2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT

LEHR/SCDS Environmental Restoration

University of California, Davis

April 2008

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1,1 DCA	1,1-dichloroethane
1,1-DCE	1,1-dichloroethene
1,2-DCA	1,2-dichloeoethane
1,2 DCP	1,2-dichloropropane
1,1,2-TCA	1,1,2-trichloroethane
Annual Report	2006 Comprehensive Annual Water Monitoring Report
AOC	Administrative Order on Consent
ASDP	Air Stripper Discharge Pump sampling location
bgs	below ground surface
COC	constituent of concern
CPT	cone penetrometer test
CRDL	contract-required detection limit
CWTP	UC Davis Campus Wastewater Treatment Plant
CVRWQCB	Central Valley Regional Water Quality Control Board
DDC	density-driven convection
DOE	United States Department of Energy
DQO	data quality objective
DWR	California Department of Water Resources
FS	feasibility study
FSP	Field Sampling Plan
ft/s	feet per second
gpm	gallons per minute
HSU	hydrostratigraphic unit
IRA	Interim Removal Action
K	hydraulic conductivity
LEHR/SCDS	Laboratory for Energy-related Health Research/South Campus Disposal Site
LF-1	landfill No. 1 stormwater runoff monitoring point
LF-3	landfill No. 3 stormwater runoff monitoring point
LS-1	lift station No. 1 stormwater runoff monitoring point
LTPS	Land Treatment Pilot Study
LTPS Work Plan	Land Treatment Pilot Study Work Plan
MEK	methyl ethyl ketone
mg/L	milligrams per liter
msl	mean sea level
NOEC	No Observed Effect Concentration
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
PCD	Putah Creek downstream sampling location
PCE	tetrachloroethylene
pCi/L	picoCuries per liter
PCU	Putah Creek upstream sampling location
QA/QC	quality assurance/quality control
QAPP	Quality Assurance Project Plan
QC	quality control
RI/FS	Remedial Investigation/Feasibility Study
RPD	Relative Percent Differences

RPM	remedial project manager
Site	Laboratory for Energy-related Health Research/South Campus Disposal Site
SOW	Statement of Work for Removal Actions and Mitigation/Repair
STOP	UC Davis sewage treatment plant outfall sampling location
TCE	trichloroethylene
TDS	total dissolved solids
TEM	transient electromagnetic
TOC	total organic carbon
TP	temporary wells
TSS	total suspended solids
UC Davis	University of California, Davis
USEPA	United States Environmental Protection Agency
vadose zone	unsaturated material
VOC	volatile organic compound
WDR	Waste Discharge Requirement
µg/L	micrograms per liter

EXECUTIVE SUMMARY

This report presents the results of the 2007 comprehensive water monitoring programs conducted at the former Laboratory for Energy-related Health Research facility and South Campus Disposal Site (LEHR/SCDS) (Site). The Site is located at the University of California, Davis (UC Davis) campus.

Water monitoring programs discussed in this report include:

- Continued monitoring for the Remedial Investigation/Feasibility Study (RI/FS) that includes stormwater runoff, surface water monitoring, and Site-wide groundwater monitoring that includes evaluation of the groundwater interim removal action (IRA) wells;
  Monitoring for the density-driven convection (DDC) expanded pilot system test; and
- IRA influent, effluent, and groundwater monitoring to assess the land treatment pilot study (LTPS).

Expanded DDC Pilot Test Program

The Expanded DDC Pilot Test is an in-situ groundwater treatment system that utilizes convection cells to treat volatile organic compounds (VOCs; primarily chloroform) in shallow groundwater. The DDC system is also intended to prevent the downward migration of VOCs (primarily chloroform) from the vadose zone and uppermost groundwater (hydrostratigraphic unit [HSU], HSU-1) to the underlying more permeable groundwater (hydrostratigraphic unit, HSU-2). Currently, there are six DDC treatment wells (DDC-1 through DDC-6) installed in HSU-1 near the VOC source.

In 2007, the DDC system monitoring consisted of semi-annual sampling of all wells.

IRA Influent/Effluent Monitoring Program

The groundwater IRA was designed to minimize offsite migration of VOCs, primarily chloroform, in HSU-2 groundwater by conventional extraction and treatment (air stripping for VOCs), followed by effluent discharge to the UC Davis Campus Wastewater Treatment Plant (CWTP) or the LTPS. During 2007, IRA influent and effluent samples were monitored monthly to assess IRA operational efficiency and effluent discharge requirements. Influent and effluent samples were inadvertently not collected in November. IRA effluent met discharge standards for land treatment during 2007.

RI/FS Monitoring Program

The current groundwater, stormwater and surface water monitoring program provides data to support development of the Site FS. In Site groundwater, five hydrostratigraphic units (HSUs) have been defined, based on drilling and geophysical surveys completed since 1987. In descending order, the units are HSU-1, HSU-2, HSU-3, HSU-4, and an unnamed aquitard. For the purposes of this report, the unsaturated material (vadose zone) from the surface to first encountered groundwater is included in HSU-1.

During 2007, 62 monitoring wells were used in the program; 36 of these wells are completed within HSU-1, 21 are completed within HSU-2, and five are completed within HSU-4. The water monitoring program for 2007 included semi-annual collection of groundwater samples during the winter and summer quarters.

Four new groundwater monitoring wells were installed in November 2007 (UCD1-055, UCD2-056, UCD2-057, and UCD1-058) as part of an investigation effort to delineate the extent of chromium in groundwater.

Stormwater from LF-1 and surface water were sampled in February 2007. Stormwater at LS-1 (monitored and sampled by the United Stated Department of Energy [DOE]) was sampled in April and December 2007.

Data Validation

The data validation process for these reports outlined in the Quality Assurance Project Plan (QAPP) was modified to a more streamlined data verification process as outlined in the 2003 Comprehensive Annual Water Monitoring Report (Brown and Caldwell, 2005). The results of this data verification conducted during 2007 indicated that the data are valid for their intended purpose.

Assessment of Water Monitoring Programs and Recommendations

Based on the findings of the data collected between 1999 through 2007, UC Davis is not recommending any additional changes to the semi-annual monitoring schedule for the overall groundwater monitoring program in 2008.

Combined Groundwater Monitoring Results

Consistent with previous data, the primary VOC detected in groundwater samples during 2007 was chloroform. Chloroform was detected above the contract-required detection limit (CRDL) of 0.5 μg/L in 20 of the 50 wells monitored ranging in concentration from 0.691 μg/L (UCD1-022 in March 2007) to 430 μg/L (UCD1-050 in September 2007). In addition to chloroform, twelve other VOCs were reported at low concentrations in the chloroform source area.

Stormwater and Surface Water Monitoring Results

Results from the stormwater and surface water sampling in 2007 were within historical values.

As requested in the RWQCB's August 22, 2007 letter, UC Davis will be implementing stormwater best management practices (BMPs) to reduce the discharge of sediment runoff from the Site into the South Fork of Putah Creek. The proposed BMPs consist of modifications to the stormwater culverts at LF-1 and LF-3 to prevent discharge to the creek except during very large storms. In the 2006 Comprehensive Annual Water Monitoring Report (Brown and Caldwell, 2007a), UC Davis recommended discontinuing sampling of the stormwater and surface water monitoring points. However, based on comments from the RPMs to this recommendation, UC Davis will continue to monitor for discharge from LF-1 and LF-3 and collect samples if discharge occurs through the new BMPs while surface water sampling will be discontinued.

Expanded DDC Pilot Test Performance

The expanded DDC pilot test system operated approximately 97 percent of the time during 2007 and removed approximately 48 pounds of chloroform. Based on the information presented in this 2007 Comprehensive Annual Water Monitoring Report, UC Davis recommends no changes for operations or monitoring for the expanded DDC pilot test system in 2008.

IRA Influent/Effluent Monitoring Program

IRA Treatment System. In 2007, the groundwater IRA operated approximately 63 percent of the year removing approximately 9.9 pounds of chloroform. Chloroform was not reported in any of the effluent

samples. No other constituents were present above effluent discharge standards for irrigation with LTPS in 2007. Based on these results, no changes to the IRA influent/effluent monitoring program are recommended.

Reporting

In 2008, reporting for the monitoring program includes a semi-annual and annual report. UC Davis proposes that the 2008 Comprehensive Annual Water Monitoring Report include a detailed assessment of each monitoring program and include a summary of changes to the programs and recommendations for future monitoring. The 2008 annual report will be submitted to the United Stated Environmental Protection Agency (USEPA) by May 1, 2009.

Site Information Sources

For more information about the Site restoration program, you may contact:

Sue Fields – UC Davis	**(530) 752-3044**
Vijay Kothari – DOE LM Project Manager	**(304) 285-4579**

Documents relating to the Site investigation and restoration may be found at the following locations:

Yolo County Public Library, Davis Branch
Reference Desk
Davis, California
(530) 756-2332

UC Davis
Shields Library
(530) 752-6561

Additional information is also available on the Internet at: http://ehs.ucdavis.edu/enviro/lehr.html

1. INTRODUCTION

This document presents the 2007 results for groundwater and surface water monitoring programs conducted at the former Laboratory for Energy-related Health Research facility and South Campus Disposal Site (LEHR/SCDS [Site]) located on the University of California, Davis (UC Davis) campus (Figure 1). This water monitoring is part of the UC Davis Environmental Restoration Program for the Site.

The sampling programs are intended to meet the requirements of the monitoring programs outlined in the 1999 Administrative Order on Consent (AOC) #99-16 issued by the United States Environmental Protection Agency (USEPA) (USEPA, 1999). Sampling and analytical procedures are performed in accordance with the *Final Revised Field Sampling Plan* (FSP) (Dames & Moore, 1998a), the *Final Revised Quality Assurance Project Plan* (QAPP) (Dames & Moore, 1998b), and the Final 2002 Comprehensive Annual Water Monitoring Report (Brown and Caldwell, 2003).

Water monitoring activities at the Site have been conducted under various programs since 1991. The current water monitoring programs follow the requirements outlined in AOC# 99-16 and the modifications included in the *Final 2005 Comprehensive Annual Water Monitoring Report* (2005 Annual Report) (Brown and Caldwell, 2006a) and the *Draft 2006 Comprehensive Annual Water Monitoring Report* (2006 Annual Report) (Brown and Caldwell, 2007a). UC Davis proposed in the 2005 Annual Report to consolidate the various groundwater monitoring programs into semi-annual monitoring with one semi-annual report (submitted with the First Half monitoring results) and an annual report (submitted with First and Second Half monitoring results); these changes were approved by the USEPA in August of 2006. The three groundwater monitoring programs that are monitored on a semi-annual basis include:

1. A combined program for the Site Remedial Investigation/Feasibility Study (RI/FS) and monitoring associated with operation of an interim removal action (IRA) groundwater extraction system;
2. Monitoring for the land-treatment pilot study (LTPS) associated with operation of the IRA system; and
3. Groundwater monitoring associated with operation of the expanded density-driven convection (DDC) groundwater treatment system.

In August 2006, the *Final Site-Wide Risk Assessment, Volume I, Human Health Risk Assessment Report* (Brown and Caldwell, 2006b) and the *Final Site-Wide Ecological Risk Assessment* (BBL Sciences, 2006) (collectively known as the SWRA), and the *Final Remedial Investigation Report* (Geomatrix, 2004) (RI) were approved by the USEPA, marking the completion of Site characterization and a transition towards remedial action monitoring. Therefore, additional modifications to the water monitoring programs were proposed by UC Davis in the 2006 Annual Report for the interim period between completion of the FS report and startup of remedial actions. Based on initial comments from the remedial project managers (RPMs) for the project, this plan was amended as documented in the July 17, 2007 letter from Brown and Caldwell to the USEPA. The proposed modifications included an optimized semi-annual monitoring program for groundwater to monitor specific constituents in areas with known impacts. In addition, it was proposed to monitor all Site wells for six target constituents (tritium, carbon-14, volatile organic compounds [VOCs], nitrates, total chromium, and total dissolved solids [TDS]) every two years until the remedial action monitoring programs are implemented as specified in the Record of Decision (ROD). Following this program, the primary focus of monitoring as presented in the 2006 Annual Report is as follows:

1. Continue assessing the operation of IRA and DDC systems in minimizing off-Site migration of VOCs (IRA system) and removal of VOCs within the HSU-1 groundwater source area (DDC system);
2. Continue monitoring groundwater quality for specific constituents in areas with known impacts; and
3. Provide the information needed to evaluate remedial alternatives developed in the FS.

With the exception of the data validation process discussed in Section 4.1, sampling and analytical procedures for all elements were performed in accordance with the *Final Revised Field Sampling Plan* (FSP) (Dames & Moore, 1998a) and the *Final Revised Quality Assurance Project Plan* (QAPP) (Dames & Moore, 1998b).

In November 2007, four new wells were installed (UCD1-055, UCD1-058, UCD2-056, and UCD2-057) to further delineate the lateral and vertical extent of chromium in the groundwater to the northeast. Groundwater samples were collected from these wells on December 3, 2007. Their results and the details about the investigation and installation of the wells are provided in Appendix A of this report.

1.1 Organization of Report

This report summarizes the results of monitoring conducted for 2007 and is organized into five sections, including this introduction, and four appendices. Section 2 discusses the groundwater and surface water monitoring programs conducted as part of the combined RI/FS and IRA programs. Section 3 discusses the monitoring programs conducted to assess the operation of the groundwater treatment systems, including data collected from the IRA treatment system and associated LTPS and the expanded DDC groundwater treatment system. The results of this semi-annual monitoring are presented and discussed in Section 4. Section 5 assesses the monitoring programs versus the stated program precautions listed in Section 7 of the 2006 Annual Report and presents recommendations for changes to the program based on this assessment, as appropriate. Cited references are listed in Section 6. A technical memorandum describing the installation of the new wells is included as Appendix A. Groundwater sampling purge logs for the second half of 2007 are included in Appendix B. Appendix C contains the complete Site-wide groundwater analytical results. Appendix D contains the analytical results for the IRA treatment system. Appendix E contains a summary table of the analytical results for the DDC monitoring system and Appendix F presents the analytical results for the stormwater and surface water samples.

2. 2007 WATER MONITORING PROGRAMS

Water monitoring consists of collecting samples from Site groundwater monitoring wells, three stormwater sampling points, and three surface water sampling points from the adjacent Putah Creek (Figure 2). For the groundwater sampling program there are a total of 62 monitoring wells installed at the Site for various purposes as listed in Table 1 and summarized below:

- Combined IRA/RI Monitoring – Total of 52 wells. This count does not include wells UCD2-048 and UCD1-049 through UCD1-051 that were installed as part of the expanded DDC pilot test system but have been used for RI assessment purposes. Four new wells were installed in November 2007 (UCD1-055, UCD2-056, UCD2-057, and UCD1-058) as part of an investigation effort to delineate the extent of chromium in groundwater and will be included in the IRA/RI monitoring program.
- DDC Monitoring – Total of 10 wells. The DDC nested wells are only counted as a single well. As indicated above, UCD2-048 and UCD1-049 through UCD1-051 are included in this total number of DDC wells. Well UCD1-012 counted as part of the combined IRA/RI program is also used to assess this system.
- Land Treatment Pilot Study (LTPS) – One nested well (UCD1-27 Z1 through Z3). Wells UCD1-011, UCD1-018, UCD1-025, and UCD1-028 used for this program are counted as part of the combined IRA/RI program.

Monitoring wells have been designated with a "1", "2", or "4" corresponding to three hydrostratigraphic units that have been defined at the Site based on drilling and geophysical surveys completed since 1987. These three hydrostratigraphic units (HSU) are part of five identified at the Site that, in descending order, are referred to as HSU-1, HSU-2, HSU-3, HSU-4, and an unnamed aquitard.

HSU-1 and HSU-2 form the upper and lower units, respectively, of the upper formation identified at the Site, the Putah Creek Fan. HSU-3, HSU-4, and the unnamed aquitard form the upper, intermediate, and lower units, respectively, of the lower formation identified at the Site, the Tehama Formation. A detailed discussion of the Site hydrogeology is presented in the RI (Geomatrix, 2004) and is updated when new data is collected within the corresponding comprehensive annual water monitoring report, the most recent of which was the 2006 Annual Report and the recent chromium investigation with the installation of two wells in HSU-1 (UCD1-055 and UCD1-058) and two wells in HSU-2 (UCD2-056 and UCD2-057). In general, the stratigraphy and hydrogeology encountered during the drilling of these wells was consistent with subsurface stratigraphy and hydrogeology presented in the 2006 Annual Report for the Site. Details about the recent investigation and installation of wells are provided in a technical memorandum attached as Appendix A in this report.

A summary of the combined water monitoring programs completed during 2007 is presented in the following sections. Field activities for the sampling programs are conducted in accordance with the FSP (Dames & Moore, 1998a). Table 2 lists the analytical parameters and associated methods used for all groundwater, stormwater, and surface water monitoring. Results of the 2007 monitoring programs are discussed in Section 4.0.

All groundwater water samples were shipped by overnight delivery to Calscience Environmental Laboratories in Garden Grove, California. All storm and surface water samples were shipped by overnight delivery to GEL Laboratories, LLC, in Charleston, South Carolina. Immediately upon receipt of the sample shipment,

the laboratory documented the condition of the sample containers on the chain-of-custody forms and acknowledged receipt by faxing a copy of the chain-of-custody form to the task manager. Surface water and stormwater bioassay samples were analyzed by Block Environmental Services.

2.1 Groundwater Monitoring

As specified in the optimization water monitoring program presented in the 2006 Annual Report, water level measurements are collected quarterly from all Site monitoring wells. For the First Half 2007 semi-annual monitoring round, these measurements were collected on March 12, 2007 and July 17, 2007. During the Second Half 2007 semi-annual monitoring round, these measurements were collected on September 17, 2007 and December 13, 2007. Prior to collection of the water level measurements, the caps from each well were removed to allow for equilibration of atmospheric pressures within the wells. Water level measurements were then collected to the nearest 0.01 foot using an electronic well sounder and recording the depth to water from a surveyed point at each well. The mean sea level (msl) elevation for each monitoring well measuring point is included in Table 3 along with other well construction details.

Depth to water level measurements are used to calculate groundwater elevations, groundwater gradients, estimate groundwater flow conditions, and prepare the groundwater elevation contour plots for HSU-1, HSU-2, and HSU-4 as discussed in Section 4.2. Table 4 summarizes the water level measurements collected over the past 3 years.

The First Half 2007 sampling round was conducted March 13 through 28, 2007 immediately after the March 12, 2007 quarterly water level measurement round. The Second Half 2007 sampling round was performed on September 18 through 26, 2007 immediately after the September 17, 2007 quarterly water level measurement round. Groundwater sampling is primarily conducted by purging and sampling wells using dedicated sampling pumps and tubing. However, not all Site monitoring wells currently have working dedicated pumps. In the event that a well does not have a dedicated pump, a properly decontaminated portable pump is used. The use of a dedicated pump or portable pump is recorded on the groundwater purge and sampling field data sheets (field data sheets) copies of which are included in Appendix B for the Second Half 2007 sampling round. The field data sheets for the First Half 2007 sampling round were included in the *First Half 2007 Semi-Annual Water Monitoring Report* (Brown and Caldwell, 2007b) and not duplicated in this report.

Both the dedicated systems and the portable system consist of variable speed submersible Grundfos Redi-flo electric pumps. Purging and sampling procedures are described in standard operating procedure (SOP) 1.0 of the FSP and consists of purging each well until:

- Three to five casing volumes of water are removed from the well; and
- The field measurements of pH, temperature, electrical conductivity (EC), and oxidation potential (Eh) of the purged water stabilize to within 10 percent of the previous reading.

Well casing volumes were calculated using the water level measurements collected during the March 2007 and September 2007 quarterly water level measurements and the well construction details as presented in Table 3. The calculated casing volumes and field instrument measurements collected during purging are recorded on the field data sheets. After purging each well, groundwater samples are collected directly from the sampling pumps into clean sample containers provided by the laboratory and are submitted under proper chain-of-custody for analysis. Samples were collected following the procedures in SOP 1.0 and purge water handled according to SOP 4.0 of the FSP.

During 2007, a total of 62 monitoring wells were sampled; 36 of these wells are completed within HSU-1, 21 are completed within HSU-2, and five are completed within HSU-4. 124 samples were collected by UC Davis during 2007 (including 12 field duplicates) from the 62 Site wells (including all six DDC nested wells); 83 samples were collected (including 8 field duplicates) from the 36 HSU-1 wells; 35 samples (including 3 field

duplicates) were collected from 21 HSU-2 wells; and six samples were collected from the five HSU-4 wells (including one field duplicate). Groundwater monitoring results, including the RI/FS and the IRA and DDC groundwater treatment systems monitoring, are discussed in Section 4.3.

2.2 Stormwater Monitoring

The stormwater monitoring program consists of three monitoring locations designated LF-1, LF-3, and LS-1. Locations LF-1 and LF-3 represent discharges from UC Davis areas Landfill Unit Number 1 and Landfill Unit Number 3, respectively, and are monitored by UC Davis. The LS-1 location represents a sample collected from a lift station for the Site and is monitored by the United States Department of Energy (DOE). Figure 2 shows the locations of these sampling points, Table 1 presents the specific analytes tested from each location, and Table 2 lists the analytical parameters and associated methods used for monitoring.

The three sampling locations represent different portions of the Site and drain areas of varying sizes and surface conditions. For example, most of the area that drains to LS-1 is paved with asphalt, while LF-1 and LF-3 represent unpaved areas near the landfill units. Thus, a discharge can occur at each area at different times in the rainy season or during different storm events. Stormwater monitoring has been conducted twice during the rainy season (October-March) each year. Stormwater samples were collected from LF-01 on February 26, 2007 and from LS-01 on April 11, 2007 and December 7, 2007. Sample locations LF-1 and LF-3 were monitored for potential discharge during 2007, but no discharge was present for sampling at LF-1 during Fall 2007 or at LF-3 during all of 2007. LF-1 was subsequently sampled twice during storms that occurred in early 2008; the data from these sampling events will be presented in the First Half 2008 Semi-Annual Report.

2.3 Surface Water Monitoring

The surface water monitoring program consists of collecting samples from three locations along the South Fork of Putah Creek which flows west to east just south of the Site. These locations are shown on Figure 2 and are designated Putah Creek upstream sampling location (PCU), Putah Creek downstream sampling location (PCD), and UC Davis sewage treatment plant outfall sampling location (STPO). The program is intended to collect surface water samples on the same day or as soon as possible after stormwater samples are collected to assess the affects of the same precipitation event. Surface water samples are not collected if no stormwater samples are collected. During the First Half of 2007, surface water samples were collected on February 27, 2007. Surface water samples were not collected during the Second Half of 2007, since storm water flow was not observed.

3. GROUNDWATER TREATMENT SYSTEMS MONITORING

Two groundwater treatment systems, the IRA system and the expanded DDC system, have been installed at the Site. The IRA system began full-scale operation on May 11, 1998. The primary objective of this system is to minimize the off-site migration of VOCs, primarily chloroform. The IRA was modified to include the LTPS and the Berryessa Mixing System at the end of 2000 in response to increasing effluent TDS and nitrate concentrations above discharge limits for the injection well (IW2-1) used for the system. In 2002, the operation of the Berryessa Mixing System was terminated because the surface water used in the mixing system caused microbial clogging of the treatment plant bag filters and the injection well screen, reducing injection well capacity. Injection into HSU-2 was discontinued in 2005 due to unsuccessful attempts to rehabilitate injection well IW2-1; instead, the IRA effluent that normally would be injected was diverted to the UC Davis Campus Wastewater Treatment Plant (CWTP) in May 2005.

In December of 2000, the DDC pilot test system began operation to assess the effectiveness of this technology in removing the source of VOCs in the shallow groundwater at the Site. The successful operation of the DDC technology for source removal was documented in the May 7, 2001 *Letter Report*, *Groundwater Source Removal Pilot Test* (URS, 2001). Based on this successful operation, the system was expanded in 2002. The expanded DDC groundwater treatment system began operation on December 5, 2002.

This section discusses the monitoring programs developed to assess the effectiveness of the treatment systems summarized above. As discussed in Section 2.0, the groundwater monitoring programs for the IRA and DDC system are combined with the overall Site groundwater monitoring. All groundwater monitoring results for 2007 are presented in Section 4.3.

3.1 IRA Groundwater Monitoring Program

The primary objective for monitoring the IRA groundwater treatment system is to assess the performance of the extraction of VOC-impacted groundwater in HSU-2 and to evaluate the quality of IRA effluent water. IRA discharge standards for effluent diverted to the CWTP are less conservative than the standards for irrigation; therefore, the IRA effluent water quality is only compared with the irrigation discharge standards listed in Table 5. As outlined in the 2006 Annual Report (Brown and Caldwell, 2007a), the 2007 IRA monitoring program consisted of influent and effluent monitoring and operations information for the IRA and LTPS systems. A description of each of these programs is provided in the following sections.

The groundwater IRA system influent water samples were analyzed for VOCs, total organic carbon (TOC), carbon-14, and tritium. Effluent samples were analyzed for VOCs, metals, nitrate as nitrogen (nitrate-N), alkalinity, chlorides, sulfate, calcium, magnesium, sodium, potassium, and TDS. During 2007, the water was discharged directly into the CWTP or to the LTPS.

The IRA treatment system monitoring program is designed to assess if extracted and treated groundwater meets standards for injection into groundwater and for irrigation. As noted above, treated water is no longer injected into HSU-2. In their letter dated June 22, 2007, UC Davis requested that the USEPA amend the *Engineering Evaluation/Cost Analysis, Groundwater Removal Action* (EE/CA) (Dames & Moore, 1997) for the IRA system to allow discharge of effluent water directly from the IRA extraction well to the CWTP, bypassing the existing IRA treatment system. Water would still be directed to the LTPS, as needed, for irrigation of the pastures in this area and thus sampling for conformance with irrigation standards will continue.

The IRA operations summary for 2007 is presented in Table 6. The system was off-line for brief periods due to both a high or low level of water in the irrigation tank for the LTPS. The valve which controls the direction of the effluent water is manually operated and requires an operator to regulate the water level in the irrigation tank. If the tank fills up or empties completely, the system will shut down. Overall, the IRA uptime for 2007 was 63%. Treated effluent was discharged to both to the LTPS irrigation system and to the CWTP during 2007.

During 2007, 25,998,038 gallons of the groundwater was extracted and treated. Approximately 89% of the treated effluent was discharged to the CWTP and the remaining 11% was discharged to the LTPS through the irrigation system. A total of 2,874,010 gallons of treated water was applied to the irrigated pastures in 2007 (Table 6).

3.2 Expanded DDC Groundwater Treatment Program

The expanded DDC system currently consists of six nested DDC wells monitoring three zones each (DDC-1A, DDC-1B, DDC-1C through DDC-6A, DDC-6B, DDC-6C), five nested temporary piezometers (TP) monitoring three zones each (TP-1A, TP-1B, and TP-1C through TP-5A, TP-5B, and TP-5C), four HSU-1 monitoring wells (UCD1-012, UCD1-049, UCD1-050, and UCD1-051), and one HSU-2 well (UCD2-048). The zone designation "A", "B", and "C" correspond to the screen intervals of the DDC well and are not intended to represent specific zones within HSU-1. A detailed description of the design, construction, and technology details for the DDC system are presented in the *DDC System Summary Report* (Appendix A of the Final 2003 Annual Report,
Brown and Caldwell, 2005).

Figure 2 shows the location of the monitoring points for the DDC expanded pilot test system. The monitoring program for the expanded system includes semi-annual collection and analyses of water samples from the DDC, HSU-1, and HSU-2 wells during the same period as sampling for the overall RI/FS monitoring program. The TP wells were installed to assess the initial DDC pilot test system and are no longer sampled as part of the expanded DDC monitoring program. Groundwater samples collected for this program are submitted for analysis of VOCs using USEPA Method 8260B (Table 2). With the exception of the DDC nested wells, groundwater samples collected for this program are as described in Section 2.1. Samples from the DDC wells represent performance samples for the DDC system and are collected by lowering a disposable bailer down each piezometer within the DDC well during operation. As the DDC system is operating during sampling, creating a constant pumping action within the wells, standard purge volumes are not calculated. Instead, ten bailer volumes are purged prior to sampling. Purging and field instrument measurements are recorded on the field data sheets provided in the *First Half 2007 Semi-Annual Monitoring Report* (Brown and Caldwell, 2007b) and in Appendix B for the Second Half 2007.

As shown in the DDC operations and maintenance log presented in Table 7, the expanded DDC system operated at 97% efficiency throughout 2007; the system was down for short periods of time in April for regular maintenance. Monitoring results for the expanded DDC pilot test program are discussed in Section 4.5.

4. RESULTS

This section presents the analytical results of sampling and operational data collected for the 2007 water monitoring programs discussed in Section 3.0. Complete tables of the analytical data collected during 2007 are provided in Appendices C through F. The analytical laboratory reports (for samples collected by UC Davis) are maintained in the UC Davis project files.

4.1 Data Validation Process

Quality control (QC) samples consisting of duplicates and blanks were collected in the field at a minimum frequency of 10 percent of the total amount of samples collected for each sampling round, according to procedures discussed in the QAPP (Dames & Moore, 1998b). Travel blanks were included with each shipment containing samples for VOC analyses. Duplicate samples were submitted for the same analysis as the primary samples. Trip blanks are only analyzed for VOCs. The assessment of trip blanks, equipment blanks, and field duplicates is as specified in the final revised QAPP prepared for the Site (Dames & Moore, 1998b).

The quality assurance/quality control procedures conducted by the analytical laboratory for sample analysis are discussed in the QAPP. The laboratory is required to submit laboratory reports in both electronic and hardcopy formats. The electronic format is consistent with the project's electronic data deliverable format. This format allows data to be uploaded into an automated data review tool. The electronic data is then loaded into a Microsoft SQL Server database. Database verification reports are generated and compared to the laboratory hardcopy reports to confirm that results in the database match the laboratory hardcopy report.

Analytical performance is assessed on a "batch QC" basis, that is, by evaluating the QC sample results for groups of samples that were prepared and analyzed together. The assessment steps include the following:

- Reviewing chain-of-custody documentation.
- Checking holding time compliance.
- Determining whether adequate or required batch QC samples were analyzed and reported according to method and project specifications (i.e., method blanks, laboratory control samples [LCSs], and matrix spikes [MSs]).
- Assessing LCS and laboratory control sample duplicate (LCSD) recoveries and relative percent differences (RPDs).
- Evaluating surrogate spike recoveries (for organic methods).
- Evaluating method blank contamination.
- Assessing matrix spike (MS) recoveries and matrix spike duplicate (MSD) recoveries and RPDs.

Influences from field conditions, cross-contamination, and assessment of matrix heterogeneity are evaluated using field QC samples, including:

- Trip blanks
- Equipment blanks
- Field duplicates

These QC samples are associated with the field samples by sampling date, shipment cooler, sampling equipment, location, matrix, or other conditions related to sample collection and handling, as appropriate. As a final process, the reported concentrations were compared to the historical results of these constituents to assess potential discrepancies in the data. No results were rejected during the data validation process. However, some results were qualified not detected at an estimated detection limit (UJ) or as estimated (J) due to blank contamination, holding time violations, high and low spike recoveries, and duplicate imprecision. Most qualification is due to sporadic issues. Systematic issues are methylene chloride and acetone blank contamination and holding time violations for nitrate as nitrogen. Some methylene chloride and acetone detections could be biased high or represent false positives based on the frequency of detections in blanks.

The components of data validation are presented in Table 8. Table 9 provides a summary of the number of results that were qualified by method. Overall, the water data are of good quality. No results were rejected, and only about 2 percent of the total data is qualified as estimated. The results of this verification indicate that the data are valid for their intended purpose except as noted. Most methods had less than 5 percent of the results qualified as estimated due to QC issues. Only U.S. EPA Methods E300, E903.1, and SW6020 had greater than 5 percent of results qualified as estimated. Holding time violations for nitrate accounted for all qualified data by U.S. EPA Method E300. Blank contamination was the primary reason for qualification of metals by U.S. EPA Method SW6020. A single radium-226 result by U.S. EPA Method E903.1 was qualified for laboratory replicate imprecision.

Overall, the results of this validation indicate that the data are valid for their intended purpose.

4.2 Groundwater Elevation Results

Groundwater elevations for 2007 are presented in Table 4, horizontal groundwater gradients are presented in Table 10, while vertical groundwater gradients are presented in Table 11, and the 2007 quarterly groundwater elevation contour maps are presented on Figures 3 through 5.

4.2.1 Horizontal Groundwater Gradients

Horizontal groundwater gradients during 2007 ranged from 0.0004 vertical feet per horizontal feet (ft/ft) to 0.01 ft/ft for HSU-1, 0.0003 ft/ft to 0.001 ft/ft for HSU-2, and 0.0006 ft/ft to 0.005 ft/ft for HSU-4 (Table 10). Gradients were generally steeper during the spring and the flattest during the winter for all three HSU's. Groundwater flow was generally to the northeast in HSU-1 with a northeast-east flow in September 2007 (Figure 3). Groundwater flow in HSU-2 was generally to the east across the Site turning northeast on the eastern side of the Site (Figure 4), while groundwater flow in HSU-4 was to the northeast (Figure 5). Groundwater levels for HSU-1, HSU-2, and HSU-4 rose on average 10.89 feet from September 17, 2007 to December 13, 2007.

4.2.2 Vertical Groundwater Gradients

Vertical groundwater gradients were evaluated using data from well pairs between HSU-1/HSU-2 and HSU-2/HSU-4. Vertical groundwater gradients for 2007 based on well pairs between HSU-1/HSU-2 and HSU-2/HSU-4 are shown in Table 11. Downward gradients between HSU-1 and HSU-2 ranged between 0.0015 ft/ft and 0.125 ft/ft, while upward gradients ranged between 0.0004 and 0.0156. The gradients between HSU-2 and HSU-4 were mostly downward with a range of 0.0021 ft/ft to 0.0909 ft/ft with an upward gradient measured in December 2007 of 0.1470 ft/ft between wells UCD2-40 and UCD4 -41.

4.3 Combined Groundwater Monitoring Results

Table 12 presents a summary of analytical results for 2007. For easier review, the historical maximum concentrations of each of the six target analytes (with the corresponding sample date) have been included. Current sample concentration results representing a new maximum concentration for a well that is greater than 10% of the prior historic maximum concentration have been highlighted in bold text. For March 2007, Figures 6 through 11 illustrate chloroform, chromium, nitrate as N, TDS, carbon-14, and tritium concentrations for HSU-1, respectively. The same constituents for HSU-2 are illustrated on Figures 12 through 17 and Figures 18 through 23 for HSU-4.

As shown in Table 12, HSU-1 wells were within historical limits with the exception of monitoring wells UCD1-005, UCD1-006, UCD1-008, UCD1-009, and UCD1-050. The group of wells UCD1-005, UCD1-006, UCD1-008, UCD1-009 has not been consistently sampled due to problems with initial well construction and the fact that these wells are typically dry during low water level periods. As such, deeper groundwater wells UCD1-021, UCD1-022, UCD1-013, and UCD1-012, respectively, were installed as replacement wells to provide representative groundwater samples in the same vicinity (see Table 3 for well construction details). With the exception of the tritium results in UCD1-008, the remainder of the detections in wells UCD1-005 through UCD1-009 is consistent with the results from their adjacent deeper replacement wells. Tritium was detected in UCD1-008 at 3,130 +/- 254 picocurries per liter (pci/L) while its deeper replacement well UCD1-013 had a detection of 599 +/-221 pci/L. Carbon-14 was detected in UCD1-050 at 95.3 pCi/L, slightly higher than the prior historical high of 84.6 pCi/L in June of 2006.

During the June 2006 sampling round, tritum was reported for the first time in the sample collected from UCD1-052 at a concentration of 1,730 pCi/L. The reported concentration of tritium for this well during the First Half 2007 semi-annual sampling round was below the reported detection limit of 278 pCi/L and during the Second Half 2007 semi-annual sampling round was below the reported detection limit of 410 pCi/L (Appendix C).

Analytical results for wells completed in HSU-2 and HSU-4 were within historical limits.

4.4 IRA Treatment System Monitoring Results

This section summarizes the results of influent and effluent monitoring of the IRA system, including a calculation of chloroform mass removal and comparison of effluent water quality with discharge requirements. The complete analytical results of influent and effluent water quality monitoring compared to discharge standards are presented in Appendix D. The effluent discharge standards for the IRA groundwater treatment system are included in Table 5. Samples were collected from the system in January through December; a sample in November was inadvertently not collected. However, influent and effluent samples for April 2007 were collected in the first week of May 2007.

A summary of the influent sample results is as follows:

- Chloroform was the primary VOC detected at concentrations above the contract-required detection limit (CRDL) in the IRA influent. Chloroform concentrations in influent samples varied from 20 micrograms per liter (µg/L) to 75.4 µg/L in July 2007 and October 2007, respectively. 1,2-dichloroethane (1,2-DCA), and 1,2-dichloropropane (1,2-DCP) were also identified in the IRA influent at levels ranging from 0.612 µg/L to 0.863 µg/L and 0.582 µg/L to 1.19 µg/L, respectively. 1,1-dichloroethane (1,1-DCA) was reported in the May 2007 influent sample at 0.532 µg/L. In August 2007, chloromethane was reported in the influent sample at 0.505 µg/L.
- TOC concentrations in influent samples were detected four of six months ranging from 1.09 milligrams per liter (mg/L) in May 2006 to 2.62 mg/L in January 2007.

- Carbon-14 in the influent samples was detected at 23.7 +/- 8.03 pci/L in February 2007 and 22.7 +/- 9.62 pci/L in June 2007.
- Tritium in the influent samples was not detected above the CRDL during 2007.

A summary of the effluent sample results is as follows:

- VOCs other than acetone were not detected in any of the effluent samples for 2007. Acetone was detected in the March 2007 sample at 5.07 µg/L.
- Effluent samples met the irrigation discharge limits to the LTPS for all metals and inorganic cations during 2007. Reported detections above the CRDLs include: barium (159 µg/L to 188 µg/L); boron (326 µg/L to 639 µg/L); calcium (36,500 µg/L to 46,300 µg/L); chromium (18.7 µg/L to 28.2 µg/L); iron (165 µg/L to 342 µg/L), magnesium (64,600 µg/L to 76,700 µg/L); sodium (37,700 µg/L to 43,300 µg/L), and vanadium (10.6 µg/L to 15.3 µg/L).
- Reported detections above the CRDLs for general parameters include: alkalinity (123 mg/L to 420 mg/L); chloride (10.7 mg/L to 21 mg/L); nitrate-N (4.97 mg/L to 8.8 mg/L); and sulfate (19.8 mg/L to 65.4 mg/L).
- TDS concentrations in effluent ranged from 465 mg/L to 496 mg/L during 2007.

These data show that the IRA operated within prescribed limits. The results presented in Appendix D show that the effluent met all discharge standards for irrigation of the LTPS.

4.4.1 Groundwater IRA Extraction Rate

The observed extraction rates increased slightly through the First Half of 2007 with a final average for 2007 of 84 gallons per minute (gpm) (Table 6). The detailed daily IRA extraction rates and system operational logs for January 2007 through December 2007, are presented in Table 6. The extraction rates during 2007 are at levels above the recommended rates in the recent capture zone analysis (Appendix B of the 2003 Annual Water Monitoring Report).

4.4.2 Chloroform Removal Rates

The volume of groundwater extracted and chloroform mass removed by the Groundwater IRA Treatment System during 2007 are listed in Table 13. Based on the number of gallons extracted and the monthly average removal concentrations, approximately 4.50 kilogram (kg) (9.93 pounds [lbs]) of chloroform was removed from groundwater during 2007 (Table 13). The cumulative mass of chloroform removed by the IRA is now approximately 59 kg (130 lbs.).

Figure 24 presents the time versus chloroform concentrations for wells UCD2-30, UCD2-32, and UCD2-40. These three wells have been used to assess the effectiveness of the IRA extraction system with respect to minimizing the offsite migration of chloroform. As seen on this figure, since startup of the IRA system in March 1998, chloroform concentrations in all three wells have decreased significantly overall; concentrations continued to decrease during the Second Half of 2007 compared to June and August 2006. As documented in numerous reports for the Site, varying trends in these wells for the past several years reflects the variable operation of the IRA extraction system and continues to be well understood, illustrating that this set of wells continues to be an effective monitoring network for the IRA treatment system.

4.5 DDC Treatment System Monitoring Results

The effectiveness of the DDC system in reducing groundwater VOC concentrations is currently monitored by sampling HSU-1 wells UCD1-012 and UCD1-049 through UCD1-051, and HSU-2 well UCD2-048.

Table 11 includes the sampling results of detected chloroform from these five wells during 2007. Chloroform was reported in all samples collected from the DDC monitoring system ranging from 8.6 µg/L (UCD1-012) to 430 µg/L (UCD1-050). Six other VOCs were also detected at lower levels, including 1,1,2-trichloroethane (1,1,2-TCA), 1,1-dichloroethane (1,1-DCA), 1,1-dichlroethene, 1,2-dichloroethane (1,2-DCA), acetone, chlorobenzene, chloromethane, and trichloroethene. Complete analytical results for the DDC system are included in Appendix E.

Figure 25 presents the time versus chloroform concentrations for wells UCD1-012, UCD1-049, UCD1-050, UCD1-051, and UCD2-048. These five wells have been used to assess the effectiveness of the DDC treatment system with respect to minimizing the offsite migration of chloroform. As can be seen in this figure, since startup of the expanded DDC system in November 2002, chloroform concentrations in the four HSU-1 wells have decreased significantly and HSU-2 impacts have been minimized.

During 2007, the expanded DDC pilot test system removed approximately 48 pounds (lbs) of chloroform from the HSU-1 system as shown in Table 14. DDC-1, located at the center of the system, removed approximately 27 lbs of chloroform mass. A significant mass was also removed from DDC-5 (approximately 20 lbs) located in the northeast portion of the system.

4.6 Stormwater and Surface Water Monitoring

The LF-1 and LS-1 samples were analyzed for field parameters, nitrate, TDS, total organic carbon TOC, total suspended solids, oil and grease (LF-1 only), VOCs, pesticides and polychlorinated biphenyls (PCBs), radionuclides, acute aquatic toxicity (LS-1 only), and metals. Table 2 lists the analytical parameters and associated methods used for monitoring at the Site, including stormwater and surface water monitoring. As discussed in Section 3, no water was observed discharging from LF-3 and thus no samples were collected from this point.

The results for stormwater and surface water monitoring are presented in Appendix F. Of the constituents listed above, LF-1 did not have detections of VOCs, pesticides, PCBs, oil and grease, or radionuclides. LS-1 did not have detections of nitrate, PCBs, or radionuclides. LF-1 and LS-1 had detections above the CRDL for the following constituents:

- nitrate (LF-1: 1.49 mg/L)
- TDS (LF-1: 52 mg/L and LS-1: 380 mg/L)
- TOC (LF-1: 6.54 mg/L and LS-1: 65 mg/L)
- VOCs detected in LS-1: acetone (224 µg/L), methyl ethyl ketone (4.73 µg/L), and toluene (16.7 µg/L)
- Pesticides in LS-1: alpha-chlordane (0.0317 µg/L) and gamma-chlordane (0.0118 µg/L)
- Total chromium (LF-1: 60.9 µg/L and LS-1: 45 µg/L)
- Other metals in LF-1: barium (150 µg/L), boron (68.2 µg/L), cobalt (13.6 µg/L), copper (26.4 µg/L), iron (17,900 µg/L), lead (22.2 µg/L), manganese (399 µg/L), mercury (0.225 µg/L), nickel (101 µg/L), vanadium (44 µg/L), and zinc (192 µg/L).
- Other metals in LS-1: antimony (120 µg/L), arsenic (5.9 µg/L), barium (250 µg/L), cadmium (1.4 µg/L), copper (62 µg/L), iron (14,500 µg/L), lead (26 µg/L), manganese (380 µg/L), nickel (83 µg/L), vanadium (41 µg/L), and zinc (730 µg/L).

TDS, TOC, barium, copper, lead, zinc, methyl ethyl ketone and acetone concentrations in stormwater samples collected from LS-1 on April 11, 2007 were above their respective historical ranges. Of the analyte concentrations above historical ranges, lead and zinc results were qualified due to field duplicate imprecision

(high relative percent difference between the primary sample and field duplicate). No recent release of contamination has been reported at the LEHR site and the source of elevated concentrations in LS-1 stormwater samples is currently unknown. Subsequent sampling at LS-1 will be reviewed to evaluate whether data indicate an elevated concentration trend.

Samples for acute aquatic toxicity were collected at LF-1 on February 26, 2007 and at LS-1 on April 11, 2007. Both samples demonstrated no toxicity, with 95% survival of the target species (pimephales, flathead minnow).

The surface water samples collected from PCU, PCD, and STPO were sampled for field parameters, nitrate, TDS, VOCs, pesticides and PCBs, radionuclides, and metals. Of these constituents, a pesticide, nitrate, TDS, tritium, and eight metals were detected above the CRDLs. Specifically:

- Lindane was detected in STPO at a concentration of 0.0111 μg/L.
- Nitrate was detected ranging from 3.24 mg/L at PCU to 8.49 mg/L at STPO.
- TDS was detected ranging from 290 mg/L at PCU to 704 mg/L at STPO.
- Tritium was detected in STPO at a concentration of 1120 +/- 162 pCi/L.
- Metals detected: arsenic (8.81 at STPO), barium (ranging from 60.5 μg/L at STPO to 123 μg/L at PCU), boron (374 μg/L at PCU to 772 μg/L at STPO), iron (ranging from 186 μg/L at STPO to 604 μg/L at PCD), manganese (ranging from 17 μg/L at PCD to 19.7 μg/L at PCU), molybdenum (11.3 μg/L at STPO), selenium (15.5 μg/L at STPO), vanadium (10 μg/L at STPO), and zinc (ranging from 20.5 μg/L to 57.6 μg/L at STPO).

Samples for chronic aquatic toxicity were collected on February 27, 2007 at the PCU and PCD locations. The sample results indicated no toxicity at either location with the No Observed Effect Concentration (NOEC) at 100% sample concentration for all analysis.

5. RECOMMENDATIONS

As presented in the 2006 Annual Report (Brown and Caldwell, 2007a), UC Davis recommended that the groundwater optimization program be implemented with the following precautions added:

- All Site monitoring wells will be sampled for all six target constituents every two years until the remedial action monitoring programs are implemented as specified in the ROD.
- If the IRA system is shut down for more than a one month period, monitoring wells UCD2-030 and UCD2-040 will be sampled on a monthly basis for VOCs until the system is restarted.
- If the DDC system is shut down for more than a one month period, monitoring well UCD2-048 will be sampled on a monthly basis for VOCs until the system is restarted.
- If a significant increase is noted in any of the six target constituents for specific wells, those wells will be immediately re-sampled for the specific analyte. If the increase is still noted for the re-sampling of the well(s), then quarterly sampling will be re-instituted for the specific wells and analytes that have increased.

The First Half 2007 semi-annual sampling round followed the two-year program. Neither the IRA or DDC systems were shut down for a period of one month; therefore, monthly samples were not collected from the wells listed above. Other than the tritium sample collected from UCD1-008, no significant increases were noted in any of the six target constituents for specific wells. Based on these results, UCD1-008 was added to the semi-annual sampling program for tritium as shown in Table 15.

As discussed in Section 4.3, UCD1-052 was added to the semi-annual sampling program for 2007 for tritium due to a concentration of 1,730 pCi/L detected in June 2006. As agreed during the August 2007 RPM meeting, if tritium is not detected in UCD1-052 during two consecutive semi-annual sampling rounds, UCD1-052 would be returned to the two-year sampling program for tritium. Tritium was not detected in UCD1-052 during 2007; therefore, UCD1-052 will be placed back into the two-year sampling program for tritium.

The four new wells installed as part of the chromium investigation in groundwater (UCD1-055, UCD2-056, UCD2-057, and UCD1-058) will be added to the semi-annual sampling program for all six of the target constituents (VOCs [primarily chloroform], total chromium, nitrate, tritium, carbon-14, and EC) for 2008 to establish present water quality conditions and seasonal variations for these locations.

As requested in the RWQCB's August 22, 2007 letter, UC Davis will be implementing stormwater best management practices (BMPs) to reduce the discharge of sediment runoff from the Site into the South Fork of Putah Creek. The proposed BMPs consist of modifications to the stormwater culverts at LF-1 and LF-3 to prevent discharge to the creek except during very large storms. In the 2006 Comprehensive Annual Water Monitoring Report (Brown and Caldwell, 2007a), UC Davis recommended discontinuing sampling of the stormwater and surface water monitoring points. However, based on comments from the RPMs to this recommendation, UC Davis will continue to monitor for discharge from LF-1 and LF-3 and collect samples if discharge occurs through the new BMPs while surface water sampling will be discontinued. The revised analyte list for stormwater samples (if they are collected) is listed in Table 16; the revised analyte list was approved by the RWQCB on December 17, 2007. It should be noted that until the proposed BMPs are installed, stormwater monitoring will continue and samples will be collected when discharge is present from LF-1 and LF-3 using the revised analyte list at least twice during the rainy season (October-March).

The proposed programs for 2008 are combined in Table 15 and include continued monitoring for the following:

1. the expanded DDC pilot test system;
2. the IRA influent/effluent monitoring; and
3. the optimized monitoring program for groundwater.

A summary of the content of the two reports to be issued for 2008 is presented below.

Semi-Annual Report: One semi-annual report will include updates for all of the programs described in this Report. These updates will include an assessment of the progress of each system, summary of unexpected changes, and additional data collected, if any, that was not included in the program descriptions. Monthly data collected during the quarter will also be included in this report.

Annual Report: An annual report will present the detailed assessment of each monitoring program and will include a summary of changes to the programs and recommendations for future monitoring. The assessments will include detailed analysis of historical monitoring, including graphical and statistical analysis. The 2008 Comprehensive Annual Water Monitoring Report will be submitted to the USEPA by May 1, 2009.

6. REFERENCES

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TABLES

Table 1
2007 Combined IRA Groundwater Treatment System, RI Groundwater, Surface Water, and Stormwater Monitoring
2007 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

					Radiological Analytes															Bioassay		Field
HSU	Program	Wells	Number of Wells	Groundwater Level Measurements	Tritium	C-14	Other rads	VOC	Pesticides & PCBs	Metals	TOC	Nitrates (as N)	Total Chromium	TDS	Alkalinity	TSS	Oil and Grease	Anions (chloride, sulfate)	Cations (Ca, Mg, Na, K)	Acute Aquatic Toxicity	Chronic Aquatic Toxicity	EC
HSU-1	RI/FS, IRA	UCD1-001	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-003	1		✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-004	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-005	1		✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-006	1		✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-008	1		✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-009	1		✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA, LTPS	UCD1-010	1	Q	✓	✓		✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA, LTPS	UCD1-011	1	Q	✓✓	✓✓		✓✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA, DDC	UCD1-012	1	Q	✓	✓		✓✓				✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD1-013	1	Q	✓✓	✓✓		✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA, LTPS	UCD1-018	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-019	1	Q	✓	✓		✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD1-020	1	Q	✓[D]	✓[D]		✓[D]				✓[D]	✓[D]	✓[D]								✓
	RI/FS, IRA	UCD1-021	1	Q	✓	✓		✓✓				✓	✓	✓								✓✓
	RI/FS, IRA	UCD1-022	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-023	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD1-024	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA, LTPS	UCD1-025	1	Q	✓	✓		✓✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA, LTPS	UCD1-027Z1	1		✓	✓		✓				✓	✓	✓								✓
		UCD1-027Z2			✓	✓		✓				✓	✓	✓								✓
		UCD1-027Z3			✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA, LTPS	UCD1-028	1	Q	✓	✓		✓				✓✓[D]	✓✓[D]	✓								✓✓
	RI/FS, IRA	UCD1-034	1	Q	✓	✓		✓				✓	✓	✓								✓
	DDC	UCD1-049	1	Q	✓	✓		✓✓				✓	✓	✓								✓✓
	DDC	UCD1-050	1	Q	✓✓	✓✓		✓✓				✓✓	✓	✓								✓✓
	DDC	UCD1-051	1	Q	✓[D]✓[D]	✓[D]✓[D]		✓[D]✓[D]				✓[D]✓[D]	✓[D]✓[D]	✓[D]								✓✓
	RI/FS, IRA	UCD1-052	1	Q	✓[D]✓	✓[D]		✓[D]				✓[D]✓	✓[D]	✓[D]								✓✓
	RI/FS, IRA	UCD1-053	1	Q	✓	✓		✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD1-054	1	Q	✓[D]	✓[D]		✓[D]				✓[D]✓	✓[D]	✓[D]								✓✓
	RI/FS, IRA	UCD1-055	1	Q									✓[D]									✓
	RI/FS, IRA	UCD1-058	1	Q									✓									✓
	DDC	DDC-1-A	1	Q				✓														✓
		DDC-1-B						✓✓														✓✓
		DDC-1-C						✓✓														✓✓
	DDC	DDC-2-A	1	Q				✓														✓
		DDC-2-B						✓														✓
		DDC-2-C						✓✓														✓✓
	DDC	DDC-3-A	1	Q				✓														✓
		DDC-3-B						✓✓														✓✓
		DDC-3-C						✓✓														✓✓
	DDC	DDC-4-A	1	Q				✓														✓
		DDC-4-B						✓✓														✓✓
		DDC-4-C						✓✓														✓✓
	DDC	DDC-5-A	1	Q				✓														✓
		DDC-5-B						✓✓[D]														✓✓[D]
		DDC-5-C						✓✓														✓✓
	DDC	DDC-6-A	1	Q				✓														✓
		DDC-6-B						✓✓														✓✓
		DDC-6-C						✓✓														✓✓

Table 1
2007 Combined IRA Groundwater Treatment System, RI Groundwater, Surface Water, and Stormwater Monitoring
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					Radiological Analytes															Bioassay		Field
HSU	Program	Wells	Number of Wells	Groundwater Level Measurements	Tritium	C-14	Other rads	VOC	Pesticides & PCBs	Metals	TOC	Nitrates (as N)	Total Chromium	TDS	Alkalinity	TSS	Oil and Grease	Anions (chloride, sulfate)	Cations (Ca, Mg, Na, K)	Acute Aquatic Toxicity	Chronic Aquatic Toxicity	EC
HSU-2	RI/FS, IRA	UCD2-007	1	Q	✓	✓		✓				✓✓	✓	✓								✓✓
	RI/FS, IRA	UCD2-014	1	Q	✓D✓	✓D✓		✓D				✓D✓	✓D✓	✓D								✓✓
	RI/FS, IRA	UCD2-015	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-016	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-017	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-026	1	Q	✓	✓		✓				✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD2-029	1	Q	✓	✓		✓✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD2-030	1	Q	✓	✓		✓✓				✓✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD2-031	1	Q	✓	✓		✓✓D				✓	✓✓D	✓								✓✓
	RI/FS, IRA	UCD2-032	1	Q	✓	✓		✓✓				✓	✓	✓								✓✓
	RI/FS, IRA	UCD2-035	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-036	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-037	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-038	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-039	1	Q	✓✓	✓✓		✓				✓	✓	✓								✓✓
	RI/FS, IRA	UCD2-040	1	Q	✓	✓		✓✓				✓	✓✓	✓								✓✓
	RI/FS, IRA	UCD2-045	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD2-046	1	Q	✓	✓		✓✓				✓	✓	✓								✓✓
	DDC	UCD2-048	1	Q	✓D	✓D		✓D✓				✓D✓	✓D	✓D								✓✓
	RI/FS, IRA	UCD2-056	1	Q									✓									✓
	RI/FS, IRA	UCD2-057	1	Q									✓									✓
HSU-4	RI/FS, IRA	UCD4-041	1	Q	✓D	✓D		✓D				✓D	✓D	✓D								✓
	RI/FS, IRA	UCD4-042	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD4-043	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD4-044	1	Q	✓	✓		✓				✓	✓	✓								✓
	RI/FS, IRA	UCD4-047	1	Q	✓	✓		✓				✓	✓	✓								✓
	Stormwater	LF-1	NA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓			✓		
		LF-3	NA		x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)	x Dry (no sample)		x Dry (no sample)	x Dry (no sample)			x Dry (no sample)		
		LS-1	NA		✓D	✓D	✓D	✓D	✓D	✓D	✓D	✓D	✓D	✓D		✓D				✓		
	Surface water	STPO	NA		✓	✓	✓	✓	✓	✓		✓	✓	✓								
		PCU	NA		✓	✓	✓	✓	✓	✓		✓	✓	✓							✓	
		PCD	NA		✓D	✓D	✓D	✓D	✓D	✓D		✓D	✓D	✓D							✓	
	Treatment System	Influent	NA	(EW2-01) Q	✓M	✓M		✓M			✓M											
		Effluent	NA	(IW2-01) Q				✓M		✓M		✓M	✓M	✓M	✓M			✓M	✓M			
			62 wells																			
		2007 Sample Totals:																				
		RI/FS, IRA, DDC wells:			61+8 dups	60+8 dups	0	97+10 dups	0	0	0	70+9 dups	73+11 dups	54+7 dups	0	0	0	0	0	0	0	112
		Stormwater:			2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	2+1 dups	0	2+1 dups	1	0	0	2+1 dups	0	0
		Surface water:			3+1 dups	3+1 dups	3+1 dups	3+1 dups	3+1 dups	3+1 dups	0	3+1 dups	3+1 dups	3+1 dups	0	0	0	0	0	0	2	0
		Treatment System:			12	12	0	24	0	12	12	12	12	12	12	0	0	12	12	0	0	0
					88	87	7	138	7	19	15	98	103	80	12	3	1	12	12	3	2	112

Notes:

✓ = Measurement taken or sample collected
x = Measurement not taken or sample not collected
D = Duplicate sample
M = Sampled monthly

Table 2
Analytical Parameters and Methods
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SAMPLE PARAMETERS		
Constituent	Units	Method(s)
Field Parameters		
Field		
pH	pH units	Field, SOP
Electrical Conductivity	µmhos/cm	Field, SOP
Reduction Potential	Mvolts	Field, SOP
Temperature	°C	Field, SOP
Laboratory Parameters		
Organic		
Volatile Organic Compounds	µg/L	EPA SW8260B
Organochlorine Pesticides	µg/L	EPA SW8081A
Radiologic		
Tritium	pCi/L	EPA 906.0 (M)
Carbon-14	pCi/L	EERF C/EPA 906.0 (M)
Strontium –90	pCi/L	EPA 905.0 (M)
Radium-226	pCi/L	EPA 903.1 (M)
Metals		
Total Chromium	µg/L	EPA SW6010B
Anitmony	µg/L	EPA SW6020
Arsenic	µg/L	EPA SW6020
Barium	µg/L	EPA SW6020
Beryllium	µg/L	EPA SW6020
Cadmium	µg/L	EPA SW6020
Cobalt	µg/L	EPA SW6020
Copper	µg/L	EPA SW6020
Iron	µg/L	EPA SW6020
Lead	µg/L	EPA SW6020
Mercury	µg/L	EPA SW7470A
Molybdenum	µg/L	EPA SW6020
Nickel	µg/L	EPA SW6020
Selenium	µg/L	EPA SW6020
Silver	µg/L	EPA SW6020
Thallium	µg/L	EPA SW6020
Vanadium	µg/L	EPA SW6020
Zinc	µg/L	EPA SW6020
General Chemicals		
Alkalinity	mg/L	EPA 310.1/SM 2320B
Sodium	mg/L	EPA 6010B
Potassium	mg/L	EPA 6010B
Calcium	mg/L	EPA 6010B
Magnesium	mg/L	EPA 6010B
Chloride	mg/L	EPA 300.0
Sulfate	mg/L	EPA 300.0
Nitrate (as Nitrogen)	mg/L	EPA 300.0
Total Dissolved Solids	mg/L	EPA 160.1/SM 2540C
Total Suspended Solids	mg/L	EPA 160.2
Total Organic Carbon	mg/L	EPA 415.1/SM 5310D
Oil and Grease	mg/L	EPA 9070/EPA 413.1
Acute Aquatic Toxicity	%	EPA/600/4-90-027F

Table 3
Summary of Well Construction Details
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Wells	Date Installed	Total Boring Depth (ft bgs)	PVC Well Diameter (inches)	Screen Interval (ft bgs)	Filter Pack (ft bgs)	Bentonite (ft bgs)	Cement (ft bgs)	Measuring Point Elevation (ft msl)	Elevation Ground Surface (ft msl)
Groundwater Monitoring Wells									
UCD1-001	10/09/87	56.5	2	46.5-56.5	41-56.5	38-41	0-38	50.05	47.9
UCD1-002	Abandoned								
UCD1-003	10/23/87	51.5	2	39-49	34-51.5	a	0-34	50.05	48.2
UCD1-004	10/14/87	56.5	2	45-55	40-56.5	37-40a	0-37	51.69	49.4
UCD1-005	10/22/87	48.5	2	38-48	33-48	a	0-33	48.44	48.4
UCD1-006	10/21/87	52.5	2	40-50	35-50	a	0-35	50.94	49.0
UCD2-007	11/05/87	90	2	80-90	75-90	a	0-75	51.65	49.3
UCD1-008	11/03/87	56	2	43.5-53.5	39-53.5	a	0-39	51.51	49.2
UCD1-009	11/04/87	51.5	2	40-50	35-50	a	0-35	51.38	49.0
UCD1-010	10/11/89	70	4	54-69	52-70	49-52	0-49	49.87	47.4
UCD1-011	10/17/89	66.5	4	50-65	47-66.5	44-47	0-44	50.67	47.6
UCD1-012	10/19/89	65	4	49.5-64.5	47-65	44-47	0-44	51.76	48.8
UCD1-013	10/26/89	65	4	50-65	47-65	44.5-47	0-44.5	52.19	49.2
UCD2-014	11/15/89	86	4	75-85	69-86	64-69	0-64	51.72	49.0
UCD2-015	03/28/90	120.5	4b	91-116	86-120.5	65-86	0-65	51.49	49.4
UCD2-016	04/04/90	122	4b	92-117	86-122	71-86	0-71	49.95	48.2
UCD2-017	04/10/90	143	4b	88-113	81-113	78-81	0-78	51.83	49.6
UCD1-018	10/04/90	70	4b	54-69	51-70	48-51	0-48	48.56	46.7
UCD1-019	10/01/90	74.5	4b	56.5-71.5	53.5-72.5	50.5-53.5	0-50.5	51.33	49.3
UCD1-020	10/09/90	73.5	4b	57-72	54-73.5	51-54	0-51	49.78	48.0
UCD1-021	10/11/90	73.5	4b	57-72	54-73.5	51-54	0-51	48.77	48.7
UCD1-022	10/25/90	73	4b	57-72	54-73	51-54	0-51	49.07	49.0
UCD1-023	10/17/90	76.5	4b	56.5-71.5	53.5-73	50.5-53.5	0-50.5	49.39	49.2
UCD1-024	10/22/90	73	4b	57-72	54-73	51-54	0-51	48.91	48.8
UCD1-025	10/06/95	75	4c	60-75	56.9-75	52-56.9	0-52	47.38	-
UCD2-026	10/06/95	102	4c	87-102	54-102	79-84	0-79	48.79	-
UCD2-027Z1	10/06/95	136	5c	53-55	51.5-57.5	49-51.5	0-49	47.52	-
UCD2-027Z2	10/06/95	136	5c	63-65	61.5-66.5	57.5-61.5	0-49	47.52	-
UCD2-027Z3	10/06/95	136	5c	73-75	71.5-76.5	66.5-71.5	0-49	47.52	-
UCD2-027Z4	10/06/95	136	5c	86-88	84.9-90	76.5-84.9	0-49	47.52	-
UCD2-027Z5	10/06/95	136	5c	96-98	94.5-100	90-94.5	0-49	47.52	-
UCD2-027Z6	10/06/95	136	5c	106-108	104.5-109.5	100-104.5	0-49	47.52	-
UCD2-027Z7	10/06/95	136	5c	116-118	114.5-119	109.5-114.5	0-49	47.52	-

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UCD1-028	09/05/96	70	2b	53-68	51-70	47-51	0-47	47.48	48.1
UCD2-029	09/04/96	97	2b	80-95	76.7-97	72-76.7	0-72	47.58	48.1
UCD2-030	09/10/96	110	2b	95-110	91-110	89.5-91	0-89.5	47.20	47.6
UCD2-031	09/11/96	110	2b	94-109	91-110	87-91	0-87	47.21	47.5
UCD2-032	04/03/97	105	2b	83-103	81-105	77-81	0-77	45.41	45.1
UCD4-033	Abandoned in May 1997 and replaced by UCD4-42								
UCD1-034	10/06/95	80	4c	61-76	57-76	50-57	0-50	55.70	-
UCD2-035	10/06/95	130	4c	107-122	103-122	98-103	0-98	55.71	-
UCD2-036	11/06/97	105	2b	82-102	79-105	73-79	0-73	48.31	-
UCD2-037	10/20/97	118.5	2b	94-114	91-118.5	85-91	0-85	49.63	-
UCD2-038	10/23/97	119	2b	95-115	89-95	83-89	0-83	57.20	-
UCD2-039	10/30/97	112	2b	87-107	84-112	80.5-84	0-81.5	49.63	47.4
UCD2-040	11/07/97	108.5	2b	86-106	83-108.5	78-83	0-78	46.49	46.5
UCD4-041	10/10/97	295	4b	257-277	253-280	248.5-253	0-248.5	46.60	47.0
UCD4-042	11/03/97	272	4b	248.5-268.5	245-269	240-245	0-246	47.22	47.0
UCD4-043	10/02/97	295	4b	248-268	242.5-274	233-242.5	0-237	45.06	44.5
UCD4-044	04/07/99	295	4b	246.5-266.5	242-273	237-242	0-237	47.43	-
UCD2-045	11/30/99	114	2b	93-113	89.5-113.5	84.5-89.5	0-84.5	46.33	45.0
UCD2-046	05/05/00	106	2b	84.5-104.5	81.75-106	79-81.75	0-79	44.79	51.5
UCD4-047	05/20/00	299	4b	266-286	263.5-288.9	257-263	0-257	47.04	45.0
UCD2-048	08/28/02	104	4b	90-100	88.3-104	84-88.3	0-84	51.21	-
UCD1-049	08/14/02	69.5	4b	49.5-69.5	47-69.5	43-47	0-43	51.16	-
UCD1-050	08/13/02	69.5	4b	49.5-69.5	47.5-69.5	43.5-47.5	0-43.5	52.08	-
UCD1-051	08/12/02	70	4b	49.7-69.7	48-70	44-48	0-44	51.62	-
UCD1-052	02/12/04	70	2	53.5 - 68.5	51 - 70	50 - 51	0 - 50	47.46	-
UCD1-053	02/13/04	70	2	52.5 - 67.5	48 - 70	45 - 48	0 - 48	47.49	-
UCD1-054	02/06/04	73	2	58 - 73	56 - 73	54 - 56	0 - 56	49.05	-
UCD1-055	10/24/07	62	2b	47 - 62	44 - 62	41 - 44	0 - 41	44.16	-
UCD2-056	11/05/07	89	4	78 - 88	76 - 89	73 - 76	0 - 73	44.77	-
UCD2-057	11/02/07	97	4	87 - 97	84 - 97	81 - 84	0 - 81	47.41	-
UCD1-058	11/02/07	71	2	55 - 70	52 - 71	48 - 52	0 - 48	47.85	-

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DDC Treatment System									
DDC-1	10/27/00	86	4b	20-35 40-55 65-80	19-35.5 40-55.7 60-80.5	17-19 35.7-40 80.5-85	0.5-17	52.82	-
DDC-1A	10/27/00	86	1.25b	32.5-35	19-35.5	17-19	0.5-17	51.42	-
DDC-1B	10/27/00	86	1.25b	50-52.5	40-55.7	35.7-40	0.5-17	51.32	-
DDC-1C	10/27/00	86	1.25b	70-75	60-80.5	80.5-85	0.5-17	51.42	-
DDC-2	09/16/02	80	4b	19.7-34.7 39.7-54.7 64.7-79.7	16-36 38-56.5 62.3-80	14.3-16 36-38 56.5-62.3	0-14.3	51.34	-
DDC-2A	09/16/02	80	1.25b	30-35	16-36	14.3-16	0-14.3	51.50	-
DDC-2B	09/16/02	80	1.25b	50-55	38-56.5	36-38	0-14.3	51.52	-
DDC-2C	09/16/02	80	1.25b	65-70	62.3-80	56.5-62.3	0-14.3	51.47	-
DDC-3	09/18/02	80	4b	19-34 39-54 64-69.7	16-35 37-56.7 62-80	14.3-16 35-37 56.7-62	0-14.3	52.53	-
DDC-3A	09/18/02	80	1.25b	28-34	16-35	14.3-16	0-14.3	51.75	-
DDC-3B	09/18/02	80	1.25b	49-54	37-56.7	35-37	0-14.3	51.68	-
DDC-3C	09/18/02	80	1.25b	64-79.7	62-80	56.7-62	0-14.3	51.74	-
DDC-4	09/19/02	80	4b	19.5-34.5 39.5-54.5 64.5-79.5	16-35.5 37-56.5 62-80	14.3-16 35.5-37 56.5-62	0-14.3	50.86	-
DDC-4A	09/19/02	80	1.25b	29.5-34.5	16-35.5	14.3-16	0-14.3	51.22	-
DDC-4B	09/19/02	80	1.25b	49.5-54.5	37-56.5	35.5-37	0-14.3	51.23	-
DDC-4C	09/19/02	80	1.25b	64.5-69.5	62-80	56.5-62	0-14.3	51.84	-
DDC-5	09/20/02	80	4b	18.5-33.5 38.5-53.5 63.5-78.5	16-34.5 36.5-55.7 61-80	14-16 34.5-36.5 55.7-61	0-14	51.18	-
DDC-5A	09/20/02	80	1.25b	28.5-33.5	16-34.5	14-16	0-14	51.02	-
DDC-5B	09/20/02	80	1.25b	48.5-53.5	36.5-55.7	34.5-36.5	0-14	51.04	-
DDC-5C	09/20/02	80	1.25b	73.5-78.5	61-80	55.7-61	0-14	51.01	-

Table 3
Summary of Well Construction Details
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Wells	Date Installed	Total Boring Depth (ft bgs)	PVC Well Diameter (inches)	Screen Interval (ft bgs)	Filter Pack (ft bgs)	Bentonite (ft bgs)	Cement (ft bgs)	Measuring Point Elevation (ft msl)	Elevation Ground Surface (ft msl)
DDC-6	09/13/02	80.3	4b	20-35 40-55 65-80	16-36 38-56.5 62-80.3	14.3-16 36-38 56.5-62	0-14.3	51.37	-
DDC-6A	09/13/02	80.3	1.25b	30-35	16-36	14.3-16	0-14.3	51.56	-
DDC-6B	09/13/02	80.3	1.25b	50-55	38-56.5	36-38	0-14.3	51.58	-
DDC-6C	09/13/02	80.3	1.25b	65-70	62-80.3	56.5-62	0-14.3	51.51	-
Piezometers									
TP-1A	11/04/00	80	2	30-35	17-35.5	14-17	0.5-14	49.65	-
TP-1B	11/04/00	80	2	47-52	45-55	35.7-45	0.5-14	49.90	-
TP-1C	11/04/00	80	2	70-75	60-80.5	55-60	0.5-14	49.81	-
TP-2A	10/31/00	79	2	28-33	14-33	12-14	0.5-12	51.43	-
TP-2B	10/31/00	79	2	47.5-52.5	45-55	33-45	0.5-12	51.15	-
TP-2C	10/31/00	79	2	70-75	60-79	55-60	0.5-12	51.10	-
TP-3A	11/03/00	80.5	2	30-35	20-33.5	15-20	0.5-15	51.05	-
TP-3B	11/03/00	80.5	2	47.5-52.5	45-55	35.5-45	0.5-15	51.10	-
TP-3C	11/03/00	80.5	2	70-75	60-80.5	55-60	0.5-15	51.08	-
TP-4A	11/02/00	80.5	2	30-35	19-35	12-19	0.5-17	51.07	-
TP-4B	11/02/00	80.5	2	47.5-52.5	45-55	35-45	0.5-17	51.06	-
TP-4C	11/02/00	80.5	2	70-75	60-80.5	55-60	0.5-17	51.17	-
TP-5A	10/26/00	80	2	30-35	20-35.5	15-20	0.5-15	51.93	-
TP-5B	10/26/00	80	2	47.5-52.5	45-55.3	35.5-45	0.5-15	51.87	-
TP-5C	10/26/00	80	2	74.5-79.5	60-80	55.25-60	0.5-15	51.79	-
IRA Treatment System									
EW2-1	09/20/96	125.65	8b	79.4-119.4	74.4-125.65	68.4-74.4	0-68.4	49.17	47.3
IW2-1	10/17/97	126.5	10b	84.5-119.5	80-126.5	75-80	0-75	49.39	-

[a] well constructed with #60 sand seal and no bentonite

[b] stainless steel, wire-wrap screen

[c] stainless steel, blank casing, and wire wrap screen

EW = extraction well

ft bgs = feet below ground surface

ft msl = feet mean sea level datum

IW = injection well

Table 4
2007 Groundwater Elevation Data
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HSU	Well	14-Jan-05	25-Jan-05	4-Feb-05	11-Mar-05	26-Apr-05	25-May-05	7-Jun-05	15-Jul-05	Oct-05	Feb-06	May-06	22-Aug-06	1-Nov-06	12-Mar-07	17-Jul-07	17-Sep-07	13-Dec-07
HSU-1	UCD1-001	11.36	NM	12.39	14.74	14.79	11.56	8.74	4.14	2.69	NM	30.07	7.08	11.64	17.71	-4.22	-3.26	6.46
	UCD1-003	11.52	NM	12.30	14.85	15.62	11.30	9.08	3.88	2.08	NM	NM	6.73	11.23	17.61	Dry	Dry	6.14
	UCD1-004	12.45	NM	12.74	15.19	17.59	13.84	10.92	NM	2.42	NM	29.78	8.62	12.18	18.32	Dry	Dry	6.64
	UCD1-005	11.28	NM	11.99	14.64	15.29	11.21	8.99	3.96	2.25	NM	NM	6.89	11.72	17.62	Dry	Dry	6.23
	UCD1-006	11.63	NM	12.44	13.87	15.94	13.79	9.40	4.41	2.48	NM	NM	7.38	12.18	17.84	Dry	Dry	6.46
	UCD1-008	10.97	NM	11.92	14.30	17.05	11.90	9.42	3.81	2.21	NM	NM	6.82	11.12	17.60	Dry	Dry	6.20
	UCD1-009	11.03	NM	11.97	14.27	15.52	10.82	8.46	3.61	DRY	NM	NM	6.14	10.91	17.35	Dry	Dry	6.06
	UCD1-010	10.69	NM	11.44	NM	13.19	9.49	7.29	3.04	1.38	NM	29.3	5.06	10.77	16.92	-6.71	-3.82	NM
	UCD1-011	10.55	NM	11.74	NM	NM	NM	NM	NM	1.90	17.9	28.7	5.57	10.76	17.21	-6.21	-3.74	5.93
	UCD1-012	10.86	NM	11.84	14.21	15.87	10.80	8.54	3.73	1.69	18.38	28.71	6.14	10.92	17.34	-5.24	-3.60	6.08
	UCD1-013	10.94	NM	11.84	14.24	16.92	12.04	9.42	3.65	1.69	NM	29.83	6.82	11.11	17.59	-3.66	-3.57	6.21
	UCD1-018	12.76	NM	12.89	15.51	17.59	14.06	11.76	6.56	3.50	26.23	31.13	9.56	9.80	18.63	-1.54	-2.27	6.96
	UCD1-019	10.74	NM	12.00	14.27	14.50	10.10	8.15	3.15	1.85	NM	28.7	6.09	11.02	17.28	-5.36	-3.52	6.04
	UCD1-020	11.50	NM	12.36	14.71	15.57	11.31	9.07	2.83	2.10	NM	28.61	6.68	11.26	17.59	-4.37	-3.38	6.10
	UCD1-021	11.27	NM	12.04	14.54	15.42	11.25	8.92	3.92	2.21	NM	27.47	6.8	11.37	17.59	-4.06	-3.32	6.08
	UCD1-022	11.60	NM	12.49	14.74	15.89	11.39	9.31	4.34	2.51	NM	29.46	7.41	11.86	17.86	-3.33	-3.39	6.51
	UCD1-023	12.14	NM	12.79	15.04	17.27	13.16	10.42	4.89	2.30	NM	30.34	8.17	12.02	18.15	-0.79	-3.79	Dry
	UCD1-024	NM	NM	NM	NM	NM	NM	NM	NM	2.23	NM	NM	3.2	12.23	17.62	NM	NM	NM
	UCD1-025	10.38	NM	NM	NM	13.20	9.65	7.14	2.20	1.39	17.65	25.94	5.12	10.08	16.97	-6.18	-3.79	5.84
	UCD1-028	10.54	NM	10.58	14.13	12.35	9.03	6.73	1.88	1.64	17.65	25.75	4.67	10.62	16.88	-6.98	-3.86	5.86
	UCD1-034	12.49	NM	12.82	15.10	17.40	14.95	10.40	4.90	2.28	NM	NM	8.68	12.28	18.64	-0.69	-3.36	7.04
	UCD1-049	10.87	11.31	11.74	14.14	15.58	9.76	8.26	3.69	1.53	18.21	29.04	5.92	10.85	17.23	-5.41	-3.71	5.92
	UCD1-050	10.91	11.36	11.72	14.22	15.67	11.77	8.89	3.57	1.50	18.25	28.96	6.51	10.74	17.22	-5.30	-3.72	5.89
	UCD1-051	10.76	11.30	11.76	14.13	15.83	10.76	8.43	3.31	1.51	18.62	28.99	6.03	10.75	17.20	-5.39	-3.75	5.87
	UCD1-052	10.61	NM	11.86	13.96	12.51	9.29	6.89	2.01	1.71	17.79	24.34	4.87	10.88	16.95	-7.04	-3.79	5.80
	UCD1-053	10.40	NM	11.84	14.04	12.29	10.53	6.76	2.12	1.64	17.82	25.82	4.55	10.77	16.81	-7.20	-3.91	5.73
	UCD1-054	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.36
	UCD1-055	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.80
	UCD1-058	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.74
HSU-2	UCD2-007	11.02	NM	12.18	14.51	13.43	10.28	7.72	2.68	2.57	NM	28.3	6.08	11.36	17.44	-6.07	-3.30	6.43
	UCD2-014	10.77	NM	11.97	14.09	13.29	10.52	7.47	2.36	2.13	NM	28.02	5.71	11.10	17.23	-6.49	-3.59	6.22
	UCD2-015	11.19	NM	12.31	14.68	14.03	11.23	8.27	NM	2.93	NM	32.78	6.65	11.61	17.62	-5.63	-3.15	6.61
	UCD2-016	11.10	NM	12.24	14.54	13.83	10.65	7.97	3.68	2.82	NM	28.34	6.35	11.61	17.54	-5.42	-3.15	6.53
	UCD2-017	11.47	NM	12.56	14.96	14.71	11.76	8.86	4.61	3.20	NM	29.03	7.5	12.05	17.96	-4.60	-2.70	6.90
	UCD2-026	10.58	NM	NM	NM	12.19	9.44	6.69	2.04	1.68	NM	23.88	5.21	10.87	16.95	-7.14	-3.69	5.98
	UCD2-029	10.53	NM	11.91	14.21	12.10	9.26	6.62	1.76	1.81	17.68	28.8	4.99	10.41	16.84	-7.50	-3.75	5.81
	UCD2-030	10.49	NM	11.84	14.19	11.85	9.24	6.42	1.70	1.79	NM	27.14	3.78	10.44	16.83	-7.73	-3.79	5.82
	UCD2-031	10.51	NM	11.86	14.11	11.89	9.11	6.51	NM	1.76	NM	28.88	3.58	10.76	16.79	-7.54	-3.82	6.55
	UCD2-032	9.98	NM	11.23	13.48	10.28	7.13	4.26	0.53	1.10	NM	26.47	4.06	10.16	16.23	-9.37	-4.39	7.80
	UCD2-035	10.81	NM	12.09	14.21	13.36	10.53	7.75	3.21	2.24	NM	38.08	6.13	11.32	17.33	-5.85	-3.52	6.31
	UCD2-036	5.07	NM	12.21	11.43	13.36	10.51	7.71	3.34	2.63	NM	26.18	6.06	11.52	17.42	-5.88	-3.32	6.37
	UCD2-037	NM	NM	NM	14.58	14.03	10.98	8.35	4.18	2.88	NM	28.4	6.85	12.05	17.76	-5.04	-2.97	NM
	UCD2-038	9.21*	NM	12.38	14.60	14.25	11.35	8.30	4.10	2.81	NM	38.99	6.98	11.82	17.73	-5.11	-3.01	6.70
	UCD2-039	10.59	NM	11.88	NM	NM	NM	NM	NM	2.08	NM	28.4	5.23	10.95	17.00	-6.90	-3.75	6.04
	UCD2-040	10.42	NM	11.79	13.84	11.26	8.84	6.26	1.24	1.63	17.31	24.94	3.85	10.12	16.70	-7.95	-3.98	2.37
	UCD2-045	10.14	NM	11.39	13.74	9.24	7.84	5.19	0.04	1.24	NM	27.63	3.73	10.13	16.49	-9.16	-4.42	5.45
	UCD2-046	9.18	NM	10.68	13.03	-0.87	NM	1.77	-2.55	-0.27	NM	26.05	1.37	8.58	15.42	-12.29	-5.00	2.29
	UCD2-048	10.63	11.51	11.81	14.16	12.91	9.96	7.74	2.18	1.97	17.87	27.97	5.48	11	17.11	-6.66	-3.62	6.11
	UCD2-056	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.41
	UCD2-057	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.62
HSU-4	UCD4-041	9.28	NM	10.80	13.10	6.15	1.40	-8.71	-14.52	-1.10	NM	25.39	-2.11	8.95	15.68	-23.45	-9.54	27.44
	UCD4-042	9.14	NM	10.64	13.04	5.74	1.14	-8.94	-14.72	-1.46	NM	25.18	-3.93	8.96	15.47	-23.89	-9.80	5.24
	UCD4-043	8.96	NM	10.55	13.00	4.55	0.55	-9.69	-16.45	-0.86	NM	20.79	-4.72	8.74	15.27	-25.00	-10.19	4.90
	UCD4-044	9.44	NM	10.95	13.20	6.85	2.10	-8.41	-12.85	-0.46	NM	20.72	-2.07	9.93	15.86	-22.54	-9.19	5.46
	UCD4-047	8.58	NM	10.18	12.63	NM	-1.97	-12.58	-20.14	-3.07	NM	22.07	-7.66	7.38	14.78	-27.28	-11.34	6.34
IRA System	EW2-01	10.40	NM	11.62	13.77	11.51	8.84	5.95	1.31	NM	NM	NM	NM	11.56	16.35	-8.04	NM	5.47
	IW2-01	11.28	NM	12.45	14.19	14.29	11.40	8.45	3.81	NM	NM	NM	NM	11.79	17.73	NM	NM	NM

Notes:
All data shown is in feet mean sea level (ft msl)

Table 5
IRA LTPS Effluent Discharge Standards for Irrigation
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Effluent Discharge Standards for Irrigation

Analyte	Units	Standard
Arsenic	µg/L	10
Barium	µg/L	490
Boron	µg/L	791
Cadmium	µg/L	1
Carbon-14	pCi/L	50
Chloride	mg/L	106
Chloroform	µg/L	0.5
Chromium (total)	µg/L	44.6
Lead	µg/L	2
Manganese	µg/L	50
Mercury	µg/L	1.2
Nickel	µg/L	100
NO_3-N	mg/L	27.4
SO_4-S	mg/L	250
Tritium	pCi/L	300
Zinc	µg/L	2,000

Table 6
2007 Groundwater IRA Treatment System Operation Log
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Date	Blower Run Time (hrs)	Blower On (hrs)	Extraction Totalizer (gal)	Flow Rate (gpm)	Irrigation Totalizer (gal)	Calculated Operating Time (days)	Calendar Days Available	Uptime	Notes
1/4/07	57416	--	152,428,329	--	--				System startup
1/10/07	57559	143	153,114,459	80	13,082,210	6	6	99%	Changed 1 bag filter
1/16/07	57652	93	--	70	--	4	6	65%	Startup. Had to bypass irrigation alarm
1/22/07	57762	110	153,998,075	70	--	5	6	76%	Running
2/1/07	58000	238	155,027,127	70	--	10	10	99%	Running
2/6/07	58044	44	155,218,758	90	--	2	5	37%	Startup
2/15/07	58257	213	156,067,916	70	--	9	9	99%	Running
2/21/07	58400	143	156,690,666	70	--	6	6	99%	Removed bird from blower intake screen.
2/26/07	58520	120	157,224,222	70	--	5	5	100%	Running
3/5/07	58689	169	157,974,266	75	--	7	7	100%	Running
3/16/07	58944	255	159,127,980	--	--	11	11	97%	Startup
3/28/07	59004	60	--			3	12	21%	Shutdown
4/3/07	59047	43	159,862,899	--	13,259,215	2	6	30%	Startup
4/5/07	59092	45	160,597,817	90	13,312,186	2	2	93%	Startup. Increased extraction rate.
4/16/07	59288	196	160,843,077	95	13,375,054	8	11	74%	Startup
4/19/07	59330	42	161,070,468	95	13,428,025	2	3	58%	Startup
4/23/07	59341	11	161,132,820	95	13,428,026	0	4	11%	Startup
4/25/07	59347	6	161,165,946	93	13,428,026	0	2	13%	Startup
4/30/07	59430	83	161,632,769	90	13,516,153	3	5	69%	Startup
5/1/07	59434	4	161,717,348	--	--	0	1	16%	Shutdown
5/7/07	59460	26	161,801,926	100	13,516,153	1	6	18%	Startup
5/19/07	59735	275	162,755,022	80	13,727,245	11	12	95%	Running
5/22/07	59802	67	163,478,509	80	13,820,507	3	3	93%	Running, Slightly raised extraction rate
5/24/07	--	--	--	85	--	--	--	--	Shut down, berryessa panel alarm
5/24/07	--	--	--	85	--	--	--	--	Startup, slightly lowered extraction rate
5/30/07	59996	194	164,420,270	95	13,944,175	8	8	100%	Running, has shut down for short periods
6/5/07	60094	98	165,000,030	100	14,033,227	4	6	68%	Startup
6/11/07	60199	105	165,628,836	100	14,177,220	4	6	73%	Running, lowered extraction rate.
6/21/07	60437	238	166,777,042	80	14,484,859	10	10	99%	Running
6/25/07	60538	101	167,264,901	70	14,562,939	4	4	100%	Running
7/3/07	60728	190	168,087,076	70	14,722,340	8	8	99%	Running well
7/4/07	--	--	--	100	--	--	--	--	Shut down, Berryessa Alarm 3
7/9/07	60739	11	168,147,370	100	14,755,662	0	6	8%	Startup
7/17/07	60823	84	168,642,337	90	14,852,927	4	8	44%	Running
7/25/07	60901	78	169,109,707	105	15,031,525	3	8	41%	Running
7/31/07	60967	66	169,478,447	100	15,125,578	3	6	46%	Running
8/15/07	61263	296	171,177,210	85	15,342,070	12	15	82%	Running
11/1/07	62356	1093	176,159,288	65	15,906,150	46	78	58%	Running
12/6/07	62575	220	177,043,368	70	15,956,221	9	35	26%	Startup
1/2/08	62927	352	178,426,367	70	15,956,220	15	27	54%	Running
Totals for 2007:		***5,511***	***25,998,038***	***84***	***2,874,010***	***230***	***363***	***63%***	

Table 7
2007 DDC Groundwater Treatment System Operation Log
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Date	Time	System Running	Compressor Run Time (hrs)	Compressor On (hrs)	Calculated Operating Time (days)	Calendar Days Available	Efficiency	Notes
12/21/2006	--	--	***20918***	--	--	--	--	
1/4/2007	9:45	Y	21252	334	14	14	100%	System running smoothly.
1/16/2007	15:00	Y	--	--	--	--	--	System running smoothly, all wells bubbling, acid tank low.
1/23/2007	10:40	Y	21706	454	19	19	100%	System running smoothly, wells bubbling with a minimum of 5' of separation between zones, refill acid tank, pH levels are too high. Adjusted acid system.
1/26/2007	9:08	Y	--	--	--	--	--	System running smoothly, all wells bubbling, pH levels in acceptable range.
2/1/2007	13:20	Y	--	--	--	--	--	System running smoothly.
2/6/2007	16:00	Y	--	--	--	--	--	System running smoothly. Acid drip system does not seem to be functioning properly; adjust acid pump.
2/15/2007	15:35	Y	--	--	--	--	--	System running smoothly. pH levels too high, adjust acid system.
2/21/2007	11:45	Y	--	--	--	--	--	System running smoothly, all wells bubbling, pH levels in acceptable range.
2/26/2007	11:30	Y	22521	815	34	34	100%	DDC system running upon arrival, but smoking badly. System shutdown for repair.
3/5/2007	13:05	Y	--	--	--	--	--	DDC system running upon arrival, but acid system is corroding the compressor and pressure tank. Shutdown for maintenance until Friday.
3/9/2007	13:35	N	22686	165	7	11	63%	System restarted at 1335 after repairs to the acid system are complete.
3/16/2007	9:40	Y	--	--	--	--	--	System running smoothly; refill acid tank.
4/9/2007	14:00	Y	--	--	--	--	--	System running smoothly; pH levels too low, adjust acid system.
7/12/2007	16:15	Y	25619	2933	122	125	98%	System running smoothly; repair minor acid leaks at wellheads.
8/3/2007	13:40	Y	26141	522	22	22	99%	DDC system on upon arrival; shutdown briefly for compressor maintenance. Refill acid tank.
8/6/2007	11:51	Y	26209	68	3	3	94%	DDC system on upon arrival; shutdown briefly for compressor maintenance.
8/20/2007	17:00	Y	26550	341	14	14	101%	System running smoothly.
8/29/2007	12:40	Y	26759	209	9	9	97%	System running smoothly; refill acid tank.
9/17/2007	14:52	Y	27221	462	19	19	101%	System shutdown upon departure for GW sampling event
9/20/2007	10:51	N	27221	0	0	3	0%	System restarted at this time after maintenance
9/24/2007	16:45	Y	--	--	--	--	--	System running smoothly; refill acid tank.
9/26/2007	12:45	Y	27367	146	6	6	101%	System running smoothly; compressor needs new air filter.
10/3/2007	12:47	Y	27535	168	7	7	100%	System running smoothly; refill acid tank.
10/8/2007	11:00	Y	27654	119	5	5	99%	System running smoothly; refill acid tank.
10/19/2007	11:05	Y	27918	264	11	11	100%	System running smoothly; refill acid tank.
10/30/2007	11:39	Y	28182	264	11	11	100%	System running smoothly; refill acid tank.
11/19/2007	12:40	Y	--	--	--	--	--	System running upon arrival; oil filter maintenance needed (couldn't bypass message for run time reading). Refill acid tank.
12/7/2007	13:33	Y	29096	914	38	38	100%	System running upon arrival. Attempted oil filter change - too tight. Changed air filter and refilled acid tank.
12/19/2007	14:20	Y	29385	289	12	12	100%	System running upon arrival. Attempted oil filter change with new tool - still too tight. Refilled acid tank.
1/3/2008	12:30	Y	29743	358	15	15	99%	
			Totals for 2007:	***8825***	***368***	***378***	***97%***	

Table 8
Data Validation Requirements
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Review Item	Checked During Data Verification
Case Narrative	X
Chain-of-Custody Documentation	X
Summary of Results	X
Holding Times	X
Method Blank Analysis Results	X
Field/Trip Blank Analysis Results	X
Surrogate Standard %R	X
Laboratory Control Samples - %R	X
Matrix Spike – %R	X
LCS/LCS Duplicate - RPD	X
MS/MS Duplicate - RPD	X
Laboratory Replicate - RPD	X
Field Duplicate - RPD	X

Note:
%R = percent recoveries
LCS = laboratory control sample
MS = matrix spike
RPD = relative percent difference

Table 9
Analytical Completeness by Method for Water Samples
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				Number of results				Completeness	
Method	Parameter	Samples Analyzed (N+FD)	Analytes per sample	Total	Rejected	Estimated due to QC deficiencies	Estimated due to >MDL but <PQL	Percent usable	Percent quantitative*
A2320B	Alkalinity	4	1-4	7	0	0	0	100%	100%
A2540C	Total Dissolved Solids	8	1	8	0	0	0	100%	100%
A5310D	Total Organic Carbon	4	1	4	0	0	0	100%	100%
E160.1	Total Dissolved Solids	75+9	1	84	0	4	0	100%	95%
E160.2	Total Suspended Solids	2+1	1	3	0	0	0	100%	100%
E300	Anions	100+11	1-3	135	0	25	0	100%	81%
E310.1	Alkalinity	8	1	8	0	0	0	100%	100%
E413.1	Oil and Grease	1+1	1	2	0	0	2	100%	100%
E415.1	Total Organic Carbon	10+1	1	11	0	0	2	100%	100%
E600.4	Aquatic Toxicity	4+1	1-6	13	0	0	0	100%	100%
E903.1	Radium-226	5+2	1	7	0	1	0	100%	86%
E905.0	Strontium	5+2	1	7	0	0	0	100%	100%
E906.0(M)	Tritium	78+10	1-2	88	0	0	4	100%	100%
EERF C	Carbon-14	77+10	1	87	0	1	2	100%	99%
SW6010B	Metals by ICP/AES	91+12	1-5	147	0	2	21	100%	99%
SW6020	Metals by ICP/MS	17+2	17-19	334	0	39	80	100%	88%
SW7470A	Mercury	17+2	1	19	0	0	1	100%	100%
SW8081	Pesticides	5+2	28	196	0	9	9	100%	95%
SW8260B	Volatile Organics	129+12	40-67	6574	0	99	107	100%	98%
SW9070	Oil and Grease	1	1	1	0	0	0	100%	100%

Notes:
*Estimations due solely to results <PQL do not affect the calculated completeness.
Calculations do not include any required field or laboratory QC samples, except field duplicates.
MDL = method detection limit
PQL = practical quantitation limit
ICP/AES = inductively coupled plasma atomic emission spectrophotometer
ICP/MS = inductively coupled plasma mass spectrometer
FD = field duplicate samples
N = normal environmental samples

Table 10
Horizontal Gradients for HSU-1, HSU-2, and HSU-4 Wells
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Date Measured	HSU-1	HSU-2	HSU-4
March-07	0.0009 to 0.002	0.0003 to 0.0007	0.0006 to 0.0009
July-07	0.002 to 0.01	0.001	0.002 to 0.005
September-07	0.0004 to 0.001	0.0004 to 0.0008	0.001
December-07	0.0006 to 0.0025	0.0008 to 0.001	0.002

Notes:
Horizontal Gradient (ft/ft)

Table 11
Vertical Gradient between Select HSU-1/HSU-2 and HSU-2/HSU-4 Wells
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Date Measured	UCD1-021 and UCD2-007	UCD1-028 and UCD2-029	UCD1-013 and UCD2-014	UCD1-051 and UCD2-048	UCD2-029 and UCD4-044	UCD2-040 and UCD4-041	UCD2-032 and UCD4-042
March-07	0.0067	0.0015	0.0159	0.0025	0.0058	0.0060	0.0046
July-07	0.0897	0.0193	0.1247	0.0360	0.0890	0.0909	0.0888
September-07	-0.0009	-0.0041	0.0009	-0.0037	0.0322	0.0326	0.0331
December-07	-0.0156	0.0019	-0.0004	-0.0068	0.0021	-0.1470	0.0156
Difference of Screens (feet)	22.4	27	22.7	35.3	169	170.5	163.58

Notes:
Vertical Gradient = feet/foot
A negative value denotes an upward gradient.

Table 12
Analytical Results Summary of Combined Groundwater Monitoring Programs
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		Tritium (pci/L)				C-14 (pci/L)				Chloroform (ug/L)			
HSU	Location	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)
HSU-1	UCD1-001	< 234	NA	2211 (5/26/1993)	--	< 14.1	NA	72 (12/2/1993)	--	< 0.11	NA	1.6 (5/26/1993)	--
	UCD1-003	< 278	NA	NS	--	< 16.3	NA	NS	--	< 0.11	NA	NS	--
	UCD1-004	< 279	NA	2022 (5/26/1993)	--	< 15.7	NA	57 (9/1/1993)	--	< 0.11	NA	4.4 (5/17/1994)	--
	UCD1-005	< 279	NA	NS	--	< 16.2	NA	ND	--	**7.78**	NA	**7.78 (3/15/2007)**	NS
	UCD1-006	< 217	NA	NS	--	< 13.8	NA	ND	--	**0.208**	NA	**0.208 (3/26/2007)**	NS
	UCD1-008	**3130**	NA	**3130 (3/20/2007)**	NS	**597**	NA	**597 (3/20/2007)**	NS	**0.36**	NA	**0.36 (3/20/2007)**	NS
	UCD1-009	< 267	NA	NS	--	**54**	NA	**54 (3/22/2007)**	NS	**33.4**	NA	**33.4 (3/22/2007)**	NS
	UCD1-010	< 216	NA	ND	--	< 13.8	NA	ND	--	< 0.11	NA	5.1 (8/28/1995)	--
	UCD1-011	<278	< 410	1382 (11/5/1990)	--	<15.8	36.1	195 (8/31/1993)	--	3.22	2.7	5.22 (2/10/2005)	--
	UCD1-012	< 270	NA	1172 (10/31/1990)	--	60.5	NA	385 (5/11/1999)	--	32.7	8.6	21000 (11/20/1991)	--
	UCD1-013	1100	599	29838 (11/24/1992)	--	422	353	7180 (9/16/1996)	--	< 0.11	NA	65 (2/23/1995)	--
	UCD1-018	< 314	NA	1618 (10/31/1990)	--	< 14.8	NA	24.8 (5/8/2002)	--	< 0.11	NA	10.3 (10/31/1990)	--
	UCD1-019	< 268	NA	1640 (2/24/1993)	--	< 19.8	NA	88 (8/25/1993)	--	< 0.11	NA	ND	--
	UCD1-020	< 278	NA	1573 (11/1/1990)	--	< 16.2	NA	117 (2/24/1997)	--	< 0.11	NA	ND	--
	UCD1-021	< 278	NA	9752 (11/18/1991)	--	< 15.9	NA	177 (2/24/1997)	--	1.46	1.4	3.3 (2/5/1991)	--
	UCD1-022	< 220	NA	430 (2/25/1997)	--	< 13.8	NA	92 (8/30/1993)	--	0.691	NA	1.6 (8/7/1991)	--
	UCD1-023	< 215	NA	2081 (5/14/1992)	--	< 15	NA	370 (8/24/1995)	--	< 0.11	NA	1 (11/30/1993)	--
	UCD1-024	< 221	NA	1305 (11/6/1990)	--	< 13.8	NA	7.27 (5/27/1998)	--	1.27	NA	3.5 (5/14/1991)	--
	UCD1-025	< 221	NA	ND	--	< 13.8	NA	230 (5/19/1997)	--	0.418	<1	3.3 (8/1/2000)	--
	UCD1-027Z1	< 216	NA	2880 (1/13/2005)	--	< 15	NA	8.41 (10/16/2003)	--	< 0.11	NA	1.6 (12/5/1995)	--
	UCD1-027Z2	< 214	NA	ND	--	< 15	NA	8.25 (10/16/2003)	--	< 0.11	NA	5.6 (12/6/1995)	--
	UCD1-027Z3	< 224	NA	320 (2/28/1997)	--	< 15	NA	96 (5/20/1997)	--	0.17	NA	4.6 (12/7/1995)	--
	UCD1-028	< 278	NA	ND	--	< 16.3	NA	12 (1/9/2002)	--	0.12	NA	0.9 (3/3/1998)	--
	UCD1-034	< 187	NA	460 (11/20/1996)	--	< 14.7	NA	74 (2/12/1997)	--	< 0.11	NA	ND	--
	UCD1-049	< 267	NA	ND	--	19.4	NA	23.8 (5/17/2006)	--	304	170	2970 (8/28/2002)	--
	UCD1-050	<215	<390	ND	--	55.7	**95.3**	**95.3 (9/26/2007)**	84.6 (6/2/2006)	307	430	3140 (4/8/2004)	--
	UCD1-051	<270	<390	ND	--	36.9	80	84.6 (10/19/2005)	--	278	390	2780 (1/13/2004)	--
	UCD1-052	<276	<410	1730 (6/1/2006)	--	< 15.8	NA	ND	--	1.54	NA	3.7 (5/2/2005)	--
	UCD1-053	< 277	NA	ND	--	< 15.3	NA	ND	--	0.123	NA	0.155 (6/2/2006)	--
	UCD1-054	< 226	NA	ND	--	< 19.8	NA	ND	--	< 0.11	NA	0.281 (6/2/2006)	--
	UCD1-055	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	UCD1-058	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-1A	NA	NA	--	--	NA	NA	--	--	18.9	NA	144 (4/13/2004)	--
	DDC-1B	NA	NA	--	--	NA	NA	--	--	32.7	6.2	5720 (12/7/2000)	--
	DDC-1C	NA	NA	--	--	NA	NA	--	--	4310	290	7950 (6/18/2003)	--
	DDC-2A	NA	NA	--	--	NA	NA	--	--	35.2	NA	336 (5/9/2006)	--
	DDC-2B	NA	NA	--	--	NA	NA	--	--	87	NA	1450 (11/15/2002)	--
	DDC-2C	NA	NA	--	--	NA	NA	--	--	311	230	1810 (11/15/2002)	--
	DDC-3A	NA	NA	--	--	NA	NA	--	--	56.2	NA	280 (4/13/2004)	--
	DDC-3B	NA	NA	--	--	NA	NA	--	--	68.1	13	1260 (11/15/2002)	--
	DDC-3C	NA	NA	--	--	NA	NA	--	--	99.5	18	1180 (11/15/2002)	--
	DDC-4A	NA	NA	--	--	NA	NA	--	--	62.3	NA	527 (4/13/2004)	--
	DDC-4B	NA	NA	--	--	NA	NA	--	--	82.8	43	3720 (11/15/2002)	--
	DDC-4C	NA	NA	--	--	NA	NA	--	--	122	57	5600 (11/15/2002)	--
	DDC-5A	NA	NA	--	--	NA	NA	--	--	0.568	NA	8.4 (4/13/2004)	--
	DDC-5B	NA	NA	--	--	NA	NA	--	--	22.6	<1	402 (11/18/2002)	--
	DDC-5C	NA	NA	--	--	NA	NA	--	--	1370	72	2900 (8/10/2005)	--
	DDC-6A	NA	NA	--	--	NA	NA	--	--	29	NA	213 (4/13/2004)	--
	DDC-6B	NA	NA	--	--	NA	NA	--	--	31.8	14	556 (11/15/2002)	--
	DDC-6C	NA	NA	--	--	NA	NA	--	--	87.1	18	1250 (11/15/2002)	--

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		Nitrates (as N) (mg/L)				Total Chromium (ug/L)				TDS (mg/L)			
HSU	Location	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)
HSU-1	UCD1-001	7.65	NA	18.7 (5/19/1992)	--	24	NA	80 (2/24/1992)	--	599	NA	906 (5/19/1992)	--
	UCD1-003	**8.66**	NA	**8.66 (3/15/2007)**	NS	**25.3**	NA	**25.3 (3/15/2007)**	NS	**394**	NA	**394 (3/15/2007)**	NS
	UCD1-004	1.03	NA	10.3 (5/26/1993)	--	15	NA	50.6 (9/1/1993)	--	428	NA	792 (5/15/1991)	--
	UCD1-005	18.3	NA	18.3 (3/15/2007)	18 (6/14/2006)	**50.9**	NA	**50.9 (3/15/2007)**	NS	**724**	NA	**724 (3/15/2007)**	NS
	UCD1-006	46.1	NA	46.1 (3/26/2007)	43 (6/15/2006)	**38.8**	NA	**38.8 (3/26/2007)**	NS	**756**	NA	**756 (3/26/2007)**	NS
	UCD1-008	**13.6**	NA	**13.6 (3/20/2007)**	NS	**73.1**	NA	**73.1 (3/20/2007)**	NS	**1110**	NA	**1110 (3/20/2007)**	NS
	UCD1-009	**77.4**	NA	**77.4 (3/22/2007)**	NS	**113**	NA	**113 (3/22/2007)**	NS	**1150**	NA	**1150 (3/22/2007)**	NS
	UCD1-010	20.5	17	47.3 (8/25/1997)	--	60.1	46.4	150 (5/24/1993)	--	819	NA	1550 (11/18/1997)	--
	UCD1-011	36.4	33	36.4 (3/16/2007)	35.1 (2/2/2006)	155	154	450 (5/20/1993)	--	933	NA	9190 (5/21/1991)	--
	UCD1-012	77.8	NA	159 (10/13/2004)	--	113	123	280 (5/24/1993)	--	1180	NA	2451 (5/13/1992)	--
	UCD1-013	9.5	7.4	20.3 (10/12/2004)	--	67.9	62.5	170 (5/20/1993)	--	1010	NA	1200 (8/30/1995)	--
	UCD1-018	3.3	NA	27 (2/14/1996)	--	7.18	NA	50 (8/3/1992)	--	392	NA	2450 (9/7/2000)	--
	UCD1-019	34.6	26	34.6 (3/22/2007)	--	158	207	300 (2/20/1992)	--	999	NA	1150 (5/4/2005)	--
	UCD1-020	18.2	NA	51.3 (11/1/1990)	--	50.7	NA	110 (11/18/1991)	--	560	NA	920 (11/1/1990)	--
	UCD1-021	30.2	27	64 (2/23/1998)	--	77.2	71.8	130 (8/10/1992)	--	823	NA	1090 (2/23/1998)	--
	UCD1-022	6.22	NA	17.7 (5/23/2005)	--	15.1	NA	50 (5/25/1993)	--	520	NA	894 (8/24/1998)	--
	UCD1-023	0.414	NA	12.3 (5/25/1993)	--	6.46	NA	110 (11/18/1992)	--	313	NA	690 (5/24/1995)	--
	UCD1-024	11.5	NA	99.8 (2/23/1998)	--	31.1	NA	90 (8/6/1991)	--	537	NA	1100 (5/24/1995)	--
	UCD1-025	35.8	32	70 (7/6/2004)	--	166	145	392 (2/22/1996)	--	754	NA	910 (2/22/1996)	--
	UCD1-027Z1	9.61	NA	28.6 (8/4/2006)	--	< 1	NA	40.8 (5/22/2006)	--	661	NA	940 (12/5/1995)	--
	UCD1-027Z2	14.6	NA	23.4 (8/4/2006)	--	< 1	NA	4.7 (12/6/1995)	--	671	NA	774 (8/4/2006)	--
	UCD1-027Z3	6.35	NA	8.74 (5/3/2005)	--	< 1	NA	5.1 (2/28/1997)	--	595	NA	680 (11/25/1996)	--
	UCD1-028	55	60	67.2 (8/9/2005)	--	496	513	613 (1/4/2000)	--	1120	NA	1270 (4/7/2003)	--
	UCD1-034	**1.91**	NA	**1.91 (3/19/2007)**	0.953 (5/19/1997)	< 1	NA	7.3 (2/12/1997)	--	318	NA	640 (11/20/1996)	--
	UCD1-049	69.9	NA	75 (10/19/2005)	--	110	NA	144 (10/14/2003)	--	1040	NA	1500 (10/14/2003)	--
	UCD1-050	71.3	60	186 (10/13/2004)	--	89.4	NA	156 (10/14/2003)	--	1210	NA	1990 (10/14/2003)	--
	UCD1-051	55.4	48	159 (10/13/2004)	--	96.4	91	138 (10/14/2003)	--	1080	NA	1760 (10/14/2003)	--
	UCD1-052	53.3	50	57.5 (6/1/2006)	--	**181**	**205**	**205 (9/19/2007)**	**181 (3/16/2007)**	1060	NA	1060 (3/16/2007)	1020 (6/1/2006)
	UCD1-053	20.1	39	39 (9/19/2007)	35.8 (6/12/2006)	407	437	448 (10/28/2005)	--	467	NA	899 (6/2/2006)	--
	UCD1-054	10.3	**21**	**21 (9/20/2007)**	18.8 (6/2/2006)	2.05	NA	13 (6/15/2006)	--	994	NA	1070 (6/2/2006)	--
	UCD1-055	NA	NA	--	--	NA	**29.9**	**29.9 (12/3/2007)**	NS	NA	NA	--	--
	UCD1-058	NA	NA	--	--	NA	**29.8**	**29.8 (12/3/2007)**	NS	NA	NA	--	--
	DDC-1A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-1B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-1C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-2A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-2B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-2C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-3A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-3B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-3C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-4A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-4B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-4C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-5A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-5B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-5C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-6A	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-6B	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	DDC-6C	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--

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		Tritium (pci/L)				C-14 (pci/L)				Chloroform (ug/L)			
HSU	Location	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)
HSU-2	UCD2-007	283	NA	691 (8/4/1992)	--	< 15.5	NA	102 (2/24/1997)	--	< 0.11	NA	1.3 (5/25/2005)	--
	UCD2-014	251	<410	9550 (9/16/1996)	--	15.2	115	2030 (9/16/1996)	--	< 0.11	NA	6 (11/1/1990)	--
	UCD2-015	< 278	NA	5302 (5/13/1992)	--	< 16.3	NA	18.4 (11/2/2000)	--	< 0.11	NA	0.79 (8/23/1995)	--
	UCD2-016	< 257	NA	1200 (11/16/1992)	--	< 14.7	NA	ND	--	< 0.11	NA	3.8 (8/23/1995)	--
	UCD2-017	< 313	NA	270 (8/7/2001)	--	< 14.7	NA	145 (11/29/1993)	--	< 0.11	NA	0.5 (2/28/1994)	--
	UCD2-026	< 278	NA	ND	--	< 15.2	NA	69 (2/13/1997)	--	6.95	NA	68.5 (3/4/1998)	--
	UCD2-029	< 275	NA	357 (7/5/2000)	--	< 15.8	NA	26.3 (3/1/2000)	--	221	56	329 (10/7/1998)	--
	UCD2-030	< 277	NA	261 (9/2/1999)	--	< 15.4	NA	102 (10/13/2003)	--	4.69	8.2	91.6 (7/25/2006)	--
	UCD2-031	< 233	NA	724 (7/5/2000)	--	< 14.2	NA	77.7 (10/13/2003)	--	2.72	1	48 (11/25/1997)	--
	UCD2-032	< 267	NA	216 (8/7/2001)	--	< 18.2	NA	11.7 (3/3/1998)	--	8.31	<1	69 (11/21/1997)	--
	UCD2-035	< 242	NA	1620 (11/20/1996)	--	< 14.7	NA	30 (5/19/2006)	--	< 0.11	NA	3.8 (2/22/1996)	--
	UCD2-036	< 257	NA	ND	--	< 14.6	NA	254 (8/3/1999)	--	< 0.11	NA	0.5 (10/5/1998)	--
	UCD2-037	< 304	NA	197 (10/15/2003)	--	< 14.8	NA	11.5 (7/5/2000)	--	< 0.11	NA	0.3 (11/4/1998)	--
	UCD2-038	< 188	NA	393 (5/19/2006)	--	< 14.7	NA	20.9 (10/18/2004)	--	< 0.11	NA	0.72 (12/5/2001)	--
	UCD2-039	<260	<410	290 (9/1/1999)	--	<17.9	<17.9	74.7 (10/13/2003)	--	0.883	NA	4.2 (8/4/1998)	--
	UCD2-040	< 233	NA	250 (11/25/1997)	--	< 14.2	NA	22.2 (9/1/1999)	--	16	6.6	113 (6/1/1998)	--
	UCD2-045	< 263	NA	394 (2/7/2000)	--	< 18.2	NA	17.9 (2/7/2000)	--	0.721	NA	6.8 (8/13/2002)	--
	UCD2-046	< 267	NA	211 (8/8/2001)	--	< 14.7	NA	14.2 (4/9/2003)	--	0.141	<1	2.2 (4/9/2003)	--
	UCD2-048	< 303	NA	ND	--	< 18.2	NA	ND	--	9.91	13	1380 (2/7/2006)	--
	UCD2-056	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
	UCD2-057	NA	NA	--	--	NA	NA	--	--	NA	NA	--	--
HSU-4	UCD4-041	< 234	NA	ND	--	< 14.2	NA	32.8 (5/12/1999)	--	< 0.11	NA	33.3 (6/1/1998)	--
	UCD4-042	< 265	NA	221 (8/7/2001)	--	< 18.2	NA	44.1 (2/7/2000)	--	2.41	NA	58.9 (3/5/1998)	--
	UCD4-043	< 267	NA	226 (8/7/2001)	--	< 18.2	NA	19.2 (2/7/2000)	--	1.86	NA	35.5 (6/2/1998)	--
	UCD4-044	< 281	NA	201 (8/6/2001)	--	< 16.6	NA	11.1 (11/6/2002)	--	< 0.11	NA	ND	--
	UCD4-047	< 187	NA	287 (7/6/2000)	--	< 15.1	NA	11 (10/15/2003)	--	3.66	NA	5.7 (8/3/2000)	--

New historic high 10% greater that the previous historic high is shown in **bold.**
ND = This well has not historically had a detection over the reporting limit.
NA = Not analyzed for this constitiuent.
NS = This well was not sampled for this constituent prior to 2007.
* Field duplicate collected

Table 12
Analytical Results Summary of Combined Groundwater Monitoring Programs
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Davis, CA

		Nitrates (as N) (mg/L)				Total Chromium (ug/L)				TDS (mg/L)			
HSU	Location	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)	First Half 2007 Conc	Second Half 2007 Conc	Max Conc (date)	Prior Max Conc (date)
HSU-2	UCD2-007	9.42	13	37.4 (5/20/1991)	--	30.6	NA	120 (5/24/1993)	--	444	NA	786 (5/13/1992)	--
	UCD2-014	3.13	2.9	20.3 (8/21/1997)	--	34.8	57.1	110 (5/20/1993)	--	232	NA	936 (5/23/2005)	--
	UCD2-015	0.966	NA	10 (11/2/2000)	--	5.98	NA	70 (11/8/1990)	--	409	NA	631 (5/13/1992)	--
	UCD2-016	8.4	NA	15 (8/30/1994)	--	32.1	NA	150 (11/9/1990)	--	542	NA	700 (5/20/1996)	--
	UCD2-017	2.97	NA	3.89 (5/8/2002)	--	21.3	NA	50 (11/9/1990)	--	428	NA	6730 (8/5/1991)	--
	UCD2-026	4.19	NA	14.7 (5/3/1999)	--	7.24	15	41.7 (5/3/1999)	--	463	NA	639 (9/5/2000)	--
	UCD2-029	9.34	8.7	15.2 (7/5/2000)	--	27.2	37.2	38.3 (8/1/2000)	--	565	NA	639 (10/3/2000)	--
	UCD2-030	3.74	6.3	10.2 (2/5/2001)	--	19.8	25.7	29.1 (4/7/2003)	--	465	NA	554 (5/14/2001)	--
	UCD2-031	5.57	NA	8.31 (4/3/2002)	--	22.9	31.3	31.3 (9/19/2007)	30.5 (11/4/2002)	511	NA	547 (4/3/2002)	--
	UCD2-032	6.12	NA	11.5 (8/27/1997)	--	23.9	NA	58.9 (8/12/2002)	--	484	NA	614 (8/12/2002)	--
	UCD2-035	0.734	NA	18 (9/26/1995)	--	3.54	NA	21.2 (5/4/2000)	--	336	NA	710 (9/11/1996)	--
	UCD2-036	7.54	NA	11 (10/7/1999)	--	25.8	NA	40.1 (10/18/2001)	--	497	NA	609 (9/5/2001)	--
	UCD2-037	1.21	NA	5.17 (4/6/1999)	--	8.14	NA	40.3 (5/15/2001)	--	384	NA	1020 (7/10/2002)	--
	UCD2-038	0.813	NA	9.58 (9/5/2000)	--	2.83	NA	27 (1/5/2000)	--	329	NA	532 (9/5/2000)	--
	UCD2-039	1.7	NA	9.88 (2/5/2001)	--	10.5	NA	30.5 (9/7/2000)	--	429	NA	536 (10/4/2000)	--
	UCD2-040	8.17	NA	10.5 (6/1/1998)	--	43.9	46.2	54 (8/1/2000)	--	520	NA	574 (7/2/2001)	--
	UCD2-045	6.74	NA	10.9 (11/6/2001)	--	38	NA	61.2 (4/9/2003)	--	536	NA	688 (4/9/2003)	--
	UCD2-046	**12.9**	NA	**12.9 (3/19/2007)**	11.6 (5/9/2002)	72	NA	72 (3/19/2007)	67 (11/6/2001)	725	NA	747 (5/9/2002)	--
	UCD2-048	3.85	6.3	6.37 (4/8/2004)	--	10.9	NA	22.7 (4/8/2004)	--	396	NA	480 (10/19/2005)	--
	UCD2-056	NA	NA	--	--	NS	**77.5**	**77.5 (12/3/2007)**	NS	NA	NA	--	--
	UCD2-057	NA	NA	--	--	NS	**46.9**	**46.9 (12/3/2007)**	NS	NA	NA	--	--
HSU-4	UCD4-041	2.6	NA	5.2 (8/27/1998)	--	26.5	NA	26.5 (3/14/2007)	25.2 (5/23/2006)	462	NA	477 (8/27/1998)	--
	UCD4-042	2.59	NA	7.02 (3/5/1998)	--	29	NA	37.6 (5/15/2001)	--	435	NA	530 (5/2/2000)	--
	UCD4-043	2.31	NA	5.31 (6/2/1998)	--	27.3	NA	33.8 (5/12/1999)	--	411	NA	510 (8/10/1999)	--
	UCD4-044	2.4	NA	2.84 (5/26/2006)	--	26.2	NA	31.7 (5/26/2006)	--	437	NA	451 (5/26/2006)	--
	UCD4-047	6.83	NA	9.19 (5/18/2006)	--	35.4	NA	39.9 (8/3/2000)	--	496	NA	574 (5/18/2006)	--

New historic high 10% greater that the previc
ND = This well has not historically had a dete
NA = Not analyzed for this constitiuent.
NS = This well was not sampled for this const
* Field duplicate collected

Table 13
IRA Chloroform Mass Removal
2007 Comprehensive Annual Water Monitoring Report
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Davis, CA

Month	Average Chloroform Concentration (µg/L)	Average Chloroform Concentration (kg/L)	Volume of Extracted Groundwater (gal)	Volume of Extracted Groundwater (L)	Mass of Chloroform Removed* (kg)	Mass of Chloroform Removed* (lbs)
Apr-98	29.9	2.99E-08	375,250	1,420,321	0.04	0.09
May-98	35.2	3.52E-08	1,531,590	5,797,068	0.20	0.45
Jun-98	37.3	3.73E-08	3,865,155	14,629,612	0.55	1.20
Jul-98	68.0	6.80E-08	5,968,366	22,590,265	1.54	3.39
Aug-98	80.0	8.00E-08	7,564,438	28,631,398	2.29	5.05
Sep-98	52.0	5.20E-08	8,221,465	31,118,245	1.62	3.57
Oct-98	58.0	5.80E-08	4,261,762	16,130,769	0.94	2.06
Nov-98	34.0	3.40E-08	4,786,293	18,116,119	0.62	1.36
Dec-98	25.3	2.53E-08	5,397,711	20,430,336	0.52	1.14
1998			***41,972,030***	***158,864,134***	***8.31***	***18.31***
Jan-99	23.1	2.31E-08	4,942,820	18,708,574	0.43	0.95
Feb-99	19.7	1.97E-08	4,838,400	18,313,344	0.36	0.80
Mar-99	14.5	1.45E-08	4,645,800	17,584,353	0.25	0.56
Apr-99	15.1	1.51E-08	5,010,000	18,962,850	0.29	0.63
May-99	23.6	2.36E-08	5,683,950	21,513,751	0.51	1.12
Jun-99	59.5	5.95E-08	6,480,000	24,526,800	1.46	3.22
Jul-99	106	1.06E-07	7,073,410	26,772,857	2.84	6.26
Aug-99	61.7	6.17E-08	7,588,800	28,723,608	1.77	3.91
Sep-99	44.1	4.41E-08	4,976,641	18,836,586	0.83	1.83
Oct-99	35.6	3.56E-08	6,453,540	24,426,649	0.87	1.92
Nov-99	2.8	2.80E-09	7,252,200	27,449,577	0.08	0.17
Dec-99	20.1	2.01E-08	5,730,825	21,691,173	0.44	0.96
1999			***70,676,386***	***267,510,121***	***10.12***	***22.32***
Jan-00	23.4	2.34E-08	5,200,800	19,685,028	0.46	1.02
Feb-00	23.8	2.38E-08	4,176,000	15,806,160	0.38	0.83
Mar-00	23.2	2.32E-08	2,394,000	9,061,290	0.21	0.46
Apr-00	29.2	2.92E-08	4,314,000	16,328,490	0.48	1.05
May-00	47.4	4.74E-08	4,741,200	17,945,442	0.85	1.88
Jun-00	67.5	6.75E-08	6,448,200	24,406,437	1.65	3.63
Jul-00	82.2	8.22E-08	7,197,300	27,241,781	2.24	4.94
Aug-00	70.9	7.09E-08	7,029,000	26,604,765	1.89	4.16
Sep-00	54.1	5.41E-08	5,406,000	20,461,710	1.11	2.44
Oct-00	53.7	5.37E-08	6,095,010	23,069,613	1.24	2.73
Nov-00	52.4	5.24E-08	2,226,850	8,428,627	0.44	0.97
Dec-00	38.4	3.84E-08	1,602,900	6,066,977	0.23	0.51
2000			***56,831,260***	***215,106,319***	***11.17***	***24.62***
Jan-01	50.2**	5.02E-08	449,313	1,700,650	0.09	0.19
Feb-01	50.2**	5.02E-08	162,940	616,728	0.03	0.07
Mar-01	50.2**	5.02E-08	62,700	237,320	0.01	0.03
Apr-01	50.2**	5.02E-08	263,634	997,855	0.05	0.11
May-01	50.2**	5.02E-08	797,451	3,018,352	0.15	0.33
Jun-01	50.2**	5.02E-08	709,686	2,686,162	0.13	0.30
Jul-01	50.2**	5.02E-08	40,060	151,627	0.01	0.02
Aug-01	62.0	6.20E-08	2,665,183	10,087,718	0.63	1.38
Sep-01	51.8	5.18E-08	895,401	3,389,093	0.18	0.39
Oct-01	41.6	4.16E-08	3,441,750	13,027,024	0.54	1.19
Nov-01	43.0	4.30E-08	2,750,430	10,410,378	0.45	0.99
Dec-01	44.1***	4.41E-08	294,673	1,115,337	0.05	0.11
2001			***12,533,221***	***47,438,241***	***2.31***	***5.10***

Table 13
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Month	Average Chloroform Concentration (µg/L)	Average Chloroform Concentration (kg/L)	Volume of Extracted Groundwater (gal)	Volume of Extracted Groundwater (L)	Mass of Chloroform Removed* (kg)	Mass of Chloroform Removed* (lbs)
Jan-02	45.1	4.51E-08	544,724	2,061,780	0.09	0.20
Feb-02	48.0	4.80E-08	2,516,876	9,526,376	0.46	1.01
Mar-02	29.6	2.96E-08	2,925,660	11,073,623	0.33	0.72
Apr-02	29.9	2.99E-08	3,319,827	12,565,545	0.38	0.83
May-02	41.9	4.19E-08	3,067,445	11,610,279	0.49	1.07
Jun-02	50.4****	5.04E-08	2,809,088	10,632,398	0.54	1.18
Jul-02	37.3****	3.73E-08	3,320,687	12,568,800	0.47	1.03
Aug-02	36.8	3.68E-08	3,145,128	11,904,309	0.44	0.97
Sep-02	32.8	3.28E-08	2,983,863	11,293,921	0.37	0.82
Oct-02	30.0	3.00E-08	2,432,162	9,205,733	0.28	0.61
Nov-02	44.9	4.49E-08	1,478,467	5,595,998	0.25	0.55
Dec-02	31.5	3.15E-08	2,309,269	8,740,583	0.28	0.61
2002			***30,853,196***	***116,779,347***	***4.36***	***9.60***
Jan-03	29.8	2.98E-08	1,249,925	4,730,966	0.14	0.31
Feb-03	34.1	3.41E-08	1,830,956	6,930,168	0.24	0.52
Mar-03	32.0	3.20E-08	961,671	3,639,925	0.12	0.26
Apr-03	28.5	2.85E-08	2,592,823	9,813,835	0.28	0.62
May-03	37.8	3.78E-08	1,507,418	5,705,577	0.22	0.48
Jun-03	37.8	3.78E-08	2,873,040	10,874,456	0.41	0.91
Jul-03	46.4	4.64E-08	3,935,911	14,897,423	0.69	1.52
Aug-03	59.5	5.95E-08	4,727,962	17,895,336	1.06	2.35
Sep-03	34.1	3.41E-08	1,173,818	4,442,901	0.15	0.33
Oct-03	37.1	3.71E-08	2,558,755	9,684,888	0.36	0.79
Nov-03	42.6	4.26E-08	3,008,790	11,388,270	0.49	1.07
Dec-03	32.3	3.23E-08	1,396,012	5,283,905	0.17	0.38
2003			***27,817,081***	***105,287,652***	***4.32***	***9.53***
Jan-04	31.3	3.13E-08	2,014,641	7,625,416	0.24	0.53
Feb-04	29.3	2.93E-08	2,174,737	8,231,380	0.24	0.53
Mar-04	17.8	1.78E-08	1,784,979	6,756,146	0.12	0.27
Apr-04	21.7	2.17E-08	2,076,523	7,859,640	0.17	0.38
May-04	54.9	5.49E-08	2,125,245	8,044,052	0.44	0.97
Jun-04	86.6	8.66E-08	1,624,490	6,148,695	0.53	1.17
Jul-04	83.4	8.34E-08	1,761,489	6,667,236	0.56	1.23
Aug-04	67.3	6.73E-08	2,102,050	7,956,259	0.54	1.18
Sep-04	69.0	6.90E-08	2,052,145	7,767,369	0.54	1.18
Oct-04	76.9	7.69E-08	1,507,468	5,705,766	0.44	0.97
Nov-04	47.4	4.74E-08	1,708,687	6,467,380	0.31	0.68
Dec-04	50.9	5.09E-08	976,880	3,697,491	0.19	0.41
2004			***21,909,334***	***82,926,829***	***4.31***	***9.49***
Jan-05	NC	NC	0	0	0.00	0.00
Feb-05	NC	NC	0	0	0.00	0.00
Mar-05	NC	NC	0	0	0.00	0.00
Apr-05	NC	NC	0	0	0.00	0.00
May-05	37.29****	3.72E-08	1,602,719	6,066,291	0.23	0.50
Jun-05	41.87****	4.18E-08	2,368,549	8,964,958	0.37	0.83
Jul-05	58.69****	5.86E-08	2,779,372	10,519,923	0.62	1.36
Aug-05	62.69****	6.26E-08	2,727,404	10,323,224	0.65	1.42
Sep-05	49.7	4.97E-08	2,392,174	9,054,379	0.45	0.99
Oct-05	46.5	4.65E-08	3,157,138	11,949,767	0.56	1.23
Nov-05	33.7	3.37E-08	1,437,031	5,439,162	0.18	0.40
Dec-05	39.2	3.92E-08	1,720,866	6,513,478	0.26	0.56
2005			***18,185,253***	***68,831,183***	***3.31***	***7.29***

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Davis, CA

Month	Average Chloroform Concentration (µg/L)	Average Chloroform Concentration (kg/L)	Volume of Extracted Groundwater (gal)	Volume of Extracted Groundwater (L)	Mass of Chloroform Removed* (kg)	Mass of Chloroform Removed* (lbs)
Jan-06	29.8	2.98E-08	2,433,465	9,210,665	0.27	0.61
Feb-06	25.4	2.54E-08	1,717,473	6,500,635	0.17	0.36
Mar-06	13.2	1.32E-08	2,210,609	8,367,155	0.11	0.24
Apr-06	10.5	1.05E-08	2,721,957	10,302,607	0.11	0.24
May-06	NC	NC	2,750,319	10,409,957	NC	NC
Jun-06	38.5****	3.85E-08	3,603,153	13,637,934	0.53	1.16
Jul-06	166.02****	1.66E-07	2,672,985	10,117,248	1.68	3.70
Aug-06	108.23****	1.08E-07	3,129,613	11,845,585	1.28	2.82
Sep-06	73.8	7.38E-08	2,538,446	9,608,018	0.71	1.56
Oct-06	63.29****	6.32E-08	1,978,915	7,490,193	0.47	1.04
Nov-06	43.28****	4.32E-08	2,976,134	11,264,667	0.49	1.07
Dec-06	56.0	5.60E-08	1,268,125	4,799,853	0.27	0.59
2006			*30,001,194*	*113,554,519*	*6.08*	*13.40*
Jan-07	44.0	4.40E-08	1,569,746	5,941,489	0.26	0.58
Feb-07	35.5	3.55E-08	2,197,095	8,316,005	0.30	0.65
Mar-07	46.6	4.66E-08	1,153,714	4,366,807	0.20	0.45
8-May-07	69.8	6.98E-08	1,769,871	6,698,962	0.47	1.03
30-May-07	48.3	4.83E-08	2,702,923	10,230,564	0.49	1.09
Jun-07	68.3	6.83E-08	2,554,751	9,669,733	0.66	1.46
Jul-07	75.4	7.54E-08	1,590,138	6,018,673	0.45	1.00
Aug-07	40.7	4.07E-08	3,129,613	11,845,585	0.48	1.06
Sep-07	44.0	4.40E-08	2,538,446	9,608,018	0.42	0.93
Oct-07	20.0	2.00E-08	1,978,915	7,490,193	0.15	0.33
Nov-07	38.0	3.80E-08	2,976,134	11,264,667	0.43	0.94
Dec-07	35.0	3.50E-08	1,382,999	5,234,651	0.18	0.40
2007			*25,544,345*	*96,685,347*	*4.50*	*9.93*
		GRAND TOTAL	**336,323,300**	**1,272,983,692**	**58.78**	**129.60**

Notes:
Annual Averages given in *Italics*
Totals given in **Bold**
* Mass Removed = Average Concentration x Volume of Extracted Groundwate
** Average Concentration calculated from Dec-00 and Aug-01
*** Average Concentration calculated from Nov-01 and Jan-02
**** Concentration represents the difference between the influent and effluent concentrations
µg/L = micrograms per liter
kg/L = kilograms per liter
gal = gallons
L = liters
kg = kilograms
lbs = pounds
NC = Not Collected

Table 14
Estimated Chloroform Mass Removal
Expanded DDC Pilot Test
2007 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration, Davis, CA

Date	DDC Well	C-Well Chloroform Concentration (µg/L)	B-Well Chloroform Concentration (µg/L)	Chloroform Concentration Removed (µg/L)	Number of Days Operating[1]	Volume of Water Pumped Between Zones (Liters)	Mass of Chloroform Removed (µg)	Mass of Chloroform Removed (lbs)
13-Dec-02	DDC-1	64.8	26.2	38.6	8	87,206	3,366,167	0.01
17-Dec-02		44.5	30.3	14.2	4	43,603	619,165	0.00
23-Dec-02		54.2	35	19.2	6	65,405	1,255,772	0.00
29-Jan-03		161	93.1	67.9	37	403,330	27,386,080	0.06
25-Feb-03		541	109	432	27	294,322	127,146,931	0.28
25-Mar-03		1950	111	1839	28	305,222	561,303,994	1.24
18-Jun-03		7400	125	7275	85	926,568	6,740,782,200	14.86
13-Aug-03		5190	15.3	5174.7	56	610,445	3,158,868,707	6.96
14-Oct-03		1730	16.6	1713.4	62	675,850	1,158,000,705	2.55
14-Jan-04		3030	75.8	2954.2	92	1,002,874	2,962,689,189	6.53
							Total DDC-1	**32.50**
13-Dec-02	DDC-2	55	36.9	18.1	8	87,206	1,578,436	0.00
17-Dec-02		47.3	33.7	13.6	4	43,603	593,004	0.00
23-Dec-02		36.6	32.8	3.8	6	65,405	248,538	0.00
29-Jan-03		78.3	56	22.3	37	403,330	8,994,250	0.02
25-Feb-03		134	76.9	57.1	27	294,322	16,805,763	0.04
25-Mar-03		236	165	71	28	305,222	21,670,790	0.05
18-Jun-03		66.7	46.6	20.1	85	926,568	18,624,017	0.04
14-Jan-04		98.8	55.1	43.7	49	534,139	23,341,883	0.05
							Total DDC-2	**0.20**
13-Dec-02	DDC-3	54	36.6	17.4	8	87,206	1,517,391	0.00
17-Dec-02		48.9	36.8	12.1	4	43,603	527,599	0.00
23-Dec-02		53.1	12.4	40.7	6	65,405	2,661,975	0.01
29-Jan-03		53.4	31.9	21.5	37	403,330	8,671,586	0.02
25-Feb-03		39.3	26.6	12.7	27	294,322	3,737,884	0.01
25-Mar-03		124	92.1	31.9	28	305,222	9,736,595	0.02
18-Jun-03		156	115	41	85	926,568	37,989,288	0.08
14-Jan-04		201	144	57	49	534,139	30,445,934	0.07
							Total DDC-3	**0.21**
13-Dec-02	DDC-4	146	137	9	8	87,206	784,858	0.00
17-Dec-02		141	85.4	55.6	4	43,603	2,424,338	0.01
23-Dec-02		91.1	90.9	0.2	6	65,405	13,081	0.00
29-Jan-03		106	62.7	43.3	37	403,330	17,464,172	0.04
25-Feb-03		284	177	107	27	294,322	31,492,411	0.07
25-Mar-03		566	327	239	28	305,222	72,948,154	0.16
18-Jun-03		422	331	91	85	926,568	84,317,688	0.19
14-Jan-04		175	125	50	49	534,139	26,706,960	0.06
							Total DDC-4	**0.52**
13-Dec-02	DDC-5	50.7	12.5	38.2	8	87,206	3,331,284	0.01
17-Dec-02		64	16.5	47.5	4	43,603	2,071,152	0.00
23-Dec-02		161	26	135	6	65,405	8,829,648	0.02
29-Jan-03		58.7	5.3	53.4	37	403,330	21,537,801	0.05
25-Feb-03		450	0.5	449.5	27	294,322	132,297,559	0.29
25-Mar-03		1160	2.6	1157.4	28	305,222	353,264,406	0.78
18-Jun-03		515	2.6	512.4	85	926,568	474,773,443	1.05
14-Jan-04		47	3.8	43.2	49	534,139	23,074,813	0.05
							Total DDC-5	**2.25**
13-Dec-02	DDC-6	108	29.3	78.7	8	87,206	6,863,144	0.02
17-Dec-02		69.4	49.6	19.8	4	43,603	863,343	0.00
23-Dec-02		116	67.4	48.6	6	65,405	3,178,673	0.01
29-Jan-03		148	42.1	105.9	37	403,330	42,712,605	0.09
25-Feb-03		155	66.3	88.7	27	294,322	26,106,326	0.06
25-Mar-03		218	196	22	28	305,222	6,714,893	0.01
18-Jun-03		90.7	26.9	63.8	85	926,568	59,115,038	0.13
14-Jan-04		113	120	-	49	-	-	0.00
				%DDC Uptime for 2003	***61%***		**Total DDC-6**	**0.32**
							Total Estimated Mass Removed in the Expanded Phase DDC System in 2003:	**36.00**

Table 14
Estimated Chloroform Mass Removal
Expanded DDC Pilot Test
2007 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration, Davis, CA

Date	DDC Well	C-Well Chloroform Concentration (µg/L)	B-Well Chloroform Concentration (µg/L)	Chloroform Concentration Removed (µg/L)	Number of Days Operating[1]	Volume of Water Pumped Between Zones (Liters)	Mass of Chloroform Removed (µg)	Mass of Chloroform Removed (lbs)
14-Jan-04	DDC-1	3030	75.8	2954.2	13	385,452	38,000	0.0001
7-Apr-04		5460	150	5310	84	2,490,615	13,225,164,503	29.156
8-Jul-04		4340	150	4190	92	2,727,816	11,429,549,844	25.197
12-Oct-04		4170	22.6	4147	96	3,155,128	13,085,576,009	28.848
							Total DDC-1:	**83.202**
14-Jan-04	DDC-2	98.8	55.1	43.7	13	-	-	0.000
7-Apr-04		81.2	49.3	31.9	84	-	-	0.000
8-Jul-04		39.8	22.4	17.4	92	-	-	0.000
12-Oct-04		56.2	22.4	33.8	96	1,758,081	59,423,139	0.131
							Total DDC-2:	**0.131**
14-Jan-04	DDC-3	201	144	57	13	209,023	11,914,302	0.026
7-Apr-04		463	383	80	84	1,350,609	108,048,730	0.238
8-Jul-04		122	86.1	35.9	92	1,479,239	53,104,664	0.117
12-Oct-04		148	125	23	96	1,004,618	23,106,208	0.051
							Total DDC-3:	**0.432**
14-Jan-04	DDC-4	175	125	50	13	140,293	7,014,665	0.015
7-Apr-04		415	545	0	84	906,511	-	0.000
8-Jul-04		151	80.3	70.7	92	992,845	70,194,132	0.155
12-Oct-04		184	167	17	96	1,114,498	18,946,462	0.042
							Total DDC-4:	**0.212**
14-Jan-04	DDC-5	47	3.8	43.2	13	533,540	23,048,913	0.051
7-Apr-04		878	6.3	871.7	84	3,447,487	3,005,174,425	6.625
8-Jul-04		1740	0.9	1739.1	92	3,775,819	6,566,527,004	14.476
12-Oct-04		2830	1.35	2828.65	96	6,671,290	18,870,743,327	41.602
							Total DDC-5:	**62.755**
14-Jan-04	DDC-6	113	120	0	13	176,429	-	0.000
7-Apr-04		136	163	0	84	1,140,006	-	0.000
8-Jul-04		57.7	19.4	38.3	92	1,248,578	47,820,523	0.105
12-Oct-04		59.2	28.4	30.8	96	4,018,471	123,768,904	0.273
			%DDC Uptime for 2004		***78%***		**Total DDC-5**	**0.378**
				Total Estimated Mass Removed in the Expanded Phase DDC System in 2004:				**147.1**
20-Jan-05	DDC-1	4580	49.7	4530.3	62	-	-	0.00
27-Apr-05		5350	66.9	5283.1	50	886,194	4,681,852,377	10.32
10-Aug-05		5320	28.1	5291.9	40	-	-	0.00
18-Oct-05		4600	3560	1040.0	58	1,897,629	1,973,534,609	4.35
							Total DDC-1:	**14.67**
19-Jan-05	DDC-2	152	42.1	109.9	62	-	-	0.00
27-Apr-05		89.6	50.4	39.2	50	-	-	0.00
10-Aug-05		63.5	50.4	13.1	40	-	-	0.00
18-Oct-05		141	47.8	93.2	58	35,023	3,264,177	0.01
							Total DDC-2:	**0.01**
20-Jan-05	DDC-3	184	204	0.0	62	40,496	-	0.00
27-Apr-05		176	140	36.0	50	-	-	0.00
10-Aug-05		222	39.6	182.4	40	-	-	0.00
18-Oct-05		57	29.4	27.6	58	1,235,369	34,096,198	0.08
							Total DDC-3:	**0.08**
19-Jan-05	DDC-4	164	93	71.0	62	-	-	0.00
27-Apr-05		253	177	76.0	50	687,752	52,269,145	0.00
10-Aug-05		407	91.1	315.9	40	-	-	0.00
18-Oct-05		296	192	104.0	58	1,057,069	109,935,149	0.24
							Total DDC-4:	**0.24**
19-Jan-05	DDC-5	748	1.62	746.4	62	2,338,671	1,745,537,454	3.85
27-Apr-05		1020	6.17	1013.8	50	916,096	928,766,032	2.05
10-Aug-05		2900	8.82	2891.2	40	-	-	0.00
18-Oct-05		2310	2.93	2307.1	58	1,365,911	3,151,252,563	6.95
							Total DDC-5:	**12.84**
19-Jan-05	DDC-6	56.9	25.1	31.8	62	2,291,425	72,867,327	0.16
27-Apr-05		43.9	32.7	11.2	50	1,565,791	17,536,858	0.04
10-Aug-05		22.9	9.97	12.9	40	-	-	0.00
18-Oct-05		32.8	19.1	13.7	58	1,270,393	17,404,382	0.04
			%DDC Uptime for 2005		***59%***		**Total DDC-6**	**0.24**
				Total Estimated Mass Removed in the Expanded Phase DDC System in 2005:				**28.1**

Table 14
Estimated Chloroform Mass Removal
Expanded DDC Pilot Test
2007 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration, Davis, CA

Date	DDC Well	C-Well Chloroform Concentration (µg/L)	B-Well Chloroform Concentration (µg/L)	Chloroform Concentration Removed (µg/L)	Number of Days Operating[1]	Volume of Water Pumped Between Zones (Liters)	Mass of Chloroform Removed (µg)	Mass of Chloroform Removed (lbs)
9-Feb-06	DDC-1	834	23.6	810.4	84	1,089,644	883,047,472	1.95
11-May-06		1910	49.1	1860.9	58	752,373	1,400,091,318	3.09
31-Aug-06		2900	43.2	2856.8	84	1,089,644	3,112,894,888	6.86
							Total DDC-1:	**11.90**
8-Feb-06	DDC-2	90.9	76.9	14.0	84	50,362	705,064	0.00
9-May-06		220	89.3	130.7	58	34,774	4,544,903	0.01
31-Aug-06		259	26	233.0	84	50,362	11,734,275	0.03
							Total DDC-2:	**0.04**
9-Feb-06	DDC-3	130	51	79.0	84	572,292	45,211,068	0.10
11-May-06		136	86.1	49.9	58	395,154	19,718,185	0.04
31-Aug-06		228	107	121.0	84	572,292	69,247,332	0.15
							Total DDC-3:	**0.30**
8-Feb-06	DDC-4	266	158	108.0	84	721,851	77,959,905	0.00
9-May-06		386	252	134.0	58	498,421	66,788,402	0.15
5-Sep-06		289	183	106.0	84	721,851	76,516,203	0.17
							Total DDC-4:	**0.32**
8-Feb-06	DDC-5	656	0.856	655.1	84	2,226,597	1,458,741,932	3.22
9-May-06		962	6.79	955.2	58	1,537,412	1,468,551,790	3.24
5-Sep-06		2100	1.05	2099.0	84	2,226,597	4,673,516,630	10.30
							Total DDC-5:	**16.76**
8-Feb-06	DDC-6	44.4	29.3	15.1	84	2,524,189	38,115,258	0.08
9-May-06		37.4	36.8	0.6	58	1,742,893	1,045,736	0.00
5-Sep-06		75.9	83.7	0.0	84	2,524,189	-	0.00
			%DDC Uptime for 2006:		***71%***		**Total DDC-6:**	**0.09**
				Total Estimated Mass Removed in the Expanded Phase DDC System in 2006:				**29.4**
28-Mar-07	DDC-1	4310	32.7	4277.3	196	2,670,696	11,423,368,001	25.18
24-Sep-07		290	6.2	283.8	180	2,403,626	682,149,172	1.50
							Total DDC-1:	**26.69**
23-Mar-07	DDC-2[2]	311	87	224.0	196	320,484	71,788,308	0.16
24-Sep-07		230	87	143.0	185	40,333	5,767,613	0.01
							Total DDC-2:	**0.17**
23-Mar-07	DDC-3	99.5	68.1	31.4	196	2,350,212	73,796,672	0.16
24-Sep-07		18	13	5.0	185	564,661	2,823,307	0.01
							Total DDC-3:	**0.17**
28-Mar-07	DDC-4	122	82.8	39.2	196	2,563,868	100,503,632	0.22
24-Sep-07		57	43	14.0	180	1,265,583	17,718,160	0.04
							Total DDC-4:	**0.26**
28-Mar-07	DDC-5	1370	22.6	1347.4	196	6,409,670	8,636,389,897	19.04
24-Sep-07		72	1	71.0	180	4,581,606	325,294,043	0.72
							Total DDC-5:	**19.76**
28-Mar-07	DDC-6	87.1	31.8	55.3	196	4,807,253	265,841,080	0.59
24-Sep-07		18	14	4	180	1,491,229	5,964,918	0.01
							Total DDC-6:	**0.60**
			%DDC Uptime for 2007:		***97%***			
				Total Estimated Mass Removed in the Expanded Phase DDC System in 2007:				**47.6**
				Estimated Total of Cumulative Mass Removed by the Expanded DDC System:				***288.2***

Notes:
[1]Days operating reflects number of days that the system was running during the period in which the sample was taken.
[2]DDC-2B was dry during the 9/17/07 sampling event; therefore, the chloroform results from 3/23/07 were used.
µg/L = micrograms per liter
lbs = pounds

Table 16
Approved Analytical Parameters and Methods
2008 Stormwater Monitoring Program
2007 Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

SAMPLE PARAMETERS		
Constituent	Units	Method(s)
Field Parameters		
Field		
pH	pH units	Field, SOP
Electrical Conductivity	µmhos/cm	Field, SOP
Temperature	°C	Field, SOP
Laboratory Parameters		
Metals		
Iron	µg/L	EPA SW6020
Low Level Mercury	ng/L	EPA SW1631
General Chemicals		
Hardness, as $CaCO_3$	mg/L	EPA 130.2
Total Suspended Solids	mg/L	EPA 415.2
Total Organic Carbon	mg/L	EPA 9060M
Oil and Grease	mg/L	EPA 9070

Table 15
2008 Combined IRA Groundwater Treatment System, DDC Groundwater Treatment System, and RI Groundwater Monitoring
2007 Comprehensive Annual Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

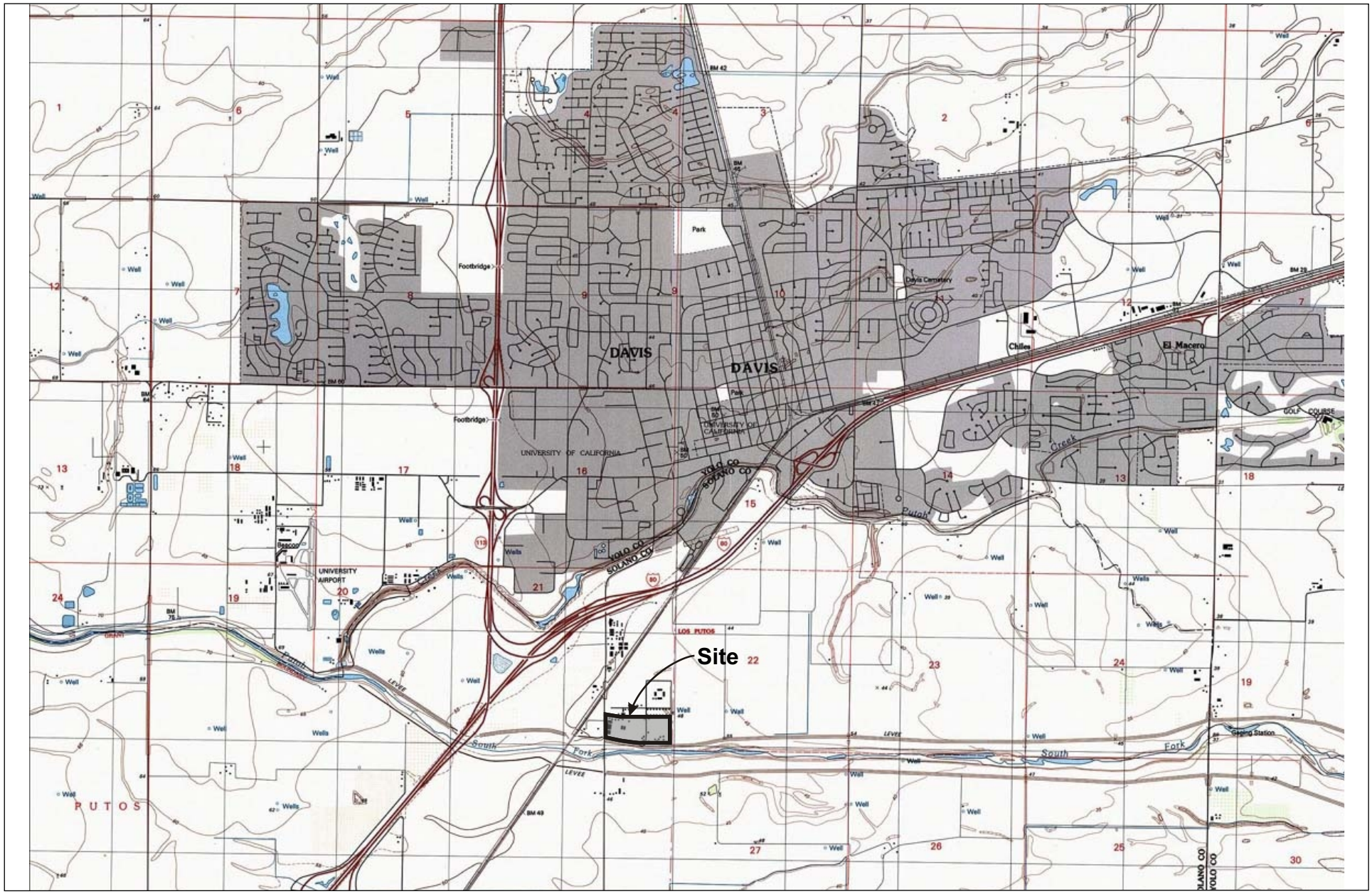
					Radiological Analytes		Chemical Analytes									
HSU	Program	Wells	Number of Wells	Groundwater Level	Tritium	C-14	VOC	Nitrates (as N)	Total Chromium	Metals	TOC	TDS	Alkalinity	Anions	Cations	Electrical Conductivity (EC)
HSU-1	RI/FS, IRA	UCD1-008	1	Q	W Su	--	--	--	--	--	--	--	--	--	--	W Su
	RI/FS, IRA, LTPS	UCD1-010	1	Q	--	--	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA, LTPS	UCD1-011	1	Q	W Su	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA, DDC	UCD1-012	1	Q	--	--	W Su	--	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-013	1	Q	W Su	W Su	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-019	1	Q	--	--	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-021	1	Q	--	--	W	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-024	1	Q	--	--	W	W Su	--	--	--	--	--	--	--	W Su
	RI/FS, IRA, LTPS	UCD1-025	1	Q	--	--	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA, LTPS	UCD1-028	1	Q	--	--	--	W Su	W Su	--	--	--	--	--	--	W Su
	DDC	UCD1-049	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	UCD1-050	1	Q	--	W Su	W Su	W Su	--	--	--	--	--	--	--	W Su
	DDC	UCD1-051	1	Q	--	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-052	1	Q	--	--	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-053	1	Q	--	--	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-054	1	Q	--	--	--	W Su	--	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-055	1	Q	W Su	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD1-058	1	Q	W Su	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	DDC	DDC-1-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	DDC-2-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	DDC-3-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	DDC-4-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	DDC-5-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	DDC-6-A, B, and C	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
HSU-2	RI/FS, IRA	UCD2-007	1	Q	--	--	--	W Su	--	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-014	1	Q	W Su	W Su	--	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-026	1	Q	--	--	--	--	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-029	1	Q	--	--	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-030	1	Q	--	--	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-031	1	Q	--	--	W Su	--	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-032	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-039	1	Q	W Su	W Su	--	--	--	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-040	1	Q	--	--	W Su	--	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-046	1	Q	--	--	W Su	--	--	--	--	--	--	--	--	W Su
	DDC	UCD2-048	1	Q	--	--	W Su	W Su	--	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-056	1	Q	W Su	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	RI/FS, IRA	UCD2-057	1	Q	W Su	W Su	W Su	W Su	W Su	--	--	--	--	--	--	W Su
	Treatment System	Influent	1	(EW2-01) Q	M	M	M	--	--	--	M	--	--	--	--	--
		Effluent	1	(IW2-01) Q	--	--	M	M	M	M	--	M	M	M	M	--

Notes: *39 Wells*

1. All Site wells will be sampled every two years for all six target constituents.
2. Water levels will be measured quarterly in all Site wells.
3. If the IRA Groundwater Treatment System is shut down for a significant amount of time, groundwater monitoring well UCD2-30 and UCD2-40 will be sampled for VOCs on a monthly basis until the IRA System is back online.
4. If the Expanded DDC Pilot Test System is shut down for a significant amount of time, groundwater monitoring well UCD2-48 will be sampled for VOCs on a monthly basis.
5. If significant increases of target constituents are noted in the semi-annual results, quarterly monitoring will be reinstated for those constituents.
6. Significant increases in groundwater monitoring wells UCD2-30 or UCD2-40 specifically will result in a more frequent sampling schedule of those wells.
7. If the reported chloroform concentration in UCD1-21 and UCD1-24 is within historical limits, then the well(s) will be placed back into the two-year sampling program for chloroform.

W = First half semi-annual sampling event is conducted during winter quarter.
Su = Second Half semi-annual sampling event is conducted during summer quarter.
Q = Measured Quarterly
M = Measured Monthly

FIGURES



NORTH

0 2000 4000

Scale in Feet

Source: TOPO! 2001, National Geographic

SITE VICINITY MAP

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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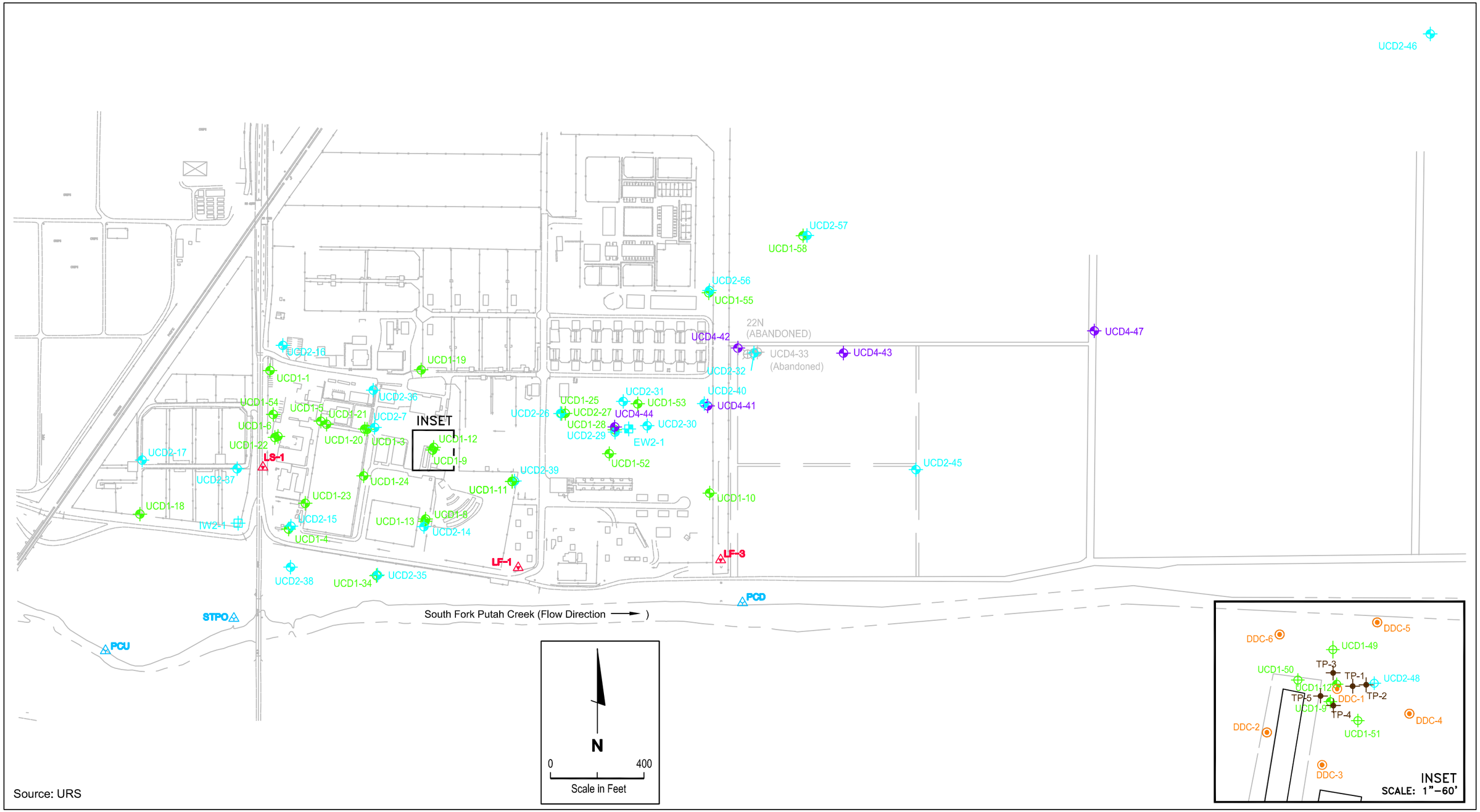
P:\31000\131261 - LEHR\2007 Annual report\07 annual figures 1-28-08 Ann07-Fig1-SiteVic.cdr

FIGURE 1



Source: URS

EXPANDED DDC SYSTEM

EXPLANATION

- UCD1-11 HSU-1 Monitoring Well
- UCD2-17 HSU-2 Monitoring Well
- EW2-1 HSU-2 Extraction Well
- IW2-1 HSU-2 Injection Well
- UCD4-33 HSU-4 Monitoring Well
- 22N Former Irrigation Well
- STPO Surface Water Sample Location
- LS-1 Stormwater Sample Location
- DDC-1 DDC Well Location
- TP-1 Nested Piezometer Location

SITE AND WELL LOCATION MAP

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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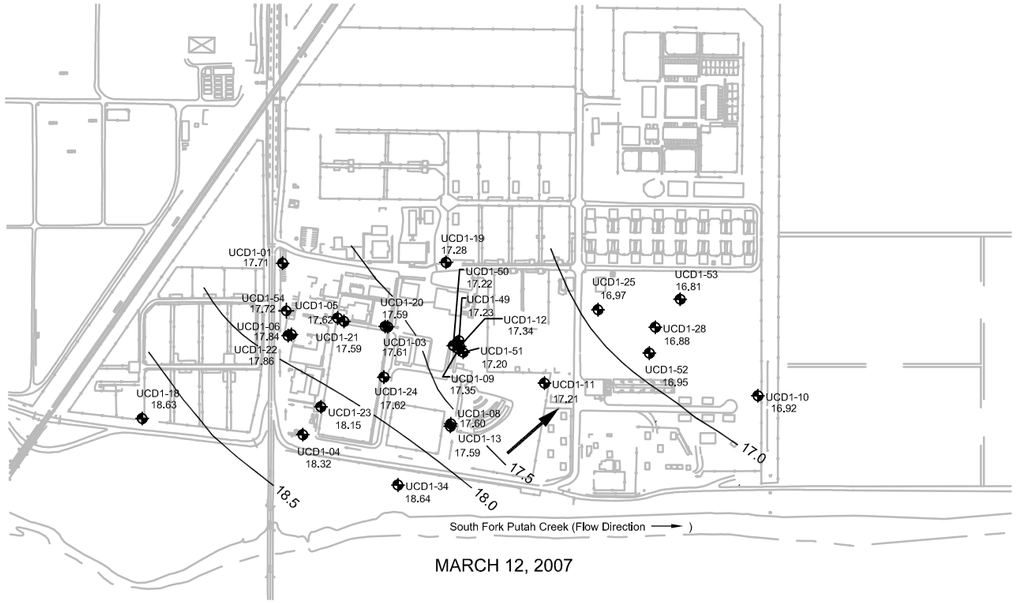
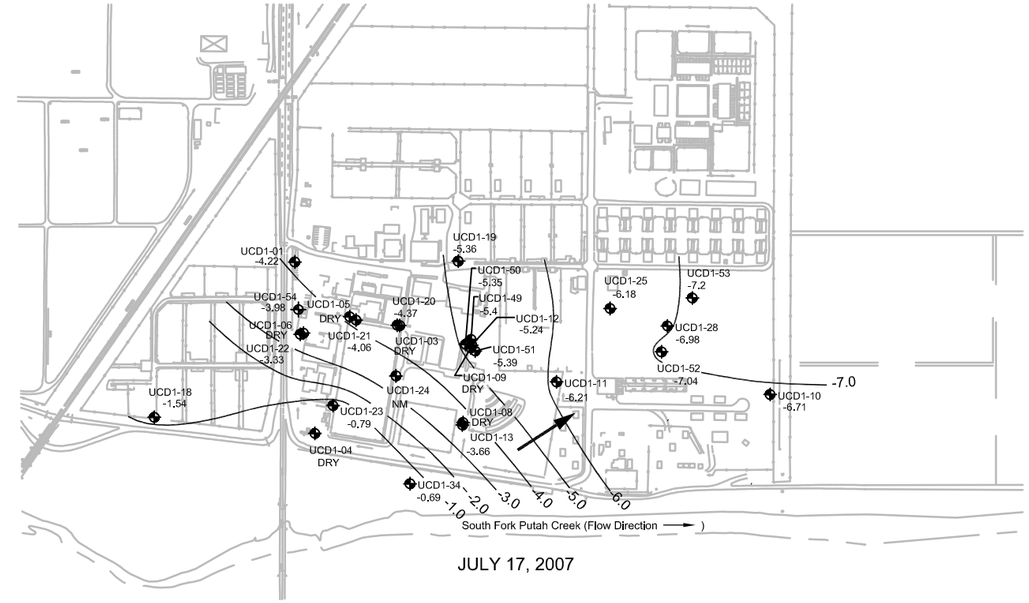
Davis, California

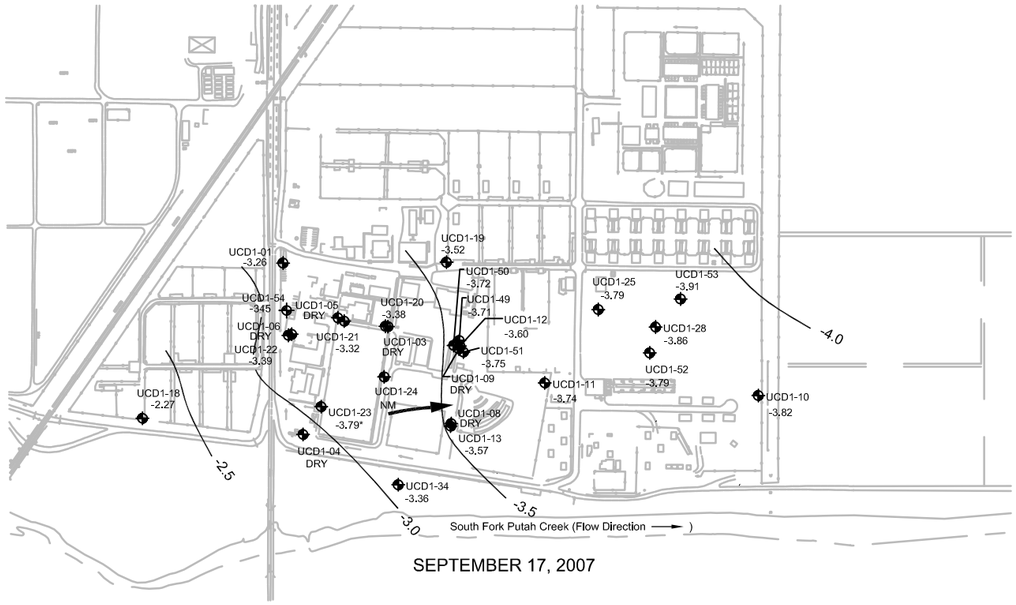
FIGURE 2



MARCH 12, 2007



JULY 17, 2007



SEPTEMBER 17, 2007

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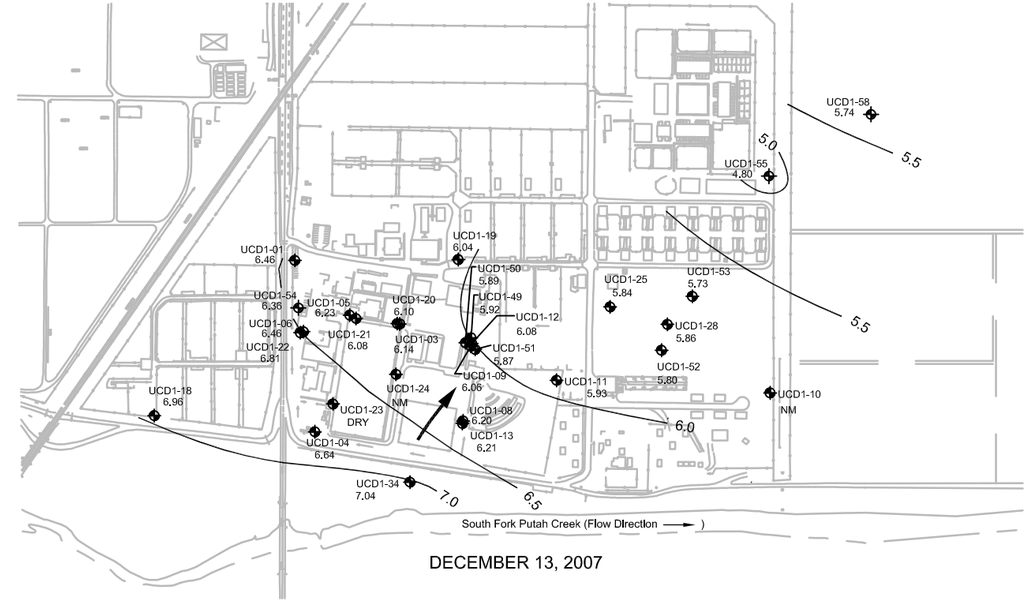


DECEMBER 13, 2007

EXPLANATION

UCD1-11 HSU-1 Monitoring Well

10.55 Groundwater Elevation Above Mean Sea Level

Groundwater Contour Line, Contour Interval = 0.5

Approximate Groundwater Flow Direction

0 300 600

Scale in Feet

GROUNDWATER ELEVATION CONTOUR MAP - HSU-1

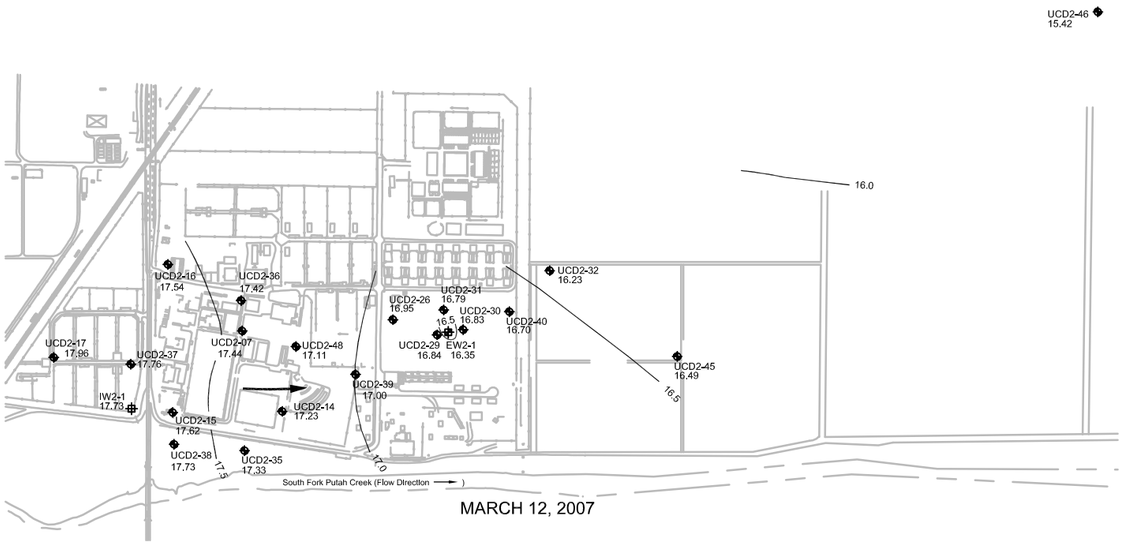
2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT

LEHR/SCDS

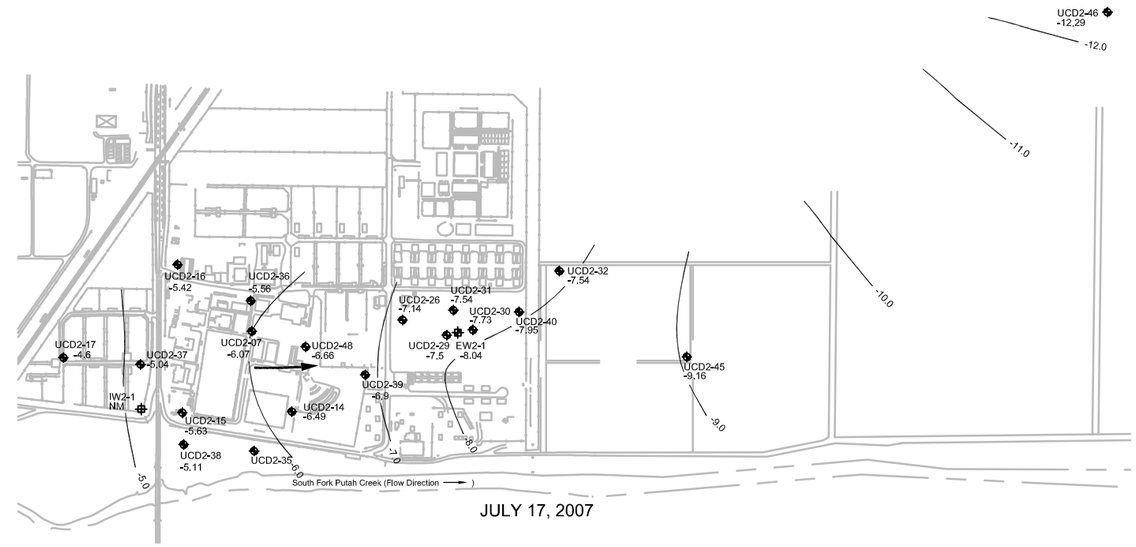
Davis, California

FIGURE 3

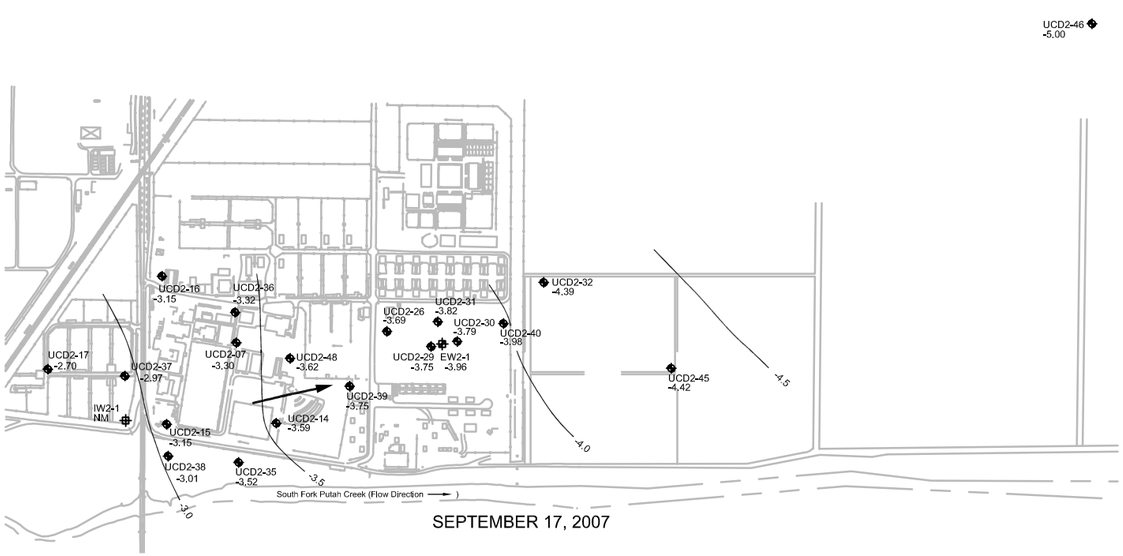
P:\31000\131261 - LEHR\2007 Annual report\07 annual figures Jan 28, 2008 Ann07-Fig3-HSU1-GW-4qtrs.DWG



MARCH 12, 2007

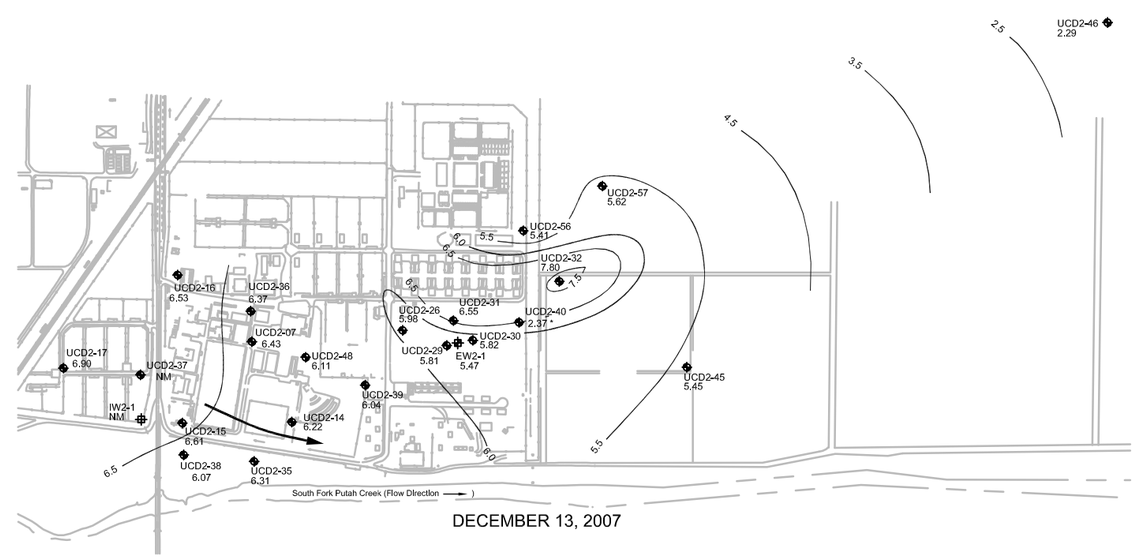


JULY 17, 2007



SEPTEMBER 17, 2007

N



DECEMBER 13, 2007

EXPLANATION

- UCD2-17 HSU-2 Monitoring Well
- EW2-1 HSU-2 Extraction Well
- IW2-1 HSU-2 Injection Well
- 10.28 Groundwater Elevation Above Mean Sea Level
- Groundwater Contour Line, Contour Interval = 1.0
- Approximate Groundwater Flow Direction

0 400 800
Scale in Feet

GROUNDWATER ELEVATION CONTOUR MAP - HSU-2

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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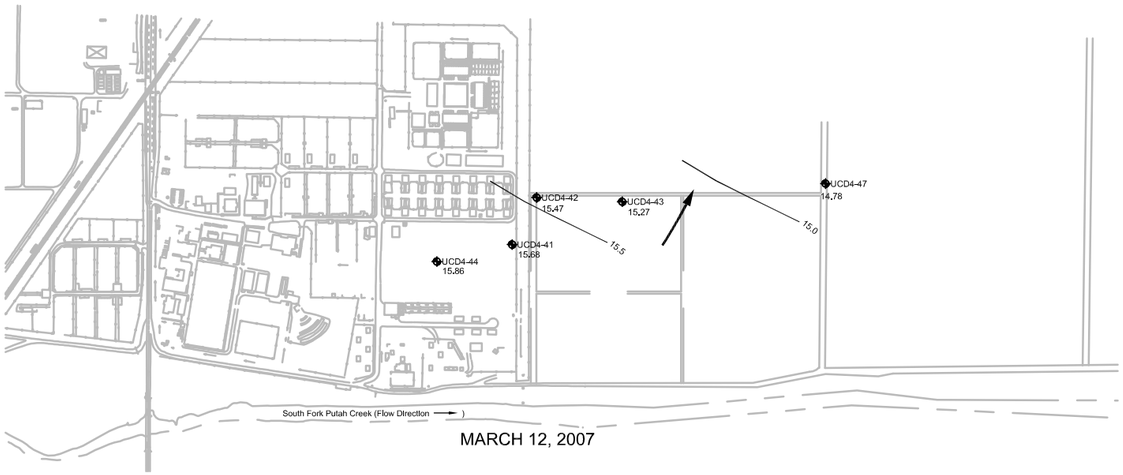
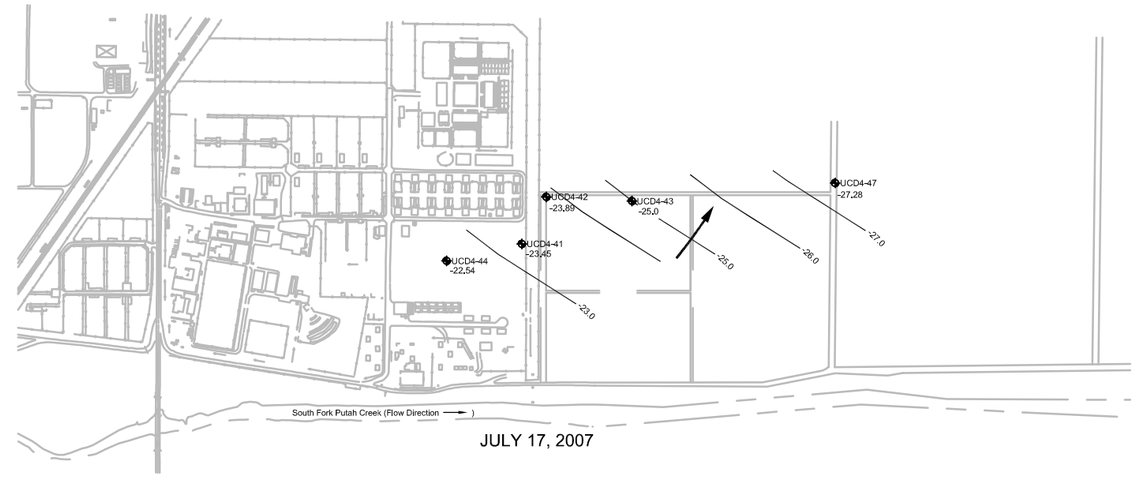
Davis, California

FIGURE 4

P:\31000\131261 - LEHR\2007 Annual report\07 annual figures Apr 02, 2008 Ann07-Fig4-HSU2-GW-4qtrs.DWG



MARCH 12, 2007



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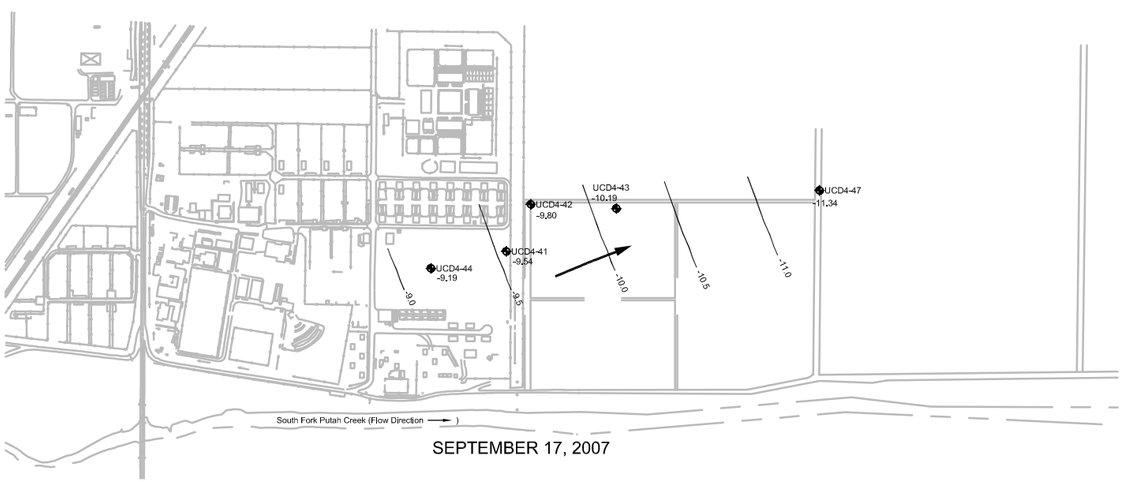

SEPTEMBER 17, 2007

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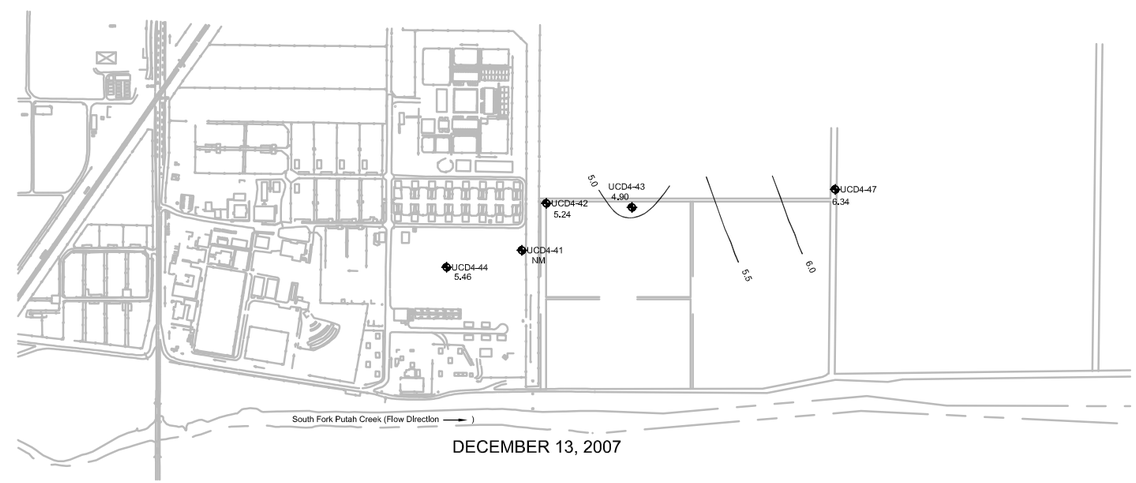


DECEMBER 13, 2007

EXPLANATION

UCD4-44 HSU-4 Monitoring Well

20.72 Groundwater Elevation Above Mean Sea Level

Groundwater Contour Line, Contour Interval = 0.5

Approximate Groundwater Flow Direction

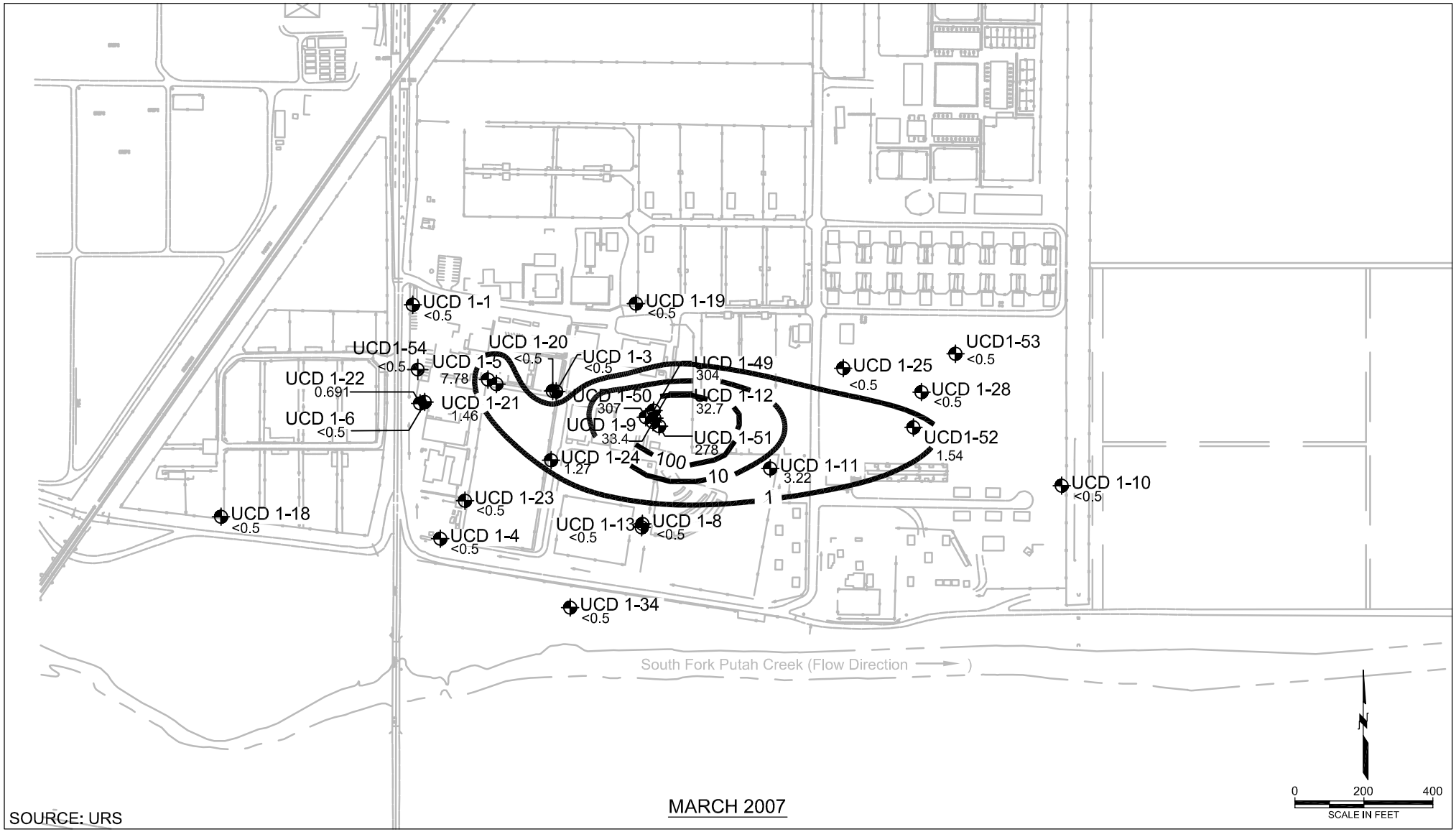
0 400 800

Scale in Feet

GROUNDWATER ELEVATION CONTOUR MAP - HSU-4

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
Davis, California

FIGURE 5



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL
<0.5	RESULT IS LESS THAN THE CRDL
NS	NOT SAMPLED
*	NOT USED IN CONTOURING

ISOCONCENTRATION CONTOUR.
ALL RESULTS REPORTED IN UG/L.

CHLOROFORM ISOCONCENTRATION CONTOURS IN HSU-1

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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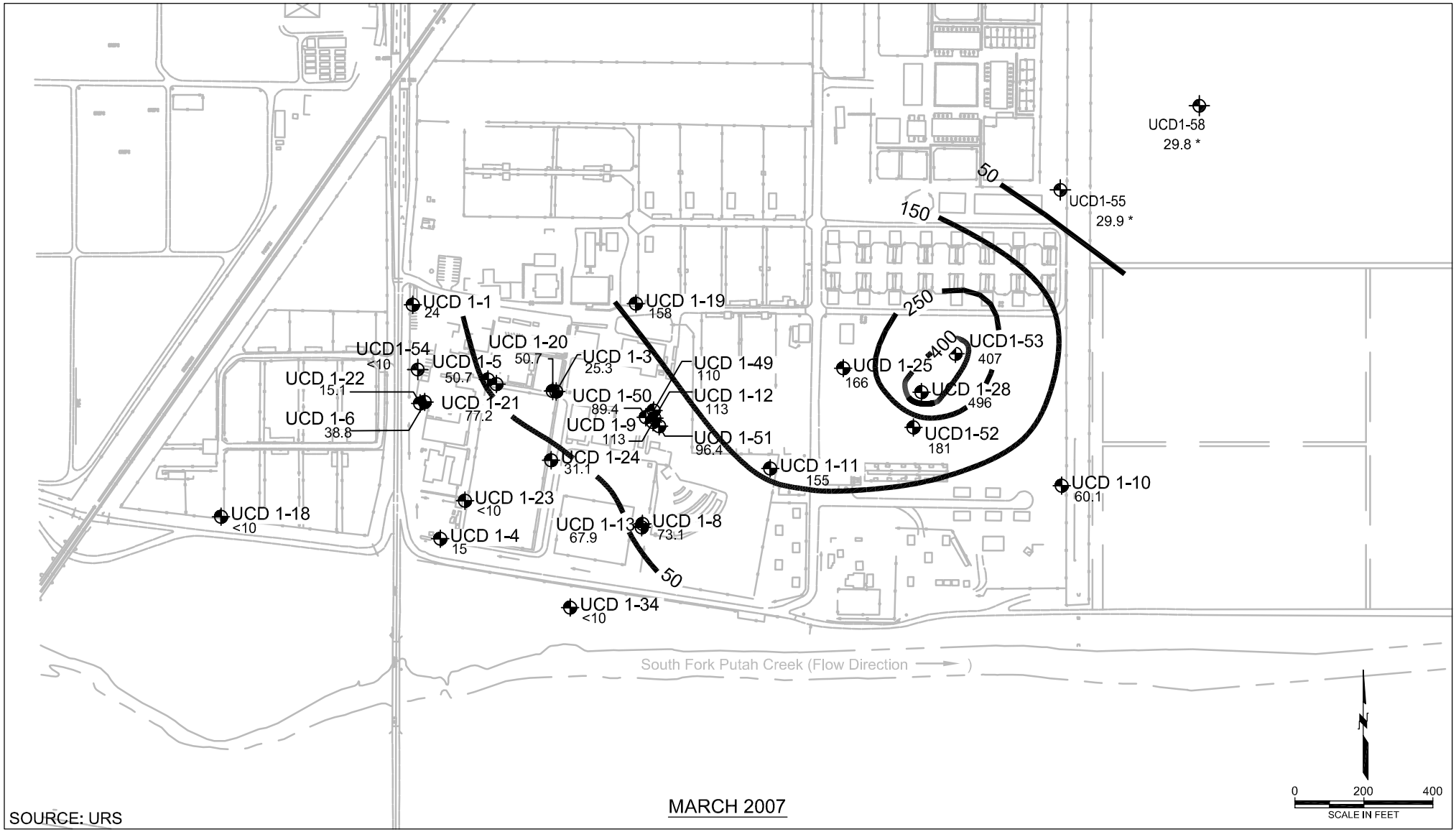
FIGURE 6

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig6-Chlor-HSU-1 Plot date: Jan 28, 2008-08:05:12am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL	50	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN UG/L.
<10	RESULT IS LESS THAN THE CRDL		
NS	NOT SAMPLED	*	SAMPLED DECEMBER 2007

CHROMIUM ISOCONCENTRATION CONTOURS IN HSU-1

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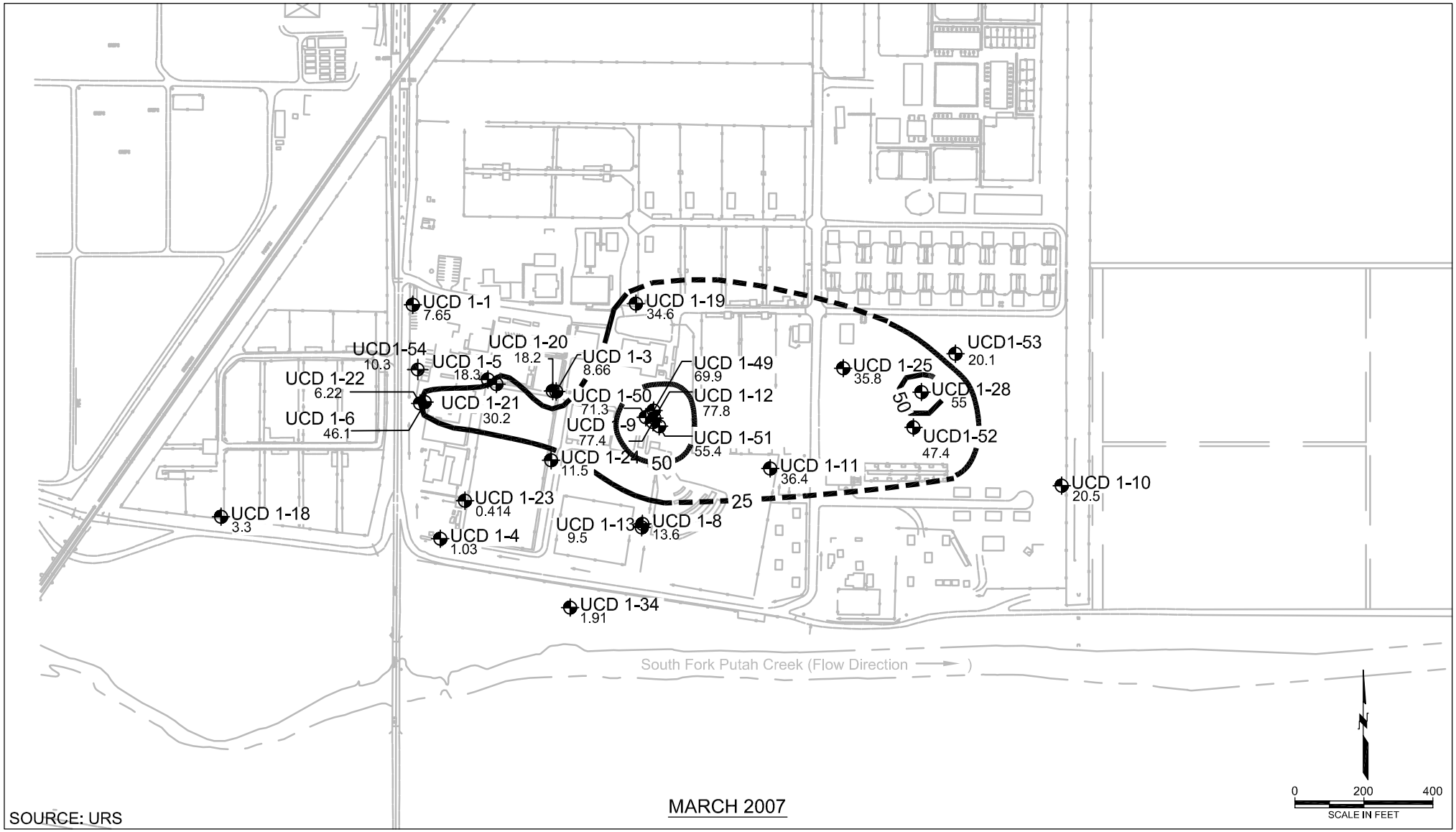
FIGURE 7

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig7-ChromHSU-1 Plot date: Feb 28, 2008-03:30:35pm CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL
<0.1	RESULT IS LESS THAN THE CRDL
NS	NOT SAMPLED

25 ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN MG/L.

NITRATE AS N ISOCONCENTRATION CONTOURS IN HSU-1

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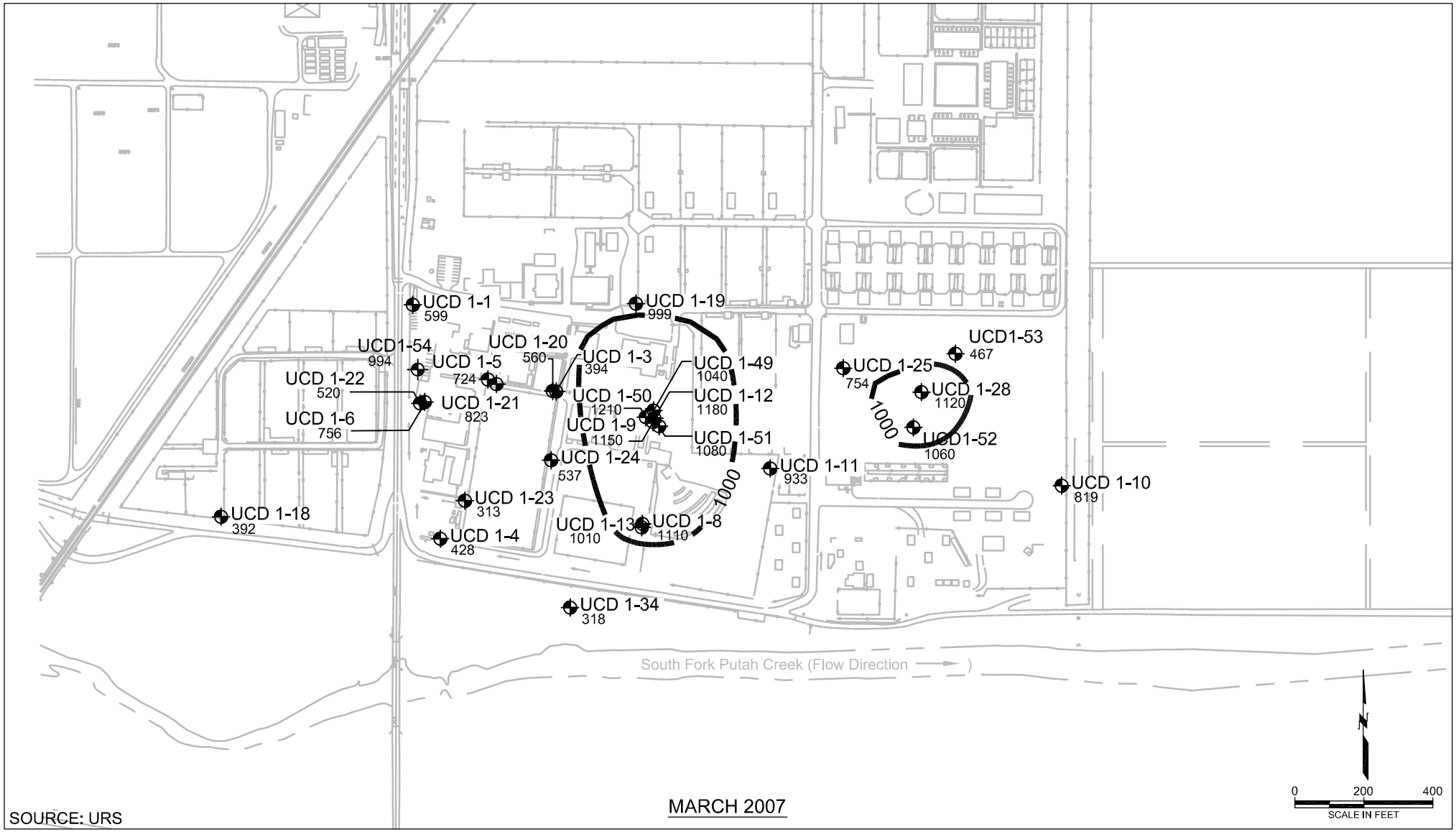
FIGURE 8

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig8-Nitr-HSU-1 Plot date: Jan 28, 2008-08:08:39am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL
<20	RESULT IS LESS THAN THE CRDL
NS	NOT SAMPLED
1000	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN MG/L.

TDS ISOCONCENTRATION CONTOURS IN HSU-1

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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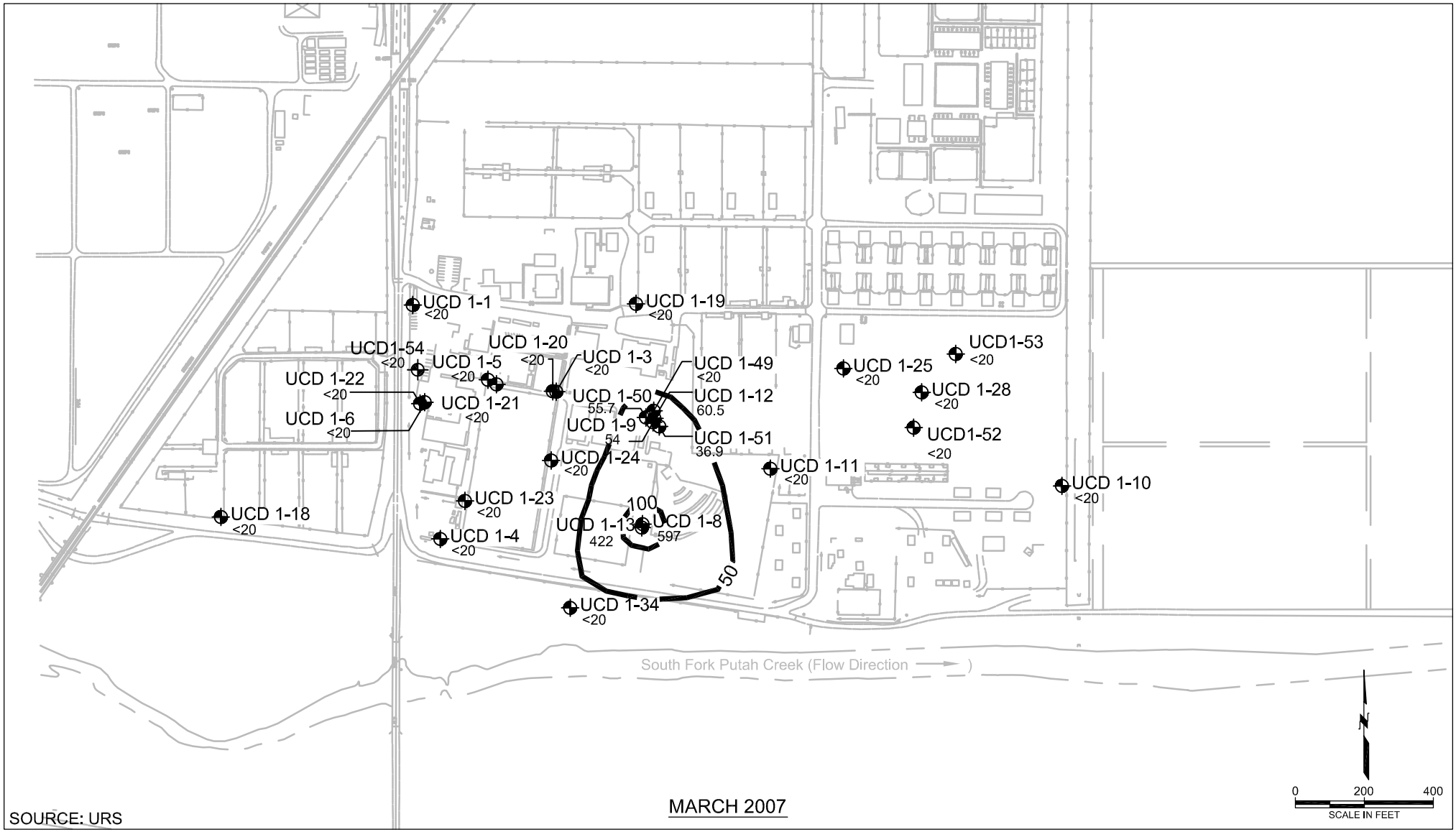
FIGURE 9

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig9-TDS-HSU-1 Plot date: Jan 28, 2008-08:09:23am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL
<20	RESULT IS LESS THAN THE CRDL
NS	NOT SAMPLED
50	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN PCI/L.

CARBON-14 ISOCONCENTRATION CONTOURS IN HSU-1

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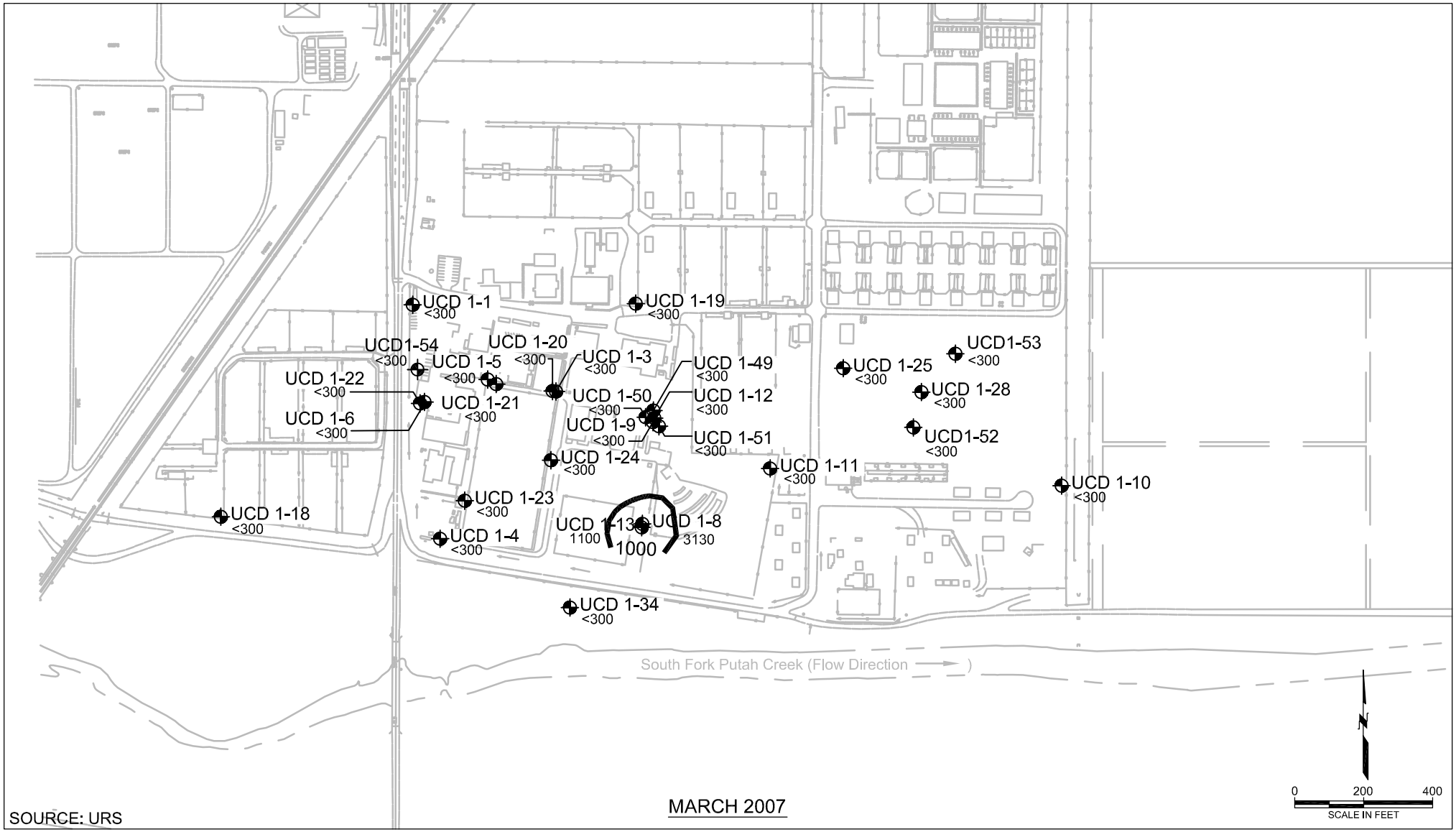
DAVIS, CALIFORNIA

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig10-Carb-HSU-1 Plot date: Jan 28, 2008-08:10:14am CAD User: jrogers

FIGURE 10



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-1 MONITORING WELL
<300	RESULT IS LESS THAN THE CRDL
NS	NOT SAMPLED
1000	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN PCI/L.

TRITIUM ISOCONCENTRATION CONTOURS IN HSU-1

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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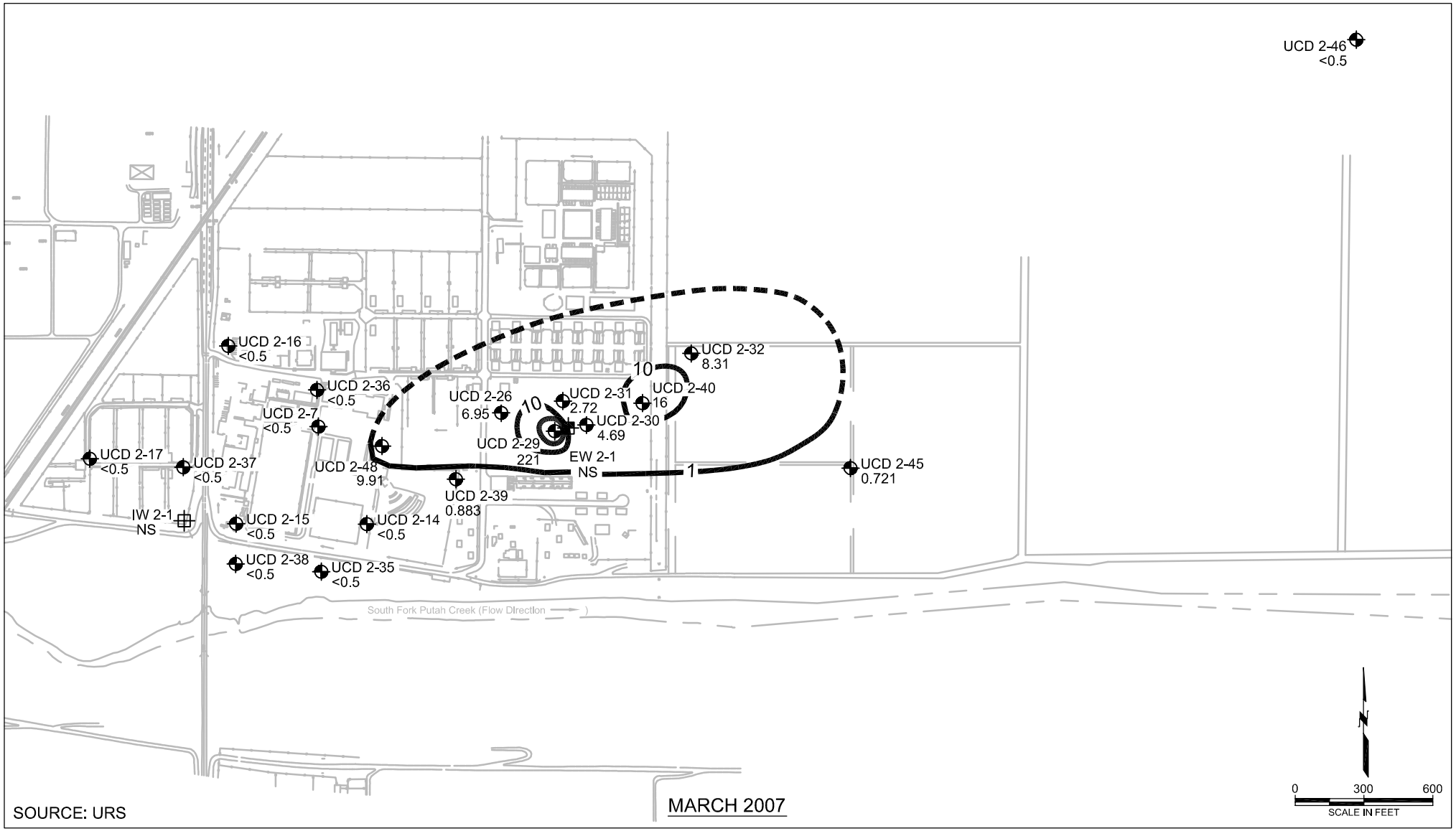
FIGURE 11

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig11-Trit-HSU-1 Plot date: Jan 28, 2008-08:10:49am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-2 MONITORING WELL	10	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN UG/L
IW 2-1	HSU-2 EXTRACTION WELL		
IW 2-1	HSU-2 INJECTION WELL	<0.5	RESULT IS LESS THAN CRDL
NS	NOT SAMPLED		

CHLOROFORM ISOCONCENTRATION CONTOURS IN HSU-2

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
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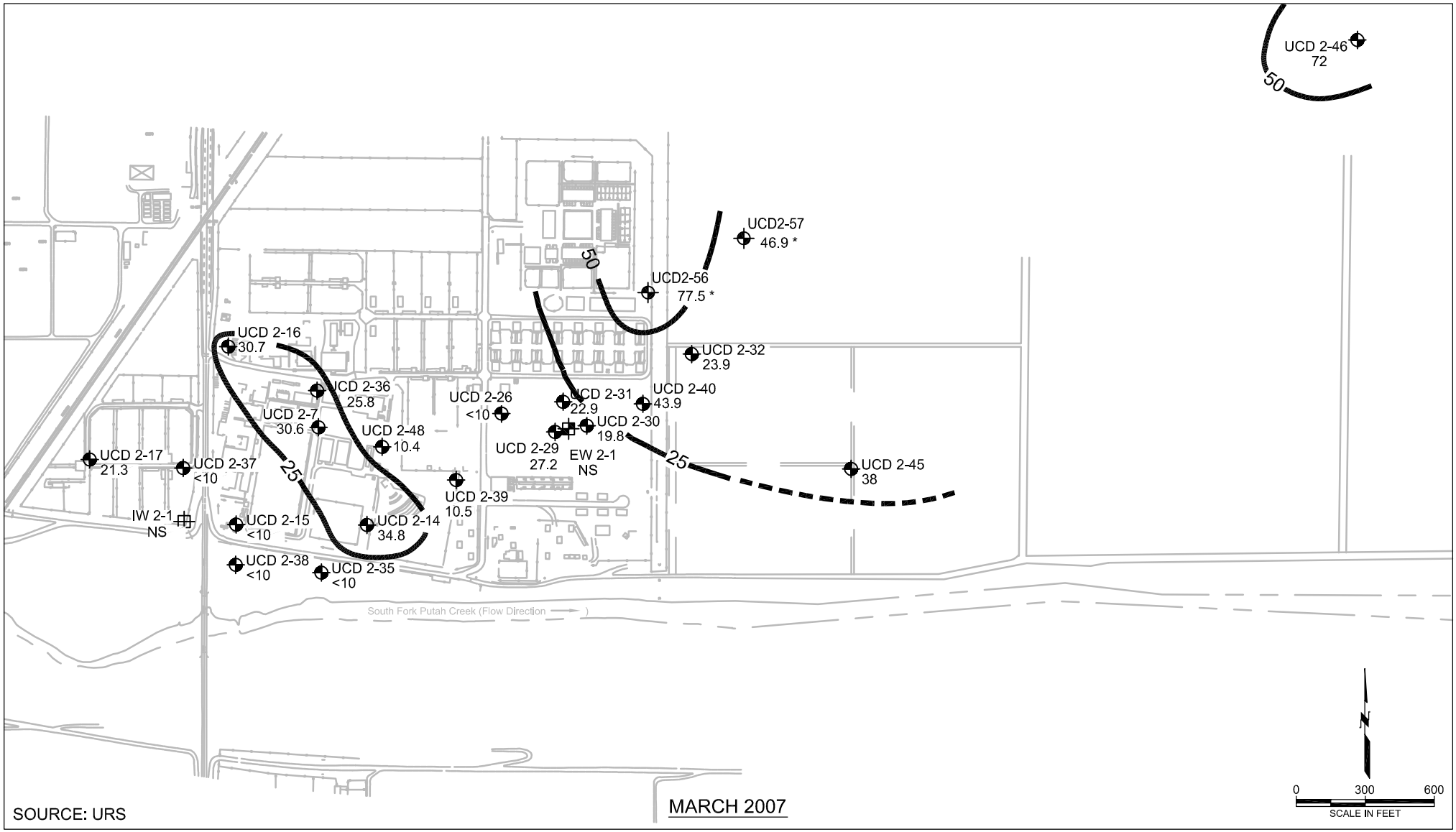
FIGURE 12

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig12-Chlor-HSU-2 Plot date: Jan 28, 2008-08:12:20am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-2 MONITORING WELL
IW 2-1	HSU-2 EXTRACTION WELL
IW 2-1	HSU-2 INJECTION WELL
NS	NOT SAMPLED
25	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN UG/L
<10	RESULT IS LESS THAN CRDL
*	SAMPLED DECEMBER 2007

CHROMIUM ISOCONCENTRATION CONTOURS IN HSU-2

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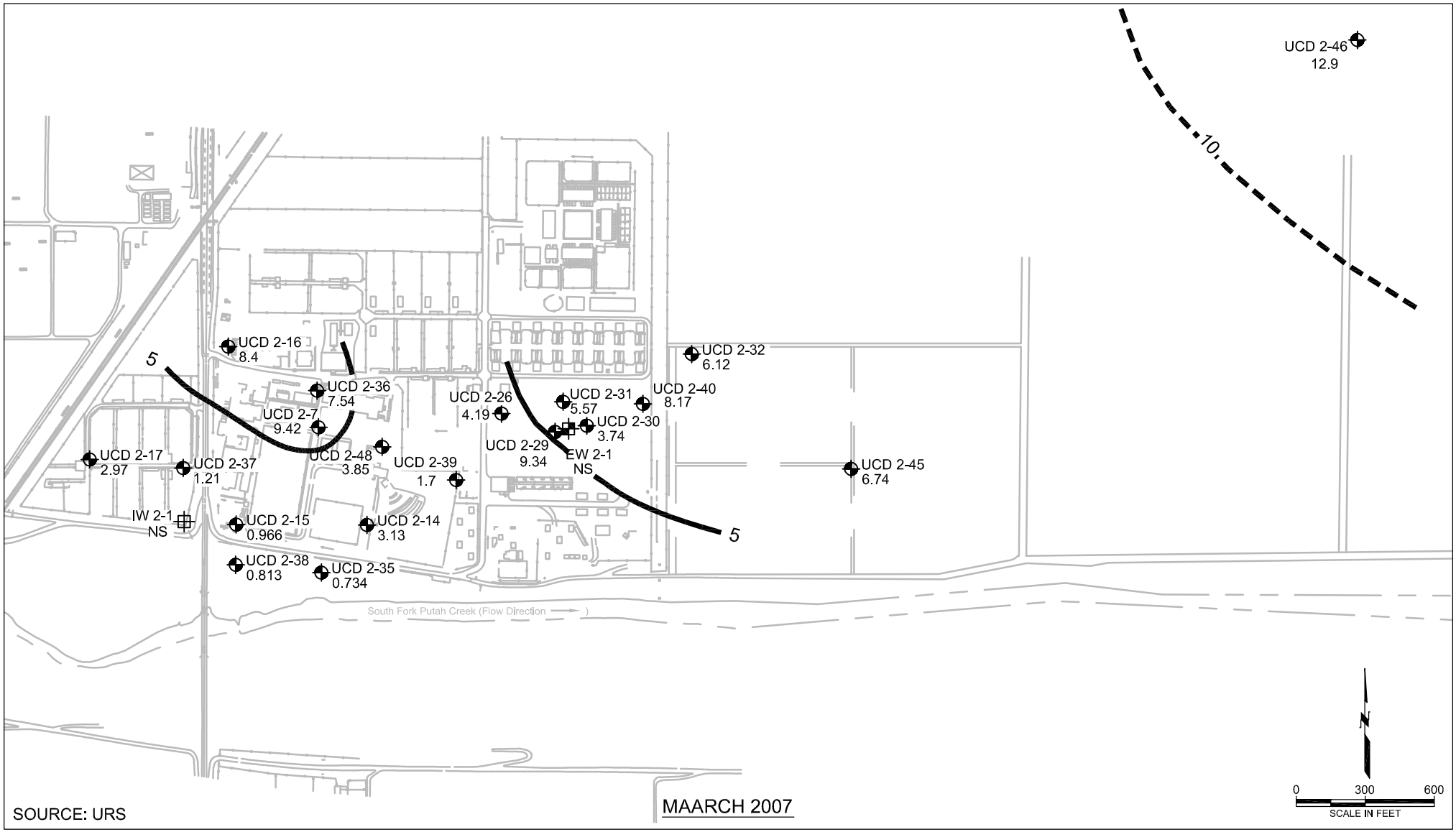
DAVIS, CALIFORNIA

FIGURE 13

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig13-Chrom-HSU-2 Plot date: Feb 28, 2008-02:49:50pm CAD User: jrogers



LEGEND

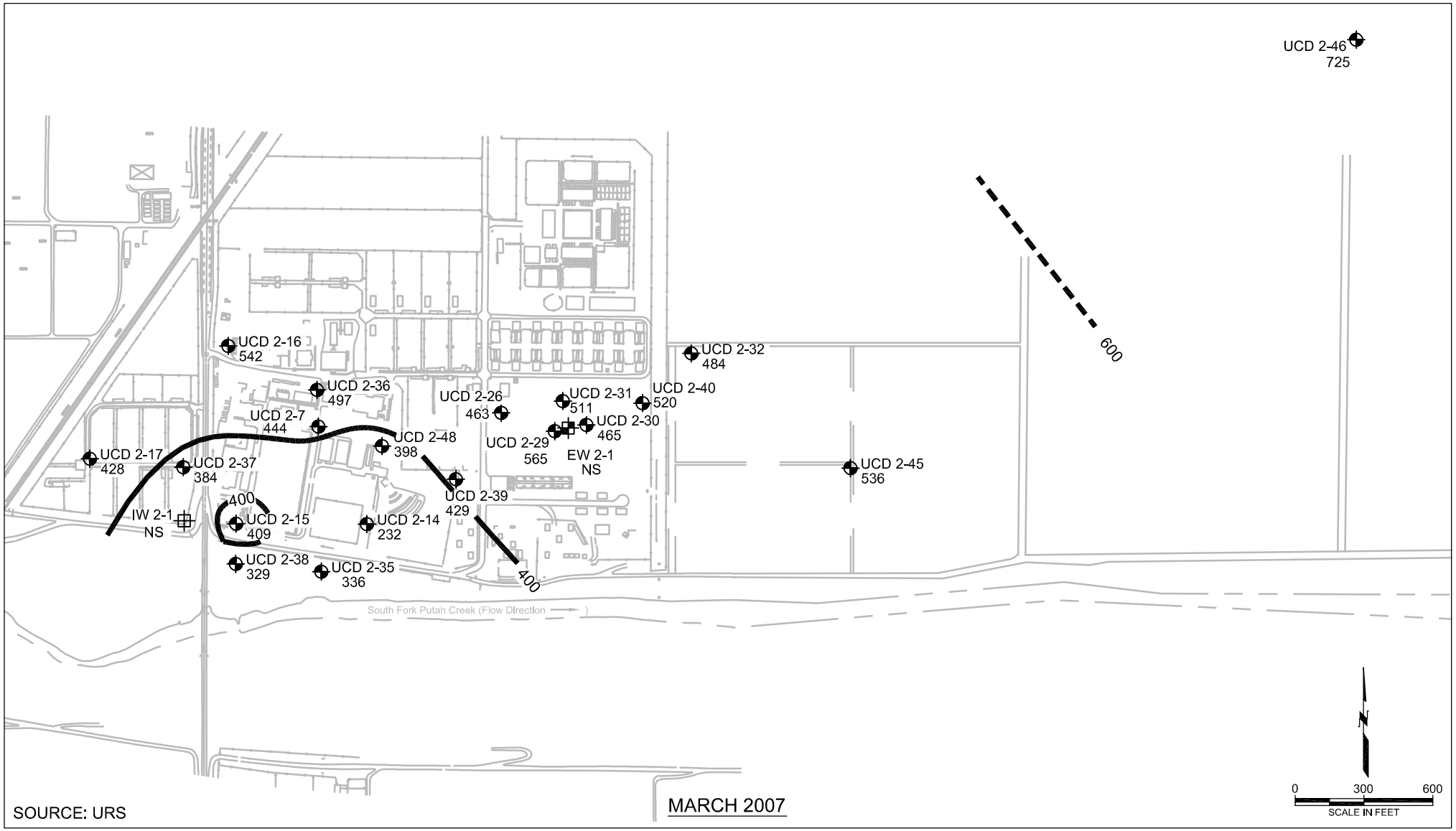
UCD1-11	HSU-2 MONITORING WELL	5	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN MG/L
IW 2-1	HSU-2 EXTRACTION WELL		
IW 2-1	HSU-2 INJECTION WELL	<0.1	RESULT IS LESS THAN CRDL
NS	NOT SAMPLED		

NITRATE AS N ISOCONCENTRATION CONTOURS IN HSU-2

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 14

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig14-Nitr-HSU-2 Plot date: Jan 28, 2008-08:14:11am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

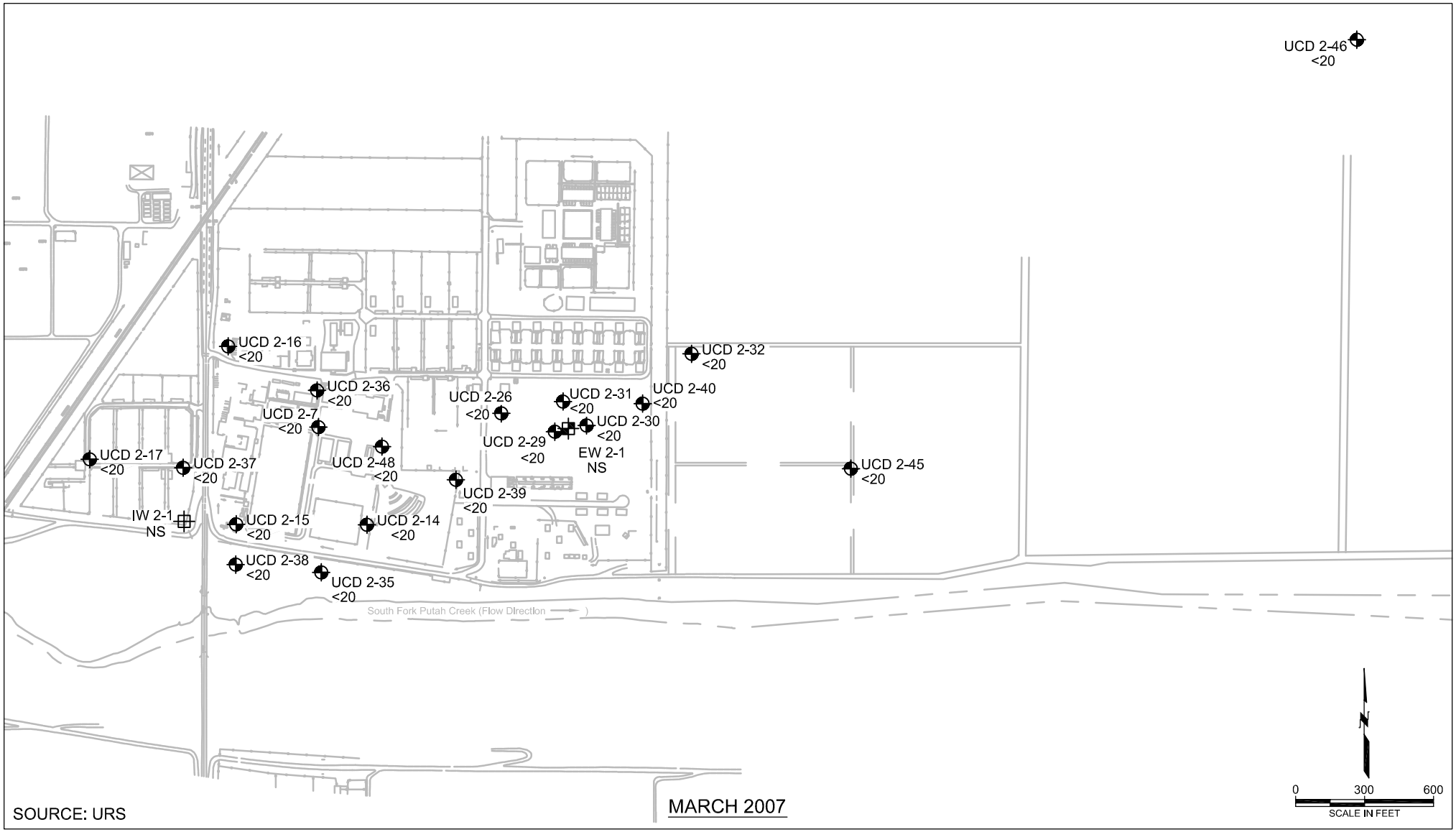
UCD1-11	HSU-2 MONITORING WELL	400	ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN MG/L
IW 2-1	HSU-2 EXTRACTION WELL		
IW 2-1	HSU-2 INJECTION WELL	<20	RESULT IS LESS THAN CRDL
NS	NOT SAMPLED		

TDS ISOCONCENTRATION CONTOURS IN HSU-2

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 15

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig15-TDS-HSU-2 Plot date: Jan 28, 2008-08:15:00am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD1-11	HSU-2 MONITORING WELL		
IW 2-1	HSU-2 EXTRACTION WELL		
IW 2-1	HSU-2 INJECTION WELL	<20	RESULT IS LESS THAN CRDL
NS	NOT SAMPLED		

CARBON-14 CONCENTRATION IN HSU-2

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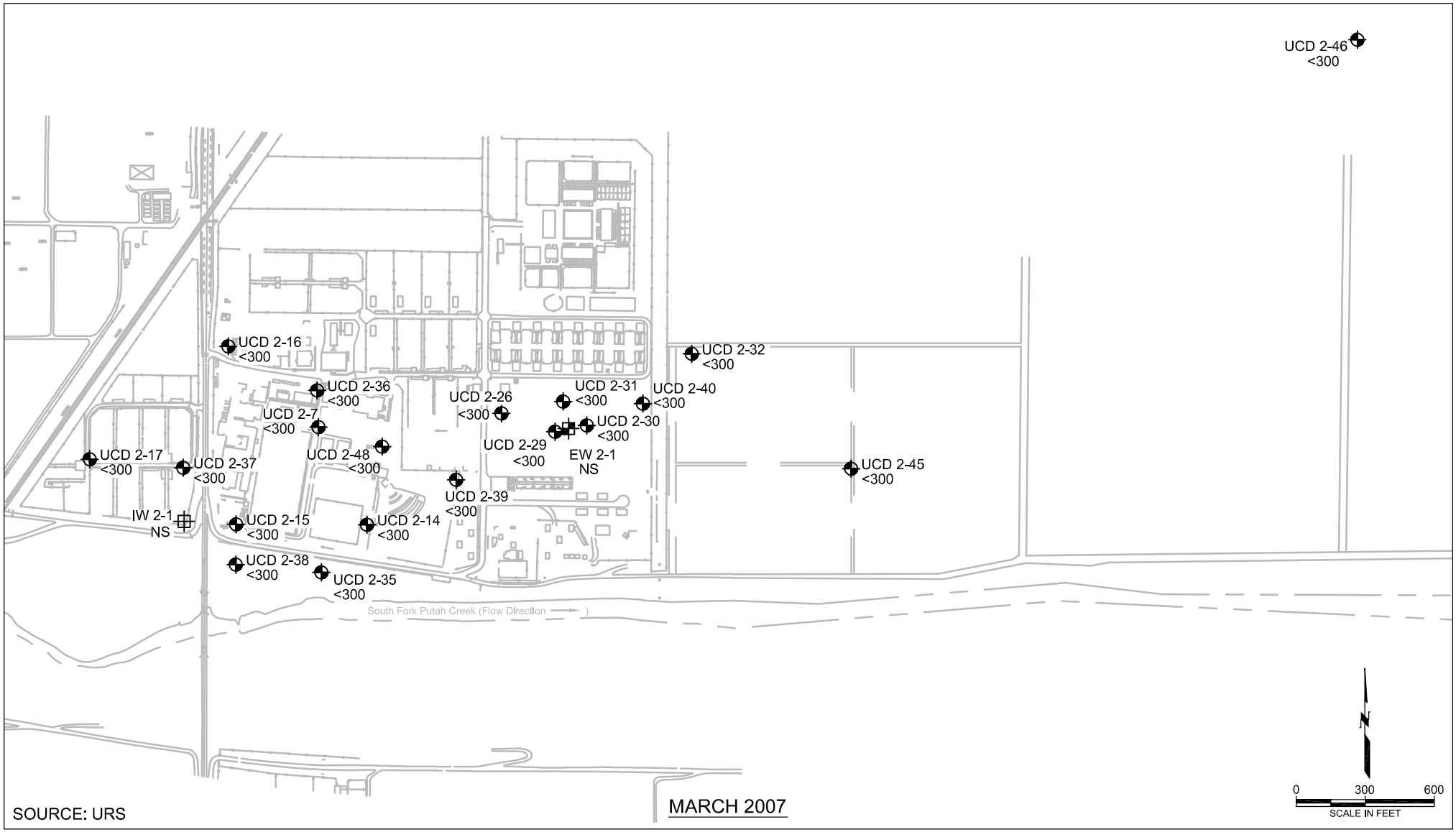
FIGURE 16

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig16-Carb-HSU-2 Plot date: Mar 14, 2008-11:11:14am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

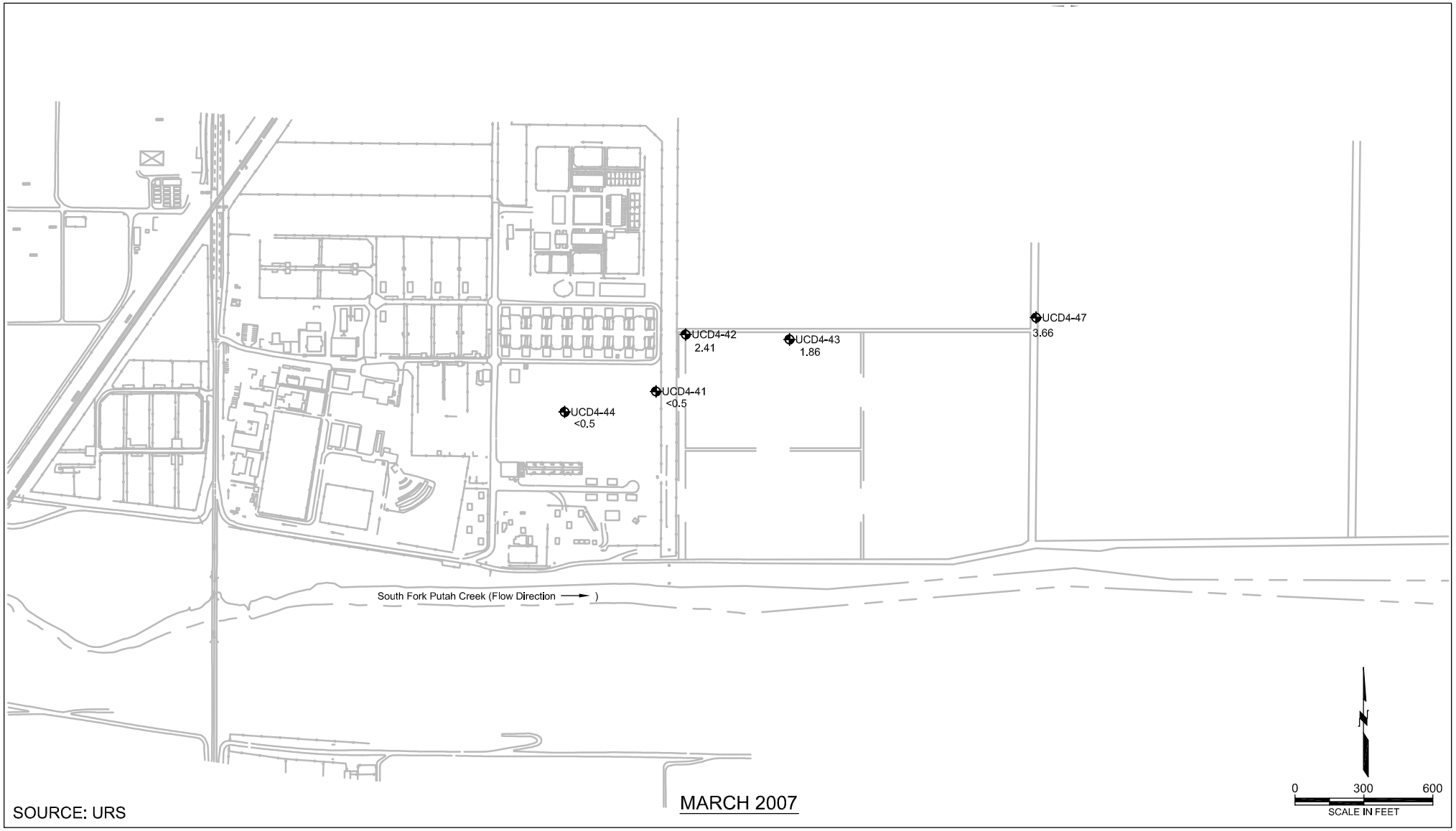
UCD1-11	HSU-2 MONITORING WELL		
IW 2-1	HSU-2 EXTRACTION WELL		
IW 2-1	HSU-2 INJECTION WELL	<300	RESULT IS LESS THAN CRDL
NS	NOT SAMPLED		

TRITIUM CONCENTRATION IN HSU-2

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 17

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig17-Trit-HSU-2 Plot date: Mar 14, 2008-11:13:37am CAD User: jrogers



SOURCE: URS

LEGEND

UCD4-44 HSU-4 Monitoring Well

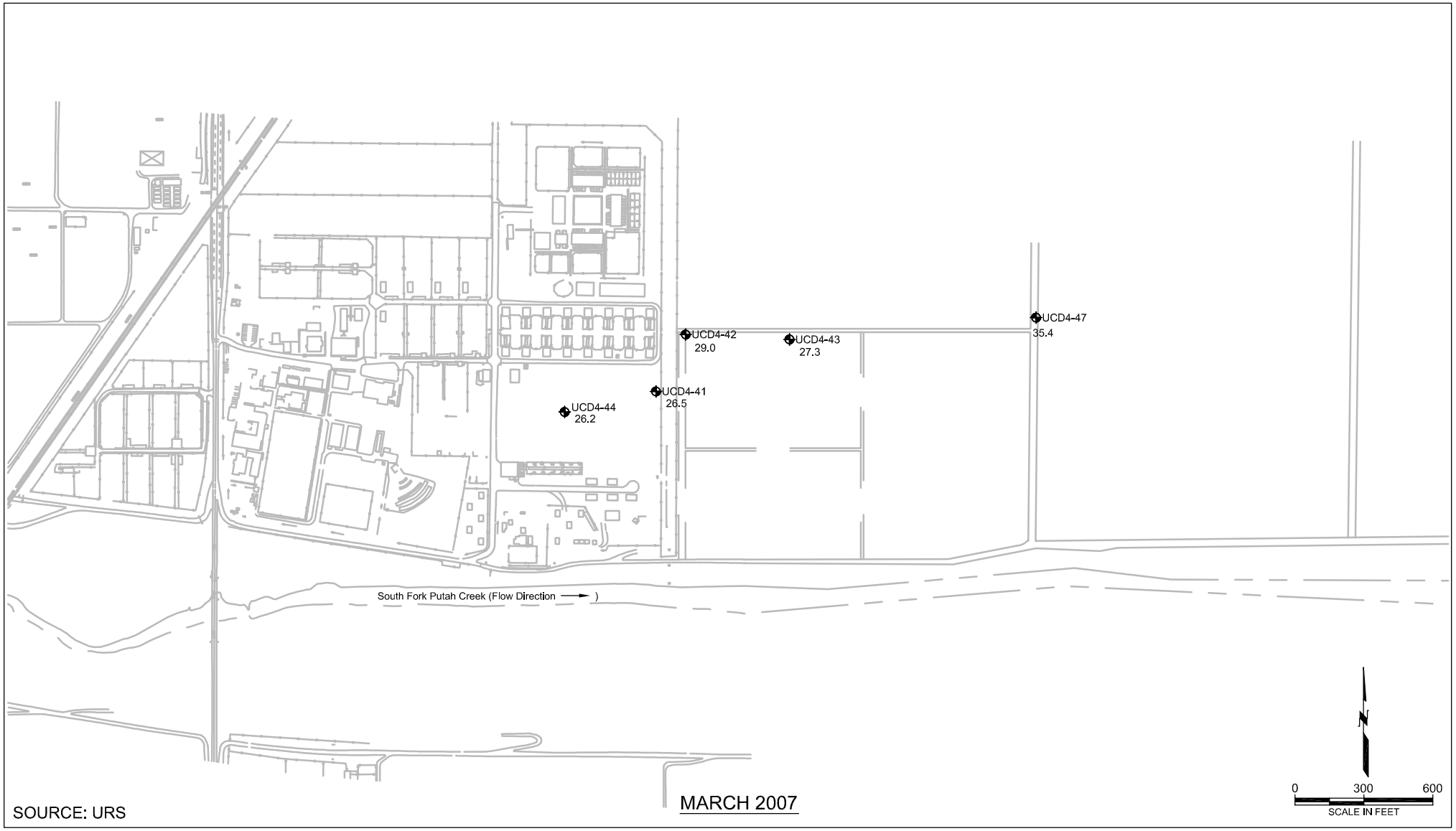
<0.5 RESULT IS LESS THAN CRDL

CHLOROFORM CONCENTRATION IN HSU-4

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 18

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig18-Chlor-HSU4 Plot date: Mar 14, 2008-11:18:31am CAD User: jrogers



SOURCE: URS

LEGEND

UCD4-44 HSU-4 Monitoring Well

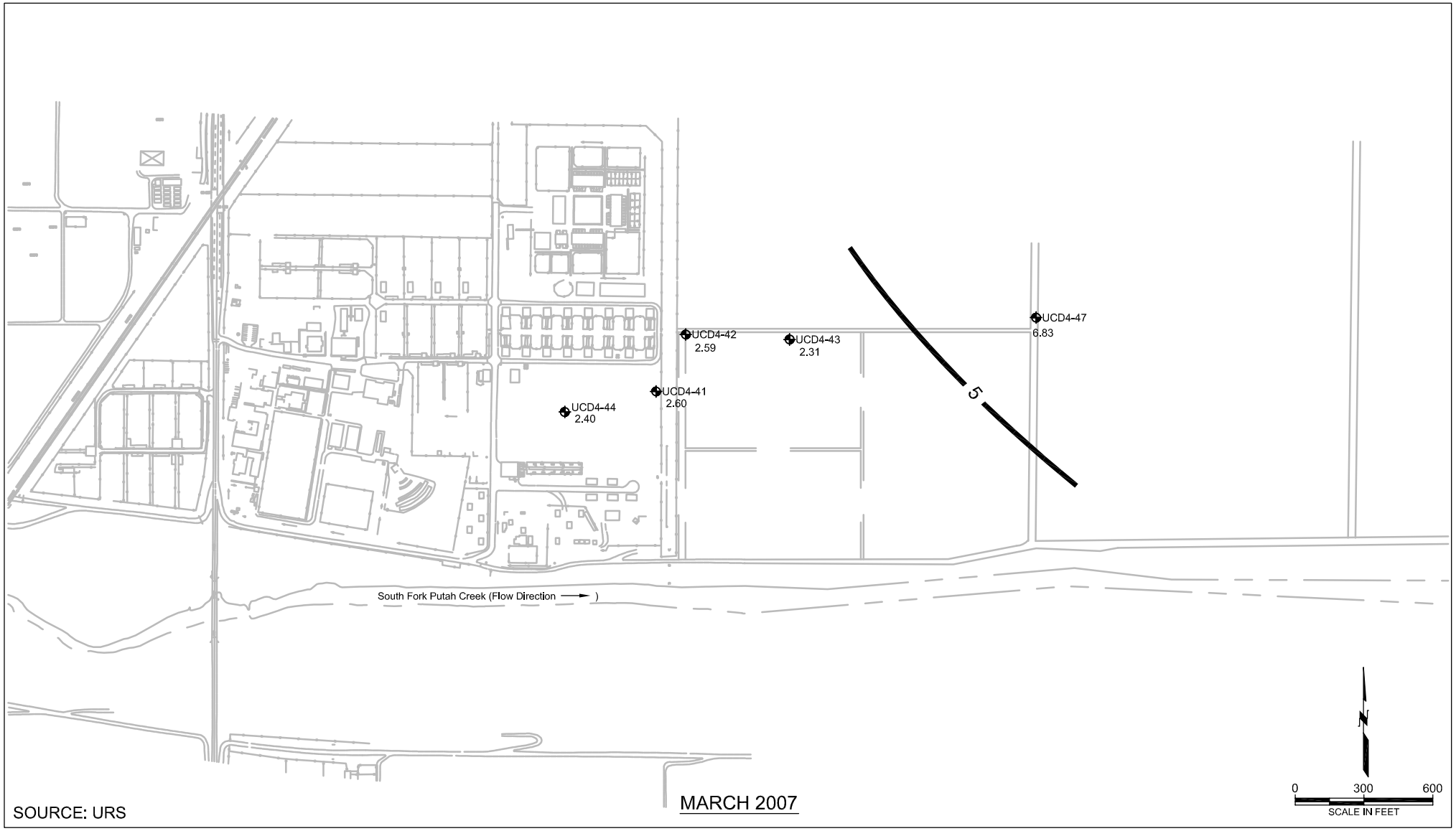
<10 RESULT IS LESS THAN CRDL

CHROMIUM CONCENTRATION IN HSU-4

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 19

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig19-Chrom-HSU4 Plot date: Mar 14, 2008-11:20:10am CAD User: jrogers



LEGEND

UCD4-44 HSU-4 Monitoring Well

5 ISOCONCENTRATION CONTOUR. ALL RESULTS REPORTED IN MG/L

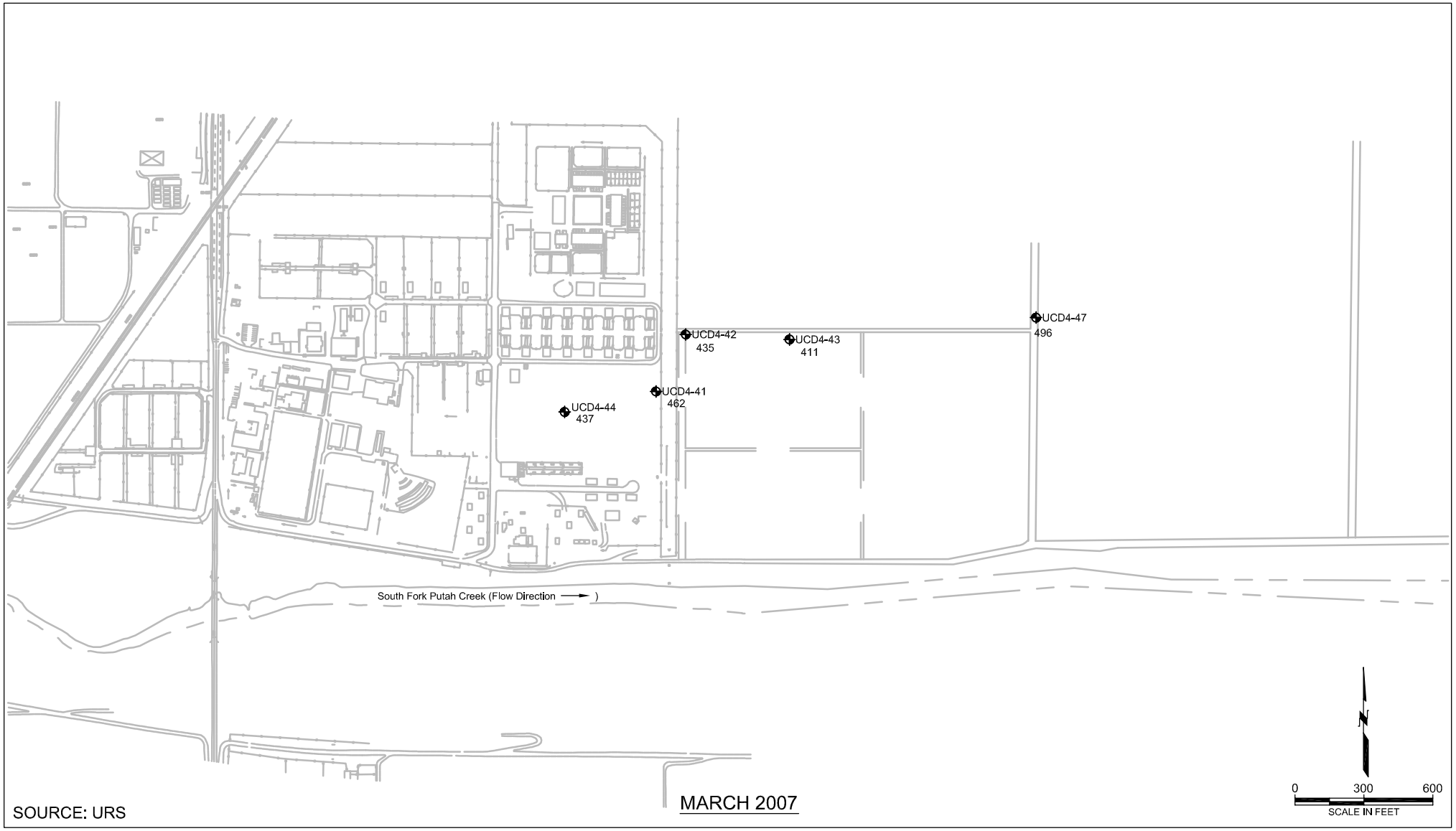
<0.1 RESULT IS LESS THAN CRDL

NITRATE AS N ISOCONCENTRATION CONTOURS IN HSU-4

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 20

Path: P:\31000\131261 - LEHR\2007 Annual report\07 annual figures\ Filename: Ann07-Fig20-Nitr-HSU4 Plot date: Jan 28, 2008-08:20:42am CAD User: jrogers



SOURCE: URS

MARCH 2007

LEGEND

UCD4-44 HSU-4 Monitoring Well

<20 RESULT IS LESS THAN CRDL

TDS CONCENTRATION IN HSU-4

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FIGURE 21

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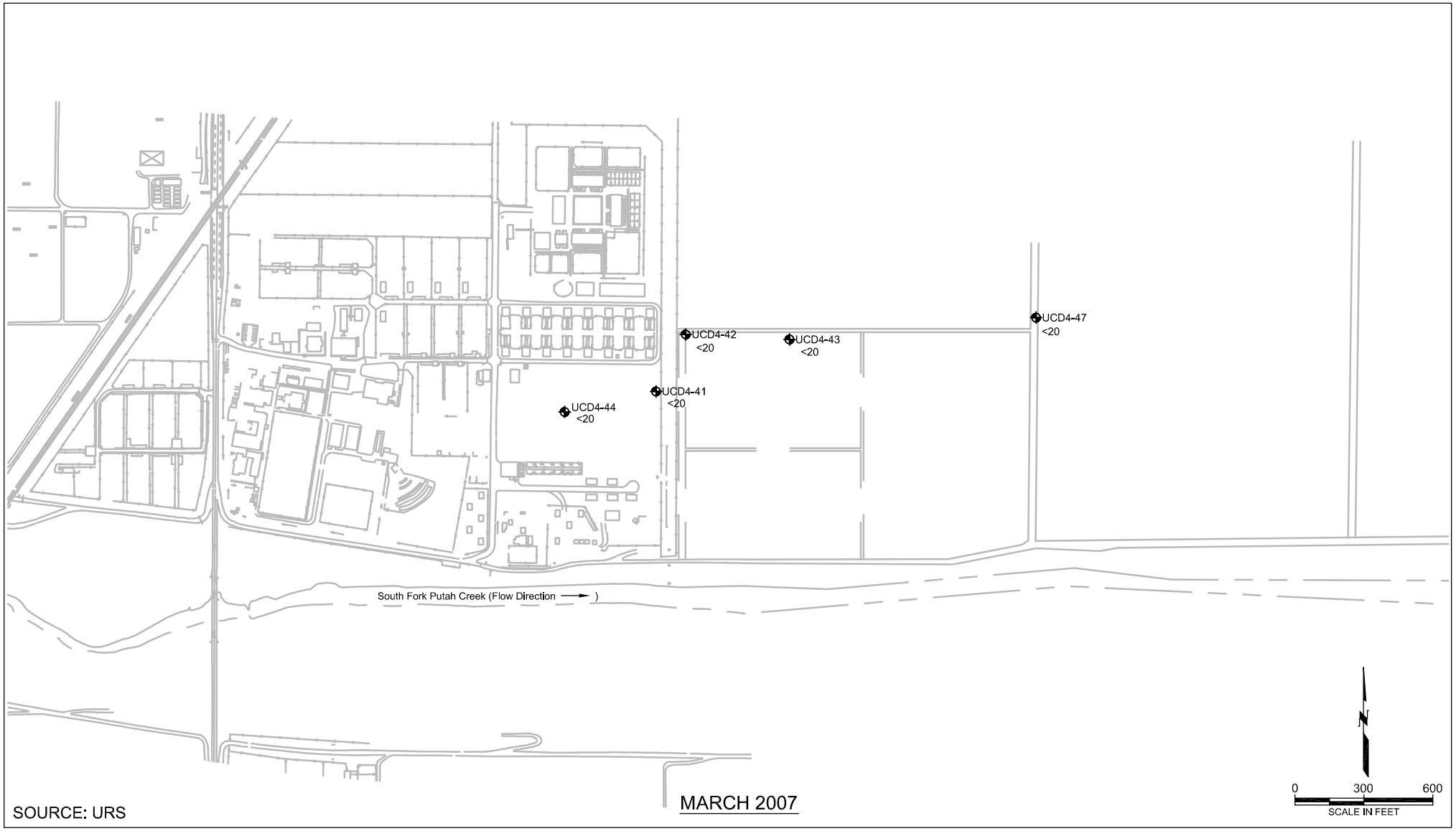

SOURCE: URS

MARCH 2007

LEGEND

UCD4-44 HSU-4 Monitoring Well

<20 RESULT IS LESS THAN CRDL

CARBON-14 CONCENTRATION IN HSU-4

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DAVIS, CALIFORNIA

FIGURE 22

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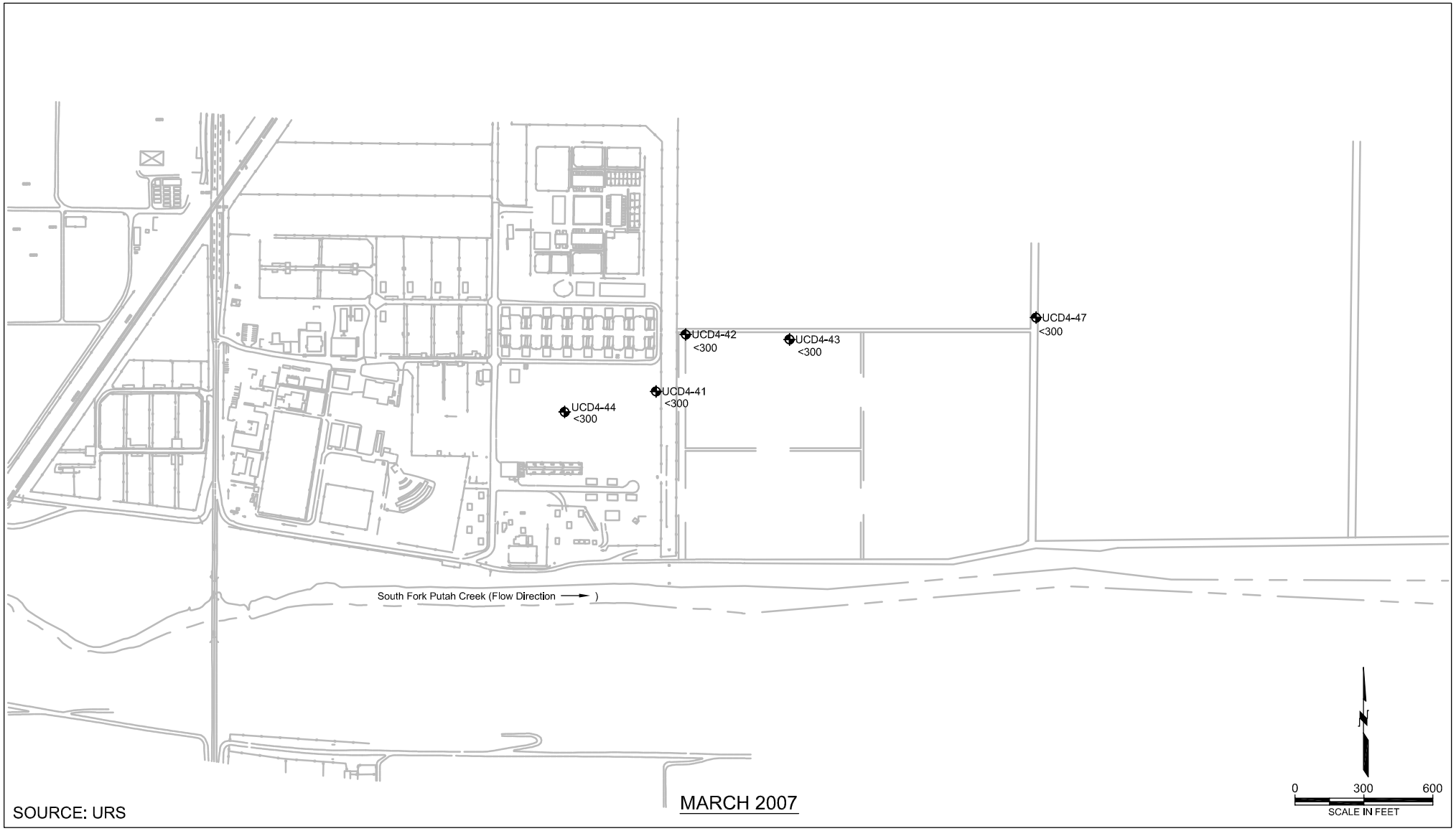

SOURCE: URS

LEGEND

UCD4-44 HSU-4 Monitoring Well

<300 RESULT IS LESS THAN CRDL

TRITIUM CONCENTRATION IN HSU-4

2007 COMPREHENSIVE ANNUAL WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

FIGURE 23

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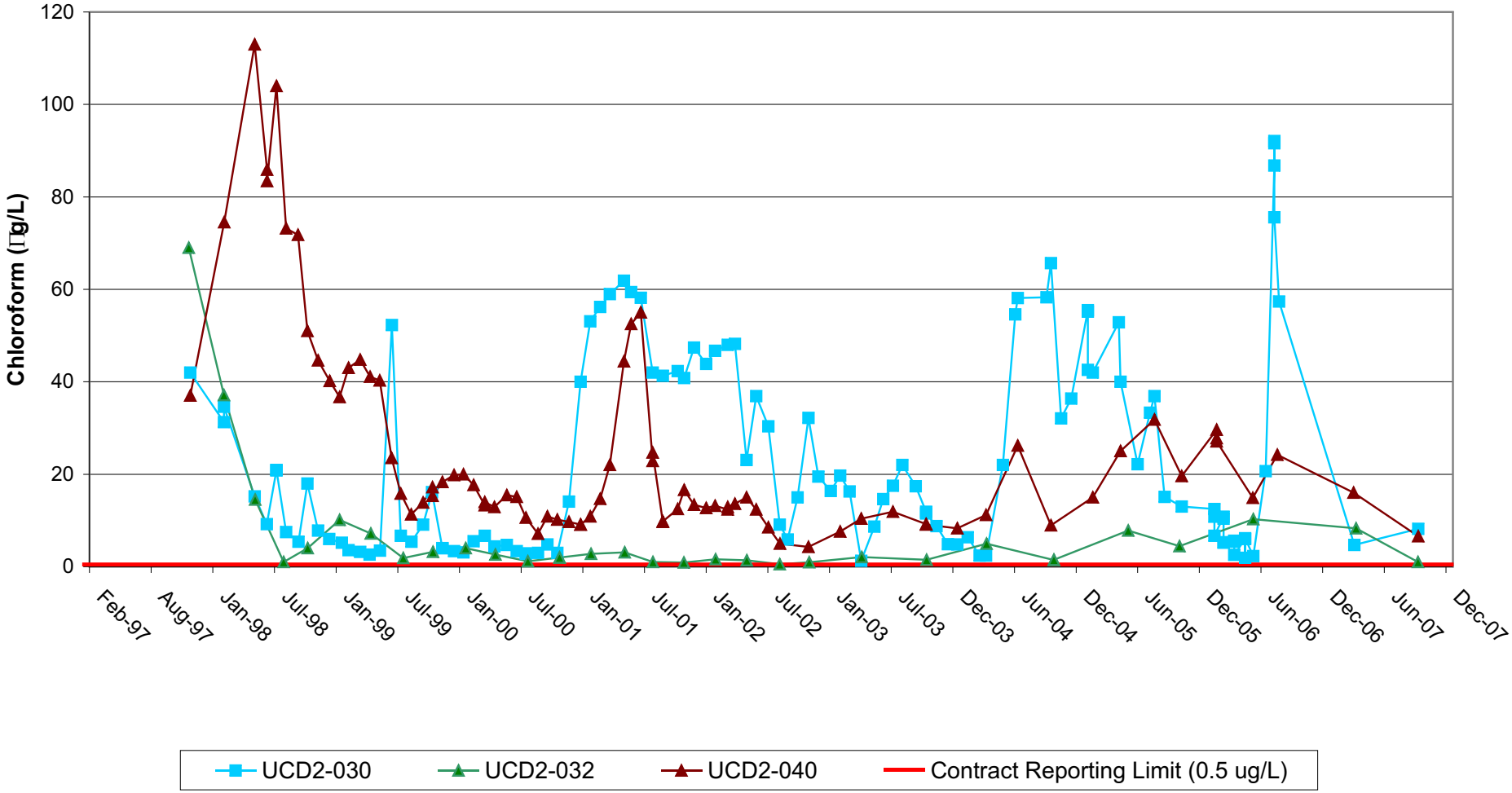

IRA EXTRACTION SYSTEM MONITORING

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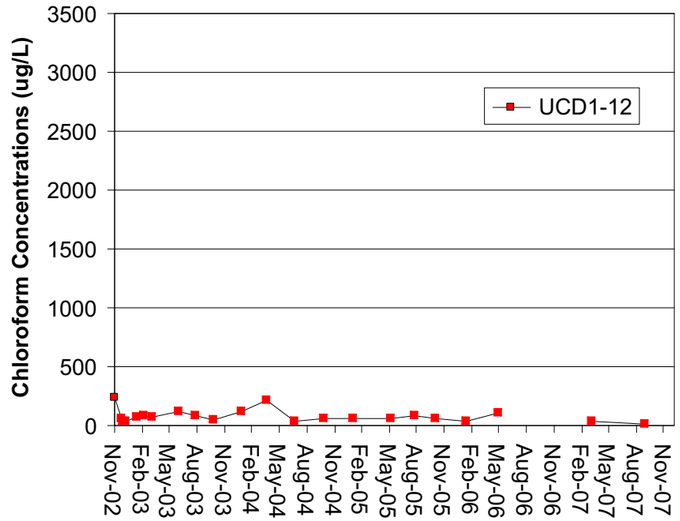
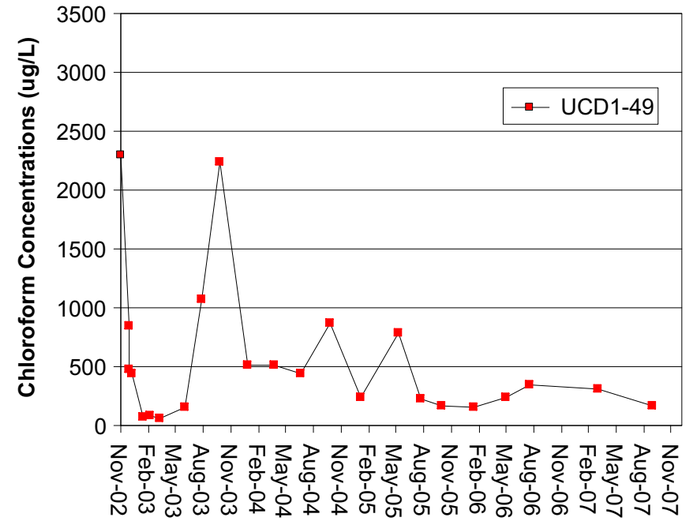
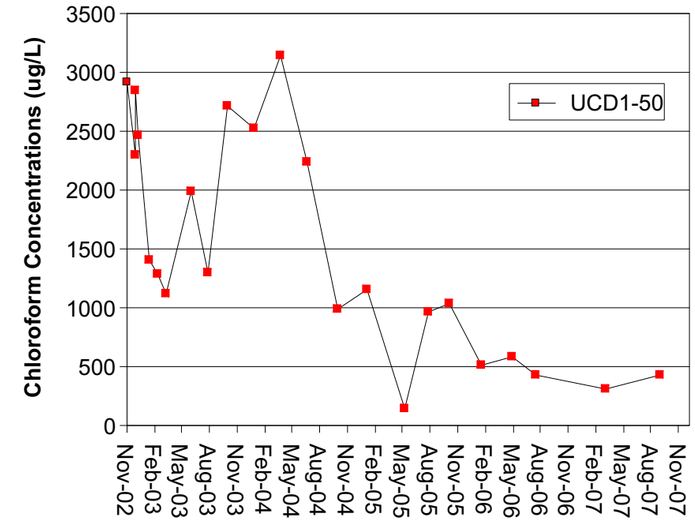
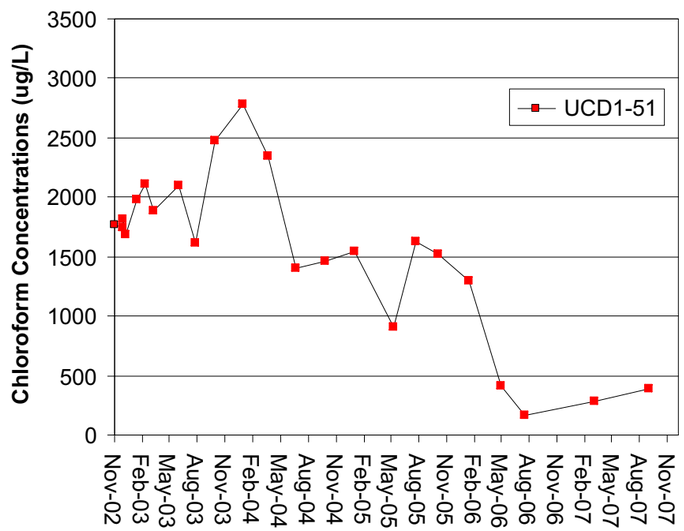
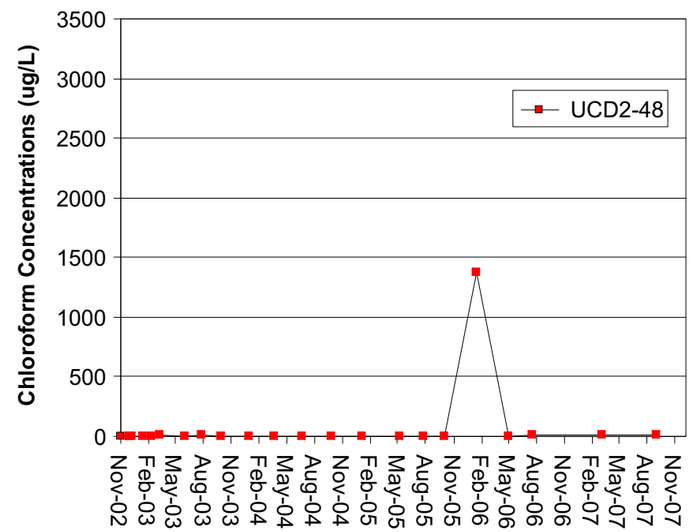
Davis, California











DDC TREATMENT SYSTEM MONITORING

2007 Comprehensive Annual Water Monitoring Report
LEHR/SCDS
Davis, California

APPENDIX A: TECHINICAL MEMRANDUM FOR INSTALLATION OF HSU-1 AND HSU-2 WELLS FOR CHROMIUM INVESTIGATION

TECHNICAL MEMORANDUM
SUPPLEMENTAL DELINEATION OF CHROMIUM IN GROUNDWATER
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

Prepared for

Environmental Health and Safety
University of California, Davis

Prepared by

Brown and Caldwell

March 2008

TECHNICAL MEMORANDUM
SUPPLEMENTAL DELINEATION OF CHROMIUM IN GROUNDWATER
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

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TECHNICAL MEMORANDUM
SUPPLEMENTAL DELINEATION OF CHROMIUM IN GROUNDWATER
LEHR/SCDS ENVIRONMENTAL RESTORATION
DAVIS, CALIFORNIA

1.0 INTRODUCTION

This report presents the results of the groundwater investigation at the former Laboratory for Energy-related Health Research/South Campus Disposal Site (LEHR/SCDS or Site, Figure 1). The investigation was conducted in accordance with the *Work Plan – Supplemental Delineation of Chromium in Groundwater at the LEHR/SCDS Environmental Restoration, Davis, California* (Brown and Caldwell, August 2007). The primary purpose of the investigation is to provide additional characterization of chromium in the upper ground water bearing zones, referred to as hydrostratigraphic unit one (HSU-1), and two (HSU-2), downgradient of wells UCD1-28 and UCD1-53 (Figure 2).

Investigative work is being conducted at the Site according to the Administrative Order on Consent (AOC) issued by the US EPA on September 30, 1999 (USEPA, 1999). The AOC is issued under the authority of the Comprehensive Environmental Response and Liability Act (CERCLA). This investigation serves as an addendum to the Final Draft Remedial Investigation/Feasibility Study (RI/FS) Work Plan prepared in 1994 (Dames & Moore, 1994). UC Davis has prepared and revised a comprehensive Field Sampling Plan (FSP) (Dames & Moore, 1998a), Quality Assurance Project Plan (QAPP) (Dames & Moore, 1998b) and Health and Safety Plan (HSP) (Dames & Moore, 1996) which are also part of the RI/FS Work Plan for remediation investigation and construction activities at the LEHR/SCDS site. The FSP, QAPP and HSP have been reviewed and approved by EPA and served as project guidance documents for the investigation by reference.

Additional data were needed for the UC Davis Feasibility Study (FS) to assess the extent of elevated chromium concentrations in the vicinity of UCD1-28 and UCD1-53 in HSU-1. In order to provide lateral and vertical delineation of chromium in groundwater, UC Davis proposed to collect a series of hydropunch samples in HSU-1, analyze these samples for hexavalent chromium to optimize the location of additional monitoring wells.

Locations of the hydropunch samples collected as part of this effort were based on the direction of HSU-1 groundwater gradient and water quality presented in Figure 3. UC Davis located the hydropunch samples and the two HSU-1/HSU-2 well pairs to the northeast of UCD1-53, based on groundwater gradient and water quality data observed from subsequent hydropunch locations. The following sections of this report present a

brief background of the site, the methods used during the field investigation, and the results of the dissolved chromium analyses and investigation data.

2.0 BACKGROUND

UC Davis has been investigating on- and off-site groundwater quality (including chromium) since 1988. Beginning in 1990, quarterly monitoring for total dissolved chromium (on filtered groundwater samples) and hexavalent chromium was initiated on all monitoring wells. Due to the large amount of Site data and relative stability of results, sampling frequency was reduced to annually for a number of HSU-1 wells beginning in 2000.

The Site groundwater investigation work to date has identified landfill and waste burial holes constituents (chloroform, nitrate, tritium and carbon-14) and chromium concentrations in HSU-1 wells adjacent to landfills and waste burial holes. Monitoring well UCD1-12 (Figure 2) located in Landfill Unit No. 2 (LFU2) is impacted with both chloroform and moderate levels of chromium (100 to 200 ug/L Cr). Well UCD1-13 adjacent to the waste burial holes is impacted with tritium, carbon-14 and similar levels of chromium.

Interestingly, chromium concentrations greater than 200 ug/L were identified in several HSU-1 wells more than 400 feet side-gradient from the landfills and waste burial holes (UCD1-19), 700 feet down-gradient (UCD1-28) and over 1,000 feet down-gradient (UCD1-53), away from any known land disposal area.

Samples from UCD1-28 and UCD1-53 have consistently high levels of total dissolved and hexavalent chromium without the presence of chloroform, tritium or carbon-14. The absence of chloroform, carbon-14 or tritium in UCD1-28 and UCD1-53 suggests that these wells may not be affected by any known waste disposal practices on site.

The distance between potential sources and down-gradient wells is also significant because the lateral velocity of HSU-1 groundwater was estimated to be approximately 4 feet per year based on HSU-1 aquifer testing (Dames & Moore, 1999). This low lateral velocity is due to the predominance of silts and clays and the discontinuous nature of the sand lenses present in HSU-1 (DOE, 1993, URS, 2002, Brown & Caldwell, 2003, Geomatrix 2004). At the observed HSU-1 lateral velocity, it would take more than 175 years for HSU-1 groundwater to move from LFU2 to UCD1-28, the well where groundwater chromium concentrations are highest. LFU2 initiated disposal operations in 1956, approximately 61 years ago, suggesting a chromium plume from Landfill Unit No. 2 is unlikely to have reached UCD1-28, which is also supported by the absence of chloroform in this well.

Despite the elevated chromium impacts in HSU-1, chromium concentrations in HSU-2 remain within a range of 25 to 50 ug/L throughout the site. The UC Davis Remedial Investigation (RI; Geomatrix, 2004) has presented these trends.

The observed groundwater monitoring data in HSU-2 confirms that the elevated levels of chromium in the area of UCD1-28 and UCD1-53 has had little if any affect on HSU-2 groundwater quality based on the HSU-2 monitoring data in this area (see data for UCD2-29 and UCD2-30). Of further significance, this area is also within the capture zone of the IRA extraction well EW2-1 where the predominant vertical gradient is downward throughout the year from operation of this extraction well in HSU-2.

While the source of chromium remains unexplained, the RPMs have requested that UC Davis delineate the lateral and vertical extent of the anomalous results from UCD1-28 and UCD1-53, with additional monitoring wells. UC Davis proposed additional wells in HSU-1 and HSU-2 down-gradient of UCD1-28 and UCD1-53. These additional HSU-1 and HSU-2 wells will help to define the down-gradient lateral and vertical extent of chromium in groundwater relative to UCD1-28.

3.0 FIELD METHODS

This field program complies with the RI/FS Work Plan (Dames & Moore, 1994) and project specific FSP (Dames & Moore, 1998a), QAPP (Dames & Moore, 1998b), and HSP (Dames & Moore, 1996) developed for remedial activities at LEHR/SCDS.

The field methods listed below describes the methods and any variances employed during the investigation as dictated by field conditions.

3.1 Hydropunch and CPT Analysis

The hydropunch and CPT locations were all advanced using Gregg Drilling, a California C-57 licensed drilling contractor, CPT drilling rig identified as C-6/DP-13. The hydropunch and CPT locations were advanced from October 1, 2007 through October 9, 2007. The location of these points are shown on Figure 3.

Hydropunch samples were collected using a stainless steel well screen. The screen was exposed to the subsurface upon reaching the target depth. This depth was determined to be approximately 65 to 70 feet below ground surface (ft. bgs) for HSU-1 and depths greater than 70 and up to 94 ft. bgs for HSU-2. HSU-2 sample depths were typically determined by observing a significant increase in required down-force to advance the rod through sands and gravels common to HSU-2. These depths were also verified with the lithologic log from CPT-Cr-2; the log is provided in Attachment A. Seven of the HSU-1 hydropunch locations did not produce sufficient water with the exposed 5-foot screened interval and required a modification to the screen length by continued removal of the push rods. The locations requiring modification to the sample interval included HPCr-7, -13, -15, -16, -18, -19, and -22; the sampling interval is summarized in Table 1. These boreholes were allowed additional time to produce water and provide a groundwater sample.

Analysis of the groundwater samples were expedited on a 24-hour turn around time to allow for placement of subsequent hydropunch locations and ultimately the locations of groundwater monitoring well pairs for HSU-1 and HSU-2. The groundwater samples were analyzed by California Laboratory Service (CLS), a California certified analytical laboratory, by EPA method 200.7 for total chromium only. The samples were collected from the hydropunch rods or temporary casings using a stainless steel bailer, which was decontaminated following each sample collection along with all hydropunch rods and screens. The samples were containerized in laboratory provided polyethylene containers and delivered directly to the lab by courier for filtration, preservation, and analysis.

3.2 Monitoring Well Drilling Method

Based on the results of CPT/hydropunch program, two well pairs, consisting of an HSU-1 and HSU-2 well, were installed. The well pairs included UCD1-55/UCD2-56 and UCD1-58/UCD2-57. The locations of these well pairs are shown on Figure 3. Following utility clearance, the wells were installed by hollow-stem auger methods as described in SOP 6.2.2, described the approved work plan. This section describes the methods used in drilling and sampling the borings for the proposed monitoring wells.

The drilling was performed by Gregg Drilling for well UCD1-55 and Cascade Drilling, for wells UCD1-55 and UCD1-58/UCD2-57, both drillers are C-57 California State licensed drillers. Similar drilling methods were used by both drillers. An 8-inch auger was used to advance borings while collecting a continuous core sample from HSU-2 boreholes or 18-inch California split spoon sample in 5-foot intervals for the HSU-1 boreholes. The 5-foot long continuous core barrel was advanced in 5-foot intervals, retrieved, and opened on a plastic sheet for lithologic logging. The split spoon samples were collected from the adjacent well pair for confirmation purposes. Difficult sample collection was experienced when encountering the sands and gravel of the upper HSU-2 unit. The flowing sands resulted in poor sample recovery and mechanical seizing of the core barrel within the auger flights.

3.3 Monitoring Well Design and Construction

As required in SOP 8.0, the monitoring wells were designed and installed under the supervision of an experienced geologist working under the supervision of a California Professional Geologist. The proposed wells were constructed according to SOP 8.0, similar to all other wells for the Site. The exact construction details for the HSU-1 and HSU-2 wells was based on the lithologic data collected from boring logs of the continuous core completed for the wells. Well construction details are summarized in Table 2 and lithologic and well completion logs are included in Attachment B.

3.4 Well Installation

Prior to installation of each well, all drilling equipment was decontaminated as described in SOP 3.0. SOP 8.3 describes the well installation methods used. These procedures specify the placement of the well casing, well screen, and filter pack. Following placement of the well and filter pack, preliminary development of the well was conducted to settle the filter pack prior to seal placement. The bentonite seal, cement/bentonite sanitary seal and surface completion are

described in SOP 8.3 and 8.4, respectively. Well development procedures were followed according to SOP 8.5. Well construction details are described below in the Section 4.0.

Monitoring wells UCD1-55 and UCD1-58, HSU-1, were constructed in 8-inch diameter hollow stem boreholes. These borings were observed to remain stable and allow for construction of the well and placement of the annulus materials. The HSU-1 wells were constructed with threaded 2-inch diameter schedule-40 polyvinyl chloride (PVC) casings and 0.01-inch slot screen made of stainless steel for UCD1-55 and PVC for UCD1-58. The screen intervals were 15 feet in length at depths of 47 to 62 and 55 to 70 ft. bgs for wells UCD1-55 and UCD1-58, respectively. Each had had a minimum of a 3-foot thick transition seal consisting of hydrated bentonite chips followed by a primary sanitary seal of neat Portland cement to the surface. UCD1-55 was completed at the surface with a locking compression cap on the well casing located within a traffic-rated flush-mount vault. UCD1-58 was completed at the surface with a locking compression cap located within an approximately 3-foot tall locking steel stove pipe stick-up with protective bollards.

The HSU-2 wells, UCD2-56 and UCD2-57, were completed following reaming of the 8-inch auger boring to a 10-inch diameter auger. A wooden plug was inserted into the end of the 10-inch auger flight tip, once the targeted drilling depth was reached the auger flights were filled with fresh water, the plug was knocked out, and the wells casing, screen, filter pack, and seals placed. This method was used to help counter the flowing sands encountered in HSU-2. The HSU-2 wells were constructed with threaded 4-inch diameter schedule-40 PVC casing and 0.02-inch slot PVC well screen. The screen intervals were 10 feet in length at depths of 78 to 88 and 87 to 97 ft. bgs for wells UCD2-56 and UCD2-57, respectively. Each had had a minimum of a 3-foot thick transition seal consisting of hydrated bentonite coated pellets followed by a primary sanitary seal of neat Portland cement to the surface. UCD2-56 was completed at the surface with a locking compression cap on the well casing located within a traffic-rated flush-mount vault. UCD2-57 was completed at the surface with a locking compression cap located within an approximately 3 foot tall locking steel stove pipe stick-up with protective bollards.

Each well was surveyed by a California licensed surveyor for latitude and longitude coordinates as well as top of casing elevation measured to the nearest 1/100th of a foot. The survey results are presented in Table 2.

Development of these wells consisted of a surging and bailing approximately 10 casing volumes of water at a minimum. The well development was observed using a field meter measuring pH, temperature, electrical conductivity, and turbidity. Development water was discharged to the land surface and allowed to infiltrate.

Management of decontamination liquids, cuttings, development and purge water was managed according to SOP 4.0. All downhole drilling equipment and tools were decontaminated as outlined in SOP 3.0 – Equipment Decontamination. Rinsate generated during steam cleaning and equipment decontamination was used to prepare cement for the sanitary seals.

3.5 Groundwater Sampling

A sample was collected from the newly installed wells and submitted for analysis of total chromium using USEPA Method 200.7. Groundwater samples were collected following the procedures described in SOP 1.0 and SOP 2.0, describing the operation of field meters. Sample containers were sealed, labeled, and placed in cooled ice chests for shipment as required in SOP 5.0. A project-specific Chain-of-Custody form was completed and accompanied the sample cooler. After being securely packed in coolers with ice, all samples were transported to California Laboratory Services (hydropunch samples) or Calscience (well samples) for analysis. The laboratory analytical reports are included in Attachment C.

4.0 RESULTS

This section presents the results of the hydropunch, CPT, and associated analytical results.

4.1 Hydropunch / CPT Installation and Analytical Results

The analytical methodology used for sample analysis is consistent with the methods employed during other investigations at the Site. These methods, compounds, detection limits, and quality control measures are detailed in the LEHR/SCDS QAPP (Dames & Moore, 1998b).

Figure 3 presents the locations of the hydropunch samples. A total of 24 hydropunch borings were advanced to varying depths and are summarized in Table 1. There were 19 hydropunch borehole advanced in HSU-1 and 5 in HSU-2. All boreholes yielded a groundwater sample from its' respective hydrostratigraphic unit except location HPCr-22. Sample location HPCr-22 was allowed to remain open for several hours yet no water or moisture was observed. A single CPT boring, CPT-Cr-2, was advanced to a depth of 92 feet below ground surface (ft. bgs) near hydropunch boring HPCr-2. The CPT was performed to verify lithology and depth of encountered water bearing zones and hydrostratigraphic units. CPT-Cr-2 log is included Attachment A.

Chromium results are posted on Figure 3 and summarized in Table 1. These results were used to direct the locations of subsequent borings and ultimately the location of the monitoring well pairs. The chromium analytical results ranged from <10 ug/L to 740 ug/L in 18 HSU-1 samples and 41 ug/L to 160 ug/L in 5 HSU-2 samples.

4.2 Monitoring Well Installation and Analytical Results

Well construction was similar for wells in like hydrostratigraphic units (HSU). The HSU-1 wells, UCD1-55 and UCD1-58 targeted the deeper portion of HSU-1 to observe the near contact conditions and facilitate the greatest amount of available groundwater. The HSU-2 wells, UCD2-56 and UCD2-57 were constructed near the upper portion of HSU-2 to observe the near contact conditions with HSU-1. Groundwater samples were collected immediately following well completion. This section presents the initial chromium analytical results.

Groundwater samples have been collected twice, December 3, 2007 and February 1, 2008, since their construction for confirmation purposes. Chromium was detected at concentrations of 29.9 and 77.5 ug/L in well pair UCD1-55 / UCD2-56, respectively; and 29.9 and 46.9 in well pair UCD1-58 / UCD2-57, respectively on December 3, 2007. Chromium was detected at

concentrations of 30.3 and 73.2 ug/L in well pair UCD1-55 / UCD2-56, respectively; and 22.1 and 44.6 in well pair UCD1-58 / UCD2-57, respectively on February 1, 2008.

The analytical data was validated according to the procedures presented in the LEHR/SCDS QAPP (Dames & Moore, 1998b). Any data qualified as a result of data validation will be discussed in all monitoring reports.

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Brown & Caldwell, 2003. 2002 Comprehensive Annual Water Monitoring Report. May

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URS, 2002. 2001 Annual Groundwater Treatment System and Water Monitoring Report. October.

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Attachment A

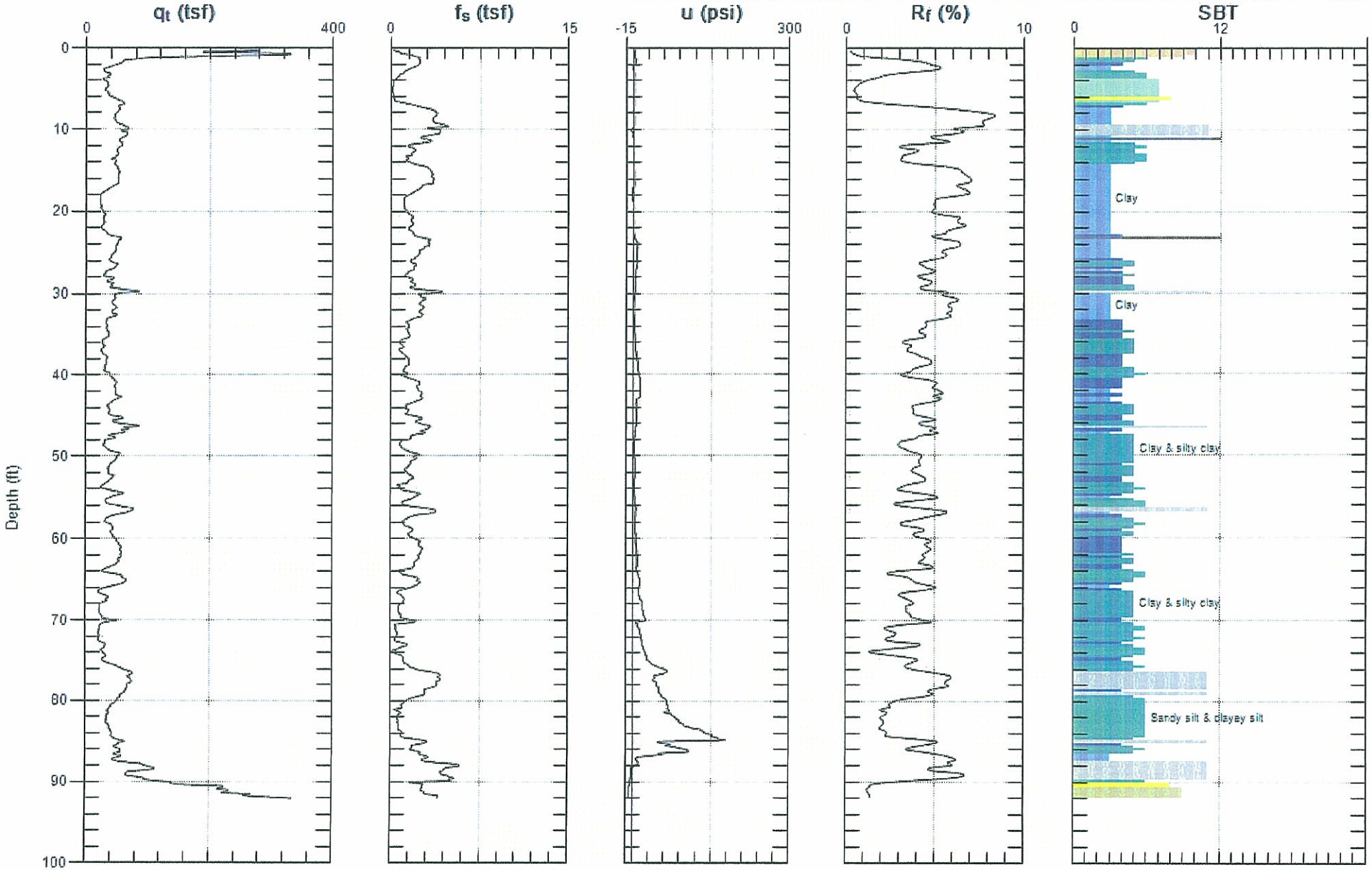
CPT Log

GREGG

BROWN & CALDWELL

Site: UC DAVIS/LEHR
Sounding: CPT-CR-2

Engineer: TIM GODWIN
Date: 10/3/2007 08:39



Max. Depth: 92.028 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Attachment B

Boring and Well Construction Logs

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD1-55** Sheet **1** of **2**

Boring Location: **LEHR Facility**		Elevation and Datum: **44.16**	
Drilling Contractor: **Gregg**	Driller: **Jeramy**	Date Started: **10/24/2007**	Date Finished: **10/24/2007**
Drilling Equipment: **D-9**	Borehole Diameter: **8"**	Completed Depth: (feet) **62.0**	Water Depth (Feet): Static/First Encountered **/55.0**
Sampling Method: **Split Spoon**		WELL CONSTRUCTION	
Drilling Method: **HSA**	Drilling Fluid: **None**	Type and Diameter of Well Casing: **2.0 PVC**	
Backfill Material: **Neat Cement**		Slot Size: **0.01**	Filter Material: **#2/16 Silica Sand**
Logged By: **T. Godwin**	Checked By: **J. Turner**	Development Method: **Surge and Bail**	

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
		Fill - Fine sand with gravel, hand augered, poor recovery, very unconsolidated.							Hand Augered
5	CL-ML	Silty Clay - Slightly moist, low plastiicty, minor fine sand (<o.1mm), dark chocolate brown.							Continuous Core
		Sandy Silt - 70% Silt, 20% fine sand (<0.1mm), 10% clay, minor plant roots, light reddish brown.							
10									Continuous Core
	ML	Clayey Silt - 70% Silt, 20% clay, 10% fine sand, low plasticity, moist, light reddish brown.							
15		Sandy Silt - 70% Silt, 20% fine sand (<0.1mm), 10% clay, minor plant roots, light reddish brown, minor white mottling around roots.							Continuous Core
20	SM	Silty Sand - 60% fine Sand (<0.2mm), 30% silt, 10% clay, slightly moist to dry, reddish brown.							Continuous Core
	SP	Sand - fine reddish brown sand (0.1 to 0.3mm), moderatrelyrounded, slightly moist.							
25	CL	Clay - dense greenish reddish brown clay, low plasticity, slightly moist, minor silt. -white mottling -white mottling							Continuous Core
30		Clayey Silt - minor fine sand, slightly moist to dry, minor cemented nodules whitish in color.							Continuous Core
35		- very dense mottled grayish green in reddish brown matrix.							Continuous Core
40		- very dense mottled grayish green in reddish brown matrix.							Continuous Core
		- very dense mottled grayish green in reddish brown matrix. - moist							
45	ML	- very moist							Continuous Core

BL UCDAVISLEHR.GPJ 3/3/08

BROWN AND CALDWELL

BORING LOG

Project Name: UC Davis LEHR Facility Project Number: 131261

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: UCD1-55 Sheet 2 of 2

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
50									Continuous Core
55									Continuous Core
60									Continuous Core
65									
70									
75									
80									
85									
90									
95									
100									
105									
110									

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD1-58** Sheet **1** of **2**

Boring Location: **LEHR Facility**		Elevation and Datum: **47.85**	
Drilling Contractor: **Cascade**	Driller: **Jeff**	Date Started: **11/2/2007**	Date Finished: **11/2/2007**
Drilling Equipment: **CME-1050**	Borehole Diameter: **8"**	Completed Depth: (feet) **72.0**	Water Depth (Feet): Static/First Encountered **/52.0**
Sampling Method: **Split Spoon**		WELL CONSTRUCTION	
Drilling Method: **HSA**	Drilling Fluid: **None**	Type and Diameter of Well Casing: **2.0 PVC**	
Backfill Material: **Neat Cement**		Slot Size: **0.01**	Filter Material: **#2/16 Silica Sand**
Logged By: **T. Godwin**	Checked By: **J. Turner**	Development Method: **Surge and Bail**	

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
	SM	Fine Silty Sand - 70% Sand (<0.2mm), 30% Silt, Dry, Hand Augered.							Hand Augered
5	CL-ML	Silty Clay - Moist, very dark chocolate brown, low to moderate plasticity, minor root casts.							Continuous Core
10	ML	Clayey Silt with fine Sand - 60% Silt, 30% Clay, 10% fine sand(<0.1mm), moist, slightly plastic, light brown, minor root casts, minor dark mottling (MnO/carbon?)							Continuous Core
		- very moist at 13'							
15		- moist, reddish brown, slight black mottling (carbon?), platy fracture.							Continuous Core
20		- platy fractures have black mineralization on fracture surfaces (MnO?). Minor white mottling/mineralization (calcareous).							Continuous Core
25		- increased white mottling/ mineralization - increased fine sand 20% (<0.2mm), poor recovery, moist, white mottling in reddish brown matrix. - clayey silt, as above, very moist.							Continuous Core
30		- dry, friable, white veining.							Continuous Core
35	CL-ML	Silty Clay - moist, moderately plastic, trace very fine sand (<0.1mm), grayish greenish brown, reddish mottling with black mineralization or carbon on platy fracture surfaces, minor whitish veining.							Continuous Core
40									Continuous Core
45									Continuous Core
	ML	Sandy Silt with clay - 70% Silt, 20% fine sand (<0.2mm), 10% clay, very wet.							

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD1-58** Sheet **2** of **2**

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
50	CL-ML	Silty Clay - moist, moderately plastic, trace very fine sand (<0.1mm), grayish greenish brown, reddish mottling with black mineralization or carbon on platy fracture surfaces, minor whitish veining.							Continuous Core
	ML	Clayey Silt with fine Sand - 60% Silt, 30% Clay, 10% fine Sand (<0.2mm), reddish brown with greenish mottling, dense, moist.							
55	ML	Fine Sandy Silt with Clay - 60% Silt, 30% Sand(<0.2mm), 10% Clay, saturated.							Continuous Core
60									Continuous Core
65	SC	Silty Clayey Sand - 60% fine Sand (<0.2mm), 30% Clay, 10% Silt, slightly plastic, reddish brown, very moist to saturated, minor greenish mottling.							Continuous Core
	SP	Sand - 90% fine sand (<0.2mm), 10% silt or finer, well sorted, saturated.							
70	SC	Silty Clayey Sand - 60% fine Sand (<0.2mm), 30% Clay, 10% Silt, slightly plastic, reddish brown, very moist to saturated, minor greenish mottling.							
75									
80									
85									
90									
95									
100									
105									
110									

BL UCDAVISLEHR.GPJ 3/3/08

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD2-56** Sheet **1** of **2**

Boring Location: **LEHR Facility**		Elevation and Datum: **44.77**	
Drilling Contractor: **Gregg/Cascade**	Driller: **Jeramy/Jeff**	Date Started: **11/5/2007**	Date Finished: **11/5/2007**
Drilling Equipment: **CME-1050**	Borehole Diameter: **10"**	Completed Depth: (feet) **90.0**	Water Depth (Feet): Static/First Encountered **75.00/55.0**
Sampling Method: **Continuous**		WELL CONSTRUCTION	
Drilling Method: **HSA**	Drilling Fluid: **None**	Type and Diameter of Well Casing: **4.0 PVC**	
Backfill Material: **Neat Cement**		Slot Size: **0.02**	Filter Material: **#3 Silica Sand**
Logged By: **T. Godwin**	Checked By: **J. Turner**	Development Method: **Surge and Bail**	

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
		Fill - Fine sand with gravel, hand augered, poor recovery, very unconsolidated.							Hand Augered
5	CL-ML	Silty Clay - Slightly moist, low plastiicty, minor fine sand (<o.1mm), dark chocolate brown.							Continuous Core
		Sandy Silt - 70% Silt, 20% fine sand (<0.1mm), 10% clay, minor plant roots, light reddish brown.							
10									Continuous Core
	ML	Clayey Silt - 70% Silt, 20% clay, 10% fine sand, low plasticity, moist, light reddish brown.							
15		Sandy Silt - 70% Silt, 20% fine sand (<0.1mm), 10% clay, minor plant roots, light reddish brown, minor white mottling around roots.							Continuous Core
20	SM	Silty Sand - 60% fine Sand (<0.2mm), 30% silt, 10% clay, slightly moist to dry, reddish brown.							Continuous Core
	SP	Sand - fine reddish brown sand (0.1 to 0.3mm), moderatrelyrounded, slightly moist.							
25	CL	Clay - dense greenish reddish brown clay, low plasticity, slightly moist, minor silt. -white mottling -white mottling							Continuous Core
30		Clayey Silt - minor fine sand, slightly moist to dry, minor cemented nodules whitish in color.							Continuous Core
35		- very dense mottled grayish green in reddish brown matrix.							Continuous Core
40		- very dense mottled grayish green in reddish brown matrix.							Continuous Core
		- very dense mottled grayish green in reddish brown matrix. - moist							
45		- very moist							Continuous Core

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD2-56** Sheet **2** of **2**

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
50	ML								Continuous Core
55									Continuous Core
60									Continuous Core
65									Continuous Core
		Sandy Silt - 60% silt, 30% fine sand (<0.1mm), 10%clay, light reddish brown with grayish green mottling, very moist, minor charcoal pieces.							
70									Continuous Core
75	SW	Sand - 75% sand (<0.2 to 6mm), 25% silt, very moist to saturated, clasts rounded, minor broken rounded gravel to 1 cm, dark reddish brown.							Continuous Core
80		- Poor recovery, loose sand.							Split spoon Split spoon
85	SP	Fine Sand - Well sorted sand (0.2 to 0.6mm), well rounded, minor silt, saturated, very loose, unconsolidated, hole sloughing/flowing sand.							Split spoon
90									
95									
100									
105									
110									

BL UCDAVISLEHR.GPJ 3/3/08

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD2-57** Sheet **1** of **2**

Boring Location: **LEHR Facility**		Elevation and Datum: **47.85**	
Drilling Contractor: **Cascade**	Driller: **Jeff**	Date Started: **11/1/2007**	Date Finished: **11/2/2007**
Drilling Equipment: **CME-1050**	Borehole Diameter: **10"**	Completed Depth: (feet) **100.0**	Water Depth (Feet): Static/First Encountered **83.00/53.0**
Sampling Method: **Continuous**		WELL CONSTRUCTION	
Drilling Method: **HSA**	Drilling Fluid: **None**	Type and Diameter of Well Casing: **4.0 PVC**	
Backfill Material: **Neat Cement**		Slot Size: **0.02**	Filter Material: **#3 Silica Sand**
Logged By: **T. Godwin**	Checked By: **J. Turner**	Development Method: **Surge and Bail**	

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
	SM	Fine Silty Sand - 70% Sand (<0.2mm), 30% Silt, Dry, Hand Augered.							Hand Augered
5	CL-ML	Silty Clay - Moist, very dark chocolate brown, low to moderate plasticity, minor root casts.							Continuous Core
10	ML	Clayey Silt with fine Sand - 60% Silt, 30% Clay, 10% fine sand(<0.1mm), moist, slightly plastic, light brown, minor root casts, minor dark mottling (MnO/carbon?)							Continuous Core
		- very moist at 13'							
15		- moist, reddish brown, slight black mottling (carbon?), platy fracture.							Continuous Core
20		- platy fractures have black mineralization on fracture surfaces (MnO?). Minor white mottling/mineralization (calcareous).							Continuous Core
25		- increased white mottling/ mineralization - increased fine sand 20% (<0.2mm), poor recovery, moist, white mottling in reddish brown matrix. - clayey silt, as above, very moist.							Continuous Core
30		- dry, friable, white veining.							Continuous Core
35	CL-ML	Silty Clay - moist, moderately plastic, trace very fine sand (<0.1mm), grayish greenish brown, reddish mottling with black mineralization or carbon on platy fracture surfaces, minor whitish veining.							Continuous Core
40									Continuous Core
45									Continuous Core
	ML	Sandy Silt with clay - 70% Silt, 20% fine sand (<0.2mm), 10% clay, very wet.							

BROWN AND CALDWELL

BORING LOG

Project Name: **UC Davis LEHR Facility** Project Number: **131261**

Soil Boring ☐ Hand Auger Boring ☐ Monitoring Well ☒ Boring/Well Number: **UCD2-57** Sheet **2** of **2**

Depth (feet)	USCS Soil Type	Description (group name, gradation [%gravel, %sands, %fines] munsell color, color, soil characteristics)	Blow Counts	Sample No.	Graphic Log: Sample	Graphic Log: Lithology	Graphic Log: Boring/Well Completion	PID Readings PPM	Remarks
50	CL-ML	Silty Clay - moist, moderately plastic, trace very fine sand (<0.1mm), grayish greenish brown, reddish mottling with black mineralization or carbon on platy fracture surfaces, minor whitish veining.							Continuous Core
	ML	Clayey Silt with fine Sand - 60% Silt, 30% Clay, 10% fine Sand (<0.2mm), reddish brown with greenish mottling, dense, moist.							
55	ML	Fine Sandy Silt with Clay - 60% Silt, 30% Sand(<0.2mm), 10% Clay, saturated.							Continuous Core
60									Continuous Core
65	SC	Silty Clayey Sand - 60% fine Sand (<0.2mm), 30% Clay, 10% Silt, slightly plastic, reddish brown, very moist to saturated, minor greenish mottling.							Continuous Core
	SP	Sand - 90% fine sand (<0.2mm), 10% silt or finer, well sorted, saturated.							
70	SC	Silty Clayey Sand - 60% fine Sand (<0.2mm), 30% Clay, 10% Silt, slightly plastic, reddish brown, very moist to saturated, minor greenish mottling.							Continuous Core
	CL	Silty Clay - 90% finer than silt, 10% fine sand (<0.2mm), very dense, dark reddish brown with greenish mottling, minor black mineralization.							
75	ML	Clayey Silt - 60% Silt, 25% Clay, 15% fine Sand (<0.1mm), light reddish brown with greenish mottling, very moist, black specs (carbon?), minor white calcareous veining.							Continuous Core
80									Continuous Core
85	SW	Sand - 90% Sand (<0.5mm to 2mm), 10% pebbles (to 1cm), well rounded, very loose, heaving, fine grained metasedimentary and metavolcanic clasts, saturated.							
90									
95									
100									
105									
110									

Attachment C

Laboratory Analytical Reports

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 04, 2008

CLS Work Order #: CQJ0031
COC #: 90333

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/01/07 14:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:37

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0031**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90333

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0031 LOG NO. 90333

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5370
PROJECT NAME: LEHR - Chromium
SAMPLED BY: Tim Godwin
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: UC DAVIS, DAVIS CA

CLIENT JOB NUMBER: 131216
DESTINATION LABORATORY: ☑ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID: _____
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME: 1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS OR ALT. ID:
10/1/07	1030	HPCr-3	H_2O	1	500 ml Poly	3	✓	ASAP				
	1035	DUP1		1		3	✓	ASAP				
	1220	HPCr-4		1		3	✓	ASAP				
	1330	HPCr-2		1		3	✓	ASAP				

~~LAST LINE~~ [illegible]
Filter prior to analysis. Results needed AM 10/2/07 - See Scott Pieters

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = CO_3 (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
[signature]	Tim Godwin Brown & Caldwell	10/1/07 1330	[signature]	Joe Turner / Brown & Caldwell
[signature]	Joe Turner / Brown & Caldwell	10/1/07 1410		

RECD AT LAB BY: Will Orellana DATE/TIME: 10/1/07 1410 CONDITIONS / COMMENTS: 5°
SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:37

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0031**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90333

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCR-3 (CQJ0031-01) Water Sampled: 10/01/07 10:30 Received: 10/01/07 14:10									
Chromium	**160**	10	µg/L	1	CQ08174	10/02/07	10/02/07	EPA 200.7	
DUP1 (CQJ0031-02) Water Sampled: 10/01/07 10:35 Received: 10/01/07 14:10									
Chromium	**160**	10	µg/L	1	CQ08174	10/02/07	10/02/07	EPA 200.7	
HPCR-4 (CQJ0031-03) Water Sampled: 10/01/07 12:20 Received: 10/01/07 14:10									
Chromium	**49**	10	µg/L	1	CQ08174	10/02/07	10/02/07	EPA 200.7	
HPCR-2 (CQJ0031-04) Water Sampled: 10/01/07 13:30 Received: 10/01/07 14:10									
Chromium	**280**	10	µg/L	1	CQ08174	10/02/07	10/02/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:37

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0031**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90333

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08174 - EPA 3010A										
Blank (CQ08174-BLK1)				Prepared & Analyzed: 10/02/07						
Chromium	ND	10	µg/L							
LCS (CQ08174-BS1)				Prepared & Analyzed: 10/02/07						
Chromium	214	10	µg/L	200		107	80-120			
LCS Dup (CQ08174-BSD1)				Prepared & Analyzed: 10/02/07						
Chromium	211	10	µg/L	200		106	80-120	1.13	20	
Matrix Spike (CQ08174-MS1)		**Source: CQJ0064-01**		Prepared & Analyzed: 10/02/07						
Chromium	216	10	µg/L	200	ND	108	75-125			
Matrix Spike Dup (CQ08174-MSD1)		**Source: CQJ0064-01**		Prepared & Analyzed: 10/02/07						
Chromium	214	10	µg/L	200	ND	107	75-125	1.07	25	

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:37

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0031**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90333

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

March 04, 2008

CLS Work Order #: CQJ0057
COC #: 90334

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/01/07 16:41. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:39

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0057**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90334

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0057 LOG NO. 90334

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5334
PROJECT NAME: LEHR Chromium Investigation
SAMPLED BY: Tim Godwin
JOB DESCRIPTION: Chromium Investigation - Grab Groundwater
SITE LOCATION: UC Davis, Davis, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ✓ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID: _____
COMPOSITE:
FIELD CONDITIONS:

TURN AROUND TIME: (1 DAY) 2 DAY 5 DAY 10 DAY
SPECIAL INSTRUCTIONS OR ALT. ID:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME
10/1/07	1430	HPCr-1	H_2O	1	500 ml poly	3	✓	ASAP
~~10/1/07~~	~~1555~~	~~HPCr-12~~						~~ASAP~~

~~Tim Godwin~~ ~~LAST LINE~~

Filter Prior to Analysis - Results Needed As soon As possible 10/2/07 - See Scott Pickers

1 Sample only on this COC, HPCr-1. HPCr-12 did not produce enough water will be submitted on another COC.

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) ~~= NaOH~~ (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Tim Godwin	Tim Godwin - Brown & Caldwell	10/1/07 1641		

REC'D AT LAB BY: JonR DATE / TIME: 10-1-7 1641 CONDITIONS / COMMENTS:
SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:39

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0057**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90334

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCr-1 (CQJ0057-01) Water Sampled: 10/01/07 14:30 Received: 10/01/07 16:41									
Chromium	**55**	10	µg/L	1	CQ08174	10/02/07	10/02/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 03/04/08 15:39

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0057**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90334

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08174 - EPA 3010A										
Blank (CQ08174-BLK1)				Prepared & Analyzed: 10/02/07						
Chromium	ND	10	µg/L							
LCS (CQ08174-BS1)				Prepared & Analyzed: 10/02/07						
Chromium	214	10	µg/L	200		107	80-120			
LCS Dup (CQ08174-BSD1)				Prepared & Analyzed: 10/02/07						
Chromium	211	10	µg/L	200		106	80-120	1.13	20	
Matrix Spike (CQ08174-MS1)		**Source: CQJ0064-01**		Prepared & Analyzed: 10/02/07						
Chromium	216	10	µg/L	200	ND	108	75-125			
Matrix Spike Dup (CQ08174-MSD1)		**Source: CQJ0064-01**		Prepared & Analyzed: 10/02/07						
Chromium	214	10	µg/L	200	ND	107	75-125	1.07	25	

CALIFORNIA LABORATORY SERVICES

03/04/08 15:39

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131216	**CLS Work Order #: CQJ0057**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90334

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 11, 2007

CLS Work Order #: CQJ0096
COC #: 90335

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/02/07 15:00. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:01

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0096**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90335

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0096 LOG NO. 90335

REPORT TO:
NAME AND ADDRESS: JOE TURNER - BROWN & CALDWELL, 10540 White Rock Rd. #180, RANCHO CORDOVA, CA 95670
PROJECT MANAGER: JOE TURNER PHONE#: 916-853-5334
PROJECT NAME: LEHR-Chromium Investigation
SAMPLED BY: Tim GODWIN
JOB DESCRIPTION: LEHR - Chromium INVESTIGATION
SITE LOCATION: UC DAVIS, DAVIS, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ✓ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID: _____
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME: 1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS / OR ALT. ID:
10/2/07	725	HPCr-12	H_2O	1	500ml Poly	3	✓	ASAP				
	850	HPCr-11					✓	ASAP				
	955	HPCr-5					✓	ASAP				
	1240	HPCr-10					✓	ASAP				
	1250	HPCr-9					✓	ASAP				
	1420	HPCr-8					✓	ASAP				

~~LAST LINE~~ [illegible]

Filter Prior to Analysis
NEED RESULTS AM 10/3/07 ASAP.
Thank you!

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
[signature]	Tim Godwin / Brown & Caldwell	10/2/07 1430		
[signature]	Angela Brosh / BTL	10/2/07 1500		

RECD AT LAB BY: [signature] DATE / TIME: 10/2/07 1500 CONDITIONS / COMMENTS: 5

SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER _____ AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:01

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0096**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90335

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCR-12 (CQJ0096-01) Water Sampled: 10/02/07 07:25 Received: 10/02/07 15:00									
Chromium	**76**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	
HPCR-11 (CQJ0096-02) Water Sampled: 10/02/07 08:50 Received: 10/02/07 15:00									
Chromium	**740**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	
HPCR-5 (CQJ0096-03) Water Sampled: 10/02/07 09:55 Received: 10/02/07 15:00									
Chromium	**310**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	
HPCR-10 (CQJ0096-04) Water Sampled: 10/02/07 12:40 Received: 10/02/07 15:00									
Chromium	**82**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	
HPCR-9 (CQJ0096-05) Water Sampled: 10/02/07 12:50 Received: 10/02/07 15:00									
Chromium	**37**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	
HPCR-8 (CQJ0096-06) Water Sampled: 10/02/07 14:20 Received: 10/02/07 15:00									
Chromium	**32**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:01

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0096**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90335

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08216 - EPA 3010A										
Blank (CQ08216-BLK1)				Prepared & Analyzed: 10/03/07						
Chromium	ND	10	µg/L							
LCS (CQ08216-BS1)				Prepared & Analyzed: 10/03/07						
Chromium	208	10	µg/L	200		104	80-120			
LCS Dup (CQ08216-BSD1)				Prepared & Analyzed: 10/03/07						
Chromium	203	10	µg/L	200		102	80-120	2.14	20	
Matrix Spike (CQ08216-MS1)		**Source: CQJ0111-01**		Prepared & Analyzed: 10/03/07						
Chromium	204	10	µg/L	200	ND	102	75-125			
Matrix Spike Dup (CQ08216-MSD1)		**Source: CQJ0111-01**		Prepared & Analyzed: 10/03/07						
Chromium	206	10	µg/L	200	ND	103	75-125	0.878	25	

CALIFORNIA LABORATORY SERVICES

10/11/07 09:01

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0096**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90335

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 11, 2007

CLS Work Order #: CQJ0110
COC #: 90610

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/02/07 17:20. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0110**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90610

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0110 LOG NO. 90610

REPORT TO:
NAME AND ADDRESS: JOE TURNER - BROWN & CALDWELL, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: JOE TURNER PHONE#: 916-853-5334
PROJECT NAME: LEHR - Chromium Investigation
SAMPLED BY: TIM GODWIN
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: UC DAVIS-LEHR, DAVIS, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ☑ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID:
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Diss. Total Chromium	TURN AROUND TIME: 1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS OR ALT. ID:
10/2/07	16:00	HPCr-7	H_2O	1	500 ml Poly	3	✓	ASAP				

~~LAST LINE~~ Tim Godwin

FILTER PRIOR to ANALYSIS
NEED RESULTS 10/3/07 ASAP
Thanks.

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Tim Godwin	TIM GODWIN / Brown & Caldwell	10/2/07 1720		

REC'D AT LAB BY: JonR DATE / TIME: 10-2-7 1720 CONDITIONS / COMMENTS:
SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0110**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90610

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCr-7 (CQJ0110-01) Water Sampled: 10/02/07 16:00 Received: 10/02/07 17:20									
Chromium	**160**	10	µg/L	1	CQ08216	10/03/07	10/03/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 10/11/07 09:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0110**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90610

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08216 - EPA 3010A										
Blank (CQ08216-BLK1)				Prepared & Analyzed: 10/03/07						
Chromium	ND	10	µg/L							
LCS (CQ08216-BS1)				Prepared & Analyzed: 10/03/07						
Chromium	208	10	µg/L	200		104	80-120			
LCS Dup (CQ08216-BSD1)				Prepared & Analyzed: 10/03/07						
Chromium	203	10	µg/L	200		102	80-120	2.14	20	
Matrix Spike (CQ08216-MS1)		**Source: CQJ0111-01**		Prepared & Analyzed: 10/03/07						
Chromium	204	10	µg/L	200	ND	102	75-125			
Matrix Spike Dup (CQ08216-MSD1)		**Source: CQJ0111-01**		Prepared & Analyzed: 10/03/07						
Chromium	206	10	µg/L	200	ND	103	75-125	0.878	25	

CALIFORNIA LABORATORY SERVICES

10/11/07 09:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0110**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90610

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 10, 2007

CLS Work Order #: CQJ0140
COC #: 90611

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/03/07 14:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0140**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90611

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0140 LOG NO. 90611

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5334
PROJECT NAME: LEAR - Chromium Investigation
SAMPLED BY: Tim Godwin
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: UC DAVIS, DAVIS, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ☒ CLS (916) 638-7301, 3249 FITZGERALD RD., RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID:
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME (1 DAY / 2 DAY / 5 DAY / 10 DAY)	SPECIAL INSTRUCTIONS OR ALT. ID:
10/3/07	820	HPCr-6	H_2O	1	500 ml Poly	3	✓	ASAP	
↓	1110	HPCr-14	↓	↓	↓	↓	✓	ASAP	

LAST LINE

FILTER PRIOR to ANALYSIS - SEE Scott Peters

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS

PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
	Tim Godwin / Brown & Caldwell	10/3/07 1250		
	Angela Brush / B+C	10/3/07 14:10		

REC'D AT LAB BY: DATE / TIME: 10/3/07 1410 CONDITIONS / COMMENTS: 5°

SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0140**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90611

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCR-6 (CQJ0140-01) Water Sampled: 10/03/07 08:20 Received: 10/03/07 14:10									
Chromium	**140**	10	µg/L	1	CQ08255	10/04/07	10/04/07	EPA 200.7	
HPCR-14 (CQJ0140-02) Water Sampled: 10/03/07 11:10 Received: 10/03/07 14:10									
Chromium	**41**	10	µg/L	1	CQ08255	10/04/07	10/04/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0140**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90611

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08255 - EPA 3010A										
Blank (CQ08255-BLK1)				Prepared & Analyzed: 10/04/07						
Chromium	ND	10	µg/L							
LCS (CQ08255-BS1)				Prepared & Analyzed: 10/04/07						
Chromium	211	10	µg/L	200		105	80-120			
LCS Dup (CQ08255-BSD1)				Prepared & Analyzed: 10/04/07						
Chromium	209	10	µg/L	200		105	80-120	0.714	20	
Matrix Spike (CQ08255-MS1)		**Source: CQJ0121-01**		Prepared & Analyzed: 10/04/07						
Chromium	206	10	µg/L	200	ND	103	75-125			
Matrix Spike Dup (CQ08255-MSD1)		**Source: CQJ0121-01**		Prepared & Analyzed: 10/04/07						
Chromium	190	10	µg/L	200	ND	95.0	75-125	7.84	25	

CALIFORNIA LABORATORY SERVICES

10/10/07 12:24

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0140**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90611

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 10, 2007

CLS Work Order #: CQJ0161
COC #: 90612

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/03/07 17:17. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:28

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0161**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90612

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0161 LOG NO. 90612

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5334
PROJECT NAME: LEHR - Chromium Investigation
SAMPLED BY: Tim Godwin
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: UC Davis, Davis, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: [X] CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 [ ] OTHER

GEOTRACKER: EDF REPORT [ ] YES [ ] NO
GLOBAL ID:
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME: 1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS OR ALT. ID:
10/3/07	1340	HPCr-13	H_2O	1	500 ml Poly	3	✓	ASAP				
↓	1620	HPCr-15	↓	↓	↓	↓	✓	ASAP				

LAST LINE

Filter Prior to analysis.

LAB

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
	Tim Godwin / Brown & Caldwell	10/3/07 1717		

REC'D AT LAB BY: JonR DATE / TIME: 10-3-7 1717 CONDITIONS / COMMENTS:
SHIPPED BY: [ ] FED X [ ] UPS [ ] OTHER AIR BILL #

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:28

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0161**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90612

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCr-13 (CQJ0161-01) Water	**Sampled: 10/03/07 13:40**	**Received: 10/03/07 17:17**							
Chromium	ND	10	µg/L	1	CQ08255	10/04/07	10/04/07	EPA 200.7	
HPCr-15 (CQJ0161-02) Water	**Sampled: 10/03/07 16:20**	**Received: 10/03/07 17:17**							
Chromium	**34**	10	µg/L	1	CQ08255	10/04/07	10/04/07	EPA 200.7	

CALIFORNIA LABORATORY SERVICES

 10/10/07 12:28

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0161**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90612

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08255 - EPA 3010A										
Blank (CQ08255-BLK1)				Prepared & Analyzed: 10/04/07						
Chromium	ND	10	µg/L							
LCS (CQ08255-BS1)				Prepared & Analyzed: 10/04/07						
Chromium	211	10	µg/L	200		105	80-120			
LCS Dup (CQ08255-BSD1)				Prepared & Analyzed: 10/04/07						
Chromium	209	10	µg/L	200		105	80-120	0.714	20	
Matrix Spike (CQ08255-MS1)		**Source: CQJ0121-01**		Prepared & Analyzed: 10/04/07						
Chromium	206	10	µg/L	200	ND	103	75-125			
Matrix Spike Dup (CQ08255-MSD1)		**Source: CQJ0121-01**		Prepared & Analyzed: 10/04/07						
Chromium	190	10	µg/L	200	ND	95.0	75-125	7.84	25	

CALIFORNIA LABORATORY SERVICES

10/10/07 12:28

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0161**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90612

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 18, 2007

CLS Work Order #: CQJ0309
COC #: 90613

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/08/07 17:44. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:10

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0309**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90613

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0309 LOG NO. 90613

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5334
PROJECT NAME: LEHR - Chromium Investigation
SAMPLED BY: Tim Godwin
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: LEHR UCDAVIS, DAVIS, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ✓ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO GLOBAL ID:
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	ANALYSIS REQUESTED: Dissolved Total Chromium	TURN AROUND TIME: 1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS OR ALT. ID:
10/8/07	1250	HPCr-16	H_2O	1	500 ml Poly	3	✓	ASAP				
	1115	HPCr-20					✓	ASAP				
	1700	HPCr-18					✓	ASAP				
	1650	HPCr-17					✓	ASAP				
	1625	HPCr-19					✓	ASAP				

Tim Godwin LAST LINE

FILTER PRIOR to ANALYSIS.
NEED RESULTS 10/9/07 AM.
THANKS

INVOICE TO:
P.O. #:
QUOTE #:

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCl (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Tim Godwin	Tim Godwin/Brown & Caldwell	10/8/07 1744		

RECD AT LAB BY: Will Vallana DATE / TIME: 10/8/07 1744 CONDITIONS / COMMENTS: 5°

SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER AIR BILL #

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:10

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0309**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90613

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCR-16 (CQJ0309-01) Water	**Sampled: 10/08/07 12:50**	**Received: 10/08/07 17:44**							
Chromium	**280**	10	µg/L	1	CQ08358	10/09/07	10/09/07	EPA 200.7	A-COM
HPCR-20 (CQJ0309-02) Water	**Sampled: 10/08/07 11:15**	**Received: 10/08/07 17:44**							
Chromium	**150**	10	µg/L	1	CQ08358	10/09/07	10/09/07	EPA 200.7	A-COM
HPCR-18 (CQJ0309-03) Water	**Sampled: 10/08/07 17:00**	**Received: 10/08/07 17:44**							
Chromium	**41**	10	µg/L	1	CQ08358	10/09/07	10/09/07	EPA 200.7	A-COM
HPCR-17 (CQJ0309-04) Water	**Sampled: 10/08/07 16:50**	**Received: 10/08/07 17:44**							
Chromium	**230**	10	µg/L	1	CQ08358	10/09/07	10/09/07	EPA 200.7	A-COM
HPCR-19 (CQJ0309-05) Water	**Sampled: 10/08/07 16:35**	**Received: 10/08/07 17:44**							
Chromium	**66**	10	µg/L	1	CQ08358	10/09/07	10/09/07	EPA 200.7	A-COM

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:10

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0309**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90613

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08358 - EPA 3020A										
Blank (CQ08358-BLK1)				Prepared & Analyzed: 10/09/07						
Chromium	ND	10	µg/L							
LCS (CQ08358-BS1)				Prepared & Analyzed: 10/09/07						
Chromium	97.0	10	µg/L	100		97.0	80-120			
LCS Dup (CQ08358-BSD1)				Prepared & Analyzed: 10/09/07						
Chromium	94.0	10	µg/L	100		94.0	80-120	3.14	20	
Matrix Spike (CQ08358-MS1)		**Source: CQJ0284-01**		Prepared & Analyzed: 10/09/07						
Chromium	88.9	10	µg/L	100	ND	88.9	75-125			
Matrix Spike Dup (CQ08358-MSD1)		**Source: CQJ0284-01**		Prepared & Analyzed: 10/09/07						
Chromium	88.0	10	µg/L	100	ND	88.0	75-125	1.06	25	

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:10

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0309**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90613

Notes and Definitions

A-COM	Run by ICP-MS
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

CALIFORNIA LABORATORY SERVICES

3249 Fitzgerald Road Rancho Cordova, CA 95742

October 18, 2007

CLS Work Order #: CQJ0349
COC #: 90614

Joseph Turner
Brown & Caldwell-Rancho Cordova
10540 White Rock Rd. Suite 180
Rancho Cordova, CA 95670

Project Name: LEHR - Chromium

Enclosed are the results of analyses for samples received by the laboratory on 10/09/07 17:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,

James Liang, Ph.D.
Laboratory Director

CA DOHS ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:13

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0349**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90614

CLS - Labs CHAIN OF CUSTODY CLS ID No.: CQJ0349 LOG NO. 90614

REPORT TO:
NAME AND ADDRESS: Joe Turner - Brown & Caldwell, 10540 White Rock Rd. #180, Rancho Cordova, CA 95670
PROJECT MANAGER: Joe Turner PHONE#: 916-853-5334
PROJECT NAME: LEHR-Chromium Investigation
SAMPLED BY: T. Godwin
JOB DESCRIPTION: Chromium Investigation
SITE LOCATION: LEHR-UC Davis, Davis, CA

CLIENT JOB NUMBER: 131261
DESTINATION LABORATORY: ☑ CLS (916) 638-7301, 3249 FITZGERALD RD. RANCHO CORDOVA, CA. 95742 ☐ OTHER

GEOTRACKER: EDF REPORT ☐ YES ☐ NO
GLOBAL ID:
COMPOSITE:
FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Dissolved Total Chromium	1 DAY	2 DAY	5 DAY	10 DAY	SPECIAL INSTRUCTIONS OR ALT. ID:
10/9/07	1035	HPCr-21	H_2O	1	500 ml Poly	3	✓	✓				
↓	1335	HPCr-23	↓	↓	↓	↓	✓	✓				
↓	1600	HPCr-24	↓	↓	↓	↓	✓	✓				

Tim Godwin LAST LINE

FILTER PRIOR TO ANALYSIS.
Thanks.

INVOICE TO:
P.O. #
QUOTE #

SUSPECTED CONSTITUENTS
PRESERVATIVES: (1) HCL (2) HNO_3 (3) = COLD (4) = NaOH (5) = H_2SO_4 (6) = $Na_2S_2O_3$ (7) =

RELINQUISHED BY (SIGN)	PRINT NAME / COMPANY	DATE / TIME	RECEIVED BY (SIGN)	PRINT NAME / COMPANY
Tim Godwin	Tim Godwin / Brown & Caldwell	10/9/07 1730		

RECD AT LAB BY: Will Orellana DATE / TIME: 10/9/07 1730 CONDITIONS / COMMENTS: 5°

SHIPPED BY: ☐ FED X ☐ UPS ☐ OTHER AIR BILL #

LAB

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:13

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0349**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90614

Metals (Dissolved) by EPA 200 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
HPCr-21 (CQJ0349-01) Water	**Sampled: 10/09/07 10:35**	**Received: 10/09/07 17:30**							
Chromium	**66**	10	µg/L	1	CQ08395	10/10/07	10/10/07	EPA 200.7	A-COM
HPCr-23 (CQJ0349-02) Water	**Sampled: 10/09/07 13:35**	**Received: 10/09/07 17:30**							
Chromium	**130**	10	µg/L	1	CQ08395	10/10/07	10/10/07	EPA 200.7	A-COM
HPCr-24 (CQJ0349-03) Water	**Sampled: 10/09/07 16:00**	**Received: 10/09/07 17:30**							
Chromium	**160**	10	µg/L	1	CQ08395	10/10/07	10/10/07	EPA 200.7	A-COM

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:13

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0349**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90614

Metals (Dissolved) by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch CQ08395 - EPA 3020A										
Blank (CQ08395-BLK1)				Prepared & Analyzed: 10/10/07						
Chromium	ND	10	µg/L							
LCS (CQ08395-BS1)				Prepared & Analyzed: 10/10/07						
Chromium	93.7	10	µg/L	100		93.7	80-120			
LCS Dup (CQ08395-BSD1)				Prepared & Analyzed: 10/10/07						
Chromium	97.4	10	µg/L	100		97.4	80-120	3.88	20	
Matrix Spike (CQ08395-MS1)		**Source: CQJ0319-01**		Prepared & Analyzed: 10/10/07						
Chromium	93.8	10	µg/L	100	ND	93.8	75-125			
Matrix Spike Dup (CQ08395-MSD1)		**Source: CQJ0319-01**		Prepared & Analyzed: 10/10/07						
Chromium	96.3	10	µg/L	100	ND	96.3	75-125	2.66	25	

CALIFORNIA LABORATORY SERVICES

 10/18/07 09:13

Brown & Caldwell-Rancho Cordova	Project: LEHR - Chromium	
10540 White Rock Rd. Suite 180	Project Number: 131261	**CLS Work Order #: CQJ0349**
Rancho Cordova, CA 95670	Project Manager: Joseph Turner	COC #: 90614

Notes and Definitions

A-COM	Run by ICP-MS
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Calscience Environmental Laboratories, Inc.

Analytical Report

Brown and Caldwell		Date Received:	02/02/08
10540 White Rock Road, Suite 180		Work Order No:	08-02-0099
Rancho Cordova, CA 95670-7984		Preparation:	EPA 3010A Total
		Method:	EPA 6010B

Project: UC Davis - LEHR / 131261

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
GWGW2262	**08-02-0099-1-A**	**02/01/08**	**Aqueous**	**ICP 5300**	**02/05/08**	**02/06/08 12:07**	**080205L01**

UCD1-55

Parameter	Result	RL	DF	Qual	Units
Chromium	0.0303	0.00500	1		mg/L

GWGW2263	**08-02-0099-2-A**	**02/01/08**	**Aqueous**	**ICP 5300**	**02/05/08**	**02/06/08 12:15**	**080205L01**

UCD1-56

Parameter	Result	RL	DF	Qual	Units
Chromium	0.0221	0.00500	1		mg/L

GWGW2264	**08-02-0099-3-A**	**02/01/08**	**Aqueous**	**ICP 5300**	**02/05/08**	**02/06/08 12:24**	**080205L01**

UCD2-57

Parameter	Result	RL	DF	Qual	Units
Chromium	0.0732	0.00500	1		mg/L

GWGW2265	**08-02-0099-4-A**	**02/01/08**	**Aqueous**	**ICP 5300**	**02/05/08**	**02/06/08 12:27**	**080205L01**

UCD2-57

Parameter	Result	RL	DF	Qual	Units
Chromium	0.0446	0.00500	1		mg/L

Method Blank	**097-01-003-7,989**	**N/A**	**Aqueous**	**ICP 5300**	**02/05/08**	**02/06/08 12:01**	**080205L01**

Parameter	Result	RL	DF	Qual	Units
Chromium	ND	0.00500	1		mg/L

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

BROWN AND CALDWELL CHAIN OF CUSTODY RECORD 02-02-09

UCD0000276

☑ 10540 White Rock Rd, Ste. 180
Rancho Cordova, CA 95670
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San Diego, CA 92123
858-514-8822 / FAX 858-514-8833

☐ 201 N. Civic Dr. / Suite 115
Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

☐ 400 Exchange
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

PROJECT NAME: UC Davis - LEHR

PROJECT NUMBER: 131261

LABORATORY NAME & ADDRESS: CalScience Environmental Laboratories, Inc. Garder CA

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	GWGW2265	02-01-08	1140		1	~~1L~~ 500 Plastic	NONE	W	Tritium, C-14	–	–	STD	SP	36.84 ---- 36.77	
02	GWGW2265				3	40 mL VOA	HCl pH < 2	W	SW8260B					----	
03	GWGW2265				1	~~1L~~ 250 Plastic	NONE	W	Nitrate (as N), EC					----	
04	GWGW2265	02-01-08	1140		1	250 mL Plastic	HNO3 pH < 2	W	Total Chromium					----	
05	TBGW0503	2/1/08	NA	NA	2/3	40mL VOA	HCl	W	SW8260B				NA	----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY: Johnie Tanko / John S Tal	DATE 2/01/08	TIME :	COOLER I.D.: #1			COMMENTS (see note on back):
RECEIVED BY: G.SO	DATE 2/01/08	TIME 15:15	RELINQUISHED BY: John S Tal	DATE 2/01/08	TIME 15:15	
Michael Abatt CEL	2-2-08	10:34				
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

DISTRIBUTION: WHITE-LAB RECEIPT • CANARY-PROJECT FILE • PINK-DATA MANAGEMENT • GOLDENROD-FIELD

USE A BALLPOINT PEN, BLACK INK, AND PRESS FIRMLY. INSTRUCTIONS ARE ON THE BACK

BROWN AND CALDWELL CHAIN OF CUSTODY RECORD 08-02-0049

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Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

❑ 400 Exchange / Suite 100
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

UCD0000274

PROJECT NAME: UC Davis - LEHR

PROJECT NUMBER: 131261

LABORATORY NAME & ADDRESS: ~~CalScience Environmental Laboratories, Inc. Garder~~ CA

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	GWGW2263	02-01-08	1210	J.T.	1	~~1L~~ N Plastic 250	NONE	W	Tritium, C-14	–	–	STD	SP	36.70 37.86	–
02	GWGW2263			J.T.	3	40 mL VOA ~~1500~~	HCl pH < 2	W	SW8260B	–	–			----	–
03	GWGW2263			J.T.	1	~~1L~~ Plastic 500	NONE	W	Nitrate (as N), EC	–	–			----	–
04	GWGW2263	02-01-08	1210	J.T.	1	250 mL Plastic	HNO3 pH < 2	W	Total Chromium	–	–			----	–
05														----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY: Johnie S. Tonlin / John S Tonlin	DATE 2/01/08	TIME :	COOLER I.D.: #1			COMMENTS (see note on back):
RECEIVED BY: G50	DATE 2/01/08	TIME 15:15	RELINQUISHED BY: John S Tonlin	DATE 2/01/08	TIME 15:15	
Michael Hart CEL	2-2-08	10:34				
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

DISTRIBUTION: WHITE-LAB RECEIPT • CANARY-PROJECT FILE • PINK-DATA MANAGEMENT • GOLDENROD-FIELD

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BROWN AND CALDWELL

CHAIN OF CUSTODY RECORD 00-02-0044

UCD0000275

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❑ 400 Exchange / Suite 100
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

PROJECT NAME: UC Davis - LEHR

PROJECT NUMBER: 131261

LABORATORY NAME & ADDRESS: CalScience Environmental Laboratories, Inc. Garder CA

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	GWGW2264	2-01-08	1445	J.T.	1	~~1 L~~ Plastic 250	NONE	W	Tritium, C-14	–	–	STD	SP	34.01 ---- ~~34.19~~ 34.19	
02	GWGW2264			J.T.	3	40 mL VOA	HCl pH < 2	W	SW8260B	–	–			----	
03	GWGW2264			J.T.	1	~~1 L~~ Plastic 500	NONE	W	Nitrate (as N), EC	–	–			----	
04	GWGW2264	2-01-08	1445	J.T.	1	250 mL Plastic	HNO3 pH < 2	W	Total Chromium	–	✓			----	
05														----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY: Johnie Lanier / [signature]	DATE 2/01/08	TIME :	COOLER I.D.: #1			COMMENTS (see note on back):
RECEIVED BY: GSO	DATE 2/01/08	TIME 15:15	RELINQUISHED BY: [signature]	DATE 2/01/08	TIME 15:15	
Michael Hult CEL	2/2/08	10 34				
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

DISTRIBUTION: WHITE-LAB RECEIPT • CANARY-PROJECT FILE • PINK-DATA MANAGEMENT • GOLDENROD-FIELD

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BROWN AND CALDWELL

CHAIN OF CUSTODY RECORD 08-02-004

UCD0000273

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Rancho Cordova, CA 95670
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Walnut Creek, CA 94596
925-937-9010 / FAX 925-937-9026

☐ 400 Exchange / Suite 200
Irvine, CA 92602
714-730-7600 / FAX 714-734-0940

PROJECT NAME: UC Davis - LEHR

PROJECT NUMBER: 131261

LABORATORY NAME & ADDRESS: CalScience Environmental Laboratories, Inc. Garder CA

LINE NO.	SAMPLE – I.D.	COLLECTION DATE	COLLECTION TIME	SAMPLER'S INITIALS	NUMBER OF CONTAINERS	CONTAINER SIZE AND TYPE	PRESER-VATIVE	MATRIX CODE	ANALYSES REQUESTED	FIELD FILTERED	QC - REQ	TAT	SAMPLING METHOD	DEPTH (FT.) BEGIN ---- END	PID READING (ppm)
01	GWGW2262	2-01-08	1501	J.T	1	~~1L~~ 250 Plastic	NONE	W	Tritium, C-14	–	–	STD	SP	33.43 ---- 35.17	
02	GWGW2262	|	|	J.T.	3	40 mL VOA	HCl pH < 2	W	SW8260B	–	–	|	|	----	
03	GWGW2262	|	|	J.T.	1	~~1L~~ 500 Plastic	NONE	W	Nitrate (as N), EC	–	–	|	|	----	
04	GWGW2262	2-01-08	1501	J.T.	1	250 mL Plastic	HNO3 pH < 2	W	Total Chromium	–	–	|	|	----	
05														----	
06														----	
07														----	
08														----	
09														----	
10														----	

COLLECTED & RELEASED BY: Johnie Tomlin / JT	DATE 2/01/08	TIME :	COOLER I.D.: #1			COMMENTS (see note on back):
RECEIVED BY: GSO	DATE 2/01/08	TIME 15:15	RELINQUISHED BY: JT	DATE 2/01/08	TIME 15:15	
Michael Hall CEL	2-2-08	10:34				
RECORD RETURNED BY:	DATE / /	TIME :				
COURIER:			SHIPPING NUMBER:			

DISTRIBUTION: WHITE-LAB RECEIPT • CANARY-PROJECT FILE • PINK-DATA MANAGEMENT • GOLDENROD-FIELD

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Tables

Table 1
Supplemental Chromium Investigation Hydropunch / CPT Results
LEHR/SCDS Environmental Restoration
Davis, California

Location	HSU	Date Advanced	Date Sampled	Total Depth (ft. bgs)	Sample Interval (ft. bgs)	Water Production	Chromium Results (ug/L)
HPCr-1	1	10/1/2007	10/1/2007	70	65-70	Moderate	55
HPCr-2	1	10/1/2007	10/1/2007	70	65-70	Moderate	280
HPCr-3	1	10/1/2007	10/1/2007	70	65-70	Poor	160
HPCr-4	1	10/1/2007	10/1/2007	70	65-70	Poor	49
HPCr-5	1	10/2/2007	10/2/2007	70	65-70	Moderate	310
HPCr-6	1	10/3/2007	10/3/2007	70	65-70	Moderate	140
HPCr-7	1	10/2/2007	10/2/2007	70	0-70	Poor	160
HPCr-8	1	10/2/2007	10/2/2007	70	65-70	Moderate	32
HPCr-9	1	10/2/2007	10/2/2007	70	65-70	Moderate	37
HPCr-10	1	10/2/2007	10/2/2007	70	65-70	Poor	82
HPCr-11	1	10/2/2007	10/2/2007	70	65-70	Moderate	740
HPCr-12	1	10/1/2007	10/2/2007	70	65-70	Poor	76
HPCr-13	1	10/3/2007	10/3/2007	70	50-70	Moderate	<10
HPCr-14	2	10/3/2007	10/3/2007	94	89-94	Good	41
HPCr-15	1	10/3/2007	10/3/2007	70	45-70	Poor	34
HPCr-16	1	10/8/2007	10/8/2007	70	0-70	Poor	280
HPCr-17	1	10/8/2007	10/8/2007	70	65-70	Poor	230
HPCr-18	1	10/8/2007	10/8/2007	70	0-70	Poor	41
HPCr-19	1	10/8/2007	10/8/2007	70	0-70	Poor	66
HPCr-20	2	10/8/2007	10/8/2007	88	83-88	Good	150
HPCr-21	2	10/9/2007	10/9/2007	83	78-83	Good	66
HPCr-22	1	10/9/2007	NA	70	0-70	Dry	NA
HPCr-23	2	10/9/2007	10/9/2007	80	75-80	Good	130
HPCr-24	2	10/9/2007	10/9/2007	80	75-80	Good	160
CPT-Cr-2	2	10/3/2007	10/3/2007	92	0-92	NA	NA

Notes:
HSU = Hydrostatigraphic Unit
ft. bgs = feet below ground surface
ug/L = micrograms per liter
NA = Not Applicable

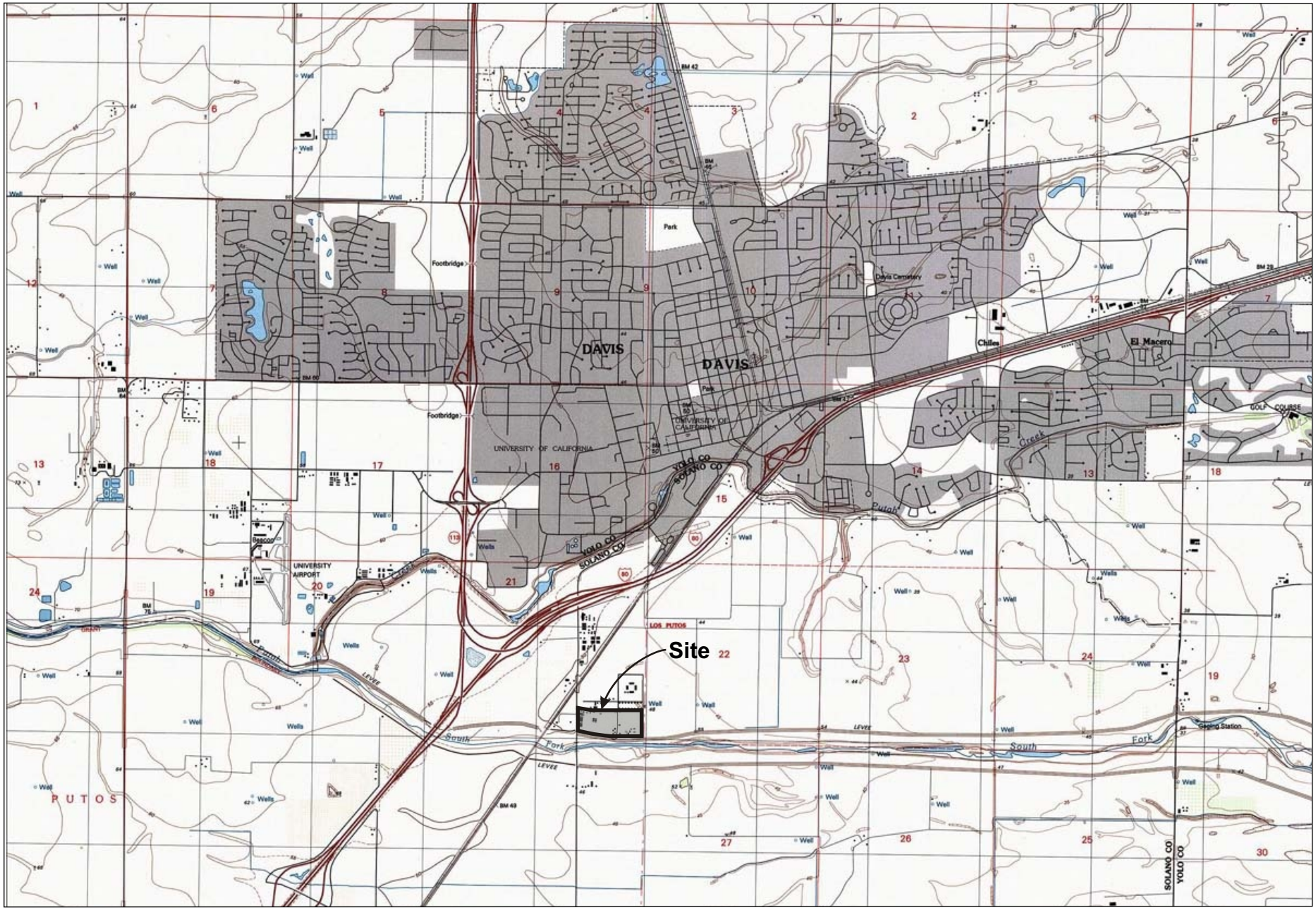
Table 2
Supplemental Chromium Investigation New Monitoring Well Pair Results
LEHR/SCDS Environmental Restoration
Davis, California

Well ID	HSU	Northing	Easting	Top of Casing Elevation (ft. asl)	Total Depth (ft. bgs)	Cassing / Screen Material	Screened Interal (ft. bgs)	Slot Size (inches)	Filter Pack Interval (ft. bgs)	Filter Pack Material	Transition Seal Interval (ft. bgs)	Transition Seal Material	Secondary Seal Interval (ft. bgs)	Secondary Seal Material	Surface Completion
UCD1-55	1	38.5210178	-121.7502757	44.16	62	2 in. PVC/SS	47-62	0.01	44-62	#2/16 Sand	41-44	Bentonite	0-41	Cement	Vault
UCD2-56	2	38.5210419	-121.7502628	44.77	88	4 in. PVC/PVC	78-88	0.02	76-88	#3 Sand	73-76	Bentonite	0-73	Cement	Vault
UCD1-58	1	38.5216853	-121.7488610	47.85	72	2 in. PVC/PVC	55-70	0.01	52-72	#2/16 Sand	48-52	Bentonite	0-48	Cement	Stick-up
UCD2-57	2	38.5216861	-121.7488023	47.85	100	4 in. PVC/PVC	87-97	0.02	84-97	#3 Sand	81-84	Bentonite	0-81	Cement	Stick-up

Well ID	HSU	Total Dissolved Chromium Results[1] - EPA 6010 (ug/L)	
		12/3/2007	2/1/2008
UCD1-55	1	29.9	30.3
UCD2-56	2	77.5	73.2
UCD1-58	1	29.8	22.1
UCD2-57	2	46.9	44.6

Notes:
HSU = Hydrostatigraphic Unit
Northing - Decimal degrees latitude
Easting - Decimal degrees longitude
ft. asl = feet above sea level
ft. bgs = feet below ground surface
PVC = Polyvinyl chloride
SS = Stainless Steel
ug/L = micrograms per liter
1. - Total dissolved chromium are assumed to be hexavalent chromium.

Figures



NORTH

0 2000 4000

Scale in Feet

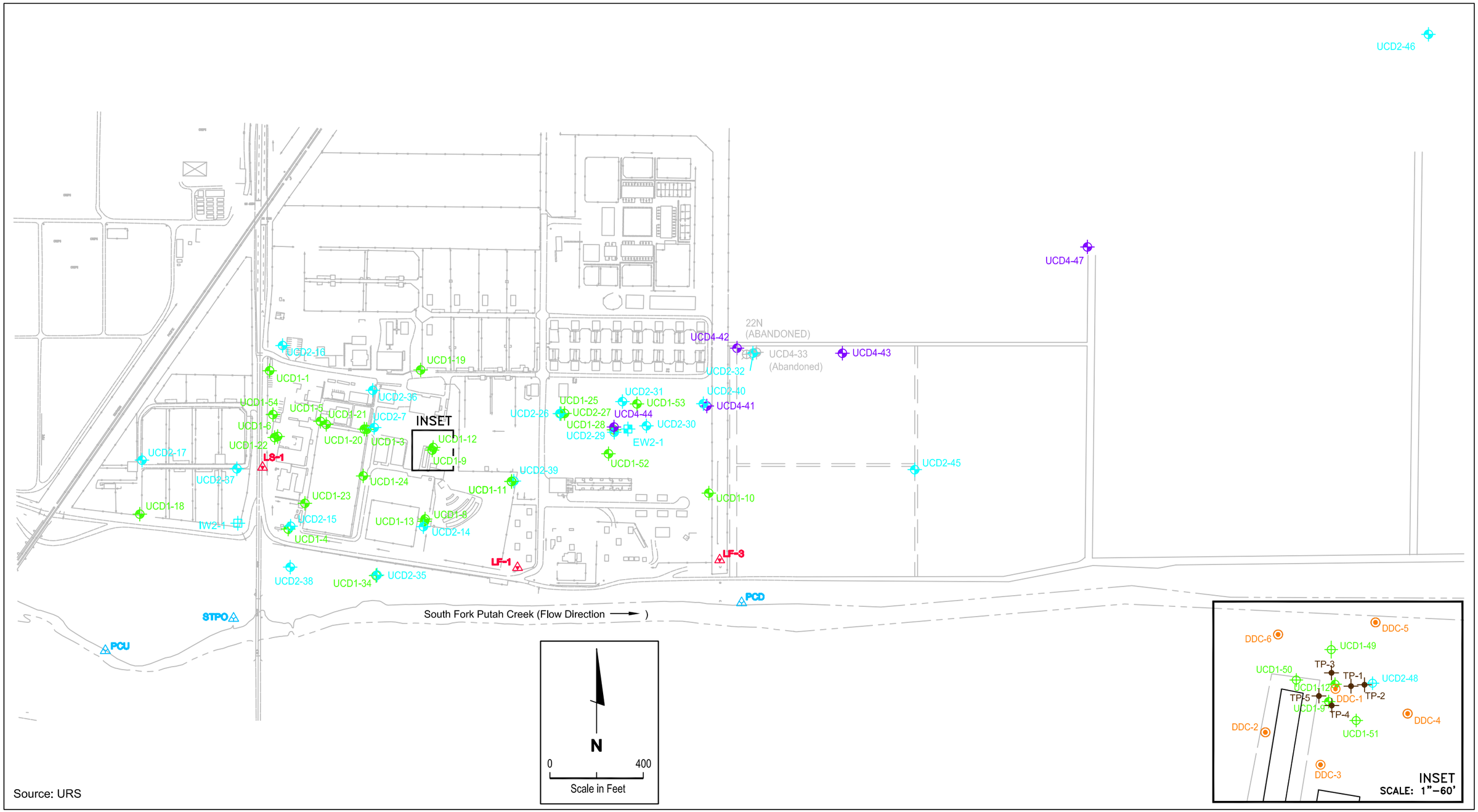
Source: TOPO! 2001, National Geographic

SITE VICINITY MAP

FIRST HALF 2007 WATER MONITORING REPORT
LEHR/SCDS
DAVIS, CALIFORNIA

P:\31000\131261 - LEHR\graphics\1st half 07 figs 3-15-07 1stHalf07-Fig1-SiteVic.cdr

FIGURE 1



Source: URS

EXPANDED DDC SYSTEM

EXPLANATION

- UCD1-11 HSU-1 Monitoring Well
- UCD2-17 HSU-2 Monitoring Well
- EW2-1 HSU-2 Extraction Well
- IW2-1 HSU-2 Injection Well
- UCD4-33 HSU-4 Monitoring Well
- 22N Former Irrigation Well
- STPO Surface Water Sample Location
- LS-1 Stormwater Sample Location
- DDC-1 DDC Well Location
- TP-1 Nested Piezometer Location

SITE AND WELL LOCATION MAP

FIRST HALF 2007 MONITORING REPORT
LEHR/SCDS
Davis, California

FIGURE 2

FILE: \\Bcsac-nas01\GIS\LEHR\Anticipated Hydropunch Locations with GW Contours_Tims2_UCD1-55,58,2-56,57.mxd

BROWN AND CALDWELL

PROJECT	SITE	
131261	UC Davis LEHR/SCDS, Davis, California	Figure
DATE	TITLE	
3/20/08	Supplemental Delineation of Chromium in Groundwater	3

APPENDIX B: GROUNDWATER SAMPLING PURGE LOGS FOR SECOND HALF 2007

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

1. PROJECT INFORMATION

WELL ID: UCD2-7

Project Number: 131261 Task Number: 300

Client: UC Davis

Project Location: LEHR

Date: 9-20-07 Time: 11:03

Personnel: ANGELA / HOCK

Weather: Cold / Rainy

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 10 feet

Total Depth of Well from TOC: 90 feet

Depth to Static Water from TOC: 54.98 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 35.02 Calculated Casing Volume: 17.5 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START @ 11:03

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☑ No Pumping Rate: 1 gal/min

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ mS)	~~Eh (Units)~~ ORP	DO (Units)	Turbidity (NTU)	Other:	Comments
11:13	10	7.15	18.2	0.090	195	5.01	9.5		
11:18	15	7.17	18.5	~~44.4~~ 0.090	193	5.04	19.8		
11:21	18	7.17	18.6	0.090	192	4.82	4.9		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2195 Sample Time: 11:22 # of Containers: 1

Duplicate Sample Collected? ☐ Yes ☑ No ID:

Type of Containers: 1x 8 oz glass bottle

Analyses Requested:

Nitrate as N

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-10

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-20-07 Time: 9:52

Client: UC Davis Personnel: ANGELA CHUCK

Project Location: LEHR Weather: COLD, RAINY

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 69 feet

Depth to Static Water from TOC: 53.71 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 15.29 Calculated Casing Volume: 30.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: ~~2" Grundfos Redi-flo pump Dedicated~~ Bailer

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate:_____ gal/min

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ S/m)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
9:52	10	7.29	15.9	0.129	171	5.73	21.3		
10:00	20	7.16	15.9	0.127	184	4.93	34.7		
10:10	30	7.16	16.0	0.128	190	5.08	29.0		
10:11	31	7.16	16.3	0.128	188	5.10	24.6		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:_____ Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2159 Sample Time: 10:13 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☐ No ID:

Type of Containers: 2x 8 oz glass bottle

Analyses Requested:

Nitrate as N

Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-11

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9/18/07 Time: 1355

Client: UC Davis Personnel:

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 65 feet

Depth to Static Water from TOC: 54.43 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 10.57 Calculated Casing Volume: 21.2 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: 2" Grundfos Redi-flo pump Dedicated 1. N/A

Material: Pump Stainless Steel/Teflon 2.

Material: Tubing Polyethylene 3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

START @ 1355

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(µmhos/cm)~~ S/m	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
1403	8	7.03	19.1	0.145	190	4.50	2.3		
1411	16	7.08	19.2	0.146	189	4.34	7.3		
1413	18	7.09	19.2	0.146	189	4.27	4.5		
1415	20	7.09	19.2	0.147	189	4.21	5.8		
1417	22	7.09	19.2	0.145	189	4.25	7.3		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2160 Sample Time: 14:20 # of Containers: 6

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 3x 40ml VOA Vials and ~~1x~~ 8 oz glass bottle ~~1x~~ 250ml Poly HNO3 1x 250ml Poly

Analyses Requested:

VOCs (Chloroform)
Carbon-14, Tritium
Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01) Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-12

1. PROJECT INFORMATION

Project Number: 131261
Task Number: 300
Client: UC Davis
Project Location: LEHR

Date: 9/24/07
Time: 1607
Personnel: C Frey
Weather:

2. WELL DATA

Casing Diameter: 4 inches
Type of Casing: PVC
Screen Diameter: 4 inches
Type of Screen: PVC
Screen Length : 15 feet
Total Depth of Well from TOC: 64.5 feet
Depth to Static Water from TOC: 55.39 feet
Depth to Product from TOC: N/A
Length of Water Column (h): 9.11
Calculated Casing Volume: 18.2 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated
Material: Pump: Stainless Steel/Teflon
Material: Tubing: Polyethylene
Was well purged dry? ☐ Yes ☐ No
Pumping Rate: 1 gal/min

Equipment Model(s)
1. N/A
2.
3.

START @ 1607

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(µmhos/cm)~~ S/m	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
1612	5	7.71	20.6	0.200	129	8.40	9.5		
1617	10	7.67	19.6	0.206	121	8.96	10.2		
1622	15	7.67	19.2	0.209	108	8.97	13.0		
1625	18	7.68	19.0	0.211	86	9.14	29.1		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated
Material: Bailer: Stainless Steel/Teflon
Material: Rope: Polyethylene
Depth to Water at Time of Sampling:
Field Filtered? ☐ Yes ☐ No
Sample ID: GWGW 2161
Sample Time: 1628
# of Containers: 4
Type of Containers: 3x 40ml VOA Vials and 1x 8 oz glass bottle
Duplicate Sample Collected? ☐ Yes ☑ No ID:

Analyses Requested:
VOCs (Chloroform)
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-13

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-07 Time: 15:18

Client: UC Davis Personnel: ANDREA / CHUCK

Project Location: LEHR Weather: SUNNY, BREEZY, 70'S

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 65 feet

Depth to Static Water from TOC: 55.71 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 9.29 Calculated Casing Volume: 18.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

START @ 15:18

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: 2" Grundfos Redi-flo pump Dedicated 1. N/A

Material: Pump Stainless Steel/Teflon 2.

Material: Tubing Polyethylene 3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(µmhos/cm)~~ mS	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
15:23	5	7.03	21.6	0.173	161	3.69	0.0		
15:28	10	7.06	20.9	0.177	160	3.25	0.0		
15:33	15	7.09	20.7	0.177	157	3.06	0.0		
15:38	19	7.11	20.5	0.177	149	2.97	0.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2162 Sample Time: 15:39 # of Containers: 3

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 3x 8 oz glass bottle

Analyses Requested:

Carbon-14, Tritium
Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01) Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-14

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-07 Time: 14:39

Client: UC Davis Personnel: ANGELA / CHUCK

Project Location: LEHR Weather: SUNNY / BREEZY 70'S

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 10 feet

Total Depth of Well from TOC: 85 feet

Depth to Static Water from TOC: 55.26 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 29.74 Calculated Casing Volume: 59.5 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

START @ 14:39

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: 2" Grundfos Redi-flo pump Dedicated 1. N/A

Material: Pump Stainless Steel/Teflon 2.

Material: Tubing Polyethylene 3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 2.5 gal/min

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ mS/cm)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
14:47	20	7.04	24.3	0.173	144	3.67	3.1		
14:55	40	7.25	20	0.135	157	1.46	0.6		
14:59	50	7.25	19.5	0.135	155	1.27	4.3		
15:03	60	7.26	19.2	0.134	153	1.28	0.5		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2196 Sample Time: 15:05 # of Containers: 3

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 3x 8 oz glass bottle

Analyses Requested:

Nitrate as N
Total Chromium
Carbon-14, Tritium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01) Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-019

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-18-07 Time: 11:35

Client: UC Davis Personnel:

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 71.5 feet

Depth to Static Water from TOC: 54.87 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 16.63 Calculated Casing Volume: 33.3 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Equipment Model(s)

1. N/A
2.
3.

START @ 1138

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ S/m)	ORP Eh (Units)	DO (Units) mg/L	Turbidity (NTU)	Other:	Comments
1148	10	6.95	20.3	0.160	177	2.28	0.0		
1158	20	6.99	20.0	0.160	192	1.80	2.8		
1203	25	6.99	19.9	0.161	195	1.68	9.8		
1208	30	7.00	19.9	0.161	194	1.67	1.0		
1211	33	6.99	19.9	0.157	197	1.67	0.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW2163 Sample Time: 12:13 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: ~~2x~~ 1x 8 oz glass bottle

Analyses Requested:

Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-021

1. PROJECT INFORMATION

Project Number: 131261
Task Number: 300
Client: UC Davis
Project Location: LEHR

Date: 9-20-07
Time: 11:27
Personnel: ANGELA / CHUCK
Weather: COLD / RAINY

2. WELL DATA

Casing Diameter: 4 inches
Type of Casing: PVC
Screen Diameter: 4 inches
Type of Screen: PVC
Screen Length : 15 feet
Total Depth of Well from TOC: 72 feet
Depth to Static Water from TOC: 52.09 feet
Depth to Product from TOC: N/A
Length of Water Column (h): 19.91
Calculated Casing Volume: 39.8 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

START @ 11:27

Note: 2-inch well = 0.167 gal/ft *4-inch well = 0.667 gal/ft*

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated
Material: Pump: Stainless Steel/Teflon
Material: Tubing: Polyethylene
Was well purged dry? ☐ Yes ☐ No
Pumping Rate: 1.5 gal/min

Equipment Model(s)
1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~umhos/cm~~) mS/m	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
11:35	12	7.18	19.2	0.133	188	8.34	0.0		
11:42	24	7.11	19.3	0.133	188	8.38	8.3		
11:50	36	7.13	19.3	0.133	184	8.30	1.5		
11:53	40	7.13	19.3	0.134	184	8.44	0.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated
Material: Bailer: Stainless Steel/Teflon
Material: Rope: Polyethylene
Depth to Water at Time of Sampling:
Field Filtered? ☐ Yes ☐ No
Sample ID: GWGW2164
Sample Time: 11:54
# of Containers: 5
Duplicate Sample Collected? ☐ Yes ☐ No ID:
Type of Containers: 3x 40ml VOA vials and 2x 8oz glass bottle

Analyses Requested:
VOCs (Chloroform)
Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-25

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-07 Time: 9:10

Client: UC Davis Personnel: CHUK / ANGELA

Project Location: LEHR Weather: Sunny, breezy, 60's

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 75 feet

Depth to Static Water from TOC: 51.69 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 23.31 Calculated Casing Volume: 46.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 2 gal/min

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ S/m)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
9:18	15	1.12	18.5	0.158	184	2.50	5.6		
9:25	~~20~~ 30	7.10	18.6	0.150	191	1.64	16.4		
9:33	~~30~~ 45	7.12	18.8	0.159	191	1.42	19.4		
9:34	~~40~~ 47	7.12	18.8	0.161	189	1.42	20.6		
	~~47~~								

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2166 Sample Time: 9:35 # of Containers: 5

Duplicate Sample Collected? ☐ Yes ☐ No ID: Type of Containers: 3x 40ml VOA Vials and 2x 8 oz glass bottle

Analyses Requested:

VOCs (Chloroform)
Nitrate as N
Total Chromium

5. COMMENTS

MS/MSD

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-26

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-07 Time: 9:40

Client: UC Davis Personnel: CHUCK / ANGELA

Project Location: LEHR Weather: SUNNY / BREEZY / 60'S

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 102 feet

Depth to Static Water from TOC: 51.58 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 50.42 Calculated Casing Volume: 25.3 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

START @ 9:40

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ mS/cm)	~~ORP (Units)~~ ORP	DO (Units)	Turbidity (NTU)	Other:	Comments
9:50	10	7.01	20.2	89.4	189	1.07	16.7		
10:00	20	7.07	19.3	88.7	95	1.44	39.5		
10:05	25	7.08	19.2	88.0	88	1.42	8.3		
10:06	26	7.07	19.2	88.0	80	1.42	4.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2197 Sample Time: 10:07 # of Containers: 1

Duplicate Sample Collected? ☐ Yes ☑ No ID:

Type of Containers: 1x 8 oz glass bottle

Analyses Requested:

Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-28

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300

Client: UC Davis

Project Location: LEHR

Date: 9-19-07 Time: 13:29

Personnel: ANGELA / LITUCK

Weather:

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 68 feet

Depth to Static Water from TOC: 51.79 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 16.21 Calculated Casing Volume: 8.1 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START 13:29

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: .5 gal/min

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(mmhos/cm)~~ S/m	~~Eh (Units)~~ ORP	DO (Units)	Turbidity (NTU)	Other:	Comments
13:33	2	7.30	19.5	0.223	158	5.25	1.7		
13:37	4	7.30	19.6	0.221	156	5.15	1.3		
13:41	6	7.31	19.8	0.220	156	5.30	1.2		
13:45	8	7.32	20.1	0.223	155	5.40	0.0		
13:47	9	7.33	20.3	0.225	155	5.54	0.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2167 Sample Time: 13:49 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: GWGW 2168 Type of Containers: 2x 8 oz glass bottle

Analyses Requested:

Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-29

1. PROJECT INFORMATION

Project Number: 131261
Task Number: 300
Client: UC Davis
Project Location: LEHR

Date: 9-19-07
Time: 13:50
Personnel: ANGELA / CHUCK
Weather: Sunny / Breezy / 60's 70's

2. WELL DATA

Casing Diameter: 2 inches
Type of Casing: PVC
Screen Diameter: 2 inches
Type of Screen: PVC
Screen Length : 15 feet
Total Depth of Well from TOC: 95 feet
Depth to Static Water from TOC: 51.76 feet
Depth to Product from TOC: N/A
Length of Water Column (h): 43.24
Calculated Casing Volume: 21.7 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START @ 13:50

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated
Material: Pump Stainless Steel/Teflon
Material: Tubing Polyethylene
Was well purged dry? ☐ Yes ☐ No
Pumping Rate: 1 gal/min

Equipment Model(s)
1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
~~14:00~~	~~10~~	~~9.09~~	~~22.8~~	~~0.0~~	~~77~~	~~10.43~~	~~129.0~~		
~~14:05~~	~~15~~	~~9.09~~	~~24.0~~	~~0.0~~	~~73~~	~~10.04~~	~~132.0~~		
~~14:10~~	~~20~~	~~9.07~~	~~24.8~~	~~0.0~~	~~73~~	~~9.84~~	~~124.0~~		
14:12	22	7.60	22.9	88.7	150	4.24	0.0		
14:17	27	7.54	21.1	89.7	152	3.91	0.0		
14:22	32	7.53	20.1	92.8	150	3.85	0.0		
14:27	37	7.52	19.8	92.5	150	3.83	0.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated
Material: Bailer Stainless Steel/Teflon
Material: Rope Polyethylene
Depth to Water at Time of Sampling:
Field Filtered? ☐ Yes ☑ No
Sample ID: GWGW 2198
Sample Time: ~~14:15~~ 14:20
# of Containers: 5
Duplicate Sample Collected? ☐ Yes ☑ No ID:
Type of Containers: 3x 40ml VOA Vials and 2x 8 oz glass bottle

Analyses Requested:
VOCs (Chloroform)
Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-30

1. PROJECT INFORMATION

Project Number: 131261
Task Number: 300
Client: UC Davis
Project Location: LEHR

Date: 9-14-07
Time: 13:00
Personnel:
Weather:

2. WELL DATA

Casing Diameter: 2 inches
Type of Casing: PVC
Screen Diameter: 2 inches
Type of Screen: PVC
Screen Length : 15 feet
Total Depth of Well from TOC: 110 feet
Depth to Static Water from TOC: 51.43 feet
Depth to Product from TOC: N/A
Length of Water Column (h): 58.57
Calculated Casing Volume: 29.3 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START @ 13:00

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated
Material: Pump Stainless Steel/Teflon
Material: Tubing Polyethylene
Was well purged dry? ☐ Yes ☐ No
Pumping Rate: 1.5 gal/min

Equipment Model(s)
1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(µmhos/cm)~~ µS/cm	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
13:00	~~10~~ 9	7.54	20.5	87.1	147	3.92	13.8		
13:12	~~20~~ 18	7.51	19.10	88.5	147	3.75	8.1		
13:18	~~25~~ 27	7.51	19.3	89.4	147	3.62	6.9		
13:20	~~30~~ 30	7.51	19.2	89.5	147	3.78	9.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated
Material: Bailer Stainless Steel/Teflon
Material: Rope Polyethylene
Depth to Water at Time of Sampling:
Field Filtered? ☐ Yes ☐ No
Sample ID: GWGW 2199
Sample Time: 13:21
# of Containers: 5
Duplicate Sample Collected? ☐ Yes ☐ No ID:
Type of Containers: 3x 40ml VOA Vials and 2x 8 oz glass bottle

Analyses Requested:
VOCs (Chloroform)
Nitrate as N
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-31

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-02 Time: 12:24

Client: UC Davis Personnel: CHUK / ANGELA

Project Location: LEHR Weather: SUNNY / BREEZY / 60-70'S

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 109 feet

Depth to Static Water from TOC: 51.43 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 57.57 Calculated Casing Volume: 28.8 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START @ 12:24

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Equipment Model(s): 1. N/A 2. 3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: i gal/min

START @ 12:24

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
12:34	10	7.46	19.8	92.7	141	4.57	3.9		
12:44	20	7.47	19.8	92.6	138	4.46	0.9		
12:49	25	7.48	19.8	92.3	138	4.44	~~1.4~~ 0.0		
12:53	29	7.48	19.9	92.8	138	4.41	1.5		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2200 Sample Time: 12:54 # of Containers: 4

Duplicate Sample Collected? ☑ Yes ☐ No ID: GWGW 2201 Type of Containers: 3x 40ml VOA vials, 1x 8 oz glass bottle

Analyses Requested:

VOCs (Chloroform)
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-32

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300
Client: UC Davis
Project Location: LEHR

Date: 9-8-07 Time: 14:53
Personnel: CHUCK / ANGELA
Weather: SUNNY, breezy, 80's

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC
Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 20 feet
Total Depth of Well from TOC: 103 feet
Depth to Static Water from TOC: 49.47 feet
Depth to Product from TOC: N/A
Length of Water Column (h): 53.53 Calculated Casing Volume: 26.8 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated
Material: Pump Stainless Steel/Teflon
Material: Tubing Polyethylene
Was well purged dry? ☐ Yes ☐ No Pumping Rate: _____ gal/min

Equipment Model(s)
1. N/A
2. _____
3. _____

Start @ 14:53

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. ~~(umhos/cm)~~ S/M	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other: _____	Comments
15:05	10	7.28	20.4	.090	181	4.62	4.9		
15:13	20	7.22	19.5	.090	178	4.48	0.8		
15:18	25	7.26	19.4	.090	177	4.54	1.8		
15:20	27	7.30	19.4	.090	177	4.61	1.1		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated
Material: Bailer Stainless Steel/Teflon
Material: Rope Polyethylene
Depth to Water at Time of Sampling: _____
Field Filtered? ☐ Yes ☑ No
Sample ID: GWGW 2202 Sample Time: 1523
# of Containers: 9
Duplicate Sample Collected? ☐ Yes ☑ No ID:
Type of Containers: 3x 40ml VOA Vials

Analyses Requested:
VOCs (Chloroform)

5. COMMENTS

DO MSD

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-39

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-18-07 Time: 13:24

Client: UC Davis Personnel:

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 20 feet

Total Depth of Well from TOC: 106 feet

Depth to Static Water from TOC: 50.92 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 55.08 Calculated Casing Volume: 27.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Equipment Model(s)

1. N/A
2.
3.

Start @ 13:24

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm)	~~Eh (Units)~~ DEP	DO (Units)	Turbidity (NTU)	Other:	Comments
13:34	10	7.35	20.8	82.9	173	3.69	20.3		
13:44	20	7.30	19.1	87.1	178	3.21	18.6		
13:49	25	7.30	19.0	87.4	178	3.09	11.9		
13:52	28	7.30	18.9	87.7	179	3.05	18.0		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2203 Sample Time: 13:55 # of Containers: ~~6~~ 1

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: ~~6x 40ml VOA vials and~~ 1 x 8 oz glass bottle

Analyses Requested:

~~VOCs (Chloroform)~~

~~Total Chromium~~

Carbon-14, Tritium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD2-40

1. PROJECT INFORMATION

Project Number: _____ Task Number: _____ Date: 9-19-07 Time: 10:24

Client: Lehr Personnel: CHUCK / ANGELA

Project Location: Davis Weather: _____

2. WELL DATA

Casing Diameter: _____ inches Type of Casing: _____

Screen Diameter: _____ inches (d) Type of Screen: _____ Screen Length : _____

Total Depth of Well from TOC: 100 feet

Depth to Static Water from TOC: 50.92 feet

Depth to Product from TOC: _____ feet

Length of Water Column (h): 55.08 feet Calculated Casing Volume: 27.6 gal (3 to 5 times one well volume)

Purge Volume Calculation (one casing volume = $0.041d^2h$):

START @ 10:24

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: _____

Materials: Pump/Bailer _____

Materials: Rope/Tubing _____

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

1. _____
2. _____
3. _____

Time	Cum. Gallons Removed	pH	Temp (Units)	Spec. Cond. ~~(Units)~~ S/cm	ORP ~~Eh (Units)~~ mV	DO (Units)	Turbidity (NTU)	Other:	Comments	
10:34	10	7.38	19.5	94.8	140	3.94	~~19.63~~			
10:44	20	7.38	19.3	95.8	142	3.96	8.2			
10:52	28	7.40	19.3	96.2	146	4.44	9.2			

4. SAMPLING DATA

Method(s): _____

Materials: Pump/Bailer _____

Materials: Tubing/Rope _____

Depth to Water at Time of Sampling: _____ Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW2204 Sample Time: 10:54 # of Containers: _____

Duplicate Sample Collected? ☐ Yes ☑ No ID: _____

Analyses Requested:

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

RM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

1. PROJECT INFORMATION

WELL ID: UCD2-46

Project Number: 131261 Task Number: 300 Date: 9-18 Time: 12:31

Client: UC Davis Personnel:

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 20 feet

Total Depth of Well from TOC: 104.5 feet

Depth to Static Water from TOC: 49.73 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 54.77 Calculated Casing Volume: 27.4 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Equipment Model(s)

1. N/A
2.
3.

START @ 1231

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm)	~~Eh (Units)~~ ppp	DO (Units)	Turbidity (NTU)	Other:	Comments
1241	10	7.21	22.8	.099	182	4.36	18.6		
1251	20	7.19	19.4	0.104	180	4.21	43.3		
1256	25	7.19	19.0	0.105	179	4.35	37.2		
12:59	28	7.19	18.9	0.105	179	4.44	34.1		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2205 Sample Time: 13:00 # of Containers: 3

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 3x 40ml VOA vials

Analyses Requested:

VOCs (Chloroform)

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

1. PROJECT INFORMATION

WELL ID: UCD2-48

Project Number: 131261 Task Number: 300

Client: UC Davis

Project Location: LEHR

Date: 9/26/07 Time:

Personnel: GFREI

Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4inches Type of Screen: PVC Screen Length : 10 feet

Total Depth of Well from TOC: 100 feet

Depth to Static Water from TOC: 55.38 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 44.62 Calculated Casing Volume: 89.3 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 3 gal/min

START @ 0900

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~ S/m)	Eh (Units)	DO (~~Units~~ mg/L)	Turbidity (NTU)	Other:	Comments
0910	30	7.30	18.9	0.0906	134	3.62			
0920	60	7.29	18.8	0.0913	143	3.50			
0926	78	7.22	18.9	0.0915	147	3.47			
0929	87	7.21	18.9	0.0914	148	3.45			
0930	90	7.21	19.0	0.0914	148	3.46			

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2206 Sample Time: 0932

# of Containers: 4

Duplicate Sample Collected? ☐ Yes ☐ No ID:

Type of Containers: 3x 40ml VOA vials and, 1x 125 mL poly bottle

Analyses Requested:

VOCs (Chloroform)
Nitrate as N

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

1. PROJECT INFORMATION

WELL ID: UCD1-49

Project Number: 131261 Task Number: 300

Client: UC Davis

Project Location: LEHR

Date: 9/26/07 Time:

Personnel: C FREY

Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 20 feet

Total Depth of Well from TOC: 69.5 feet

Depth to Static Water from TOC: 55.15 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 14.35 Calculated Casing Volume: 28.7 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1.25 gal/min

Equipment Model(s)

1. N/A
2.
3.

TMT @ ~~0926~~ 0946

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm)	ORP Eh ~~(units)~~ MV	DO (~~units~~) mg/L	Turbidity (NTU)	Other:	Comments
~~0954~~	~~0954~~	~~10~~							
0954	10	6.98	23.2	0.179	164	6.89			
1002	20	6.95	20.2	0.215	162	8.17			
1006	25	6.96	20.0	0.219	161	8.28			
1009	28.75	6.96	19.9	0.220	161	8.36			

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2169 Sample Time: 1012

# of Containers: ~~3~~ 9

Duplicate Sample Collected? ☐ Yes ☑ No ID:

Type of Containers: 3x 40ml VOA Vials

Analyses Requested:

VOCs (Chloroform)

5. COMMENTS

MS/MSD

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-50

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9/26/07 Time:

Client: UC Davis Personnel: C Fahey

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 20 feet

Total Depth of Well from TOC: 69.5 feet

Depth to Static Water from TOC: 56.19 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 13.31 Calculated Casing Volume: 26.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

1. N/A
2.
3.

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 15 gal/min

START @ 1026

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (µmhos/cm) S/M	Eh ~~(Units)~~ ORP mV	DO (Units)	Turbidity (NTU)	Other:	Comments
1032	9	6.90	23.3	0.231	154	7.46			
1038	18	6.90	20.4	0.244	141	7.87			
1042	24	6.91	20.1	0.246	138	8.16			
1044	27	6.91	20.0	0.246	137	7.93			

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2170 Sample Time: 1045 # of Containers: 3

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 3x 40ml VOA vials

Analyses Requested:

VOCs (Chloroform)

NITRATE

C-14

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-51

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9/26/07 Time:

Client: UC Davis Personnel: C Grim

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 4 inches Type of Casing: PVC

Screen Diameter: 4 inches Type of Screen: PVC Screen Length : 20 feet

Total Depth of Well from TOC: 69.7 feet

Depth to Static Water from TOC: 55.76 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 13.94 Calculated Casing Volume: 27.9 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Equipment Model(s)

1. N/A
2.
3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: 1 gal/min

Start @ 1057

Time	Cum. Gallons Removed	pH	Temp (°C) 20.6	Spec. Cond. (µmhos/cm) S/M	ORP Eh (~~Units~~) mv	DO (Units) mg/L	Turbidity (NTU)	Other:	Comments
1107	10	7.04	~~0.204~~	0.204	144	8.46			
1117	20	7.01	19.9	0.210	147	8.66			
1122	25	7.01	19.8	0.214	149	[illegible]	8.80		
1125	28	7.02	19.8	0.219	149	9.01			

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:

Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2171 Sample Time: 1128

# of Containers: 5

Duplicate Sample Collected? ☑ Yes ☐ No ID:

Type of Containers: 3x 40ml VOA vials and 1x 250 mL poly bottle

Analyses Requested:

VOCs (Chloroform)
Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-52

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 11-19-07 Time: 11:12

Client: UC Davis Personnel: CHOLK/ANGELA

Project Location: LEHR Weather:

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 68.5 feet

Depth to Static Water from TOC: 51.25 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 17.25 Calculated Casing Volume: 8.6 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: 2" Grundfos Redi-flo pump Dedicated

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☐ No Pumping Rate: .5 gal/min

1. N/A
2.
3.

START TIME @ 11:12

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~mmhos/cm~~ S/m)	ORP ~~Eh (Units)~~	DO (Units)	Turbidity (NTU)	Other:	Comments
11:16	2	7.25	21.0	0.192	143	3.98	9.3		
11:20	4	7.26	21.0	0.195	142	3.86	6.8		
11:24	6	7.26	21.0	0.197	140	3.81	6.2		
11:26	7	~~7.27~~	21.0	0.198	139	3.91	6.5		
11:28	8	7.28	21.1	0.199	139	3.92	7.7		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☐ No

Sample ID: GWGW 2172 Sample Time: 11:30 # of Containers: ~~2~~ 3

Duplicate Sample Collected? ☐ Yes ☐ No ID: Type of Containers: 2x 8 oz glass bottle

Analyses Requested:

Nitrate as N

Total Chromium

TRITIUM

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-53

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 9-19-07 Time: 12 00

Client: UC Davis Personnel: ANGELA / CHUCK

Project Location: LEHR Weather: SUNNY, BREEZY 60-70's

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 67.5 feet

Depth to Static Water from TOC: 51.4 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 16.1 Calculated Casing Volume: 8.1 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.167):

START @ 12:00

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Equipment Model(s)

Purge Method: 2" Grundfos Redi-flo pump Dedicated 1. N/A

Material: Pump Stainless Steel/Teflon 2.

Material: Tubing Polyethylene 3.

Was well purged dry? ☐ Yes ☐ No Pumping Rate: .5 gal/min

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~umhos/cm~~) S/m	~~Eh (Units)~~ ORP MV	DO (Units)	Turbidity (NTU)	Other:	Comments
12:04	2	7.35	21.3	0.102	171	6.12	8.8	~~4.8~~	
12:08	4	7.35	20.8	0.105	167	6.34	7.1		
12:12	6	7.35	20.7	0.106	165	6.43	3.2		
12:16	8	7.36	20.8	0.107	163	6.47	4.9		
12:18	9	7.36	20.8	0.107	163	6.52	5.9		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling: Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW 2173 Sample Time: 12:19 # of Containers: 2

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 2x 8 oz glass bottle

Analyses Requested:

Nitrate as N

Total Chromium

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

Signature

FORM GW-1 (Rev 7/31/01)

GROUNDWATER PURGE AND SAMPLING FIELD DATA SHEET

WELL ID: UCD1-054

1. PROJECT INFORMATION

Project Number: 131261 Task Number: 300 Date: 1-20-07 Time: 12:00

Client: UC Davis Personnel: ANGELA / CHUCK

Project Location: LEHR Weather: COLD / RAINY

2. WELL DATA

Casing Diameter: 2 inches Type of Casing: PVC

Screen Diameter: 2 inches Type of Screen: PVC Screen Length : 15 feet

Total Depth of Well from TOC: 73 feet

Depth to Static Water from TOC: 52.15 feet

Depth to Product from TOC: N/A

Length of Water Column (h): 20.85 Calculated Casing Volume: 10.4 (3 Casing volumes)

Purge Volume Calculation (one casing volume = 0.667):

START @ 12:00

Note: 2-inch well = 0.167 gal/ft 4-inch well = 0.667 gal/ft

3. PURGE DATA

Purge Method: ~~2" Grundfos Redi-flo pump Dedicated~~ bailer

Material: Pump Stainless Steel/Teflon

Material: Tubing Polyethylene

Was well purged dry? ☐ Yes ☑ No Pumping Rate:_____ gal/min

Equipment Model(s)

1. N/A
2.
3.

Time	Cum. Gallons Removed	pH	Temp (°C)	Spec. Cond. (~~µmhos/cm~~) S/m	~~Eh (Units)~~ ORP	DO (Units)	Turbidity (NTU)	Other:	Comments
12:12	~~2~~ 3	7.13	18.3	0.180	183	3.80	318.0		
12:25	~~4~~ 6	7.20	18.0	0.183	184	3.48	189.0		
12:34	~~6~~ 9	7.21	18.0	0.183	171	5.34	105.0		
12:40	11	7.28	17.9	0.177	175	8.97	99.2		

4. SAMPLING DATA

Method(s): 2" Grundfos Redi-flo pump Dedicated

Material: Bailer Stainless Steel/Teflon

Material: Rope Polyethylene

Depth to Water at Time of Sampling:_____ Field Filtered? ☐ Yes ☑ No

Sample ID: GWGW2174 Sample Time: 12:50 # of Containers: 1

Duplicate Sample Collected? ☐ Yes ☑ No ID: Type of Containers: 1x 8 oz glass bottle

Analyses Requested:

Nitrate as N

5. COMMENTS

Note: Include comments such as well condition, odor, presence of NAPL, or other items not on the field data sheet.

FORM GW-1 (Rev 7/31/01)

Signature

9/24/07 MONDAY

CLEAR COOL BREEZY

OBJECTIVE: FINISH WATER SAMPLING

0900 CHUCK FREY ON SITE PICKED UP GENERATOR FROM HERTZ ON WAY IN
CALIBRATE HORIBA U22 WITH 1413 MS/CM SOLUTION
pH 4, 7, AND 10 SOLUTION CALIBRATES OK.

0920 ARRIVE AT DDC SYSTEM
LEAK IN ACID TUBING DDC-3
ALL WELLS BUBBLING WILL CHECK DTW IN B ZONES

DDC-6	50.96 DTW	54.70 TD	
DDC-5	~~DRY~~	54.20 TD	52.51 DTW
DDC-4	51.10 DTW	57.50 TD	
DDC-3	57.0 DTW	56.95 TD	
DDC-2	~~50.2 DTW DRY~~	54.20 TD	
DDC-1	50.2 DTW	53.35 TD	

WILL SAMPLE ALL B & C ZONES IN DDC WELLS EXCEPT DDC-2

0948 START BAILING DDC-6B

TIME	BAILS	pH	COND	TEMP	ORP
0950	2	8.28	0.204	19.6	114
0952	4	8.20	0.209	19.1	118
0954	6	8.25	0.210	18.8	122
0956	8	8.25	0.211	18.7	129
0958	10	8.20	0.210	18.7	131

1000 SAMPLE DDC-6D GO TO MEET KATIE FROM UCD AT IRA PLANT

1005 MEET KATIE SHOW HER MAP OF LOCATIONS TALK ABOUT HYDROPUNCH AND WELL INSTALLATION WILL EMAIL HER DATES
MARK LOCATIONS FOR USA

1050 BACK AT DDC AREA SET UP AT DDC-6C

TIME	BAILS	pH	COND	TEMP	ORP
1056	2	7.98	0.209	19.6	141
1058	4	7.97	0.209	19.6	142
1100	6	7.98	0.209	19.4	142
1102	8	7.96	0.200	19.7	142
1104	10	7.96	0.200	19.8	142

1110 SAMPLE DDC-6C GO TO DAVIS TO GET MORE TWINE

1140 BACK FROM DAVIS SET UP AT DDC-~~6~~5B

TIME	BAILS	pH	COND	TEMP	ORP
1150	2	8.62	0.182	25.7	133
1159	4	8.49	0.183	25.6	127
1203	6	8.55	0.181	24.0	128
1205	8	8.54	0.180	23.5	134
1208	10	8.57	0.179	23.1	137

1210 SAMPLE DDC-5B

1215 SAMPLE DDC-5B DUPLICATE

1225 START DDC-5C

TIME	BAILS	pH	COND	TEMP	ORP
1227	2	7.52	0.182	24.0	140
1229	4	7.42	0.188	22.8	142
1231	6	7.42	0.189	21.9	142
1233	8	7.49	0.191	21.4	142
1235	10	7.55	0.187	21.4	145

1240 SAMPLE DDC-~~6~~5C

MOVE TO DDC-4B

DDC-4&B

TIME	BAILS	pH	TEMP	COND	ORP
1250	2	8.29	23.3	0.184	135
1253	4	8.29	22.5	0.183	134
1256	6	8.29	22.0	0.182	133
1258	8	8.29	21.6	0.186	132
1300	10	8.29	21.3	0.187	132

1303 SAMPLED DDC-4B
1310 START DDC-4C

TIME	BAILS	pH	COND	TEMP	ORP
1313	2	8.14	0.187	22.3	132
1315	4	8.14	0.189	22.0	131
1318	6	8.14	0.186	21.9	132
1321	8	8.15	0.187	21.6	132
1323	10	8.13	0.187	21.7	132

1325 SAMPLE DDC-4C

FIX ACID TUBING ON DDC-3 AND DDC-4

1340 START DDC-3B

TIME	BAILS	pH	COND	TEMP	ORP
1345	2	8.47	0.244	24.4	122
1347	4	8.30	0.244	23.1	132
1349	6	8.29	0.246	22.2	132
1352	8	8.30	0.248	21.5	132
1354	10	8.30	0.250	21.1	133

1358 SAMPLE DDC-3B

ADD ACID AND WATER TO ACID TANK
200 GALLONS WATER 7 GALLONS
MURIATIC ACID

1417 START ~~ST~~ BAILING DDC-3C

TIME	BAIL	pH	COND	TEMP	ORP
1419	2	8.20	0.249	22.3	135
1422	4	8.20	0.250	21.5	136
1425	6	8.19	0.254	20.8	136
1427	8	8.19	0.255	20.5	136
1430	10	8.23	0.255	20.2	142

1433 SAMPLE DDC-3C

1435 SEE SAM ABORN TALK TO HIM TELL HIM MW-24 MISSING HE SAYS HE MIGHT TRY TO FIND IT LET HIM KNOW IT TALKED TO KATIE THIS MORNING

1445 START BAILING DDC-2C

TIME	BAILS	pH	COND	TEMP	ORP
1449	2	7.44	0.079	21.4	112
1452	4	7.11	0.088	21.2	123
1455	6	7.05	0.110	20.8	124
1457	8	7.06	0.129	20.8	123
1500	10	7.08	0.154	20.9	121

1503 SAMPLE DDC-2C

1510 START DDC-1B

TIME	BAILS	pH	COND	TEMP	ORP
1516	2	8.45	0.190	23.9	114
1519	4	8.46	0.191	23.0	112
1522	6	8.46	0.192	22.4	111
1524	8	8.47	0.194	22.0	109
1526	10	8.46	0.193	21.9	109

1530 SAMPLE DDC-1B

1536 START BAILING DDC-1C

TIME	# BAILS	pH	COND	TEMP	ORP
1539	2	7.76	0.203	22.8	116
1542	4	7.75	0.204	22.2	119
1544	6	7.75	0.205	21.7	120
1547	8	7.76	0.207	21.3	121
1549	10	7.77	0.208	21.2	122

1552 SAMPLE DDC-1C

1607 START PURGING UCD1-12
1628 DONE SAMPLING UCD1-12
CLEAN UP SITE
1640 STOP AND MARK USA ON PAVEMENT FOR CHROMIUM HYDROPUNCH
1645 LEAVE SITE DDC SYSTEM OPERATING TANK FULL OF ACID WATER FROM UCD1-12 CONTAINED
USED 11 BAILERS
HORIBA U-22

APPENDIX C: COMPLETE ANALYTICAL RESULTS FOR 2007 GROUNDWATER

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-1A	DDC-1B	DDC-1B	DDC-1C	DDC-1C	DDC-2A	DDC-2B
		Sample ID	GWGW2109	GWGW2110	GWGW2176	GWGW2111	GWGW2177	GWGW2112	GWGW2113
		Date	3/28/2007	3/28/2007	9/24/2007	3/28/2007	9/24/2007	3/23/2007	3/23/2007
AnalyteNameShort	CRDL	UnitsID							
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	0.664 J	0.977 J	< 1	**27.6**	**2.1**	**4.52**	**8.38**
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	0.175 J	< 1	**11.6**	**1.6**	0.227 J	**0.644**
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	**11.5**	**1**	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 5	< 1.25	< 5	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	0.224 J	0.362 J	< 0.5	**10.3**	**0.66**	< 0.1	**0.564**
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 1	**1.26 J**	< 1	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 10	< 2.5	< 10	< 0.5	< 0.5
ACETONE	5	UG/L	**6.77**	**6.85**	< 50	< 1.85	< 50	4.53 J	**5.47**
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.5	< 0.675	< 0.5	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 1	< 0.52	< 1	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	**0.562 J**	< 1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 10	< 1.25	< 10	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 10	< 2.23	< 10	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 1	< 0.5	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	**0.949 J**	< 1	< 0.1	0.263 J
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**18.9**	**32.7**	**6.2**	**4310**	**290**	**35.2**	**87**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 10	< 1.2	< 10	< 0.24	**0.627**
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 1	< 0.5	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 1	< 0.405	< 1	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 10	< 2.19	< 10	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 10	< 2.5	< 10	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.59 UJ	< 0.581 UJ	< 10	< 3.81 UJ	< 10	< 0.23 UJ	< 0.334 UJ
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 1	< 0.28	< 1	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.5	< 0.57	< 0.5	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 1	**1 J**	< 1	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.5	< 0.55	< 0.5	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	NS	< 0.875	NS	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-2C	DDC-2C	DDC-3A	DDC-3B	DDC-3B	DDC-3C	DDC-3C	DDC-4A
		Sample ID	GWGW2114	GWGW2181	GWGW2115	GWGW2116	GWGW2183	GWGW2117	GWGW2184	GWGW2118
		Date	3/23/2007	9/24/2007	3/23/2007	3/23/2007	9/24/2007	3/23/2007	9/24/2007	3/28/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	**14.2**	**4.2**	0.571 J	0.589 J	< 1	0.716 J	< 1	0.506 J
1,1-DICHLOROETHANE	0.5	UG/L	**1.55**	**2.7**	**1.19**	**1.45**	< 1	**2.45**	< 1	0.392 J
1,1-DICHLOROETHENE	0.5	UG/L	0.426 J	**1**	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 5	< 0.25	< 0.25	< 5	< 0.25	< 5	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	**0.628**	**0.64**	**3.7**	**4.32**	**0.71**	**5.31**	**0.8**	**2.6**
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 1	**0.52**	**0.624**	< 1	**0.813**	< 1	0.312 J
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5
ACETONE	5	UG/L	4.41 J	< 50	**5.1**	< 0.37	< 50	4.3 J	< 50	**5.16**
BENZENE	0.5	UG/L	< 0.135	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 0.104	< 1	< 0.104	< 1	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 10	< 0.25	< 0.25	< 10	< 0.25	< 10	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 10	< 0.446	< 0.446	< 10	< 0.446	< 10	0.586 J
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2
CHLOROBENZENE	0.5	UG/L	0.144 J	< 1	< 0.1	< 0.1	< 1	0.186 J	< 1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
CHLOROFORM	0.5	UG/L	**311**	**230**	**56.2**	**68.1**	**13**	**99.5**	**18**	**62.3**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 10	< 0.24	< 0.24	< 10	0.332 J	< 10	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 1	< 0.081	< 0.081	< 1	< 0.081	< 1	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 10	< 0.438	< 0.438	< 10	< 0.438	< 10	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.238 UJ	< 10	< 0.295 UJ	< 0.263 UJ	< 10	< 0.304 UJ	< 10	< 0.632 UJ
STYRENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.415 UJ	< 1	< 0.1	< 0.1	< 1	< 0.137 UJ	< 1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 1	< 0.056	< 0.056	< 1	< 0.056	< 1	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	**1.09**	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	NS	< 0.175	< 0.175	NS	< 0.175	NS	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
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		Location	DDC-4B	DDC-4B	DDC-4C	DDC-4C	DDC-5A	DDC-5B	DDC-5B	DDC-5B
		Sample ID	GWGW2119	GWGW2186	GWGW2120	GWGW2187	GWGW2121	GWGW2122	GWGW2189	GWGW2190 Dup
		Date	3/28/2007	9/24/2007	3/28/2007	9/24/2007	3/28/2007	3/28/2007	9/24/2007	9/24/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	0.707 J	< 1	0.804 J	< 1	< 0.104	< 0.104	< 1	< 1
1,1-DICHLOROETHANE	0.5	UG/L	**0.545**	< 1	**0.958**	< 1	< 0.101	< 0.101	< 1	< 1
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 5	< 0.25	< 5	< 0.25	< 0.25	< 5	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	**3.35**	**1.3**	**4.17**	**1.4**	< 0.1	< 0.1	< 0.5	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	0.431 J	< 1	**0.689**	< 1	< 0.103	< 0.103	< 1	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10
ACETONE	5	UG/L	**5.48**	< 50	4.88 J	< 50	**6.62**	< 0.37	< 50	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135	< 0.135	< 0.5	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 1	< 0.104	< 0.104	< 1	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 1	0.13 J	< 1	< 0.1	< 0.1	< 1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 10	< 0.25	< 10	< 0.25	< 0.25	< 10	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 10	< 0.446	< 10	< 0.446	< 0.446	< 10	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 1	0.103 J	< 1	< 0.1	0.241 J	< 1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
CHLOROFORM	0.5	UG/L	**82.8**	**43**	**122**	**57**	**0.568**	**22.6**	< 1	< 1
CHLOROMETHANE	0.5	UG/L	< 0.24	< 10	< 0.24	< 10	< 0.24	0.325 J	< 10	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 1	< 0.081	< 1	< 0.081	< 0.081	< 1	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 10	< 0.438	< 10	< 0.438	< 0.438	< 10	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.61 UJ	< 10	< 0.596 UJ	< 10	< 0.382 UJ	< 0.604 UJ	< 10	< 10
STYRENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 1	< 0.056	< 1	< 0.056	< 0.056	< 1	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114	< 0.114	< 0.5	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11	< 0.11	< 0.5	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	NS	< 0.175	NS	< 0.175	< 0.175	NS	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-5C	DDC-5C	DDC-6A	DDC-6B	DDC-6B	DDC-6C	DDC-6C	UCD1-001
		Sample ID	GWGW2123	GWGW2191	GWGW2124	GWGW2125	GWGW2193	GWGW2126	GWGW2194	GWGW2079
		Date	3/28/2007	9/24/2007	3/28/2007	3/28/2007	9/24/2007	3/28/2007	9/24/2007	3/14/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	**7.97**	< 1	**2.94**	**3.48**	**1.9**	**5.02**	**2.1**	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	**2.3 J**	< 1	< 0.101	< 0.101	< 1	< 0.101	< 1	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	**2.53**	< 1	< 0.1	< 0.1	< 1	0.151 J	< 1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 1.25	< 5	< 0.25	< 0.25	< 5	< 0.25	< 5	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	**1.11 J**	< 0.5	< 0.1	< 0.1	< 0.5	< 0.1	< 0.5	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.515	< 1	< 0.103	< 0.103	< 1	< 0.103	< 1	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
2-HEXANONE	1	UG/L	< 2.5	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5
ACETONE	5	UG/L	< 1.85	< 50	4.82 J	**6**	< 50	4.4 J	< 50	< 3.88 UJ
BENZENE	0.5	UG/L	< 0.675	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.52	< 1	< 0.104	< 0.104	< 1	< 0.104	< 1	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
BROMOFORM	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
BROMOMETHANE	1	UG/L	< 1.25	< 10	< 0.25	< 0.25	< 10	< 0.25	< 10	< 0.25
CARBON DISULFIDE	1	UG/L	< 2.23	< 10	< 0.446	< 0.446	< 10	< 0.446	< 10	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 1	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2
CHLOROBENZENE	0.5	UG/L	**2.58**	< 1	< 0.1	< 0.1	< 1	0.266 J	< 1	< 0.1
CHLOROETHANE	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
CHLOROFORM	0.5	UG/L	**1370**	**72**	**29**	**31.8**	**14**	**87.1**	**18**	< 0.11
CHLOROMETHANE	0.5	UG/L	**1.64 J**	< 10	< 0.24	< 0.24	< 10	0.359 J	< 10	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 1	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.405	< 1	< 0.081	< 0.081	< 1	< 0.081	< 1	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 2.19	< 10	< 0.438	< 0.438	< 10	< 0.438	< 10	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 2.5	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 3.19 UJ	< 10	< 0.593 UJ	< 0.664 UJ	< 10	< 0.658 UJ	< 10	< 0.28 UJ
STYRENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
TOLUENE	0.5	UG/L	< 0.28	< 1	< 0.056	< 0.056	< 1	< 0.056	< 1	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.5	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.57	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.55	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.875	NS	< 0.175	< 0.175	NS	< 0.175	NS	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
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		Location	UCD1-003	UCD1-004	UCD1-005	UCD1-006	UCD1-008	UCD1-009	UCD1-010	UCD1-011
		Sample ID	GWGW2080	GWGW2081	GWGW2082	GWGW2083	GWGW2084	GWGW2089	GWGW2086	GWGW2087
		Date	3/15/2007	3/15/2007	3/15/2007	3/26/2007	3/20/2007	3/22/2007	3/26/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	0.757 J	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.279 J	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 0.103	< 0.103	0.118 J	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 0.37	< 0.37	< 0.37	4.57 J	< 0.37	< 0.37	< 0.37	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	< 0.11	< 0.11	**7.78**	0.208 J	0.36 J	**33.4**	< 0.11	**3.22**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.269 UJ	< 0.417 UJ	< 0.277 UJ	< 0.424 UJ	< 0.234 UJ	< 0.517 UJ	< 0.426 UJ	< 0.2
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-011	UCD1-012	UCD1-012	UCD1-013	UCD1-018	UCD1-019	UCD1-020	UCD1-020
		Sample ID	GWGW2160	GWGW2088	GWGW2161	GWGW2085	GWGW2090	GWGW2091	GWGW2092	GWGW2151 Dup
		Date	9/18/2007	3/22/2007	9/24/2007	3/20/2007	3/14/2007	3/22/2007	3/15/2007	3/15/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 1	0.783 J	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 1	< 0.101	< 1	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 0.25	< 5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.5	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	< 0.103	< 1	0.132 J	< 0.103	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 10	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 50	< 0.37	< 50	< 0.37	< 0.37	4.64 J	< 0.37	< 0.37
BENZENE	0.5	UG/L	< 0.5	< 0.135	< 0.5	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 1	< 0.104	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 10	< 0.25	< 10	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 10	< 0.446	< 10	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**2.7**	**32.7**	**8.6**	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
CHLOROMETHANE	0.5	UG/L	< 10	< 0.24	< 10	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 1	< 0.081	< 1	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 0.438	< 10	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 10	< 0.515 UJ	< 10	< 0.225 UJ	< 0.2	< 0.484 UJ	< 0.333 UJ	< 0.284 UJ
STYRENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 0.1	< 1	< 0.192 UJ	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 1	< 0.056	< 1	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.114	< 0.5	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.11	< 0.5	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	NS	< 0.175	NS	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-021	UCD1-021	UCD1-022	UCD1-023	UCD1-024	UCD1-025	UCD1-025	UCD1-027Z1
		Sample ID	GWGW2093	GWGW2164	GWGW2094	GWGW2095	GWGW2096	GWGW2097	GWGW2166	GWGW2098
		Date	3/15/2007	9/20/2007	3/26/2007	3/27/2007	3/26/2007	3/26/2007	9/19/2007	3/27/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 1	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 1	< 0.101	< 0.101	< 0.101	< 0.101	< 1	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 5	< 0.25	< 0.25	< 0.25	< 0.25	< 5	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 1	< 0.103	< 0.103	< 0.103	< 0.103	< 1	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5
ACETONE	5	UG/L	< 0.37	< 50	3.82 J	4.5 J	4.52 J	4.35 J	< 50	4.12 J
BENZENE	0.5	UG/L	< 0.135	< 0.5	< 0.135	< 0.135	< 0.135	< 0.135	< 0.5	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 1	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 1	0.165 J	< 0.1	< 0.1	< 0.1	< 1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 10	< 0.25	< 0.25	< 0.25	< 0.25	< 10	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 10	< 0.446	< 0.446	< 0.446	< 0.446	< 10	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
CHLOROFORM	0.5	UG/L	**1.46**	**1.4**	**0.691**	< 0.11	**1.27**	0.418 J	< 1	< 0.11
CHLOROMETHANE	0.5	UG/L	< 0.24	< 10	< 0.24	< 0.24	< 0.24	< 0.24	< 10	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 1	< 0.081	< 0.081	< 0.081	< 0.081	< 1	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 10	< 0.438	< 0.438	< 0.438	< 0.438	< 10	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.272 UJ	< 10	< 0.368 UJ	< 0.262 UJ	< 0.525 UJ	< 0.614 UJ	< 10	< 0.21 UJ
STYRENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 1	< 0.056	< 0.056	< 0.056	< 0.056	< 1	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.5	< 0.114	< 0.114	< 0.114	< 0.114	< 0.5	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.11	< 0.11	< 0.11	< 0.11	< 0.5	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	NS	< 0.175	< 0.175	< 0.175	< 0.175	NS	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-027Z2	UCD1-027Z3	UCD1-028	UCD1-034	UCD1-049	UCD1-049	UCD1-050	UCD1-050
		Sample ID	GWGW2099	GWGW2100	GWGW2101	GWGW2102	GWGW2103	GWGW2169	GWGW2104	GWGW2170
		Date	3/27/2007	3/27/2007	3/16/2007	3/19/2007	3/22/2007	9/26/2007	3/26/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	**1.42**	**4**	**8.27**	**21**
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 0.101	< 0.101	**0.512**	< 1	**0.999**	**2**
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	**0.836**	< 1	**0.718**	**1.5**
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 5	< 0.25	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	0.426 J	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103	< 1	< 0.103	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 10
ACETONE	5	UG/L	4.08 J	**5.22**	< 0.37	< 0.37	< 0.37	< 50	< 0.37	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 1	< 0.104	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 10	< 0.25	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 10	< 0.446	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	< 1
CHLOROFORM	0.5	UG/L	< 0.11	0.17 J	0.12 J	< 0.11	**304**	**170**	**307**	**430**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 10	< 0.24	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 1	< 0.081	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 10	< 0.438	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 0.5	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.276 UJ	< 0.412 UJ	< 0.23 UJ	< 0.2	< 0.452 UJ	< 10	< 0.491 UJ	< 10
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 1	< 0.056	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 0.1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 0.2	**1.4**
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	NS	< 0.175	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-051	UCD1-051	UCD1-051	UCD1-051	UCD1-052	UCD1-052	UCD1-053
		Sample ID	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup	GWGW2106	GWGW2152 Dup	GWGW2107
		Date	3/22/2007	3/22/2007	9/26/2007	9/26/2007	3/16/2007	3/16/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID							
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	**1.18**	**1.08**	**1.2**	**1.3**	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	**4.07**	**3.81**	**7.1**	**7.1**	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	**0.614**	**0.598**	< 1	< 1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 5	< 5	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	**4.83**	**4.54**	**5.8**	**5.6**	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	0.379 J	0.385 J	< 1	< 1	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 10	< 10	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 0.37	< 0.37	< 50	< 50	< 0.37	< 0.37	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.5	< 0.5	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 1	< 1	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 10	< 10	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 10	< 10	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**278**	**274**	**380**	**390**	**1.49**	**1.54**	0.123 J
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 10	< 10	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 1	< 1	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 10	< 10	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 10	< 10	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.415 UJ	< 0.459 UJ	< 10	< 10	< 0.2	< 0.403 UJ	< 0.34 UJ
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.992 UJ	< 0.949 UJ	< 1	< 1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 1	< 1	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.5	< 0.5	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.5	< 0.5	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	NS	NS	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-054	UCD1-054	UCD2-007	UCD2-014	UCD2-014	UCD2-015	UCD2-016	UCD2-017
		Sample ID	GWGW2108	GWGW2153 Dup	GWGW2127	GWGW2128	GWGW2156 Dup	GWGW2129	GWGW2130	GWGW2131
		Date	3/23/2007	3/23/2007	3/15/2007	3/26/2007	3/26/2007	3/15/2007	3/20/2007	3/19/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25 UJ
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 0.37	< 0.37	< 0.37	**5.81**	**5.28**	3.85 J	4.13 J	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.319 UJ	< 0.3 UJ	< 0.2	< 0.439 UJ	< 0.333 UJ	< 0.2	< 0.225 UJ	< 0.2
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-026	UCD2-029	UCD2-029	UCD2-030	UCD2-030	UCD2-031	UCD2-031	UCD2-031
		Sample ID	GWGW2132	GWGW2133	GWGW2198	GWGW2134	GWGW2199	GWGW2135	GWGW2200	GWGW2201 Dup
		Date	3/16/2007	3/16/2007	9/19/2007	3/16/2007	9/19/2007	3/14/2007	9/19/2007	9/19/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	0.356 J	< 1	< 0.104	< 1	< 0.104	< 1	< 1
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	**1.04**	< 1	< 0.101	< 1	< 0.101	< 1	< 1
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	**0.697**	< 1	< 0.1	< 1	< 0.1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 5	< 0.25	< 5	< 0.25	< 5	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	**1.75**	< 0.5	< 0.1	< 0.5	< 0.1	< 0.5	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	**2.63**	< 1	< 0.103	< 1	< 0.103	< 1	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 10	< 10
ACETONE	5	UG/L	4.21 J	< 0.37	< 50	< 0.37	< 50	< 4.47 UJ	< 50	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135	< 0.5	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 1	< 0.104	< 1	< 0.104	< 1	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	0.142 J	< 1	< 0.1	< 1	< 0.1	< 1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 10	< 0.25	< 10	< 0.25	< 10	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 10	< 0.446	< 10	< 0.446	< 10	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
CHLOROFORM	0.5	UG/L	**6.95**	**221**	**56**	**4.69**	**8.2**	**2.72**	**1**	**1**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 10	< 0.24	< 10	< 0.24	< 10	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 1	< 0.081	< 1	< 0.081	< 1	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 10	< 0.438	< 10	< 0.438	< 10	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 10	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.293 UJ	< 0.481 UJ	< 10	< 0.294 UJ	< 10	< 0.255 UJ	< 10	< 10
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 1	< 0.056	< 1	< 0.056	< 1	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114	< 0.5	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11	< 0.5	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	NS	< 0.175	NS	< 0.175	NS	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-032	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040
		Sample ID	GWGW2136	GWGW2202	GWGW2137	GWGW2138	GWGW2139	GWGW2140	GWGW2141	GWGW2142
		Date	3/21/2007	9/18/2007	3/19/2007	3/20/2007	3/19/2007	3/19/2007	3/20/2007	3/14/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 1	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.135 J
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 5	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.159 J
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 1	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103	0.163 J
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 0.37	< 50	< 0.37	< 0.37	< 0.37	< 0.37	< 0.37	< 4.18 UJ
BENZENE	0.5	UG/L	< 0.135	< 0.5	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 10	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 10	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**8.31**	< 1	< 0.11	< 0.11	< 0.11	< 0.11	**0.883**	**16**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 10	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 1	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 10	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 10	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.554 UJ	< 10	< 0.2	< 0.229 UJ	< 0.2	< 0.2	< 0.242 UJ	< 0.221 UJ
STYRENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 1	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.5	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	NS	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-040	UCD2-045	UCD2-046	UCD2-046	UCD2-048	UCD2-048	UCD2-048	UCD4-041
		Sample ID	GWGW2204	GWGW2143	GWGW2144	GWGW2205	GWGW2145	GWGW2155 Dup	GWGW2206	GWGW2146
		Date	9/19/2007	3/21/2007	3/19/2007	9/18/2007	3/22/2007	3/22/2007	9/26/2007	3/14/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 1	< 0.104	< 0.104	< 1	< 0.104	< 0.104	< 1	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 1	< 0.101	< 0.101	< 1	< 0.101	< 0.101	< 1	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 0.25	< 0.25	< 5	< 0.25	< 0.25	< 5	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.5	< 0.1	< 0.1	< 0.5	< 0.1	< 0.1	< 0.5	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	< 0.103	< 0.103	< 1	< 0.103	< 0.103	< 1	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
2-HEXANONE	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 0.5	< 10	< 0.5
ACETONE	5	UG/L	< 50	< 0.37	< 0.37	< 50	4.28 J	< 0.37	< 50	< 0.37
BENZENE	0.5	UG/L	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 1	< 0.104	< 0.104	< 1	< 0.104	< 0.104	< 1	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
BROMOFORM	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
BROMOMETHANE	1	UG/L	< 10	< 0.25	< 0.25	< 10	< 0.25	< 0.25	< 10	< 0.25
CARBON DISULFIDE	1	UG/L	< 10	< 0.446	< 0.446	< 10	< 0.446	< 0.446	< 10	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2
CHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
CHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
CHLOROFORM	0.5	UG/L	**6.6**	**0.721**	0.141 J	< 1	**9.91**	**6.69**	**13**	< 0.11
CHLOROMETHANE	0.5	UG/L	< 10	< 0.24	< 0.24	< 10	< 0.24	< 0.24	< 10	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
ETHYLBENZENE	0.5	UG/L	< 1	< 0.081	< 0.081	< 1	< 0.081	< 0.081	< 1	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 0.438	< 0.438	< 10	< 0.438	< 0.438	< 10	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 0.5	< 10	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 10	< 0.674 UJ	< 0.2	< 10	< 0.335 UJ	< 0.479 UJ	< 10	< 0.217 UJ
STYRENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
TOLUENE	0.5	UG/L	< 1	< 0.056	< 0.056	< 1	< 0.056	< 0.056	< 1	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 0.2	< 1	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11
XYLENES, TOTAL	1	UG/L	NS	< 0.175	< 0.175	NS	< 0.175	< 0.175	NS	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
VOLATILE ORGANIC COMPOUNDS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD4-041	UCD4-042	UCD4-043	UCD4-044	UCD4-047
		Sample ID	GWGW2157 Dup	GWGW2147	GWGW2148	GWGW2149	GWGW2150
		Date	3/14/2007	3/21/2007	3/21/2007	3/16/2007	3/19/2007
AnalyteNameShort	CRDL	UnitsID					
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 4.07 UJ	4.46 J	3.73 J	< 0.37	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	< 0.11	**2.41**	**1.86**	< 0.11	**3.66**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.232 UJ	< 0.628 UJ	< 0.562 UJ	< 0.402 UJ	< 0.2
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1 UJ	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX C
METALS - GROUNDWATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
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		Location	UCD1-001	UCD1-003	UCD1-004	UCD1-005	UCD1-006	UCD1-008	UCD1-009	UCD1-010	UCD1-010
		Sample ID	GWGW2079	GWGW2080	GWGW2081	GWGW2082	GWGW2083	GWGW2084	GWGW2089	GWGW2086	GWGW2159
		Date	3/14/2007	3/15/2007	3/15/2007	3/15/2007	3/26/2007	3/20/2007	3/22/2007	3/26/2007	9/20/2007
AnalyteNameShort	CRDL	UnitsID									
CHROMIUM, TOTAL	10	UG/L	**24**	**25.3**	**15**	**50.9**	**38.8**	**73.1**	**113**	**60.1**	**46.4**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-011	UCD1-011	UCD1-012	UCD1-012	UCD1-013	UCD1-013	UCD1-018	UCD1-019	UCD1-019
		Sample ID	GWGW2087	GWGW2160	GWGW2088	GWGW2161	GWGW2085	GWGW2162	GWGW2090	GWGW2091	GWGW2163
		Date	3/16/2007	9/18/2007	3/22/2007	9/24/2007	3/20/2007	9/19/2007	3/14/2007	3/22/2007	9/18/2007
AnalyteNameShort	CRDL	UnitsID									
CHROMIUM, TOTAL	10	UG/L	**155**	**154**	**113**	**123**	**67.9**	**62.5**	7.18 J	**158**	**207**

NS - Not Sampled
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UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-020	UCD1-020	UCD1-021	UCD1-021	UCD1-022	UCD1-023	UCD1-024	UCD1-025
		Sample ID	GWGW2092	GWGW2151 Dup	GWGW2093	GWGW2164	GWGW2094	GWGW2095	GWGW2096	GWGW2097
		Date	3/15/2007	3/15/2007	3/15/2007	9/20/2007	3/26/2007	3/27/2007	3/26/2007	3/26/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**12.7 J**	**50.7 J**	**77.2**	**71.8**	**15.1**	6.46 J	**31.1**	**166**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-025	UCD1-027Z1	UCD1-027Z2	UCD1-027Z3	UCD1-028	UCD1-028	UCD1-028	UCD1-034
		Sample ID	GWGW2166	GWGW2098	GWGW2099	GWGW2100	GWGW2101	GWGW2167	GWGW2168 Dup	GWGW2102
		Date	9/19/2007	3/27/2007	3/27/2007	3/27/2007	3/16/2007	9/19/2007	9/19/2007	3/19/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**145**	< 1	< 1	< 1	**496**	**509**	**513**	< 1

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UJ - Estimated value falls below reporting limit.
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		Location	UCD1-049	UCD1-050	UCD1-051	UCD1-051	UCD1-051	UCD1-051	UCD1-052	UCD1-052
		Sample ID	GWGW2103	GWGW2104	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup	GWGW2106	GWGW2152 Dup
		Date	3/22/2007	3/26/2007	3/22/2007	3/22/2007	9/26/2007	9/26/2007	3/16/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**110**	**89.4**	**96**	**96.4**	**91**	**89.1**	**179**	**181**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-052	UCD1-053	UCD1-053	UCD1-054	UCD1-054	UCD1-055	UCD1-055	UCD1-058
		Sample ID	GWGW2172	GWGW2107	GWGW2173	GWGW2108	GWGW2153 Dup	GWGW2210	GWGW2211 Dup	GWGW2208
		Date	9/19/2007	3/16/2007	9/19/2007	3/23/2007	3/23/2007	12/3/2007	12/3/2007	12/3/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**205**	**407**	**437**	1.72 J	2.05 J	**29.9**	**29.3**	**29.8**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-007	UCD2-014	UCD2-014	UCD2-014	UCD2-015	UCD2-016	UCD2-017	UCD2-026
		Sample ID	GWGW2127	GWGW2128	GWGW2156 Dup	GWGW2196	GWGW2129	GWGW2130	GWGW2131	GWGW2132
		Date	3/15/2007	3/26/2007	3/26/2007	9/19/2007	3/15/2007	3/20/2007	3/19/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**30.6**	**34.8**	**32.6**	**57.1**	5.98 J	**32.1**	**21.3**	7.24 J

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-026	UCD2-029	UCD2-029	UCD2-030	UCD2-030	UCD2-031	UCD2-031	UCD2-031
		Sample ID	GWGW2197	GWGW2133	GWGW2198	GWGW2134	GWGW2199	GWGW2135	GWGW2200	GWGW2201 Dup
		Date	9/19/2007	3/16/2007	9/19/2007	3/16/2007	9/19/2007	3/14/2007	9/19/2007	9/19/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**15**	**27.2**	**37.2**	**19.8**	**25.7**	**22.9**	**31.3**	**29**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD2-040	UCD2-045
		Sample ID	GWGW2136	GWGW2137	GWGW2138	GWGW2139	GWGW2140	GWGW2141	GWGW2142	GWGW2204	GWGW2143
		Date	3/21/2007	3/19/2007	3/20/2007	3/19/2007	3/19/2007	3/20/2007	3/14/2007	9/19/2007	3/21/2007
AnalyteNameShort	CRDL	UnitsID									
CHROMIUM, TOTAL	10	UG/L	**23.9**	3.54 J	**25.8**	8.14 J	2.83 J	**10.5**	**43.9**	**46.2**	**38**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-046	UCD2-048	UCD2-048	UCD2-056	UCD2-057	UCD4-041	UCD4-041	UCD4-042
		Sample ID	GWGW2144	GWGW2145	GWGW2155 Dup	GWGW2209	GWGW2207	GWGW2146	GWGW2157 Dup	GWGW2147
		Date	3/19/2007	3/22/2007	3/22/2007	12/3/2007	12/3/2007	3/14/2007	3/14/2007	3/21/2007
AnalyteNameShort	CRDL	UnitsID								
CHROMIUM, TOTAL	10	UG/L	**72**	**10.9**	**10.7**	**77.5**	**46.9**	**25.9**	**26.5**	**29**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD4-043	UCD4-044	UCD4-047
		Sample ID	GWGW2148	GWGW2149	GWGW2150
		Date	3/21/2007	3/16/2007	3/19/2007
AnalyteNameShort	CRDL	UnitsID			
CHROMIUM, TOTAL	10	UG/L	**27.3**	**26.2**	**35.4**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-001	UCD1-003	UCD1-004	UCD1-005	UCD1-006	UCD1-008	UCD1-009	UCD1-010
		Sample ID	GWGW2079	GWGW2080	GWGW2081	GWGW2082	GWGW2083	GWGW2084	GWGW2089	GWGW2086
		Date	3/14/2007	3/15/2007	3/15/2007	3/15/2007	3/26/2007	3/20/2007	3/22/2007	3/26/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	< 14.1	< 16.3	< 15.7	< 16.2	< 13.8	**597 +/- 18.7**	**54 +/- 11.8**	< 13.8
TRITIUM (HYDROGEN-3)	300	PCI/L	< 234	< 278	< 279	< 279	< 217	**3130 +/- 254**	< 267	< 216

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-011	UCD1-011	UCD1-012	UCD1-013	UCD1-013	UCD1-018	UCD1-019	UCD1-020
		Sample ID	GWGW2087	GWGW2160	GWGW2088	GWGW2085	GWGW2162	GWGW2090	GWGW2091	GWGW2092
		Date	3/16/2007	9/18/2007	3/22/2007	3/20/2007	9/19/2007	3/14/2007	3/22/2007	3/15/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	< 15.8	**36.1 +/- 17.6**	**60.5 +/- 11.9**	**422 +/- 16.3**	**353 +/- 10.7**	< 14.8	< 19.8	< 16.2
TRITIUM (HYDROGEN-3)	300	PCI/L	< 278	< 410	< 270	**1100 +/- 192**	**599 +/- 221 J**	< 314	< 268	< 275

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-020	UCD1-021	UCD1-022	UCD1-023	UCD1-024	UCD1-025	UCD1-027Z1	UCD1-027Z2	UCD1-027Z3
		Sample ID	GWGW2151 Dup	GWGW2093	GWGW2094	GWGW2095	GWGW2096	GWGW2097	GWGW2098	GWGW2099	GWGW2100
		Date	3/15/2007	3/15/2007	3/26/2007	3/27/2007	3/26/2007	3/26/2007	3/27/2007	3/27/2007	3/27/2007
AnalyteNameShort	CRDL	UnitsID									
CARBON-14	20	PCI/L	< 15.3	< 15.9	< 13.8	< 15	< 13.8	< 13.8	< 15	< 15	< 15
TRITIUM (HYDROGEN-3)	300	PCI/L	< 278	< 278	< 220	< 215	< 221	< 221	< 216	< 214	< 224

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-028	UCD1-034	UCD1-049	UCD1-050	UCD1-050	UCD1-051	UCD1-051	UCD1-051
		Sample ID	GWGW2101	GWGW2102	GWGW2103	GWGW2104	GWGW2170	GWGW2105	GWGW2154	GWGW2171
		Date	3/16/2007	3/19/2007	3/22/2007	3/26/2007	9/26/2007	3/22/2007	Dup 3/22/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	< 16.3	< 14.7	19.4 +/- 11.1 J	**55.7 +/- 9.61**	**95.3 +/- 41.3**	**36.9 +/- 11.5**	**36.8 +/- 11.5**	**80 +/- 19.9**
TRITIUM (HYDROGEN-3)	300	PCI/L	< 278	< 187	< 267	< 215	< 390	< 270	< 268	< 390

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-051	UCD1-052	UCD1-052	UCD1-052	UCD1-053	UCD1-054	UCD1-054	UCD2-007
		Sample ID	GWGW2175 Dup	GWGW2106	GWGW2152 Dup	GWGW2172	GWGW2107	GWGW2108	GWGW2153 Dup	GWGW2127
		Date	9/26/2007	3/16/2007	3/16/2007	9/19/2007	3/16/2007	3/23/2007	3/23/2007	3/15/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	**53.1 +/- 15.8**	< 15.8	< 15.7	NS	< 15.3	< 19.8	< 19.9	< 15.5
TRITIUM (HYDROGEN-3)	300	PCI/L	< 390	< 276	< 278	< 410	< 277	< 226	< 229	283 +/- 175 J

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-014	UCD2-014	UCD2-014	UCD2-015	UCD2-016	UCD2-017	UCD2-026	UCD2-029
		Sample ID	GWGW2128	GWGW2156 Dup	GWGW2196	GWGW2129	GWGW2130	GWGW2131	GWGW2132	GWGW2133
		Date	3/26/2007	3/26/2007	9/19/2007	3/15/2007	3/20/2007	3/19/2007	3/16/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	15.2 +/- 8.74 J	< 15	**115 +/- 7.99**	< 16.3	< 14.7	< 14.7	< 15.2	< 15.8
TRITIUM (HYDROGEN-3)	300	PCI/L	251 +/- 147 J	250 +/- 146 J	< 410	< 278	< 257	< 313	< 278	< 275

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036	UCD2-037	UCD2-038	UCD2-039	UCD2-039
		Sample ID	GWGW2134	GWGW2135	GWGW2136	GWGW2137	GWGW2138	GWGW2139	GWGW2140	GWGW2141	GWGW2203
		Date	3/16/2007	3/14/2007	3/21/2007	3/19/2007	3/20/2007	3/19/2007	3/19/2007	3/20/2007	9/18/2007
AnalyteNameShort	CRDL	UnitsID									
CARBON-14	20	PCI/L	< 15.4	< 14.2	< 18.2	< 14.7	< 14.6	< 14.8	< 14.7	< 17.9	<17.9
TRITIUM (HYDROGEN-3)	300	PCI/L	< 277	< 233	< 267	< 242	< 257	< 304	< 188	< 260	< 410

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD2-040	UCD2-045	UCD2-046	UCD2-048	UCD2-048	UCD4-041	UCD4-041	UCD4-042
		Sample ID	GWGW2142	GWGW2143	GWGW2144	GWGW2145	GWGW2155 Dup	GWGW2146	GWGW2157 Dup	GWGW2147
		Date	3/14/2007	3/21/2007	3/19/2007	3/22/2007	3/22/2007	3/14/2007	3/14/2007	3/21/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	< 14.2	< 18.2	< 14.7	< 18.2	< 18.2	< 14.1	< 14.2	< 18.2
TRITIUM (HYDROGEN-3)	300	PCI/L	< 233	< 263	< 267	< 303	< 269	< 234	< 233	< 265

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD4-043	UCD4-044	UCD4-047
		Sample ID	GWGW2148	GWGW2149	GWGW2150
		Date	3/21/2007	3/16/2007	3/19/2007
AnalyteNameShort	CRDL	UnitsID			
CARBON-14	20	PCI/L	< 18.2	< 16.6	< 15.1
TRITIUM (HYDROGEN-3)	300	PCI/L	< 267	< 281	< 187

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-001	UCD1-003	UCD1-004	UCD1-005	UCD1-006	UCD1-008	UCD1-009
		Sample ID	GWGW2079	GWGW2080	GWGW2081	GWGW2082	GWGW2083	GWGW2084	GWGW2089
		Date	3/14/2007	3/15/2007	3/15/2007	3/15/2007	3/26/2007	3/20/2007	3/22/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**7.65**	**8.66**	**1.03**	**18.3 J**	**46.1 J**	**13.6 J**	**77.4 J**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**599**	**394**	**428**	**724**	**756**	**1110**	**1150**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-010	UCD1-010	UCD1-011	UCD1-011	UCD1-012	UCD1-013	UCD1-013
		Sample ID	GWGW2086	GWGW2159	GWGW2087	GWGW2160	GWGW2088	GWGW2085	GWGW2162
		Date	3/26/2007	9/20/2007	3/16/2007	9/18/2007	3/22/2007	3/20/2007	9/19/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**20.5 J**	**17**	**36.4 J**	**33**	**77.8 J**	**9.5**	**7.4**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**819**	NS	**933**	NS	**1180**	**1010**	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-018	UCD1-019	UCD1-019	UCD1-020	UCD1-020	UCD1-021	UCD1-021
		Sample ID	GWGW2090	GWGW2091	GWGW2163	GWGW2092	GWGW2151 Dup	GWGW2093	GWGW2164
		Date	3/14/2007	3/22/2007	9/18/2007	3/15/2007	3/15/2007	3/15/2007	9/20/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**3.3**	**34.6 J**	**26**	**18.2 J**	**18.2 J**	**30.2 J**	**27**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**392**	**999**	NS	**546**	**560**	**823**	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-022	UCD1-023	UCD1-024	UCD1-025	UCD1-025	UCD1-027Z1	UCD1-027Z2	UCD1-027Z3
		Sample ID	GWGW2094	GWGW2095	GWGW2096	GWGW2097	GWGW2166	GWGW2098	GWGW2099	GWGW2100
		Date	3/26/2007	3/27/2007	3/26/2007	3/26/2007	9/19/2007	3/27/2007	3/27/2007	3/27/2007
AnalyteNameShort	CRDL	UnitsID								
NITRATE AS NITROGEN	0.1	MG/L	**6.22**	**0.414**	**11.5 J**	**35.8 J**	**32**	**9.61**	**14.6 J**	**6.35**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**520**	**313**	**537**	**754**	NS	**661**	**671**	**595**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-028	UCD1-028	UCD1-028	UCD1-034	UCD1-049	UCD1-050	UCD1-050
		Sample ID	GWGW2101	GWGW2167	GWGW2168 Dup	GWGW2102	GWGW2103	GWGW2104	GWGW2170
		Date	3/16/2007	9/19/2007	9/19/2007	3/19/2007	3/22/2007	3/26/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**55 J**	**60**	**59**	**1.91**	**69.9 J**	**71.3 J**	**60**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**1120**	NS	NS	**318**	**1040**	**1210**	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD1-051	UCD1-051	UCD1-051	UCD1-051	UCD1-052	UCD1-052	UCD1-052
		Sample ID	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup	GWGW2106	GWGW2152 Dup	GWGW2172
		Date	3/22/2007	3/22/2007	9/26/2007	9/26/2007	3/16/2007	3/16/2007	9/19/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**55.2 J**	**55.4 J**	**47**	**48**	**53.3 J**	**47.4 J**	**50**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**1040**	**1080**	NS	NS	**1060**	**1000**	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
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		Location	UCD1-053	UCD1-053	UCD1-054	UCD1-054	UCD1-054	UCD2-007	UCD2-007
		Sample ID	GWGW2107	GWGW2173	GWGW2108	GWGW2153 Dup	GWGW2174	GWGW2127	GWGW2195
		Date	3/16/2007	9/19/2007	3/23/2007	3/23/2007	9/20/2007	3/15/2007	9/20/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**20.1 J**	**39**	**9.8**	**10.3**	**21**	**9.42**	**13**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**467**	NS	**698 J**	**994 J**	NS	**444**	NS

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
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		Location	UCD2-014	UCD2-014	UCD2-014	UCD2-015	UCD2-016	UCD2-017	UCD2-026
		Sample ID	GWGW2128	GWGW2156 Dup	GWGW2196	GWGW2129	GWGW2130	GWGW2131	GWGW2132
		Date	3/26/2007	3/26/2007	9/19/2007	3/15/2007	3/20/2007	3/19/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**3.09**	**3.13**	**2.9**	**0.966**	**8.4**	**2.97**	**4.19**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**232**	**222**	NS	**409**	542	428	**463**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
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		Location	UCD2-029	UCD2-029	UCD2-030	UCD2-030	UCD2-031	UCD2-032	UCD2-035	UCD2-036
		Sample ID	GWGW2133	GWGW2198	GWGW2134	GWGW2199	GWGW2135	GWGW2136	GWGW2137	GWGW2138
		Date	3/16/2007	9/19/2007	3/16/2007	9/19/2007	3/14/2007	3/21/2007	3/19/2007	3/20/2007
AnalyteNameShort	CRDL	UnitsID								
NITRATE AS NITROGEN	0.1	MG/L	**9.34**	**8.7**	**3.74**	**6.3**	**5.57**	**6.12**	**0.734**	**7.54**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**565**	NS	**465**	NS	**511**	**484**	**336**	**497**

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J - Validation qualifier for estimated value; Sample exceeds quantitation range.
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		Location	UCD2-037	UCD2-038	UCD2-039	UCD2-040	UCD2-045	UCD2-046	UCD2-048
		Sample ID	GWGW2139	GWGW2140	GWGW2141	GWGW2142	GWGW2143	GWGW2144	GWGW2145
		Date	3/19/2007	3/19/2007	3/20/2007	3/14/2007	3/21/2007	3/19/2007	3/22/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**1.21**	**0.813**	**1.7**	**8.17**	**6.74**	**12.9 J**	**3.85**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**384**	**329**	**429**	**520**	**536**	**725**	**398**

NS - Not Sampled
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		Location	UCD2-048	UCD2-048	UCD4-041	UCD4-041	UCD4-042	UCD4-043	UCD4-044
		Sample ID	GWGW2155 Dup	GWGW2206	GWGW2146	GWGW2157 Dup	GWGW2147	GWGW2148	GWGW2149
		Date	3/22/2007	9/26/2007	3/14/2007	3/14/2007	3/21/2007	3/21/2007	3/16/2007
AnalyteNameShort	CRDL	UnitsID							
NITRATE AS NITROGEN	0.1	MG/L	**3.82**	**6.3**	**2.6**	**2.6**	**2.59**	**2.31**	**2.4**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**396**	NS	**462**	**441**	**435**	**411**	**437**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

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		Location	UCD4-047
		Sample ID	GWGW2150
		Date	3/19/2007
AnalyteNameShort	CRDL	UnitsID	
NITRATE AS NITROGEN	0.1	MG/L	**6.83**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**496**

NS - Not Sampled
J - Validation qualifier for estimated value; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D: 2007 IRA TREATMENT SYSTEM ANALYTICAL RESULTS

APPENDIX D
VOLATILE ORGANIC COMPOUNDS - IRA SYSTEM
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		Location	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2
		Sample ID	TPIN0342	TPIN0343	TPIN0344	TPIN0345	TPIN0346	TPIN0347	TPIN0348	TPIN0350
		Date	1/22/2007	2/15/2007	3/30/2007	5/8/2007	5/30/2007	6/25/2007	7/17/2007	8/29/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	0.355 J	0.284 J	0.439 J	**0.532**	0.44 J	0.456 J	0.267 J	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	0.191 J	0.189 J	0.201 J	0.333 J	0.234 J	0.287 J	0.184 J	0.136 J
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	**0.612**	0.454 J	**0.751**	**0.863**	**0.702**	**0.752**	0.427 J	0.385 J
1,2-DICHLOROPROPANE	0.5	UG/L	**0.692**	**0.582**	**0.903**	**1.19**	**0.81**	**0.968**	0.499 J	0.451 J
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 0.37	< 0.37	3.65 J	< 0.37	< 0.37 UJ	< 1.92 UJ	0.395 J	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 0.446 UJ	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**44 J**	**35.5**	**46.6**	**69.8**	**48.3**	**68.3 J**	**75.4**	**40.7**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	0.29 J	**0.505**
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 0.438 UJ	< 0.438 UJ	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.2	< 0.2	< 0.484 UJ	< 0.2	< 0.2 UJ	< 0.2	< 0.2	< 0.631 UJ
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175	< 0.175

Notes:
NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
VOLATILE ORGANIC COMPOUNDS - IRA SYSTEM
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		Location	SP-2	SP-2	SP-2	SP-2	SP-5	SP-5	SP-5	SP-5
		Sample ID	TPIN0351	TPIN0352	TPIN0353	TPIN0354	TPEF0342	TPEF0343	TPEF0344	TPEF0345
		Date	9/13/2007	10/3/2007	11/8/2007	12/19/2007	1/22/2007	2/15/2007	3/30/2007	5/8/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 1	< 1	< 1	< 1	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 5	< 5	< 5	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.103	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	< 50	< 50	< 50	< 50	< 0.37	< 0.37	**5.07**	1.29 J
BENZENE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 1	< 1	< 1	< 1	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 10	< 10	< 10	< 10	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 10	< 10	< 10	< 10	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**44**	**20**	**38**	**35**	< 0.11 UJ	< 0.11	< 0.11	< 0.11
CHLOROMETHANE	0.5	UG/L	< 10	< 10	< 10	< 10	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 10	< 10	< 10	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 10	< 10	< 10	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 10	< 10	< 10	< 10	< 0.2	< 0.2	< 0.625 UJ	< 0.2
STYRENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.056	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	NS	NS	NS	NS	< 0.175	< 0.175	< 0.175	< 0.175

Notes:
NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
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		Location	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5
		Sample ID	TPEF0346	TPEF0347	TPEF0348	TPEF0350	TPEF0351	TPEF0352	TPEF0353	TPEF0354
		Date	5/30/2007	6/25/2007	7/17/2007	8/29/2007	9/13/2007	10/3/2007	11/8/2007	12/19/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 1	< 1	< 1	< 1
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 0.101	< 0.101	< 1	< 1	< 1	< 1
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 5	< 5	< 5	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.5	< 0.5	< 0.5	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 0.103	< 0.103	< 1	< 1	< 1	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 10	< 10
ACETONE	5	UG/L	< 0.37	< 1.42 UJ	< 0.37	< 0.37 UJ	< 50	< 50	< 50	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.135	< 0.135	< 0.5	< 0.5	< 0.5	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 0.104	< 0.104	< 1	< 1	< 1	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 0.25	< 0.25	< 10	< 10	< 10	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 0.446	< 0.446	< 10	< 10	< 10	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
CHLOROFORM	0.5	UG/L	< 0.11	< 0.11	< 0.11	0.34 J	< 1	< 1	< 1	< 1
CHLOROMETHANE	0.5	UG/L	< 0.24	0.282 J	< 0.24	< 0.24	< 10	< 10	< 10	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 0.081	< 0.081	< 1	< 1	< 1	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 0.438	< 0.438	< 10	< 10	< 10	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 10	< 10	< 10	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.2	< 0.2	0.54 J	< 0.395 UJ	< 10	< 10	< 10	< 10
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	0.139 J	< 0.056	< 1	< 1	< 1	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 1	< 1	< 1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.114	< 0.114	< 0.5	< 0.5	< 0.5	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 1	< 1	< 1	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.11	< 0.11	< 0.5	< 0.5	< 0.5	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	< 0.175	< 0.175	NS	NS	NS	NS

Notes:
NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
METALS - IRA SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5
		Sample ID	TPEF0342	TPEF0343	TPEF0344	TPEF0345	TPEF0346	TPEF0347	TPEF0348	TPEF0350	TPEF0351
		Date	1/22/2007	2/15/2007	3/30/2007	5/8/2007	5/30/2007	6/25/2007	7/17/2007	8/29/2007	9/13/2007
AnalyteNameShort	CRDL	UnitsID									
ANTIMONY	5	UG/L	< 0.5	< 0.5	< 0.5 UJ	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1
ARSENIC	3	UG/L	1.83 J	2.5 J	< 1.5	2.48 J	< 1.5	< 4.3 UJ	< 1.5	1.7 J	2.87
BARIUM	20	UG/L	**159**	**181**	**164**	**183**	**177**	**170**	**167**	**167**	**187**
BERYLLIUM	1	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1
BORON	50	UG/L	**466**	**326 J**	**564**	**581**	**464**	**639**	**584**	**601**	NS
CADMIUM	1	UG/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.11	< 0.11	< 1
CALCIUM	2000	UG/L	**40200**	**41900**	**36500**	**42500**	**41800**	**41200**	**40400**	**42500**	**46300**
CHROMIUM, TOTAL	10	UG/L	**21.5**	**21.9**	**18.7**	**22.1**	**23.1**	**21.9**	**21.7**	**23.6**	**28.2**
COBALT	10	UG/L	< 0.1	0.241 J	0.255 J	0.271 J	0.37 J	0.23 J	0.32 J	0.28 J	< 1
COPPER	10	UG/L	1.26 J	1.42 J	1.44 J	1.39 J	1.5 J	1.1 J	1.8 J	1.9 J	< 1
IRON	100	UG/L	**342**	**256**	**176**	**268**	85.7 J	**165**	**163**	**179**	NS
LEAD	3	UG/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 1
MAGNESIUM	2000	UG/L	**70800**	**74100**	**64600**	**71400**	**70900**	**71200**	**69200**	**74200**	**76700**
MANGANESE	10	UG/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	NS
MERCURY	0.2	UG/L	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.06	< 0.03	< 0.03	< 0.5
MOLYBDENUM	10	UG/L	1.79 J	1.84 J	1.92 J	1.81 J	1.9 J	1.9 J	1.7 J	1.7 J	1.81
NICKEL	20	UG/L	1.94 J	1.6 J	1.34 J	1.72 J	1.8 J	1.4 J	1.4 J	1.5 J	2.5
POTASSIUM	2000	UG/L	724 J	780 J	778 J	625 J	750 J	787 J	710 J	770 J	989
SELENIUM	3	UG/L	< 2.5	< 2.5	< 2.5	< 2.5	< 5	< 2.5	1.8 J	1.6 J	**3.92**
SILVER	10	UG/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1
SODIUM	2000	UG/L	**42600**	**40800**	**37700**	**39400**	**43200**	**40700**	**41500**	**38100**	**43300**
THALLIUM	10	UG/L	< 0.4	< 0.4	< 0.4	< 0.4	0.56 J	0.43 J	< 0.3	0.44 J	< 1
VANADIUM	10	UG/L	10 J	**15.3 J**	< 10	**12.4 J**	< 30	**11.1 J**	**10.6**	**11.3**	**12.9**
ZINC	20	UG/L	< 4.73 UJ	< 3.2 UJ	3.54 J	< 3.04 UJ	3.4 J	3.4 J	4 J	3.3 J	12.9

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APPENDIX D
METALS - IRA SYSTEM
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LEHR/SCDS Environmental Restoration
Davis, California

		Location	SP-5	SP-5	SP-5
		Sample ID	TPEF0352	TPEF0353	TPEF0354
		Date	10/3/2007	11/8/2007	12/19/2007
AnalyteNameShort	CRDL	UnitsID			
ANTIMONY	5	UG/L	< 1	< 1	< 1
ARSENIC	3	UG/L	1.88	1.7	2.16
BARIUM	20	UG/L	**188**	**184**	**179**
BERYLLIUM	1	UG/L	< 1	< 1	< 1
BORON	50	UG/L	NS	NS	NS
CADMIUM	1	UG/L	< 1	< 1	< 1
CALCIUM	2000	UG/L	**43000**	**44800**	**43000**
CHROMIUM, TOTAL	10	UG/L	**27.9**	**29.3**	**28.2**
COBALT	10	UG/L	< 1	< 1	< 1
COPPER	10	UG/L	3.16	1.25	1.1
IRON	100	UG/L	NS	NS	NS
LEAD	3	UG/L	< 1	< 1	< 1
MAGNESIUM	2000	UG/L	**71300**	**78400**	**72200**
MANGANESE	10	UG/L	NS	NS	NS
MERCURY	0.2	UG/L	< 0.5	< 0.5	< 0.5
MOLYBDENUM	10	UG/L	2	1.92	1.81
NICKEL	20	UG/L	2.38	1.77	1.9
POTASSIUM	2000	UG/L	833	825	868
SELENIUM	3	UG/L	2.55	1.5	1.52
SILVER	10	UG/L	< 1	< 1	< 1
SODIUM	2000	UG/L	**40400**	**42500**	**38500**
THALLIUM	10	UG/L	< 1	< 1	< 1
VANADIUM	10	UG/L	**11.5**	9.24	**10.3**
ZINC	20	UG/L	14.6	14.9	11.3

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
RADS - IRA SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2
		Sample ID	TPIN0342	TPIN0343a	TPIN0344	TPIN0345	TPIN0346	TPIN0347	TPIN0348	TPIN0349	TPIN0351
		Date	1/22/2007	2/21/2007	3/30/2007	5/8/2007	5/30/2007	6/25/2007	7/17/2007	8/24/2007	9/13/2007
AnalyteNameShort	CRDL	UnitsID									
CARBON-14	20	PCI/L	< 13.7 UJ	**23.7 +/- 8.03**	< 14.3	< 18.5	< 15.3	**22.7 +/- 9.62**	< 18.5	< 19.1	< 565
TRITIUM (HYDROGEN-3)	300	PCI/L	< 185	< 263	< 224	< 210	< 253	< 210	< 216	< 258	< 410

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
RADS - IRA SYSTEM
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		Location	SP-2	SP-2	SP-2
		Sample ID	TPIN0352	TPIN0353	TPIN0354
		Date	10/3/2007	11/8/2007	12/19/2007
AnalyteNameShort	CRDL	UnitsID			
CARBON-14	20	PCI/L	**1640 +/- 940 J**	21.7 +/- 12.1	7.86 +/- 8.89
TRITIUM (HYDROGEN-3)	300	PCI/L	< 390	NS	NS

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
WET CHEMISTRY - IRA SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2	SP-2
		Sample ID	TPIN0342	TPIN0343	TPIN0344	TPIN0345	TPIN0346	TPIN0347	TPIN0348	TPIN0350
		Date	1/22/2007	2/15/2007	3/30/2007	5/8/2007	5/30/2007	6/25/2007	7/17/2007	8/29/2007
AnalyteNameShort	CRDL	UnitsID								
ALKALINITY, TOTAL (AS CaCO3)	10	MG/L	NS	NS	NS	NS	NS	NS	NS	NS
CHLORIDE (AS CL)	1	MG/L	NS	NS	NS	NS	NS	NS	NS	NS
NITRATE AS NITROGEN	0.1	MG/L	NS	NS	NS	NS	NS	NS	NS	NS
SULFATE (AS SO4)	1	MG/L	NS	NS	NS	NS	NS	NS	NS	NS
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	NS	NS	NS	NS	NS	NS	NS	NS
TOTAL ORGANIC CARBON	1	MG/L	**2.62**	0.537 J	**1.29**	0.902 J	**1.09**	**1.17**	**1.54**	**1.18**

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX D
WET CHEMISTRY - IRA SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	SP-2	SP-2	SP-2	SP-2	SP-5	SP-5	SP-5	SP-5
		Sample ID	TPIN0351	TPIN0352	TPIN0353	TPIN0354	TPEF0342	TPEF0343a	TPEF0344	TPEF0345
		Date	9/13/2007	10/3/2007	11/8/2007	12/19/2007	1/22/2007	2/21/2007	3/30/2007	5/8/2007
AnalyteNameShort	CRDL	UnitsID								
ALKALINITY, TOTAL (AS CaCO3)	10	MG/L	NS	NS	NS	NS	**397**	**393**	**123**	**409**
CHLORIDE (AS CL)	1	MG/L	NS	NS	NS	NS	**19.9**	**19.8**	**18.3**	**19.5**
NITRATE AS NITROGEN	0.1	MG/L	NS	NS	NS	NS	**5.45**	**5.37**	**4.97**	**5.68**
SULFATE (AS SO4)	1	MG/L	NS	NS	NS	NS	**38.8**	**65.4**	**37**	**39.8**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	NS	NS	NS	NS	**475 J**	**469**	**465**	**493**
TOTAL ORGANIC CARBON	1	MG/L	**1.9**	**1.7**	**1.6**	**1.5**	NS	NS	NS	NS

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
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APPENDIX D
WET CHEMISTRY - IRA SYSTEM
Groundwater Treatment System and Water Monitoring Report
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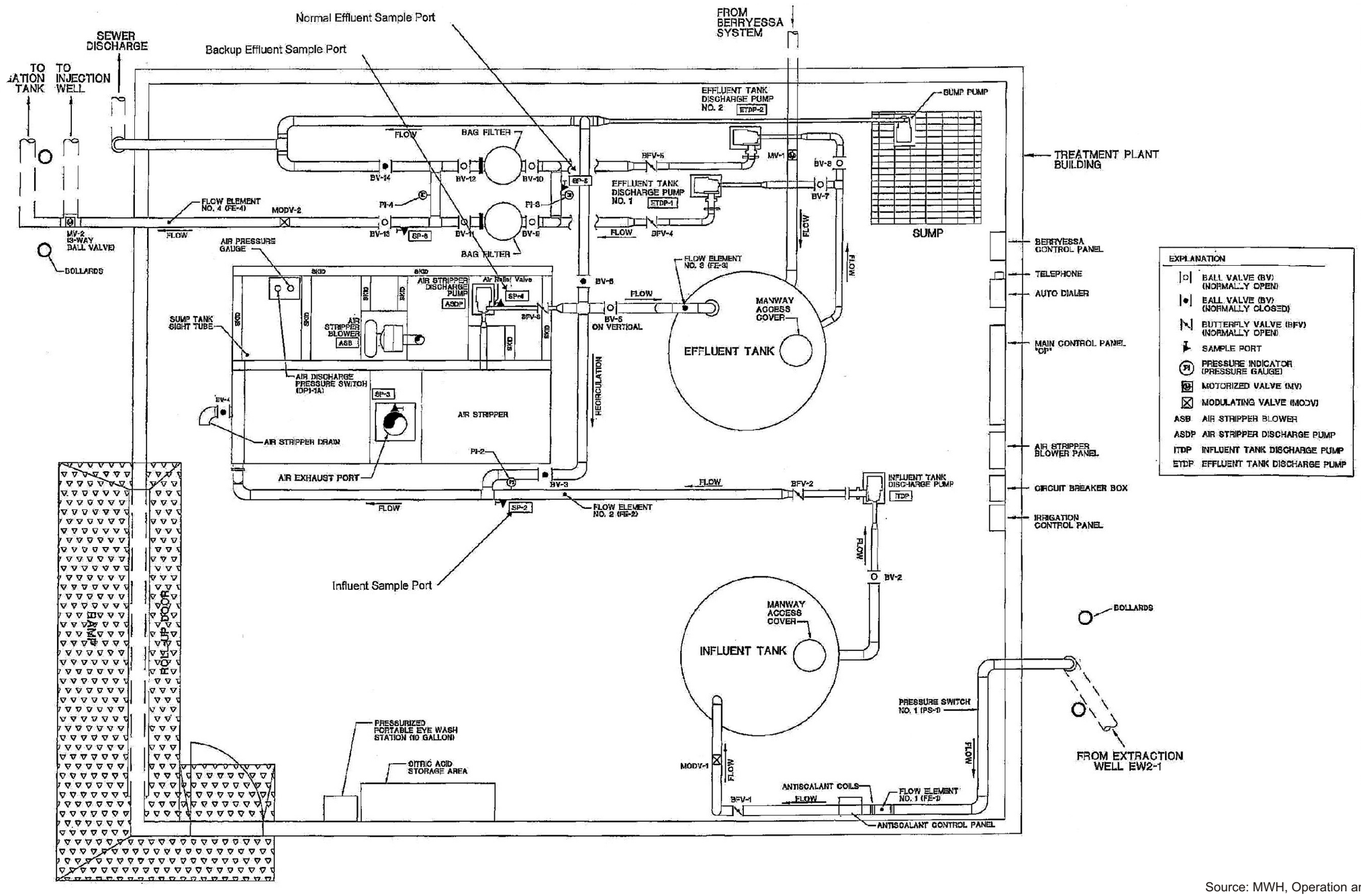
Davis, California

		Location	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5	SP-5
		Sample ID	TPEF0346	TPEF0347	TPEF0348	TPEF0350	TPEF0351	TPEF0352	TPEF0353	TPEF0354
		Date	5/30/2007	6/25/2007	7/17/2007	8/29/2007	9/13/2007	10/3/2007	11/8/2007	12/19/2007
AnalyteNameShort	CRDL	UnitsID								
ALKALINITY, TOTAL (AS CaCO3)	10	MG/L	**365**	**372**	**364**	**378**	**398**	**390**	**400**	**420**
CHLORIDE (AS CL)	1	MG/L	**19.6**	**20.6**	**10.7**	**19.4**	**19**	**19**	**22**	**21**
NITRATE AS NITROGEN	0.1	MG/L	**5.96 J**	**6.66**	**6.68**	**7.09**	**7**	**6.1**	**6.4**	**8.8**
SULFATE (AS SO4)	1	MG/L	**37.6**	**38.1**	**19.8**	**39.5**	**42**	**41**	**45**	**45**
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**496**	**490**	**495**	**476**	**506**	**493**	**483**	**496**
TOTAL ORGANIC CARBON	1	MG/L	NS	NS	NS	NS	NS	NS	NS	NS

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.



Source: MWH, Operation and Maintenance Manual

TREATMENT PLANT LAYOUT

2007 Comprehensive Annual Water Monitoring Report
LEHR/SCDS
Davis, California

APPENDIX E: 2007 ANALYTICAL RESULTS FOR THE DDC MONITORING SYSTEM

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-1A	DDC-1B	DDC-1B	DDC-1C	DDC-1C	DDC-2A	DDC-2B	DDC-2C
		Sample ID	GWGW2109	GWGW2110	GWGW2176	GWGW2111	GWGW2177	GWGW2112	GWGW2113	GWGW2114
		Date	3/28/2007	3/28/2007	9/24/2007	3/28/2007	9/24/2007	3/23/2007	3/23/2007	3/23/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	0.664 J	0.977 J	< 1	**27.6**	**2.1**	**4.52**	**8.38**	**14.2**
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	0.175 J	< 1	**11.6**	**1.6**	0.227 J	**0.644**	**1.55**
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	**11.5**	**1**	< 0.1	< 0.1	0.426 J
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 5	< 1.25	< 5	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	0.224 J	0.362 J	< 0.5	**10.3**	**0.66**	< 0.1	**0.564**	**0.628**
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 1	**1.26 J**	< 1	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 10	< 2.5	< 10	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	**6.77**	**6.85**	< 50	< 1.85	< 50	4.53 J	**5.47**	4.41 J
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.5	< 0.675	< 0.5	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 1	< 0.52	< 1	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 1	**0.562 J**	< 1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 10	< 1.25	< 10	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 10	< 2.23	< 10	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 1	< 0.5	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1	**0.949 J**	< 1	< 0.1	0.263 J	0.144 J
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**18.9**	**32.7**	**6.2**	**4310**	**290**	**35.2**	**87**	**311**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 10	< 1.2	< 10	< 0.24	**0.627**	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.5	< 1	< 0.5	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 1	< 1	< 1	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 1	< 0.405	< 1	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 10	< 2.19	< 10	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 10	< 2.5	< 10	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.59 UJ	< 0.581 UJ	< 10	< 3.81 UJ	< 10	< 0.23 UJ	< 0.334 UJ	< 0.238 UJ
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.415 UJ
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 1	< 0.28	< 1	< 0.056	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1	< 0.5	< 1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.5	< 0.57	< 0.5	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 1	**1 J**	< 1	< 0.2	< 0.2	**1.09**
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.5	< 0.55	< 0.5	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	NS	< 0.875	NS	< 0.175	< 0.175	< 0.175

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-2C	DDC-3A	DDC-3B	DDC-3B	DDC-3C	DDC-3C	DDC-4A	DDC-4B
		Sample ID	GWGW2181	GWGW2115	GWGW2116	GWGW2183	GWGW2117	GWGW2184	GWGW2118	GWGW2119
		Date	9/24/2007	3/23/2007	3/23/2007	9/24/2007	3/23/2007	9/24/2007	3/28/2007	3/28/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	**4.2**	0.571 J	0.589 J	< 1	0.716 J	< 1	0.506 J	0.707 J
1,1-DICHLOROETHANE	0.5	UG/L	**2.7**	**1.19**	**1.45**	< 1	**2.45**	< 1	0.392 J	**0.545**
1,1-DICHLOROETHENE	0.5	UG/L	**1**	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 0.25	< 0.25	< 5	< 0.25	< 5	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	**0.64**	**3.7**	**4.32**	**0.71**	**5.31**	**0.8**	**2.6**	**3.35**
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	**0.52**	**0.624**	< 1	**0.813**	< 1	0.312 J	0.431 J
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5
ACETONE	5	UG/L	< 50	**5.1**	< 0.37	< 50	4.3 J	< 50	**5.16**	**5.48**
BENZENE	0.5	UG/L	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 1	< 0.104	< 0.104	< 1	< 0.104	< 1	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 10	< 0.25	< 0.25	< 10	< 0.25	< 10	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 10	< 0.446	< 0.446	< 10	< 0.446	< 10	0.586 J	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	0.186 J	< 1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	**230**	**56.2**	**68.1**	**13**	**99.5**	**18**	**62.3**	**82.8**
CHLOROMETHANE	0.5	UG/L	< 10	< 0.24	< 0.24	< 10	0.332 J	< 10	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 1	< 0.081	< 0.081	< 1	< 0.081	< 1	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 0.438	< 0.438	< 10	< 0.438	< 10	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 10	< 0.295 UJ	< 0.263 UJ	< 10	< 0.304 UJ	< 10	< 0.632 UJ	< 0.61 UJ
STYRENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.137 UJ	< 1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 1	< 0.056	< 0.056	< 1	< 0.056	< 1	< 0.056	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	NS	< 0.175	< 0.175	NS	< 0.175	NS	< 0.175	< 0.175

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-4B	DDC-4C	DDC-4C	DDC-5A	DDC-5B	DDC-5B	GWGW2190	DDC-5C
		Sample ID	GWGW2186	GWGW2120	GWGW2187	GWGW2121	GWGW2122	GWGW2189	Dup	GWGW2123
		Date	9/24/2007	3/28/2007	9/24/2007	3/28/2007	3/28/2007	9/24/2007	9/24/2007	3/28/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 1	0.804 J	< 1	< 0.104	< 0.104	< 1	< 1	**7.97**
1,1-DICHLOROETHANE	0.5	UG/L	< 1	**0.958**	< 1	< 0.101	< 0.101	< 1	< 1	**2.3 J**
1,1-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	**2.53**
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 0.25	< 5	< 0.25	< 0.25	< 5	< 5	< 1.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
1,2-DICHLOROETHANE	0.5	UG/L	**1.3**	**4.17**	**1.4**	< 0.1	< 0.1	< 0.5	< 0.5	**1.11 J**
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	**0.689**	< 1	< 0.103	< 0.103	< 1	< 1	< 0.515
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
2-HEXANONE	1	UG/L	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10	< 2.5
ACETONE	5	UG/L	< 50	4.88 J	< 50	**6.62**	< 0.37	< 50	< 50	< 1.85
BENZENE	0.5	UG/L	< 0.5	< 0.135	< 0.5	< 0.135	< 0.135	< 0.5	< 0.5	< 0.675
BROMOCHLOROMETHANE	1	UG/L	< 1	< 0.104	< 1	< 0.104	< 0.104	< 1	< 1	< 0.52
BROMODICHLOROMETHANE	0.5	UG/L	< 1	0.13 J	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
BROMOFORM	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
BROMOMETHANE	1	UG/L	< 10	< 0.25	< 10	< 0.25	< 0.25	< 10	< 10	< 1.25
CARBON DISULFIDE	1	UG/L	< 10	< 0.446	< 10	< 0.446	< 0.446	< 10	< 10	< 2.23
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5	< 1
CHLOROBENZENE	0.5	UG/L	< 1	0.103 J	< 1	< 0.1	0.241 J	< 1	< 1	**2.58**
CHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
CHLOROFORM	0.5	UG/L	**43**	**122**	**57**	**0.568**	**22.6**	< 1	< 1	**1370**
CHLOROMETHANE	0.5	UG/L	< 10	< 0.24	< 10	< 0.24	0.325 J	< 10	< 10	**1.64 J**
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5	< 1
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
ETHYLBENZENE	0.5	UG/L	< 1	< 0.081	< 1	< 0.081	< 0.081	< 1	< 1	< 0.405
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 0.438	< 10	< 0.438	< 0.438	< 10	< 10	< 2.19
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10	< 2.5
METHYLENE CHLORIDE	1	UG/L	< 10	< 0.596 UJ	< 10	< 0.382 UJ	< 0.604 UJ	< 10	< 10	< 3.19 UJ
STYRENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
TOLUENE	0.5	UG/L	< 1	< 0.056	< 1	< 0.056	< 0.056	< 1	< 1	< 0.28
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1	< 0.5
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.114	< 0.5	< 0.114	< 0.114	< 0.5	< 0.5	< 0.57
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.11	< 0.5	< 0.11	< 0.11	< 0.5	< 0.5	< 0.55
XYLENES, TOTAL	1	UG/L	NS	< 0.175	NS	< 0.175	< 0.175	NS	NS	< 0.875

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	DDC-5C	DDC-6A	DDC-6B	DDC-6B	DDC-6C	DDC-6C	UCD1-012	UCD1-012
		Sample ID	GWGW2191	GWGW2124	GWGW2125	GWGW2193	GWGW2126	GWGW2194	GWGW2088	GWGW2161
		Date	9/24/2007	3/28/2007	3/28/2007	9/24/2007	3/28/2007	9/24/2007	3/22/2007	9/24/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 1	**2.94**	**3.48**	**1.9**	**5.02**	**2.1**	0.783 J	< 1
1,1-DICHLOROETHANE	0.5	UG/L	< 1	< 0.101	< 0.101	< 1	< 0.101	< 1	< 0.101	< 1
1,1-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	0.151 J	< 1	< 0.1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 5	< 0.25	< 0.25	< 5	< 0.25	< 5	< 0.25	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.5	< 0.1	< 0.1	< 0.5	< 0.1	< 0.5	< 0.1	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	< 1	< 0.103	< 0.103	< 1	< 0.103	< 1	< 0.103	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
2-HEXANONE	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 10
ACETONE	5	UG/L	< 50	4.82 J	**6**	< 50	4.4 J	< 50	< 0.37	< 50
BENZENE	0.5	UG/L	< 0.5	< 0.135	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 1	< 0.104	< 0.104	< 1	< 0.104	< 1	< 0.104	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
BROMOFORM	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
BROMOMETHANE	1	UG/L	< 10	< 0.25	< 0.25	< 10	< 0.25	< 10	< 0.25	< 10
CARBON DISULFIDE	1	UG/L	< 10	< 0.446	< 0.446	< 10	< 0.446	< 10	< 0.446	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5
CHLOROBENZENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	0.266 J	< 1	< 0.1	< 1
CHLOROETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
CHLOROFORM	0.5	UG/L	**72**	**29**	**31.8**	**14**	**87.1**	**18**	**32.7**	**8.6**
CHLOROMETHANE	0.5	UG/L	< 10	< 0.24	< 0.24	< 10	0.359 J	< 10	< 0.24	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.2	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
ETHYLBENZENE	0.5	UG/L	< 1	< 0.081	< 0.081	< 1	< 0.081	< 1	< 0.081	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 10	< 0.438	< 0.438	< 10	< 0.438	< 10	< 0.438	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 10	< 0.5	< 0.5	< 10	< 0.5	< 10	< 0.5	< 10
METHYLENE CHLORIDE	1	UG/L	< 10	< 0.593 UJ	< 0.664 UJ	< 10	< 0.658 UJ	< 10	< 0.515 UJ	< 10
STYRENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
TOLUENE	0.5	UG/L	< 1	< 0.056	< 0.056	< 1	< 0.056	< 1	< 0.056	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 1	< 0.1	< 0.1	< 1	< 0.1	< 1	< 0.1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.5	< 0.114	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 1	< 0.2	< 0.2	< 1	< 0.2	< 1	< 0.2	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.5	< 0.11	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11	< 0.5
XYLENES, TOTAL	1	UG/L	NS	< 0.175	< 0.175	NS	< 0.175	NS	< 0.175	NS

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-049	UCD1-049	UCD1-050	UCD1-050	UCD1-051	UCD1-051	UCD1-051	UCD1-051
		Sample ID	GWGW2103	GWGW2169	GWGW2104	GWGW2170	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup
		Date	3/22/2007	9/26/2007	3/26/2007	9/26/2007	3/22/2007	3/22/2007	9/26/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID								
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	**1.42**	**4**	**8.27**	**21**	**1.18**	**1.08**	**1.2**	**1.3**
1,1-DICHLOROETHANE	0.5	UG/L	**0.512**	< 1	**0.999**	**2**	**4.07**	**3.81**	**7.1**	**7.1**
1,1-DICHLOROETHENE	0.5	UG/L	**0.836**	< 1	**0.718**	**1.5**	**0.614**	**0.598**	< 1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 5	< 0.25	< 5	< 0.25	< 0.25	< 5	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.5	0.426 J	< 0.5	**4.83**	**4.54**	**5.8**	**5.6**
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 1	< 0.103	< 1	0.379 J	0.385 J	< 1	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10
ACETONE	5	UG/L	< 0.37	< 50	< 0.37	< 50	< 0.37	< 0.37	< 50	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.5	< 0.135	< 0.5	< 0.135	< 0.135	< 0.5	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 1	< 0.104	< 1	< 0.104	< 0.104	< 1	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 10	< 0.25	< 10	< 0.25	< 0.25	< 10	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 10	< 0.446	< 10	< 0.446	< 0.446	< 10	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
CHLOROFORM	0.5	UG/L	**304**	**170**	**307**	**430**	**278**	**274**	**380**	**390**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 10	< 0.24	< 10	< 0.24	< 0.24	< 10	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.5	< 0.2	< 0.5	< 0.2	< 0.2	< 0.5	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 1	< 0.2	< 1	< 0.2	< 0.2	< 1	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 1	< 0.081	< 1	< 0.081	< 0.081	< 1	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 10	< 0.438	< 10	< 0.438	< 0.438	< 10	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 10	< 0.5	< 10	< 0.5	< 0.5	< 10	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.452 UJ	< 10	< 0.491 UJ	< 10	< 0.415 UJ	< 0.459 UJ	< 10	< 10
STYRENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.992 UJ	< 0.949 UJ	< 1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 1	< 0.056	< 1	< 0.056	< 0.056	< 1	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 1	< 0.1	< 1	< 0.1	< 0.1	< 1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.5	< 0.114	< 0.5	< 0.114	< 0.114	< 0.5	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 1	< 0.2	**1.4**	< 0.2	< 0.2	< 1	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.11	< 0.5	< 0.11	< 0.11	< 0.5	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	NS	< 0.175	NS	< 0.175	< 0.175	NS	NS

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
VOLATILE ORGANIC COMPOUNDS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-048	UCD2-048	UCD2-048
		Sample ID	GWGW2145	GWGW2155 Dup	GWGW2206
		Date	3/22/2007	3/22/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID			
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.104	< 1
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.101	< 1
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.25	< 5
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.2	< 1
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.1	< 0.5
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.103	< 1
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1
2-HEXANONE	1	UG/L	< 0.5	< 0.5	< 10
ACETONE	5	UG/L	4.28 J	< 0.37	< 50
BENZENE	0.5	UG/L	< 0.135	< 0.135	< 0.5
BROMOCHLOROMETHANE	1	UG/L	< 0.104	< 0.104	< 1
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.1	< 1
BROMOFORM	0.5	UG/L	< 0.2	< 0.2	< 1
BROMOMETHANE	1	UG/L	< 0.25	< 0.25	< 10
CARBON DISULFIDE	1	UG/L	< 0.446	< 0.446	< 10
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.2	< 0.5
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.1	< 1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.2	< 1
CHLOROFORM	0.5	UG/L	**9.91**	**6.69**	**13**
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.24	< 10
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.1	< 1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.2	< 0.5
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.2	< 1
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.081	< 1
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	< 0.438	< 10
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 0.5	< 10
METHYLENE CHLORIDE	1	UG/L	< 0.335 UJ	< 0.479 UJ	< 10
STYRENE	0.5	UG/L	< 0.1	< 0.1	< 1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.1	< 1
TOLUENE	0.5	UG/L	< 0.056	< 0.056	< 1
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.1	< 1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.114	< 0.5
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.2	< 1
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.11	< 0.5
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.175	NS

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
METALS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-012	UCD1-012	UCD1-049	UCD1-050	UCD1-051	UCD1-051	UCD1-051	UCD1-051	UCD2-048	UCD2-048
		Sample ID	GWGW2088	GWGW2161	GWGW2103	GWGW2104	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup	GWGW2145	GWGW2155 Dup
		Date	3/22/2007	9/24/2007	3/22/2007	3/26/2007	3/22/2007	3/22/2007	9/26/2007	9/26/2007	3/22/2007	3/22/2007
AnalyteNameShort	CRDL	UnitsID										
CHROMIUM, TOTAL	10	UG/L	**113**	**123**	**110**	**89.4**	**96**	**96.4**	**91**	**89.1**	**10.9**	**10.7**

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
RADS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-012	UCD1-049	UCD1-050	UCD1-050	UCD1-051	UCD1-051	UCD1-051	UCD1-051
		Sample ID	GWGW2088	GWGW2103	GWGW2104	GWGW2170	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup
		Date	3/22/2007	3/22/2007	3/26/2007	9/26/2007	3/22/2007	3/22/2007	9/26/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID								
CARBON-14	20	PCI/L	**60.5 +/- 11.9**	19.4 +/- 11.1 J	**55.7 +/- 9.61**	**1460 +/- 940 J**	**36.9 +/- 11.5**	**36.8 +/- 11.5**	**2060 +/- 940 J**	**1030 +/- 940 J**
TRITIUM (HYDROGEN-3)	300	PCI/L	< 270	< 267	< 215	< 390	< 270	< 268	< 390	< 390

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
RADS IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-048	UCD2-048
		Sample ID	GWGW2145	GWGW2155 Dup
		Date	3/22/2007	3/22/2007
AnalyteNameShort	CRDL	UnitsID		
CARBON-14	20	PCI/L	< 18.2	< 18.2
TRITIUM (HYDROGEN-3)	300	PCI/L	< 303	< 269

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample excee
UJ - Estimated value falls below reporting limit.

APPENDIX E
WET CHEMISTRY IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD1-012	UCD1-049	UCD1-050	UCD1-050	UCD1-051	UCD1-051	UCD1-051	UCD1-051	UCD2-048
		Sample ID	GWGW2088	GWGW2103	GWGW2104	GWGW2170	GWGW2105	GWGW2154 Dup	GWGW2171	GWGW2175 Dup	GWGW2145
		Date	3/22/2007	3/22/2007	3/26/2007	9/26/2007	3/22/2007	3/22/2007	9/26/2007	9/26/2007	3/22/2007
AnalyteNameShort	CRDL	UnitsID									
NITROGEN, NITRATE (AS N)	0.1	MG/L	**77.8 J**	**69.9 J**	**71.3 J**	**60**	**55.2 J**	**55.4 J**	**47**	**48**	**3.85**
TOTAL DISSOLVED SOLIDS	20	MG/L	**1180**	**1040**	**1210**	NS	**1040**	**1080**	NS	NS	**398**

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.

APPENDIX E
WET CHEMISTRY IN THE DDC SYSTEM
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	UCD2-048	UCD2-048
		Sample ID	GWGW2155 Dup	GWGW2206
		Date	3/22/2007	9/26/2007
AnalyteNameShort	CRDL	UnitsID		
NITROGEN, NITRATE (AS N)	0.1	MG/L	**3.82**	**6.3**
TOTAL DISSOLVED SOLIDS	20	MG/L	**396**	NS

NS - Not Sampled
Results in **BOLD** indicate detections above the CRDL.
J - Validation qualifier for estimated value; sample exceeds quan
UJ - Estimated value falls below reporting limit.

APPENDIX F: COMPLETE ANALYTICAL RESULTS FOR 2007 STORMWATER AND SURFACE WATER

APPENDIX F
VOLATILE ORGANIC COMPOUNDS IN STORMWATER AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	LF-01	LS-01	LS-01	LS-01	LS-01	PCD	PCD	PCU	STPO
		Sample ID	STMW0141	RWSW0044	RWSW0045 Dup	RWSW0046	RWSW0047 Dup	SWSW0288	SWSW0290 Dup	SWSW0287	SWSW0289
		Date	2/26/2007	4/11/2007	4/11/2007	12/7/2007	12/7/2007	2/27/2007	2/27/2007	2/27/2007	2/27/2007
AnalyteNameShort	CRDL	UnitsID									
1,1,1-TRICHLOROETHANE	0.5	UG/L	< 0.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.1	< 0.1	< 0.1	< 0.1
1,1,2,2-TETRACHLOROETHANE	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
1,1,2-TRICHLOROETHANE	1	UG/L	< 0.104	< 0.25	< 0.25	< 0.25	< 0.25	< 0.104	< 0.104	< 0.104	< 0.104
1,1-DICHLOROETHANE	0.5	UG/L	< 0.101	< 0.3	< 0.3	< 0.3	< 0.3	< 0.101	< 0.101	< 0.101	< 0.101
1,1-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DIBROMO-3-CHLOROPROPANE	0.5	UG/L	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25
1,2-DIBROMOETHANE (ETHYLENE DIBROMIDE)	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
1,2-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROETHANE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
1,2-DICHLOROPROPANE	0.5	UG/L	< 0.103	< 0.25	< 0.25	< 0.25	< 0.25	< 0.103	< 0.103	< 0.103	< 0.103
1,3-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
1,4-DICHLOROBENZENE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
2-HEXANONE	1	UG/L	< 0.5	< 1.25	< 1.25	< 1.25	< 1.25	< 0.5	< 0.5	< 0.5	< 0.5
ACETONE	5	UG/L	0.37 J	**211 J**	**224 J**	< 1.25	< 1.25	< 0.37	< 0.37	< 0.37	< 0.37
BENZENE	0.5	UG/L	< 0.135	< 0.3	< 0.3	< 0.3	< 0.3	< 0.135	< 0.135	< 0.135	< 0.135
BROMOCHLOROMETHANE	1	UG/L	< 0.104	NS	NS	NS	NS	< 0.104	< 0.104	< 0.104	< 0.104
BROMODICHLOROMETHANE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
BROMOFORM	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
BROMOMETHANE	1	UG/L	< 0.25	< 0.5	< 0.5	< 0.5	< 0.5	< 0.25	< 0.25	< 0.25	< 0.25
CARBON DISULFIDE	1	UG/L	< 0.446	< 1.25	< 1.25	< 1.25	< 1.25	< 0.446	< 0.446	< 0.446	< 0.446
CARBON TETRACHLORIDE	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROBENZENE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
CHLOROETHANE	0.5	UG/L	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.2	< 0.2	< 0.2	< 0.2
CHLOROFORM	0.5	UG/L	< 0.11	< 0.25	< 0.25	< 0.25	< 0.25	< 0.11	< 0.11	< 0.11	< 0.11
CHLOROMETHANE	0.5	UG/L	< 0.24	< 0.5	< 0.5	< 0.5	< 0.5	< 0.24	< 0.24	< 0.24	< 0.24
cis-1,2-DICHLOROETHYLENE	0.5	UG/L	< 0.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.1	< 0.1	< 0.1	< 0.1
cis-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
DIBROMOCHLOROMETHANE	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
ETHYLBENZENE	0.5	UG/L	< 0.081	< 0.25	< 0.25	< 0.25	< 0.25	< 0.081	< 0.081	< 0.081	< 0.081
METHYL ETHYL KETONE (2-BUTANONE)	1	UG/L	< 0.438	**4.73 J**	**4.49 J**	< 1.25	< 1.25	< 0.438	< 0.438	< 0.438	< 0.438
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	1	UG/L	< 0.5	< 1.25	< 1.25	< 1.25	< 1.25	< 0.5	< 0.5	< 0.5	< 0.5
METHYLENE CHLORIDE	1	UG/L	< 0.2	< 2	< 2	< 2	< 2	< 0.2	< 0.2	< 0.2	< 0.761 UJ
STYRENE	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.1	< 0.1	< 0.1	< 0.1
TETRACHLOROETHYLENE(PCE)	0.5	UG/L	< 0.1	< 0.25	< 0.25	< 0.25 UJ	< 0.25 UJ	< 0.1	< 0.1	< 0.1	< 0.1
TOLUENE	0.5	UG/L	< 0.056	**16.1**	**16.7**	< 0.25	< 0.25	< 0.056	< 0.056	< 0.0741 UJ	< 0.056
trans-1,2-DICHLOROETHENE	0.5	UG/L	< 0.1	< 0.3	< 0.3	< 0.3	< 0.3	< 0.1	< 0.1	< 0.1	< 0.1
trans-1,3-DICHLOROPROPENE	0.5	UG/L	< 0.114	< 0.25	< 0.25	< 0.25	< 0.25	< 0.114	< 0.114	< 0.114	< 0.114
TRICHLOROETHYLENE (TCE)	0.5	UG/L	< 0.2	< 0.25	< 0.25	< 0.25	< 0.25	< 0.2	< 0.2	< 0.2	< 0.2
VINYL CHLORIDE	0.5	UG/L	< 0.11	< 0.5	< 0.5	< 0.5	< 0.5	< 0.11	< 0.11	< 0.11	< 0.11
XYLENES, TOTAL	1	UG/L	< 0.175	< 0.25	< 0.25	< 0.25	< 0.25	< 0.175	< 0.175	< 0.175	< 0.175

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX F
METALS IN STORMWATER AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	LF-01	LS-01	LS-01	LS-01	LS-01	PCD	PCD	PCU	STPO
		Sample ID	STMW0141	RWSW0044	RWSW0045 Dup	RWSW0046	RWSW0047 Dup	SWSW0288	SWSW0290 Dup	SWSW0287	SWSW0289
		Date	2/26/2007	4/11/2007	4/11/2007	12/7/2007	12/7/2007	2/27/2007	2/27/2007	2/27/2007	2/27/2007
AnalyteNameShort	CRDL	UnitsID									
ANTIMONY	5	UG/L	< 1.47 UJ	**120 J**	86 J	3.9	4.2	< 0.92 UJ	< 0.915 UJ	**< 1.45 UJ**	**< 0.592 UJ**
ARSENIC	3	UG/L	< 5.14 UJ	**5.9**	**3.8 J**	**5.6**	**5.6**	2.65 J	2.9 J	2.21 J	**8.81**
BARIUM	20	UG/L	**150**	**250**	**130**	**120**	**120**	**112**	**119**	**123**	**60.5**
BERYLLIUM	1	UG/L	0.345 J	0.28 J	< 0.1	0.31 J	0.31 J	< 0.1	< 0.1	< 0.1	< 0.1
BORON	50	UG/L	**68.2**	NS	NS	NS	NS	**401**	**418**	**374**	**772**
CADMIUM	1	UG/L	0.413 J	**1.4 J**	0.44 J	0.66 J	0.68 J	0.101 J	< 0.1	< 0.1	< 0.1
CHROMIUM, TOTAL	10	UG/L	**60.9**	**45 J**	**7.1 J**	**53**	**55**	7.34 J	7.36 J	6.91 J	2.44 J
COBALT	10	UG/L	**13.6**	9.9 J	**3 J**	**9.7**	**9.8**	0.546 J	0.593 J	0.475 J	0.449 J
COPPER	10	UG/L	**26.4**	**62 J**	**22 J**	**23**	**23**	2.35 J	2.48 J	2.07 J	2.33 J
IRON	100	UG/L	**17900**	**14500 J**	**1900 J**	**16900**	**16900**	**595**	**604**	**530**	**186**
LEAD	3	UG/L	**22.2**	**26 J**	**3.2 J**	**7.1**	**7.8**	0.795 J	0.636 J	< 0.5	< 0.5
MANGANESE	10	UG/L	**399**	**380**	**200**	**290**	**300**	**17**	**18.5**	**19.7**	1.44 J
MERCURY	0.2	UG/L	**0.225**	0.12 J	< 0.06	0.074 J	0.075 J	< 0.06	< 0.06	< 0.06	< 0.06
MERCURY, LOW LEVEL	0.2	UG/L	NA	NA	NA	0.173	0.173	NA	NA	NA	NA
MOLYBDENUM	10	UG/L	< 0.718 UJ	2.3	1.5	< 0.61 UJ	< 0.62 UJ	3.18 J	3.33 J	3.26 J	**11.3**
NICKEL	20	UG/L	**101**	**83 J**	**18 J**	**85**	**85**	4.52 J	4.74 J	4.07 J	2.47 J
SELENIUM	3	UG/L	< 2.5	< 2.5	< 2.5	< 1	< 1	< 2.5	< 2.5	< 2.5	**15.5**
SILVER	10	UG/L	0.276 J	1.2 J	< 0.2 UJ	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
THALLIUM	10	UG/L	< 0.4	0.53 J	< 0.4 UJ	< 0.3	< 0.3	< 0.4	< 0.4	< 0.4	< 0.4
VANADIUM	10	UG/L	**44**	**41 J**	< 10 UJ	46	47	< 10	< 10	< 10	**10 J**
ZINC	20	UG/L	**192**	**730 J**	**240 J**	**130**	**140**	**28.7**	**20.5**	< 4.87 UJ	**57.6**

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Results in **BOLD** indicate detections above the CRDL.

APPENDIX F
RADS IN STORMWATER AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	LF-01	LS-01	LS-01	LS-01	LS-01	PCD		PCU	STPO
		Sample ID	STMW0141	RWSW0044	RWSW0045 Dup	RWSW0046	RWSW0047 Dup	SWSW0288	PCD SWSW0290	SWSW0287	SWSW0289
		Date	2/26/2007	4/11/2007	4/11/2007	12/7/2007	12/7/2007	2/27/2007	Dup 2/27/2007	2/27/2007	2/27/2007
AnalyteNameShort	CRDL	UnitsID									
CARBON-14	20	PCI/L	< 16.7	< 14.4	< 14.4	< 17.8	< 18.2	< 16.7	< 16.6	< 16.6	< 16.6
RADIUM-226	1	PCI/L	< 0.447 UJ	< 0.707	< 0.714	0.622 +/- 0.322	0.89 +/- 0.369	< 0.295	< 0.266	< 0.631	< 0.321
STRONTIUM-90	1	PCI/L	< 0.86	< 0.906	< 0.92	< 0.484	< 0.575	< 0.617	< 0.62	< 0.382	< 0.943
TRITIUM (HYDROGEN-3)	300	PCI/L	< 216	< 561	< 560	< 252	< 233	< 214	< 216	< 217	**1120 +/- 162**

NS - Not Sampled
J - Validation qualifier for estimated values; Sample exceeds quantitation range.
UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX F
PESTICIDES/PCBS IN STORMWATER AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	LF-01	LS-01	LS-01	LS-01	LS-01	PCD	PCD	PCU	STPO
		Sample ID	STMW0141	RWSW0044	RWSW0045 Dup	RWSW0046	RWSW0047 Dup	SWSW0288	SWSW0290 Dup	SWSW0287	SWSW0289
		Date	2/26/2007	4/11/2007	4/11/2007	12/7/2007	12/7/2007	2/27/2007	2/27/2007	2/27/2007	2/27/2007
AnalyteNameShort	CRDL	UnitsID									
4,4'-DDD	0.02	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
4,4'-DDE	0.02	UG/L	< 0.0005	0.0101 J	0.0131 J	< 0.00476	< 0.00476	0.00304 J	< 0.0005	0.00157 J	< 0.00053
4,4'-DDT	0.02	UG/L	< 0.001	< 0.0098	< 0.01	< 0.00952	< 0.00952	< 0.00094	< 0.001	< 0.00097	< 0.00106
ALDRIN	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
ALPHA ENDOSULFAN	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00048 UJ	< 0.0005	< 0.00049	< 0.00053
ALPHA-CHLORDANE	0.01	UG/L	< 0.0005	**0.0196 J**	**0.0317 J**	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	0.01	UG/L	< 0.00085	< 0.00828	< 0.00845	< 0.00805	< 0.00805	< 0.0008	< 0.00085	< 0.00082	< 0.0009
BETA ENDOSULFAN	0.02	UG/L	< 0.0005	0.0144 J	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
DIELDRIN	0.02	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
ENDOSULFAN SULFATE	0.02	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
ENDRIN	0.02	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	0.00761 J
ENDRIN ALDEHYDE	0.02	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
ENDRIN KETONE	0.02	UG/L	< 0.00126	< 0.0123	< 0.0126	< 0.012	< 0.012	< 0.00118	< 0.00126	< 0.00122	< 0.00134
GAMMA BHC (LINDANE)	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	**0.0111**
GAMMA-CHLORDANE	0.01	UG/L	< 0.0005	**0.0118 J**	< 0.005	< 0.00476	< 0.00476	< 0.00047	< 0.0005	< 0.00049	< 0.00053
HEPTACHLOR	0.01	UG/L	< 0.00066	< 0.00642	< 0.00655	< 0.00624	< 0.00624	< 0.00062	< 0.00066	< 0.00064	< 0.0007
HEPTACHLOR EPOXIDE	0.01	UG/L	< 0.0005	< 0.0049	< 0.005	< 0.00476	< 0.00476	< 0.00048 UJ	< 0.0005	< 0.00049	< 0.00053
METHOXYCHLOR	0.1	UG/L	< 0.005	< 0.049	< 0.05	< 0.0476	< 0.0476	< 0.00472	< 0.005	< 0.00485	< 0.00532
PCB-1016 (AROCHLOR 1016)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0802 UJ	< 0.0162	< 0.0177
PCB-1221 (AROCHLOR 1221)	0.4	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0167	< 0.0162	< 0.0177
PCB-1232 (AROCHLOR 1232)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0167	< 0.0162	< 0.0177
PCB-1242 (AROCHLOR 1242)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0167	< 0.0162	< 0.0177
PCB-1248 (AROCHLOR 1248)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0167	< 0.0162	< 0.0177
PCB-1254 (AROCHLOR 1254)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.0157	< 0.0167	< 0.0162	< 0.0177
PCB-1260 (AROCHLOR 1260)	0.2	UG/L	< 0.0167	< 0.163	< 0.167	< 0.159	< 0.159	< 0.016 UJ	< 0.139 UJ	< 0.0162	< 0.0162 UJ
TOXAPHENE	1	UG/L	< 0.015	< 0.147	< 0.15	< 0.143	< 0.143	< 0.0142	< 0.015	< 0.0146	< 0.016

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UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX F
WET CHEMISTRY IN STORMWATER AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

		Location	LF-01	LS-01	LS-01	LS-01	LS-01	PCD	PCD	PCU	STPO
		Sample ID	STMW0141	RWSW0044	RWSW0045 Dup	RWSW0046	RWSW0047 Dup	SWSW0288	SWSW0290 Dup	SWSW0287	SWSW0289
		Date	2/26/2007	4/11/2007	4/11/2007	12/7/2007	12/7/2007	2/27/2007	2/27/2007	2/27/2007	2/27/2007
AnalyteNameShort	CRDL	UnitsID									
NITRATE AS NITROGEN	0.1	MG/L	**1.49**	< 0.033	< 0.033	**0.531 J**	**4.63 J**	**3.59**	**3.58**	**3.24**	**8.49**
OIL & GREASE, TOTAL REC	2	MG/L	< 1.09	NS	NS	NS	NS	NS	NS	NS	NS
TOTAL DISSOLVED SOLIDS (RESIDUE, FILTERABLE)	20	MG/L	**52**	**324**	**380**	**132**	**128**	**362**	**346**	**290**	**704**
TOTAL ORGANIC CARBON	1	MG/L	**6.54**	**64**	**65**	**9.27**	**9.23**	NS	NS	NS	NS
TOTAL SUSPENDED SOLIDS		MG/L	**301**	**12.3**	**12.6**	**142**	**153**	NS	NS	NS	NS

NS - Not Sampled
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UJ - Estimated value falls below reporting limit.
Results in **BOLD** indicate detections above the CRDL.

APPENDIX F
AQUATIC TOXICITY - GROUNDWATER, STORMWATER, AND SURFACE WATER
Groundwater Treatment System and Water Monitoring Report
LEHR/SCDS Environmental Restoration
Davis, California

Acute Aquatic Toxicity Analysis	Location Sample ID Date	LF-01 STMW0141 2/26/2007	LS-01 RWSW0044 4/11/2007	LS-01 RWSW0045 Dup 4/11/2007	LS-01 RWSW0046 12/7/2007	LS-01 RWSW0047 Dup 12/7/2007
AnalyteNameShort	UnitsID					
PIMEPHALIS SPECIES - SURVIVAL	% Survival	95 N	96 N	97 N	100 N	95 N

Chronic Aquatic Toxicity Analysis	Location Sample ID Date	PCD SWSW0288 2/27/2007	PCU SWSW0287 2/27/2007
AnalyteNameShort	UnitsID		
CERIODAPHINA SPECIES - REPRODUCTION	NOEC	100%	100%
CERIODAPHINA SPECIES - SURVIVAL	NOEC	100%	100%
PIMEPHALIS SPECIES - GROWTH	NOEC	100%	100%
SELENASTRUM SPECIES - GROWTH	NOEC	100%	100%

NOEC - No Observed Effect Concentration. Result listed is the sample concentration in which no observable effect was noted during analysis; 100% is a non-diluted sample.
N - No toxicity; the % survival for the storm water sample was not significantly different from the % survival for the associated laboratory control.
T - Toxicity detected; the % survival for the storm water sample was significantly lower than the % survival for the associated laboratory control.