21		13.46	23.2	22.81	23.39
7/6/2007 0:21		13.46	23.1	22.81	22.91
7/6/2007 0:21		13.46	23.1	22.72	22.33
7/6/2007 0:21		13.46	23.1	22.72	21.86
7/6/2007 0:22		13.37	23.1	22.72	21.57
7/6/2007 0:22		13.37	23	22.72	21.09
7/6/2007 0:22		13.27	23	22.62	20.33
7/6/2007 0:22		13.27	23	22.62	19.76
7/6/2007 0:23		13.27	23	22.62	19.19
7/6/2007 0:23		13.17	23	22.62	18.24
7/6/2007 0:23		13.17	23.1	22.72	17.38
7/6/2007 0:23		13.17	23.1	22.62	17.19
7/7/2007 0:00		13.08	23.1	22.62	16.9
7/7/2007 0:00		13.08	23.1	22.62	16.9
7/7/2007 0:00		13.08	23	22.62	17.28
7/7/2007 0:00		13.08	23.1	22.62	17.76
7/7/2007 0:01		12.98	23	22.53	17.67
7/7/2007 0:01		12.98	23	22.43	17
7/7/2007 0:01		12.98	22.91	22.24	16.71
7/7/2007 0:01		12.88	22.91	22.43	16.14
7/7/2007 0:02		12.88	22.91	22.53	15.57
7/7/2007 0:02		12.88	22.91	22.53	16.43
7/7/2007 0:02		12.88	22.91	22.53	15.76
7/7/2007 0:02		12.79	22.81	22.43	15.57
7/7/2007 0:03		12.79	22.81	22.43	14.23
7/7/2007 0:03		12.79	22.81	22.43	15.86
7/7/2007 0:03		12.79	22.72	22.33	15.09
7/7/2007 0:03		12.69	22.72	22.33	16.33
7/7/2007 0:04		12.69	22.72	22.33	15.76
7/7/2007 0:04		12.69	22.72	22.24	16.33
7/7/2007 0:04		12.69	22.62	22.14	17.86
7/7/2007 0:04		12.59	22.62	21.95	16.9
7/7/2007 0:05		12.59	22.62	21.76	15.57
7/7/2007 0:05		12.59	22.53	21.66	16.33
7/7/2007 0:05		12.59	22.53	21.86	16.9
7/7/2007 0:05		12.59	22.53	22.05	16.9
7/7/2007 0:06		12.59	22.43	22.14	15.76
7/7/2007 0:06		12.5	22.53	22.24	16.81
7/7/2007 0:06		12.5	22.53	22.24	18.62
7/7/2007 0:06		12.5	22.53	22.24	21.76
7/7/2007 0:07		12.5	22.53	22.24	25.13
7/7/2007 0:07		12.5	22.43	21.95	28.46
7/7/2007 0:07		12.5	22.43	21.66	29.45
7/7/2007 0:07		12.5	22.33	21.47	33.64
7/7/2007 0:08		12.5	22.24	21.38	34.9
7/7/2007 0:08		12.5	22.24	21.38	37.17
7/7/2007 0:08		12.5	22.33	21.95	37.6
7/7/2007 0:08		12.5	22.43	22.05	37.71
7/7/2007 0:09		12.5	22.24	21.86	39.84
7/7/2007 0:09		12.5	22.24	21.76	40.19
7/7/2007 0:09		12.5	22.33	22.24	40.3
7/7/2007 0:09		12.5	22.33	22.24	40.07
7/7/2007 0:10		12.5	22.43	22.43	34.37
7/7/2007 0:10		12.5	22.43	22.43	38.71
7/7/2007 0:10		12.5	22.53	22.43	40.19
7/7/2007 0:10		12.5	22.43	22.33	41.93
7/7/2007 0:11		12.5	22.53	22.33	41.81
7/7/2007 0:11		12.5	22.53	22.33	41.34

7/7/2007 0:11		12.5	22.62	22.43	41.58
7/7/2007 0:11		12.5	22.62	22.43	41.93
7/7/2007 0:12		12.5	22.62	22.53	42.4
7/7/2007 0:12		12.5	22.72	22.53	41.69
7/7/2007 0:12		12.5	22.72	22.53	41.81
7/7/2007 0:12		12.5	22.72	22.43	42.05
7/7/2007 0:13		12.5	22.81	22.43	42.64
7/7/2007 0:13		12.59	22.81	22.43	42.4
7/7/2007 0:13		12.59	22.91	22.43	41.46
7/7/2007 0:13		12.59	22.91	22.43	42.4
7/7/2007 0:14		12.59	23	22.72	42.88
7/7/2007 0:14		12.59	23	22.81	43.12
7/7/2007 0:14		12.59	23	22.81	35.54
7/7/2007 0:14		12.59	23.1	22.91	43
7/7/2007 0:15		12.59	23.1	22.81	39.62
7/7/2007 0:15		12.59	23.1	22.81	40.07
7/7/2007 0:15		12.59	23.1	22.91	39.96
7/7/2007 0:15		12.59	23.2	22.81	42.88
7/7/2007 0:16		12.59	23.2	22.81	35.22
7/7/2007 0:16		12.59	23.29	23.1	33.43
7/7/2007 0:16		12.59	23.29	22.81	32.5
7/7/2007 0:16		12.59	23.29	22.81	31.27
7/7/2007 0:17		12.59	23.29	22.72	30.66
7/7/2007 0:17		12.59	23.39	22.81	30.46
7/7/2007 0:17		12.59	23.39	22.81	30.46
7/7/2007 0:17		12.59	23.39	22.81	28.95
7/7/2007 0:18		12.59	23.39	22.72	27.57
7/7/2007 0:18		12.5	23.39	22.72	26.49
7/7/2007 0:18		12.5	23.29	22.81	26.88
7/7/2007 0:18		12.5	23.2	22.91	27.37
7/7/2007 0:19		12.5	23.1	23	25.42
7/7/2007 0:19		12.5	23	23	24.55
7/7/2007 0:19		12.5	22.91	23.1	25.13
7/7/2007 0:19		12.5	22.81	22.91	25.51
7/7/2007 0:20		12.5	22.81	22.62	22.72
7/7/2007 0:20		12.5	22.81	22.53	23.77
7/7/2007 0:20		12.5	22.81	22.53	23.29
7/7/2007 0:20		12.5	22.72	22.53	23.68
7/7/2007 0:21		12.5	22.72	22.53	24.16
7/7/2007 0:21		12.5	22.62	22.53	24.74
7/7/2007 0:21		12.5	22.33	22.53	22.81
7/7/2007 0:21		12.5	22.33	22.53	22.72
7/7/2007 0:22		12.5	22.43	22.43	22.53
7/7/2007 0:22		12.5	22.33	22.33	22.72
7/7/2007 0:22		12.5	22.43	22.33	23
7/7/2007 0:22		12.5	22.33	22.14	23.2
7/7/2007 0:23		12.5	22.24	22.05	23.87
7/7/2007 0:23		12.5	22.05	21.66	24.74
7/7/2007 0:23		12.5	21.86	21.28	23.29
7/7/2007 0:23		12.5	21.57	20.9	23.68
7/8/2007 0:00		12.5	21.38	20.42	24.26
7/8/2007 0:00		12.5	21.19	20.04	24.45
7/8/2007 0:00		12.5	21	19.76	24.55
7/8/2007 0:00		12.5	21	19.57	24.45
7/8/2007 0:01		12.5	20.81	19.38	24.55
7/8/2007 0:01		12.5	20.71	19.19	23.29
7/8/2007 0:01		12.5	20.62	19	23.68
7/8/2007 0:01		12.4	20.52	18.9	22.53
7/8/2007 0:02		12.4	20.42	18.81	23.58
7/8/2007 0:02		12.4	20.23	18.81	23.58
7/8/2007 0:02		12.4	20.04	18.71	23.2
7/8/2007 0:02		12.4	19.95	18.62	23
7/8/2007 0:03		12.4	20.04	18.62	23
7/8/2007 0:03		12.4	20.14	18.62	23.39
7/8/2007 0:03		12.4	20.42	18.52	22.81
7/8/2007 0:03		12.4	20.62	20.62	22.24
7/8/2007 0:04		12.4	20.9	21.38	21.47
7/8/2007 0:04		12.4	21.28	21.66	23.39
7/8/2007 0:04		12.4	21.47	21.76	23.2
7/8/2007 0:04		12.4	21.57	21.76	23.39
7/8/2007 0:05		12.4	21.66	21.76	23
7/8/2007 0:05		12.4	21.66	21.76	23.29
7/8/2007 0:05		12.3	21.66	21.76	21.19
7/8/2007 0:05		12.3	21.66	21.76	19.09
7/8/2007 0:06		12.3	21.76	21.76	17.48
7/8/2007 0:06		12.3	21.66	21.66	17.57
7/8/2007 0:06		12.3	21.76	21.66	18.52
7/8/2007 0:06		12.3	21.66	21.66	20.33
7/8/2007 0:07		12.3	21.66	21.66	24.74
7/8/2007 0:07		12.3	21.66	21.66	24.45
7/8/2007 0:07		12.3	21.66	21.57	27.27
7/8/2007 0:07		12.3	21.66	21.28	30.76
7/8/2007 0:08		12.3	21.66	21	33.12
7/8/2007 0:08		12.3	21.66	20.81	33.74
7/8/2007 0:08		12.3	21.66	20.62	33.54
7/8/2007 0:08		12.3	21.76	21.19	35.01
7/8/2007 0:09		12.3	21.66	21.38	34.9
7/8/2007 0:09		12.3	21.66	21.57	36.51
7/8/2007 0:09		12.3	21.76	21.66	37.94

7/8/2007 0:09		12.3	21.76	21.66	35.33
7/8/2007 0:10		12.3	21.76	21.57	31.06
7/8/2007 0:10		12.3	21.76	21.57	34.59
7/8/2007 0:10		12.3	21.76	21.66	36.3
7/8/2007 0:10		12.3	21.76	21.57	35.97
7/8/2007 0:11		12.3	21.76	21.57	37.6
7/8/2007 0:11		12.3	21.76	21.57	36.62
7/8/2007 0:11		12.3	21.86	21.47	33.22
7/8/2007 0:11		12.3	21.86	21.57	37.94
7/8/2007 0:12		12.3	21.86	21.66	41.81
7/8/2007 0:12		12.3	21.86	21.57	38.49
7/8/2007 0:12		12.4	21.86	21.57	41.23
7/8/2007 0:12		12.4	21.86	21.47	33.64
7/8/2007 0:13		12.4	21.86	21.28	36.73
7/8/2007 0:13		12.4	21.95	21.19	34.06
7/8/2007 0:13		12.4	21.95	21.09	31.88
7/8/2007 0:13		12.4	21.95	21.28	35.86
7/8/2007 0:14		12.4	21.95	21.57	35.12
7/8/2007 0:14		12.4	22.05	21.66	37.27
7/8/2007 0:14		12.4	22.05	21.76	32.6
7/8/2007 0:14		12.4	22.05	21.86	28.16
7/8/2007 0:15		12.4	22.05	21.86	16.52
7/8/2007 0:15		12.4	21.95	21.86	16.43
7/8/2007 0:15		12.4	21.86	21.86	17.67
7/8/2007 0:15		12.4	21.86	21.86	19.47
7/8/2007 0:16		12.4	21.86	21.86	21
7/8/2007 0:16		12.3	21.86	21.76	27.67
7/8/2007 0:16		12.3	21.76	21.76	29.35
7/8/2007 0:16		12.3	21.76	21.76	37.27
7/8/2007 0:17		12.3	21.76	21.66	34.9
7/8/2007 0:17		12.3	21.76	21.66	39.05
7/8/2007 0:17		12.4	21.95	21.66	36.08
7/8/2007 0:17		12.4	22.14	21.57	37.6
7/8/2007 0:18		12.3	22.24	21.47	35.86
7/8/2007 0:18		12.4	22.24	21.38	29.25
7/8/2007 0:18		12.3	22.24	21.38	28.75
7/8/2007 0:18		12.4	22.33	21.38	29.65
7/8/2007 0:19		12.3	22.33	21.57	24.06
7/8/2007 0:19		12.3	22.33	21.57	21.76
7/8/2007 0:19		12.3	22.33	21.57	21.38
7/8/2007 0:19		12.3	22.33	21.57	21.28
7/8/2007 0:20		12.3	22.33	21.57	21.09
7/8/2007 0:20		12.3	22.33	21.57	21.76
7/8/2007 0:20		12.3	22.33	21.57	20.62
7/8/2007 0:20		12.3	22.33	21.57	19.09
7/8/2007 0:21		12.3	22.33	21.57	17.48
7/8/2007 0:21		12.3	22.33	21.47	16.62
7/8/2007 0:21		12.3	22.33	21.47	16.62
7/8/2007 0:21		12.3	22.24	21.47	16.62
7/8/2007 0:22		12.3	22.24	21.47	16.05
7/8/2007 0:22		12.21	22.24	21.47	16.05
7/8/2007 0:22		12.21	22.24	21.38	15.76
7/8/2007 0:22		12.21	22.24	21.28	15.38
7/8/2007 0:23		12.21	22.24	21.19	15.66
7/8/2007 0:23		12.21	22.24	21.09	15.57
7/8/2007 0:23		12.21	22.14	21	15.86
7/8/2007 0:23		12.21	22.05	20.9	15.95
7/9/2007 0:00		12.21	22.05	20.81	16.14
7/9/2007 0:00		12.21	21.95	20.71	16.24
7/9/2007 0:00		12.21	21.86	20.62	16.05
7/9/2007 0:00		12.21	21.86	20.52	15.86
7/9/2007 0:01		12.21	21.76	20.42	15.66
7/9/2007 0:01		12.11	21.66	20.33	15.47
7/9/2007 0:01		12.11	21.57	20.23	15.09
7/9/2007 0:01		12.11	21.47	20.14	15.09
7/9/2007 0:02		12.11	21.38	20.04	14.8
7/9/2007 0:02		12.11	21.28	19.95	14.8
7/9/2007 0:02		12.11	21.19	19.85	14.61
7/9/2007 0:02		12.11	21.09	19.76	14.13
7/9/2007 0:03		12.11	21	19.66	13.27
7/9/2007 0:03		12.11	20.9	19.57	12.98
7/9/2007 0:03		12.11	20.81	19.47	12.69
7/9/2007 0:03		12.11	20.71	19.38	12.3
7/9/2007 0:04		12.11	20.71	19.38	12.3
7/9/2007 0:04		12.11	20.52	19.28	12.69
7/9/2007 0:04		12.01	20.42	19.19	12.69
7/9/2007 0:04		12.11	20.42	19.09	12.11
7/9/2007 0:05		12.11	20.62	19	12.59
7/9/2007 0:05		12.01	20.62	18.9	12.5
7/9/2007 0:05		12.01	20.81	18.81	12.4
7/9/2007 0:05		12.01	21.09	19.28	11.72
7/9/2007 0:06		12.01	21.47	20.33	11.92
7/9/2007 0:06		12.01	21.57	20.71	12.3
7/9/2007 0:06		12.01	21.57	20.9	13.08
7/9/2007 0:06		12.01	21.57	20.9	14.9
7/9/2007 0:07		12.01	21.57	21	18.33
7/9/2007 0:07		12.01	21.57	21	21.09
7/9/2007 0:07		12.01	21.57	21	23.58
7/9/2007 0:07		12.01	21.57	21	27.47

7/9/2007 0:08		12.01	21.57	21	25.22
7/9/2007 0:08		12.01	21.57	20.81	27.17
7/9/2007 0:08		12.01	21.47	20.42	33.33
7/9/2007 0:08		12.01	21.38	20.23	28.36
7/9/2007 0:09		12.01	21.28	20.62	24.26
7/9/2007 0:09		12.01	21.47	21	24.45
7/9/2007 0:09		12.01	21.57	21	28.06
7/9/2007 0:09		12.01	21.57	21	30.05
7/9/2007 0:10		12.01	21.57	21	29.75
7/9/2007 0:10		12.01	21.66	20.81	33.95
7/9/2007 0:10		12.01	21.66	20.62	35.97
7/9/2007 0:10		12.11	21.66	20.42	33.43
7/9/2007 0:11		12.11	21.66	20.23	34.8
7/9/2007 0:11		12.11	21.57	20.14	34.59
7/9/2007 0:11		12.11	21.66	20.04	33.64
7/9/2007 0:11		12.11	21.66	20.71	35.44
7/9/2007 0:12		12.11	21.66	21	36.51
7/9/2007 0:12		12.11	21.66	21.09	37.38
7/9/2007 0:12		12.11	21.66	21	38.05
7/9/2007 0:12		12.11	21.66	21	37.71
7/9/2007 0:13		12.11	21.66	21.09	38.83
7/9/2007 0:13		12.21	21.76	21.19	37.6
7/9/2007 0:13		12.21	21.76	21.19	38.71
7/9/2007 0:13		12.21	21.76	21.19	38.94
7/9/2007 0:14		12.21	21.76	21.19	38.94
7/9/2007 0:14		12.21	21.76	21.19	40.07
7/9/2007 0:14		12.21	21.86	21.19	40.19
7/9/2007 0:14		12.21	21.86	21.19	39.5
7/9/2007 0:15		12.21	21.86	21.28	41.34
7/9/2007 0:15		12.21	21.86	21.19	41.23
7/9/2007 0:15		12.21	21.95	21.19	40.19
7/9/2007 0:15		12.3	21.95	21.09	40.19
7/9/2007 0:16		12.3	21.95	21	36.95
7/9/2007 0:16		12.3	22.05	20.9	36.95
7/9/2007 0:16		12.3	22.05	20.9	35.86
7/9/2007 0:16		12.3	22.05	20.9	35.86
7/9/2007 0:17		12.3	22.14	21.09	37.17
7/9/2007 0:17		12.3	22.14	21.28	39.05
7/9/2007 0:17		12.3	22.14	21.28	37.82
7/9/2007 0:17		12.3	22.14	21.28	35.97
7/9/2007 0:18		12.3	22.14	21.28	38.27
7/9/2007 0:18		12.3	22.24	21.28	36.08
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7/9/2007 0:19		12.3	22.24	21.38	35.44
7/9/2007 0:19		12.3	22.24	21.38	34.27
7/9/2007 0:19		12.3	22.24	21.38	34.27
7/9/2007 0:20		12.3	22.24	21.38	31.98
7/9/2007 0:20		12.3	22.24	21.38	28.06
7/9/2007 0:20		12.3	22.24	21.47	25.42
7/9/2007 0:20		12.3	22.33	21.47	23.87
7/9/2007 0:21		12.3	22.33	21.47	22.81
7/9/2007 0:21		12.3	22.33	21.47	23.1
7/9/2007 0:21		12.3	22.33	21.47	23.29
7/9/2007 0:21		12.3	22.24	21.38	23.1
7/9/2007 0:22		12.3	22.24	21.38	21.95
7/9/2007 0:22		12.3	22.24	21.28	20.81
7/9/2007 0:22		12.3	22.24	21.28	19.85
7/9/2007 0:22		12.3	22.24	21.28	20.81
7/9/2007 0:23		12.3	22.24	21.19	19.09
7/9/2007 0:23		12.3	22.24	21.19	18.9
7/9/2007 0:23		12.21	22.14	21.09	17.95
7/9/2007 0:23		12.21	22.14	21	19.19
7/10/2007 0:00		12.21	22.14	20.9	21.76
7/10/2007 0:00		12.21	22.05	20.81	22.81
7/10/2007 0:00		12.21	22.05	20.71	24.64
7/10/2007 0:00		12.21	21.86	20.52	25.22
7/10/2007 0:01		12.21	21.76	20.42	24.74
7/10/2007 0:01		12.21	21.66	20.33	25.9
7/10/2007 0:01		12.21	21.57	20.23	25.61
7/10/2007 0:01		12.21	21.38	20.14	25.32
7/10/2007 0:02		12.21	21.19	20.04	22.81
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7/10/2007 0:03		12.21	21	19.95	20.52
7/10/2007 0:03		12.21	21	19.95	20.81
7/10/2007 0:03		12.21	20.9	19.95	20.62
7/10/2007 0:03		12.21	20.9	19.95	19.28
7/10/2007 0:04		12.21	20.9	19.95	18.71
7/10/2007 0:04		12.21	21	19.95	18.43
7/10/2007 0:04		12.21	21	19.95	18.14
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7/10/2007 0:05		12.21	21.19	20.04	18.24
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7/10/2007 0:05		12.21	21.28	20.14	18.05
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7/10/2007 0:08		12.11	21.38	20.33	18.24
7/10/2007 0:08		12.11	21.38	20.33	20.42
7/10/2007 0:09		12.11	21.38	20.33	20.81
7/10/2007 0:09		12.11	21.38	20.33	23.87
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7/10/2007 0:21		12.3	22.53	21.95	19.38
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7/11/2007 0:05		12.11	20.42	21.28	13.27
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7/11/2007 0:05		12.11	21.38	21	12.98
7/11/2007 0:06		12.11	21.38	20.9	12.88
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7/11/2007 0:06		12.01	21.19	20.71	14.13
7/11/2007 0:06		12.01	21.09	20.62	15.95
7/11/2007 0:07		12.01	20.81	20.52	18.05
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7/11/2007 0:15		12.21	22.43	21.66	22.62
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7/12/2007 0:02		12.11	21.95	21.19	15.66

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7/12/2007 0:03		12.11	22.05	21	15.76
7/12/2007 0:03		12.11	21.95	21.28	15.47
7/12/2007 0:04		12.11	21.86	21.47	15.38
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7/12/2007 0:04		12.11	21.47	21.47	14.9
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7/12/2007 0:06		12.11	21.28	21.28	13.85
7/12/2007 0:06		12.01	21.09	21.28	14.23
7/12/2007 0:06		12.11	21.86	21.28	14.33
7/12/2007 0:06		12.11	21.76	21.28	14.71
7/12/2007 0:07		12.01	21.47	21.19	16.14
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7/12/2007 0:08		12.01	21.66	21.09	28.26
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7/12/2007 0:08		12.01	21.19	21	29.35
7/12/2007 0:08		12.11	21	20.81	29.85
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7/12/2007 0:20		12.11	22.14	21.38	15.38
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7/12/2007 0:21		12.11	22.14	21.28	14.61
7/12/2007 0:21		12.11	21.95	21.28	14.8
7/12/2007 0:21		12.11	21.76	21.28	14.52
7/12/2007 0:22		12.11	21.47	21.19	14.42
7/12/2007 0:22		12.11	21.28	21.19	14.52
7/12/2007 0:22		12.11	21.19	21.19	14.23
7/12/2007 0:22		12.11	22.05	21.19	13.85
7/12/2007 0:23		12.11	21.86	21.19	14.04
7/12/2007 0:23		12.11	21.57	21.09	14.33
7/12/2007 0:23		12.11	21.28	21	14.23
7/12/2007 0:23		12.11	21.09	20.9	14.33
7/13/2007 0:00		12.11	21	20.71	14.23
7/13/2007 0:00		12.11	21.95	20.62	14.13
7/13/2007 0:00		12.11	21.76	20.52	13.94
7/13/2007 0:00		12.11	21.47	20.42	13.08

7/13/2007 0:01		12.11	21.09	20.33	13.75
7/13/2007 0:01		12.11	20.81	20.81	14.42
7/13/2007 0:01		12.01	20.62	21.09	13.75
7/13/2007 0:01		12.01	20.42	21.09	13.37
7/13/2007 0:02		12.01	21.86	21.09	13.37
7/13/2007 0:02		12.01	21.38	21.09	13.08
7/13/2007 0:02		12.01	21	21.09	11.92
7/13/2007 0:02		12.01	20.71	21	12.01
7/13/2007 0:03		12.01	20.33	21	12.01
7/13/2007 0:03		12.01	20.04	21	12.21
7/13/2007 0:03		12.01	21.57	21	11.92
7/13/2007 0:03		12.01	21.28	20.9	11.92
7/13/2007 0:04		12.01	20.71	20.9	11.33
7/13/2007 0:04		12.01	20.23	20.9	11.43
7/13/2007 0:04		12.01	19.95	20.9	11.63
7/13/2007 0:04		12.01	19.57	20.9	12.11
7/13/2007 0:05		12.01	19.38	20.81	12.11
7/13/2007 0:05		12.01	21.38	20.81	12.01
7/13/2007 0:05		12.01	21	20.71	11.53
7/13/2007 0:05		12.01	20.42	20.71	11.33
7/13/2007 0:06		11.92	19.85	20.71	11.53
7/13/2007 0:06		11.92	19.47	20.71	12.01
7/13/2007 0:06		11.92	19.09	20.71	11.82
7/13/2007 0:06		11.92	18.9	20.62	12.79
7/13/2007 0:07		11.92	21.19	20.33	14.61
7/13/2007 0:07		11.92	20.81	20.04	17
7/13/2007 0:07		11.92	20.23	19.76	21.38
7/13/2007 0:07		11.92	19.76	19.47	28.16
7/13/2007 0:08		11.92	19.38	19.28	30.96
7/13/2007 0:08		11.92	19.19	19	33.85
7/13/2007 0:08		11.92	20.23	18.9	33.85
7/13/2007 0:08		11.92	21.28	18.9	34.16
7/13/2007 0:09		12.01	21	19.95	36.19
7/13/2007 0:09		12.01	20.71	20.33	37.06
7/13/2007 0:09		12.01	20.33	20.62	38.38
7/13/2007 0:09		12.01	20.14	20.71	36.84
7/13/2007 0:10		12.01	21.38	20.81	30.56
7/13/2007 0:10		12.01	21.66	20.81	33.74
7/13/2007 0:10		12.01	21.38	20.81	35.12
7/13/2007 0:10		12.01	21.19	20.81	34.16
7/13/2007 0:11		12.11	21	20.81	38.6
7/13/2007 0:11		12.11	20.9	20.9	36.62
7/13/2007 0:11		12.11	21.86	20.81	38.38
7/13/2007 0:11		12.11	21.95	20.9	37.71
7/13/2007 0:12		12.11	21.86	20.9	38.38
7/13/2007 0:12		12.11	21.76	20.9	37.27
7/13/2007 0:12		12.11	21.66	21	37.6
7/13/2007 0:12		12.21	22.14	21	37.27
7/13/2007 0:13		12.21	22.14	21	36.95
7/13/2007 0:13		12.21	22.24	21	36.62
7/13/2007 0:13		12.21	22.24	20.9	37.71
7/13/2007 0:13		12.21	22.24	21	37.82
7/13/2007 0:14		12.21	22.43	20.9	36.51
7/13/2007 0:14		12.21	22.53	21	38.38
7/13/2007 0:14		12.21	22.62	20.9	38.05
7/13/2007 0:14		12.21	22.62	20.9	38.38
7/13/2007 0:15		12.3	22.62	20.81	38.71
7/13/2007 0:15		12.3	22.72	20.81	38.38
7/13/2007 0:15		12.3	22.81	20.81	40.3
7/13/2007 0:15		12.3	22.81	20.81	39.96
7/13/2007 0:16		12.3	22.91	21	39.62
7/13/2007 0:16		12.3	22.91	21.09	41.69
7/13/2007 0:16		12.3	23	21.09	40.65
7/13/2007 0:16		12.3	23.1	21.09	42.4
7/13/2007 0:17		12.3	23.1	21.09	41.81
7/13/2007 0:17		12.3	23	21.09	39.16
7/13/2007 0:17		12.4	23.2	21.09	38.6
7/13/2007 0:17		12.4	23.29	21.09	40.53
7/13/2007 0:18		12.4	23.2	21.09	39.84
7/13/2007 0:18		12.4	23.1	21.19	33.64
7/13/2007 0:18		12.4	23.48	21.19	34.48
7/13/2007 0:18		12.4	23.48	21.19	30.05
7/13/2007 0:19		12.4	23.48	21.19	28.66
7/13/2007 0:19		12.4	23.2	21.19	27.67
7/13/2007 0:19		12.4	23.48	21.19	26.78
7/13/2007 0:19		12.4	23.58	21.19	25.71
7/13/2007 0:20		12.4	23.68	21.19	25.71
7/13/2007 0:20		12.4	23.29	21.19	25.42
7/13/2007 0:20		12.4	23.39	21.19	24.06
7/13/2007 0:20		12.4	23.48	21.19	23
7/13/2007 0:21		12.4	23.58	21.19	22.43
7/13/2007 0:21		12.4	23.48	21.19	21.76
7/13/2007 0:21		12.3	23.29	21.19	22.05
7/13/2007 0:21		12.3	23.39	21.19	23.68
7/13/2007 0:22		12.3	23.29	21.19	23
7/13/2007 0:22		12.3	23.29	21.19	21.57
7/13/2007 0:22		12.3	23.1	21.28	22.33
7/13/2007 0:22		12.3	22.91	21.19	21.86
7/13/2007 0:23		12.3	22.62	21.09	20.9

7/13/2007 0:23		12.3	22.43	21.09	18.62
7/13/2007 0:23		12.3	22.33	21.09	20.62
7/13/2007 0:23		12.3	22.72	21	21.28
7/14/2007 0:00		12.3	22.53	21	20.62
7/14/2007 0:00		12.3	22.33	21	19.57
7/14/2007 0:00		12.3	22.14	21	18.81
7/14/2007 0:00		12.3	22.53	21	17.67
7/14/2007 0:01		12.3	22.53	21	16.9
7/14/2007 0:01		12.3	22.24	20.9	18.33
7/14/2007 0:01		12.3	21.86	20.9	19.66
7/14/2007 0:01		12.3	22.33	20.9	20.04
7/14/2007 0:02		12.3	22.05	20.9	20.52
7/14/2007 0:02		12.3	21.76	20.81	20.23
7/14/2007 0:02		12.3	21.57	20.81	19
7/14/2007 0:02		12.3	21.38	20.81	18.43
7/14/2007 0:03		12.3	22.24	20.81	17.76
7/14/2007 0:03		12.21	22.05	20.71	16.71
7/14/2007 0:03		12.21	21.66	20.52	17.28
7/14/2007 0:03		12.21	21.38	20.42	17.09
7/14/2007 0:04		12.21	21.19	20.33	16.81
7/14/2007 0:04		12.21	22.14	20.14	16.05
7/14/2007 0:04		12.21	21.86	20.04	15.76
7/14/2007 0:04		12.21	21.38	19.95	15.57
7/14/2007 0:05		12.21	21.09	19.85	15
7/14/2007 0:05		12.21	20.81	20.52	14.71
7/14/2007 0:05		12.21	21.86	20.71	14.71
7/14/2007 0:05		12.21	21.66	20.71	14.52
7/14/2007 0:06		12.21	21.19	20.62	14.33
7/14/2007 0:06		12.21	20.71	20.62	13.94
7/14/2007 0:06		12.21	21.76	20.62	15.19
7/14/2007 0:06		12.21	21.38	20.62	16.14
7/14/2007 0:07		12.21	20.9	20.62	20.52
7/14/2007 0:07		12.21	20.52	20.62	23.87
7/14/2007 0:07		12.21	20.23	20.62	25.81
7/14/2007 0:07		12.21	21.76	20.52	31.27
7/14/2007 0:08		12.21	21.09	20.52	34.27
7/14/2007 0:08		12.21	20.81	20.52	37.82
7/14/2007 0:08		12.21	20.62	20.42	40.99
7/14/2007 0:08		12.21	20.52	20.62	39.84
7/14/2007 0:09		12.21	21.95	20.62	37.71
7/14/2007 0:09		12.21	21.76	20.62	38.38
7/14/2007 0:09		12.21	21.47	20.62	37.94
7/14/2007 0:09		12.21	21.47	20.62	35.12
7/14/2007 0:10		12.21	21.86	20.71	31.06
7/14/2007 0:10		12.21	22.33	20.62	35.44
7/14/2007 0:10		12.3	22.14	20.52	37.49
7/14/2007 0:10		12.3	22.14	20.62	36.51
7/14/2007 0:11		12.3	22.43	20.71	36.73
7/14/2007 0:11		12.3	22.43	20.71	37.17
7/14/2007 0:11		12.3	22.43	20.71	37.27
7/14/2007 0:11		12.3	22.53	20.62	37.06
7/14/2007 0:12		12.3	22.72	20.52	38.38
7/14/2007 0:12		12.3	22.81	20.52	37.94
7/14/2007 0:12		12.3	22.91	20.52	38.49
7/14/2007 0:12		12.4	23	20.52	38.27
7/14/2007 0:13		12.4	23	20.52	38.38
7/14/2007 0:13		12.4	23.1	20.81	37.49
7/14/2007 0:13		12.4	23.29	21	37.71
7/14/2007 0:13		12.4	23.39	21	38.83
7/14/2007 0:14		12.4	23.29	21	38.49
7/14/2007 0:14		12.4	23.29	21	41.23
7/14/2007 0:14		12.5	23.68	21	39.05
7/14/2007 0:14		12.4	23.77	21.09	32.09
7/14/2007 0:15		12.5	23.48	21.09	37.94
7/14/2007 0:15		12.5	23.58	21.09	39.73
7/14/2007 0:15		12.5	23.97	21.19	41.81
7/14/2007 0:15		12.5	24.16	21.09	41.69
7/14/2007 0:16		12.5	23.58	21.09	35.33
7/14/2007 0:16		12.5	23.97	21.09	35.65
7/14/2007 0:16		12.5	24.16	21.09	30.66
7/14/2007 0:16		12.5	24.45	21.09	29.45
7/14/2007 0:17		12.5	23.77	21.09	29.95
7/14/2007 0:17		12.5	24.16	21.09	29.05
7/14/2007 0:17		12.5	24.35	21.09	25.71
7/14/2007 0:17		12.5	24.45	21.09	22.14
7/14/2007 0:18		12.5	23.68	21.09	21.86
7/14/2007 0:18		12.5	23.77	21.09	24.06
7/14/2007 0:18		12.5	23.77	21.09	25.22
7/14/2007 0:18		12.5	23.77	21.09	30.76
7/14/2007 0:19		12.5	23.39	21.09	28.16
7/14/2007 0:19		12.5	23.48	21.19	26.78
7/14/2007 0:19		12.5	23.58	21.28	24.26
7/14/2007 0:19		12.5	23.58	21.28	22.81
7/14/2007 0:20		12.5	23.39	21.38	22.72
7/14/2007 0:20		12.5	23.29	21.47	22.91
7/14/2007 0:20		12.5	23.29	21.28	22.53
7/14/2007 0:20		12.5	23.2	21.19	21.95
7/14/2007 0:21		12.5	23.1	21.09	23.48
7/14/2007 0:21		12.5	23.1	21.09	22.62

7/14/2007 0:21		12.5	23	21.09	22.33
7/14/2007 0:21		12.5	22.91	21	21.57
7/14/2007 0:22		12.5	22.81	21	19.95
7/14/2007 0:22		12.5	22.91	21	19.19
7/14/2007 0:22		12.5	22.91	21	19.09
7/14/2007 0:22		12.4	22.72	20.9	18.81
7/14/2007 0:23		12.4	22.62	20.9	18.81
7/14/2007 0:23		12.4	22.53	20.9	19.57
7/14/2007 0:23		12.4	22.72	20.9	19
7/14/2007 0:23		12.4	22.62	20.81	17.76
7/15/2007 0:00		12.4	22.53	20.81	19.38
7/15/2007 0:00		12.4	22.43	20.81	19.76
7/15/2007 0:00		12.4	22.62	20.81	19.47
7/15/2007 0:00		12.4	22.62	20.81	18.71
7/15/2007 0:01		12.4	22.43	20.71	16.9
7/15/2007 0:01		12.4	22.24	20.71	15.95
7/15/2007 0:01		12.4	22.14	20.62	15.66
7/15/2007 0:01		12.4	22.53	20.52	15.66
7/15/2007 0:02		12.4	22.24	20.52	15.66
7/15/2007 0:02		12.4	21.95	20.42	15.38
7/15/2007 0:02		12.3	21.76	20.33	14.9
7/15/2007 0:02		12.3	22.05	20.33	14.9
7/15/2007 0:03		12.3	22.33	20.52	15.57
7/15/2007 0:03		12.3	21.86	20.71	16.14
7/15/2007 0:03		12.3	21.57	20.71	15.86
7/15/2007 0:03		12.3	21.28	20.71	16.24
7/15/2007 0:04		12.3	22.05	20.71	16.33
7/15/2007 0:04		12.3	21.95	20.62	16.33
7/15/2007 0:04		12.3	21.47	20.62	16.24
7/15/2007 0:04		12.3	21.09	20.62	15.66
7/15/2007 0:05		12.3	20.81	20.52	15.28
7/15/2007 0:05		12.3	21.95	20.42	15.47
7/15/2007 0:05		12.3	21.47	20.42	16.14
7/15/2007 0:05		12.21	21	20.33	15.09
7/15/2007 0:06		12.21	20.62	20.33	14.23
7/15/2007 0:06		12.21	20.81	20.33	13.85
7/15/2007 0:06		12.21	21.76	20.33	14.61
7/15/2007 0:06		12.21	21.19	20.33	18.71
7/15/2007 0:07		12.21	20.62	20.14	22.62
7/15/2007 0:07		12.21	20.33	19.95	25.42
7/15/2007 0:07		12.21	21.19	19.76	28.85
7/15/2007 0:07		12.21	21.76	19.66	33.64
7/15/2007 0:08		12.21	21.28	19.47	36.08
7/15/2007 0:08		12.21	20.9	19.28	37.06
7/15/2007 0:08		12.21	20.71	19.38	37.6
7/15/2007 0:08		12.21	21.86	19.95	38.16
7/15/2007 0:09		12.3	21.76	20.23	39.39
7/15/2007 0:09		12.3	21.47	20.33	40.07
7/15/2007 0:09		12.3	21.38	20.33	39.96
7/15/2007 0:09		12.3	21.66	20.33	36.84
7/15/2007 0:10		12.3	22.14	20.42	32.91
7/15/2007 0:10		12.3	21.86	20.42	38.94
7/15/2007 0:10		12.3	21.76	20.52	40.07
7/15/2007 0:10		12.3	21.66	20.62	41.34
7/15/2007 0:11		12.3	22.33	20.62	42.52
7/15/2007 0:11		12.3	22.14	20.52	41.58
7/15/2007 0:11		12.4	22.05	20.62	40.65
7/15/2007 0:11		12.4	22.14	20.62	40.65
7/15/2007 0:12		12.4	22.53	20.62	40.76
7/15/2007 0:12		12.4	22.62	20.62	40.53
7/15/2007 0:12		12.4	22.72	20.62	40.65
7/15/2007 0:12		12.4	22.81	20.71	41.69
7/15/2007 0:13		12.5	23	20.62	40.53
7/15/2007 0:13		12.4	23.1	20.52	39.39
7/15/2007 0:13		12.5	23	20.52	41.34
7/15/2007 0:13		12.5	23.2	20.71	41.58
7/15/2007 0:14		12.5	23.39	20.81	41.34
7/15/2007 0:14		12.5	23.39	20.81	41.11
7/15/2007 0:14		12.5	23.29	20.9	41.46
7/15/2007 0:14		12.5	23.68	20.9	39.39
7/15/2007 0:15		12.5	23.87	20.9	35.12
7/15/2007 0:15		12.5	23.48	21	35.01
7/15/2007 0:15		12.5	23.77	21	43.48
7/15/2007 0:15		12.59	23.97	21.09	38.83
7/15/2007 0:16		12.59	23.68	21.09	32.39
7/15/2007 0:16		12.59	23.97	21	33.33
7/15/2007 0:16		12.59	24.16	21.09	32.7
7/15/2007 0:16		12.59	23.77	21.09	32.7
7/15/2007 0:17		12.59	23.68	21.09	42.16
7/15/2007 0:17		12.59	24.06	21.09	38.27
7/15/2007 0:17		12.59	24.26	21.19	39.96
7/15/2007 0:17		12.59	23.87	21.19	43.12
7/15/2007 0:18		12.59	23.77	21.28	39.05
7/15/2007 0:18		12.59	24.16	21.28	40.65
7/15/2007 0:18		12.59	24.45	21.38	37.27
7/15/2007 0:18		12.59	24.06	21.09	41.81
7/15/2007 0:19		12.59	23.97	21.19	42.64
7/15/2007 0:19		12.59	24.35	21.19	38.27
7/15/2007 0:19		12.59	24.55	21.09	35.86

7/15/2007 0:19		12.59	23.97	21.09	32.81
7/15/2007 0:20		12.59	23.97	21.19	29.35
7/15/2007 0:20		12.59	24.16	21.19	26.98
7/15/2007 0:20		12.59	24.26	21.19	26.39
7/15/2007 0:20		12.59	23.87	21.19	25.81
7/15/2007 0:21		12.59	23.68	21.19	25.32
7/15/2007 0:21		12.59	23.77	21.19	23.2
7/15/2007 0:21		12.59	23.87	21.19	22.05
7/15/2007 0:21		12.59	23.87	21.19	22.53
7/15/2007 0:22		12.59	23.58	21.19	21.19
7/15/2007 0:22		12.59	23.68	21.19	20.62
7/15/2007 0:22		12.59	23.68	21.19	19.95
7/15/2007 0:22		12.59	23.68	21.19	20.14
7/15/2007 0:23		12.59	23.39	21.09	19.76
7/15/2007 0:23		12.5	23.39	21.09	19.38
7/15/2007 0:23		12.59	23.39	21	18.81
7/15/2007 0:23		12.5	23.29	21	19.38
7/16/2007 0:00		12.5	23.29	21	18.81
7/16/2007 0:00		12.5	23.2	21	19.19
7/16/2007 0:00		12.5	23.1	21	19.76
7/16/2007 0:00		12.5	22.91	20.9	19.47
7/16/2007 0:01		12.5	22.81	20.9	18.43
7/16/2007 0:01		12.5	22.91	20.9	18.62
7/16/2007 0:01		12.5	22.91	20.81	18.05
7/16/2007 0:01		12.5	22.72	20.81	17.95
7/16/2007 0:02		12.5	22.43	20.71	17.95
7/16/2007 0:02		12.5	22.24	20.62	18.05
7/16/2007 0:02		12.5	22.62	20.62	18.05
7/16/2007 0:02		12.4	22.53	20.52	18.24
7/16/2007 0:03		12.4	22.14	20.52	17.86
7/16/2007 0:03		12.4	21.86	20.42	17
7/16/2007 0:03		12.4	21.57	20.33	17.09
7/16/2007 0:03		12.4	22.33	20.23	17.09
7/16/2007 0:04		12.4	22.05	20.14	17.38
7/16/2007 0:04		12.4	21.57	20.04	17.19
7/16/2007 0:04		12.4	21.28	20.62	17.28
7/16/2007 0:04		12.4	21	20.52	16.52
7/16/2007 0:05		12.4	22.14	20.52	16.14
7/16/2007 0:05		12.4	21.86	20.52	16.62
7/16/2007 0:05		12.4	21.28	20.42	17.48
7/16/2007 0:05		12.4	20.81	20.33	17.28
7/16/2007 0:06		12.4	20.42	20.23	16.9
7/16/2007 0:06		12.3	21.76	20.14	16.81
7/16/2007 0:06		12.3	21.66	20.04	17
7/16/2007 0:06		12.3	21.09	19.95	19.19
7/16/2007 0:07		12.3	20.52	19.76	21.76
7/16/2007 0:07		12.3	20.23	19.76	24.45
7/16/2007 0:07		12.3	20.62	20.42	28.85
7/16/2007 0:07		12.3	21.66	20.42	32.81
7/16/2007 0:08		12.3	21.09	20.42	35.97
7/16/2007 0:08		12.3	20.71	20.33	38.6
7/16/2007 0:08		12.4	21.76	20.33	40.99
7/16/2007 0:08		12.4	21.47	20.23	41.46
7/16/2007 0:09		12.4	21.09	20.14	41.46
7/16/2007 0:09		12.4	21.95	20.04	41.11
7/16/2007 0:09		12.4	21.66	20.04	39.73
7/16/2007 0:09		12.4	21.38	20.04	37.49
7/16/2007 0:10		12.4	21.28	19.95	34.16
7/16/2007 0:10		12.4	21.86	19.95	40.07
7/16/2007 0:10		12.4	22.14	20.62	42.4
7/16/2007 0:10		12.4	21.86	20.62	41.58
7/16/2007 0:11		12.4	21.76	20.52	42.05
7/16/2007 0:11		12.5	22.33	20.52	42.4
7/16/2007 0:11		12.5	22.33	20.52	43.12
7/16/2007 0:11		12.5	22.14	20.52	42.4
7/16/2007 0:12		12.5	22.14	20.81	43.6
7/16/2007 0:12		12.5	22.62	20.81	43.12
7/16/2007 0:12		12.5	22.53	20.81	43
7/16/2007 0:12		12.5	22.53	20.81	43.12
7/16/2007 0:13		12.59	22.53	20.81	43.48
7/16/2007 0:13		12.59	22.91	20.81	43.36
7/16/2007 0:13		12.59	23	20.81	42.76
7/16/2007 0:13		12.59	23.1	20.9	44.46
7/16/2007 0:14		12.59	23.2	21	44.95
7/16/2007 0:14		12.59	23.29	21	43.24
7/16/2007 0:14		12.59	23.48	21.09	39.39
7/16/2007 0:14		12.59	23.58	21.09	38.71
7/16/2007 0:15		12.69	23.48	21.09	39.05
7/16/2007 0:15		12.59	23.68	21.09	37.17
7/16/2007 0:15		12.69	23.87	21.19	36.95
7/16/2007 0:15		12.69	24.06	21.19	35.22
7/16/2007 0:16		12.69	23.68	21.28	34.06
7/16/2007 0:16		12.69	23.68	21.19	35.22
7/16/2007 0:16		12.69	23.77	21.19	35.44
7/16/2007 0:16		12.69	23.87	21.19	37.27
7/16/2007 0:17		12.69	23.77	21.28	37.6
7/16/2007 0:17		12.69	23.68	21.28	35.65
7/16/2007 0:17		12.69	23.97	21.28	35.86
7/16/2007 0:17		12.69	24.16	21.28	34.59

7/16/2007 0:18		12.69	24.06	21.28	34.16
7/16/2007 0:18		12.69	23.77	21.38	32.29
7/16/2007 0:18		12.69	23.97	21.38	31.27
7/16/2007 0:18		12.69	24.06	21.28	31.27
7/16/2007 0:19		12.69	24.06	21.28	31.78
7/16/2007 0:19		12.69	23.58	21.28	31.17
7/16/2007 0:19		12.69	23.77	21.28	30.46
7/16/2007 0:19		12.69	23.87	21.38	29.25
7/16/2007 0:20		12.69	23.97	21.38	28.56
7/16/2007 0:20		12.69	23.77	21.28	27.96
7/16/2007 0:20		12.69	23.68	21.28	25.81
7/16/2007 0:20		12.69	23.87	21.28	24.64
7/16/2007 0:21		12.69	23.97	21.38	23
7/16/2007 0:21		12.69	23.97	21.38	23.39
7/16/2007 0:21		12.69	23.48	21.38	22.91
7/16/2007 0:21		12.59	23.58	21.28	23.29
7/16/2007 0:22		12.59	23.48	21.19	22.62
7/16/2007 0:22		12.59	23.39	21.19	21.57
7/16/2007 0:22		12.59	23.39	21.19	20.9
7/16/2007 0:22		12.59	23.39	21.19	20.71
7/16/2007 0:23		12.59	23.29	21.19	20.23
7/16/2007 0:23		12.59	23.2	21.19	20.33
7/16/2007 0:23		12.59	23.1	21.19	20.42
7/16/2007 0:23		12.59	23	21.09	19.76
7/17/2007 0:00		12.59	23.1	21.09	20.04
7/17/2007 0:00		12.59	23	21.09	21.19
7/17/2007 0:00		12.59	22.81	21.19	20.9
7/17/2007 0:00		12.59	22.62	21.19	19.19
7/17/2007 0:01		12.59	22.53	21.09	19.19
7/17/2007 0:01		12.5	22.81	21.09	19.09
7/17/2007 0:01		12.5	22.91	21.09	18.33
7/17/2007 0:01		12.5	22.72	21	18.52
7/17/2007 0:02		12.5	22.43	21	19.57
7/17/2007 0:02		12.5	22.24	20.9	21.28
7/17/2007 0:02		12.5	22.05	21.09	22.81
7/17/2007 0:02		12.5	22.72	21.09	22.43
7/17/2007 0:03		12.5	22.62	21.09	23.2
7/17/2007 0:03		12.5	22.24	21	22.91
7/17/2007 0:03		12.5	22.14	21	22.62
7/17/2007 0:03		12.5	21.95	21	22.72
7/17/2007 0:04		12.5	22.24	20.9	20.9
7/17/2007 0:04		12.5	22.62	20.9	19
7/17/2007 0:04		12.5	22.24	20.81	17.38
7/17/2007 0:04		12.5	21.95	20.81	17
7/17/2007 0:05		12.5	21.76	20.71	17.09
7/17/2007 0:05		12.4	21.47	20.62	16.81
7/17/2007 0:05		12.4	22.05	20.62	16.05
7/17/2007 0:05		12.4	22.33	21	15.76
7/17/2007 0:06		12.4	21.86	20.9	15.66
7/17/2007 0:06		12.4	21.57	20.81	16.14
7/17/2007 0:06		12.4	21.09	20.71	17
7/17/2007 0:06		12.4	20.81	20.62	19.57
7/17/2007 0:07		12.4	20.52	20.52	23.58
7/17/2007 0:07		12.4	22.05	20.81	25.71
7/17/2007 0:07		12.4	21.86	20.81	29.05
7/17/2007 0:07		12.4	21.47	20.71	32.81
7/17/2007 0:08		12.4	21.09	20.71	36.51
7/17/2007 0:08		12.4	21	20.71	39.96
7/17/2007 0:08		12.4	20.9	20.62	43
7/17/2007 0:08		12.4	22.24	20.52	43.48
7/17/2007 0:09		12.4	21.86	20.52	43.6
7/17/2007 0:09		12.4	21.57	20.42	43.36
7/17/2007 0:09		12.4	21.47	20.9	43.84
7/17/2007 0:09		12.4	21.28	20.9	40.3
7/17/2007 0:10		12.5	22.33	20.9	36.84
7/17/2007 0:10		12.5	22.24	20.9	42.88
7/17/2007 0:10		12.5	22.05	20.9	44.83
7/17/2007 0:10		12.5	21.95	21	45.45
7/17/2007 0:11		12.5	22.14	20.9	45.2
7/17/2007 0:11		12.5	22.62	20.9	43.6
7/17/2007 0:11		12.5	22.62	21.09	43.72
7/17/2007 0:11		12.5	22.72	21.19	43.72
7/17/2007 0:12		12.59	22.72	21.19	43.84
7/17/2007 0:12		12.59	23	21.19	42.28
7/17/2007 0:12		12.59	23.2	21.19	43.6
7/17/2007 0:12		12.59	23.29	21.28	38.71
7/17/2007 0:13		12.59	23.48	21.28	38.49
7/17/2007 0:13		12.59	23.29	21.19	41.93
7/17/2007 0:13		12.59	23.39	21.19	44.46
7/17/2007 0:13		12.59	23.58	21.19	43.24
7/17/2007 0:14		12.69	23.77	21.19	45.33
7/17/2007 0:14		12.69	23.58	21.19	44.58
7/17/2007 0:14		12.69	23.68	21.28	41.46
7/17/2007 0:14		12.69	23.97	21.28	37.71
7/17/2007 0:15		12.69	24.16	21.28	35.44
7/17/2007 0:15		12.69	23.97	21.47	34.69
7/17/2007 0:15		12.69	23.87	21.66	31.88
7/17/2007 0:15		12.69	24.06	21.66	30.76
7/17/2007 0:16		12.69	24.16	21.66	29.35

7/17/2007 0:16		12.69	24.26	21.66	30.86
7/17/2007 0:16		12.69	23.87	21.66	32.19
7/17/2007 0:16		12.69	24.16	21.66	32.91
7/17/2007 0:17		12.69	24.35	21.66	33.12
7/17/2007 0:17		12.69	24.55	21.57	32.7
7/17/2007 0:17		12.69	24.55	21.57	31.88
7/17/2007 0:17		12.69	23.87	21.57	31.17
7/17/2007 0:18		12.69	23.87	21.57	29.85
7/17/2007 0:18		12.69	23.58	21.57	28.46
7/17/2007 0:18		12.69	23.2	21.47	28.46
7/17/2007 0:18		12.69	22.91	21.38	28.56
7/17/2007 0:19		12.69	23.1	21.28	28.16
7/17/2007 0:19		12.69	23	21.19	28.06
7/17/2007 0:19		12.69	22.53	21.09	27.57
7/17/2007 0:19		12.69	22.05	21.38	26.49
7/17/2007 0:20		12.69	21.57	21.47	25.9
7/17/2007 0:20		12.69	21.19	21.38	25.13
7/17/2007 0:20		12.69	22.53	21.38	24.93
7/17/2007 0:20		12.69	22.24	21.38	24.84
7/17/2007 0:21		12.69	21.66	21.38	24.55
7/17/2007 0:21		12.69	21.09	21.28	24.45
7/17/2007 0:21		12.69	20.62	21.28	24.55
7/17/2007 0:21		12.69	20.23	21.19	24.64
7/17/2007 0:22		12.69	22.14	21.19	24.45
7/17/2007 0:22		12.69	21.86	21	24.74
7/17/2007 0:22		12.69	21.19	20.81	25.51
7/17/2007 0:22		12.69	20.62	20.62	24.93
7/17/2007 0:23		12.79	20.23	20.42	23.58
7/17/2007 0:23		12.69	21.76	20.23	24.26
7/17/2007 0:23		12.69	21.86	20.14	24.45
7/17/2007 0:23		12.69	21.38	20.52	23.77
7/18/2007 0:00		12.69	20.9	21.19	24.74
7/18/2007 0:00		12.69	20.62	21.28	23.1
7/18/2007 0:00		12.69	20.42	21.28	22.05
7/18/2007 0:00		12.69	21.76	21.28	22.53
7/18/2007 0:01		12.69	21.95	21.28	22.05
7/18/2007 0:01		12.69	21.57	21.28	21.38
7/18/2007 0:01		12.69	21.28	21.28	20.62
7/18/2007 0:01		12.69	21	21.19	20.33
7/18/2007 0:02		12.69	20.71	21.19	20.42
7/18/2007 0:02		12.69	21.86	21.19	20.42
7/18/2007 0:02		12.69	21.76	21	19.95
7/18/2007 0:02		12.69	21.38	20.9	23.2
7/18/2007 0:03		12.69	21	20.81	22.62
7/18/2007 0:03		12.69	20.71	20.71	20.04
7/18/2007 0:03		12.59	20.52	20.62	19.09
7/18/2007 0:03		12.59	21.76	20.52	21.57
7/18/2007 0:04		12.59	21.66	20.42	21.86
7/18/2007 0:04		12.59	21.28	21.19	21
7/18/2007 0:04		12.59	21	21.28	21.76
7/18/2007 0:04		12.59	20.62	21.28	21.19
7/18/2007 0:05		12.59	20.42	21.28	21.09
7/18/2007 0:05		12.59	21.28	21.28	21.57
7/18/2007 0:05		12.59	21.57	21.28	22.72
7/18/2007 0:05		12.59	21.19	21.28	22.14
7/18/2007 0:06		12.59	20.81	21.19	21.76
7/18/2007 0:06		12.59	20.42	21.19	21.38
7/18/2007 0:06		12.59	20.14	21.19	21.86
7/18/2007 0:06		12.59	19.95	21.19	21.86
7/18/2007 0:07		12.59	21.47	21.19	27.37
7/18/2007 0:07		12.59	21.19	21	28.46
7/18/2007 0:07		12.59	20.9	20.9	30.05
7/18/2007 0:07		12.59	20.62	20.81	32.5
7/18/2007 0:08		12.59	20.42	20.71	35.01
7/18/2007 0:08		12.59	20.23	20.62	37.27
7/18/2007 0:08		12.59	21.47	20.62	37.71
7/18/2007 0:08		12.59	21.19	20.52	38.94
7/18/2007 0:09		12.59	20.9	21.19	39.28
7/18/2007 0:09		12.59	20.71	21.38	40.3
7/18/2007 0:09		12.59	20.62	21.38	43.12
7/18/2007 0:09		12.59	21.57	21.38	37.49
7/18/2007 0:10		12.59	21.57	21.38	33.54
7/18/2007 0:10		12.59	21.38	21.38	40.42
7/18/2007 0:10		13.17	21.28	21.38	39.28
7/18/2007 0:10		12.69	21.19	21.38	39.84
7/18/2007 0:11		12.69	22.43	22.62	39.96
7/18/2007 0:11		12.69	23.2	23	40.42
7/18/2007 0:11		12.69	23.87	23.29	40.19
7/18/2007 0:11		12.69	24.26	23.48	41.11
7/18/2007 0:12		12.69	24.74	23.68	41.46
7/18/2007 0:12		12.69	23.29	23.77	42.76
7/18/2007 0:12		12.69	22.91	23.77	41.23
7/18/2007 0:12		12.69	22.72	22.62	41.81
7/18/2007 0:13		12.69	22.62	22.43	35.12
7/18/2007 0:13		12.69	22.53	22.24	35.33
7/18/2007 0:13		12.69	22.53	22.24	34.37
7/18/2007 0:13		12.79	22.72	22.24	35.22
7/18/2007 0:14		12.69	22.91	22.24	34.37
7/18/2007 0:14		12.79	23	22.14	37.38

7/18/2007 0:14		12.79	23.48	22.14	39.16
7/18/2007 0:14		12.69	23.2	22.14	33.33
7/18/2007 0:15		12.79	22.91	22.14	33.33
7/18/2007 0:15		12.79	23	22.14	34.27
7/18/2007 0:15		12.79	23.2	22.14	33.01
7/18/2007 0:15		12.79	23.29	22.14	41.11
7/18/2007 0:16		12.79	23.58	22.14	36.73
7/18/2007 0:16		12.79	23.77	22.14	38.94
7/18/2007 0:16		12.79	23.1	22.14	36.73
7/18/2007 0:16		12.79	23.29	22.14	33.85
7/18/2007 0:17		12.79	23.48	22.05	32.5
7/18/2007 0:17		12.79	23.29	22.05	30.66
7/18/2007 0:17		12.79	23.29	22.14	29.25
7/18/2007 0:17		12.79	23.48	22.14	27.76
7/18/2007 0:18		12.79	23.58	22.05	23.77
7/18/2007 0:18		12.79	23.2	22.05	24.06
7/18/2007 0:18		12.79	23.1	21.95	24.84
7/18/2007 0:18		12.79	23.1	21.95	25.71
7/18/2007 0:19		12.79	22.91	21.86	25.42
7/18/2007 0:19		12.69	22.72	21.86	25.32
7/18/2007 0:19		12.79	22.72	21.86	25.71
7/18/2007 0:19		12.69	22.72	21.86	25.51
7/18/2007 0:20		12.69	22.72	21.76	26
7/18/2007 0:20		12.69	22.53	21.76	25.71
7/18/2007 0:20		12.69	22.33	21.76	26.29
7/18/2007 0:20		12.69	22.43	21.76	26.59
7/18/2007 0:21		12.69	22.43	21.76	27.86
7/18/2007 0:21		12.69	22.33	21.76	28.36
7/18/2007 0:21		12.69	22.33	21.76	27.86
7/18/2007 0:21		12.69	22.33	21.76	25.61
7/18/2007 0:22		12.69	22.33	21.76	24.06
7/18/2007 0:22		12.69	22.24	21.76	24.93
7/18/2007 0:22		12.69	22.24	21.86	24.16
7/18/2007 0:22		12.69	22.24	21.76	24.84
7/18/2007 0:23		12.69	22.14	21.76	25.42
7/18/2007 0:23		12.69	22.24	21.76	24.16
7/18/2007 0:23		12.69	22.24	21.76	23.58
7/18/2007 0:23		12.69	22.14	21.76	22.62
7/19/2007 0:00		12.69	22.14	21.76	22.72
7/19/2007 0:00		12.69	22.24	21.76	21.47
7/19/2007 0:00		12.69	22.14	21.76	21.57
7/19/2007 0:00		12.69	22.14	21.76	22.05
7/19/2007 0:01		12.69	22.14	21.86	21.38
7/19/2007 0:01		12.69	22.14	21.86	20.9
7/19/2007 0:01		12.69	22.14	21.86	20.62
7/19/2007 0:01		12.69	22.14	21.95	20.14
7/19/2007 0:02		12.69	22.14	21.95	19.85
7/19/2007 0:02		12.69	22.14	21.95	19.38
7/19/2007 0:02		12.69	22.14	21.95	19
7/19/2007 0:02		12.69	22.14	21.95	18.52
7/19/2007 0:03		12.59	22.14	21.95	17.95
7/19/2007 0:03		12.59	22.14	21.95	17.38
7/19/2007 0:03		12.59	22.24	21.95	17.57
7/19/2007 0:03		12.59	22.14	21.95	17.09
7/19/2007 0:04		12.59	22.24	21.95	16.62
7/19/2007 0:04		12.59	22.24	21.95	15.76
7/19/2007 0:04		12.59	22.14	21.95	15.95
7/19/2007 0:04		12.59	22.14	21.95	15.28
7/19/2007 0:05		12.59	22.14	21.95	16.81
7/19/2007 0:05		12.59	22.14	21.95	16.52
7/19/2007 0:05		12.59	22.14	21.95	16.14
7/19/2007 0:05		12.59	22.05	21.95	16.14
7/19/2007 0:06		12.5	22.05	21.95	16.24
7/19/2007 0:06		12.59	22.05	21.86	17.28
7/19/2007 0:06		12.5	22.05	21.86	19.28
7/19/2007 0:06		12.5	21.95	21.86	22.24
7/19/2007 0:07		12.5	22.05	21.86	20.23
7/19/2007 0:07		12.5	22.05	21.86	21.47
7/19/2007 0:07		12.5	21.95	21.86	20.62
7/19/2007 0:07		12.5	21.95	21.86	22.81
7/19/2007 0:08		12.5	21.86	21.86	23.48
7/19/2007 0:08		12.5	21.95	21.86	26.29
7/19/2007 0:08		12.5	21.95	21.86	23.2
7/19/2007 0:08		12.5	22.05	21.86	22.24
7/19/2007 0:09		12.5	22.05	21.86	23.58
7/19/2007 0:09		12.5	22.05	21.86	25.51
7/19/2007 0:09		12.5	22.05	21.86	25.13
7/19/2007 0:09		12.5	22.14	21.86	23.97
7/19/2007 0:10		12.5	22.14	21.76	24.84
7/19/2007 0:10		12.5	22.05	21.76	25.03
7/19/2007 0:10		12.5	22.14	21.86	27.27
7/19/2007 0:10		12.5	22.24	21.86	25.03
7/19/2007 0:11		12.5	22.24	21.86	23.58
7/19/2007 0:11		12.5	22.24	21.86	24.64
7/19/2007 0:11		12.5	22.33	21.86	28.36
7/19/2007 0:11		12.5	22.24	21.86	27.47
7/19/2007 0:12		12.5	22.33	21.86	26.49
7/19/2007 0:12		12.5	22.33	21.86	28.16
7/19/2007 0:12		12.5	22.33	21.86	28.36

7/19/2007 0:12		12.5	22.33	21.86	29.25
7/19/2007 0:13		12.5	22.43	21.86	32.39
7/19/2007 0:13		12.5	22.43	21.86	35.97
7/19/2007 0:13		12.5	22.43	21.76	38.05
7/19/2007 0:13		12.5	22.33	21.76	35.54
7/19/2007 0:14		12.5	22.43	21.76	36.95
7/19/2007 0:14		12.5	22.53	21.76	36.95
7/19/2007 0:14		12.5	22.62	21.76	36.19
7/19/2007 0:14		12.59	22.53	21.76	35.01
7/19/2007 0:15		12.59	22.62	21.86	36.19
7/19/2007 0:15		12.59	22.72	21.86	33.43
7/19/2007 0:15		12.59	22.62	21.86	34.37
7/19/2007 0:15		12.59	22.72	21.86	39.84
7/19/2007 0:16		12.59	23	21.86	35.12
7/19/2007 0:16		12.59	23.2	21.86	33.95
7/19/2007 0:16		12.59	23.2	21.86	31.78
7/19/2007 0:16		12.59	23.2	21.86	31.78
7/19/2007 0:17		12.59	22.81	21.86	32.39
7/19/2007 0:17		12.59	22.91	21.86	30.86
7/19/2007 0:17		12.59	23	21.86	28.75
7/19/2007 0:17		12.59	22.91	21.86	27.76
7/19/2007 0:18		12.59	22.62	21.86	27.08
7/19/2007 0:18		12.59	22.62	21.86	26.49
7/19/2007 0:18		12.59	22.72	21.86	26.2
7/19/2007 0:18		12.59	22.72	21.86	26.1
7/19/2007 0:19		12.59	22.72	21.86	25.9
7/19/2007 0:19		12.59	22.72	21.86	25.61
7/19/2007 0:19		12.59	22.81	21.95	25.13
7/19/2007 0:19		12.59	22.91	21.86	24.64
7/19/2007 0:20		12.59	23	21.86	23.77
7/19/2007 0:20		12.59	23.1	21.86	23.48
7/19/2007 0:20		12.59	23.2	21.95	22.62
7/19/2007 0:20		12.59	23.39	21.95	21.95
7/19/2007 0:21		12.59	23	21.95	21.95
7/19/2007 0:21		12.59	23	21.95	21.28
7/19/2007 0:21		12.59	23.1	21.95	20.42
7/19/2007 0:21		12.59	23.29	21.95	19.76
7/19/2007 0:22		12.5	23.1	21.95	19.38
7/19/2007 0:22		12.5	23	21.95	19.19
7/19/2007 0:22		12.5	23	21.95	18.52
7/19/2007 0:22		12.5	22.91	21.95	18.52
7/19/2007 0:23		12.5	22.81	21.95	18.33
7/19/2007 0:23		12.5	22.81	21.95	18.24
7/19/2007 0:23		12.5	22.81	21.95	18.62
7/19/2007 0:23		12.5	22.81	21.95	18.62
7/20/2007 0:00		12.5	22.81	21.95	18.43
7/20/2007 0:00		12.5	22.81	21.95	18.14
7/20/2007 0:00		12.5	22.91	21.95	18.24
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7/20/2007 0:01		12.5	22.81	21.95	18.62
7/20/2007 0:01		12.5	22.81	21.95	18.33
7/20/2007 0:01		12.5	22.81	21.95	18.05
7/20/2007 0:02		12.5	22.72	21.95	18.24
7/20/2007 0:02		12.5	22.81	22.05	17.95
7/20/2007 0:02		12.5	22.81	21.95	17.48
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7/20/2007 0:03		12.5	22.72	21.86	16.9
7/20/2007 0:03		12.4	22.72	21.86	16.81
7/20/2007 0:03		12.4	22.72	21.86	16.62
7/20/2007 0:03		12.4	22.62	21.86	16.62
7/20/2007 0:04		12.4	22.62	21.86	17
7/20/2007 0:04		12.4	22.62	21.86	17
7/20/2007 0:04		12.4	22.62	21.86	16.71
7/20/2007 0:04		12.4	22.53	21.86	16.33
7/20/2007 0:05		12.4	22.53	21.86	16.14
7/20/2007 0:05		12.4	22.53	21.86	16.14
7/20/2007 0:05		12.4	22.53	21.86	16.14
7/20/2007 0:05		12.4	22.43	21.86	16.14
7/20/2007 0:06		12.4	22.43	21.86	16.05
7/20/2007 0:06		12.4	22.43	21.86	16.24
7/20/2007 0:06		12.4	22.33	21.86	17.09
7/20/2007 0:06		12.4	22.33	21.86	17.28
7/20/2007 0:07		12.4	22.43	21.86	18.24
7/20/2007 0:07		12.4	22.33	21.86	18.71
7/20/2007 0:07		12.4	22.33	21.86	18.81
7/20/2007 0:07		12.4	22.33	21.86	18.71
7/20/2007 0:08		12.4	22.33	21.76	19.19
7/20/2007 0:08		12.4	22.33	21.76	22.33
7/20/2007 0:08		12.4	22.33	21.76	29.65
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7/20/2007 0:09		12.4	22.33	21.76	35.97
7/20/2007 0:09		12.4	22.33	21.76	36.3
7/20/2007 0:09		12.4	22.33	21.76	31.68
7/20/2007 0:09		12.4	22.43	21.76	31.68
7/20/2007 0:10		12.4	22.43	21.76	32.91
7/20/2007 0:10		12.4	22.53	21.76	36.19
7/20/2007 0:10		12.4	22.43	21.76	37.06
7/20/2007 0:10		12.4	22.62	21.76	37.17

7/20/2007 0:11		12.4	22.81	21.76	37.17
7/20/2007 0:11		12.5	23	21.76	36.51
7/20/2007 0:11		12.5	23.1	21.76	36.62
7/20/2007 0:11		12.5	22.81	21.76	36.95
7/20/2007 0:12		12.5	23.1	21.76	36.84
7/20/2007 0:12		12.5	23.39	21.86	37.82
7/20/2007 0:12		12.5	23.68	21.86	38.6
7/20/2007 0:12		12.5	23.2	21.86	39.39
7/20/2007 0:13		12.5	23.29	21.86	38.6
7/20/2007 0:13		12.5	23.48	21.86	40.76
7/20/2007 0:13		12.59	23.77	21.86	39.62
7/20/2007 0:13		12.59	23.87	21.86	40.99
7/20/2007 0:14		12.59	23.29	21.86	39.39
7/20/2007 0:14		12.59	23.77	21.86	39.62
7/20/2007 0:14		12.59	24.06	21.86	39.5
7/20/2007 0:14		12.59	23.58	21.86	39.62
7/20/2007 0:15		12.59	23.68	21.86	40.42
7/20/2007 0:15		12.59	23.97	21.86	42.4
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7/20/2007 0:15		12.59	24.45	21.95	40.53
7/20/2007 0:16		12.69	24.55	21.95	42.16
7/20/2007 0:16		12.69	23.77	21.95	41.93
7/20/2007 0:16		12.69	24.16	21.95	42.28
7/20/2007 0:16		12.69	24.45	21.95	41.69
7/20/2007 0:17		12.69	24.55	21.95	41.23
7/20/2007 0:17		12.69	24.35	22.05	41.81
7/20/2007 0:17		12.69	24.35	22.14	43.84
7/20/2007 0:17		12.69	23.68	22.24	42.4
7/20/2007 0:18		12.69	24.16	22.33	40.76
7/20/2007 0:18		12.69	24.64	22.43	34.59
7/20/2007 0:18		12.69	24.84	22.62	36.51
7/20/2007 0:18		12.69	24.84	22.33	32.81
7/20/2007 0:19		12.69	24.06	22.24	28.66
7/20/2007 0:19		12.69	24.35	22.24	27.17
7/20/2007 0:19		12.69	24.55	22.24	25.9
7/20/2007 0:19		12.69	24.74	22.24	25.32
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7/20/2007 0:20		12.69	24.55	22.33	22.62
7/20/2007 0:21		12.69	24.64	22.33	22.14
7/20/2007 0:21		12.69	24.64	22.33	22.05
7/20/2007 0:21		12.69	24.64	22.33	22.14
7/20/2007 0:21		12.69	24.55	22.33	21.57
7/20/2007 0:22		12.69	24.74	22.33	21.09
7/20/2007 0:22		12.69	24.26	22.33	20.62
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7/20/2007 0:22		12.69	24.06	22.43	20.04
7/20/2007 0:23		12.69	23.87	22.43	20.14
7/20/2007 0:23		12.59	23.77	22.43	19.38
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7/21/2007 0:00		12.59	23.58	22.43	19
7/21/2007 0:00		12.59	23.68	22.43	19.28
7/21/2007 0:00		12.59	23.58	22.53	18.9
7/21/2007 0:00		12.59	23.68	22.53	19
7/21/2007 0:01		12.59	23.58	22.53	18.05
7/21/2007 0:01		12.59	23.58	22.43	17.76
7/21/2007 0:01		12.59	23.58	22.33	17.38
7/21/2007 0:01		12.59	23.48	22.33	17.28
7/21/2007 0:02		12.59	23.58	22.33	17.38
7/21/2007 0:02		12.59	23.68	22.33	19.38
7/21/2007 0:02		12.59	23.68	22.33	19.19
7/21/2007 0:02		12.59	23.48	22.33	18.05
7/21/2007 0:03		12.59	23.48	22.33	17.28
7/21/2007 0:03		12.59	23.48	22.33	18.9
7/21/2007 0:03		12.5	23.48	22.33	18.81
7/21/2007 0:03		12.5	23.48	22.33	19.09
7/21/2007 0:04		12.5	23.48	22.33	19.09
7/21/2007 0:04		12.5	23.29	22.33	17.86
7/21/2007 0:04		12.5	23.39	22.33	17
7/21/2007 0:04		12.5	23.39	22.33	17.09
7/21/2007 0:05		12.5	23.39	22.33	16.52
7/21/2007 0:05		12.5	23.39	22.33	16.14
7/21/2007 0:05		12.5	23.29	22.33	15.86
7/21/2007 0:05		12.5	23.2	22.33	15.66
7/21/2007 0:06		12.5	23.2	22.33	15.76
7/21/2007 0:06		12.5	23.1	22.24	16.14
7/21/2007 0:06		12.5	23.1	22.24	17.86
7/21/2007 0:06		12.5	23	22.24	21.95
7/21/2007 0:07		12.5	23	22.14	23
7/21/2007 0:07		12.5	23	22.14	24.16
7/21/2007 0:07		12.5	22.91	22.14	25.81
7/21/2007 0:07		12.5	22.81	22.05	31.17
7/21/2007 0:08		12.5	22.91	22.05	36.4
7/21/2007 0:08		12.5	22.72	21.95	38.6
7/21/2007 0:08		12.5	22.62	21.95	40.53
7/21/2007 0:08		12.5	22.43	21.95	41.69
7/21/2007 0:09		12.5	22.62	21.95	39.28

7/21/2007 0:09		12.5	22.72	21.95	40.3
7/21/2007 0:09		12.5	22.72	21.95	34.27
7/21/2007 0:09		12.5	22.72	21.95	34.8
7/21/2007 0:10		12.5	22.81	21.95	35.54
7/21/2007 0:10		12.5	22.81	21.95	36.73
7/21/2007 0:10		12.5	23	22.05	40.53
7/21/2007 0:10		12.59	23.2	22.05	43.72
7/21/2007 0:11		12.59	23.39	22.05	39.05
7/21/2007 0:11		12.59	23.48	22.05	40.99
7/21/2007 0:11		12.59	23.39	22.14	40.3
7/21/2007 0:11		12.59	23.39	22.14	41.11
7/21/2007 0:12		12.59	23.77	22.14	41.34
7/21/2007 0:12		12.59	24.06	22.14	42.16
7/21/2007 0:12		12.59	24.35	22.14	42.28
7/21/2007 0:12		12.69	24.45	22.14	41.69
7/21/2007 0:13		12.69	24.64	22.24	40.88
7/21/2007 0:13		12.69	24.06	22.24	42.16
7/21/2007 0:13		12.69	23.39	22.24	41.58
7/21/2007 0:13		12.69	23.58	22.33	42.16
7/21/2007 0:14		12.69	23.77	22.33	42.88
7/21/2007 0:14		12.69	24.16	22.33	43.6
7/21/2007 0:14		12.69	24.06	22.43	44.33
7/21/2007 0:14		12.69	24.06	22.43	43
7/21/2007 0:15		12.69	24.45	22.43	43.6
7/21/2007 0:15		12.79	24.26	22.53	44.46
7/21/2007 0:15		12.79	24.74	22.53	42.52
7/21/2007 0:15		12.79	24.93	22.53	41.23
7/21/2007 0:16		12.79	25.22	22.62	40.19
7/21/2007 0:16		12.79	24.74	22.62	43.24
7/21/2007 0:16		12.79	24.64	22.62	42.88
7/21/2007 0:16		12.79	24.93	22.62	43.72
7/21/2007 0:17		12.88	25.51	22.72	39.73
7/21/2007 0:17		12.88	25.81	22.72	45.45
7/21/2007 0:17		12.88	26	22.72	45.83
7/21/2007 0:17		12.88	24.84	22.72	39.84
7/21/2007 0:18		12.88	24.35	22.81	36.73
7/21/2007 0:18		12.88	24.64	22.81	35.44
7/21/2007 0:18		12.88	24.93	22.72	32.6
7/21/2007 0:18		12.88	24.55	22.72	28.36
7/21/2007 0:19		12.88	24.35	22.72	27.27
7/21/2007 0:19		12.88	24.26	22.72	26.68
7/21/2007 0:19		12.88	24.16	22.72	26.39
7/21/2007 0:19		12.88	24.35	22.72	26.2
7/21/2007 0:20		12.88	24.45	22.81	26.59
7/21/2007 0:20		12.88	24.55	22.81	26.39
7/21/2007 0:20		12.88	24.35	22.81	25.71
7/21/2007 0:20		12.88	24.55	22.81	25.32
7/21/2007 0:21		12.79	24.93	22.81	24.84
7/21/2007 0:21		12.88	24.93	22.81	24.93
7/21/2007 0:21		12.79	25.03	22.81	24.35
7/21/2007 0:21		12.79	25.13	22.81	23.77
7/21/2007 0:22		12.79	24.74	22.81	23.58
7/21/2007 0:22		12.79	24.55	22.91	23.97
7/21/2007 0:22		12.79	24.55	22.81	23.58
7/21/2007 0:22		12.79	24.64	22.81	23.2
7/21/2007 0:23		12.79	24.74	22.81	21.95
7/21/2007 0:23		12.79	24.74	22.81	21.66
7/21/2007 0:23		12.79	24.26	22.81	20.9
7/21/2007 0:23		12.79	24.35	22.81	20.33
7/22/2007 0:00		12.79	24.64	22.81	19.95
7/22/2007 0:00		12.79	24.84	22.81	19.85
7/22/2007 0:00		12.79	24.74	22.81	19.76
7/22/2007 0:00		12.79	24.35	22.81	19.85
7/22/2007 0:01		12.69	24.16	22.81	19.95
7/22/2007 0:01		12.69	24.26	22.91	19.19
7/22/2007 0:01		12.69	24.35	22.81	18.05
7/22/2007 0:01		12.69	24.35	22.91	17.95
7/22/2007 0:02		12.69	24.35	22.81	18.43
7/22/2007 0:02		12.69	24.35	22.81	18.52
7/22/2007 0:02		12.69	24.35	22.81	18.9
7/22/2007 0:02		12.69	24.45	22.81	19.19
7/22/2007 0:03		12.69	24.16	22.72	18.33
7/22/2007 0:03		12.69	24.06	22.72	18.14
7/22/2007 0:03		12.69	23.97	22.72	17.19
7/22/2007 0:03		12.69	23.87	22.72	16.81
7/22/2007 0:04		12.69	23.87	22.62	17.48
7/22/2007 0:04		12.69	23.68	22.62	17.86
7/22/2007 0:04		12.69	23.77	22.62	17.48
7/22/2007 0:04		12.59	23.68	22.62	17.28
7/22/2007 0:05		12.59	23.68	22.53	16.71
7/22/2007 0:05		12.59	23.58	22.53	16.43
7/22/2007 0:05		12.59	23.48	22.53	16.52
7/22/2007 0:05		12.59	23.48	22.53	16.81
7/22/2007 0:06		12.59	23.48	22.53	16.71
7/22/2007 0:06		12.59	23.39	22.53	17.09
7/22/2007 0:06		12.59	23.2	22.43	19.76
7/22/2007 0:06		12.59	23.2	22.43	24.55
7/22/2007 0:07		12.59	23.29	22.43	25.13
7/22/2007 0:07		12.59	23.29	22.43	28.85

7/22/2007 0:07		12.59	23.2	22.43	32.7
7/22/2007 0:07		12.59	23.1	22.33	35.01
7/22/2007 0:08		12.59	23	22.33	37.17
7/22/2007 0:08		12.59	23	22.33	38.94
7/22/2007 0:08		12.59	23.1	22.33	41.58
7/22/2007 0:08		12.59	23.29	22.33	40.99
7/22/2007 0:09		12.59	23.39	22.33	41.46
7/22/2007 0:09		12.59	23.39	22.43	40.07
7/22/2007 0:09		12.59	23.48	22.43	33.95
7/22/2007 0:09		12.69	23.48	22.43	36.3
7/22/2007 0:10		12.59	23.58	22.43	40.99
7/22/2007 0:10		12.69	23.58	22.43	41.46
7/22/2007 0:10		12.69	23.58	22.43	41.23
7/22/2007 0:10		12.69	23.68	22.43	41.23
7/22/2007 0:11		12.69	23.87	22.43	40.88
7/22/2007 0:11		12.69	23.97	22.53	41.93
7/22/2007 0:11		12.69	23.87	22.53	43.24
7/22/2007 0:11		12.69	24.16	22.53	42.52
7/22/2007 0:12		12.69	24.55	22.62	43.12
7/22/2007 0:12		12.79	24.64	22.62	42.64
7/22/2007 0:12		12.79	24.16	22.72	41.69
7/22/2007 0:12		12.79	24.55	22.81	42.4
7/22/2007 0:13		12.79	25.03	22.91	42.05
7/22/2007 0:13		12.79	25.13	22.81	42.64
7/22/2007 0:13		12.88	25.22	22.81	42.16
7/22/2007 0:13		12.79	24.64	22.81	43.48
7/22/2007 0:14		12.88	24.64	22.81	42.52
7/22/2007 0:14		12.88	25.13	22.81	43
7/22/2007 0:14		12.88	25.42	22.81	43.97
7/22/2007 0:14		12.88	25.03	22.81	43.84
7/22/2007 0:15		12.88	24.93	22.81	43.84
7/22/2007 0:15		12.88	25.42	22.81	45.33
7/22/2007 0:15		12.88	25.81	22.91	41.11
7/22/2007 0:15		12.88	26	22.91	44.7
7/22/2007 0:16		12.98	25.51	22.91	43.6
7/22/2007 0:16		12.98	25.13	22.91	44.7
7/22/2007 0:16		12.98	25.51	23	45.96
7/22/2007 0:16		12.98	25.71	23	46.08
7/22/2007 0:17		12.98	25.9	23	45.2
7/22/2007 0:17		12.98	26.1	23.1	44.7
7/22/2007 0:17		12.98	26.1	23.2	47.76
7/22/2007 0:17		12.98	25.22	23.39	44.83
7/22/2007 0:18		12.98	24.93	23.48	44.46
7/22/2007 0:18		12.98	25.13	23.58	38.05
7/22/2007 0:18		12.98	25.13	23.39	41.69
7/22/2007 0:18		12.98	25.03	23.2	41.81
7/22/2007 0:19		12.98	25.13	23.2	40.65
7/22/2007 0:19		12.98	25.13	23.2	36.95
7/22/2007 0:19		12.98	24.84	23.2	34.69
7/22/2007 0:19		12.98	25.22	23.2	31.68
7/22/2007 0:20		12.98	25.42	23.2	28.36
7/22/2007 0:20		12.98	25.71	23.2	26.2
7/22/2007 0:20		12.98	25.13	23.29	25.42
7/22/2007 0:20		12.98	25.61	23.2	24.16
7/22/2007 0:21		12.98	26	23.2	23.2
7/22/2007 0:21		12.98	26	23.2	23.2
7/22/2007 0:21		12.98	26	23.2	24.55
7/22/2007 0:21		12.98	26.1	23.29	25.03
7/22/2007 0:22		12.98	25.51	23.48	24.35
7/22/2007 0:22		12.98	25.22	23.58	23.68
7/22/2007 0:22		12.98	25.51	23.68	23.1
7/22/2007 0:22		12.98	25.81	23.77	22.53
7/22/2007 0:23		12.98	26	23.87	21.95
7/22/2007 0:23		12.88	25.32	23.97	21.86
7/22/2007 0:23		12.88	25.32	23.97	21.28
7/22/2007 0:23		12.88	25.61	23.68	20.52
7/23/2007 0:00		12.88	25.81	23.68	20.62
7/23/2007 0:00		12.88	26	23.58	20.33
7/23/2007 0:00		12.88	26	23.58	20.62
7/23/2007 0:00		12.88	26.1	23.58	20.52
7/23/2007 0:01		12.88	25.81	23.58	20.81
7/23/2007 0:01		12.88	25.13	23.58	20.14
7/23/2007 0:01		12.88	25.42	23.58	19.19
7/23/2007 0:01		12.88	25.61	23.58	18.52
7/23/2007 0:02		12.88	25.71	23.58	18.24
7/23/2007 0:02		12.88	25.61	23.58	18.43
7/23/2007 0:02		12.88	25.61	23.48	18.05
7/23/2007 0:02		12.79	25.13	23.29	18.43
7/23/2007 0:03		12.79	24.84	23.29	18.62
7/23/2007 0:03		12.79	24.93	23.29	19.09
7/23/2007 0:03		12.79	25.03	23.29	17.95
7/23/2007 0:03		12.79	24.74	23.29	18.52
7/23/2007 0:04		12.79	24.64	23.29	17.57
7/23/2007 0:04		12.79	24.74	23.29	17.19
7/23/2007 0:04		12.79	24.74	23.29	17
7/23/2007 0:04		12.79	24.74	23.29	17.28
7/23/2007 0:05		12.79	24.64	23.2	17.09
7/23/2007 0:05		12.79	24.64	23.29	17.48
7/23/2007 0:05		12.69	24.55	23.2	17.57

7/23/2007 0:05		12.69	24.45	23.2	17.48
7/23/2007 0:06		12.69	24.16	23.1	17.95
7/23/2007 0:06		12.69	24.16	23.1	18.43
7/23/2007 0:06		12.69	24.06	23.1	19.66
7/23/2007 0:06		12.69	23.97	23	23.58
7/23/2007 0:07		12.69	23.87	23.1	24.74
7/23/2007 0:07		12.69	23.87	23.1	26.1
7/23/2007 0:07		12.69	23.97	23.1	27.76
7/23/2007 0:07		12.69	23.87	23.1	31.27
7/23/2007 0:08		12.69	23.77	23.1	34.59
7/23/2007 0:08		12.69	23.68	23.1	37.6
7/23/2007 0:08		12.69	23.58	23.1	40.76
7/23/2007 0:08		12.69	23.58	23.1	40.53
7/23/2007 0:09		12.69	23.58	23.1	41.46
7/23/2007 0:09		12.69	23.58	23.1	41.81
7/23/2007 0:09		12.79	23.77	23.1	33.43
7/23/2007 0:09		12.69	23.87	23.1	35.76
7/23/2007 0:10		12.79	23.97	23.1	40.76
7/23/2007 0:10		12.79	23.97	23.1	40.65
7/23/2007 0:10		12.79	24.06	23.1	41.11
7/23/2007 0:10		12.79	24.06	23.1	40.42
7/23/2007 0:11		12.79	24.16	23.1	39.84
7/23/2007 0:11		12.88	24.45	23.39	40.07
7/23/2007 0:11		12.88	31.57	23.97	39.96
7/23/2007 0:11		12.88	41.46	24.35	40.19
7/23/2007 0:12		13.08	43.72	24.45	40.76
7/23/2007 0:12		13.08	27.76	25.22	40.65
7/23/2007 0:12		13.08	27.86	26	41.93
7/23/2007 0:12		13.17	28.36	26.49	42.28
7/23/2007 0:13		13.27	27.67	27.27	41.58
7/23/2007 0:13		13.27	27.17	28.16	41.93
7/23/2007 0:13		13.27	27.76	29.05	41.69
7/23/2007 0:13		13.27	28.26	29.95	41.34
7/23/2007 0:14		13.27	28.95	30.05	41.11
7/23/2007 0:14		13.27	29.15	29.95	42.05
7/23/2007 0:14		13.27	26.88	29.75	40.19
7/23/2007 0:14		13.27	25.61	29.65	35.33
7/23/2007 0:15		13.27	25.03	29.55	38.38
7/23/2007 0:15		13.27	25.03	26.59	40.99
7/23/2007 0:15		13.27	25.32	25.32	40.3
7/23/2007 0:15		13.27	25.61	24.84	44.09
7/23/2007 0:16		13.27	25.9	24.64	42.4
7/23/2007 0:16		13.27	26.1	24.45	43.6
7/23/2007 0:16		13.27	25.03	24.35	39.84
7/23/2007 0:16		13.27	24.93	24.35	33.85
7/23/2007 0:17		13.27	25.22	24.26	37.82
7/23/2007 0:17		13.27	25.51	24.26	38.6
7/23/2007 0:17		13.37	25.71	24.16	42.4
7/23/2007 0:17		13.37	25.9	24.16	37.38
7/23/2007 0:18		13.37	26.1	24.06	32.6
7/23/2007 0:18		13.37	26.29	24.06	32.6
7/23/2007 0:18		13.37	24.93	24.06	33.01
7/23/2007 0:18		13.37	25.22	24.06	31.57
7/23/2007 0:19		13.37	25.61	24.06	28.56
7/23/2007 0:19		13.37	25.81	23.97	28.66
7/23/2007 0:19		13.37	26	24.26	28.06
7/23/2007 0:19		13.37	26.2	24.45	28.06
7/23/2007 0:20		13.37	25.03	24.55	27.76
7/23/2007 0:20		13.37	25.22	24.74	27.47
7/23/2007 0:20		13.46	25.42	24.84	26.88
7/23/2007 0:20		13.46	25.61	24.93	26.1
7/23/2007 0:21		13.37	25.81	25.03	25.71
7/23/2007 0:21		13.46	25.13	25.13	25.42
7/23/2007 0:21		13.46	25.32	25.03	26
7/23/2007 0:21		13.46	25.61	24.45	26
7/23/2007 0:22		13.46	25.81	24.26	25.61
7/23/2007 0:22		13.46	25.9	24.16	24.74
7/23/2007 0:22		13.46	26.1	24.06	24.16
7/23/2007 0:22		13.46	25.81	24.06	23.87
7/23/2007 0:23		13.46	25.22	24.06	23.2
7/23/2007 0:23		13.46	25.42	23.97	22.33
7/23/2007 0:23		13.56	25.61	23.97	21.86
7/23/2007 0:23		13.56	25.81	23.87	21.28

date	SPIN	Holding Tank	Gravel Reactor	Norpac Reactor	Ambient
7/25/2007 0:00		25.42	25.81	25.22	20.62
7/25/2007 0:00		25.42	25.81	25.22	21.28
7/25/2007 0:00		25.32	25.61	25.22	21
7/25/2007 0:00		25.32	25.42	24.93	21.95
7/25/2007 0:01		25.32	25.61	24.74	21.28
7/25/2007 0:01		25.32	25.61	24.64	21.38
7/25/2007 0:01		25.32	25.61	24.55	21.86
7/25/2007 0:01		25.32	25.42	24.55	20.33
7/25/2007 0:02		25.22	25.61	24.45	19.66
7/25/2007 0:02		25.22	25.61	24.45	19.47
7/25/2007 0:02		25.22	25.61	24.45	20.14
7/25/2007 0:02		25.22	25.61	24.35	19.19
7/25/2007 0:03		25.22	25.51	24.35	18.71
7/25/2007 0:03		25.13	25.32	24.35	19.19
7/25/2007 0:03		25.13	25.32	24.35	20.04
7/25/2007 0:03		25.13	25.32	24.26	20.71
7/25/2007 0:04		25.13	25.22	24.26	20.52
7/25/2007 0:04		25.13	25.22	24.26	20.42
7/25/2007 0:04		25.13	25.13	24.26	20.14
7/25/2007 0:04		25.03	25.13	24.26	19.76
7/25/2007 0:05		25.03	25.03	24.26	19.38
7/25/2007 0:05		25.03	25.22	24.26	19.47
7/25/2007 0:05		24.93	25.22	24.16	20.33
7/25/2007 0:05		24.93	25.13	24.16	20.81
7/25/2007 0:06		24.93	25.03	24.16	20.81
7/25/2007 0:06		24.93	24.93	24.16	21.38
7/25/2007 0:06		24.93	25.13	24.26	22.91
7/25/2007 0:06		24.93	25.13	24.35	26.59
7/25/2007 0:07		24.93	25.13	24.35	27.96
7/25/2007 0:07		24.93	25.03	24.35	30.05
7/25/2007 0:07		24.93	24.93	24.35	32.5
7/25/2007 0:07		24.93	24.93	24.35	34.06
7/25/2007 0:08		24.93	25.13	24.35	37.06
7/25/2007 0:08		24.93	25.13	24.35	38.38
7/25/2007 0:08		24.93	25.13	24.35	35.65
7/25/2007 0:08		24.93	25.13	24.35	38.05
7/25/2007 0:09		24.93	25.13	24.45	35.97
7/25/2007 0:09		24.93	25.13	24.45	35.54
7/25/2007 0:09		24.93	25.22	24.45	32.29
7/25/2007 0:09		24.93	25.22	24.45	35.86
7/25/2007 0:10		24.93	25.32	24.55	38.27
7/25/2007 0:10		24.16	25.32	24.55	38.83
7/25/2007 0:10		24.06	25.22	24.64	38.94
7/25/2007 0:10		24.16	25.32	24.74	39.84
7/25/2007 0:11		24.35	25.42	24.84	39.28
7/25/2007 0:11		24.06	25.51	24.84	39.73
7/25/2007 0:11		24.06	25.61	24.93	40.07
7/25/2007 0:11		24.06	25.32	25.03	39.5
7/25/2007 0:12		24.06	25.51	25.13	39.84
7/25/2007 0:12		24.45	25.61	25.22	40.88
7/25/2007 0:12		24.45	25.81	25.03	41.81
7/25/2007 0:12		24.45	25.32	25.03	42.16
7/25/2007 0:13		24.45	25.42	24.93	42.76
7/25/2007 0:13		24.45	25.71	25.03	43.24
7/25/2007 0:13		25.13	25.32	25.13	44.46
7/25/2007 0:13		25.13	25.42	25.13	45.7
7/25/2007 0:14		25.13	25.61	25.13	43.48
7/25/2007 0:14		25.13	25.61	25.22	35.97
7/25/2007 0:14		25.13	25.71	25.42	38.94
7/25/2007 0:14		25.13	25.32	25.61	34.9
7/25/2007 0:15		25.13	25.51	25.81	33.64
7/25/2007 0:15		25.13	25.81	26	32.91
7/25/2007 0:15		25.13	25.51	26.1	32.81
7/25/2007 0:15		25.13	25.71	26.29	33.33
7/25/2007 0:16		25.13	25.42	26.29	33.95
7/25/2007 0:16		25.13	25.61	25.9	33.54
7/25/2007 0:16		25.13	25.51	25.81	32.09
7/25/2007 0:16		25.13	25.51	25.61	30.05
7/25/2007 0:17		25.13	25.51	25.51	29.35
7/25/2007 0:17		25.13	25.42	25.42	25.61
7/25/2007 0:17		25.13	25.42	25.42	24.26
7/25/2007 0:17		25.13	25.51	25.42	25.13
7/25/2007 0:18		25.13	25.42	25.42	26.1
7/25/2007 0:18		25.13	25.51	25.32	27.37
7/25/2007 0:18		25.13	25.32	25.32	27.47
7/25/2007 0:18		25.13	25.32	25.22	27.17
7/25/2007 0:19		25.13	25.13	25.22	27.17
7/25/2007 0:19		25.13	25.22	25.32	27.17
7/25/2007 0:19		25.13	25.13	25.32	25.71
7/25/2007 0:19		25.13	25.03	25.42	25.81
7/25/2007 0:20		25.13	25.22	25.42	24.84
7/25/2007 0:20		25.03	25.13	25.51	23.87
7/25/2007 0:20		25.03	25.03	25.51	24.35
7/25/2007 0:20		25.03	25.13	25.51	24.06
7/25/2007 0:21		25.13	25.03	25.51	23.48
7/25/2007 0:21		25.13	25.13	25.32	22.91

7/25/2007 0:21		25.13	24.93	25.22	22.33
7/25/2007 0:21		25.13	25.13	25.22	21.66
7/25/2007 0:22		25.03	25.03	25.13	21
7/25/2007 0:22		25.13	25.13	25.13	20.9
7/25/2007 0:22		25.03	25.13	25.13	21.38
7/25/2007 0:22		25.13	25.03	25.13	21.57
7/25/2007 0:23		25.13	25.13	25.13	20.33
7/25/2007 0:23		25.13	25.03	25.03	21.57
7/25/2007 0:23		25.13	25.13	25.03	22.05
7/25/2007 0:23		25.13	25.03	25.03	22.24
7/26/2007 0:00		25.13	25.03	25.03	21.95
7/26/2007 0:00		25.13	25.03	25.03	21.86
7/26/2007 0:00		25.13	25.03	25.03	22.33
7/26/2007 0:00		25.13	24.74	25.03	22.05
7/26/2007 0:01		25.13	24.55	24.93	22.62
7/26/2007 0:01		25.13	25.03	24.93	21.47
7/26/2007 0:01		25.13	24.84	24.93	20.33
7/26/2007 0:01		25.13	25.03	24.93	19.85
7/26/2007 0:02		25.13	24.93	24.93	19.76
7/26/2007 0:02		25.13	24.74	24.93	19.76
7/26/2007 0:02		25.13	25.03	24.93	20.04
7/26/2007 0:02		25.13	24.93	24.93	18.81
7/26/2007 0:03		25.03	24.84	24.93	17.95
7/26/2007 0:03		25.13	24.64	24.84	17.95
7/26/2007 0:03		25.13	24.93	24.84	18.43
7/26/2007 0:03		25.13	24.64	24.74	18.43
7/26/2007 0:04		25.13	24.35	24.74	18.62
7/26/2007 0:04		25.13	24.93	24.74	18.43
7/26/2007 0:04		25.13	24.84	24.74	18.71
7/26/2007 0:04		25.13	24.64	24.64	18.81
7/26/2007 0:05		25.13	24.84	24.64	18.52
7/26/2007 0:05		25.13	24.55	24.64	17.86
7/26/2007 0:05		25.13	24.16	24.64	18.33
7/26/2007 0:05		25.13	24.93	24.55	17.57
7/26/2007 0:06		25.13	24.64	24.55	16.71
7/26/2007 0:06		25.13	24.35	24.45	17.57
7/26/2007 0:06		25.13	24.74	24.45	18.33
7/26/2007 0:06		25.13	24.74	24.45	19.28
7/26/2007 0:07		25.13	24.74	24.35	19.57
7/26/2007 0:07		25.13	24.74	24.35	20.14
7/26/2007 0:07		25.13	24.55	24.35	23.39
7/26/2007 0:07		25.13	24.84	24.35	23.68
7/26/2007 0:08		25.13	24.45	24.74	24.84
7/26/2007 0:08		25.13	24.26	24.74	24.74
7/26/2007 0:08		25.13	24.74	24.84	24.16
7/26/2007 0:08		25.13	24.64	24.84	24.84
7/26/2007 0:09		25.13	24.55	24.84	25.71
7/26/2007 0:09		25.13	24.84	24.84	25.81
7/26/2007 0:09		25.03	24.64	24.84	27.47
7/26/2007 0:09		25.13	24.74	24.84	31.57
7/26/2007 0:10		25.13	24.64	24.84	30.15
7/26/2007 0:10		25.13	24.74	24.84	29.85
7/26/2007 0:10		25.13	24.64	24.84	31.47
7/26/2007 0:10		25.13	24.93	24.93	31.78
7/26/2007 0:11		25.03	24.74	24.93	34.37
7/26/2007 0:11		25.03	24.93	24.93	33.54
7/26/2007 0:11		25.13	24.84	25.03	33.33
7/26/2007 0:11		25.13	24.93	25.13	31.57
7/26/2007 0:12		25.03	24.93	25.13	31.88
7/26/2007 0:12		25.13	24.93	25.22	32.6
7/26/2007 0:12		25.03	24.93	25.32	34.06
7/26/2007 0:12		25.13	24.93	25.32	33.85
7/26/2007 0:13		25.13	25.03	25.42	31.78
7/26/2007 0:13		25.03	25.03	25.42	36.4
7/26/2007 0:13		25.03	25.03	25.42	32.39
7/26/2007 0:13		25.03	25.13	25.51	30.56
7/26/2007 0:14		25.13	25.13	25.51	32.6
7/26/2007 0:14		25.03	25.13	25.51	39.73
7/26/2007 0:14		25.03	25.13	25.51	39.28
7/26/2007 0:14		25.13	25.22	25.61	41.46
7/26/2007 0:15		25.03	25.22	25.61	39.16
7/26/2007 0:15		25.03	25.22	25.71	38.49
7/26/2007 0:15		25.03	25.22	25.81	33.12
7/26/2007 0:15		25.03	25.22	25.9	34.69
7/26/2007 0:16		25.03	25.32	26	42.64
7/26/2007 0:16		25.03	25.32	26.1	42.28
7/26/2007 0:16		25.03	25.32	26.2	42.76
7/26/2007 0:16		25.03	25.32	26.39	37.27
7/26/2007 0:17		25.03	25.42	26.49	42.05
7/26/2007 0:17		25.03	25.42	26.49	42.88
7/26/2007 0:17		25.13	25.42	26.59	42.16
7/26/2007 0:17		25.13	25.42	26.29	34.59
7/26/2007 0:18		25.03	25.51	26.2	29.95
7/26/2007 0:18		25.03	25.42	26.1	29.75
7/26/2007 0:18		25.13	25.51	26	29.05
7/26/2007 0:18		25.03	25.51	26	27.17
7/26/2007 0:19		25.03	25.51	26	25.81
7/26/2007 0:19		25.03	25.61	26	25.13
7/26/2007 0:19		25.13	25.51	25.9	24.45

7/26/2007 0:19		25.03	25.71	25.9	23.87
7/26/2007 0:20		25.13	25.61	25.9	23.1
7/26/2007 0:20		25.03	25.61	26	22.43
7/26/2007 0:20		25.03	25.71	26.1	22.33
7/26/2007 0:20		25.03	25.61	26.29	21.86
7/26/2007 0:21		25.13	25.71	26.39	21
7/26/2007 0:21		25.13	25.61	26.49	21.19
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7/26/2007 0:21		25.13	25.71	26.59	21.38
7/26/2007 0:22		25.03	25.71	26.68	21.38
7/26/2007 0:22		25.03	25.71	26.68	21.47
7/26/2007 0:22		25.13	25.71	26.68	21
7/26/2007 0:22		25.13	25.71	26.78	20.14
7/26/2007 0:23		25.13	25.71	26.39	20.33
7/26/2007 0:23		25.13	25.71	26.2	20.52
7/26/2007 0:23		25.13	25.71	26	19.95
7/26/2007 0:23		25.13	25.71	26	19.57
7/27/2007 0:00		25.13	25.71	25.9	19.38
7/27/2007 0:00		25.13	25.71	25.81	19.28
7/27/2007 0:00		25.13	25.71	25.81	19.09
7/27/2007 0:00		25.13	25.71	25.71	18.81
7/27/2007 0:01		25.13	25.71	25.71	18.71
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7/27/2007 0:03		25.13	25.61	25.9	16.14
7/27/2007 0:03		25.13	25.71	26	16.14
7/27/2007 0:03		25.13	25.61	26	16.52
7/27/2007 0:03		25.13	25.71	26	16.81
7/27/2007 0:04		25.13	25.61	25.9	17.09
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7/27/2007 0:05		25.13	25.61	25.51	15.95
7/27/2007 0:06		25.13	25.61	25.51	15.66
7/27/2007 0:06		25.13	25.42	25.42	15.95
7/27/2007 0:06		25.13	25.61	25.42	16.24
7/27/2007 0:06		25.13	25.61	25.42	17
7/27/2007 0:07		25.13	25.61	25.32	17.67
7/27/2007 0:07		25.13	25.42	25.32	18.24
7/27/2007 0:07		25.13	25.71	25.32	18.81
7/27/2007 0:07		25.13	25.61	25.32	19.76
7/27/2007 0:08		25.13	25.51	25.32	20.33
7/27/2007 0:08		25.22	25.51	24.93	22.05
7/27/2007 0:08		25.22	25.13	24.55	23.2
7/27/2007 0:08		25.13	25.51	24.45	22.53
7/27/2007 0:09		23.77	25.42	24.93	24.45
7/27/2007 0:09		23.77	25.51	25.13	27.08
7/27/2007 0:09		23.77	25.32	25.22	22.91
7/27/2007 0:09		23.77	25.71	25.22	23
7/27/2007 0:10		23.77	25.61	25.32	22.05
7/27/2007 0:10		23.77	25.71	25.32	22.14
7/27/2007 0:10		23.77	25.61	25.32	23.1
7/27/2007 0:10		23.77	25.81	25.32	22.62
7/27/2007 0:11		23.77	25.71	25.32	24.84
7/27/2007 0:11		23.77	25.71	25.32	25.32
7/27/2007 0:11		23.77	25.61	25.32	27.08
7/27/2007 0:11		23.77	25.81	25.32	28.26
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7/27/2007 0:12		23.77	25.81	25.32	29.05
7/27/2007 0:12		23.77	26	25.42	31.78
7/27/2007 0:13		23.77	25.9	25.42	29.95
7/27/2007 0:13		23.77	25.81	25.42	29.45
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7/27/2007 0:14		23.77	26	25.61	29.25
7/27/2007 0:14		23.77	26	25.51	28.26
7/27/2007 0:14		23.77	26	25.61	27.96
7/27/2007 0:14		23.77	26.1	25.61	29.75
7/27/2007 0:15		23.87	26.1	25.51	30.56
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7/27/2007 0:15		23.87	26.1	25.51	41.11
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7/27/2007 0:16		23.87	26.2	25.42	36.19
7/27/2007 0:16		23.87	26.29	25.42	29.65
7/27/2007 0:16		23.87	26.29	25.42	28.66
7/27/2007 0:16		23.87	26.29	25.51	28.06
7/27/2007 0:17		23.87	26.29	25.61	26.49
7/27/2007 0:17		23.87	26.29	25.71	25.61
7/27/2007 0:17		23.87	26.29	25.81	25.03
7/27/2007 0:17		23.87	26.39	25.9	25.03

7/27/2007 0:18		23.87	26.39	25.9	23.58
7/27/2007 0:18		23.87	26.39	25.71	21.38
7/27/2007 0:18		23.87	26.29	25.71	20.52
7/27/2007 0:18		23.87	26.2	25.61	20.23
7/27/2007 0:19		23.87	26	25.51	20.33
7/27/2007 0:19		23.87	26.39	25.42	19.95
7/27/2007 0:19		23.87	26.1	25.42	19.28
7/27/2007 0:19		23.87	26.2	25.42	18.52
7/27/2007 0:20		23.87	26.39	25.42	17.95
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7/27/2007 0:20		23.87	26.39	25.32	17.57
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7/27/2007 0:21		23.87	26.29	25.51	17.09
7/27/2007 0:21		23.87	26.2	25.51	16.9
7/27/2007 0:21		23.87	26.39	25.51	16.71
7/27/2007 0:22		23.87	26.29	25.61	16.62
7/27/2007 0:22		23.87	26.49	25.51	16.52
7/27/2007 0:22		23.97	26.29	25.51	16.62
7/27/2007 0:22		23.87	26.39	25.51	16.52
7/27/2007 0:23		23.97	26.39	25.51	16.62
7/27/2007 0:23		23.97	26.29	25.42	16.71
7/27/2007 0:23		23.97	26.49	25.42	16.71
7/27/2007 0:23		23.97	26.39	25.42	16.81
7/28/2007 0:00		23.97	26.39	25.32	16.81
7/28/2007 0:00		23.97	26.39	25.32	16.9
7/28/2007 0:00		23.97	26.39	25.32	16.81
7/28/2007 0:00		23.97	26.29	25.32	16.9
7/28/2007 0:01		23.97	26.2	25.32	16.81
7/28/2007 0:01		23.97	26.39	25.32	16.71
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7/28/2007 0:01		23.97	26.2	25.32	16.62
7/28/2007 0:02		23.97	26.29	25.22	16.62
7/28/2007 0:02		23.97	26.29	25.32	16.62
7/28/2007 0:02		23.97	26.29	25.32	16.62
7/28/2007 0:02		23.97	26.1	25.32	16.62
7/28/2007 0:03		23.97	26.39	25.32	16.71
7/28/2007 0:03		23.97	26.2	25.32	16.71
7/28/2007 0:03		23.97	26.1	25.32	16.62
7/28/2007 0:03		23.97	25.9	25.22	16.33
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7/28/2007 0:04		23.97	26.1	25.22	16.71
7/28/2007 0:04		23.97	26.39	25.22	16.52
7/28/2007 0:04		23.97	26.1	25.22	16.14
7/28/2007 0:05		24.06	26.39	25.13	15.86
7/28/2007 0:05		24.06	26.1	25.03	15.95
7/28/2007 0:05		24.06	26.1	24.93	16.05
7/28/2007 0:05		24.06	25.9	24.93	15.86
7/28/2007 0:06		24.06	26.29	24.84	15.86
7/28/2007 0:06		24.06	26.1	24.74	15.95
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7/28/2007 0:07		24.06	26.2	25.03	21.86
7/28/2007 0:07		24.06	26.39	25.03	20.81
7/28/2007 0:08		24.06	26.1	25.03	25.81
7/28/2007 0:08		24.06	26	25.03	25.32
7/28/2007 0:08		24.06	25.71	25.03	25.51
7/28/2007 0:08		24.06	26.29	25.03	22.91
7/28/2007 0:09		24.06	26	25.13	22.81
7/28/2007 0:09		24.06	26.39	25.13	29.05
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7/28/2007 0:10		24.06	26.2	25.13	33.64
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7/28/2007 0:10		24.06	26.39	25.03	34.59
7/28/2007 0:11		24.06	26.2	25.03	30.26
7/28/2007 0:11		24.06	26.39	25.03	29.45
7/28/2007 0:11		24.06	26.29	25.03	26.39
7/28/2007 0:11		24.06	26.49	25.03	27.57
7/28/2007 0:12		24.06	26.29	25.03	27.37
7/28/2007 0:12		24.06	26.49	25.32	27.27
7/28/2007 0:12		24.06	26.39	25.32	27.96
7/28/2007 0:12		24.06	26.59	25.32	29.35
7/28/2007 0:13		24.06	26.49	25.32	33.01
7/28/2007 0:13		24.06	26.39	25.32	31.06
7/28/2007 0:13		24.16	26.29	25.32	30.56
7/28/2007 0:13		24.06	26.49	25.32	29.65
7/28/2007 0:14		24.16	26.49	25.32	27.86
7/28/2007 0:14		24.16	26.68	25.32	27.76
7/28/2007 0:14		24.16	26.49	25.32	27.96
7/28/2007 0:14		24.16	26.68	25.32	29.05
7/28/2007 0:15		24.16	26.59	25.32	29.45
7/28/2007 0:15		24.16	26.68	25.32	30.86
7/28/2007 0:15		24.16	26.59	25.32	30.86
7/28/2007 0:15		24.16	26.68	25.32	28.95
7/28/2007 0:16		24.16	26.59	25.42	28.46

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7/28/2007 0:16		24.16	26.59	25.42	27.27
7/28/2007 0:16		24.16	26.68	25.42	27.17
7/28/2007 0:17		24.16	26.59	25.42	28.36
7/28/2007 0:17		24.16	26.78	25.42	27.86
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7/28/2007 0:18		24.16	26.78	25.42	26.2
7/28/2007 0:18		24.16	26.59	25.42	25.32
7/28/2007 0:18		24.16	26.88	25.42	30.46
7/28/2007 0:19		24.16	26.68	25.42	33.74
7/28/2007 0:19		24.16	26.78	25.42	31.78
7/28/2007 0:19		24.16	26.88	25.42	27.47
7/28/2007 0:19		24.16	26.68	25.42	24.16
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7/28/2007 0:20		24.16	26.88	25.42	20.42
7/28/2007 0:20		24.16	26.78	25.42	19.66
7/28/2007 0:21		24.16	26.68	25.32	18.9
7/28/2007 0:21		24.16	26.59	25.32	18.62
7/28/2007 0:21		24.16	26.88	25.42	18.33
7/28/2007 0:21		24.26	26.78	25.42	18.24
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7/28/2007 0:23		24.26	26.68	25.32	16.71
7/28/2007 0:23		24.26	26.49	25.22	16.52
7/28/2007 0:23		24.26	26.68	25.22	16.24
7/29/2007 0:00		24.26	26.39	25.22	16.62
7/29/2007 0:00		24.26	26.78	25.03	16.43
7/29/2007 0:00		24.26	26.49	24.93	15.95
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7/29/2007 0:02		24.26	26.78	24.26	15.95
7/29/2007 0:02		24.26	26.49	24.16	15.76
7/29/2007 0:02		24.26	26.78	23.97	15.66
7/29/2007 0:02		24.26	26.68	24.64	15
7/29/2007 0:03		24.26	26.29	24.84	14.9
7/29/2007 0:03		24.26	26.1	24.84	15.09
7/29/2007 0:03		24.26	25.81	24.93	14.04
7/29/2007 0:03		24.26	25.51	24.93	13.65
7/29/2007 0:04		24.26	26.39	24.93	13.37
7/29/2007 0:04		24.35	26	24.93	13.27
7/29/2007 0:04		24.26	26.49	24.84	13.56
7/29/2007 0:04		24.35	26.2	24.84	14.33
7/29/2007 0:05		24.35	26.39	24.84	14.42
7/29/2007 0:05		24.35	26.49	24.74	14.61
7/29/2007 0:05		24.35	26.29	24.45	14.61
7/29/2007 0:05		24.35	26.1	24.16	14.23
7/29/2007 0:06		24.35	26.1	23.87	13.17
7/29/2007 0:06		24.35	25.9	23.68	13.46
7/29/2007 0:06		24.35	26.49	23.48	14.8
7/29/2007 0:06		24.35	26.1	23.29	16.81
7/29/2007 0:07		24.35	25.81	23.1	18.71
7/29/2007 0:07		24.35	25.51	22.91	21.19
7/29/2007 0:07		24.35	26.2	24.26	24.45
7/29/2007 0:07		24.35	25.81	24.55	26.88
7/29/2007 0:08		24.35	26.29	24.64	30.15
7/29/2007 0:08		24.35	25.9	24.26	30.96
7/29/2007 0:08		24.35	25.42	24.55	31.78
7/29/2007 0:08		24.35	25.42	24.64	33.33
7/29/2007 0:09		23.48	25.51	24.74	33.12
7/29/2007 0:09		23.1	26	24.84	30.76
7/29/2007 0:09		23.1	26.29	24.84	26.39
7/29/2007 0:09		23.1	26.2	24.84	30.36
7/29/2007 0:10		22.81	26	24.93	31.68
7/29/2007 0:10		22.81	26.49	24.93	31.27
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7/29/2007 0:11		22.81	26.49	24.64	33.22
7/29/2007 0:11		22.81	26.29	24.45	33.12
7/29/2007 0:11		22.81	26.59	24.35	33.85
7/29/2007 0:11		22.81	26.39	24.16	33.64
7/29/2007 0:12		22.81	26.78	24.16	33.74
7/29/2007 0:12		22.81	26.49	24.06	36.51
7/29/2007 0:12		22.91	26.78	24.93	33.12
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7/29/2007 0:13		22.91	26.88	25.22	34.06
7/29/2007 0:13		22.91	26.68	25.22	32.5
7/29/2007 0:13		22.91	26.88	25.32	30.86
7/29/2007 0:13		22.91	26.68	25.32	34.59
7/29/2007 0:14		22.91	26.78	25.32	29.05
7/29/2007 0:14		22.91	26.88	25.42	39.05

7/29/2007 0:14		22.91	26.68	25.42	33.95
7/29/2007 0:14		22.91	26.98	25.42	34.16
7/29/2007 0:15		22.91	26.88	25.42	34.37
7/29/2007 0:15		22.91	27.08	25.32	32.5
7/29/2007 0:15		22.91	26.88	25.32	29.55
7/29/2007 0:15		22.91	26.78	25.22	29.75
7/29/2007 0:16		22.91	27.08	25.13	27.37
7/29/2007 0:16		22.91	26.88	25.13	25.42
7/29/2007 0:16		22.91	27.08	25.03	23.39
7/29/2007 0:16		22.91	26.98	25.03	23
7/29/2007 0:17		22.91	26.88	25.42	23.97
7/29/2007 0:17		22.91	26.78	25.51	23.97
7/29/2007 0:17		23	26.49	25.51	24.55
7/29/2007 0:17		23	27.08	25.51	25.13
7/29/2007 0:18		23	26.68	25.42	27.08
7/29/2007 0:18		23	26.78	25.42	32.39
7/29/2007 0:18		23	26.49	25.42	30.76
7/29/2007 0:18		23	27.08	25.51	31.47
7/29/2007 0:19		23	26.68	25.51	30.66
7/29/2007 0:19		23	26.49	25.42	28.46
7/29/2007 0:19		23	26.88	25.32	25.32
7/29/2007 0:19		23	26.59	25.13	22.43
7/29/2007 0:20		23	26.98	25.03	20.81
7/29/2007 0:20		23	26.68	24.93	19.76
7/29/2007 0:20		23	27.08	24.84	18.81
7/29/2007 0:20		23	26.68	24.74	18.05
7/29/2007 0:21		23	26.88	24.74	17.95
7/29/2007 0:21		23	26.59	25.32	17.86
7/29/2007 0:21		23	26.98	25.51	17.76
7/29/2007 0:21		23.1	26.68	25.51	17.95
7/29/2007 0:22		23.1	26.88	25.51	17.76
7/29/2007 0:22		23.1	26.68	25.51	17.95
7/29/2007 0:22		23.1	26.68	25.51	18.43
7/29/2007 0:22		23.1	26.78	25.51	17.95
7/29/2007 0:23		23.1	26.49	25.51	17.95
7/29/2007 0:23		23.1	26.59	25.51	17.48
7/29/2007 0:23		23.1	26.59	25.42	17
7/29/2007 0:23		23.1	26.68	25.22	17
7/30/2007 0:00		23.1	26.78	25.03	16.62
7/30/2007 0:00		23.1	26.59	24.84	16.81
7/30/2007 0:00		23.1	26.68	24.74	16.33
7/30/2007 0:00		23.1	26.39	24.55	16.52
7/30/2007 0:01		23.1	26.49	24.45	16.14
7/30/2007 0:01		23.1	26.1	24.35	15.38
7/30/2007 0:01		23.1	26.68	24.84	15.47
7/30/2007 0:01		23.1	26.68	25.32	15.57
7/30/2007 0:02		23.1	26.39	25.42	15.19
7/30/2007 0:02		23.2	26.68	25.42	15.28
7/30/2007 0:02		23.2	26.39	25.42	15
7/30/2007 0:02		23.2	26.1	25.42	14.61
7/30/2007 0:03		23.2	26.49	25.42	14.23
7/30/2007 0:03		23.2	26	25.42	14.42
7/30/2007 0:03		23.2	26.59	25.32	14.04
7/30/2007 0:03		23.2	26.2	25.32	13.56
7/30/2007 0:04		23.2	26.49	25.13	13.17
7/30/2007 0:04		23.2	26.1	24.84	12.98
7/30/2007 0:04		23.2	26.49	24.64	13.46
7/30/2007 0:04		23.2	26.2	24.45	13.46
7/30/2007 0:05		23.2	26.29	24.26	13.17
7/30/2007 0:05		23.2	26.39	24.16	12.88
7/30/2007 0:05		23.2	26.29	23.97	12.69
7/30/2007 0:05		23.2	26.1	24.35	12.4
7/30/2007 0:06		23.2	26.2	25.03	12.21
7/30/2007 0:06		23.2	25.9	25.13	12.98
7/30/2007 0:06		23.2	25.32	25.13	15
7/30/2007 0:06		23.2	26.29	25.13	16.81
7/30/2007 0:07		23.2	25.71	25.13	18.9
7/30/2007 0:07		23.29	26.39	25.13	22.14
7/30/2007 0:07		23.29	25.81	25.13	24.74
7/30/2007 0:07		23.29	25.61	25.13	28.95
7/30/2007 0:08		23.29	26.2	25.13	31.88
7/30/2007 0:08		23.29	25.61	25.13	34.37
7/30/2007 0:08		23.29	26.29	25.03	36.19
7/30/2007 0:08		23.29	25.71	24.64	37.27
7/30/2007 0:09		23.29	26.29	24.45	34.9
7/30/2007 0:09		23.29	25.9	24.16	34.48
7/30/2007 0:09		23.29	26.39	23.97	29.35
7/30/2007 0:09		23.29	26	23.87	34.27
7/30/2007 0:10		23.29	26.2	23.68	35.33
7/30/2007 0:10		23.29	26.49	23.58	35.12
7/30/2007 0:10		25.51	26.2	23.58	35.54
7/30/2007 0:10		23.58	26.68	25.22	37.17
7/30/2007 0:11		23.58	26.88	25.9	36.51
7/30/2007 0:11		23.58	35.97	26.39	36.62
7/30/2007 0:11		23.58	41.58	26.68	36.51
7/30/2007 0:11		23.58	43.6		36.62
7/30/2007 0:12		23.48	27.67	28.36	37.6
7/30/2007 0:12		23.48	27.57	27.47	37.82
7/30/2007 0:12		23.48	27.47	27.08	36.84

7/30/2007 0:12		23.48	27.27	26.68	38.27
7/30/2007 0:13		23.48	27.08	26.49	36.95
7/30/2007 0:13		23.48	26.68	26.29	36.84
7/30/2007 0:13		23.58	26.78	26.2	38.38
7/30/2007 0:13		23.58	26.68	26.2	38.05
7/30/2007 0:14		23.58	26.49	26.2	39.5
7/30/2007 0:14		23.58	26.59	26.1	39.05
7/30/2007 0:14		23.58	26.78	26.1	32.09
7/30/2007 0:14		23.58	26.59	26.1	37.17
7/30/2007 0:15		23.58	26.39	26	38.49
7/30/2007 0:15		23.58	26.68	25.9	39.62
7/30/2007 0:15		23.58	26.78	25.9	34.37
7/30/2007 0:15		23.68	26.68	25.9	40.3
7/30/2007 0:16		23.68	26.78	25.9	33.54
7/30/2007 0:16		23.68	26.88	25.9	29.85
7/30/2007 0:16		23.68	26.68	25.9	27.47
7/30/2007 0:16		23.68	26.78	25.9	27.86
7/30/2007 0:17		23.68	26.88	25.9	25.81
7/30/2007 0:17		23.77	26.59	25.9	22.43
7/30/2007 0:17		23.77	26.1	25.81	22.24
7/30/2007 0:17		23.77	26.68	25.71	22.91
7/30/2007 0:18		23.77	26.49	25.71	24.35
7/30/2007 0:18		23.77	26	25.71	31.06
7/30/2007 0:18		23.77	26.39	25.71	27.27
7/30/2007 0:18		23.77	26.59	25.71	26.88
7/30/2007 0:19		23.87	26.1	25.71	26.39
7/30/2007 0:19		23.87	26.1	25.71	25.81
7/30/2007 0:19		23.87	26.49	25.71	25.32
7/30/2007 0:19		23.87	26.29	25.71	24.64
7/30/2007 0:20		23.87	26.49	25.71	23.39
7/30/2007 0:20		23.87	26.49	25.71	22.43
7/30/2007 0:20		23.87	26.2	25.71	21.95
7/30/2007 0:20		23.87	26.49	25.71	21.38
7/30/2007 0:21		23.97	26.39	25.71	21.28
7/30/2007 0:21		23.97	25.9	25.61	20.81
7/30/2007 0:21		23.97	25.81	25.51	20.04
7/30/2007 0:21		23.97	26.88	25.51	19.76
7/30/2007 0:22		23.97	26.78	25.42	19.09
7/30/2007 0:22		23.97	26.49	25.32	18.62
7/30/2007 0:22		23.97	26.68	25.22	19.28
7/30/2007 0:22		23.97	26.1	25.13	19.66
7/30/2007 0:23		23.97	26.49	25.03	18.71
7/30/2007 0:23		23.97	26	25.03	18.14
7/30/2007 0:23		23.97	25.51	25.22	18.05
7/30/2007 0:23		24.06	26.39	25.32	17.38
7/31/2007 0:00		24.06	26.2	25.32	16.52
7/31/2007 0:00		24.06	26.29	25.42	15.95
7/31/2007 0:00		24.06	25.9	25.42	15.76
7/31/2007 0:00		24.06	25.61	25.42	15.47
7/31/2007 0:01		24.06	26.29	25.42	15.09
7/31/2007 0:01		24.06	25.71	25.42	15
7/31/2007 0:01		24.06	25.61	25.42	15.19
7/31/2007 0:01		24.06	26.2	25.42	15.28
7/31/2007 0:02		24.06	26.1	25.42	15.57
7/31/2007 0:02		24.06	26.1	25.42	15.95
7/31/2007 0:02		24.06	25.9	25.42	14.8
7/31/2007 0:02		24.06	25.81	25.32	15.19
7/31/2007 0:03		24.06	25.32	25.32	14.9
7/31/2007 0:03		24.06	25.42	25.32	14.42
7/31/2007 0:03		24.06	26.1	25.32	14.04
7/31/2007 0:03		24.06	26	25.32	13.94
7/31/2007 0:04		24.06	26	25.32	13.65
7/31/2007 0:04		24.06	25.51	25.22	13.27
7/31/2007 0:04		24.06	26	25.22	13.46
7/31/2007 0:04		24.06	25.51	25.22	13.17
7/31/2007 0:05		24.06	26.2	25.22	13.37
7/31/2007 0:05		24.06	26.2	25.13	12.98
7/31/2007 0:05		24.06	26.1	25.13	12.88
7/31/2007 0:05		24.06	26.1	25.13	12.98
7/31/2007 0:06		24.06	25.51	25.13	13.17
7/31/2007 0:06		24.06	25.03	25.13	13.75
7/31/2007 0:06		24.06	25.81	25.03	15.86
7/31/2007 0:06		24.06	25.71	25.03	19.38
7/31/2007 0:07		24.06	25.71	25.03	23
7/31/2007 0:07		24.06	25.71	24.93	26.78
7/31/2007 0:07		24.06	25.61	24.93	30.05
7/31/2007 0:07		24.06	25.61	24.74	31.47
7/31/2007 0:08		24.06	25.42	24.55	32.81
7/31/2007 0:08		24.06	25.42	24.45	31.78
7/31/2007 0:08		24.06	25.42	24.26	33.01
7/31/2007 0:08		24.06	25.42	24.16	33.33
7/31/2007 0:09		24.06	25.71	24.06	35.54
7/31/2007 0:09		24.06	25.81	24.06	35.01
7/31/2007 0:09		24.06	25.81	24.26	30.56
7/31/2007 0:09		24.06	25.42	24.55	36.73
7/31/2007 0:10		24.06	24.93	24.74	35.22
7/31/2007 0:10		24.06	25.51	24.93	36.84
7/31/2007 0:10		24.06	26	25.03	37.06
7/31/2007 0:10		24.06	25.61	25.13	36.19

7/31/2007 0:11		24.06	25.22	25.13	36.62
7/31/2007 0:11		24.16	25.81	25.22	37.06
7/31/2007 0:11		24.16	26.1	25.22	37.38
7/31/2007 0:11		24.16	25.9	25.22	37.49
7/31/2007 0:12		24.16	26.1	25.22	37.71
7/31/2007 0:12		24.16	25.71	25.32	38.27
7/31/2007 0:12		24.16	25.61	25.22	37.17
7/31/2007 0:12		24.26	26.29	25.13	38.94
7/31/2007 0:13		24.26	26.2	24.93	39.62
7/31/2007 0:13		24.26	25.9	24.93	39.5
7/31/2007 0:13		24.26	26.29	24.93	41.23
7/31/2007 0:13		24.35	26.39	24.84	41.11
7/31/2007 0:14		24.35	26.39	24.84	39.62
7/31/2007 0:14		24.35	26.1	24.93	40.99
7/31/2007 0:14		24.45	26	25.22	40.07
7/31/2007 0:14		24.45	26.49	25.32	39.84
7/31/2007 0:15		24.45	26.39	25.42	39.39
7/31/2007 0:15		24.45	26.2	25.51	39.84
7/31/2007 0:15		24.55	26.59	25.51	34.9
7/31/2007 0:15		24.55	26.49	25.61	34.48
7/31/2007 0:16		24.55	26.68	25.61	39.84
7/31/2007 0:16		24.64	26.78	25.61	41.34
7/31/2007 0:16		24.64	26.59	25.71	40.76
7/31/2007 0:16		24.64	26.39	25.71	41.58
7/31/2007 0:17		24.74	26.88	25.71	41.58
7/31/2007 0:17		24.74	26.78	25.71	39.5
7/31/2007 0:17		24.74	26.49	25.71	38.38
7/31/2007 0:17		24.74	26.78	25.61	38.05
7/31/2007 0:18		24.84	26.88	25.61	36.73
7/31/2007 0:18		24.84	26.78	25.71	35.76
7/31/2007 0:18		24.84	26.59	25.81	31.68
7/31/2007 0:18		24.84	26.98	25.81	33.43
7/31/2007 0:19		24.84	26.88	25.9	30.86
7/31/2007 0:19		24.93	26.98	25.9	30.05
7/31/2007 0:19		24.93	26.98	25.9	28.16
7/31/2007 0:19		24.93	27.08	26	26
7/31/2007 0:20		24.93	27.08	26	24.55
7/31/2007 0:20		24.93	26.88	26	22.62
7/31/2007 0:20		24.93	27.27	26	21.86
7/31/2007 0:20		24.93	27.27	26.1	21.38
7/31/2007 0:21		24.93	27.17	26.1	21.09
7/31/2007 0:21		24.93	27.17	26	21.19
7/31/2007 0:21		24.93	27.08	26.1	20.62
7/31/2007 0:21		24.93	26.98	26	20.33
7/31/2007 0:22		24.93	26.78	26	20.33
7/31/2007 0:22		24.93	27.08	26	20.42
7/31/2007 0:22		24.93	26.88	25.9	20.04
7/31/2007 0:22		24.93	26.68	26	19.85
7/31/2007 0:23		24.93	26.68	26	19.95
7/31/2007 0:23		24.93	26.98	26	19.66
7/31/2007 0:23		24.93	26.78	26	19.76
7/31/2007 0:23		24.93	26.59	26	19.38
8/1/2007 0:00		24.93	26.78	26	18.62
8/1/2007 0:00		24.93	27.08	26	19.09
8/1/2007 0:00		24.93	27.08	25.9	19.57
8/1/2007 0:00		24.93	26.98	25.9	19.19
8/1/2007 0:01		24.93	26.98	25.9	18.81
8/1/2007 0:01		24.93	26.78	25.9	18.05
8/1/2007 0:01		24.93	26.59	25.81	18.71
8/1/2007 0:01		24.93	26.68	25.81	18.71
8/1/2007 0:02		24.93	26.68	25.71	17.86
8/1/2007 0:02		24.93	26.39	25.71	18.43
8/1/2007 0:02		24.93	26.29	25.61	18.43
8/1/2007 0:02		24.93	26.68	25.61	17.86
8/1/2007 0:03		24.93	26.49	25.51	17.67
8/1/2007 0:03		24.93	26.49	25.61	17.19
8/1/2007 0:03		24.93	26.1	25.71	17
8/1/2007 0:03		24.93	25.9	25.81	16.81
8/1/2007 0:04		24.84	26.59	25.81	16.71
8/1/2007 0:04		24.84	26.59	25.9	16.52
8/1/2007 0:04		24.84	26.1	25.9	16.05
8/1/2007 0:04		24.84	25.81	25.9	15.38
8/1/2007 0:05		24.84	26.49	25.81	14.71
8/1/2007 0:05		24.84	26.49	25.81	14.13
8/1/2007 0:05		24.84	26.2	25.81	13.94
8/1/2007 0:05		24.84	25.9	25.81	13.65
8/1/2007 0:06		24.74	26.49	25.81	13.75
8/1/2007 0:06		24.74	26.39	25.71	14.13
8/1/2007 0:06		24.74	26	25.61	15.66
8/1/2007 0:06		24.74	26.49	25.51	19.28
8/1/2007 0:07		24.74	26.68	25.32	23.2
8/1/2007 0:07		24.74	26.59	25.22	27.37
8/1/2007 0:07		24.74	26.68	25.22	29.55
8/1/2007 0:07		24.74	26.49	25.13	31.78
8/1/2007 0:08		24.74	26.1	25.03	34.9
8/1/2007 0:08		24.74	25.81	25.03	36.4
8/1/2007 0:08		24.74	26.49	24.93	36.19
8/1/2007 0:08		24.84	26.29	24.93	38.6
8/1/2007 0:09		24.84	26.49	25.22	40.19

8/1/2007 0:09		24.84	26	25.42	37.38
8/1/2007 0:09		24.84	25.71	25.61	32.39
8/1/2007 0:09		24.84	26.39	25.71	38.94
8/1/2007 0:10		24.84	26.49	25.71	39.62
8/1/2007 0:10		24.84	26.2	25.81	39.28
8/1/2007 0:10		24.84	26	25.81	39.5
8/1/2007 0:10		24.84	26.59	25.9	38.94
8/1/2007 0:11		24.84	26.59	25.81	39.96
8/1/2007 0:11		24.93	26.29	25.81	38.94
8/1/2007 0:11		24.93	26.2	25.81	37.82
8/1/2007 0:11		24.93	26.78	25.81	37.38
8/1/2007 0:12		24.93	26.68	25.81	37.38
8/1/2007 0:12		24.93	26.59	25.71	37.82
8/1/2007 0:12		25.03	26.78	25.71	38.16
8/1/2007 0:12		25.03	26.88	25.61	37.94
8/1/2007 0:13		25.13	26.98	25.61	38.27
8/1/2007 0:13		25.13	26.98	25.51	38.05
8/1/2007 0:13		25.13	26.88	25.51	39.28
8/1/2007 0:13		25.22	26.88	25.71	39.39
8/1/2007 0:14		25.22	26.98	25.9	40.3
8/1/2007 0:14		25.22	26.98	26	37.71
8/1/2007 0:14		25.32	27.08	26	40.76
8/1/2007 0:14		25.32	26.98	26.1	40.53
8/1/2007 0:15		25.32	26.98	26.1	39.28
8/1/2007 0:15		25.42	27.17	26.1	41.46
8/1/2007 0:15		25.42	27.17	26.1	38.27
8/1/2007 0:15		25.42	27.27	26.1	32.7
8/1/2007 0:16		25.42	27.17	26.1	39.16
8/1/2007 0:16		25.42	27.08	26	43.48
8/1/2007 0:16		25.42	27.37	26	40.99
8/1/2007 0:16		25.51	27.37	26	40.42
8/1/2007 0:17		25.51	27.27	26	40.42
8/1/2007 0:17		25.51	27.47	26.1	40.53
8/1/2007 0:17		25.51	27.57	26.1	40.88
8/1/2007 0:17		25.51	27.57	26.2	34.69
8/1/2007 0:18		25.61	27.47	26.29	25.81
8/1/2007 0:18		25.61	27.47	26.29	26.59
8/1/2007 0:18		25.61	27.37	26.29	25.81
8/1/2007 0:18		25.61	27.27	26.29	26
8/1/2007 0:19		25.61	27.47	26.29	23.68
8/1/2007 0:19		25.61	27.47	26.29	21.86
8/1/2007 0:19		25.61	27.27	26.29	21.38
8/1/2007 0:19		25.61	27.57	26.2	21
8/1/2007 0:20		25.61	27.57	26.2	20.71
8/1/2007 0:20		25.61	27.57	26.2	20.62
8/1/2007 0:20		25.51	27.47	26.1	20.33
8/1/2007 0:20		25.51	27.37	26.1	20.23
8/1/2007 0:21		25.51	27.37	26.1	20.14
8/1/2007 0:21		25.51	27.57	26.29	20.14
8/1/2007 0:21		25.51	27.57	26.39	19.38
8/1/2007 0:21		25.42	27.67	26.49	17.95
8/1/2007 0:22		25.42	27.57	26.49	17.38
8/1/2007 0:22		25.42	27.47	26.49	17.09
8/1/2007 0:22		25.42	27.27	26.39	16.62
8/1/2007 0:22		25.42	27.27	26.39	16.43
8/1/2007 0:23		25.42	27.47	26.39	16.52
8/1/2007 0:23		25.42	27.17	26.39	16.52
8/1/2007 0:23		25.32	26.88	26.39	16.33
8/1/2007 0:23		25.32	27.17	26.29	16.43
8/2/2007 0:00		25.32	27.27	26.29	16.81
8/2/2007 0:00		25.32	27.08	26.2	17.28
8/2/2007 0:00		25.32	26.98	26	17.57
8/2/2007 0:00		25.32	26.68	25.9	17.67
8/2/2007 0:01		25.32	26.29	25.81	17.67
8/2/2007 0:01		25.32	27.08	25.71	18.05
8/2/2007 0:01		25.32	27.08	25.61	18.52
8/2/2007 0:01		25.32	26.68	25.51	19
8/2/2007 0:02		25.32	26.39	25.51	19.38
8/2/2007 0:02		25.32	26.98	25.42	19.57
8/2/2007 0:02		25.32	27.17	25.51	19.85
8/2/2007 0:02		25.32	27.08	25.81	19.95
8/2/2007 0:03		25.22	27.08	25.9	19.57
8/2/2007 0:03		25.32	26.98	25.9	19.19
8/2/2007 0:03		25.22	26.49	26	17.86
8/2/2007 0:03		25.22	26.59	26	16.81
8/2/2007 0:04		25.22	26.78	26.1	16.05
8/2/2007 0:04		25.22	26.39	26.1	15.86
8/2/2007 0:04		25.22	26	26.2	16.05
8/2/2007 0:04		25.22	26.88	26.2	15.57
8/2/2007 0:05		25.22	26.59	26.2	15.28
8/2/2007 0:05		25.22	26.59	26.1	14.8
8/2/2007 0:05		25.22	26.68	26.1	14.52
8/2/2007 0:05		25.22	26.29	25.9	14.33
8/2/2007 0:06		25.22	26.29	25.81	13.94
8/2/2007 0:06		25.22	26.68	25.61	14.61
8/2/2007 0:06		25.22	26.29	25.51	16.14
8/2/2007 0:06		25.22	26.68	25.42	19.57
8/2/2007 0:07		25.22	26.39	25.32	22.14
8/2/2007 0:07		25.22	26	25.22	24.74

8/2/2007 0:07		25.22	26.39	25.13	26.68
8/2/2007 0:07		25.22	26.88	25.13	29.35
8/2/2007 0:08		25.22	26.78	25.42	31.06
8/2/2007 0:08		25.22	26.68	25.61	32.81
8/2/2007 0:08		25.22	26.88	25.81	33.64
8/2/2007 0:08		25.22	26.59	25.9	34.9
8/2/2007 0:09		25.22	26.59	25.9	34.06
8/2/2007 0:09		25.22	26.2	25.9	32.19
8/2/2007 0:09		25.22	26.29	25.9	29.45
8/2/2007 0:09		25.22	26.78	25.9	36.19
8/2/2007 0:10		25.22	26.49	26	32.5
8/2/2007 0:10		25.32	26.1	26	29.35
8/2/2007 0:10		25.42	26.88	25.9	30.86
8/2/2007 0:10		25.32	26.88	25.81	37.94
8/2/2007 0:11		25.51	26.78	26.1	30.46
8/2/2007 0:11		25.61	28.36	27.37	35.54
8/2/2007 0:11		25.42	27.08	41.81	38.27
8/2/2007 0:11		25.42	27.47	41.81	38.27
8/2/2007 0:12		25.32	27.57	39.05	34.06
8/2/2007 0:12		25.22	27.86	39.5	34.16
8/2/2007 0:12		24.64	28.46	38.94	33.54
8/2/2007 0:12		24.74	27.86	42.4	34.16
8/2/2007 0:13		24.74	28.16	44.33	34.59
8/2/2007 0:13		24.74	28.85	43.48	37.71
8/2/2007 0:13		24.84	29.05	29.55	38.16
8/2/2007 0:13		24.84	29.05	29.15	41.69
8/2/2007 0:14		24.93	28.46	29.05	35.22
8/2/2007 0:14		24.93	27.76	28.66	40.99
8/2/2007 0:14		24.93	27.76	27.96	38.16
8/2/2007 0:14		24.93	27.86	27.67	35.12
8/2/2007 0:15		24.93	27.76	27.57	31.98
8/2/2007 0:15		24.93	27.67	27.57	35.33
8/2/2007 0:15		25.03	27.67	27.57	35.44
8/2/2007 0:15		25.03	27.67	27.57	29.35
8/2/2007 0:16		25.03	27.67	27.47	29.05
8/2/2007 0:16		25.03	27.67	27.27	28.95
8/2/2007 0:16		25.03	27.67	27.08	29.65
8/2/2007 0:16		25.03	27.67	27.08	30.46
8/2/2007 0:17		25.03	27.67	26.98	28.06
8/2/2007 0:17		25.13	27.67	27.08	28.56
8/2/2007 0:17		25.13	27.67	27.08	27.17
8/2/2007 0:17		25.13	27.67	27.08	27.37
8/2/2007 0:18		25.13	27.67	27.08	26.68
8/2/2007 0:18		25.13	27.67	27.08	26.29
8/2/2007 0:18		25.13	27.76	26.98	29.45
8/2/2007 0:18		25.13	27.76	26.98	28.56
8/2/2007 0:19		25.13	27.76	26.98	27.17
8/2/2007 0:19		25.13	27.76	26.98	25.71
8/2/2007 0:19		25.13	27.67	26.98	24.93
8/2/2007 0:19		25.13	27.67	26.98	23.87
8/2/2007 0:20		25.13	27.86	26.98	21.95
8/2/2007 0:20		25.13	27.76	27.08	20.62
8/2/2007 0:20		25.22	27.86	27.08	20.52
8/2/2007 0:20		25.22	27.86	27.08	20.42
8/2/2007 0:21		25.22	27.86	27.08	20.23
8/2/2007 0:21		25.22	27.86	27.08	19.85
8/2/2007 0:21		25.22	27.86	27.08	19.57
8/2/2007 0:21		25.22	27.86	26.98	19.09
8/2/2007 0:22		25.22	27.96	26.88	18.71
8/2/2007 0:22		25.22	27.86	26.88	18.24
8/2/2007 0:22		25.22	27.86	26.88	16.71
8/2/2007 0:22		25.22	27.86	26.88	16.62
8/2/2007 0:23		25.22	27.76	26.88	16.71
8/2/2007 0:23		25.22	27.67	26.88	16.81
8/2/2007 0:23		25.32	27.86	26.88	16.9
8/2/2007 0:23		25.32	27.76	26.78	17
8/3/2007 0:00		25.32	27.76	26.78	17
8/3/2007 0:00		25.32	27.86	26.78	17
8/3/2007 0:00		25.32	27.76	26.78	16.9
8/3/2007 0:00		25.32	28.06	26.78	16.9
8/3/2007 0:01		25.32	27.96	26.78	16.9
8/3/2007 0:01		25.32	27.86	26.68	16.62
8/3/2007 0:01		25.32	27.67	26.68	16.62
8/3/2007 0:01		25.32	27.57	26.68	16.9
8/3/2007 0:02		25.32	27.96	26.68	16.9
8/3/2007 0:02		25.32	27.76	26.68	16.81
8/3/2007 0:02		25.32	27.67	26.68	16.9
8/3/2007 0:02		25.32	27.76	26.68	16.71
8/3/2007 0:03		25.32	27.86	26.59	16.9
8/3/2007 0:03		25.32	27.76	26.59	16.9
8/3/2007 0:03		25.32	27.67	26.59	16.81
8/3/2007 0:03		25.32	27.96	26.59	16.81
8/3/2007 0:04		25.32	27.76	26.49	16.81
8/3/2007 0:04		25.32	27.57	26.49	16.71
8/3/2007 0:04		25.32	27.96	26.59	16.81
8/3/2007 0:04		25.32	27.76	26.59	16.9
8/3/2007 0:05		25.32	27.96	26.49	16.81
8/3/2007 0:05		25.32	27.67	26.49	16.81
8/3/2007 0:05		25.32	27.57	26.49	16.62

8/3/2007 0:05		25.32	27.37	26.49	17
8/3/2007 0:06		25.32	27.86	26.49	17.09
8/3/2007 0:06		25.32	27.67	26.49	17
8/3/2007 0:06		25.32	27.47	26.49	17.38
8/3/2007 0:06		25.32	27.57	26.39	18.24
8/3/2007 0:07		25.32	27.86	26.39	19.47
8/3/2007 0:07		25.32	27.76	26.29	19.19
8/3/2007 0:07		25.32	27.76	26.29	19.95
8/3/2007 0:07		25.32	27.67	26.2	28.36
8/3/2007 0:08		25.32	27.67	26.39	22.33
8/3/2007 0:08		25.32	27.67	26.39	28.46
8/3/2007 0:08		25.32	27.67	26.39	33.85
8/3/2007 0:08		25.32	27.76	26.39	35.97
8/3/2007 0:09		25.32	27.67	26.29	31.27
8/3/2007 0:09		25.32	27.47	26.29	28.85
8/3/2007 0:09		25.32	27.86	26.29	30.36
8/3/2007 0:09		25.32	27.57	26.2	35.65
8/3/2007 0:10		25.32	27.37	26.2	37.6
8/3/2007 0:10		25.32	27.67	26.39	38.49
8/3/2007 0:10		25.32	27.86	26.49	36.84
8/3/2007 0:10		25.32	27.47	26.49	36.4
8/3/2007 0:11		25.32	27.76	26.49	37.06
8/3/2007 0:11		25.32	27.76	26.49	41.23
8/3/2007 0:11		25.32	27.57	26.49	39.73
8/3/2007 0:11		25.32	27.37	26.49	32.81
8/3/2007 0:12		25.32	27.86	26.49	29.75
8/3/2007 0:12		25.32	28.06	26.49	30.76
8/3/2007 0:12		25.32	27.96	26.49	31.98
8/3/2007 0:12		25.42	27.86	26.49	32.7
8/3/2007 0:13		25.42	27.67	26.49	33.12
8/3/2007 0:13		25.42	28.06	26.59	35.01
8/3/2007 0:13		25.42	28.06	26.59	34.69
8/3/2007 0:13		25.42	27.76	26.59	37.49
8/3/2007 0:14		25.42	28.06	26.59	40.07
8/3/2007 0:14		25.42	27.96	26.59	32.91
8/3/2007 0:14		25.42	27.76	26.59	39.96
8/3/2007 0:14		25.42	28.06	26.59	31.37
8/3/2007 0:15		25.42	27.96	26.59	32.09
8/3/2007 0:15		25.42	27.76	26.68	36.84
8/3/2007 0:15		25.42	27.86	26.68	43.72
8/3/2007 0:15		25.42	28.16	26.68	33.01
8/3/2007 0:16		25.42	28.06	26.68	32.39
8/3/2007 0:16		25.42	27.86	26.68	29.75
8/3/2007 0:16		25.42	27.96	26.68	28.66
8/3/2007 0:16		25.42	28.26	26.68	21.86
8/3/2007 0:17		25.51	28.16	26.68	22.05
8/3/2007 0:17		25.51	27.96	26.68	23
8/3/2007 0:17		25.51	28.06	26.68	23.2
8/3/2007 0:17		25.51	28.26	26.68	23
8/3/2007 0:18		25.51	28.06	26.68	23.1
8/3/2007 0:18		25.51	27.76	26.68	23.2
8/3/2007 0:18		25.51	28.36	26.68	23
8/3/2007 0:18		25.51	28.36	26.68	21.66
8/3/2007 0:19		25.51	28.26	26.59	18.24
8/3/2007 0:19		25.51	28.36	26.59	19.09
8/3/2007 0:19		25.51	28.26	26.59	20.42
8/3/2007 0:19		25.51	28.26	26.49	19.76
8/3/2007 0:20		25.51	28.16	26.49	19.09
8/3/2007 0:20		25.51	27.86	26.39	19.09
8/3/2007 0:20		25.51	28.36	26.59	19.38
8/3/2007 0:20		25.51	28.16	26.68	19.28
8/3/2007 0:21		25.51	27.76	26.68	18.62
8/3/2007 0:21		25.51	28.26	26.68	18.52
8/3/2007 0:21		25.51	28.06	26.68	18.33
8/3/2007 0:21		25.51	27.67	26.88	18.81
8/3/2007 0:22		25.51	27.47	26.78	19.09
8/3/2007 0:22		25.51	28.26	26.88	19.28
8/3/2007 0:22		25.51	28.06	26.78	19.28
8/3/2007 0:22		25.61	27.76	26.78	19.76
8/3/2007 0:23		25.61	27.37	26.78	19.95
8/3/2007 0:23		25.61	27.86	26.68	18.52
8/3/2007 0:23		25.61	28.26	26.59	17.95
8/3/2007 0:23		25.61	28.06	26.59	18.71
8/4/2007 0:00		25.61	28.26	26.78	18.62
8/4/2007 0:00		25.61	28.06	26.88	18.52
8/4/2007 0:00		25.61	28.06	26.88	18.14
8/4/2007 0:00		25.61	27.67	26.88	17.57
8/4/2007 0:01		25.61	27.57	26.88	17.76
8/4/2007 0:01		25.61	27.17	26.78	18.33
8/4/2007 0:01		25.61	27.86	26.78	18.71
8/4/2007 0:01		25.61	27.86	26.68	18.33
8/4/2007 0:02		25.61	27.96	26.68	18.62
8/4/2007 0:02		25.61	27.57	26.68	17.95
8/4/2007 0:02		25.61	28.16	26.59	17.86
8/4/2007 0:02		25.61	27.67	26.59	18.24
8/4/2007 0:03		25.61	27.27	26.49	17.38
8/4/2007 0:03		25.61	26.88	26.49	16.9
8/4/2007 0:03		25.51	27.76	26.49	16.43
8/4/2007 0:03		25.61	27.17	26.49	16.24

8/4/2007 0:04		25.61	27.37	26.49	16.43
8/4/2007 0:04		25.61	27.57	26.49	16.14
8/4/2007 0:04		25.61	28.06	26.39	16.24
8/4/2007 0:04		25.61	27.96	26.39	16.62
8/4/2007 0:05		25.51	27.86	26.29	16.52
8/4/2007 0:05		25.61	28.06	26.29	16.62
8/4/2007 0:05		25.51	27.67	26.2	15.76
8/4/2007 0:05		25.61	27.17	26.1	15.66
8/4/2007 0:06		25.51	26.78	26.49	15.57
8/4/2007 0:06		25.51	27.96	26.68	15.76
8/4/2007 0:06		25.51	27.67	26.68	18.52
8/4/2007 0:06		25.51	27.17	26.68	23.48
8/4/2007 0:07		25.51	27.27	26.68	27.86
8/4/2007 0:07		25.51	27.76	26.68	31.37
8/4/2007 0:07		25.51	27.47	26.68	25.9
8/4/2007 0:07		25.51	27.47	26.68	36.95
8/4/2007 0:08		25.51	26.98	26.59	39.05
8/4/2007 0:08		25.51	26.68	26.59	27.96
8/4/2007 0:08		25.61	27.67	26.59	26.29
8/4/2007 0:08		25.51	27.57	26.39	29.25
8/4/2007 0:09		25.61	27.86	26.1	32.5
8/4/2007 0:09		25.61	27.67	26	32.09
8/4/2007 0:09		25.61	27.67	25.81	36.73
8/4/2007 0:09		25.61	27.67	25.71	42.4
8/4/2007 0:10		25.61	27.86	25.71	40.3
8/4/2007 0:10		25.61	27.76	25.61	31.88
8/4/2007 0:10		25.61	27.57	25.71	33.54
8/4/2007 0:10		25.61	27.27	26.49	39.84
8/4/2007 0:11		25.61	27.67	26.68	39.62
8/4/2007 0:11		25.61	27.47	26.78	32.6
8/4/2007 0:11		25.71	27.67	26.88	39.39
8/4/2007 0:11		25.71	27.17	26.78	39.62
8/4/2007 0:12		25.71	27.47	26.78	33.85
8/4/2007 0:12		25.71	27.37	26.88	37.17
8/4/2007 0:12		25.71	27.47	26.68	38.71
8/4/2007 0:12		25.71	27.96	26.59	32.39
8/4/2007 0:13		25.71	27.86	26.49	31.98
8/4/2007 0:13		25.71	28.06	26.39	40.42
8/4/2007 0:13		25.71	28.06	26.2	40.99
8/4/2007 0:13		25.71	27.86	26.39	33.12
8/4/2007 0:14		25.81	27.57	26.78	37.82
8/4/2007 0:14		25.81	27.86	26.88	43.12
8/4/2007 0:14		25.81	27.86	26.98	32.6
8/4/2007 0:14		25.81	27.76	26.98	30.56
8/4/2007 0:15		25.81	27.57	26.98	35.01
8/4/2007 0:15		25.81	28.16	26.98	39.39
8/4/2007 0:15		25.81	28.16	26.98	39.84
8/4/2007 0:15		25.9	27.96	26.98	33.64
8/4/2007 0:16		25.81	27.96	26.88	31.47
8/4/2007 0:16		25.9	27.67	26.68	31.17
8/4/2007 0:16		25.9	28.06	26.59	39.28
8/4/2007 0:16		25.9	28.16	26.49	30.46
8/4/2007 0:17		25.9	27.96	26.39	28.85
8/4/2007 0:17		25.9	27.76	26.29	29.15
8/4/2007 0:17		25.9	27.96	26.29	28.26
8/4/2007 0:17		25.9	27.57	26.68	27.17
8/4/2007 0:18		25.9	28.16	26.88	25.51
8/4/2007 0:18		25.9	28.26	26.98	18.9
8/4/2007 0:18		25.9	28.26	26.98	17.67
8/4/2007 0:18		26	28.26	26.98	17.48
8/4/2007 0:19		26	27.86	26.98	17.57
8/4/2007 0:19		25.9	27.86	26.88	17.28
8/4/2007 0:19		25.9	28.26	26.68	17.48
8/4/2007 0:19		25.9	27.86	26.59	17.28
8/4/2007 0:20		25.9	27.57	26.39	17.28
8/4/2007 0:20		25.9	28.16	26.29	17.38
8/4/2007 0:20		25.9	28.06	26.1	17.19
8/4/2007 0:20		25.9	27.76	26	17
8/4/2007 0:21		25.9	28.06	25.81	17.09
8/4/2007 0:21		25.9	27.76	26.1	17
8/4/2007 0:21		25.9	28.06	26.59	16.9
8/4/2007 0:21		25.9	27.57	26.68	17.28
8/4/2007 0:22		25.9	27.17	26.68	17.76
8/4/2007 0:22		25.9	28.06	26.78	18.24
8/4/2007 0:22		25.9	27.76	26.68	18.33
8/4/2007 0:22		25.9	27.17	26.68	18.52
8/4/2007 0:23		25.81	27.96	26.68	18.81
8/4/2007 0:23		25.81	27.67	26.59	19.19
8/4/2007 0:23		25.81	27.08	26.39	18.52
8/4/2007 0:23		25.81	27.27	26.1	18.71
8/5/2007 0:00		25.81	27.27	25.81	18.81
8/5/2007 0:00		25.81	27.67	25.61	19.28
8/5/2007 0:00		25.81	27.86	25.32	20.14
8/5/2007 0:00		25.81	27.27	25.22	21.28
8/5/2007 0:01		25.81	27.27	24.93	21
8/5/2007 0:01		25.81	26.88	25.61	20.04
8/5/2007 0:01		25.81	26.98	26.2	19.09
8/5/2007 0:01		25.81	27.67	26.39	19.47
8/5/2007 0:02		25.81	27.57	26.49	17.19

8/5/2007 0:02		25.81	26.88	26.49	16.52
8/5/2007 0:02		25.81	27.37	26.49	15.86
8/5/2007 0:02		25.81	26.88	26.49	16.24
8/5/2007 0:03		25.81	26.29	26.49	16.33
8/5/2007 0:03		25.81	27.47	26.29	15.76
8/5/2007 0:03		25.81	26.78	26	16.52
8/5/2007 0:03		25.81	26.78	25.71	17.95
8/5/2007 0:04		25.81	26.2	25.42	17.95
8/5/2007 0:04		25.81	26.78	25.13	17
8/5/2007 0:04		25.81	27.08	24.93	17.95
8/5/2007 0:04		25.81	26.2	24.74	18.14
8/5/2007 0:05		25.81	27.27	24.55	17.95
8/5/2007 0:05		25.81	26.59	25.71	16.9
8/5/2007 0:05		25.71	26	26.1	16.9
8/5/2007 0:05		25.81	26.49	26.2	17.57
8/5/2007 0:06		25.71	27.17	26.29	17.19
8/5/2007 0:06		25.71	27.57	26.29	18.24
8/5/2007 0:06		25.71	26.78	26.29	18.14
8/5/2007 0:06		25.71	26	26.29	18.24
8/5/2007 0:07		25.71	26.68	26.2	21.28
8/5/2007 0:07		25.71	25.9	25.9	24.93
8/5/2007 0:07		25.71	26.49	25.51	24.26
8/5/2007 0:07		25.71	27.27	25.22	26.49
8/5/2007 0:08		25.71	26.1	24.93	31.88
8/5/2007 0:08		25.71	25.42	24.64	32.5
8/5/2007 0:08		25.71	26.49	24.45	31.57
8/5/2007 0:08		25.71	27.17	24.26	30.96
8/5/2007 0:09		25.71	26.29	25.22	34.59
8/5/2007 0:09		25.71	25.71	25.9	30.26
8/5/2007 0:09		25.71	27.08	26.2	31.37
8/5/2007 0:09		25.81	26.98	26.29	35.76
8/5/2007 0:10		25.81	26.1	26.39	37.27
8/5/2007 0:10		25.81	26.78	26.49	39.84
8/5/2007 0:10		25.81	26	26.49	38.83
8/5/2007 0:10		25.9	27.17	26.49	39.05
8/5/2007 0:11		25.9	26.59	26.49	39.28
8/5/2007 0:11		25.9	25.81	26.49	38.6
8/5/2007 0:11		25.9	26.68	26.49	36.95
8/5/2007 0:11		25.9	27.57	26.49	35.33
8/5/2007 0:12		25.9	27.27	26.2	37.82
8/5/2007 0:12		26	26.68	26	38.27
8/5/2007 0:12		26	26.39	25.81	38.83
8/5/2007 0:12		26	27.37	25.61	35.01
8/5/2007 0:13		26	27.17	25.51	37.06
8/5/2007 0:13		26	27.08	25.42	38.16
8/5/2007 0:13		26	27.27	25.32	40.88
8/5/2007 0:13		26.1	26.68	25.22	35.86
8/5/2007 0:14		26.1	26.98	26.1	39.16
8/5/2007 0:14		26.1	27.57	26.49	37.38
8/5/2007 0:14		26.1	26.98	26.59	37.71
8/5/2007 0:14		26.1	26.68	26.59	44.58
8/5/2007 0:15		26.1	27.57	26.68	37.71
8/5/2007 0:15		26.2	27.57	26.68	35.01
8/5/2007 0:15		26.2	26.98	26.59	34.48
8/5/2007 0:15		26.2	27.17	26.49	35.22
8/5/2007 0:16		26.2	26.68	26.39	34.8
8/5/2007 0:16		26.2	27.37	26.2	33.01
8/5/2007 0:16		26.2	27.57	26.1	34.06
8/5/2007 0:16		26.2	26.98	26	32.5
8/5/2007 0:17		26.29	27.76	25.9	32.6
8/5/2007 0:17		26.29	27.67	26.29	31.17
8/5/2007 0:17		26.29	27.08	26.68	30.96
8/5/2007 0:17		26.29	27.37	26.78	29.75
8/5/2007 0:18		26.29	26.98	26.78	26.88
8/5/2007 0:18		26.2	27.76	26.78	25.81
8/5/2007 0:18		26.2	27.47	26.78	24.45
8/5/2007 0:18		26.2	27.47	26.68	23.29
8/5/2007 0:19		26.2	27.76	26.68	21.86
8/5/2007 0:19		26.2	27.37	26.59	21.47
8/5/2007 0:19		26.2	27.47	26.49	20.71
8/5/2007 0:19		26.2	27.76	26.39	19.57
8/5/2007 0:20		26.2	27.86	26.29	19.66
8/5/2007 0:20		26.2	27.86	26.2	19.57
8/5/2007 0:20		26.2	27.37	26.1	19.09
8/5/2007 0:20		26.2	26.98	26	19.76
8/5/2007 0:21		26.2	27.17	25.9	19.66
8/5/2007 0:21		26.2	27.47	25.9	19.19
8/5/2007 0:21		26.2	27.86	26.49	19.47
8/5/2007 0:21		26.2	27.37	26.68	19.38
8/5/2007 0:22		26.2	27.76	26.78	18.71
8/5/2007 0:22		26.2	27.76	26.78	19.28
8/5/2007 0:22		26.2	27.37	26.78	19.57
8/5/2007 0:22		26.2	27.86	26.78	18.52
8/5/2007 0:23		26.2	27.37	26.68	17.95
8/5/2007 0:23		26.2	27.96	26.68	17.67
8/5/2007 0:23		26.2	27.17	26.49	17.67
8/5/2007 0:23		26.2	27.27	26.29	17.57
8/6/2007 0:00		26.2	27.08	26.2	17.57
8/6/2007 0:00		26.2	27.86	26.1	17.57

8/6/2007 0:00		26.29	27.17	26	17.57
8/6/2007 0:00		26.29	27.86	25.9	17.38
8/6/2007 0:01		26.2	27.37	25.81	17.38
8/6/2007 0:01		26.2	26.98	26	17.38
8/6/2007 0:01		26.2	27.96	26.59	17.28
8/6/2007 0:01		26.2	27.47	26.68	17.19
8/6/2007 0:02		26.2	26.98	26.78	17
8/6/2007 0:02		26.2	27.57	26.78	17
8/6/2007 0:02		26.2	27.76	26.78	17
8/6/2007 0:02		26.2	27.96	26.78	17.09
8/6/2007 0:03		26.2	27.86	26.78	16.81
8/6/2007 0:03		26.2	27.67	26.68	16.71
8/6/2007 0:03		26.2	27.08	26.59	16.9
8/6/2007 0:03		26.2	26.88	26.39	17
8/6/2007 0:04		26.2	26.49	26.29	17
8/6/2007 0:04		26.29	26.98	26.1	16.43
8/6/2007 0:04		26.2	26.59	26	16.05
8/6/2007 0:04		26.29	26.39	25.9	16.33
8/6/2007 0:05		26.2	27.76	25.81	16.33
8/6/2007 0:05		26.2	27.47	25.71	16.24
8/6/2007 0:05		26.2	26.88	26.29	16.24
8/6/2007 0:05		26.2	27.27	26.59	16.24
8/6/2007 0:06		26.2	27.76	26.68	16.52
8/6/2007 0:06		26.2	27.37	26.78	16.71
8/6/2007 0:06		26.2	27.17	26.78	16.81
8/6/2007 0:06		26.2	26.68	26.78	16.81
8/6/2007 0:07		26.2	27.17	26.68	17.09
8/6/2007 0:07		26.2	27.76	26.68	17.48
8/6/2007 0:07		26.2	27.67	26.49	18.14
8/6/2007 0:07		26.1	27.86	26.29	18.81
8/6/2007 0:08		26.1	27.27	26.1	20.04
8/6/2007 0:08		26.1	27.67	25.9	20.71
8/6/2007 0:08		26.2	26.88	25.71	22.53
8/6/2007 0:08		26.2	26.49	25.51	22.43
8/6/2007 0:09		26.2	26.98	25.42	21.38
8/6/2007 0:09		26.2	26.49	25.32	22.53
8/6/2007 0:09		26.2	27.57	26.2	24.84
8/6/2007 0:09		26.2	27.57	26.59	25.9
8/6/2007 0:10		26.2	26.88	26.68	26.1
8/6/2007 0:10		26.2	27.76	26.78	26.49
8/6/2007 0:10		26.2	27.37	26.78	28.36
8/6/2007 0:10		26.2	26.88	26.78	30.26
8/6/2007 0:11		26.2	27.76	26.78	30.15
8/6/2007 0:11		26.29	27.37	26.78	29.45
8/6/2007 0:11		26.29	26.88	26.59	29.05
8/6/2007 0:11		26.29	26.78	26.39	30.15
8/6/2007 0:12		26.29	27.67	26.29	29.35
8/6/2007 0:12		26.29	27.76	26.2	28.85
8/6/2007 0:12		26.29	27.76	26	30.15
8/6/2007 0:12		26.29	27.27	25.9	30.66
8/6/2007 0:13		26.29	27.37	25.81	29.95
8/6/2007 0:13		26.29	26.98	26.39	27.57
8/6/2007 0:13		26.29	27.76	26.78	26.78
8/6/2007 0:13		26.39	27.27	26.88	27.67
8/6/2007 0:14		26.39	27.47	26.88	28.85
8/6/2007 0:14		26.39	27.08	26.88	28.06
8/6/2007 0:14		26.39	27.76	26.88	27.37
8/6/2007 0:14		26.39	27.47	26.88	26.2
8/6/2007 0:15		26.39	26.98	26.78	24.64
8/6/2007 0:15		26.39	27.67	26.59	23.87
8/6/2007 0:15		26.39	27.67	26.39	22.43
8/6/2007 0:15		26.39	27.08	26.29	19.95
8/6/2007 0:16		26.39	26.68	26.1	19.19
8/6/2007 0:16		26.39	27.47	25.9	19.85
8/6/2007 0:16		26.39	27.67	25.71	19.95
8/6/2007 0:16		26.39	27.76	25.51	21.38
8/6/2007 0:17		26.29	27.76	25.9	22.33
8/6/2007 0:17		26.29	26.98	26.39	24.84
8/6/2007 0:17		26.29	26.78	26.59	27.67
8/6/2007 0:17		26.39	26.88	26.68	25.61
8/6/2007 0:18		26.39	26.29	26.68	23.97
8/6/2007 0:18		26.39	26	26.68	30.96
8/6/2007 0:18		26.39	27.67	26.68	25.71
8/6/2007 0:18		26.39	27.17	26.68	25.03
8/6/2007 0:19		26.39	26.59	26.59	23.97
8/6/2007 0:19		26.39	27.67	26.39	22.05
8/6/2007 0:19		26.39	27.47	26.2	21.66
8/6/2007 0:19		26.39	26.88	26	20.42
8/6/2007 0:20		26.39	26.29	25.81	19.57
8/6/2007 0:20		26.39	27.47	25.71	18.81
8/6/2007 0:20		26.39	26.78	25.61	17.95
8/6/2007 0:20		26.39	26.68	25.51	17.48
8/6/2007 0:21		26.39	27.47	25.81	16.9
8/6/2007 0:21		26.39	27.76	26.39	16.24
8/6/2007 0:21		26.39	26.88	26.68	17
8/6/2007 0:21		26.39	27.17	26.68	16.24
8/6/2007 0:22		26.39	26.78	26.68	16.14
8/6/2007 0:22		26.39	27.27	26.68	15.86
8/6/2007 0:22		26.39	26.98	26.59	15.76

8/6/2007 0:22		26.39	26.78	26.59	15.76
8/6/2007 0:23		26.39	27.47	26.49	15.76
8/6/2007 0:23		26.39	27.37	26.2	15.86
8/6/2007 0:23		26.39	26.68	26	15.66
8/6/2007 0:23		26.39	26.29	25.81	15.38
8/7/2007 0:00		26.39	27.57	25.61	15.28
8/7/2007 0:00		26.39	27.27	25.51	14.9
8/7/2007 0:00		26.29	26.59	25.32	14.71
8/7/2007 0:00		26.29	27.27	25.22	14.61
8/7/2007 0:01		26.29	27.47	25.32	14.42
8/7/2007 0:01		26.29	27.57	26.2	14.42
8/7/2007 0:01		26.29	26.78	26.29	14.61
8/7/2007 0:01		26.29	26.59	26.39	15.19
8/7/2007 0:02		26.29	27.17	26.49	15.47
8/7/2007 0:02		26.29	26.88	26.39	15.28
8/7/2007 0:02		26.29	26.2	26.39	15.47
8/7/2007 0:02		26.29	27.37	26.39	15.57
8/7/2007 0:03		26.29	26.88	26.29	16.24
8/7/2007 0:03		26.29	27.17	26	16.9
8/7/2007 0:03		26.29	26.98	25.71	16.81
8/7/2007 0:03		26.29	26.2	25.42	16.71
8/7/2007 0:04		26.29	27.17	25.22	16.24
8/7/2007 0:04		26.29	26.39	25.03	15.86
8/7/2007 0:04		26.29	27.47	24.84	15.95
8/7/2007 0:04		26.29	26.49	24.64	16.05
8/7/2007 0:05		26.29	26.98	24.55	16.14
8/7/2007 0:05		26.29	26.59	25.32	16.14
8/7/2007 0:05		26.29	27.17	25.9	15.95
8/7/2007 0:05		26.29	26.68	26.2	15.66
8/7/2007 0:06		26.29	26.1	26.2	15.57
8/7/2007 0:06		26.29	26.29	26.29	15.95
8/7/2007 0:06		26.29	27.57	26.29	16.62
8/7/2007 0:06		26.2	27.08	26.2	17.19
8/7/2007 0:07		26.2	26.98	26.2	20.52
8/7/2007 0:07		26.2	26.2	26	20.52
8/7/2007 0:07		26.2	26.49	25.61	21.76
8/7/2007 0:07		26.2	26	25.32	20.52
8/7/2007 0:08		26.2	26.88	25.13	20.81
8/7/2007 0:08		26.2	26.1	24.84	20.71
8/7/2007 0:08		26.29	27.27	24.64	20.71
8/7/2007 0:08		26.29	26.59	24.45	21.57
8/7/2007 0:09		26.29	27.27	24.35	23
8/7/2007 0:09		26.29	26.59	24.26	24.74
8/7/2007 0:09		26.29	26	25.51	24.64
8/7/2007 0:09		26.29	27.27	25.9	24.64
8/7/2007 0:10		26.29	26.88	26.2	24.45
8/7/2007 0:10		26.29	26.1	26.2	24.26
8/7/2007 0:10		26.29	27.27	26.29	25.32
8/7/2007 0:10		26.29	27.27	26.2	26.2
8/7/2007 0:11		26.39	27.17	25.61	27.67
8/7/2007 0:11		26.49	26.59	25.03	30.26
8/7/2007 0:11		26.1	26.39	25.32	29.85
8/7/2007 0:11		25.9	25.81	24.64	28.56
8/7/2007 0:12		25.81	25.32	24.06	27.27
8/7/2007 0:12		25.9	25.71	23.68	28.26
8/7/2007 0:12		26.1	29.85	24.35	29.05
8/7/2007 0:12		26.2	27.57	24.84	31.17
8/7/2007 0:13		26.1	26.88	26	31.06
8/7/2007 0:13		25.81	26.88	25.71	31.27
8/7/2007 0:13		25.81	27.37	25.42	32.91
8/7/2007 0:13		25.71	27.57	25.22	29.45
8/7/2007 0:14		25.51	27.27	24.93	27.96
8/7/2007 0:14		25.51	26.88	24.84	30.46
8/7/2007 0:14		25.32	26.39	24.64	32.81
8/7/2007 0:14		25.13	26.39	24.64	31.68
8/7/2007 0:15		25.03	26.2	25.71	31.37
8/7/2007 0:15		25.03	26	26.1	34.8
8/7/2007 0:15		24.84	25.9	26.29	31.06
8/7/2007 0:15		24.74	25.9	26.39	28.95
8/7/2007 0:16		24.64	25.9	26.39	27.76
8/7/2007 0:16		24.55	25.81	26.39	24.45
8/7/2007 0:16		24.45	25.81	26.39	24.55
8/7/2007 0:16		24.26	25.9	26.29	24.64
8/7/2007 0:17		24.16	25.81	26.29	25.42
8/7/2007 0:17		24.06	25.61	26	27.67
8/7/2007 0:17		23.97	25.42	25.71	31.37
8/7/2007 0:17		23.87	25.22	25.42	28.36
8/7/2007 0:18		23.68	25.22	25.22	28.16
8/7/2007 0:18		23.68	25.22	25.03	26.59
8/7/2007 0:18		23.58	25.42	24.93	26.1
8/7/2007 0:18		23.39	25.13	24.74	25.51
8/7/2007 0:19		23.39	25.13	24.55	24.06
8/7/2007 0:19		23.29	25.13	25.61	22.62
8/7/2007 0:19		23.29	25.22	25.9	21.66
8/7/2007 0:19		23.2	25.32	26.1	20.81
8/7/2007 0:20		23.1	25.22	26.1	20.33
8/7/2007 0:20		23.1	25.22	26.1	19.28
8/7/2007 0:20		23	25.32	26.1	18.71
8/7/2007 0:20		22.81	25.32	26.1	18.62

8/7/2007 0:21		22.72	25.22	26.1	18.05
8/7/2007 0:21		22.72	25.42	26	17.86
8/7/2007 0:21		22.53	25.13	25.71	17.38
8/7/2007 0:21		22.33	25.13	25.51	16.71
8/7/2007 0:22		22.14	25.42	25.32	16.81
8/7/2007 0:22		22.14	25.42	25.13	16.62
8/7/2007 0:22		21.95	25.13	24.93	15.86
8/7/2007 0:22		21.76	24.93	24.84	16.43
8/7/2007 0:23		21.47	24.84	24.74	18.52
8/7/2007 0:23		21.47	24.84	24.55	17.67
8/7/2007 0:23		21.28	24.84	25.22	17.19
8/7/2007 0:23		21.09	24.74	25.51	16.81
8/8/2007 0:00		20.9	24.84	25.71	15.66
8/8/2007 0:00		20.81	24.74	25.71	14.8
8/8/2007 0:00		20.71	24.74	25.81	15.95
8/8/2007 0:00		20.42	24.64	25.81	17.09
8/8/2007 0:01		20.23	24.64	25.81	17.19
8/8/2007 0:01		20.23	24.55	25.81	16.62
8/8/2007 0:01		20.14	24.55	25.71	17.95
8/8/2007 0:01		19.85	24.35	25.71	18.05
8/8/2007 0:02		19.66	24.16	25.42	18.24
8/8/2007 0:02		19.66	24.06	25.13	17.19
8/8/2007 0:02		19.57	24.16	24.93	15.95
8/8/2007 0:02		19.38	24.26	24.74	17.57
8/8/2007 0:03		19.28	24.26	24.45	21.19
8/8/2007 0:03		19.19	24.26	24.35	19.95
8/8/2007 0:03		19.09	24.26	24.16	20.23
8/8/2007 0:03		18.9	24.16	23.97	20.04
8/8/2007 0:04		18.81	24.16	23.77	21
8/8/2007 0:04		18.71	24.26	24.74	21.19
8/8/2007 0:04		18.62	24.26	25.13	21.38
8/8/2007 0:04		18.43	24.26	25.03	21.19
8/8/2007 0:05		18.33	24.35	25.13	21.66
8/8/2007 0:05		18.33	24.16	25.22	21.86
8/8/2007 0:05		18.24	24.16	25.22	21.66
8/8/2007 0:05		18.05	23.58	25.13	20.9
8/8/2007 0:06		17.95	23.68	25.13	21.28
8/8/2007 0:06		17.95	23.48	25.13	21.47
8/8/2007 0:06		17.86	23.48	25.03	22.62
8/8/2007 0:06		17.76	23.39	24.84	24.35
8/8/2007 0:07		17.67	23.29	24.45	25.51
8/8/2007 0:07		17.67	22.81	24.06	26.59
8/8/2007 0:07		17.57	23	23.77	27.96
8/8/2007 0:07		17.48	23	23.48	29.75
8/8/2007 0:08		17.38	22.72	23.2	30.96
8/8/2007 0:08		17.38	22.53	22.91	31.78
8/8/2007 0:08		17.28	22.81	22.72	32.6
8/8/2007 0:08		17.19	22.62	22.33	32.6
8/8/2007 0:09		17.09	22.81	23.97	33.64
8/8/2007 0:09		17.09	22.62	24.35	29.65
8/8/2007 0:09		17.09	22.91	24.84	33.85
8/8/2007 0:09		17	23	24.93	34.9
8/8/2007 0:10		16.9	22.91	24.84	35.86
8/8/2007 0:10		16.9	22.91	24.84	36.08
8/8/2007 0:10		16.81	23.2	24.93	38.27
8/8/2007 0:10		16.81	23.1	24.93	36.84
8/8/2007 0:11		16.71	23.39	25.13	34.8
8/8/2007 0:11		16.71	23.29	25.13	34.37
8/8/2007 0:11		16.71	23.58	24.74	37.17
8/8/2007 0:11		16.62	23.48	24.55	37.71
8/8/2007 0:12		16.62	23.39	24.35	35.76
8/8/2007 0:12		16.62	23.77	24.16	35.22
8/8/2007 0:12		16.52	23.77	23.97	38.71
8/8/2007 0:12		16.52	23.97	23.77	39.39
8/8/2007 0:13		16.52	23.97	23.68	39.28
8/8/2007 0:13		16.43	24.16	24.35	40.42
8/8/2007 0:13		16.43	24.16	25.03	41.34
8/8/2007 0:13		16.43	24.35	25.32	36.84
8/8/2007 0:14		16.43	24.26	25.42	32.7
8/8/2007 0:14		16.33	24.45	25.51	31.78
8/8/2007 0:14		16.33	24.45	25.51	31.78
8/8/2007 0:14		16.24	24.26	25.51	35.01
8/8/2007 0:15		16.33	24.55	25.51	32.39
8/8/2007 0:15		16.24	24.74	25.51	38.16
8/8/2007 0:15		16.24	24.64	25.51	35.54
8/8/2007 0:15		16.24	24.84	25.22	38.83
8/8/2007 0:16		16.14	24.93	25.03	38.94
8/8/2007 0:16		16.14	24.74	24.84	40.42
8/8/2007 0:16		16.14	24.84	24.74	42.4
8/8/2007 0:16		16.05	24.64	24.55	41.46
8/8/2007 0:17		16.05	24.74	24.45	33.33
8/8/2007 0:17		16.05	24.84	24.35	32.29
8/8/2007 0:17		16.05	24.84	24.64	29.75
8/8/2007 0:17		16.05	24.74	25.13	30.05
8/8/2007 0:18		15.95	24.93	25.42	29.75
8/8/2007 0:18		15.95	24.84	25.51	29.35
8/8/2007 0:18		15.95	24.93	25.51	34.69
8/8/2007 0:18		15.95	24.84	25.51	35.97
8/8/2007 0:19		15.86	24.93	25.51	34.06

8/8/2007 0:19		15.86	25.13	25.51	36.62
8/8/2007 0:19		15.86	25.13	25.51	33.01
8/8/2007 0:19		15.86	25.03	25.51	26.68
8/8/2007 0:20		15.76	25.22	25.32	24.74
8/8/2007 0:20		15.76	25.22	25.22	23.68
8/8/2007 0:20		15.76	25.22	25.13	22.72
8/8/2007 0:20		15.76	25.13	25.03	22.53
8/8/2007 0:21		15.66	25.13	24.93	21.57
8/8/2007 0:21		15.66	25.22	24.84	21.09
8/8/2007 0:21		15.57	25.13	24.74	20.62
8/8/2007 0:21		15.66	25.22	24.55	20.33
8/8/2007 0:22		15.57	25.22	24.84	20.71
8/8/2007 0:22		15.57	25.13	25.13	19.28
8/8/2007 0:22		15.47	25.13	25.32	18.52
8/8/2007 0:22		15.47	24.93	25.32	19.47
8/8/2007 0:23		15.47	25.03	25.32	19.85
8/8/2007 0:23		15.47	24.93	25.32	20.23
8/8/2007 0:23		15.38	24.93	25.22	20.52
8/8/2007 0:23		15.38	24.93	25.22	20.62

Field Measurement Calibration Records

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 05/24/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition damaged

Membrane changed? yes

Calibration X

Notes
Field calibration of dissolved oxygen electrode – DO charge out of range

Post data collection calibration check

Conductivity electrode:	1298 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

DO electrode reconditioned following return to lab

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 06/04/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1354 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 06/14/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1398 uS/cm	value	1413 mS/cm	std.
pH electrode:	6.9	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 06/20/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition ok

Membrane changed? yes

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1329 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 06/26/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1275 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 07/02/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1267 uS/cm	value	1413 mS/cm	std.
pH electrode:	6.9	value	7.0	std.

Notes

F-100

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 07/05/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1310 uS/cm	value	1413 mS/cm	std.
pH electrode:	6.9	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 07/09/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition ok

Membrane changed? yes

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1342 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 07/23/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1378 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 07/30/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1400 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 08/01/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition ok

Membrane changed? yes

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1287 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 08/06/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1326 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 08/13/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1346 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 08/21/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	10.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1277 uS/cm	value	1413 mS/cm	std.
pH electrode:	6.9	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 08/28/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition ok

Membrane changed? yes

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1337 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.0	value	7.0	std.

Notes

Colorado State University
Center for Contaminant Hydrology
Calibration Record

Equipment ID: YSI 600 Series multiparameter electrode

Date: 09/11/2007

Equipment condition: good

Conductivity electrode:	X	1413 uS/cm	std.
pH electrode:	X	7.0	std.
	X	4.0	std.

Dissolved Oxygen – membrane condition good

Membrane changed? no

Calibration X

Notes
Field calibration of dissolved oxygen electrode

Post data collection calibration check

Conductivity electrode:	1267 uS/cm	value	1413 mS/cm	std.
pH electrode:	7.1	value	7.0	std.

Notes

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	DG/NM	
Date	06/08/07	
Time on site	11:10	
Time off site	13:00	
Weather	CLEAR	
Battery charge	12.4 - 12.7 SEE NOTE	
Sample collection	Holding tank	☑
	Eff. - plastic	☑
	Eff. - gravel	☑
Water parameters	Holding tank	☑
	Eff. - plastic	☑
	Eff. - gravel	☑

Notes:

SOLAR PANELS DISLODGED IN WINDSTORM - REPAIRED
NO APPARENT POWER LOSS (WINDSTORM 06/06/07 PM)

INF
T = 11.31
EC = 4.488
DO = 38.2%/4.11
pH = 6.87
ORP = 133.

EFF PEA GRAV
T = 12.44
EC = 3.897
DO = 12.8%/1.3
pH = 7.56
ORP = 111.6

EFF ROC RACK
T = 11.56
EC = 4.
DO = 9.4%/1.0
pH = 7.27
ORP = 113.7

Need More string
pump tubing

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	DG	
Date	06/11/07	
Time on site	10:30	
Time off site		
Weather	PARTLY CLDY ~75°F	
Battery charge	13.6	
Sample collection	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

~9L MeOH ADDED TO EACH RESERVOIR

	INF	EFF GRAV	EFF NONPACK
T	11.9	15.57	16.48
EC	4499	3227	4122
DO	4.26/40%	1.14/11.6%	1.22/12.7%
pH	6.90	7.56	7.30
ORP	+88	+55.0	+48

SUPPLIES

- GLOVES
- FISHING DEVICE (FORCEPS) – NOTE SAMPLE VIAL LOST IN PLASTIC EFF FLOW THROUGH

DUMP MEMORY ON 650 YSI

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	DG / NM		
Date	06/14/07		
Time on site	10:45		
Time off site			
Weather	CLEAR / HOT		
Battery charge	13.6		
Sample collection	Holding tank	☒	
	Eff. - plastic	☒	
	Eff. - gravel	☒	
Water parameters	Holding tank	☒	
	Eff. - plastic	☒	
	Eff. - gravel	☒	

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	MO		No apparent MCOH flow
Date	6/20/07		effluent lines → both flow through cells
Time on site	17:20		empty → opened sample port, no pressure
Time off site			reactors apparently de-pressurized
Weather	Warm Sunny 95°		changed pump tubing (main) seems to
Battery charge	13.4		have restored flow
Sample collection	Holding tank	☑	
	Eff. - plastic	n ☐ *	
	Eff. - gravel	n ☐ *	
Water parameters	Holding tank	☑	
	Eff. - plastic	n ☐ →	
	Eff. - gravel	n ☐ *	emptied lab study waste into treatment cell

Note: Consider changing pump tubing weekly
↳ both pumps?

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	NM		Changed MeOH tubes.
Date	6/21/07		Flow appears to be reestablished.
Time on site	11:00 AM		Flow is reestablished to the Gravel Reactor
Time off site	12:15		When taking the effluent samples for both
Weather	clear & Hot		reactors, vials were rinsed 3 time w/ effluent,
Battery charge	13.4		because no DI water was present.
			Flow is also reestablished to the Norpak reactor
Sample collection	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	
Water parameters	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	DG/NM		TRACER STUDY INITIATED @ 12:00
Date	06/26/07		ISCO SAMPLERS DEPLOYED SAMPLE 1 @ 12:00
Time on site	10:45		
Time off site	12:45		Need Pump heads for Ismateq; connectors for tubes
Weather	OVERCAST ~70°F		& Trash bag
Battery charge	12.8 GREEN		
Sample collection	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	
Water parameters	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	DG/NM		TRACER STUDY ONGOING - 12 SAMPLES FROM EACH ISCO - BATTERIES CHANGED & RE PROGRAM
Date	06/29/07		
Time on site	11:00		
Time off site	13:00		
Weather	CLEAR ~ 80°F		Changed pump tubing
Battery charge	13.3		
			advanced tubing on MeOH Pump (need to swap next time)
Sample collection	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	
Water parameters	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	DG/NM	
Date	07/03/07	
Time on site	11:00	
Time off site	12:45	
Weather	CLEAR/HOT	
Battery charge	13.2	
Sample collection	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

TRACER STUDY SAMPLES TAKEN
GRAVEL #1 DRY
NORPAK #14 DRY
NORPAK #16 DRY
NORPAK #9 LOW VOLUME

SAMPLING DISCONTINUED (LAST SAMPLE @ 0600 07/03/07)

MeOH ADDED 4800 mL
5000 mL @ 12:00

MeOH PUMP TUBING REPLACED

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	Mo/NM	
Date	7/6/07	
Time on site	10:15	
Time off site	11:35	
Weather	Sunny & Warm	
Battery charge	13.4 V	
Sample collection	**Holding tank**	no
	Eff. - plastic	☐
	Eff. - gravel	☐
Water parameters	**Holding tank**	☒ *
	Eff. - plastic	no ☐
	Eff. - gravel	☐

Notes:

Upon arrival opened trailer - peristaltic (main) was working, then stopped; cycled every minute or so. Could not change flow rate. Seems to be short circuit (?). None of the buttons behave normally. Cycled power - some results

Added more tape to methanol - date, written on tape

* holding tank level very low; 1st 2 readings in initial water. Nick cycled pump power, some water flowed in → 3rd reading → new water

** change tubing → no effect

*** Some results with no load on pump - appears to be electrical

Bring W/L tape next time!

Pump
Cole Parmer
7524-40

Next week
new pump(?)
W/L tape

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	MD	
Date	7/16/07	
Time on site	11:45 Am	
Time off site	13:10	
Weather	80° & cldy	
Battery charge	full 13.0V	
Sample collection	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

Pump not running; power is on (LCD is lit)
Changed out peristaltic pump → now using old pump from Pueblo project

→ Reservoir is full!

SPIN W/L 28.04 ft

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	NM	
Date	7/18/07	
Time on site	10:00	
Time off site		
Weather	Clear & sunny	
Battery charge	13.0	
Sample collection	**Holding tank**	☐
	Eff. - plastic	☐
	Eff. - gravel	☐
Water parameters	**Holding tank**	☐
	Eff. - plastic	☐
	Eff. - gravel	☐

Notes:

Both pumps are running

~~[illegible]~~ MeOH tubing to Plastic reactor was disconnected

Levels of MeOH differed significantly

MeOH Tubing was changed

Levels of MeOH

	Plastic	Gravel
7/3/07	neck	neck
7/6/07	slightly above 20L (1/4")	~~[illegible]~~ 1/4" below 20L
7/10/07	16.3 L	15.0 L
7/18/07	13.8L	6.5L

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	DG/NM		BOTH PUMPS RUNNING
Date	07/23/07		MEOH FLOW RATE OK BOTH CHANNELS
Time on site	10:45		SAMPLES OF EFF & INF TAKEN FOR
Time off site			OUTSIDE LAB SUBMITTAL
Weather	CLEAR/HOT		SPIN DISCONNECTED IN PREPARATION
Battery charge	13.2 GREEN		OF SWITCHOVER TO DG
Sample collection	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	
Water parameters	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	NM		
Date	7/30/07		Refilled MeOH reservoirs
Time on site	10:30		
Time off site			
Weather	Clear		
Battery charge	13.4		
Sample collection	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	
Water parameters	Holding tank	☑	
	Eff. - plastic	☑	
	Eff. - gravel	☑	

The DO membrane appeared to go bad
the DO results were somewhere in the area of 14

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	MoINM	
Date	8/2/07	
Time on site	10:30 A	
Time off site	2:00 P	
Weather	Pcloudy	
Battery charge	13.6	
Sample collection MeOH & NO_3	**Holding tank**	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	**Holding tank**	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

Pumps okay;

MeOH tubing was changed

DG water → added 8 tanks (~ 10-12 gallons each) reservoir near full

2 samples; 1 reservoir, 1 sample port
1 MeOH sample from reservoir

early reading only → DO #'s went weird
Couldn't reestablish acceptable readings

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	DG/NM	
Date	8/14/07	
Time on site	10:30	
Time off site		
Weather		
Battery charge	13.1 (cells cleaned)	
Sample collection	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

MeOH Levels: Gravel 10.75 L
Norpac 8 L
] Reservoirs Refilled

1:00 MeOH increased to 0.8 mL/min (setting 20)
Flow increased to 100 mL/min (setting 6)

Influent tank level above overflow
• no evidence of overtopping

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	AW/DG	
Date	8/7/07	
Time on site	10:45	
Time off site		
Weather	Cloudy	
Battery charge	12.9	
Sample collection	Holding tank	☒ 4
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	Holding tank	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

ALK TITRATIONS:
INF: 302, 309, 310
GRAVEL: 760*
NORPAC: 1030
DG: 357, 365

*HIGH TURBIDITY

MeOH levels*: Gravel 14 L
Norpac 13 L

re-plumbed SPIN - added to remaining DG water (initially ~1/2 full)

* Changed flow setting to lo (was 20)

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

Initials	DG	
Date	8/22/07	
Time on site	13:00	
Time off site		
Weather		
Battery charge	12.6	
Sample collection	**Holding tank**	☒
	Eff. - plastic	☒
	Eff. - gravel	☒
Water parameters	**Holding tank**	☒
	Eff. - plastic	☒
	Eff. - gravel	☒

Notes:

Pump: ok

MeOH samples submitted to STL
RF-I-01 = Inf
RF-G-01 = Gravel
RF-N-01 = Norpac

Added 8L MeOH to Gravel Tank 0.7 mL/min
6L Norp 0.5 mL/min
followed by off

Tubing in MeOH pump changed @ 14:00 Bio-fouling
MeOH injection rate decreased @ 14:15

Peristaltic tubing changed @ 14:30

Rocky Flats
Solar Ponds Plume Treatability Study
Colorado State University - Center for Contaminant Hydrology

			Notes:
Initials	DG		System OK
Date	8/29/07		
Time on site	10:30		
Time off site			
Weather			
Battery charge	12.5 (yellow)		
Sample collection	Holding tank	☒	→ Samples collected for:
	Eff. - plastic	☒	IC (CCH) - Quads from each
	Eff. - gravel	☒	MeOH (STL) - RF-I-02 = Influent line (plastic)
			RF-G-02 = Gravel eff
			RF-N-02 = Norpac eff
Water parameters	Holding tank	☒	
	Eff. - plastic	☒	
	Eff. - gravel	☒	

Appendix H

RFLMA Contact Records

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Appendix H: RFLMA Contact Records

Summary of RFLMA Contact Records

This section provides a summary of the status of activities addressed by RFLMA contact records issued during 2007.

RFLMA references the use of contact records to document CDPHE oral approvals of field modifications to implement approved response actions (see RFLMA paragraph 34). RFLMA Attachment 2 also references the use of contact records to document the outcome of consultation related to addressing any reportable conditions (see RFLMA Attachment 2, Section 6.0). Finally, the Rocky Flats Site Legacy Management Public Involvement Plan (PIP), RFLMA Appendix 2, also provides that a contact record of consultative process discussions between the RFLMA Parties will be made available to the Rocky Flats Stewardship Council and other interested stakeholders as early in the process as is practicable following signature approval by the parties. The PIP process to make contact records available is implemented by posting contact records on the Rocky Flats public website, and providing timely notice to stakeholders that the contact record is posted by an e-mail message.

The RFLMA Parties agreed, as documented in RFLMA Contact Record 2007-08, that the status of actions or activities in RFLMA contact records will be documented by DOE from time to time, and included in RFLMA quarterly and/or annual surveillance and maintenance reports for tracking purposes. The RFLMA Parties also agreed that to facilitate the status reporting contact records should include a short discussion of the anticipated actions or activities to close out the RFLMA contact record. Thus, contact record 2007-08 and subsequent contact records will include the close out discussion.

Table H−1 lists the RFLMA contact records issued in 2007 and their status as of December 31, 2007. Because the status of RFLMA contact records issued in 2006 has not previously been reported, these are also included in Table H−1.

Table H−1. RFLMA Contact Records Issued in 2007

Contact Record #	Purpose	Date Posted on Rocky Flats LM Website	Status as of December 31, 2007
2006-01	Disposition December 2005 - May 2006 monitoring results for manganese at the Present Landfill Treatment System (PLFTS)	3/15/2007	Actions completed—closed
2006-02	Disposition December-July 2006 monitoring results for boron at the Present Landfill Treatment System (PLFTS)	3/15/2007	Actions completed—closed
2006-03	Disposition February-July 2006 monitoring results for arsenic at the Present Landfill Treatment System (PLFTS)	3/15/2007	Actions completed—closed
2007-01	Notification of Adverse Biological Condition, March 27, 2007, Central Operable Unit (COE) Boundary Fence Wildlife Deaths	4/11/2007	Actions completed—closed
2007-02	Discussion and Approval of Exploratory Excavations to Greater Than 3 Feet Below Grade Around the Former Interceptor Trench Pump House	6/7/2007	Actions completed—closed
2007-03	Discussion and Approval of Excavation Greater Than 3 Feet Below Grade in FC-1 Soil Borrow Area and Placement of Soil South of Former Building 371 to Eliminate Ponding Around Well Heads	6/7/2007	Actions completed—closed
2007-04	Discussion and approval of soil disturbance for Phase III road improvement work involving the construction of roadside drainage ditches that will not return excavation to preexisting grade	8/17/2007	Actions completed—closed
2007-05	Grading of the Slump Area South of FC-4 and former B991	10/1/2007	Actions completed—closed
2007-06	Evaluation of Elevated Nitrate in Ground Water Samples from AOC Well B206989	10/16/2007	Continuing monitoring and evaluation
2007-07	Replacement of Monitoring Well 45605 (B991 Slump)	12/10/2007	Open
2007-08	Changes to Present Landfill Inspection and Monitoring Frequencies and Modification of the PLF Monitoring and Maintenance Plan	12/26/07	Open

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Disposition December 2005 - May 2006 monitoring results for manganese at the Present Landfill Treatment System (PLFTS)

Contact Record Approval Date: March 13, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, Doug Hansen / S.M. Stoller, George Squibb / S.M. Stoller, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Mark Aguilar / EPA, Larry Kimmel / EPA, Carl Spreng / CDPHE

Discussion:

As part of Present Landfill closure, a passive seep interception and treatment system has been installed to treat volatile organic compounds (VOCs) in landfill seep water and ground water intercept system (GWIS) water. There are three sources of influent to the treatment system: two GWIS pipes, and the Present Landfill seep. Effluent from the treatment system eventually flows to the Landfill Pond.

As required by the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* and detailed in the 2006 Integrated Monitoring Plan (to be superseded under the Rocky Flats Legacy Management Agreement [RFLMA] by the Rocky Flats Site Operations Guide [RFSOG]), treatment system effluent monitoring requirements consist of routine quarterly sampling for VOCs, metals, and other analytes to evaluate remedy performance. A validated exceedance of a surface-water standard at the treatment system effluent triggers monthly effluent sampling for three consecutive months. Continued exceedances during the 3-month period triggers sampling of the Landfill Pond for those constituents in question. Continued exceedances also trigger consultation between the parties to determine whether a change in the remedy is required, additional parameters need to be analyzed, or a modification of the monitoring plan is warranted. If surface water standards are exceeded in the Landfill Pond, the parties consult to determine if further monitoring modifications are warranted and if Landfill Pond operations should be addressed.

The routine quarterly effluent sample collected on 12/28/05 (Table 1) showed a manganese concentration exceeding the applicable Rocky Flats Cleanup Agreement (RFCA) standard of 1,858 ug/L. Subsequent sampling on a monthly frequency (Table 1) also showed manganese concentrations exceeding the RFCA standard, triggering sampling of the Landfill Pond (Table 2) and consultation.

Formal consultation regarding this issue took place in June 2006.

Table 1. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Manganese, total	***12/28/05***	***6,100***	***µg/L***	***1,858***
	2/23/06	5,650	µg/L	1,858
	3/20/06	5,430	µg/L	1,858
	4/19/06	*5,310*	*µg/L*	*1,858*
	5/23/06	7,000	ug/L	1,858

Notes: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly samples are shown in italics.

Table 2. Present Landfill Pond (PLFPONDEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Manganese, total	5/23/06	24	µg/L	1,858

Notes: The 4/19/06 PLFSYSEFF result (Table 1) was received on 5/23/06, triggering pond sampling.

Resolution:

The manganese sample collected from the Landfill Pond (Table 2) was below the RFCA standard, and no action concerning Landfill Pond operations is warranted at this time. The parties also recognize that the PLFTS is designed to treat VOCs, not metals such as manganese. Routine quarterly sampling at the PLFTS with regard to manganese will continue as currently implemented and based on this consultation. The parties will continue to be consulted regarding the quarterly manganese sampling results at the PLFTS effluent, with the intention that implementation of monthly or supplemental PLFTS effluent manganese sampling be based on those future consultations. To aid future consultations, samples for manganese only will be collected from the Landfill Pond in conjunction with the routine quarterly PLFTS effluent samples. The parties agree to evaluate Landfill Pond operations should manganese concentrations in the Landfill Pond exceed the applicable surface water standard. Contact records for future consultations regarding manganese at the PLFTS and Landfill Pond will be generated as required.

Contact Record Prepared by: George Squibb

Distribution:

Mark Aguilar, EPA
Larry Kimmel, EPA
Carl Spreng, CDPHE
Dave Kruchek, CDPHE
John Rampe, DOE
Scott Surovchak, DOE
John Boylan, Stoller
George Squibb, Stoller
Linda Kaiser, Stoller
Anna Montoya, Stoller

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Disposition December-July 2006 monitoring results for boron at the Present Landfill Treatment System (PLFTS)

Contact Record Approval Date: March 13, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, Doug Hansen / S.M. Stoller, George Squibb / S.M. Stoller, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Mark Aguilar / EPA, Larry Kimmel / EPA, Carl Spreng / CDPHE

Discussion:

As part of Present Landfill closure, a passive seep interception and treatment system has been installed to treat volatile organic compounds (VOCs) in landfill seep water and ground water intercept system (GWIS) water. There are three sources of influent to the treatment system: two GWIS pipes, and the Present Landfill seep. Effluent from the treatment system eventually flows to the Landfill Pond.

As required by the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* and detailed in the 2006 Integrated Monitoring Plan (to be superseded under the Rocky Flats Legacy Management Agreement [RFLMA] by the Rocky Flats Site Operations Guide [RFSOG]), treatment system effluent monitoring requirements consist of routine quarterly sampling for VOCs, metals, and other analytes to evaluate remedy performance. A validated exceedance of a surface-water standard at the treatment system effluent triggers monthly effluent sampling for three consecutive months. Continued exceedances during the 3-month period triggers sampling of the Landfill Pond for those constituents in question. Continued exceedances also trigger consultation between the parties to determine whether a change in the remedy is required, additional parameters need to be analyzed, or a modification of the monitoring plan is warranted. If surface water standards are exceeded in the Landfill Pond, the parties consult to determine if further monitoring modifications are warranted and if Landfill Pond operations should be addressed.

The routine quarterly effluent sample collected on 12/28/05 (Table 1) showed a boron concentration exceeding the applicable Rocky Flats Cleanup Agreement (RFCA) standard of 750 ug/L. Subsequent sampling on a monthly frequency (Table 1) also showed boron concentrations exceeding the RFCA standard, triggering sampling of the Landfill Pond (Table 2) and consultation.

Formal consultation regarding this issue took place on November 8, 2006.

Table 1. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Boron, total	***12/28/05***	***2100***	***µg/L***	***750***
	2/23/06	*1930*	*µg/L*	*750*
	3/20/06	1600	µg/L	750
	4/19/06	*1350*	*µg/L*	*750*
	5/23/06	1600	µg/L	750
	7/25/06	*1230*	*ug/L*	*750*

Notes: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly samples are shown in italics.

Table 2. Present Landfill Pond (PLFPONDEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Boron, total	5/23/06	1200	µg/L	750
	7/25/06	1290	µg/L	750

Notes: The 4/19/06 PLFSYSEFF result (Table 1) was received on 5/23/06, triggering pond sampling.

Resolution:

The surface water standard for boron in RFCA is 750 µg/L (total), which is derived from the Colorado Water Quality Control Commission's (WQCC) Regulation No. 38 for Segments 4a, 4b, and 5 of Big Dry Creek Basin. Footnote *g* of Table 4 in the Basic Standards for Groundwater (WQCC Regulation No. 41) explains that this value is based on an agricultural use specifically to protect fruit and nut trees. The parties recognize that Rocky Flats Site (RFS) water is not used to irrigate fruit and nut trees. Agricultural and drinking water uses of surface water, and the drilling of groundwater wells for such uses, are prohibited by the Corrective Action Decision / Record of Decision, the forthcoming RFLMA, and the Environmental Covenant for the Central Operable Unit. The parties also recognize that the PLFTS is designed to treat VOCs, not metals such as boron. The parties have agreed to petition the WQCC for a change in the boron standard for Segments 4a, 4b, and 5 to reflect the use status of RFS surface waters. Routine quarterly sampling at the PLFTS with regard to boron will continue as currently implemented based on this consultation. The parties will continue to be consulted regarding the quarterly boron sampling results, with the intention that implementation of monthly or supplemental boron sampling be based on those future consultations. Contact records for future consultations regarding boron at the PLFTS, up to and including the outcome of the WQCC petition, will be generated as required.

Contact Record Prepared by: George Squibb

Distribution:

Mark Aguilar, EPA
Larry Kimmel, EPA
Carl Spreng, CDPHE
Dave Kruchek, CDPHE
John Rampe, DOE
Scott Surovchak, DOE
John Boylan, Stoller
George Squibb, Stoller
Linda Kaiser, Stoller
Anna Montoya, Stoller

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Disposition February-July 2006 monitoring results for arsenic at the Present Landfill Treatment System (PLFTS)

Contact Record Approval Date: March 13, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, Doug Hansen / S.M. Stoller, George Squibb / S.M. Stoller, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Mark Aguilar / EPA, Larry Kimmel / EPA, Carl Spreng / CDPHE

Discussion:

As part of Present Landfill closure, a passive seep interception and treatment system has been installed to treat volatile organic compounds (VOCs) in landfill seep water and ground water intercept system (GWIS) water. There are three sources of influent to the treatment system: two GWIS pipes, and the Present Landfill seep. Effluent from the treatment system eventually flows to the Landfill Pond.

As required by the *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan* and detailed in the 2006 Integrated Monitoring Plan (to be superseded under the Rocky Flats Legacy Management Agreement [RFLMA] by the Rocky Flats Site Operations Guide [RFSOG]), treatment system effluent monitoring requirements consist of routine quarterly sampling for VOCs, metals, and other analytes to evaluate remedy performance. A validated exceedance of a surface-water standard at the treatment system effluent triggers monthly effluent sampling for three consecutive months. Continued exceedances during the 3-month period triggers sampling of the Landfill Pond for those constituents in question. Continued exceedances also trigger consultation between the parties to determine whether a change in the remedy is required, additional parameters need to be analyzed, or a modification of the monitoring plan is warranted. If surface water standards are exceeded in the Landfill Pond, the parties consult to determine if further monitoring modifications are warranted and if Landfill Pond operations should be addressed.

The routine quarterly effluent sample collected on 2/26/06 (Table 1) showed an arsenic concentration exceeding the applicable Rocky Flats Cleanup Agreement (RFCA) standard of 0.018 ug/L. Subsequent sampling on a monthly frequency (Table 1) also showed arsenic concentrations exceeding the RFCA standard, triggering sampling of the Landfill Pond (Table 2) and consultation.

Formal consultation regarding this issue took place on November 8, 2006.

Table 1. Present Landfill Treatment System Effluent (PLFSYSEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard[1]
Arsenic, total	***2/23/06***	***18.1***	***µg/L***	***0.018***
	4/19/06	*21.2*	*µg/L*	*0.018*
	5/23/06	7.3	µg/L	0.018
	6/28/06	5.3	µg/L	0.018
	7/25/06	*22.4*	*ug/L*	*0.018*

Notes: The initial result triggering monthly sampling is shown in **bold**. The routine quarterly samples are shown in italics.
[1] The Site analyzes for total As and conservatively compares to the **total recoverable** RFCA standard.

Table 2. Present Landfill Pond (PLFPONDEFF): Summary of Analytical Results

Analyte	Sample Date	Result	Units	RFCA Standard
Arsenic, total	7/31/06	7.2	µg/L	0.018

Notes: The 6/28/06 PLFSYSEFF result (Table 1) was received on 7/31/06, triggering pond sampling.

Resolution:

With the implementation of RFLMA (see RFLMA Attachment 2, Table 1), the applicable surface-water standard for arsenic will be 50 ug/L (total recoverable; based on the CDPHE Water Quality Control Commission Regulation No. 38 for Segments 4a, 4b, and 5 of Big Dry Creek). The parties recognize that past arsenic concentrations at the PLFTS are below the forthcoming RFLMA standard, and no action is warranted. The parties also recognize that the PLFTS is designed to treat VOCs, not metals such as arsenic. Monitoring at the PLFTS with regard to arsenic will continue as currently implemented based on this consultation.

Contact Record Prepared by: George Squibb

Distribution:

Mark Aguilar, EPA
Larry Kimmel, EPA
Carl Spreng, CDPHE
Dave Kruchek, CDPHE
John Rampe, DOE
Scott Surovchak, DOE
John Boylan, Stoller
George Squibb, Stoller
Linda Kaiser, Stoller
Anna Montoya, Stoller

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Notification of Adverse Biological Condition, March 27, 2007, Central Operable Unit (COU) Boundary Fence Wildlife Deaths

Consultation Date: April 4, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, Linda Kaiser / S.M. Stoller, Jeremiah McLaughlin / S.M. Stoller, Jody Nelson / S.M. Stoller/PEG

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Contact Record Approval Date:

Discussion:

In preparation for the transfer of part of the portions of the Peripheral Operable Unit (POU) to the U.S. Fish and Wildlife Service (USFWS), a 4-strand barbed wire fence was installed around the boundary of the Central Operable Unit (COU). Since completion of the fence in mid-March 2007, there have been three mule deer that have become entangled in the fence and died as a result. A notification to the regulatory contact was made on March 27, 2007, per the requirements in the Rocky Flats Legacy Management Agreement (RFLMA; see attachment). In order to minimize future impacts, DOE requested representatives of the USFWS to visit the Site and inspect the fence. Based on the visit on March 28, 2007, the USFWS indicated that they saw no problems with the design or installation of the fence. The suggestion was made that perhaps something could be done to make the fence more visible for the wildlife until they get used to its presence.

Based on internal discussions between DOE and S.M. Stoller personnel it was decided that an evaluation be made to determine where the deer most commonly cross the fence and then look into some type of marking that could be placed on the fence at those locations to make the fence more visible. On April 2, 2007, Site ecologists walked the entire length of the COU fence and noted the locations where deer seem to frequently cross the fence. Based on an internet search, a product called a fence flag warning device (see attachment) was identified that could be used to make the fence more visible to wildlife. The fence flags are molded, bright white, oval plastic shaped flags that are suspended from the top wire of the fence and flutter in the breeze making the fence more visible. The fence flags will be placed on the fence at the frequently used deer crossing locations to help make the deer aware of the fence.

DOE discussed the issue with CDPH&E on April 4, 2007.

Resolution:

DOE will place the fence flags on the fence and continue to monitor the fence line to determine if the fence flags are preventing future injury or death to the mule deer or other wildlife at the Site. The parties will notified if problems continue and contact records for future consultations regarding the fence will be generated as required.

Contact Record Prepared by: Jody Nelson

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Jeremiah McLaughlin, Stoller
Jody Nelson, Stoller/PEG
Anna Montoya, Stoller
Site Operations Guide

Voltmeters & Fence Monitors

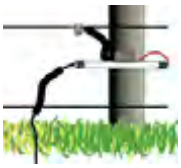
Voltmeters determine if there is sufficient voltage on the fence to control the animals. If fence voltage is lower than 2000 volts, check ground rods, wire connections, and the fence for shorts. A more powerful charger may be needed. Our Digital Voltmeter (VSXK) reads up to 9,900 volts on an easy to read LCD display using a nine volt battery. This is the most accurate fence meter we have tested. If your budget cannot justify an expensive voltmeter, an economy version is also available. The Five Light tester is a minimum requirement to maintain an electric fence properly. A single bulb neon tester can light with less than 100 volts.

VPP

NEW! **The Electric Fence Tester** (VPP) and **Compass™** (VPX) are ideal when saving time is important or for areas where the problem just can't be found. These instruments give a digital readout of the fence voltage, the amperage flow and even the direction of the short. No wires are used with these. If you professionally install electric fence, you need one. The Compass™ has a large backlit LCD screen and beeper. **FREE SHIPPING**

VPX

Fence Compass™	VPX	109.00
Electric Fence Probe	VPP	108.00



The **Kencove Night Light** (MNL) is a fluorescent light that can be hung from an electrified fence wire or attached to a post. One Night Light wire (insulated, galvanized steel) is attached to a hot fence wire with the included tap (CBT), and the other wire (stainless steel) goes to a ground rod. The ground rod does not have to be long; some people use a ten inch brace pin. The light flashes with every pulse of the charger, making it easy to see if the fence is hot from a distance at night. It also warns animals to stay away from the fence. The night light has been improved for better durability but it has no guarantee. If lightning hits the fence, remember Kencove's cost is much less than others.

Fence Monitors		
Kencove Night Light	MNL	21.00
Replacement Bulb	ZZN003	4.25

VSXK

Kencove's **Digital Voltmeter** (VSXK) reads up to 9000 volts on an easy-to-read LCD display using a 9-volt battery (included). This is the most accurate fence meter we have tested.

VSX

The **Stafix Digital Voltmeter** is durable and reliable with automatic on/off and reads from 100 to 10,000 volts. Large clips are included for attaching to the live wire and earth contact.

Voltmeters		
NZ Digital Voltmeter	VSX	67.50
Digital Voltmeter	VSXK	41.50
5 Lite Tester	V5L	10.75

V5L

Kencove's **5-Light Tester** is more rugged than other units, with brighter lights to increase daytime visibility.

5 Lite Tester	V5L	10.75

NEW! **Stafix Fence Alert™** flashes when fence voltage drops below 1 of 2 preset voltage levels. Easily clips to fence. The battery lasts up to 5 years in standby mode and runs the strobe light for over 2 weeks.

Fence Alert	MFA	17.95

Warning Signs & Fence Flags

The **Kencove Sign** (MFSP) is yellow and provides good visibility. The Stafix (MFS) has plastic clips for attaching onto the fence wire and also has 5 holes for different attachment methods. All signs are printed "ELECTRIC FENCE" on both sides and are made of yellow plastic. Use the stainless steel spring type K-CLIPS® for secure hanging of the signs. The clips will keep the sign from sliding down the smooth wire.

For fence lines needing more visibility to livestock, wildlife or humans, consider using our **FENCE-FLAG®** warning device. Designed to flutter with the slightest breeze, these molded, bright white, oval shaped flags are suspended on a stainless steel, spring temper **K-CLIP®** that securely attaches with finger tip application to any style wire or twine fence line. They are packed in bags containing 12 stainless steel K-CLIPS® and 12 molded flags. Quickly and easily installed!

MFSP

MFF

MFS

Stafix Fence Sign Plastic Clip-on type	MFS	1.99
Kencove Electric Fence Sign Plastic	MFSP	.75

K-CLIPS® grip the wire with spring action, stainless steel 50/pk	MFC	8.00
FENCE-FLAG® 12/pk with K-CLIPS® White	MFF	3.65

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Discussion and approval of exploratory excavations to greater than 3 feet below grade around the former Interceptor Trench Pump House

Contact Record Approval Date: June 6, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller, Jody Nelson / S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Discussion:
The Solar Ponds Plume Treatment System (SPPTS) collects and treats water contaminated with nitrate and uranium. Effluent from this system is discharged at the Solar Ponds Plume Discharge Gallery (DG) via remnants of the pre-existing Interceptor Trench System (ITS). Although only low concentrations of residual nitrate and uranium are in the system effluent, concentrations of these constituents in water at the DG are elevated, often exceeding concentrations in untreated SPPTS influent. These elevated concentrations contribute to contaminant levels in North Walnut Creek. For future compliance purposes and to reduce long-term operation and maintenance costs, the source(s) of this higher-concentration water, and possible replacement of the existing SPPTS with a more efficient system in the originally-proposed valley-bottom location, should be evaluated.

Resolution:
Additional sources of ground water that may contribute to elevated concentrations of nitrate and uranium monitored at the DG will be investigated by using a backhoe or similar equipment to “pothole” around the location of the former Interceptor Trench Pump House (ITPH). Specific targets include the main western manifold of the ITS, the associated connection to the DG, and the main eastern manifold of the ITS. Some sources indicate these manifolds are constructed of perforated pipe, possibly gravel-wrapped, suggesting the elevated nitrate and uranium reported at the DG may be due to hillside contamination intercepted by the manifolds or remnants of the ITS feeder lines. Alternatively, the source may be the ITPH area itself, since water with elevated concentrations of nitrate and uranium saturated this area on many occasions during ITS and ITPH operation. Finally, the eastern manifold of the ITS, which is fed by lines that were not intercepted by the SPPTS intercept trench, may also contribute to the DG.

The targets described above are expected to be deeper than three (3) feet below ground surface (ft bgs), but are not expected to be deeper than approximately 8 ft bgs. Once located, pipes will be inspected for perforations/wrapping and other construction details; surveyed for x, y, and z coordinates; and if appropriate, the pipes will be penetrated and water flow will be measured. Samples may also be collected if conditions are favorable for this activity.

Because the hillside in which the ITS and SPPTS are located is typically dry and consists of clayey colluvium overlying tight claystone, performing this work during the wetter spring months is desirable in order to collect the maximum amount of data.

An email discussing the potholing was provided on May 10, 2007 to Carl Spreng, CDPHE. This email and his authorizing response, dated May 11, 2007, are attached.

Contact Record Prepared by: John Boylan

Distribution:

Carl Spreng, CDPHE
Scott Surovchak, DOE
John Boylan, Stoller
George Squibb, Stoller
Linda Kaiser, Stoller
Rick DiSalvo, Stoller
Anna Montoya, Stoller

Supplementary Information Regarding Excavation

CDPHE has requested that the following information be included in contact records for soil excavation.

1 - Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption won't be violated (or state that there are none if that is the case)-

The exploratory excavation is in the vicinity of the former Interceptor Trench Pump House (ITPH) known as building 308D. The building was removed as documented in the 9/22/03 Type 1 Facility Closeout Report for Buildings 308B and 308D. The closeout report indicates that utilities were disconnected and capped three feet below grade.

2 - Provide information about any former IHSSs/PACs or other known soil or groundwater contamination in the vicinity (or state that there is no known contamination)-

The closeout report indicates that there is no contamination of remaining soils, and this area was not an IHSS. The RI/FS Nature and Extent of Soil Contamination Figures do not indicate soil contamination in this area. Ground water in the vicinity is impacted by the Solar Ponds Plume. Any ground water that is encountered will be collected from the excavation if necessary to conduct the investigative work and be treated in the Solar Ponds Plume Treatment System.

3 - Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored)-

All excavated soils will be returned to the excavation and original contours restored.

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Discussion and Approval of Excavation Greater than 3 Feet Below Grade in FC-1 Soil Borrow Area and Placement of Soil South of Former B371 Location to Eliminate Ponding Around Well Heads for Wells 33502, 33604, and 33703

Contact Record Approval Date: June 6, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller, Jody Nelson/ S.M. Stoller (subcontractor), Rick DiSalvo, S.M. Stoller (subcontractor)

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Discussion:

Conceptual plans to use the eastern portion of the bottom of the soil borrow area that created Functional Channel (FC)-1 as part of the Rocky Flats Land Configuration work (the large borrow area west of where Building 371 used to sit) as additional fill material are under development. The fill material will be used to fill some low spots that "pool" water around ground water wells south of the B371 area and also to recontour the area so that the water from precipitation events drains away from the wells. The excavation work will likely exceed the 3-foot-depth limit specified by the institutional controls (RFLMA, Attachment 2, Table 4, Control 2) and thus requires pre-approved procedures. We expect the total depth to be no greater than 3 to 5 feet below current grade. Erosion controls will be employed in accordance with the Central Operable Unit (OU) Erosion Control Plan. The excavated area will be contoured after removal of the fill material, so that the water that currently flows in a ditch on the east side of the bottom of FC-1 will flow across the bottom of the excavated area, thus potentially creating additional wetland at the Site.

The borrow area is not located in Preble's mouse habitat; therefore, there are no Endangered Species Act issues with the project.

The attached S.M. Stoller 5/30/07 Conceptual Design Grading Plan has been developed to provide the location information of the proposed borrow/fill area to allow regulatory review in relation to the institutional control. CDPHE approval for this work is requested before final design and procurement activities proceed. It is anticipated that the construction work would be done in August or September 2007.

CDPHE has requested that the following information be included in contact records for soil excavation related to this institutional control:

1 - Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).

There are no remaining subsurface structures in the borrow area so that the minimum cover assumption is not relevant.

2 - Provide information about any former IHSSs/PACs or other known soil or groundwater contamination in the vicinity (or state that there is no known contamination).

The proposed borrow area is not near any soil or ground water contamination. Two IHSSs were located in the area, PAC 300-700, Scrap Roofing Disposal, and PAC 300-702, Pesticide Shed. These were investigated and dispositioned with approval of No Further Accelerated Action as discussed in the Historical Release Report, RI/FS Appendix B. When the area was excavated during construction of FC-1 in 2005, scrap material was found in the location of PAC 300-700, but was determined to be not hazardous.

3 - Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).

The approximate final contours of the borrow and fill area are expected to conform to the final grading plan.

Resolution:

Carl Spreng, CDPHE, approved the FC-1 area indicated on the S.M. Stoller 5/30/07 Conceptual Design Grading Plan for excavation to depths below 3 feet to obtain borrow soil and place it on the fill area shown on the Grading Plan.

Thus, Stoller will continue with the design to allow procurement activities to proceed.

Contact Record Prepared by: Jody Nelson and Rick DiSalvo

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Rocky Flats Contact Record File

GRADING PLAN

N

SCALE IN FEET
60 30 0 60 120 180

CONTOUR INTERVAL = 0.5 FEET

LEGEND:

- EXISITING CONTOURS
- REGRADE CONTOURS
- ROAD
- RIPRAP
- AREA OF PONDED WATER AFTER SNOWMELT
- NEW DITCH/FUNCTIONAL CHANNEL
- OLD DITCH/FUNCTIONAL CHANNEL

NOTES:

1) VOLUME OF CUT FROM WESTERN WETLAND EXCAVATION TO BE UTILIZED FOR CENTRAL PONDING AREA FILL. REGRADE CONTOUR AS SHOWN WILL PRODUCE APPROXIMATELY 6,000 CY OF MATERIAL.

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

REFERENCE

APPROVALS		DATE
DRAWN BY:	A. TUMEY	5/30/07
ENGINEER	J. KIENHOLZ	5/30/07
PROJECT ENGINEER		
APPROVED BY:	M. MADRIL	5/30/07
PROJECT MANAGER	L. KAISER	5/30/07
DOE CONCURRENCE	(SEE RECORD)	5/30/07

AREA B371/FC-1 GRADING

GRADING PLAN

PROJECT NO. LTS-111-0056-13-001C
SHT. 1 OF 1
DRAWING NO. S03222-RAC-C02-D+

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Discussion and approval of soil disturbance for Phase III road improvement work involving the construction of roadside drainage ditches that will not return excavation to preexisting grade.

Contact Record Approval Date: August 17, 2007

Site Contact(s)/Affiliation(s):
Jeremiah McLaughlin, S.M. Stoller
Rick DiSalvo, S.M. Stoller

Regulatory Contact(s)/Affiliation(s):
Carl Spreng, CDPHE

Discussion

The engineering design for the Phase III road repair/maintenance work to be conducted in August 2007 includes four areas where drainage ditches are to be constructed alongside the roads. When they are completed, the center of the ditches will be 1 foot below the existing grade with an approximately 3:1 taper up to the existing grade. The design for one other area, the road leading to the Mound Treatment System, calls for four water bars (a shallow depression bordered by a hump similar to a speed bump) to be constructed across the road to channel runoff. The water bar depressions are 9 inches below the existing grade, and the hump is 9 inches above the existing grade. The ditches and water bars facilitate drainage to minimize the effects of heavy precipitation on these areas of the roads.

Attached is a Central Operable Unit aerial photograph showing the locations where ditches are to be constructed.

The Rocky Flats Legacy Management Agreement (RFLMA), Attachment 2, Table 4, Institutional Control (IC) Number 3, stipulates that soil disturbance must be in accordance with the CDPHE-approved Erosion Control Plan (ECP) and that the soil surface must be restored to the preexisting grade after any soil-disturbance activity has occurred. Work will be done in accordance with the ECP, but of necessity, soil will not be restored to the preexisting grade where the ditches and water bars are to be constructed.

The ditches and water bars are needed to meet the design objective to facilitate drainage, and the construction is a field modification. DOE may implement field modifications that are consistent with the intent of the approved action (in this case, IC Number 3) upon approval by CDPHE, in accordance with RFLMA, paragraph 34. This contact record is to document CDPHE approval.

The objective of the IC is to maintain the current depth to subsurface contamination or contaminated structures. This IC also results in achieving compliance with the CDPHE risk management policy of ensuring that residual risks to the site user are at or below 1x10-6. Based on a review of the areas where ditches and water bars are to be constructed, and based on the limited aerial extent, the minor change in depth to subsurface contamination does not impact compliance with the risk management policy.

CDPHE has requested that the following information be included in contact records for soil excavation related to this IC that will not return soil to the preexisting grade:

1) Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).

A portion of the Original Process Waste Line (OPWL), IHSS 000-121 (for more information on IHSS 000-121, see item 2, below), runs under the road at approximately the center of the ditch planned for Area AA, which is along former Central Avenue. The portion is identified as P11, a 3-inch rubber pipe inside a 4-inch fiberglass pipe. This pipe is located at approximately 5.5 feet below the surface.

A portion of the sanitary sewer system, IHSS 000-500 (for more information on IHSS 000-500, see item 2, below), runs under the road (former Central Avenue), with two intersecting lines from the south of the road joining at approximately the eastern and western ends of Area AA. In Area AA, two manholes were completely removed, three manholes were removed to 4 feet below the surface, and any remaining piping is at least 3 feet belowground.

None of the other areas where ditches or water bars are planned to be constructed have remaining subsurface structure in the vicinity.

2) Provide information about any former IHSSs/PACs or other known soil or ground water contamination in the vicinity (or state that there is no known contamination).

Only Area AA is in the vicinity of IHSSs/PACs or other known soil or ground water contamination. Portions of the following IHSSs/PACs in the vicinity of the ditch planned for Area AA and their disposition are as follows:

<u>IHSS 000-121 (OPWL)</u>: The OPWL system was a network of underground pipelines and tanks used to transport and store aqueous chemical and radioactive process wastes for subsequent treatment. Site wide, all OPWL was tapped, drained of any residual liquid, and grouted to the extent possible. Approximately 17,000 feet of OPWL were removed, and approximately 14,700 feet were grouted and left in place, which includes line P11 running under and perpendicular to the road in Area AA. Soils adjacent to OPWL were sampled, contaminated soils were removed in accordance with Rocky Flats Cleanup Agreement (RFCA) accelerated action decision document requirements, and excavations were backfilled with clean soils. No Further Accelerated Action was approved by CDPHE in 2005.

<u>IHSS 000-162 (Radioactive Site, 700 Area)</u>: This area was at approximately the central portion of Area AA, and it was identified based on ground water monitoring results in 1974 and air monitoring results in January 1981, which indicated the presence of residual radioactivity in the area. This IHSS essentially coincided with the OPWL in this area and was considered part of the OPWL (IHSS 000-121) characterization work. No Further Accelerated Action was approved by CDPHE in 2005.

<u>IHSS 000-190 (Caustic Leak [a.k.a. Central Avenue Ditch])</u>: In 1978 1,000 to 1,500 gallons of 2.5 Normal NaOH leaked into the Central Avenue Ditch. The NaOH was adequately neutralized after the spill, and subsequent storm water flows in the ditch flushed away any remaining NaOH. No Further Accelerated Action was approved by CDPHE in 2005.

<u>PAC 000-500 (Sanitary Sewer System)</u>: The sanitary sewer system was used for the transport, storage, and treatment of sanitary waste throughout the operating history of Rocky Flats. Sanitary sewer lines and connecting lines from buildings ran under and alongside Central Avenue. There were several releases to the system over its operating life, and for many years, normal discharge to the system included radioactively contaminated laundry water. All of the major discharges occurred prior to 1990, and significant volumes of sewage, and the jet washing of lines to remove sludge served to subsequently flush the lines. The contamination of soil by leaking pipes was unlikely because ground water infiltrated the system rather than sewage leaking out of it. The system was closed by removing any lines to at least 3 feet below grade, removing manholes completely or to at least 4 feet below grade, and grouting open ends resulting from building disconnection. Lines and bedding material were disrupted at various locations to eliminate the possibility of preferential ground water flow paths. No Further Accelerated Action was approved by CDPHE in 2005.

<u>PAC 000-503 (Solar Pond Water Spill along Central Avenue)</u>: A tanker truck transporting water from the Solar Evaporation Ponds to the former Building 374 storage tanks spilled about 35 gallons over a half-mile stretch of asphalt on Central Avenue in 1994. The spilled water was cleaned up from the asphalt. No Further Accelerated Action was approved by CDPHE in 2002.

PAC 000-505 (Storm Drains): The storm drains provided site drainage from roads, parking lots, and other areas throughout the operating history of Rocky Flats. Sanitary sewer lines and connecting lines from buildings ran under and alongside Central Avenue. There were eight specific contaminant-release areas associated with PAC 000-505, and these were identified as IHSSs or PACs and individually dispositioned in accordance with RFCA. Storm drains were removed or disrupted at various locations to eliminate the possibility of preferential ground water flow paths. Characterization did not indicate that subsurface soil removal was necessary. In Area AA, the storm drains were removed. No Further Accelerated Action was approved by CDPHE in 2005.

More detailed information on these PACs/IHSSs and the disposition of these areas is in the *Historical Release Report*, RI/FS, Appendix B.

3) Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).

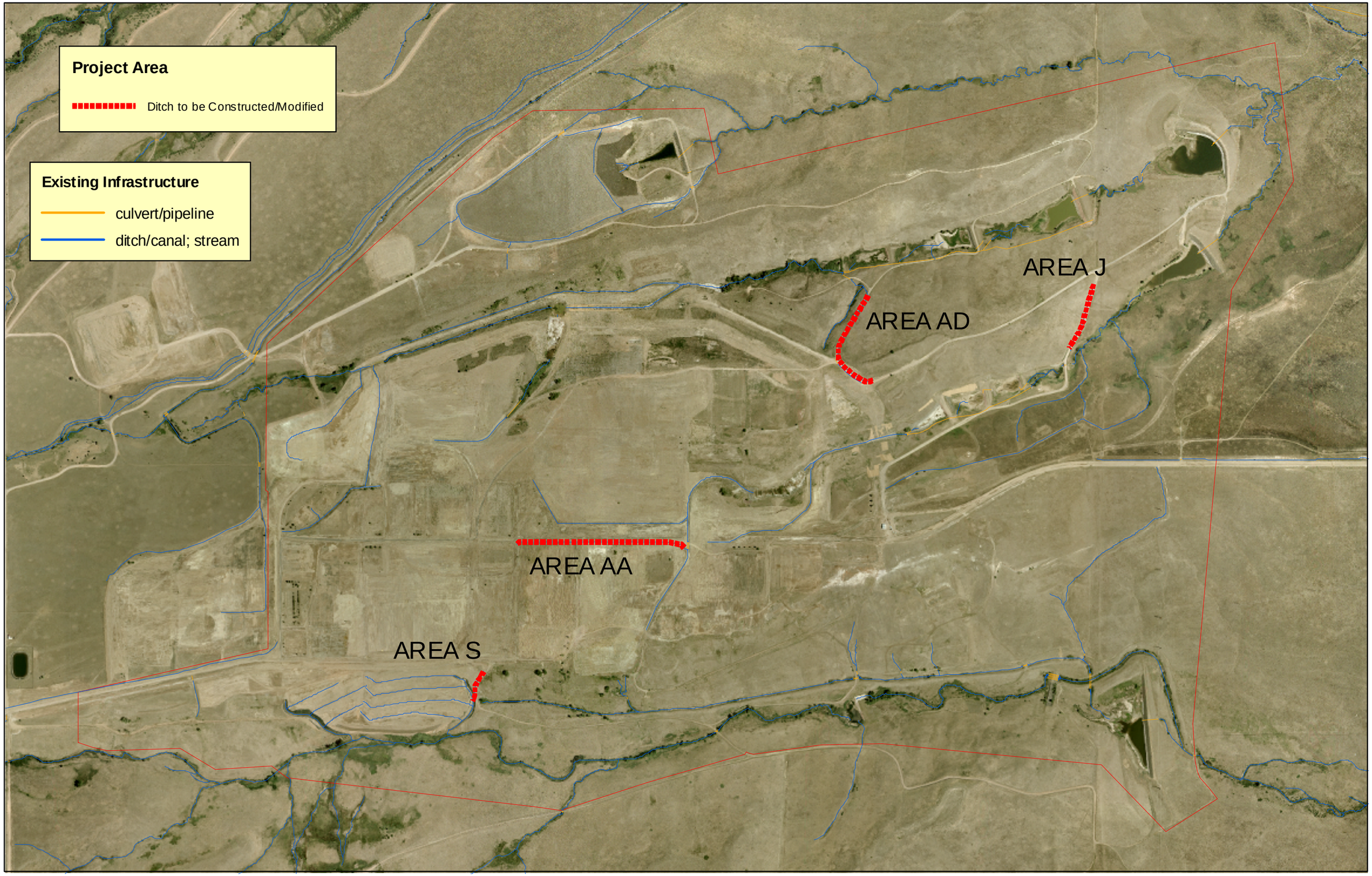
When completed, the center of the ditches will be 1 foot below the existing grade with a 3:1 taper up to the existing grade. The water bar depressions are 9 inches below the existing grade, and the hump is 9 inches above the existing grade.

Resolution

Carl Spreng, CDPHE, approved the placement of the ditches and water bars as described in this contact record.

Contact Record Prepared by: Jeremiah McLaughlin and Rick DiSalvo

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, S.M. Stoller
Rocky Flats Contact Record File


Project Area
Ditch to be Constructed/Modified
Existing Infrastructure
culvert/pipeline
ditch/canal; stream
AREA J
AREA AD
AREA AA
AREA S

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Grading the Slump Area South of FC-4 and Former Building 991

Contact Record Approval Date: September 27, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak, DOE
John Boylan, S.M. Stoller
Rick DiSalvo, S.M. Stoller

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Discussion

The hillside slump south of the location of former Building 991 on the south side of Functional Channel (FC)-4, which began developing in 2006, needs to be regraded and seeded to stabilize the hillside and address worker safety and aesthetic concerns. The slumping is likely due to water saturation of the soils caused by disruption of the French drain underlying the hill and removal of the outfall associated with the drainage during closure. The hillside was constructed as part of the former Protected Area security fencing installation in the 1970s. The regrading is anticipated to make the topography of the area similar to that which existed prior to the hillside construction. Sentinel well 45605 is located within the slumping area; its casing is no longer vertical and the stress caused by the slumping is affecting its long-term serviceability. This well needs to be replaced after the grading work is completed. Other than the Sentinel well location, movement of the soils creating the slump does not affect the implementation of the remedy.

The excavation work will exceed the 3-foot-depth limit specified by the institutional controls (Rocky Flats Legacy Management Agreement [RFLMA], Attachment 2, Table 4, Institutional Control 2) and thus requires pre-approved procedures.

DOE, CDPHE, and Stoller staff informally consulted on August 30, 2007, on the regrading concept, and the attached S.M. Stoller Conceptual Design shows the grading location, depth of excavation, and placement of fill based on the outcome of those discussions. Note that Design Sheet 3 also shows the location of former Individual Hazardous Substance Site (IHSS) 154, the Pallet Burn Site, which is discussed in more detail below.

The regrading is projected to generate approximately 7,000 cubic yards of excess material. This soil will be spread at and adjacent to the former 903 Pad area (refer to Design Sheet 8), which will facilitate revegetation efforts in this area. The fill placement activity will conform with the applicable institutional controls, and the final elevation after fill placement and reseeding is expected to be slightly above the existing elevation. Erosion controls for the regrading excavation and fill activities will be employed in accordance with the Central Operable Unit (OU) Erosion Control Plan.

CDPHE approval for this work is requested before final design and procurement activities proceed. It is anticipated that the construction work will be completed in November 2007.

The objective of the institutional control is to maintain the current depth to subsurface contamination or contaminated structures. This control also results in achieving compliance with the CDPHE risk management policy of ensuring that residual risks to the site user are at or below 1×10^{-6}. Based on a review of the location of the regraded area, the limited aerial extent, and the minor change in depth to subsurface contamination, the regrading does not impact compliance with the risk management policy.

CDPHE has requested that the following information be included in contact records for soil excavation related to this institutional control that will not return soil to the preexisting grade:

1 - Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption will not be violated (or state that there are none if that is the case).

There are no subsurface structures in the vicinity. The slump has been informally referred to as the "Building 991 slump" for ease of reference due to its proximity to the location of former Building 991. Portions of former Building 991 remain in the subsurface, but are located north of FC-4, well outside the hillside slump regrading activity area.

2 - Provide information about any former IHSSs/PACs or other known soil or groundwater contamination in the vicinity (or state that there is no known contamination).

The following IHSSs/Potential Areas of Concern (PACs) are in the vicinity of the hillside slump regrading activity area:

- IHSS 154 (PAC 900-154), Pallet Burn Site – Oil-contaminated pallets and other wood debris were burned in this area, which is located south of the slumping soils, just north of FC-5. The conceptual design drawing (Sheet 3) shows that the extent of regrading just touches the northern extent of IHSS 154, approximately between the southern end of Sections E and F (Sheets 6 and 7). Burning activities were conducted in 1965 and the area was removed sometime in the 1970s. Characterization of this IHSS in 2002, as part of IHSS Group 900-2, resulted in three of six sample locations with detectable levels of arsenic, and two of the three locations had arsenic above the wildlife refuge worker (WRW) soil action level specified in the Rocky Flats Cleanup Agreement (RFCA), both at depths greater than 4.5 feet below the surface.

  Detected arsenic concentrations in the three locations ranged from 15.3 to 55.1 milligrams per kilogram (mg/kg). The two sample concentrations above the WRW RFCA soil action level of 22.2 mg/kg were 24.1 and 55.1 mg/kg. Based on the RFCA Attachment 5 Subsurface Soil Risk Screen, soil removal was not required because of the depth of the samples with concentrations above the WRW RFCA soil action level and because the IHSS was not in a significant erosion area, as identified in RFCA Attachment 5. No Further Accelerated Action was approved by CDPHE in 2002.

  The proposed regrading may remove some soil adjacent to IHSS 154, but this would not significantly decrease the elevation of soils within IHSS 154. Prior to regrading, the

boundaries of IHSS 154 will be surveyed and marked. No excavation will take place inside the IHSS boundary.

- IHSS 192 (PAC 000-192), Antifreeze Discharge – On December 2 or 3, 1980, approximately 155 gallons of antifreeze solution, 25% ethylene glycol in water, were discharged from a brine chiller evaporator into a floor drain in former Building 708. The floor drain discharged into a buried culvert, which subsequently discharged into South Walnut Creek. The discharge was impounded in Pond B-1 and 5,000 gallons of water were flushed through the drainage system into Pond B-1. Based on the degradation model for ethylene glycol, it was predicted to reach undetectable levels in leachate and soil within 1 week of the discharge.

  IHSS 192 was part of OU 16, Low Priority Sites, and a No Action remedy for this IHSS was approved in the 1994 OU 16 Corrective Action Decision/Record of Decision.

- PAC 000-503, Solar Pond Water Spill Along Central Avenue – In 1994, a tanker truck transporting water from the Solar Evaporation Ponds to the former Building 374 storage tanks spilled approximately 35 gallons over a 0.5-mile stretch of asphalt on Central Avenue. The spilled water was cleaned up from the asphalt. No Further Accelerated Action was approved by CDPHE in 2002.

More detailed information on these PACs/IHSSs and the disposition of these areas is provided in the Historical Release Report, Appendix B of the Remedial Investigation/Feasibility Study Report.

3 - Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored).

When completed, the new surface elevations will be consistent with the final design drawings for the regrading work. Final elevations will be surveyed and the resulting data will be used to update the Central OU topography maps.

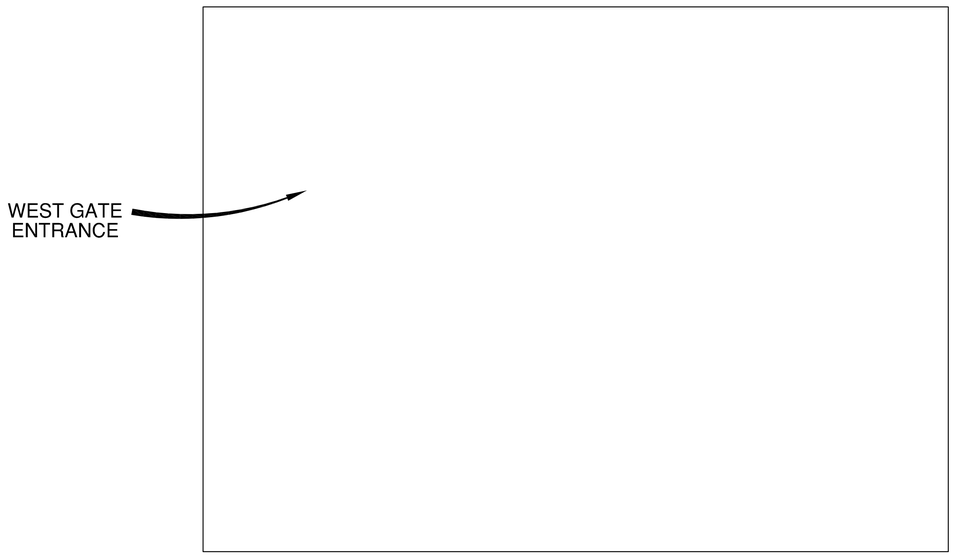
Resolution

Carl Spreng, CDPHE, approved the regrading work as described in this Contact Record.

Contact Record Prepared by: Rick DiSalvo

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Rocky Flats Contact Record
File

UNITED STATES
DEPARTMENT OF ENERGY
LEGACY MANAGEMENT
ROCKY FLATS SITE
BUILDING AREA 991 SLUMP REPAIR



SITE LOCATION MAP

INDEX OF DRAWINGS

SHEET	TITLE	DRAWING NO.
1	TITLE SHEET	S03433–R00–T01–D+
2	PROJECT SITE PLAN	S03434–R00–F01–D+
3	GRADING PLAN	S03435–R00–C01–D+
4	SECTIONS A AND B	S03436–R00–C02–D+
5	SECTIONS C AND D	S03437–R00–C03–D+
6	SECTIONS E AND F	S03438–R00–C04–D+
7	SECTIONS G AND H	S03439–R00–C05–D+
8	EROSION CONTROL PLAN	S03640–R00–C06–D+

ABBREVIATIONS

APPROX.	APPROXIMATE	HORIZ.	HORIZONTAL	SHT	SHEET
℄	CENTER LINE	INV	INVERT	SPPTS	SOLAR POND PLUME TREATMENT SYSTEM
DIA.	DIAMETER	MAX.	MAXIMUM	STA.	STATION
DOE	DEPARTMENT OF ENERGY	MIN.	MINIMUM	THK.	THICK
E	EASTING	MW	MONITORING WELL	TYP.	TYPICAL
EL. OR ELEV.	ELEVATION	N	NORTHING		
EXIST.	EXISTING	NA	NOT APPLICABLE		
		NIC	NOT IN CONTRACT		
		NTS	NOT TO SCALE		

DRAWING LEGEND

PLAN

- —T—·—O·—W— BURIED – TELEPHONE/OPTICAL/WATER
- —E—·—G·—IP— BURIED – ELECTRICAL/GAS LINES/ IRRIGATION PIPE
- RAILROAD TRACK
- WIRE FENCE
- CHAIN LINK FENCE
- SILT FENCE
- DRAINAGE DITCH/WATER LINE LIMITS
- EXISTING UNIMPROVED DIRT ROAD
- OVERHEAD ELECTRICAL LINE
- TREES/SHRUBS/BRUSH
- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROJECT ACCESS/HAUL ROUTE
- UTILITY POLE
- UNDERGROUND DRAINAGE CULVERT
- XXXX EXISTING MONITORING WELL
- 36 HIGHWAY
- SLOPE/FLOW ARROW
- TOP OF SLOPE
- SURVEY CONTROL POINT
- BUILDING/STRUCTURE
- EROSION CONTROL WATTLES

SECTION

- COMPACTED SOIL
- UNDISTURBED SOIL
- SCARIFIED SUBGRADE
- GRAVEL OR DRAIN ROCK
- REVEGETATION

DETAIL SYMBOL

1 — DETAIL NUMBER/SECTION LETTER

2 — SHEET ON WHICH DETAIL/SECTION IS TAKEN FROM

3 — SHEET ON WHICH DETAIL/SECTION IS DRAWN

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE–AC01–02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

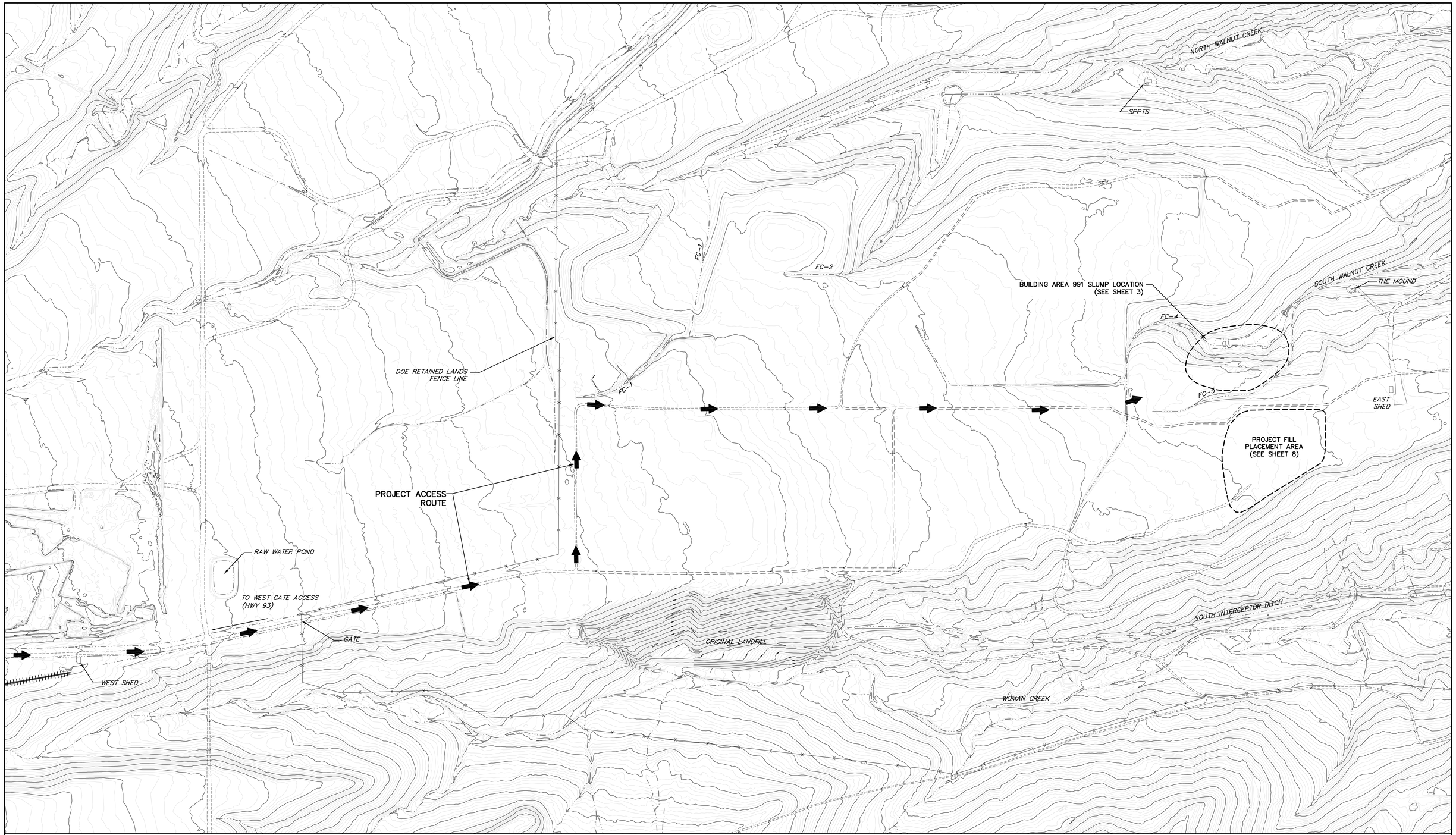
REFERENCE

APPROVALS		DATE
DRAWN BY:	T. BOEHLER	–/–/07
ENGINEER:	J. KIENHOLZ	–/–/07
PROJECT ENGINEER		
APPROVED BY:	M. MADRIL	–/–/07
PROJECT MANAGER	L. KAISER	–/–/07
DOE CONCURRENCE	(SEE RECORD)	–/–/07

BUILDING AREA 991 SLUMP REPAIR

TITLE SHEET

PROJECT NO. LTS–111–0056–13–001D
DRAWING NO. S03433–R00–T01–D+
SHT. 1 OF 8



DITCH/CHANNEL/CREEK
BOUNDARY FENCE
OVERHEAD ELECTRIC LINE

N

SITE PLAN

SCALE IN FEET
300 150 0 300 600 900

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

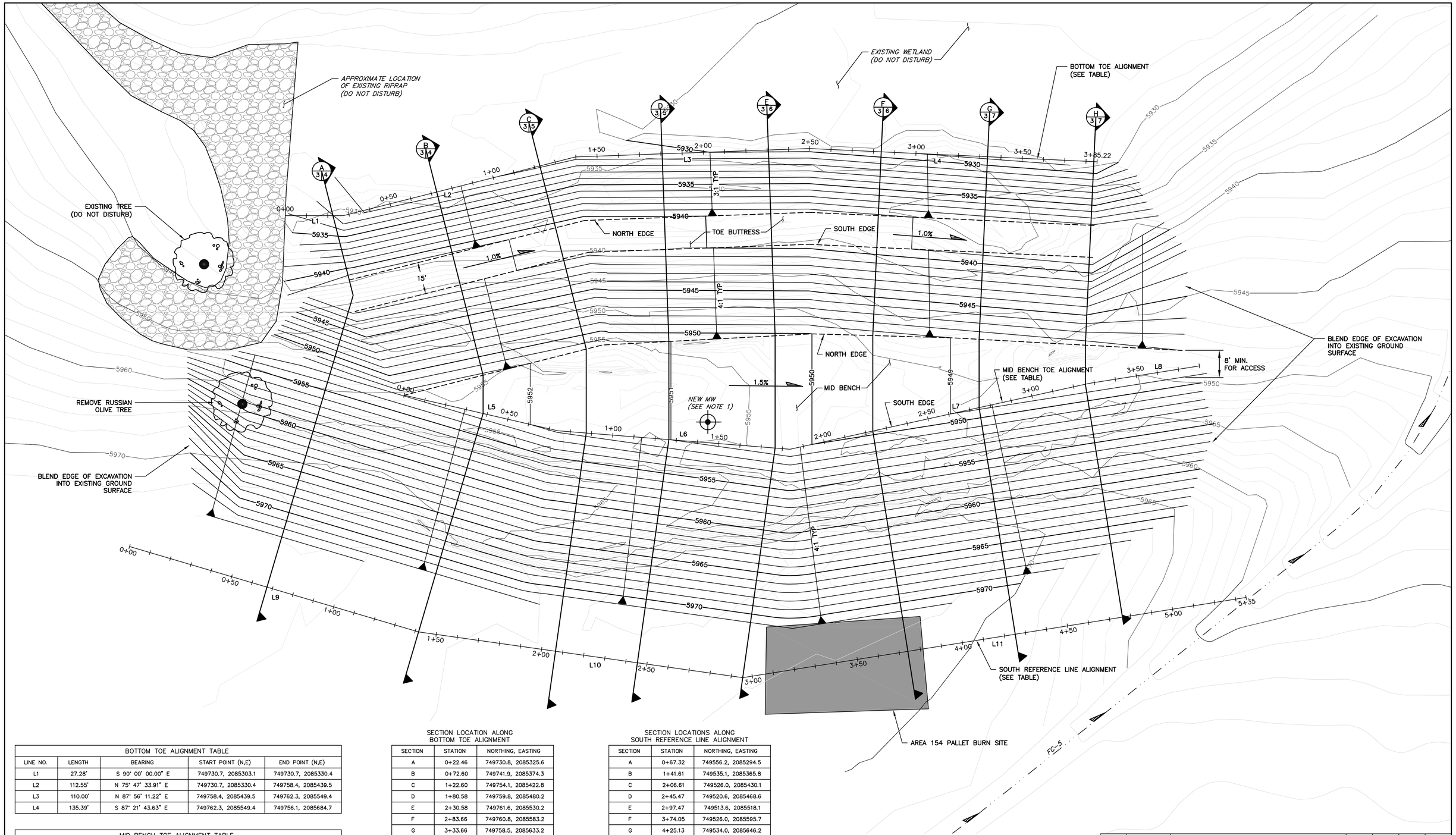
REFERENCE

APPROVALS		
DRAWN BY: T. BOEHLER	DATE: -/-/07	
ENGINEER: J. KIENHOLZ	-/-/07	
PROJECT ENGINEER		
APPROVED BY: M. MADRIL	-/-/07	
PROJECT MANAGER: L. KAISER	-/-/07	
DOE CONCURRENCE: (SEE RECORD)	-/-/07	

BUILDING AREA 991 SLUMP REPAIR

SITE PLAN

PROJECT NO. LTS-111-0056-13-001D
SHT. 2 OF 8
DRAWING NO. S03434-R00-F01-D+



BOTTOM TOE ALIGNMENT TABLE				
LINE NO.	LENGTH	BEARING	START POINT (N,E)	END POINT (N,E)
L1	27.28'	S 90° 00' 00.00" E	749730.7, 2085303.1	749730.7, 2085330.4
L2	112.55'	N 75° 47' 33.91" E	749730.7, 2085330.4	749758.4, 2085439.5
L3	110.00'	N 87° 56' 11.22" E	749758.4, 2085439.5	749762.3, 2085549.4
L4	135.39'	S 87° 21' 43.63" E	749762.3, 2085549.4	749756.1, 2085684.7

MID BENCH TOE ALIGNMENT TABLE				
LINE NO.	LENGTH	BEARING	START POINT (N,E)	END POINT (N,E)
L5	74.01'	S 76° 57' 52.83" E	749646.4, 2085359.0	749629.7, 2085431.1
L6	109.59'	S 85° 26' 32.55" E	749629.7, 2085431.1	749621.0, 2085540.4
L7	143.98'	N 77° 34' 21.09" E	749621.0, 2085540.4	749651.9, 2085681.0
L8	52.42'	N 81° 00' 22.16" E	749651.9, 2085681.0	749660.1, 2085732.7

SOUTH REFERENCE LINE ALIGNMENT TABLE				
LINE NO.	LENGTH	BEARING	START POINT (N,E)	END POINT (N,E)
L9	141.61'	S 73° 31' 51.77" E	749575.2, 2085230.0	749535.1, 2085365.8
L10	153.86'	S 81° 58' 41.00" E	749535.1, 2085365.8	749513.6, 2085518.1
L11	239.53'	N 80° 56' 59.56" E	749513.6, 2085518.1	749551.3, 2085754.7

SECTION LOCATION ALONG BOTTOM TOE ALIGNMENT

SECTION	STATION	NORTHING, EASTING
A	0+22.46	749730.8, 2085325.6
B	0+72.60	749741.9, 2085374.3
C	1+22.60	749754.1, 2085422.8
D	1+80.58	749759.8, 2085480.2
E	2+30.58	749761.6, 2085530.2
F	2+83.66	749760.8, 2085583.2
G	3+33.66	749758.5, 2085633.2
H	3+83.66	749756.2, 2085683.1

SECTION LOCATION ALONG MID BENCH TOE ALIGNMENT

SECTION	STATION	NORTHING, EASTING
A	–	–
B	0+38.10	749637.8, 2085396.1
C	0+87.54	749628.6, 2085444.6
D	1+26.47	749625.5, 2085483.4
E	1+76.56	749621.5, 2085533.3
F	2+23.42	749629.5, 2085579.3
G	2+74.59	749640.5, 2085629.2
H	3+25.72	749651.5, 2085679.2

SECTION LOCATIONS ALONG SOUTH REFERENCE LINE ALIGNMENT

SECTION	STATION	NORTHING, EASTING
A	0+67.32	749556.2, 2085294.5
B	1+41.61	749535.1, 2085365.8
C	2+06.61	749526.0, 2085430.1
D	2+45.47	749520.6, 2085468.6
E	2+97.47	749513.6, 2085518.1
F	3+74.05	749526.0, 2085595.7
G	4+25.13	749534.0, 2085646.2
H	4+76.17	749542.0, 2085696.6

NOTE:

1) NEW MONITORING WELL TO REPLACE THE MONITORING WELL DESTROYED DURING THE SLUMP TO BE INSTALLED BY OTHERS.

N

GRADING PLAN

SCALE IN FEET

20 10 0 20 40 60

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

REFERENCE

APPROVALS

		DATE
DRAWN BY:	T. BOEHLER	–/–/07
ENGINEER:	J. KIENHOLZ	–/–/07
PROJECT ENGINEER:		
APPROVED BY:	M. MADRIL	–/–/07
PROJECT MANAGER:	L. KAISER	–/–/07
DOE CONCURRENCE:	(SEE RECORD)	–/–/07

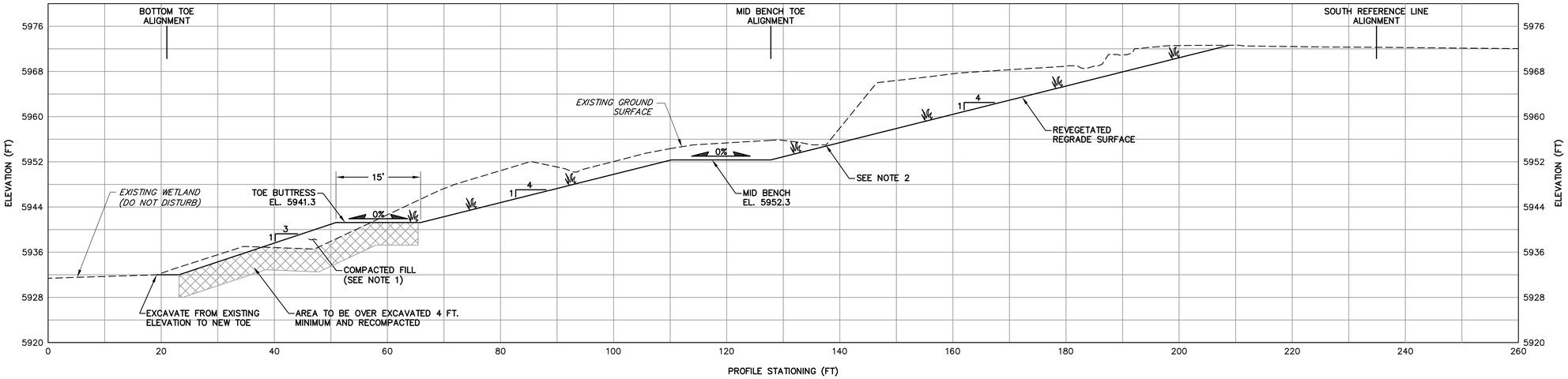
BUILDING AREA 991 SLUMP REPAIR

GRADING PLAN

PROJECT NO. LTS-111-0056-13-001D

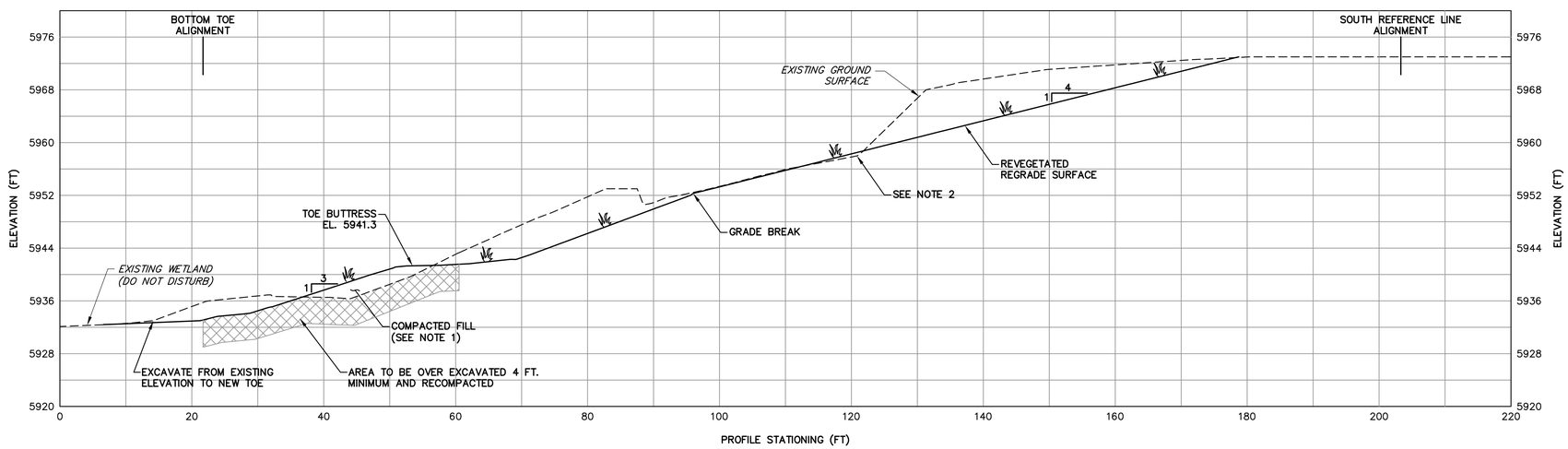
DRAWING NO. S03435-R00-C001-D+

SHT. 3 OF 8



B 3 4 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'



A 3 4 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'

NOTE:

1) IN FILL AREAS, SCARIFY A MINIMUM 12-INCH DEPTH, WORK THE SCARIFIED MATERIAL TO A UNIFORM CONDITION AND MOISTURE CONDITION, AND COMPACT WITH A MINIMUM OF THREE PASSES WITH SHEEP'S FOOT COMPACTION EQUIPMENT.

2) EXCAVATE AND FILL LARGE SUBSIDENCE CRACKS PRIOR TO FILL PLACEMENT.

3) SPREAD FILL IN 12-INCH LIFTS (MAXIMUM).

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

REFERENCE

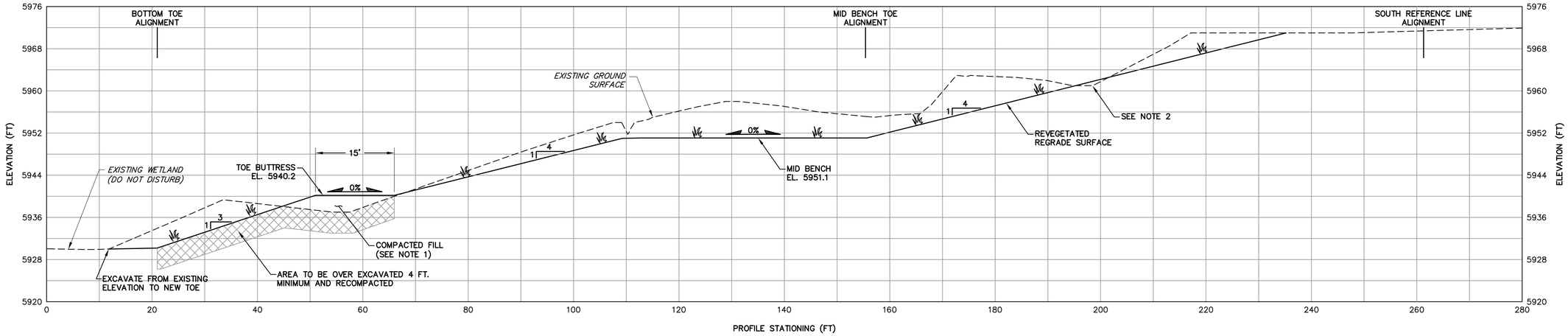
APPROVALS

		DATE
DRAWN BY:	T. BOEHLER	-/-/07
ENGINEER	J. KIENHOLZ	-/-/07
PROJECT ENGINEER		
APPROVED BY:	M. MADRIL	-/-/07
PROJECT MANAGER	L. KAISER	-/-/07
DOE CONCURRENCE	(SEE RECORD)	-/-/07

BUILDING AREA 991 SLUMP REPAIR

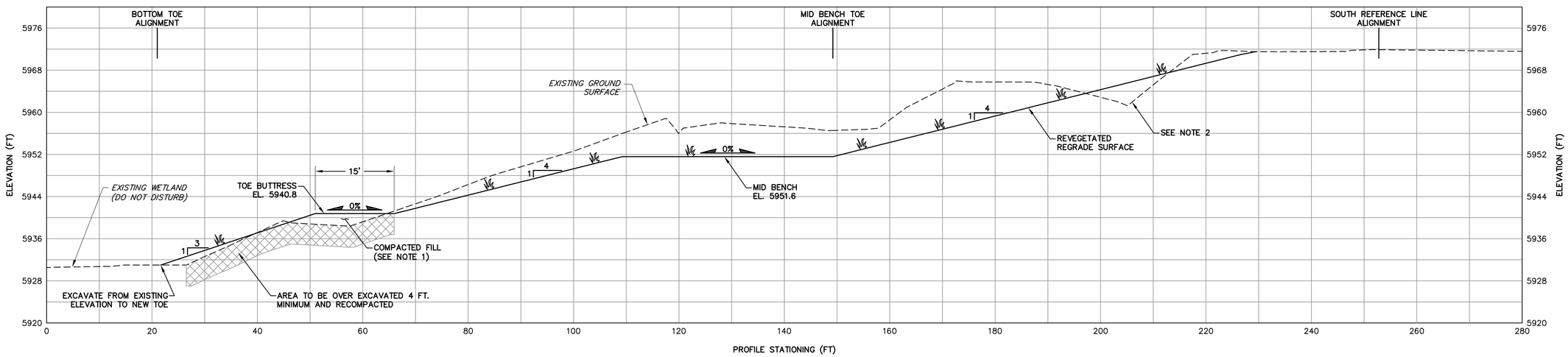
SECTIONS A AND B

PROJECT NO. LTS-111-0056-13-001D
SHT. 4 OF 8
DRAWING NO. S03436-R00-C002-D+



D 3 5 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'



C 3 5 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'

NOTE:

1) IN FILL AREAS, SCARIFY A MINIMUM 12-INCH DEPTH, WORK THE SCARIFIED MATERIAL TO A UNIFORM CONDITION AND MOISTURE CONDITION, AND COMPACT WITH A MINIMUM OF THREE PASSES WITH SHEEP'S FOOT COMPACTION EQUIPMENT.

2) EXCAVATE AND FILL LARGE SUBSIDENCE CRACKS PRIOR TO FILL PLACEMENT.

3) SPREAD FILL IN 12-INCH LIFTS (MAXIMUM).

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION
ROCKY FLATS SITE
GOLDEN, COLORADO

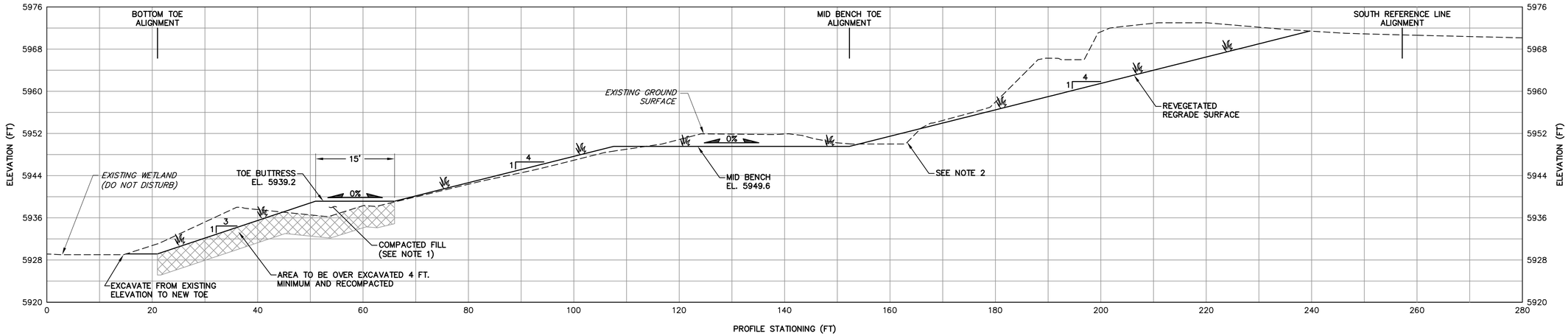
REFERENCE

APPROVALS		DATE
DRAWN BY:	T. BOEHLER	-/-/07
ENGINEER:	J. KIENHOLZ	-/-/07
PROJECT ENGINEER		
APPROVED BY:	M. MADRIL	-/-/07
PROJECT MANAGER	L. KAISER	-/-/07
DOE CONCURRENCE	(SEE RECORD)	-/-/07

BUILDING AREA 991 SLUMP REPAIR

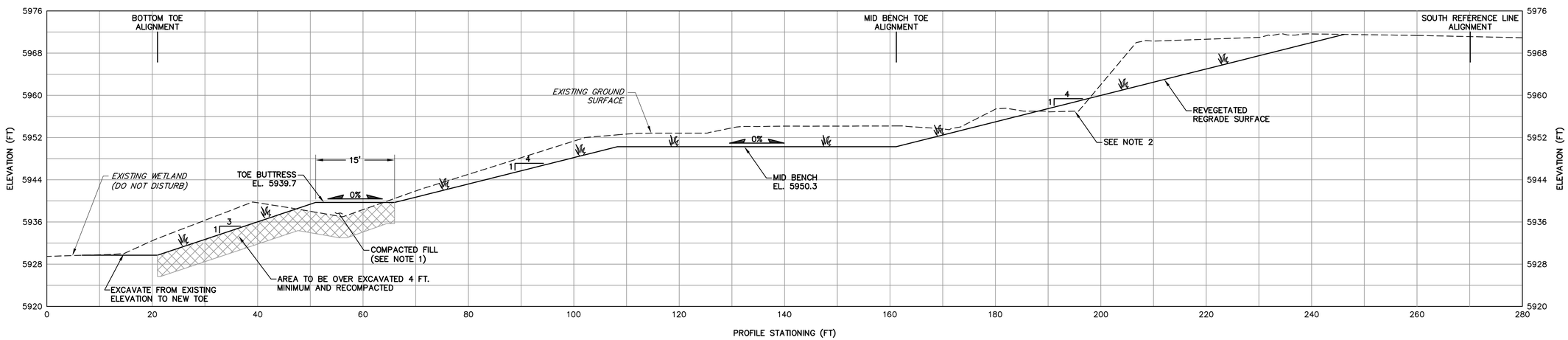
SECTIONS C AND D

PROJECT NO. LTS-111-0056-13-001D
DRAWING NO. S03437-R00-C003-D+
SHT. 5 OF 8



F 3 6 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'



E 3 6 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'

NOTE:

1) IN FILL AREAS, SCARIFY A MINIMUM 12-INCH DEPTH, WORK THE SCARIFIED MATERIAL TO A UNIFORM CONDITION AND MOISTURE CONDITION, AND COMPACT WITH A MINIMUM OF THREE PASSES WITH SHEEP'S FOOT COMPACTION EQUIPMENT.

2) EXCAVATE AND FILL LARGE SUBSIDENCE CRACKS PRIOR TO FILL PLACEMENT.

3) SPREAD FILL IN 12-INCH LIFTS (MAXIMUM).

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION: ROCKY FLATS SITE GOLDEN, COLORADO

REFERENCE

APPROVALS		DATE
DRAWN BY:	T. BOEHLER	-/-/07
ENGINEER:	J. KIENHOLZ	-/-/07
PROJECT ENGINEER:		
APPROVED BY:	M. MADRIL	-/-/07
PROJECT MANAGER:	L. KAISER	-/-/07
DOE CONCURRENCE:	(SEE RECORD)	-/-/07

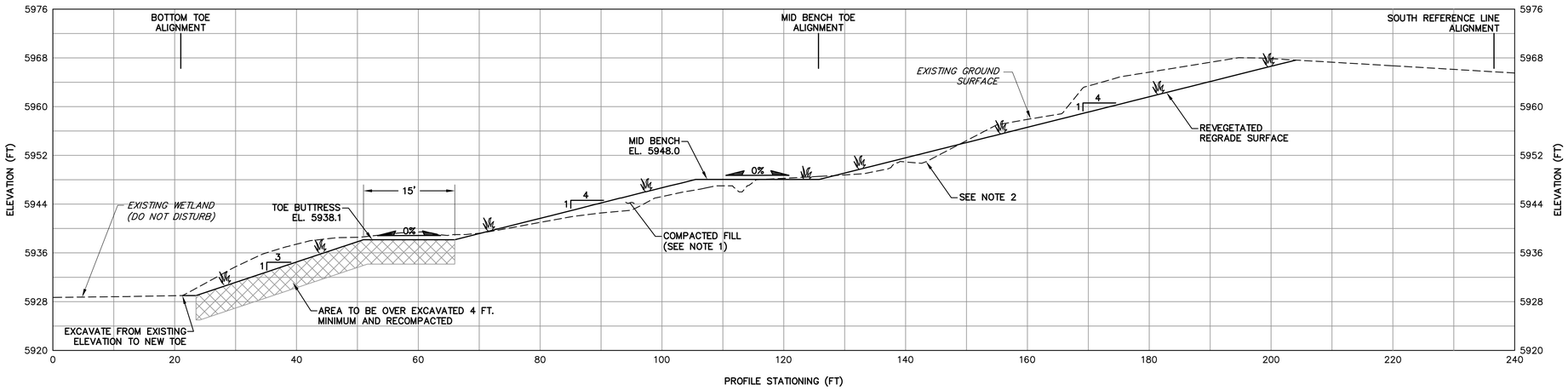
BUILDING AREA 991 SLUMP REPAIR

SECTIONS E AND F

PROJECT NO. LTS-111-0056-13-001D

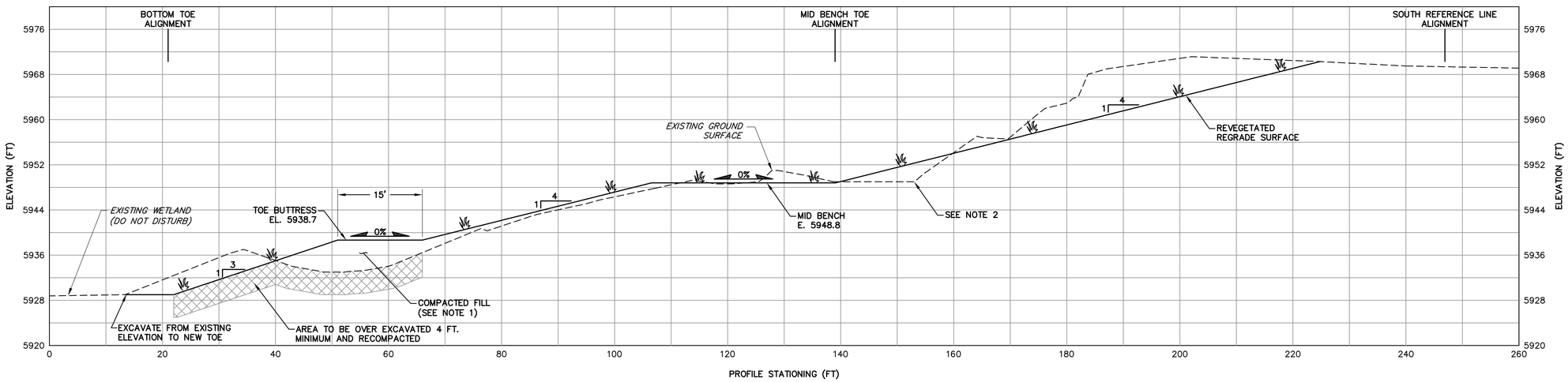
SHT. 6 OF 8

DRAWING NO. S03438-R00-C004-D+



H 3 7 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'



G 3 7 SECTION

SCALE: HORIZ: 1" = 10'
VERT: 1" = 10'

NOTE:

1) IN FILL AREAS, SCARIFY A MINIMUM 12–INCH DEPTH, WORK THE SCARIFIED MATERIAL TO A UNIFORM CONDITION AND MOISTURE CONDITION, AND COMPACT WITH A MINIMUM OF THREE PASSES WITH SHEEP'S FOOT COMPACTION EQUIPMENT.

2) EXCAVATE AND FILL LARGE SUBSIDENCE CRACKS PRIOR TO FILL PLACEMENT.

3) SPREAD FILL IN 12–INCH LIFTS (MAXIMUM).

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE–AC01–02GJ79491

PROJECT LOCATION: ROCKY FLATS SITE GOLDEN, COLORADO

REFERENCE:

APPROVALS		DATE
DRAWN BY:	T. BOEHLER	–/–/07
ENGINEER:	J. KIENHOLZ	–/–/07
PROJECT ENGINEER:		
APPROVED BY:	M. MADRIL	–/–/07
PROJECT MANAGER:	L. KAISER	–/–/07
DOE CONCURRENCE:	(SEE RECORD)	–/–/07

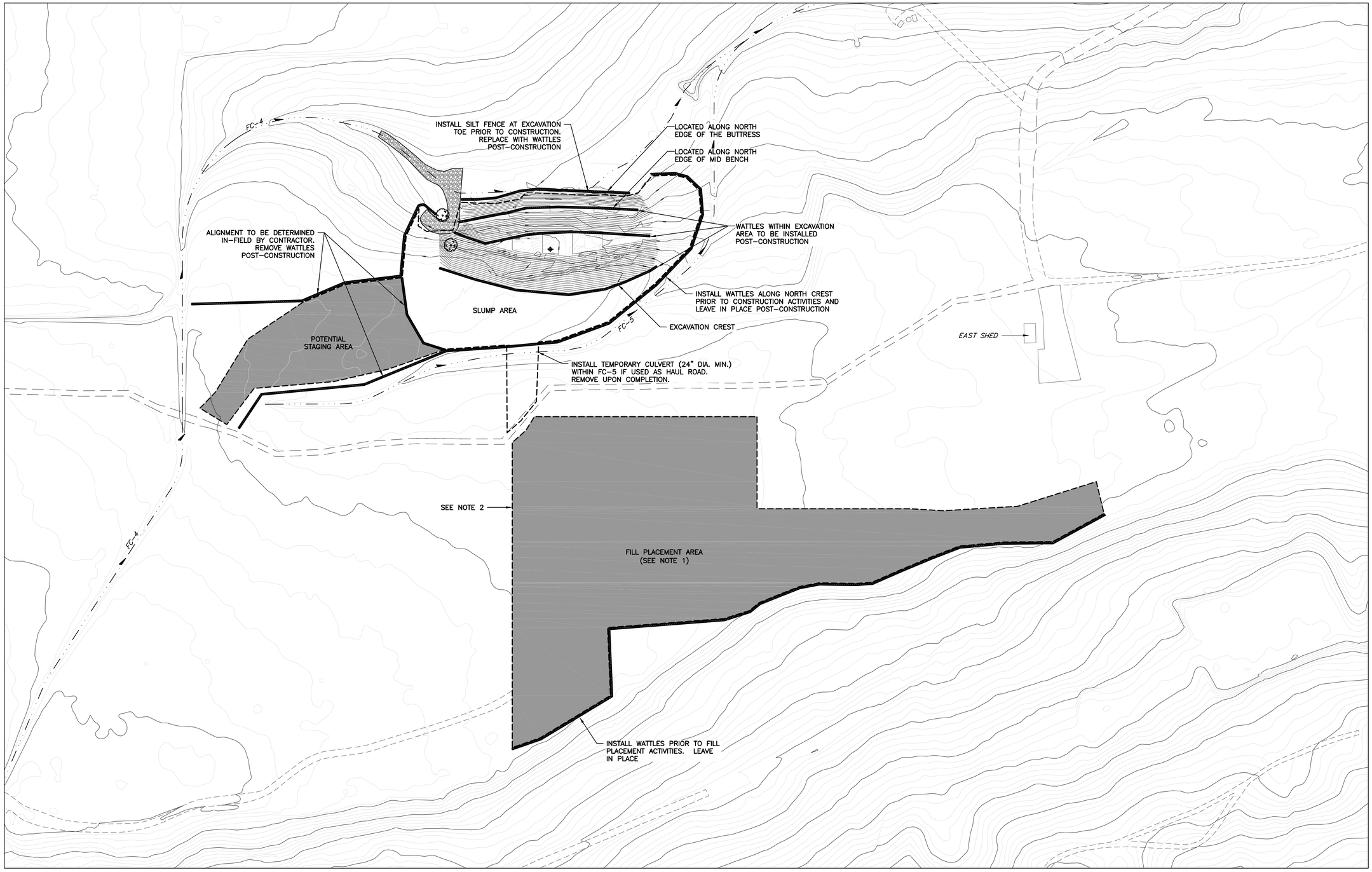
BUILDING AREA 991 SLUMP REPAIR

SECTIONS G AND H

PROJECT NO. LTS–111–0056–13–001D

DRAWING NO. S03439–R00–C005–D+

SHT. 7 OF 8



NOTE:

1) SPREAD FILL MATERIAL GENERATED FROM AREA 991 EXCAVATION IN ONE, SIX-INCH THICK LAYER AND REVEGETATE. ACTUAL AREA MAY VARY DEPENDING ON FILL GENERATED FROM EXCAVATION.

2) CONTRACTOR TO STAKE PERIMETER OF FILL PLACEMENT AREA PRIOR TO CONSTRUCTION ACTIVITIES.

3) INSTALL WATTLES AND SILT FENCE AS DIRECTED BY THE CONTRACTOR AND PER THE EROSION CONTROL PLAN FOR ROCKY FLATS CENTRAL OPERABLE UNIT DATED 4/26/07.

N

GRADING PLAN

SCALE IN FEET
100 50 0 100 200 300

REVISION NO.	DATE	DESCRIPTION	DRAWN BY	CHECKED BY	PROJECT A/E	APPROVAL

U.S. DEPARTMENT OF ENERGY
GRAND JUNCTION, COLORADO

Work Performed by
S.M. Stoller Corporation
Under DOE Contract
No. DE-AC01-02GJ79491

PROJECT LOCATION: ROCKY FLATS SITE GOLDEN, COLORADO

REFERENCE

APPROVALS		DATE
DRAWN BY:	T. BOEHLER	-/-/07
ENGINEER:	J. KIENHOLZ	-/-/07
PROJECT ENGINEER:		
APPROVED BY:	M. MADRIL	-/-/07
PROJECT MANAGER:	L. KAISER	-/-/07
DOE CONCURRENCE:	(SEE RECORD)	-/-/07

BUILDING AREA 991 SLUMP REPAIR

EROSION CONTROL PLAN

PROJECT NO. LTS-111-0056-13-001D
SHT. 8 OF 8
DRAWING NO. S03640-R00-C006-D+

ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Evaluation of Elevated Nitrate in Ground Water Samples from AOC Well B206989

Contact Record Approval Date: October 12, 2007

Site Contact(s) / Affiliation(s):
Scott Surovchak / DOE-LM, John Boylan / S.M. Stoller, Linda Kaiser / S. M. Stoller, Rick DiSalvo / S. M. Stoller

Regulatory Contact(s) / Affiliation(s):
Carl Spreng / CDPHE

Discussion:
See attached document for discussion.

Resolution:
See attached document for resolution.

Contact Record Prepared by: John Boylan, S.M. Stoller

Distribution:
Carl Spreng, CDPHE
Scott Surovchak, DOE
Linda Kaiser, Stoller
Rocky Flats Contact Record
File

Evaluation of Elevated Nitrate in Ground Water Samples from AOC Well B206989

Per the RFLMA, DOE is required to notify the agencies of AOC wells with reportable conditions. A reportable condition for nitrate at well B206989 was declared in the last week of August 2007. Notification of the CDPHE was made in a meeting at the Rocky Flats office on August 30, 2007. This document provides the RFLMA-required plan and schedule for an evaluation to address this specific occurrence.

Background

Well B206989 was classified as a Sentinel well until the signing of the RFLMA on March 14, 2007, at which point it was reclassified as an AOC well. This new classification has reportable requirements associated. Reportable conditions are triggered when the concentration of an analyte exceeds the corresponding RFLMA Table 1 level or uranium threshold for two consecutive routinely-collected samples (i.e., two consecutive semiannual samples).

Well B206989 is located at the toe of the Landfill Pond dam. It is screened in weathered bedrock. Analytical data from this well have often appeared anomalous; for example, concentrations of nitrate + nitrite as N (herein termed nitrate) and uranium typically exceed those in samples from other nearby wells, indicating these results are not indicative of a plume of contamination. (This document addresses only nitrate, as the uranium concentrations have not exceeded the 120 ug/L threshold since the RFLMA was signed.) The anomalous water quality does not appear to be associated with the landfill wastes.

The sample collected from this well in June 2007 contained 27 mg/L nitrate, exceeding the applicable Table 1 standard of 10 mg/L. (The 100 mg/L Temporary Modification does not apply to wells in the No Name Gulch drainage.)

Although this was only the first sample collected under its new AOC classification, because the result was consistent with previous data the DOE decided to consider the result a reportable condition. This document proposes a response to that condition. The response focuses on a statistical evaluation of the analytical data for nitrate from this well, with the results of that evaluation driving any subsequent action that may be necessary.

Data Summary

Table 1 below summarizes nitrate data from well B206989 collected since 2000. The 10 mg/L standard and the 100 mg/L Temporary Modification for Segment 5 are also included for reference. As shown, the June 2007 results are generally consistent with previous results, only one of which is less than the 10 mg/L standard.

Figure 1 presents these data in a time-series plot, and includes a best-fit regression trend line. The r^2 value, 0.1266, suggests the fit is not particularly good. This is to be expected given the variability of the data. Even so, the visually apparent overall decrease is confirmed.

Figure 2 shows the same data, but includes a trend calculated using the Seasonal-Kendall trending method. Once again, a decreasing trend is evident. But again, the statistical confidence is not high; as shown, the trend does not meet an 80% level of significance.

Recommended Response

Three different approaches – one subjective (visual) and two objective (regression and Seasonal-Kendall trend calculation) – suggest concentrations of nitrate in ground water samples from well B206989 are decreasing. Therefore, it does not appear likely that the nitrate concentrations reported for ground water in this well will impact surface water quality at the Point of Compliance (POC).

Installing a replacement well has been discussed in the past due to the anomalous results generated by samples from well B206989. However, given the apparent decreasing trend in nitrate, well replacement at this time would probably represent an unnecessary cost and should be postponed unless and until a potential negative impact to surface water quality is indicated (i.e., the concentration trend is increasing) and downstream surface water exceeds the nitrate standard at the POC.

The following evaluation strategy is recommended:

1. Well B206989 will continue to be monitored semiannually as an AOC well, in accordance with the RFLMA except as described below.
2. Nitrate data will continue to be evaluated for trend. Exceedance of the nitrate standard will not trigger additional reportable conditions, as the evaluation will still be ongoing.
3. If and when a decreasing Seasonal-Kendall trend in nitrate concentrations with a level of significance of 80% is reached, the CDPHE shall be notified and this formal evaluation shall conclude.
4. Alternatively, if an increasing Seasonal-Kendall trend in nitrate concentrations is indicated, even at less than 80% significance, consultation with the CDPHE shall commence on the next phase of the evaluation, which shall incorporate all additional information then available.
5. If the level of significance of the nitrate trend still has not reached 80% following receipt of data from the last routinely-collected sample in calendar year 2011, and a subset of the nitrate results from the most recent 8 routine semiannual samples also lacks this level of significance, the DOE and CDPHE shall consult to determine whether an alternative to or modifications of this strategy are warranted based on all then-available data. (The date 2011 is arbitrarily selected to encompass the next CERCLA 5-year review period; the minimum number of samples required to calculate a Seasonal-Kendall trend is 8.)
6. Following conclusion of this evaluation via Step 3 above, if concentrations still frequently exceed the standard, the DOE and CDPHE shall discuss whether a unique definition of reportable conditions should be established for nitrate in well B206989.

Table 1. Concentrations of nitrate in ground water samples from well B206989 since January 2000.

Date Sampled	Nitrate Concentration, mg/L
1/19/2000	40
6/15/2000	39
11/30/2000	44
2/28/2001	60
7/17/2001	33.3
12/4/2001	31.4
2/11/2002	69.4
7/18/2002	40.3
11/6/2002	19
2/12/2003	54.1
3/25/2003	48
1/7/2004	34
6/3/2004	41
8/18/2004	9.55
12/6/2004	37.5
5/26/2005	33.1
7/28/2005	28
11/9/2005	34.6
4/26/2006	45
10/10/2006	35
6/26/2007	27

NOTE: Results reported as nitrate + nitrite as N. Field duplicates, equipment rinsates, and special No Purge sampling method-evaluation samples omitted.

Figure 1. Time-series plot of analytical data from Table 1 together with calculated regression best-fit trend and corresponding R^2 value.

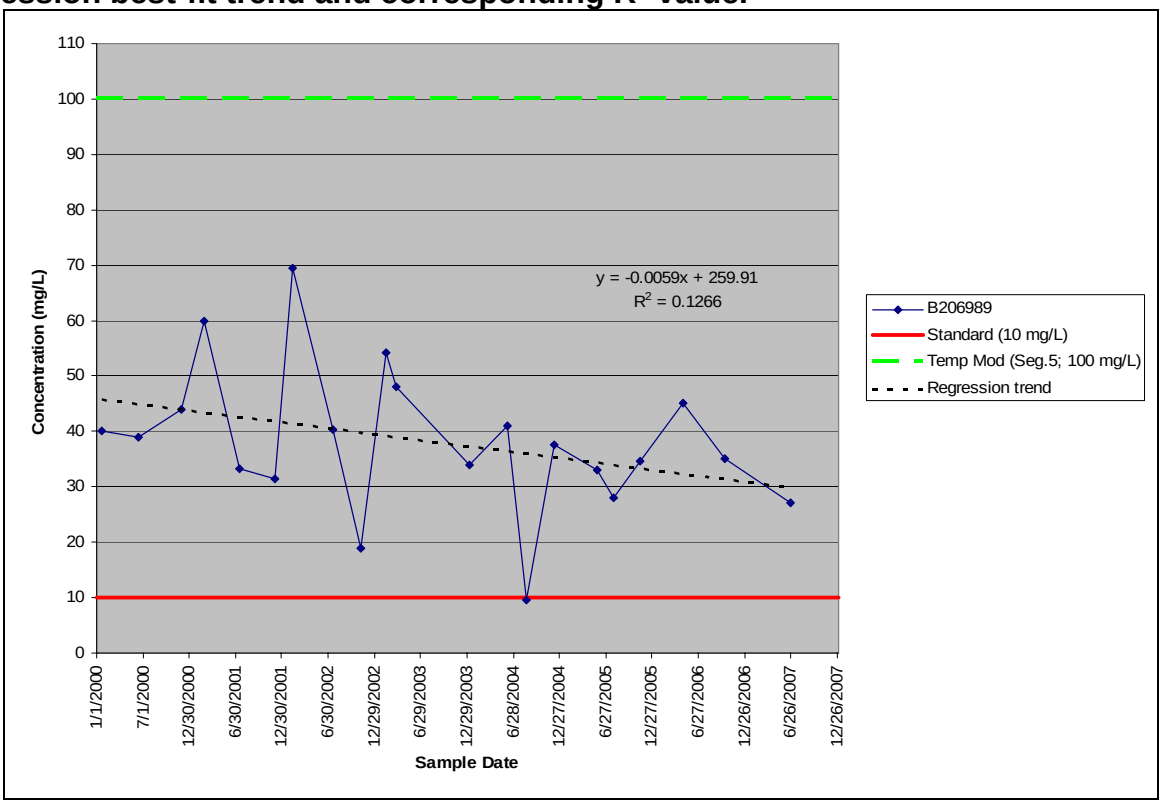
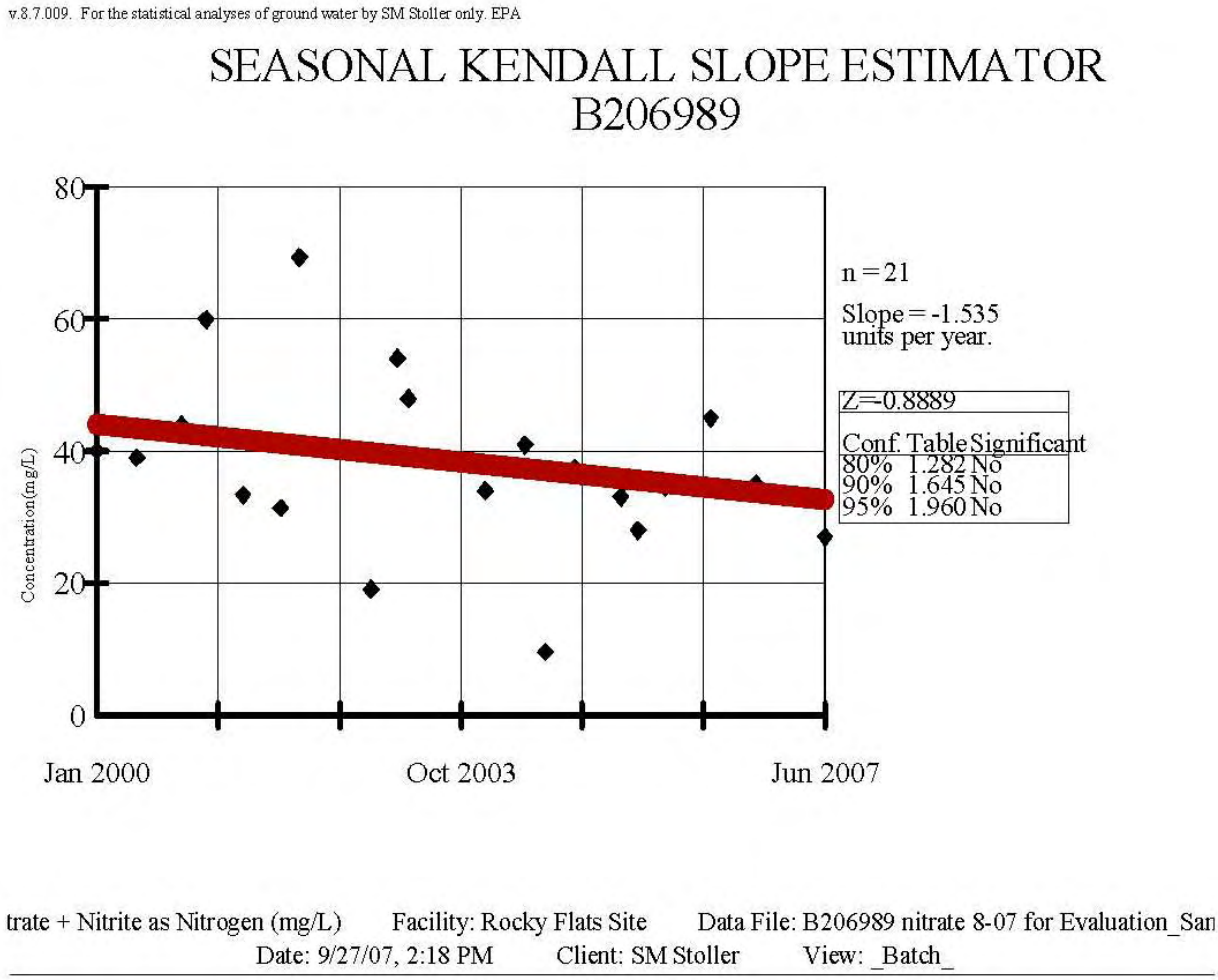


Figure 2. Plot of analytical data from Table 1 together with calculated Seasonal-Kendall trend.



ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Replacement of Monitoring Well 45605 (B991 Slump)

Contact Record Approval Date: November 29, 2007

Site Contact(s) / Affiliation(s): Scott Surovchak / DOE; John Boylan / Stoller; Linda Kaiser / Stoller

Regulatory Contact(s) / Affiliation(s): Carl Spreng / CDPHE

Discussion:
Monitoring well 45605 was installed as a Sentinel well to monitor the disrupted French drain that fed surface water location SW056 (prior to closure). To address the low concentrations of VOCs in water discharged by the drain, this outlet was removed during Site closure and the drain was disrupted. (See *Closeout Report for Surface Water Station SW056 Outfall*, Nov. 2005, for more information.) Following this, the constructed hillside in which the French drain was installed became unstable and a slump developed. The slump eventually damaged the monitoring well, reduced its useful lifetime, and presented health and safety concerns for personnel working in the area. In October and November 2007 well 45605 was abandoned and this slumping hillside was regraded.

Resolution:
Now that the regrade has been completed, the replacement of well 45605 can proceed. The original well was installed in consultation with the regulators, and was situated approximately 10 ft. north (downgradient) of the buried French drain and 10 ft. west (upgradient) of the disrupted eastern end of the drain. This location provided access to ground water collected by the remnants of the drain.
The replacement well will be installed approximately 10 ft. west of the previous well location (so as to be beyond the area of disturbance posed by the original borehole, but still monitor collected ground water), using survey coordinates to determine this location. The diameter of the replacement well will be between 0.75 inch to 2 inches. The design of the well will approximate that of well 45605, taking into account the regrading that has been performed and limitations of well materials (i.e., standard lengths), and the need to satisfy the original DQOs. The well will penetrate at least a few inches into the weathered bedrock and monitor what may be reasonably expected to represent the saturated surficial materials (predominantly artificial fill), as did the original well. The method used to install the well will be at the Site's discretion, and may range from direct-push methods (e.g., Geoprobe™) to sonic, hollow-stem auger, or other drill rig; any method that uses no drilling fluids or other potential contamination agents to install the well will provide the necessary borehole information and an appropriate monitoring well.

The well will be identified as either 45607 or 45608, depending on whether it is installed in calendar year 2007 or 2008. The exact timing of this installation is at the Site's discretion, but will be completed sufficiently in advance of the end of the second calendar quarter of 2008 to allow well development and the collection of ground water samples representing that quarter. The monitoring classification, analytical suite, and all other DQOs and requirements previously met by well 45605 shall be transferred to the replacement well.

Contact Record Prepared by: **John Boylan**

Distribution:
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ROCKY FLATS SITE
REGULATORY CONTACT RECORD

Purpose: Changes to Present Landfill Inspection and Monitoring Frequencies and Modification of the PLF Monitoring and Maintenance Plan.

Contact Record Approval Date: December 21, 2007

Site Contact(s) / Affiliation(s): Scott Surovchak, DOE, Linda Kaiser, S.M. Stoller, Jeremiah McLaughlin, S.M. Stoller, George Squibb, S.M. Stoller, John Boylan, S.M. Stoller, Jody Nelson, S.M. Stoller, Rick DiSalvo, S.M. Stoller

Regulatory Contact(s) / Affiliation(s): Carl Spreng / CDPHE

Discussion: The Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan, May 2006, (PLF M&M Plan) includes certain inspection and monitoring requirements that may be changed or phased out over time as conditions warrant, in accordance with the PLF M&M Plan. Also, the PLF M&M Plan was written before the Corrective Action Decision/Record of Decision (CAD/ROD) was approved in September 2006 and the Rocky Flats Legacy Management Agreement (RFLMA) to implement the CAD/ROD was drafted and became effective in March, 2007. The PLF M&M Plan is incorporated by reference as an enforceable requirement of RFLMA (See RFLMA Attachment 2, section 5.3.1, and Tables 1-3). RFLMA terminated and supersedes the Rocky Flats Cleanup Agreement (RFCA) and the PLF M&M Plan references RFCA in certain sections.

This Contact Record is to document changes in inspection frequencies, completion of certain monitoring requirements that now may be phased out, clarification of vegetation inspection schedules and completion criteria in accordance with the PLF M&M Plan. It is also to document agreement between DOE and CDPHE to revise the M&M Plan so that the M&M Plan text recognizes the implementation of the remedy under RFLMA.

Pursuant to RFLMA paragraph 66, DOE and CDPHE do not consider these items to constitute a significant change from existing requirements of RFLMA, and this Contact Record shall be used to provide public notice of modifications to the PLF M&M Plan. Also, CDPHE may approve modifications to RFLMA Attachments pursuant to RFLMA paragraph 65. (Note that the Original Landfill (OLF) M&M Plan will also require updating revisions, since it was also approved prior to RFLMA. DOE will consult with CDPHE on changes to the OLF M&M Plan after the ongoing investigation of seeps and slumping on the OLF soil cover is completed.)

The groundwater and surface water monitoring plans in the PLF M&M Plan reference RFCA and the RFCA Integrated Monitoring Plan. These have been superseded by RFLMA, so the PLF M&M Plan revision will reflect the RFLMA requirements, which include the following RFLMA Attachment tables and figures:

- Table 1, Surface Water Standards
- Table 2, Water Monitoring Locations and Sampling Criteria
- Table 3, Present and Original Landfill Inspection and Maintenance Requirements
- Figure 10, RCRA Wells
- Figure 11, Groundwater Treatment Systems

Inspection Frequencies: Table 1, below, shows the PLF inspection frequency requirements as summarized in RFLMA Attachment 2, Table 3 that are being changed, and the new frequencies. Note that the frequencies for stability and erosion control inspections were evaluated in the recently completed CERCLA periodic review, as described in the *Second Five-Year Review Report for the Rocky Flats Site,* September 2007. The next CERCLA five-year review will be conducted in 2012.

Table 1

RFLMA Inspection and Maintenance Requirements – derived from RFLMA Attachment 2, Table 3		**Result of consultation and 5-Year review**
Requirement and Description of Activity	**Frequency/Status**	**New Frequency**
Final cover inspection and monitoring ✓ inspect/monitor slope stability, soil cover ✓ visually inspect surface of landfill cover for cracks, depressions, heaving, and sinkholes	monthly for first year/completed	quarterly – evaluate frequency in subsequent CERCLA periodic review
Final cover inspection and monitoring ✓ monitor settlement monuments and side slope stability monuments	quarterly for first year/completed	annually – evaluate frequency in subsequent CERCLA periodic review
Final cover inspection and monitoring ✓ vegetation monitoring	quarterly for first year/completed	monthly for noxious weeds during growing season (April-September) and annually for vegetation until PLF M&M Plan quantitative grassland success criteria is met.
Final cover inspection and monitoring ✓ additional weather-related inspections after storm event of one inch or more of rain in a 24-hour period or significant melt of 10-inch or more snowstorm	after event (no time specified)/ongoing	within 2 days after event (This is consistent with RFLMA Attachment 2, Table 3 for the OLF.)
Inspection and monitoring of stormwater management system and erosion control features ✓ visually inspect stormwater management structures (channels/lining, culverts, and outfalls) ✓ visually inspect erosion control features (perimeter channels and natural drainages); ✓ visually inspect seep treatment system	monthly for first year/completed	quarterly – evaluate frequency in subsequent CERCLA periodic review
Inspection and monitoring of stormwater	after event (no time	within 2 days after event

RFLMA Inspection and Maintenance Requirements – derived from RFLMA Attachment 2, Table 3		Result of consultation and 5-Year review
Requirement and Description of Activity	**Frequency/Status**	**New Frequency**
management system and erosion control features ✓ additional weather-related inspections after storm event of one inch or more of rain in a 24-hour period or significant melt of 10-inch or more snowstorm	specified)/ongoing	(This is consistent with RFLMA Attachment 2, Table 3 for the OLF.)

Water Monitoring Sampling Criteria: Two PLF water monitoring locations specified in the PLF M&M Plan, the Groundwater Interceptor System (GWIS) influent to the PLF Treatment System (PLFTS), are required by the PLF M&M Plan to be sampled for one year, and the results evaluated by the RFCA Parties. These two locations, identified as GWISINFNORTH and GWISINFSOUTH in RFLMA Attachment 2, Table 2 have been sampled quarterly for the last two years. These locations are included in the evaluations required in RFLMA Attachment 2, Figure11, and monitoring may be discontinued based on the consultative process. The results have been evaluated by DOE and CDPHE and the data do not present any reason to continue quarterly sampling. Thus, the frequency for sampling in RFLMA Attachment 2, Table 2 will be changed to "discontinued". A footnote will be added to indicate these sampling locations may be used for investigation purposes.

In addition, the PLF M&M Plan requires sampling the PLFTS effluent for metals, plutonium, isotopic uranium, volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). RFLMA Attachment 2, Table 2 does not include sampling for plutonium. To resolve differences in the PLF M&M Plan and RFLMA analyte lists, the PLF M&M Plan will be revised to defer to the analytes in RFLMA.

Table 2, below, shows the PLF water monitoring requirements as summarized in RFLMA Attachment 2, Table 2, that are being changed and the new requirement.

Table 2

RFLMA water Monitoring Locations and Sampling Criteria Requirements – derived from RFLMA Attachment 2, Table 2		Result of consultation
Requirement and Description of Activity	**Frequency/Status**	**New Frequency**
Present Landfill Treatment System ✓ GWISINFNORTH ✓ GWISINFSOUTH	quarterly for VOCs, Isotopic U, metals, nitrate	discontinue – add footnote indicating may be used for investigation purposes

Other Criteria: Surface water standards may change from time to time, based upon regulatory actions, and RFLMA Attachment 2, Table 1 will be updated to reflect changes from time to time. Since the PLF M&M Plan will be changed to defer to the RFLMA analyte list, no changes to the PLF M&M Plan will be required if surface water standards change in the future. Currently, there are no changes needed for RFLMA Attachment 2, Table 1.

Resolution: The PLF inspection and monitoring frequencies shall be implemented as described in Table 1 and 2 of this Contact Record, above, and RFLMA Attachment 2, Tables 2 and 3 will be modified accordingly. The PLF M&M Plan will be modified as described herein.

Pending the submittal of the modifications for approval, Carl Spreng, CDPHE, approved the immediate implementation of the changed inspection frequencies and water monitoring sampling criteria as described in this Contact Record.

DOE anticipates the modifications to RFLMA Attachment 2, Tables 2 and 3, and the modifications to the PLF M&M Plan will be submitted to CDPHE for approval by January 1, 2008. There are no changes needed for RFLMA Attachment 2 Figures 10 and 11.

Closeout of Contact Record: The status of actions or activities documented by RFLMA Contact Records will be documented by DOE from time to time, and included in RFLMA quarterly and/or annual surveillance and maintenance reports for tracking purposes. This Contact Record will be closed when:

- Modified RFLMA Attachment 2, Tables 2 and 3 approved by CDPHE and posted to the DOE website. Notification of the availability of the modification made by DOE in accordance with RFLMA Appendix 2, *Public Involvement Plan*.
- Modified PLF M&M Plan approved by CDPHE and posted to the DOE website. Notification of the availability of the modification made by DOE in accordance with RFLMA Appendix 2, *Public Involvement Plan*.

Contact Record Prepared by: Rick DiSalvo, S.M. Stoller

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