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TECHNICAL MEMORANDUM FOR THE ON-SITE DISPOSAL FACILITY CELLS 1, 2, AND 3 BASELINE GROUNDWATER CONDITIONS

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO

JULY 2002

U.S. DEPARTMENT OF ENERGY

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REV. B
DRAFT FINAL
000001

FERNALD
ENVIRONMENTAL
MANAGEMENT PROJECT

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LIST OF ACRONYMS

AOR	after outlier removal
ADR	after data reduction
ANOVA	Analysis of Variance
ARARS	applicable or relevant and appropriate requirement
AWWT	Advanced Wastewater Treatment
CFR	Code of Federal Regulations
DOE	U. S. Department of Energy
EPA	U. S. Environmental Protection Agency
FEMP	Fernald Environmental Management Project
GMA	Great Miami Aquifer
gpad	gallons per acre per day
GWLMP	Groundwater/Leak Detection and Leachate Monitoring Plan
HTW	horizontal till well
IEMP	Integrated Environmental Monitoring Plan
LCS	leachate collection system
LDS	leak detection system
mg/L	milligrams per liter
OAC	Ohio Administrative Code
OEPA	Ohio Environmental Protection Agency
OSDF	on-site disposal facility
p-values	probability values
RCRA	Resource Conservation and Recovery Act
SCL	Shewart Control Limit
Shewhart-CUSUM	Shewart-cumulative sum
µg/L	micrograms per liter

Section 1.0

1.0 INTRODUCTION

This technical memorandum has been prepared to document the results of baseline groundwater monitoring activities through December 2000 for Cells 1, 2, and 3 of the on-site disposal facility. These data were collected per the requirements of the Groundwater/Leak Detection and Leachate Monitoring Plan (GWLMP) (DOE 1997b) and additional agreements with the U.S. Environmental Protection Agency (EPA) and Ohio Environmental Protection Agency (OEPA). The additional agreements were reached during the comment resolution process after submittal of the Draft Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions in September 1998. As anticipated, the pre-existing contamination at the site complicates the interpretation of the baseline groundwater data. Therefore, flow and constituent concentration data from the Cells 1, 2, and 3 leachate collection system (LCS) and leak detection system (LDS) are also included along with additional groundwater data analysis, as they are pertinent supplements to the statistical analysis conducted with the baseline groundwater data set.

In addition, this technical memorandum has been developed to help fulfill the applicable or relevant and appropriate requirements (ARARs) to the Final Record of Decision for Remedial Actions at Operable Unit 2 as noted in Appendix A of the GWLMP. ARARs pertinent to the on-site disposal facility groundwater monitoring program include:

- Ohio Municipal Solid Waste Rules - Ground Water Sampling, Analysis, and Statistical Methods, Ohio Administrative Code (OAC) 3745-27-10(C)
- Ohio Hazardous Waste General Facility Standards - New Facilities Rules B General Groundwater Monitoring Requirements, OAC 3745-54-97-98
- Resource Conservation and Recovery Act (RCRA) Groundwater Protection Standards (Landfills), 40 Code of Federal Regulations (CFR) 264.97-98
- Radioactive Waste Management, U.S. Department of Energy (DOE) Order 5820.2A, Chapter III (3)(k).

This technical memorandum presents the following on-site disposal facility Cells 1, 2, and 3 baseline information:

- Groundwater monitoring sampling protocol (Section 2.0)
- Data preparation and statistical methodology (Section 3.0)
- Additional leak detection evaluation assessments (Section 4.0)
- Conclusions and post-baseline monitoring, data evaluation, and reporting (Section 5.0).

The data set for the horizontal till wells and Great Miami Aquifer wells along with the LCS and LDS at Cells 1, 2, and 3 of the on-site disposal facility is provided in Appendix A. Appendex B provides the detailed preparatory statistical methodology and Appendix C provides the Shewhart-cumulative sum (Shewhart-CUSUM) control chart methodology and the resultant control charts. Appendix D provides statistical information with respect to the on-site disposal facility's Great Miami Aquifer monitoring wells' water level and total uranium concentration relationships.

Section 2.0

2.0 GROUNDWATER MONITORING SAMPLING PROTOCOL

This section discusses the monitoring locations, constituents, and sampling completed to establish baseline groundwater conditions for Cells 1, 2, and 3 of the on-site disposal facility.

As identified in the GWLMP, the groundwater monitoring network for each cell of the on-site disposal facility is comprised of the following components:

- Horizontal till well (Type 1 monitoring well) located at the west side of the on-site disposal facility and screened below the LCS and LDS sump area. The sump area is the lowest point in the LCS and LDS layers and is where the LCS and LDS lines penetrate through the cell's liner. This area has been deemed to be the most likely area where leakage through the liner could occur.
- Upgradient Type 2 Great Miami Aquifer monitoring well
- Downgradient Type 2 Great Miami Aquifer monitoring well.

Figure 2-1 identifies and shows the locations of the horizontal till wells and Great Miami Aquifer wells for Cells 1, 2, and 3. The upgradient and downgradient designations for Type 2 monitoring wells relate to the natural west to east flow gradient for groundwater, which exists in the vicinity of the on-site disposal facility. Therefore, under natural flow conditions, the monitoring well on the west side of the cell is the upgradient well and the monitoring well on the east side of the cell is the downgradient well. At times during remediation of the Great Miami Aquifer, pumping operations are projected to temporarily change this gradient. The change in flow direction during aquifer remediation will affect the approach to data interpretation. Specifically, data evaluation will focus on "intra-well" data comparisons rather than the standard upgradient to downgradient inter-well comparisons. This approach is reflected in the GWLMP and in Section 3.0 of this technical memorandum.

The list of constituents monitored at these locations (referred to as the on-site disposal facility leak detection groundwater monitoring constituent list) was developed in accordance with Ohio Solid Waste and Hazardous Waste Regulations, which are discussed in Sections 3.0 and 4.5 of GWLMP. These constituents were selected from the 41 Fernald Environmental Management Project (FEMP) waste acceptance criteria constituents listed in Final Record of Decision for Remedial Actions at Operable Unit 5 as noted in Section 4.5.2.1 of the GWLMP. Selections were made according to the following information, as detailed in Section 4.5.2 of the GWLMP:

- Type, quantity, and concentration of waste constituents to be disposed of at the on-site disposal facility
- Mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the on-site disposal facility

- Detection of the groundwater monitoring constituents, waste constituents, and their reaction products in the groundwater
- Concentration of groundwater monitoring constituents or waste constituents in background groundwater.

Table 2-1 presents the groundwater monitoring constituents identified in the GWLMP for the on-site disposal facility groundwater leak detection monitoring program. These constituents are also analyzed in samples collected from the LCS and LDS layers of Cells 1, 2, and 3 along with the flow volumes that each of the layers yield. Together, information gathered from the perched water, groundwater, LCS, and LDS provide the basis for the on-site disposal facility leak identification/evaluation program.

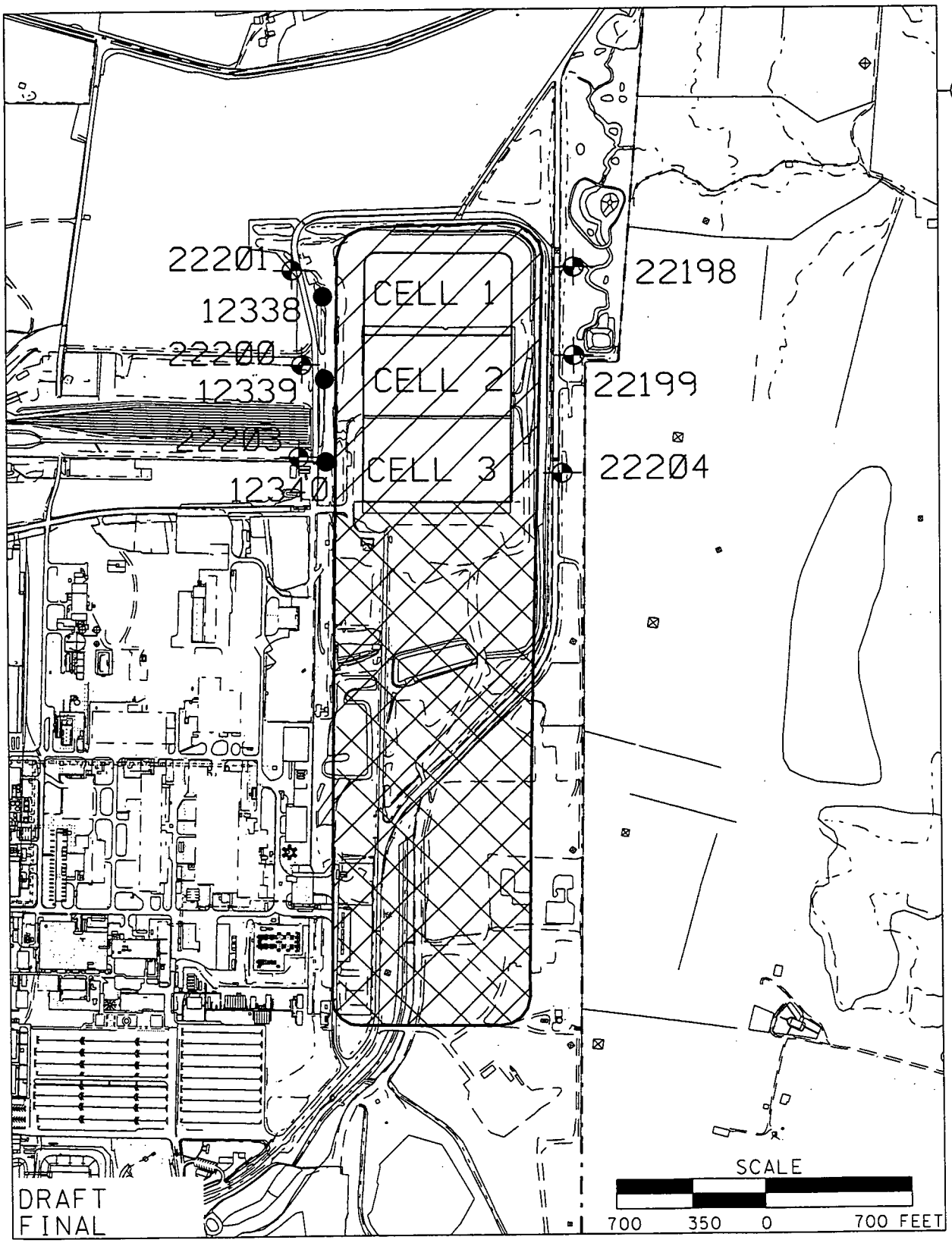
Changes to the baseline sampling program occurred as a result of comment resolution process for EPA and OEPA comments on the Draft Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions. These changes include: extension of baseline sampling period, modification of the sampling frequency for both the horizontal till wells and the Great Miami Aquifer monitoring wells (sampling frequency standardized to every other month for the horizontal till wells and quarterly for the Great Miami Aquifer wells for the remainder of the baseline period), and pre-sample purging of the horizontal till wells.

Figure 2-2 summarizes many pertinent details of the baseline sampling period for Cells 1, 2, and 3. Additionally, the original pre-waste placement baseline sampling periods for the horizontal till wells and the revised baseline periods resulting from the above noted comment resolution process are provided in this figure. The revised baseline period was necessary to help attain sample independence and provide a sufficient number of samples to conduct the required statistical analyses. As indicated on Figure 2-2, the revised sampling period resulted in collection of baseline samples both prior to and during waste placement in the cells.

TABLE 2-1

CONSTITUENTS OF THE GROUNDWATER LEAK DETECTION MONITORING PROGRAM

Constituent Suite	Specific Constituents
General Chemistry	Total Organic Carbon Total Organic Halogens
Inorganics	Boron Mercury
Radionuclides	Technetium-99 Uranium, Total
Volatile Organics	1,1-Dichloroethene 1,2-Dichloroethene (total) Bromodichloromethane Tetrachloroethene Trichloroethene Vinyl Chloride
Semi-volatile Organics	4-Nitroaniline bis(2-Chloroisopropyl)ether Carbazole
Pesticides/PCBs	alpha-Chlordane



LEGEND:

- FEMP BOUNDARY
- OSDF MONITORING WELL IN GREAT MIAMI AQUIFER
- HORIZONTAL TILL WELL
- EXISTING CELLS
- ANTICIPATED FUTURE CELL AREA

FIGURE 2-1. ON-SITE DISPOSAL FACILITY FOOTPRINT AND MONITORING WELL LOCATIONS FOR CELLS 1, 2 AND 3

STATE PLANAR COORDINATE SYSTEM 1983

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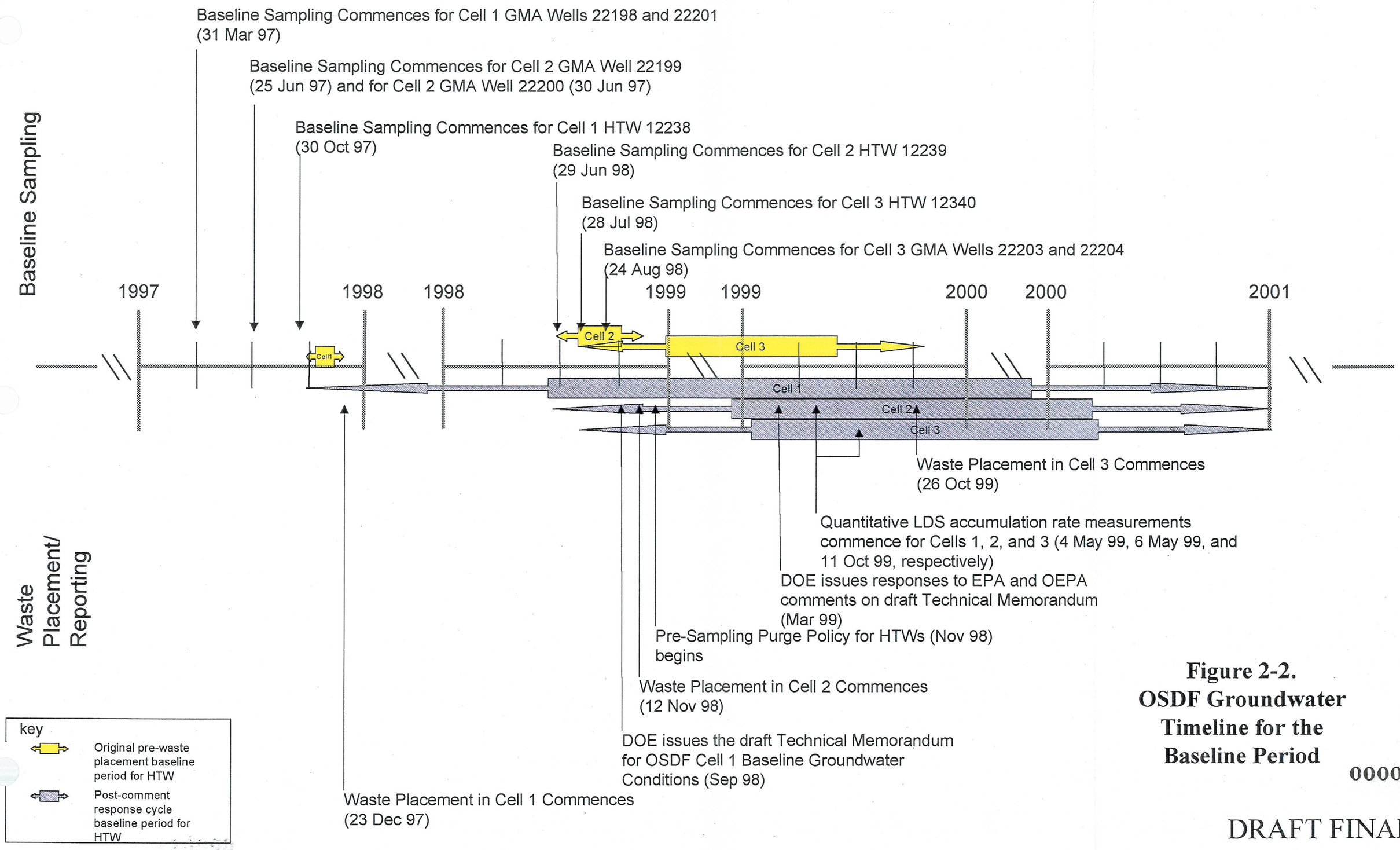

Figure 2-2. OSDF Groundwater Timeline for the Baseline Period

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Section 3.0

3.0 DATA PREPARATION AND STATISTICAL METHODOLOGY

The purpose of this section is to document the selection of the statistical methods used to develop control limits for evaluating post-baseline groundwater data as part of the on-site disposal facility leak identification/evaluation program and to identify the necessary data/statistical preparation and evaluation process prior to the establishment of control limits. The section consists of the following subsections:

- Data/statistical preparation and evaluation process (Section 3.1)
- Control limit statistical methodology (Section 3.2).

3.1 DATA/STATISTICAL PREPARATION AND EVALUATION PROCESS

To prepare and evaluate the baseline data prior to establishment of control limits, it was necessary to first identify the commitments relating to baseline data/statistical evaluations. The commitments associated with data/statistical evaluations consist of those identified in GWLMP and those that were generated from the Draft Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions. The commitments relating to the GWLMP are encompassed in the ARARs identified in Section 1.0 of this document and those relating to the technical memorandum are included in the April 5, 1999 letter from J. Reising to J. Saric and T. Schneider: "Responses to the U.S. Environmental Protection Agency and Ohio Environmental Protection Agency Comments on the Draft Technical Memorandum for the On-Site Disposal Facility Cell 1 Baseline Groundwater Conditions." The following are the data/statistical evaluation commitments associated with the technical memorandum:

- Comment Response/Action #3: Use data through December 2000 and statistically evaluate horizontal till well data with respect to purging versus not purging prior to sample collection

- Comment Response/Action #6: Consider those constituents that have less than 25 percent detectable concentrations to be non-detects for baseline

- Comment Response/Action #7: Perform trend analysis

- Comment Response/Action #8: Screen for and remove outliers.

Next, steps were established in order to evaluate the data in a logical order. The following summarizes the steps and associated subsections in which discussions are provided:

- Total data set review along with determining constituents with detectable concentrations (Section 3.1.1)

- Data reduction - standardization of sample collection frequency and comparison of sample methodology (i.e., purging versus non-purging prior to sample collection) (Section 3.1.2)

- Outlier removal (Section 3.1.3)

- Trend and serial correlation (Section 3.1.4)

- Summary information (Section 3.1.5)
- LCS and LDS supplemental data review (Section 3.1.6).

The first five subsections, Sections 3.1.1 through 3.1.5, pertain to the horizontal till wells and Great Miami Aquifer wells. The complete baseline data (i.e., horizontal till wells and Great Miami Aquifer wells) for Cells 1, 2, and 3 are provided in Appendix A (Attachment A.1) and include data through December 2000. The last section, Section 3.1.6, includes supplemental information pertaining to the LCS and LDS. LCS and LDS data are provided in Appendix A (Attachment A.2) and include data through June 2001.

3.1.1 Total Data Set Review

As an initial review, the complete (total) baseline data from each location (i.e., horizontal till wells and Great Miami Aquifer wells) associated with Cells 1, 2, and 3 were reviewed to determine detected constituents. Tables 3-1 and 3-2 identify constituents (by location) which were detected (i.e., highlighting indicates that 25 percent or more of the sample set was detected for the constituent of interest) and presents the frequency of detections for the horizontal till wells and Great Miami Aquifer wells, respectively. The following criteria were applied to the data prior to review:

- Use half the non-detected concentration.
- Use a concentration of zero if the validated result was less than zero (e.g., radiological constituents can have negative concentrations when laboratory backgrounds are subtracted from results.)
- Use the maximum result of either field duplicate or normal sample, if more than one sample exists for a given location on the same day.
- Do not use rejected data.

The next steps involved statistical evaluations that were performed on constituents with detectable concentrations (i.e., 25 percent or more detectable concentrations). As previously identified, those constituents that have less than 25 percent detectable concentrations will be considered to be non-detects for baseline. The subsequent text in this technical memorandum referring to "detections" will pertain to those constituents with 25 percent or more detectable concentrations. Additional statistical support information is presented in Appendix B and summary information is provided in Tables 3-1 and 3-2 for the horizontal till wells and Great Miami Aquifer wells, respectively.

3.1.2 Data Reduction

Data reduction involved evaluating sample frequency and purging versus not purging issues. It was necessary to evaluate sample frequencies and sampling methodologies (i.e., purging requirements) because they had changed during the baseline period. For instance, the Great Miami Aquifer wells were initially sampled more frequently than quarterly (e.g., monthly) and the horizontal till wells were initially sampled more frequently than bi-monthly (e.g., weekly); however, the majority of the Great Miami Aquifer well samples have been collected quarterly and the majority of the horizontal till well samples have been collected bi-monthly. Additionally, the sampling methodology for the horizontal till wells changed from not purging prior to sample collection to purging prior to sample collection in order to ensure accurate representation of horizontal till well water quality conditions. It should also be noted that generally there were more post-purging sampling results than unpurged sampling results. From the evaluations, it was determined that there were statistically significant differences between the "purging" versus "not purging" data in many sample populations. Therefore, the data collected without prior purging were not included in the further baseline statistical evaluations because of the following:

- There are statistically significant differences in sample populations.
- Purging prior to sample collection yields more representative water quality results.
- Currently approved sampling protocol requires purging prior to sample collection.

Additionally, it was decided to standardize the sample frequency (i.e., horizontal till wells to bi-monthly and Great Miami Aquifer wells to quarterly) in an effort to alleviate the biased weighting by samples collected on a more frequent basis. The sample numbers after data reduction (ADR) are provided in Tables 3-1 and 3-2 for the horizontal till wells and Great Miami Aquifer wells, respectively.

3.1.3 Outlier Removal

Outlier tests were performed on the ADR data. This step was performed in order to ensure that anomalous sample results would not potentially skew the baseline data (i.e., anomalous results can have significantly higher or lower concentrations than the majority of the data set). It is possible for anomalous results to cause control limits to be higher or lower than expected, which in turn could cause false positives or false negatives with respect to leak detection. Appendix B provides more detailed discussion on outlier removal. The sample counts after outlier removal (AOR) are provided in Tables 3-1 and 3-2 for the horizontal till wells and Great Miami Aquifer wells, respectively.

3.1.4 Trends and Serial Correlation

Trend and serial correlation tests were performed on the AOR data set to identify the possibility of pre-existing contaminant conditions and to measure the extent to which successive sample events are related (i.e., independence or lack of), respectively. Through these evaluations, it was determined that several of the detectable constituents' well-specific data sets had:

- Statistically significant trends (e.g., up, marginal; up, significant), more than likely due to pre-existing contaminant conditions
- Detected serial correlation (i.e., lack of temporal independence in some sample sets).

Results from trend and serial correlation tests are provided in Tables 3-1 and 3-2 for the horizontal till wells and Great Miami Aquifer wells, respectively.

3.1.5 Summary Information

Completion of the above steps meet the pre-existing baseline data/statistical evaluation commitments established between DOE and the agencies and address the ARARs requirements associated with initial data/statistical evaluation prior to control limit establishment. The following is summary information obtained from these evaluations:

- Four (total organic carbon, total organic halogens, boron, and total uranium) of the 16 constituents sampled at the horizontal till wells and Great Miami Aquifer wells had detectable concentrations (greater than 25 percent of the sample set).
- There were four constituents detected at each of the three horizontal till wells (i.e., 12 well/constituent combinations). Four of the 12 combinations had trend and/or serial correlation: boron (12338), total organic carbon (12340), boron (12340), and total uranium (12340).
- There were four constituents detected at each of the six Great Miami Aquifer wells (i.e., 24 well/constituent combinations). Nine of the 24 combinations had trend and/or serial correlation: total uranium (22198), total organic carbon (22199), total organic halogens (22199), boron (22199), total uranium (22199), total organic halogens (22200), total organic halogens (22201), total uranium (22203), and boron (22204).
- The existence of trends indicates that the baseline data set is not in steady state and that there are pre-existing contaminant conditions. Pre-existing contamination in the vicinity of the on-site disposal facility footprint has also been identified in various FEMP documents including the GWLMP, the Remedial Investigation Report for Operable Unit 5 (DOE 1995b), the 1993 through 1996 RCRA Annual Reports (DOE 1994, DOE 1995a, DOE 1996, and DOE 1997a, respectively), the Design for Remediation of the Great Miami Aquifer in the Waste Storage and Plant 6 Areas (DOE 2000b), and annual site environmental reports.
- Serial correlation indicates that the sampling interval may be too frequent; thus the "same" water is sampled multiple times.

3.1.6 LCS And LDS Supplemental Data Review

Due to the existence of trends and serial correlation in the baseline data, it was decided to additionally review the LCS and LDS data to enhance the overall data review process and to determine relationships between the different monitoring horizons (i.e., LCS, LDS, horizontal till wells, and Great Miami Aquifer wells). Therefore, the LCS and LDS were evaluated using the same steps identified in Sections 3.1.1 through 3.1.4. The LCS and LDS data for on-site disposal facility Cells 1, 2, and 3 are provided in Appendix A (Attachment A.2) and include data through June 2001.

Supplemental LCS and LDS information:

- Tables 3-3 and 3-4 identify constituents (by location) which were detected and present the frequency of detections for the LCS and LDS, respectively.
- Four constituents were detected for the LCS and LDS (total organic carbon, total organic halogens, boron, and total uranium), which are the same constituents detected in the horizontal till wells and Great Miami Aquifer wells.
- An additional constituent (technetium-99) was detected at one of the LCS locations (12338C - Cell 1).
- There are trends and serial correlations within the LCS and LDS data as identified in Tables 3-3 and 3-4, respectively; however, the upward trends in the LDS are not thought to be caused by on-site disposal facility cell leakage (further discussion is provided in Section 4).

3.2 CONTROL CHART STATISTICAL METHODOLOGY

As per regulatory guidance, it is necessary to have the baseline data in steady-state (i.e., does not exhibit statistically significant trends), be normally distributed, and exhibit statistical independence (i.e., no serial correlation detected) in order to standardize sample data and establish control limits. The previous sections identify that the baseline data set under review for the on-site disposal facility horizons (i.e., horizontal till wells and Great Miami Aquifer wells) do not meet the above criteria in all cases. For those constituents with detectable concentrations that meet the above criteria, an intra-well control chart methodology was selected for the following reasons as a means of identifying control limits that could potentially be used for leak detection monitoring:

- Conforms with the guidance as set forth in the Operable Unit 2 ARARs
- Control charts are simple; they use standardized limits against which to compare a standardized mean and cumulative difference in standard deviations
- Suitable for Great Miami Aquifer wells because groundwater flow direction may vary throughout the course of groundwater restoration (i.e., no consistent upgradient location)

- Suitable for perched water because the primary flow direction within the glacial till is vertical (i.e., there is no discernable upgradient versus downgradient)
- Consistent with the EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, Interim Final Guidance and Addendum (EPA 1989 and EPA 1992, respectively).

The control chart methodology recommended by EPA guidance is the combined Shewhart-CUSUM control chart method. Under this method, standardized results are plotted over time and compared to control limits, which are determined from the baseline data set. This method allows for the detection of sudden changes as well as gradual changes over time. Specifically, the baseline data were used to establish the mean and standard deviation in order to determine standardized data and control limits. The control limits established through this method provide the basis for identifying significant changes in perched water and groundwater quality relative to baseline conditions. Appendix C provides the equations used to construct the Shewhart-CUSUM control charts along with the control charts for those locations with detectable constituents that meet the necessary criteria (i.e., steady-state conditions, normally distributed, and sample independence). Additionally Appendix C, specifically Section C.3, describes the process for updating control charts.

TABLE 3-1

FREQUENCY OF BASELINE CONSTITUENT DETECTIONS, TREND, AND SERIAL CORRELATION FOR ON-SITE DISPOSAL FACILITY HORIZONTAL TILL WELLS

	Cell 1 Well 12338					Cell 2 Well 12339					Cell 3 Well 12340				
	Number of Samples with Detections/Number of Samples (%)					Number of Samples with Detections/Number of Samples (%)					Number of Samples with Detections/Number of Samples (%)				
Constituent	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]
General Chemistry															
Total Organic Carbon	29/32 (91)	9/12 (75)	8/11 (73)	No Sig. Trend	Not detected	25/30 (83)	9/13 (69)	8/12 (67)	No Sig. Trend	Not detected	16/25 (64)	11/13 (85)	10/12 (83)	Up, Sig.	Not detected
Total Organic Halogens	18/31 (58)	7/12 (58)	6/11 (55)	No Sig. Trend	Not detected	20/30 (67)	9/13 (69)	9/13 (69)	No Sig. Trend	Not detected	19/25 (76)	11/13 (85)	11/13 (85)	No Sig. Trend	Not detected
Inorganics															
Boron	25/32 (78)	8/12 (67)	8/12 (67)	Up, Sig.	Detected	18/30 (60)	9/13 (69)	9/13 (69)	No Sig. Trend	Not detected	20/24 (83)	11/12 (92)	11/12 (92)	Up, Sig.	Detected
Mercury	0/32 (0)	0/12 (0)	NA			2/29 (7)	0/13 (0)	NA			1/24 (4)	1/12 (8)	NE		
Radionuclides															
Technetium-99	7/32 (22)	0/12 (0)	NA			5/31 (16)	0/13 (0)	NA			2/24 (8)	1/12 (8)	NE		
Uranium, Total	31/32 (97)	11/12 (92)	11/11 (100)	No Sig. Trend	Not detected	30/31 (97)	12/13 (92)	12/12 (100)	No Sig. Trend	Not detected	22/24 (92)	12/12 (100)	12/12 (100)	Up, Sig.	Detected
Volatile Organics															
1,1-Dichloroethene	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		
1,2-Dichloroethene (total)	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		
Bromodichloromethane	5/32 (16)	0/12 (0)	NA			1/30 (3)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		
Tetrachloroethene	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		

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TABLE 3-1
(Continued)

Constituent	Cell 1 Well 12338 Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Cell 2 Well 12339 Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Cell 3 Well 12340 Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]
Volatile Organics (Contd)															
Trichloroethene	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		
Vinyl Chloride	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/24 (0)	0/13 (0)	NA		
Semi-Volatile Organics															
4-Nitroaniline	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/25 (0)	0/13 (0)	NA		
bis(2-Chloroisopropyl)ether	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/25 (0)	0/13 (0)	NA		
Carbazole	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/25 (0)	0/13 (0)	NA		
Pesticides/PCBs															
alpha-Chlordane	0/32 (0)	0/12 (0)	NA			0/30 (0)	0/13 (0)	NA			0/25 (0)	0/13 (0)	NA		

Note: Highlighting indicates that 25 percent or more of the sample set was detected for the constituent of interest.

[a]If there was more than one result per day (e.g., a duplicate sample), then only the maximum sample concentration was counted.
[b]Rejected data qualified with either an R or Z were not counted.
[c]ADR = After Data Reduced. Data were reduced to one result for every two months.
[d]AOR = After Outliers Removed. Dixon's test was used to remove outliers at a p-value of 2 percent.
[e]NA = not applicable, because there were no detects.
NE = not evaluated for outliers because, while there were detects, at least 25 percent of the data must be detected in order for trend and serial correlation to be valid.
[f]Mann-Kendall test for trend. There must be at least four samples in order to perform trend analysis.
Up, Sig. = Up, Significant
No Sig. Trend = No Significant Trend
[g]Rank Von Neumann test for serial correlation. There must be at least 10 samples in order to perform serial correlation.

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TABLE 3-2

FREQUENCY OF BASELINE CONSTITUENT DETECTIONS, TREND, AND SERIAL CORRELATION FOR CELLS 1, 2 & 3 OF THE ON-SITE DISPOSAL FACILITY GREAT MIAMI AQUIFER WELLS

Constituent	Cell 1									
	Upgradient Well 22201					Downgradient Well 22198				
	No. of Samples with Detections/No. of Samples (%)					No. of Samples with Detections/No. of Samples (%)				
	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]
General Chemistry										
Total Organic Carbon	24/27 (89)	13/16 (81)	13/16 (81)	No Sig. Trend	Not Detected	22/27 (81)	11/16 (69)	10/15 (67)	No Sig. Trend	Not Detected
Total Organic Halogens	14/27 (52)	9/16 (56)	9/16 (56)	No Sig. Trend	Marg. Detected	8/27 (30)	5/16 (31)	5/16 (31)	No Sig. Trend	Not Detected
Inorganics										
Boron	22/27 (81)	16/16 (100)	16/16 (100)	No Sig. Trend	Not Detected	30/40 (75)	16/16 (100)	16/16 (100)	No Sig. Trend	Not Detected
Mercury	0/27 (0)	0/16 (0)	NA			0/40 (0)	0/16 (0)	NA		
Radionuclides										
Technetium-99	1/27 (4)	1/16 (6)	NE			2/40 (5)	2/16 (12)	NE		
Uranium, Total	23/27 (85)	13/16 (81)	13/16 (81)	No Sig. Trend	Not Detected	40/40 (100)	16/16 (100)	16/16 (100)	No Sig. Trend	Detected
Volatile Organics										
1,1-Dichloroethene	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
1,2-Dichloroethene (total)	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
Bromodichloromethane	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
Tetrachloroethene	1/27 (4)	1/16 (6)	NA			0/27 (0)	0/16 (0)	NA		
Trichloroethene	0/27 (0)	0/16 (0)	NA			0/40 (0)	0/16 (0)	NA		
Vinyl Chloride	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
Semi-Volatile Organics										
4-Nitroaniline	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
bis(2-Chloroisopropyl)ether	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
Carbazole	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		
Pesticides/PCBs										
alpha-Chlordane	0/27 (0)	0/16 (0)	NA			0/27 (0)	0/16 (0)	NA		

Constituent	Cell 2									
	Upgradient Well 22200					Downgradient Well 22199				
	No. of Samples with Detections/No. of Samples (%)					No. of Samples with Detections/No. of Samples (%)				
	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]
General Chemistry										
Total Organic Carbon	20/22 (91)	14/15 (93)	14/15 (93)	No Sig. Trend	Not Detected	17/22 (77)	11/15 (73)	11/15 (73)	Down, Sig.	Not Detected
Total Organic Halogens	10/22 (45)	7/15 (47)	5/13 (38)	Up, Marg.	Marg. Detected	9/22 (41)	7/15 (47)	7/15 (47)	Up, Sig.	Not Detected
Inorganics										
Boron	14/22 (64)	11/15 (73)	11/15 (73)	No Sig. Trend	Not Detected	15/22 (68)	12/15 (80)	12/15 (80)	No Sig. Trend	Marg. Detected
Mercury	0/22 (0)	0/14 (0)	NA			0/22 (0)	0/15 (0)	NA		
Radionuclides										
Technetium-99	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Uranium, Total	15/22 (68)	10/15 (67)	10/15 (67)	No Sig. Trend	Not Detected	22/22 (100)	15/15 (100)	15/15 (100)	Up, Sig.	Marg. Detected
Volatile Organics										
1,1-Dichloroethene	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
1,2-Dichloroethene (total)	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Bromodichloromethane	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Tetrachloroethene	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Trichloroethene	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Vinyl Chloride	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Semi-Volatile Organics										
4-Nitroaniline	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
bis(2-Chloroisopropyl)ether	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Carbazole	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		
Pesticides/PCBs										
alpha-Chlordane	0/22 (0)	0/15 (0)	NA			0/22 (0)	0/15 (0)	NA		

Constituent	Cell 3									
	Upgradient Well 22203					Downgradient Well 22204				
	No. of Samples with Detections/No. of Samples (%)					No. of Samples with Detections/No. of Samples (%)				
	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correl.[g]
General Chemistry										
Total Organic Carbon	9/20 (45)	8/10 (80)	8/10 (80)	No Sig. Trend	Not Detected	9/20 (45)	7/10 (70)	7/10 (70)	No Sig. Trend	Not Detected
Total Organic Halogens	9/20 (45)	7/10 (70)	6/9 (67)	No Sig. Trend	Not Detected	8/21 (38)	7/10 (70)	6/9 (67)	No Sig. Trend	Not Detected
Inorganics										
Boron	12/20 (60)	8/10 (80)	8/10 (80)	No Sig. Trend	Not Detected	13/20 (65)	9/10 (90)	9/10 (90)	No Sig. Trend	Marg. Detected
Mercury	0/20 (0)	0/9 (0)	NA			2/20 (10)	2/9 (22)	NE		
Radionuclides										
Technetium-99	1/20 (5)	1/10 (10)	NE			0/20 (0)	0/10 (0)	NA		
Uranium, Total	15/20 (75)	10/10 (100)	10/10 (100)	Up, Marg.	Detected	19/20 (95)	10/10 (100)	10/10 (100)	No Sig. Trend	Not Detected
Volatile Organics										
1,1-Dichloroethene	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
1,2-Dichloroethene (total)	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Bromodichloromethane	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Tetrachloroethene	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Trichloroethene	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Vinyl Chloride	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Semi-Volatile Organics										
4-Nitroaniline	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
bis(2-Chloroisopropyl)ether	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Carbazole	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		
Pesticides/PCBs										
alpha-Chlordane	0/20 (0)	0/10 (0)	NA			0/20 (0)	0/10 (0)	NA		

Note: Highlighting indicates that 25 percent or more of the sample set was detected for the constituent of interest.

[a]If there was more than on result per day (e.g., a duplicate sample), then only the maximum sample concentration was counted.
[b]Rejected data qualified with either an R or Z were not counted.
[c]ADR = After Data Reduced. Data were reduced to one result per quarter.
[d]AOR = After Outliers Removed. Dixon's test was used to remove outliers at a p-value of 2 percent.
[e]NA = not applicable, because there were no detects.
NE = not evaluated for outliers because, while there were detects, at least 25 percent of the data must be detected in order for trend and serial correlation to be valid.
[f]Mann-Kendall test for trend. There must be at least four samples in order to perform trend analysis.
Up, Sig. = Up, Significant
Down, Sig. = Down, Significant
Up, Marg. = Up, Marginal
No Sig. Trend = No Significant Trend
[g]Rank Von Neumann test for serial correlation. There must be at least 10 samples in order to perform serial correlation.

TABLE 3-3

FREQUENCY OF BASELINE CONSTITUENT DETECTIONS, TREND, AND SERIAL CORRELATION FOR ON-SITE DISPOSAL FACILITY LEACHATE COLLECTION SYSTEM

	Cell 1 Well 12338C					Cell 2 Well 12339C					Cell 3 Well 12340C				
	Number of Samples with Detections/Number of Samples (%)					Number of Samples with Detections/Number of Samples (%)					Number of Samples with Detections/Number of Samples (%)				
Constituent	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]
General Chemistry															
Total Organic Carbon	12/14 (86)	12/14 (86)	11/13 (85)	Up, Marg.	Marg. detected	7/11 (64)	7/11 (64)	7/11 (64)	No Sig. Trend	Not detected	5/8 (63)	5/7 (71)	4/6 (67)	No Sig. Trend	Insuf. Data
Total Organic Halogens	12/14 (86)	12/14 (86)	12/14 (86)	Up, Marg.	Not detected	4/11 (36)	4/11 (36)	4/10 (40)	No Sig. Trend	Not detected	3/8 (38)	2/7 (29)	2/7 (29)	Down, Sig.	Insuf. Data
Inorganics															
Boron	15/15 (100)	14/14 (100)	14/14 (100)	No Sig. Trend	Detected	11/12 (92)	11/11 (100)	11/11 (100)	Down, Sig.	Not detected	8/9 (89)	7/8 (88)	7/8 (88)	No Sig. Trend	Insuf. Data
Mercury	2/14 (14)	2/14 (14)	NE			0/11 (0)	0/11 (0)	NA			0/8 (0)	0/7 (0)	NA		
Radionuclides															
Technetium-99	4/14 (29)	4/14 (29)	4/14 (29)	No Sig. Trend	Not detected	1/11 (9)	1/11 (9)	NE			0/8 (0)	0/7 (0)	NA		
Uranium, Total	13/14 (93)	13/14 (93)	13/14 (93)	No Sig. Trend	Not detected	11/11 (100)	11/11 (100)	11/11 (100)	Up, Sig.	Detected	8/8 (100)	7/7 (100)	7/7 (100)	Up, Sig.	Insuf. Data
Volatile Organics															
1,1-Dichloroethene	0/15 (0)	0/14 (0)	NA			0/12 (0)	0/11 (0)	NA			0/9 (0)	0/8 (0)	NA		
1,2-Dichloroethene (total)	0/13 (0)	0/13 (0)	NA			0/10 (0)	0/10 (0)	NA			0/7 (0)	0/6 (0)	NA		
Bromodichloromethane	0/15 (0)	0/14 (0)	NA			0/12 (0)	0/11 (0)	NA			1/9 (11)	1/8 (13)	NE		
Tetrachloroethene	0/15 (0)	0/14 (0)	NA			0/12 (0)	0/11 (0)	NA			0/9 (0)	0/8 (0)	NA		
Trichloroethene	0/15 (0)	0/14 (0)	NA			0/12 (0)	0/11 (0)	NA			0/9 (0)	0/8 (0)	NA		
Vinyl Chloride	0/15 (0)	0/14 (0)	NA			0/12 (0)	0/11 (0)	NA			0/9 (0)	0/8 (0)	NA		

TABLE 3-3
(Continued)

Constituent	Cell 1 Well 12338C Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Cell 2 Well 12339C Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Cell 3 Well 12340C Number of Samples with Detections/Number of Samples (%) Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]
Semi-Volatile Organics															
4-Nitroaniline	0/14 (0)	0/14 (0)	NA			0/11 (0)	0/11 (0)	NA			0/8 (0)	0/7 (0)	NA		
bis(2-Chloroisopropyl)ether	0/14 (0)	0/14 (0)	NA			0/11 (0)	0/11 (0)	NA			0/8 (0)	0/7 (0)	NA		
Carbazole	0/14 (0)	0/14 (0)	NA			0/11 (0)	0/11 (0)	NA			0/8 (0)	0/7 (0)	NA		
Pesticides/PCBs															
alpha-Chlordane	0/14 (0)	0/14 (0)	NA			0/11 (0)	0/11 (0)	NA			1/8 (12)	1/7 (14)	NE		

Note: Highlighting indicates that 25 percent or more of the sample set was detected for the constituent of interest.

[a]If there was more than on result per day (e.g., a duplicate sample), then only the maximum sample concentration was counted.
[b]Rejected data qualified with either an R or Z were not counted.
[c]ADR = After Data Reduced. Data were reduced to one result per quarter.
[d]AOR = After Outliers Removed. Dixon's test was used to remove outliers at a p-value of 2 percent.
[e]NA = not applicable, because there were no detects.
NE = not evaluated for outliers because, while there were no detects, at least 25 percent of the data must be detected in order for trend and serial correlation to be valid.
[f]Mann-Kendall test for trend. There must be at least four samples in order to perform trend analysis.
Up, Sig. = Up, Significant
Down, Sig. = Down, Significant
Up, Marg. = Up, Marginal
No Sig. Trend = No Significant Trend
[g]Rank Von Neumann test for serial correlation. There must be at least 10 samples in order to perform serial correlation.

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TABLE 3-4

FREQUENCY OF BASELINE CONSTITUENT DETECTIONS, TREND, AND SERIAL CORRELATION FOR ON-SITE DISPOSAL FACILITY LEAK DETECTION SYSTEM

	Cell 1 Well 12338D					Cell 2 Well 12339D				
	Number of Samples with Detections/Number of Samples (%)					Number of Samples with Detections/Number of Samples (%)				
Constituent	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]	Total Data Set[a,b]	ADR[c]	AOR[d,e]	Trend[f]	Serial Correlation[g]
General Chemistry										
Total Organic Carbon	11/13 (85)	11/13 (85)	11/13 (85)	No Sig. Trend	Not detected	10/11 (91)	10/11 (91)	10/11 (91)	Down, Sig.	Detected
Total Organic Halogens	10/13 (77)	10/13 (77)	10/13 (77)	No Sig. Trend	Not detected	5/11 (45)	5/11 (45)	5/11 (45)	No Sig. Trend	Not detected
Inorganics										
Boron	12/13 (92)	12/13 (92)	11/11 (100)	Down, Sig.	Not detected	11/11 (100)	11/11 (100)	11/11 (100)	Down, Sig.	Marg. Detected
Mercury	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Radionuclides										
Technetium-99	1/13 (8)	1/13 (8)	NE			1/11 (9)	1/11 (9)	NE		
Uranium, Total	13/13 (100)	13/13 (100)	13/13 (100)	No Sig. Trend	Not detected	11/11 (100)	11/11 (100)	11/11 (100)	Down, Sig.	Detected
Volatile Organics										
1,1-Dichloroethene	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
1,2-Dichloroethene (total)	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Bromodichloromethane	1/13 (8)	1/13 (8)	NE			0/11 (0)	0/11 (0)	NA		
Tetrachloroethene	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Trichloroethene	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Vinyl Chloride	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Semi-Volatile Organics										
4-Nitroaniline	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
bis(2-Chloroisopropyl)ether	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Carbazole	0/13 (0)	0/13 (0)	NA			0/11 (0)	0/11 (0)	NA		
Pesticides/PCBs										
alpha-Chlordane	0/13 (0)	0/13 (0)	NA			1/11 (9)	1/11 (9)	NE		

Note: Highlighting indicates that 25 percent or more of the sample set was detected for the constituent of interest.

[a]If there was more than on result per day (e.g., a duplicate sample), then only the maximum sample concentration was counted.
[b]Rejected data qualified with either an R or Z were not counted.
[c]ADR = After Data Reduced. Data were reduced to one result per quarter.
[d]AOR = After Outliers Removed. Dixon's test was used to remove outliers at a p-value of 2 percent.
[e]NA = not applicable, because there were no detects.
NE = not evaluated for outliers because, while there were no detects, at least 25 percent of the data must be detected in order for trend and serial correlation to be valid.
[f]Mann-Kendall test for trend. There must be at least four samples in order to perform trend analysis.
Down, Sig. = Down, Significant
No Sig. Trend = No Significant Trend
[g]Rank Von Neumann test for serial correlation. There must be at least 10 samples in order to perform serial correlation.

Section 4.0

4.0 ADDITIONAL LEAK DETECTION EVALUATION ASSESSMENTS

In 1996 and 1997, during development of the GWLMP, it was recognized that pre-existing contamination in the glacial overburden and Great Miami Aquifer in the area of the on-site disposal facility footprint would complicate leak detection evaluations. Therefore, it was noted in the GWLMP that tools other than control limits established via statistical analysis of baseline data would be used as part of the on-site disposal facility leak detection monitoring program. The GWLMP, Section 4.6, Leak Evaluation Strategy notes the following:

"The leak evaluation strategy for each on-site disposal facility cell is two-fold:

- Trend analysis for the LCS, LDS, the glacial till, and the Great Miami Aquifer will help pinpoint potential leak-related influences within each leak detection program element; and
- The monitoring results from all elements will be correlated and evaluated holistically to determine whether a release has occurred and if a response action is necessary."

This section has been prepared to fulfill the above noted leak evaluation strategy and as a supplement to the statistical analysis used in Section 3 and Appendices B and C due to:

- The small number of detected constituents in the baseline sampling for Cells 1, 2, and 3 (i.e., only four of 16 constituents sampled at the horizontal till wells and Great Miami Aquifer wells had a sufficient number of detections to allow for statistical analysis).
- The fact that some of the detected constituents were found to have trends and/or serial correlation at various monitoring locations (Table 4-1). The presence of these trends/serial correlations further reduced the data set that could be used to establish baseline control limits. This reduction was necessary as per EPA guidance, which states that it is technically inappropriate to establish control limits for leak detection purposes with data showing trends or serial correlation.

This section has also been prepared to document the ongoing efforts to quantify pre-existing groundwater contamination in the on-site disposal facility area, beyond the cell-specific horizontal till and Great Miami Aquifer monitoring well sampling.

The following subsections describe the other efforts being employed to quantify pre-existing on-site disposal facility area groundwater contamination and the additional leak detection data evaluation assessments employed:

- Ongoing efforts to quantify pre-existing groundwater contamination in the on-site disposal facility area (Section 4.1)
- Constituent concentration comparisons between horizontal till wells and LCS and LDS (Section 4.2)

- Horizontal till well purge volumes (Section 4.3)
- Great Miami Aquifer total uranium results with respect to water levels and turbidity (Section 4.4)
- LCS and LDS volumes/accumulation rates (Section 4.5).

4.1 ONGOING EFFORTS TO QUANTIFY PRE-EXISTING GROUNDWATER CONTAMINATION IN THE ON-SITE DISPOSAL FACILITY AREA

As identified in Section 3.1.5, the presence of pre-existing groundwater contamination in the on-site disposal facility area has been noted in various documents over the last eight years. The most recent documentation occurred in the Design for Remediation of the Great Miami Aquifer in the Waste Storage and Plant 6 Areas, when substantially above background uranium concentrations were seen in Property Boundary Monitoring Well 2426. The text pertaining to this documentation is repeated here as follows:

> "IEMP sampling results (June 2000) for Monitoring Well 2426 indicated a > 20 μg/L uranium plume at the eastern property boundary downgradient from the Plant 6 area (Figure 1-3). The initial sample results indicated a 24.2 μg/L uranium concentration. Since > 20 μg/L uranium concentrations had not been previously observed at Monitoring Well 2426, the sample was re-analyzed yielding a uranium concentration of 10 μg/L. To verify the presence/absence of a > 20 μg/L uranium plume at the eastern property boundary, direct push location 12859a was completed just upgradient of Monitoring Well 2426. The maximum uranium concentration at Location 12859a was 0.6 μg/L indicating there was not a > 20 μg/L uranium plume at the eastern property boundary. To further verify the presence or absence of a > 20 μg/L uranium plume in this area four additional direct push locations (12829-12832, Figure 1-3) were completed on a north-south line east of Plant 6, the only confirmed source for aquifer contamination in this area. The maximum uranium results for all four locations (all ≤ 5 μg/L) further indicate there is no uranium plume requiring remediation in this area east (downgradient) of Plant 6. However, due to a concern regarding penetration through the glacial overburden in the On-Site Disposal Facility footprint, no direct push locations could be completed in that footprint. The concern is that penetrations through the glacial overburden in the footprint could compromise the protectiveness of the overburden and potentially create a short circuit pathway for potential leakage from future OSDF cells to reach the Great Miami Aquifer.
>
> Although it appears from past and current characterization efforts in this area east of Plant 6 that there is not a uranium plume requiring remediation in this area, it is recognized that there are residual, above background concentrations of uranium present. Due to the presence of the OSDF footprint, these residual concentrations cannot be fully defined. Further, it is recognized that these residual concentrations must be considered when developing pre-OSDF baseline uranium concentrations in the aquifer, and since they cannot be quantified they may confound future OSDF leak detection evaluations."

Ongoing efforts to quantify pre-existing groundwater contamination in the on-site disposal facility area, beyond the cell-specific groundwater sampling consist of:

- Integrated Environmental Monitoring Plan (IEMP) Property Boundary sampling
- Groundwater remedy performance Geoprobing at 20-25 locations sitewide per year, some in the vicinity of the on-site disposal facility footprint, as needed
- If feasible, Geoprobing at each new monitoring well location for the remaining cells to be constructed. This will be done to establish a "snapshot" uranium profile at the monitoring well locations.

4.2 CONSTITUENT CONCENTRATION COMPARISONS: HORIZONTAL TILL WELLS VERSUS THE LCS AND LDS

Concentration versus time graphs for detected constituents were constructed for the LCS, LDS, and horizontal till wells of each cell (Figures 4-1 through 4-19). Constituent–specific graphs of the three horizons were overlain in an effort to verify that there were no impacts to the horizontal till wells from the overlying LCS and LDS during the baseline period. A summary table (Table 4-1) showing the minimum, maximum, and average of the detected constituents per horizon per cell was also constructed to supplement the graphs. While there are a few exceptions, the graphs and table generally show that the water quality of each horizon is distinct and these distinctions support the conclusion that the horizontal till wells have not been impacted by the overlying LCS and LDS layers. The following are some observations made from review of the LCS/LDS/horizontal till well graphs and Table 4-1:

Cell 1:

- There is a consistent pattern present for boron, total organic carbon, total organic halogens, and total uranium. The pattern is that the LCS concentrations are generally higher than the LDS concentrations, and the LDS concentrations are generally higher than the horizontal till well concentrations. Review of the averages provided in Table 4-1 indicates the LCS and LDS concentrations of these four constituents are nearly an order of magnitude or more higher than the horizontal till well concentration. In fact, the average LCS concentration for total uranium is 43 times greater than the horizontal till well average.
- Technetium-99 was detected in the LCS but not in the LDS or horizontal till well.
- The specific conductivity pattern is that the LDS is generally greater than the LCS and the LCS is greater than the horizontal till well.
- The pH is generally greater in the horizontal till well than the LDS and the LDS is generally greater than the LCS.

Cell 2:

- The patterns for boron, technetium-99, total organic carbon, and total organic halogens are not consistent with the Cell 1 patterns. This may be due to the cross contamination of the Cell 2 LDS from the leachate backups that occurred in late 1998 and early 1999.

- The boron concentrations in the horizontal till well are much less than the LCS and LDS concentrations (which are similar).

- The total organic carbon concentrations are generally higher in the LDS than in the LCS and in the horizontal till well during 1999 and the first half of 2000 (i.e., cross-contamination from leachate backups). The total organic carbon concentrations in all three horizons are similar from mid-2000 to the end of 2001.

- Total organic halogens concentrations are generally similar in all three horizons throughout the baseline sampling period.

- Total organic carbon and total organic halogens are not very useful as leak detection indicators. The average total organic carbon concentration in the horizontal till well is only slightly less than that found in the LCS and the average total organic halogens concentration in the horizontal till well is higher than the average concentration found in the LCS.

- The total uranium concentrations are generally higher in the LDS than in the LCS and horizontal till well until late 1999 (cross-contamination). From early 2000 through the end of the baseline sampling period, the pattern is consistent with Cell 1; the LCS concentrations are greater than the LDS concentrations and the LDS concentrations are greater than the horizontal till well concentrations (indicates the uranium cross-contamination has dissipated).

- The average concentrations of boron and total uranium are about an order of magnitude less in the horizontal till well than in the LCS and LDS. The average total uranium and boron concentrations in the LCS are nearly nine times greater and 12 times greater, respectively, than those found in the horizontal till well.

- The specific conductivity pattern is that the LDS is generally greater than the horizontal till well and the horizontal till well is greater than the LCS (for 2000).

- The pH pattern is consistent with Cell 1 for a portion of 2000 (pH greater in the horizontal till well than the LDS and the LDS is generally greater than the LCS).

Cell 3:

- The LDS for Cell 3 has not yielded any water. Therefore, no LDS samples have been collected.

- The boron and total uranium concentrations are generally greater in the LCS than in the horizontal till well (similar to Cell 1). The LCS averages for these two constituents are more than five times greater than those found in the horizontal till well (Table 4-1).

- The LCS and horizontal till well total uranium concentrations are both exhibiting an upward trend.

- Total organic carbon and boron are also exhibiting an upward trend in the horizontal till well, but not in the LCS.

- The total organic carbon and total organic halogens concentrations are similar in the LCS and horizontal till well.

- The LCS specific conductivity fluctuates greatly above and below the horizontal till well, while the horizontal till well shows generally increasing specific conductivity with time (similar to the Cells 1 and 2 horizontal till wells).

- The pH pattern is generally consistent with Cell 1 and portions of Cell 2 (horizontal till well higher than the LCS).

Based on review of these graphs and Table 4-1, it may be a viable enhancement to the on-site disposal facility leak detection monitoring program to begin evaluating these graphs and summary information on an annual basis. These annual reviews could provide an early warning of potential leakage from the LCS to the LDS and from the LDS to the horizontal till wells.

4.3 HORIZONTAL TILL WELL PURGE VOLUMES

Pre-sample purging of the horizontal till wells began in November of 1998. Since that time, the horizontal till wells for Cells 1, 2, and, 3 have either been purged dry or had at least three well volumes purged prior to sample collection. The individual pre-sampling purge volumes from the horizontal till wells are provided on Figures 4-20 through 4-22.

Pre-sampling purge volumes from the horizontal till wells were evaluated to look for similarities, differences, and trends in the horizontal till well water yield between the individual cells over time. It was also evaluated to see if the purge data were useful in supplementing the interpretation of the analytical data. It was anticipated that as a particular cell aged, the yield of its horizontal till well would decrease. The following points are made based on review of the purge data:

- The total annual yield for the Cells 1 and 2 horizontal till wells for 1999 and 2000 are very similar and increased slightly from 1999 to 2000.

- The 1999 Cell 3 horizontal till well yield was in the general range (albeit somewhat lower) of that for the Cells 1 and 2 horizontal till wells. However, the 2000 total yield for the Cell 3 horizontal till well decreased 77 percent from the 1999 yield and was less than one fifth of the yield seen at the Cells 1 and 2 horizontal till wells.

- The consistent volumes from Cells 1 and 2 horizontal till wells during 1999 and 2000 indicate a source of recharge greater than that seen in Cell 3, where the 2000 volumes dropped off dramatically.

The Cell 3 horizontal till well condition, where less recharge is occurring, may help explain the analytical data for the Cell 3 horizontal till well. Lower recharge volumes indicate that the perched water volume present under Cell 3 is depleting, relative to Cells 1 and 2. As the volume of water depletes, the concentration of various constituents in the water would be expected to increase. This is what is seen in three of the four detected constituents in the Cell 3 horizontal till well where there are "up, significant" trends (Table 4-1). By comparison, in the Cells 1 and 2 horizontal till wells there is only one "up, significant" trend out of eight detections (Table 4-1). This "aging water" phenomenon is important to recognize, as it is pertinent to future leak detection interpretations. If this were not considered, then false positives may not be recognized as such.

4.4 GREAT MIAMI AQUIFER TOTAL URANIUM GRAPHS

4.4.1 Total Uranium Versus Water Levels

Concentration versus time graphs for total uranium were constructed for each of the up- and down-gradient wells for Cells 1, 2, and 3. The screened interval of each well, along with the pre-sample water level associated with each total uranium result were also posted on the graphs. This was done in an effort to determine if there were visual correlations of the total uranium concentrations and the water levels. These graphs are shown in Figures 4-23 through 4-28. A pattern can be discerned from several of the graphs. The observed pattern is that when the water levels rose after a seasonal low, generally the total uranium concentrations also increased after a short delay, then subsequently declined along with the water levels. This phenomenon indicates one or both of the following scenarios may be occurring:

1) Soluble uranium is present in the vadose zone. The mobilization of this soluble uranium when the water levels rise is the explanation for the increase (i.e. the cyclic wetting and drying of the vadose zone is responsible for the increases and subsequent decreases).

2) A plume may be present below the screened interval. When the water levels are lower, then rise, the plume "top" is seen with the rising water table.

Investigation to determine if Scenario 2 was occurring was conducted via uranium profile sampling of the aquifer in the vicinity of the on-site disposal facility with a Geoprobe™ unit. This sampling indicated that a plume was not present below the screened intervals of the monitoring wells near the on-site disposal facility. However, only three monitoring well locations were tested due to persistent breakage of the Geoprobe™ rods. An additional four locations from the Plant 6 area pre-design investigation were also utilized in this investigation and confirmed that there was not a plume below the Type 2 monitoring well screen interval. Stronger Geoprobe™ rods are being acquired and additional sampling in the vicinity of the on-site disposal facility monitoring wells is being planned for 2002 to further investigate the possibility of a deeper pre-existing uranium plume in the on-site disposal facility area.

Prior to review of these graphs, the interpretation was that low concentration plumes were arriving at the wells from migrating historic releases in the former production and/or waste storage areas. However, if Scenario 1 is the mechanism responsible for the uranium fluctuations, then that is fundamentally different from the previous interpretation. This is significant in that regionally the aquifer water levels have been trending downward during the baseline monitoring period and when they rise, it is possible that new high levels of uranium may be seen at the on-site disposal facility monitoring wells. If this occurs in the future, then it may be interpreted as a leak from the on-site disposal facility when indeed it is not. Regardless of the reason for the uranium increases in conjunction with the rising water levels, a correlation exists, and therefore, this phenomenon must be taken into consideration when interpreting the results of the on-site disposal facility leak detection monitoring in the Great Miami Aquifer.

In addition to the visual observations, which were made by reviewing the relationship of individual sample results (i.e., the relationship between a water level and a total uranium concentration), statistical analyses were performed on the overall sample population to determine the relationship between water levels and total uranium concentrations for each Great Miami Aquifer on-site disposal facility well. Specifically, regression analysis was used to statistically evaluate the relationship between water levels and total uranium concentrations. The overall results indicate that in general over time as water levels are trending downward, uranium concentrations are trending upward. This indicates that during the monitoring period (1997 through 2001) the regional water table is lowering and also shows that pre-existing total uranium concentrations are impacting the Great Miami Aquifer on-site disposal facility area wells. It should be noted that for two wells (22200 and 22204), there were no discernable upward or downward trends for total uranium concentrations. Appendix D provides the detailed statistical results from this evaluation. Additionally, more information regarding water level versus total uranium concentrations in Great Miami Aquifer wells located in other areas of the site will be included in the mid-year IEMP report due to OEPA and EPA by November 30, 2002.

4.4.2 Total Uranium Versus Turbidity

The total uranium concentrations versus time results for the Great Miami Aquifer wells were also compared to the pre-sample turbidity result (Figures 4-29 through 4-34). This was completed because turbidity has been shown to affect monitoring well total uranium results in other areas of the site. Review of Figures 4-29 through 4-34 indicates there is no strong consistent visual correlation of turbidity with total uranium results in the vicinity of the on-site disposal facility. However, Figure 4-29 (Cell 1 upgradient Monitoring Well 22201) does show some correlation from mid-1998 to the close of the baseline sampling period. Based on this correlation, it may be prudent to continue to compare the

turbidity results to the total uranium results in order to identify possible trends, which, if present may help explain unusually high total uranium results.

4.5 LCS AND LDS VOLUMES

LCS and LDS water yields versus time provide useful information with respect to leak detection evaluations. Comparisons of these yields to various other parameters, such as precipitation and waste placement volumes are also useful. Figure 4-35 provides a schematic cross-section of the on-site disposal facility liner system and horizontal till well location with respect to the liner system. This configuration is used for all cells.

4.5.1 LCS Volumes

The monthly net total LCS volumes for Cells 1, 2, and 3 from January 1998 through November 2001 are provided in Figure 4-36. Monthly precipitation totals are also plotted on this graph. Generally, the monthly LCS volumes mimic the precipitation pattern, particularly in the winter. This is expected as the bulk of the leachate is precipitation draining to the LCS layer via the open catchment areas of the active cells and more runoff to the catchment areas in the winter time is likely due to relatively less evaporation in the winter versus the summer. Water is drained from each cell's LCS layer as quickly as possible via the perforated LCS pipe (Figure 4-35). Quickly draining the LCS layers helps to minimize water accumulation on the primary liner, thereby minimizing the potential for leakage through the primary liner.

From January 1998 through November 2001, a total of 34.6 million gallons of leachate have been generated from Cells 1, 2, and 3. This leachate was subsequently treated at the site's Advanced Wastewater Treatment (AWWT) Facility Phase II. At this writing, cell specific LCS volumes were not available; however, they are expected to be available in 2002. When the cell-specific leachate volumes are available, cell-specific apparent liner hydraulic efficiencies can be calculated via the following equation:

$$[1-(Vol_{LDS}/Vol_{LCS})] \times 100$$

Apparent liner hydraulic efficiency is a measure of how a particular cell's liner is performing but considers *all* the LDS volume to be leakage through the primary liner, which is not always the case. In the EPA Report of 1995 Workshop on Geosynthetic Clay Liners, Appendix F, several sources of flow from leak detection layers are identified. These sources include:

- Top liner leakage
- Construction water and compression water
- Consolidation water
- Water from groundwater infiltration.

Given the chemical differences in the waters found in the LCS and LDS for Cells 1 and 2, noted above and summarized in Table 4-1, it is apparent that top liner leakage is not the sole source of the water yielded from their LDS layers. Nonetheless, monthly apparent liner efficiencies will be a valuable parameter to track over time, and will be calculated when the cell-specific LCS volumes become available. As noted above, the Cell 3 LDS has not yielded any water since the cell came online in October 1999, indicating the Cell 3 top (primary) liner has a hydraulic efficiency of 100 percent. Overall the on-site disposal facility's apparent primary liner hydraulic efficiency for Cells 1, 2, and 3 combined from January 1998 through November 2001 is 99.92 percent [1-(28,212 gallons/34,600,000 gallons) x 100]. This is based on the total leachate volume and total LDS volume for the period. Table 4-2 provides the LCS and LDS flow totals.

4.5.2 LDS Accumulation Rates

LDS accumulation rates have been tracked via hourly measurements since May of 1999 for Cells 1 and 2 and since October 1999 for Cell 3 (note that the hourly measurements were suspended during the tie-ins to the new permanent leachate transmission system in the spring of 2001). The hourly measurements are reviewed weekly and weekly average accumulation rates, in gallons per acre per day (gpad), are generated and reported to the EPA and OEPA via the weekly site update teleconferences. Prior to May 1999, the Cell 1 and 2 LDS accumulation rates were tracked via pump outs of the LDS primary containment vessel. The Cell 3 LDS accumulation rates have been tracked via the hourly measurements since waste placement began in October 1999.

Figures 4-37 and 4-38 depict the monthly average LDS accumulation rates versus precipitation and waste placement/cap placement volume respectively for Cell 1 since detailed tracking of the rates began. The monthly average accumulation rates for the period tracked range from 0.02 gpad in May 2000 to 1.03 gpad in November 2001. The on-site disposal facility design established initial response leakage rate for each cell is 20 gpad. The maximum monthly average accumulation rate during the period tracked is five percent of the initial response rate. The following observations are made based on review of Figures 4-37 and 4-38:

- The accumulation rates appear to have a seasonal pattern, particularly in 2000 and 2001. The rates are lowest in the spring/early summer and highest in the late fall and winter.
- The accumulation rates do not appear to correlate well with precipitation or with waste/cap material placement volumes.
- The highest accumulation rate for Cell 1 occurred in November 2001 just after the largest monthly precipitation amount, and coincident with the largest monthly placement volume.

- During some months, the LDS rates appear to correlate with the LCS volumes but not consistently.

Figures 4-39 and 4-40 depict the monthly average LDS accumulation rates versus precipitation and waste placement volume, respectively for Cell 2, since detailed tracking of the rates began. The monthly average accumulation rates for the period tracked range from zero gpad in November/December 1999, December 2000, and January 2001 to 4.77 gpad in June 1999. The maximum monthly average accumulation rate during the period tracked is 25 percent of the initial response rate. The following observations are made based on review of Figures 4-39 and 4-40:

- The rates appear to have a seasonal pattern. The highest rates are seen in the summer months, while the lowest rates are seen in the winter months, just the opposite of Cell 1.
- The rates do not appear to correlate well with precipitation or with waste placement volumes.
- During some months, the LDS rates appear to correlate with the LCS volumes, but as with Cell 1, not consistently.

When comparing the Cell 1 accumulation rates to those of Cell 2, the Cell 2 rates are seen to have a greater range; 0 to 4.77 gpad versus 0.02 to 1.03 gpad for Cell 1. Both cells have seasonal low accumulation rates at or very near zero gpad, which is what is expected once the cells are capped, and the remaining leachate drains from the capped waste. Table 4-2 shows that, as expected, the annual total LDS volumes are declining in Cells 1 and 2.

An additional factor that sheds light on the LDS accumulation rates/volumes for the three cells is precipitation amounts during the construction of the cell's liner systems. This factor was first presented in the 1999 Integrated Site Environmental Report Appendix A, Attachment A.6, On-Site Disposal Facility Monitoring Results (DOE 2000a). The precipitation data and discussion is repeated in this technical memorandum as it is useful information to be considered for the Cells 1, 2, and 3 leak detection evaluation. Table 4-3 presents the liner construction period precipitation amounts and resultant volumes on the on-site disposal facility liner areas for Cells 1, 2, and 3.

As noted in Table 4-3, the calculated volume of precipitation that fell on Cell 1 during construction of its primary liner was 605,000 gallons. A portion of this water became trapped, as construction water, in the geosynthetic clay liner on top of the Cell 1 leak detection system and in the geotextile cushion within the leak detection system. The total water yield recorded for the Cell 1 leak detection system from January 1998 (waste placement began in late December 1997) to November 2001 was 9,797 gallons or about 1.6 percent of the volume of precipitation that fell on Cell 1 during construction of its primary liner.

Table 4-3 shows the calculated volume of precipitation that fell on Cell 2 during construction of its primary liner was 141,000 gallons. A portion of this water became trapped, as construction water, in the geosynthetic clay liner on top of the Cell 2 leak detection system and in the geotextile cushion within the leak detection system. The total water yield recorded for the Cell 2 leak detection system from November 1998 (when waste placement began) to November 2001 was 18,415 gallons or about 13.1 percent of the volume of precipitation that fell on Cell 2 during construction of its primary liner. The total volume yielded from the Cell 2 leak detection system is significantly more than the Cell 1 leak detection system even though Cell 2 has not been open nearly as long as Cell 1. This higher yield from Cell 2 is being attributed to malfunctions in the leachate transmission pipeline that allowed mixing of flows as described in the 1999 Integrated Site Environmental Report, Section A.6.2.2.2.

As shown in Table 4-3, precipitation for the period when the Cell 3 liner system was installed indicates that the conditions were much drier than those when the liners for Cells 1 and 2 were installed. These drier conditions may have led to a condition where, unlike Cells 1 and 2, very little construction water accumulated in the Cell 3 leak detection layer; hence, no yield from the Cell 3 LDS has been observed.

TABLE 4-1

TREND AND SERIAL CORRELATION FOR THE MONITORED HORIZONS AT THE ON-SITE DISPOSAL FACILITY CELLS 1, 2, AND 3

Constituent	Cell #	Horizon[a]	Location	Number of Samples[b,c]	Minimum[b,c] (mg/L)	Maximum[b,c] (mg/L)	Average[b,c] (mg/L)	Trend[b,c,d]	Serial Correlation[b,c,e]
Total Organic Carbon	1	LCS	12338C	13	0.85	29.3	19	Up, Marginal	Marg. Detected
		LDS	12338D	13	0.58	80.9	11	No Significant Trend	Not Detected
		HTW	12338	11	0.5	3.21	1.6	No Significant Trend	Not Detected
		UGMA	22201	16	1.32	59.7	9.5	No Significant Trend	Not Detected
		DGMA	22198	15	0.48	13	4.3	No Significant Trend	Not Detected
	2	LCS	12339C	11	0.5	6.25	2	No Significant Trend	Not Detected
		LDS[f]	12339D	11	1.22	26.1	7.10	Down, Significant	Detected
		HTW	12339	12	0.5	3.04	1.3	No Significant Trend	Not Detected
		UGMA	22200	15	1.04	40.1	8.31	No Significant Trend	Not Detected
		DGMA	22199	15	0.5	48.1	7	Down, Significant	Not Detected
	3	LCS	12340C	6	0.64	3.14	1.8	No Significant Trend	Insufficient Data
		LDS	12340D	NS	NS	NS	NS	NS	NS
		HTW	12340	12	1.21	2.96	1.9	Up, Significant	Not Detected
		UGMA	22203	10	0.79	14.1	3.2	No Significant Trend	Not Detected
		DGMA	22204	10	0.5	8.83	2	No Significant Trend	Not Detected
Total Organic Halogens	1	LCS	12338C	14	0.0072	0.352	0.11	Up, Marginal	Marg. Detected
		LDS	12338D	13	0.0038	0.361	0.048	No Significant Trend	Not Detected
		HTW	12338	11	0.00065	0.0147	0.0081	No Significant Trend	Not Detected
		UGMA	22201	16	0.0013	0.308	0.035	No Significant Trend	Marg. Detected
		DGMA	22198	16	0.00076	0.092	0.017	No Significant Trend	Not Detected
	2	LCS	12339C	10	0.0024	0.0576	0.019	No Significant Trend	Not Detected
		LDS[f]	12339D	11	0.0020	0.069	0.015	No Significant Trend	Not Detected
		HTW	12339	13	0.0060	0.101	0.030	No Significant Trend	Not Detected
		UGMA	22200	13	0.0013	0.0138	0.0086	Up, Marginal	Marg. Detected
		DGMA	22199	15	0.0023	0.0775	0.015	Up, Significant	Not Detected
	3	LCS	12340C	7	0.0018	0.178	0.038	Down, Significant	Insufficient Data
		LDS	12340D	NS	NS	NS	NS	NS	NS
		HTW	12340	13	0.0112	0.0773	0.0281	No Significant Trend	Not Detected
		UGMA	22203	9	0.0028	0.019	0.0098	No Significant Trend	Not Detected
		DGMA	22204	9	0.0053	0.0149	0.010	No Significant Trend	Not Detected

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TABLE 4-1
(Continued)

Constituent	Cell #	Horizon[a]	Location	Number of Samples[b,c]	Minimum[b,c] (mg/L)	Maximum[b,c] (mg/L)	Average[b,c] (mg/L)	Trend[b,c,d]	Serial Correlation[b,c,e]
Boron	1	LCS	12338C	14	0.0642	2.8	1.1	No Significant Trend	Detected
		LDS	12338D	11	0.197	0.321	0.247	Down, Significant	Not Detected
		HTW	12338	12	0.0124	0.123	0.0610	Up, Significant	Detected
		UGMA	22201	16	0.0575	0.142	0.0993	No Significant Trend	Not Detected
		DGMA	22198	16	0.0264	0.0804	0.0489	No Significant Trend	Not Detected
	2	LCS	12339C	11	0.207	0.915	0.471	Down, Significant	Not Detected
		LDS[f]	12339D	11	0.289	2.22	0.644	Down, Significant	Marg. Detected
		HTW	12339	13	0.0192	0.0601	0.0387	No Significant Trend	Not Detected
		UGMA	22200	15	0.0223	0.087	0.045	No Significant Trend	Not Detected
		DGMA	22199	15	0.0151	0.0497	0.0376	No Significant Trend	Marg. Detected
	3	LCS	12340C	8	0.0159	1.51	0.727	No Significant Trend	Insufficient Data
		LDS	12340D	NS	NS	NS	NS	NS	NS
		HTW	12340	12	0.0436	0.235	0.136	Up, Significant	Detected
		UGMA	22203	10	0.0201	0.0494	0.0360	No Significant Trend	Not Detected
		DGMA	22204	10	0.0227	0.0887	0.0389	No Significant Trend	Marg. Detected
Technetium-99	1	LCS	12338C	14	0	18.3	4.91	No Significant Trend	Not Detected
		LDS	12338D	NE	NE	NE	NE	NE	NE
		HTW	12338	NA	NA	NA	NA	NA	NA
		UGMA	22201	NE	NE	NE	NE	NE	NE
		DGMA	22198	NE	NE	NE	NE	NE	NE
	2	LCS	12339C	NE	NE	NE	NE	NE	NE
		LDS[f]	12339D	NE	NE	NE	NE	NE	NE
		HTW	12339	NA	NA	NA	NA	NA	NA
		UGMA	22200	NA	NA	NA	NA	NA	NA
		DGMA	22199	NA	NA	NA	NA	NA	NA
	3	LCS	12340C	NA	NA	NA	NA	NA	NA
		LDS	12340D	NS	NS	NS	NS	NS	NS
		HTW	12340	NE	NE	NE	NE	NE	NE
		UGMA	22203	NE	NE	NE	NE	NE	NE
		DGMA	22204	NA	NA	NA	NA	NA	NA

TABLE 4-1
(Continued)

Constituent	Cell #	Horizon[a]	Location	Number of Samples[b,c]	Minimum[b,c] (mg/L)	Maximum[b,c] (mg/L)	Average[b,c] (mg/L)	Trend[b,c,d]	Serial Correlation[b,c,e]
Uranium, Total	1	LCS	12338C	14	0	142	72.9	No Significant Trend	Not Detected
		LDS	12338D	13	1.5	20.2	12	No Significant Trend	Not Detected
		HTW	12338	11	1.34	2.04	1.71	No Significant Trend	Not Detected
		UGMA	22201	16	0.025	6.38	1.2	No Significant Trend	Not Detected
		DGMA	22198	16	0.574	7.65	2.00	No Significant Trend	Detected
	2	LCS	12339C	11	4.51	45.1	25.4	Up, Significant	Detected
		LDS[f]	12339D	11	9.33	71	25	Down, Significant	Detected
		HTW	12339	12	2.29	3.35	2.85	No Significant Trend	Not Detected
		UGMA	22200	15	0.025	1.11	0.27	No Significant Trend	Not Detected
		DGMA	22199	15	0.381	12.1	3.06	Up, Significant	Marg. Detected
	3	LCS	12340C	7	9.35	58.6	33.1	Up, Significant	Insufficient Data
		LDS	12340D	NS	NS	NS	NS	NS	NS
		HTW	12340	12	3.62	8.42	6.08	Up, Significant	Detected
		UGMA	22203	10	0.118	2.52	0.716	Up, Marginal	Detected
		DGMA	22204	10	0.359	5.92	1.53	No Significant Trend	Not Detected

Note: Highlighting indicates the maximum concentration is greater in that horizon than in the LCS (or in some cases LDS); thereby, diminishing the value of the constituent as a leak detection indicator.

[a]LCS = Leachate Collection System
LDS = Leak Detection System
HTW = Horizontal Till Well
UGMA = Upgradient Great Miami Aquifer
DGMA = Downgradient Great Miami Aquifer
[b]AOR = After Outliers Removed. All data and statistical evaluations in this table are based on data after outliers have been removed. Dixon's Test was used to remove outliers at a p-value of 2 percent.
[c]NS = not sampled (LDS for Cell 3 has been dry).
NA = not applicable, because there were no detects.
NE = not evaluated for outliers because, while there were detects, at least 25 percent of the data must be detected in order for trend and serial correlation to be valid.
[d]Mann-Kendall test for trend requires at least four samples to perform analysis.
[e]Rank Von Neumann test for serial correlation requires at least 10 samples or there is "insufficient data."
[f]The LDS for Cell 2 was affected by cross-contamination from leachate line backups in December 1998 and January 1999 as described in the annual integrated site environmental reports (Appendix A, Attachment A.6) for those years.

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TABLE 4-2

LCS AND LDS FLOW (GALLONS)

Year	1998	1999	2000	2001	Totals
LCS Flow	6 million	5.1 million	13.5 million	10.0 million	34.6 million
Cell 1 LDS Flow	7,534	1,014	672	577	9,797
Cell 2 LDS Flow	9,959	6,009	1,377	1,070	18,415
Cell 3 LDS Flow	0	0	0	0	

TABLE 4-3

PRECIPITATION DURING CONSTRUCTION OF CELLS 1, 2, AND 3 SECONDARY AND PRIMARY LINERS

Activity/Item		Cell 1	Cell 2	Cell 3
Secondary liner construction	Start: Finish:	October 21, 1997 November 12, 1997	September 8, 1998 October 7, 1998	August 18, 1999 September 2, 1999
Precipitation during construction (inches)		1.9	4.12	1.77
Cell area (acres)		6.45	6.45	6.45
Precipitation volume on cell during construction (gallons)		330,000	716,000	308,000
Primary liner construction	Start: Finish:	November 1997 December 18, 1997	October 20, 1998 November 2, 1998	September 13, 1999 September 28, 1999
Precipitation during construction (inches)		3.48	0.81	0.07
Cell area (acres)		6.45	6.45	6.45
Precipitation volume on cell during construction (gallons)		605,000	141,000	12,000
Total precipitation volume on cell during secondary and primary liner construction periods (gallons)		935,000	857,000	320,000

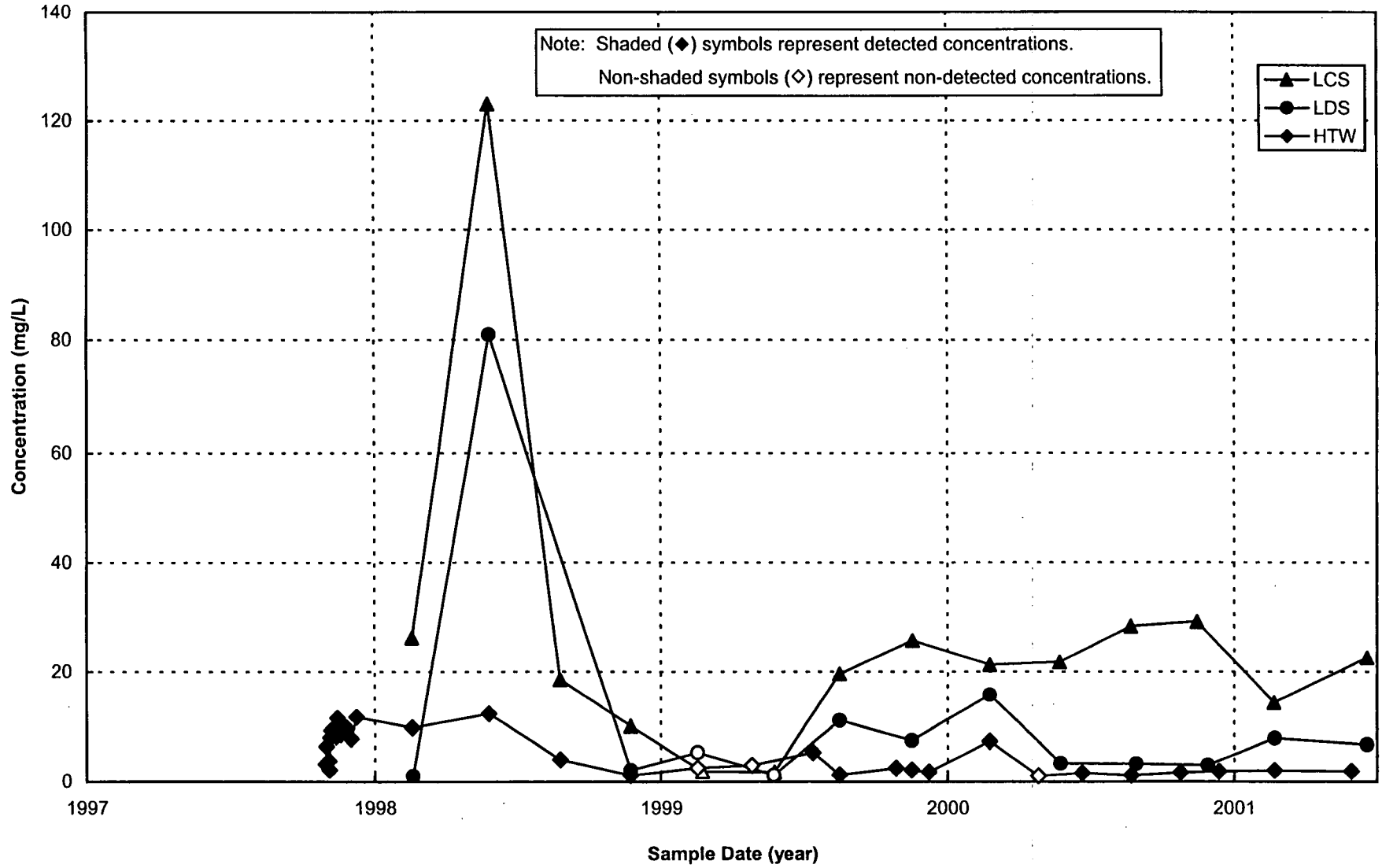

FIGURE 4-1. TOTAL ORGANIC CARBON CONCENTRATIONS VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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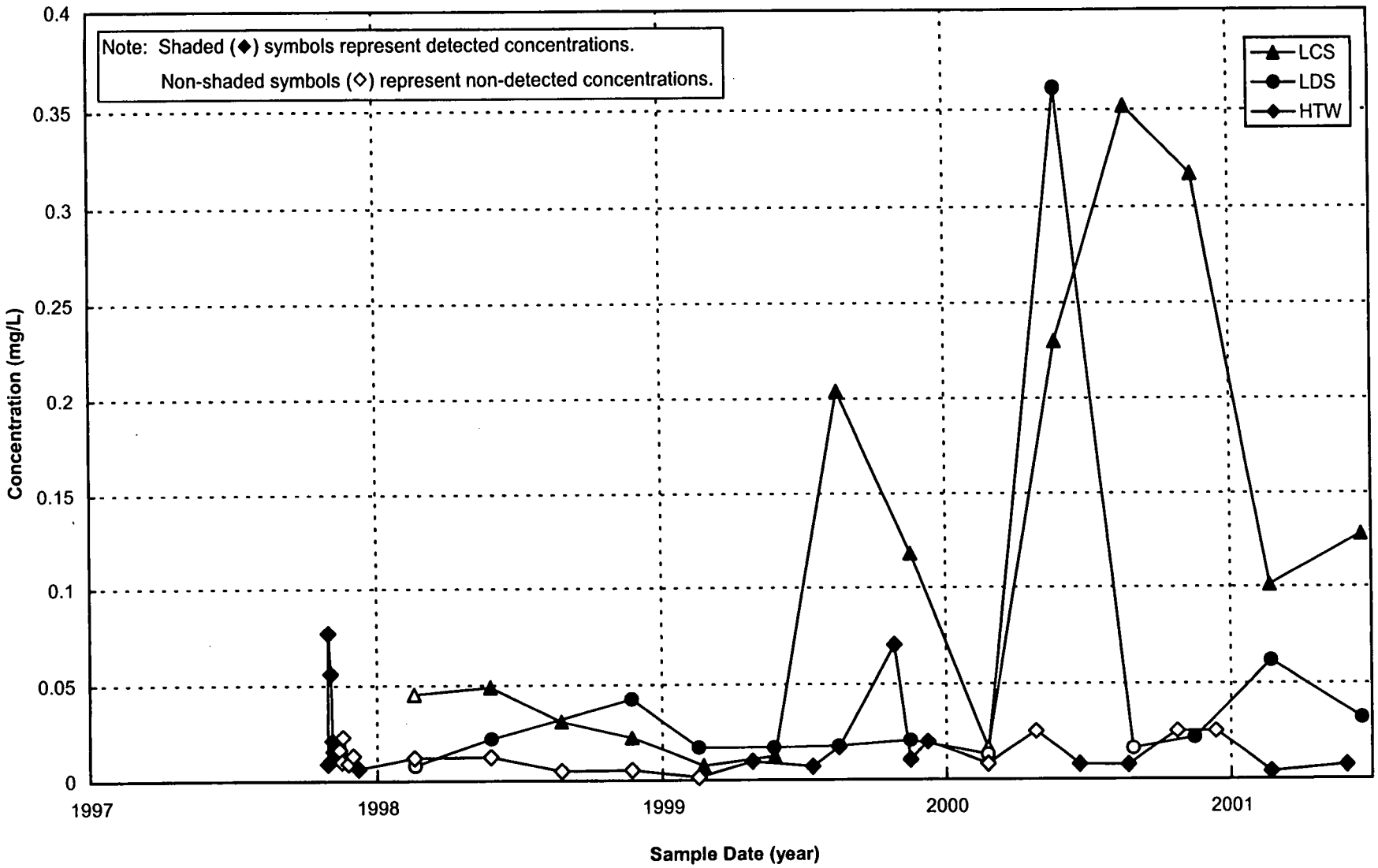

FIGURE 4-2. TOTAL ORGANIC HALOGENS CONCENTRATIONS VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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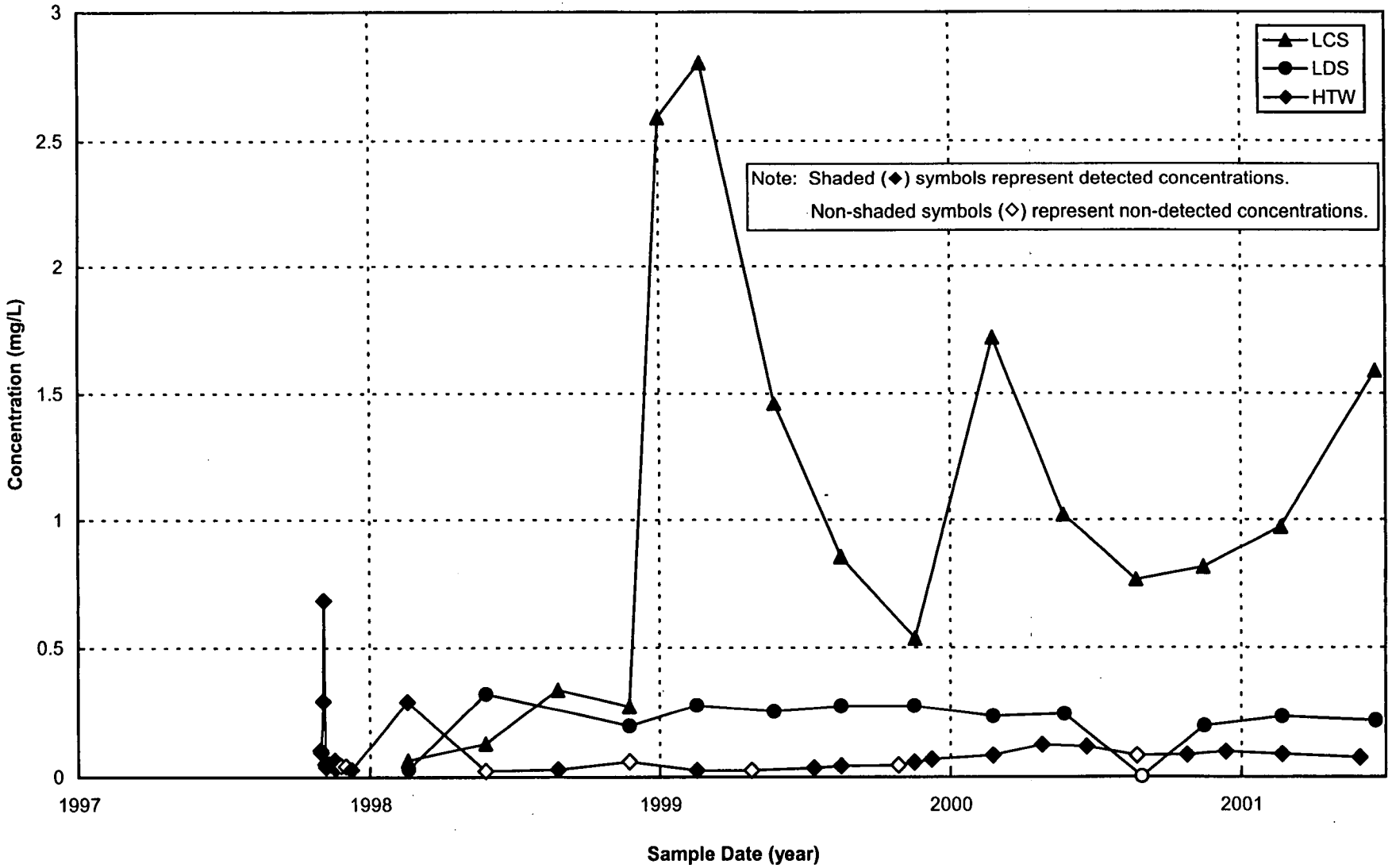

FIGURE 4-3. BORON CONCENTRATIONS VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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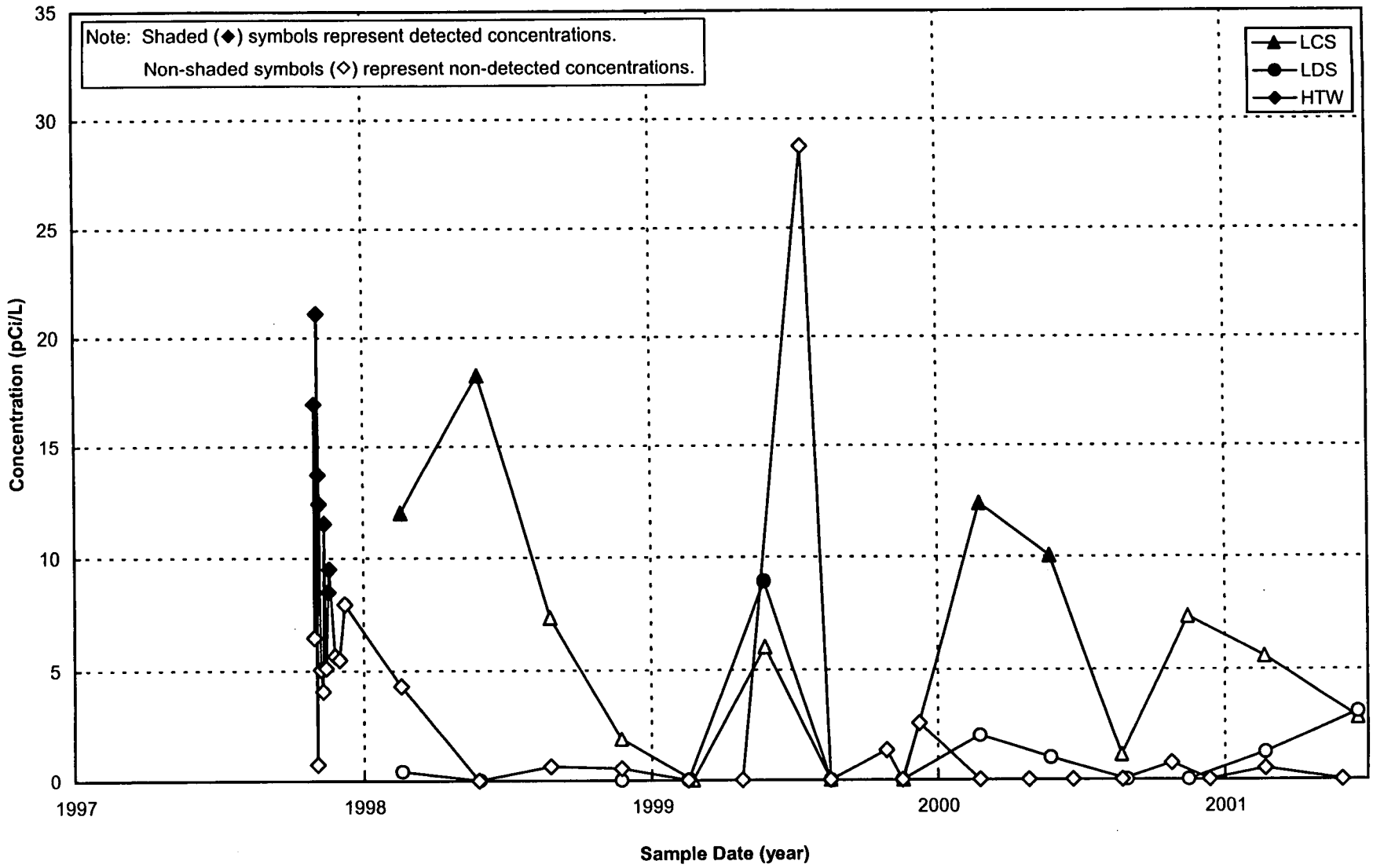

FIGURE 4-4. TECHNETIUM-99 CONCENTRATIONS VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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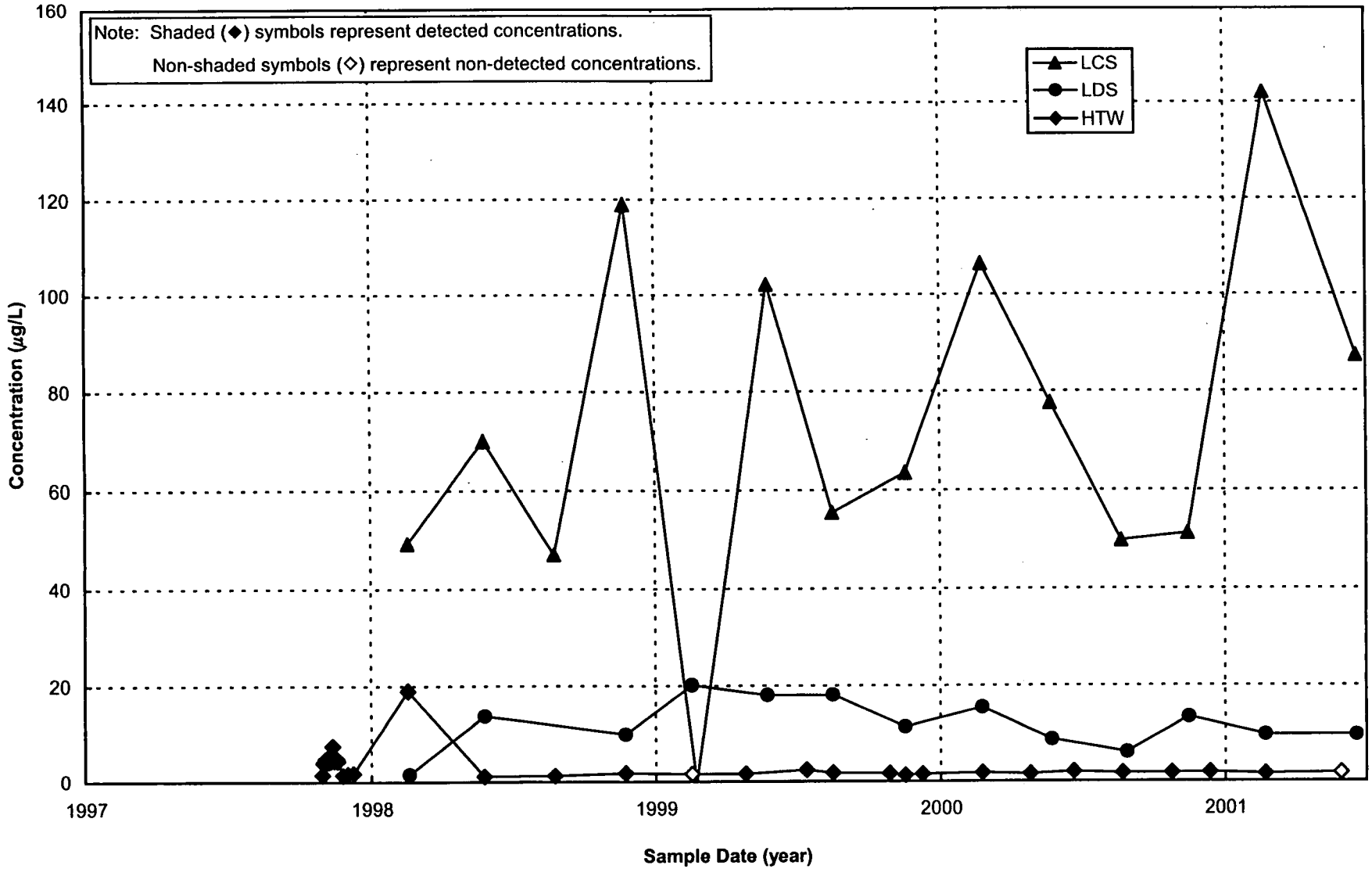

FIGURE 4-5. TOTAL URANIUM CONCENTRATIONS VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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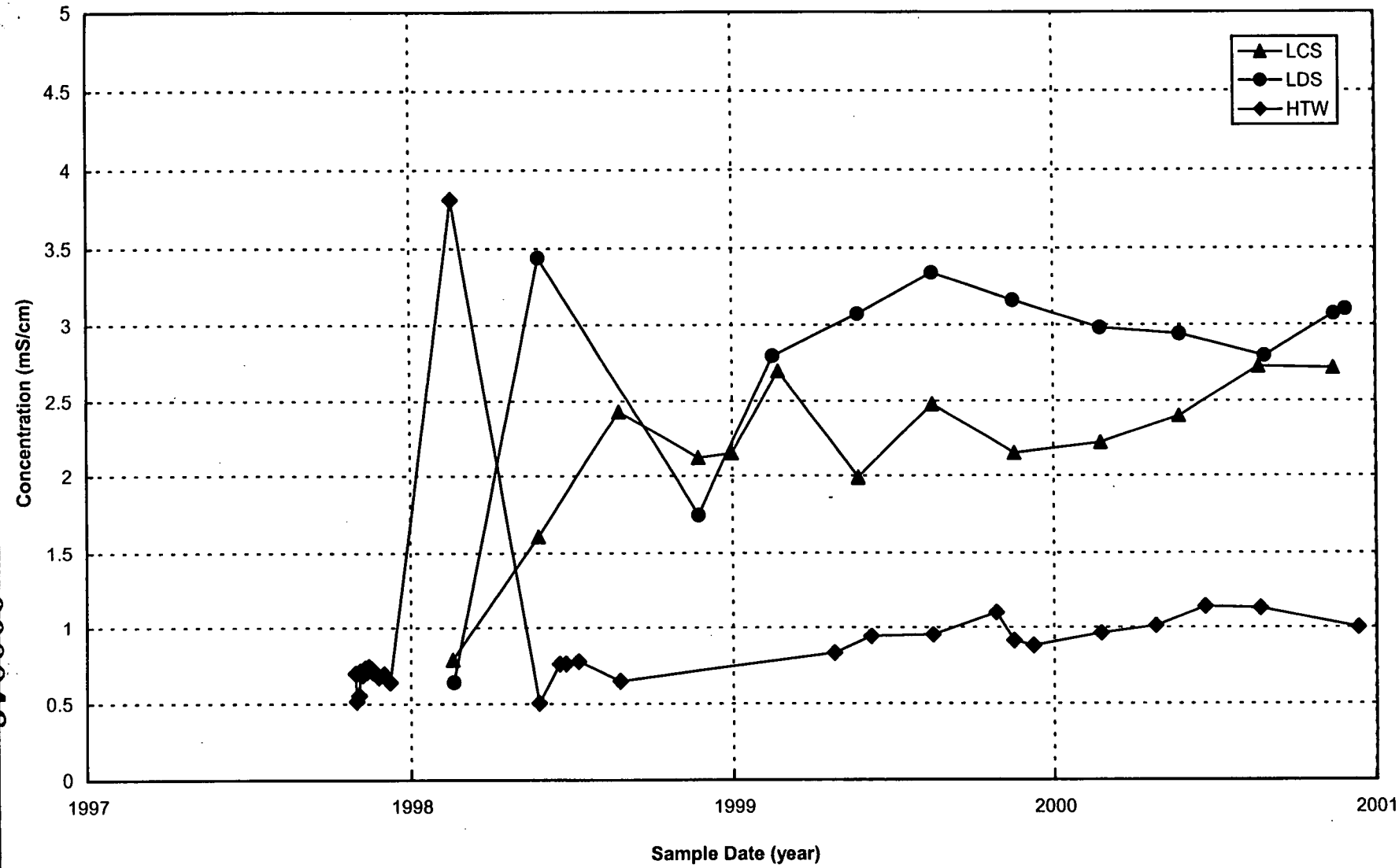

FIGURE 4-6. PRE-SAMPLE SPECIFIC CONDUCTIVITY VS. TIME PLOT FOR CELL 1 (LCS, LDS AND HTW)

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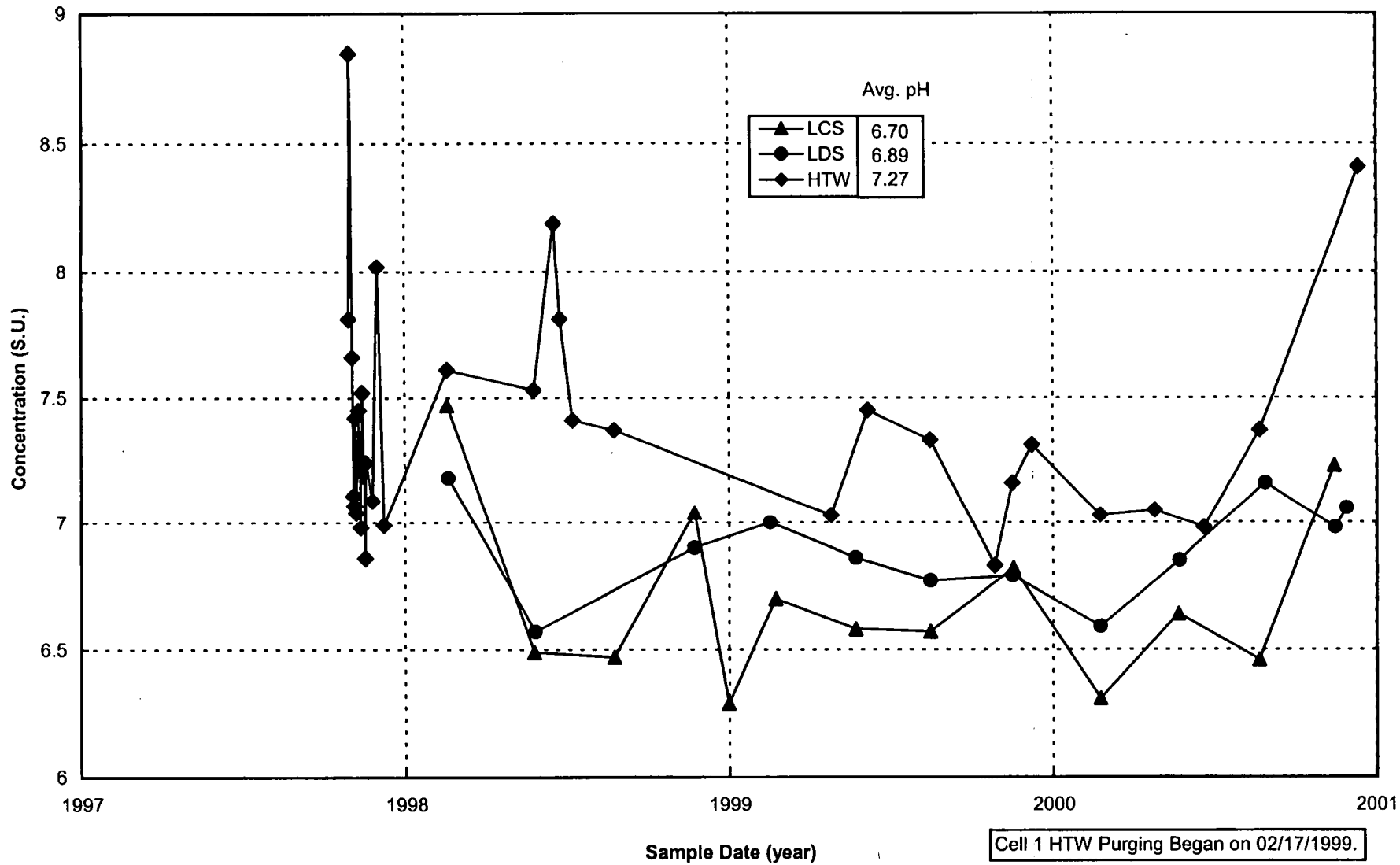

FIGURE 4-7. PRE-SAMPLE pH VS. TIME PLOT FOR CELL 1 (LCS, LDS, & HTW)

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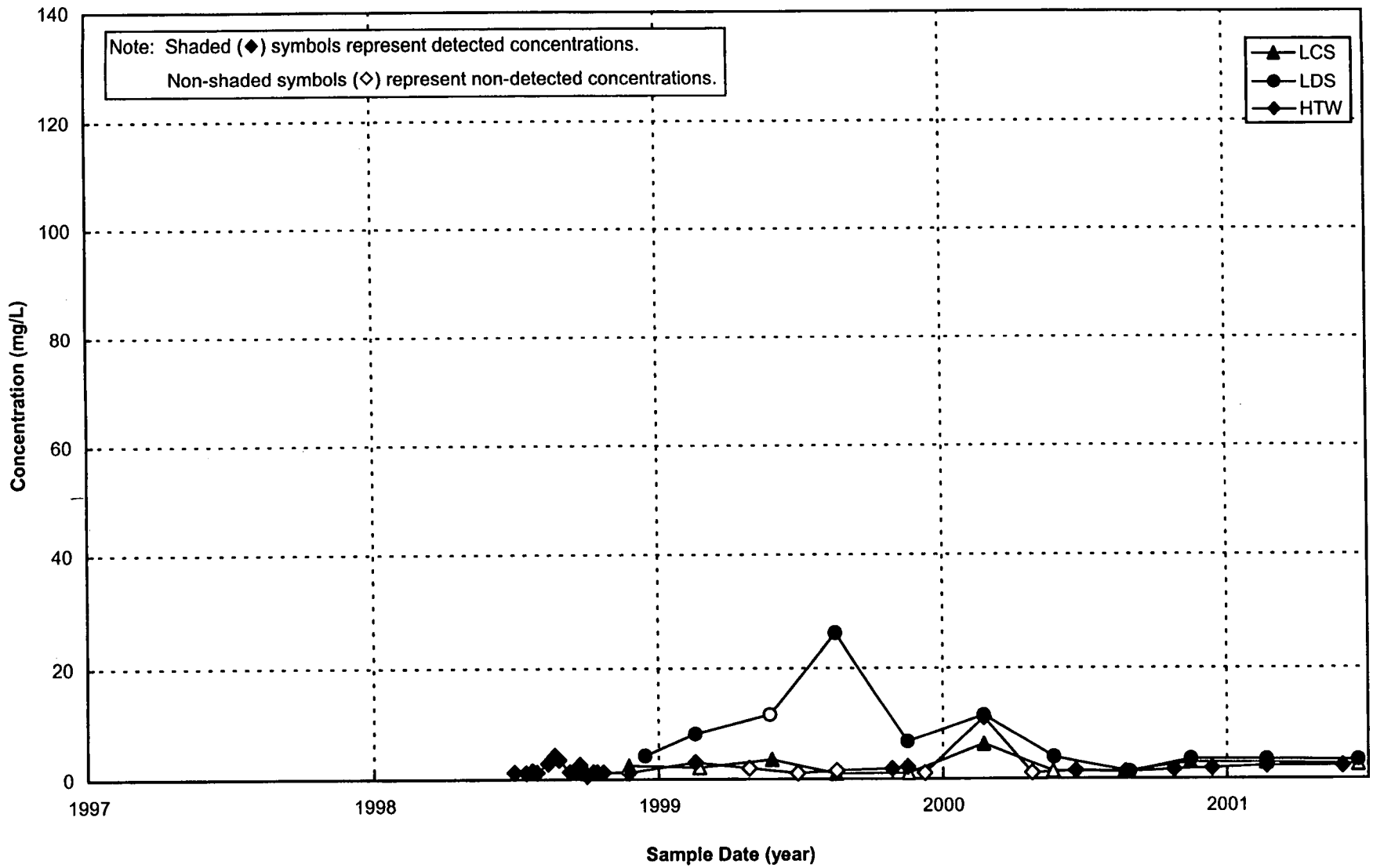

FIGURE 4-8. TOTAL ORGANIC CARBON CONCENTRATIONS VS. TIME PLOT FOR CELL 2 (LCS, LDS, & HTW)

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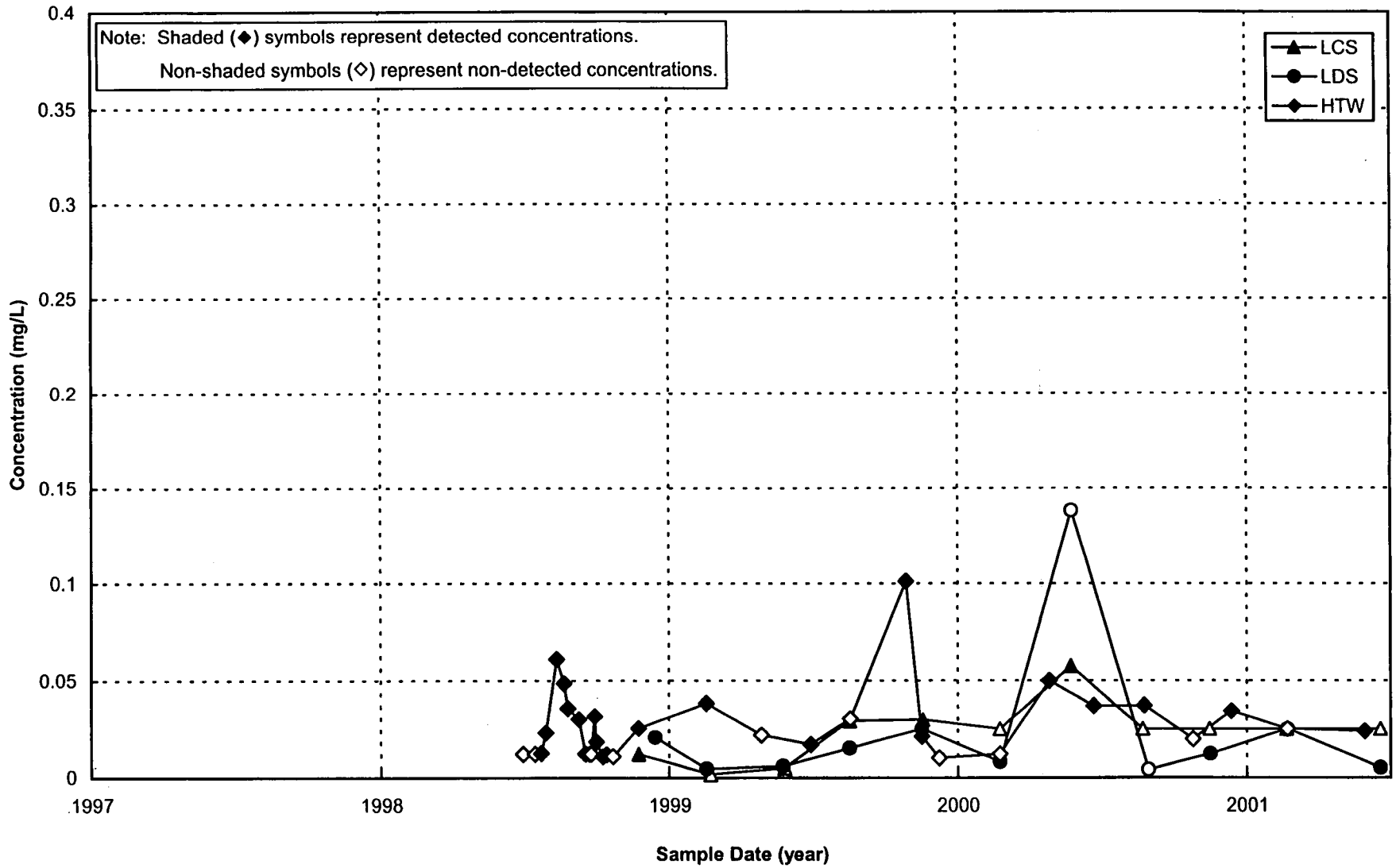

FIGURE 4-9. TOTAL ORGANIC HALOGENS CONCENTRATIONS VS. TIME PLOT FOR CELL 2 (LCS, LDS, & HTW)

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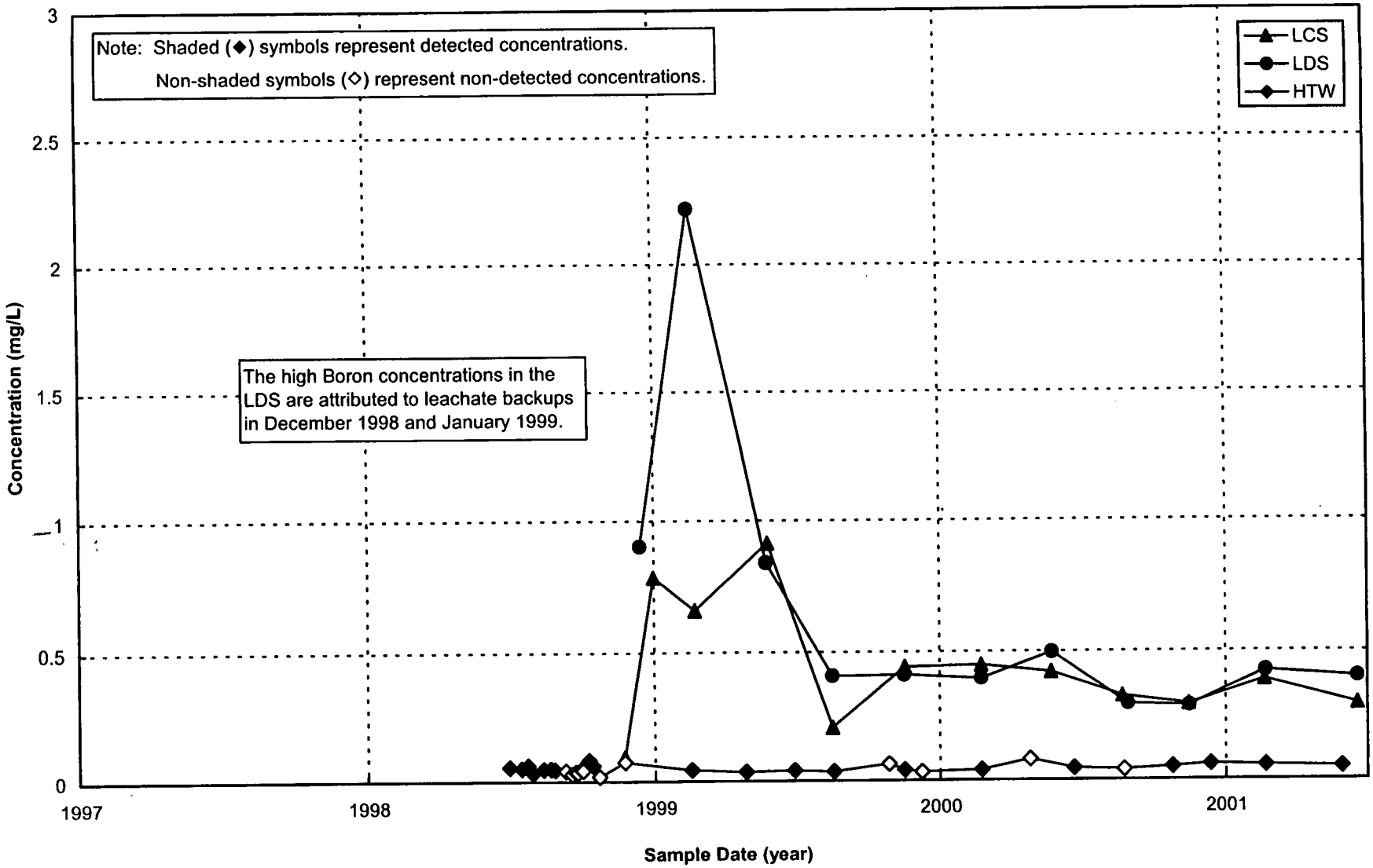

FIGURE 4-10. BORON CONCENTRATIONS VS. TIME PLOT FOR CELL 2 (LCS, LDS, & HTW)

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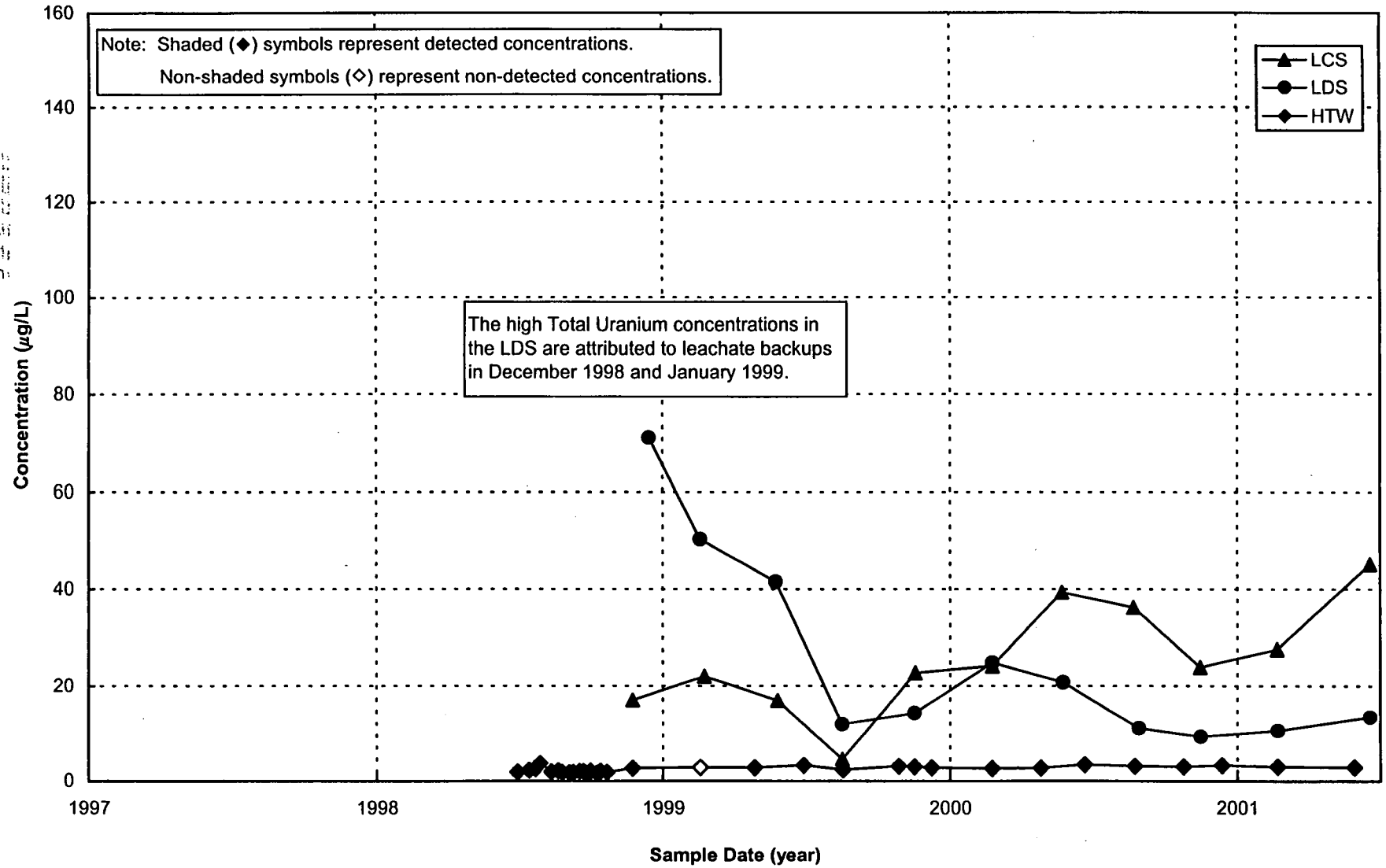

FIGURE 4-11. TOTAL URANIUM CONCENTRATIONS VS. TIME PLOT FOR CELL 2 (LCS, LDS, & HTW)

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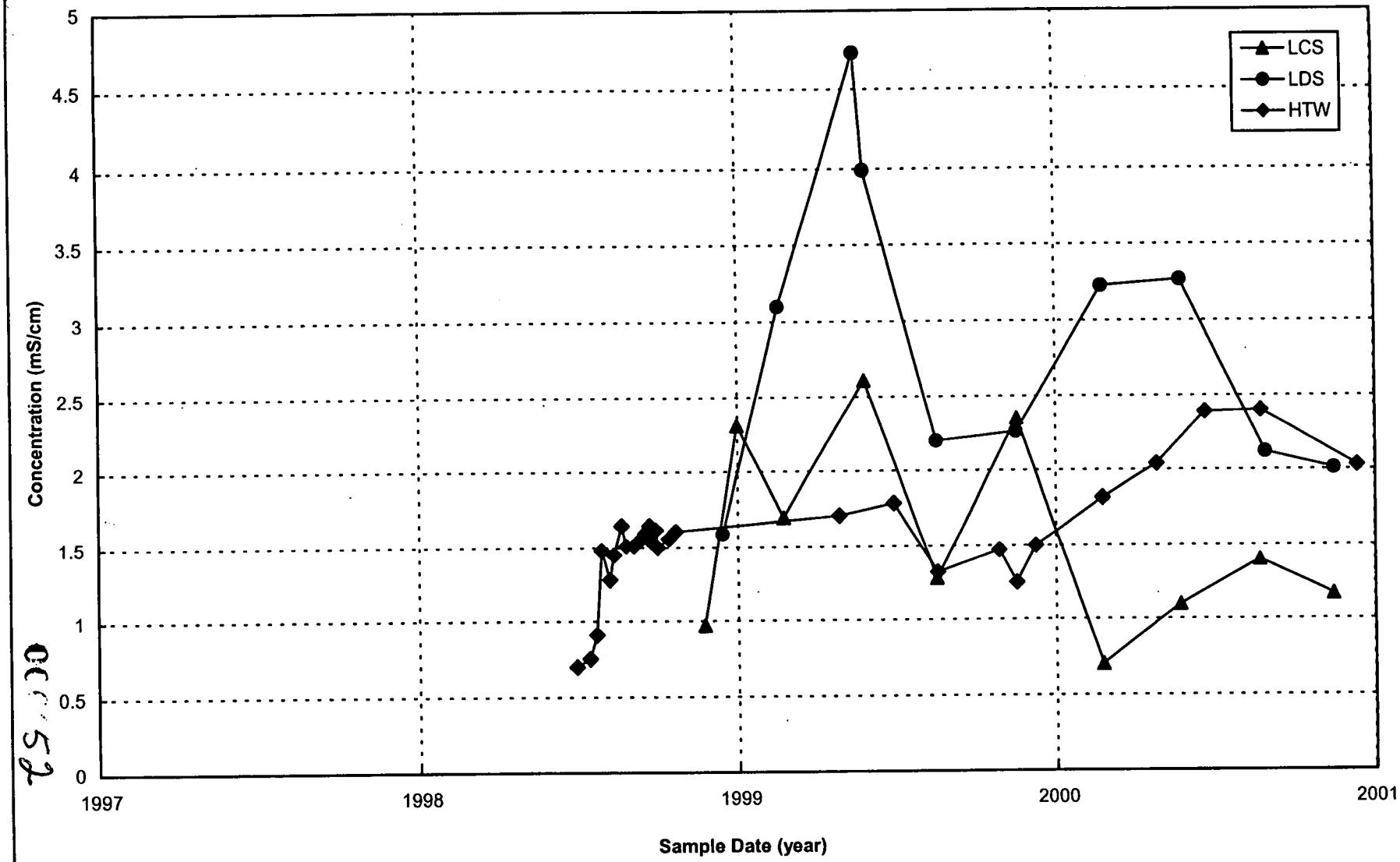

FIGURE 4-12. PRE-SAMPLE SPECIFIC CONDUCTIVITY VS. TIME PLOT FOR CELL 2 (LCS, LDS, AND HTW)

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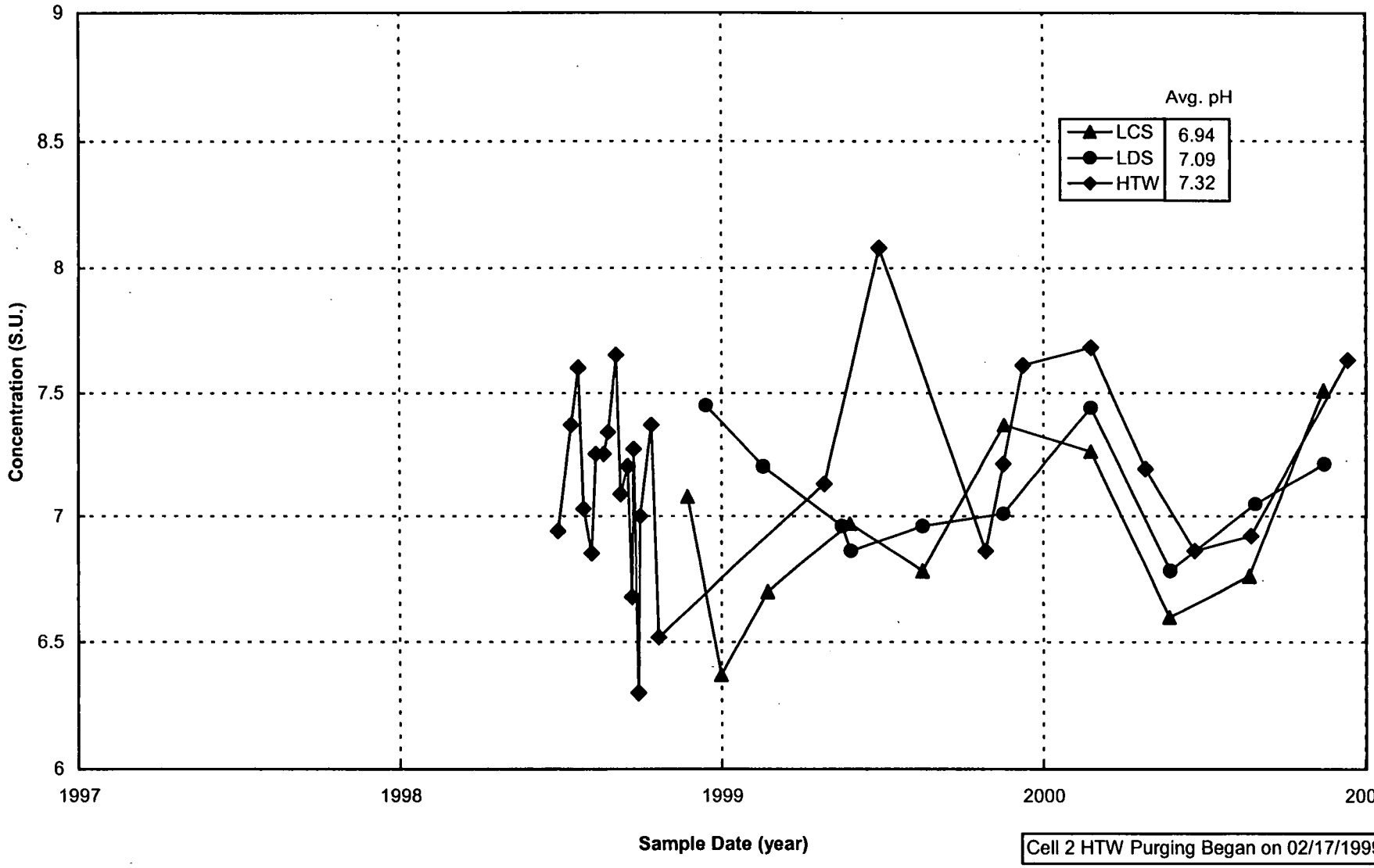

Cell 2 HTW Purging Began on 02/17/1999.

FIGURE 4-13. PRE-SAMPLE pH VS. TIME PLOT FOR CELL 2 (LCS, LDS, & HTW)

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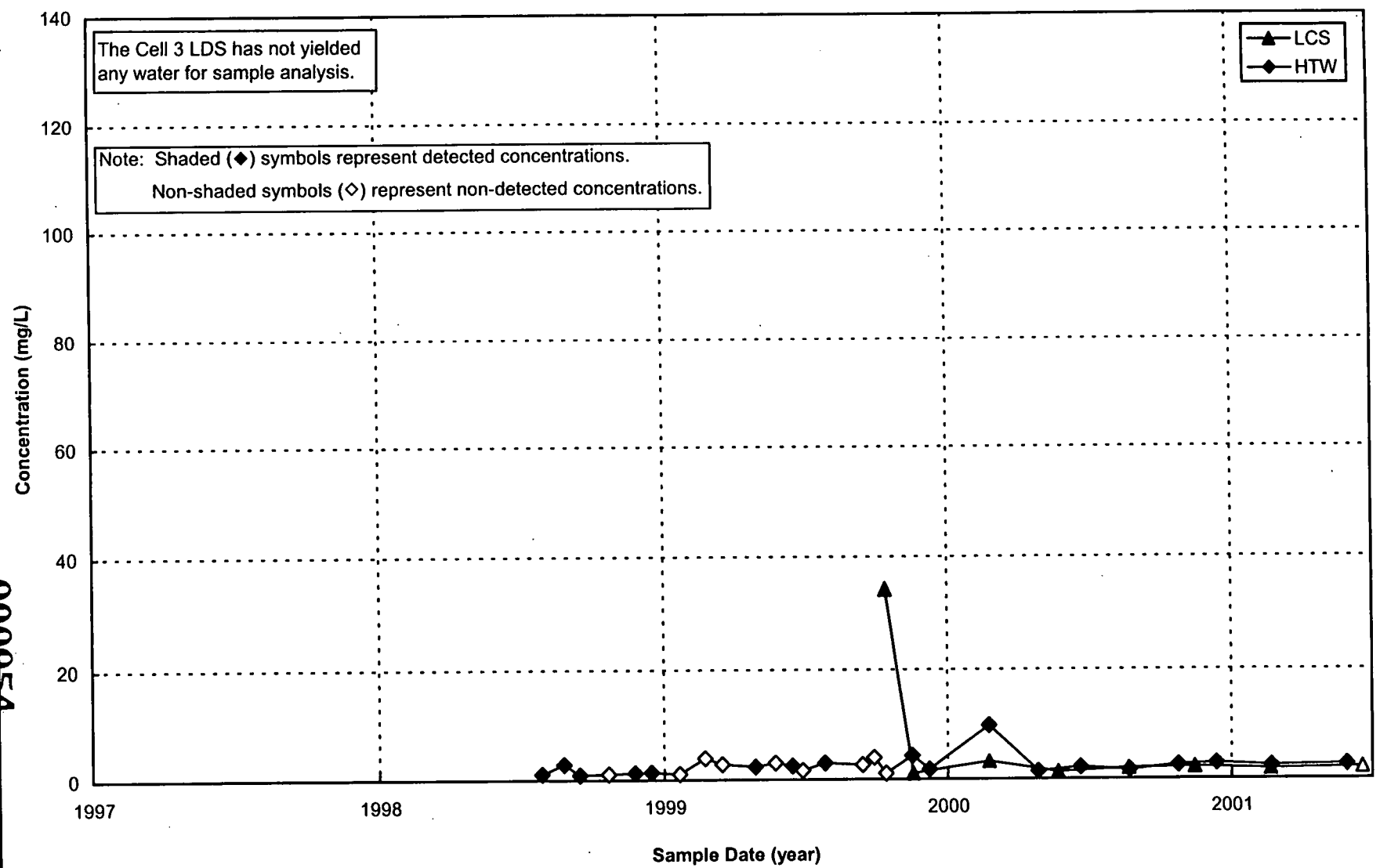

FIGURE 4-14. TOTAL ORGANIC CARBON CONCENTRATIONS VS. TIME PLOT FOR CELL 3 (LCS & HTW)

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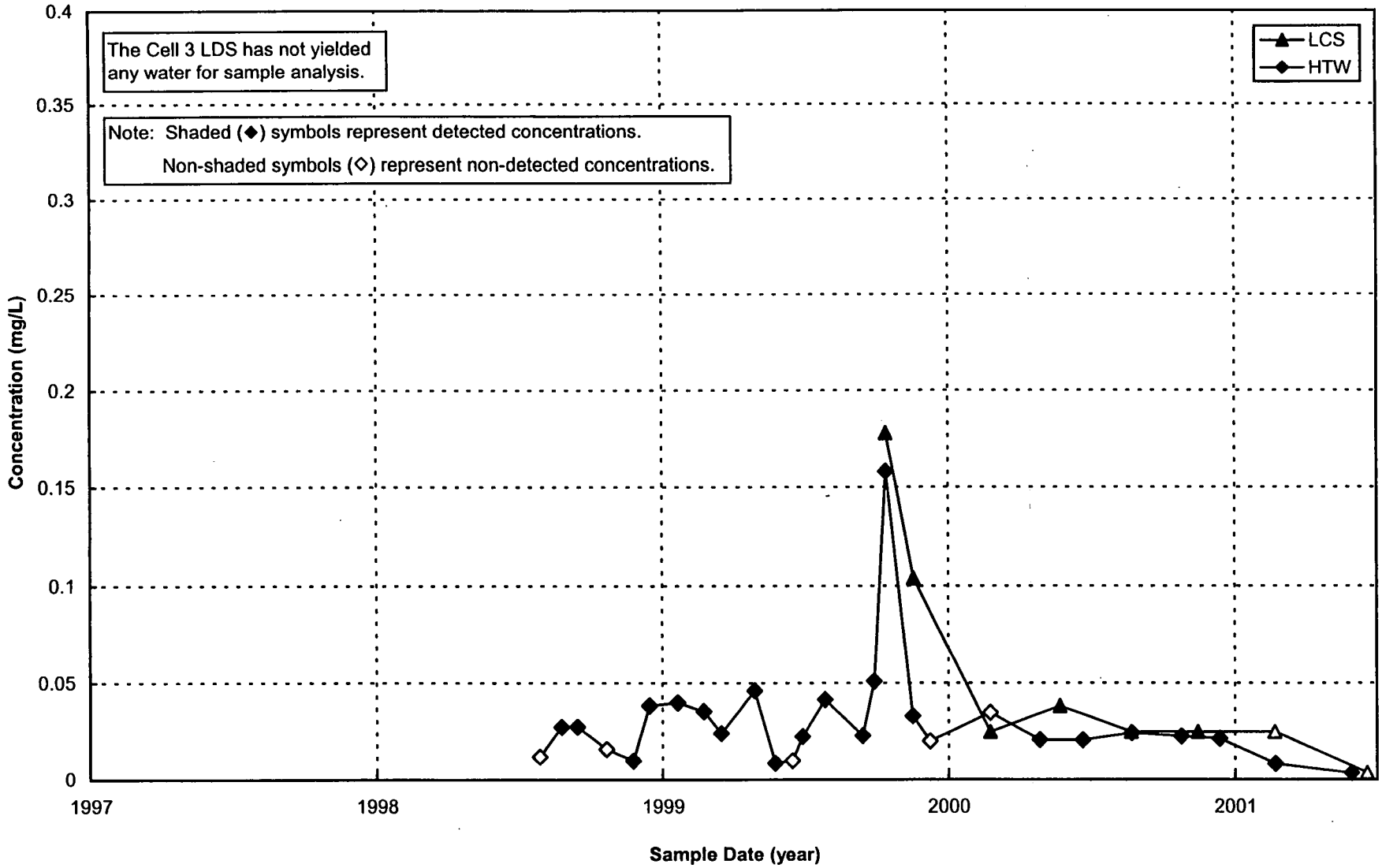

FIGURE 4-15. TOTAL ORGANIC HALOGENS CONCENTRATIONS VS. TIME PLOT FOR CELL 3 (LCS & HTW)

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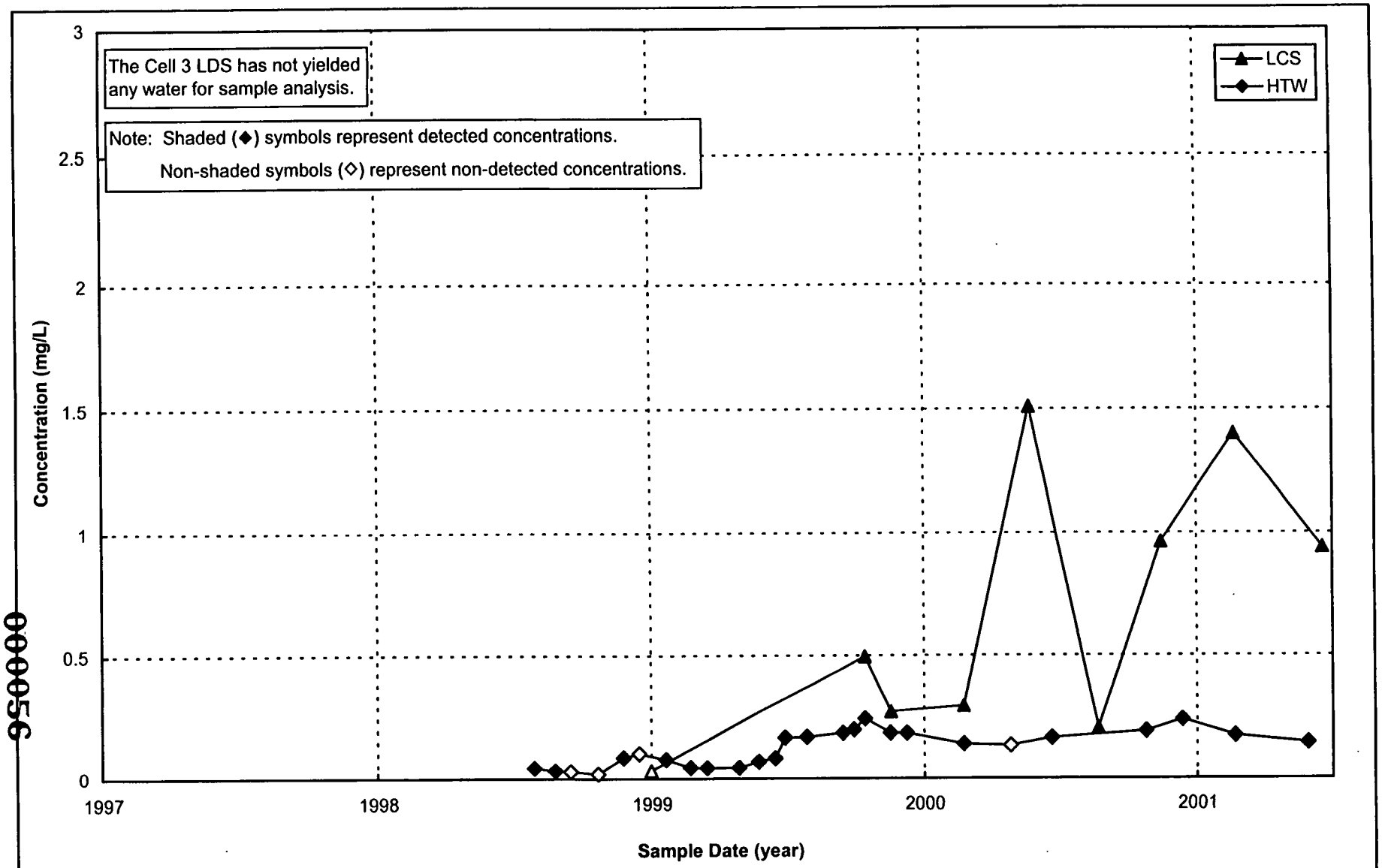

FIGURE 4-16. BORON CONCENTRATIONS VS. TIME PLOT FOR CELL 3 (LCS & HTW)

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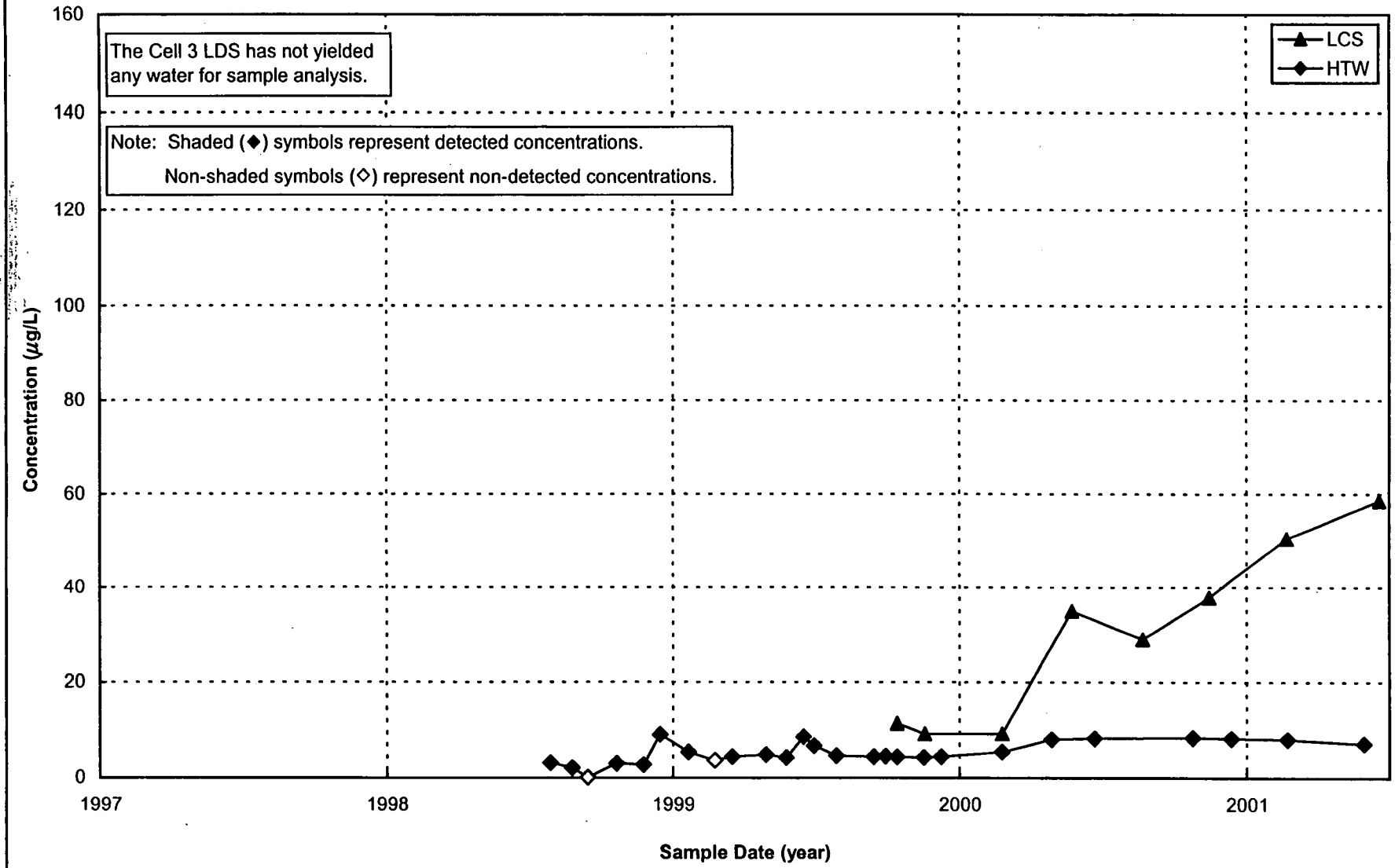

FIGURE 4-17. TOTAL URANIUM CONCENTRATIONS VS. TIME PLOT FOR CELL 3 (LCS & HTW)

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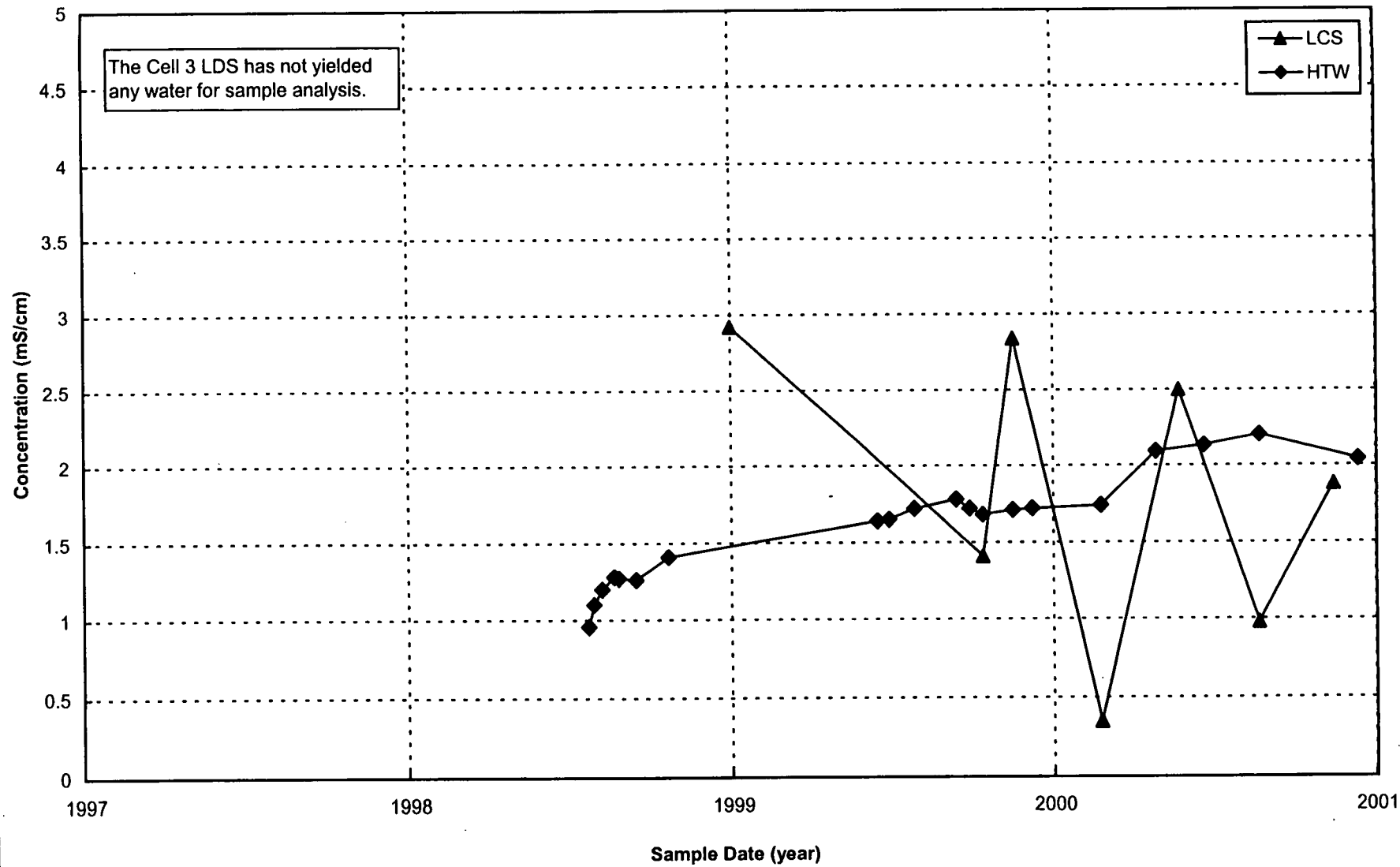

FIGURE 4-18. PRE-SAMPLE SPECIFIC CONDUCTIVITY VS. TIME PLOT FOR CELL 3 (LCS AND HTW)

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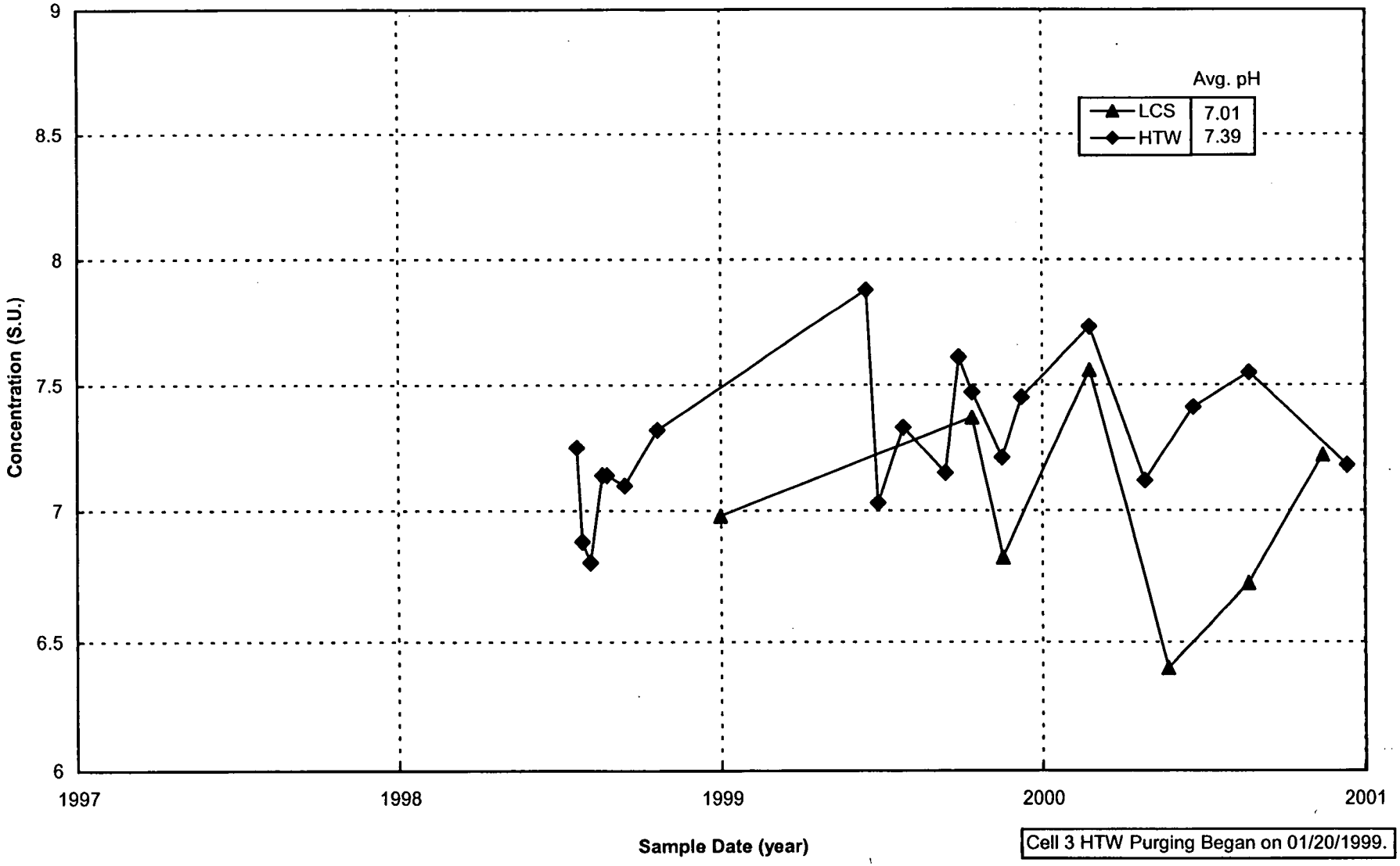

FIGURE 4-19. PRE-SAMPLE pH VS. TIME PLOT FOR CELL 3 (LCS & HTW)

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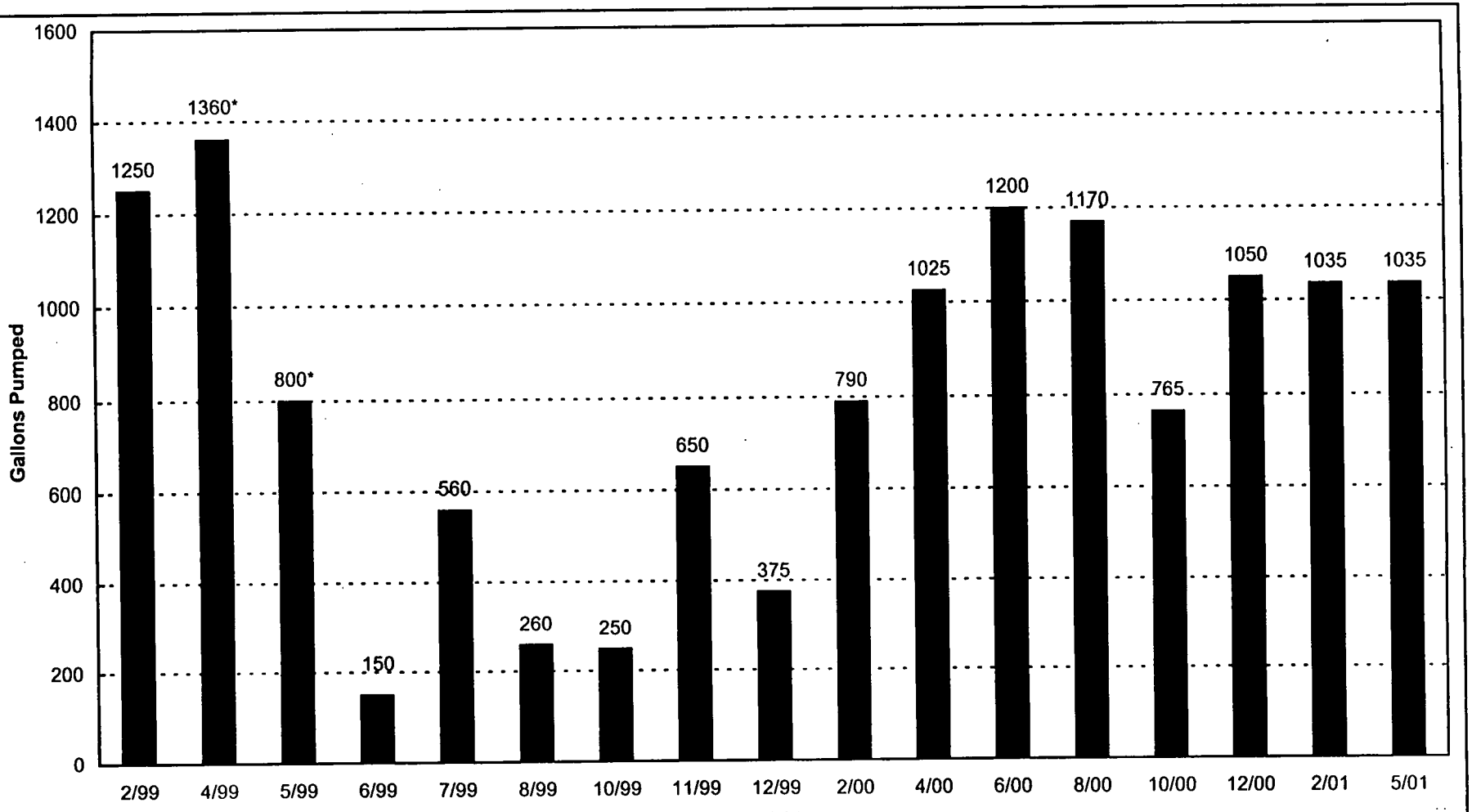

*More than one purge of the well was completed during these months to help evaluate well yield.

12338 Purge Information

Year	Total Volume (gal.)	Purges	Average Purge (gal.)
1999:	5655	n=9	628
2000:	6000	n=6	1000
2001 (thru 5/01):	2070	n=2	1035
Overall:			807

FIGURE 4-20. OSDF HORIZONTAL TILL WELL 12338 (CELL 1) WATER YIELD

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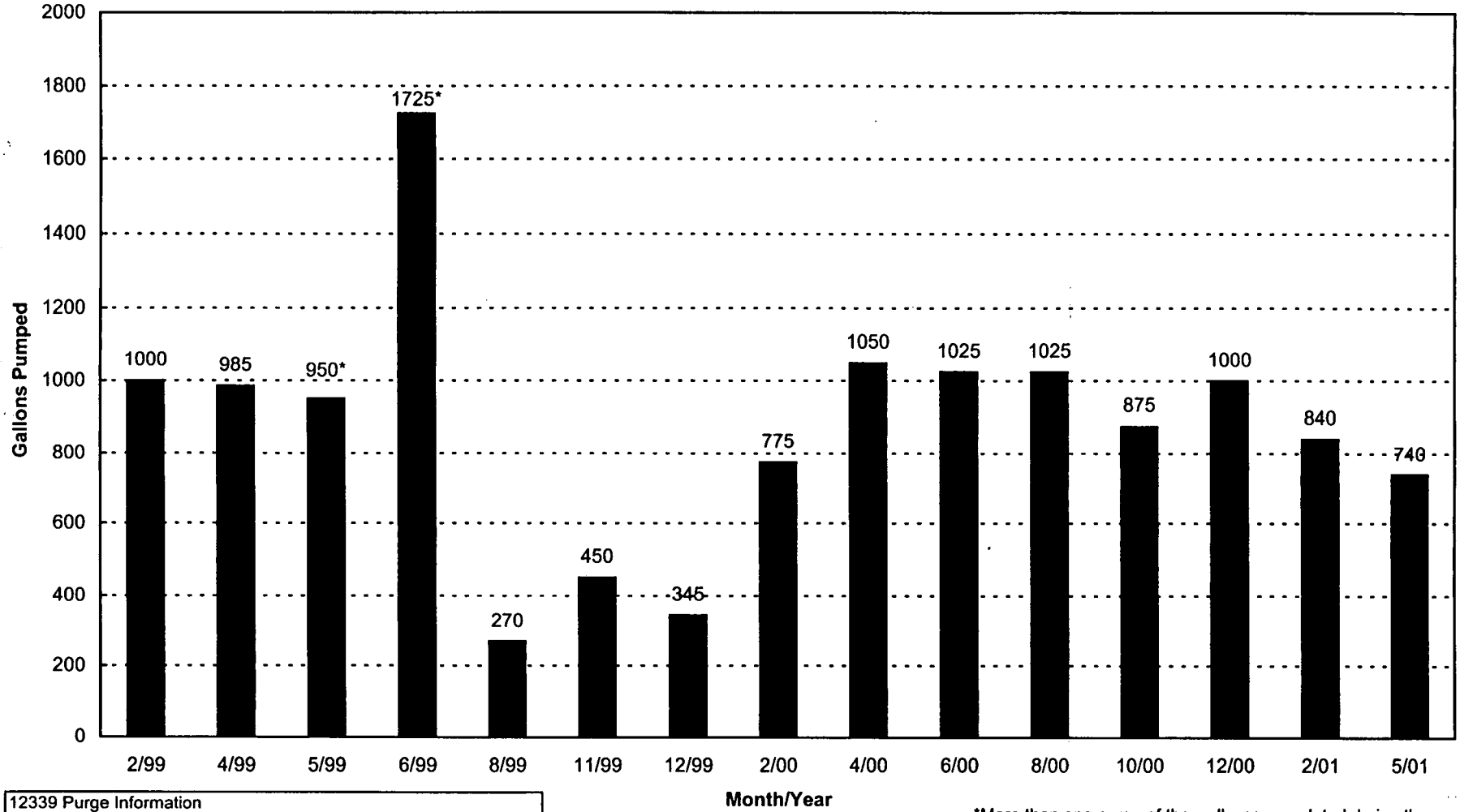

12339 Purge Information

Year	Total Volume (gal.)	Purges	Average Purge (gal.)
1999:	5725	n=7	818
2000:	5750	n=6	958
2001 (thru 5/01):	1580	n=2	790
Overall:			870

*More than one purge of the well was completed during these months to help evaluate well yield.

FIGURE 4-21. OSDF HORIZONTAL TILL WELL 12339 (CELL 2) WATER YIELD

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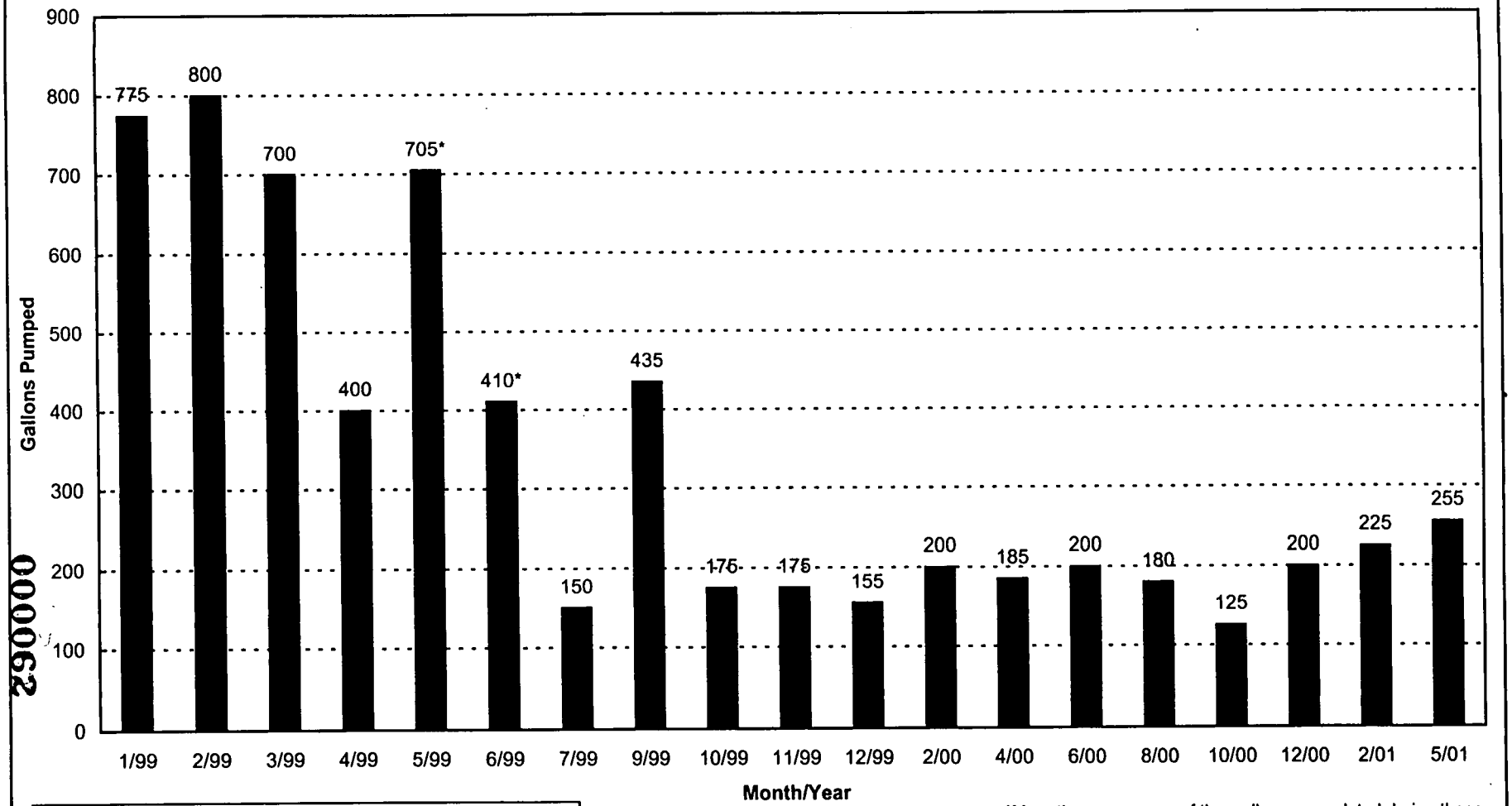

12340 Purge Information

Year	Total Volume (gal.)	Purges	Average Purge (gal.)
1999:	4880	n=7	444
2000:	1090	n=6	182
2001 (thru 5/01):	480	n=2	240
Overall:			315

*More than one purge of the well was completed during these months to help evaluate well yield.

FIGURE 4-22. OSDF HORIZONTAL TILL WELL 12340 (CELL 3) WATER YIELD

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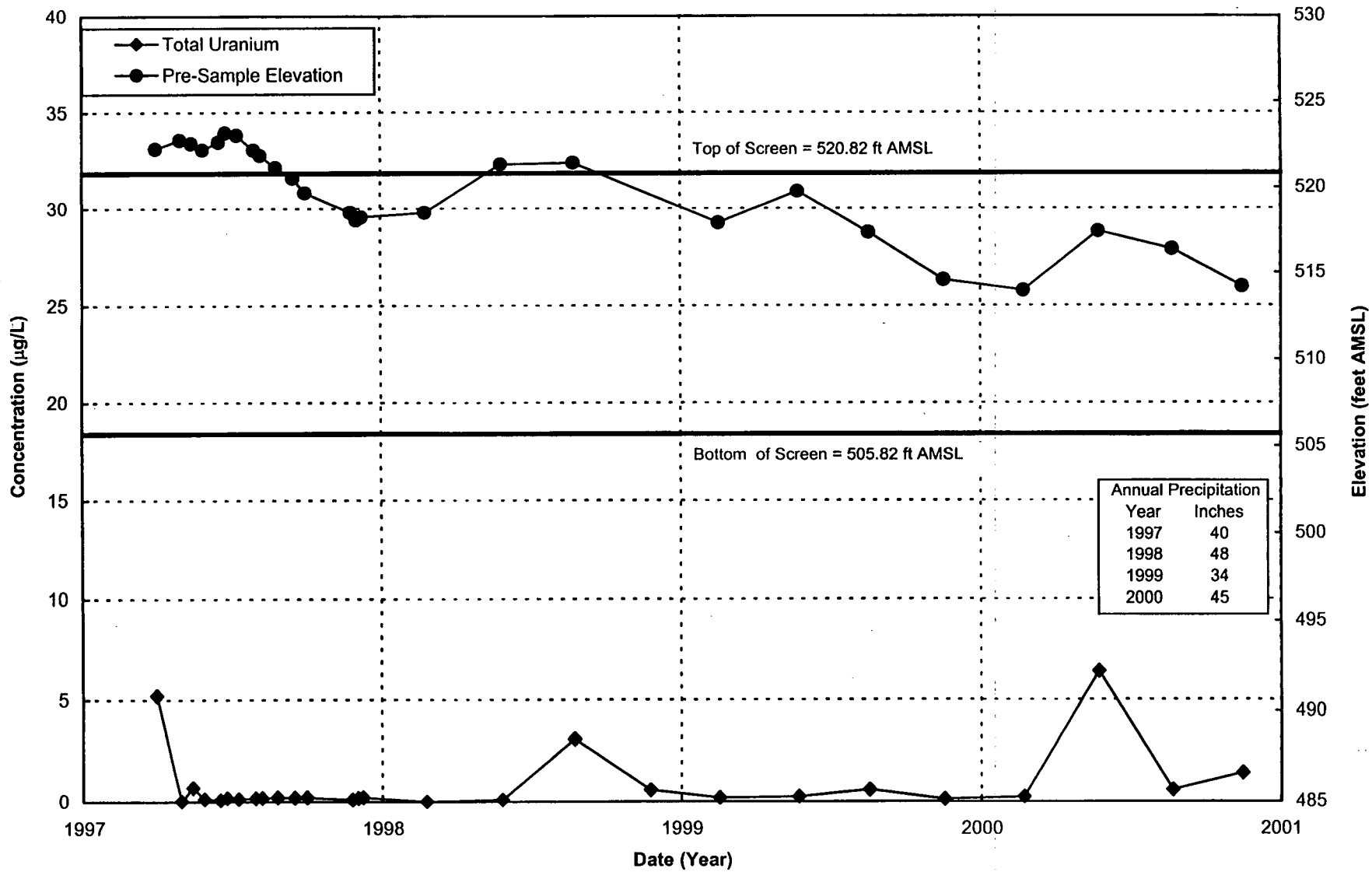

FIGURE 4-23. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 1 UPGRADIENT MONITORING WELL 22201

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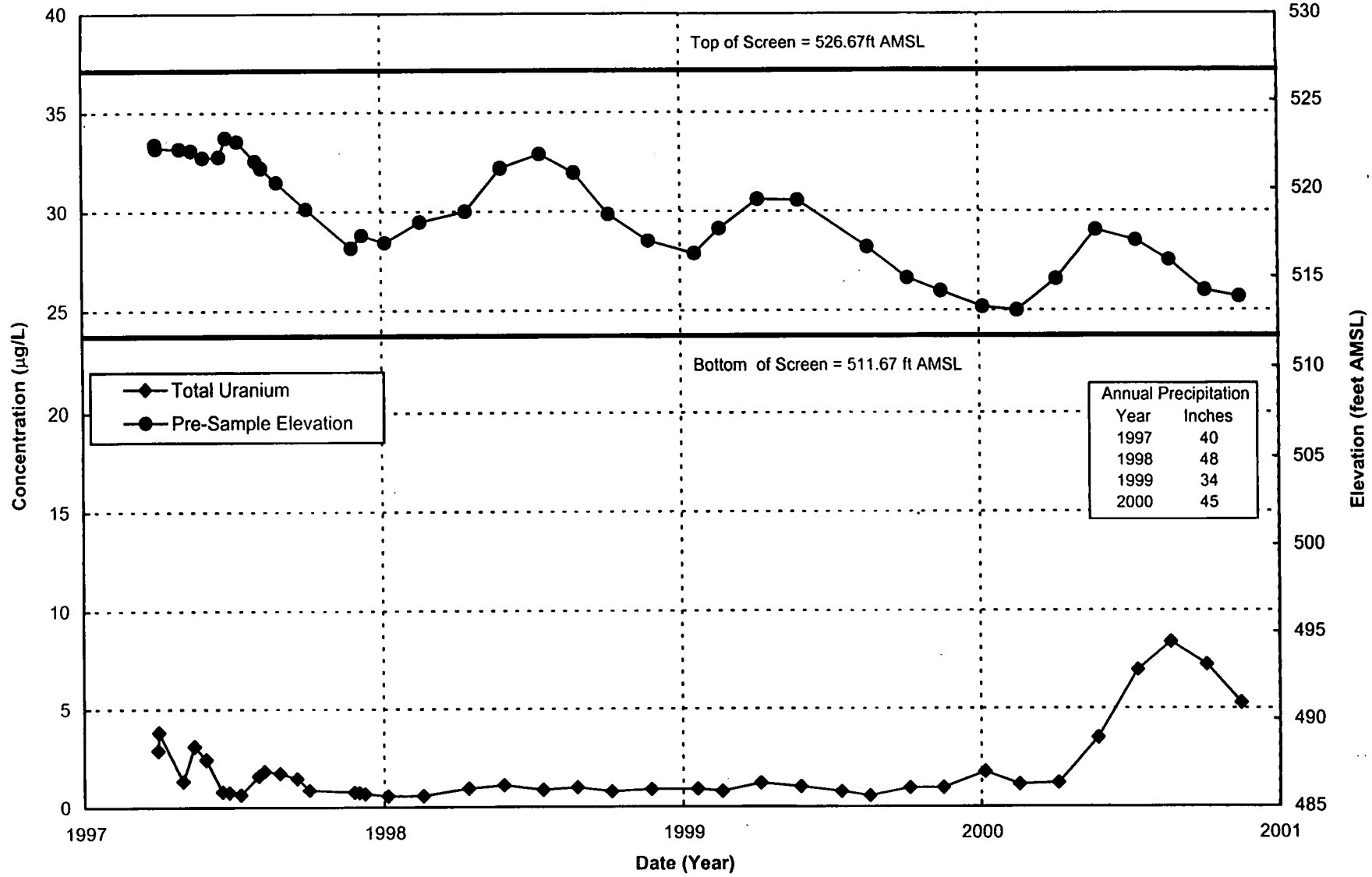

FIGURE 4-24. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 1 DOWNGRADIENT MONITORING WELL 22198

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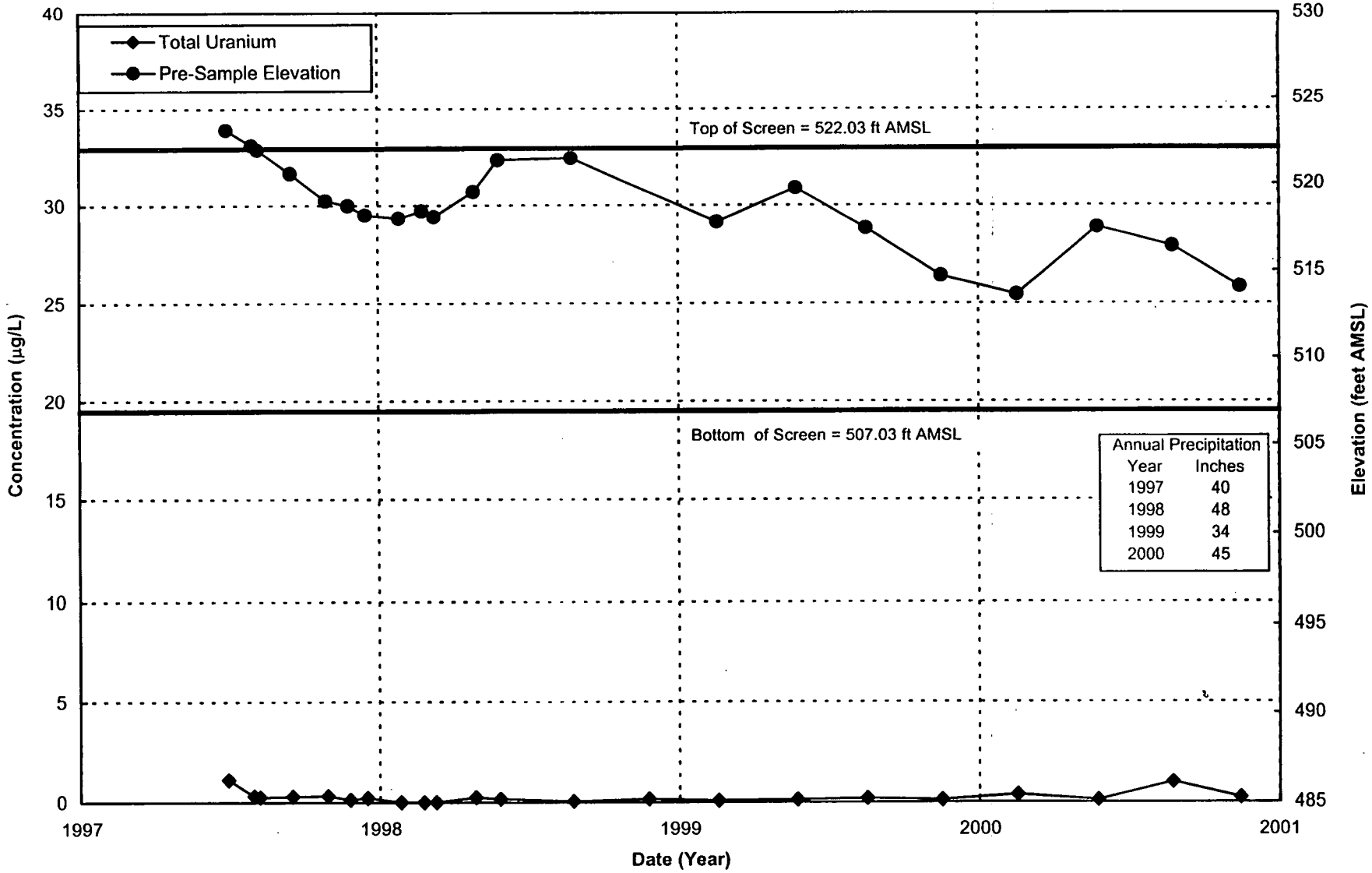

FIGURE 4-25. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 2 UPGRADIENT MONITORING WELL 22200

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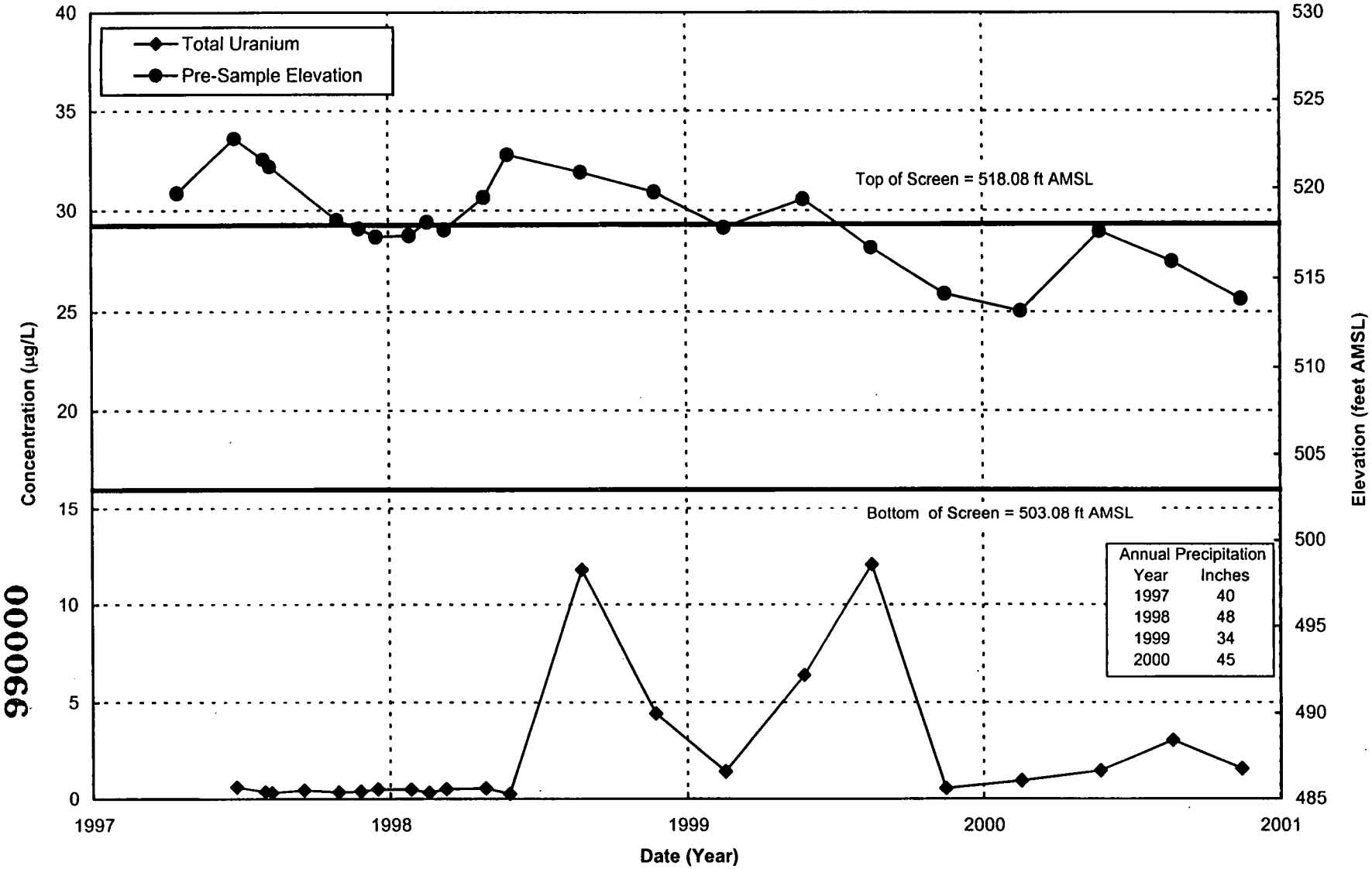

FIGURE 4-26. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 2 DOWNGRADIENT MONITORING WELL 22199

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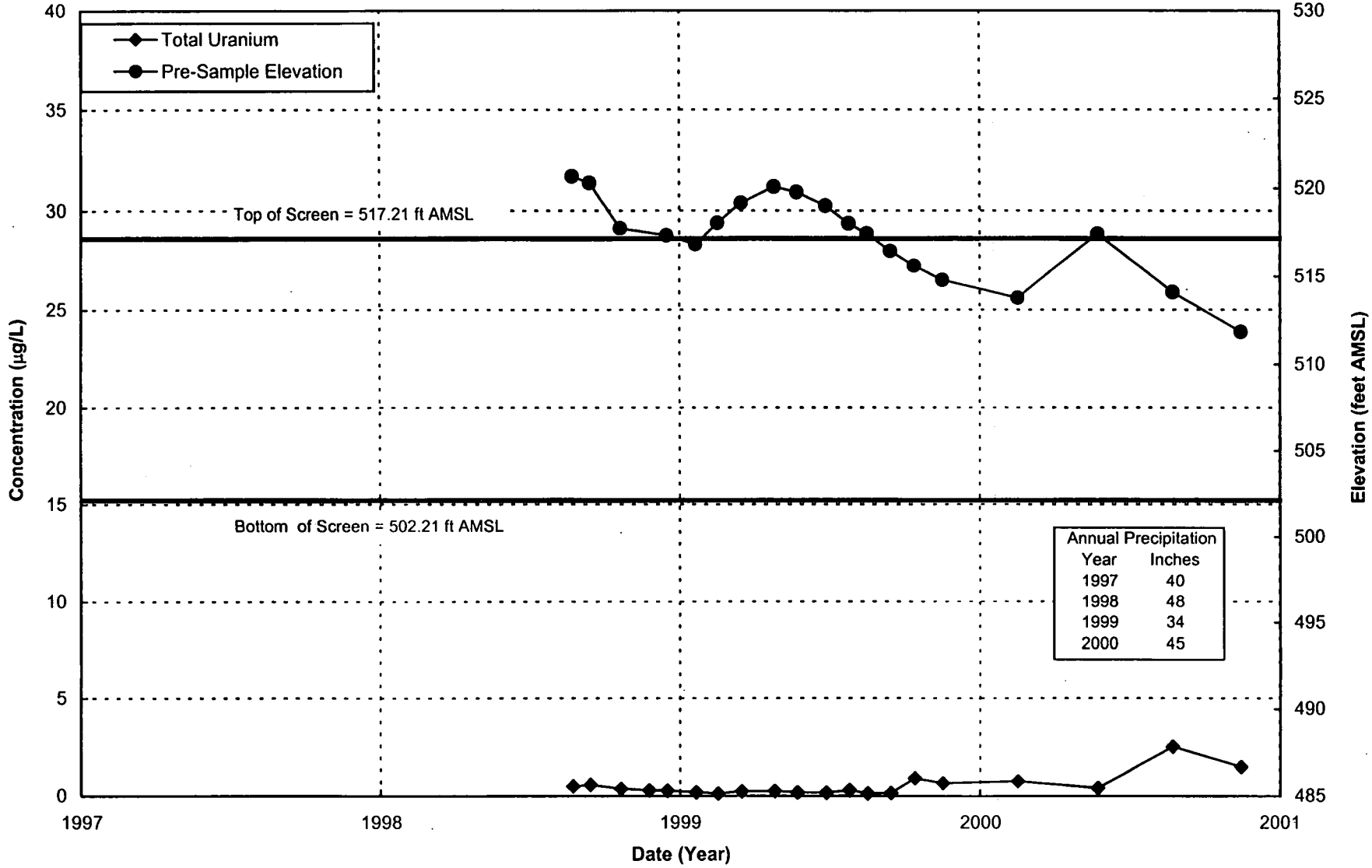

FIGURE 4-27. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 3 UPGRADIENT MONITORING WELL 22203

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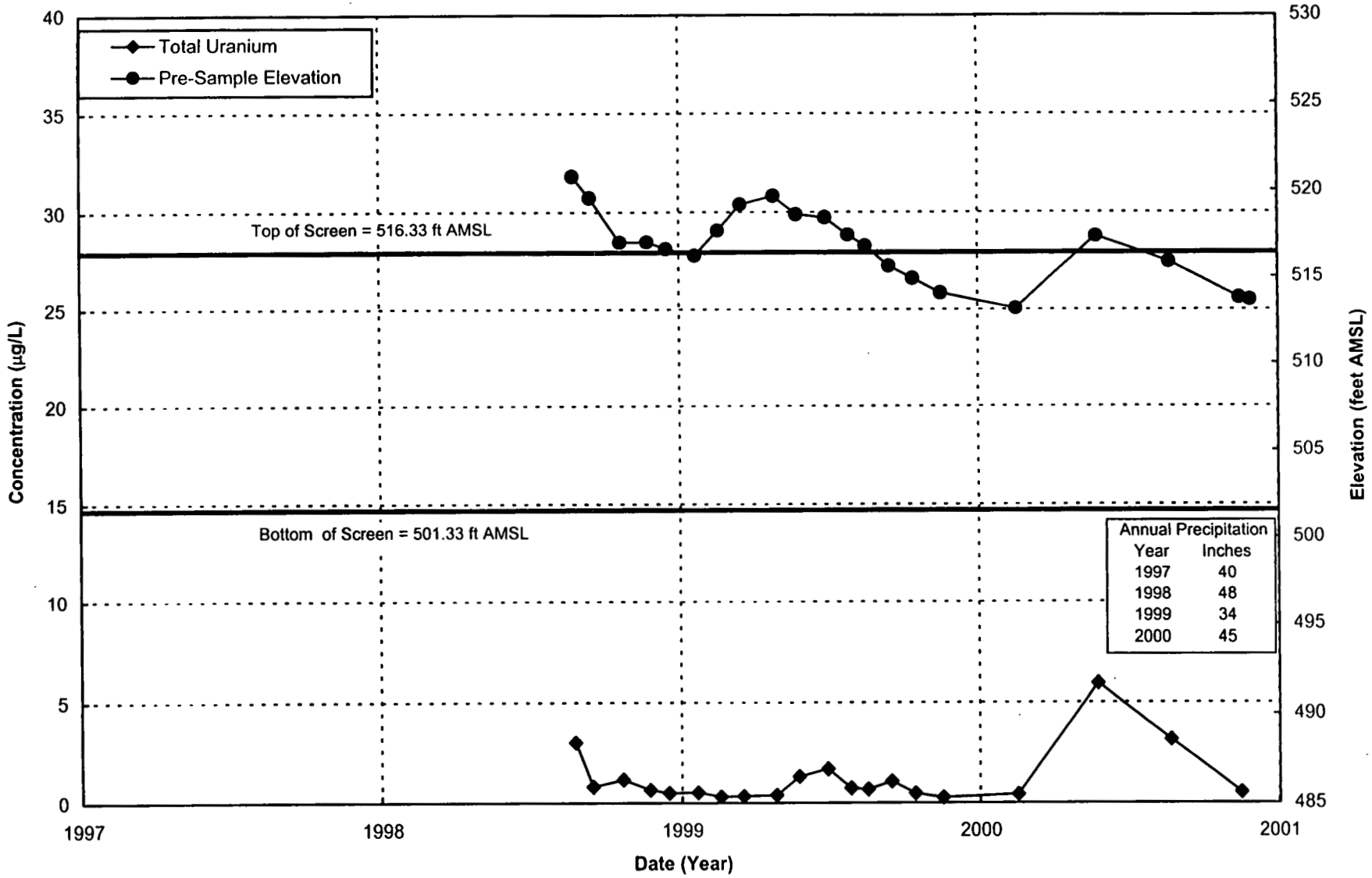

FIGURE 4-28. PRE-SAMPLE GROUNDWATER ELEVATION AND TOTAL URANIUM CONCENTRATION FOR CELL 3 DOWNGRADIENT MONITORING WELL 22204

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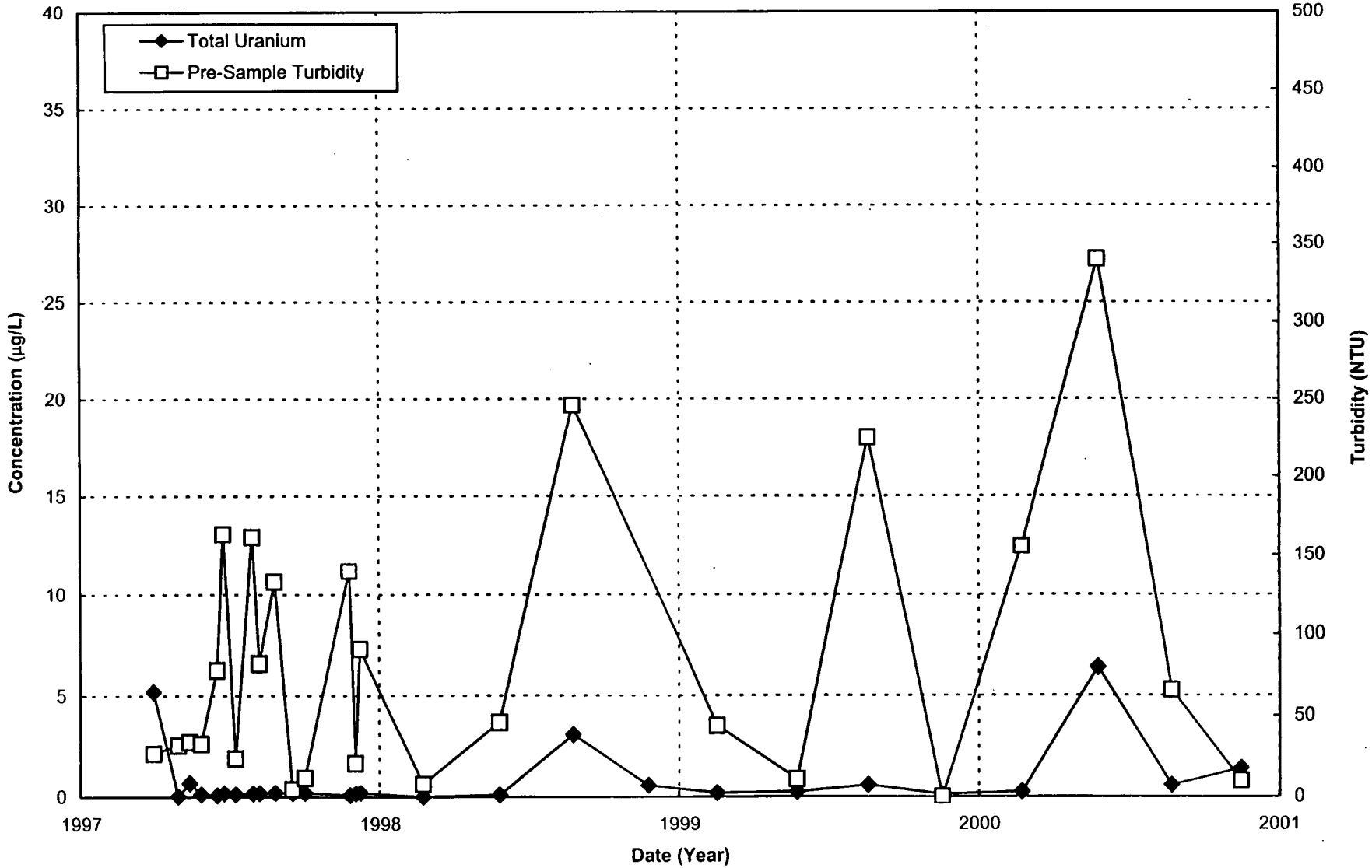

FIGURE 4-29. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 1 UPGRADIENT MONITORING WELL 22201

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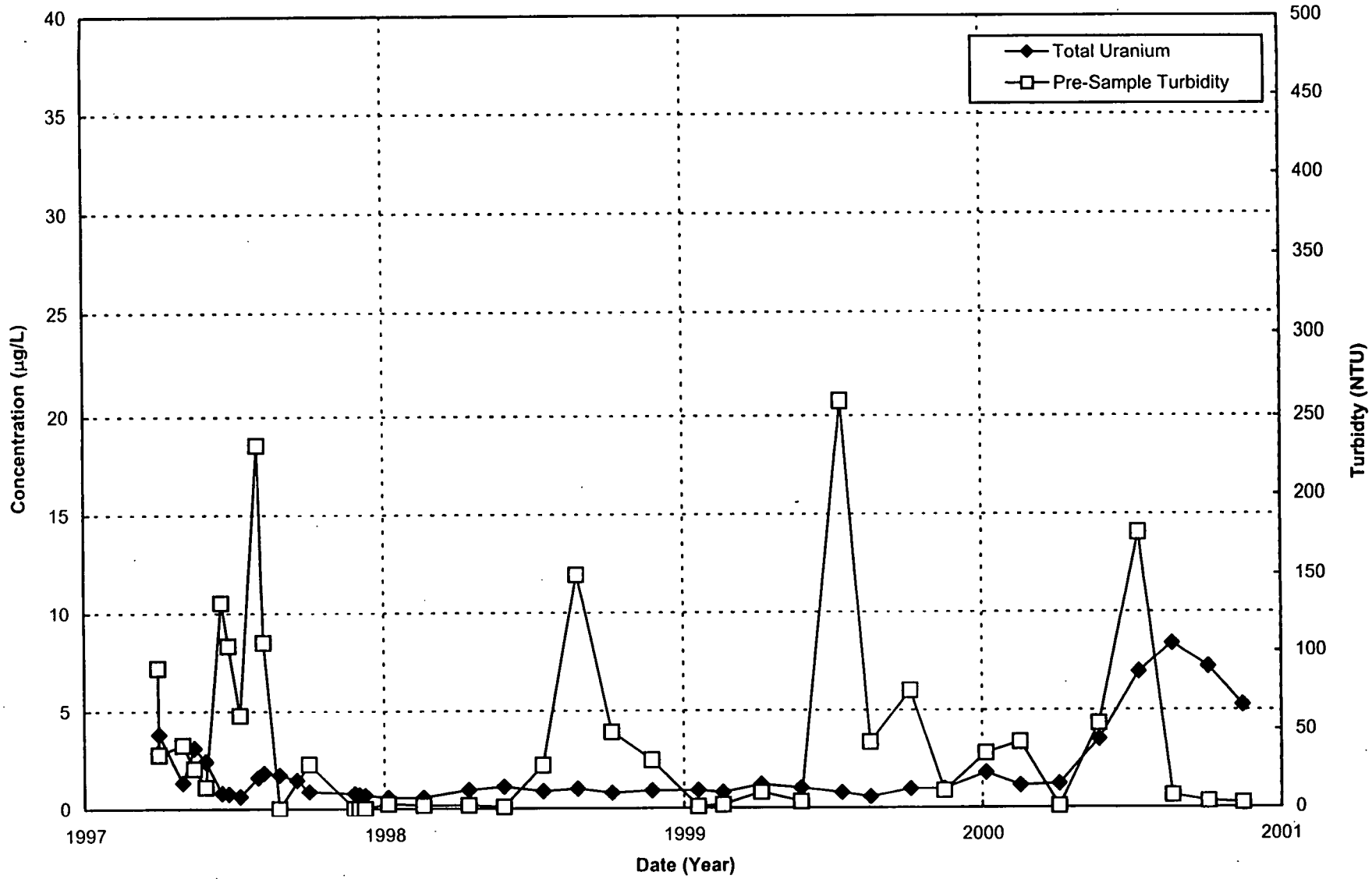

FIGURE 4-30. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 1 DOWNGRADIENT MONITORING WELL 22198

DRAFT FINAL

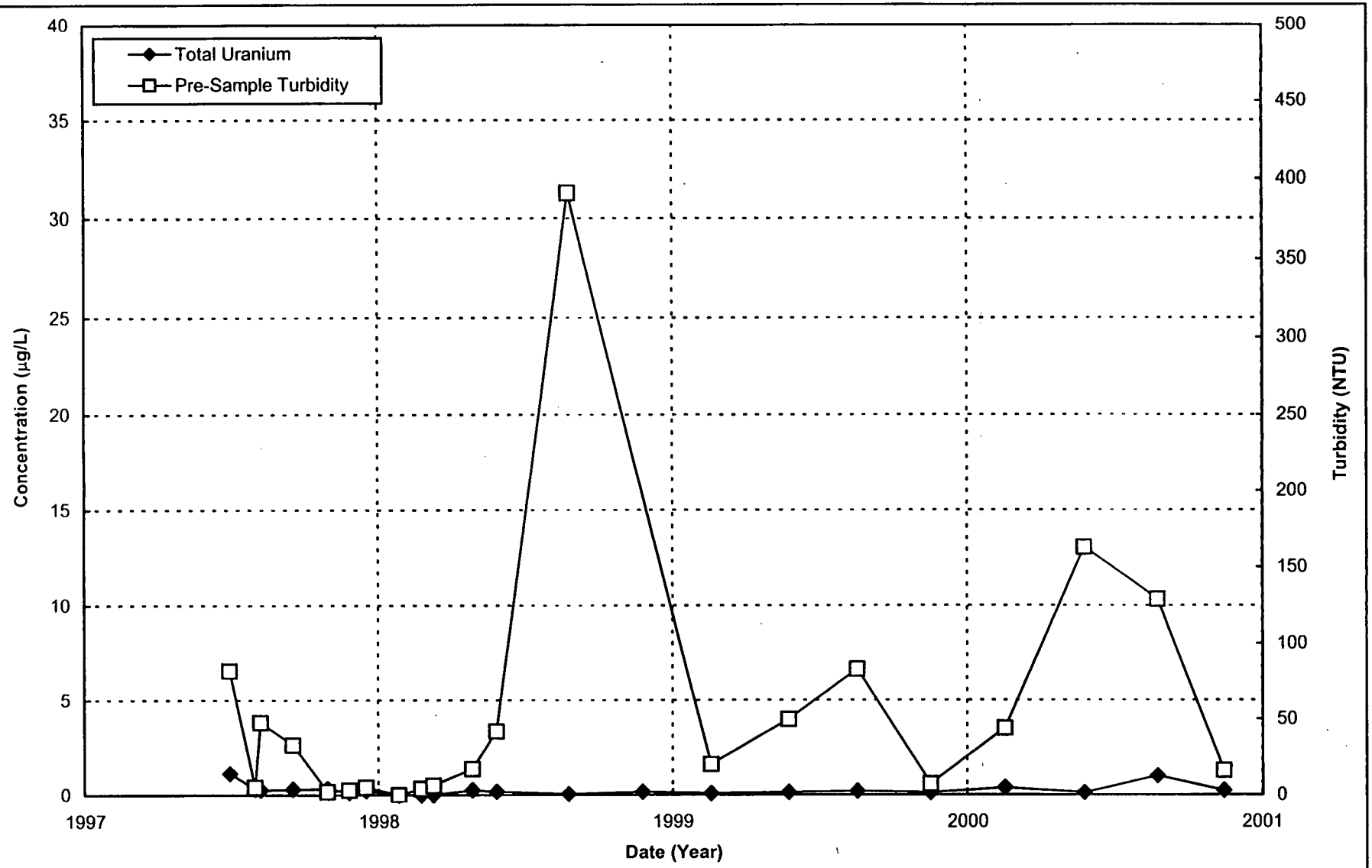

FIGURE 4-31. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 2 UPGRADIENT MONITORING WELL 22200

DRAFT FINAL

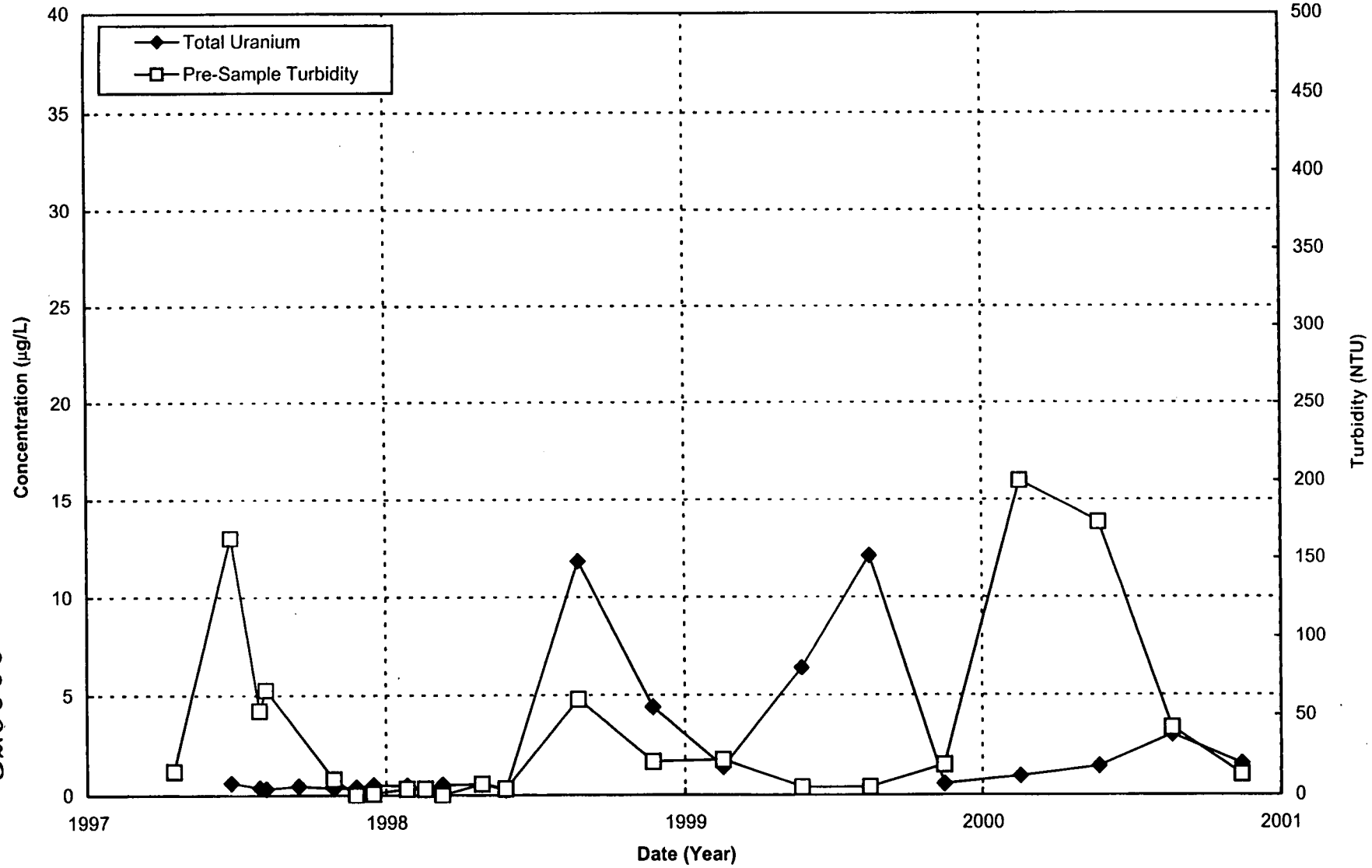

FIGURE 4-32. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 2 DOWNGRADIENT MONITORING WELL 22199

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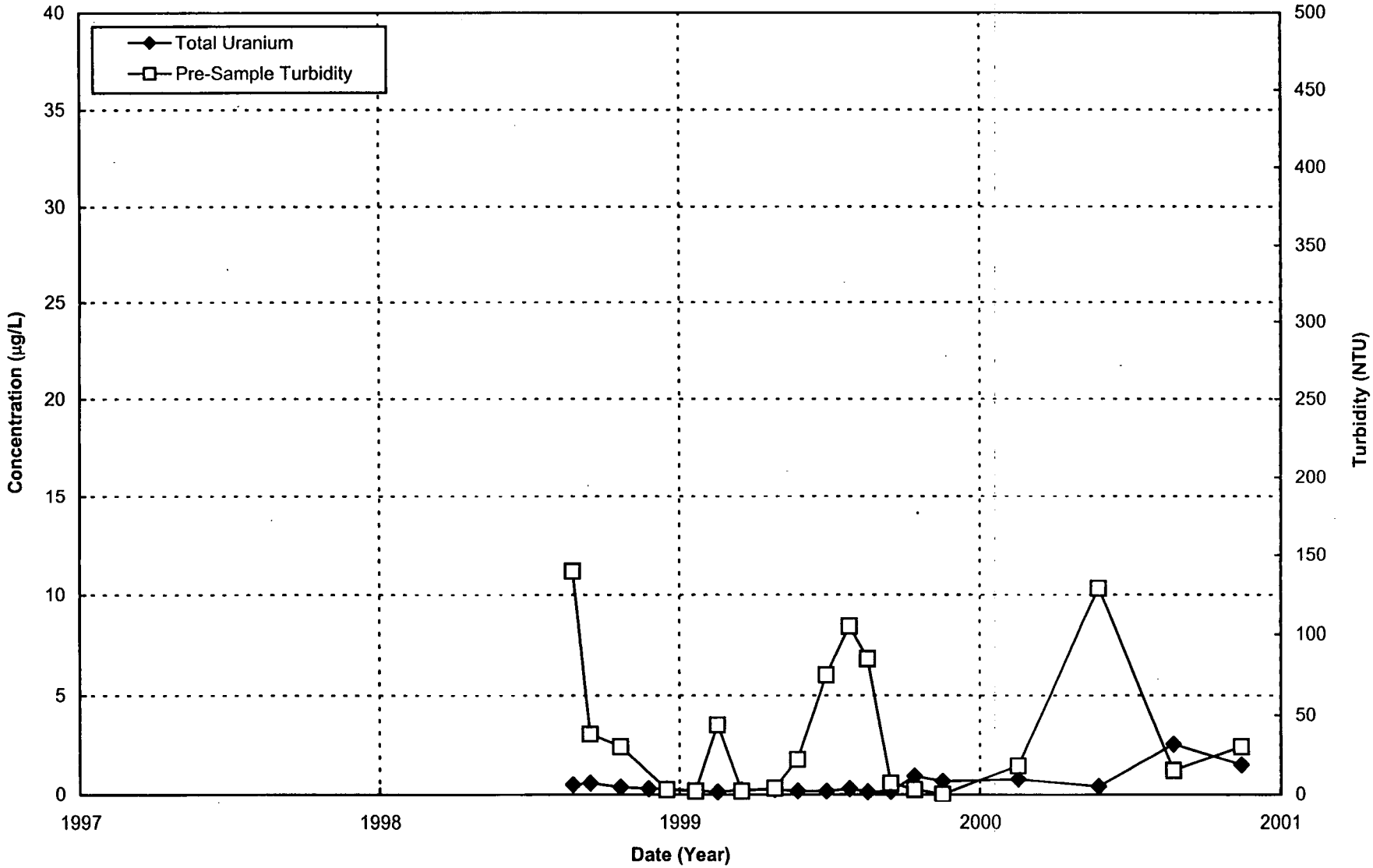

FIGURE 4-33. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 3 UPGRADIENT MONITORING WELL 22203

DRAFT FINAL

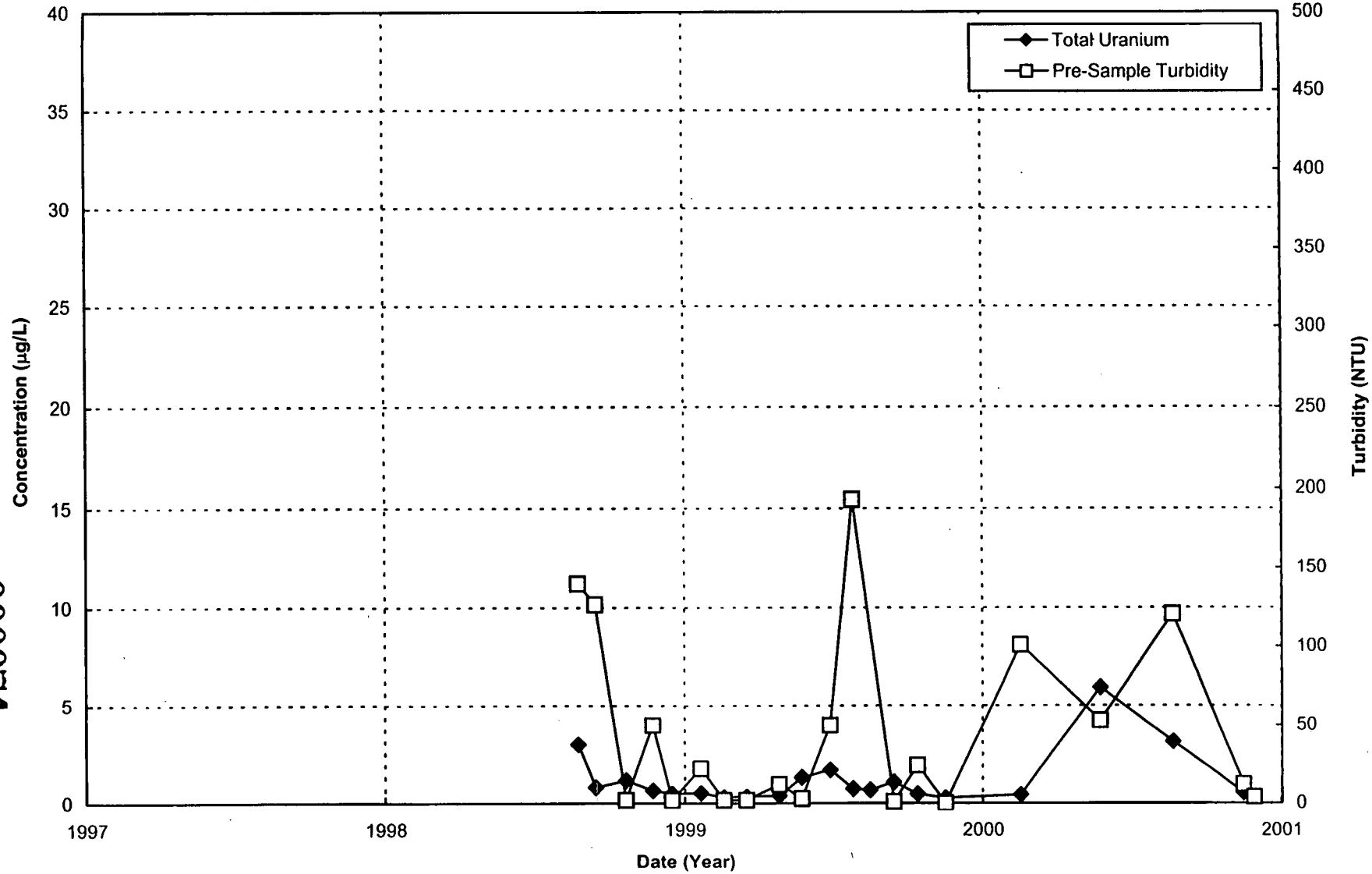

FIGURE 4-34. PRE-SAMPLE TURBIDITY AND TOTAL URANIUM CONCENTRATION FOR CELL 3 DOWNGRADIENT MONITORING WELL 22204

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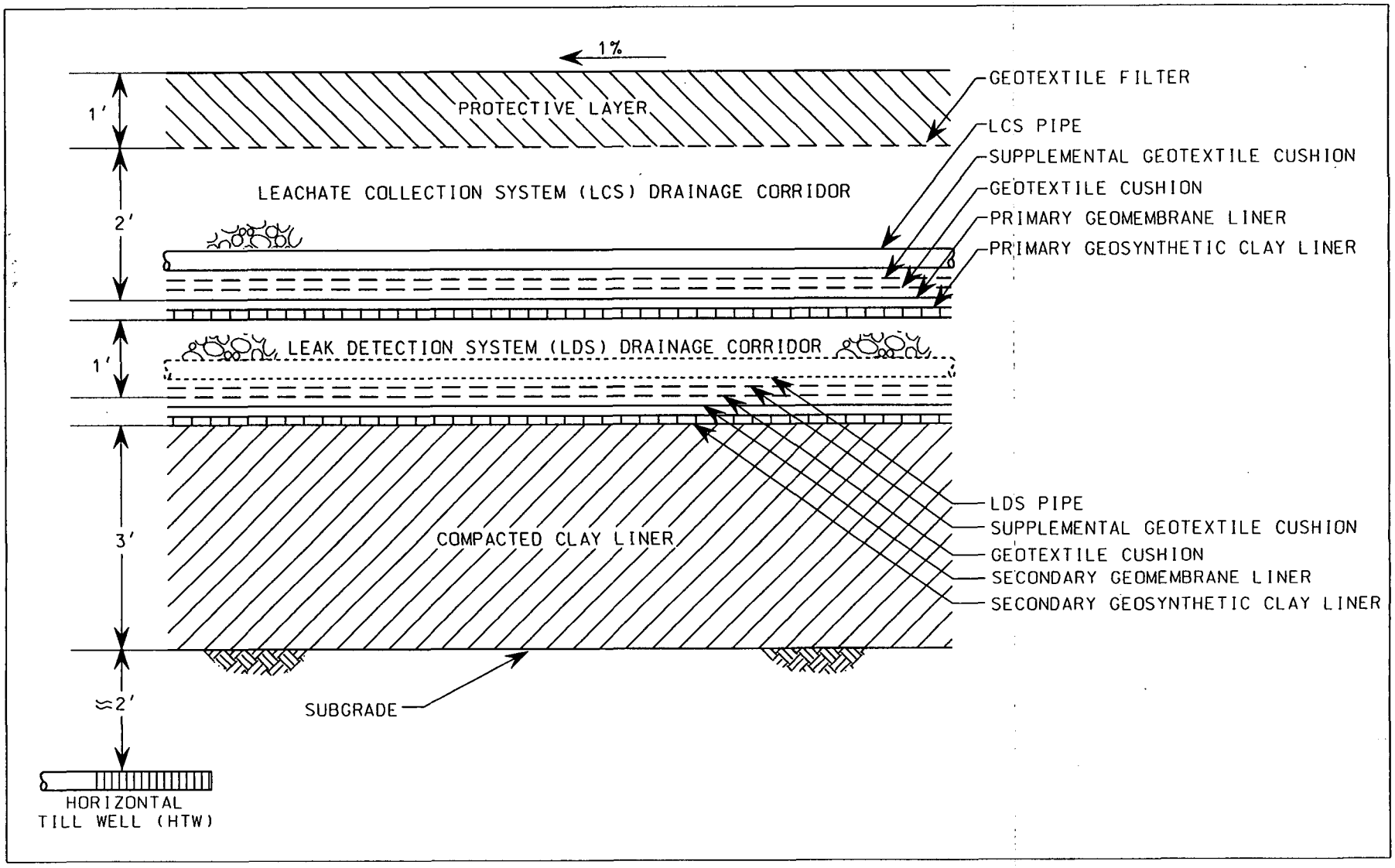

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FIGURE 4-35. OSDF LINER SYSTEM WITH HTW AT THE DRAINAGE CORRIDOR

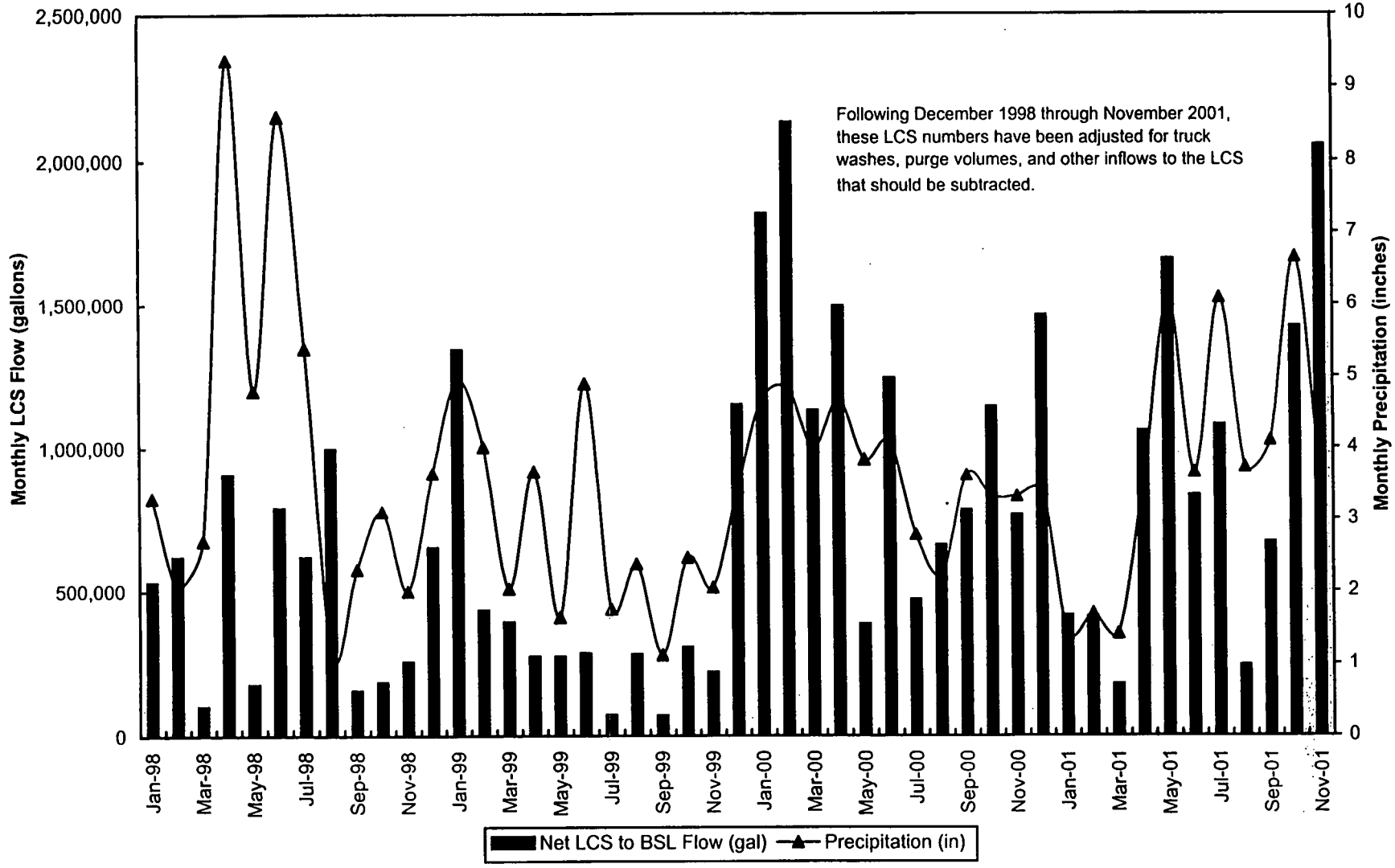

FIGURE 4-36. OSDF LCS TO BSL FLOW AND PRECIPITATION

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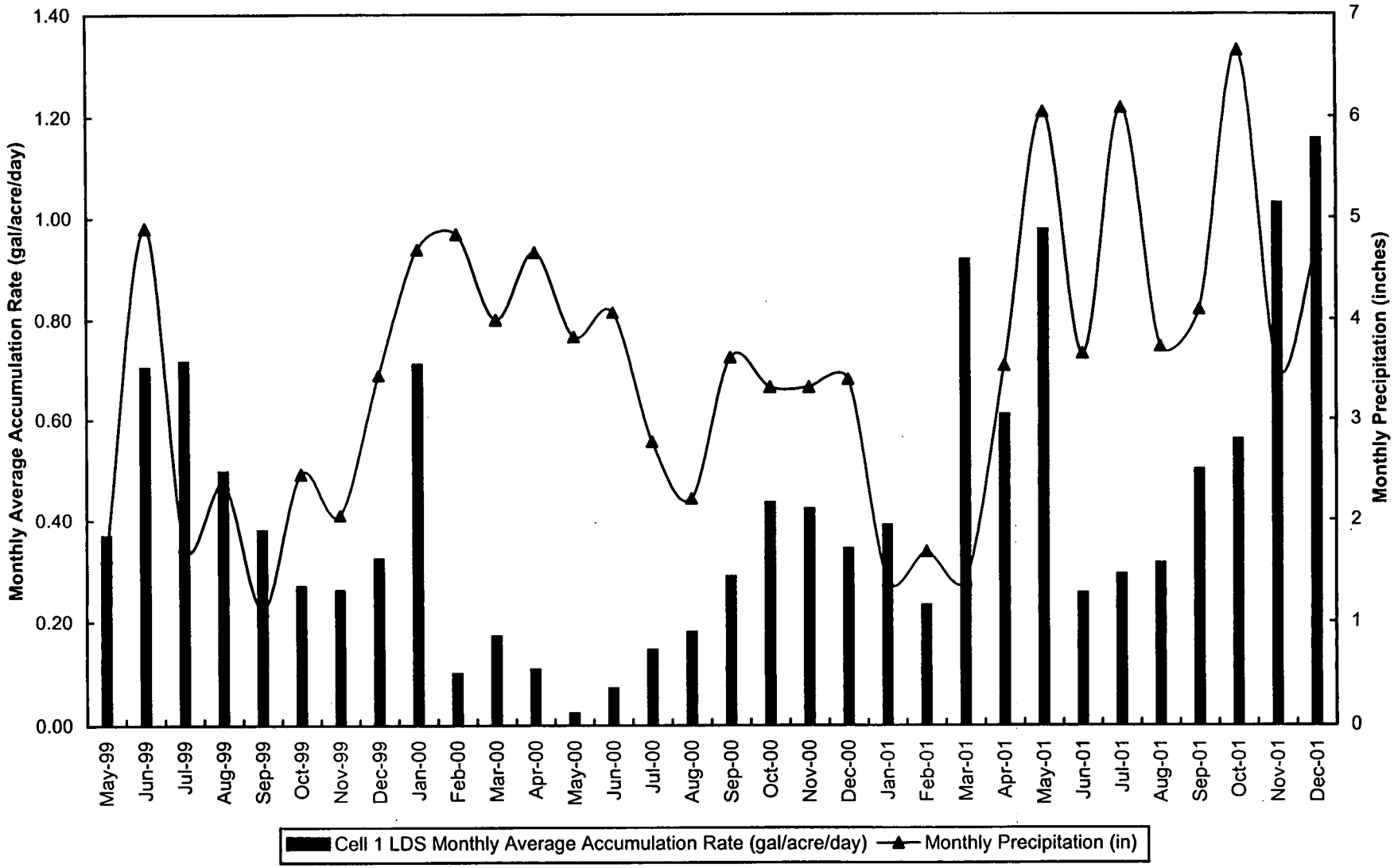

FIGURE 4-37. OSDF CELL 1 LDS MONTHLY AVERAGE ACCUMULATION RATES AND MONTHLY PRECIPITATION

DRAFT FINAL

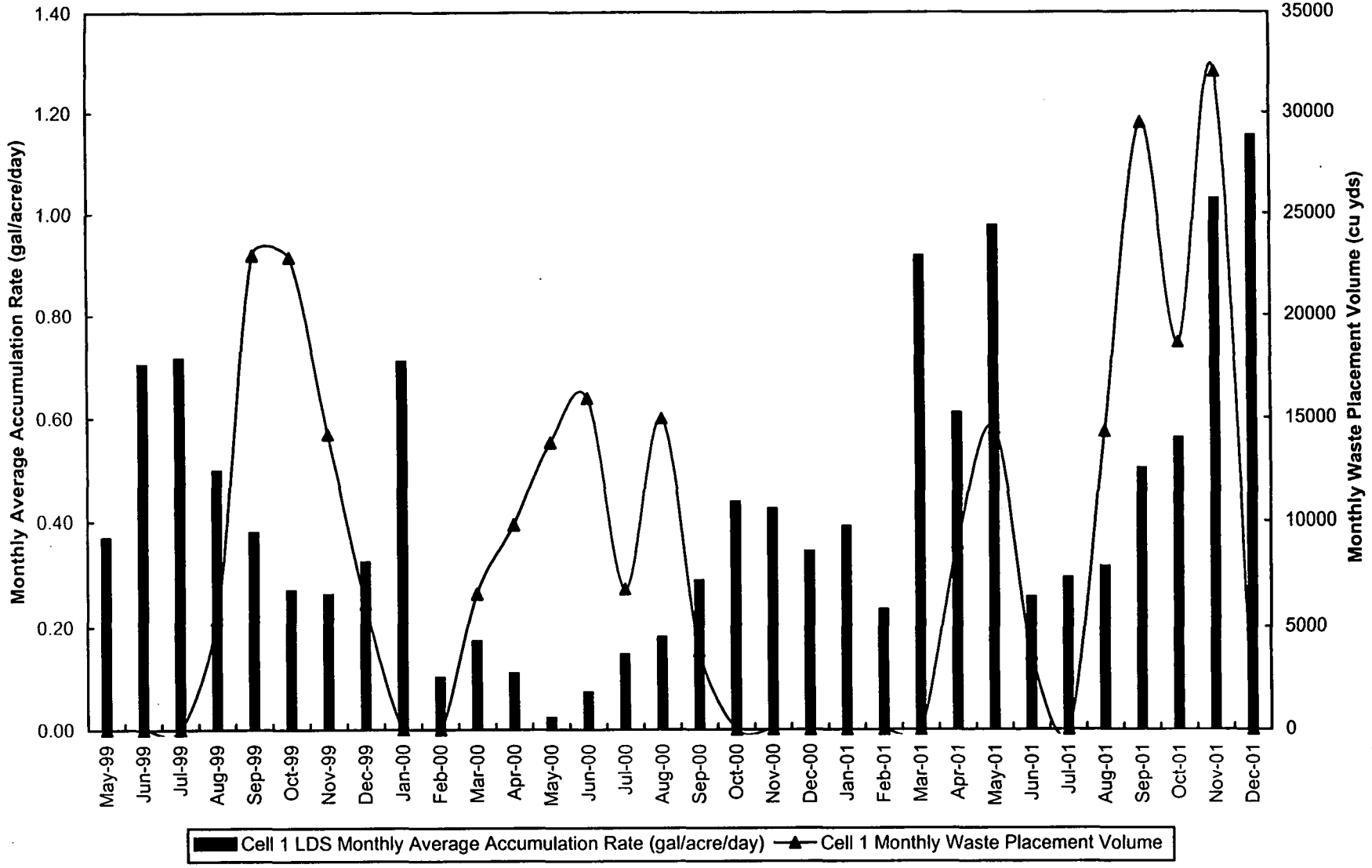

FIGURE 4-38. OSDF CELL 1 LDS MONTHLY AVERAGE ACCUMULATION RATES AND MONTHLY WASTE PLACEMENT VOLUME

DRAFT FINAL

000078

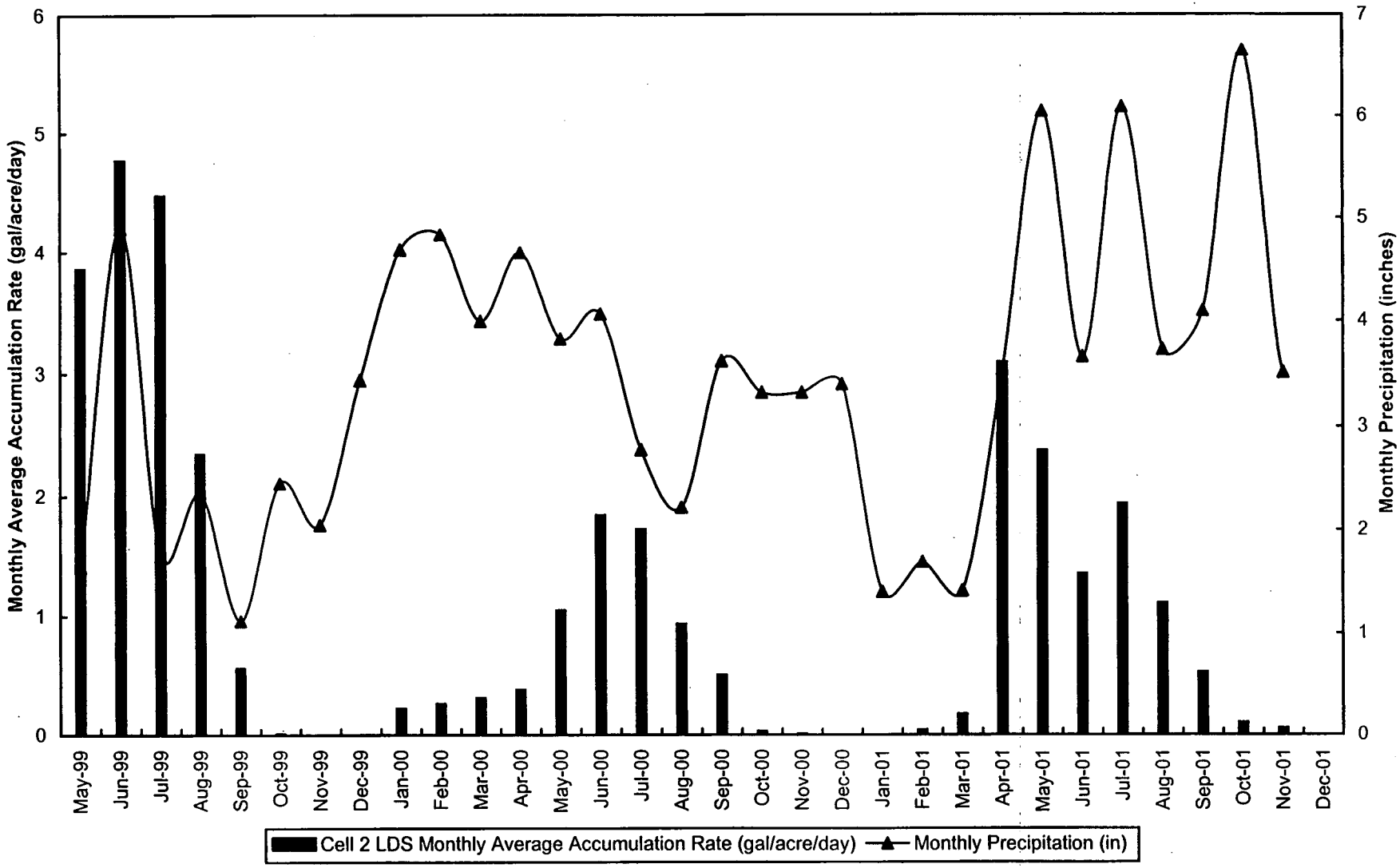

FIGURE 4-39. OSDF CELL 2 LDS MONTHLY AVERAGE ACCUMULATION RATES AND MONTHLY PRECIPITATION

DRAFT FINAL

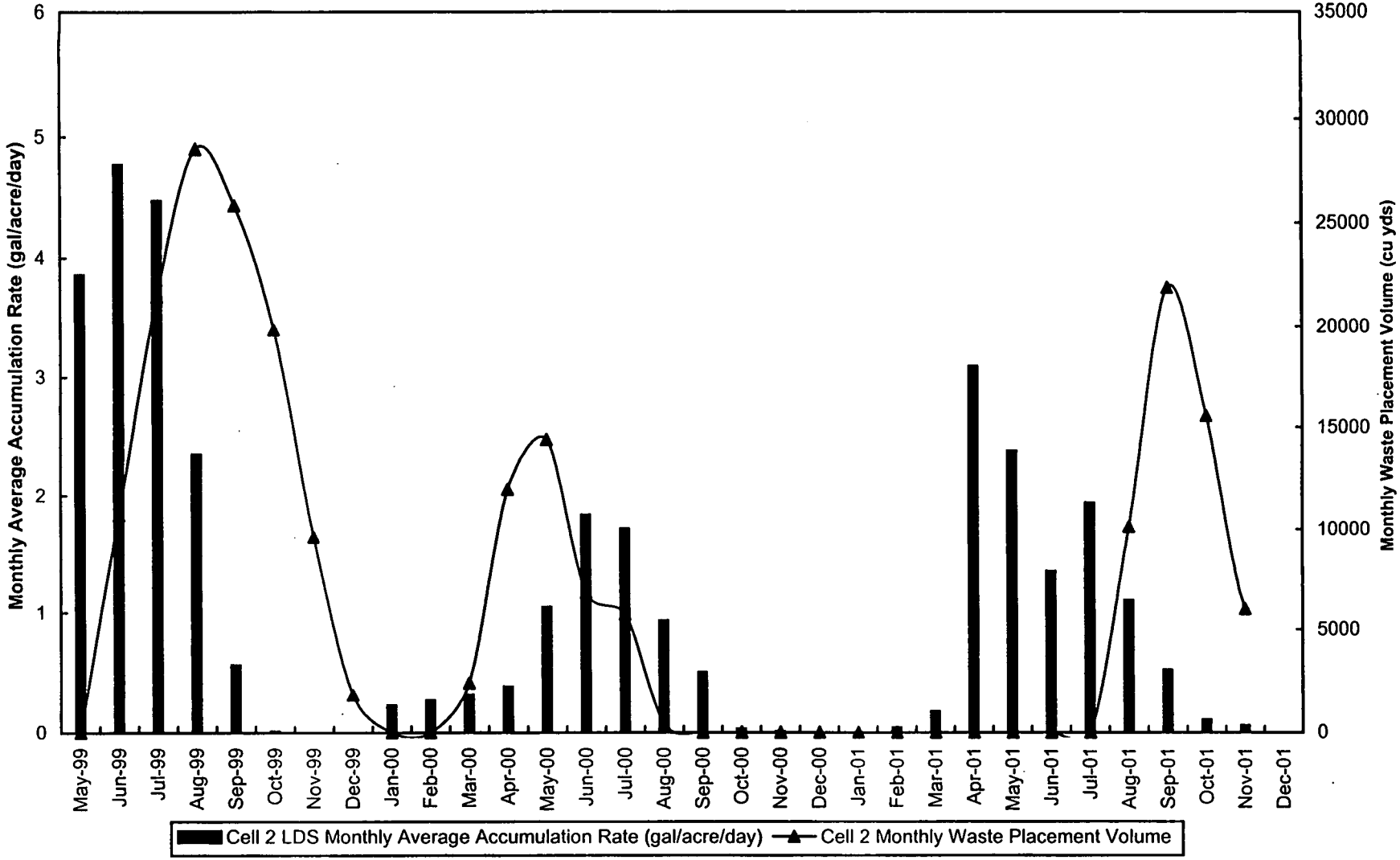

FIGURE 4-40. OSDF CELL 2 LDS MONTHLY AVERAGE ACCUMULATION RATES AND MONTHLY WASTE PLACEMENT VOLUME

DRAFT FINAL

080000

4374

Section 5.0

5.0 CONCLUSIONS AND POST-BASELINE MONITORING, DATA EVALUATION, AND REPORTING

This section provides conclusions derived from information presented in Sections 3.0 and 4.0 (Section 5.1) and post-baseline monitoring, data evaluation and reporting (Section 5.2).

5.1 CONCLUSIONS

The conclusions from the information provided in Sections 3.0 and 4.0 are as follows:

- Trend analysis for the LCS, LDS, the glacial till, and the Great Miami Aquifer will help pinpoint potential leak-related influences within each leak detection program element.
- Only four of the 16 constituents sampled for had a sufficient number of detections to allow for statistical analysis. The detected constituents are total organic carbon, total organic halogens, boron, and total uranium.
- The four detected constituents were detected at all three horizontal till wells and all six Great Miami Aquifer wells yielding 36 constituent-well combinations where statistical analysis could be performed.
- Of these 36 combinations, 13 were not amenable to the establishment of control limits via control charting or other methods due to the presence of trend and/or serial correlation. This left 23 combinations where control limits could be calculated.

The following table summarizes the constituent-well combinations where groundwater control limits could be calculated, by cell and horizon.

Constituent Location Combinations Where Control Limits Could be Established

	Cell 1			Cell 2			Cell 3		
Constituent	HTW[a]	UGMA[a]	DGMA[a]	HTW[a]	UGMA[a]	DGMA[a]	HTW[a]	UGMA[a]	DGMA[a]
Total Organic Carbon	YES	YES	YES	YES	YES	NO	NO	YES	YES
Total Organic Halogens	YES	NO	YES	YES	NO	NO	YES	YES	YES
Boron	NO	YES	YES	YES	YES	NO	NO	YES	NO
Total, Uranium	YES	YES	NO	YES	YES	NO	NO	NO	YES

Note: Highlighting indicates locations that have a maximum concentration greater than the associated LCS.
[a]HTW = Horizontal Till Well
UGMA = Upgradient Great Miami Aquifer
DGMA = Downgradient Great Miami Aquifer

- Of the 23 constituent-well combinations where control limits could be established, five of the locations have a maximum constituent concentration greater than the associated LCS concentration for that cell. These five constituent-well combinations are shaded in the above table. This condition makes these five constituent-well combinations useless as leak detection indicators. Therefore, the associated control limits calculated in Appendix C are not useable.
- Of the 36 constituent-well combinations, useable control limits could be established for 18 constituent-well combinations.

As anticipated, on-site disposal facility area pre-existing contamination in the perched groundwater and in the Great Miami Aquifer has complicated the establishment of a statistical measure for baseline groundwater conditions at Cells 1, 2, and 3. It is anticipated that this contamination will confound future leak detection determinations, as well. Therefore, in addition to statistical analysis, the supplemental assessments in Section 4.0, which provide useful leak detection considerations for the ongoing on-site disposal facility leak detection program will be updated on a routine basis. These assessments include:

- Constituent concentration comparisons: horizontal till wells versus the LCS and LDS
- Horizontal till well water yields over time
- Great Miami Aquifer water levels versus monitoring well total uranium concentrations
- Monitoring well turbidity versus total uranium concentration
- Cell-specific LCS and LDS volume yields (to calculate cell-specific apparent hydraulic liner efficiency)
- Tracking of precipitation volumes during liner construction for future cells.

5.2 POST-BASELINE MONITORING, DATA EVALUATION, AND REPORTING

5.2.1 Post-Baseline Monitoring

This section provides the post-baseline monitoring approach for Cells 1, 2, and 3 based on the conclusions provided in Section 5.1 and based on discussion with OEPA and EPA during March 2002. Post-baseline monitoring will focus on the four constituents that had a sufficient number of detections (25 percent or more) to allow for statistical analysis. The four constituents are total organic carbon, total organic halogens, boron, and total uranium. These four constituents will be monitored in all four horizons (LCS, LDS, horizontal till well, and Great Miami Aquifer) at Cells 1, 2, and 3 on a quarterly basis. In addition to the quarterly sampling, all 16 leak detection indicator constituents will be analyzed in the annual samples collected from Cells 1, 2, and 3 LCS and LDS. If a constituent is detected in either the LCS or LDS, then confirmatory sampling for that constituent will consist of three quarterly samples from the horizon in which it was detected. Depending on the magnitude and/or persistence of the constituent detected in the LCS or LDS, DOE will consider sampling for the detected constituent in the next (lower) horizon (e.g., if detected in the LCS, then sample for detect in the LDS, or if detected in the LDS, then sample for detect in the horizontal till well). If the constituent is detected in the next lower horizon, then DOE will again conduct confirmatory sampling consisting of three quarterly samples. This strategy will continue, as necessary, based on detected constituents to ensure that a thorough evaluation of all detected constituents is completed. As per OEPA guidance, annual samples from each cell's LCS will continue to be analyzed for OAC 3745-27-10 Appendix I constituents.

Where possible, volumes of leachate generated will be tracked by cell, on a month by month basis. Liquid volumes generated from each cell's LDS will be tracked on a weekly basis.

5.2.2 Post-Baseline Data Evaluation and Reporting

Post baseline data evaluation and reporting will consist of the following and in general will be reported in the annual site environmental reports unless otherwise noted. Annual reporting will begin in the 2002 Site Environmental Report.

- Control charts: Control charts will be updated annually as per Appendix C, Section C. Additionally, both trend and serial correlation will be evaluated during the process of updating control charts. Results of these evaluations will be provided annually.

- Constituent concentration comparisons: These graphical comparisons will be completed cell by cell for the horizontal till wells versus the LCS and LDS. The data used to generate these graphs (as well as the Great Miami Aquifer data) will be provided on the IEMP Extranet Site as it becomes available.

- Horizontal till well water yields over time: These graphical comparisons will be updated based on the water yielded prior to each of the quarterly sampling events.

- Great Miami Aquifer monitoring well water levels versus total uranium concentration: These graphical comparisons will be updated annually for each of cell's 1-3 up- and downgradient monitoring wells, based on the water levels and uranium results derived from the quarterly sampling events. Additionally, statistical analyses to determine the relationship between these two factors will be conducted annually.

- Great Miami Aquifer monitoring well turbidity versus total uranium concentration: These graphical comparisons will also be updated annually for each of cell's 1-3 up- and downgradient Great Miami Aquifer monitoring wells, based on the water levels and uranium results derived from the quarterly sampling events.

- Cell-specific LCS and LDS volume yields: This information will be tracked as noted in Section 5.2.1 and is currently reported on a weekly basis to EPA and OEPA via the weekly site facsimile. The volumes are discussed, as necessary, during the weekly site teleconference. Weekly LDS accumulation rates compared to precipitation will be provided semi-annually and annually in the IEMP reports. Monthly LCS and LDS volumes compared to precipitation will be reported annually. The LDS volumes will also be compared to waste placement volumes and reported annually. Monthly apparent liner efficiencies will be calculated and additionally reported annually.

The above noted monitoring, data evaluation, and reporting protocol will meet the needs of the on-site disposal facility leak detection program. As the program matures, it is recognized that ongoing enhancements to the program will be made as additional data are accumulated and evaluated. The enhancements will be communicated through the various reporting channels (e.g. weekly reports and the IEMP semi-annual reports) and will be documented in various revisions of the GWLMP.

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Appendix A

APPENDIX A

ON-SITE DISPOSAL FACILITY CELLS 1, 2, AND 3 DATA SET

APPENDIX A

The following attachments, Attachments A.1 and A.2, include well/location number, constituent, date sampled, validated result, validation qualifier, units, and type (e.g., N = Normal and FD = Field Duplicate) for the horizontal till wells and Great Miami Aquifer wells (Attachment A.1) and the leachate collection system (LCS) and leak detection system (LDS). The baseline data in Attachment A.1 goes through December 2000 and the LCS/LDS data goes through June 2001. The data in the table are sorted in the following order: well/location number, constituents, and sample date. An explanation of validation qualifier codes can be found in Appendix D, Section D.2.4.1, of the Sitewide CERCLA Quality Assurance Project Plan (DOE 2002).

The following identifies the well/location numbers associated with each cell:

Cell Number	Location	Location Number
	Horizontal Till Well	12338
	Great Miami Aquifer Well - Upgradient	22201
1	Great Miami Aquifer Well – Downgradient	22198
	LCS	12338C
	LDS	12338D
	Horizontal Till Well	12339
	Great Miami Aquifer Well - Upgradient	22200
2	Great Miami Aquifer Well – Downgradient	22199
	LCS	12339C
	LDS	12339D
	Horizontal Till Well	12340
	Great Miami Aquifer Well - Upgradient	22203
3	Great Miami Aquifer Well – Downgradient	22204
	LCS	12340C
	LDS	12340D

Attachment A.1

ATTACHMENT A.1

HORIZONTAL TILL WELLS AND GREAT MIAMI AQUIFER WELLS DATA

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Total Organic Carbon	10/30/1997	3.1	J	mg/L	N
12338	Total Organic Carbon	10/31/1997	6.3	-	mg/L	N
12338	Total Organic Carbon	11/03/1997	3.7	-	mg/L	N
12338	Total Organic Carbon	11/04/1997	2.1	J	mg/L	N
12338	Total Organic Carbon	11/05/1997	7.9	J	mg/L	N
12338	Total Organic Carbon	11/06/1997	9.2	J	mg/L	N
12338	Total Organic Carbon	11/07/1997	9.3	J	mg/L	N
12338	Total Organic Carbon	11/10/1997	8.8	J	mg/L	N
12338	Total Organic Carbon	11/12/1997	8.1	J	mg/L	N
12338	Total Organic Carbon	11/14/1997	11.4	J	mg/L	N
12338	Total Organic Carbon	11/17/1997	9.4	J	mg/L	N
12338	Total Organic Carbon	11/17/1997	8.8	J	mg/L	FD
12338	Total Organic Carbon	11/18/1997	8.5	J	mg/L	N
12338	Total Organic Carbon	11/25/1997	9.7	J	mg/L	N
12338	Total Organic Carbon	12/01/1997	7.7	J	mg/L	N
12338	Total Organic Carbon	12/08/1997	11.6	J	mg/L	N
12338	Total Organic Carbon	02/17/1998	9.72	-	mg/L	N
12338	Total Organic Carbon	05/26/1998	12.2	J	mg/L	N
12338	Total Organic Carbon	08/25/1998	3.93	-	mg/L	N
12338	Total Organic Carbon	11/23/1998	1.1	-	mg/L	N
12338	Total Organic Carbon	02/16/1999	2.46	U	mg/L	N
12338	Total Organic Carbon	04/26/1999	2.94	U	mg/L	N
12338	Total Organic Carbon	07/13/1999	5.23	-	mg/L	N
12338	Total Organic Carbon	08/16/1999	1.19	-	mg/L	N
12338	Total Organic Carbon	10/27/1999	2.4	-	mg/L	N
12338	Total Organic Carbon	10/27/1999	2.3	-	mg/L	FD
12338	Total Organic Carbon	11/16/1999	2.09	-	mg/L	N
12338	Total Organic Carbon	12/08/1999	1.7	J	mg/L	N
12338	Total Organic Carbon	12/08/1999	1.7	J	mg/L	FD
12338	Total Organic Carbon	02/23/2000	7.24	J	mg/L	N
12338	Total Organic Carbon	04/25/2000	1	U	mg/L	N
12338	Total Organic Carbon	06/20/2000	1.51	J	mg/L	N
12338	Total Organic Carbon	08/22/2000	1.1	J	mg/L	N
12338	Total Organic Carbon	10/24/2000	1.64	-	mg/L	N
12338	Total Organic Carbon	12/12/2000	1.85	-	mg/L	N
12338	Total Organic Carbon	12/12/2000	1.71	-	mg/L	FD
12338	Total Organic Halogens	10/30/1997	0.0085	-	mg/L	N
12338	Total Organic Halogens	10/31/1997	0.077	-	mg/L	N
12338	Total Organic Halogens	11/03/1997	0.056	-	mg/L	N
12338	Total Organic Halogens	11/05/1997	0.0207	-	mg/L	N
12338	Total Organic Halogens	11/06/1997	0.0148	-	mg/L	N
12338	Total Organic Halogens	11/07/1997	0.0115	-	mg/L	N
12338	Total Organic Halogens	11/10/1997	0.0132	-	mg/L	N
12338	Total Organic Halogens	11/12/1997	0.0115	-	mg/L	N
12338	Total Organic Halogens	11/14/1997	0.0156	U	mg/L	N
12338	Total Organic Halogens	11/17/1997	0.0096	U	mg/L	N
12338	Total Organic Halogens	11/17/1997	0.0092	U	mg/L	FD
12338	Total Organic Halogens	11/18/1997	0.0227	U	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Total Organic Halogens	11/25/1997	0.0086	U	mg/L	N
12338	Total Organic Halogens	12/01/1997	0.0126	U	mg/L	N
12338	Total Organic Halogens	12/08/1997	0.00591	-	mg/L	N
12338	Total Organic Halogens	02/17/1998	0.0115	U	mg/L	N
12338	Total Organic Halogens	05/26/1998	0.012	U	mg/L	N
12338	Total Organic Halogens	08/25/1998	0.00469	U	mg/L	N
12338	Total Organic Halogens	11/23/1998	0.005	U	mg/L	N
12338	Total Organic Halogens	02/16/1999	0.0013	U	mg/L	N
12338	Total Organic Halogens	04/26/1999	0.00932	J	mg/L	N
12338	Total Organic Halogens	07/13/1999	0.00668	J	mg/L	N
12338	Total Organic Halogens	08/16/1999	0.0165	-	mg/L	N
12338	Total Organic Halogens	10/27/1999	0.0703	J	mg/L	N
12338	Total Organic Halogens	10/27/1999	0.0538	J	mg/L	FD
12338	Total Organic Halogens	11/16/1999	0.01	J	mg/L	N
12338	Total Organic Halogens	12/08/1999	0.0119	J	mg/L	N
12338	Total Organic Halogens	12/08/1999	0.0194	J	mg/L	FD
12338	Total Organic Halogens	02/23/2000	0.00772	U	mg/L	N
12338	Total Organic Halogens	04/25/2000	0.025	U	mg/L	N
12338	Total Organic Halogens	06/20/2000	0.00748	J	mg/L	N
12338	Total Organic Halogens	08/22/2000	0.00719	J	mg/L	N
12338	Total Organic Halogens	10/24/2000	0.025	U	mg/L	N
12338	Total Organic Halogens	12/12/2000	0.0071	J	mg/L	N
12338	Total Organic Halogens	12/12/2000	0.025	U	mg/L	FD
12338	Boron	10/30/1997	0.103	-	mg/L	N
12338	Boron	10/31/1997	0.0934	-	mg/L	N
12338	Boron	11/03/1997	0.293	J	mg/L	N
12338	Boron	11/04/1997	0.685	J	mg/L	N
12338	Boron	11/05/1997	0.0493	-	mg/L	N
12338	Boron	11/06/1997	0.0375	-	mg/L	N
12338	Boron	11/07/1997	0.0477	-	mg/L	N
12338	Boron	11/10/1997	0.0501	-	mg/L	N
12338	Boron	11/12/1997	0.0476	-	mg/L	N
12338	Boron	11/14/1997	0.0448	-	mg/L	N
12338	Boron	11/17/1997	0.0623	-	mg/L	N
12338	Boron	11/17/1997	0.0452	-	mg/L	FD
12338	Boron	11/18/1997	0.0333	-	mg/L	N
12338	Boron	11/25/1997	0.0415	U	mg/L	N
12338	Boron	12/01/1997	0.0407	U	mg/L	N
12338	Boron	12/08/1997	0.0277	-	mg/L	N
12338	Boron	02/17/1998	0.29	-	mg/L	N
12338	Boron	05/26/1998	0.0229	U	mg/L	N
12338	Boron	08/25/1998	0.0283	-	mg/L	N
12338	Boron	11/23/1998	0.059	U	mg/L	N
12338	Boron	02/16/1999	0.0247	-	mg/L	N
12338	Boron	04/26/1999	0.0248	U	mg/L	N
12338	Boron	07/13/1999	0.0341	J	mg/L	N
12338	Boron	08/16/1999	0.0418	-	mg/L	N
12338	Boron	10/27/1999	0.0445	U	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Boron	10/27/1999	0.0434	U	mg/L	FD
12338	Boron	11/16/1999	0.0553	-	mg/L	N
12338	Boron	12/08/1999	0.0648	-	mg/L	N
12338	Boron	12/08/1999	0.0674	-	mg/L	FD
12338	Boron	02/23/2000	0.083	-	mg/L	N
12338	Boron	04/25/2000	0.123	-	mg/L	N
12338	Boron	06/20/2000	0.116	J	mg/L	N
12338	Boron	08/22/2000	0.0815	UJ	mg/L	N
12338	Boron	10/24/2000	0.0848	J	mg/L	N
12338	Boron	12/12/2000	0.0967	J	mg/L	N
12338	Boron	12/12/2000	0.0921	J	mg/L	FD
12338	Mercury	10/30/1997	0.0001	U	mg/L	N
12338	Mercury	10/31/1997	0.0001	U	mg/L	N
12338	Mercury	11/03/1997	0.0001	U	mg/L	N
12338	Mercury	11/04/1997	0.0001	U	mg/L	N
12338	Mercury	11/05/1997	0.0001	U	mg/L	N
12338	Mercury	11/06/1997	0.0001	U	mg/L	N
12338	Mercury	11/07/1997	0.0001	U	mg/L	N
12338	Mercury	11/10/1997	0.0001	U	mg/L	N
12338	Mercury	11/12/1997	0.0001	U	mg/L	N
12338	Mercury	11/14/1997	0.0001	U	mg/L	N
12338	Mercury	11/17/1997	0.0001	U	mg/L	N
12338	Mercury	11/17/1997	0.0001	U	mg/L	FD
12338	Mercury	11/18/1997	0.0001	U	mg/L	N
12338	Mercury	11/25/1997	0.0001	U	mg/L	N
12338	Mercury	12/01/1997	0.0001	U	mg/L	N
12338	Mercury	12/08/1997	0.0001	U	mg/L	N
12338	Mercury	02/17/1998	0.0001	U	mg/L	N
12338	Mercury	05/26/1998	0.0001	U	mg/L	N
12338	Mercury	08/25/1998	0.0001	U	mg/L	N
12338	Mercury	11/23/1998	0.0001	U	mg/L	N
12338	Mercury	02/16/1999	0.00012	U	mg/L	N
12338	Mercury	04/26/1999	0.00012	U	mg/L	N
12338	Mercury	07/13/1999	0.00004	U	mg/L	N
12338	Mercury	08/16/1999	0.0001	U	mg/L	N
12338	Mercury	10/27/1999	0.0001	U	mg/L	N
12338	Mercury	10/27/1999	0.0001	U	mg/L	FD
12338	Mercury	11/16/1999	0.00004	U	mg/L	N
12338	Mercury	12/08/1999	0.0001	UJ	mg/L	N
12338	Mercury	12/08/1999	0.0001	UJ	mg/L	FD
12338	Mercury	02/23/2000	0.00004	U	mg/L	N
12338	Mercury	04/25/2000	0.00013	U	mg/L	N
12338	Mercury	06/20/2000	0.000043	U	mg/L	N
12338	Mercury	08/22/2000	0.0001	U	mg/L	N
12338	Mercury	10/24/2000	0.000048	U	mg/L	N
12338	Mercury	12/12/2000	0.000048	U	mg/L	N
12338	Mercury	12/12/2000	0.000048	U	mg/L	FD
12338	alpha-Chlordane	10/30/1997	0.05	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	alpha-Chlordane	10/31/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/03/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/04/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/05/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/06/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/07/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/10/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/12/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/14/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/17/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/17/1997	0.05	U	µg/L	FD
12338	alpha-Chlordane	11/18/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	11/25/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	12/01/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	12/08/1997	0.05	U	µg/L	N
12338	alpha-Chlordane	02/17/1998	0.05	UJ	µg/L	N
12338	alpha-Chlordane	05/26/1998	0.05	U	µg/L	N
12338	alpha-Chlordane	08/25/1998	0.031	U	µg/L	N
12338	alpha-Chlordane	11/23/1998	0.1	U	µg/L	N
12338	alpha-Chlordane	02/16/1999	0.01	UJ	µg/L	N
12338	alpha-Chlordane	04/26/1999	0.01	U	µg/L	N
12338	alpha-Chlordane	07/13/1999	0.02	U	µg/L	N
12338	alpha-Chlordane	08/16/1999	0.05	U	µg/L	N
12338	alpha-Chlordane	10/27/1999	0.04	U	µg/L	N
12338	alpha-Chlordane	10/27/1999	0.04	U	µg/L	FD
12338	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
12338	alpha-Chlordane	12/08/1999	0.04	U	µg/L	N
12338	alpha-Chlordane	12/08/1999	0.04	U	µg/L	FD
12338	alpha-Chlordane	02/23/2000	0.1	U	µg/L	N
12338	alpha-Chlordane	04/25/2000	0.1	U	µg/L	N
12338	alpha-Chlordane	06/20/2000	0.1	Z	µg/L	N
12338	alpha-Chlordane	06/20/2000	0.1	UJ	µg/L	N
12338	alpha-Chlordane	08/22/2000	0.1	U	µg/L	N
12338	alpha-Chlordane	10/24/2000	0.5	UJ	µg/L	N
12338	alpha-Chlordane	12/12/2000	0.1	U	µg/L	N
12338	alpha-Chlordane	12/12/2000	0.1	U	µg/L	FD
12338	alpha-Chlordane	12/12/2000	0.1	Z	µg/L	FD
12338	Technetium-99	10/30/1997	6.49	UJ	pCi/L	N
12338	Technetium-99	10/31/1997	16.94	J	pCi/L	N
12338	Technetium-99	11/03/1997	16.25	R	pCi/L	N
12338	Technetium-99	11/03/1997	71.3	Z	pCi/L	N
12338	Technetium-99	11/03/1997	0.74	U	pCi/L	N
12338	Technetium-99	11/04/1997	7.36	R	pCi/L	N
12338	Technetium-99	11/04/1997	21.1	-	pCi/L	N
12338	Technetium-99	11/05/1997	13.7	-	pCi/L	N
12338	Technetium-99	11/05/1997	4.6	R	pCi/L	N
12338	Technetium-99	11/06/1997	12.39	J	pCi/L	N
12338	Technetium-99	11/07/1997	7.84	R	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Technetium-99	11/07/1997	5.05	U	pCi/L	N
12338	Technetium-99	11/10/1997	4.07	UJ	pCi/L	N
12338	Technetium-99	11/12/1997	11.52	J	pCi/L	N
12338	Technetium-99	11/14/1997	5.12	UJ	pCi/L	N
12338	Technetium-99	11/17/1997	7.07	J	pCi/L	N
12338	Technetium-99	11/17/1997	8.51	J	pCi/L	FD
12338	Technetium-99	11/18/1997	9.5	J	pCi/L	N
12338	Technetium-99	11/25/1997	5.68	UJ	pCi/L	N
12338	Technetium-99	12/01/1997	5.5	UJ	pCi/L	N
12338	Technetium-99	12/08/1997	7.96	UJ	pCi/L	N
12338	Technetium-99	02/17/1998	4.3	U	pCi/L	N
12338	Technetium-99	05/26/1998	-6.5	U	pCi/L	N
12338	Technetium-99	08/25/1998	0.64	UJ	pCi/L	N
12338	Technetium-99	11/23/1998	0.546	U	pCi/L	N
12338	Technetium-99	02/16/1999	-0.385	U	pCi/L	N
12338	Technetium-99	04/26/1999	0	UJ	pCi/L	N
12338	Technetium-99	07/13/1999	28.77	UJ	pCi/L	N
12338	Technetium-99	08/16/1999	-4.693	UJ	pCi/L	N
12338	Technetium-99	10/27/1999	-0.324	UJ	pCi/L	N
12338	Technetium-99	10/27/1999	1.347	UJ	pCi/L	FD
12338	Technetium-99	11/16/1999	-5.059	UJ	pCi/L	N
12338	Technetium-99	12/08/1999	-2.084	UJ	pCi/L	FD
12338	Technetium-99	12/08/1999	2.578	UJ	pCi/L	N
12338	Technetium-99	02/23/2000	-0.489	UJ	pCi/L	N
12338	Technetium-99	04/25/2000	-2.754	UJ	pCi/L	N
12338	Technetium-99	06/20/2000	-1.135	UJ	pCi/L	N
12338	Technetium-99	08/22/2000	-2.003	U	pCi/L	N
12338	Technetium-99	10/24/2000	0.759	UJ	pCi/L	N
12338	Technetium-99	12/12/2000	-5.462	U	pCi/L	N
12338	Technetium-99	12/12/2000	-6.271	U	pCi/L	FD
12338	Uranium, Total	10/30/1997	1.417	J	µg/L	N
12338	Uranium, Total	10/31/1997	3.867	J	µg/L	N
12338	Uranium, Total	11/03/1997	4.673	J	µg/L	N
12338	Uranium, Total	11/04/1997	4.192	J	µg/L	N
12338	Uranium, Total	11/05/1997	4.18	J	µg/L	N
12338	Uranium, Total	11/06/1997	5.106	J	µg/L	N
12338	Uranium, Total	11/07/1997	4.19	J	µg/L	N
12338	Uranium, Total	11/10/1997	4.345	J	µg/L	N
12338	Uranium, Total	11/12/1997	7.454	J	µg/L	N
12338	Uranium, Total	11/14/1997	4.334	J	µg/L	N
12338	Uranium, Total	11/17/1997	4.453	J	µg/L	N
12338	Uranium, Total	11/17/1997	4.76	J	µg/L	FD
12338	Uranium, Total	11/18/1997	4.323	J	µg/L	N
12338	Uranium, Total	11/25/1997	1.37	J	µg/L	N
12338	Uranium, Total	12/01/1997	1.57	J	µg/L	N
12338	Uranium, Total	12/08/1997	1.74	J	µg/L	N
12338	Uranium, Total	02/17/1998	19	-	µg/L	N
12338	Uranium, Total	05/26/1998	1.106	J	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Uranium, Total	08/25/1998	1.23	-	µg/L	N
12338	Uranium, Total	11/23/1998	1.73	-	µg/L	N
12338	Uranium, Total	02/16/1999	1.6	U	µg/L	N
12338	Uranium, Total	04/26/1999	1.58	-	µg/L	N
12338	Uranium, Total	07/13/1999	2.37	-	µg/L	N
12338	Uranium, Total	08/16/1999	1.71	-	µg/L	N
12338	Uranium, Total	10/27/1999	1.65	-	µg/L	N
12338	Uranium, Total	10/27/1999	1.65	-	µg/L	FD
12338	Uranium, Total	11/16/1999	1.24	J	µg/L	N
12338	Uranium, Total	12/08/1999	0.993	-	µg/L	FD
12338	Uranium, Total	12/08/1999	1.45	-	µg/L	N
12338	Uranium, Total	02/23/2000	1.7196	J	µg/L	N
12338	Uranium, Total	04/25/2000	1.521	J	µg/L	N
12338	Uranium, Total	06/20/2000	1.923	J	µg/L	N
12338	Uranium, Total	08/22/2000	1.686	J	µg/L	N
12338	Uranium, Total	10/24/2000	1.747	J	µg/L	N
12338	Uranium, Total	12/12/2000	1.734	-	µg/L	N
12338	Uranium, Total	12/12/2000	1.84	-	µg/L	FD
12338	Uranium, Total	12/12/2000	1.799	Z	µg/L	FD
12338	4-Nitroaniline	10/30/1997	25	U	µg/L	N
12338	4-Nitroaniline	10/31/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/03/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/04/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/05/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/06/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/07/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/10/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/12/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/14/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/17/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/17/1997	25	U	µg/L	FD
12338	4-Nitroaniline	11/18/1997	25	U	µg/L	N
12338	4-Nitroaniline	11/25/1997	25	U	µg/L	N
12338	4-Nitroaniline	12/01/1997	25	U	µg/L	N
12338	4-Nitroaniline	12/08/1997	25	U	µg/L	N
12338	4-Nitroaniline	02/17/1998	25	U	µg/L	N
12338	4-Nitroaniline	05/26/1998	20	U	µg/L	N
12338	4-Nitroaniline	08/25/1998	20	U	µg/L	N
12338	4-Nitroaniline	11/23/1998	20	U	µg/L	N
12338	4-Nitroaniline	02/16/1999	25	U	µg/L	N
12338	4-Nitroaniline	04/26/1999	50	UJ	µg/L	N
12338	4-Nitroaniline	07/13/1999	25	UJ	µg/L	N
12338	4-Nitroaniline	08/16/1999	25	U	µg/L	N
12338	4-Nitroaniline	10/27/1999	20	U	µg/L	N
12338	4-Nitroaniline	10/27/1999	20	U	µg/L	FD
12338	4-Nitroaniline	11/16/1999	50	U	µg/L	N
12338	4-Nitroaniline	12/08/1999	50	U	µg/L	N
12338	4-Nitroaniline	12/08/1999	50	U	µg/L	FD

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	4-Nitroaniline	02/23/2000	50	U	µg/L	N
12338	4-Nitroaniline	04/25/2000	50	U	µg/L	N
12338	4-Nitroaniline	06/20/2000	50	U	µg/L	N
12338	4-Nitroaniline	08/22/2000	50	U	µg/L	N
12338	4-Nitroaniline	10/24/2000	50	U	µg/L	N
12338	4-Nitroaniline	12/12/2000	50	U	µg/L	N
12338	4-Nitroaniline	12/12/2000	50	U	µg/L	FD
12338	Carbazole	10/30/1997	5	U	µg/L	N
12338	Carbazole	10/31/1997	5	U	µg/L	N
12338	Carbazole	11/03/1997	5	U	µg/L	N
12338	Carbazole	11/04/1997	5	U	µg/L	N
12338	Carbazole	11/05/1997	5	U	µg/L	N
12338	Carbazole	11/06/1997	5	U	µg/L	N
12338	Carbazole	11/07/1997	5	U	µg/L	N
12338	Carbazole	11/10/1997	5	U	µg/L	N
12338	Carbazole	11/12/1997	5	U	µg/L	N
12338	Carbazole	11/14/1997	5	U	µg/L	N
12338	Carbazole	11/17/1997	5	U	µg/L	N
12338	Carbazole	11/17/1997	5	U	µg/L	FD
12338	Carbazole	11/18/1997	5	U	µg/L	N
12338	Carbazole	11/25/1997	5	U	µg/L	N
12338	Carbazole	12/01/1997	5	U	µg/L	N
12338	Carbazole	12/08/1997	5	U	µg/L	N
12338	Carbazole	02/17/1998	10	UJ	µg/L	N
12338	Carbazole	05/26/1998	5	U	µg/L	N
12338	Carbazole	08/25/1998	5	U	µg/L	N
12338	Carbazole	11/23/1998	5	U	µg/L	N
12338	Carbazole	02/16/1999	5	U	µg/L	N
12338	Carbazole	04/26/1999	10	U	µg/L	N
12338	Carbazole	07/13/1999	5	U	µg/L	N
12338	Carbazole	08/16/1999	10	U	µg/L	N
12338	Carbazole	10/27/1999	5	U	µg/L	N
12338	Carbazole	10/27/1999	5	U	µg/L	FD
12338	Carbazole	11/16/1999	10	U	µg/L	N
12338	Carbazole	12/08/1999	10	U	µg/L	N
12338	Carbazole	12/08/1999	10	U	µg/L	FD
12338	Carbazole	02/23/2000	10	U	µg/L	N
12338	Carbazole	04/25/2000	10	U	µg/L	N
12338	Carbazole	06/20/2000	10	U	µg/L	N
12338	Carbazole	08/22/2000	10	U	µg/L	N
12338	Carbazole	10/24/2000	10	U	µg/L	N
12338	Carbazole	12/12/2000	10	U	µg/L	N
12338	Carbazole	12/12/2000	10	U	µg/L	FD
12338	bis(2-Chloroisopropyl) ether	10/30/1997	2	UJ	µg/L	N
12338	bis(2-Chloroisopropyl) ether	10/31/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/03/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/04/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/05/1997	2	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	bis(2-Chloroisopropyl) ether	11/06/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/07/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/10/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/12/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/14/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/17/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/17/1997	2	U	µg/L	FD
12338	bis(2-Chloroisopropyl) ether	11/18/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/01/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/08/1997	2	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	02/17/1998	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	05/26/1998	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	08/25/1998	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	02/16/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	04/26/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	07/13/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	08/16/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	10/27/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	10/27/1999	5	U	µg/L	FD
12338	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/08/1999	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/08/1999	5	U	µg/L	FD
12338	bis(2-Chloroisopropyl) ether	02/23/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	04/25/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	06/20/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	08/22/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	10/24/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/12/2000	5	U	µg/L	N
12338	bis(2-Chloroisopropyl) ether	12/12/2000	5	U	µg/L	FD
12338	1,1-Dichloroethene	10/30/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	10/31/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/03/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/04/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/05/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/06/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/07/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/10/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/12/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/14/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/17/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/17/1997	3	U	µg/L	FD
12338	1,1-Dichloroethene	11/18/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	11/25/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	12/01/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	12/08/1997	3	U	µg/L	N
12338	1,1-Dichloroethene	02/17/1998	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	1,1-Dichloroethene	05/26/1998	1	U	µg/L	N
12338	1,1-Dichloroethene	08/25/1998	1	U	µg/L	N
12338	1,1-Dichloroethene	11/23/1998	1	U	µg/L	N
12338	1,1-Dichloroethene	02/16/1999	1	U	µg/L	N
12338	1,1-Dichloroethene	04/26/1999	5	U	µg/L	N
12338	1,1-Dichloroethene	07/13/1999	5	U	µg/L	N
12338	1,1-Dichloroethene	08/16/1999	1	U	µg/L	N
12338	1,1-Dichloroethene	10/27/1999	1	U	µg/L	N
12338	1,1-Dichloroethene	10/27/1999	1	U	µg/L	FD
12338	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
12338	1,1-Dichloroethene	12/08/1999	1	U	µg/L	N
12338	1,1-Dichloroethene	12/08/1999	1	U	µg/L	FD
12338	1,1-Dichloroethene	02/23/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	04/25/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	06/20/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	08/22/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	10/24/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	12/12/2000	5	U	µg/L	N
12338	1,1-Dichloroethene	12/12/2000	5	U	µg/L	FD
12338	1,2-Dichloroethene (Total)	10/30/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	10/31/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/03/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/04/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/05/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/06/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/07/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/10/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/12/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/14/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/17/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/17/1997	10	U	µg/L	FD
12338	1,2-Dichloroethene (Total)	11/18/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/01/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/08/1997	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	02/17/1998	1	U	µg/L	N
12338	1,2-Dichloroethene (Total)	05/26/1998	1	U	µg/L	N
12338	1,2-Dichloroethene (Total)	08/25/1998	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	02/16/1999	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	04/26/1999	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	07/13/1999	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	08/16/1999	1	U	µg/L	N
12338	1,2-Dichloroethene (Total)	10/27/1999	1	U	µg/L	N
12338	1,2-Dichloroethene (Total)	10/27/1999	1	U	µg/L	FD
12338	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/08/1999	1	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/08/1999	1	U	µg/L	FD

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	1,2-Dichloroethene (Total)	02/23/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	04/25/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	06/20/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	08/22/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	10/24/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/12/2000	10	U	µg/L	N
12338	1,2-Dichloroethene (Total)	12/12/2000	10	U	µg/L	FD
12338	Bromodichloromethane	10/30/1997	10	U	µg/L	N
12338	Bromodichloromethane	10/31/1997	8	J	µg/L	N
12338	Bromodichloromethane	11/03/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/04/1997	3	J	µg/L	N
12338	Bromodichloromethane	11/05/1997	2	J	µg/L	N
12338	Bromodichloromethane	11/06/1997	2	J	µg/L	N
12338	Bromodichloromethane	11/07/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/10/1997	2	J	µg/L	N
12338	Bromodichloromethane	11/12/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/14/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/17/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/17/1997	10	U	µg/L	FD
12338	Bromodichloromethane	11/18/1997	10	U	µg/L	N
12338	Bromodichloromethane	11/25/1997	10	U	µg/L	N
12338	Bromodichloromethane	12/01/1997	10	U	µg/L	N
12338	Bromodichloromethane	12/08/1997	10	U	µg/L	N
12338	Bromodichloromethane	02/17/1998	1	U	µg/L	N
12338	Bromodichloromethane	05/26/1998	1	U	µg/L	N
12338	Bromodichloromethane	08/25/1998	10	U	µg/L	N
12338	Bromodichloromethane	11/23/1998	10	U	µg/L	N
12338	Bromodichloromethane	02/16/1999	10	U	µg/L	N
12338	Bromodichloromethane	04/26/1999	10	U	µg/L	N
12338	Bromodichloromethane	07/13/1999	10	U	µg/L	N
12338	Bromodichloromethane	08/16/1999	1	U	µg/L	N
12338	Bromodichloromethane	10/27/1999	1	U	µg/L	N
12338	Bromodichloromethane	10/27/1999	1	U	µg/L	FD
12338	Bromodichloromethane	11/16/1999	10	U	µg/L	N
12338	Bromodichloromethane	12/08/1999	1	U	µg/L	N
12338	Bromodichloromethane	12/08/1999	1	U	µg/L	FD
12338	Bromodichloromethane	02/23/2000	10	U	µg/L	N
12338	Bromodichloromethane	04/25/2000	10	U	µg/L	N
12338	Bromodichloromethane	06/20/2000	10	U	µg/L	N
12338	Bromodichloromethane	08/22/2000	10	U	µg/L	N
12338	Bromodichloromethane	10/24/2000	10	U	µg/L	N
12338	Bromodichloromethane	12/12/2000	10	U	µg/L	N
12338	Bromodichloromethane	12/12/2000	10	U	µg/L	FD
12338	Tetrachloroethene	10/30/1997	10	U	µg/L	N
12338	Tetrachloroethene	10/31/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/03/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/04/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/05/1997	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Tetrachloroethene	11/06/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/07/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/10/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/12/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/14/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/17/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/17/1997	10	U	µg/L	FD
12338	Tetrachloroethene	11/18/1997	10	U	µg/L	N
12338	Tetrachloroethene	11/25/1997	10	U	µg/L	N
12338	Tetrachloroethene	12/01/1997	10	U	µg/L	N
12338	Tetrachloroethene	12/08/1997	10	U	µg/L	N
12338	Tetrachloroethene	02/17/1998	1	U	µg/L	N
12338	Tetrachloroethene	05/26/1998	1	U	µg/L	N
12338	Tetrachloroethene	08/25/1998	10	U	µg/L	N
12338	Tetrachloroethene	11/23/1998	10	U	µg/L	N
12338	Tetrachloroethene	02/16/1999	10	U	µg/L	N
12338	Tetrachloroethene	04/26/1999	10	U	µg/L	N
12338	Tetrachloroethene	07/13/1999	10	U	µg/L	N
12338	Tetrachloroethene	08/16/1999	1	U	µg/L	N
12338	Tetrachloroethene	10/27/1999	1	U	µg/L	N
12338	Tetrachloroethene	10/27/1999	1	U	µg/L	FD
12338	Tetrachloroethene	11/16/1999	10	U	µg/L	N
12338	Tetrachloroethene	12/08/1999	1	U	µg/L	N
12338	Tetrachloroethene	12/08/1999	1	U	µg/L	FD
12338	Tetrachloroethene	02/23/2000	10	U	µg/L	N
12338	Tetrachloroethene	04/25/2000	10	U	µg/L	N
12338	Tetrachloroethene	06/20/2000	10	U	µg/L	N
12338	Tetrachloroethene	08/22/2000	10	U	µg/L	N
12338	Tetrachloroethene	10/24/2000	10	U	µg/L	N
12338	Tetrachloroethene	12/12/2000	10	U	µg/L	N
12338	Tetrachloroethene	12/12/2000	10	U	µg/L	FD
12338	Trichloroethene	10/30/1997	2	U	µg/L	N
12338	Trichloroethene	10/31/1997	2	U	µg/L	N
12338	Trichloroethene	11/03/1997	2	U	µg/L	N
12338	Trichloroethene	11/04/1997	2	U	µg/L	N
12338	Trichloroethene	11/05/1997	2	U	µg/L	N
12338	Trichloroethene	11/06/1997	2	U	µg/L	N
12338	Trichloroethene	11/07/1997	2	U	µg/L	N
12338	Trichloroethene	11/10/1997	2	U	µg/L	N
12338	Trichloroethene	11/12/1997	2	U	µg/L	N
12338	Trichloroethene	11/14/1997	2	U	µg/L	N
12338	Trichloroethene	11/17/1997	2	U	µg/L	N
12338	Trichloroethene	11/17/1997	2	U	µg/L	FD
12338	Trichloroethene	11/18/1997	2	U	µg/L	N
12338	Trichloroethene	11/25/1997	2	U	µg/L	N
12338	Trichloroethene	12/01/1997	2	U	µg/L	N
12338	Trichloroethene	12/08/1997	2	U	µg/L	N
12338	Trichloroethene	02/17/1998	1	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Trichloroethene	05/26/1998	1	U	µg/L	N
12338	Trichloroethene	08/25/1998	1	U	µg/L	N
12338	Trichloroethene	11/23/1998	1	U	µg/L	N
12338	Trichloroethene	02/16/1999	3	U	µg/L	N
12338	Trichloroethene	04/26/1999	3	U	µg/L	N
12338	Trichloroethene	07/13/1999	3	U	µg/L	N
12338	Trichloroethene	08/16/1999	1	U	µg/L	N
12338	Trichloroethene	10/27/1999	1	U	µg/L	N
12338	Trichloroethene	10/27/1999	1	U	µg/L	FD
12338	Trichloroethene	11/16/1999	3	U	µg/L	N
12338	Trichloroethene	12/08/1999	1	U	µg/L	N
12338	Trichloroethene	12/08/1999	1	U	µg/L	FD
12338	Trichloroethene	02/23/2000	3	U	µg/L	N
12338	Trichloroethene	04/25/2000	3	U	µg/L	N
12338	Trichloroethene	06/20/2000	3	U	µg/L	N
12338	Trichloroethene	08/22/2000	3	U	µg/L	N
12338	Trichloroethene	10/24/2000	3	U	µg/L	N
12338	Trichloroethene	12/12/2000	3	U	µg/L	N
12338	Trichloroethene	12/12/2000	3	U	µg/L	FD
12338	Vinyl chloride	10/30/1997	1	U	µg/L	N
12338	Vinyl chloride	10/31/1997	1	U	µg/L	N
12338	Vinyl chloride	11/03/1997	1	U	µg/L	N
12338	Vinyl chloride	11/04/1997	1	U	µg/L	N
12338	Vinyl chloride	11/05/1997	1	U	µg/L	N
12338	Vinyl chloride	11/06/1997	1	U	µg/L	N
12338	Vinyl chloride	11/07/1997	1	U	µg/L	N
12338	Vinyl chloride	11/10/1997	1	U	µg/L	N
12338	Vinyl chloride	11/12/1997	1	U	µg/L	N
12338	Vinyl chloride	11/14/1997	1	U	µg/L	N
12338	Vinyl chloride	11/17/1997	1	U	µg/L	N
12338	Vinyl chloride	11/17/1997	1	U	µg/L	FD
12338	Vinyl chloride	11/18/1997	1	U	µg/L	N
12338	Vinyl chloride	11/25/1997	1	U	µg/L	N
12338	Vinyl chloride	12/01/1997	1	U	µg/L	N
12338	Vinyl chloride	12/08/1997	1	U	µg/L	N
12338	Vinyl chloride	02/17/1998	2	U	µg/L	N
12338	Vinyl chloride	05/26/1998	1	UJ	µg/L	N
12338	Vinyl chloride	08/25/1998	1	U	µg/L	N
12338	Vinyl chloride	11/23/1998	2	U	µg/L	N
12338	Vinyl chloride	02/16/1999	1	U	µg/L	N
12338	Vinyl chloride	04/26/1999	1	U	µg/L	N
12338	Vinyl chloride	07/13/1999	1	U	µg/L	N
12338	Vinyl chloride	08/16/1999	1	U	µg/L	N
12338	Vinyl chloride	10/27/1999	1	U	µg/L	N
12338	Vinyl chloride	10/27/1999	1	U	µg/L	FD
12338	Vinyl chloride	11/16/1999	1	U	µg/L	N
12338	Vinyl chloride	12/08/1999	1	U	µg/L	N
12338	Vinyl chloride	12/08/1999	1	U	µg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338	Vinyl chloride	02/23/2000	1	U	µg/L	N
12338	Vinyl chloride	04/25/2000	1	U	µg/L	N
12338	Vinyl chloride	06/20/2000	1	U	µg/L	N
12338	Vinyl chloride	08/22/2000	1	U	µg/L	N
12338	Vinyl chloride	10/24/2000	1	U	µg/L	N
12338	Vinyl chloride	12/12/2000	1	U	µg/L	N
12338	Vinyl chloride	12/12/2000	1	U	µg/L	FD
12339	Total Organic Carbon	06/29/1998	1.2	-	mg/L	N
12339	Total Organic Carbon	07/14/1998	1.1	-	mg/L	N
12339	Total Organic Carbon	07/22/1998	1.5	-	mg/L	N
12339	Total Organic Carbon	07/22/1998	1.4	-	mg/L	FD
12339	Total Organic Carbon	07/28/1998	1.2	-	mg/L	N
12339	Total Organic Carbon	08/11/1998	2.81	-	mg/L	N
12339	Total Organic Carbon	08/20/1998	4.22	J	mg/L	N
12339	Total Organic Carbon	08/20/1998	3.92	J	mg/L	FD
12339	Total Organic Carbon	08/25/1998	3.55	-	mg/L	N
12339	Total Organic Carbon	09/08/1998	1.3	-	mg/L	N
12339	Total Organic Carbon	09/16/1998	1.3	J	mg/L	N
12339	Total Organic Carbon	09/21/1998	2.6	J	mg/L	N
12339	Total Organic Carbon	09/23/1998	1.2	-	mg/L	N
12339	Total Organic Carbon	09/28/1998	1	J	mg/L	N
12339	Total Organic Carbon	09/30/1998	0.57	J	mg/L	N
12339	Total Organic Carbon	10/08/1998	1.24	J	mg/L	N
12339	Total Organic Carbon	10/13/1998	1.26	-	mg/L	N
12339	Total Organic Carbon	10/21/1998	1.2	J	mg/L	N
12339	Total Organic Carbon	11/23/1998	1.14	-	mg/L	N
12339	Total Organic Carbon	02/17/1999	3.04	-	mg/L	N
12339	Total Organic Carbon	04/27/1999	1.95	U	mg/L	N
12339	Total Organic Carbon	06/28/1999	1	UJ	mg/L	N
12339	Total Organic Carbon	08/17/1999	1.49	U	mg/L	N
12339	Total Organic Carbon	10/27/1999	1.8	-	mg/L	N
12339	Total Organic Carbon	11/16/1999	2.12	-	mg/L	N
12339	Total Organic Carbon	12/08/1999	1	U	mg/L	N
12339	Total Organic Carbon	02/23/2000	11.1	J	mg/L	N
12339	Total Organic Carbon	04/25/2000	1	U	mg/L	N
12339	Total Organic Carbon	04/25/2000	1	U	mg/L	FD
12339	Total Organic Carbon	06/20/2000	1.37	J	mg/L	N
12339	Total Organic Carbon	08/23/2000	1.2	J	mg/L	N
12339	Total Organic Carbon	10/24/2000	1.64	-	mg/L	N
12339	Total Organic Carbon	12/12/2000	1.85	-	mg/L	N
12339	Total Organic Halogens	06/29/1998	0.012	UJ	mg/L	N
12339	Total Organic Halogens	07/14/1998	0.012	U	mg/L	N
12339	Total Organic Halogens	07/22/1998	0.012	UJ	mg/L	N
12339	Total Organic Halogens	07/22/1998	0.0124	J	mg/L	FD
12339	Total Organic Halogens	07/28/1998	0.023	-	mg/L	N
12339	Total Organic Halogens	08/11/1998	0.0612	-	mg/L	N
12339	Total Organic Halogens	08/20/1998	0.0487	J	mg/L	N
12339	Total Organic Halogens	08/20/1998	0.0203	J	mg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Total Organic Halogens	08/25/1998	0.0358	-	mg/L	N
12339	Total Organic Halogens	09/08/1998	0.0301	-	mg/L	N
12339	Total Organic Halogens	09/16/1998	0.0121	J	mg/L	N
12339	Total Organic Halogens	09/21/1998	0.012	UJ	mg/L	N
12339	Total Organic Halogens	09/23/1998	0.012	U	mg/L	N
12339	Total Organic Halogens	09/28/1998	0.0316	-	mg/L	N
12339	Total Organic Halogens	09/30/1998	0.0182	-	mg/L	N
12339	Total Organic Halogens	10/08/1998	0.0107	J	mg/L	N
12339	Total Organic Halogens	10/13/1998	0.0117	-	mg/L	N
12339	Total Organic Halogens	10/21/1998	0.0108	U	mg/L	N
12339	Total Organic Halogens	11/23/1998	0.0253	-	mg/L	N
12339	Total Organic Halogens	02/17/1999	0.0385	-	mg/L	N
12339	Total Organic Halogens	04/27/1999	0.0218	U	mg/L	N
12339	Total Organic Halogens	06/28/1999	0.0168	-	mg/L	N
12339	Total Organic Halogens	08/17/1999	0.0304	U	mg/L	N
12339	Total Organic Halogens	10/27/1999	0.101	J	mg/L	N
12339	Total Organic Halogens	11/16/1999	0.021	J	mg/L	N
12339	Total Organic Halogens	12/08/1999	0.01	UJ	mg/L	N
12339	Total Organic Halogens	02/23/2000	0.0119	U	mg/L	N
12339	Total Organic Halogens	04/25/2000	0.04999	J	mg/L	N
12339	Total Organic Halogens	04/25/2000	0.03496	J	mg/L	FD
12339	Total Organic Halogens	06/20/2000	0.037	-	mg/L	N
12339	Total Organic Halogens	08/23/2000	0.0373	-	mg/L	N
12339	Total Organic Halogens	10/24/2000	0.0196	U	mg/L	N
12339	Total Organic Halogens	12/12/2000	0.0344	-	mg/L	N
12339	Boron	06/29/1998	0.0551	-	mg/L	N
12339	Boron	07/14/1998	0.0502	-	mg/L	N
12339	Boron	07/22/1998	0.062	-	mg/L	N
12339	Boron	07/22/1998	0.0506	-	mg/L	FD
12339	Boron	07/28/1998	0.0317	-	mg/L	N
12339	Boron	08/11/1998	0.0466	-	mg/L	N
12339	Boron	08/20/1998	0.0488	-	mg/L	N
12339	Boron	08/20/1998	0.0461	-	mg/L	FD
12339	Boron	08/25/1998	0.0448	-	mg/L	N
12339	Boron	09/08/1998	0.0404	U	mg/L	N
12339	Boron	09/16/1998	0.0279	UJ	mg/L	N
12339	Boron	09/21/1998	0.0355	UJ	mg/L	N
12339	Boron	09/23/1998	0.0339	U	mg/L	N
12339	Boron	09/28/1998	0.0463	U	mg/L	N
12339	Boron	09/30/1998	0.0415	U	mg/L	N
12339	Boron	10/08/1998	0.0829	-	mg/L	N
12339	Boron	10/13/1998	0.0603	-	mg/L	N
12339	Boron	10/21/1998	0.0182	U	mg/L	N
12339	Boron	11/23/1998	0.0742	U	mg/L	N
12339	Boron	02/17/1999	0.0432	-	mg/L	N
12339	Boron	04/27/1999	0.0353	-	mg/L	N
12339	Boron	06/28/1999	0.0395	-	mg/L	N
12339	Boron	08/17/1999	0.0344	-	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Boron	10/27/1999	0.0635	U	mg/L	N
12339	Boron	11/16/1999	0.04	-	mg/L	N
12339	Boron	12/08/1999	0.0315	U	mg/L	N
12339	Boron	02/23/2000	0.0388	-	mg/L	N
12339	Boron	04/25/2000	0.0454	U	mg/L	N
12339	Boron	04/25/2000	0.0807	U	mg/L	FD
12339	Boron	06/20/2000	0.045	J	mg/L	N
12339	Boron	08/23/2000	0.0384	U	mg/L	N
12339	Boron	10/24/2000	0.0499	J	mg/L	N
12339	Boron	12/12/2000	0.0601	J	mg/L	N
12339	Mercury	06/29/1998	0.0001	U	mg/L	N
12339	Mercury	07/22/1998	0.0001	U	mg/L	N
12339	Mercury	07/22/1998	0.0001	U	mg/L	FD
12339	Mercury	07/28/1998	0.0001	U	mg/L	N
12339	Mercury	08/11/1998	0.0001	U	mg/L	N
12339	Mercury	08/20/1998	0.00024	-	mg/L	N
12339	Mercury	08/20/1998	0.0001	U	mg/L	FD
12339	Mercury	08/25/1998	0.0001	U	mg/L	N
12339	Mercury	09/08/1998	0.0001	U	mg/L	N
12339	Mercury	09/16/1998	0.0001	UJ	mg/L	N
12339	Mercury	09/21/1998	0.0001	UJ	mg/L	N
12339	Mercury	09/23/1998	0.0001	U	mg/L	N
12339	Mercury	09/28/1998	0.0001	U	mg/L	N
12339	Mercury	09/30/1998	0.0001	U	mg/L	N
12339	Mercury	10/08/1998	0.0001	U	mg/L	N
12339	Mercury	10/13/1998	0.0001	U	mg/L	N
12339	Mercury	10/21/1998	0.0001	U	mg/L	N
12339	Mercury	11/23/1998	0.0001	U	mg/L	N
12339	Mercury	02/17/1999	0.00012	U	mg/L	N
12339	Mercury	04/27/1999	0.00012	U	mg/L	N
12339	Mercury	06/28/1999	0.00025	-	mg/L	N
12339	Mercury	08/17/1999	0.0001	U	mg/L	N
12339	Mercury	10/27/1999	0.0001	U	mg/L	N
12339	Mercury	11/16/1999	0.00004	U	mg/L	N
12339	Mercury	12/08/1999	0.0001	UJ	mg/L	N
12339	Mercury	02/23/2000	0.00004	U	mg/L	N
12339	Mercury	04/25/2000	0.00037	U	mg/L	N
12339	Mercury	04/25/2000	0.0001	U	mg/L	FD
12339	Mercury	06/20/2000	0.000043	U	mg/L	N
12339	Mercury	08/23/2000	0.0001	U	mg/L	N
12339	Mercury	10/24/2000	0.000048	U	mg/L	N
12339	Mercury	12/12/2000	0.000048	U	mg/L	N
12339	alpha-Chlordane	06/29/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	07/14/1998	0.05	UJ	µg/L	N
12339	alpha-Chlordane	07/22/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	07/22/1998	0.05	UJ	µg/L	FD
12339	alpha-Chlordane	07/28/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	08/11/1998	0.031	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	alpha-Chlordane	08/20/1998	0.062	U	µg/L	N
12339	alpha-Chlordane	08/20/1998	0.031	U	µg/L	FD
12339	alpha-Chlordane	08/25/1998	0.031	U	µg/L	N
12339	alpha-Chlordane	09/08/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	09/16/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	09/21/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	09/23/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	09/28/1998	0.02	UJ	µg/L	N
12339	alpha-Chlordane	09/30/1998	0.02	U	µg/L	N
12339	alpha-Chlordane	10/08/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	10/13/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	10/21/1998	0.05	U	µg/L	N
12339	alpha-Chlordane	11/23/1998	0.1	U	µg/L	N
12339	alpha-Chlordane	02/17/1999	0.01	UJ	µg/L	N
12339	alpha-Chlordane	04/27/1999	0.01	U	µg/L	N
12339	alpha-Chlordane	06/28/1999	0.04	UJ	µg/L	N
12339	alpha-Chlordane	08/17/1999	0.05	U	µg/L	N
12339	alpha-Chlordane	10/27/1999	0.04	U	µg/L	N
12339	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
12339	alpha-Chlordane	12/08/1999	0.04	U	µg/L	N
12339	alpha-Chlordane	02/23/2000	0.1	U	µg/L	N
12339	alpha-Chlordane	04/25/2000	0.1	U	µg/L	N
12339	alpha-Chlordane	04/25/2000	0.1	U	µg/L	FD
12339	alpha-Chlordane	06/20/2000	0.1	Z	µg/L	N
12339	alpha-Chlordane	06/20/2000	0.1	UJ	µg/L	N
12339	alpha-Chlordane	08/23/2000	0.1	U	µg/L	N
12339	alpha-Chlordane	10/24/2000	0.5	UJ	µg/L	N
12339	alpha-Chlordane	12/12/2000	0.1	U	µg/L	N
12339	Technetium-99	06/29/1998	2.88	U	pCi/L	N
12339	Technetium-99	07/14/1998	8	J	pCi/L	N
12339	Technetium-99	07/22/1998	2.5	U	pCi/L	N
12339	Technetium-99	07/22/1998	3.39	U	pCi/L	FD
12339	Technetium-99	07/28/1998	3.73	U	pCi/L	N
12339	Technetium-99	08/11/1998	-0.12	U	pCi/L	N
12339	Technetium-99	08/20/1998	-0.16	U	pCi/L	N
12339	Technetium-99	08/20/1998	1.93	U	pCi/L	FD
12339	Technetium-99	08/25/1998	4.82	U	pCi/L	N
12339	Technetium-99	09/03/1998	12	-	pCi/L	N
12339	Technetium-99	09/08/1998	4.93	J	pCi/L	N
12339	Technetium-99	09/16/1998	7.14	-	pCi/L	N
12339	Technetium-99	09/21/1998	5.47	-	pCi/L	N
12339	Technetium-99	09/23/1998	-4.01	U	pCi/L	N
12339	Technetium-99	09/28/1998	-1.57	U	pCi/L	N
12339	Technetium-99	09/30/1998	-1.95	U	pCi/L	N
12339	Technetium-99	10/08/1998	3.93	U	pCi/L	N
12339	Technetium-99	10/13/1998	-4.729	U	pCi/L	N
12339	Technetium-99	10/21/1998	-5.14	U	pCi/L	N
12339	Technetium-99	11/23/1998	-1.169	U	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Technetium-99	02/17/1999	-2.138	U	pCi/L	N
12339	Technetium-99	04/27/1999	0.23	UJ	pCi/L	N
12339	Technetium-99	06/28/1999	5.29	UJ	pCi/L	N
12339	Technetium-99	08/17/1999	-1.171	UJ	pCi/L	N
12339	Technetium-99	10/27/1999	-3.764	UJ	pCi/L	N
12339	Technetium-99	11/16/1999	-3.018	UJ	pCi/L	N
12339	Technetium-99	12/08/1999	1.424	UJ	pCi/L	N
12339	Technetium-99	02/23/2000	0.714	UJ	pCi/L	N
12339	Technetium-99	04/25/2000	-4.88	UJ	pCi/L	N
12339	Technetium-99	04/25/2000	-3.058	UJ	pCi/L	FD
12339	Technetium-99	06/20/2000	-2.744	UJ	pCi/L	N
12339	Technetium-99	08/23/2000	-0.648	U	pCi/L	N
12339	Technetium-99	10/24/2000	1.342	UJ	pCi/L	N
12339	Technetium-99	12/12/2000	-4.225	U	pCi/L	N
12339	Uranium, Total	06/29/1998	1.805	-	µg/L	N
12339	Uranium, Total	07/14/1998	2.156	-	µg/L	N
12339	Uranium, Total	07/22/1998	2.489	-	µg/L	N
12339	Uranium, Total	07/22/1998	2.382	-	µg/L	FD
12339	Uranium, Total	07/28/1998	3.607	-	µg/L	N
12339	Uranium, Total	08/11/1998	1.832	-	µg/L	N
12339	Uranium, Total	08/20/1998	2.053	-	µg/L	N
12339	Uranium, Total	08/20/1998	2.017	-	µg/L	FD
12339	Uranium, Total	08/25/1998	1.708	-	µg/L	N
12339	Uranium, Total	09/03/1998	1.632	-	µg/L	N
12339	Uranium, Total	09/08/1998	1.719	-	µg/L	N
12339	Uranium, Total	09/16/1998	1.903	-	µg/L	N
12339	Uranium, Total	09/21/1998	1.932	-	µg/L	N
12339	Uranium, Total	09/23/1998	1.656	J	µg/L	N
12339	Uranium, Total	09/28/1998	1.55	J	µg/L	N
12339	Uranium, Total	09/30/1998	2.041	J	µg/L	N
12339	Uranium, Total	10/08/1998	1.53	J	µg/L	N
12339	Uranium, Total	10/13/1998	1.94	-	µg/L	N
12339	Uranium, Total	10/21/1998	1.74	-	µg/L	N
12339	Uranium, Total	11/23/1998	2.58	-	µg/L	N
12339	Uranium, Total	02/17/1999	2.773	U	µg/L	N
12339	Uranium, Total	04/27/1999	2.69	-	µg/L	N
12339	Uranium, Total	06/28/1999	3.19	-	µg/L	N
12339	Uranium, Total	08/17/1999	2.29	-	µg/L	N
12339	Uranium, Total	10/27/1999	3	-	µg/L	N
12339	Uranium, Total	11/16/1999	2.91	-	µg/L	N
12339	Uranium, Total	12/08/1999	2.71	-	µg/L	N
12339	Uranium, Total	02/23/2000	2.5603	J	µg/L	N
12339	Uranium, Total	04/25/2000	2.575	J	µg/L	N
12339	Uranium, Total	04/25/2000	2.633	J	µg/L	FD
12339	Uranium, Total	06/20/2000	3.351	J	µg/L	N
12339	Uranium, Total	08/23/2000	3.045	J	µg/L	N
12339	Uranium, Total	10/24/2000	2.908	J	µg/L	N
12339	Uranium, Total	12/12/2000	3.197	-	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	4-Nitroaniline	06/29/1998	20	UJ	µg/L	N
12339	4-Nitroaniline	07/14/1998	20	U	µg/L	N
12339	4-Nitroaniline	07/22/1998	20	U	µg/L	N
12339	4-Nitroaniline	07/22/1998	20	U	µg/L	FD
12339	4-Nitroaniline	07/28/1998	20	U	µg/L	N
12339	4-Nitroaniline	08/11/1998	20	U	µg/L	N
12339	4-Nitroaniline	08/20/1998	20	U	µg/L	N
12339	4-Nitroaniline	08/20/1998	20	U	µg/L	FD
12339	4-Nitroaniline	08/25/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/08/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/16/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/21/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/23/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/28/1998	20	U	µg/L	N
12339	4-Nitroaniline	09/30/1998	20	U	µg/L	N
12339	4-Nitroaniline	10/08/1998	50	U	µg/L	N
12339	4-Nitroaniline	10/13/1998	50	U	µg/L	N
12339	4-Nitroaniline	10/21/1998	50	Z	µg/L	N
12339	4-Nitroaniline	10/21/1998	50	UJ	µg/L	N
12339	4-Nitroaniline	11/23/1998	20	U	µg/L	N
12339	4-Nitroaniline	02/17/1999	25	U	µg/L	N
12339	4-Nitroaniline	04/27/1999	50	UJ	µg/L	N
12339	4-Nitroaniline	06/28/1999	25	U	µg/L	N
12339	4-Nitroaniline	08/17/1999	25	U	µg/L	N
12339	4-Nitroaniline	10/27/1999	20	U	µg/L	N
12339	4-Nitroaniline	11/16/1999	50	U	µg/L	N
12339	4-Nitroaniline	12/08/1999	50	U	µg/L	N
12339	4-Nitroaniline	02/23/2000	50	U	µg/L	N
12339	4-Nitroaniline	04/25/2000	50	U	µg/L	N
12339	4-Nitroaniline	04/25/2000	50	U	µg/L	FD
12339	4-Nitroaniline	06/20/2000	50	U	µg/L	N
12339	4-Nitroaniline	08/23/2000	50	Z	µg/L	N
12339	4-Nitroaniline	08/23/2000	50	UJ	µg/L	N
12339	4-Nitroaniline	10/24/2000	50	U	µg/L	N
12339	4-Nitroaniline	12/12/2000	50	U	µg/L	N
12339	Carbazole	06/29/1998	5	UJ	µg/L	N
12339	Carbazole	07/14/1998	5	U	µg/L	N
12339	Carbazole	07/22/1998	5	U	µg/L	N
12339	Carbazole	07/22/1998	5	U	µg/L	FD
12339	Carbazole	07/28/1998	5	U	µg/L	N
12339	Carbazole	08/11/1998	5	U	µg/L	N
12339	Carbazole	08/20/1998	5	U	µg/L	N
12339	Carbazole	08/20/1998	5	U	µg/L	FD
12339	Carbazole	08/25/1998	5	U	µg/L	N
12339	Carbazole	09/08/1998	5	U	µg/L	N
12339	Carbazole	09/16/1998	5	U	µg/L	N
12339	Carbazole	09/21/1998	5	U	µg/L	N
12339	Carbazole	09/23/1998	5	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Carbazole	09/28/1998	5	U	µg/L	N
12339	Carbazole	09/30/1998	5	U	µg/L	N
12339	Carbazole	10/08/1998	10	UJ	µg/L	N
12339	Carbazole	10/13/1998	10	U	µg/L	N
12339	Carbazole	10/21/1998	10	Z	µg/L	N
12339	Carbazole	10/21/1998	10	U	µg/L	N
12339	Carbazole	11/23/1998	5	U	µg/L	N
12339	Carbazole	02/17/1999	5	U	µg/L	N
12339	Carbazole	04/27/1999	10	U	µg/L	N
12339	Carbazole	06/28/1999	10	U	µg/L	N
12339	Carbazole	08/17/1999	10	U	µg/L	N
12339	Carbazole	10/27/1999	5	U	µg/L	N
12339	Carbazole	11/16/1999	10	U	µg/L	N
12339	Carbazole	12/08/1999	10	U	µg/L	N
12339	Carbazole	02/23/2000	10	U	µg/L	N
12339	Carbazole	04/25/2000	10	U	µg/L	N
12339	Carbazole	04/25/2000	10	U	µg/L	FD
12339	Carbazole	06/20/2000	10	U	µg/L	N
12339	Carbazole	08/23/2000	10	Z	µg/L	N
12339	Carbazole	08/23/2000	10	UJ	µg/L	N
12339	Carbazole	10/24/2000	10	U	µg/L	N
12339	Carbazole	12/12/2000	10	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	06/29/1998	5	UJ	µg/L	N
12339	bis(2-Chloroisopropyl) ether	07/14/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	07/22/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	07/22/1998	5	U	µg/L	FD
12339	bis(2-Chloroisopropyl) ether	07/28/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/11/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/20/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/20/1998	5	U	µg/L	FD
12339	bis(2-Chloroisopropyl) ether	08/25/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/08/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/16/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/21/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/23/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/28/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	09/30/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/08/1998	10	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/13/1998	10	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/21/1998	10	Z	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/21/1998	10	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	02/17/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	04/27/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	06/28/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/17/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/27/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	bis(2-Chloroisopropyl) ether	12/08/1999	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	02/23/2000	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	04/25/2000	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	04/25/2000	5	U	µg/L	FD
12339	bis(2-Chloroisopropyl) ether	06/20/2000	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/23/2000	5	Z	µg/L	N
12339	bis(2-Chloroisopropyl) ether	08/23/2000	5	UJ	µg/L	N
12339	bis(2-Chloroisopropyl) ether	10/24/2000	5	U	µg/L	N
12339	bis(2-Chloroisopropyl) ether	12/12/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	06/29/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	07/14/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	07/22/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	07/22/1998	1	U	µg/L	FD
12339	1,1-Dichloroethene	07/28/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	08/11/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	08/20/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	08/20/1998	1	U	µg/L	FD
12339	1,1-Dichloroethene	08/25/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/08/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/16/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/21/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/23/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/28/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	09/30/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	10/08/1998	1	UJ	µg/L	N
12339	1,1-Dichloroethene	10/13/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	10/21/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	11/23/1998	1	U	µg/L	N
12339	1,1-Dichloroethene	02/17/1999	1	U	µg/L	N
12339	1,1-Dichloroethene	04/27/1999	5	U	µg/L	N
12339	1,1-Dichloroethene	06/28/1999	1	U	µg/L	N
12339	1,1-Dichloroethene	08/17/1999	1	U	µg/L	N
12339	1,1-Dichloroethene	10/27/1999	1	U	µg/L	N
12339	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
12339	1,1-Dichloroethene	12/08/1999	1	U	µg/L	N
12339	1,1-Dichloroethene	02/23/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	04/25/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	04/25/2000	5	U	µg/L	FD
12339	1,1-Dichloroethene	06/20/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	08/23/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	10/24/2000	5	U	µg/L	N
12339	1,1-Dichloroethene	12/12/2000	5	U	µg/L	N
12339	1,2-Dichloroethene (Total)	06/29/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	07/14/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	07/22/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	07/22/1998	1	U	µg/L	FD
12339	1,2-Dichloroethene (Total)	07/28/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	08/11/1998	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	1,2-Dichloroethene (Total)	08/20/1998	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	08/20/1998	10	U	µg/L	FD
12339	1,2-Dichloroethene (Total)	08/25/1998	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/08/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/16/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/21/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/23/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/28/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	09/30/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	10/08/1998	10	UJ	µg/L	N
12339	1,2-Dichloroethene (Total)	10/13/1998	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	10/21/1998	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	02/17/1999	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	04/27/1999	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	06/28/1999	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	08/17/1999	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	10/27/1999	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	12/08/1999	1	U	µg/L	N
12339	1,2-Dichloroethene (Total)	02/23/2000	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	04/25/2000	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	04/25/2000	10	U	µg/L	FD
12339	1,2-Dichloroethene (Total)	06/20/2000	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	08/23/2000	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	10/24/2000	10	U	µg/L	N
12339	1,2-Dichloroethene (Total)	12/12/2000	10	U	µg/L	N
12339	Bromodichloromethane	06/29/1998	0.4	J	µg/L	N
12339	Bromodichloromethane	07/14/1998	1	U	µg/L	N
12339	Bromodichloromethane	07/22/1998	1	U	µg/L	N
12339	Bromodichloromethane	07/22/1998	1	U	µg/L	FD
12339	Bromodichloromethane	07/28/1998	1	U	µg/L	N
12339	Bromodichloromethane	08/11/1998	10	U	µg/L	N
12339	Bromodichloromethane	08/20/1998	10	U	µg/L	N
12339	Bromodichloromethane	08/20/1998	10	U	µg/L	FD
12339	Bromodichloromethane	08/25/1998	10	U	µg/L	N
12339	Bromodichloromethane	09/08/1998	1	U	µg/L	N
12339	Bromodichloromethane	09/16/1998	1	U	µg/L	N
12339	Bromodichloromethane	09/21/1998	1	U	µg/L	N
12339	Bromodichloromethane	09/23/1998	1	U	µg/L	N
12339	Bromodichloromethane	09/28/1998	1	U	µg/L	N
12339	Bromodichloromethane	09/30/1998	1	U	µg/L	N
12339	Bromodichloromethane	10/08/1998	10	UJ	µg/L	N
12339	Bromodichloromethane	10/13/1998	1	U	µg/L	N
12339	Bromodichloromethane	10/21/1998	10	U	µg/L	N
12339	Bromodichloromethane	11/23/1998	10	U	µg/L	N
12339	Bromodichloromethane	02/17/1999	10	U	µg/L	N
12339	Bromodichloromethane	04/27/1999	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Bromodichloromethane	06/28/1999	1	U	µg/L	N
12339	Bromodichloromethane	08/17/1999	1	U	µg/L	N
12339	Bromodichloromethane	10/27/1999	1	U	µg/L	N
12339	Bromodichloromethane	11/16/1999	10	U	µg/L	N
12339	Bromodichloromethane	12/08/1999	1	U	µg/L	N
12339	Bromodichloromethane	02/23/2000	10	U	µg/L	N
12339	Bromodichloromethane	04/25/2000	10	U	µg/L	N
12339	Bromodichloromethane	04/25/2000	10	U	µg/L	FD
12339	Bromodichloromethane	06/20/2000	10	U	µg/L	N
12339	Bromodichloromethane	08/23/2000	10	U	µg/L	N
12339	Bromodichloromethane	10/24/2000	10	U	µg/L	N
12339	Bromodichloromethane	12/12/2000	10	U	µg/L	N
12339	Tetrachloroethene	06/29/1998	1	U	µg/L	N
12339	Tetrachloroethene	07/14/1998	1	U	µg/L	N
12339	Tetrachloroethene	07/22/1998	1	U	µg/L	N
12339	Tetrachloroethene	07/22/1998	1	U	µg/L	FD
12339	Tetrachloroethene	07/28/1998	1	U	µg/L	N
12339	Tetrachloroethene	08/11/1998	10	U	µg/L	N
12339	Tetrachloroethene	08/20/1998	10	U	µg/L	N
12339	Tetrachloroethene	08/20/1998	10	U	µg/L	FD
12339	Tetrachloroethene	08/25/1998	10	U	µg/L	N
12339	Tetrachloroethene	09/08/1998	1	U	µg/L	N
12339	Tetrachloroethene	09/16/1998	1	U	µg/L	N
12339	Tetrachloroethene	09/21/1998	1	U	µg/L	N
12339	Tetrachloroethene	09/23/1998	1	U	µg/L	N
12339	Tetrachloroethene	09/28/1998	1	U	µg/L	N
12339	Tetrachloroethene	09/30/1998	1	U	µg/L	N
12339	Tetrachloroethene	10/08/1998	10	UJ	µg/L	N
12339	Tetrachloroethene	10/13/1998	1	U	µg/L	N
12339	Tetrachloroethene	10/21/1998	10	U	µg/L	N
12339	Tetrachloroethene	11/23/1998	10	U	µg/L	N
12339	Tetrachloroethene	02/17/1999	10	U	µg/L	N
12339	Tetrachloroethene	04/27/1999	10	U	µg/L	N
12339	Tetrachloroethene	06/28/1999	1	U	µg/L	N
12339	Tetrachloroethene	08/17/1999	1	U	µg/L	N
12339	Tetrachloroethene	10/27/1999	1	U	µg/L	N
12339	Tetrachloroethene	11/16/1999	10	U	µg/L	N
12339	Tetrachloroethene	12/08/1999	1	U	µg/L	N
12339	Tetrachloroethene	02/23/2000	10	U	µg/L	N
12339	Tetrachloroethene	04/25/2000	10	U	µg/L	N
12339	Tetrachloroethene	04/25/2000	10	U	µg/L	FD
12339	Tetrachloroethene	06/20/2000	10	U	µg/L	N
12339	Tetrachloroethene	08/23/2000	10	U	µg/L	N
12339	Tetrachloroethene	10/24/2000	10	U	µg/L	N
12339	Tetrachloroethene	12/12/2000	10	U	µg/L	N
12339	Trichloroethene	06/29/1998	1	U	µg/L	N
12339	Trichloroethene	07/14/1998	1	U	µg/L	N
12339	Trichloroethene	07/22/1998	1	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Trichloroethene	07/22/1998	1	U	µg/L	FD
12339	Trichloroethene	07/28/1998	1	U	µg/L	N
12339	Trichloroethene	08/11/1998	1	U	µg/L	N
12339	Trichloroethene	08/20/1998	1	U	µg/L	N
12339	Trichloroethene	08/20/1998	1	U	µg/L	FD
12339	Trichloroethene	08/25/1998	1	U	µg/L	N
12339	Trichloroethene	09/08/1998	1	U	µg/L	N
12339	Trichloroethene	09/16/1998	1	U	µg/L	N
12339	Trichloroethene	09/21/1998	1	U	µg/L	N
12339	Trichloroethene	09/23/1998	1	U	µg/L	N
12339	Trichloroethene	09/28/1998	1	U	µg/L	N
12339	Trichloroethene	09/30/1998	1	U	µg/L	N
12339	Trichloroethene	10/08/1998	1	UJ	µg/L	N
12339	Trichloroethene	10/13/1998	1	U	µg/L	N
12339	Trichloroethene	10/21/1998	1	U	µg/L	N
12339	Trichloroethene	11/23/1998	1	U	µg/L	N
12339	Trichloroethene	02/17/1999	3	U	µg/L	N
12339	Trichloroethene	04/27/1999	3	U	µg/L	N
12339	Trichloroethene	06/28/1999	1	U	µg/L	N
12339	Trichloroethene	08/17/1999	1	U	µg/L	N
12339	Trichloroethene	10/27/1999	1	U	µg/L	N
12339	Trichloroethene	11/16/1999	3	U	µg/L	N
12339	Trichloroethene	12/08/1999	1	U	µg/L	N
12339	Trichloroethene	02/23/2000	3	U	µg/L	N
12339	Trichloroethene	04/25/2000	3	U	µg/L	N
12339	Trichloroethene	04/25/2000	3	U	µg/L	FD
12339	Trichloroethene	06/20/2000	3	U	µg/L	N
12339	Trichloroethene	08/23/2000	3	U	µg/L	N
12339	Trichloroethene	10/24/2000	3	U	µg/L	N
12339	Trichloroethene	12/12/2000	3	U	µg/L	N
12339	Vinyl chloride	06/29/1998	1	U	µg/L	N
12339	Vinyl chloride	07/14/1998	1	U	µg/L	N
12339	Vinyl chloride	07/22/1998	1	U	µg/L	N
12339	Vinyl chloride	07/22/1998	1	U	µg/L	FD
12339	Vinyl chloride	07/28/1998	1	U	µg/L	N
12339	Vinyl chloride	08/11/1998	1	U	µg/L	N
12339	Vinyl chloride	08/20/1998	1	U	µg/L	N
12339	Vinyl chloride	08/20/1998	1	U	µg/L	FD
12339	Vinyl chloride	08/25/1998	1	U	µg/L	N
12339	Vinyl chloride	09/08/1998	1	U	µg/L	N
12339	Vinyl chloride	09/16/1998	1	U	µg/L	N
12339	Vinyl chloride	09/21/1998	1	U	µg/L	N
12339	Vinyl chloride	09/23/1998	1	U	µg/L	N
12339	Vinyl chloride	09/28/1998	1	U	µg/L	N
12339	Vinyl chloride	09/30/1998	1	U	µg/L	N
12339	Vinyl chloride	10/08/1998	2	UJ	µg/L	N
12339	Vinyl chloride	10/13/1998	2	U	µg/L	N
12339	Vinyl chloride	10/21/1998	2	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339	Vinyl chloride	11/23/1998	2	U	µg/L	N
12339	Vinyl chloride	02/17/1999	1	U	µg/L	N
12339	Vinyl chloride	04/27/1999	1	U	µg/L	N
12339	Vinyl chloride	05/28/1999	1	U	µg/L	N
12339	Vinyl chloride	08/17/1999	1	U	µg/L	N
12339	Vinyl chloride	10/27/1999	1	U	µg/L	N
12339	Vinyl chloride	11/16/1999	1	U	µg/L	N
12339	Vinyl chloride	12/08/1999	1	U	µg/L	N
12339	Vinyl chloride	02/23/2000	1	U	µg/L	N
12339	Vinyl chloride	04/25/2000	1	U	µg/L	N
12339	Vinyl chloride	04/25/2000	1	U	µg/L	FD
12339	Vinyl chloride	06/20/2000	1	U	µg/L	N
12339	Vinyl chloride	08/23/2000	1	U	µg/L	N
12339	Vinyl chloride	10/24/2000	1	U	µg/L	N
12339	Vinyl chloride	12/12/2000	1	U	µg/L	N
12340	Total Organic Carbon	07/28/1998	1	-	mg/L	N
12340	Total Organic Carbon	08/25/1998	2.79	-	mg/L	N
12340	Total Organic Carbon	09/14/1998	0.84	-	mg/L	N
12340	Total Organic Carbon	10/21/1998	1	UJ	mg/L	N
12340	Total Organic Carbon	11/24/1998	1.19	-	mg/L	N
12340	Total Organic Carbon	12/15/1998	1.32	-	mg/L	N
12340	Total Organic Carbon	01/20/1999	1	U	mg/L	N
12340	Total Organic Carbon	01/20/1999	1	U	mg/L	FD
12340	Total Organic Carbon	02/22/1999	3.85	U	mg/L	N
12340	Total Organic Carbon	03/16/1999	2.72	U	mg/L	N
12340	Total Organic Carbon	04/28/1999	2.26	-	mg/L	N
12340	Total Organic Carbon	05/24/1999	2.99	U	mg/L	N
12340	Total Organic Carbon	06/15/1999	2.4	J	mg/L	N
12340	Total Organic Carbon	06/28/1999	1.6	U	mg/L	N
12340	Total Organic Carbon	07/27/1999	2.91	-	mg/L	N
12340	Total Organic Carbon	07/27/1999	2.2	-	mg/L	FD
12340	Total Organic Carbon	09/13/1999	2.62	U	mg/L	N
12340	Total Organic Carbon	09/13/1999	2.6	U	mg/L	FD
12340	Total Organic Carbon	09/28/1999	3.37	U	mg/L	N
12340	Total Organic Carbon	09/28/1999	3.9	U	mg/L	FD
12340	Total Organic Carbon	10/13/1999	1	U	mg/L	N
12340	Total Organic Carbon	11/16/1999	4.21	-	mg/L	N
12340	Total Organic Carbon	12/08/1999	1.7	J	mg/L	N
12340	Total Organic Carbon	02/23/2000	9.81	J	mg/L	N
12340	Total Organic Carbon	04/26/2000	1.368	-	mg/L	N
12340	Total Organic Carbon	06/20/2000	1.97	J	mg/L	N
12340	Total Organic Carbon	06/20/2000	2.09	J	mg/L	FD
12340	Total Organic Carbon	08/22/2000	1.6	J	mg/L	N
12340	Total Organic Carbon	10/24/2000	2.36	-	mg/L	N
12340	Total Organic Carbon	10/24/2000	2.47	-	mg/L	FD
12340	Total Organic Carbon	12/12/2000	2.77	-	mg/L	N
12340	Total Organic Halogens	07/28/1998	0.012	U	mg/L	N
12340	Total Organic Halogens	08/25/1998	0.0274	-	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Total Organic Halogens	09/14/1998	0.0276	J	mg/L	N
12340	Total Organic Halogens	10/21/1998	0.0159	U	mg/L	N
12340	Total Organic Halogens	11/24/1998	0.00985	J	mg/L	N
12340	Total Organic Halogens	12/15/1998	0.0384	J	mg/L	N
12340	Total Organic Halogens	01/20/1999	0.03	J	mg/L	N
12340	Total Organic Halogens	01/20/1999	0.04	J	mg/L	FD
12340	Total Organic Halogens	02/22/1999	0.0355	-	mg/L	N
12340	Total Organic Halogens	03/16/1999	0.0242	-	mg/L	N
12340	Total Organic Halogens	04/28/1999	0.0461	-	mg/L	N
12340	Total Organic Halogens	05/24/1999	0.00866	J	mg/L	N
12340	Total Organic Halogens	06/15/1999	0.01	UJ	mg/L	N
12340	Total Organic Halogens	06/28/1999	0.0226	-	mg/L	N
12340	Total Organic Halogens	07/27/1999	0.0323	-	mg/L	N
12340	Total Organic Halogens	07/27/1999	0.0417	-	mg/L	FD
12340	Total Organic Halogens	09/13/1999	0.019	-	mg/L	N
12340	Total Organic Halogens	09/13/1999	0.023	-	mg/L	FD
12340	Total Organic Halogens	09/28/1999	0.0509	-	mg/L	N
12340	Total Organic Halogens	09/28/1999	0.029	-	mg/L	FD
12340	Total Organic Halogens	10/13/1999	0.158	J	mg/L	N
12340	Total Organic Halogens	11/16/1999	0.0331	-	mg/L	N
12340	Total Organic Halogens	12/08/1999	0.02	UJ	mg/L	N
12340	Total Organic Halogens	02/23/2000	0.0349	U	mg/L	N
12340	Total Organic Halogens	04/26/2000	0.02064	J	mg/L	N
12340	Total Organic Halogens	06/20/2000	0.0205	J	mg/L	N
12340	Total Organic Halogens	06/20/2000	0.0192	J	mg/L	FD
12340	Total Organic Halogens	08/22/2000	0.0243	J	mg/L	N
12340	Total Organic Halogens	10/24/2000	0.0225	U	mg/L	N
12340	Total Organic Halogens	10/24/2000	0.0209	U	mg/L	FD
12340	Total Organic Halogens	12/12/2000	0.0214	J	mg/L	N
12340	Boron	07/28/1998	0.0425	-	mg/L	N
12340	Boron	08/25/1998	0.0322	-	mg/L	N
12340	Boron	09/14/1998	0.0288	U	mg/L	N
12340	Boron	10/21/1998	0.0182	U	mg/L	N
12340	Boron	11/24/1998	0.0848	-	mg/L	N
12340	Boron	12/15/1998	0.101	U	mg/L	N
12340	Boron	01/20/1999	0.077	-	mg/L	N
12340	Boron	01/20/1999	0.0624	-	mg/L	FD
12340	Boron	02/22/1999	0.0442	-	mg/L	N
12340	Boron	03/16/1999	0.0433	-	mg/L	N
12340	Boron	04/28/1999	0.044	-	mg/L	N
12340	Boron	05/24/1999	0.0687	J	mg/L	N
12340	Boron	06/15/1999	0.082	-	mg/L	N
12340	Boron	06/28/1999	0.165	-	mg/L	N
12340	Boron	07/27/1999	0.168	J	mg/L	N
12340	Boron	07/27/1999	0.0363	J	mg/L	FD
12340	Boron	09/13/1999	0.183	-	mg/L	N
12340	Boron	09/13/1999	0.176	-	mg/L	FD
12340	Boron	09/28/1999	0.192	-	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Boron	09/28/1999	0.197	-	mg/L	FD
12340	Boron	10/13/1999	0.24	-	mg/L	N
12340	Boron	11/16/1999	0.183	-	mg/L	N
12340	Boron	12/08/1999	0.182	-	mg/L	N
12340	Boron	02/23/2000	0.138	-	mg/L	N
12340	Boron	04/26/2000	0.133	U	mg/L	N
12340	Boron	06/20/2000	0.161	J	mg/L	N
12340	Boron	06/20/2000	0.163	J	mg/L	FD
12340	Boron	10/24/2000	0.188	J	mg/L	N
12340	Boron	10/24/2000	0.189	J	mg/L	FD
12340	Boron	12/12/2000	0.235	J	mg/L	N
12340	Mercury	07/28/1998	0.0001	U	mg/L	N
12340	Mercury	08/25/1998	0.0001	U	mg/L	N
12340	Mercury	09/14/1998	0.0001	U	mg/L	N
12340	Mercury	10/21/1998	0.0001	U	mg/L	N
12340	Mercury	11/24/1998	0.0001	U	mg/L	N
12340	Mercury	12/15/1998	0.0001	U	mg/L	N
12340	Mercury	01/20/1999	0.0001	U	mg/L	N
12340	Mercury	01/20/1999	0.0001	U	mg/L	FD
12340	Mercury	02/22/1999	0.00012	U	mg/L	N
12340	Mercury	03/16/1999	0.00012	U	mg/L	N
12340	Mercury	04/28/1999	0.00012	U	mg/L	N
12340	Mercury	05/24/1999	0.00012	U	mg/L	N
12340	Mercury	06/15/1999	0.00015	U	mg/L	N
12340	Mercury	06/28/1999	0.00026	-	mg/L	N
12340	Mercury	07/27/1999	0.00004	U	mg/L	N
12340	Mercury	07/27/1999	0.00004	U	mg/L	FD
12340	Mercury	09/13/1999	0.0001	U	mg/L	N
12340	Mercury	09/13/1999	0.0001	U	mg/L	FD
12340	Mercury	09/28/1999	0.00004	U	mg/L	N
12340	Mercury	09/28/1999	0.00004	U	mg/L	FD
12340	Mercury	10/13/1999	0.0001	U	mg/L	N
12340	Mercury	11/16/1999	0.00004	U	mg/L	N
12340	Mercury	12/08/1999	0.0001	UJ	mg/L	N
12340	Mercury	02/23/2000	0.00004	U	mg/L	N
12340	Mercury	04/26/2000	0.00018	U	mg/L	N
12340	Mercury	06/20/2000	0.000043	U	mg/L	N
12340	Mercury	06/20/2000	0.000043	U	mg/L	FD
12340	Mercury	10/24/2000	0.000048	U	mg/L	N
12340	Mercury	10/24/2000	0.000048	U	mg/L	FD
12340	Mercury	12/12/2000	0.000048	U	mg/L	N
12340	alpha-Chlordane	07/28/1998	0.05	U	µg/L	N
12340	alpha-Chlordane	08/25/1998	0.031	U	µg/L	N
12340	alpha-Chlordane	09/14/1998	0.04	U	µg/L	N
12340	alpha-Chlordane	10/21/1998	0.05	U	µg/L	N
12340	alpha-Chlordane	11/24/1998	0.1	U	µg/L	N
12340	alpha-Chlordane	12/15/1998	0.1	U	µg/L	N
12340	alpha-Chlordane	01/20/1999	0.04	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	alpha-Chlordane	01/20/1999	0.04	U	µg/L	FD
12340	alpha-Chlordane	02/22/1999	0.01	UJ	µg/L	N
12340	alpha-Chlordane	03/16/1999	0.01	U	µg/L	N
12340	alpha-Chlordane	04/28/1999	0.01	U	µg/L	N
12340	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
12340	alpha-Chlordane	06/15/1999	0.04	U	µg/L	N
12340	alpha-Chlordane	06/28/1999	0.04	UJ	µg/L	N
12340	alpha-Chlordane	07/27/1999	0.01	UJ	µg/L	N
12340	alpha-Chlordane	07/27/1999	0.01	UJ	µg/L	FD
12340	alpha-Chlordane	09/13/1999	0.05	U	µg/L	N
12340	alpha-Chlordane	09/13/1999	0.05	U	µg/L	FD
12340	alpha-Chlordane	09/28/1999	0.1	U	µg/L	N
12340	alpha-Chlordane	09/28/1999	0.1	U	µg/L	FD
12340	alpha-Chlordane	10/13/1999	0.04	U	µg/L	N
12340	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
12340	alpha-Chlordane	12/08/1999	0.04	U	µg/L	N
12340	alpha-Chlordane	02/23/2000	0.1	U	µg/L	N
12340	alpha-Chlordane	04/26/2000	0.1	U	µg/L	N
12340	alpha-Chlordane	06/20/2000	0.1	Z	µg/L	N
12340	alpha-Chlordane	06/20/2000	0.1	UJ	µg/L	FD
12340	alpha-Chlordane	06/20/2000	0.1	UJ	µg/L	N
12340	alpha-Chlordane	06/20/2000	0.1	Z	µg/L	FD
12340	alpha-Chlordane	08/22/2000	0.1	U	µg/L	N
12340	alpha-Chlordane	10/24/2000	0.5	UJ	µg/L	N
12340	alpha-Chlordane	10/24/2000	0.5	UJ	µg/L	FD
12340	alpha-Chlordane	12/12/2000	0.1	U	µg/L	N
12340	Technetium-99	07/28/1998	3.38	U	pCi/L	N
12340	Technetium-99	08/25/1998	5.2	U	pCi/L	N
12340	Technetium-99	09/14/1998	3.23	U	pCi/L	N
12340	Technetium-99	10/21/1998	-1.115	U	pCi/L	N
12340	Technetium-99	11/24/1998	-2.311	U	pCi/L	N
12340	Technetium-99	12/15/1998	-1.105	U	pCi/L	N
12340	Technetium-99	01/20/1999	-0.801	U	pCi/L	N
12340	Technetium-99	01/20/1999	-1.579	U	pCi/L	FD
12340	Technetium-99	02/22/1999	-1.25	U	pCi/L	N
12340	Technetium-99	03/16/1999	11.043	U	pCi/L	N
12340	Technetium-99	04/28/1999	0.63	UJ	pCi/L	N
12340	Technetium-99	05/24/1999	13.55	J	pCi/L	N
12340	Technetium-99	06/15/1999	38.35	J	pCi/L	N
12340	Technetium-99	06/28/1999	10.83	UJ	pCi/L	N
12340	Technetium-99	07/27/1999	5.09	Z	pCi/L	N
12340	Technetium-99	07/27/1999	-0.8	UJ	pCi/L	N
12340	Technetium-99	07/27/1999	8.31	Z	pCi/L	FD
12340	Technetium-99	07/27/1999	0.86	UJ	pCi/L	FD
12340	Technetium-99	09/13/1999	1.123	UJ	pCi/L	N
12340	Technetium-99	09/13/1999	-0.209	UJ	pCi/L	FD
12340	Technetium-99	09/28/1999	0.704	UJ	pCi/L	N
12340	Technetium-99	09/28/1999	-0.188	UJ	pCi/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Technetium-99	10/13/1999	-4.517	UJ	pCi/L	N
12340	Technetium-99	11/16/1999	-3.919	UJ	pCi/L	N
12340	Technetium-99	12/08/1999	0.685	UJ	pCi/L	N
12340	Technetium-99	02/23/2000	-1.137	UJ	pCi/L	N
12340	Technetium-99	04/26/2000	-3.896	UJ	pCi/L	N
12340	Technetium-99	06/20/2000	-1.795	UJ	pCi/L	N
12340	Technetium-99	06/20/2000	-3.649	UJ	pCi/L	FD
12340	Technetium-99	10/24/2000	1.15	UJ	pCi/L	N
12340	Technetium-99	10/24/2000	0.234	UJ	pCi/L	FD
12340	Technetium-99	12/12/2000	-9.043	U	pCi/L	N
12340	Uranium, Total	07/28/1998	3.133	-	µg/L	N
12340	Uranium, Total	08/25/1998	2.056	-	µg/L	N
12340	Uranium, Total	09/14/1998	0.029	U	µg/L	N
12340	Uranium, Total	10/21/1998	3.02	-	µg/L	N
12340	Uranium, Total	11/24/1998	2.76	-	µg/L	N
12340	Uranium, Total	12/15/1998	9.14	-	µg/L	N
12340	Uranium, Total	01/20/1999	4.921	J	µg/L	N
12340	Uranium, Total	01/20/1999	5.409	J	µg/L	FD
12340	Uranium, Total	02/22/1999	3.656	U	µg/L	N
12340	Uranium, Total	03/16/1999	4.437	-	µg/L	N
12340	Uranium, Total	04/28/1999	4.9	-	µg/L	N
12340	Uranium, Total	05/24/1999	4.27	-	µg/L	N
12340	Uranium, Total	06/15/1999	8.64	-	µg/L	N
12340	Uranium, Total	06/28/1999	6.8	-	µg/L	N
12340	Uranium, Total	07/27/1999	4.656	-	µg/L	N
12340	Uranium, Total	07/27/1999	4.68	-	µg/L	FD
12340	Uranium, Total	09/13/1999	4.45	-	µg/L	N
12340	Uranium, Total	09/13/1999	4.24	-	µg/L	FD
12340	Uranium, Total	09/28/1999	4.57	-	µg/L	N
12340	Uranium, Total	09/28/1999	4.36	-	µg/L	FD
12340	Uranium, Total	10/13/1999	4.39	-	µg/L	N
12340	Uranium, Total	11/16/1999	4.31	-	µg/L	N
12340	Uranium, Total	12/08/1999	4.45	-	µg/L	N
12340	Uranium, Total	02/23/2000	5.4502	J	µg/L	N
12340	Uranium, Total	04/26/2000	8.142	J	µg/L	N
12340	Uranium, Total	06/20/2000	8.305	J	µg/L	N
12340	Uranium, Total	06/20/2000	7.107	J	µg/L	FD
12340	Uranium, Total	10/24/2000	8.132	J	µg/L	N
12340	Uranium, Total	10/24/2000	8.422	J	µg/L	FD
12340	Uranium, Total	12/12/2000	8.552	Z	µg/L	N
12340	Uranium, Total	12/12/2000	8.3	-	µg/L	N
12340	4-Nitroaniline	07/28/1998	20	U	µg/L	N
12340	4-Nitroaniline	08/25/1998	20	U	µg/L	N
12340	4-Nitroaniline	09/14/1998	20	U	µg/L	N
12340	4-Nitroaniline	10/21/1998	50	U	µg/L	N
12340	4-Nitroaniline	11/24/1998	50	U	µg/L	N
12340	4-Nitroaniline	12/15/1998	20	U	µg/L	N
12340	4-Nitroaniline	01/20/1999	50	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	4-Nitroaniline	01/20/1999	50	U	µg/L	FD
12340	4-Nitroaniline	02/22/1999	25	U	µg/L	N
12340	4-Nitroaniline	03/16/1999	25	U	µg/L	N
12340	4-Nitroaniline	04/28/1999	50	UJ	µg/L	N
12340	4-Nitroaniline	05/24/1999	50	U	µg/L	N
12340	4-Nitroaniline	06/15/1999	25	U	µg/L	N
12340	4-Nitroaniline	06/28/1999	25	U	µg/L	N
12340	4-Nitroaniline	07/27/1999	25	U	µg/L	N
12340	4-Nitroaniline	07/27/1999	25	U	µg/L	FD
12340	4-Nitroaniline	09/13/1999	25	U	µg/L	N
12340	4-Nitroaniline	09/13/1999	25	U	µg/L	FD
12340	4-Nitroaniline	09/28/1999	50	U	µg/L	N
12340	4-Nitroaniline	09/28/1999	50	U	µg/L	FD
12340	4-Nitroaniline	10/13/1999	25	U	µg/L	N
12340	4-Nitroaniline	11/16/1999	50	U	µg/L	N
12340	4-Nitroaniline	12/08/1999	50	U	µg/L	N
12340	4-Nitroaniline	02/23/2000	50	U	µg/L	N
12340	4-Nitroaniline	04/26/2000	50	U	µg/L	N
12340	4-Nitroaniline	06/20/2000	50	U	µg/L	N
12340	4-Nitroaniline	06/20/2000	50	U	µg/L	FD
12340	4-Nitroaniline	08/22/2000	50	U	µg/L	N
12340	4-Nitroaniline	10/24/2000	50	U	µg/L	N
12340	4-Nitroaniline	10/24/2000	50	U	µg/L	FD
12340	4-Nitroaniline	12/12/2000	50	U	µg/L	N
12340	Carbazole	07/28/1998	5	U	µg/L	N
12340	Carbazole	08/25/1998	5	U	µg/L	N
12340	Carbazole	09/14/1998	5	U	µg/L	N
12340	Carbazole	10/21/1998	10	U	µg/L	N
12340	Carbazole	11/24/1998	5	U	µg/L	N
12340	Carbazole	12/15/1998	5	U	µg/L	N
12340	Carbazole	01/20/1999	10	U	µg/L	N
12340	Carbazole	01/20/1999	10	U	µg/L	FD
12340	Carbazole	02/22/1999	5	U	µg/L	N
12340	Carbazole	03/16/1999	5	U	µg/L	N
12340	Carbazole	04/28/1999	10	U	µg/L	N
12340	Carbazole	05/24/1999	10	U	µg/L	N
12340	Carbazole	06/15/1999	10	U	µg/L	N
12340	Carbazole	06/28/1999	10	U	µg/L	N
12340	Carbazole	07/27/1999	5	U	µg/L	N
12340	Carbazole	07/27/1999	5	U	µg/L	FD
12340	Carbazole	09/13/1999	10	U	µg/L	N
12340	Carbazole	09/13/1999	10	U	µg/L	FD
12340	Carbazole	09/28/1999	10	U	µg/L	N
12340	Carbazole	09/28/1999	10	U	µg/L	FD
12340	Carbazole	10/13/1999	10	U	µg/L	N
12340	Carbazole	11/16/1999	10	U	µg/L	N
12340	Carbazole	12/08/1999	10	U	µg/L	N
12340	Carbazole	02/23/2000	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Carbazole	04/26/2000	10	U	µg/L	N
12340	Carbazole	06/20/2000	10	U	µg/L	N
12340	Carbazole	06/20/2000	10	U	µg/L	FD
12340	Carbazole	08/22/2000	10	U	µg/L	N
12340	Carbazole	10/24/2000	10	U	µg/L	N
12340	Carbazole	10/24/2000	10	U	µg/L	FD
12340	Carbazole	12/12/2000	10	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	07/28/1998	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	08/25/1998	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	09/14/1998	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	10/21/1998	10	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	11/24/1998	5	UJ	µg/L	N
12340	bis(2-Chloroisopropyl) ether	12/15/1998	5	UJ	µg/L	N
12340	bis(2-Chloroisopropyl) ether	01/20/1999	10	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	01/20/1999	10	U	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	02/22/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	03/16/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	04/28/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	06/15/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	06/28/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	07/27/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	07/27/1999	5	U	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	09/13/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	09/13/1999	5	U	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	09/28/1999	5	UJ	µg/L	N
12340	bis(2-Chloroisopropyl) ether	09/28/1999	5	UJ	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	10/13/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	12/08/1999	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	02/23/2000	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	04/26/2000	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	06/20/2000	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	06/20/2000	5	U	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	08/22/2000	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	10/24/2000	5	U	µg/L	N
12340	bis(2-Chloroisopropyl) ether	10/24/2000	5	U	µg/L	FD
12340	bis(2-Chloroisopropyl) ether	12/12/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	07/28/1998	1	U	µg/L	N
12340	1,1-Dichloroethene	08/25/1998	1	UJ	µg/L	N
12340	1,1-Dichloroethene	09/14/1998	1	U	µg/L	N
12340	1,1-Dichloroethene	10/21/1998	1	U	µg/L	N
12340	1,1-Dichloroethene	11/24/1998	1	U	µg/L	N
12340	1,1-Dichloroethene	12/15/1998	1	U	µg/L	N
12340	1,1-Dichloroethene	01/20/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	01/20/1999	1	U	µg/L	FD
12340	1,1-Dichloroethene	02/22/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	03/16/1999	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
12340	1,1-Dichloroethene	06/15/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	06/28/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	07/27/1999	5	U	µg/L	N
12340	1,1-Dichloroethene	07/27/1999	5	U	µg/L	FD
12340	1,1-Dichloroethene	09/13/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	09/13/1999	1	U	µg/L	FD
12340	1,1-Dichloroethene	09/28/1999	5	U	µg/L	N
12340	1,1-Dichloroethene	09/28/1999	5	U	µg/L	FD
12340	1,1-Dichloroethene	10/13/1999	0.8	U	µg/L	N
12340	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
12340	1,1-Dichloroethene	12/08/1999	1	U	µg/L	N
12340	1,1-Dichloroethene	02/23/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	04/26/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	06/20/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	06/20/2000	5	U	µg/L	FD
12340	1,1-Dichloroethene	08/22/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	10/24/2000	5	U	µg/L	N
12340	1,1-Dichloroethene	10/24/2000	5	U	µg/L	FD
12340	1,1-Dichloroethene	12/12/2000	5	U	µg/L	N
12340	1,2-Dichloroethene (Total)	07/28/1998	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	08/25/1998	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	09/14/1998	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	10/21/1998	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	11/24/1998	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	12/15/1998	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	01/20/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	01/20/1999	1	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	02/22/1999	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	03/16/1999	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	06/15/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	06/28/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	07/27/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	07/27/1999	10	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	09/13/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	09/13/1999	1	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	09/28/1999	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	09/28/1999	10	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	10/13/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	12/08/1999	1	U	µg/L	N
12340	1,2-Dichloroethene (Total)	02/23/2000	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	04/26/2000	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	06/20/2000	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	06/20/2000	10	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	08/22/2000	10	U	µg/L	N
12340	1,2-Dichloroethene (Total)	10/24/2000	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	1,2-Dichloroethene (Total)	10/24/2000	10	U	µg/L	FD
12340	1,2-Dichloroethene (Total)	12/12/2000	10	U	µg/L	N
12340	Bromodichloromethane	07/28/1998	1	U	µg/L	N
12340	Bromodichloromethane	08/25/1998	10	U	µg/L	N
12340	Bromodichloromethane	09/14/1998	1	U	µg/L	N
12340	Bromodichloromethane	10/21/1998	10	U	µg/L	N
12340	Bromodichloromethane	11/24/1998	10	U	µg/L	N
12340	Bromodichloromethane	12/15/1998	10	U	µg/L	N
12340	Bromodichloromethane	01/20/1999	1	U	µg/L	N
12340	Bromodichloromethane	01/20/1999	1	U	µg/L	FD
12340	Bromodichloromethane	02/22/1999	10	U	µg/L	N
12340	Bromodichloromethane	03/16/1999	10	U	µg/L	N
12340	Bromodichloromethane	05/24/1999	10	U	µg/L	N
12340	Bromodichloromethane	06/15/1999	1	U	µg/L	N
12340	Bromodichloromethane	06/28/1999	1	U	µg/L	N
12340	Bromodichloromethane	07/27/1999	10	U	µg/L	N
12340	Bromodichloromethane	07/27/1999	10	U	µg/L	FD
12340	Bromodichloromethane	09/13/1999	1	U	µg/L	N
12340	Bromodichloromethane	09/13/1999	1	U	µg/L	FD
12340	Bromodichloromethane	09/28/1999	10	U	µg/L	N
12340	Bromodichloromethane	09/28/1999	10	U	µg/L	FD
12340	Bromodichloromethane	10/13/1999	1	U	µg/L	N
12340	Bromodichloromethane	11/16/1999	10	U	µg/L	N
12340	Bromodichloromethane	12/08/1999	1	U	µg/L	N
12340	Bromodichloromethane	02/23/2000	10	U	µg/L	N
12340	Bromodichloromethane	04/26/2000	10	U	µg/L	N
12340	Bromodichloromethane	06/20/2000	10	U	µg/L	N
12340	Bromodichloromethane	06/20/2000	10	U	µg/L	FD
12340	Bromodichloromethane	08/22/2000	10	U	µg/L	N
12340	Bromodichloromethane	10/24/2000	10	U	µg/L	N
12340	Bromodichloromethane	10/24/2000	10	U	µg/L	FD
12340	Bromodichloromethane	12/12/2000	10	U	µg/L	N
12340	Tetrachloroethene	07/28/1998	1	U	µg/L	N
12340	Tetrachloroethene	08/25/1998	10	U	µg/L	N
12340	Tetrachloroethene	09/14/1998	1	U	µg/L	N
12340	Tetrachloroethene	10/21/1998	10	U	µg/L	N
12340	Tetrachloroethene	11/24/1998	10	U	µg/L	N
12340	Tetrachloroethene	12/15/1998	10	U	µg/L	N
12340	Tetrachloroethene	01/20/1999	1	U	µg/L	N
12340	Tetrachloroethene	01/20/1999	1	U	µg/L	FD
12340	Tetrachloroethene	02/22/1999	10	U	µg/L	N
12340	Tetrachloroethene	03/16/1999	10	U	µg/L	N
12340	Tetrachloroethene	05/24/1999	10	U	µg/L	N
12340	Tetrachloroethene	06/15/1999	1	U	µg/L	N
12340	Tetrachloroethene	06/28/1999	1	U	µg/L	N
12340	Tetrachloroethene	07/27/1999	10	U	µg/L	N
12340	Tetrachloroethene	07/27/1999	10	U	µg/L	FD
12340	Tetrachloroethene	09/13/1999	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Tetrachloroethene	09/13/1999	1	U	µg/L	FD
12340	Tetrachloroethene	09/28/1999	10	U	µg/L	N
12340	Tetrachloroethene	09/28/1999	10	U	µg/L	FD
12340	Tetrachloroethene	10/13/1999	1	U	µg/L	N
12340	Tetrachloroethene	11/16/1999	10	U	µg/L	N
12340	Tetrachloroethene	12/08/1999	1	U	µg/L	N
12340	Tetrachloroethene	02/23/2000	10	U	µg/L	N
12340	Tetrachloroethene	04/26/2000	10	U	µg/L	N
12340	Tetrachloroethene	06/20/2000	10	U	µg/L	N
12340	Tetrachloroethene	06/20/2000	10	U	µg/L	FD
12340	Tetrachloroethene	08/22/2000	10	U	µg/L	N
12340	Tetrachloroethene	10/24/2000	10	U	µg/L	N
12340	Tetrachloroethene	10/24/2000	10	U	µg/L	FD
12340	Tetrachloroethene	12/12/2000	10	U	µg/L	N
12340	Trichloroethene	07/28/1998	1	U	µg/L	N
12340	Trichloroethene	08/25/1998	1	U	µg/L	N
12340	Trichloroethene	09/14/1998	1	U	µg/L	N
12340	Trichloroethene	10/21/1998	1	U	µg/L	N
12340	Trichloroethene	11/24/1998	1	U	µg/L	N
12340	Trichloroethene	12/15/1998	1	U	µg/L	N
12340	Trichloroethene	01/20/1999	1	U	µg/L	N
12340	Trichloroethene	01/20/1999	1	U	µg/L	FD
12340	Trichloroethene	02/22/1999	3	U	µg/L	N
12340	Trichloroethene	03/16/1999	3	U	µg/L	N
12340	Trichloroethene	05/24/1999	3	U	µg/L	N
12340	Trichloroethene	06/15/1999	1	U	µg/L	N
12340	Trichloroethene	06/28/1999	1	U	µg/L	N
12340	Trichloroethene	07/27/1999	3	U	µg/L	N
12340	Trichloroethene	07/27/1999	3	U	µg/L	FD
12340	Trichloroethene	09/13/1999	1	U	µg/L	N
12340	Trichloroethene	09/13/1999	1	U	µg/L	FD
12340	Trichloroethene	09/28/1999	3	U	µg/L	N
12340	Trichloroethene	09/28/1999	3	U	µg/L	FD
12340	Trichloroethene	10/13/1999	1	U	µg/L	N
12340	Trichloroethene	11/16/1999	3	U	µg/L	N
12340	Trichloroethene	12/08/1999	1	U	µg/L	N
12340	Trichloroethene	02/23/2000	3	U	µg/L	N
12340	Trichloroethene	04/26/2000	3	U	µg/L	N
12340	Trichloroethene	06/20/2000	3	U	µg/L	N
12340	Trichloroethene	06/20/2000	3	U	µg/L	FD
12340	Trichloroethene	08/22/2000	3	U	µg/L	N
12340	Trichloroethene	10/24/2000	3	U	µg/L	N
12340	Trichloroethene	10/24/2000	3	U	µg/L	FD
12340	Trichloroethene	12/12/2000	3	U	µg/L	N
12340	Vinyl chloride	07/28/1998	1	U	µg/L	N
12340	Vinyl chloride	08/25/1998	1	UJ	µg/L	N
12340	Vinyl chloride	09/14/1998	1	U	µg/L	N
12340	Vinyl chloride	10/21/1998	2	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340	Vinyl chloride	11/24/1998	2	U	µg/L	N
12340	Vinyl chloride	12/15/1998	2	U	µg/L	N
12340	Vinyl chloride	01/20/1999	1	U	µg/L	N
12340	Vinyl chloride	01/20/1999	1	U	µg/L	FD
12340	Vinyl chloride	02/22/1999	1	U	µg/L	N
12340	Vinyl chloride	03/16/1999	1	U	µg/L	N
12340	Vinyl chloride	05/24/1999	1	U	µg/L	N
12340	Vinyl chloride	06/15/1999	1	U	µg/L	N
12340	Vinyl chloride	06/28/1999	1	U	µg/L	N
12340	Vinyl chloride	07/27/1999	1	U	µg/L	N
12340	Vinyl chloride	07/27/1999	1	U	µg/L	FD
12340	Vinyl chloride	09/13/1999	1	U	µg/L	N
12340	Vinyl chloride	09/13/1999	1	U	µg/L	FD
12340	Vinyl chloride	09/28/1999	1	U	µg/L	N
12340	Vinyl chloride	09/28/1999	1	U	µg/L	FD
12340	Vinyl chloride	10/13/1999	1	U	µg/L	N
12340	Vinyl chloride	11/16/1999	1	U	µg/L	N
12340	Vinyl chloride	12/08/1999	1	U	µg/L	N
12340	Vinyl chloride	02/23/2000	1	U	µg/L	N
12340	Vinyl chloride	04/26/2000	1	U	µg/L	N
12340	Vinyl chloride	06/20/2000	1	U	µg/L	N
12340	Vinyl chloride	06/20/2000	1	U	µg/L	FD
12340	Vinyl chloride	08/22/2000	1	U	µg/L	N
12340	Vinyl chloride	10/24/2000	1	U	µg/L	N
12340	Vinyl chloride	10/24/2000	1	U	µg/L	FD
12340	Vinyl chloride	12/12/2000	1	U	µg/L	N
22198	Total Organic Carbon	03/31/1997	0.96	-	mg/L	N
22198	Total Organic Carbon	04/30/1997	6.3	J	mg/L	N
22198	Total Organic Carbon	04/30/1997	2.7	J	mg/L	FD
22198	Total Organic Carbon	05/14/1997	1.4	-	mg/L	N
22198	Total Organic Carbon	05/28/1997	2.8	J	mg/L	N
22198	Total Organic Carbon	05/28/1997	0.71	J	mg/L	FD
22198	Total Organic Carbon	06/17/1997	2	UJ	mg/L	N
22198	Total Organic Carbon	06/17/1997	2.4	J	mg/L	FD
22198	Total Organic Carbon	06/25/1997	2.8	J	mg/L	N
22198	Total Organic Carbon	07/09/1997	3.67	-	mg/L	N
22198	Total Organic Carbon	07/31/1997	2.1	J	mg/L	N
22198	Total Organic Carbon	08/07/1997	4.9	J	mg/L	N
22198	Total Organic Carbon	08/26/1997	24.1	-	mg/L	N
22198	Total Organic Carbon	09/16/1997	14.3	J	mg/L	N
22198	Total Organic Carbon	10/01/1997	8.4	J	mg/L	N
22198	Total Organic Carbon	10/01/1997	25	J	mg/L	FD
22198	Total Organic Carbon	11/25/1997	12.8	J	mg/L	N
22198	Total Organic Carbon	12/01/1997	13.7	J	mg/L	N
22198	Total Organic Carbon	12/01/1997	11.1	J	mg/L	FD
22198	Total Organic Carbon	12/08/1997	11.8	J	mg/L	N
22198	Total Organic Carbon	02/17/1998	1	U	mg/L	N
22198	Total Organic Carbon	05/26/1998	52.5	J	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Total Organic Carbon	05/26/1998	49.3	J	mg/L	FD
22198	Total Organic Carbon	08/24/1998	4.7	-	mg/L	N
22198	Total Organic Carbon	11/23/1998	1	U	mg/L	FD
22198	Total Organic Carbon	11/23/1998	1	U	mg/L	N
22198	Total Organic Carbon	02/17/1999	3.56	-	mg/L	N
22198	Total Organic Carbon	05/24/1999	11.7	U	mg/L	N
22198	Total Organic Carbon	08/17/1999	0.963	U	mg/L	N
22198	Total Organic Carbon	11/15/1999	2	-	mg/L	N
22198	Total Organic Carbon	02/16/2000	13	-	mg/L	N
22198	Total Organic Carbon	05/23/2000	1.89	-	mg/L	N
22198	Total Organic Carbon	08/21/2000	1	UJ	mg/L	N
22198	Total Organic Carbon	11/15/2000	1.65	-	mg/L	N
22198	Total Organic Halogens	03/31/1997	0.024	U	mg/L	N
22198	Total Organic Halogens	04/30/1997	0.0323	-	mg/L	N
22198	Total Organic Halogens	04/30/1997	0.0526	-	mg/L	FD
22198	Total Organic Halogens	05/14/1997	0.0264	J	mg/L	N
22198	Total Organic Halogens	05/28/1997	0.0222	-	mg/L	N
22198	Total Organic Halogens	05/28/1997	0.0217	-	mg/L	FD
22198	Total Organic Halogens	06/17/1997	0.005	U	mg/L	N
22198	Total Organic Halogens	06/17/1997	0.005	U	mg/L	FD
22198	Total Organic Halogens	06/25/1997	0.014	-	mg/L	N
22198	Total Organic Halogens	07/09/1997	0.005	UJ	mg/L	N
22198	Total Organic Halogens	07/31/1997	0.005	U	mg/L	N
22198	Total Organic Halogens	08/07/1997	0.0076	U	mg/L	N
22198	Total Organic Halogens	08/26/1997	0.005	UJ	mg/L	N
22198	Total Organic Halogens	09/16/1997	0.005	UJ	mg/L	N
22198	Total Organic Halogens	10/01/1997	0.005	UJ	mg/L	N
22198	Total Organic Halogens	10/01/1997	0.0063	UJ	mg/L	FD
22198	Total Organic Halogens	11/25/1997	0.0078	U	mg/L	N
22198	Total Organic Halogens	12/01/1997	0.012	U	mg/L	N
22198	Total Organic Halogens	12/01/1997	0.0085	U	mg/L	FD
22198	Total Organic Halogens	12/08/1997	0.0062	-	mg/L	N
22198	Total Organic Halogens	02/17/1998	0.0145	U	mg/L	N
22198	Total Organic Halogens	05/26/1998	0.0473	J	mg/L	N
22198	Total Organic Halogens	05/26/1998	0.012	UJ	mg/L	FD
22198	Total Organic Halogens	08/24/1998	0.00469	UJ	mg/L	N
22198	Total Organic Halogens	11/23/1998	0.012	J	mg/L	FD
22198	Total Organic Halogens	11/23/1998	0.0058	J	mg/L	N
22198	Total Organic Halogens	02/17/1999	0.00152	U	mg/L	N
22198	Total Organic Halogens	05/24/1999	0.00474	U	mg/L	N
22198	Total Organic Halogens	08/17/1999	0.012	U	mg/L	N
22198	Total Organic Halogens	11/15/1999	0.0147	J	mg/L	N
22198	Total Organic Halogens	02/16/2000	0.025	U	mg/L	N
22198	Total Organic Halogens	05/23/2000	0.184	U	mg/L	N
22198	Total Organic Halogens	08/21/2000	0.025	U	mg/L	N
22198	Total Organic Halogens	11/15/2000	0.025	U	mg/L	N
22198	Boron	03/31/1997	0.0723	-	mg/L	N
22198	Boron	04/01/1997	0.0565	-	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Boron	04/30/1997	0.052	-	mg/L	N
22198	Boron	04/30/1997	0.0558	-	mg/L	FD
22198	Boron	05/14/1997	0.0511	-	mg/L	N
22198	Boron	05/28/1997	0.0577	-	mg/L	N
22198	Boron	05/28/1997	0.0506	-	mg/L	FD
22198	Boron	06/17/1997	0.0492	U	mg/L	N
22198	Boron	06/17/1997	0.0488	U	mg/L	FD
22198	Boron	06/25/1997	0.0524	U	mg/L	N
22198	Boron	07/09/1997	0.0615	-	mg/L	FD
22198	Boron	07/09/1997	0.0631	-	mg/L	N
22198	Boron	07/09/1997	0.0444	U	mg/L	N
22198	Boron	07/31/1997	0.019	U	mg/L	N
22198	Boron	08/07/1997	0.0407	U	mg/L	N
22198	Boron	08/26/1997	0.0514	-	mg/L	N
22198	Boron	09/16/1997	0.0576	-	mg/L	N
22198	Boron	09/16/1997	0.0638	-	mg/L	N
22198	Boron	10/01/1997	0.059	-	mg/L	N
22198	Boron	10/01/1997	0.059	-	mg/L	FD
22198	Boron	11/25/1997	0.0594	-	mg/L	N
22198	Boron	12/01/1997	0.0805	J	mg/L	N
22198	Boron	12/01/1997	0.0661	UJ	mg/L	FD
22198	Boron	12/08/1997	0.0736	-	mg/L	N
22198	Boron	01/05/1998	0.0232	U	mg/L	N
22198	Boron	02/17/1998	0.0412	-	mg/L	N
22198	Boron	04/13/1998	0.0516	-	mg/L	N
22198	Boron	05/26/1998	0.0493	-	mg/L	N
22198	Boron	05/26/1998	0.0456	-	mg/L	FD
22198	Boron	07/13/1998	0.0442	-	mg/L	N
22198	Boron	08/24/1998	0.0441	-	mg/L	N
22198	Boron	10/05/1998	0.0895	U	mg/L	N
22198	Boron	11/23/1998	0.116	-	mg/L	FD
22198	Boron	11/23/1998	0.0623	U	mg/L	N
22198	Boron	01/18/1999	0.0476	U	mg/L	N
22198	Boron	02/17/1999	0.0503	-	mg/L	N
22198	Boron	04/05/1999	0.0538	-	mg/L	N
22198	Boron	05/24/1999	0.0526	J	mg/L	N
22198	Boron	07/13/1999	0.0531	-	mg/L	N
22198	Boron	08/17/1999	0.0503	-	mg/L	N
22198	Boron	10/05/1999	0.0545	U	mg/L	N
22198	Boron	11/15/1999	0.0541	-	mg/L	N
22198	Boron	01/05/2000	0.0599	-	mg/L	N
22198	Boron	02/16/2000	0.0627	-	mg/L	N
22198	Boron	04/04/2000	0.0617	U	mg/L	N
22198	Boron	04/04/2000	0.0532	U	mg/L	FD
22198	Boron	05/23/2000	0.0501	-	mg/L	N
22198	Boron	07/11/2000	0.049	U	mg/L	N
22198	Boron	08/21/2000	0.0466	J	mg/L	N
22198	Boron	10/04/2000	0.0508	-	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Boron	11/15/2000	0.026	-	mg/L	N
22198	Mercury	03/31/1997	0.0001	U	mg/L	N
22198	Mercury	04/01/1997	0.0001	U	mg/L	N
22198	Mercury	04/30/1997	0.0001	U	mg/L	N
22198	Mercury	04/30/1997	0.0001	U	mg/L	FD
22198	Mercury	05/14/1997	0.0001	U	mg/L	N
22198	Mercury	05/28/1997	0.0001	U	mg/L	N
22198	Mercury	05/28/1997	0.0001	U	mg/L	FD
22198	Mercury	06/17/1997	0.0001	U	mg/L	N
22198	Mercury	06/17/1997	0.0001	U	mg/L	FD
22198	Mercury	06/25/1997	0.0001	U	mg/L	N
22198	Mercury	07/09/1997	0.0001	U	mg/L	FD
22198	Mercury	07/09/1997	0.0001	U	mg/L	N
22198	Mercury	07/09/1997	0.0001	U	mg/L	N
22198	Mercury	07/31/1997	0.0001	U	mg/L	N
22198	Mercury	08/07/1997	0.0001	U	mg/L	N
22198	Mercury	08/26/1997	0.0001	U	mg/L	N
22198	Mercury	09/16/1997	0.0001	U	mg/L	N
22198	Mercury	09/16/1997	0.0001	U	mg/L	N
22198	Mercury	10/01/1997	0.0001	U	mg/L	N
22198	Mercury	10/01/1997	0.0001	U	mg/L	FD
22198	Mercury	11/25/1997	0.0001	U	mg/L	N
22198	Mercury	12/01/1997	0.0001	U	mg/L	N
22198	Mercury	12/01/1997	0.0001	U	mg/L	FD
22198	Mercury	12/08/1997	0.0001	U	mg/L	N
22198	Mercury	01/05/1998	0.0001	U	mg/L	N
22198	Mercury	02/17/1998	0.0001	U	mg/L	N
22198	Mercury	04/13/1998	0.0001	U	mg/L	N
22198	Mercury	05/26/1998	0.0001	U	mg/L	N
22198	Mercury	05/26/1998	0.0001	U	mg/L	FD
22198	Mercury	07/13/1998	0.0001	U	mg/L	N
22198	Mercury	08/24/1998	0.0001	U	mg/L	N
22198	Mercury	10/05/1998	0.0001	U	mg/L	N
22198	Mercury	11/23/1998	0.0001	U	mg/L	FD
22198	Mercury	11/23/1998	0.0001	U	mg/L	N
22198	Mercury	01/18/1999	0.0001	U	mg/L	N
22198	Mercury	02/17/1999	0.00012	U	mg/L	N
22198	Mercury	04/05/1999	0.00012	U	mg/L	N
22198	Mercury	05/24/1999	0.00012	U	mg/L	N
22198	Mercury	07/13/1999	0.00004	U	mg/L	N
22198	Mercury	08/17/1999	0.0001	U	mg/L	N
22198	Mercury	10/05/1999	0.0001	U	mg/L	N
22198	Mercury	11/15/1999	0.00004	U	mg/L	N
22198	Mercury	01/05/2000	0.00004	U	mg/L	N
22198	Mercury	02/16/2000	0.00004	R	mg/L	N
22198	Mercury	04/04/2000	0.0001	U	mg/L	N
22198	Mercury	04/04/2000	0.00011	U	mg/L	FD
22198	Mercury	05/23/2000	0.0001	U	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Mercury	07/11/2000	0.0001	U	mg/L	N
22198	Mercury	08/21/2000	0.0001	U	mg/L	N
22198	Mercury	10/04/2000	0.000048	U	mg/L	N
22198	Mercury	11/15/2000	0.00012	U	mg/L	N
22198	alpha-Chlordane	03/31/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	04/30/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	04/30/1997	0.05	U	µg/L	FD
22198	alpha-Chlordane	04/30/1997	0.05	Z	µg/L	FD
22198	alpha-Chlordane	04/30/1997	0.05	Z	µg/L	N
22198	alpha-Chlordane	05/14/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	05/28/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	05/28/1997	0.05	U	µg/L	FD
22198	alpha-Chlordane	06/17/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	06/17/1997	0.05	U	µg/L	FD
22198	alpha-Chlordane	06/25/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	07/09/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	07/31/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	08/07/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	08/26/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	09/16/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	10/01/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	10/01/1997	0.05	U	µg/L	FD
22198	alpha-Chlordane	11/25/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	12/01/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	12/01/1997	0.05	U	µg/L	FD
22198	alpha-Chlordane	12/08/1997	0.05	U	µg/L	N
22198	alpha-Chlordane	02/17/1998	0.05	UJ	µg/L	N
22198	alpha-Chlordane	05/26/1998	0.005	U	µg/L	N
22198	alpha-Chlordane	05/26/1998	0.005	U	µg/L	FD
22198	alpha-Chlordane	08/24/1998	0.031	U	µg/L	N
22198	alpha-Chlordane	11/23/1998	0.1	U	µg/L	FD
22198	alpha-Chlordane	11/23/1998	0.1	U	µg/L	N
22198	alpha-Chlordane	02/17/1999	0.01	UJ	µg/L	N
22198	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22198	alpha-Chlordane	08/17/1999	0.05	U	µg/L	N
22198	alpha-Chlordane	11/15/1999	0.1	U	µg/L	N
22198	alpha-Chlordane	02/16/2000	0.1	U	µg/L	N
22198	alpha-Chlordane	05/23/2000	0.1	U	µg/L	N
22198	alpha-Chlordane	08/21/2000	0.1	U	µg/L	N
22198	alpha-Chlordane	11/15/2000	0.1	UJ	µg/L	N
22198	Technetium-99	03/31/1997	8.91	U	pCi/L	N
22198	Technetium-99	03/31/1997	8.91	U	pCi/L	N
22198	Technetium-99	04/01/1997	-2.097	U	pCi/L	N
22198	Technetium-99	04/30/1997	3.36	U	pCi/L	N
22198	Technetium-99	04/30/1997	12.8	U	pCi/L	FD
22198	Technetium-99	05/14/1997	8.6	U	pCi/L	N
22198	Technetium-99	05/28/1997	-7.77	U	pCi/L	N
22198	Technetium-99	05/28/1997	-4.59	UJ	pCi/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Technetium-99	06/17/1997	-0.8	UJ	pCi/L	N
22198	Technetium-99	06/17/1997	-3.9	UJ	pCi/L	FD
22198	Technetium-99	06/25/1997	5.91	U	pCi/L	N
22198	Technetium-99	06/25/1997	17.56	Z	pCi/L	N
22198	Technetium-99	07/09/1997	-3.057	Z	pCi/L	FD
22198	Technetium-99	07/09/1997	-0.795	U	pCi/L	N
22198	Technetium-99	07/09/1997	-0.795	Z	pCi/L	N
22198	Technetium-99	07/09/1997	3.25	UJ	pCi/L	N
22198	Technetium-99	07/09/1997	3.057	U	pCi/L	FD
22198	Technetium-99	07/31/1997	1.82	UJ	pCi/L	N
22198	Technetium-99	08/07/1997	1.71	UJ	pCi/L	N
22198	Technetium-99	08/26/1997	5.89	UJ	pCi/L	N
22198	Technetium-99	09/16/1997	-0.4	UJ	pCi/L	N
22198	Technetium-99	09/16/1997	0.133	U	pCi/L	N
22198	Technetium-99	10/01/1997	-2.26	UJ	pCi/L	N
22198	Technetium-99	10/01/1997	-3.89	UJ	pCi/L	FD
22198	Technetium-99	11/25/1997	2.12	UJ	pCi/L	N
22198	Technetium-99	12/01/1997	6.43	UJ	pCi/L	N
22198	Technetium-99	12/01/1997	5.15	UJ	pCi/L	FD
22198	Technetium-99	12/08/1997	4.1	UJ	pCi/L	N
22198	Technetium-99	01/05/1998	14.8	J	pCi/L	N
22198	Technetium-99	02/17/1998	3.62	U	pCi/L	N
22198	Technetium-99	04/13/1998	3.02	UJ	pCi/L	N
22198	Technetium-99	05/26/1998	-5.19	U	pCi/L	N
22198	Technetium-99	05/26/1998	-7.72	U	pCi/L	FD
22198	Technetium-99	07/13/1998	12.18	J	pCi/L	N
22198	Technetium-99	08/24/1998	4.82	U	pCi/L	N
22198	Technetium-99	10/05/1998	0.51	U	pCi/L	N
22198	Technetium-99	11/23/1998	-0.884	U	pCi/L	FD
22198	Technetium-99	11/23/1998	0.867	UJ	pCi/L	N
22198	Technetium-99	01/18/1999	-0.159	U	pCi/L	N
22198	Technetium-99	02/17/1999	-3.706	U	pCi/L	N
22198	Technetium-99	04/05/1999	-0.389	UJ	pCi/L	N
22198	Technetium-99	05/24/1999	4.72	UJ	pCi/L	N
22198	Technetium-99	07/13/1999	-3.066	UJ	pCi/L	N
22198	Technetium-99	08/17/1999	-4.739	UJ	pCi/L	N
22198	Technetium-99	10/05/1999	-1.602	UJ	pCi/L	N
22198	Technetium-99	11/15/1999	1.567	UJ	pCi/L	N
22198	Technetium-99	01/05/2000	-1.362	UJ	pCi/L	N
22198	Technetium-99	02/16/2000	-2.649	UJ	pCi/L	N
22198	Technetium-99	04/04/2000	-3.544	UJ	pCi/L	N
22198	Technetium-99	04/04/2000	1.713	UJ	pCi/L	FD
22198	Technetium-99	05/23/2000	0.23	UJ	pCi/L	N
22198	Technetium-99	07/11/2000	-6.667	U	pCi/L	N
22198	Technetium-99	08/21/2000	-5.171	U	pCi/L	N
22198	Technetium-99	10/04/2000	-1.794	UJ	pCi/L	N
22198	Technetium-99	11/15/2000	2.016	UJ	pCi/L	N
22198	Uranium, Total	03/31/1997	2.906	-	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Uranium, Total	04/01/1997	3.814	J	µg/L	N
22198	Uranium, Total	04/30/1997	1.35	J	µg/L	N
22198	Uranium, Total	04/30/1997	1.36	J	µg/L	FD
22198	Uranium, Total	05/14/1997	3.12	-	µg/L	N
22198	Uranium, Total	05/28/1997	2.45	-	µg/L	N
22198	Uranium, Total	05/28/1997	2.15	-	µg/L	FD
22198	Uranium, Total	06/17/1997	0.794	-	µg/L	N
22198	Uranium, Total	06/17/1997	0.801	-	µg/L	FD
22198	Uranium, Total	06/25/1997	0.767	J	µg/L	N
22198	Uranium, Total	07/09/1997	0.513	J	µg/L	FD
22198	Uranium, Total	07/09/1997	0.645	J	µg/L	N
22198	Uranium, Total	07/09/1997	0.559	J	µg/L	N
22198	Uranium, Total	07/31/1997	1.62	J	µg/L	N
22198	Uranium, Total	08/07/1997	1.86	J	µg/L	N
22198	Uranium, Total	08/26/1997	1.757	J	µg/L	N
22198	Uranium, Total	09/16/1997	1.489	J	µg/L	N
22198	Uranium, Total	09/16/1997	1.28	J	µg/L	N
22198	Uranium, Total	10/01/1997	0.866	J	µg/L	N
22198	Uranium, Total	10/01/1997	0.877	J	µg/L	FD
22198	Uranium, Total	11/25/1997	0.782	J	µg/L	N
22198	Uranium, Total	12/01/1997	0.627	J	µg/L	N
22198	Uranium, Total	12/01/1997	0.748	J	µg/L	FD
22198	Uranium, Total	12/08/1997	0.692	J	µg/L	N
22198	Uranium, Total	01/05/1998	0.579	-	µg/L	N
22198	Uranium, Total	02/17/1998	0.57	-	µg/L	N
22198	Uranium, Total	04/13/1998	0.963	J	µg/L	N
22198	Uranium, Total	05/26/1998	0.803	J	µg/L	N
22198	Uranium, Total	05/26/1998	1.13	J	µg/L	FD
22198	Uranium, Total	07/13/1998	0.882	-	µg/L	N
22198	Uranium, Total	08/24/1998	1.014	-	µg/L	N
22198	Uranium, Total	10/05/1998	0.794	J	µg/L	N
22198	Uranium, Total	11/23/1998	0.744	-	µg/L	FD
22198	Uranium, Total	11/23/1998	0.913	-	µg/L	N
22198	Uranium, Total	01/18/1999	0.924	-	µg/L	N
22198	Uranium, Total	02/17/1999	0.809	J	µg/L	N
22198	Uranium, Total	04/05/1999	1.221	J	µg/L	N
22198	Uranium, Total	05/24/1999	1.03	-	µg/L	N
22198	Uranium, Total	07/13/1999	0.778	J	µg/L	N
22198	Uranium, Total	08/17/1999	0.557	J	µg/L	N
22198	Uranium, Total	10/05/1999	0.977	J	µg/L	N
22198	Uranium, Total	11/15/1999	0.989	J	µg/L	N
22198	Uranium, Total	01/05/2000	1.8069	-	µg/L	N
22198	Uranium, Total	02/16/2000	1.1522	J	µg/L	N
22198	Uranium, Total	04/04/2000	0.974	J	µg/L	N
22198	Uranium, Total	04/04/2000	1.227	J	µg/L	FD
22198	Uranium, Total	05/23/2000	3.509	J	µg/L	N
22198	Uranium, Total	07/11/2000	6.937	J	µg/L	N
22198	Uranium, Total	08/21/2000	8.365	J	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Uranium, Total	10/04/2000	7.197	J	µg/L	N
22198	Uranium, Total	11/15/2000	5.258	J	µg/L	N
22198	4-Nitroaniline	03/31/1997	25	U	µg/L	N
22198	4-Nitroaniline	04/30/1997	25	UJ	µg/L	N
22198	4-Nitroaniline	04/30/1997	25	UJ	µg/L	FD
22198	4-Nitroaniline	05/14/1997	25	U	µg/L	N
22198	4-Nitroaniline	05/28/1997	25	U	µg/L	N
22198	4-Nitroaniline	05/28/1997	25	U	µg/L	FD
22198	4-Nitroaniline	06/17/1997	25	U	µg/L	N
22198	4-Nitroaniline	06/17/1997	25	U	µg/L	FD
22198	4-Nitroaniline	06/25/1997	1.8	U	µg/L	N
22198	4-Nitroaniline	07/09/1997	25	U	µg/L	N
22198	4-Nitroaniline	07/31/1997	25	U	µg/L	N
22198	4-Nitroaniline	08/07/1997	25	U	µg/L	N
22198	4-Nitroaniline	08/26/1997	25	U	µg/L	N
22198	4-Nitroaniline	09/16/1997	25	U	µg/L	N
22198	4-Nitroaniline	10/01/1997	25	U	µg/L	N
22198	4-Nitroaniline	10/01/1997	25	U	µg/L	FD
22198	4-Nitroaniline	11/25/1997	25	U	µg/L	N
22198	4-Nitroaniline	12/01/1997	25	U	µg/L	N
22198	4-Nitroaniline	12/01/1997	25	U	µg/L	FD
22198	4-Nitroaniline	12/08/1997	25	U	µg/L	N
22198	4-Nitroaniline	02/17/1998	25	U	µg/L	N
22198	4-Nitroaniline	05/26/1998	20	U	µg/L	N
22198	4-Nitroaniline	05/26/1998	20	U	µg/L	FD
22198	4-Nitroaniline	08/24/1998	20	U	µg/L	N
22198	4-Nitroaniline	11/23/1998	20	U	µg/L	FD
22198	4-Nitroaniline	11/23/1998	20	U	µg/L	N
22198	4-Nitroaniline	02/17/1999	25	U	µg/L	N
22198	4-Nitroaniline	05/24/1999	50	UJ	µg/L	N
22198	4-Nitroaniline	05/24/1999	50	Z	µg/L	N
22198	4-Nitroaniline	08/17/1999	25	U	µg/L	N
22198	4-Nitroaniline	11/15/1999	50	U	µg/L	N
22198	4-Nitroaniline	02/16/2000	50	U	µg/L	N
22198	4-Nitroaniline	05/23/2000	25	U	µg/L	N
22198	4-Nitroaniline	08/21/2000	50	U	µg/L	N
22198	4-Nitroaniline	11/15/2000	50	UJ	µg/L	N
22198	Carbazole	03/31/1997	10	UJ	µg/L	N
22198	Carbazole	04/30/1997	10	U	µg/L	N
22198	Carbazole	04/30/1997	10	U	µg/L	FD
22198	Carbazole	05/14/1997	10	U	µg/L	N
22198	Carbazole	05/28/1997	10	U	µg/L	N
22198	Carbazole	05/28/1997	10	U	µg/L	FD
22198	Carbazole	06/17/1997	5	U	µg/L	N
22198	Carbazole	06/17/1997	5	U	µg/L	FD
22198	Carbazole	06/25/1997	2.1	U	µg/L	N
22198	Carbazole	07/09/1997	5	U	µg/L	N
22198	Carbazole	07/31/1997	5	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Carbazole	08/07/1997	5	U	µg/L	N
22198	Carbazole	08/26/1997	5	U	µg/L	N
22198	Carbazole	09/16/1997	5	U	µg/L	N
22198	Carbazole	10/01/1997	5	UJ	µg/L	N
22198	Carbazole	10/01/1997	5	UJ	µg/L	FD
22198	Carbazole	11/25/1997	5	U	µg/L	N
22198	Carbazole	12/01/1997	5	U	µg/L	N
22198	Carbazole	12/01/1997	5	U	µg/L	FD
22198	Carbazole	12/08/1997	5	U	µg/L	N
22198	Carbazole	02/17/1998	10	UJ	µg/L	N
22198	Carbazole	05/26/1998	5	U	µg/L	N
22198	Carbazole	05/26/1998	5	U	µg/L	FD
22198	Carbazole	08/24/1998	5	U	µg/L	N
22198	Carbazole	11/23/1998	5	U	µg/L	FD
22198	Carbazole	11/23/1998	5	U	µg/L	N
22198	Carbazole	02/17/1999	5	U	µg/L	N
22198	Carbazole	05/24/1999	10	U	µg/L	N
22198	Carbazole	05/24/1999	10	Z	µg/L	N
22198	Carbazole	08/17/1999	10	U	µg/L	N
22198	Carbazole	11/15/1999	10	U	µg/L	N
22198	Carbazole	02/16/2000	10	U	µg/L	N
22198	Carbazole	05/23/2000	10	U	µg/L	N
22198	Carbazole	08/21/2000	10	U	µg/L	N
22198	Carbazole	11/15/2000	10	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	03/31/1997	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	04/30/1997	5	UJ	µg/L	N
22198	bis(2-Chloroisopropyl) ether	04/30/1997	5	UJ	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	05/14/1997	10	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/28/1997	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/28/1997	5	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	06/17/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	06/17/1997	2	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	06/25/1997	1.8	UJ	µg/L	N
22198	bis(2-Chloroisopropyl) ether	07/09/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	07/31/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	08/07/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	08/26/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	09/16/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	10/01/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	10/01/1997	2	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	12/01/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	12/01/1997	2	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	12/08/1997	2	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	02/17/1998	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/26/1998	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/26/1998	5	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	FD
22198	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	02/17/1999	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/24/1999	5	UJ	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/24/1999	5	Z	µg/L	N
22198	bis(2-Chloroisopropyl) ether	08/17/1999	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	11/15/1999	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	05/23/2000	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	08/21/2000	5	U	µg/L	N
22198	bis(2-Chloroisopropyl) ether	11/15/2000	5	UJ	µg/L	N
22198	1,1-Dichloroethene	03/31/1997	1	UJ	µg/L	N
22198	1,1-Dichloroethene	04/30/1997	1	UJ	µg/L	N
22198	1,1-Dichloroethene	04/30/1997	1	UJ	µg/L	FD
22198	1,1-Dichloroethene	05/14/1997	1	UJ	µg/L	N
22198	1,1-Dichloroethene	05/28/1997	1	UJ	µg/L	N
22198	1,1-Dichloroethene	05/28/1997	1	UJ	µg/L	FD
22198	1,1-Dichloroethene	06/17/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	06/17/1997	3	U	µg/L	FD
22198	1,1-Dichloroethene	06/25/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	07/09/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	07/31/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	08/07/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	08/26/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	09/16/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	10/01/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	10/01/1997	3	U	µg/L	FD
22198	1,1-Dichloroethene	11/25/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	12/01/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	12/01/1997	3	U	µg/L	FD
22198	1,1-Dichloroethene	12/08/1997	3	U	µg/L	N
22198	1,1-Dichloroethene	02/17/1998	1	U	µg/L	N
22198	1,1-Dichloroethene	05/26/1998	1	U	µg/L	N
22198	1,1-Dichloroethene	05/26/1998	1	U	µg/L	FD
22198	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22198	1,1-Dichloroethene	11/23/1998	1	U	µg/L	FD
22198	1,1-Dichloroethene	11/23/1998	1	U	µg/L	N
22198	1,1-Dichloroethene	02/17/1999	1	U	µg/L	N
22198	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22198	1,1-Dichloroethene	08/17/1999	1	U	µg/L	N
22198	1,1-Dichloroethene	11/15/1999	5	U	µg/L	N
22198	1,1-Dichloroethene	02/16/2000	5	U	µg/L	N
22198	1,1-Dichloroethene	05/23/2000	5	U	µg/L	N
22198	1,1-Dichloroethene	08/21/2000	5	U	µg/L	N
22198	1,1-Dichloroethene	11/15/2000	5	U	µg/L	N
22198	1,2-Dichloroethene (Total)	03/31/1997	1	UJ	µg/L	N
22198	1,2-Dichloroethene (Total)	04/30/1997	1	UJ	µg/L	N
22198	1,2-Dichloroethene (Total)	04/30/1997	1	UJ	µg/L	FD

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Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	1,2-Dichloroethene (Total)	05/14/1997	1	UJ	µg/L	N
22198	1,2-Dichloroethene (Total)	05/28/1997	1	UJ	µg/L	N
22198	1,2-Dichloroethene (Total)	05/28/1997	1	UJ	µg/L	FD
22198	1,2-Dichloroethene (Total)	06/17/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	06/17/1997	10	U	µg/L	FD
22198	1,2-Dichloroethene (Total)	06/25/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	07/09/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	07/31/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	08/07/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	08/26/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	09/16/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	10/01/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	10/01/1997	10	U	µg/L	FD
22198	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	12/01/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	12/01/1997	10	U	µg/L	FD
22198	1,2-Dichloroethene (Total)	12/08/1997	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	02/17/1998	1	U	µg/L	N
22198	1,2-Dichloroethene (Total)	05/26/1998	1	U	µg/L	N
22198	1,2-Dichloroethene (Total)	05/26/1998	1	U	µg/L	FD
22198	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	FD
22198	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	02/17/1999	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	08/17/1999	1	U	µg/L	N
22198	1,2-Dichloroethene (Total)	11/15/1999	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	05/23/2000	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	08/21/2000	10	U	µg/L	N
22198	1,2-Dichloroethene (Total)	11/15/2000	10	U	µg/L	N
22198	Bromodichloromethane	03/31/1997	1	UJ	µg/L	N
22198	Bromodichloromethane	04/30/1997	1	UJ	µg/L	N
22198	Bromodichloromethane	04/30/1997	1	UJ	µg/L	FD
22198	Bromodichloromethane	05/14/1997	1	UJ	µg/L	N
22198	Bromodichloromethane	05/28/1997	1	UJ	µg/L	N
22198	Bromodichloromethane	05/28/1997	1	UJ	µg/L	FD
22198	Bromodichloromethane	06/17/1997	10	U	µg/L	N
22198	Bromodichloromethane	06/17/1997	10	U	µg/L	FD
22198	Bromodichloromethane	06/25/1997	10	U	µg/L	N
22198	Bromodichloromethane	07/09/1997	10	U	µg/L	N
22198	Bromodichloromethane	07/31/1997	10	U	µg/L	N
22198	Bromodichloromethane	08/07/1997	10	U	µg/L	N
22198	Bromodichloromethane	08/26/1997	10	U	µg/L	N
22198	Bromodichloromethane	09/16/1997	10	U	µg/L	N
22198	Bromodichloromethane	10/01/1997	10	U	µg/L	N
22198	Bromodichloromethane	10/01/1997	10	U	µg/L	FD
22198	Bromodichloromethane	11/25/1997	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Bromodichloromethane	12/01/1997	10	U	µg/L	N
22198	Bromodichloromethane	12/01/1997	10	U	µg/L	FD
22198	Bromodichloromethane	12/08/1997	10	U	µg/L	N
22198	Bromodichloromethane	02/17/1998	1	U	µg/L	N
22198	Bromodichloromethane	05/26/1998	1	U	µg/L	N
22198	Bromodichloromethane	05/26/1998	1	U	µg/L	FD
22198	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22198	Bromodichloromethane	11/23/1998	10	U	µg/L	FD
22198	Bromodichloromethane	11/23/1998	10	U	µg/L	N
22198	Bromodichloromethane	02/17/1999	10	U	µg/L	N
22198	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22198	Bromodichloromethane	08/17/1999	1	U	µg/L	N
22198	Bromodichloromethane	11/15/1999	10	U	µg/L	N
22198	Bromodichloromethane	02/16/2000	10	U	µg/L	N
22198	Bromodichloromethane	05/23/2000	10	U	µg/L	N
22198	Bromodichloromethane	08/21/2000	10	U	µg/L	N
22198	Bromodichloromethane	11/15/2000	10	U	µg/L	N
22198	Tetrachloroethene	03/31/1997	1	UJ	µg/L	N
22198	Tetrachloroethene	04/30/1997	1	UJ	µg/L	N
22198	Tetrachloroethene	04/30/1997	1	UJ	µg/L	FD
22198	Tetrachloroethene	05/14/1997	1	UJ	µg/L	N
22198	Tetrachloroethene	05/28/1997	1	UJ	µg/L	N
22198	Tetrachloroethene	05/28/1997	1	UJ	µg/L	FD
22198	Tetrachloroethene	06/17/1997	10	UJ	µg/L	N
22198	Tetrachloroethene	06/17/1997	10	U	µg/L	FD
22198	Tetrachloroethene	06/25/1997	10	U	µg/L	N
22198	Tetrachloroethene	07/09/1997	10	U	µg/L	N
22198	Tetrachloroethene	07/31/1997	10	U	µg/L	N
22198	Tetrachloroethene	08/07/1997	10	U	µg/L	N
22198	Tetrachloroethene	08/26/1997	10	U	µg/L	N
22198	Tetrachloroethene	09/16/1997	10	U	µg/L	N
22198	Tetrachloroethene	10/01/1997	10	U	µg/L	N
22198	Tetrachloroethene	10/01/1997	10	U	µg/L	FD
22198	Tetrachloroethene	11/25/1997	10	U	µg/L	N
22198	Tetrachloroethene	12/01/1997	10	U	µg/L	N
22198	Tetrachloroethene	12/01/1997	10	U	µg/L	FD
22198	Tetrachloroethene	12/08/1997	10	U	µg/L	N
22198	Tetrachloroethene	02/17/1998	1	U	µg/L	N
22198	Tetrachloroethene	05/26/1998	1	U	µg/L	N
22198	Tetrachloroethene	05/26/1998	1	U	µg/L	FD
22198	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22198	Tetrachloroethene	11/23/1998	10	U	µg/L	FD
22198	Tetrachloroethene	11/23/1998	10	U	µg/L	N
22198	Tetrachloroethene	02/17/1999	10	U	µg/L	N
22198	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22198	Tetrachloroethene	08/17/1999	1	U	µg/L	N
22198	Tetrachloroethene	11/15/1999	10	U	µg/L	N
22198	Tetrachloroethene	02/16/2000	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Tetrachloroethene	05/23/2000	10	U	µg/L	N
22198	Tetrachloroethene	08/21/2000	10	U	µg/L	N
22198	Tetrachloroethene	11/15/2000	10	U	µg/L	N
22198	Trichloroethene	03/31/1997	1	UJ	µg/L	N
22198	Trichloroethene	04/01/1997	2	U	µg/L	N
22198	Trichloroethene	04/30/1997	1	UJ	µg/L	N
22198	Trichloroethene	04/30/1997	1	UJ	µg/L	FD
22198	Trichloroethene	05/14/1997	1	UJ	µg/L	N
22198	Trichloroethene	05/28/1997	1	UJ	µg/L	N
22198	Trichloroethene	05/28/1997	1	UJ	µg/L	FD
22198	Trichloroethene	06/17/1997	2	U	µg/L	N
22198	Trichloroethene	06/17/1997	2	U	µg/L	FD
22198	Trichloroethene	06/25/1997	2	U	µg/L	N
22198	Trichloroethene	07/09/1997	2	U	µg/L	FD
22198	Trichloroethene	07/09/1997	2	U	µg/L	N
22198	Trichloroethene	07/09/1997	2	U	µg/L	N
22198	Trichloroethene	07/31/1997	2	U	µg/L	N
22198	Trichloroethene	08/07/1997	2	U	µg/L	N
22198	Trichloroethene	08/26/1997	2	U	µg/L	N
22198	Trichloroethene	09/16/1997	2	U	µg/L	N
22198	Trichloroethene	09/16/1997	2	U	µg/L	N
22198	Trichloroethene	10/01/1997	2	U	µg/L	N
22198	Trichloroethene	10/01/1997	2	U	µg/L	FD
22198	Trichloroethene	11/25/1997	2	U	µg/L	N
22198	Trichloroethene	12/01/1997	2	U	µg/L	N
22198	Trichloroethene	12/01/1997	2	U	µg/L	FD
22198	Trichloroethene	12/08/1997	2	U	µg/L	N
22198	Trichloroethene	01/05/1998	5	U	µg/L	N
22198	Trichloroethene	02/17/1998	1	U	µg/L	N
22198	Trichloroethene	04/13/1998	1	U	µg/L	N
22198	Trichloroethene	05/26/1998	1	U	µg/L	N
22198	Trichloroethene	05/26/1998	1	U	µg/L	FD
22198	Trichloroethene	07/13/1998	1	U	µg/L	N
22198	Trichloroethene	08/24/1998	1	U	µg/L	N
22198	Trichloroethene	10/05/1998	1	U	µg/L	N
22198	Trichloroethene	11/23/1998	1	U	µg/L	FD
22198	Trichloroethene	11/23/1998	1	U	µg/L	N
22198	Trichloroethene	01/18/1999	1	U	µg/L	N
22198	Trichloroethene	02/17/1999	3	U	µg/L	N
22198	Trichloroethene	04/05/1999	3	U	µg/L	N
22198	Trichloroethene	05/24/1999	3	U	µg/L	N
22198	Trichloroethene	07/13/1999	3	U	µg/L	N
22198	Trichloroethene	08/17/1999	1	U	µg/L	N
22198	Trichloroethene	10/05/1999	1	U	µg/L	N
22198	Trichloroethene	11/15/1999	3	U	µg/L	N
22198	Trichloroethene	01/05/2000	3	U	µg/L	N
22198	Trichloroethene	02/16/2000	3	U	µg/L	N
22198	Trichloroethene	04/04/2000	3	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22198	Trichloroethene	04/04/2000	3	U	µg/L	FD
22198	Trichloroethene	05/23/2000	3	U	µg/L	N
22198	Trichloroethene	07/11/2000	3	U	µg/L	N
22198	Trichloroethene	08/21/2000	3	U	µg/L	N
22198	Trichloroethene	10/04/2000	3	U	µg/L	N
22198	Trichloroethene	11/15/2000	3	U	µg/L	N
22198	Vinyl chloride	03/31/1997	1	UJ	µg/L	N
22198	Vinyl chloride	04/30/1997	1	UJ	µg/L	N
22198	Vinyl chloride	04/30/1997	1	UJ	µg/L	FD
22198	Vinyl chloride	05/14/1997	1	UJ	µg/L	N
22198	Vinyl chloride	05/28/1997	1	UJ	µg/L	N
22198	Vinyl chloride	05/28/1997	1	UJ	µg/L	FD
22198	Vinyl chloride	06/17/1997	1	UJ	µg/L	N
22198	Vinyl chloride	06/17/1997	1	UJ	µg/L	FD
22198	Vinyl chloride	06/25/1997	1	UJ	µg/L	N
22198	Vinyl chloride	07/09/1997	1	U	µg/L	N
22198	Vinyl chloride	07/31/1997	1	U	µg/L	N
22198	Vinyl chloride	08/07/1997	1	U	µg/L	N
22198	Vinyl chloride	08/26/1997	1	U	µg/L	N
22198	Vinyl chloride	09/16/1997	1	U	µg/L	N
22198	Vinyl chloride	10/01/1997	1	U	µg/L	N
22198	Vinyl chloride	10/01/1997	1	U	µg/L	FD
22198	Vinyl chloride	11/25/1997	1	U	µg/L	N
22198	Vinyl chloride	12/01/1997	1	U	µg/L	N
22198	Vinyl chloride	12/01/1997	1	U	µg/L	FD
22198	Vinyl chloride	12/08/1997	1	U	µg/L	N
22198	Vinyl chloride	02/17/1998	2	U	µg/L	N
22198	Vinyl chloride	05/26/1998	1	UJ	µg/L	N
22198	Vinyl chloride	05/26/1998	1	UJ	µg/L	FD
22198	Vinyl chloride	08/24/1998	1	U	µg/L	N
22198	Vinyl chloride	11/23/1998	2	U	µg/L	FD
22198	Vinyl chloride	11/23/1998	2	U	µg/L	N
22198	Vinyl chloride	02/17/1999	1	U	µg/L	N
22198	Vinyl chloride	05/24/1999	1	U	µg/L	N
22198	Vinyl chloride	08/17/1999	1	U	µg/L	N
22198	Vinyl chloride	11/15/1999	1	U	µg/L	N
22198	Vinyl chloride	02/16/2000	1	U	µg/L	N
22198	Vinyl chloride	05/23/2000	1	U	µg/L	N
22198	Vinyl chloride	08/21/2000	1	U	µg/L	N
22198	Vinyl chloride	11/15/2000	1	U	µg/L	N
22199	Total Organic Carbon	06/25/1997	3.5	J	mg/L	N
22199	Total Organic Carbon	07/30/1997	12.7	J	mg/L	FD
22199	Total Organic Carbon	07/30/1997	19.3	J	mg/L	N
22199	Total Organic Carbon	08/07/1997	3.7	J	mg/L	N
22199	Total Organic Carbon	09/16/1997	26.6	J	mg/L	N
22199	Total Organic Carbon	10/29/1997	9.3	J	mg/L	N
22199	Total Organic Carbon	11/25/1997	10.9	J	mg/L	N
22199	Total Organic Carbon	12/16/1997	11.4	J	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Total Organic Carbon	01/26/1998	1.22	-	mg/L	N
22199	Total Organic Carbon	01/26/1998	1	U	mg/L	FD
22199	Total Organic Carbon	02/17/1998	1	U	mg/L	N
22199	Total Organic Carbon	03/10/1998	1.66	-	mg/L	N
22199	Total Organic Carbon	04/27/1998	44.3	J	mg/L	N
22199	Total Organic Carbon	04/27/1998	51.8	J	mg/L	FD
22199	Total Organic Carbon	05/26/1998	44.4	J	mg/L	N
22199	Total Organic Carbon	08/24/1998	3.7	-	mg/L	N
22199	Total Organic Carbon	11/23/1998	1	U	mg/L	N
22199	Total Organic Carbon	02/16/1999	2.34	U	mg/L	FD
22199	Total Organic Carbon	02/16/1999	3.17	U	mg/L	N
22199	Total Organic Carbon	05/24/1999	4.18	U	mg/L	N
22199	Total Organic Carbon	08/16/1999	2.57	-	mg/L	N
22199	Total Organic Carbon	11/15/1999	1.51	-	mg/L	N
22199	Total Organic Carbon	02/16/2000	9.68	-	mg/L	N
22199	Total Organic Carbon	02/16/2000	8.5	-	mg/L	FD
22199	Total Organic Carbon	05/23/2000	1.11	-	mg/L	N
22199	Total Organic Carbon	05/23/2000	1.23	-	mg/L	FD
22199	Total Organic Carbon	08/21/2000	1	UJ	mg/L	N
22199	Total Organic Carbon	11/14/2000	1.46	-	mg/L	N
22199	Total Organic Halogens	06/25/1997	0.005	U	mg/L	N
22199	Total Organic Halogens	07/30/1997	0.005	U	mg/L	FD
22199	Total Organic Halogens	07/30/1997	0.005	U	mg/L	N
22199	Total Organic Halogens	08/07/1997	0.005	U	mg/L	N
22199	Total Organic Halogens	09/16/1997	0.005	UJ	mg/L	N
22199	Total Organic Halogens	10/29/1997	0.0055	-	mg/L	N
22199	Total Organic Halogens	11/25/1997	0.0087	U	mg/L	N
22199	Total Organic Halogens	12/16/1997	0.0066	-	mg/L	N
22199	Total Organic Halogens	01/26/1998	0.0256	J	mg/L	N
22199	Total Organic Halogens	01/26/1998	0.0386	J	mg/L	FD
22199	Total Organic Halogens	02/17/1998	0.0084	U	mg/L	N
22199	Total Organic Halogens	03/10/1998	0.0118	-	mg/L	N
22199	Total Organic Halogens	04/27/1998	0.0124	-	mg/L	N
22199	Total Organic Halogens	04/27/1998	0.0122	-	mg/L	FD
22199	Total Organic Halogens	05/26/1998	0.012	U	mg/L	N
22199	Total Organic Halogens	08/24/1998	0.00469	UJ	mg/L	N
22199	Total Organic Halogens	11/23/1998	0.00835	-	mg/L	N
22199	Total Organic Halogens	02/16/1999	0.0272	J	mg/L	FD
22199	Total Organic Halogens	02/16/1999	0.00474	UJ	mg/L	N
22199	Total Organic Halogens	05/24/1999	0.00474	U	mg/L	N
22199	Total Organic Halogens	08/16/1999	0.0155	-	mg/L	N
22199	Total Organic Halogens	11/15/1999	0.0164	J	mg/L	N
22199	Total Organic Halogens	02/16/2000	0.025	U	mg/L	N
22199	Total Organic Halogens	02/16/2000	0.0118	U	mg/L	FD
22199	Total Organic Halogens	05/23/2000	0.155	U	mg/L	N
22199	Total Organic Halogens	05/23/2000	0.155	U	mg/L	FD
22199	Total Organic Halogens	08/21/2000	0.025	U	mg/L	N
22199	Total Organic Halogens	11/14/2000	0.025	U	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Boron	06/25/1997	0.0302	U	mg/L	N
22199	Boron	07/30/1997	0.019	U	mg/L	FD
22199	Boron	07/30/1997	0.019	U	mg/L	N
22199	Boron	08/07/1997	0.012	U	mg/L	N
22199	Boron	09/16/1997	0.046	-	mg/L	N
22199	Boron	10/29/1997	0.044	-	mg/L	N
22199	Boron	11/25/1997	0.0569	-	mg/L	N
22199	Boron	12/16/1997	0.0445	-	mg/L	N
22199	Boron	01/26/1998	0.0932	U	mg/L	N
22199	Boron	01/26/1998	0.102	U	mg/L	FD
22199	Boron	02/17/1998	0.0401	-	mg/L	N
22199	Boron	03/10/1998	0.0758	U	mg/L	N
22199	Boron	04/27/1998	0.0436	-	mg/L	N
22199	Boron	04/27/1998	0.0467	-	mg/L	FD
22199	Boron	05/26/1998	0.043	-	mg/L	N
22199	Boron	08/24/1998	0.0398	-	mg/L	N
22199	Boron	11/23/1998	0.0638	U	mg/L	N
22199	Boron	02/16/1999	0.0404	-	mg/L	FD
22199	Boron	02/16/1999	0.0393	-	mg/L	N
22199	Boron	05/24/1999	0.0458	J	mg/L	N
22199	Boron	08/16/1999	0.0428	-	mg/L	N
22199	Boron	11/15/1999	0.0441	-	mg/L	N
22199	Boron	02/16/2000	0.0497	-	mg/L	N
22199	Boron	02/16/2000	0.0494	-	mg/L	FD
22199	Boron	05/23/2000	0.0412	-	mg/L	N
22199	Boron	05/23/2000	0.042	-	mg/L	FD
22199	Boron	08/21/2000	0.033	J	mg/L	N
22199	Boron	11/14/2000	0.0452	U	mg/L	N
22199	Mercury	06/25/1997	0.0001	U	mg/L	N
22199	Mercury	07/30/1997	0.0001	U	mg/L	FD
22199	Mercury	07/30/1997	0.0001	U	mg/L	N
22199	Mercury	08/07/1997	0.0001	U	mg/L	N
22199	Mercury	09/16/1997	0.0001	U	mg/L	N
22199	Mercury	10/29/1997	0.0001	U	mg/L	N
22199	Mercury	11/25/1997	0.0001	U	mg/L	N
22199	Mercury	12/16/1997	0.0001	U	mg/L	N
22199	Mercury	01/26/1998	0.0001	U	mg/L	N
22199	Mercury	01/26/1998	0.0001	U	mg/L	FD
22199	Mercury	02/17/1998	0.0001	U	mg/L	N
22199	Mercury	03/10/1998	0.0001	U	mg/L	N
22199	Mercury	04/27/1998	0.0001	U	mg/L	N
22199	Mercury	04/27/1998	0.0001	U	mg/L	FD
22199	Mercury	05/26/1998	0.0001	U	mg/L	N
22199	Mercury	08/24/1998	0.0001	U	mg/L	N
22199	Mercury	11/23/1998	0.0001	U	mg/L	N
22199	Mercury	02/16/1999	0.00012	U	mg/L	FD
22199	Mercury	02/16/1999	0.00012	U	mg/L	N
22199	Mercury	05/24/1999	0.00012	U	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Mercury	08/16/1999	0.0004	U	mg/L	N
22199	Mercury	11/15/1999	0.00004	U	mg/L	N
22199	Mercury	02/16/2000	0.00004	R	mg/L	N
22199	Mercury	02/16/2000	0.00004	R	mg/L	FD
22199	Mercury	05/23/2000	0.0001	U	mg/L	N
22199	Mercury	05/23/2000	0.0001	U	mg/L	FD
22199	Mercury	08/21/2000	0.0001	U	mg/L	N
22199	Mercury	11/14/2000	0.0001	U	mg/L	N
22199	alpha-Chlordane	06/25/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	07/30/1997	0.05	U	µg/L	FD
22199	alpha-Chlordane	07/30/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	08/07/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	09/16/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	10/29/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	11/25/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	12/16/1997	0.05	U	µg/L	N
22199	alpha-Chlordane	01/26/1998	0.5	U	µg/L	N
22199	alpha-Chlordane	01/26/1998	0.5	U	µg/L	FD
22199	alpha-Chlordane	02/17/1998	0.05	UJ	µg/L	N
22199	alpha-Chlordane	03/10/1998	0.05	U	µg/L	N
22199	alpha-Chlordane	04/27/1998	0.005	U	µg/L	N
22199	alpha-Chlordane	04/27/1998	0.005	U	µg/L	FD
22199	alpha-Chlordane	05/26/1998	0.005	U	µg/L	N
22199	alpha-Chlordane	08/24/1998	0.031	U	µg/L	N
22199	alpha-Chlordane	11/23/1998	0.1	U	µg/L	N
22199	alpha-Chlordane	02/16/1999	0.01	UJ	µg/L	FD
22199	alpha-Chlordane	02/16/1999	0.01	UJ	µg/L	N
22199	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22199	alpha-Chlordane	08/16/1999	0.05	U	µg/L	N
22199	alpha-Chlordane	11/15/1999	0.1	U	µg/L	N
22199	alpha-Chlordane	02/16/2000	0.1	U	µg/L	N
22199	alpha-Chlordane	02/16/2000	0.1	U	µg/L	FD
22199	alpha-Chlordane	05/23/2000	0.1	U	µg/L	N
22199	alpha-Chlordane	05/23/2000	0.1	U	µg/L	FD
22199	alpha-Chlordane	08/21/2000	0.1	U	µg/L	N
22199	alpha-Chlordane	11/14/2000	0.1	U	µg/L	N
22199	Technetium-99	06/25/1997	3.05	UJ	pCi/L	N
22199	Technetium-99	07/30/1997	0.25	UJ	pCi/L	FD
22199	Technetium-99	07/30/1997	-2.23	UJ	pCi/L	N
22199	Technetium-99	08/07/1997	2.08	UJ	pCi/L	N
22199	Technetium-99	09/16/1997	-3.51	UJ	pCi/L	N
22199	Technetium-99	10/29/1997	-1.34	R	pCi/L	N
22199	Technetium-99	10/29/1997	4.25	U	pCi/L	N
22199	Technetium-99	11/25/1997	0.35	UJ	pCi/L	N
22199	Technetium-99	12/16/1997	-4.58	UJ	pCi/L	N
22199	Technetium-99	01/26/1998	1.05	U	pCi/L	N
22199	Technetium-99	01/26/1998	2.94	U	pCi/L	FD
22199	Technetium-99	02/17/1998	1.62	U	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Technetium-99	03/10/1998	2.08	U	pCi/L	N
22199	Technetium-99	04/27/1998	2.73	U	pCi/L	N
22199	Technetium-99	04/27/1998	0.51	U	pCi/L	FD
22199	Technetium-99	05/26/1998	-7.55	U	pCi/L	N
22199	Technetium-99	08/24/1998	6.8	U	pCi/L	N
22199	Technetium-99	11/23/1998	-2.626	U	pCi/L	N
22199	Technetium-99	02/16/1999	-0.339	U	pCi/L	FD
22199	Technetium-99	02/16/1999	-0.723	U	pCi/L	N
22199	Technetium-99	05/24/1999	2.66	UJ	pCi/L	N
22199	Technetium-99	08/16/1999	-1.299	UJ	pCi/L	N
22199	Technetium-99	11/15/1999	1.943	UJ	pCi/L	N
22199	Technetium-99	02/16/2000	-1.659	UJ	pCi/L	N
22199	Technetium-99	02/16/2000	0.318	UJ	pCi/L	FD
22199	Technetium-99	05/23/2000	-1.735	UJ	pCi/L	N
22199	Technetium-99	05/23/2000	0.292	UJ	pCi/L	FD
22199	Technetium-99	08/21/2000	-0.732	U	pCi/L	N
22199	Technetium-99	11/14/2000	-1.118	UJ	pCi/L	N
22199	Uranium, Total	06/25/1997	0.608	J	µg/L	N
22199	Uranium, Total	07/30/1997	0.375	J	µg/L	FD
22199	Uranium, Total	07/30/1997	0.355	J	µg/L	N
22199	Uranium, Total	08/07/1997	0.325	J	µg/L	N
22199	Uranium, Total	09/16/1997	0.442	J	µg/L	N
22199	Uranium, Total	10/29/1997	0.35	J	µg/L	N
22199	Uranium, Total	11/25/1997	0.385	J	µg/L	N
22199	Uranium, Total	12/16/1997	0.494	J	µg/L	N
22199	Uranium, Total	01/26/1998	0.361	J	µg/L	N
22199	Uranium, Total	01/26/1998	0.479	J	µg/L	FD
22199	Uranium, Total	02/17/1998	0.323	J	µg/L	N
22199	Uranium, Total	03/10/1998	0.508	-	µg/L	N
22199	Uranium, Total	04/27/1998	0.504	-	µg/L	N
22199	Uranium, Total	04/27/1998	0.551	-	µg/L	FD
22199	Uranium, Total	05/26/1998	0.259	J	µg/L	N
22199	Uranium, Total	08/24/1998	11.826	-	µg/L	N
22199	Uranium, Total	11/23/1998	4.4	-	µg/L	N
22199	Uranium, Total	02/16/1999	1.41	J	µg/L	FD
22199	Uranium, Total	02/16/1999	1.331	J	µg/L	N
22199	Uranium, Total	05/24/1999	6.41	-	µg/L	N
22199	Uranium, Total	08/16/1999	12.1	-	µg/L	N
22199	Uranium, Total	11/15/1999	0.544	J	µg/L	N
22199	Uranium, Total	02/16/2000	0.9405	J	µg/L	N
22199	Uranium, Total	02/16/2000	0.9446	J	µg/L	FD
22199	Uranium, Total	05/23/2000	1.45	J	µg/L	N
22199	Uranium, Total	05/23/2000	1.36	J	µg/L	FD
22199	Uranium, Total	08/21/2000	3.028	J	µg/L	N
22199	Uranium, Total	11/14/2000	1.564	J	µg/L	N
22199	4-Nitroaniline	06/25/1997	1.8	U	µg/L	N
22199	4-Nitroaniline	07/30/1997	25	U	µg/L	FD
22199	4-Nitroaniline	07/30/1997	25	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	4-Nitroaniline	08/07/1997	25	U	µg/L	N
22199	4-Nitroaniline	09/16/1997	25	U	µg/L	N
22199	4-Nitroaniline	10/29/1997	25	U	µg/L	N
22199	4-Nitroaniline	11/25/1997	25	U	µg/L	N
22199	4-Nitroaniline	12/16/1997	25	U	µg/L	N
22199	4-Nitroaniline	01/26/1998	25	U	µg/L	N
22199	4-Nitroaniline	01/26/1998	25	U	µg/L	FD
22199	4-Nitroaniline	02/17/1998	25	U	µg/L	N
22199	4-Nitroaniline	03/10/1998	25	U	µg/L	N
22199	4-Nitroaniline	04/27/1998	20	U	µg/L	N
22199	4-Nitroaniline	04/27/1998	20	U	µg/L	FD
22199	4-Nitroaniline	05/26/1998	20	U	µg/L	N
22199	4-Nitroaniline	08/24/1998	20	U	µg/L	N
22199	4-Nitroaniline	11/23/1998	20	U	µg/L	N
22199	4-Nitroaniline	02/16/1999	25	U	µg/L	FD
22199	4-Nitroaniline	02/16/1999	25	U	µg/L	N
22199	4-Nitroaniline	05/24/1999	50	UJ	µg/L	N
22199	4-Nitroaniline	08/16/1999	25	U	µg/L	N
22199	4-Nitroaniline	11/15/1999	50	U	µg/L	N
22199	4-Nitroaniline	02/16/2000	50	U	µg/L	N
22199	4-Nitroaniline	02/16/2000	50	U	µg/L	FD
22199	4-Nitroaniline	05/23/2000	25	U	µg/L	N
22199	4-Nitroaniline	05/23/2000	25	U	µg/L	FD
22199	4-Nitroaniline	08/21/2000	50	U	µg/L	N
22199	4-Nitroaniline	11/14/2000	50	U	µg/L	N
22199	Carbazole	06/25/1997	2.1	U	µg/L	N
22199	Carbazole	07/30/1997	5	U	µg/L	FD
22199	Carbazole	07/30/1997	5	U	µg/L	N
22199	Carbazole	08/07/1997	5	U	µg/L	N
22199	Carbazole	09/16/1997	5	U	µg/L	N
22199	Carbazole	10/29/1997	5	U	µg/L	N
22199	Carbazole	11/25/1997	5	U	µg/L	N
22199	Carbazole	12/16/1997	5	U	µg/L	N
22199	Carbazole	01/26/1998	10	U	µg/L	N
22199	Carbazole	01/26/1998	10	U	µg/L	FD
22199	Carbazole	02/17/1998	10	UJ	µg/L	N
22199	Carbazole	03/10/1998	10	UJ	µg/L	N
22199	Carbazole	04/27/1998	5	U	µg/L	N
22199	Carbazole	04/27/1998	5	U	µg/L	FD
22199	Carbazole	05/26/1998	5	U	µg/L	N
22199	Carbazole	08/24/1998	5	U	µg/L	N
22199	Carbazole	11/23/1998	5	U	µg/L	N
22199	Carbazole	02/16/1999	5	U	µg/L	FD
22199	Carbazole	02/16/1999	5	U	µg/L	N
22199	Carbazole	05/24/1999	10	U	µg/L	N
22199	Carbazole	08/16/1999	10	U	µg/L	N
22199	Carbazole	11/15/1999	10	U	µg/L	N
22199	Carbazole	02/16/2000	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Carbazole	02/16/2000	10	U	µg/L	FD
22199	Carbazole	05/23/2000	10	U	µg/L	N
22199	Carbazole	05/23/2000	10	U	µg/L	FD
22199	Carbazole	08/21/2000	10	U	µg/L	N
22199	Carbazole	11/14/2000	10	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	06/25/1997	1.8	UJ	µg/L	N
22199	bis(2-Chloroisopropyl) ether	07/30/1997	2	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	07/30/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	08/07/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	09/16/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	10/29/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	12/16/1997	2	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	01/26/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	01/26/1998	5	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	02/17/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	03/10/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	04/27/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	04/27/1998	5	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	05/26/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	02/16/1999	5	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	02/16/1999	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	08/16/1999	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	11/15/1999	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	05/23/2000	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	05/23/2000	5	U	µg/L	FD
22199	bis(2-Chloroisopropyl) ether	08/21/2000	5	U	µg/L	N
22199	bis(2-Chloroisopropyl) ether	11/14/2000	5	UJ	µg/L	N
22199	1,1-Dichloroethene	06/25/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	07/30/1997	3	U	µg/L	FD
22199	1,1-Dichloroethene	07/30/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	08/07/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	09/16/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	10/29/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	11/25/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	12/16/1997	3	U	µg/L	N
22199	1,1-Dichloroethene	01/26/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	01/26/1998	1	U	µg/L	FD
22199	1,1-Dichloroethene	02/17/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	03/10/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	04/27/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	04/27/1998	1	U	µg/L	FD
22199	1,1-Dichloroethene	05/26/1998	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	11/23/1998	1	U	µg/L	N
22199	1,1-Dichloroethene	02/16/1999	1	U	µg/L	FD
22199	1,1-Dichloroethene	02/16/1999	1	U	µg/L	N
22199	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22199	1,1-Dichloroethene	08/16/1999	1	U	µg/L	N
22199	1,1-Dichloroethene	11/15/1999	5	U	µg/L	N
22199	1,1-Dichloroethene	02/16/2000	5	U	µg/L	N
22199	1,1-Dichloroethene	02/16/2000	5	U	µg/L	FD
22199	1,1-Dichloroethene	05/23/2000	5	U	µg/L	N
22199	1,1-Dichloroethene	05/23/2000	5	U	µg/L	FD
22199	1,1-Dichloroethene	08/21/2000	5	U	µg/L	N
22199	1,1-Dichloroethene	11/14/2000	5	U	µg/L	N
22199	1,2-Dichloroethene (Total)	06/25/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	07/30/1997	10	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	07/30/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	08/07/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	09/16/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	10/29/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	12/16/1997	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	01/26/1998	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	01/26/1998	1	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	02/17/1998	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	03/10/1998	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	04/27/1998	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	04/27/1998	1	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	05/26/1998	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	02/16/1999	10	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	02/16/1999	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	08/16/1999	1	U	µg/L	N
22199	1,2-Dichloroethene (Total)	11/15/1999	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	05/23/2000	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	05/23/2000	10	U	µg/L	FD
22199	1,2-Dichloroethene (Total)	08/21/2000	10	U	µg/L	N
22199	1,2-Dichloroethene (Total)	11/14/2000	10	U	µg/L	N
22199	Bromodichloromethane	06/25/1997	10	U	µg/L	N
22199	Bromodichloromethane	07/30/1997	10	U	µg/L	FD
22199	Bromodichloromethane	07/30/1997	10	U	µg/L	N
22199	Bromodichloromethane	08/07/1997	10	U	µg/L	N
22199	Bromodichloromethane	09/16/1997	10	U	µg/L	N
22199	Bromodichloromethane	10/29/1997	10	U	µg/L	N
22199	Bromodichloromethane	11/25/1997	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Bromodichloromethane	12/16/1997	10	U	µg/L	N
22199	Bromodichloromethane	01/26/1998	1	U	µg/L	N
22199	Bromodichloromethane	01/26/1998	1	U	µg/L	FD
22199	Bromodichloromethane	02/17/1998	1	U	µg/L	N
22199	Bromodichloromethane	03/10/1998	1	U	µg/L	N
22199	Bromodichloromethane	04/27/1998	1	U	µg/L	N
22199	Bromodichloromethane	04/27/1998	1	U	µg/L	FD
22199	Bromodichloromethane	05/26/1998	1	U	µg/L	N
22199	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22199	Bromodichloromethane	11/23/1998	10	U	µg/L	N
22199	Bromodichloromethane	02/16/1999	10	U	µg/L	FD
22199	Bromodichloromethane	02/16/1999	10	U	µg/L	N
22199	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22199	Bromodichloromethane	08/16/1999	1	U	µg/L	N
22199	Bromodichloromethane	11/15/1999	10	U	µg/L	N
22199	Bromodichloromethane	02/16/2000	10	U	µg/L	N
22199	Bromodichloromethane	02/16/2000	10	U	µg/L	FD
22199	Bromodichloromethane	05/23/2000	10	U	µg/L	N
22199	Bromodichloromethane	05/23/2000	10	U	µg/L	FD
22199	Bromodichloromethane	08/21/2000	10	U	µg/L	N
22199	Bromodichloromethane	11/14/2000	10	U	µg/L	N
22199	Tetrachloroethene	06/25/1997	10	U	µg/L	N
22199	Tetrachloroethene	07/30/1997	10	U	µg/L	FD
22199	Tetrachloroethene	07/30/1997	10	U	µg/L	N
22199	Tetrachloroethene	08/07/1997	10	U	µg/L	N
22199	Tetrachloroethene	09/16/1997	10	U	µg/L	N
22199	Tetrachloroethene	10/29/1997	10	U	µg/L	N
22199	Tetrachloroethene	11/25/1997	10	U	µg/L	N
22199	Tetrachloroethene	12/16/1997	10	U	µg/L	N
22199	Tetrachloroethene	01/26/1998	1	U	µg/L	N
22199	Tetrachloroethene	01/26/1998	1	U	µg/L	FD
22199	Tetrachloroethene	02/17/1998	1	U	µg/L	N
22199	Tetrachloroethene	03/10/1998	1	U	µg/L	N
22199	Tetrachloroethene	04/27/1998	1	U	µg/L	N
22199	Tetrachloroethene	04/27/1998	1	U	µg/L	FD
22199	Tetrachloroethene	05/26/1998	1	U	µg/L	N
22199	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22199	Tetrachloroethene	11/23/1998	10	U	µg/L	N
22199	Tetrachloroethene	02/16/1999	10	U	µg/L	FD
22199	Tetrachloroethene	02/16/1999	10	U	µg/L	N
22199	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22199	Tetrachloroethene	08/16/1999	1	U	µg/L	N
22199	Tetrachloroethene	11/15/1999	10	U	µg/L	N
22199	Tetrachloroethene	02/16/2000	10	U	µg/L	N
22199	Tetrachloroethene	02/16/2000	10	U	µg/L	FD
22199	Tetrachloroethene	05/23/2000	10	U	µg/L	N
22199	Tetrachloroethene	05/23/2000	10	U	µg/L	FD
22199	Tetrachloroethene	08/21/2000	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Tetrachloroethene	11/14/2000	10	U	µg/L	N
22199	Trichloroethene	06/25/1997	2	U	µg/L	N
22199	Trichloroethene	07/30/1997	2	U	µg/L	FD
22199	Trichloroethene	07/30/1997	2	U	µg/L	N
22199	Trichloroethene	08/07/1997	2	U	µg/L	N
22199	Trichloroethene	09/16/1997	2	U	µg/L	N
22199	Trichloroethene	10/29/1997	2	U	µg/L	N
22199	Trichloroethene	11/25/1997	2	U	µg/L	N
22199	Trichloroethene	12/16/1997	2	U	µg/L	N
22199	Trichloroethene	01/26/1998	1	U	µg/L	N
22199	Trichloroethene	01/26/1998	1	U	µg/L	FD
22199	Trichloroethene	02/17/1998	1	U	µg/L	N
22199	Trichloroethene	03/10/1998	1	U	µg/L	N
22199	Trichloroethene	04/27/1998	1	U	µg/L	N
22199	Trichloroethene	04/27/1998	1	U	µg/L	FD
22199	Trichloroethene	05/26/1998	1	U	µg/L	N
22199	Trichloroethene	08/24/1998	1	U	µg/L	N
22199	Trichloroethene	11/23/1998	1	U	µg/L	N
22199	Trichloroethene	02/16/1999	3	U	µg/L	FD
22199	Trichloroethene	02/16/1999	3	U	µg/L	N
22199	Trichloroethene	05/24/1999	3	U	µg/L	N
22199	Trichloroethene	08/16/1999	1	U	µg/L	N
22199	Trichloroethene	11/15/1999	3	U	µg/L	N
22199	Trichloroethene	02/16/2000	3	U	µg/L	N
22199	Trichloroethene	02/16/2000	3	U	µg/L	FD
22199	Trichloroethene	05/23/2000	3	U	µg/L	N
22199	Trichloroethene	05/23/2000	3	U	µg/L	FD
22199	Trichloroethene	08/21/2000	3	U	µg/L	N
22199	Trichloroethene	11/14/2000	3	U	µg/L	N
22199	Vinyl chloride	06/25/1997	1	UJ	µg/L	N
22199	Vinyl chloride	07/30/1997	1	U	µg/L	FD
22199	Vinyl chloride	07/30/1997	1	U	µg/L	N
22199	Vinyl chloride	08/07/1997	1	U	µg/L	N
22199	Vinyl chloride	09/16/1997	1	U	µg/L	N
22199	Vinyl chloride	10/29/1997	1	U	µg/L	N
22199	Vinyl chloride	11/25/1997	1	U	µg/L	N
22199	Vinyl chloride	12/16/1997	1	U	µg/L	N
22199	Vinyl chloride	01/26/1998	2	U	µg/L	N
22199	Vinyl chloride	01/26/1998	2	U	µg/L	FD
22199	Vinyl chloride	02/17/1998	2	U	µg/L	N
22199	Vinyl chloride	03/10/1998	2	U	µg/L	N
22199	Vinyl chloride	04/27/1998	1	U	µg/L	N
22199	Vinyl chloride	04/27/1998	1	U	µg/L	FD
22199	Vinyl chloride	05/26/1998	1	UJ	µg/L	N
22199	Vinyl chloride	08/24/1998	1	U	µg/L	N
22199	Vinyl chloride	11/23/1998	2	U	µg/L	N
22199	Vinyl chloride	02/16/1999	1	U	µg/L	FD
22199	Vinyl chloride	02/16/1999	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22199	Vinyl chloride	05/24/1999	1	U	µg/L	N
22199	Vinyl chloride	08/16/1999	1	U	µg/L	N
22199	Vinyl chloride	11/15/1999	1	U	µg/L	N
22199	Vinyl chloride	02/16/2000	1	U	µg/L	N
22199	Vinyl chloride	02/16/2000	1	U	µg/L	FD
22199	Vinyl chloride	05/23/2000	1	U	µg/L	N
22199	Vinyl chloride	05/23/2000	1	U	µg/L	FD
22199	Vinyl chloride	08/21/2000	1	U	µg/L	N
22199	Vinyl chloride	11/14/2000	1	U	µg/L	N
22200	Total Organic Carbon	06/30/1997	3.28	-	mg/L	N
22200	Total Organic Carbon	07/31/1997	19.4	J	mg/L	N
22200	Total Organic Carbon	08/07/1997	3.4	J	mg/L	N
22200	Total Organic Carbon	09/16/1997	23.2	J	mg/L	N
22200	Total Organic Carbon	10/29/1997	12	J	mg/L	N
22200	Total Organic Carbon	10/29/1997	9.4	J	mg/L	FD
22200	Total Organic Carbon	11/25/1997	9.9	J	mg/L	N
22200	Total Organic Carbon	11/25/1997	8	J	mg/L	FD
22200	Total Organic Carbon	12/16/1997	12.6	J	mg/L	N
22200	Total Organic Carbon	12/16/1997	10.5	J	mg/L	FD
22200	Total Organic Carbon	01/26/1998	1.88	-	mg/L	N
22200	Total Organic Carbon	02/23/1998	1.1	-	mg/L	N
22200	Total Organic Carbon	03/10/1998	1	U	mg/L	N
22200	Total Organic Carbon	03/10/1998	1	U	mg/L	FD
22200	Total Organic Carbon	04/27/1998	47.6	J	mg/L	N
22200	Total Organic Carbon	05/27/1998	32.6	J	mg/L	N
22200	Total Organic Carbon	08/24/1998	5.44	-	mg/L	N
22200	Total Organic Carbon	11/24/1998	1.04	-	mg/L	N
22200	Total Organic Carbon	02/17/1999	7.84	-	mg/L	N
22200	Total Organic Carbon	05/24/1999	2.35	U	mg/L	N
22200	Total Organic Carbon	08/17/1999	16.2	-	mg/L	N
22200	Total Organic Carbon	11/16/1999	3.59	-	mg/L	N
22200	Total Organic Carbon	02/16/2000	14.4	-	mg/L	N
22200	Total Organic Carbon	05/24/2000	1.06	-	mg/L	N
22200	Total Organic Carbon	08/23/2000	1.2	J	mg/L	N
22200	Total Organic Carbon	11/14/2000	1.34	-	mg/L	N
22200	Total Organic Halogens	06/30/1997	0.0073	-	mg/L	N
22200	Total Organic Halogens	07/31/1997	0.005	U	mg/L	N
22200	Total Organic Halogens	08/07/1997	0.005	U	mg/L	N
22200	Total Organic Halogens	09/16/1997	0.005	UJ	mg/L	N
22200	Total Organic Halogens	10/29/1997	0.0181	J	mg/L	N
22200	Total Organic Halogens	10/29/1997	0.0061	J	mg/L	FD
22200	Total Organic Halogens	11/25/1997	0.0085	U	mg/L	N
22200	Total Organic Halogens	11/25/1997	0.005	U	mg/L	FD
22200	Total Organic Halogens	12/16/1997	0.0055	J	mg/L	N
22200	Total Organic Halogens	12/16/1997	0.0093	J	mg/L	FD
22200	Total Organic Halogens	01/26/1998	0.00735	-	mg/L	N
22200	Total Organic Halogens	02/23/1998	0.0111	-	mg/L	N
22200	Total Organic Halogens	03/10/1998	0.0113	-	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Total Organic Halogens	03/10/1998	0.00985	-	mg/L	FD
22200	Total Organic Halogens	04/27/1998	0.024	U	mg/L	N
22200	Total Organic Halogens	05/27/1998	0.012	U	mg/L	N
22200	Total Organic Halogens	08/24/1998	0.013	UJ	mg/L	N
22200	Total Organic Halogens	11/24/1998	0.124	J	mg/L	N
22200	Total Organic Halogens	02/17/1999	0.00268	U	mg/L	N
22200	Total Organic Halogens	05/24/1999	0.00776	J	mg/L	N
22200	Total Organic Halogens	08/17/1999	0.012	U	mg/L	N
22200	Total Organic Halogens	11/16/1999	0.0138	J	mg/L	N
22200	Total Organic Halogens	02/16/2000	0.025	U	mg/L	N
22200	Total Organic Halogens	05/24/2000	0.177	J	mg/L	N
22200	Total Organic Halogens	08/23/2000	0.025	U	mg/L	N
22200	Total Organic Halogens	11/14/2000	0.025	U	mg/L	N
22200	Boron	06/30/1997	0.0486	U	mg/L	N
22200	Boron	07/31/1997	0.019	U	mg/L	N
22200	Boron	08/07/1997	0.026	U	mg/L	N
22200	Boron	09/16/1997	0.0473	-	mg/L	N
22200	Boron	10/29/1997	0.158	J	mg/L	N
22200	Boron	10/29/1997	0.0612	J	mg/L	FD
22200	Boron	11/25/1997	0.0547	J	mg/L	N
22200	Boron	11/25/1997	0.053	J	mg/L	FD
22200	Boron	12/16/1997	0.0483	-	mg/L	N
22200	Boron	12/16/1997	0.047	-	mg/L	FD
22200	Boron	01/26/1998	0.0873	U	mg/L	N
22200	Boron	02/23/1998	0.0692	U	mg/L	N
22200	Boron	03/10/1998	0.073	U	mg/L	N
22200	Boron	03/10/1998	0.0668	U	mg/L	FD
22200	Boron	04/27/1998	0.0461	-	mg/L	N
22200	Boron	05/27/1998	0.0427	-	mg/L	N
22200	Boron	08/24/1998	0.0424	-	mg/L	N
22200	Boron	11/24/1998	0.0642	-	mg/L	N
22200	Boron	02/17/1999	0.0465	-	mg/L	N
22200	Boron	05/24/1999	0.0536	J	mg/L	N
22200	Boron	08/17/1999	0.048	-	mg/L	N
22200	Boron	11/16/1999	0.0522	-	mg/L	N
22200	Boron	02/16/2000	0.0606	-	mg/L	N
22200	Boron	05/24/2000	0.046	-	mg/L	N
22200	Boron	08/23/2000	0.0446	U	mg/L	N
22200	Boron	11/14/2000	0.0529	U	mg/L	N
22200	Mercury	06/30/1997	0.0001	U	mg/L	N
22200	Mercury	07/31/1997	0.0001	U	mg/L	N
22200	Mercury	08/07/1997	0.0001	U	mg/L	N
22200	Mercury	09/16/1997	0.0001	U	mg/L	N
22200	Mercury	10/29/1997	0.0001	U	mg/L	N
22200	Mercury	10/29/1997	0.0001	U	mg/L	FD
22200	Mercury	11/25/1997	0.0001	U	mg/L	N
22200	Mercury	11/25/1997	0.0001	U	mg/L	FD
22200	Mercury	12/16/1997	0.0001	U	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Mercury	12/16/1997	0.0001	U	mg/L	FD
22200	Mercury	01/26/1998	0.0001	U	mg/L	N
22200	Mercury	02/23/1998	0.0001	U	mg/L	N
22200	Mercury	03/10/1998	0.0001	U	mg/L	N
22200	Mercury	03/10/1998	0.0001	U	mg/L	FD
22200	Mercury	04/27/1998	0.0001	U	mg/L	N
22200	Mercury	05/27/1998	0.0001	U	mg/L	N
22200	Mercury	08/24/1998	0.0001	U	mg/L	N
22200	Mercury	11/24/1998	0.0001	U	mg/L	N
22200	Mercury	02/17/1999	0.00012	U	mg/L	N
22200	Mercury	05/24/1999	0.00012	U	mg/L	N
22200	Mercury	08/17/1999	0.0001	U	mg/L	N
22200	Mercury	11/16/1999	0.00004	U	mg/L	N
22200	Mercury	02/16/2000	0.00004	R	mg/L	N
22200	Mercury	05/24/2000	0.0001	U	mg/L	N
22200	Mercury	08/23/2000	0.0001	U	mg/L	N
22200	Mercury	11/14/2000	0.0001	U	mg/L	N
22200	alpha-Chlordane	06/30/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	07/31/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	08/07/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	09/16/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	10/29/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	10/29/1997	0.05	U	µg/L	FD
22200	alpha-Chlordane	11/25/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	11/25/1997	0.05	U	µg/L	FD
22200	alpha-Chlordane	12/16/1997	0.05	U	µg/L	N
22200	alpha-Chlordane	12/16/1997	0.05	U	µg/L	FD
22200	alpha-Chlordane	01/26/1998	0.5	U	µg/L	N
22200	alpha-Chlordane	02/23/1998	0.05	U	µg/L	N
22200	alpha-Chlordane	03/10/1998	0.05	U	µg/L	N
22200	alpha-Chlordane	03/10/1998	0.05	U	µg/L	FD
22200	alpha-Chlordane	04/27/1998	0.005	U	µg/L	N
22200	alpha-Chlordane	05/27/1998	0.005	U	µg/L	N
22200	alpha-Chlordane	08/24/1998	0.031	U	µg/L	N
22200	alpha-Chlordane	11/24/1998	0.1	U	µg/L	N
22200	alpha-Chlordane	02/17/1999	0.01	UJ	µg/L	N
22200	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22200	alpha-Chlordane	08/17/1999	0.05	U	µg/L	N
22200	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
22200	alpha-Chlordane	02/16/2000	0.1	U	µg/L	N
22200	alpha-Chlordane	05/24/2000	0.1	U	µg/L	N
22200	alpha-Chlordane	05/24/2000	0.02	Z	µg/L	N
22200	alpha-Chlordane	08/23/2000	0.1	U	µg/L	N
22200	alpha-Chlordane	11/14/2000	0.1	U	µg/L	N
22200	Technetium-99	06/30/1997	4.78	UJ	pCi/L	N
22200	Technetium-99	07/31/1997	-1.38	UJ	pCi/L	N
22200	Technetium-99	08/07/1997	-8.61	UJ	pCi/L	N
22200	Technetium-99	09/16/1997	1.41	UJ	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Technetium-99	10/29/1997	1.5	R	pCi/L	N
22200	Technetium-99	10/29/1997	0.09	U	pCi/L	FD
22200	Technetium-99	10/29/1997	0.98	R	pCi/L	FD
22200	Technetium-99	10/29/1997	5	U	pCi/L	N
22200	Technetium-99	11/25/1997	-0.13	UJ	pCi/L	N
22200	Technetium-99	11/25/1997	0.7	UJ	pCi/L	FD
22200	Technetium-99	12/16/1997	-0.86	UJ	pCi/L	N
22200	Technetium-99	12/16/1997	0.87	UJ	pCi/L	FD
22200	Technetium-99	01/26/1998	1.44	U	pCi/L	N
22200	Technetium-99	02/23/1998	1.81	U	pCi/L	N
22200	Technetium-99	03/10/1998	-2.88	U	pCi/L	N
22200	Technetium-99	03/10/1998	-2.29	U	pCi/L	FD
22200	Technetium-99	04/27/1998	2.78	U	pCi/L	N
22200	Technetium-99	05/27/1998	-7.49	U	pCi/L	N
22200	Technetium-99	08/24/1998	5.52	U	pCi/L	N
22200	Technetium-99	11/24/1998	-1.244	U	pCi/L	N
22200	Technetium-99	02/17/1999	-1.784	U	pCi/L	N
22200	Technetium-99	05/24/1999	2.15	UJ	pCi/L	N
22200	Technetium-99	08/17/1999	-1.932	UJ	pCi/L	N
22200	Technetium-99	11/16/1999	-3.83	UJ	pCi/L	N
22200	Technetium-99	02/16/2000	0.253	UJ	pCi/L	N
22200	Technetium-99	05/24/2000	5.229	UJ	pCi/L	N
22200	Technetium-99	08/23/2000	-1.433	U	pCi/L	N
22200	Technetium-99	11/14/2000	-1.889	UJ	pCi/L	N
22200	Uranium, Total	06/30/1997	1.11	J	µg/L	N
22200	Uranium, Total	07/31/1997	0.311	J	µg/L	N
22200	Uranium, Total	08/07/1997	0.261	J	µg/L	N
22200	Uranium, Total	09/16/1997	0.292	J	µg/L	N
22200	Uranium, Total	10/29/1997	0.304	J	µg/L	N
22200	Uranium, Total	10/29/1997	0.315	J	µg/L	FD
22200	Uranium, Total	11/25/1997	0.131	J	µg/L	N
22200	Uranium, Total	11/25/1997	0.124	J	µg/L	FD
22200	Uranium, Total	12/16/1997	0.105	J	µg/L	N
22200	Uranium, Total	12/16/1997	0.22	J	µg/L	FD
22200	Uranium, Total	01/26/1998	0	UJ	µg/L	N
22200	Uranium, Total	02/23/1998	0	UJ	µg/L	N
22200	Uranium, Total	03/10/1998	0	UJ	µg/L	N
22200	Uranium, Total	03/10/1998	0	UJ	µg/L	FD
22200	Uranium, Total	04/27/1998	0.247	-	µg/L	N
22200	Uranium, Total	05/27/1998	0.165	J	µg/L	N
22200	Uranium, Total	08/24/1998	0.049	-	µg/L	N
22200	Uranium, Total	11/24/1998	0.15	J	µg/L	N
22200	Uranium, Total	02/17/1999	0.071	U	µg/L	N
22200	Uranium, Total	05/24/1999	0.13	-	µg/L	N
22200	Uranium, Total	08/17/1999	0.193	U	µg/L	N
22200	Uranium, Total	11/16/1999	0.112	U	µg/L	N
22200	Uranium, Total	02/16/2000	0.3676	J	µg/L	N
22200	Uranium, Total	05/24/2000	0.113	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Uranium, Total	08/23/2000	0.991	J	µg/L	N
22200	Uranium, Total	11/14/2000	0.232	J	µg/L	N
22200	4-Nitroaniline	06/30/1997	1.8	U	µg/L	N
22200	4-Nitroaniline	06/30/1997	3.5	Z	µg/L	N
22200	4-Nitroaniline	07/31/1997	25	U	µg/L	N
22200	4-Nitroaniline	08/07/1997	25	U	µg/L	N
22200	4-Nitroaniline	09/16/1997	25	U	µg/L	N
22200	4-Nitroaniline	10/29/1997	25	U	µg/L	N
22200	4-Nitroaniline	10/29/1997	25	U	µg/L	FD
22200	4-Nitroaniline	11/25/1997	25	U	µg/L	N
22200	4-Nitroaniline	11/25/1997	25	U	µg/L	FD
22200	4-Nitroaniline	12/16/1997	25	U	µg/L	N
22200	4-Nitroaniline	12/16/1997	25	U	µg/L	FD
22200	4-Nitroaniline	01/26/1998	25	U	µg/L	N
22200	4-Nitroaniline	02/23/1998	25	U	µg/L	N
22200	4-Nitroaniline	03/10/1998	25	U	µg/L	N
22200	4-Nitroaniline	03/10/1998	25	U	µg/L	FD
22200	4-Nitroaniline	04/27/1998	20	U	µg/L	N
22200	4-Nitroaniline	05/27/1998	20	U	µg/L	N
22200	4-Nitroaniline	08/24/1998	20	UJ	µg/L	N
22200	4-Nitroaniline	11/24/1998	50	U	µg/L	N
22200	4-Nitroaniline	02/17/1999	25	U	µg/L	N
22200	4-Nitroaniline	05/24/1999	50	U	µg/L	N
22200	4-Nitroaniline	08/17/1999	25	U	µg/L	N
22200	4-Nitroaniline	11/16/1999	50	U	µg/L	N
22200	4-Nitroaniline	02/16/2000	50	U	µg/L	N
22200	4-Nitroaniline	05/24/2000	25	U	µg/L	N
22200	4-Nitroaniline	08/23/2000	50	U	µg/L	N
22200	4-Nitroaniline	08/23/2000	100	Z	µg/L	N
22200	4-Nitroaniline	11/14/2000	50	U	µg/L	N
22200	Carbazole	06/30/1997	2.1	U	µg/L	N
22200	Carbazole	06/30/1997	4.2	Z	µg/L	N
22200	Carbazole	07/31/1997	5	U	µg/L	N
22200	Carbazole	08/07/1997	5	U	µg/L	N
22200	Carbazole	09/16/1997	5	U	µg/L	N
22200	Carbazole	10/29/1997	5	U	µg/L	N
22200	Carbazole	10/29/1997	5	U	µg/L	FD
22200	Carbazole	11/25/1997	5	U	µg/L	N
22200	Carbazole	11/25/1997	5	U	µg/L	FD
22200	Carbazole	12/16/1997	5	U	µg/L	N
22200	Carbazole	12/16/1997	5	U	µg/L	FD
22200	Carbazole	01/26/1998	10	U	µg/L	N
22200	Carbazole	02/23/1998	10	UJ	µg/L	N
22200	Carbazole	03/10/1998	10	UJ	µg/L	N
22200	Carbazole	03/10/1998	10	UJ	µg/L	FD
22200	Carbazole	04/27/1998	5	U	µg/L	N
22200	Carbazole	05/27/1998	5	U	µg/L	N
22200	Carbazole	08/24/1998	5	UJ	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Carbazole	11/24/1998	5	U	µg/L	N
22200	Carbazole	02/17/1999	5	U	µg/L	N
22200	Carbazole	05/24/1999	10	U	µg/L	N
22200	Carbazole	08/17/1999	10	U	µg/L	N
22200	Carbazole	11/16/1999	10	U	µg/L	N
22200	Carbazole	02/16/2000	10	U	µg/L	N
22200	Carbazole	05/24/2000	10	U	µg/L	N
22200	Carbazole	08/23/2000	10	U	µg/L	N
22200	Carbazole	08/23/2000	20	Z	µg/L	N
22200	Carbazole	11/14/2000	10	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	06/30/1997	1.8	UJ	µg/L	N
22200	bis(2-Chloroisopropyl) ether	06/30/1997	3.5	Z	µg/L	N
22200	bis(2-Chloroisopropyl) ether	07/31/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	08/07/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	09/16/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	10/29/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	10/29/1997	2	U	µg/L	FD
22200	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	FD
22200	bis(2-Chloroisopropyl) ether	12/16/1997	2	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	12/16/1997	2	U	µg/L	FD
22200	bis(2-Chloroisopropyl) ether	01/26/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	02/23/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	03/10/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	03/10/1998	5	UJ	µg/L	FD
22200	bis(2-Chloroisopropyl) ether	04/27/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	05/27/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	11/24/1998	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	02/17/1999	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	08/17/1999	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	05/24/2000	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	08/23/2000	5	U	µg/L	N
22200	bis(2-Chloroisopropyl) ether	08/23/2000	10	Z	µg/L	N
22200	bis(2-Chloroisopropyl) ether	11/14/2000	5	UJ	µg/L	N
22200	1,1-Dichloroethene	06/30/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	07/31/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	08/07/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	09/16/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	10/29/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	10/29/1997	3	U	µg/L	FD
22200	1,1-Dichloroethene	11/25/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	11/25/1997	3	U	µg/L	FD
22200	1,1-Dichloroethene	12/16/1997	3	U	µg/L	N
22200	1,1-Dichloroethene	12/16/1997	3	U	µg/L	FD

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	1,1-Dichloroethene	01/26/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	02/23/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	03/10/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	03/10/1998	1	U	µg/L	FD
22200	1,1-Dichloroethene	04/27/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	05/27/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	11/24/1998	1	U	µg/L	N
22200	1,1-Dichloroethene	02/17/1999	1	U	µg/L	N
22200	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22200	1,1-Dichloroethene	08/17/1999	1	U	µg/L	N
22200	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
22200	1,1-Dichloroethene	02/16/2000	5	U	µg/L	N
22200	1,1-Dichloroethene	05/24/2000	5	U	µg/L	N
22200	1,1-Dichloroethene	08/23/2000	5	U	µg/L	N
22200	1,1-Dichloroethene	11/14/2000	5	U	µg/L	N
22200	1,2-Dichloroethene (Total)	06/30/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	07/31/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	08/07/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	09/16/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	10/29/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	10/29/1997	10	U	µg/L	FD
22200	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	FD
22200	1,2-Dichloroethene (Total)	12/16/1997	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	12/16/1997	10	U	µg/L	FD
22200	1,2-Dichloroethene (Total)	01/26/1998	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	02/23/1998	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	03/10/1998	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	03/10/1998	1	U	µg/L	FD
22200	1,2-Dichloroethene (Total)	04/27/1998	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	05/27/1998	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	11/24/1998	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	02/17/1999	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	08/17/1999	1	U	µg/L	N
22200	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	05/24/2000	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	08/23/2000	10	U	µg/L	N
22200	1,2-Dichloroethene (Total)	11/14/2000	10	U	µg/L	N
22200	Bromodichloromethane	06/30/1997	10	U	µg/L	N
22200	Bromodichloromethane	07/31/1997	10	U	µg/L	N
22200	Bromodichloromethane	08/07/1997	10	U	µg/L	N
22200	Bromodichloromethane	09/16/1997	10	U	µg/L	N
22200	Bromodichloromethane	10/29/1997	10	U	µg/L	N
22200	Bromodichloromethane	10/29/1997	10	U	µg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Bromodichloromethane	11/25/1997	10	U	µg/L	N
22200	Bromodichloromethane	11/25/1997	10	U	µg/L	FD
22200	Bromodichloromethane	12/16/1997	10	U	µg/L	N
22200	Bromodichloromethane	12/16/1997	10	U	µg/L	FD
22200	Bromodichloromethane	01/26/1998	1	U	µg/L	N
22200	Bromodichloromethane	02/23/1998	1	U	µg/L	N
22200	Bromodichloromethane	03/10/1998	1	U	µg/L	N
22200	Bromodichloromethane	03/10/1998	1	U	µg/L	FD
22200	Bromodichloromethane	04/27/1998	1	U	µg/L	N
22200	Bromodichloromethane	05/27/1998	1	U	µg/L	N
22200	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22200	Bromodichloromethane	11/24/1998	10	U	µg/L	N
22200	Bromodichloromethane	02/17/1999	10	U	µg/L	N
22200	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22200	Bromodichloromethane	08/17/1999	1	U	µg/L	N
22200	Bromodichloromethane	11/16/1999	10	U	µg/L	N
22200	Bromodichloromethane	02/16/2000	10	U	µg/L	N
22200	Bromodichloromethane	05/24/2000	10	U	µg/L	N
22200	Bromodichloromethane	08/23/2000	10	U	µg/L	N
22200	Bromodichloromethane	11/14/2000	10	U	µg/L	N
22200	Tetrachloroethene	06/30/1997	10	U	µg/L	N
22200	Tetrachloroethene	07/31/1997	10	U	µg/L	N
22200	Tetrachloroethene	08/07/1997	10	U	µg/L	N
22200	Tetrachloroethene	09/16/1997	10	U	µg/L	N
22200	Tetrachloroethene	10/29/1997	10	U	µg/L	N
22200	Tetrachloroethene	10/29/1997	10	U	µg/L	FD
22200	Tetrachloroethene	11/25/1997	10	U	µg/L	N
22200	Tetrachloroethene	11/25/1997	10	U	µg/L	FD
22200	Tetrachloroethene	12/16/1997	10	U	µg/L	N
22200	Tetrachloroethene	12/16/1997	10	U	µg/L	FD
22200	Tetrachloroethene	01/26/1998	1	U	µg/L	N
22200	Tetrachloroethene	02/23/1998	1	U	µg/L	N
22200	Tetrachloroethene	03/10/1998	1	U	µg/L	N
22200	Tetrachloroethene	03/10/1998	1	U	µg/L	FD
22200	Tetrachloroethene	04/27/1998	1	U	µg/L	N
22200	Tetrachloroethene	05/27/1998	1	U	µg/L	N
22200	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22200	Tetrachloroethene	11/24/1998	10	U	µg/L	N
22200	Tetrachloroethene	02/17/1999	10	U	µg/L	N
22200	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22200	Tetrachloroethene	08/17/1999	1	U	µg/L	N
22200	Tetrachloroethene	11/16/1999	10	U	µg/L	N
22200	Tetrachloroethene	02/16/2000	10	U	µg/L	N
22200	Tetrachloroethene	05/24/2000	10	U	µg/L	N
22200	Tetrachloroethene	08/23/2000	10	U	µg/L	N
22200	Tetrachloroethene	11/14/2000	10	U	µg/L	N
22200	Trichloroethene	06/30/1997	2	U	µg/L	N
22200	Trichloroethene	07/31/1997	2	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Trichloroethene	08/07/1997	2	U	µg/L	N
22200	Trichloroethene	09/16/1997	2	U	µg/L	N
22200	Trichloroethene	10/29/1997	2	U	µg/L	N
22200	Trichloroethene	10/29/1997	2	U	µg/L	FD
22200	Trichloroethene	11/25/1997	2	U	µg/L	N
22200	Trichloroethene	11/25/1997	2	U	µg/L	FD
22200	Trichloroethene	12/16/1997	2	U	µg/L	N
22200	Trichloroethene	12/16/1997	2	U	µg/L	FD
22200	Trichloroethene	01/26/1998	1	U	µg/L	N
22200	Trichloroethene	02/23/1998	1	U	µg/L	N
22200	Trichloroethene	03/10/1998	1	U	µg/L	N
22200	Trichloroethene	03/10/1998	1	U	µg/L	FD
22200	Trichloroethene	04/27/1998	1	U	µg/L	N
22200	Trichloroethene	05/27/1998	1	U	µg/L	N
22200	Trichloroethene	08/24/1998	1	U	µg/L	N
22200	Trichloroethene	11/24/1998	1	U	µg/L	N
22200	Trichloroethene	02/17/1999	3	U	µg/L	N
22200	Trichloroethene	05/24/1999	3	U	µg/L	N
22200	Trichloroethene	08/17/1999	1	U	µg/L	N
22200	Trichloroethene	11/16/1999	3	U	µg/L	N
22200	Trichloroethene	02/16/2000	3	U	µg/L	N
22200	Trichloroethene	05/24/2000	3	U	µg/L	N
22200	Trichloroethene	08/23/2000	3	U	µg/L	N
22200	Trichloroethene	11/14/2000	3	U	µg/L	N
22200	Vinyl chloride	06/30/1997	1	U	µg/L	N
22200	Vinyl chloride	07/31/1997	1	U	µg/L	N
22200	Vinyl chloride	08/07/1997	1	U	µg/L	N
22200	Vinyl chloride	09/16/1997	1	U	µg/L	N
22200	Vinyl chloride	10/29/1997	1	U	µg/L	N
22200	Vinyl chloride	10/29/1997	1	U	µg/L	FD
22200	Vinyl chloride	11/25/1997	1	U	µg/L	N
22200	Vinyl chloride	11/25/1997	1	U	µg/L	FD
22200	Vinyl chloride	12/16/1997	1	U	µg/L	N
22200	Vinyl chloride	12/16/1997	1	U	µg/L	FD
22200	Vinyl chloride	01/26/1998	2	U	µg/L	N
22200	Vinyl chloride	02/23/1998	2	U	µg/L	N
22200	Vinyl chloride	03/10/1998	2	U	µg/L	N
22200	Vinyl chloride	03/10/1998	2	U	µg/L	FD
22200	Vinyl chloride	04/27/1998	1	U	µg/L	N
22200	Vinyl chloride	05/27/1998	1	UJ	µg/L	N
22200	Vinyl chloride	08/24/1998	1	U	µg/L	N
22200	Vinyl chloride	11/24/1998	2	U	µg/L	N
22200	Vinyl chloride	02/17/1999	1	U	µg/L	N
22200	Vinyl chloride	05/24/1999	1	U	µg/L	N
22200	Vinyl chloride	08/17/1999	1	U	µg/L	N
22200	Vinyl chloride	11/16/1999	1	U	µg/L	N
22200	Vinyl chloride	02/16/2000	1	U	µg/L	N
22200	Vinyl chloride	05/24/2000	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22200	Vinyl chloride	08/23/2000	1	U	µg/L	N
22200	Vinyl chloride	11/14/2000	1	U	µg/L	N
22201	Total Organic Carbon	03/31/1997	13.7	-	mg/L	N
22201	Total Organic Carbon	03/31/1997	11.7	-	mg/L	FD
22201	Total Organic Carbon	04/30/1997	1.9	-	mg/L	N
22201	Total Organic Carbon	05/14/1997	4.1	J	mg/L	N
22201	Total Organic Carbon	05/14/1997	1.8	J	mg/L	FD
22201	Total Organic Carbon	05/28/1997	1.5	-	mg/L	N
22201	Total Organic Carbon	06/17/1997	3.4	-	mg/L	N
22201	Total Organic Carbon	06/25/1997	2.4	J	mg/L	N
22201	Total Organic Carbon	06/25/1997	2.5	J	mg/L	FD
22201	Total Organic Carbon	07/09/1997	4.48	-	mg/L	N
22201	Total Organic Carbon	07/09/1997	3.7	-	mg/L	FD
22201	Total Organic Carbon	07/30/1997	22.5	J	mg/L	N
22201	Total Organic Carbon	08/07/1997	13.5	J	mg/L	N
22201	Total Organic Carbon	08/07/1997	20.9	J	mg/L	FD
22201	Total Organic Carbon	08/26/1997	37.6	Z	mg/L	N
22201	Total Organic Carbon	08/26/1997	9.66	J	mg/L	FD
22201	Total Organic Carbon	08/26/1997	7.39	J	mg/L	N
22201	Total Organic Carbon	09/16/1997	18.6	J	mg/L	N
22201	Total Organic Carbon	09/16/1997	14	J	mg/L	FD
22201	Total Organic Carbon	10/01/1997	24	-	mg/L	N
22201	Total Organic Carbon	11/25/1997	16.5	J	mg/L	N
22201	Total Organic Carbon	12/02/1997	16.3	J	mg/L	N
22201	Total Organic Carbon	12/08/1997	13.7	J	mg/L	N
22201	Total Organic Carbon	12/08/1997	12.5	J	mg/L	FD
22201	Total Organic Carbon	02/23/1998	1.98	-	mg/L	FD
22201	Total Organic Carbon	02/23/1998	1.9	-	mg/L	N
22201	Total Organic Carbon	05/27/1998	59.7	J	mg/L	N
22201	Total Organic Carbon	08/24/1998	7.72	-	mg/L	N
22201	Total Organic Carbon	11/24/1998	2.18	-	mg/L	N
22201	Total Organic Carbon	02/16/1999	3.6	U	mg/L	N
22201	Total Organic Carbon	05/24/1999	13	U	mg/L	N
22201	Total Organic Carbon	08/18/1999	2.63	U	mg/L	N
22201	Total Organic Carbon	11/17/1999	2.22	-	mg/L	N
22201	Total Organic Carbon	02/22/2000	12.4	J	mg/L	N
22201	Total Organic Carbon	05/24/2000	2.16	-	mg/L	N
22201	Total Organic Carbon	08/22/2000	3.4	J	mg/L	N
22201	Total Organic Carbon	11/15/2000	2.84	-	mg/L	N
22201	Total Organic Halogens	03/31/1997	0.078	J	mg/L	N
22201	Total Organic Halogens	03/31/1997	0.024	UJ	mg/L	FD
22201	Total Organic Halogens	04/30/1997	0.061	-	mg/L	N
22201	Total Organic Halogens	05/14/1997	0.022	J	mg/L	N
22201	Total Organic Halogens	05/14/1997	0.0265	J	mg/L	FD
22201	Total Organic Halogens	05/28/1997	0.0268	-	mg/L	N
22201	Total Organic Halogens	06/17/1997	0.0074	U	mg/L	N
22201	Total Organic Halogens	06/25/1997	0.0176	-	mg/L	N
22201	Total Organic Halogens	06/25/1997	0.0202	-	mg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Total Organic Halogens	07/09/1997	0.0069	J	mg/L	N
22201	Total Organic Halogens	07/09/1997	0.005	UJ	mg/L	FD
22201	Total Organic Halogens	07/30/1997	0.005	U	mg/L	N
22201	Total Organic Halogens	08/07/1997	0.0066	U	mg/L	N
22201	Total Organic Halogens	08/07/1997	0.0056	U	mg/L	FD
22201	Total Organic Halogens	08/26/1997	0.005	UJ	mg/L	N
22201	Total Organic Halogens	08/26/1997	0.0055	J	mg/L	FD
22201	Total Organic Halogens	09/16/1997	0.005	UJ	mg/L	N
22201	Total Organic Halogens	09/16/1997	0.005	UJ	mg/L	FD
22201	Total Organic Halogens	10/01/1997	0.012	UJ	mg/L	N
22201	Total Organic Halogens	11/25/1997	0.029	-	mg/L	N
22201	Total Organic Halogens	12/02/1997	0.0228	U	mg/L	N
22201	Total Organic Halogens	12/08/1997	0.0214	-	mg/L	N
22201	Total Organic Halogens	12/08/1997	0.0236	-	mg/L	FD
22201	Total Organic Halogens	02/23/1998	0.026	J	mg/L	FD
22201	Total Organic Halogens	02/23/1998	0.0141	J	mg/L	N
22201	Total Organic Halogens	05/27/1998	0.0138	-	mg/L	N
22201	Total Organic Halogens	08/24/1998	0.00524	UJ	mg/L	N
22201	Total Organic Halogens	11/24/1998	0.0105	J	mg/L	N
22201	Total Organic Halogens	02/16/1999	0.0026	U	mg/L	N
22201	Total Organic Halogens	05/24/1999	0.00474	U	mg/L	N
22201	Total Organic Halogens	08/18/1999	0.0274	U	mg/L	N
22201	Total Organic Halogens	11/17/1999	0.00508	UJ	mg/L	N
22201	Total Organic Halogens	02/22/2000	0.023	U	mg/L	N
22201	Total Organic Halogens	05/24/2000	0.308	J	mg/L	N
22201	Total Organic Halogens	08/22/2000	0.0181	J	mg/L	N
22201	Total Organic Halogens	11/15/2000	0.025	U	mg/L	N
22201	Boron	03/31/1997	0.0575	-	mg/L	N
22201	Boron	03/31/1997	0.0444	-	mg/L	FD
22201	Boron	04/30/1997	0.07	-	mg/L	N
22201	Boron	05/14/1997	0.0777	-	mg/L	N
22201	Boron	05/14/1997	0.0812	-	mg/L	FD
22201	Boron	05/28/1997	0.0869	-	mg/L	N
22201	Boron	06/17/1997	0.0544	U	mg/L	N
22201	Boron	06/25/1997	0.0732	U	mg/L	N
22201	Boron	06/25/1997	0.0724	U	mg/L	FD
22201	Boron	07/09/1997	0.0651	U	mg/L	N
22201	Boron	07/09/1997	0.0644	U	mg/L	FD
22201	Boron	07/30/1997	0.0506	U	mg/L	N
22201	Boron	08/07/1997	0.0735	U	mg/L	N
22201	Boron	08/07/1997	0.0794	U	mg/L	FD
22201	Boron	08/26/1997	0.0819	-	mg/L	N
22201	Boron	08/26/1997	0.0748	-	mg/L	FD
22201	Boron	09/16/1997	0.1	-	mg/L	N
22201	Boron	09/16/1997	0.102	-	mg/L	FD
22201	Boron	10/01/1997	0.105	-	mg/L	N
22201	Boron	11/25/1997	0.123	-	mg/L	N
22201	Boron	12/02/1997	0.114	-	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Boron	12/08/1997	0.114	-	mg/L	N
22201	Boron	12/08/1997	0.112	-	mg/L	FD
22201	Boron	02/23/1998	0.142	-	mg/L	FD
22201	Boron	02/23/1998	0.132	-	mg/L	N
22201	Boron	05/27/1998	0.0915	-	mg/L	N
22201	Boron	08/24/1998	0.0759	-	mg/L	N
22201	Boron	11/24/1998	0.133	-	mg/L	N
22201	Boron	02/16/1999	0.109	-	mg/L	N
22201	Boron	05/24/1999	0.121	J	mg/L	N
22201	Boron	08/18/1999	0.0983	-	mg/L	N
22201	Boron	11/17/1999	0.125	-	mg/L	N
22201	Boron	02/22/2000	0.108	-	mg/L	N
22201	Boron	05/24/2000	0.0913	-	mg/L	N
22201	Boron	08/22/2000	0.125	J	mg/L	N
22201	Boron	11/15/2000	0.0692	-	mg/L	N
22201	Mercury	03/31/1997	0.0001	U	mg/L	N
22201	Mercury	03/31/1997	0.0001	U	mg/L	FD
22201	Mercury	04/30/1997	0.0001	U	mg/L	N
22201	Mercury	05/14/1997	0.0001	U	mg/L	N
22201	Mercury	05/14/1997	0.0001	U	mg/L	FD
22201	Mercury	05/28/1997	0.0001	U	mg/L	N
22201	Mercury	06/17/1997	0.0001	U	mg/L	N
22201	Mercury	06/25/1997	0.0001	U	mg/L	N
22201	Mercury	06/25/1997	0.0001	U	mg/L	FD
22201	Mercury	07/09/1997	0.0001	U	mg/L	N
22201	Mercury	07/09/1997	0.0001	U	mg/L	FD
22201	Mercury	07/30/1997	0.0001	U	mg/L	N
22201	Mercury	08/07/1997	0.0001	U	mg/L	N
22201	Mercury	08/07/1997	0.0001	U	mg/L	FD
22201	Mercury	08/26/1997	0.0001	U	mg/L	N
22201	Mercury	08/26/1997	0.0001	U	mg/L	FD
22201	Mercury	09/16/1997	0.0001	U	mg/L	N
22201	Mercury	09/16/1997	0.0001	U	mg/L	FD
22201	Mercury	10/01/1997	0.0001	U	mg/L	N
22201	Mercury	11/25/1997	0.0001	U	mg/L	N
22201	Mercury	12/02/1997	0.0001	U	mg/L	N
22201	Mercury	12/08/1997	0.0001	U	mg/L	N
22201	Mercury	12/08/1997	0.0001	U	mg/L	FD
22201	Mercury	02/23/1998	0.0001	U	mg/L	FD
22201	Mercury	02/23/1998	0.0001	U	mg/L	N
22201	Mercury	05/27/1998	0.0001	U	mg/L	N
22201	Mercury	08/24/1998	0.0001	U	mg/L	N
22201	Mercury	11/24/1998	0.0001	U	mg/L	N
22201	Mercury	02/16/1999	0.00012	U	mg/L	N
22201	Mercury	05/24/1999	0.00012	U	mg/L	N
22201	Mercury	08/18/1999	0.0001	U	mg/L	N
22201	Mercury	11/17/1999	0.00004	U	mg/L	N
22201	Mercury	02/22/2000	0.00004	U	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Mercury	05/24/2000	0.0001	U	mg/L	N
22201	Mercury	08/22/2000	0.0001	U	mg/L	N
22201	Mercury	11/15/2000	0.00015	U	mg/L	N
22201	alpha-Chlordane	03/31/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	03/31/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	04/30/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	04/30/1997	0.05	Z	µg/L	N
22201	alpha-Chlordane	05/14/1997	0.05	UJ	µg/L	N
22201	alpha-Chlordane	05/14/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	05/28/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	06/17/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	06/25/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	06/25/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	07/09/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	07/09/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	07/30/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	08/07/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	08/07/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	08/26/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	08/26/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	09/16/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	09/16/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	10/01/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	11/25/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	12/02/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	12/08/1997	0.05	U	µg/L	N
22201	alpha-Chlordane	12/08/1997	0.05	U	µg/L	FD
22201	alpha-Chlordane	02/23/1998	0.05	U	µg/L	FD
22201	alpha-Chlordane	02/23/1998	0.05	U	µg/L	N
22201	alpha-Chlordane	05/27/1998	0.005	U	µg/L	N
22201	alpha-Chlordane	08/24/1998	0.062	U	µg/L	N
22201	alpha-Chlordane	11/24/1998	0.1	U	µg/L	N
22201	alpha-Chlordane	02/16/1999	0.01	UJ	µg/L	N
22201	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22201	alpha-Chlordane	08/18/1999	0.05	U	µg/L	N
22201	alpha-Chlordane	11/17/1999	0.1	U	µg/L	N
22201	alpha-Chlordane	02/22/2000	0.1	U	µg/L	N
22201	alpha-Chlordane	05/24/2000	0.1	U	µg/L	N
22201	alpha-Chlordane	08/22/2000	0.1	U	µg/L	N
22201	alpha-Chlordane	11/15/2000	0.1	UJ	µg/L	N
22201	Technetium-99	03/31/1997	6.01	U	pCi/L	N
22201	Technetium-99	03/31/1997	6.86	U	pCi/L	FD
22201	Technetium-99	03/31/1997	6.01	Z	pCi/L	N
22201	Technetium-99	03/31/1997	6.86	U	pCi/L	FD
22201	Technetium-99	04/30/1997	6.99	U	pCi/L	N
22201	Technetium-99	05/14/1997	12.5	UJ	pCi/L	N
22201	Technetium-99	05/14/1997	4.12	U	pCi/L	FD
22201	Technetium-99	05/28/1997	-2.02	UJ	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Technetium-99	06/17/1997	0.69	UJ	pCi/L	N
22201	Technetium-99	06/25/1997	21.57	Z	pCi/L	N
22201	Technetium-99	06/25/1997	4.52	U	pCi/L	FD
22201	Technetium-99	06/25/1997	16.3	Z	pCi/L	FD
22201	Technetium-99	06/25/1997	0.87	U	pCi/L	N
22201	Technetium-99	07/09/1997	5.05	UJ	pCi/L	N
22201	Technetium-99	07/09/1997	4.43	UJ	pCi/L	FD
22201	Technetium-99	07/30/1997	-4.46	UJ	pCi/L	N
22201	Technetium-99	08/07/1997	-3.43	UJ	pCi/L	N
22201	Technetium-99	08/07/1997	-3.23	UJ	pCi/L	FD
22201	Technetium-99	08/26/1997	10.13	J	pCi/L	N
22201	Technetium-99	08/26/1997	13.41	J	pCi/L	FD
22201	Technetium-99	09/16/1997	0.67	UJ	pCi/L	N
22201	Technetium-99	09/16/1997	3.57	UJ	pCi/L	FD
22201	Technetium-99	10/01/1997	-2.08	UJ	pCi/L	N
22201	Technetium-99	11/25/1997	4.62	UJ	pCi/L	N
22201	Technetium-99	12/02/1997	4.25	UJ	pCi/L	N
22201	Technetium-99	12/08/1997	3.37	UJ	pCi/L	N
22201	Technetium-99	12/08/1997	2.27	UJ	pCi/L	FD
22201	Technetium-99	02/23/1998	2	U	pCi/L	FD
22201	Technetium-99	02/23/1998	4.27	U	pCi/L	N
22201	Technetium-99	05/27/1998	-6.19	U	pCi/L	N
22201	Technetium-99	08/24/1998	7.21	U	pCi/L	N
22201	Technetium-99	11/24/1998	-1.949	U	pCi/L	N
22201	Technetium-99	02/16/1999	-0.076	U	pCi/L	N
22201	Technetium-99	05/24/1999	4.27	UJ	pCi/L	N
22201	Technetium-99	08/18/1999	-0.722	UJ	pCi/L	N
22201	Technetium-99	11/17/1999	-3.435	UJ	pCi/L	N
22201	Technetium-99	02/22/2000	-1.473	UJ	pCi/L	N
22201	Technetium-99	05/24/2000	4.937	UJ	pCi/L	N
22201	Technetium-99	08/22/2000	-3.325	U	pCi/L	N
22201	Technetium-99	11/15/2000	-2.128	UJ	pCi/L	N
22201	Uranium, Total	03/31/1997	5.089	-	µg/L	N
22201	Uranium, Total	03/31/1997	5.196	-	µg/L	FD
22201	Uranium, Total	04/30/1997	0.028	U	µg/L	N
22201	Uranium, Total	05/14/1997	0.617	-	µg/L	N
22201	Uranium, Total	05/14/1997	0.697	-	µg/L	FD
22201	Uranium, Total	05/28/1997	0.125	-	µg/L	N
22201	Uranium, Total	06/17/1997	0.08	-	µg/L	N
22201	Uranium, Total	06/25/1997	0.174	J	µg/L	N
22201	Uranium, Total	06/25/1997	0.029	U	µg/L	FD
22201	Uranium, Total	07/09/1997	0.129	J	µg/L	N
22201	Uranium, Total	07/09/1997	0.099	J	µg/L	FD
22201	Uranium, Total	07/30/1997	0.161	J	µg/L	N
22201	Uranium, Total	08/07/1997	0.175	J	µg/L	N
22201	Uranium, Total	08/07/1997	0.144	J	µg/L	FD
22201	Uranium, Total	08/26/1997	0.204	J	µg/L	N
22201	Uranium, Total	08/26/1997	0.155	J	µg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Uranium, Total	09/16/1997	0.154	J	µg/L	N
22201	Uranium, Total	09/16/1997	0.195	J	µg/L	FD
22201	Uranium, Total	10/01/1997	0.203	J	µg/L	N
22201	Uranium, Total	11/25/1997	0.091	J	µg/L	N
22201	Uranium, Total	12/02/1997	0.172	J	µg/L	N
22201	Uranium, Total	12/08/1997	0.107	J	µg/L	N
22201	Uranium, Total	12/08/1997	0.209	J	µg/L	FD
22201	Uranium, Total	02/23/1998	0	UJ	µg/L	FD
22201	Uranium, Total	02/23/1998	0	UJ	µg/L	N
22201	Uranium, Total	05/27/1998	0.087	J	µg/L	N
22201	Uranium, Total	08/24/1998	3.08	-	µg/L	N
22201	Uranium, Total	11/24/1998	0.58	-	µg/L	N
22201	Uranium, Total	02/16/1999	0.194	J	µg/L	N
22201	Uranium, Total	05/24/1999	0.24	-	µg/L	N
22201	Uranium, Total	08/18/1999	0.592	J	µg/L	N
22201	Uranium, Total	11/17/1999	0.111	U	µg/L	N
22201	Uranium, Total	02/22/2000	0.2399	UJ	µg/L	N
22201	Uranium, Total	05/24/2000	6.384	J	µg/L	N
22201	Uranium, Total	08/22/2000	0.592	J	µg/L	N
22201	Uranium, Total	11/15/2000	1.416	J	µg/L	N
22201	4-Nitroaniline	03/31/1997	25	U	µg/L	N
22201	4-Nitroaniline	03/31/1997	25	U	µg/L	FD
22201	4-Nitroaniline	04/30/1997	25	UJ	µg/L	N
22201	4-Nitroaniline	05/14/1997	25	U	µg/L	N
22201	4-Nitroaniline	05/14/1997	25	U	µg/L	FD
22201	4-Nitroaniline	05/28/1997	25	U	µg/L	N
22201	4-Nitroaniline	06/17/1997	25	U	µg/L	N
22201	4-Nitroaniline	06/25/1997	1.8	U	µg/L	N
22201	4-Nitroaniline	06/25/1997	1.8	U	µg/L	FD
22201	4-Nitroaniline	07/09/1997	25	U	µg/L	N
22201	4-Nitroaniline	07/09/1997	25	U	µg/L	FD
22201	4-Nitroaniline	07/09/1997	25	U	µg/L	N
22201	4-Nitroaniline	07/30/1997	25	U	µg/L	N
22201	4-Nitroaniline	08/07/1997	25	U	µg/L	N
22201	4-Nitroaniline	08/07/1997	25	U	µg/L	FD
22201	4-Nitroaniline	08/26/1997	25	U	µg/L	N
22201	4-Nitroaniline	08/26/1997	25	U	µg/L	FD
22201	4-Nitroaniline	09/16/1997	25	U	µg/L	N
22201	4-Nitroaniline	09/16/1997	25	U	µg/L	FD
22201	4-Nitroaniline	10/01/1997	25	U	µg/L	N
22201	4-Nitroaniline	11/25/1997	25	U	µg/L	N
22201	4-Nitroaniline	12/02/1997	25	U	µg/L	N
22201	4-Nitroaniline	12/08/1997	25	U	µg/L	N
22201	4-Nitroaniline	12/08/1997	25	U	µg/L	FD
22201	4-Nitroaniline	02/23/1998	25	U	µg/L	FD
22201	4-Nitroaniline	02/23/1998	25	U	µg/L	N
22201	4-Nitroaniline	05/27/1998	20	U	µg/L	N
22201	4-Nitroaniline	08/24/1998	20	UJ	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	4-Nitroaniline	11/24/1998	50	U	µg/L	N
22201	4-Nitroaniline	02/16/1999	25	U	µg/L	N
22201	4-Nitroaniline	05/24/1999	50	U	µg/L	N
22201	4-Nitroaniline	08/18/1999	25	U	µg/L	N
22201	4-Nitroaniline	11/17/1999	50	U	µg/L	N
22201	4-Nitroaniline	02/22/2000	62.5	U	µg/L	N
22201	4-Nitroaniline	05/24/2000	25	U	µg/L	N
22201	4-Nitroaniline	08/22/2000	50	U	µg/L	N
22201	4-Nitroaniline	11/15/2000	50	U	µg/L	N
22201	Carbazole	03/31/1997	10	UJ	µg/L	N
22201	Carbazole	03/31/1997	10	UJ	µg/L	FD
22201	Carbazole	04/30/1997	10	U	µg/L	N
22201	Carbazole	05/14/1997	10	U	µg/L	N
22201	Carbazole	05/14/1997	10	U	µg/L	FD
22201	Carbazole	05/28/1997	10	U	µg/L	N
22201	Carbazole	06/17/1997	5	U	µg/L	N
22201	Carbazole	06/25/1997	2.1	U	µg/L	N
22201	Carbazole	06/25/1997	2.1	U	µg/L	FD
22201	Carbazole	07/09/1997	5	U	µg/L	N
22201	Carbazole	07/09/1997	5	U	µg/L	N
22201	Carbazole	07/09/1997	5	U	µg/L	FD
22201	Carbazole	07/30/1997	5	U	µg/L	N
22201	Carbazole	08/07/1997	5	U	µg/L	N
22201	Carbazole	08/07/1997	5	U	µg/L	FD
22201	Carbazole	08/26/1997	5	U	µg/L	N
22201	Carbazole	08/26/1997	5	U	µg/L	FD
22201	Carbazole	09/16/1997	5	U	µg/L	N
22201	Carbazole	09/16/1997	5	U	µg/L	FD
22201	Carbazole	10/01/1997	5	UJ	µg/L	N
22201	Carbazole	11/25/1997	5	U	µg/L	N
22201	Carbazole	12/02/1997	5	U	µg/L	N
22201	Carbazole	12/08/1997	5	U	µg/L	N
22201	Carbazole	12/08/1997	5	U	µg/L	FD
22201	Carbazole	02/23/1998	10	UJ	µg/L	FD
22201	Carbazole	02/23/1998	10	UJ	µg/L	N
22201	Carbazole	05/27/1998	5	U	µg/L	N
22201	Carbazole	08/24/1998	5	UJ	µg/L	N
22201	Carbazole	11/24/1998	5	U	µg/L	N
22201	Carbazole	02/16/1999	5	U	µg/L	N
22201	Carbazole	05/24/1999	10	U	µg/L	N
22201	Carbazole	08/18/1999	10	U	µg/L	N
22201	Carbazole	11/17/1999	10	U	µg/L	N
22201	Carbazole	02/22/2000	12.5	U	µg/L	N
22201	Carbazole	05/24/2000	10	U	µg/L	N
22201	Carbazole	08/22/2000	10	U	µg/L	N
22201	Carbazole	11/15/2000	10	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	03/31/1997	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	03/31/1997	5	U	µg/L	FD

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	bis(2-Chloroisopropyl) ether	04/30/1997	5	UJ	µg/L	N
22201	bis(2-Chloroisopropyl) ether	05/14/1997	10	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	05/14/1997	10	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	05/28/1997	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	06/17/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	06/25/1997	1.8	UJ	µg/L	N
22201	bis(2-Chloroisopropyl) ether	06/25/1997	1.8	UJ	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	07/09/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	07/09/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	07/09/1997	2	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	07/30/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/07/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/07/1997	2	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	08/26/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/26/1997	2	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	09/16/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	09/16/1997	2	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	10/01/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	11/25/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	12/02/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	12/08/1997	2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	12/08/1997	2	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	02/23/1998	5	U	µg/L	FD
22201	bis(2-Chloroisopropyl) ether	02/23/1998	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	05/27/1998	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	11/24/1998	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	02/16/1999	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/18/1999	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	11/17/1999	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	02/22/2000	6.2	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	05/24/2000	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	08/22/2000	5	U	µg/L	N
22201	bis(2-Chloroisopropyl) ether	11/15/2000	5	UJ	µg/L	N
22201	1,1-Dichloroethene	03/31/1997	1	UJ	µg/L	N
22201	1,1-Dichloroethene	03/31/1997	1	UJ	µg/L	FD
22201	1,1-Dichloroethene	04/30/1997	1	UJ	µg/L	N
22201	1,1-Dichloroethene	05/14/1997	1	UJ	µg/L	N
22201	1,1-Dichloroethene	05/14/1997	1	UJ	µg/L	FD
22201	1,1-Dichloroethene	05/28/1997	1	UJ	µg/L	N
22201	1,1-Dichloroethene	06/17/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	06/25/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	06/25/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	07/09/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	07/09/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	07/30/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	08/07/1997	3	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	1,1-Dichloroethene	08/07/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	08/26/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	08/26/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	09/16/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	09/16/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	10/01/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	11/25/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	12/02/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	12/08/1997	3	U	µg/L	N
22201	1,1-Dichloroethene	12/08/1997	3	U	µg/L	FD
22201	1,1-Dichloroethene	02/23/1998	1	U	µg/L	FD
22201	1,1-Dichloroethene	02/23/1998	1	U	µg/L	N
22201	1,1-Dichloroethene	05/27/1998	1	U	µg/L	N
22201	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22201	1,1-Dichloroethene	11/24/1998	1	U	µg/L	N
22201	1,1-Dichloroethene	02/16/1999	1	U	µg/L	N
22201	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22201	1,1-Dichloroethene	08/18/1999	1	U	µg/L	N
22201	1,1-Dichloroethene	11/17/1999	5	U	µg/L	N
22201	1,1-Dichloroethene	02/22/2000	5	U	µg/L	N
22201	1,1-Dichloroethene	05/24/2000	5	U	µg/L	N
22201	1,1-Dichloroethene	08/22/2000	5	U	µg/L	N
22201	1,1-Dichloroethene	11/15/2000	5	U	µg/L	N
22201	1,2-Dichloroethene (Total)	03/31/1997	1	UJ	µg/L	N
22201	1,2-Dichloroethene (Total)	03/31/1997	1	UJ	µg/L	FD
22201	1,2-Dichloroethene (Total)	04/30/1997	1	UJ	µg/L	N
22201	1,2-Dichloroethene (Total)	05/14/1997	1	UJ	µg/L	N
22201	1,2-Dichloroethene (Total)	05/14/1997	1	UJ	µg/L	FD
22201	1,2-Dichloroethene (Total)	05/28/1997	1	UJ	µg/L	N
22201	1,2-Dichloroethene (Total)	06/17/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	06/25/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	06/25/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	07/09/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	07/09/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	07/30/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/07/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/07/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	08/26/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/26/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	09/16/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	09/16/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	10/01/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	11/25/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	12/02/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	12/08/1997	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	12/08/1997	10	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	02/23/1998	1	U	µg/L	FD
22201	1,2-Dichloroethene (Total)	02/23/1998	1	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	1,2-Dichloroethene (Total)	05/27/1998	1	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	11/24/1998	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	02/16/1999	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/18/1999	1	U	µg/L	N
22201	1,2-Dichloroethene (Total)	11/17/1999	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	02/22/2000	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	05/24/2000	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	08/22/2000	10	U	µg/L	N
22201	1,2-Dichloroethene (Total)	11/15/2000	10	U	µg/L	N
22201	Bromodichloromethane	03/31/1997	1	UJ	µg/L	N
22201	Bromodichloromethane	03/31/1997	1	UJ	µg/L	FD
22201	Bromodichloromethane	04/30/1997	1	UJ	µg/L	N
22201	Bromodichloromethane	05/14/1997	1	UJ	µg/L	N
22201	Bromodichloromethane	05/14/1997	1	UJ	µg/L	FD
22201	Bromodichloromethane	05/28/1997	1	UJ	µg/L	N
22201	Bromodichloromethane	06/17/1997	10	U	µg/L	N
22201	Bromodichloromethane	06/25/1997	10	U	µg/L	N
22201	Bromodichloromethane	06/25/1997	10	U	µg/L	FD
22201	Bromodichloromethane	07/09/1997	10	U	µg/L	N
22201	Bromodichloromethane	07/09/1997	10	U	µg/L	FD
22201	Bromodichloromethane	07/30/1997	10	U	µg/L	N
22201	Bromodichloromethane	08/07/1997	10	U	µg/L	N
22201	Bromodichloromethane	08/07/1997	10	U	µg/L	FD
22201	Bromodichloromethane	08/26/1997	10	U	µg/L	N
22201	Bromodichloromethane	08/26/1997	10	U	µg/L	FD
22201	Bromodichloromethane	09/16/1997	10	U	µg/L	N
22201	Bromodichloromethane	09/16/1997	10	U	µg/L	FD
22201	Bromodichloromethane	10/01/1997	10	U	µg/L	N
22201	Bromodichloromethane	11/25/1997	10	U	µg/L	N
22201	Bromodichloromethane	12/02/1997	10	U	µg/L	N
22201	Bromodichloromethane	12/08/1997	10	U	µg/L	N
22201	Bromodichloromethane	12/08/1997	10	U	µg/L	FD
22201	Bromodichloromethane	02/23/1998	1	U	µg/L	FD
22201	Bromodichloromethane	02/23/1998	1	U	µg/L	N
22201	Bromodichloromethane	05/27/1998	1	U	µg/L	N
22201	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22201	Bromodichloromethane	11/24/1998	10	U	µg/L	N
22201	Bromodichloromethane	02/16/1999	10	U	µg/L	N
22201	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22201	Bromodichloromethane	08/18/1999	1	U	µg/L	N
22201	Bromodichloromethane	11/17/1999	10	U	µg/L	N
22201	Bromodichloromethane	02/22/2000	10	U	µg/L	N
22201	Bromodichloromethane	05/24/2000	10	U	µg/L	N
22201	Bromodichloromethane	08/22/2000	10	U	µg/L	N
22201	Bromodichloromethane	11/15/2000	10	U	µg/L	N
22201	Tetrachloroethene	03/31/1997	1	UJ	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Tetrachloroethene	03/31/1997	1	UJ	µg/L	FD
22201	Tetrachloroethene	04/30/1997	1	UJ	µg/L	N
22201	Tetrachloroethene	05/14/1997	1	UJ	µg/L	N
22201	Tetrachloroethene	05/14/1997	1	UJ	µg/L	FD
22201	Tetrachloroethene	05/28/1997	1	UJ	µg/L	N
22201	Tetrachloroethene	06/17/1997	10	UJ	µg/L	N
22201	Tetrachloroethene	06/25/1997	10	U	µg/L	N
22201	Tetrachloroethene	06/25/1997	10	U	µg/L	FD
22201	Tetrachloroethene	07/09/1997	10	U	µg/L	N
22201	Tetrachloroethene	07/09/1997	10	U	µg/L	FD
22201	Tetrachloroethene	07/30/1997	10	U	µg/L	N
22201	Tetrachloroethene	08/07/1997	10	U	µg/L	N
22201	Tetrachloroethene	08/07/1997	10	U	µg/L	FD
22201	Tetrachloroethene	08/26/1997	10	U	µg/L	N
22201	Tetrachloroethene	08/26/1997	10	U	µg/L	FD
22201	Tetrachloroethene	09/16/1997	1	J	µg/L	N
22201	Tetrachloroethene	09/16/1997	10	U	µg/L	FD
22201	Tetrachloroethene	10/01/1997	10	U	µg/L	N
22201	Tetrachloroethene	11/25/1997	10	U	µg/L	N
22201	Tetrachloroethene	12/02/1997	10	U	µg/L	N
22201	Tetrachloroethene	12/08/1997	10	U	µg/L	N
22201	Tetrachloroethene	12/08/1997	10	U	µg/L	FD
22201	Tetrachloroethene	02/23/1998	1	U	µg/L	FD
22201	Tetrachloroethene	02/23/1998	1	U	µg/L	N
22201	Tetrachloroethene	05/27/1998	1	U	µg/L	N
22201	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22201	Tetrachloroethene	11/24/1998	10	U	µg/L	N
22201	Tetrachloroethene	02/16/1999	10	U	µg/L	N
22201	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22201	Tetrachloroethene	08/18/1999	1	U	µg/L	N
22201	Tetrachloroethene	11/17/1999	10	U	µg/L	N
22201	Tetrachloroethene	02/22/2000	10	U	µg/L	N
22201	Tetrachloroethene	05/24/2000	10	U	µg/L	N
22201	Tetrachloroethene	08/22/2000	10	U	µg/L	N
22201	Tetrachloroethene	11/15/2000	10	U	µg/L	N
22201	Trichloroethene	03/31/1997	1	UJ	µg/L	N
22201	Trichloroethene	03/31/1997	1	UJ	µg/L	FD
22201	Trichloroethene	04/30/1997	1	UJ	µg/L	N
22201	Trichloroethene	05/14/1997	1	UJ	µg/L	N
22201	Trichloroethene	05/14/1997	1	UJ	µg/L	FD
22201	Trichloroethene	05/28/1997	1	UJ	µg/L	N
22201	Trichloroethene	06/17/1997	2	U	µg/L	N
22201	Trichloroethene	06/25/1997	2	U	µg/L	N
22201	Trichloroethene	06/25/1997	2	U	µg/L	FD
22201	Trichloroethene	07/09/1997	2	U	µg/L	N
22201	Trichloroethene	07/09/1997	2	U	µg/L	FD
22201	Trichloroethene	07/30/1997	2	U	µg/L	N
22201	Trichloroethene	08/07/1997	2	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Trichloroethene	08/07/1997	2	U	µg/L	FD
22201	Trichloroethene	08/26/1997	2	U	µg/L	N
22201	Trichloroethene	08/26/1997	2	U	µg/L	FD
22201	Trichloroethene	09/16/1997	2	U	µg/L	N
22201	Trichloroethene	09/16/1997	2	U	µg/L	FD
22201	Trichloroethene	10/01/1997	2	U	µg/L	N
22201	Trichloroethene	11/25/1997	2	U	µg/L	N
22201	Trichloroethene	12/02/1997	2	U	µg/L	N
22201	Trichloroethene	12/08/1997	2	U	µg/L	N
22201	Trichloroethene	12/08/1997	2	U	µg/L	FD
22201	Trichloroethene	02/23/1998	1	U	µg/L	FD
22201	Trichloroethene	02/23/1998	1	U	µg/L	N
22201	Trichloroethene	05/27/1998	1	U	µg/L	N
22201	Trichloroethene	08/24/1998	1	U	µg/L	N
22201	Trichloroethene	11/24/1998	1	U	µg/L	N
22201	Trichloroethene	02/16/1999	3	U	µg/L	N
22201	Trichloroethene	05/24/1999	3	U	µg/L	N
22201	Trichloroethene	08/18/1999	1	U	µg/L	N
22201	Trichloroethene	11/17/1999	3	U	µg/L	N
22201	Trichloroethene	02/22/2000	3	U	µg/L	N
22201	Trichloroethene	05/24/2000	3	U	µg/L	N
22201	Trichloroethene	08/22/2000	3	U	µg/L	N
22201	Trichloroethene	11/15/2000	3	U	µg/L	N
22201	Vinyl chloride	03/31/1997	1	UJ	µg/L	N
22201	Vinyl chloride	03/31/1997	1	UJ	µg/L	FD
22201	Vinyl chloride	04/30/1997	1	UJ	µg/L	N
22201	Vinyl chloride	05/14/1997	1	UJ	µg/L	N
22201	Vinyl chloride	05/14/1997	1	UJ	µg/L	FD
22201	Vinyl chloride	05/28/1997	1	UJ	µg/L	N
22201	Vinyl chloride	06/17/1997	1	UJ	µg/L	N
22201	Vinyl chloride	06/25/1997	1	UJ	µg/L	N
22201	Vinyl chloride	06/25/1997	1	UJ	µg/L	FD
22201	Vinyl chloride	07/09/1997	1	U	µg/L	N
22201	Vinyl chloride	07/09/1997	1	U	µg/L	FD
22201	Vinyl chloride	07/30/1997	1	U	µg/L	N
22201	Vinyl chloride	08/07/1997	1	U	µg/L	N
22201	Vinyl chloride	08/07/1997	1	U	µg/L	FD
22201	Vinyl chloride	08/26/1997	1	U	µg/L	N
22201	Vinyl chloride	08/26/1997	1	U	µg/L	FD
22201	Vinyl chloride	09/16/1997	1	U	µg/L	N
22201	Vinyl chloride	09/16/1997	1	U	µg/L	FD
22201	Vinyl chloride	10/01/1997	1	U	µg/L	N
22201	Vinyl chloride	11/25/1997	1	U	µg/L	N
22201	Vinyl chloride	12/02/1997	1	U	µg/L	N
22201	Vinyl chloride	12/08/1997	1	U	µg/L	N
22201	Vinyl chloride	12/08/1997	1	U	µg/L	FD
22201	Vinyl chloride	02/23/1998	2	U	µg/L	FD
22201	Vinyl chloride	02/23/1998	2	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22201	Vinyl chloride	05/27/1998	1	UJ	µg/L	N
22201	Vinyl chloride	08/24/1998	1	U	µg/L	N
22201	Vinyl chloride	11/24/1998	2	U	µg/L	N
22201	Vinyl chloride	02/16/1999	1	U	µg/L	N
22201	Vinyl chloride	05/24/1999	1	U	µg/L	N
22201	Vinyl chloride	08/18/1999	1	U	µg/L	N
22201	Vinyl chloride	11/17/1999	1	U	µg/L	N
22201	Vinyl chloride	02/22/2000	1	U	µg/L	N
22201	Vinyl chloride	05/24/2000	1	U	µg/L	N
22201	Vinyl chloride	08/22/2000	1	U	µg/L	N
22201	Vinyl chloride	11/15/2000	1	U	µg/L	N
22203	Total Organic Carbon	08/24/1998	3.51	-	mg/L	N
22203	Total Organic Carbon	09/14/1998	1.8	-	mg/L	N
22203	Total Organic Carbon	09/14/1998	0.81	-	mg/L	FD
22203	Total Organic Carbon	10/21/1998	1	UJ	mg/L	N
22203	Total Organic Carbon	11/24/1998	1.36	-	mg/L	N
22203	Total Organic Carbon	12/16/1998	1	U	mg/L	N
22203	Total Organic Carbon	12/16/1998	1	U	mg/L	FD
22203	Total Organic Carbon	01/20/1999	1	U	mg/L	N
22203	Total Organic Carbon	02/16/1999	2.32	U	mg/L	N
22203	Total Organic Carbon	03/17/1999	3.83	U	mg/L	N
22203	Total Organic Carbon	04/26/1999	1.48	U	mg/L	N
22203	Total Organic Carbon	04/26/1999	0.234	U	mg/L	FD
22203	Total Organic Carbon	05/24/1999	6.02	U	mg/L	N
22203	Total Organic Carbon	06/28/1999	3.7	U	mg/L	FD
22203	Total Organic Carbon	06/28/1999	1	UJ	mg/L	N
22203	Total Organic Carbon	07/26/1999	2.17	-	mg/L	N
22203	Total Organic Carbon	08/17/1999	1.08	U	mg/L	N
22203	Total Organic Carbon	09/14/1999	2.01	U	mg/L	N
22203	Total Organic Carbon	10/13/1999	1	U	mg/L	N
22203	Total Organic Carbon	11/16/1999	2.52	-	mg/L	N
22203	Total Organic Carbon	02/16/2000	5.66	-	mg/L	N
22203	Total Organic Carbon	05/24/2000	0.89	-	mg/L	N
22203	Total Organic Carbon	08/23/2000	1.9	J	mg/L	N
22203	Total Organic Carbon	11/14/2000	14.1	-	mg/L	N
22203	Total Organic Halogens	08/24/1998	0.00816	UJ	mg/L	N
22203	Total Organic Halogens	09/14/1998	0.012	UJ	mg/L	N
22203	Total Organic Halogens	09/14/1998	0.0171	J	mg/L	FD
22203	Total Organic Halogens	10/21/1998	0.006	U	mg/L	N
22203	Total Organic Halogens	11/24/1998	0.0089	J	mg/L	N
22203	Total Organic Halogens	12/16/1998	0.0098	-	mg/L	N
22203	Total Organic Halogens	12/16/1998	0.00745	-	mg/L	FD
22203	Total Organic Halogens	01/20/1999	0.01	J	mg/L	N
22203	Total Organic Halogens	02/16/1999	0.00424	U	mg/L	N
22203	Total Organic Halogens	03/17/1999	0.0024	U	mg/L	N
22203	Total Organic Halogens	04/26/1999	0.00908	J	mg/L	N
22203	Total Organic Halogens	04/26/1999	0.00314	UJ	mg/L	FD
22203	Total Organic Halogens	05/24/1999	0.00474	U	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	Total Organic Halogens	06/28/1999	0.0137	-	mg/L	FD
22203	Total Organic Halogens	06/28/1999	0.01	U	mg/L	N
22203	Total Organic Halogens	07/26/1999	0.019	J	mg/L	N
22203	Total Organic Halogens	08/17/1999	0.0155	U	mg/L	N
22203	Total Organic Halogens	09/14/1999	0.012	U	mg/L	N
22203	Total Organic Halogens	10/13/1999	0.047	UJ	mg/L	N
22203	Total Organic Halogens	11/16/1999	0.0145	J	mg/L	N
22203	Total Organic Halogens	02/16/2000	0.00564	U	mg/L	N
22203	Total Organic Halogens	05/24/2000	0.213	J	mg/L	N
22203	Total Organic Halogens	08/23/2000	0.025	U	mg/L	N
22203	Total Organic Halogens	11/14/2000	0.025	U	mg/L	N
22203	Boron	08/24/1998	0.0376	-	mg/L	N
22203	Boron	09/14/1998	0.0387	U	mg/L	N
22203	Boron	09/14/1998	0.0386	U	mg/L	FD
22203	Boron	10/21/1998	0.0182	U	mg/L	N
22203	Boron	11/24/1998	0.0776	-	mg/L	N
22203	Boron	12/16/1998	0.0933	U	mg/L	N
22203	Boron	12/16/1998	0.0866	U	mg/L	FD
22203	Boron	01/20/1999	0.0613	U	mg/L	N
22203	Boron	02/16/1999	0.038	-	mg/L	N
22203	Boron	03/17/1999	0.039	-	mg/L	N
22203	Boron	04/26/1999	0.0379	U	mg/L	N
22203	Boron	04/26/1999	0.001	U	mg/L	FD
22203	Boron	05/24/1999	0.0454	J	mg/L	N
22203	Boron	06/28/1999	0.043	-	mg/L	FD
22203	Boron	06/28/1999	0.0394	-	mg/L	N
22203	Boron	07/26/1999	0.0377	-	mg/L	N
22203	Boron	08/17/1999	0.0399	-	mg/L	N
22203	Boron	09/14/1999	0.0411	-	mg/L	N
22203	Boron	10/13/1999	0.0426	U	mg/L	N
22203	Boron	11/16/1999	0.0433	-	mg/L	N
22203	Boron	02/16/2000	0.0494	-	mg/L	N
22203	Boron	05/24/2000	0.0379	-	mg/L	N
22203	Boron	08/23/2000	0.0401	U	mg/L	N
22203	Boron	11/14/2000	0.0717	U	mg/L	N
22203	Mercury	08/24/1998	0.0001	U	mg/L	N
22203	Mercury	09/14/1998	0.0001	U	mg/L	N
22203	Mercury	09/14/1998	0.0001	U	mg/L	FD
22203	Mercury	10/21/1998	0.0001	U	mg/L	N
22203	Mercury	11/24/1998	0.0001	U	mg/L	N
22203	Mercury	12/16/1998	0.0001	U	mg/L	N
22203	Mercury	12/16/1998	0.0001	U	mg/L	FD
22203	Mercury	01/20/1999	0.0001	U	mg/L	N
22203	Mercury	02/16/1999	0.00012	U	mg/L	N
22203	Mercury	03/17/1999	0.00012	U	mg/L	N
22203	Mercury	04/26/1999	0.00012	U	mg/L	N
22203	Mercury	04/26/1999	0.00012	U	mg/L	FD
22203	Mercury	05/24/1999	0.00012	U	mg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	Mercury	06/28/1999	0.0001	U	mg/L	FD
22203	Mercury	06/28/1999	0.0001	U	mg/L	N
22203	Mercury	07/26/1999	0.00004	U	mg/L	N
22203	Mercury	08/17/1999	0.0001	U	mg/L	N
22203	Mercury	09/14/1999	0.0001	U	mg/L	N
22203	Mercury	10/13/1999	0.0001	U	mg/L	N
22203	Mercury	11/16/1999	0.00004	U	mg/L	N
22203	Mercury	02/16/2000	0.00004	R	mg/L	N
22203	Mercury	05/24/2000	0.0001	U	mg/L	N
22203	Mercury	08/23/2000	0.0001	U	mg/L	N
22203	Mercury	11/14/2000	0.0001	U	mg/L	N
22203	alpha-Chlordane	08/24/1998	0.031	U	µg/L	N
22203	alpha-Chlordane	09/14/1998	0.04	U	µg/L	N
22203	alpha-Chlordane	09/14/1998	0.04	U	µg/L	FD
22203	alpha-Chlordane	10/21/1998	0.05	U	µg/L	N
22203	alpha-Chlordane	11/24/1998	0.1	U	µg/L	N
22203	alpha-Chlordane	12/16/1998	0.1	U	µg/L	N
22203	alpha-Chlordane	12/16/1998	0.1	U	µg/L	FD
22203	alpha-Chlordane	01/20/1999	0.04	U	µg/L	N
22203	alpha-Chlordane	02/16/1999	0.01	UJ	µg/L	N
22203	alpha-Chlordane	03/17/1999	0.01	U	µg/L	N
22203	alpha-Chlordane	04/26/1999	0.01	U	µg/L	N
22203	alpha-Chlordane	04/26/1999	0.01	U	µg/L	FD
22203	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22203	alpha-Chlordane	06/28/1999	0.04	UJ	µg/L	FD
22203	alpha-Chlordane	06/28/1999	0.04	UJ	µg/L	N
22203	alpha-Chlordane	07/26/1999	0.1	UJ	µg/L	N
22203	alpha-Chlordane	08/17/1999	0.05	U	µg/L	N
22203	alpha-Chlordane	09/14/1999	0.05	U	µg/L	N
22203	alpha-Chlordane	10/13/1999	0.04	U	µg/L	N
22203	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
22203	alpha-Chlordane	02/16/2000	0.1	U	µg/L	N
22203	alpha-Chlordane	05/24/2000	0.1	U	µg/L	N
22203	alpha-Chlordane	08/23/2000	0.1	U	µg/L	N
22203	alpha-Chlordane	11/14/2000	0.1	U	µg/L	N
22203	Technetium-99	08/24/1998	8.16	U	pCi/L	N
22203	Technetium-99	09/14/1998	1.7	U	pCi/L	N
22203	Technetium-99	09/14/1998	4.24	U	pCi/L	FD
22203	Technetium-99	10/21/1998	1.239	U	pCi/L	N
22203	Technetium-99	11/24/1998	-0.692	U	pCi/L	N
22203	Technetium-99	12/16/1998	-2.165	U	pCi/L	N
22203	Technetium-99	12/16/1998	0.259	U	pCi/L	FD
22203	Technetium-99	01/20/1999	-0.345	U	pCi/L	N
22203	Technetium-99	02/16/1999	3.151	U	pCi/L	N
22203	Technetium-99	03/17/1999	6.861	U	pCi/L	N
22203	Technetium-99	04/26/1999	-0.922	UJ	pCi/L	N
22203	Technetium-99	04/26/1999	-0.33	UJ	pCi/L	FD
22203	Technetium-99	05/24/1999	3.77	UJ	pCi/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	Technetium-99	06/28/1999	21.3	UJ	pCi/L	FD
22203	Technetium-99	06/28/1999	22.92	UJ	pCi/L	N
22203	Technetium-99	07/26/1999	3.9	Z	pCi/L	N
22203	Technetium-99	07/26/1999	1.37	UJ	pCi/L	N
22203	Technetium-99	08/17/1999	-0.207	UJ	pCi/L	N
22203	Technetium-99	09/14/1999	0.165	UJ	pCi/L	N
22203	Technetium-99	10/13/1999	0.458	UJ	pCi/L	N
22203	Technetium-99	11/16/1999	-3.45	UJ	pCi/L	N
22203	Technetium-99	02/16/2000	-1.273	UJ	pCi/L	N
22203	Technetium-99	05/24/2000	8.438	J	pCi/L	N
22203	Technetium-99	08/23/2000	-2.493	U	pCi/L	N
22203	Technetium-99	11/14/2000	1.314	UJ	pCi/L	N
22203	Uranium, Total	08/24/1998	0.491	J	µg/L	N
22203	Uranium, Total	09/14/1998	0.236	-	µg/L	N
22203	Uranium, Total	09/14/1998	0.559	J	µg/L	FD
22203	Uranium, Total	10/21/1998	0.353	J	µg/L	N
22203	Uranium, Total	11/24/1998	0.28	J	µg/L	N
22203	Uranium, Total	12/16/1998	0.266	J	µg/L	N
22203	Uranium, Total	12/16/1998	0.176	J	µg/L	FD
22203	Uranium, Total	01/20/1999	0.175	J	µg/L	N
22203	Uranium, Total	02/16/1999	0.115	U	µg/L	N
22203	Uranium, Total	03/17/1999	0.224	-	µg/L	N
22203	Uranium, Total	04/26/1999	0.24	U	µg/L	N
22203	Uranium, Total	04/26/1999	0.09	U	µg/L	FD
22203	Uranium, Total	05/24/1999	0.16	-	µg/L	N
22203	Uranium, Total	06/28/1999	0.15	U	µg/L	FD
22203	Uranium, Total	06/28/1999	0.14	U	µg/L	N
22203	Uranium, Total	07/26/1999	0.277	J	µg/L	N
22203	Uranium, Total	08/17/1999	0.112	U	µg/L	N
22203	Uranium, Total	09/14/1999	0.144	U	µg/L	N
22203	Uranium, Total	10/13/1999	0.907	-	µg/L	N
22203	Uranium, Total	11/16/1999	0.654	-	µg/L	N
22203	Uranium, Total	02/16/2000	0.7486	J	µg/L	N
22203	Uranium, Total	05/24/2000	0.401	J	µg/L	N
22203	Uranium, Total	08/23/2000	2.522	J	µg/L	N
22203	Uranium, Total	11/14/2000	1.482	J	µg/L	N
22203	4-Nitroaniline	08/24/1998	20	UJ	µg/L	N
22203	4-Nitroaniline	09/14/1998	20	U	µg/L	N
22203	4-Nitroaniline	09/14/1998	20	U	µg/L	FD
22203	4-Nitroaniline	10/21/1998	50	U	µg/L	N
22203	4-Nitroaniline	11/24/1998	50	U	µg/L	N
22203	4-Nitroaniline	12/16/1998	20	U	µg/L	N
22203	4-Nitroaniline	12/16/1998	20	U	µg/L	FD
22203	4-Nitroaniline	01/20/1999	50	UJ	µg/L	N
22203	4-Nitroaniline	02/16/1999	25	U	µg/L	N
22203	4-Nitroaniline	03/17/1999	25	U	µg/L	N
22203	4-Nitroaniline	04/26/1999	50	UJ	µg/L	N
22203	4-Nitroaniline	04/26/1999	50	UJ	µg/L	FD

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	4-Nitroaniline	05/24/1999	50	U	µg/L	N
22203	4-Nitroaniline	06/28/1999	25	U	µg/L	FD
22203	4-Nitroaniline	06/28/1999	25	U	µg/L	N
22203	4-Nitroaniline	07/26/1999	25	U	µg/L	N
22203	4-Nitroaniline	08/17/1999	25	U	µg/L	N
22203	4-Nitroaniline	09/14/1999	25	U	µg/L	N
22203	4-Nitroaniline	10/13/1999	25	U	µg/L	N
22203	4-Nitroaniline	11/16/1999	50	U	µg/L	N
22203	4-Nitroaniline	02/16/2000	50	U	µg/L	N
22203	4-Nitroaniline	05/24/2000	25	U	µg/L	N
22203	4-Nitroaniline	08/23/2000	50	Z	µg/L	N
22203	4-Nitroaniline	08/23/2000	50	UJ	µg/L	N
22203	4-Nitroaniline	11/14/2000	50	U	µg/L	N
22203	Carbazole	08/24/1998	5	UJ	µg/L	N
22203	Carbazole	09/14/1998	5	U	µg/L	N
22203	Carbazole	09/14/1998	5	U	µg/L	FD
22203	Carbazole	10/21/1998	10	U	µg/L	N
22203	Carbazole	11/24/1998	5	U	µg/L	N
22203	Carbazole	12/16/1998	5	U	µg/L	N
22203	Carbazole	12/16/1998	5	U	µg/L	FD
22203	Carbazole	01/20/1999	10	UJ	µg/L	N
22203	Carbazole	02/16/1999	5	U	µg/L	N
22203	Carbazole	03/17/1999	5	U	µg/L	N
22203	Carbazole	04/26/1999	10	U	µg/L	N
22203	Carbazole	04/26/1999	10	U	µg/L	FD
22203	Carbazole	05/24/1999	10	U	µg/L	N
22203	Carbazole	06/28/1999	10	U	µg/L	FD
22203	Carbazole	06/28/1999	10	U	µg/L	N
22203	Carbazole	07/26/1999	5	U	µg/L	N
22203	Carbazole	08/17/1999	10	U	µg/L	N
22203	Carbazole	09/14/1999	10	U	µg/L	N
22203	Carbazole	10/13/1999	10	U	µg/L	N
22203	Carbazole	11/16/1999	10	U	µg/L	N
22203	Carbazole	02/16/2000	10	U	µg/L	N
22203	Carbazole	05/24/2000	10	U	µg/L	N
22203	Carbazole	08/23/2000	10	Z	µg/L	N
22203	Carbazole	08/23/2000	10	UJ	µg/L	N
22203	Carbazole	11/14/2000	10	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	09/14/1998	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	09/14/1998	5	U	µg/L	FD
22203	bis(2-Chloroisopropyl) ether	10/21/1998	10	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	11/24/1998	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	12/16/1998	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	12/16/1998	5	U	µg/L	FD
22203	bis(2-Chloroisopropyl) ether	01/20/1999	10	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	02/16/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	03/17/1999	5	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	bis(2-Chloroisopropyl) ether	04/26/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	04/26/1999	5	U	µg/L	FD
22203	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	06/28/1999	5	U	µg/L	FD
22203	bis(2-Chloroisopropyl) ether	06/28/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	07/26/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	08/17/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	09/14/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	10/13/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	05/24/2000	5	U	µg/L	N
22203	bis(2-Chloroisopropyl) ether	08/23/2000	5	Z	µg/L	N
22203	bis(2-Chloroisopropyl) ether	08/23/2000	5	UJ	µg/L	N
22203	bis(2-Chloroisopropyl) ether	11/14/2000	5	UJ	µg/L	N
22203	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22203	1,1-Dichloroethene	09/14/1998	1	U	µg/L	N
22203	1,1-Dichloroethene	09/14/1998	1	U	µg/L	FD
22203	1,1-Dichloroethene	10/21/1998	1	U	µg/L	N
22203	1,1-Dichloroethene	11/24/1998	1	U	µg/L	N
22203	1,1-Dichloroethene	12/16/1998	1	U	µg/L	N
22203	1,1-Dichloroethene	12/16/1998	1	U	µg/L	FD
22203	1,1-Dichloroethene	01/20/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	02/16/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	03/17/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	04/26/1999	5	U	µg/L	N
22203	1,1-Dichloroethene	04/26/1999	5	U	µg/L	FD
22203	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22203	1,1-Dichloroethene	06/28/1999	1	U	µg/L	FD
22203	1,1-Dichloroethene	06/28/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	07/26/1999	5	U	µg/L	N
22203	1,1-Dichloroethene	08/17/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	09/14/1999	1	U	µg/L	N
22203	1,1-Dichloroethene	10/13/1999	0.8	U	µg/L	N
22203	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
22203	1,1-Dichloroethene	02/16/2000	5	U	µg/L	N
22203	1,1-Dichloroethene	05/24/2000	5	U	µg/L	N
22203	1,1-Dichloroethene	08/23/2000	5	U	µg/L	N
22203	1,1-Dichloroethene	11/14/2000	5	U	µg/L	N
22203	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	09/14/1998	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	09/14/1998	1	U	µg/L	FD
22203	1,2-Dichloroethene (Total)	10/21/1998	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	11/24/1998	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	12/16/1998	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	12/16/1998	10	U	µg/L	FD
22203	1,2-Dichloroethene (Total)	01/20/1999	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	02/16/1999	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	1,2-Dichloroethene (Total)	03/17/1999	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	04/26/1999	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	04/26/1999	10	U	µg/L	FD
22203	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	06/28/1999	1	U	µg/L	FD
22203	1,2-Dichloroethene (Total)	06/28/1999	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	07/26/1999	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	08/17/1999	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	09/14/1999	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	10/13/1999	1	U	µg/L	N
22203	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	05/24/2000	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	08/23/2000	10	U	µg/L	N
22203	1,2-Dichloroethene (Total)	11/14/2000	10	U	µg/L	N
22203	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22203	Bromodichloromethane	09/14/1998	1	U	µg/L	N
22203	Bromodichloromethane	09/14/1998	1	U	µg/L	FD
22203	Bromodichloromethane	10/21/1998	10	U	µg/L	N
22203	Bromodichloromethane	11/24/1998	10	U	µg/L	N
22203	Bromodichloromethane	12/16/1998	10	U	µg/L	N
22203	Bromodichloromethane	12/16/1998	10	U	µg/L	FD
22203	Bromodichloromethane	01/20/1999	1	U	µg/L	N
22203	Bromodichloromethane	02/16/1999	10	U	µg/L	N
22203	Bromodichloromethane	03/17/1999	10	U	µg/L	N
22203	Bromodichloromethane	04/26/1999	10	U	µg/L	N
22203	Bromodichloromethane	04/26/1999	10	U	µg/L	FD
22203	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22203	Bromodichloromethane	06/28/1999	1	U	µg/L	FD
22203	Bromodichloromethane	06/28/1999	1	U	µg/L	N
22203	Bromodichloromethane	07/26/1999	10	U	µg/L	N
22203	Bromodichloromethane	08/17/1999	1	U	µg/L	N
22203	Bromodichloromethane	09/14/1999	1	U	µg/L	N
22203	Bromodichloromethane	10/13/1999	1	U	µg/L	N
22203	Bromodichloromethane	11/16/1999	10	U	µg/L	N
22203	Bromodichloromethane	02/16/2000	10	U	µg/L	N
22203	Bromodichloromethane	05/24/2000	10	U	µg/L	N
22203	Bromodichloromethane	08/23/2000	10	U	µg/L	N
22203	Bromodichloromethane	11/14/2000	10	U	µg/L	N
22203	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22203	Tetrachloroethene	09/14/1998	1	U	µg/L	N
22203	Tetrachloroethene	09/14/1998	1	U	µg/L	FD
22203	Tetrachloroethene	10/21/1998	10	U	µg/L	N
22203	Tetrachloroethene	11/24/1998	10	U	µg/L	N
22203	Tetrachloroethene	12/16/1998	10	U	µg/L	N
22203	Tetrachloroethene	12/16/1998	10	U	µg/L	FD
22203	Tetrachloroethene	01/20/1999	1	U	µg/L	N
22203	Tetrachloroethene	02/16/1999	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	Tetrachloroethene	03/17/1999	10	U	µg/L	N
22203	Tetrachloroethene	04/26/1999	10	U	µg/L	N
22203	Tetrachloroethene	04/26/1999	10	U	µg/L	FD
22203	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22203	Tetrachloroethene	06/28/1999	1	U	µg/L	FD
22203	Tetrachloroethene	06/28/1999	1	U	µg/L	N
22203	Tetrachloroethene	07/26/1999	10	U	µg/L	N
22203	Tetrachloroethene	08/17/1999	1	U	µg/L	N
22203	Tetrachloroethene	09/14/1999	1	U	µg/L	N
22203	Tetrachloroethene	10/13/1999	1	U	µg/L	N
22203	Tetrachloroethene	11/16/1999	10	U	µg/L	N
22203	Tetrachloroethene	02/16/2000	10	U	µg/L	N
22203	Tetrachloroethene	05/24/2000	10	U	µg/L	N
22203	Tetrachloroethene	08/23/2000	10	U	µg/L	N
22203	Tetrachloroethene	11/14/2000	10	U	µg/L	N
22203	Trichloroethene	08/24/1998	1	U	µg/L	N
22203	Trichloroethene	09/14/1998	1	U	µg/L	N
22203	Trichloroethene	09/14/1998	1	U	µg/L	FD
22203	Trichloroethene	10/21/1998	1	U	µg/L	N
22203	Trichloroethene	11/24/1998	1	U	µg/L	N
22203	Trichloroethene	12/16/1998	1	U	µg/L	N
22203	Trichloroethene	12/16/1998	1	U	µg/L	FD
22203	Trichloroethene	01/20/1999	1	U	µg/L	N
22203	Trichloroethene	02/16/1999	3	U	µg/L	N
22203	Trichloroethene	03/17/1999	3	U	µg/L	N
22203	Trichloroethene	04/26/1999	3	U	µg/L	N
22203	Trichloroethene	04/26/1999	3	U	µg/L	FD
22203	Trichloroethene	05/24/1999	3	U	µg/L	N
22203	Trichloroethene	06/28/1999	1	U	µg/L	FD
22203	Trichloroethene	06/28/1999	1	U	µg/L	N
22203	Trichloroethene	07/26/1999	3	U	µg/L	N
22203	Trichloroethene	08/17/1999	1	U	µg/L	N
22203	Trichloroethene	09/14/1999	1	U	µg/L	N
22203	Trichloroethene	10/13/1999	1	U	µg/L	N
22203	Trichloroethene	11/16/1999	3	U	µg/L	N
22203	Trichloroethene	02/16/2000	3	U	µg/L	N
22203	Trichloroethene	05/24/2000	3	U	µg/L	N
22203	Trichloroethene	08/23/2000	3	U	µg/L	N
22203	Trichloroethene	11/14/2000	3	U	µg/L	N
22203	Vinyl chloride	08/24/1998	1	U	µg/L	N
22203	Vinyl chloride	09/14/1998	1	U	µg/L	N
22203	Vinyl chloride	09/14/1998	1	U	µg/L	FD
22203	Vinyl chloride	10/21/1998	2	U	µg/L	N
22203	Vinyl chloride	11/24/1998	2	U	µg/L	N
22203	Vinyl chloride	12/16/1998	2	U	µg/L	N
22203	Vinyl chloride	12/16/1998	2	U	µg/L	FD
22203	Vinyl chloride	01/20/1999	1	U	µg/L	N
22203	Vinyl chloride	02/16/1999	1	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22203	Vinyl chloride	03/17/1999	1	U	µg/L	N
22203	Vinyl chloride	04/26/1999	1	U	µg/L	N
22203	Vinyl chloride	04/26/1999	1	U	µg/L	FD
22203	Vinyl chloride	05/24/1999	1	U	µg/L	N
22203	Vinyl chloride	06/28/1999	1	U	µg/L	FD
22203	Vinyl chloride	06/28/1999	1	U	µg/L	N
22203	Vinyl chloride	07/26/1999	1	U	µg/L	N
22203	Vinyl chloride	08/17/1999	1	U	µg/L	N
22203	Vinyl chloride	09/14/1999	1	U	µg/L	N
22203	Vinyl chloride	10/13/1999	1	U	µg/L	N
22203	Vinyl chloride	11/16/1999	1	U	µg/L	N
22203	Vinyl chloride	02/16/2000	1	U	µg/L	N
22203	Vinyl chloride	05/24/2000	1	U	µg/L	N
22203	Vinyl chloride	08/23/2000	1	U	µg/L	N
22203	Vinyl chloride	11/14/2000	1	U	µg/L	N
22204	Total Organic Carbon	08/24/1998	5	-	mg/L	N
22204	Total Organic Carbon	08/24/1998	4.69	-	mg/L	FD
22204	Total Organic Carbon	09/14/1998	0.85	-	mg/L	N
22204	Total Organic Carbon	10/21/1998	1	UJ	mg/L	N
22204	Total Organic Carbon	10/21/1998	1	UJ	mg/L	FD
22204	Total Organic Carbon	11/23/1998	1.56	-	mg/L	N
22204	Total Organic Carbon	12/16/1998	1	U	mg/L	N
22204	Total Organic Carbon	01/20/1999	1	U	mg/L	N
22204	Total Organic Carbon	02/17/1999	1.68	U	mg/L	N
22204	Total Organic Carbon	03/17/1999	1.46	U	mg/L	N
22204	Total Organic Carbon	03/17/1999	2.99	U	mg/L	FD
22204	Total Organic Carbon	04/26/1999	2.71	U	mg/L	N
22204	Total Organic Carbon	05/24/1999	1.44	U	mg/L	N
22204	Total Organic Carbon	06/28/1999	1	UJ	mg/L	N
22204	Total Organic Carbon	07/26/1999	0.898	J	mg/L	N
22204	Total Organic Carbon	08/16/1999	1.2	-	mg/L	N
22204	Total Organic Carbon	09/14/1999	1.18	U	mg/L	N
22204	Total Organic Carbon	10/13/1999	1	U	mg/L	N
22204	Total Organic Carbon	11/16/1999	2.82	-	mg/L	N
22204	Total Organic Carbon	02/16/2000	8.83	-	mg/L	N
22204	Total Organic Carbon	05/24/2000	1.24	-	mg/L	N
22204	Total Organic Carbon	08/21/2000	1.7	J	mg/L	N
22204	Total Organic Carbon	11/28/2000	1	U	mg/L	FD
22204	Total Organic Carbon	11/28/2000	1	U	mg/L	N
22204	Total Organic Halogens	08/24/1998	0.00469	UJ	mg/L	N
22204	Total Organic Halogens	08/24/1998	0.008	UJ	mg/L	FD
22204	Total Organic Halogens	09/14/1998	0.014	J	mg/L	N
22204	Total Organic Halogens	10/21/1998	0.0115	U	mg/L	N
22204	Total Organic Halogens	10/21/1998	0.01	U	mg/L	FD
22204	Total Organic Halogens	11/23/1998	0.005	U	mg/L	N
22204	Total Organic Halogens	12/16/1998	0.0089	-	mg/L	N
22204	Total Organic Halogens	01/20/1999	0.03	J	mg/L	N
22204	Total Organic Halogens	02/17/1999	0.00474	U	mg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	Total Organic Halogens	03/17/1999	0.0105	-	mg/L	N
22204	Total Organic Halogens	03/17/1999	0.0109	-	mg/L	FD
22204	Total Organic Halogens	04/26/1999	0.00372	UJ	mg/L	N
22204	Total Organic Halogens	05/24/1999	0.00474	U	mg/L	N
22204	Total Organic Halogens	06/28/1999	0.0116	-	mg/L	N
22204	Total Organic Halogens	07/26/1999	0.025	U	mg/L	N
22204	Total Organic Halogens	08/16/1999	0.0261	-	mg/L	N
22204	Total Organic Halogens	09/14/1999	0.012	U	mg/L	N
22204	Total Organic Halogens	10/13/1999	0.0149	UJ	mg/L	N
22204	Total Organic Halogens	11/16/1999	0.0076	J	mg/L	N
22204	Total Organic Halogens	02/16/2000	0.0181	U	mg/L	N
22204	Total Organic Halogens	05/24/2000	0.165	J	mg/L	N
22204	Total Organic Halogens	08/21/2000	0.025	U	mg/L	N
22204	Total Organic Halogens	11/15/2000	0.025	U	mg/L	FD
22204	Total Organic Halogens	11/28/2000	0.025	U	mg/L	FD
22204	Total Organic Halogens	11/28/2000	0.025	U	mg/L	N
22204	Boron	08/24/1998	0.0416	-	mg/L	N
22204	Boron	08/24/1998	0.0409	-	mg/L	FD
22204	Boron	09/14/1998	0.0309	U	mg/L	N
22204	Boron	10/21/1998	0.0182	U	mg/L	N
22204	Boron	10/21/1998	0.0182	U	mg/L	FD
22204	Boron	11/23/1998	0.0608	U	mg/L	N
22204	Boron	12/16/1998	0.0683	U	mg/L	N
22204	Boron	01/20/1999	0.0483	U	mg/L	N
22204	Boron	02/17/1999	0.0395	-	mg/L	N
22204	Boron	03/17/1999	0.0376	-	mg/L	N
22204	Boron	03/17/1999	0.0389	-	mg/L	FD
22204	Boron	04/26/1999	0.0368	U	mg/L	N
22204	Boron	05/24/1999	0.0425	J	mg/L	N
22204	Boron	06/28/1999	0.0472	-	mg/L	N
22204	Boron	07/26/1999	0.179	-	mg/L	N
22204	Boron	08/16/1999	0.0433	-	mg/L	N
22204	Boron	09/14/1999	0.0439	-	mg/L	N
22204	Boron	10/13/1999	0.045	U	mg/L	N
22204	Boron	11/16/1999	0.0454	-	mg/L	N
22204	Boron	02/16/2000	0.048	-	mg/L	N
22204	Boron	05/24/2000	0.0406	-	mg/L	N
22204	Boron	08/21/2000	0.0314	J	mg/L	N
22204	Boron	11/15/2000	0.0227	-	mg/L	N
22204	Boron	11/15/2000	0.0227	-	mg/L	FD
22204	Mercury	08/24/1998	0.0001	U	mg/L	N
22204	Mercury	08/24/1998	0.0001	U	mg/L	FD
22204	Mercury	09/14/1998	0.0001	U	mg/L	N
22204	Mercury	10/21/1998	0.0001	U	mg/L	N
22204	Mercury	10/21/1998	0.0001	U	mg/L	FD
22204	Mercury	11/23/1998	0.0001	U	mg/L	N
22204	Mercury	12/16/1998	0.0001	U	mg/L	N
22204	Mercury	01/20/1999	0.0001	U	mg/L	N

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Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	Mercury	02/17/1999	0.00012	U	mg/L	N
22204	Mercury	03/17/1999	0.00012	U	mg/L	N
22204	Mercury	03/17/1999	0.00012	U	mg/L	FD
22204	Mercury	04/26/1999	0.00012	U	mg/L	N
22204	Mercury	05/24/1999	0.00012	U	mg/L	N
22204	Mercury	06/28/1999	0.00028	-	mg/L	N
22204	Mercury	07/26/1999	0.00004	U	mg/L	N
22204	Mercury	08/16/1999	0.0001	U	mg/L	N
22204	Mercury	09/14/1999	0.0001	U	mg/L	N
22204	Mercury	10/13/1999	0.0001	U	mg/L	N
22204	Mercury	11/16/1999	0.00004	U	mg/L	N
22204	Mercury	02/16/2000	0.00004	R	mg/L	N
22204	Mercury	05/24/2000	0.0001	U	mg/L	N
22204	Mercury	08/21/2000	0.0001	U	mg/L	N
22204	Mercury	11/15/2000	0.0002	J	mg/L	N
22204	Mercury	11/15/2000	0.00011	U	mg/L	FD
22204	alpha-Chlordane	08/24/1998	0.031	U	µg/L	N
22204	alpha-Chlordane	08/24/1998	0.031	U	µg/L	FD
22204	alpha-Chlordane	09/14/1998	0.04	U	µg/L	N
22204	alpha-Chlordane	10/21/1998	0.05	U	µg/L	N
22204	alpha-Chlordane	10/21/1998	0.05	U	µg/L	FD
22204	alpha-Chlordane	11/23/1998	0.1	U	µg/L	N
22204	alpha-Chlordane	12/16/1998	0.1	U	µg/L	N
22204	alpha-Chlordane	01/20/1999	0.04	U	µg/L	N
22204	alpha-Chlordane	02/17/1999	0.01	UJ	µg/L	N
22204	alpha-Chlordane	03/17/1999	0.01	U	µg/L	N
22204	alpha-Chlordane	03/17/1999	0.01	U	µg/L	FD
22204	alpha-Chlordane	04/26/1999	0.01	U	µg/L	N
22204	alpha-Chlordane	05/24/1999	0.01	U	µg/L	N
22204	alpha-Chlordane	06/28/1999	0.04	UJ	µg/L	N
22204	alpha-Chlordane	07/26/1999	0.1	UJ	µg/L	N
22204	alpha-Chlordane	08/16/1999	0.05	U	µg/L	N
22204	alpha-Chlordane	09/14/1999	0.05	U	µg/L	N
22204	alpha-Chlordane	10/13/1999	0.04	U	µg/L	N
22204	alpha-Chlordane	11/16/1999	0.1	U	µg/L	N
22204	alpha-Chlordane	02/16/2000	0.1	U	µg/L	N
22204	alpha-Chlordane	05/24/2000	0.1	U	µg/L	N
22204	alpha-Chlordane	08/21/2000	0.1	U	µg/L	N
22204	alpha-Chlordane	11/15/2000	0.1	UJ	µg/L	N
22204	alpha-Chlordane	11/15/2000	0.1	UJ	µg/L	FD
22204	Technetium-99	08/24/1998	7	U	pCi/L	N
22204	Technetium-99	08/24/1998	7.22	U	pCi/L	FD
22204	Technetium-99	09/14/1998	4.08	U	pCi/L	N
22204	Technetium-99	10/21/1998	-0.908	U	pCi/L	N
22204	Technetium-99	10/21/1998	-1.261	U	pCi/L	FD
22204	Technetium-99	11/23/1998	2.333	U	pCi/L	N
22204	Technetium-99	12/16/1998	-1.075	U	pCi/L	N
22204	Technetium-99	01/20/1999	-1.918	U	pCi/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	Technetium-99	02/17/1999	-2.41	U	pCi/L	N
22204	Technetium-99	03/17/1999	10.724	U	pCi/L	N
22204	Technetium-99	03/17/1999	9.225	U	pCi/L	FD
22204	Technetium-99	04/26/1999	-1.08	UJ	pCi/L	N
22204	Technetium-99	05/24/1999	3.87	UJ	pCi/L	N
22204	Technetium-99	06/28/1999	24.42	UJ	pCi/L	N
22204	Technetium-99	07/26/1999	2.97	Z	pCi/L	N
22204	Technetium-99	07/26/1999	-0.69	UJ	pCi/L	N
22204	Technetium-99	08/16/1999	-1.059	UJ	pCi/L	N
22204	Technetium-99	09/14/1999	-2.199	UJ	pCi/L	N
22204	Technetium-99	10/13/1999	-0.826	UJ	pCi/L	N
22204	Technetium-99	11/16/1999	-4.782	UJ	pCi/L	N
22204	Technetium-99	02/16/2000	0	UJ	pCi/L	N
22204	Technetium-99	05/24/2000	-0.641	UJ	pCi/L	N
22204	Technetium-99	08/21/2000	-4.868	U	pCi/L	N
22204	Technetium-99	11/15/2000	1.535	UJ	pCi/L	N
22204	Technetium-99	11/15/2000	-2.075	UJ	pCi/L	FD
22204	Uranium, Total	08/24/1998	2.995	-	µg/L	N
22204	Uranium, Total	08/24/1998	2.577	-	µg/L	FD
22204	Uranium, Total	09/14/1998	0.804	-	µg/L	N
22204	Uranium, Total	10/21/1998	1.15	J	µg/L	N
22204	Uranium, Total	10/21/1998	1.06	-	µg/L	FD
22204	Uranium, Total	11/23/1998	0.636	-	µg/L	N
22204	Uranium, Total	12/16/1998	0.481	-	µg/L	N
22204	Uranium, Total	01/20/1999	0.513	J	µg/L	N
22204	Uranium, Total	02/17/1999	0.301	J	µg/L	N
22204	Uranium, Total	03/17/1999	0.335	-	µg/L	N
22204	Uranium, Total	03/17/1999	0.326	-	µg/L	FD
22204	Uranium, Total	04/26/1999	0.38	U	µg/L	N
22204	Uranium, Total	05/24/1999	1.3	-	µg/L	N
22204	Uranium, Total	06/28/1999	1.67	-	µg/L	N
22204	Uranium, Total	07/26/1999	0.734	-	µg/L	N
22204	Uranium, Total	08/16/1999	0.66	J	µg/L	N
22204	Uranium, Total	09/14/1999	1.06	J	µg/L	N
22204	Uranium, Total	10/13/1999	0.464	-	µg/L	N
22204	Uranium, Total	11/16/1999	0.254	J	µg/L	N
22204	Uranium, Total	02/16/2000	0.418	J	µg/L	N
22204	Uranium, Total	05/24/2000	5.924	J	µg/L	N
22204	Uranium, Total	08/21/2000	3.138	J	µg/L	N
22204	Uranium, Total	11/15/2000	0.515	J	µg/L	N
22204	Uranium, Total	11/15/2000	0.526	UJ	µg/L	FD
22204	4-Nitroaniline	08/24/1998	20	UJ	µg/L	N
22204	4-Nitroaniline	08/24/1998	20	UJ	µg/L	FD
22204	4-Nitroaniline	09/14/1998	20	U	µg/L	N
22204	4-Nitroaniline	10/21/1998	50	U	µg/L	N
22204	4-Nitroaniline	10/21/1998	50	U	µg/L	FD
22204	4-Nitroaniline	11/23/1998	20	U	µg/L	N
22204	4-Nitroaniline	12/16/1998	20	U	µg/L	N

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Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	4-Nitroaniline	01/20/1999	50	U	µg/L	N
22204	4-Nitroaniline	02/17/1999	25	U	µg/L	N
22204	4-Nitroaniline	03/17/1999	25	U	µg/L	N
22204	4-Nitroaniline	03/17/1999	25	U	µg/L	FD
22204	4-Nitroaniline	04/26/1999	50	UJ	µg/L	N
22204	4-Nitroaniline	05/24/1999	50	U	µg/L	N
22204	4-Nitroaniline	06/28/1999	25	U	µg/L	N
22204	4-Nitroaniline	07/26/1999	25	U	µg/L	N
22204	4-Nitroaniline	08/16/1999	25	U	µg/L	N
22204	4-Nitroaniline	09/14/1999	25	U	µg/L	N
22204	4-Nitroaniline	10/13/1999	25	U	µg/L	N
22204	4-Nitroaniline	11/16/1999	50	U	µg/L	N
22204	4-Nitroaniline	02/16/2000	50	U	µg/L	N
22204	4-Nitroaniline	05/24/2000	25	U	µg/L	N
22204	4-Nitroaniline	08/21/2000	50	U	µg/L	N
22204	4-Nitroaniline	11/15/2000	50	U	µg/L	N
22204	4-Nitroaniline	11/15/2000	50	U	µg/L	FD
22204	Carbazole	08/24/1998	5	UJ	µg/L	N
22204	Carbazole	08/24/1998	5	UJ	µg/L	FD
22204	Carbazole	09/14/1998	5	U	µg/L	N
22204	Carbazole	10/21/1998	10	U	µg/L	N
22204	Carbazole	10/21/1998	10	U	µg/L	FD
22204	Carbazole	11/23/1998	5	U	µg/L	N
22204	Carbazole	12/16/1998	5	U	µg/L	N
22204	Carbazole	01/20/1999	10	UJ	µg/L	N
22204	Carbazole	02/17/1999	5	U	µg/L	N
22204	Carbazole	03/17/1999	5	U	µg/L	N
22204	Carbazole	03/17/1999	5	U	µg/L	FD
22204	Carbazole	04/26/1999	10	U	µg/L	N
22204	Carbazole	05/24/1999	10	U	µg/L	N
22204	Carbazole	06/28/1999	10	U	µg/L	N
22204	Carbazole	07/26/1999	5	U	µg/L	N
22204	Carbazole	08/16/1999	10	U	µg/L	N
22204	Carbazole	09/14/1999	10	U	µg/L	N
22204	Carbazole	10/13/1999	10	U	µg/L	N
22204	Carbazole	11/16/1999	10	U	µg/L	N
22204	Carbazole	02/16/2000	10	U	µg/L	N
22204	Carbazole	05/24/2000	10	U	µg/L	N
22204	Carbazole	08/21/2000	10	U	µg/L	N
22204	Carbazole	11/15/2000	10	U	µg/L	N
22204	Carbazole	11/15/2000	10	U	µg/L	FD
22204	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	08/24/1998	5	U	µg/L	FD
22204	bis(2-Chloroisopropyl) ether	09/14/1998	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	10/21/1998	10	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	10/21/1998	10	U	µg/L	FD
22204	bis(2-Chloroisopropyl) ether	11/23/1998	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	12/16/1998	5	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	bis(2-Chloroisopropyl) ether	01/20/1999	10	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	02/17/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	03/17/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	03/17/1999	5	U	µg/L	FD
22204	bis(2-Chloroisopropyl) ether	04/26/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	05/24/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	06/28/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	07/26/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	08/16/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	09/14/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	10/13/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	11/16/1999	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	02/16/2000	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	05/24/2000	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	08/21/2000	5	U	µg/L	N
22204	bis(2-Chloroisopropyl) ether	11/15/2000	5	UJ	µg/L	N
22204	bis(2-Chloroisopropyl) ether	11/15/2000	5	UJ	µg/L	FD
22204	1,1-Dichloroethene	08/24/1998	1	U	µg/L	N
22204	1,1-Dichloroethene	08/24/1998	1	U	µg/L	FD
22204	1,1-Dichloroethene	09/14/1998	1	U	µg/L	N
22204	1,1-Dichloroethene	10/21/1998	1	U	µg/L	N
22204	1,1-Dichloroethene	10/21/1998	1	U	µg/L	FD
22204	1,1-Dichloroethene	11/23/1998	1	U	µg/L	N
22204	1,1-Dichloroethene	12/16/1998	1	U	µg/L	N
22204	1,1-Dichloroethene	01/20/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	02/17/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	03/17/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	03/17/1999	1	U	µg/L	FD
22204	1,1-Dichloroethene	04/26/1999	5	U	µg/L	N
22204	1,1-Dichloroethene	05/24/1999	5	U	µg/L	N
22204	1,1-Dichloroethene	06/28/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	07/26/1999	5	U	µg/L	N
22204	1,1-Dichloroethene	08/16/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	09/14/1999	1	U	µg/L	N
22204	1,1-Dichloroethene	10/13/1999	0.8	U	µg/L	N
22204	1,1-Dichloroethene	11/16/1999	5	U	µg/L	N
22204	1,1-Dichloroethene	02/16/2000	5	U	µg/L	N
22204	1,1-Dichloroethene	05/24/2000	5	U	µg/L	N
22204	1,1-Dichloroethene	08/21/2000	5	U	µg/L	N
22204	1,1-Dichloroethene	11/15/2000	5	U	µg/L	N
22204	1,1-Dichloroethene	11/15/2000	5	U	µg/L	FD
22204	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	08/24/1998	10	U	µg/L	FD
22204	1,2-Dichloroethene (Total)	09/14/1998	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	10/21/1998	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	10/21/1998	10	U	µg/L	FD
22204	1,2-Dichloroethene (Total)	11/23/1998	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	12/16/1998	10	U	µg/L	N

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Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	1,2-Dichloroethene (Total)	01/20/1999	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	02/17/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	03/17/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	03/17/1999	10	U	µg/L	FD
22204	1,2-Dichloroethene (Total)	04/26/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	05/24/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	06/28/1999	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	07/26/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	08/16/1999	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	09/14/1999	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	10/13/1999	1	U	µg/L	N
22204	1,2-Dichloroethene (Total)	11/16/1999	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	02/16/2000	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	05/24/2000	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	08/21/2000	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	11/15/2000	10	U	µg/L	N
22204	1,2-Dichloroethene (Total)	11/15/2000	10	U	µg/L	FD
22204	Bromodichloromethane	08/24/1998	10	U	µg/L	N
22204	Bromodichloromethane	08/24/1998	10	U	µg/L	FD
22204	Bromodichloromethane	09/14/1998	1	U	µg/L	N
22204	Bromodichloromethane	10/21/1998	10	U	µg/L	N
22204	Bromodichloromethane	10/21/1998	10	U	µg/L	FD
22204	Bromodichloromethane	11/23/1998	10	U	µg/L	N
22204	Bromodichloromethane	12/16/1998	10	U	µg/L	N
22204	Bromodichloromethane	01/20/1999	1	U	µg/L	N
22204	Bromodichloromethane	02/17/1999	10	U	µg/L	N
22204	Bromodichloromethane	03/17/1999	10	U	µg/L	N
22204	Bromodichloromethane	03/17/1999	10	U	µg/L	FD
22204	Bromodichloromethane	04/26/1999	10	U	µg/L	N
22204	Bromodichloromethane	05/24/1999	10	U	µg/L	N
22204	Bromodichloromethane	06/28/1999	1	U	µg/L	N
22204	Bromodichloromethane	07/26/1999	10	U	µg/L	N
22204	Bromodichloromethane	08/16/1999	1	U	µg/L	N
22204	Bromodichloromethane	09/14/1999	1	U	µg/L	N
22204	Bromodichloromethane	10/13/1999	1	U	µg/L	N
22204	Bromodichloromethane	11/16/1999	10	U	µg/L	N
22204	Bromodichloromethane	02/16/2000	10	U	µg/L	N
22204	Bromodichloromethane	05/24/2000	10	U	µg/L	N
22204	Bromodichloromethane	08/21/2000	10	U	µg/L	N
22204	Bromodichloromethane	11/15/2000	10	U	µg/L	N
22204	Bromodichloromethane	11/15/2000	10	U	µg/L	FD
22204	Tetrachloroethene	08/24/1998	10	U	µg/L	N
22204	Tetrachloroethene	08/24/1998	10	U	µg/L	FD
22204	Tetrachloroethene	09/14/1998	1	U	µg/L	N
22204	Tetrachloroethene	10/21/1998	10	U	µg/L	N
22204	Tetrachloroethene	10/21/1998	10	U	µg/L	FD
22204	Tetrachloroethene	11/23/1998	10	U	µg/L	N
22204	Tetrachloroethene	12/16/1998	10	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	Tetrachloroethene	01/20/1999	1	U	µg/L	N
22204	Tetrachloroethene	02/17/1999	10	U	µg/L	N
22204	Tetrachloroethene	03/17/1999	10	U	µg/L	N
22204	Tetrachloroethene	03/17/1999	10	U	µg/L	FD
22204	Tetrachloroethene	04/26/1999	10	U	µg/L	N
22204	Tetrachloroethene	05/24/1999	10	U	µg/L	N
22204	Tetrachloroethene	06/28/1999	1	U	µg/L	N
22204	Tetrachloroethene	07/26/1999	10	U	µg/L	N
22204	Tetrachloroethene	08/16/1999	1	U	µg/L	N
22204	Tetrachloroethene	09/14/1999	1	U	µg/L	N
22204	Tetrachloroethene	10/13/1999	1	U	µg/L	N
22204	Tetrachloroethene	11/16/1999	10	U	µg/L	N
22204	Tetrachloroethene	02/16/2000	10	U	µg/L	N
22204	Tetrachloroethene	05/24/2000	10	U	µg/L	N
22204	Tetrachloroethene	08/21/2000	10	U	µg/L	N
22204	Tetrachloroethene	11/15/2000	10	U	µg/L	N
22204	Tetrachloroethene	11/15/2000	10	U	µg/L	FD
22204	Trichloroethene	08/24/1998	1	U	µg/L	N
22204	Trichloroethene	08/24/1998	1	U	µg/L	FD
22204	Trichloroethene	09/14/1998	1	U	µg/L	N
22204	Trichloroethene	10/21/1998	1	U	µg/L	N
22204	Trichloroethene	10/21/1998	1	U	µg/L	FD
22204	Trichloroethene	11/23/1998	1	U	µg/L	N
22204	Trichloroethene	12/16/1998	1	U	µg/L	N
22204	Trichloroethene	01/20/1999	1	U	µg/L	N
22204	Trichloroethene	02/17/1999	3	U	µg/L	N
22204	Trichloroethene	03/17/1999	3	U	µg/L	N
22204	Trichloroethene	03/17/1999	3	U	µg/L	FD
22204	Trichloroethene	04/26/1999	3	U	µg/L	N
22204	Trichloroethene	05/24/1999	3	U	µg/L	N
22204	Trichloroethene	06/28/1999	1	U	µg/L	N
22204	Trichloroethene	07/26/1999	3	U	µg/L	N
22204	Trichloroethene	08/16/1999	1	U	µg/L	N
22204	Trichloroethene	09/14/1999	1	U	µg/L	N
22204	Trichloroethene	10/13/1999	1	U	µg/L	N
22204	Trichloroethene	11/16/1999	3	U	µg/L	N
22204	Trichloroethene	02/16/2000	3	U	µg/L	N
22204	Trichloroethene	05/24/2000	3	U	µg/L	N
22204	Trichloroethene	08/21/2000	3	U	µg/L	N
22204	Trichloroethene	11/15/2000	3	U	µg/L	N
22204	Trichloroethene	11/15/2000	3	U	µg/L	FD
22204	Vinyl chloride	08/24/1998	1	U	µg/L	N
22204	Vinyl chloride	08/24/1998	1	U	µg/L	FD
22204	Vinyl chloride	09/14/1998	1	U	µg/L	N
22204	Vinyl chloride	10/21/1998	2	U	µg/L	N
22204	Vinyl chloride	10/21/1998	2	U	µg/L	FD
22204	Vinyl chloride	11/23/1998	2	U	µg/L	N
22204	Vinyl chloride	12/16/1998	2	U	µg/L	N

Attachment A.1. Horizontal Till Wells and Great Miami Aquifer Wells Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
22204	Vinyl chloride	01/20/1999	1	U	µg/L	N
22204	Vinyl chloride	02/17/1999	1	U	µg/L	N
22204	Vinyl chloride	03/17/1999	1	U	µg/L	N
22204	Vinyl chloride	03/17/1999	1	U	µg/L	FD
22204	Vinyl chloride	04/26/1999	1	U	µg/L	N
22204	Vinyl chloride	05/24/1999	1	U	µg/L	N
22204	Vinyl chloride	06/28/1999	1	U	µg/L	N
22204	Vinyl chloride	07/26/1999	1	U	µg/L	N
22204	Vinyl chloride	08/16/1999	1	U	µg/L	N
22204	Vinyl chloride	09/14/1999	1	U	µg/L	N
22204	Vinyl chloride	10/13/1999	1	U	µg/L	N
22204	Vinyl chloride	11/16/1999	1	U	µg/L	N
22204	Vinyl chloride	02/16/2000	1	U	µg/L	N
22204	Vinyl chloride	05/24/2000	1	U	µg/L	N
22204	Vinyl chloride	08/21/2000	1	U	µg/L	N
22204	Vinyl chloride	11/15/2000	1	U	µg/L	N
22204	Vinyl chloride	11/15/2000	1	U	µg/L	FD

Attachment A.2

ATTACHMENT A.2

LEACHATE COLLECTION SYSTEM AND LEAK DETECTION SYSTEM DATA

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Alkalinity as CaCO3	12/31/1998	337	J	mg/L	N
12338C	Alkalinity as CaCO3	12/31/1998	341	J	mg/L	FD
12338C	Alkalinity as CaCO3	11/17/1999	520	-	mg/L	N
12338C	Alkalinity as CaCO3	08/21/2000	606	-	mg/L	N
12338C	Alkalinity as CaCO3	08/21/2000	612	-	mg/L	FD
12338C	Alkalinity as CaCO3	06/19/2001	340	J	mg/L	N
12338C	Alkalinity as CaCO3	06/19/2001	395	J	mg/L	FD
12338C	Ammonia	12/31/1998	0.1	U	mg/L	N
12338C	Ammonia	12/31/1998	0.1	U	mg/L	FD
12338C	Ammonia	11/17/1999	2.14	-	mg/L	N
12338C	Ammonia	08/21/2000	4.08	J	mg/L	N
12338C	Ammonia	08/21/2000	4.5	J	mg/L	FD
12338C	Ammonia	06/19/2001	0.32	-	mg/L	N
12338C	Ammonia	06/19/2001	0.31	-	mg/L	FD
12338C	Chemical Oxygen Demand	12/31/1998	13.8	J	mg/L	N
12338C	Chemical Oxygen Demand	12/31/1998	10	UJ	mg/L	FD
12338C	Chemical Oxygen Demand	11/17/1999	65	-	mg/L	N
12338C	Chemical Oxygen Demand	08/21/2000	96.5	-	mg/L	N
12338C	Chemical Oxygen Demand	08/21/2000	98.6	-	mg/L	FD
12338C	Chemical Oxygen Demand	06/19/2001	49.7	-	mg/L	N
12338C	Chemical Oxygen Demand	06/19/2001	48	-	mg/L	FD
12338C	Chloride	12/31/1998	21.8	-	mg/L	N
12338C	Chloride	12/31/1998	20.6	-	mg/L	FD
12338C	Chloride	11/17/1999	23.1	-	mg/L	N
12338C	Chloride	08/21/2000	27.6	-	mg/L	N
12338C	Chloride	08/21/2000	27.4	-	mg/L	FD
12338C	Chloride	06/19/2001	30.9	-	mg/L	N
12338C	Chloride	06/19/2001	30.3	-	mg/L	FD
12338C	Nitrate/Nitrite	08/25/1998	0.04	J	mg/L	N
12338C	Nitrate/Nitrite	08/25/1998	0.06	J	mg/L	FD
12338C	Nitrate/Nitrite	12/31/1998	7	J	mg/L	N
12338C	Nitrate/Nitrite	12/31/1998	0.1	R	mg/L	FD
12338C	Nitrate/Nitrite	02/22/1999	4.8	-	mg/L	N
12338C	Nitrate/Nitrite	05/25/1999	0.6	NV	mg/L	N
12338C	Nitrate/Nitrite	05/25/1999	0.7	NV	mg/L	FD
12338C	Nitrate/Nitrite	08/16/1999	0.1	U	mg/L	N
12338C	Nitrate/Nitrite	11/17/1999	1.1	U	mg/L	N
12338C	Nitrate/Nitrite	02/23/2000	2.35	J	mg/L	N
12338C	Nitrate/Nitrite	05/22/2000	2.68	-	mg/L	N
12338C	Nitrate/Nitrite	08/21/2000	0.129	J	mg/L	N
12338C	Nitrate/Nitrite	08/21/2000	0.381	J	mg/L	FD
12338C	Nitrate/Nitrite	11/14/2000	3.53	J	mg/L	N
12338C	Nitrate/Nitrite	02/20/2001	2.85	J	mg/L	N
12338C	Nitrate/Nitrite	06/19/2001	0.11	J	mg/L	N
12338C	Nitrate/Nitrite	06/19/2001	0.14	J	mg/L	FD
12338C	Sulfate	12/31/1998	1070	J	mg/L	N
12338C	Sulfate	12/31/1998	1060	J	mg/L	FD
12338C	Sulfate	11/17/1999	812	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Sulfate	08/21/2000	1190	-	mg/L	N
12338C	Sulfate	08/21/2000	1160	-	mg/L	FD
12338C	Sulfate	06/19/2001	1170	-	mg/L	N
12338C	Sulfate	06/19/2001	1160	-	mg/L	FD
12338C	Total Dissolved Solids	08/25/1998	2129	NV	mg/L	N
12338C	Total Dissolved Solids	08/25/1998	2065	NV	mg/L	FD
12338C	Total Dissolved Solids	12/31/1998	1960	J	mg/L	N
12338C	Total Dissolved Solids	12/31/1998	1990	J	mg/L	FD
12338C	Total Dissolved Solids	02/22/1999	2348	-	mg/L	N
12338C	Total Dissolved Solids	05/25/1999	1792	NV	mg/L	N
12338C	Total Dissolved Solids	05/25/1999	1788	NV	mg/L	FD
12338C	Total Dissolved Solids	08/16/1999	2333	-	mg/L	N
12338C	Total Dissolved Solids	11/17/1999	2344	J	mg/L	N
12338C	Total Dissolved Solids	02/23/2000	1940	-	mg/L	N
12338C	Total Dissolved Solids	05/22/2000	2200	-	mg/L	N
12338C	Total Dissolved Solids	08/21/2000	2390	-	mg/L	N
12338C	Total Dissolved Solids	08/21/2000	2420	-	mg/L	FD
12338C	Total Dissolved Solids	11/14/2000	2520	-	mg/L	N
12338C	Total Dissolved Solids	02/20/2001	2660	-	mg/L	N
12338C	Total Dissolved Solids	06/19/2001	230	-	mg/L	N
12338C	Total Dissolved Solids	06/19/2001	2360	-	mg/L	FD
12338C	Total Organic Carbon	02/17/1998	26.3	-	mg/L	N
12338C	Total Organic Carbon	05/26/1998	123	J	mg/L	N
12338C	Total Organic Carbon	08/25/1998	18.4	-	mg/L	N
12338C	Total Organic Carbon	08/25/1998	18.5	-	mg/L	FD
12338C	Total Organic Carbon	11/23/1998	9.99	-	mg/L	N
12338C	Total Organic Carbon	02/22/1999	1.8	U	mg/L	N
12338C	Total Organic Carbon	05/25/1999	1.7	U	mg/L	N
12338C	Total Organic Carbon	05/25/1999	0.11	U	mg/L	FD
12338C	Total Organic Carbon	08/16/1999	19.6	-	mg/L	N
12338C	Total Organic Carbon	11/17/1999	25.8	-	mg/L	N
12338C	Total Organic Carbon	02/23/2000	21.3	J	mg/L	N
12338C	Total Organic Carbon	05/22/2000	21.8	-	mg/L	N
12338C	Total Organic Carbon	08/21/2000	27.6	-	mg/L	N
12338C	Total Organic Carbon	08/21/2000	28.4	-	mg/L	FD
12338C	Total Organic Carbon	11/14/2000	29.3	-	mg/L	N
12338C	Total Organic Carbon	02/20/2001	14.3	J	mg/L	N
12338C	Total Organic Carbon	06/19/2001	22.5	J	mg/L	N
12338C	Total Organic Carbon	06/19/2001	22.6	J	mg/L	FD
12338C	Total Organic Halogens	02/17/1998	0.0454	U	mg/L	N
12338C	Total Organic Halogens	05/26/1998	0.049	-	mg/L	N
12338C	Total Organic Halogens	08/25/1998	0.0276	-	mg/L	N
12338C	Total Organic Halogens	08/25/1998	0.0308	-	mg/L	FD
12338C	Total Organic Halogens	11/23/1998	0.022	-	mg/L	N
12338C	Total Organic Halogens	02/22/1999	0.00716	-	mg/L	N
12338C	Total Organic Halogens	05/25/1999	0.0119	J	mg/L	N
12338C	Total Organic Halogens	05/25/1999	0.0116	J	mg/L	FD
12338C	Total Organic Halogens	08/16/1999	0.204	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Total Organic Halogens	11/17/1999	0.118	J	mg/L	N
12338C	Total Organic Halogens	02/23/2000	0.0162	U	mg/L	N
12338C	Total Organic Halogens	05/22/2000	0.23	J	mg/L	N
12338C	Total Organic Halogens	08/21/2000	0.352	J	mg/L	N
12338C	Total Organic Halogens	08/21/2000	0.223	J	mg/L	FD
12338C	Total Organic Halogens	11/14/2000	0.317	J	mg/L	N
12338C	Total Organic Halogens	02/20/2001	0.101	-	mg/L	N
12338C	Total Organic Halogens	06/19/2001	0.116	-	mg/L	N
12338C	Total Organic Halogens	06/19/2001	0.128	-	mg/L	FD
12338C	Antimony	12/31/1998	0.004	U	mg/L	N
12338C	Antimony	12/31/1998	0.004	U	mg/L	FD
12338C	Antimony	11/17/1999	0.004	U	mg/L	N
12338C	Antimony	08/21/2000	0.00082	U	mg/L	N
12338C	Antimony	08/21/2000	0.0005	U	mg/L	FD
12338C	Antimony	06/19/2001	0.000306	U	mg/L	N
12338C	Antimony	06/19/2001	0.000401	U	mg/L	FD
12338C	Arsenic	12/31/1998	0.003	U	mg/L	N
12338C	Arsenic	12/31/1998	0.003	U	mg/L	FD
12338C	Arsenic	11/17/1999	0.003	U	mg/L	N
12338C	Arsenic	08/21/2000	0.0037	-	mg/L	N
12338C	Arsenic	08/21/2000	0.0038	-	mg/L	FD
12338C	Arsenic	06/19/2001	0.00013	U	mg/L	N
12338C	Arsenic	06/19/2001	0.000628	U	mg/L	FD
12338C	Barium	12/31/1998	0.0815	-	mg/L	N
12338C	Barium	12/31/1998	0.0885	-	mg/L	FD
12338C	Barium	11/17/1999	0.0801	-	mg/L	N
12338C	Barium	08/21/2000	0.0625	-	mg/L	N
12338C	Barium	08/21/2000	0.0591	-	mg/L	FD
12338C	Barium	06/19/2001	0.0507	J	mg/L	N
12338C	Barium	06/19/2001	0.0527	J	mg/L	FD
12338C	Beryllium	12/31/1998	0.001	U	mg/L	N
12338C	Beryllium	12/31/1998	0.001	U	mg/L	FD
12338C	Beryllium	11/17/1999	0.001	U	mg/L	N
12338C	Beryllium	08/21/2000	0.00048	U	mg/L	N
12338C	Beryllium	08/21/2000	0.00041	U	mg/L	FD
12338C	Beryllium	06/19/2001	0.000012	U	mg/L	N
12338C	Beryllium	06/19/2001	0.000012	U	mg/L	FD
12338C	Boron	02/17/1998	0.0642	-	mg/L	N
12338C	Boron	05/26/1998	0.128	-	mg/L	N
12338C	Boron	08/25/1998	0.334	-	mg/L	N
12338C	Boron	08/25/1998	0.337	-	mg/L	FD
12338C	Boron	11/23/1998	0.272	-	mg/L	N
12338C	Boron	12/31/1998	2.38	-	mg/L	N
12338C	Boron	12/31/1998	2.59	-	mg/L	FD
12338C	Boron	02/22/1999	2.8	-	mg/L	N
12338C	Boron	05/25/1999	1.3	J	mg/L	N
12338C	Boron	05/25/1999	1.46	J	mg/L	FD
12338C	Boron	08/16/1999	0.856	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Boron	11/17/1999	0.536	-	mg/L	N
12338C	Boron	02/23/2000	1.72	-	mg/L	N
12338C	Boron	05/22/2000	1.02	-	mg/L	N
12338C	Boron	08/21/2000	0.768	-	mg/L	N
12338C	Boron	08/21/2000	0.736	-	mg/L	FD
12338C	Boron	11/14/2000	0.817	J	mg/L	N
12338C	Boron	02/20/2001	0.971	-	mg/L	N
12338C	Boron	06/19/2001	1.59	J	mg/L	N
12338C	Boron	06/19/2001	1.53	J	mg/L	FD
12338C	Cadmium	12/31/1998	0.001	U	mg/L	N
12338C	Cadmium	12/31/1998	0.001	U	mg/L	FD
12338C	Cadmium	11/17/1999	0.001	U	mg/L	N
12338C	Cadmium	08/21/2000	0.00084	-	mg/L	N
12338C	Cadmium	08/21/2000	0.0008	-	mg/L	FD
12338C	Cadmium	06/19/2001	0.000146	U	mg/L	N
12338C	Cadmium	06/19/2001	0.000233	U	mg/L	FD
12338C	Calcium	12/31/1998	387	J	mg/L	N
12338C	Calcium	12/31/1998	406	J	mg/L	FD
12338C	Calcium	11/17/1999	377	J	mg/L	N
12338C	Calcium	08/21/2000	386	-	mg/L	N
12338C	Calcium	08/21/2000	375	-	mg/L	FD
12338C	Calcium	06/19/2001	506	-	mg/L	N
12338C	Calcium	06/19/2001	503	-	mg/L	FD
12338C	Chromium	12/31/1998	0.0012	-	mg/L	N
12338C	Chromium	12/31/1998	0.0016	-	mg/L	FD
12338C	Chromium	11/17/1999	0.0012	-	mg/L	N
12338C	Chromium	08/21/2000	0.00025	U	mg/L	N
12338C	Chromium	08/21/2000	0.00025	U	mg/L	FD
12338C	Chromium	06/19/2001	0.000053	U	mg/L	N
12338C	Chromium	06/19/2001	0.000053	U	mg/L	FD
12338C	Cobalt	12/31/1998	0.003	U	mg/L	N
12338C	Cobalt	12/31/1998	0.003	U	mg/L	FD
12338C	Cobalt	11/17/1999	0.0266	-	mg/L	N
12338C	Cobalt	08/21/2000	0.0227	J	mg/L	N
12338C	Cobalt	08/21/2000	0.0216	J	mg/L	FD
12338C	Cobalt	06/19/2001	0.017	-	mg/L	N
12338C	Cobalt	06/19/2001	0.0171	-	mg/L	FD
12338C	Copper	12/31/1998	0.0018	-	mg/L	N
12338C	Copper	12/31/1998	0.003	-	mg/L	FD
12338C	Copper	11/17/1999	0.0157	-	mg/L	N
12338C	Copper	08/21/2000	0.00094	-	mg/L	N
12338C	Copper	08/21/2000	0.00076	-	mg/L	FD
12338C	Copper	06/19/2001	0.00397	-	mg/L	N
12338C	Copper	06/19/2001	0.00395	-	mg/L	FD
12338C	Iron	12/31/1998	0.229	UJ	mg/L	N
12338C	Iron	12/31/1998	1.74	J	mg/L	FD
12338C	Iron	11/17/1999	1.54	J	mg/L	N
12338C	Iron	08/21/2000	10.1	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Iron	08/21/00	9.55	J	mg/L	FD
12338C	Iron	06/19/01	0.528	J	mg/L	N
12338C	Iron	06/19/01	0.487	J	mg/L	FD
12338C	Lead	12/31/98	0.002	U	mg/L	N
12338C	Lead	12/31/98	0.002	U	mg/L	FD
12338C	Lead	11/17/99	0.002	U	mg/L	N
12338C	Lead	08/21/00	0.0005	U	mg/L	N
12338C	Lead	08/21/00	0.00059	U	mg/L	FD
12338C	Lead	06/19/01	0.000446	U	mg/L	N
12338C	Lead	06/19/01	0.00034	U	mg/L	FD
12338C	Magnesium	12/31/98	68.8	-	mg/L	N
12338C	Magnesium	12/31/98	71.4	-	mg/L	FD
12338C	Magnesium	11/17/99	111	-	mg/L	N
12338C	Magnesium	08/21/00	114	J	mg/L	N
12338C	Magnesium	08/21/00	109	J	mg/L	FD
12338C	Magnesium	06/19/01	169	J	mg/L	N
12338C	Magnesium	06/19/01	162	J	mg/L	FD
12338C	Manganese	12/31/98	0.0052	J	mg/L	N
12338C	Manganese	12/31/98	0.0104	J	mg/L	FD
12338C	Manganese	11/17/99	2.18	J	mg/L	N
12338C	Manganese	08/21/00	1.93	-	mg/L	N
12338C	Manganese	08/21/00	1.84	-	mg/L	FD
12338C	Manganese	06/19/01	2.78	J	mg/L	N
12338C	Manganese	06/19/01	2.75	J	mg/L	FD
12338C	Mercury	02/17/98	0.0001	U	mg/L	N
12338C	Mercury	05/26/98	0.0001	U	mg/L	N
12338C	Mercury	08/25/98	0.0001	U	mg/L	N
12338C	Mercury	08/25/98	0.0001	U	mg/L	FD
12338C	Mercury	11/23/98	0.0001	U	mg/L	N
12338C	Mercury	02/22/99	0.00012	U	mg/L	N
12338C	Mercury	05/25/99	0.00012	U	mg/L	N
12338C	Mercury	05/25/99	0.00012	U	mg/L	FD
12338C	Mercury	08/16/99	0.0001	U	mg/L	N
12338C	Mercury	11/17/99	0.0001	U	mg/L	N
12338C	Mercury	02/23/00	0.00004	U	mg/L	N
12338C	Mercury	05/22/00	0.0001	U	mg/L	N
12338C	Mercury	08/21/00	0.00000024	J	mg/L	N
12338C	Mercury	08/21/00	0.00000024	J	mg/L	FD
12338C	Mercury	11/14/00	0.00047	-	mg/L	N
12338C	Mercury	02/20/01	0.000057	UJ	mg/L	N
12338C	Mercury	06/19/01	0.000057	U	mg/L	N
12338C	Mercury	06/19/01	0.000057	U	mg/L	FD
12338C	Nickel	12/31/98	0.0183	-	mg/L	N
12338C	Nickel	12/31/98	0.0205	-	mg/L	FD
12338C	Nickel	11/17/99	0.0472	-	mg/L	N
12338C	Nickel	08/21/00	0.0373	-	mg/L	N
12338C	Nickel	08/21/00	0.0353	-	mg/L	FD
12338C	Nickel	06/19/01	0.0473	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Nickel	06/19/01	0.0472	J	mg/L	FD
12338C	Potassium	12/31/98	24.9	J	mg/L	N
12338C	Potassium	12/31/98	25.9	J	mg/L	FD
12338C	Potassium	11/17/99	10.8	J	mg/L	N
12338C	Potassium	08/21/00	15.1	-	mg/L	N
12338C	Potassium	08/21/00	14	-	mg/L	FD
12338C	Potassium	06/19/01	15.2	J	mg/L	N
12338C	Potassium	06/19/01	15.1	J	mg/L	FD
12338C	Selenium	12/31/98	0.0142	-	mg/L	N
12338C	Selenium	12/31/98	0.017	-	mg/L	FD
12338C	Selenium	11/17/99	0.004	U	mg/L	N
12338C	Selenium	08/21/00	0.001	U	mg/L	N
12338C	Selenium	08/21/00	0.001	U	mg/L	FD
12338C	Selenium	06/19/01	0.00721	-	mg/L	N
12338C	Selenium	06/19/01	0.00714	-	mg/L	FD
12338C	Silver	12/31/98	0.002	U	mg/L	N
12338C	Silver	12/31/98	0.002	U	mg/L	FD
12338C	Silver	11/17/99	0.001	U	mg/L	N
12338C	Silver	08/21/00	0.0005	U	mg/L	N
12338C	Silver	08/21/00	0.0005	U	mg/L	FD
12338C	Silver	06/19/01	0.000133	U	mg/L	N
12338C	Silver	06/19/01	0.000133	U	mg/L	FD
12338C	Sodium	12/31/98	14	-	mg/L	N
12338C	Sodium	12/31/98	14.7	-	mg/L	FD
12338C	Sodium	11/17/99	11.7	-	mg/L	N
12338C	Sodium	08/21/00	12.8	-	mg/L	N
12338C	Sodium	08/21/00	12.1	-	mg/L	FD
12338C	Sodium	06/19/01	13.6	J	mg/L	N
12338C	Sodium	06/19/01	13.9	J	mg/L	FD
12338C	Thallium	12/31/98	0.004	U	mg/L	N
12338C	Thallium	12/31/98	0.004	U	mg/L	FD
12338C	Thallium	11/17/99	0.004	U	mg/L	N
12338C	Thallium	08/21/00	0.001	UJ	mg/L	N
12338C	Thallium	08/21/00	0.001	UJ	mg/L	FD
12338C	Thallium	06/19/01	0.000364	U	mg/L	N
12338C	Thallium	06/19/01	0.000333	U	mg/L	FD
12338C	Vanadium	12/31/98	0.001	U	mg/L	N
12338C	Vanadium	12/31/98	0.001	U	mg/L	FD
12338C	Vanadium	11/17/99	0.001	U	mg/L	N
12338C	Vanadium	08/21/00	0.00046	U	mg/L	N
12338C	Vanadium	08/21/00	0.0006	U	mg/L	FD
12338C	Vanadium	06/19/01	0.00103	U	mg/L	N
12338C	Vanadium	06/19/01	0.00156	U	mg/L	FD
12338C	Zinc	12/31/98	0.0093	UJ	mg/L	N
12338C	Zinc	12/31/98	0.0173	UJ	mg/L	FD
12338C	Zinc	11/17/99	0.575	-	mg/L	N
12338C	Zinc	08/21/00	0.0136	U	mg/L	N
12338C	Zinc	08/21/00	0.0149	U	mg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Zinc	06/19/01	0.0139	-	mg/L	N
12338C	Zinc	06/19/01	0.0162	-	mg/L	FD
12338C	alpha-Chlordane	02/17/98	0.05	UJ	µg/L	N
12338C	alpha-Chlordane	05/26/98	0.005	U	µg/L	N
12338C	alpha-Chlordane	08/25/98	0.031	U	µg/L	N
12338C	alpha-Chlordane	08/25/98	0.031	U	µg/L	FD
12338C	alpha-Chlordane	11/23/98	0.1	U	µg/L	N
12338C	alpha-Chlordane	02/22/99	0.01	UJ	µg/L	N
12338C	alpha-Chlordane	05/25/99	0.01	U	µg/L	N
12338C	alpha-Chlordane	05/25/99	0.01	U	µg/L	FD
12338C	alpha-Chlordane	08/16/99	0.05	U	µg/L	N
12338C	alpha-Chlordane	11/17/99	0.1	U	µg/L	N
12338C	alpha-Chlordane	02/23/00	0.1	U	µg/L	N
12338C	alpha-Chlordane	05/22/00	0.1	U	µg/L	N
12338C	alpha-Chlordane	08/21/00	0.1	U	µg/L	N
12338C	alpha-Chlordane	08/21/00	0.1	U	µg/L	FD
12338C	alpha-Chlordane	11/14/00	0.1	U	µg/L	N
12338C	alpha-Chlordane	02/20/01	0.1	UJ	µg/L	N
12338C	alpha-Chlordane	06/19/01	0.1	U	µg/L	N
12338C	alpha-Chlordane	06/19/01	0.1	U	µg/L	FD
12338C	Technetium-99	02/17/98	12	-	pCi/L	N
12338C	Technetium-99	05/26/98	18.28	-	pCi/L	N
12338C	Technetium-99	08/25/98	3.23	U	pCi/L	N
12338C	Technetium-99	08/25/98	7.36	U	pCi/L	FD
12338C	Technetium-99	11/23/98	1.879	U	pCi/L	N
12338C	Technetium-99	02/22/99	-0.982	U	pCi/L	N
12338C	Technetium-99	05/25/99	3.03	UJ	pCi/L	N
12338C	Technetium-99	05/25/99	6.04	UJ	pCi/L	FD
12338C	Technetium-99	08/16/99	-2.976	UJ	pCi/L	N
12338C	Technetium-99	11/17/99	-0.624	UJ	pCi/L	N
12338C	Technetium-99	02/23/00	12.374	J	pCi/L	N
12338C	Technetium-99	05/22/00	10.05	J	pCi/L	N
12338C	Technetium-99	08/21/00	-4.625	U	pCi/L	N
12338C	Technetium-99	08/21/00	1.13	U	pCi/L	N
12338C	Technetium-99	11/14/00	7.373	UJ	pCi/L	N
12338C	Technetium-99	02/20/01	5.601	U	pCi/L	N
12338C	Technetium-99	06/19/01	2.721	UJ	pCi/L	N
12338C	Technetium-99	06/19/01	2.825	UJ	pCi/L	FD
12338C	Uranium, Total	02/17/98	49.3	-	µg/L	N
12338C	Uranium, Total	05/26/98	70.006	J	µg/L	N
12338C	Uranium, Total	08/25/98	45.55	-	µg/L	N
12338C	Uranium, Total	08/25/98	47.018	-	µg/L	FD
12338C	Uranium, Total	11/23/98	119	-	µg/L	N
12338C	Uranium, Total	02/22/99	-0.084	U	µg/L	N
12338C	Uranium, Total	05/04/99	13	NV	µg/L	N
12338C	Uranium, Total	05/25/99	100.54	-	µg/L	N
12338C	Uranium, Total	05/25/99	102.14	-	µg/L	FD
12338C	Uranium, Total	08/16/99	55.5	-	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Uranium, Total	11/17/99	63.4	-	µg/L	N
12338C	Uranium, Total	02/23/00	106.4346	J	µg/L	N
12338C	Uranium, Total	05/22/00	77.644	J	µg/L	N
12338C	Uranium, Total	08/21/00	49.85	J	µg/L	N
12338C	Uranium, Total	08/21/00	47.338	J	µg/L	N
12338C	Uranium, Total	11/14/00	51.312	J	µg/L	N
12338C	Uranium, Total	02/20/01	142.186	-	µg/L	N
12338C	Uranium, Total	06/19/01	87.239	-	µg/L	N
12338C	Uranium, Total	06/19/01	86.065	-	µg/L	FD
12338C	1,2-Dichlorobenzene	12/31/98	1	U	µg/L	N
12338C	1,2-Dichlorobenzene	12/31/98	1	U	µg/L	FD
12338C	1,2-Dichlorobenzene	11/17/99	10	U	µg/L	N
12338C	1,2-Dichlorobenzene	08/21/00	10	U	µg/L	N
12338C	1,2-Dichlorobenzene	08/21/00	10	U	µg/L	FD
12338C	1,2-Dichlorobenzene	06/19/01	10	U	µg/L	N
12338C	1,2-Dichlorobenzene	06/19/01	10	U	µg/L	FD
12338C	1,4-Dichlorobenzene	12/31/98	1	U	µg/L	N
12338C	1,4-Dichlorobenzene	12/31/98	1	U	µg/L	FD
12338C	1,4-Dichlorobenzene	11/17/99	10	U	µg/L	N
12338C	1,4-Dichlorobenzene	08/21/00	10	U	µg/L	N
12338C	1,4-Dichlorobenzene	08/21/00	10	U	µg/L	FD
12338C	1,4-Dichlorobenzene	06/19/01	10	U	µg/L	N
12338C	1,4-Dichlorobenzene	06/19/01	10	U	µg/L	FD
12338C	4-Nitroaniline	02/17/98	25	U	µg/L	N
12338C	4-Nitroaniline	05/26/98	20	U	µg/L	N
12338C	4-Nitroaniline	08/25/98	20	U	µg/L	N
12338C	4-Nitroaniline	08/25/98	20	U	µg/L	FD
12338C	4-Nitroaniline	11/23/98	20	U	µg/L	N
12338C	4-Nitroaniline	02/22/99	25	U	µg/L	N
12338C	4-Nitroaniline	05/25/99	50	U	µg/L	N
12338C	4-Nitroaniline	05/25/99	50	U	µg/L	FD
12338C	4-Nitroaniline	08/16/99	25	U	µg/L	N
12338C	4-Nitroaniline	11/17/99	50	U	µg/L	N
12338C	4-Nitroaniline	02/23/00	50	U	µg/L	N
12338C	4-Nitroaniline	05/22/00	25	U	µg/L	N
12338C	4-Nitroaniline	08/21/00	50	U	µg/L	N
12338C	4-Nitroaniline	08/21/00	50	U	µg/L	FD
12338C	4-Nitroaniline	11/14/00	50	U	µg/L	N
12338C	4-Nitroaniline	02/20/01	50	U	µg/L	N
12338C	4-Nitroaniline	06/19/01	50	U	µg/L	N
12338C	4-Nitroaniline	06/19/01	50	U	µg/L	FD
12338C	Carbazole	02/17/98	10	UJ	µg/L	N
12338C	Carbazole	05/26/98	5	U	µg/L	N
12338C	Carbazole	08/25/98	5	U	µg/L	N
12338C	Carbazole	08/25/98	5	U	µg/L	FD
12338C	Carbazole	11/23/98	5	U	µg/L	N
12338C	Carbazole	02/22/99	5	U	µg/L	N
12338C	Carbazole	05/25/99	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Carbazole	05/25/99	10	U	µg/L	FD
12338C	Carbazole	08/16/99	10	U	µg/L	N
12338C	Carbazole	11/17/99	10	U	µg/L	N
12338C	Carbazole	02/23/00	10	U	µg/L	N
12338C	Carbazole	05/22/00	10	U	µg/L	N
12338C	Carbazole	08/21/00	10	U	µg/L	N
12338C	Carbazole	08/21/00	10	U	µg/L	FD
12338C	Carbazole	11/14/00	10	U	µg/L	N
12338C	Carbazole	02/20/01	10	U	µg/L	N
12338C	Carbazole	06/19/01	10	U	µg/L	N
12338C	Carbazole	06/19/01	10	U	µg/L	FD
12338C	bis(2-Chloroisopropyl) ether	02/17/98	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	05/26/98	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	08/25/98	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	08/25/98	5	U	µg/L	FD
12338C	bis(2-Chloroisopropyl) ether	11/23/98	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	02/22/99	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	05/25/99	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	05/25/99	5	U	µg/L	FD
12338C	bis(2-Chloroisopropyl) ether	08/16/99	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	11/17/99	5	UJ	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	02/23/00	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	05/22/00	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	08/21/00	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	08/21/00	5	U	µg/L	FD
12338C	bis(2-Chloroisopropyl) ether	11/14/00	5	UJ	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	02/20/01	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	N
12338C	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	FD
12338C	1,1,1,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12338C	1,1,1,2-Tetrachloroethane	12/31/98	1	U	µg/L	FD
12338C	1,1,1,2-Tetrachloroethane	11/17/99	10	U	µg/L	N
12338C	1,1,1,2-Tetrachloroethane	08/21/00	10	U	µg/L	N
12338C	1,1,1,2-Tetrachloroethane	08/21/00	10	U	µg/L	FD
12338C	1,1,1,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12338C	1,1,1,2-Tetrachloroethane	06/19/01	10	U	µg/L	FD
12338C	1,1,1-Trichloroethane	12/31/98	1	U	µg/L	N
12338C	1,1,1-Trichloroethane	12/31/98	1	U	µg/L	FD
12338C	1,1,1-Trichloroethane	11/17/99	1	U	µg/L	N
12338C	1,1,1-Trichloroethane	08/21/00	1	U	µg/L	N
12338C	1,1,1-Trichloroethane	08/21/00	1	U	µg/L	FD
12338C	1,1,1-Trichloroethane	06/19/01	1	U	µg/L	N
12338C	1,1,1-Trichloroethane	06/19/01	1	U	µg/L	FD
12338C	1,1,2,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12338C	1,1,2,2-Tetrachloroethane	12/31/98	1	U	µg/L	FD
12338C	1,1,2,2-Tetrachloroethane	11/17/99	10	U	µg/L	N
12338C	1,1,2,2-Tetrachloroethane	08/21/00	10	U	µg/L	N
12338C	1,1,2,2-Tetrachloroethane	08/21/00	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	1,1,2,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12338C	1,1,2,2-Tetrachloroethane	06/19/01	10	U	µg/L	FD
12338C	1,1,2-Trichloroethane	12/31/98	1	U	µg/L	N
12338C	1,1,2-Trichloroethane	12/31/98	1	U	µg/L	FD
12338C	1,1,2-Trichloroethane	11/17/99	10	U	µg/L	N
12338C	1,1,2-Trichloroethane	08/21/00	10	U	µg/L	N
12338C	1,1,2-Trichloroethane	08/21/00	10	U	µg/L	FD
12338C	1,1,2-Trichloroethane	06/19/01	10	U	µg/L	N
12338C	1,1,2-Trichloroethane	06/19/01	10	U	µg/L	FD
12338C	1,1-Dichloroethane	12/31/98	1	R	µg/L	N
12338C	1,1-Dichloroethane	12/31/98	1	R	µg/L	FD
12338C	1,1-Dichloroethane	11/17/99	10	U	µg/L	N
12338C	1,1-Dichloroethane	08/21/00	10	U	µg/L	N
12338C	1,1-Dichloroethane	08/21/00	10	U	µg/L	FD
12338C	1,1-Dichloroethane	06/19/01	10	U	µg/L	N
12338C	1,1-Dichloroethane	06/19/01	10	U	µg/L	FD
12338C	1,1-Dichloroethene	02/17/98	1	U	µg/L	N
12338C	1,1-Dichloroethene	05/26/98	1	U	µg/L	N
12338C	1,1-Dichloroethene	08/25/98	1	U	µg/L	N
12338C	1,1-Dichloroethene	08/25/98	1	U	µg/L	FD
12338C	1,1-Dichloroethene	11/23/98	1	U	µg/L	N
12338C	1,1-Dichloroethene	12/31/98	1	U	µg/L	N
12338C	1,1-Dichloroethene	12/31/98	1	U	µg/L	FD
12338C	1,1-Dichloroethene	02/22/99	1	U	µg/L	N
12338C	1,1-Dichloroethene	05/25/99	5	U	µg/L	N
12338C	1,1-Dichloroethene	05/25/99	5	U	µg/L	FD
12338C	1,1-Dichloroethene	08/16/99	1	U	µg/L	N
12338C	1,1-Dichloroethene	11/17/99	5	U	µg/L	N
12338C	1,1-Dichloroethene	02/23/00	5	U	µg/L	N
12338C	1,1-Dichloroethene	05/22/00	5	U	µg/L	N
12338C	1,1-Dichloroethene	08/21/00	5	U	µg/L	N
12338C	1,1-Dichloroethene	08/21/00	5	U	µg/L	FD
12338C	1,1-Dichloroethene	11/14/00	5	U	µg/L	N
12338C	1,1-Dichloroethene	02/20/01	5	U	µg/L	N
12338C	1,1-Dichloroethene	06/19/01	5	U	µg/L	N
12338C	1,1-Dichloroethene	06/19/01	5	U	µg/L	FD
12338C	1,2,3-Trichloropropane	12/31/98	1	UJ	µg/L	N
12338C	1,2,3-Trichloropropane	12/31/98	1	UJ	µg/L	FD
12338C	1,2,3-Trichloropropane	11/17/99	10	U	µg/L	N
12338C	1,2,3-Trichloropropane	08/21/00	10	U	µg/L	N
12338C	1,2,3-Trichloropropane	08/21/00	10	U	µg/L	FD
12338C	1,2,3-Trichloropropane	06/19/01	10	U	µg/L	N
12338C	1,2,3-Trichloropropane	06/19/01	10	U	µg/L	FD
12338C	1,2-Dibromo-3-chloropropane	12/31/98	1	U	µg/L	N
12338C	1,2-Dibromo-3-chloropropane	12/31/98	1	U	µg/L	FD
12338C	1,2-Dibromo-3-chloropropane	11/17/99	10	U	µg/L	N
12338C	1,2-Dibromo-3-chloropropane	08/21/00	10	U	µg/L	N
12338C	1,2-Dibromo-3-chloropropane	08/21/00	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	1,2-Dibromo-3-chloropropane	06/19/01	10	U	µg/L	N
12338C	1,2-Dibromo-3-chloropropane	06/19/01	10	U	µg/L	FD
12338C	1,2-Dibromoethane	12/31/98	1	U	µg/L	N
12338C	1,2-Dibromoethane	12/31/98	1	U	µg/L	FD
12338C	1,2-Dibromoethane	11/17/99	10	U	µg/L	N
12338C	1,2-Dibromoethane	08/21/00	10	U	µg/L	N
12338C	1,2-Dibromoethane	08/21/00	10	U	µg/L	FD
12338C	1,2-Dibromoethane	06/19/01	10	U	µg/L	N
12338C	1,2-Dibromoethane	06/19/01	10	U	µg/L	FD
12338C	1,2-Dichloroethane	12/31/98	1	U	µg/L	N
12338C	1,2-Dichloroethane	12/31/98	1	U	µg/L	FD
12338C	1,2-Dichloroethane	11/17/99	10	U	µg/L	N
12338C	1,2-Dichloroethane	08/21/00	1	U	µg/L	N
12338C	1,2-Dichloroethane	08/21/00	1	U	µg/L	FD
12338C	1,2-Dichloroethane	06/19/01	1	U	µg/L	N
12338C	1,2-Dichloroethane	06/19/01	1	U	µg/L	FD
12338C	1,2-Dichloroethene (Total)	02/17/98	1	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	05/26/98	1	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	08/25/98	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	08/25/98	10	U	µg/L	FD
12338C	1,2-Dichloroethene (Total)	11/23/98	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	02/22/99	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	05/25/99	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	05/25/99	10	U	µg/L	FD
12338C	1,2-Dichloroethene (Total)	08/16/99	1	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	11/17/99	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	02/23/00	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	05/22/00	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	11/14/00	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	02/20/01	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	N
12338C	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	FD
12338C	1,2-Dichloropropane	11/17/99	10	U	µg/L	N
12338C	1,2-Dichloropropane	08/21/00	10	U	µg/L	N
12338C	1,2-Dichloropropane	08/21/00	10	U	µg/L	FD
12338C	1,2-Dichloropropane	06/19/01	10	U	µg/L	N
12338C	1,2-Dichloropropane	06/19/01	10	U	µg/L	FD
12338C	2-Butanone	11/17/99	10	UJ	µg/L	N
12338C	2-Butanone	08/21/00	10	U	µg/L	N
12338C	2-Butanone	08/21/00	10	U	µg/L	FD
12338C	2-Butanone	06/19/01	10	U	µg/L	N
12338C	2-Butanone	06/19/01	10	U	µg/L	FD
12338C	2-Hexanone	11/17/99	10	U	µg/L	N
12338C	2-Hexanone	08/21/00	10	U	µg/L	N
12338C	2-Hexanone	08/21/00	10	U	µg/L	FD
12338C	2-Hexanone	06/19/01	10	U	µg/L	N
12338C	2-Hexanone	06/19/01	10	U	µg/L	FD
12338C	4-Methyl-2-pentanone	11/17/99	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	4-Methyl-2-pentanone	08/21/00	10	U	µg/L	N
12338C	4-Methyl-2-pentanone	08/21/00	10	U	µg/L	FD
12338C	4-Methyl-2-pentanone	06/19/01	10	U	µg/L	N
12338C	4-Methyl-2-pentanone	06/19/01	10	U	µg/L	FD
12338C	Acetone	12/31/98	5	UJ	µg/L	N
12338C	Acetone	12/31/98	5	UJ	µg/L	FD
12338C	Acetone	11/17/99	10	U	µg/L	N
12338C	Acetone	08/21/00	10	UJ	µg/L	N
12338C	Acetone	08/21/00	5	UJ	µg/L	FD
12338C	Acetone	06/19/01	1.8	U	µg/L	N
12338C	Acetone	06/19/01	2.1	U	µg/L	FD
12338C	Acrylonitrile	12/31/98	10	UJ	µg/L	N
12338C	Acrylonitrile	12/31/98	10	UJ	µg/L	FD
12338C	Acrylonitrile	11/17/99	10	U	µg/L	N
12338C	Acrylonitrile	08/21/00	10	U	µg/L	N
12338C	Acrylonitrile	08/21/00	10	U	µg/L	FD
12338C	Acrylonitrile	06/19/01	10	U	µg/L	N
12338C	Acrylonitrile	06/19/01	10	U	µg/L	FD
12338C	Benzene	12/31/98	1	U	µg/L	N
12338C	Benzene	12/31/98	1	U	µg/L	FD
12338C	Benzene	11/17/99	1	U	µg/L	N
12338C	Benzene	08/21/00	1	U	µg/L	N
12338C	Benzene	08/21/00	1	U	µg/L	FD
12338C	Benzene	06/19/01	1	U	µg/L	N
12338C	Benzene	06/19/01	1	U	µg/L	FD
12338C	Bromochloromethane	12/31/98	1	U	µg/L	N
12338C	Bromochloromethane	12/31/98	1	U	µg/L	FD
12338C	Bromochloromethane	11/17/99	10	U	µg/L	N
12338C	Bromochloromethane	08/21/00	10	U	µg/L	N
12338C	Bromochloromethane	08/21/00	10	U	µg/L	FD
12338C	Bromochloromethane	06/19/01	10	U	µg/L	N
12338C	Bromochloromethane	06/19/01	10	U	µg/L	FD
12338C	Bromodichloromethane	02/17/98	1	U	µg/L	N
12338C	Bromodichloromethane	05/26/98	1	U	µg/L	N
12338C	Bromodichloromethane	08/25/98	10	U	µg/L	N
12338C	Bromodichloromethane	08/25/98	10	U	µg/L	FD
12338C	Bromodichloromethane	11/23/98	10	U	µg/L	N
12338C	Bromodichloromethane	12/31/98	1	U	µg/L	N
12338C	Bromodichloromethane	12/31/98	1	U	µg/L	FD
12338C	Bromodichloromethane	02/22/99	10	U	µg/L	N
12338C	Bromodichloromethane	05/25/99	10	U	µg/L	N
12338C	Bromodichloromethane	05/25/99	10	U	µg/L	FD
12338C	Bromodichloromethane	08/16/99	1	U	µg/L	N
12338C	Bromodichloromethane	11/17/99	10	U	µg/L	N
12338C	Bromodichloromethane	02/23/00	10	U	µg/L	N
12338C	Bromodichloromethane	05/22/00	10	U	µg/L	N
12338C	Bromodichloromethane	08/21/00	10	U	µg/L	N
12338C	Bromodichloromethane	08/21/00	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Bromodichloromethane	11/14/00	10	U	µg/L	N
12338C	Bromodichloromethane	02/20/01	10	U	µg/L	N
12338C	Bromodichloromethane	06/19/01	10	U	µg/L	N
12338C	Bromodichloromethane	06/19/01	10	U	µg/L	FD
12338C	Bromoform	12/31/98	1	U	µg/L	N
12338C	Bromoform	12/31/98	1	U	µg/L	FD
12338C	Bromoform	11/17/99	10	U	µg/L	N
12338C	Bromoform	08/21/00	10	U	µg/L	N
12338C	Bromoform	08/21/00	10	U	µg/L	FD
12338C	Bromoform	06/19/01	10	U	µg/L	N
12338C	Bromoform	06/19/01	10	U	µg/L	FD
12338C	Bromomethane	11/17/99	2	UJ	µg/L	N
12338C	Bromomethane	08/21/00	2	U	µg/L	N
12338C	Bromomethane	08/21/00	2	U	µg/L	FD
12338C	Bromomethane	06/19/01	2	U	µg/L	N
12338C	Bromomethane	06/19/01	2	U	µg/L	FD
12338C	Carbon Tetrachloride	12/31/98	1	U	µg/L	N
12338C	Carbon Tetrachloride	12/31/98	1	U	µg/L	FD
12338C	Carbon Tetrachloride	11/17/99	10	U	µg/L	N
12338C	Carbon Tetrachloride	08/21/00	10	U	µg/L	N
12338C	Carbon Tetrachloride	08/21/00	10	U	µg/L	FD
12338C	Carbon Tetrachloride	06/19/01	10	U	µg/L	N
12338C	Carbon Tetrachloride	06/19/01	10	U	µg/L	FD
12338C	Carbon disulfide	12/31/98	1	U	µg/L	N
12338C	Carbon disulfide	12/31/98	1	U	µg/L	FD
12338C	Carbon disulfide	11/17/99	5	U	µg/L	N
12338C	Carbon disulfide	08/21/00	5	U	µg/L	N
12338C	Carbon disulfide	08/21/00	5	U	µg/L	FD
12338C	Carbon disulfide	06/19/01	5	U	µg/L	N
12338C	Carbon disulfide	06/19/01	5	U	µg/L	FD
12338C	Chlorobenzene	12/31/98	1	U	µg/L	N
12338C	Chlorobenzene	12/31/98	1	U	µg/L	FD
12338C	Chlorobenzene	11/17/99	10	U	µg/L	N
12338C	Chlorobenzene	08/21/00	10	U	µg/L	N
12338C	Chlorobenzene	08/21/00	10	U	µg/L	FD
12338C	Chlorobenzene	06/19/01	10	U	µg/L	N
12338C	Chlorobenzene	06/19/01	10	U	µg/L	FD
12338C	Chloroethane	12/31/98	1	UJ	µg/L	N
12338C	Chloroethane	12/31/98	1	UJ	µg/L	FD
12338C	Chloroethane	11/17/99	1	U	µg/L	N
12338C	Chloroethane	08/21/00	1	U	µg/L	N
12338C	Chloroethane	08/21/00	1	U	µg/L	FD
12338C	Chloroethane	06/19/01	1	U	µg/L	N
12338C	Chloroethane	06/19/01	1	U	µg/L	FD
12338C	Chloroform	12/31/98	1	UJ	µg/L	N
12338C	Chloroform	12/31/98	1	UJ	µg/L	FD
12338C	Chloroform	11/17/99	10	U	µg/L	N
12338C	Chloroform	08/21/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Chloroform	08/21/00	10	U	µg/L	FD
12338C	Chloroform	06/19/01	10	U	µg/L	N
12338C	Chloroform	06/19/01	10	U	µg/L	FD
12338C	Chloromethane	11/17/99	10	U	µg/L	N
12338C	Chloromethane	08/21/00	10	U	µg/L	N
12338C	Chloromethane	08/21/00	10	U	µg/L	FD
12338C	Chloromethane	06/19/01	10	U	µg/L	N
12338C	Chloromethane	06/19/01	10	U	µg/L	FD
12338C	Dibromochloromethane	12/31/98	1	U	µg/L	N
12338C	Dibromochloromethane	12/31/98	1	U	µg/L	FD
12338C	Dibromochloromethane	11/17/99	10	U	µg/L	N
12338C	Dibromochloromethane	08/21/00	10	U	µg/L	N
12338C	Dibromochloromethane	08/21/00	10	U	µg/L	FD
12338C	Dibromochloromethane	06/19/01	10	U	µg/L	N
12338C	Dibromochloromethane	06/19/01	10	U	µg/L	FD
12338C	Ethylbenzene	11/17/99	10	U	µg/L	N
12338C	Ethylbenzene	08/21/00	10	U	µg/L	N
12338C	Ethylbenzene	08/21/00	10	U	µg/L	FD
12338C	Ethylbenzene	06/19/01	10	U	µg/L	N
12338C	Ethylbenzene	06/19/01	10	U	µg/L	FD
12338C	Iodomethane	11/17/99	10	U	µg/L	N
12338C	Iodomethane	08/21/00	10	UJ	µg/L	N
12338C	Iodomethane	08/21/00	10	UJ	µg/L	FD
12338C	Iodomethane	06/19/01	10	U	µg/L	N
12338C	Iodomethane	06/19/01	10	U	µg/L	FD
12338C	Methylene chloride	11/17/99	4	U	µg/L	N
12338C	Methylene chloride	08/21/00	3	UJ	µg/L	N
12338C	Methylene chloride	08/21/00	4	UJ	µg/L	FD
12338C	Methylene chloride	06/19/01	4	U	µg/L	N
12338C	Methylene chloride	06/19/01	4	U	µg/L	FD
12338C	Styrene	11/17/99	10	U	µg/L	N
12338C	Styrene	08/21/00	10	U	µg/L	N
12338C	Styrene	08/21/00	10	U	µg/L	FD
12338C	Styrene	06/19/01	10	U	µg/L	N
12338C	Styrene	06/19/01	10	U	µg/L	FD
12338C	Tetrachloroethene	02/17/98	1	U	µg/L	N
12338C	Tetrachloroethene	05/26/98	1	U	µg/L	N
12338C	Tetrachloroethene	08/25/98	10	U	µg/L	N
12338C	Tetrachloroethene	08/25/98	10	U	µg/L	FD
12338C	Tetrachloroethene	11/23/98	10	U	µg/L	N
12338C	Tetrachloroethene	12/31/98	1	U	µg/L	N
12338C	Tetrachloroethene	12/31/98	1	U	µg/L	FD
12338C	Tetrachloroethene	02/22/99	10	U	µg/L	N
12338C	Tetrachloroethene	05/25/99	10	U	µg/L	N
12338C	Tetrachloroethene	05/25/99	10	U	µg/L	FD
12338C	Tetrachloroethene	08/16/99	1	U	µg/L	N
12338C	Tetrachloroethene	11/17/99	10	U	µg/L	N
12338C	Tetrachloroethene	02/23/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Tetrachloroethene	05/22/00	10	U	µg/L	N
12338C	Tetrachloroethene	08/21/00	10	U	µg/L	N
12338C	Tetrachloroethene	08/21/00	10	U	µg/L	FD
12338C	Tetrachloroethene	11/14/00	10	U	µg/L	N
12338C	Tetrachloroethene	02/20/01	10	U	µg/L	N
12338C	Tetrachloroethene	06/19/01	10	U	µg/L	N
12338C	Tetrachloroethene	06/19/01	10	U	µg/L	FD
12338C	Toluene	12/31/98	1	U	µg/L	N
12338C	Toluene	12/31/98	1	U	µg/L	FD
12338C	Toluene	11/17/99	10	U	µg/L	N
12338C	Toluene	08/21/00	10	U	µg/L	N
12338C	Toluene	08/21/00	10	U	µg/L	FD
12338C	Toluene	06/19/01	0.39	U	µg/L	N
12338C	Toluene	06/19/01	0.37	U	µg/L	FD
12338C	Trichloroethene	02/17/98	1	U	µg/L	N
12338C	Trichloroethene	05/26/98	1	U	µg/L	N
12338C	Trichloroethene	08/25/98	1	U	µg/L	N
12338C	Trichloroethene	08/25/98	1	U	µg/L	FD
12338C	Trichloroethene	11/23/98	1	U	µg/L	N
12338C	Trichloroethene	12/31/98	1	U	µg/L	N
12338C	Trichloroethene	12/31/98	1	U	µg/L	FD
12338C	Trichloroethene	02/22/99	3	U	µg/L	N
12338C	Trichloroethene	05/25/99	3	U	µg/L	N
12338C	Trichloroethene	05/25/99	3	U	µg/L	FD
12338C	Trichloroethene	08/16/99	1	U	µg/L	N
12338C	Trichloroethene	11/17/99	3	U	µg/L	N
12338C	Trichloroethene	02/23/00	3	U	µg/L	N
12338C	Trichloroethene	05/22/00	3	U	µg/L	N
12338C	Trichloroethene	08/21/00	3	U	µg/L	N
12338C	Trichloroethene	08/21/00	3	U	µg/L	FD
12338C	Trichloroethene	11/14/00	3	U	µg/L	N
12338C	Trichloroethene	02/20/01	3	U	µg/L	N
12338C	Trichloroethene	06/19/01	3	U	µg/L	N
12338C	Trichloroethene	06/19/01	3	U	µg/L	FD
12338C	Trichlorofluoromethane	12/31/98	1	U	µg/L	N
12338C	Trichlorofluoromethane	12/31/98	1	U	µg/L	FD
12338C	Trichlorofluoromethane	11/17/99	10	UJ	µg/L	N
12338C	Trichlorofluoromethane	08/21/00	10	U	µg/L	N
12338C	Trichlorofluoromethane	08/21/00	10	U	µg/L	FD
12338C	Trichlorofluoromethane	06/19/01	10	U	µg/L	N
12338C	Trichlorofluoromethane	06/19/01	10	U	µg/L	FD
12338C	Vinyl Acetate	12/31/98	1	UJ	µg/L	N
12338C	Vinyl Acetate	12/31/98	1	UJ	µg/L	FD
12338C	Vinyl Acetate	11/17/99	10	UJ	µg/L	N
12338C	Vinyl Acetate	08/21/00	10	U	µg/L	N
12338C	Vinyl Acetate	08/21/00	10	U	µg/L	FD
12338C	Vinyl Acetate	06/19/01	10	U	µg/L	N
12338C	Vinyl Acetate	06/19/01	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	Vinyl chloride	02/17/98	2	U	µg/L	N
12338C	Vinyl chloride	05/26/98	1	UJ	µg/L	N
12338C	Vinyl chloride	08/25/98	1	U	µg/L	N
12338C	Vinyl chloride	08/25/98	1	U	µg/L	FD
12338C	Vinyl chloride	11/23/98	2	U	µg/L	N
12338C	Vinyl chloride	12/31/98	1	U	µg/L	N
12338C	Vinyl chloride	12/31/98	1	U	µg/L	FD
12338C	Vinyl chloride	02/22/99	1	U	µg/L	N
12338C	Vinyl chloride	05/25/99	1	U	µg/L	N
12338C	Vinyl chloride	05/25/99	1	U	µg/L	FD
12338C	Vinyl chloride	08/16/99	1	U	µg/L	N
12338C	Vinyl chloride	11/17/99	1	U	µg/L	N
12338C	Vinyl chloride	02/23/00	1	U	µg/L	N
12338C	Vinyl chloride	05/22/00	1	U	µg/L	N
12338C	Vinyl chloride	08/21/00	1	U	µg/L	N
12338C	Vinyl chloride	08/21/00	1	U	µg/L	FD
12338C	Vinyl chloride	11/14/00	1	U	µg/L	N
12338C	Vinyl chloride	02/20/01	1	U	µg/L	N
12338C	Vinyl chloride	06/19/01	1	U	µg/L	N
12338C	Vinyl chloride	06/19/01	1	U	µg/L	FD
12338C	Xylenes, Total	12/31/98	1	U	µg/L	N
12338C	Xylenes, Total	12/31/98	1	U	µg/L	FD
12338C	Xylenes, Total	11/17/99	10	U	µg/L	N
12338C	Xylenes, Total	08/21/00	10	U	µg/L	N
12338C	Xylenes, Total	08/21/00	10	U	µg/L	FD
12338C	Xylenes, Total	06/19/01	10	U	µg/L	N
12338C	Xylenes, Total	06/19/01	0.34	U	µg/L	FD
12338C	cis-1,2-Dichloroethene	12/31/98	1	U	µg/L	N
12338C	cis-1,2-Dichloroethene	12/31/98	1	U	µg/L	FD
12338C	cis-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12338C	cis-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12338C	cis-1,3-Dichloropropene	08/21/00	10	U	µg/L	FD
12338C	cis-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12338C	cis-1,3-Dichloropropene	06/19/01	10	U	µg/L	FD
12338C	trans-1,2-Dichloroethene	11/17/99	10	U	µg/L	N
12338C	trans-1,2-Dichloroethene	08/21/00	10	U	µg/L	N
12338C	trans-1,2-Dichloroethene	08/21/00	10	U	µg/L	FD
12338C	trans-1,2-Dichloroethene	06/19/01	10	U	µg/L	N
12338C	trans-1,2-Dichloroethene	06/19/01	10	U	µg/L	FD
12338C	trans-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12338C	trans-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12338C	trans-1,3-Dichloropropene	08/21/00	10	U	µg/L	FD
12338C	trans-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12338C	trans-1,3-Dichloropropene	06/19/01	10	U	µg/L	FD
12338C	trans-1,4-Dichloro-2-butene	12/31/98	1	U	µg/L	N
12338C	trans-1,4-Dichloro-2-butene	12/31/98	1	U	µg/L	FD
12338C	trans-1,4-Dichloro-2-butene	11/17/99	10	U	µg/L	N
12338C	trans-1,4-Dichloro-2-butene	08/21/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338C	trans-1,4-Dichloro-2-butene	08/21/00	10	U	µg/L	FD
12338C	trans-1,4-Dichloro-2-butene	06/19/01	10	U	µg/L	N
12338C	trans-1,4-Dichloro-2-butene	06/19/01	10	U	µg/L	FD
12338D	Nitrate/Nitrite	02/16/99	0.1	NV	mg/L	N
12338D	Nitrate/Nitrite	05/24/99	0.3	U	mg/L	N
12338D	Nitrate/Nitrite	08/16/99	0.1	U	mg/L	N
12338D	Total Dissolved Solids	02/16/99	2432	NV	mg/L	N
12338D	Total Dissolved Solids	05/24/99	7542	NV	mg/L	N
12338D	Total Dissolved Solids	08/16/99	2998	-	mg/L	N
12338D	Total Organic Carbon	02/18/98	1.04	-	mg/L	N
12338D	Total Organic Carbon	05/27/98	80.9	J	mg/L	N
12338D	Total Organic Carbon	11/23/98	2.06	-	mg/L	N
12338D	Total Organic Carbon	02/16/99	5.23	U	mg/L	N
12338D	Total Organic Carbon	05/24/99	1.17	U	mg/L	N
12338D	Total Organic Carbon	08/16/99	11	-	mg/L	N
12338D	Total Organic Carbon	11/16/99	7.37	-	mg/L	N
12338D	Total Organic Carbon	02/23/00	15.7	-	mg/L	N
12338D	Total Organic Carbon	05/23/00	3.29	-	mg/L	N
12338D	Total Organic Carbon	08/28/00	3.22	-	mg/L	N
12338D	Total Organic Carbon	11/28/00	2.96	-	mg/L	N
12338D	Total Organic Carbon	02/21/01	7.81	-	mg/L	N
12338D	Total Organic Carbon	06/19/01	6.66	J	mg/L	N
12338D	Total Organic Halogens	02/18/98	0.00755	U	mg/L	N
12338D	Total Organic Halogens	05/27/98	0.0216	-	mg/L	N
12338D	Total Organic Halogens	11/23/98	0.0426	-	mg/L	N
12338D	Total Organic Halogens	02/16/99	0.0166	-	mg/L	N
12338D	Total Organic Halogens	05/24/99	0.0164	J	mg/L	N
12338D	Total Organic Halogens	08/16/99	0.0173	-	mg/L	N
12338D	Total Organic Halogens	11/16/99	0.0202	J	mg/L	N
12338D	Total Organic Halogens	02/23/00	0.0125	U	mg/L	N
12338D	Total Organic Halogens	05/23/00	0.361	-	mg/L	N
12338D	Total Organic Halogens	08/28/00	0.0156	U	mg/L	N
12338D	Total Organic Halogens	11/15/00	0.0213	J	mg/L	N
12338D	Total Organic Halogens	02/21/01	0.0618	-	mg/L	N
12338D	Total Organic Halogens	06/19/01	0.0318	-	mg/L	N
12338D	Boron	02/18/98	0.0296	-	mg/L	N
12338D	Boron	05/27/98	0.321	-	mg/L	N
12338D	Boron	11/23/98	0.197	-	mg/L	N
12338D	Boron	02/16/99	0.276	-	mg/L	N
12338D	Boron	05/24/99	0.253	J	mg/L	N
12338D	Boron	08/16/99	0.273	-	mg/L	N
12338D	Boron	11/16/99	0.274	-	mg/L	N
12338D	Boron	02/23/00	0.234	-	mg/L	N
12338D	Boron	05/23/00	0.243	-	mg/L	N
12338D	Boron	08/28/00	0.002	U	mg/L	N
12338D	Boron	11/15/00	0.197	-	mg/L	N
12338D	Boron	02/21/01	0.233	J	mg/L	N
12338D	Boron	06/19/01	0.217	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338D	Mercury	02/18/98	0.0001	U	mg/L	N
12338D	Mercury	05/27/98	0.0001	U	mg/L	N
12338D	Mercury	11/23/98	0.0001	U	mg/L	N
12338D	Mercury	02/16/99	0.00012	U	mg/L	N
12338D	Mercury	05/24/99	0.00012	U	mg/L	N
12338D	Mercury	08/16/99	0.0001	U	mg/L	N
12338D	Mercury	11/16/99	0.00004	U	mg/L	N
12338D	Mercury	02/23/00	0.00004	U	mg/L	N
12338D	Mercury	05/23/00	0.0001	U	mg/L	N
12338D	Mercury	08/28/00	0.0001	U	mg/L	N
12338D	Mercury	11/15/00	0.00017	U	mg/L	N
12338D	Mercury	02/21/01	0.000057	U	mg/L	N
12338D	Mercury	06/19/01	0.000057	U	mg/L	N
12338D	alpha-Chlordane	02/18/98	0.05	UJ	µg/L	N
12338D	alpha-Chlordane	05/27/98	0.005	U	µg/L	N
12338D	alpha-Chlordane	11/23/98	0.1	U	µg/L	N
12338D	alpha-Chlordane	02/16/99	0.013	UJ	µg/L	N
12338D	alpha-Chlordane	05/24/99	0.01	U	µg/L	N
12338D	alpha-Chlordane	08/16/99	0.05	U	µg/L	N
12338D	alpha-Chlordane	11/16/99	0.1	U	µg/L	N
12338D	alpha-Chlordane	02/23/00	0.1	U	µg/L	N
12338D	alpha-Chlordane	05/23/00	0.1	U	µg/L	N
12338D	alpha-Chlordane	08/28/00	0.1	U	µg/L	N
12338D	alpha-Chlordane	11/15/00	0.1	UJ	µg/L	N
12338D	alpha-Chlordane	02/21/01	0.1	UJ	µg/L	N
12338D	alpha-Chlordane	06/19/01	0.1	U	µg/L	N
12338D	Technetium-99	02/18/98	0.42	U	pCi/L	N
12338D	Technetium-99	05/27/98	-2.39	U	pCi/L	N
12338D	Technetium-99	11/23/98	-1.904	U	pCi/L	N
12338D	Technetium-99	02/16/99	-3.677	U	pCi/L	N
12338D	Technetium-99	05/24/99	8.92	J	pCi/L	N
12338D	Technetium-99	08/16/99	-4.698	UJ	pCi/L	N
12338D	Technetium-99	11/16/99	-3.729	UJ	pCi/L	N
12338D	Technetium-99	02/23/00	2.011	UJ	pCi/L	N
12338D	Technetium-99	05/23/00	1.003	UJ	pCi/L	N
12338D	Technetium-99	08/28/00	-4.304	U	pCi/L	N
12338D	Technetium-99	11/15/00	-1.178	UJ	pCi/L	N
12338D	Technetium-99	02/21/01	1.225	U	pCi/L	N
12338D	Technetium-99	06/19/01	3.089	UJ	pCi/L	N
12338D	Uranium, Total	02/18/98	1.5	-	µg/L	N
12338D	Uranium, Total	05/27/98	13.744	J	µg/L	N
12338D	Uranium, Total	11/23/98	9.84	-	µg/L	N
12338D	Uranium, Total	02/16/99	20.17	-	µg/L	N
12338D	Uranium, Total	05/24/99	18.04	-	µg/L	N
12338D	Uranium, Total	08/16/99	18.1	-	µg/L	N
12338D	Uranium, Total	11/16/99	11.4	-	µg/L	N
12338D	Uranium, Total	02/23/00	15.4236	J	µg/L	N
12338D	Uranium, Total	05/23/00	8.695	J	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338D	Uranium, Total	08/28/00	6.041	J	µg/L	N
12338D	Uranium, Total	11/15/00	13.415	J	µg/L	N
12338D	Uranium, Total	02/21/01	9.696	-	µg/L	N
12338D	Uranium, Total	06/19/01	9.647	-	µg/L	N
12338D	4-Nitroaniline	02/18/98	25	U	µg/L	N
12338D	4-Nitroaniline	05/27/98	20	U	µg/L	N
12338D	4-Nitroaniline	11/23/98	20	U	µg/L	N
12338D	4-Nitroaniline	02/16/99	25	U	µg/L	N
12338D	4-Nitroaniline	05/24/99	50	U	µg/L	N
12338D	4-Nitroaniline	08/16/99	25	U	µg/L	N
12338D	4-Nitroaniline	11/16/99	50	U	µg/L	N
12338D	4-Nitroaniline	02/23/00	50	U	µg/L	N
12338D	4-Nitroaniline	05/23/00	25	U	µg/L	N
12338D	4-Nitroaniline	08/28/00	50	U	µg/L	N
12338D	4-Nitroaniline	11/28/00	50	U	µg/L	N
12338D	4-Nitroaniline	02/21/01	50	U	µg/L	N
12338D	4-Nitroaniline	06/19/01	50	U	µg/L	N
12338D	Carbazole	02/18/98	10	UJ	µg/L	N
12338D	Carbazole	05/27/98	5	U	µg/L	N
12338D	Carbazole	11/23/98	5	U	µg/L	N
12338D	Carbazole	02/16/99	5	U	µg/L	N
12338D	Carbazole	05/24/99	10	U	µg/L	N
12338D	Carbazole	08/16/99	10	U	µg/L	N
12338D	Carbazole	11/16/99	10	U	µg/L	N
12338D	Carbazole	02/23/00	10	U	µg/L	N
12338D	Carbazole	05/23/00	10	U	µg/L	N
12338D	Carbazole	08/28/00	10	U	µg/L	N
12338D	Carbazole	11/28/00	10	U	µg/L	N
12338D	Carbazole	02/21/01	10	U	µg/L	N
12338D	Carbazole	06/19/01	10	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	02/18/98	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	05/27/98	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	11/23/98	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	02/16/99	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	05/24/99	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	08/16/99	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	11/16/99	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	02/23/00	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	05/23/00	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	08/28/00	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	11/28/00	5	UJ	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	02/21/01	5	U	µg/L	N
12338D	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	N
12338D	1,1-Dichloroethene	02/18/98	1	U	µg/L	N
12338D	1,1-Dichloroethene	05/27/98	1	U	µg/L	N
12338D	1,1-Dichloroethene	11/23/98	1	U	µg/L	N
12338D	1,1-Dichloroethene	02/16/99	1	U	µg/L	N
12338D	1,1-Dichloroethene	05/24/99	5	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338D	1,1-Dichloroethene	08/16/99	1	U	µg/L	N
12338D	1,1-Dichloroethene	11/16/99	5	U	µg/L	N
12338D	1,1-Dichloroethene	02/23/00	5	U	µg/L	N
12338D	1,1-Dichloroethene	05/23/00	5	U	µg/L	N
12338D	1,1-Dichloroethene	08/28/00	5	U	µg/L	N
12338D	1,1-Dichloroethene	11/15/00	5	U	µg/L	N
12338D	1,1-Dichloroethene	02/21/01	5	U	µg/L	N
12338D	1,1-Dichloroethene	06/19/01	5	U	µg/L	N
12338D	1,2-Dichloroethane	06/19/01	1	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	02/18/98	1	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	05/27/98	1	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	11/23/98	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	02/16/99	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	05/24/99	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	08/16/99	1	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	11/16/99	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	02/23/00	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	05/23/00	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	08/28/00	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	11/15/00	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	02/21/01	10	U	µg/L	N
12338D	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	N
12338D	Benzene	06/19/01	1	U	µg/L	N
12338D	Bromodichloromethane	02/18/98	1	U	µg/L	N
12338D	Bromodichloromethane	05/27/98	1	U	µg/L	N
12338D	Bromodichloromethane	11/23/98	0.8	J	µg/L	N
12338D	Bromodichloromethane	02/16/99	10	U	µg/L	N
12338D	Bromodichloromethane	05/24/99	10	U	µg/L	N
12338D	Bromodichloromethane	08/16/99	1	U	µg/L	N
12338D	Bromodichloromethane	11/16/99	10	U	µg/L	N
12338D	Bromodichloromethane	02/23/00	10	U	µg/L	N
12338D	Bromodichloromethane	05/23/00	10	U	µg/L	N
12338D	Bromodichloromethane	08/28/00	10	U	µg/L	N
12338D	Bromodichloromethane	11/15/00	10	U	µg/L	N
12338D	Bromodichloromethane	02/21/01	10	U	µg/L	N
12338D	Bromodichloromethane	06/19/01	10	U	µg/L	N
12338D	Carbon disulfide	06/19/01	5	U	µg/L	N
12338D	Ethylbenzene	06/19/01	10	U	µg/L	N
12338D	Isopropyl Benzene	06/19/01	10	U	µg/L	N
12338D	Tetrachloroethene	02/18/98	1	U	µg/L	N
12338D	Tetrachloroethene	05/27/98	1	U	µg/L	N
12338D	Tetrachloroethene	11/23/98	10	U	µg/L	N
12338D	Tetrachloroethene	02/16/99	10	U	µg/L	N
12338D	Tetrachloroethene	05/24/99	10	U	µg/L	N
12338D	Tetrachloroethene	08/16/99	1	U	µg/L	N
12338D	Tetrachloroethene	11/16/99	10	U	µg/L	N
12338D	Tetrachloroethene	02/23/00	10	U	µg/L	N
12338D	Tetrachloroethene	05/23/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12338D	Tetrachloroethene	08/28/00	10	U	µg/L	N
12338D	Tetrachloroethene	11/15/00	10	U	µg/L	N
12338D	Tetrachloroethene	02/21/01	10	U	µg/L	N
12338D	Tetrachloroethene	06/19/01	10	U	µg/L	N
12338D	Toluene	06/19/01	0.33	J	µg/L	N
12338D	Trichloroethene	02/18/98	1	U	µg/L	N
12338D	Trichloroethene	05/27/98	1	U	µg/L	N
12338D	Trichloroethene	11/23/98	1	U	µg/L	N
12338D	Trichloroethene	02/16/99	3	U	µg/L	N
12338D	Trichloroethene	05/24/99	3	U	µg/L	N
12338D	Trichloroethene	08/16/99	1	U	µg/L	N
12338D	Trichloroethene	11/16/99	3	U	µg/L	N
12338D	Trichloroethene	02/23/00	3	U	µg/L	N
12338D	Trichloroethene	05/23/00	3	U	µg/L	N
12338D	Trichloroethene	08/28/00	3	U	µg/L	N
12338D	Trichloroethene	11/15/00	3	U	µg/L	N
12338D	Trichloroethene	02/21/01	3	U	µg/L	N
12338D	Trichloroethene	06/19/01	3	U	µg/L	N
12338D	Vinyl chloride	02/18/98	2	U	µg/L	N
12338D	Vinyl chloride	05/27/98	1	UJ	µg/L	N
12338D	Vinyl chloride	11/23/98	2	U	µg/L	N
12338D	Vinyl chloride	02/16/99	1	U	µg/L	N
12338D	Vinyl chloride	05/24/99	1	U	µg/L	N
12338D	Vinyl chloride	08/16/99	1	U	µg/L	N
12338D	Vinyl chloride	11/16/99	1	U	µg/L	N
12338D	Vinyl chloride	02/23/00	1	U	µg/L	N
12338D	Vinyl chloride	05/23/00	1	U	µg/L	N
12338D	Vinyl chloride	08/28/00	1	U	µg/L	N
12338D	Vinyl chloride	11/15/00	1	U	µg/L	N
12338D	Vinyl chloride	02/21/01	1	U	µg/L	N
12338D	Vinyl chloride	06/19/01	1	U	µg/L	N
12338D	Xylenes, Total	06/19/01	10	U	µg/L	N
12339C	Alkalinity as CaCO3	12/31/98	99.5	J	mg/L	N
12339C	Alkalinity as CaCO3	11/17/99	144	-	mg/L	N
12339C	Alkalinity as CaCO3	11/17/99	150	-	mg/L	FD
12339C	Alkalinity as CaCO3	08/21/00	392	-	mg/L	N
12339C	Alkalinity as CaCO3	06/19/01	323	J	mg/L	N
12339C	Ammonia	12/31/98	0.2	-	mg/L	N
12339C	Ammonia	11/17/99	0.109	J	mg/L	N
12339C	Ammonia	11/17/99	0.1	U	mg/L	FD
12339C	Ammonia	08/21/00	0.1	U	mg/L	N
12339C	Ammonia	06/19/01	0.1	U	mg/L	N
12339C	Chemical Oxygen Demand	12/31/98	11.6	-	mg/L	N
12339C	Chemical Oxygen Demand	11/17/99	5000	U	mg/L	N
12339C	Chemical Oxygen Demand	11/17/99	11.6	J	mg/L	FD
12339C	Chemical Oxygen Demand	08/21/00	24.7	U	mg/L	N
12339C	Chemical Oxygen Demand	06/19/01	5	U	mg/L	N
12339C	Chloride	12/31/98	41.2	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Chloride	11/17/99	17.7	-	mg/L	N
12339C	Chloride	11/17/99	17.8	-	mg/L	FD
12339C	Chloride	08/21/00	10.9	-	mg/L	N
12339C	Chloride	06/19/01	3.95	J	mg/L	N
12339C	Nitrate/Nitrite	12/31/98	3.3	J	mg/L	N
12339C	Nitrate/Nitrite	02/22/99	2.7	-	mg/L	N
12339C	Nitrate/Nitrite	05/26/99	4.1	NV	mg/L	N
12339C	Nitrate/Nitrite	08/16/99	0.2	-	mg/L	N
12339C	Nitrate/Nitrite	11/17/99	3.03	-	mg/L	N
12339C	Nitrate/Nitrite	11/17/99	3.58	-	mg/L	FD
12339C	Nitrate/Nitrite	02/23/00	1.6	J	mg/L	N
12339C	Nitrate/Nitrite	05/22/00	1.44	-	mg/L	N
12339C	Nitrate/Nitrite	08/21/00	1.56	-	mg/L	N
12339C	Nitrate/Nitrite	11/14/00	1.1	UJ	mg/L	N
12339C	Nitrate/Nitrite	02/20/01	1.45	J	mg/L	N
12339C	Nitrate/Nitrite	06/19/01	0.63	J	mg/L	N
12339C	Sulfate	12/31/98	1520	J	mg/L	N
12339C	Sulfate	11/17/99	1320	-	mg/L	N
12339C	Sulfate	11/17/99	1280	-	mg/L	FD
12339C	Sulfate	08/21/00	414	-	mg/L	N
12339C	Sulfate	06/19/01	155	-	mg/L	N
12339C	Total Dissolved Solids	12/31/98	2190	J	mg/L	N
12339C	Total Dissolved Solids	02/22/99	1545	-	mg/L	N
12339C	Total Dissolved Solids	05/26/99	2726	NV	mg/L	N
12339C	Total Dissolved Solids	08/16/99	1014	-	mg/L	N
12339C	Total Dissolved Solids	11/17/99	2528	J	mg/L	N
12339C	Total Dissolved Solids	11/17/99	2101	J	mg/L	FD
12339C	Total Dissolved Solids	02/23/00	557	-	mg/L	N
12339C	Total Dissolved Solids	05/22/00	750	-	mg/L	N
12339C	Total Dissolved Solids	08/21/00	1030	-	mg/L	N
12339C	Total Dissolved Solids	11/14/00	992	-	mg/L	N
12339C	Total Dissolved Solids	02/20/01	689	-	mg/L	N
12339C	Total Dissolved Solids	06/19/01	639	-	mg/L	N
12339C	Total Organic Carbon	11/23/98	2.44	-	mg/L	N
12339C	Total Organic Carbon	02/22/99	2.08	U	mg/L	N
12339C	Total Organic Carbon	05/26/99	3.51	-	mg/L	N
12339C	Total Organic Carbon	08/16/99	0.929	-	mg/L	N
12339C	Total Organic Carbon	11/17/99	1	U	mg/L	N
12339C	Total Organic Carbon	11/17/99	1	U	mg/L	FD
12339C	Total Organic Carbon	02/23/00	6.25	J	mg/L	N
12339C	Total Organic Carbon	05/22/00	1.35	U	mg/L	N
12339C	Total Organic Carbon	08/21/00	1.21	-	mg/L	N
12339C	Total Organic Carbon	11/14/00	2.98	-	mg/L	N
12339C	Total Organic Carbon	02/20/01	2.86	J	mg/L	N
12339C	Total Organic Carbon	06/19/01	2.53	UJ	mg/L	N
12339C	Total Organic Halogens	11/23/98	0.0119	-	mg/L	N
12339C	Total Organic Halogens	02/22/99	0.00164	U	mg/L	N
12339C	Total Organic Halogens	05/26/99	0.00474	U	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Total Organic Halogens	08/16/99	0.0292	-	mg/L	N
12339C	Total Organic Halogens	11/17/99	0.0299	J	mg/L	N
12339C	Total Organic Halogens	11/17/99	0.0297	J	mg/L	FD
12339C	Total Organic Halogens	02/23/00	0.025	U	mg/L	N
12339C	Total Organic Halogens	05/22/00	0.0576	J	mg/L	N
12339C	Total Organic Halogens	08/21/00	0.025	U	mg/L	N
12339C	Total Organic Halogens	11/14/00	0.025	U	mg/L	N
12339C	Total Organic Halogens	02/20/01	0.025	U	mg/L	N
12339C	Total Organic Halogens	06/19/01	0.025	U	mg/L	N
12339C	Antimony	12/31/98	0.004	U	mg/L	N
12339C	Antimony	11/17/99	0.004	U	mg/L	N
12339C	Antimony	11/17/99	0.004	U	mg/L	FD
12339C	Antimony	08/21/00	0.0019	U	mg/L	N
12339C	Antimony	06/19/01	0.0014	U	mg/L	N
12339C	Arsenic	12/31/98	0.003	U	mg/L	N
12339C	Arsenic	11/17/99	0.003	U	mg/L	N
12339C	Arsenic	11/17/99	0.003	U	mg/L	FD
12339C	Arsenic	08/21/00	0.00075	U	mg/L	N
12339C	Arsenic	06/19/01	0.00091	-	mg/L	N
12339C	Barium	12/31/98	0.0658	-	mg/L	N
12339C	Barium	11/17/99	0.0493	-	mg/L	N
12339C	Barium	11/17/99	0.0564	-	mg/L	FD
12339C	Barium	08/21/00	0.0814	-	mg/L	N
12339C	Barium	06/19/01	0.0879	J	mg/L	N
12339C	Beryllium	12/31/98	0.001	U	mg/L	N
12339C	Beryllium	11/17/99	0.001	U	mg/L	N
12339C	Beryllium	11/17/99	0.001	U	mg/L	FD
12339C	Beryllium	08/21/00	0.00037	U	mg/L	N
12339C	Beryllium	06/19/01	0.000066	UJ	mg/L	N
12339C	Boron	11/23/98	0.0955	U	mg/L	N
12339C	Boron	12/31/98	0.786	-	mg/L	N
12339C	Boron	02/22/99	0.66	-	mg/L	N
12339C	Boron	05/26/99	0.915	J	mg/L	N
12339C	Boron	08/16/99	0.207	-	mg/L	N
12339C	Boron	11/17/99	0.395	-	mg/L	N
12339C	Boron	11/17/99	0.442	-	mg/L	FD
12339C	Boron	02/23/00	0.448	-	mg/L	N
12339C	Boron	05/22/00	0.421	-	mg/L	N
12339C	Boron	08/21/00	0.327	-	mg/L	N
12339C	Boron	11/14/00	0.295	J	mg/L	N
12339C	Boron	02/20/01	0.389	-	mg/L	N
12339C	Boron	06/19/01	0.296	J	mg/L	N
12339C	Cadmium	12/31/98	0.001	U	mg/L	N
12339C	Cadmium	11/17/99	0.001	U	mg/L	N
12339C	Cadmium	11/17/99	0.001	U	mg/L	FD
12339C	Cadmium	08/21/00	0.00041	-	mg/L	N
12339C	Cadmium	06/19/01	0.000146	U	mg/L	N
12339C	Calcium	12/31/98	384	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Calcium	11/17/99	304	J	mg/L	N
12339C	Calcium	11/17/99	341	J	mg/L	FD
12339C	Calcium	08/21/00	224	-	mg/L	N
12339C	Calcium	06/19/01	165	-	mg/L	N
12339C	Chromium	12/31/98	0.0047	-	mg/L	N
12339C	Chromium	11/17/99	0.0016	-	mg/L	N
12339C	Chromium	11/17/99	0.0026	-	mg/L	FD
12339C	Chromium	08/21/00	0.0009	-	mg/L	N
12339C	Chromium	06/19/01	0.000201	U	mg/L	N
12339C	Cobalt	12/31/98	0.003	U	mg/L	N
12339C	Cobalt	11/17/99	0.0015	-	mg/L	N
12339C	Cobalt	11/17/99	0.0018	-	mg/L	FD
12339C	Cobalt	08/21/00	0.0007	UJ	mg/L	N
12339C	Cobalt	06/19/01	0.000283	-	mg/L	N
12339C	Copper	12/31/98	0.006	-	mg/L	N
12339C	Copper	11/17/99	0.0153	-	mg/L	N
12339C	Copper	11/17/99	0.0149	-	mg/L	FD
12339C	Copper	08/21/00	0.00093	-	mg/L	N
12339C	Copper	06/19/01	0.00117	-	mg/L	N
12339C	Iron	12/31/98	3.59	J	mg/L	N
12339C	Iron	11/17/99	0.919	J	mg/L	N
12339C	Iron	11/17/99	1.27	J	mg/L	FD
12339C	Iron	08/21/00	0.463	J	mg/L	N
12339C	Iron	06/19/01	0.155	J	mg/L	N
12339C	Lead	12/31/98	0.002	U	mg/L	N
12339C	Lead	11/17/99	0.0031	-	mg/L	N
12339C	Lead	11/17/99	0.0046	-	mg/L	FD
12339C	Lead	08/21/00	0.0013	U	mg/L	N
12339C	Lead	06/19/01	0.000194	U	mg/L	N
12339C	Magnesium	12/31/98	108	-	mg/L	N
12339C	Magnesium	11/17/99	136	-	mg/L	N
12339C	Magnesium	11/17/99	152	-	mg/L	FD
12339C	Magnesium	08/21/00	43.3	J	mg/L	N
12339C	Magnesium	06/19/01	32.4	J	mg/L	N
12339C	Manganese	12/31/98	0.0762	J	mg/L	N
12339C	Manganese	11/17/99	0.0789	J	mg/L	N
12339C	Manganese	11/17/99	0.103	J	mg/L	FD
12339C	Manganese	08/21/00	0.0106	-	mg/L	N
12339C	Manganese	06/19/01	0.0941	J	mg/L	N
12339C	Mercury	11/23/98	0.0001	U	mg/L	N
12339C	Mercury	02/22/99	0.00012	U	mg/L	N
12339C	Mercury	05/26/99	0.00012	U	mg/L	N
12339C	Mercury	08/16/99	0.0001	U	mg/L	N
12339C	Mercury	11/17/99	0.0001	U	mg/L	N
12339C	Mercury	11/17/99	0.0001	U	mg/L	FD
12339C	Mercury	02/23/00	0.00004	U	mg/L	N
12339C	Mercury	05/22/00	0.0001	U	mg/L	N
12339C	Mercury	08/21/00	0.0000001	UJ	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Mercury	11/14/00	0.0001	U	mg/L	N
12339C	Mercury	02/20/01	0.000057	UJ	mg/L	N
12339C	Mercury	06/19/01	0.000057	U	mg/L	N
12339C	Nickel	12/31/98	0.0201	-	mg/L	N
12339C	Nickel	11/17/99	0.0076	-	mg/L	N
12339C	Nickel	11/17/99	0.0092	-	mg/L	FD
12339C	Nickel	08/21/00	0.0065	-	mg/L	N
12339C	Nickel	06/19/01	0.00495	J	mg/L	N
12339C	Potassium	12/31/98	22.6	J	mg/L	N
12339C	Potassium	11/17/99	9.71	J	mg/L	N
12339C	Potassium	11/17/99	10.9	J	mg/L	FD
12339C	Potassium	08/21/00	5.99	-	mg/L	N
12339C	Potassium	06/19/01	3.93	J	mg/L	N
12339C	Selenium	12/31/98	0.0081	-	mg/L	N
12339C	Selenium	11/17/99	0.0083	-	mg/L	N
12339C	Selenium	11/17/99	0.0092	-	mg/L	FD
12339C	Selenium	08/21/00	0.0062	-	mg/L	N
12339C	Selenium	06/19/01	0.00417	-	mg/L	N
12339C	Silver	12/31/98	0.002	U	mg/L	N
12339C	Silver	11/17/99	0.001	U	mg/L	N
12339C	Silver	11/17/99	0.001	U	mg/L	FD
12339C	Silver	08/21/00	0.0005	U	mg/L	N
12339C	Silver	06/19/01	0.000133	U	mg/L	N
12339C	Sodium	12/31/98	25.6	-	mg/L	N
12339C	Sodium	11/17/99	16.1	-	mg/L	N
12339C	Sodium	11/17/99	18.1	-	mg/L	FD
12339C	Sodium	08/21/00	5.96	-	mg/L	N
12339C	Sodium	06/19/01	3.32	J	mg/L	N
12339C	Thallium	12/31/98	0.004	U	mg/L	N
12339C	Thallium	11/17/99	0.004	U	mg/L	N
12339C	Thallium	11/17/99	0.004	U	mg/L	FD
12339C	Thallium	08/21/00	0.001	UJ	mg/L	N
12339C	Thallium	06/19/01	0.00102	U	mg/L	N
12339C	Vanadium	12/31/98	0.0066	-	mg/L	N
12339C	Vanadium	11/17/99	0.0018	U	mg/L	N
12339C	Vanadium	11/17/99	0.0026	U	mg/L	FD
12339C	Vanadium	08/21/00	0.0012	U	mg/L	N
12339C	Vanadium	06/19/01	0.00292	U	mg/L	N
12339C	Zinc	12/31/98	0.0106	UJ	mg/L	N
12339C	Zinc	11/17/99	0.0165	U	mg/L	N
12339C	Zinc	11/17/99	0.0194	U	mg/L	FD
12339C	Zinc	08/21/00	0.0058	U	mg/L	N
12339C	Zinc	06/19/01	0.00333	U	mg/L	N
12339C	alpha-Chlordane	11/23/98	0.1	U	µg/L	N
12339C	alpha-Chlordane	02/22/99	0.01	UJ	µg/L	N
12339C	alpha-Chlordane	05/26/99	0.01	U	µg/L	N
12339C	alpha-Chlordane	08/16/99	0.05	U	µg/L	N
12339C	alpha-Chlordane	11/17/99	0.1	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	alpha-Chlordane	11/17/99	0.1	U	µg/L	FD
12339C	alpha-Chlordane	02/23/00	0.1	U	µg/L	N
12339C	alpha-Chlordane	05/22/00	0.1	U	µg/L	N
12339C	alpha-Chlordane	08/21/00	0.1	U	µg/L	N
12339C	alpha-Chlordane	11/14/00	0.1	U	µg/L	N
12339C	alpha-Chlordane	02/20/01	0.1	UJ	µg/L	N
12339C	alpha-Chlordane	06/19/01	0.1	U	µg/L	N
12339C	Technetium-99	11/23/98	-3.14	U	pCi/L	N
12339C	Technetium-99	02/22/99	-2.861	U	pCi/L	N
12339C	Technetium-99	05/26/99	21.25	J	pCi/L	N
12339C	Technetium-99	08/16/99	0.526	UJ	pCi/L	N
12339C	Technetium-99	11/17/99	2.637	UJ	pCi/L	N
12339C	Technetium-99	11/17/99	0.552	UJ	pCi/L	FD
12339C	Technetium-99	02/23/00	-1.795	UJ	pCi/L	N
12339C	Technetium-99	05/22/00	1.08	UJ	pCi/L	N
12339C	Technetium-99	08/21/00	0.164	U	pCi/L	N
12339C	Technetium-99	11/14/00	-1.636	UJ	pCi/L	N
12339C	Technetium-99	02/20/01	2.625	U	pCi/L	N
12339C	Technetium-99	06/19/01	1.514	UJ	pCi/L	N
12339C	Uranium, Total	11/23/98	17.1	-	µg/L	N
12339C	Uranium, Total	02/22/99	22.022	-	µg/L	N
12339C	Uranium, Total	05/19/99	17	NV	µg/L	N
12339C	Uranium, Total	05/26/99	16.98	-	µg/L	N
12339C	Uranium, Total	08/16/99	4.51	-	µg/L	N
12339C	Uranium, Total	11/17/99	21.1	-	µg/L	N
12339C	Uranium, Total	11/17/99	22.7	-	µg/L	FD
12339C	Uranium, Total	02/23/00	24.1231	J	µg/L	N
12339C	Uranium, Total	05/22/00	39.299	J	µg/L	N
12339C	Uranium, Total	08/21/00	36.115	J	µg/L	N
12339C	Uranium, Total	11/14/00	23.811	J	µg/L	N
12339C	Uranium, Total	02/20/01	27.514	-	µg/L	N
12339C	Uranium, Total	06/19/01	45.122	-	µg/L	N
12339C	1,2-Dichlorobenzene	12/31/98	1	U	µg/L	N
12339C	1,2-Dichlorobenzene	11/17/99	10	U	µg/L	N
12339C	1,2-Dichlorobenzene	11/17/99	10	U	µg/L	FD
12339C	1,2-Dichlorobenzene	08/21/00	10	U	µg/L	N
12339C	1,2-Dichlorobenzene	06/19/01	10	U	µg/L	N
12339C	1,4-Dichlorobenzene	12/31/98	1	U	µg/L	N
12339C	1,4-Dichlorobenzene	11/17/99	10	U	µg/L	N
12339C	1,4-Dichlorobenzene	11/17/99	10	U	µg/L	FD
12339C	1,4-Dichlorobenzene	08/21/00	10	U	µg/L	N
12339C	1,4-Dichlorobenzene	06/19/01	10	U	µg/L	N
12339C	4-Nitroaniline	11/23/98	20	U	µg/L	N
12339C	4-Nitroaniline	02/22/99	25	U	µg/L	N
12339C	4-Nitroaniline	05/26/99	50	UJ	µg/L	N
12339C	4-Nitroaniline	08/16/99	25	U	µg/L	N
12339C	4-Nitroaniline	11/17/99	50	U	µg/L	N
12339C	4-Nitroaniline	11/17/99	50	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	4-Nitroaniline	02/23/00	50	U	µg/L	N
12339C	4-Nitroaniline	05/22/00	25	U	µg/L	N
12339C	4-Nitroaniline	08/21/00	50	U	µg/L	N
12339C	4-Nitroaniline	11/14/00	50	U	µg/L	N
12339C	4-Nitroaniline	02/20/01	50	U	µg/L	N
12339C	4-Nitroaniline	06/19/01	50	U	µg/L	N
12339C	Carbazole	11/23/98	5	U	µg/L	N
12339C	Carbazole	02/22/99	5	U	µg/L	N
12339C	Carbazole	05/26/99	10	U	µg/L	N
12339C	Carbazole	08/16/99	10	U	µg/L	N
12339C	Carbazole	11/17/99	10	U	µg/L	N
12339C	Carbazole	11/17/99	10	U	µg/L	FD
12339C	Carbazole	02/23/00	10	U	µg/L	N
12339C	Carbazole	05/22/00	10	U	µg/L	N
12339C	Carbazole	08/21/00	10	U	µg/L	N
12339C	Carbazole	11/14/00	10	U	µg/L	N
12339C	Carbazole	02/20/01	10	U	µg/L	N
12339C	Carbazole	06/19/01	10	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	11/23/98	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	02/22/99	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	05/26/99	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	08/16/99	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	11/17/99	5	UJ	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	11/17/99	5	UJ	µg/L	FD
12339C	bis(2-Chloroisopropyl) ether	02/23/00	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	05/22/00	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	08/21/00	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	11/14/00	5	UJ	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	02/20/01	5	U	µg/L	N
12339C	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	N
12339C	1,1,1,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12339C	1,1,1,2-Tetrachloroethane	11/17/99	10	U	µg/L	N
12339C	1,1,1,2-Tetrachloroethane	11/17/99	10	U	µg/L	FD
12339C	1,1,1,2-Tetrachloroethane	08/21/00	10	U	µg/L	N
12339C	1,1,1,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12339C	1,1,1-Trichloroethane	12/31/98	1	U	µg/L	N
12339C	1,1,1-Trichloroethane	11/17/99	1	U	µg/L	N
12339C	1,1,1-Trichloroethane	11/17/99	1	U	µg/L	FD
12339C	1,1,1-Trichloroethane	08/21/00	1	U	µg/L	N
12339C	1,1,1-Trichloroethane	06/19/01	1	U	µg/L	N
12339C	1,1,2,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12339C	1,1,2,2-Tetrachloroethane	11/17/99	10	UJ	µg/L	N
12339C	1,1,2,2-Tetrachloroethane	11/17/99	10	UJ	µg/L	FD
12339C	1,1,2,2-Tetrachloroethane	08/21/00	10	U	µg/L	N
12339C	1,1,2,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12339C	1,1,2-Trichloroethane	12/31/98	1	U	µg/L	N
12339C	1,1,2-Trichloroethane	11/17/99	10	U	µg/L	N
12339C	1,1,2-Trichloroethane	11/17/99	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	1,1,2-Trichloroethane	08/21/00	10	U	µg/L	N
12339C	1,1,2-Trichloroethane	06/19/01	10	U	µg/L	N
12339C	1,1-Dichloroethane	12/31/98	1	R	µg/L	N
12339C	1,1-Dichloroethane	11/17/99	10	U	µg/L	N
12339C	1,1-Dichloroethane	11/17/99	10	U	µg/L	FD
12339C	1,1-Dichloroethane	08/21/00	10	U	µg/L	N
12339C	1,1-Dichloroethane	06/19/01	10	U	µg/L	N
12339C	1,1-Dichloroethene	11/23/98	1	U	µg/L	N
12339C	1,1-Dichloroethene	12/31/98	1	U	µg/L	N
12339C	1,1-Dichloroethene	02/22/99	1	U	µg/L	N
12339C	1,1-Dichloroethene	05/26/99	5	U	µg/L	N
12339C	1,1-Dichloroethene	08/16/99	1	U	µg/L	N
12339C	1,1-Dichloroethene	11/17/99	10	U	µg/L	N
12339C	1,1-Dichloroethene	11/17/99	5	U	µg/L	FD
12339C	1,1-Dichloroethene	02/23/00	5	U	µg/L	N
12339C	1,1-Dichloroethene	05/22/00	5	U	µg/L	N
12339C	1,1-Dichloroethene	08/21/00	5	U	µg/L	N
12339C	1,1-Dichloroethene	11/14/00	5	U	µg/L	N
12339C	1,1-Dichloroethene	02/20/01	5	U	µg/L	N
12339C	1,1-Dichloroethene	06/19/01	5	U	µg/L	N
12339C	1,2,3-Trichloropropane	12/31/98	1	UJ	µg/L	N
12339C	1,2,3-Trichloropropane	11/17/99	10	U	µg/L	N
12339C	1,2,3-Trichloropropane	11/17/99	10	U	µg/L	FD
12339C	1,2,3-Trichloropropane	08/21/00	10	U	µg/L	N
12339C	1,2,3-Trichloropropane	06/19/01	10	U	µg/L	N
12339C	1,2-Dibromo-3-chloropropane	12/31/98	1	U	µg/L	N
12339C	1,2-Dibromo-3-chloropropane	11/17/99	10	UJ	µg/L	N
12339C	1,2-Dibromo-3-chloropropane	11/17/99	10	UJ	µg/L	FD
12339C	1,2-Dibromo-3-chloropropane	08/21/00	10	U	µg/L	N
12339C	1,2-Dibromo-3-chloropropane	06/19/01	10	U	µg/L	N
12339C	1,2-Dibromoethane	12/31/98	1	U	µg/L	N
12339C	1,2-Dibromoethane	11/17/99	10	U	µg/L	N
12339C	1,2-Dibromoethane	11/17/99	10	U	µg/L	FD
12339C	1,2-Dibromoethane	08/21/00	10	U	µg/L	N
12339C	1,2-Dibromoethane	06/19/01	10	U	µg/L	N
12339C	1,2-Dichloroethane	12/31/98	1	U	µg/L	N
12339C	1,2-Dichloroethane	11/17/99	1	U	µg/L	N
12339C	1,2-Dichloroethane	11/17/99	1	U	µg/L	FD
12339C	1,2-Dichloroethane	08/21/00	1	U	µg/L	N
12339C	1,2-Dichloroethane	06/19/01	1	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	11/23/98	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	02/22/99	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	05/26/99	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	08/16/99	1	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	11/17/99	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	11/17/99	10	U	µg/L	FD
12339C	1,2-Dichloroethene (Total)	02/23/00	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	05/22/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	1,2-Dichloroethene (Total)	11/14/00	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	02/20/01	10	U	µg/L	N
12339C	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	N
12339C	1,2-Dichloropropane	11/17/99	10	U	µg/L	N
12339C	1,2-Dichloropropane	11/17/99	10	U	µg/L	FD
12339C	1,2-Dichloropropane	08/21/00	10	U	µg/L	N
12339C	1,2-Dichloropropane	06/19/01	10	U	µg/L	N
12339C	2-Butanone	11/17/99	10	UJ	µg/L	N
12339C	2-Butanone	11/17/99	10	UJ	µg/L	FD
12339C	2-Butanone	08/21/00	10	U	µg/L	N
12339C	2-Butanone	06/19/01	10	U	µg/L	N
12339C	2-Hexanone	11/17/99	10	U	µg/L	N
12339C	2-Hexanone	11/17/99	10	U	µg/L	FD
12339C	2-Hexanone	08/21/00	10	U	µg/L	N
12339C	2-Hexanone	06/19/01	10	U	µg/L	N
12339C	4-Methyl-2-pentanone	11/17/99	10	U	µg/L	N
12339C	4-Methyl-2-pentanone	11/17/99	10	U	µg/L	FD
12339C	4-Methyl-2-pentanone	08/21/00	10	U	µg/L	N
12339C	4-Methyl-2-pentanone	06/19/01	10	U	µg/L	N
12339C	Acetone	12/31/98	5	UJ	µg/L	N
12339C	Acetone	11/17/99	10	UJ	µg/L	N
12339C	Acetone	11/17/99	10	UJ	µg/L	FD
12339C	Acetone	08/21/00	5	UJ	µg/L	N
12339C	Acetone	06/19/01	1.6	U	µg/L	N
12339C	Acrylonitrile	12/31/98	10	UJ	µg/L	N
12339C	Acrylonitrile	11/17/99	10	U	µg/L	N
12339C	Acrylonitrile	11/17/99	10	U	µg/L	FD
12339C	Acrylonitrile	08/21/00	10	U	µg/L	N
12339C	Acrylonitrile	06/19/01	10	U	µg/L	N
12339C	Benzene	12/31/98	1	U	µg/L	N
12339C	Benzene	11/17/99	1	U	µg/L	N
12339C	Benzene	11/17/99	1	U	µg/L	FD
12339C	Benzene	08/21/00	1	U	µg/L	N
12339C	Benzene	06/19/01	1	U	µg/L	N
12339C	Bromochloromethane	12/31/98	1	U	µg/L	N
12339C	Bromochloromethane	11/17/99	10	U	µg/L	N
12339C	Bromochloromethane	11/17/99	10	U	µg/L	FD
12339C	Bromochloromethane	08/21/00	10	U	µg/L	N
12339C	Bromochloromethane	06/19/01	10	U	µg/L	N
12339C	Bromodichloromethane	11/23/98	10	U	µg/L	N
12339C	Bromodichloromethane	12/31/98	1	U	µg/L	N
12339C	Bromodichloromethane	02/22/99	10	U	µg/L	N
12339C	Bromodichloromethane	05/26/99	10	U	µg/L	N
12339C	Bromodichloromethane	08/16/99	1	U	µg/L	N
12339C	Bromodichloromethane	11/17/99	10	U	µg/L	N
12339C	Bromodichloromethane	11/17/99	10	U	µg/L	FD
12339C	Bromodichloromethane	02/23/00	10	U	µg/L	N
12339C	Bromodichloromethane	05/22/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Bromodichloromethane	08/21/00	10	U	µg/L	N
12339C	Bromodichloromethane	11/14/00	10	U	µg/L	N
12339C	Bromodichloromethane	02/20/01	10	U	µg/L	N
12339C	Bromodichloromethane	06/19/01	10	U	µg/L	N
12339C	Bromoform	12/31/98	1	U	µg/L	N
12339C	Bromoform	11/17/99	10	UJ	µg/L	N
12339C	Bromoform	11/17/99	10	UJ	µg/L	FD
12339C	Bromoform	08/21/00	10	U	µg/L	N
12339C	Bromoform	06/19/01	10	U	µg/L	N
12339C	Bromomethane	11/17/99	2	UJ	µg/L	N
12339C	Bromomethane	11/17/99	2	UJ	µg/L	FD
12339C	Bromomethane	08/21/00	2	U	µg/L	N
12339C	Bromomethane	06/19/01	2	U	µg/L	N
12339C	Carbon Tetrachloride	12/31/98	1	U	µg/L	N
12339C	Carbon Tetrachloride	11/17/99	10	U	µg/L	N
12339C	Carbon Tetrachloride	11/17/99	10	U	µg/L	FD
12339C	Carbon Tetrachloride	08/21/00	10	U	µg/L	N
12339C	Carbon Tetrachloride	06/19/01	10	U	µg/L	N
12339C	Carbon disulfide	12/31/98	1	U	µg/L	N
12339C	Carbon disulfide	11/17/99	5	U	µg/L	N
12339C	Carbon disulfide	11/17/99	5	U	µg/L	FD
12339C	Carbon disulfide	08/21/00	5	U	µg/L	N
12339C	Carbon disulfide	06/19/01	5	U	µg/L	N
12339C	Chlorobenzene	12/31/98	1	U	µg/L	N
12339C	Chlorobenzene	11/17/99	10	U	µg/L	N
12339C	Chlorobenzene	11/17/99	10	U	µg/L	FD
12339C	Chlorobenzene	08/21/00	10	U	µg/L	N
12339C	Chlorobenzene	06/19/01	10	U	µg/L	N
12339C	Chloroethane	12/31/98	1	UJ	µg/L	N
12339C	Chloroethane	11/17/99	1	U	µg/L	N
12339C	Chloroethane	11/17/99	1	U	µg/L	FD
12339C	Chloroethane	08/21/00	1	U	µg/L	N
12339C	Chloroethane	06/19/01	1	U	µg/L	N
12339C	Chloroform	12/31/98	1	UJ	µg/L	N
12339C	Chloroform	11/17/99	10	U	µg/L	N
12339C	Chloroform	11/17/99	10	U	µg/L	FD
12339C	Chloroform	08/21/00	10	U	µg/L	N
12339C	Chloroform	06/19/01	10	U	µg/L	N
12339C	Chloromethane	11/17/99	10	UJ	µg/L	N
12339C	Chloromethane	11/17/99	10	UJ	µg/L	FD
12339C	Chloromethane	08/21/00	10	U	µg/L	N
12339C	Chloromethane	06/19/01	10	U	µg/L	N
12339C	Dibromochloromethane	12/31/98	1	U	µg/L	N
12339C	Dibromochloromethane	11/17/99	10	U	µg/L	N
12339C	Dibromochloromethane	11/17/99	10	U	µg/L	FD
12339C	Dibromochloromethane	08/21/00	10	U	µg/L	N
12339C	Dibromochloromethane	06/19/01	10	U	µg/L	N
12339C	Ethylbenzene	11/17/99	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Ethylbenzene	11/17/99	10	U	µg/L	FD
12339C	Ethylbenzene	08/21/00	10	U	µg/L	N
12339C	Ethylbenzene	06/19/01	10	U	µg/L	N
12339C	Iodomethane	11/17/99	10	U	µg/L	N
12339C	Iodomethane	11/17/99	10	U	µg/L	FD
12339C	Iodomethane	08/21/00	10	UJ	µg/L	N
12339C	Iodomethane	06/19/01	10	U	µg/L	N
12339C	Methylene chloride	11/17/99	4	U	µg/L	N
12339C	Methylene chloride	11/17/99	4	U	µg/L	FD
12339C	Methylene chloride	08/21/00	13	UJ	µg/L	N
12339C	Methylene chloride	06/19/01	4	U	µg/L	N
12339C	Styrene	11/17/99	10	U	µg/L	N
12339C	Styrene	11/17/99	10	U	µg/L	FD
12339C	Styrene	08/21/00	10	U	µg/L	N
12339C	Styrene	06/19/01	10	U	µg/L	N
12339C	Tetrachloroethene	11/23/98	10	U	µg/L	N
12339C	Tetrachloroethene	12/31/98	1	U	µg/L	N
12339C	Tetrachloroethene	02/22/99	10	U	µg/L	N
12339C	Tetrachloroethene	05/26/99	10	U	µg/L	N
12339C	Tetrachloroethene	08/16/99	1	U	µg/L	N
12339C	Tetrachloroethene	11/17/99	10	U	µg/L	N
12339C	Tetrachloroethene	11/17/99	10	U	µg/L	FD
12339C	Tetrachloroethene	02/23/00	10	U	µg/L	N
12339C	Tetrachloroethene	05/22/00	10	U	µg/L	N
12339C	Tetrachloroethene	08/21/00	10	U	µg/L	N
12339C	Tetrachloroethene	11/14/00	10	U	µg/L	N
12339C	Tetrachloroethene	02/20/01	10	U	µg/L	N
12339C	Tetrachloroethene	06/19/01	10	U	µg/L	N
12339C	Toluene	12/31/98	1	U	µg/L	N
12339C	Toluene	11/17/99	10	U	µg/L	N
12339C	Toluene	11/17/99	10	U	µg/L	FD
12339C	Toluene	08/21/00	10	U	µg/L	N
12339C	Toluene	06/19/01	0.24	U	µg/L	N
12339C	Trichloroethene	11/23/98	1	U	µg/L	N
12339C	Trichloroethene	12/31/98	1	U	µg/L	N
12339C	Trichloroethene	02/22/99	3	U	µg/L	N
12339C	Trichloroethene	05/26/99	3	U	µg/L	N
12339C	Trichloroethene	08/16/99	1	U	µg/L	N
12339C	Trichloroethene	11/17/99	3	U	µg/L	N
12339C	Trichloroethene	11/17/99	3	U	µg/L	FD
12339C	Trichloroethene	02/23/00	3	U	µg/L	N
12339C	Trichloroethene	05/22/00	3	U	µg/L	N
12339C	Trichloroethene	08/21/00	3	U	µg/L	N
12339C	Trichloroethene	11/14/00	3	U	µg/L	N
12339C	Trichloroethene	02/20/01	3	U	µg/L	N
12339C	Trichloroethene	06/19/01	3	U	µg/L	N
12339C	Trichlorofluoromethane	12/31/98	1	U	µg/L	N
12339C	Trichlorofluoromethane	11/17/99	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339C	Trichlorofluoromethane	11/17/99	10	U	µg/L	FD
12339C	Trichlorofluoromethane	08/21/00	10	U	µg/L	N
12339C	Trichlorofluoromethane	06/19/01	10	U	µg/L	N
12339C	Vinyl Acetate	12/31/98	1	UJ	µg/L	N
12339C	Vinyl Acetate	11/17/99	10	U	µg/L	N
12339C	Vinyl Acetate	11/17/99	10	U	µg/L	FD
12339C	Vinyl Acetate	08/21/00	10	U	µg/L	N
12339C	Vinyl Acetate	06/19/01	10	U	µg/L	N
12339C	Vinyl chloride	11/23/98	2	U	µg/L	N
12339C	Vinyl chloride	12/31/98	1	U	µg/L	N
12339C	Vinyl chloride	02/22/99	1	U	µg/L	N
12339C	Vinyl chloride	05/26/99	1	U	µg/L	N
12339C	Vinyl chloride	08/16/99	1	U	µg/L	N
12339C	Vinyl chloride	11/17/99	1	U	µg/L	N
12339C	Vinyl chloride	11/17/99	1	U	µg/L	FD
12339C	Vinyl chloride	02/23/00	1	U	µg/L	N
12339C	Vinyl chloride	05/22/00	1	U	µg/L	N
12339C	Vinyl chloride	08/21/00	1	U	µg/L	N
12339C	Vinyl chloride	11/14/00	1	U	µg/L	N
12339C	Vinyl chloride	02/20/01	1	U	µg/L	N
12339C	Vinyl chloride	06/19/01	1	U	µg/L	N
12339C	Xylenes, Total	12/31/98	1	U	µg/L	N
12339C	Xylenes, Total	11/17/99	10	U	µg/L	N
12339C	Xylenes, Total	11/17/99	10	U	µg/L	FD
12339C	Xylenes, Total	08/21/00	10	U	µg/L	N
12339C	Xylenes, Total	06/19/01	0.32	U	µg/L	N
12339C	cis-1,2-Dichloroethene	12/31/98	1	U	µg/L	N
12339C	cis-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12339C	cis-1,3-Dichloropropene	11/17/99	10	U	µg/L	FD
12339C	cis-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12339C	cis-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12339C	trans-1,2-Dichloroethene	11/17/99	10	U	µg/L	N
12339C	trans-1,2-Dichloroethene	11/17/99	10	U	µg/L	FD
12339C	trans-1,2-Dichloroethene	08/21/00	10	U	µg/L	N
12339C	trans-1,2-Dichloroethene	06/19/01	10	U	µg/L	N
12339C	trans-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12339C	trans-1,3-Dichloropropene	11/17/99	10	U	µg/L	FD
12339C	trans-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12339C	trans-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12339C	trans-1,4-Dichloro-2-butene	12/31/98	1	U	µg/L	N
12339C	trans-1,4-Dichloro-2-butene	11/17/99	10	U	µg/L	N
12339C	trans-1,4-Dichloro-2-butene	11/17/99	10	U	µg/L	FD
12339C	trans-1,4-Dichloro-2-butene	08/21/00	10	U	µg/L	N
12339C	trans-1,4-Dichloro-2-butene	06/19/01	10	U	µg/L	N
12339D	Nitrate/Nitrite	02/17/99	4.2	NV	mg/L	N
12339D	Nitrate/Nitrite	02/17/99	4.1	NV	mg/L	FD
12339D	Nitrate/Nitrite	05/24/99	5.4	-	mg/L	N
12339D	Nitrate/Nitrite	08/16/99	1.8	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	Nitrate/Nitrite	08/16/99	1.8	-	mg/L	FD
12339D	Total Dissolved Solids	02/17/99	2784	-	mg/L	N
12339D	Total Dissolved Solids	02/17/99	2664	-	mg/L	FD
12339D	Total Dissolved Solids	05/24/99	3234	NV	mg/L	N
12339D	Total Dissolved Solids	08/16/99	1829	-	mg/L	N
12339D	Total Dissolved Solids	08/16/99	1894	-	mg/L	FD
12339D	Total Organic Carbon	12/14/98	4.12	-	mg/L	N
12339D	Total Organic Carbon	12/14/98	4.23	-	mg/L	FD
12339D	Total Organic Carbon	02/17/99	8.19	J	mg/L	N
12339D	Total Organic Carbon	02/17/99	2.32	J	mg/L	FD
12339D	Total Organic Carbon	05/24/99	11.7	U	mg/L	N
12339D	Total Organic Carbon	08/16/99	6.43	J	mg/L	N
12339D	Total Organic Carbon	08/16/99	26.1	J	mg/L	FD
12339D	Total Organic Carbon	11/16/99	6.71	-	mg/L	N
12339D	Total Organic Carbon	02/23/00	11.5	J	mg/L	N
12339D	Total Organic Carbon	05/23/00	3.91	-	mg/L	N
12339D	Total Organic Carbon	08/28/00	1.22	-	mg/L	N
12339D	Total Organic Carbon	11/15/00	3.54	-	mg/L	N
12339D	Total Organic Carbon	02/21/01	3.44	-	mg/L	N
12339D	Total Organic Carbon	02/21/01	3.26	-	mg/L	FD
12339D	Total Organic Carbon	06/19/01	3.36	-	mg/L	N
12339D	Total Organic Halogens	12/14/98	0.0183	-	mg/L	N
12339D	Total Organic Halogens	12/14/98	0.0205	-	mg/L	FD
12339D	Total Organic Halogens	02/17/99	0.00434	U	mg/L	N
12339D	Total Organic Halogens	02/17/99	0.00426	U	mg/L	FD
12339D	Total Organic Halogens	05/24/99	0.00566	J	mg/L	N
12339D	Total Organic Halogens	08/16/99	0.0134	-	mg/L	N
12339D	Total Organic Halogens	08/16/99	0.015	-	mg/L	FD
12339D	Total Organic Halogens	11/16/99	0.025	U	mg/L	N
12339D	Total Organic Halogens	02/23/00	0.008	U	mg/L	N
12339D	Total Organic Halogens	05/23/00	0.138	U	mg/L	N
12339D	Total Organic Halogens	08/28/00	0.00395	U	mg/L	N
12339D	Total Organic Halogens	11/15/00	0.0121	J	mg/L	N
12339D	Total Organic Halogens	02/21/01	0.025	U	mg/L	N
12339D	Total Organic Halogens	02/21/01	0.025	U	mg/L	FD
12339D	Total Organic Halogens	06/19/01	0.00486	J	mg/L	N
12339D	Boron	12/14/98	0.882	-	mg/L	N
12339D	Boron	12/14/98	0.904	-	mg/L	FD
12339D	Boron	02/17/99	2.22	-	mg/L	N
12339D	Boron	02/17/99	2.19	-	mg/L	FD
12339D	Boron	05/24/99	0.841	J	mg/L	N
12339D	Boron	08/16/99	0.408	-	mg/L	N
12339D	Boron	08/16/99	0.398	-	mg/L	FD
12339D	Boron	11/16/99	0.411	-	mg/L	N
12339D	Boron	02/23/00	0.396	-	mg/L	N
12339D	Boron	05/23/00	0.497	-	mg/L	N
12339D	Boron	08/28/00	0.296	-	mg/L	N
12339D	Boron	11/15/00	0.289	-	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	Boron	02/21/01	0.424	J	mg/L	N
12339D	Boron	02/21/01	0.421	J	mg/L	FD
12339D	Boron	06/19/01	0.4	J	mg/L	N
12339D	Mercury	12/14/98	0.0001	U	mg/L	N
12339D	Mercury	12/14/98	0.0001	U	mg/L	FD
12339D	Mercury	02/17/99	0.00012	U	mg/L	N
12339D	Mercury	02/17/99	0.00012	U	mg/L	FD
12339D	Mercury	05/24/99	0.00012	U	mg/L	N
12339D	Mercury	08/16/99	0.0001	U	mg/L	N
12339D	Mercury	08/16/99	0.0001	U	mg/L	FD
12339D	Mercury	11/16/99	0.00004	U	mg/L	N
12339D	Mercury	02/23/00	0.00004	U	mg/L	N
12339D	Mercury	05/23/00	0.0001	U	mg/L	N
12339D	Mercury	08/28/00	0.0001	U	mg/L	N
12339D	Mercury	11/15/00	0.00013	U	mg/L	N
12339D	Mercury	02/21/01	0.000057	U	mg/L	N
12339D	Mercury	02/21/01	0.000057	U	mg/L	FD
12339D	Mercury	06/19/01	0.000057	U	mg/L	N
12339D	alpha-Chlordane	12/14/98	0.1	U	µg/L	N
12339D	alpha-Chlordane	12/14/98	0.1	U	µg/L	FD
12339D	alpha-Chlordane	02/17/99	0.01	UJ	µg/L	N
12339D	alpha-Chlordane	02/17/99	0.01	UJ	µg/L	FD
12339D	alpha-Chlordane	05/24/99	0.01	U	µg/L	N
12339D	alpha-Chlordane	08/16/99	0.05	U	µg/L	N
12339D	alpha-Chlordane	08/16/99	0.05	U	µg/L	FD
12339D	alpha-Chlordane	11/16/99	0.1	U	µg/L	N
12339D	alpha-Chlordane	02/23/00	0.1	U	µg/L	N
12339D	alpha-Chlordane	05/23/00	0.1	U	µg/L	N
12339D	alpha-Chlordane	05/23/00	0.02	Z	µg/L	N
12339D	alpha-Chlordane	08/28/00	0.1	U	µg/L	N
12339D	alpha-Chlordane	11/15/00	0.1	UJ	µg/L	N
12339D	alpha-Chlordane	02/21/01	0.1	UJ	µg/L	N
12339D	alpha-Chlordane	02/21/01	0.1	UJ	µg/L	FD
12339D	alpha-Chlordane	06/19/01	0.1	U	µg/L	N
12339D	Technetium-99	12/14/98	0.239	U	pCi/L	N
12339D	Technetium-99	12/14/98	0.124	U	pCi/L	FD
12339D	Technetium-99	02/17/99	-1.736	U	pCi/L	N
12339D	Technetium-99	02/17/99	0.124	U	pCi/L	FD
12339D	Technetium-99	05/24/99	15.99	J	pCi/L	N
12339D	Technetium-99	08/16/99	1.187	UJ	pCi/L	N
12339D	Technetium-99	08/16/99	-1.34	UJ	pCi/L	FD
12339D	Technetium-99	11/16/99	-2.15	UJ	pCi/L	N
12339D	Technetium-99	02/23/00	-0.797	UJ	pCi/L	N
12339D	Technetium-99	05/23/00	1.47	UJ	pCi/L	N
12339D	Technetium-99	08/28/00	-3.024	U	pCi/L	N
12339D	Technetium-99	11/15/00	-3.753	UJ	pCi/L	N
12339D	Technetium-99	02/21/01	2.785	U	pCi/L	N
12339D	Technetium-99	02/21/01	3.521	U	pCi/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	Technetium-99	06/19/01	0.565	UJ	pCi/L	N
12339D	Uranium, Total	12/14/98	71	-	µg/L	N
12339D	Uranium, Total	12/14/98	68.6	-	µg/L	FD
12339D	Uranium, Total	02/17/99	50.024	-	µg/L	N
12339D	Uranium, Total	02/17/99	50.37	-	µg/L	FD
12339D	Uranium, Total	05/17/99	66	NV	µg/L	N
12339D	Uranium, Total	05/19/99	58	NV	µg/L	N
12339D	Uranium, Total	05/20/99	57	NV	µg/L	N
12339D	Uranium, Total	05/24/99	41.5	-	µg/L	N
12339D	Uranium, Total	05/24/99	44	NV	µg/L	N
12339D	Uranium, Total	05/27/99	43	NV	µg/L	N
12339D	Uranium, Total	08/16/99	11.3	-	µg/L	N
12339D	Uranium, Total	08/16/99	12	-	µg/L	FD
12339D	Uranium, Total	11/16/99	14.3	-	µg/L	N
12339D	Uranium, Total	02/23/00	24.7613	J	µg/L	N
12339D	Uranium, Total	05/23/00	20.749	J	µg/L	N
12339D	Uranium, Total	08/28/00	11.162	J	µg/L	N
12339D	Uranium, Total	11/15/00	9.334	J	µg/L	N
12339D	Uranium, Total	02/21/01	10.588	-	µg/L	N
12339D	Uranium, Total	02/21/01	10.427	-	µg/L	FD
12339D	Uranium, Total	06/19/01	13.475	-	µg/L	N
12339D	4-Nitroaniline	12/14/98	20	U	µg/L	N
12339D	4-Nitroaniline	12/14/98	20	U	µg/L	FD
12339D	4-Nitroaniline	02/17/99	25	U	µg/L	N
12339D	4-Nitroaniline	02/17/99	25	U	µg/L	FD
12339D	4-Nitroaniline	05/24/99	50	U	µg/L	N
12339D	4-Nitroaniline	08/16/99	25	U	µg/L	N
12339D	4-Nitroaniline	08/16/99	25	U	µg/L	FD
12339D	4-Nitroaniline	11/16/99	50	U	µg/L	N
12339D	4-Nitroaniline	02/23/00	50	U	µg/L	N
12339D	4-Nitroaniline	05/23/00	25	U	µg/L	N
12339D	4-Nitroaniline	08/28/00	50	U	µg/L	N
12339D	4-Nitroaniline	11/15/00	50	U	µg/L	N
12339D	4-Nitroaniline	02/21/01	50	U	µg/L	N
12339D	4-Nitroaniline	02/21/01	50	U	µg/L	FD
12339D	4-Nitroaniline	06/19/01	50	U	µg/L	N
12339D	Carbazole	12/14/98	5	UJ	µg/L	N
12339D	Carbazole	12/14/98	5	UJ	µg/L	FD
12339D	Carbazole	02/17/99	5	U	µg/L	N
12339D	Carbazole	02/17/99	5	U	µg/L	FD
12339D	Carbazole	05/24/99	10	U	µg/L	N
12339D	Carbazole	08/16/99	10	U	µg/L	N
12339D	Carbazole	08/16/99	10	U	µg/L	FD
12339D	Carbazole	11/16/99	10	U	µg/L	N
12339D	Carbazole	02/23/00	10	U	µg/L	N
12339D	Carbazole	05/23/00	10	U	µg/L	N
12339D	Carbazole	08/28/00	10	U	µg/L	N
12339D	Carbazole	11/15/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	Carbazole	02/21/01	10	U	µg/L	N
12339D	Carbazole	02/21/01	10	U	µg/L	FD
12339D	Carbazole	06/19/01	10	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	12/14/98	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	12/14/98	5	U	µg/L	FD
12339D	bis(2-Chloroisopropyl) ether	02/17/99	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	02/17/99	5	U	µg/L	FD
12339D	bis(2-Chloroisopropyl) ether	05/24/99	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	08/16/99	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	08/16/99	5	U	µg/L	FD
12339D	bis(2-Chloroisopropyl) ether	11/16/99	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	02/23/00	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	05/23/00	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	08/28/00	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	11/15/00	5	UJ	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	02/21/01	5	U	µg/L	N
12339D	bis(2-Chloroisopropyl) ether	02/21/01	5	U	µg/L	FD
12339D	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	N
12339D	1,1-Dichloroethene	12/14/98	1	U	µg/L	N
12339D	1,1-Dichloroethene	12/14/98	1	U	µg/L	FD
12339D	1,1-Dichloroethene	02/17/99	1	U	µg/L	N
12339D	1,1-Dichloroethene	02/17/99	1	U	µg/L	FD
12339D	1,1-Dichloroethene	05/24/99	5	U	µg/L	N
12339D	1,1-Dichloroethene	08/16/99	1	U	µg/L	N
12339D	1,1-Dichloroethene	08/16/99	1	U	µg/L	FD
12339D	1,1-Dichloroethene	11/16/99	5	U	µg/L	N
12339D	1,1-Dichloroethene	02/23/00	5	U	µg/L	N
12339D	1,1-Dichloroethene	05/23/00	5	U	µg/L	N
12339D	1,1-Dichloroethene	08/28/00	5	U	µg/L	N
12339D	1,1-Dichloroethene	11/15/00	5	U	µg/L	N
12339D	1,1-Dichloroethene	02/21/01	5	U	µg/L	N
12339D	1,1-Dichloroethene	02/21/01	5	U	µg/L	FD
12339D	1,1-Dichloroethene	06/19/01	5	U	µg/L	N
12339D	1,2-Dichloroethane	06/19/01	1	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	12/14/98	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	12/14/98	10	U	µg/L	FD
12339D	1,2-Dichloroethene (Total)	02/17/99	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	02/17/99	10	U	µg/L	FD
12339D	1,2-Dichloroethene (Total)	05/24/99	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	08/16/99	1	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	08/16/99	1	U	µg/L	FD
12339D	1,2-Dichloroethene (Total)	11/16/99	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	02/23/00	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	05/23/00	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	08/28/00	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	11/15/00	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	02/21/01	10	U	µg/L	N
12339D	1,2-Dichloroethene (Total)	02/21/01	10	U	µg/L	FD

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	N
12339D	Benzene	06/19/01	1	U	µg/L	N
12339D	Bromodichloromethane	12/14/98	10	U	µg/L	N
12339D	Bromodichloromethane	12/14/98	10	U	µg/L	FD
12339D	Bromodichloromethane	02/17/99	10	U	µg/L	N
12339D	Bromodichloromethane	02/17/99	10	U	µg/L	FD
12339D	Bromodichloromethane	05/24/99	10	U	µg/L	N
12339D	Bromodichloromethane	08/16/99	1	U	µg/L	N
12339D	Bromodichloromethane	08/16/99	1	U	µg/L	FD
12339D	Bromodichloromethane	11/16/99	10	U	µg/L	N
12339D	Bromodichloromethane	02/23/00	10	U	µg/L	N
12339D	Bromodichloromethane	05/23/00	10	U	µg/L	N
12339D	Bromodichloromethane	08/28/00	10	U	µg/L	N
12339D	Bromodichloromethane	11/15/00	10	U	µg/L	N
12339D	Bromodichloromethane	02/21/01	10	U	µg/L	N
12339D	Bromodichloromethane	02/21/01	10	U	µg/L	FD
12339D	Bromodichloromethane	06/19/01	10	U	µg/L	N
12339D	Carbon disulfide	06/19/01	5	U	µg/L	N
12339D	Ethylbenzene	06/19/01	0.1	J	µg/L	N
12339D	Isopropyl Benzene	06/19/01	10	U	µg/L	N
12339D	Tetrachloroethene	12/14/98	10	U	µg/L	N
12339D	Tetrachloroethene	12/14/98	10	U	µg/L	FD
12339D	Tetrachloroethene	02/17/99	10	U	µg/L	N
12339D	Tetrachloroethene	02/17/99	10	U	µg/L	FD
12339D	Tetrachloroethene	05/24/99	10	U	µg/L	N
12339D	Tetrachloroethene	08/16/99	1	U	µg/L	N
12339D	Tetrachloroethene	08/16/99	1	U	µg/L	FD
12339D	Tetrachloroethene	11/16/99	10	U	µg/L	N
12339D	Tetrachloroethene	02/23/00	10	U	µg/L	N
12339D	Tetrachloroethene	05/23/00	10	U	µg/L	N
12339D	Tetrachloroethene	08/28/00	10	U	µg/L	N
12339D	Tetrachloroethene	11/15/00	10	U	µg/L	N
12339D	Tetrachloroethene	02/21/01	10	U	µg/L	N
12339D	Tetrachloroethene	02/21/01	10	U	µg/L	FD
12339D	Tetrachloroethene	06/19/01	10	U	µg/L	N
12339D	Toluene	06/19/01	0.44	J	µg/L	N
12339D	Trichloroethene	12/14/98	1	U	µg/L	N
12339D	Trichloroethene	12/14/98	1	U	µg/L	FD
12339D	Trichloroethene	02/17/99	3	U	µg/L	N
12339D	Trichloroethene	02/17/99	3	U	µg/L	FD
12339D	Trichloroethene	05/24/99	3	U	µg/L	N
12339D	Trichloroethene	08/16/99	1	U	µg/L	N
12339D	Trichloroethene	08/16/99	1	U	µg/L	FD
12339D	Trichloroethene	11/16/99	3	U	µg/L	N
12339D	Trichloroethene	02/23/00	3	U	µg/L	N
12339D	Trichloroethene	05/23/00	3	U	µg/L	N
12339D	Trichloroethene	08/28/00	3	U	µg/L	N
12339D	Trichloroethene	11/15/00	3	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12339D	Trichloroethene	02/21/01	3	U	µg/L	N
12339D	Trichloroethene	02/21/01	3	U	µg/L	FD
12339D	Trichloroethene	06/19/01	3	U	µg/L	N
12339D	Vinyl chloride	12/14/98	2	U	µg/L	N
12339D	Vinyl chloride	12/14/98	2	U	µg/L	FD
12339D	Vinyl chloride	02/17/99	1	U	µg/L	N
12339D	Vinyl chloride	02/17/99	1	U	µg/L	FD
12339D	Vinyl chloride	05/24/99	1	U	µg/L	N
12339D	Vinyl chloride	08/16/99	1	U	µg/L	N
12339D	Vinyl chloride	08/16/99	1	U	µg/L	FD
12339D	Vinyl chloride	11/16/99	1	U	µg/L	N
12339D	Vinyl chloride	02/23/00	1	U	µg/L	N
12339D	Vinyl chloride	05/23/00	1	U	µg/L	N
12339D	Vinyl chloride	08/28/00	1	U	µg/L	N
12339D	Vinyl chloride	11/15/00	1	U	µg/L	N
12339D	Vinyl chloride	02/21/01	1	U	µg/L	N
12339D	Vinyl chloride	02/21/01	1	U	µg/L	FD
12339D	Vinyl chloride	06/19/01	1	U	µg/L	N
12339D	Xylenes, Total	06/19/01	0.38	U	µg/L	N
12340C	Alkalinity as CaCO3	12/31/98	135	J	mg/L	N
12340C	Alkalinity as CaCO3	11/17/99	72	-	mg/L	N
12340C	Alkalinity as CaCO3	08/21/00	286	-	mg/L	N
12340C	Alkalinity as CaCO3	06/19/01	333	J	mg/L	N
12340C	Ammonia	12/31/98	0.1	U	mg/L	N
12340C	Ammonia	11/17/99	0.1	U	mg/L	N
12340C	Ammonia	08/21/00	0.1	U	mg/L	N
12340C	Ammonia	06/19/01	0.1	U	mg/L	N
12340C	Chemical Oxygen Demand	12/31/98	10	U	mg/L	N
12340C	Chemical Oxygen Demand	11/17/99	5	U	mg/L	N
12340C	Chemical Oxygen Demand	08/21/00	24.7	U	mg/L	N
12340C	Chemical Oxygen Demand	06/19/01	5	U	mg/L	N
12340C	Chloride	12/31/98	5.1	-	mg/L	N
12340C	Chloride	11/17/99	42.8	-	mg/L	N
12340C	Chloride	08/21/00	9	-	mg/L	N
12340C	Chloride	06/19/01	9	-	mg/L	N
12340C	Nitrate/Nitrite	12/31/98	0.33	J	mg/L	N
12340C	Nitrate/Nitrite	11/17/99	1.97	-	mg/L	N
12340C	Nitrate/Nitrite	02/23/00	1	J	mg/L	N
12340C	Nitrate/Nitrite	05/22/00	2.2	-	mg/L	N
12340C	Nitrate/Nitrite	08/21/00	0.999	J	mg/L	N
12340C	Nitrate/Nitrite	11/14/00	1.35	J	mg/L	N
12340C	Nitrate/Nitrite	02/20/01	1.55	J	mg/L	N
12340C	Nitrate/Nitrite	06/19/01	0.63	J	mg/L	N
12340C	Sulfate	12/31/98	26.1	J	mg/L	N
12340C	Sulfate	11/17/99	1790	-	mg/L	N
12340C	Sulfate	08/21/00	231	-	mg/L	N
12340C	Sulfate	06/19/01	457	-	mg/L	N
12340C	Total Dissolved Solids	12/31/98	233	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Total Dissolved Solids	11/17/99	2755	J	mg/L	N
12340C	Total Dissolved Solids	02/23/00	342	-	mg/L	N
12340C	Total Dissolved Solids	05/22/00	2400	-	mg/L	N
12340C	Total Dissolved Solids	08/21/00	664	-	mg/L	N
12340C	Total Dissolved Solids	11/14/00	1580	-	mg/L	N
12340C	Total Dissolved Solids	02/20/01	1450	-	mg/L	N
12340C	Total Dissolved Solids	06/19/01	1160	-	mg/L	N
12340C	Total Organic Carbon	10/13/99	34.2	-	mg/L	N
12340C	Total Organic Carbon	11/17/99	1	U	mg/L	N
12340C	Total Organic Carbon	02/23/00	3.14	J	mg/L	N
12340C	Total Organic Carbon	05/22/00	1.27	U	mg/L	N
12340C	Total Organic Carbon	08/21/00	1.92	-	mg/L	N
12340C	Total Organic Carbon	11/14/00	2.14	-	mg/L	N
12340C	Total Organic Carbon	02/20/01	1.75	J	mg/L	N
12340C	Total Organic Carbon	06/19/01	2.06	UJ	mg/L	N
12340C	Total Organic Halogens	10/13/99	0.178	J	mg/L	N
12340C	Total Organic Halogens	11/17/99	0.104	J	mg/L	N
12340C	Total Organic Halogens	02/23/00	0.025	U	mg/L	N
12340C	Total Organic Halogens	05/22/00	0.0383	J	mg/L	N
12340C	Total Organic Halogens	08/21/00	0.025	U	mg/L	N
12340C	Total Organic Halogens	11/14/00	0.025	U	mg/L	N
12340C	Total Organic Halogens	02/20/01	0.025	U	mg/L	N
12340C	Total Organic Halogens	06/19/01	0.00358	U	mg/L	N
12340C	Antimony	12/31/98	0.004	U	mg/L	N
12340C	Antimony	11/17/99	0.004	U	mg/L	N
12340C	Antimony	08/21/00	0.0019	U	mg/L	N
12340C	Antimony	06/19/01	0.00128	U	mg/L	N
12340C	Arsenic	12/31/98	0.003	U	mg/L	N
12340C	Arsenic	11/17/99	0.003	U	mg/L	N
12340C	Arsenic	08/21/00	0.0013	-	mg/L	N
12340C	Arsenic	06/19/01	0.00013	U	mg/L	N
12340C	Barium	12/31/98	0.0307	-	mg/L	N
12340C	Barium	11/17/99	0.0384	-	mg/L	N
12340C	Barium	08/21/00	0.0434	-	mg/L	N
12340C	Barium	06/19/01	0.118	J	mg/L	N
12340C	Beryllium	12/31/98	0.001	U	mg/L	N
12340C	Beryllium	11/17/99	0.001	U	mg/L	N
12340C	Beryllium	08/21/00	0.00042	U	mg/L	N
12340C	Beryllium	06/19/01	0.000013	UJ	mg/L	N
12340C	Boron	12/31/98	0.0318	U	mg/L	N
12340C	Boron	10/13/99	0.496	-	mg/L	N
12340C	Boron	11/17/99	0.268	-	mg/L	N
12340C	Boron	02/23/00	0.291	-	mg/L	N
12340C	Boron	05/22/00	1.51	-	mg/L	N
12340C	Boron	08/21/00	0.202	-	mg/L	N
12340C	Boron	11/14/00	0.963	J	mg/L	N
12340C	Boron	02/20/01	1.4	-	mg/L	N
12340C	Boron	06/19/01	0.94	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Cadmium	12/31/98	0.001	U	mg/L	N
12340C	Cadmium	11/17/99	0.001	U	mg/L	N
12340C	Cadmium	08/21/00	0.00044	-	mg/L	N
12340C	Cadmium	06/19/01	0.000183	U	mg/L	N
12340C	Calcium	12/31/98	50.3	J	mg/L	N
12340C	Calcium	11/17/99	482	J	mg/L	N
12340C	Calcium	08/21/00	120	-	mg/L	N
12340C	Calcium	06/19/01	289	-	mg/L	N
12340C	Chromium	12/31/98	0.0012	-	mg/L	N
12340C	Chromium	11/17/99	0.0012	-	mg/L	N
12340C	Chromium	08/21/00	0.00093	-	mg/L	N
12340C	Chromium	06/19/01	0.000205	U	mg/L	N
12340C	Cobalt	12/31/98	0.003	U	mg/L	N
12340C	Cobalt	11/17/99	0.001	U	mg/L	N
12340C	Cobalt	08/21/00	0.00058	UJ	mg/L	N
12340C	Cobalt	06/19/01	0.000288	-	mg/L	N
12340C	Copper	12/31/98	0.0016	-	mg/L	N
12340C	Copper	11/17/99	0.012	-	mg/L	N
12340C	Copper	08/21/00	0.0013	-	mg/L	N
12340C	Copper	06/19/01	0.00118	-	mg/L	N
12340C	Iron	12/31/98	0.227	UJ	mg/L	N
12340C	Iron	11/17/99	0.205	J	mg/L	N
12340C	Iron	08/21/00	0.682	J	mg/L	N
12340C	Iron	06/19/01	0.227	J	mg/L	N
12340C	Lead	12/31/98	0.002	U	mg/L	N
12340C	Lead	11/17/99	0.002	U	mg/L	N
12340C	Lead	08/21/00	0.0025	U	mg/L	N
12340C	Lead	06/19/01	0.000389	U	mg/L	N
12340C	Magnesium	12/31/98	10.2	-	mg/L	N
12340C	Magnesium	11/17/99	127	-	mg/L	N
12340C	Magnesium	08/21/00	22.4	J	mg/L	N
12340C	Magnesium	06/19/01	55.4	J	mg/L	N
12340C	Manganese	12/31/98	0.0066	J	mg/L	N
12340C	Manganese	11/17/99	0.0014	J	mg/L	N
12340C	Manganese	08/21/00	0.0083	-	mg/L	N
12340C	Manganese	06/19/01	0.00347	UJ	mg/L	N
12340C	Mercury	10/13/99	0.0001	U	mg/L	N
12340C	Mercury	11/17/99	0.0001	U	mg/L	N
12340C	Mercury	02/23/00	0.00004	U	mg/L	N
12340C	Mercury	05/22/00	0.0001	U	mg/L	N
12340C	Mercury	08/21/00	0.0000001	UJ	mg/L	N
12340C	Mercury	11/14/00	0.0001	U	mg/L	N
12340C	Mercury	02/20/01	0.000057	UJ	mg/L	N
12340C	Mercury	06/19/01	0.000057	U	mg/L	N
12340C	Nickel	12/31/98	0.0021	-	mg/L	N
12340C	Nickel	11/17/99	0.0098	-	mg/L	N
12340C	Nickel	08/21/00	0.0035	-	mg/L	N
12340C	Nickel	06/19/01	0.0087	J	mg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Potassium	12/31/98	0.575	J	mg/L	N
12340C	Potassium	11/17/99	20.1	J	mg/L	N
12340C	Potassium	08/21/00	3.96	-	mg/L	N
12340C	Potassium	06/19/01	8.9	J	mg/L	N
12340C	Selenium	12/31/98	0.004	U	mg/L	N
12340C	Selenium	11/17/99	0.004	U	mg/L	N
12340C	Selenium	08/21/00	0.0019	-	mg/L	N
12340C	Selenium	06/19/01	0.00422	-	mg/L	N
12340C	Silver	12/31/98	0.002	U	mg/L	N
12340C	Silver	11/17/99	0.001	U	mg/L	N
12340C	Silver	08/21/00	0.0005	U	mg/L	N
12340C	Silver	06/19/01	0.000133	U	mg/L	N
12340C	Sodium	12/31/98	4.35	-	mg/L	N
12340C	Sodium	11/17/99	30.9	-	mg/L	N
12340C	Sodium	08/21/00	4.79	-	mg/L	N
12340C	Sodium	06/19/01	5.6	J	mg/L	N
12340C	Thallium	12/31/98	0.004	U	mg/L	N
12340C	Thallium	11/17/99	0.004	U	mg/L	N
12340C	Thallium	08/21/00	0.001	UJ	mg/L	N
12340C	Thallium	06/19/01	0.000173	U	mg/L	N
12340C	Vanadium	12/31/98	0.001	U	mg/L	N
12340C	Vanadium	11/17/99	0.0012	U	mg/L	N
12340C	Vanadium	08/21/00	0.0014	U	mg/L	N
12340C	Vanadium	06/19/01	0.00107	U	mg/L	N
12340C	Zinc	12/31/98	0.0177	UJ	mg/L	N
12340C	Zinc	11/17/99	0.0082	U	mg/L	N
12340C	Zinc	08/21/00	0.0061	U	mg/L	N
12340C	Zinc	06/19/01	0.00546	U	mg/L	N
12340C	alpha-Chlordane	10/13/99	0.04	U	µg/L	N
12340C	alpha-Chlordane	11/17/99	0.1	U	µg/L	N
12340C	alpha-Chlordane	02/23/00	0.1	U	µg/L	N
12340C	alpha-Chlordane	05/22/00	0.1	U	µg/L	N
12340C	alpha-Chlordane	05/22/00	0.02	Z	µg/L	N
12340C	alpha-Chlordane	08/21/00	0.1	U	µg/L	N
12340C	alpha-Chlordane	11/14/00	0.1	U	µg/L	N
12340C	alpha-Chlordane	02/20/01	0.1	UJ	µg/L	N
12340C	alpha-Chlordane	06/19/01	0.1	U	µg/L	N
12340C	Technetium-99	10/13/99	-1.188	UJ	pCi/L	N
12340C	Technetium-99	11/17/99	0.218	UJ	pCi/L	N
12340C	Technetium-99	02/23/00	-0.623	UJ	pCi/L	N
12340C	Technetium-99	05/22/00	0.628	UJ	pCi/L	N
12340C	Technetium-99	08/21/00	-2.099	U	pCi/L	N
12340C	Technetium-99	11/14/00	0.386	UJ	pCi/L	N
12340C	Technetium-99	02/20/01	4.737	U	pCi/L	N
12340C	Technetium-99	06/19/01	2.155	UJ	pCi/L	N
12340C	Uranium, Total	10/13/99	11.5	-	µg/L	N
12340C	Uranium, Total	11/17/99	9.27	-	µg/L	N
12340C	Uranium, Total	02/23/00	9.3481	J	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Uranium, Total	05/22/00	34.997	J	µg/L	N
12340C	Uranium, Total	08/21/00	28.993	J	µg/L	N
12340C	Uranium, Total	11/14/00	37.854	J	µg/L	N
12340C	Uranium, Total	02/20/01	50.671	-	µg/L	N
12340C	Uranium, Total	06/19/01	58.582	-	µg/L	N
12340C	1,2-Dichlorobenzene	12/31/98	1	U	µg/L	N
12340C	1,2-Dichlorobenzene	11/17/99	10	U	µg/L	N
12340C	1,2-Dichlorobenzene	08/21/00	10	U	µg/L	N
12340C	1,2-Dichlorobenzene	06/19/01	10	U	µg/L	N
12340C	1,4-Dichlorobenzene	12/31/98	1	U	µg/L	N
12340C	1,4-Dichlorobenzene	11/17/99	10	U	µg/L	N
12340C	1,4-Dichlorobenzene	08/21/00	10	U	µg/L	N
12340C	1,4-Dichlorobenzene	06/19/01	10	U	µg/L	N
12340C	4-Nitroaniline	10/13/99	25	U	µg/L	N
12340C	4-Nitroaniline	11/17/99	50	U	µg/L	N
12340C	4-Nitroaniline	02/23/00	50	U	µg/L	N
12340C	4-Nitroaniline	05/22/00	25	U	µg/L	N
12340C	4-Nitroaniline	08/21/00	50	U	µg/L	N
12340C	4-Nitroaniline	11/14/00	50	U	µg/L	N
12340C	4-Nitroaniline	02/20/01	50	U	µg/L	N
12340C	4-Nitroaniline	06/19/01	50	U	µg/L	N
12340C	Carbazole	10/13/99	10	U	µg/L	N
12340C	Carbazole	11/17/99	10	U	µg/L	N
12340C	Carbazole	02/23/00	10	U	µg/L	N
12340C	Carbazole	05/22/00	10	U	µg/L	N
12340C	Carbazole	08/21/00	10	U	µg/L	N
12340C	Carbazole	11/14/00	10	U	µg/L	N
12340C	Carbazole	02/20/01	10	U	µg/L	N
12340C	Carbazole	06/19/01	10	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	10/13/99	5	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	11/17/99	5	UJ	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	02/23/00	5	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	05/22/00	5	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	08/21/00	5	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	11/14/00	5	UJ	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	02/20/01	5	U	µg/L	N
12340C	bis(2-Chloroisopropyl) ether	06/19/01	5	U	µg/L	N
12340C	1,1,1,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12340C	1,1,1,2-Tetrachloroethane	11/17/99	10	U	µg/L	N
12340C	1,1,1,2-Tetrachloroethane	08/21/00	10	U	µg/L	N
12340C	1,1,1,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12340C	1,1,1-Trichloroethane	12/31/98	1	U	µg/L	N
12340C	1,1,1-Trichloroethane	11/17/99	1	U	µg/L	N
12340C	1,1,1-Trichloroethane	08/21/00	1	U	µg/L	N
12340C	1,1,1-Trichloroethane	06/19/01	0.54	J	µg/L	N
12340C	1,1,2,2-Tetrachloroethane	12/31/98	1	U	µg/L	N
12340C	1,1,2,2-Tetrachloroethane	11/17/99	10	UJ	µg/L	N
12340C	1,1,2,2-Tetrachloroethane	08/21/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	1,1,2,2-Tetrachloroethane	06/19/01	10	U	µg/L	N
12340C	1,1,2-Trichloroethane	12/31/98	1	U	µg/L	N
12340C	1,1,2-Trichloroethane	11/17/99	10	U	µg/L	N
12340C	1,1,2-Trichloroethane	08/21/00	10	U	µg/L	N
12340C	1,1,2-Trichloroethane	06/19/01	10	U	µg/L	N
12340C	1,1-Dichloroethane	12/31/98	1	R	µg/L	N
12340C	1,1-Dichloroethane	11/17/99	10	U	µg/L	N
12340C	1,1-Dichloroethane	08/21/00	10	U	µg/L	N
12340C	1,1-Dichloroethane	06/19/01	10	U	µg/L	N
12340C	1,1-Dichloroethene	12/31/98	1	U	µg/L	N
12340C	1,1-Dichloroethene	10/13/99	0.8	U	µg/L	N
12340C	1,1-Dichloroethene	11/17/99	5	U	µg/L	N
12340C	1,1-Dichloroethene	02/23/00	5	U	µg/L	N
12340C	1,1-Dichloroethene	05/22/00	5	U	µg/L	N
12340C	1,1-Dichloroethene	08/21/00	5	U	µg/L	N
12340C	1,1-Dichloroethene	11/14/00	5	U	µg/L	N
12340C	1,1-Dichloroethene	02/20/01	5	U	µg/L	N
12340C	1,1-Dichloroethene	06/19/01	5	U	µg/L	N
12340C	1,2,3-Trichloropropane	12/31/98	1	UJ	µg/L	N
12340C	1,2,3-Trichloropropane	11/17/99	10	U	µg/L	N
12340C	1,2,3-Trichloropropane	08/21/00	10	U	µg/L	N
12340C	1,2,3-Trichloropropane	06/19/01	10	U	µg/L	N
12340C	1,2-Dibromo-3-chloropropane	12/31/98	1	U	µg/L	N
12340C	1,2-Dibromo-3-chloropropane	11/17/99	10	UJ	µg/L	N
12340C	1,2-Dibromo-3-chloropropane	08/21/00	10	U	µg/L	N
12340C	1,2-Dibromo-3-chloropropane	06/19/01	10	U	µg/L	N
12340C	1,2-Dibromoethane	12/31/98	1	U	µg/L	N
12340C	1,2-Dibromoethane	11/17/99	10	U	µg/L	N
12340C	1,2-Dibromoethane	08/21/00	10	U	µg/L	N
12340C	1,2-Dibromoethane	06/19/01	10	U	µg/L	N
12340C	1,2-Dichloroethane	12/31/98	1	U	µg/L	N
12340C	1,2-Dichloroethane	11/17/99	1	U	µg/L	N
12340C	1,2-Dichloroethane	08/21/00	1	U	µg/L	N
12340C	1,2-Dichloroethane	06/19/01	1	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	10/13/99	1	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	11/17/99	10	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	02/23/00	10	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	05/22/00	10	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	11/14/00	10	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	02/20/01	10	U	µg/L	N
12340C	1,2-Dichloroethene (Total)	06/19/01	10	U	µg/L	N
12340C	1,2-Dichloropropane	11/17/99	10	U	µg/L	N
12340C	1,2-Dichloropropane	08/21/00	10	U	µg/L	N
12340C	1,2-Dichloropropane	06/19/01	10	U	µg/L	N
12340C	2-Butanone	11/17/99	10	UJ	µg/L	N
12340C	2-Butanone	08/21/00	10	U	µg/L	N
12340C	2-Butanone	06/19/01	10	U	µg/L	N
12340C	2-Hexanone	11/17/99	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	2-Hexanone	08/21/00	10	U	µg/L	N
12340C	2-Hexanone	06/19/01	10	U	µg/L	N
12340C	4-Methyl-2-pentanone	11/17/99	10	U	µg/L	N
12340C	4-Methyl-2-pentanone	08/21/00	10	U	µg/L	N
12340C	4-Methyl-2-pentanone	06/19/01	10	U	µg/L	N
12340C	Acetone	12/31/98	5	UJ	µg/L	N
12340C	Acetone	11/17/99	10	UJ	µg/L	N
12340C	Acetone	08/21/00	3	UJ	µg/L	N
12340C	Acetone	06/19/01	10	U	µg/L	N
12340C	Acrylonitrile	12/31/98	10	UJ	µg/L	N
12340C	Acrylonitrile	11/17/99	10	U	µg/L	N
12340C	Acrylonitrile	08/21/00	10	U	µg/L	N
12340C	Acrylonitrile	06/19/01	10	U	µg/L	N
12340C	Benzene	12/31/98	1	U	µg/L	N
12340C	Benzene	11/17/99	1	U	µg/L	N
12340C	Benzene	08/21/00	1	U	µg/L	N
12340C	Benzene	06/19/01	1	U	µg/L	N
12340C	Bromochloromethane	12/31/98	1	U	µg/L	N
12340C	Bromochloromethane	11/17/99	10	U	µg/L	N
12340C	Bromochloromethane	08/21/00	10	U	µg/L	N
12340C	Bromochloromethane	06/19/01	10	U	µg/L	N
12340C	Bromodichloromethane	12/31/98	0.5	J	µg/L	N
12340C	Bromodichloromethane	10/13/99	1	U	µg/L	N
12340C	Bromodichloromethane	11/17/99	10	U	µg/L	N
12340C	Bromodichloromethane	02/23/00	10	U	µg/L	N
12340C	Bromodichloromethane	05/22/00	10	U	µg/L	N
12340C	Bromodichloromethane	08/21/00	10	U	µg/L	N
12340C	Bromodichloromethane	11/14/00	10	U	µg/L	N
12340C	Bromodichloromethane	02/20/01	10	U	µg/L	N
12340C	Bromodichloromethane	06/19/01	10	U	µg/L	N
12340C	Bromoform	12/31/98	1	U	µg/L	N
12340C	Bromoform	11/17/99	10	UJ	µg/L	N
12340C	Bromoform	08/21/00	10	U	µg/L	N
12340C	Bromoform	06/19/01	10	U	µg/L	N
12340C	Bromomethane	11/17/99	2	UJ	µg/L	N
12340C	Bromomethane	08/21/00	2	U	µg/L	N
12340C	Bromomethane	06/19/01	2	U	µg/L	N
12340C	Carbon Tetrachloride	12/31/98	1	U	µg/L	N
12340C	Carbon Tetrachloride	11/17/99	10	U	µg/L	N
12340C	Carbon Tetrachloride	08/21/00	10	U	µg/L	N
12340C	Carbon Tetrachloride	06/19/01	10	U	µg/L	N
12340C	Carbon disulfide	12/31/98	1	U	µg/L	N
12340C	Carbon disulfide	11/17/99	5	U	µg/L	N
12340C	Carbon disulfide	08/21/00	5	U	µg/L	N
12340C	Carbon disulfide	06/19/01	5	U	µg/L	N
12340C	Chlorobenzene	12/31/98	1	U	µg/L	N
12340C	Chlorobenzene	11/17/99	10	U	µg/L	N
12340C	Chlorobenzene	08/21/00	10	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Chlorobenzene	06/19/01	10	U	µg/L	N
12340C	Chloroethane	12/31/98	1	UJ	µg/L	N
12340C	Chloroethane	11/17/99	1	U	µg/L	N
12340C	Chloroethane	08/21/00	1	U	µg/L	N
12340C	Chloroethane	06/19/01	1	U	µg/L	N
12340C	Chloroform	12/31/98	1	UJ	µg/L	N
12340C	Chloroform	11/17/99	10	U	µg/L	N
12340C	Chloroform	08/21/00	10	U	µg/L	N
12340C	Chloroform	06/19/01	10	U	µg/L	N
12340C	Chloromethane	11/17/99	10	UJ	µg/L	N
12340C	Chloromethane	08/21/00	10	U	µg/L	N
12340C	Chloromethane	06/19/01	10	U	µg/L	N
12340C	Dibromochloromethane	12/31/98	1	J	µg/L	N
12340C	Dibromochloromethane	11/17/99	10	U	µg/L	N
12340C	Dibromochloromethane	08/21/00	10	U	µg/L	N
12340C	Dibromochloromethane	06/19/01	10	U	µg/L	N
12340C	Ethylbenzene	11/17/99	10	U	µg/L	N
12340C	Ethylbenzene	08/21/00	10	U	µg/L	N
12340C	Ethylbenzene	06/19/01	10	U	µg/L	N
12340C	Iodomethane	11/17/99	10	U	µg/L	N
12340C	Iodomethane	08/21/00	10	UJ	µg/L	N
12340C	Iodomethane	06/19/01	10	U	µg/L	N
12340C	Methylene chloride	11/17/99	4	U	µg/L	N
12340C	Methylene chloride	08/21/00	10	UJ	µg/L	N
12340C	Methylene chloride	06/19/01	4	U	µg/L	N
12340C	Styrene	11/17/99	10	U	µg/L	N
12340C	Styrene	08/21/00	10	U	µg/L	N
12340C	Styrene	06/19/01	10	U	µg/L	N
12340C	Tetrachloroethene	12/31/98	1	U	µg/L	N
12340C	Tetrachloroethene	10/13/99	1	U	µg/L	N
12340C	Tetrachloroethene	11/17/99	10	U	µg/L	N
12340C	Tetrachloroethene	02/23/00	10	U	µg/L	N
12340C	Tetrachloroethene	05/22/00	10	U	µg/L	N
12340C	Tetrachloroethene	08/21/00	10	U	µg/L	N
12340C	Tetrachloroethene	11/14/00	10	U	µg/L	N
12340C	Tetrachloroethene	02/20/01	10	U	µg/L	N
12340C	Tetrachloroethene	06/19/01	10	U	µg/L	N
12340C	Toluene	12/31/98	1	U	µg/L	N
12340C	Toluene	11/17/99	10	U	µg/L	N
12340C	Toluene	08/21/00	10	U	µg/L	N
12340C	Toluene	06/19/01	10	U	µg/L	N
12340C	Trichloroethene	12/31/98	1	U	µg/L	N
12340C	Trichloroethene	10/13/99	1	U	µg/L	N
12340C	Trichloroethene	11/17/99	3	U	µg/L	N
12340C	Trichloroethene	02/23/00	3	U	µg/L	N
12340C	Trichloroethene	05/22/00	3	U	µg/L	N
12340C	Trichloroethene	08/21/00	3	U	µg/L	N
12340C	Trichloroethene	11/14/00	3	U	µg/L	N

Attachment A.2. Leachate Collection System and Leak Detection System Data

Well Number	Constituent	Date Sampled	Validated Result	Validation Qualifier	Units	Type
12340C	Trichloroethene	02/20/01	3	U	µg/L	N
12340C	Trichloroethene	06/19/01	3	U	µg/L	N
12340C	Trichlorofluoromethane	12/31/98	1	U	µg/L	N
12340C	Trichlorofluoromethane	11/17/99	10	U	µg/L	N
12340C	Trichlorofluoromethane	08/21/00	10	U	µg/L	N
12340C	Trichlorofluoromethane	06/19/01	10	U	µg/L	N
12340C	Vinyl Acetate	12/31/98	1	UJ	µg/L	N
12340C	Vinyl Acetate	11/17/99	10	U	µg/L	N
12340C	Vinyl Acetate	08/21/00	10	U	µg/L	N
12340C	Vinyl Acetate	06/19/01	10	U	µg/L	N
12340C	Vinyl chloride	12/31/98	1	U	µg/L	N
12340C	Vinyl chloride	10/13/99	1	U	µg/L	N
12340C	Vinyl chloride	11/17/99	1	U	µg/L	N
12340C	Vinyl chloride	02/23/00	1	U	µg/L	N
12340C	Vinyl chloride	05/22/00	1	U	µg/L	N
12340C	Vinyl chloride	08/21/00	1	U	µg/L	N
12340C	Vinyl chloride	11/14/00	1	U	µg/L	N
12340C	Vinyl chloride	02/20/01	1	U	µg/L	N
12340C	Vinyl chloride	06/19/01	1	U	µg/L	N
12340C	Xylenes, Total	12/31/98	1	U	µg/L	N
12340C	Xylenes, Total	11/17/99	10	U	µg/L	N
12340C	Xylenes, Total	08/21/00	10	U	µg/L	N
12340C	Xylenes, Total	06/19/01	10	U	µg/L	N
12340C	cis-1,2-Dichloroethene	12/31/98	1	U	µg/L	N
12340C	cis-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12340C	cis-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12340C	cis-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12340C	trans-1,2-Dichloroethene	11/17/99	10	U	µg/L	N
12340C	trans-1,2-Dichloroethene	08/21/00	10	U	µg/L	N
12340C	trans-1,2-Dichloroethene	06/19/01	10	U	µg/L	N
12340C	trans-1,3-Dichloropropene	11/17/99	10	U	µg/L	N
12340C	trans-1,3-Dichloropropene	08/21/00	10	U	µg/L	N
12340C	trans-1,3-Dichloropropene	06/19/01	10	U	µg/L	N
12340C	trans-1,4-Dichloro-2-butene	12/31/98	1	U	µg/L	N
12340C	trans-1,4-Dichloro-2-butene	11/17/99	10	U	µg/L	N
12340C	trans-1,4-Dichloro-2-butene	08/21/00	10	U	µg/L	N
12340C	trans-1,4-Dichloro-2-butene	06/19/01	10	U	µg/L	N

Appendix B

APPENDIX B

PREPARATORY STATISTICAL METHODOLOGY

APPENDIX B

As per the applicable or relevant and appropriate requirements (ARARs) identified in Appendix A of the Groundwater/Leak Detection and Leachate Monitoring Plan (GWLMP) (DOE 1997b), there are various statistical methods (e.g., control charts and tolerance or prediction interval procedure) that can be selected in order to assist in statistically determining a significant increase in a monitoring constituent concentration level; however, prior to selection of appropriate methods, the data must be evaluated to determine that it meets the requirements associated with each statistical method.

For instance, control charts are used as a graphical tool to track and identify rapid changes and long term trends in monitoring conditions. They are used for intra-well comparisons during detection monitoring or for comparisons to historical background data. Control charts allow for the comparison of continuously collected data to previously collected baseline or historical data enabling one to detect trends or sudden changes in concentration levels over time. Possible outliers can be detected easily as sharp deviations from existing and past conditions. Additionally, it may be easy to detect seasonality in the data when multiple years of data are present on the chart. Because control charts are intra-well comparison tools, there is no risk of identifying significant differences between compliance wells and "background" wells, which may be attributable to spatial differences between wells.

The initial baseline data set consists of at least eight independent samples collected from each well prior to constructing the control chart. These samples are meant to characterize the conditions at uncontaminated wells before detection monitoring. Estimates of the well mean and well standard deviation are calculated for each well to be used in determining the control limits and to standardize the mean of monitoring data for each sampling period. A cumulative sum (CUSUM) for each period is also computed. Each value is plotted on the Combined Shewhart-CUSUM control chart. A well is deemed "out-of-control" when either the standardized mean exceeds the Shewhart Control Limit (SCL) (sudden contamination) or the CUSUM becomes too great and crosses the "decision internal value" (h) (gradual contamination).

As with any other statistical method, control charts are based on certain assumptions about the sample data:

(Assumption 1) The baseline data are from an uncontaminated well (i.e., the process is "in control" – no trend/steady state) and reflect current conditions.

(Assumption 2) The data are normally distributed or can be transformed to such (e.g., lognormally distributed data, when log-transformed, become normally distributed).

(Assumption 3) The sample data are statistically independent (i.e., no serial correlation detected).

The following five steps were performed to assess the appropriateness and validity of using the collected data to establish "baseline" along with using statistical methods such as control charts to establish control limits:

- Data reduction (Section B.1)
- Distribution type (Section B.2)
- Outlier removal (Section B.3)
- Trend analysis (Section B.4)
- Serial correlation (Section B.5).

Graphs depicting the data for each horizon are provided in the following attachments:

- Attachment B.1 (Horizontal Till wells)
- Attachment B.2 (Great Miami Aquifer wells)
- Attachment B.3 (Leachate Collection System)
- Attachment B.4 (Leak Detection System).

These graphs are concentration versus time plots for each constituent where at least 25 percent of the data was detected. The graphs present the data per the determined distribution types (i.e., normal or lognormal). The data represented on each graph includes the total data set, as well as, the data set after data reduction. In addition, outliers are identified on the graphs (i.e., for after data reduction). In regard to the total data set, non-detected concentrations represent the laboratory detection limit; however, for after data reduction data, non-detected concentrations were halved.

B.1 DATA REDUCTION

The data reduction step serves two purposes. The first is to determine the appropriate sampling period for the baseline data set. During the baseline sampling period, there was a change in the horizontal till well purging procedure. To test the hypothesis that the "not purged prior to sample collection" data set is not consistent with the "purged prior to sample collection" data set, a series of tests comparing the two data sets were performed. The statistical tests included the t-Test (compares means from two approximately normal distributions), the F-test (compares variances from two approximately normal distributions), the Wilcoxon Rank Sum (non-parametric test that compares the equality of the distribution of pooled ranks – considered the non-parametric equivalent of the t-Test), and the Kolmogorov-Smirnov test (non-parametric test that compares the distribution shapes of two data sets). In addition to these test procedures, professional judgement by statistical staff was employed because of the relatively small population size and the occasional highly variable data sets (i.e., concentration fluctuations). Table B-1 presents the results of the comparisons.

The second step was to standardize the sampling period and generate an estimated value for each sampling period. This was accomplished by averaging all sample results within each pre-specified time period (i.e., quarterly or bi-monthly) to determine a single estimate of the average concentration per period. The purpose of this is three-fold. First, it eliminates the chance of one or more overly sampled time periods from unduly dominating the baseline calculations. Second, it helps to reduce the effects of serial correlation. And, third, it allows for proper sample-to-sample comparison and the ability to visually assess seasonality. It should be noted that control charts are always constructed on a fixed interval format. The following bullets identify the methodology with respect to averaging sample results in order to standardize sample frequency:

- Half the non-detected result is used in the averaging process.
- If there was at least one detected result for the sampling interval (i.e., quarterly or bi-monthly), then the average result was considered to be a detection.
- If all results for the sampling interval (i.e., quarterly or bi-monthly) were non-detected, then the result was considered to be a non-detect.

B.2 DISTRIBUTION TYPE

As stated in the assumptions listed above, the data need to be normally distributed for the baseline calculations to be appropriate. If the distribution can be demonstrated to be lognormal, then a log-transformation will "normalize" the data and the control chart methodology is still valid (on the log-transformed data). The distribution type is determined by use of the regression-based Shapiro-Wilk procedure, commonly believed to be the best omnibus normality testing procedure available. This procedure is recommended in the July 1992 Draft Addendum to Interim Final Guidance "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities" (EPA/530-SW-89-026 – 1989); by U.S. Environmental Protection Agency (EPA) QA/G9 "Guidance for Data Quality Assessment" (1998); and in "Prescription for Working Statisticians" (Albert Madansky, 1988). Details of this rather complex procedure can be found in the Draft Addendum and in "Statistical Methods for Environmental Pollution Monitoring" (R.O. Gilbert, 1987). A computerized version of the procedure can be found in the statistical software package "Statgraphics" from Manugistics.

The decision level of the Shapiro-Wilk procedure was set at five percent (P-Value ≥ 0.05). Data sets that could not be demonstrated to fit the normal or lognormal distributions at the five percent level are noted in the tables. The distribution that visually appears to best fit the data was assumed. The assumed distribution type is listed in Table B-2 (horizontal till wells), Table B-3 (Great Miami Aquifer wells) and Table B-4 (LCS/LDS) and are designated either "Normal" or "Lognormal". The Shapiro-Wilk probabilities (i.e., p-values) are presented in Tables B-2 through B-4 after the distribution type.

B.3 OUTLIER REMOVAL

An outlier removal procedure was performed on the baseline data set in order to eliminate apparent anomalies. These anomalies can inordinately influence the baseline statistics and can, in some cases, falsely lead to a conclusion that there is a downward or upward trend in the baseline concentrations. Outliers that are "Too Low" have an uncertain effect. Though the baseline mean is pushed lower, the baseline standard deviation increases which pushes the control limits higher. Consequently, "low" outliers effects are uncertain and differ in each case. With "Too High" outliers, the effect is always to inflate the control limits because the baseline mean and standard deviation are both inflated. Dixon's Extreme Value test was used to identify outliers because of the relatively small sample sizes of the baseline data sets. The probability value used to "remove" an outlier was set to two percent (P-Value ≤ 0.02) in order to avoid "throwing out" too much valid data, while still identifying the extreme cases which are most likely anomalies. Dixon's Test is recommended for small data sets ($n < 26$) by EPA QA/G9. The details of the procedure can also be found in this EPA guidance. Results that yielded Dixon's Test probabilities of between two and approximately five percent ($0.02 <$ P-Value ≤ 0.05) were identified as "marginal" outliers, but not removed from the baseline data set. Identified outliers, with associated information, are listed in the last five columns of Tables B-2, B-3, and B-4.

It should be noted that outlier removal and determining distribution types are performed concurrently because an apparent outlier in one assumed statistical distribution may be perfectly normal in another. For example, the lognormal distribution is not symmetric like the normal distribution, having a long right tail (away from zero) and a short left tail (toward zero). With a lognormal distribution, it is normal to have somewhat extreme values to the right but not normal to have even moderately divergent values to the left. When determining outliers and distribution, the statistical staff must assess the data sets with and without potential outliers to identify the "best" fit to the majority of the data set.

B.4 TREND ANALYSIS

Assumption 1 indicates that the baseline data are "in control"; having no trend. EPA/530-SW-89-026 states that the baseline data be "...Normally distributed with fixed mean μ and constant variance σ^2." In order to test this assumption, the Mann-Kendall procedure was used to ascertain if there was a statistically significant upward or downward trend (i.e., not a fixed mean). If a trend were present, then that would indicate that the proposed baseline data are not at steady-state and need to be further investigated. The details of the Mann-Kendall test can be found in both the Gilbert book and the EPA QA/G9 guidance.

The Mann-Kendall trend assessments and associated probability values are presented in Tables B-2, B-3, and B-4 in the column marked "Trend" and "P-Value", respectively. The following protocol was used to characterize trends based on the associated probability values:

- Up, Significant or Down, Significant
  P-Value ≤ 0.05
- Up, Marginal or Down, Marginal
  $0.05 <$ P-Value ≤ 0.10
- No Significant Trend
  P-Value > 0.10

It has been suggested that the baseline data may be "de-trended" before baseline calculations are performed. The central problem with this approach is that the statistical staff is trying to extrapolate (read "predict") into the future. There is no evidence that any currently observed trend will continue in the same manner as in the past. A trend may increase, decrease, change direction, "level-off", etc. Without prescience, there would be no way of discerning if an increase (or decrease) in concentration was due to contamination or an unforeseen change in the "natural" trend. This is why the guidance documents on the subject state unequivocally that the baseline data be "...Normally distributed with fixed mean μ and constant variance σ^2." In other words, that no statistically significant trend is present.

Removing seasonal trend has also been suggested. EPA/530-SW-89-026 states that "Corrections for seasonality should be used with great caution as they represent extrapolation into the future. There should be a good scientific explanation for the seasonality as well as good empirical evidence for the seasonality before corrections are made. Larger than average rainfalls for two or three Augusts in a row does not justify the belief that there will never be a drought in August, and this idea extends directly to groundwater quality. In addition, the quality (bias, robustness, and variance) of the estimates of the proper corrections must be considered even in cases where corrections are called for." For this reason, no attempt was made to remove seasonality from the data.

B.5 SERIAL CORRELATION

Assumption 3 is that the sample data are statistically independent (no serial correlation). The Addendum to EPA/530-SW-89-026 states that, "The methodology for Control Charts also assumes that the sample data are independently distributed from a statistical standpoint. In fact, these charts can easily give misleading results if the consecutive sample data are not independent." To test for the independence of

consecutively sampled data, the Rank Von Neumann Test for Serial Correlation was used. This procedure is detailed in Gilbert and also in Madansky.

The Rank Von Neumann serial correlation and associated probability values are presented in Tables B-2, B-3 and B-4 in the column marked "Serial Correlation" and "P-Value", respectively. The following protocol was used to characterize serial correlation based on the associated probability values:

- Detected
  P-Value ≤ 0.05
- Marginal
  $0.05 <$ P-Value < 0.10
- Not Detected
  P-Value ≥ 0.10

B.6 CONCLUSIONS

In addition to determining the viability of using the control chart approach, other statistical methods were evaluated for potential use. "Ohio Municipal Solid Waste Rules – Ground Water Sampling, Analysis, and Statistical Methods" [OAC 3745-27-10(C)] specifies three in particular: a) parametric Analysis of Variance (ANOVA), b) non-parametric ANOVA, and c) tolerance or prediction interval procedure. Though each method varies in its sensitivities to potential outliers (the non-parametric ANOVA being particularly robust to extreme values), all are sensitive to serial correlation (lack of temporal independence). And, as with any approach, none of these methods are appropriate to use when the baseline data are exhibiting an upward or downward trend because the monitoring well is not at steady state.

TABLE B-1

COMPARISON OF PURGED AND NOT PURGED DATASETS[a]

(all results were log-transformed)

	Constituent[b]	t-Test[c,d]	F-Test[c,d]	Wilcoxon[c,d]	K-S Test[c,d]	Prof. Judgement[e]
12238	TOC	0.0005 **SD**	0.5960 NSD	0.0037 **SD**	0.0053 **SD**	—
	TOX	0.8428 NSD	0.9421 NSD	0.8743 NSD	0.7805 NSD	—
N[d] NP P 5 12	Boron	0.6029 NSD	0.1439 NSD	0.6353 NSD	0.5363 NSD	—
	Uranium, Total	0.2726 NSD	0.0001 **SD**	0.4292 NSD	0.1576 NSD	**SD**
12239	TOC	0.8406 NSD	0.3913 NSD	0.7362 NSD	0.6768 NSD	—
	TOX	0.3450 NSD	0.7259 NSD	0.3463 NSD	0.6768 NSD	—
N[d] NP P 3 13	Boron	0.4938 NSD	0.5863 NSD	0.5012 NSD	0.5609 NSD	—
	Uranium, Total	0.0352 **SD**	0.6848 NSD	0.0436 **SD**	0.0610 **MD**	—
12240	TOC	0.1883 NSD	0.4431 NSD	0.3502 NSD	0.7791 NSD	**SD**
	TOX	0.3687 NSD	0.1326 NSD	0.2027 NSD	0.2574 NSD	—
N[d] NP P 2 13	Boron	0.0024 **SD**	0.3544 NSD	0.0358 **SD**	0.0649 **MD**	—
	Uranium, Total	0.0006 **SD**	0.4659 NSD	0.0358 **SD**	0.0649 **MD**	—

[a]The comparisons come from datasets where the well was either purged or not-purged prior to sample collection.
[b]TOC = total organic carbon; TOX = total organic halogens
[c]The values listed are the p-values of the test for the given constituent.
[d]N = total number of samples
NP = not purged prior to sample collection
P = purged prior to sample collection
NSD - indicates no significant difference at the 10 percent level (P-Value > 0.10)
SD - indicates a significant difference at the five percent level (P-Value $\leq$ 0.05)
MD - indicates a marginal difference with P-Values greater than five percent, but less than or equal to 10 percent (0.05 < P-Value $\leq$ 0.10)
[e]Professional judgement is indicated because of the low power of the tests due to small sample sizes. Even though the power of the test is insufficient to detect a difference, looking at the data, there appears to be "noticeable" differences between the data sets.

TABLE B-2

HORIZONTAL TILL WELL SUMMARY

								OUTLIER(S)[e]				
Well	Constituent[a]	Distribution[b]	P-Value	Trend[c]	P-Value	Ser. Corr.[d]	P-Value	Period	Result	Hit	HI/LO	P-Value
12338	TOC	Normal	0.553	No Sig. Trend	0.340	Not Detected	> 0.100	2000-B1	7.24	1	HI	< 0.005
12338	TOX	Normal	0.731	No Sig. Trend	0.229	Not Detected	> 0.100	1999-B5	0.0703	1	HI	< 0.005
12338	Boron	Lognormal	0.494	Up, Sig.	0.008	Detected	0.007					
12338	Uranium, Total	Normal	0.983	No Sig. Trend	0.267	Not Detected	> 0.100	1999-B1	0.8	0	LO	0.010
12339	TOC	Lognormal	0.675	No Sig. Trend	0.195	Not Detected	> 0.100	2000-B1	11.1	1	HI	0.020
12339	TOX	Lognormal	0.866	No Sig. Trend	0.427	Not Detected	> 0.100					
12339	Boron	Normal	0.918	No Sig. Trend	0.180	Not Detected	> 0.100					
12339	Uranium, Total	Normal	0.921	No Sig. Trend	0.075	Not Detected	> 0.100	1999-B1	1.3865	0	LO	0.005
12340	TOC	Lognormal	0.131	Up, Sig.	0.043	Not Detected	> 0.100	2000-B1	9.81	1	HI	0.017
12340	TOX	Lognormal	0.456	No Sig. Trend	0.100	Not Detected	> 0.100					
12340	Boron	Normal	0.362	Up, Sig.	0.017	Detected	< 0.005					
12340	Uranium, Total	Lognormal	0.148	Up, Sig.	0.017	Detected	0.008					

[a]TOC = total organic carbon; TOX = total organic halogens
[b]Statistical method is Shapiro-Wilk test.
[c]Statistical method is Mann-Kendall Test.
No Sig. Trend = No Significant Trend
Up, Sig. = Up, Significant
[d]Statistical method is Rank von Neumann Ratio Test.
[e]Statistical method is Dixon's Test.

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TABLE B-3

GREAT MIAMI AQUIFER WELLS SUMMARY

								OUTLIER(S)[e]				
Well	Constituent[a]	Distribution[b]	P-Value	Trend[c]	P-Value	Ser. Corr.[d]	P-Value	Period	Result	Hit	HI/LO	P-Value
22198	TOC	Lognormal	0.122	No Sig. Trend	0.241	Not Detected	> 0.100	1998-Q2	52.5	1	HI	< 0.005
22198	TOX	Lognormal	0.750	No Sig. Trend	0.150	Not Detected	> 0.100					
22198	Boron	Lognormal	0.922	No Sig. Trend	0.112	Not Detected	> 0.100					
22198	Uranium, Total	Lognormal[f]	0.039	No Sig. Trend	0.150	Detected	< 0.005					
22199	TOC	Lognormal	0.341	Down, Sig.	0.031	Not Detected	> 0.100					
22199	TOX	Lognormal	0.198	Up, Sig.	0.030	Not Detected	> 0.100					
22199	Boron	Normal[f]	0.032	No Sig. Trend	0.383	Marg. Detected	0.066					
22199	Uranium, Total	Lognormal	0.077	Up, Sig.	0.023	Marg. Detected	0.057					
22200	TOC	Lognormal	0.065	No Sig. Trend	0.214	Not Detected	> 0.100					
22200	TOX	Normal	0.445	Up, Marginal	0.061	Marg. Detected	0.071	2000-Q2	0.177	1	HI	< 0.005
								1998-Q4	0.124	1	HI	< 0.005
22200	Boron	Normal	0.285	No Sig. Trend	0.383	Not Detected	> 0.100					
22200	Uranium, Total	Lognormal	0.690	No Sig. Trend	0.422	Not Detected	> 0.100					
22201	TOC	Lognormal	0.077	No Sig. Trend	0.096	Not Detected	> 0.100					
22201	TOX	Lognormal	0.426	No Sig. Trend	0.172	Marg. Detected	0.060					
22201	Boron	Normal	0.370	No Sig. Trend	0.135	Not Detected	> 0.100					
22201	Uranium, Total	Lognormal	0.548	No Sig. Trend	0.232	Not Detected	> 0.100					
22203	TOC	Lognormal	0.123	No Sig. Trend	0.108	Not Detected	> 0.100					
22203	TOX	Normal	0.815	No Sig. Trend	0.155	Not Detected	> 0.100	2000-Q2	0.213	1	HI	< 0.005
22203	Boron	Normal	0.812	No Sig. Trend	0.431	Not Detected	> 0.100					
22203	Uranium, Total	Lognormal	0.710	Up, Marginal	0.078	Detected	0.032					
22204	TOC	Lognormal	0.127	No Sig. Trend	0.431	Not Detected	> 0.100					
22204	TOX	Normal	0.401	No Sig. Trend	0.209	Not Detected	> 0.100	2000-Q2	0.165	1	HI	< 0.005
22204	Boron	Lognormal	0.150	No Sig. Trend	0.500	Marg. Detected	0.076					
22204	Uranium, Total	Lognormal	0.244	No Sig. Trend	0.500	Not Detected	> 0.100					

[a]TOC = total organic carbon; TOX = total organic halogens
[b]Statistical method is Shapiro-wilk Test.
[c]Statistical method is Mann-Kendall Test.
No Sig. Trend = No Significant Trend
Down, Sig. = Down, Significant
Up, Sig. = Up, Significant
[d]Statistical method is Rank von Neumann Ratio Test.
Marg. Detected = Marginally Detected
[e]Statistical method is Dixon's Test using a two percent confidence level.
[f]Visually the best fit though below the five percent acceptance criteria.

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TABLE B-4

LEACHATE COLLECTION SYSTEM AND LEAK DETECTION SYSTEM SUMMARY

								OUTLIER(S)[e]				
Well	Constituent[a]	Distribution[b]	P-Value	Trend[c]	P-Value	Ser. Corr.[d]	P-Value	Period	Result	Hit	HI/LO	P-Value
12338C	TOC	Normal	0.084	Up, Marginal	0.100	Marg. Detected	0.063	1998-Q2	123	1	HI	< 0.005
12338C	TOX	Lognormal	0.295	Up, Marginal	0.050	Marg. Detected	0.059					
12338C	Boron	Normal	0.228	No Sig. Trend	0.137	Detected	0.029					
12338C	TC-99	Lognormal[f]	0.586	No Sig. Trend	0.180	Not Detected	> 0.100					
12338C	Uranium, Total	Normal	0.724	No. Sig. Trend	0.137	Not Detected	> 0.100					
12338D	TOC	Lognormal	0.715	No Sig. Trend	0.251	Not Detected	> 0.100					
12338D	TOX	Lognormal	0.210	No Sig. Trend	0.123	Not Detected	> 0.100					
12338D	Boron	Lognormal	0.736	Down, Sig.	0.020	Not Detected	> 0.100	2000-Q3	0.001	0	LO	< 0.005
								1998-Q1	0.0296	1	LO	< 0.005
12338D	Uranium, Total	Normal	0.864	No. Sig. Trend	0.180	Not Detected	> 0.100					
12339C	TOC	Lognormal	0.796	No Sig. Trend	0.438	Not Detected	> 0.100					
12339C	TOX	Lognormal[g]	0.043	No Sig. Trend	0.364	Not Detected	> 0.100	1999-Q1	0.00082	0	LO	< 0.005
12339C	Boron	Lognormal	0.757	Down, Sig.	0.015	Not Detected	> 0.100					
12339C	Uranium, Total	Normal	0.736	Up, Sig.	0.006	Detected	< 0.005					
12339D	TOC	Lognormal	0.599	Down, Sig.	0.021	Detected	0.018					
12339D	TOX	Lognormal	0.621	No Sig. Trend	0.340	Not Detected	> 0.100					
12339D	Boron	Lognormal[g]	0.016	Down, Sig.	0.015	Marg. Detected	0.098					
12339D	Uranium, Total	Lognormal	0.138	Down, Sig.	0.004	Detected	< 0.005					
12340C	TOC	Normal	0.883	Down, Sig.	0.235	Insuf. Data	NA[h]	1999-Q4	34.2	1	HI	< 0.005
12340C	TOX	Lognormal	0.282	Down, Sig.	0.035	Insuf. Data	NA[h]					
12340C	Boron	Normal	0.509	No Sig. Trend	0.138	Insuf. Data	NA[h]					
12340C	Uranium, Total	Normal	0.667	Up, Sig.	0.005	insuf. Data	NA[h]					

[a]TOC = total organic carbon; TOX = total organic halogens; TC-99 = technetium-99

[b]Statistical method is Shapiro-wilk Test.

[c]Statistical method is Mann-Kendall Test.
No Sig. Trend = No Significant Trend
Down, Sig. = Down, Significant Trend
Up, Sig. = Up, Significant

[d]Statistical method is Rank von Neumann Ratio Test.
Marg. Detected = Marginally Detected
Insuf. Data = Insufficient Data

[e]Statistical method is Dixon's Test.

[f]Distribution determination performed without "0" (zero) results which can not be log-transformed.

[g]Visually the best fit though below the 5 percent acceptance criteria.

[h]NA = not applicable

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Attachment B.1

ATTACHMENT B.1

HORIZONTAL TILL WELL GRAPHS

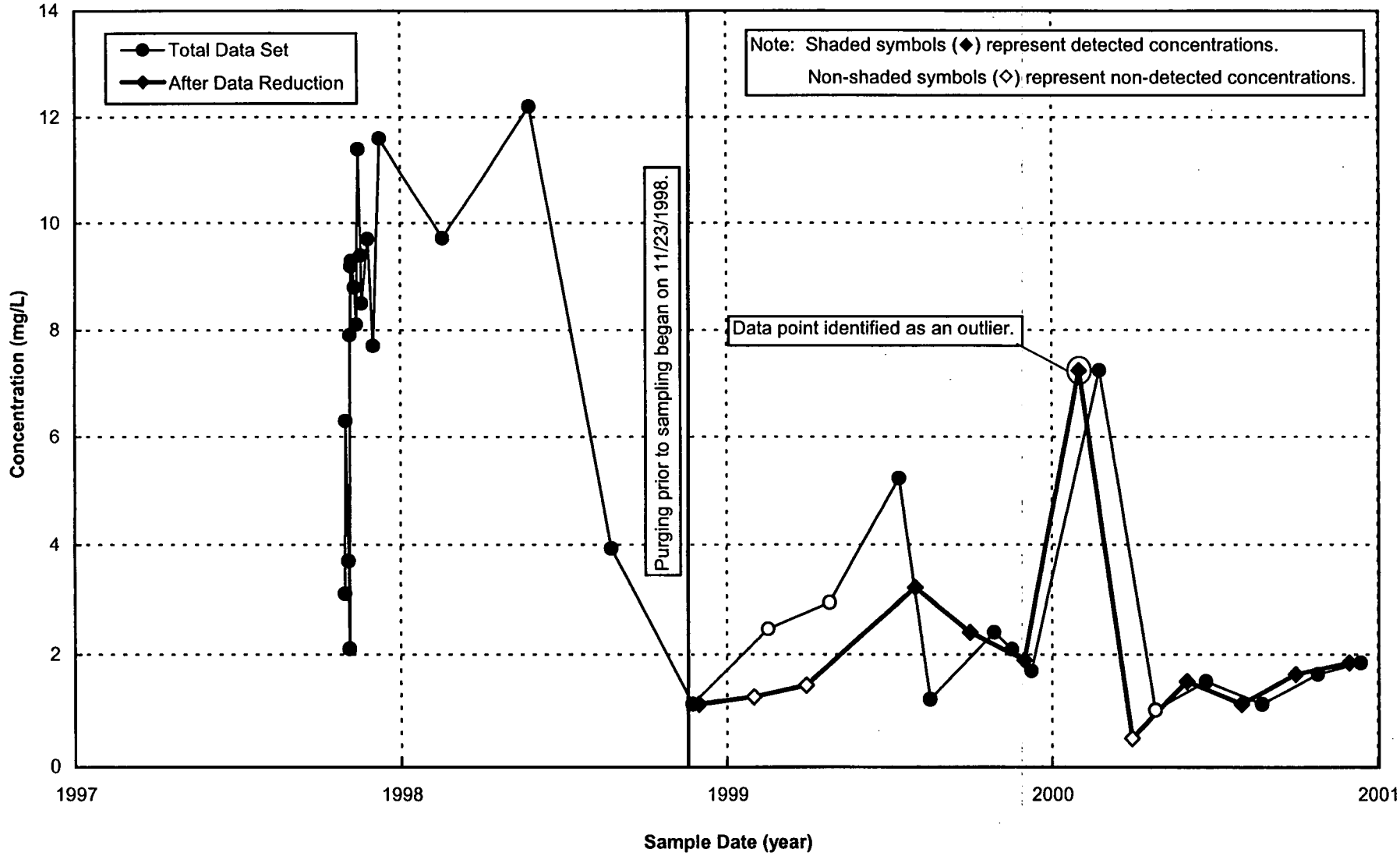

FIGURE B.1-1. TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12338

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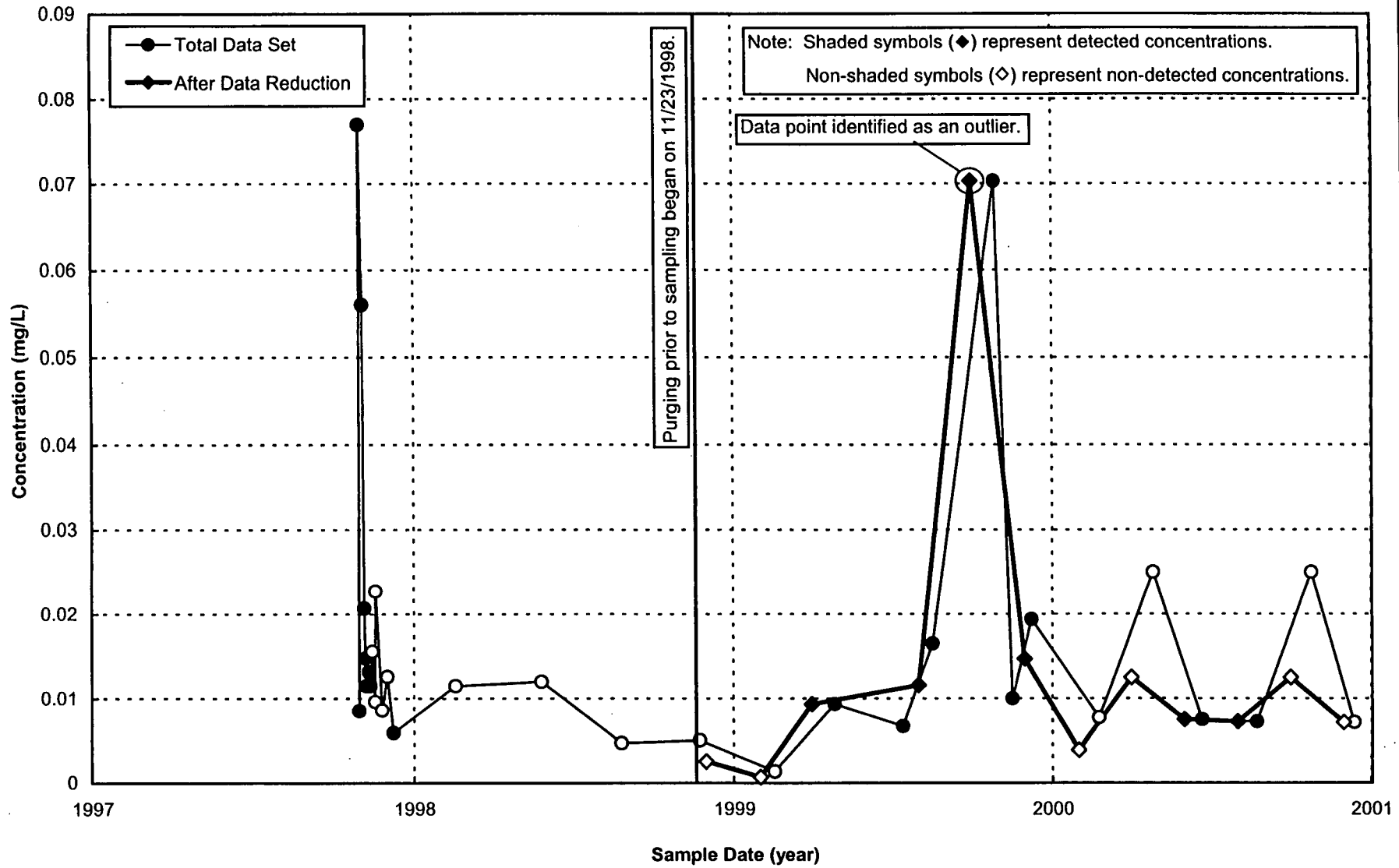

FIGURE B.1-2. TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12338

DRAFT FINAL

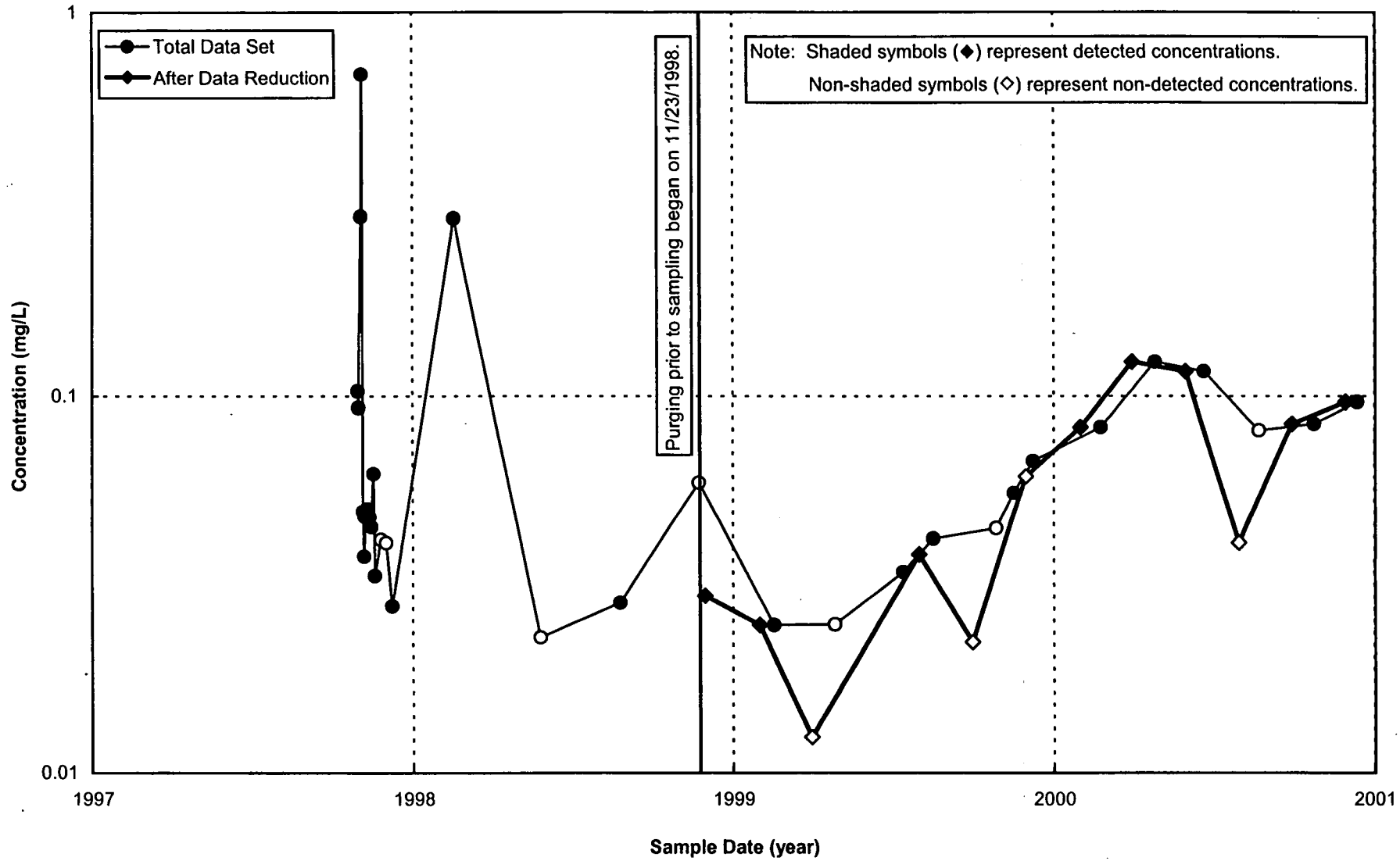

FIGURE B.1-3. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12338

DRAFT FINAL

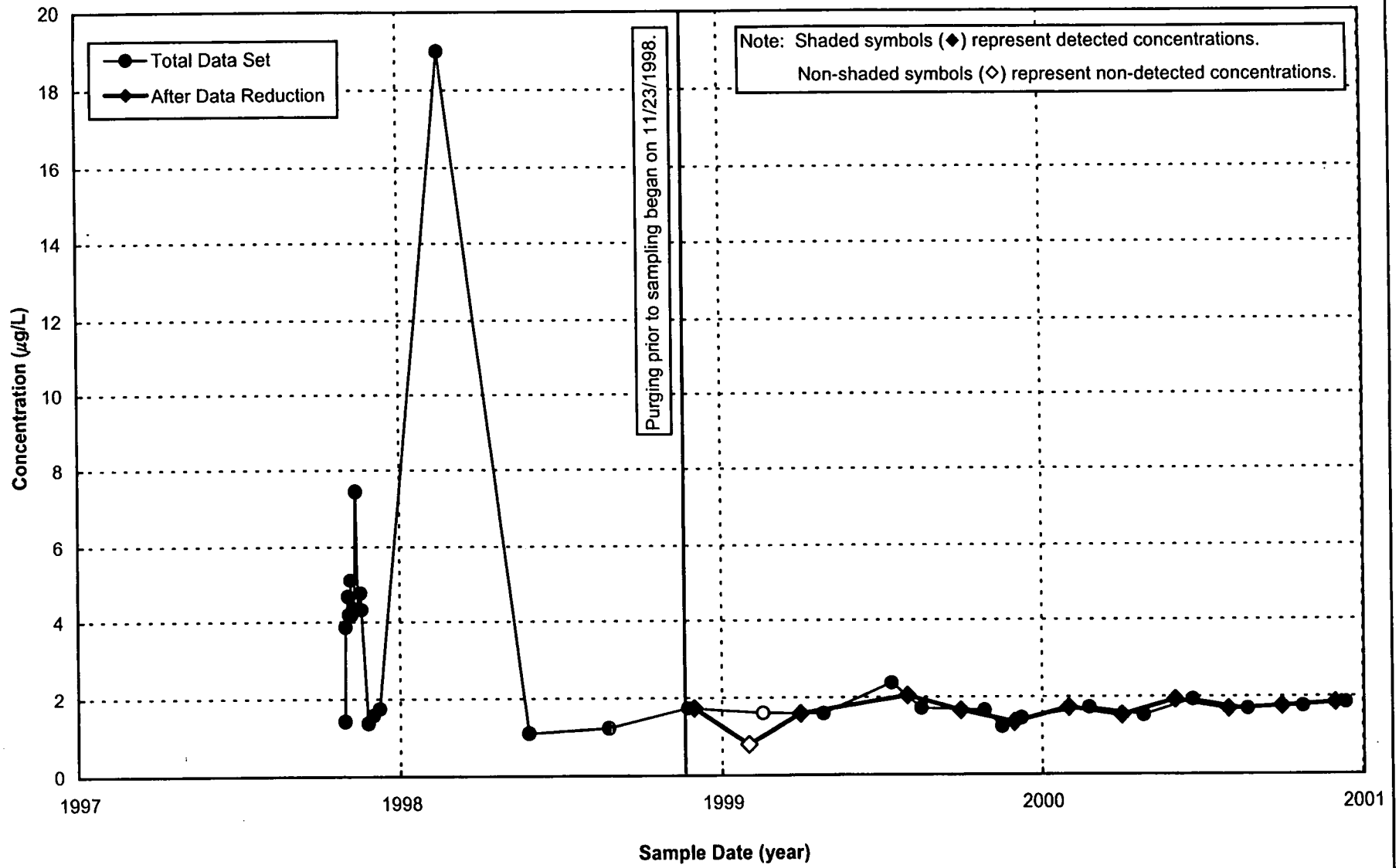

FIGURE B.1-4. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12338

DRAFT FINAL

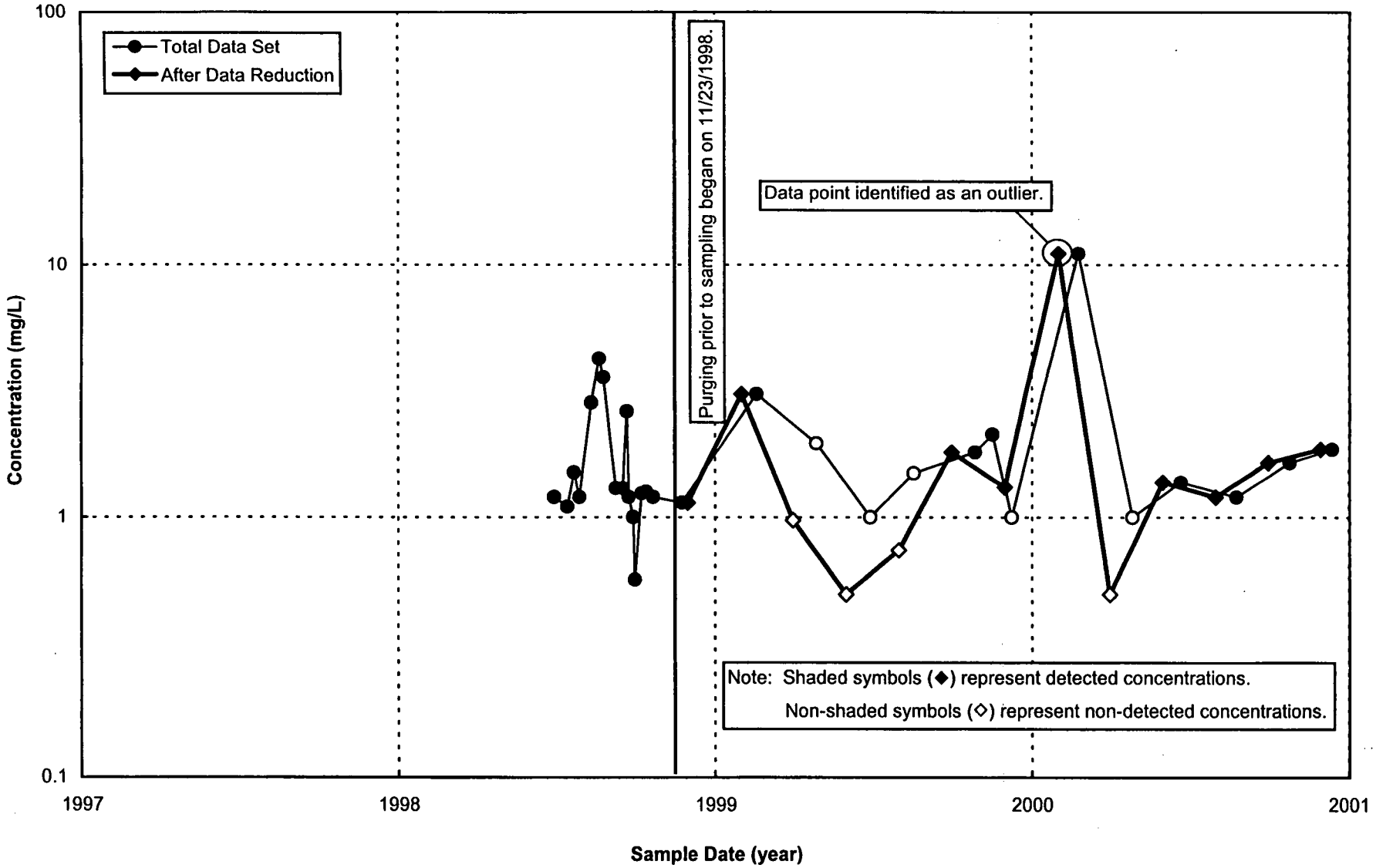

FIGURE B.1-5. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12339

DRAFT FINAL

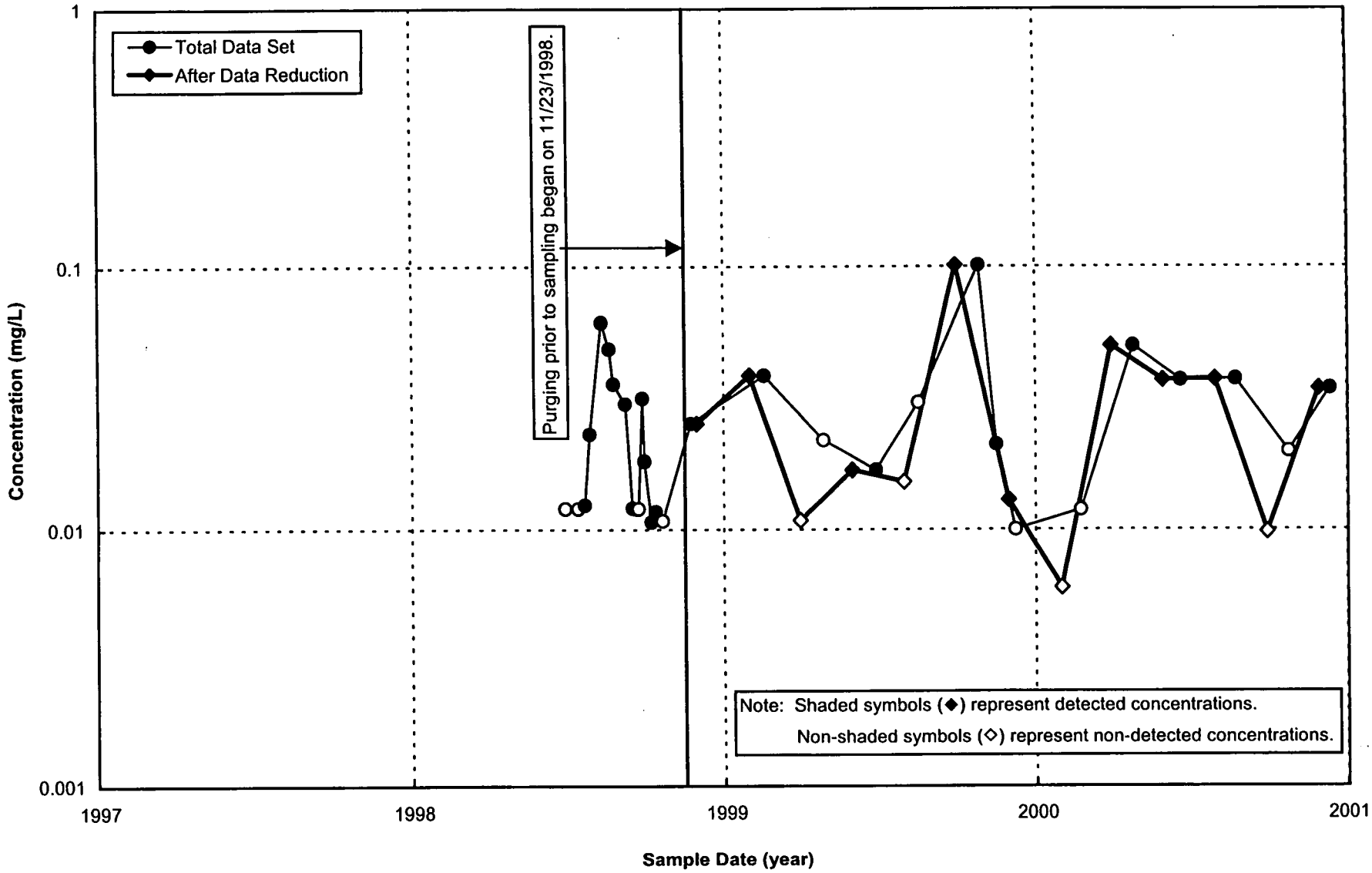

FIGURE B.1-6. LOG SCALE TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12339

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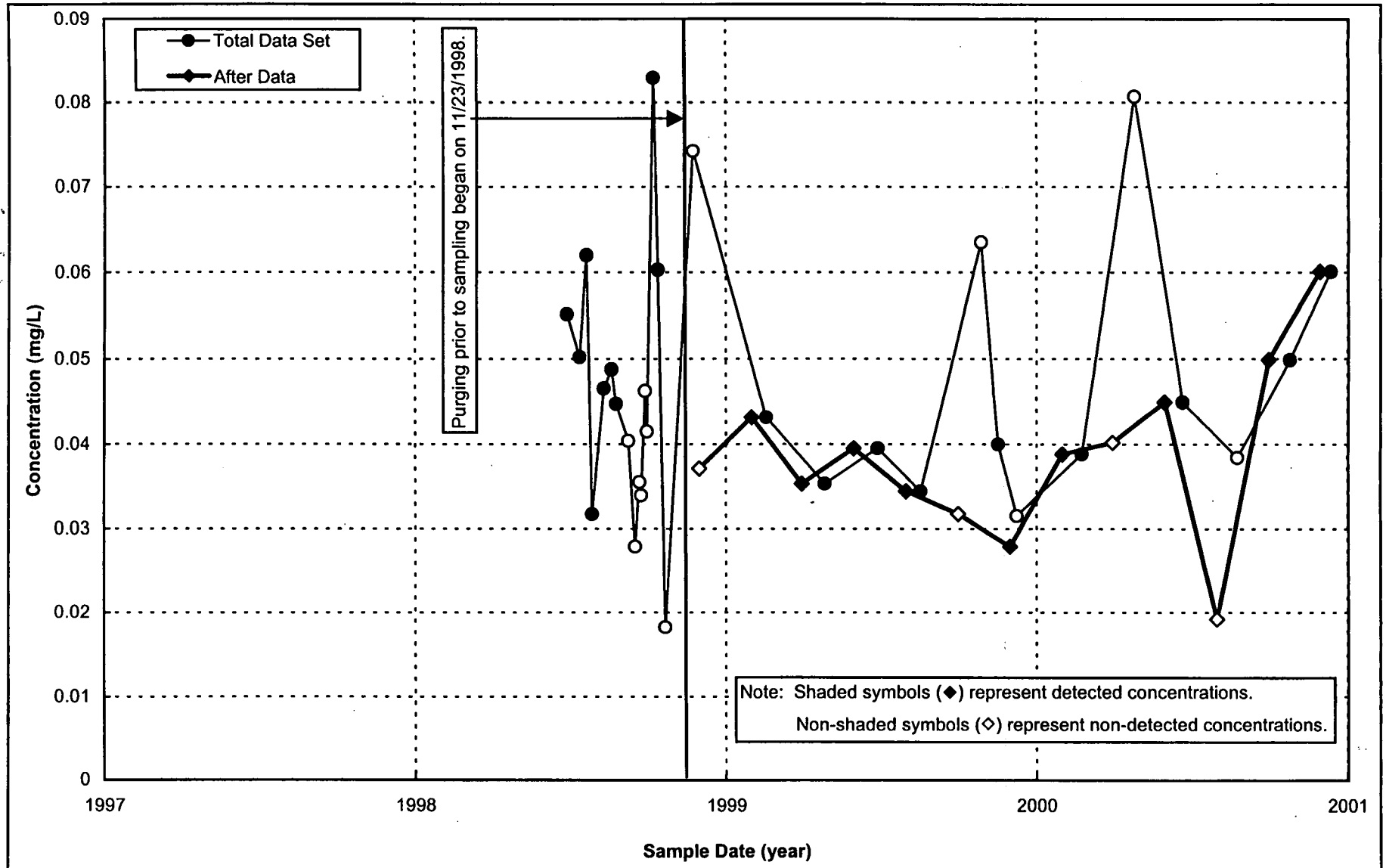

FIGURE B.1-7. BORON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12339

DRAFT FINAL

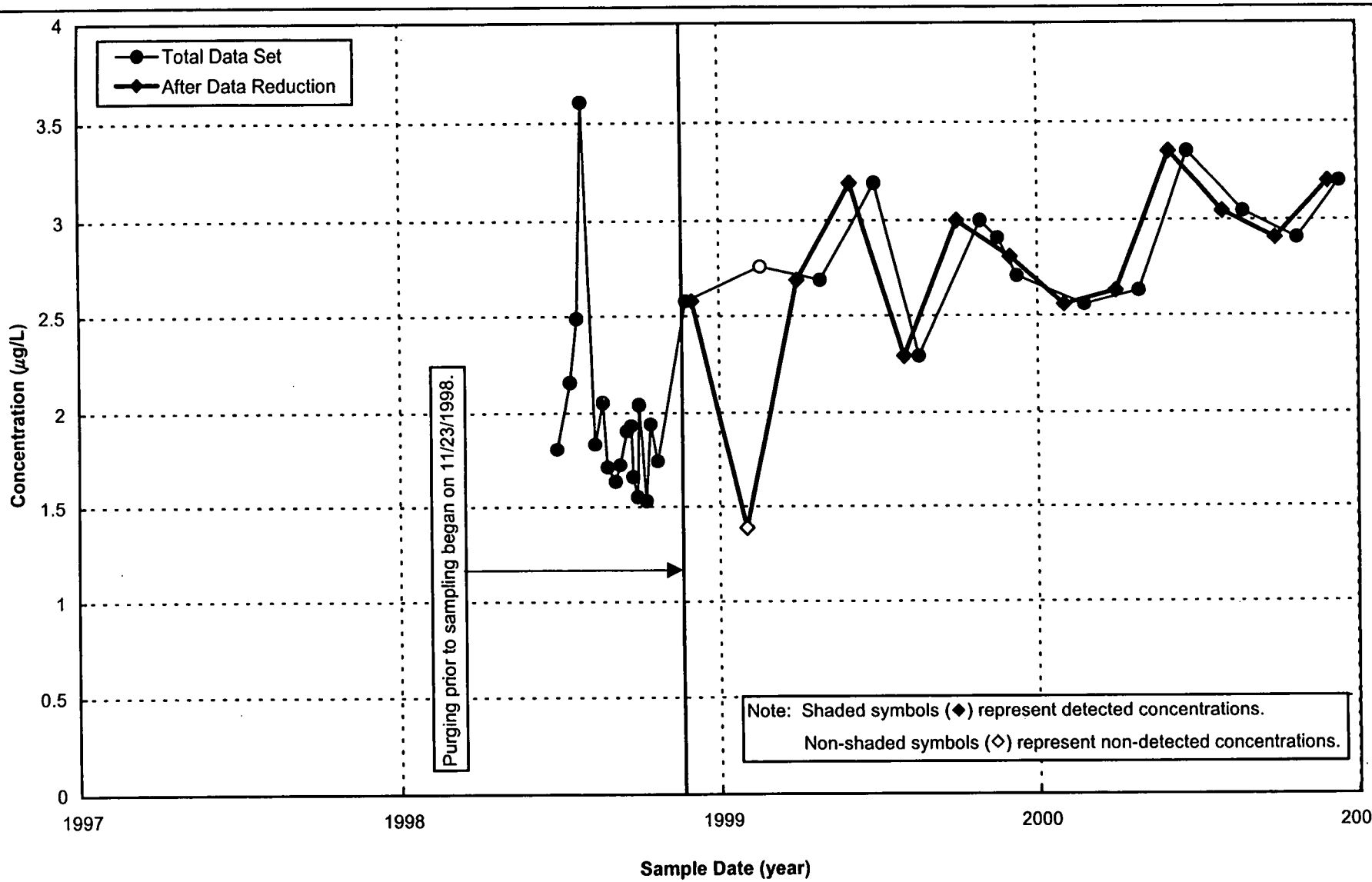

FIGURE B.1-8. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12339

DRAFT FINAL

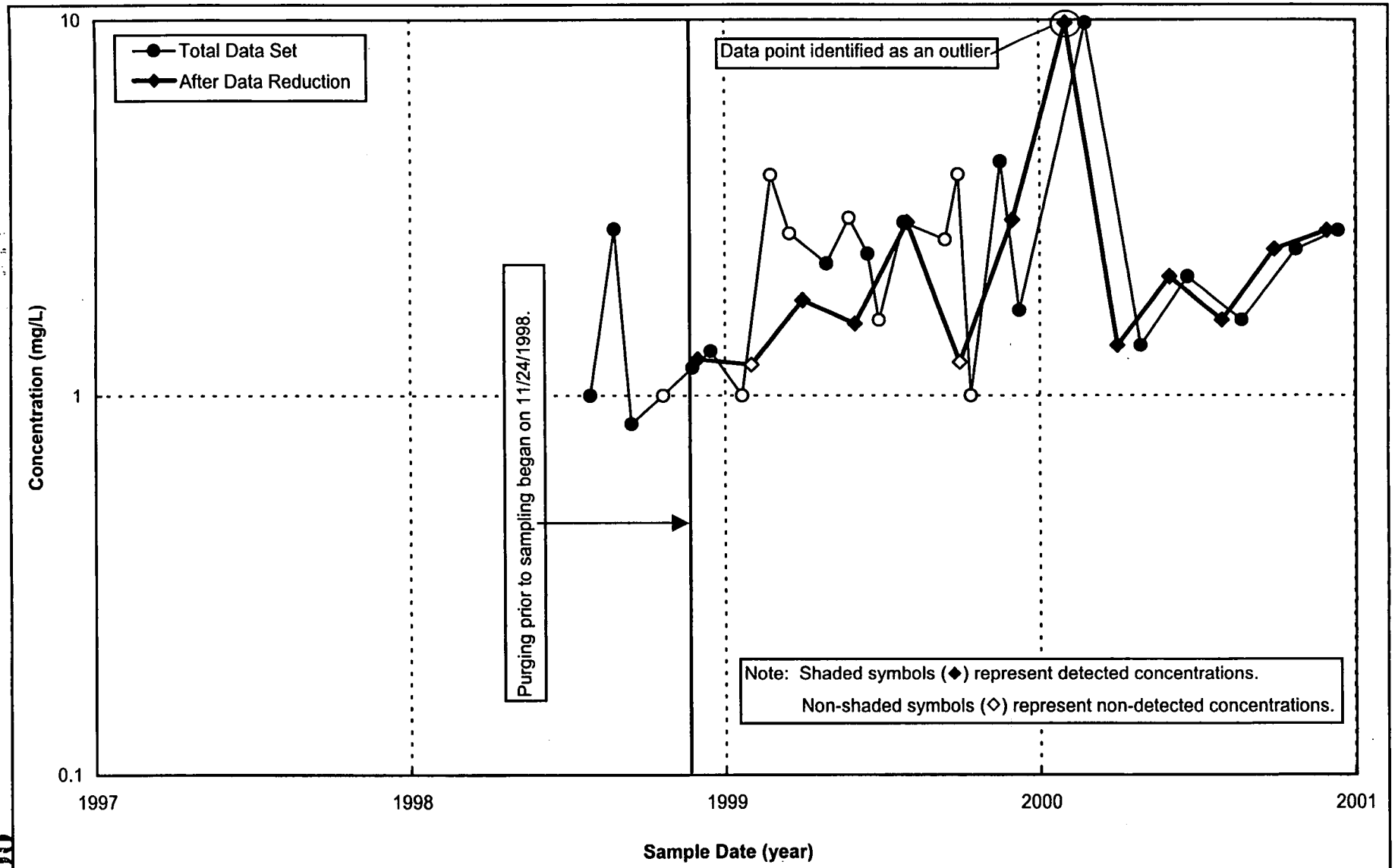

FIGURE B.1-9. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12340

DRAFT FINAL

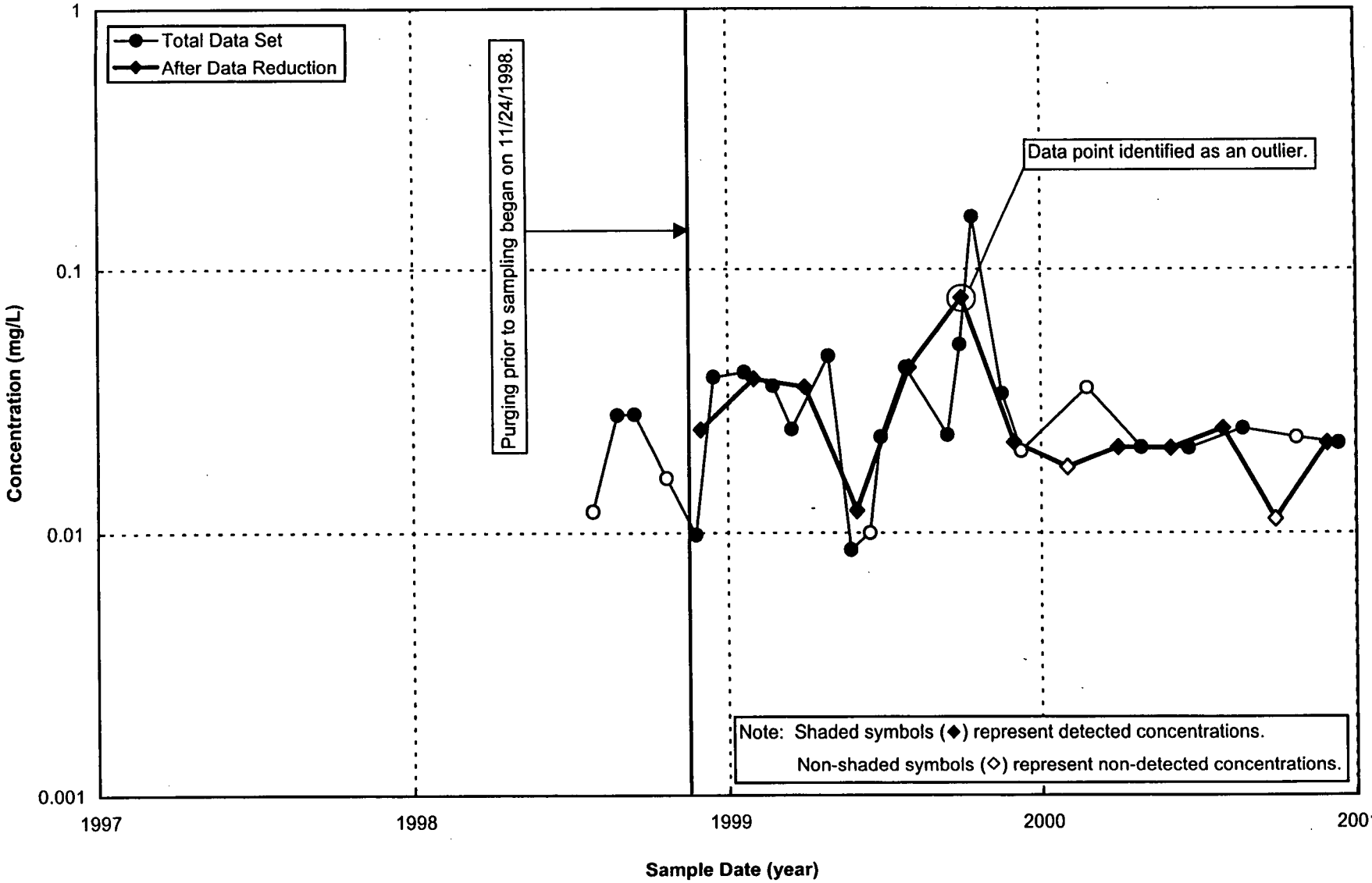

FIGURE B.1-10. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12340

DRAFT FINAL

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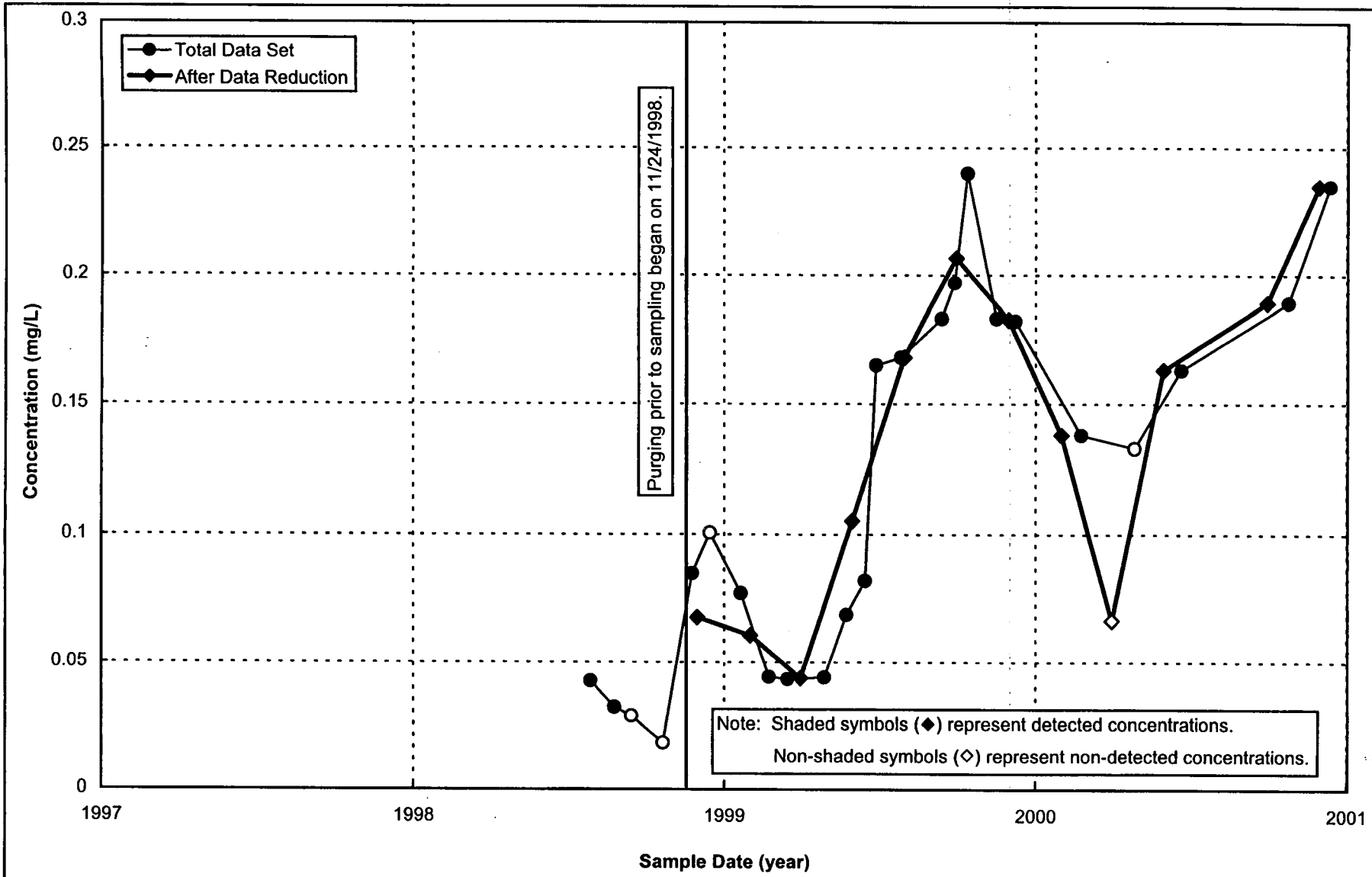

FIGURE B.1-11. BORON CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12340

DRAFT FINAL

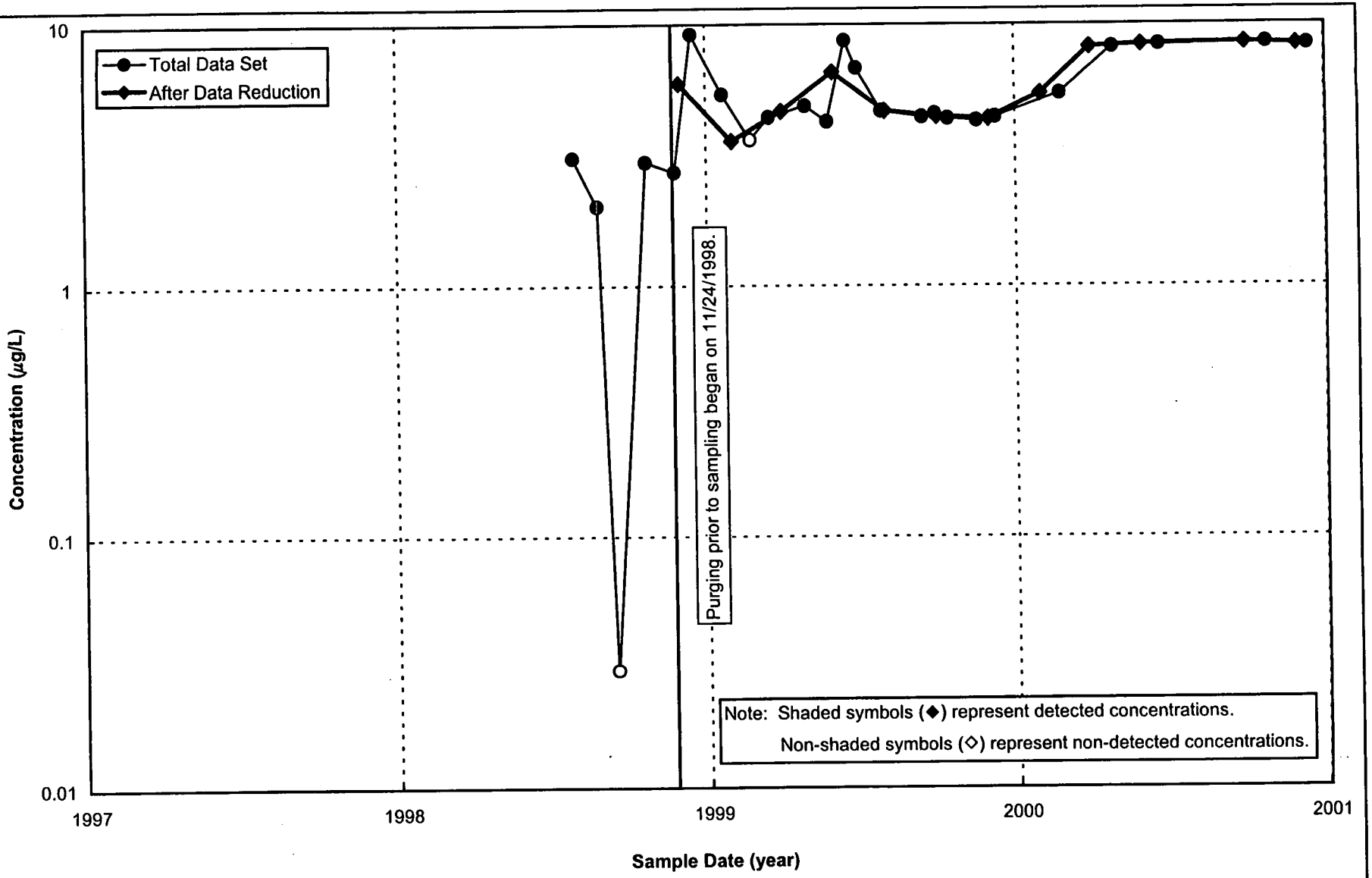

FIGURE B.1-12. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR HORIZONTAL TILL WELL 12340

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Attachment B.2

ATTACHMENT B.2

GREAT MIAMI AQUIFER GRAPHS

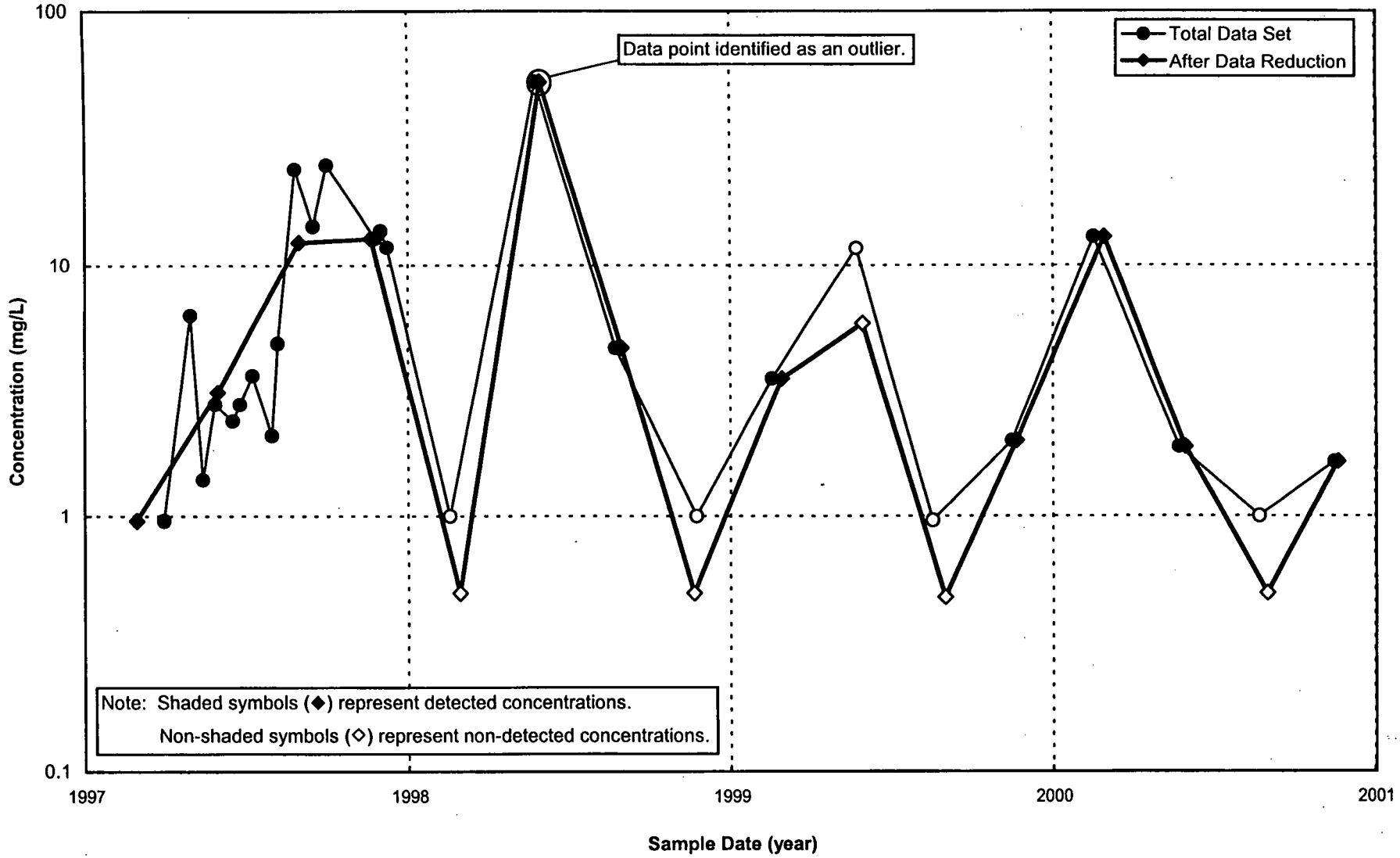

FIGURE B.2-1. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22198

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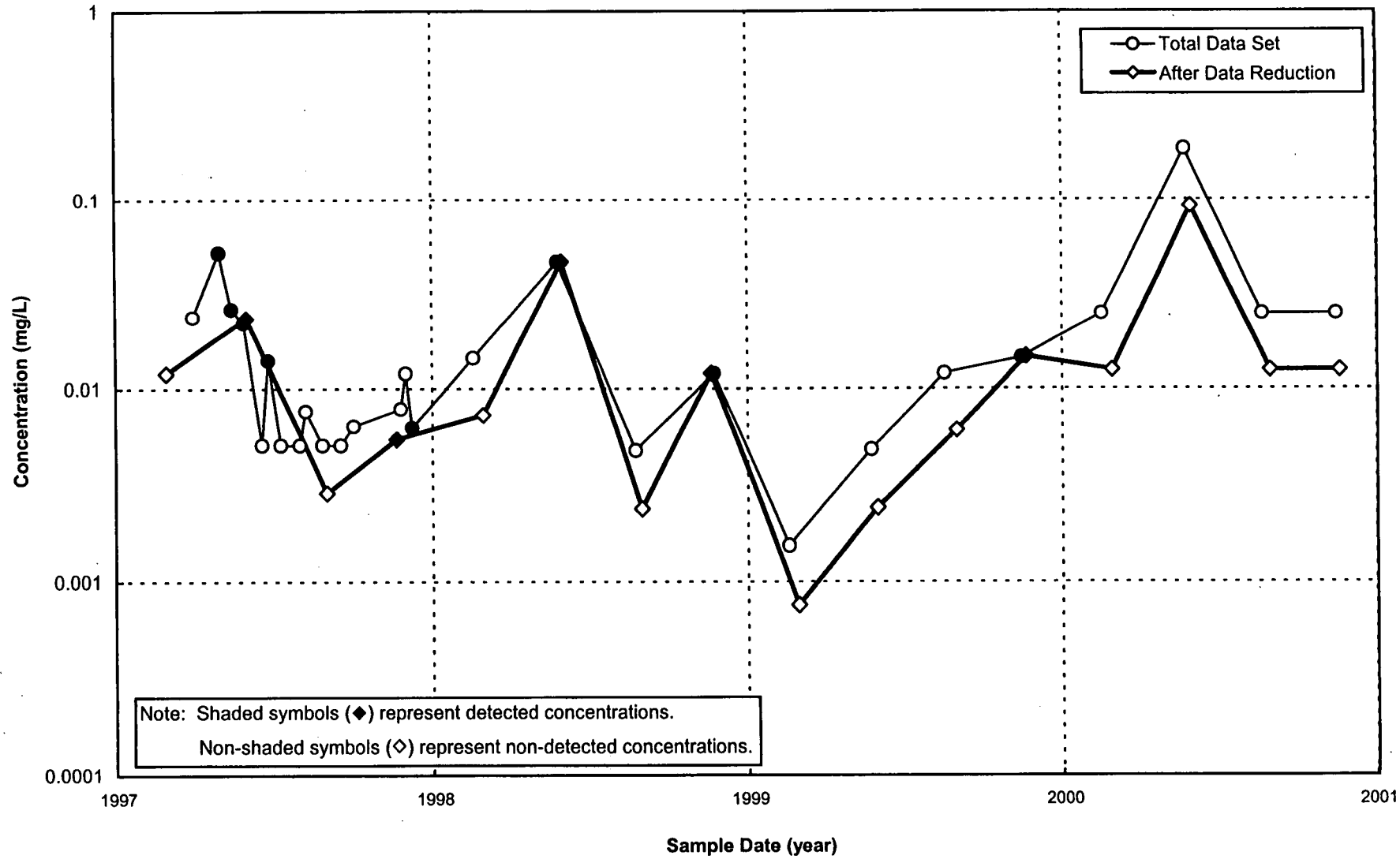

FIGURE B.2-2. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22198

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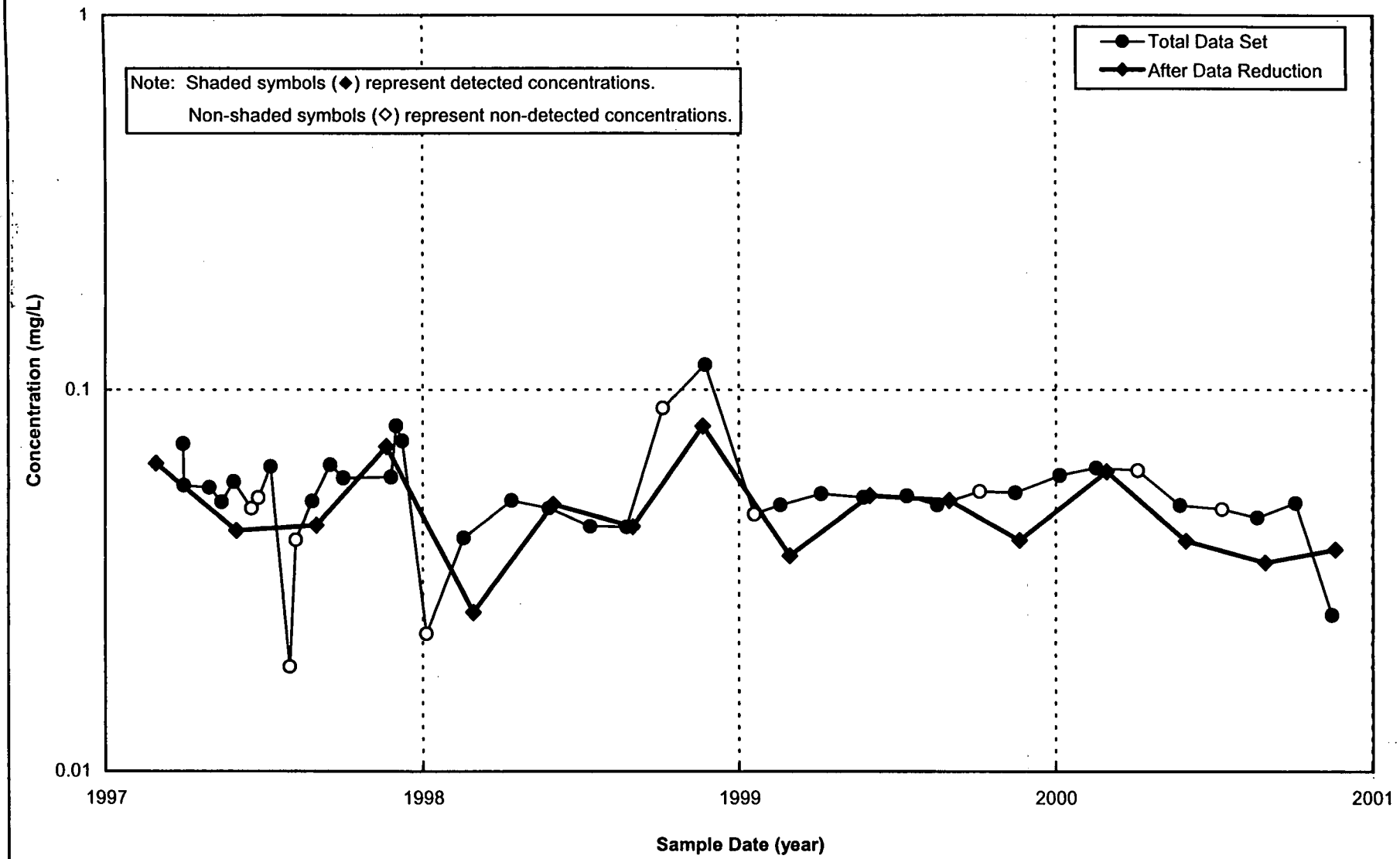

FIGURE B.2-3. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22198

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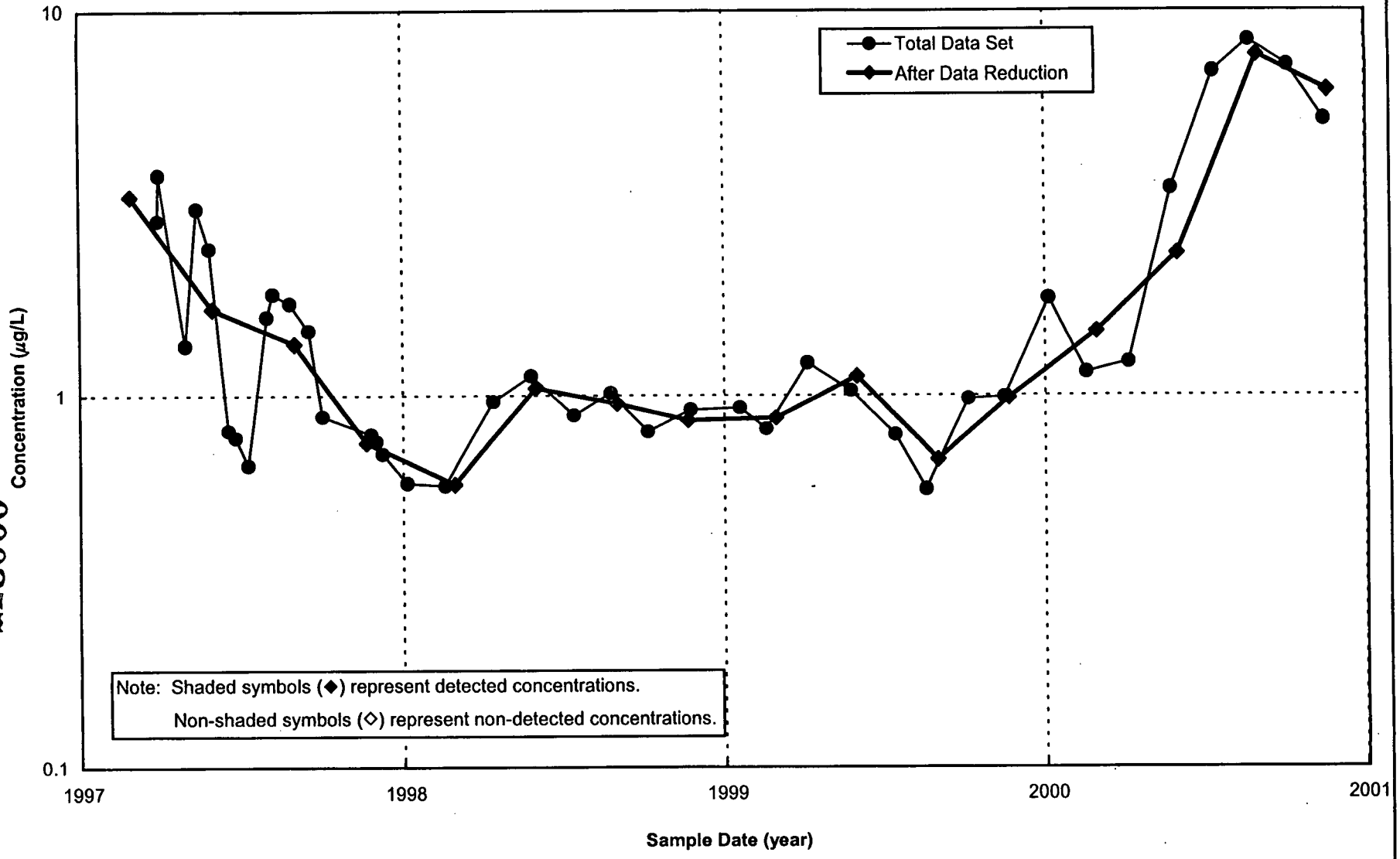

FIGURE B.2-4. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22198

DRAFT FINAL

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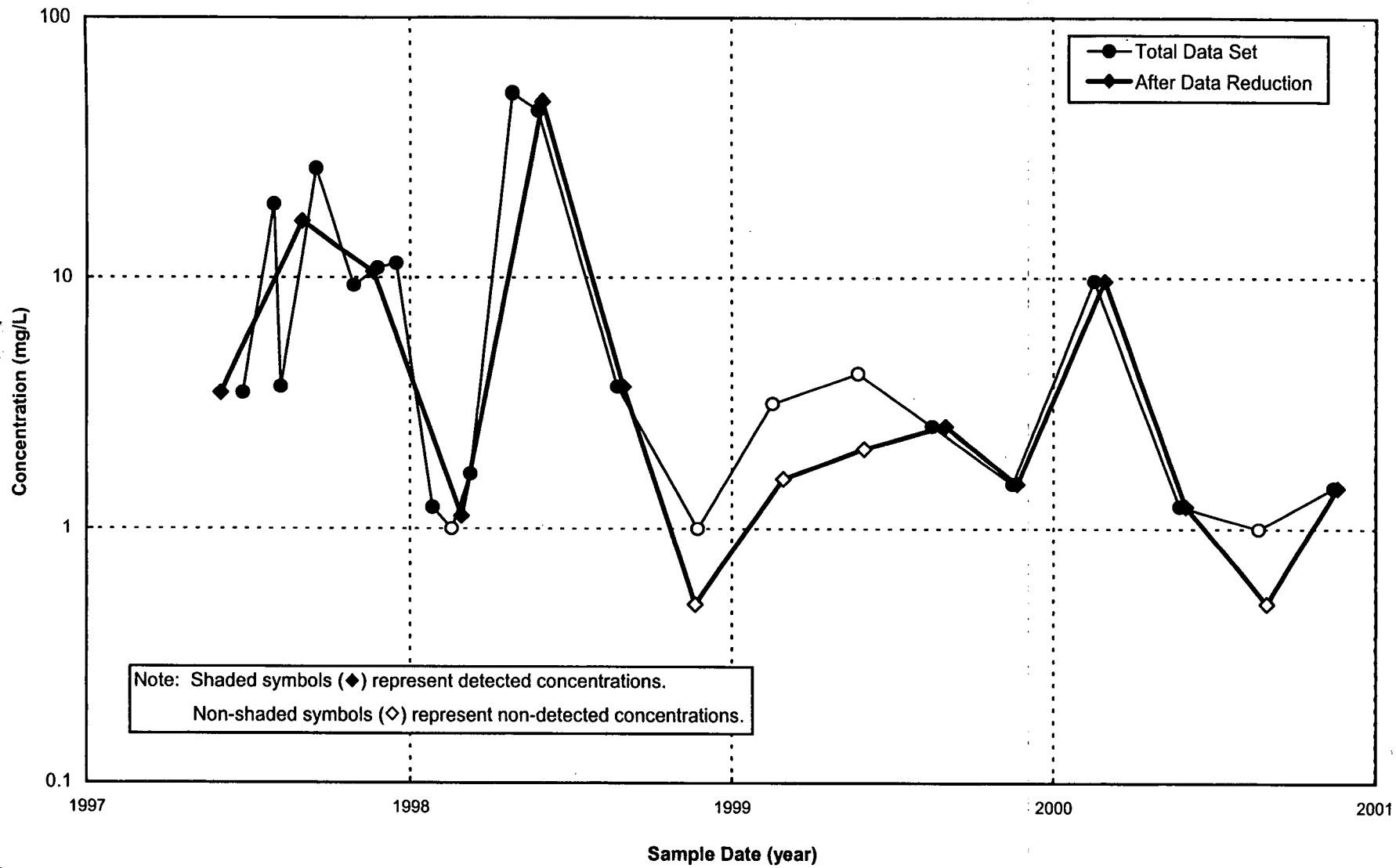

FIGURE B.2-5. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22199

DRAFT FINAL

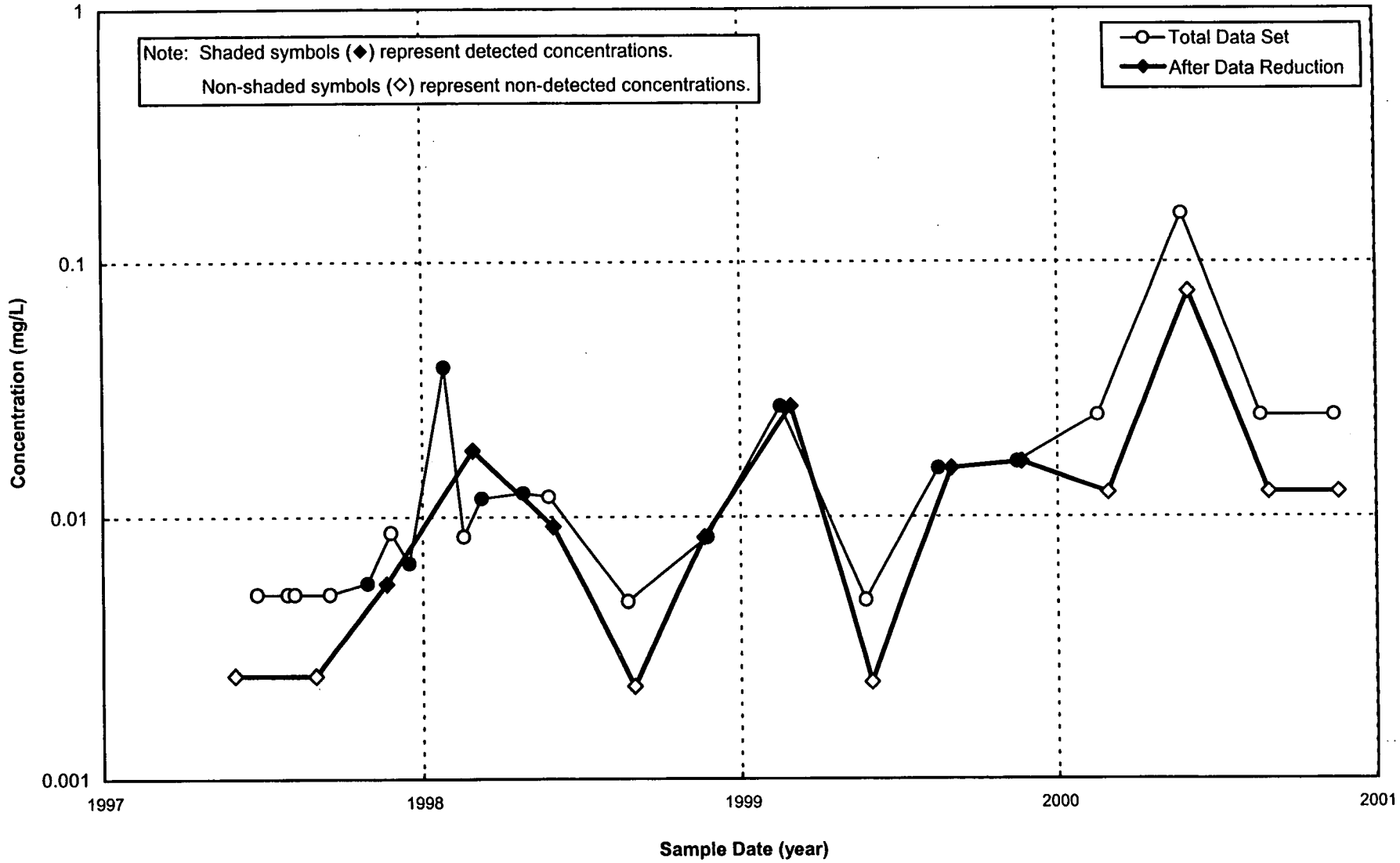

FIGURE B.2-6. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22199

DRAFT FINAL

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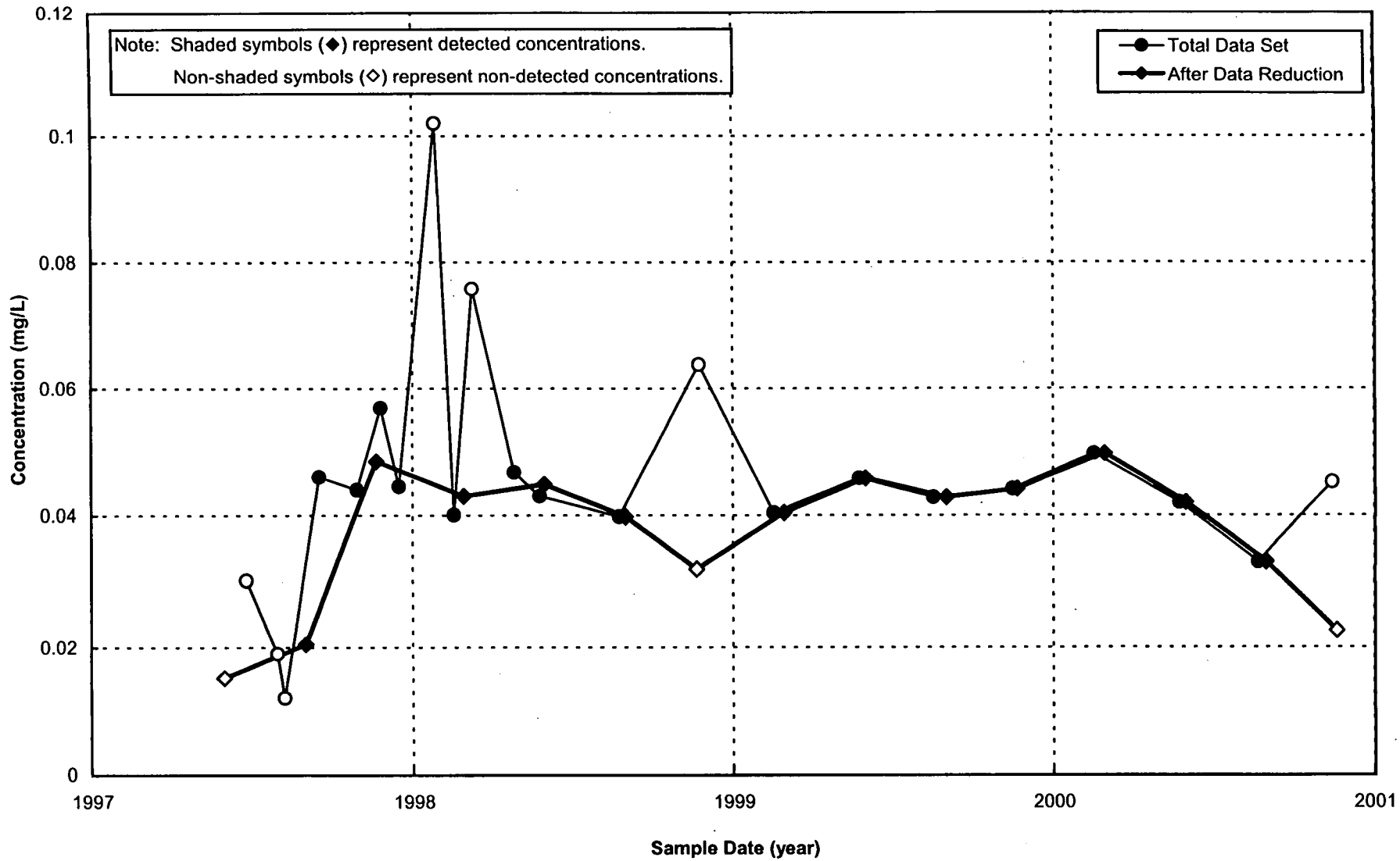

FIGURE B.2-7. BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22199

DRAFT FINAL

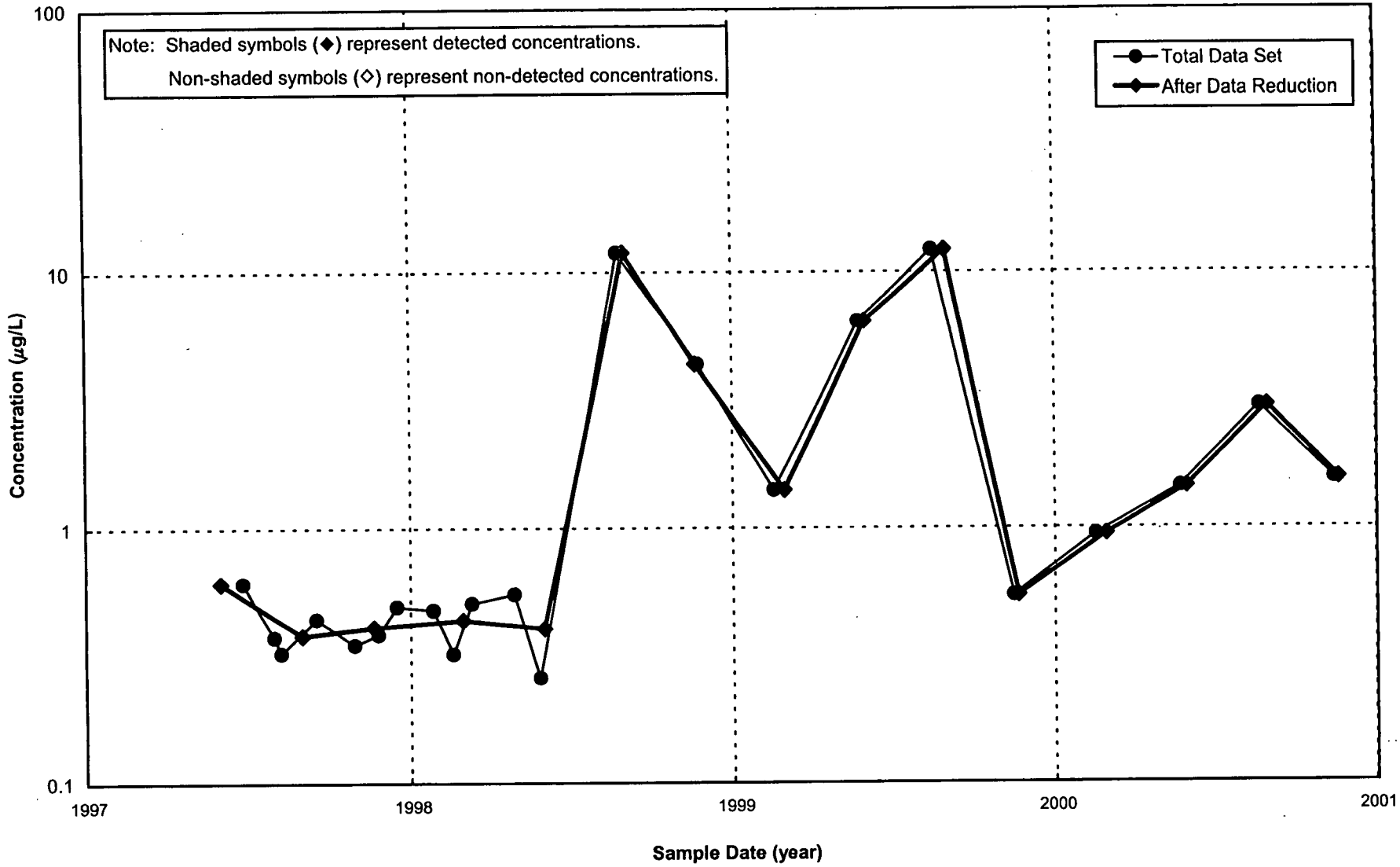

FIGURE B.2-8. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22199

DRAFT FINAL

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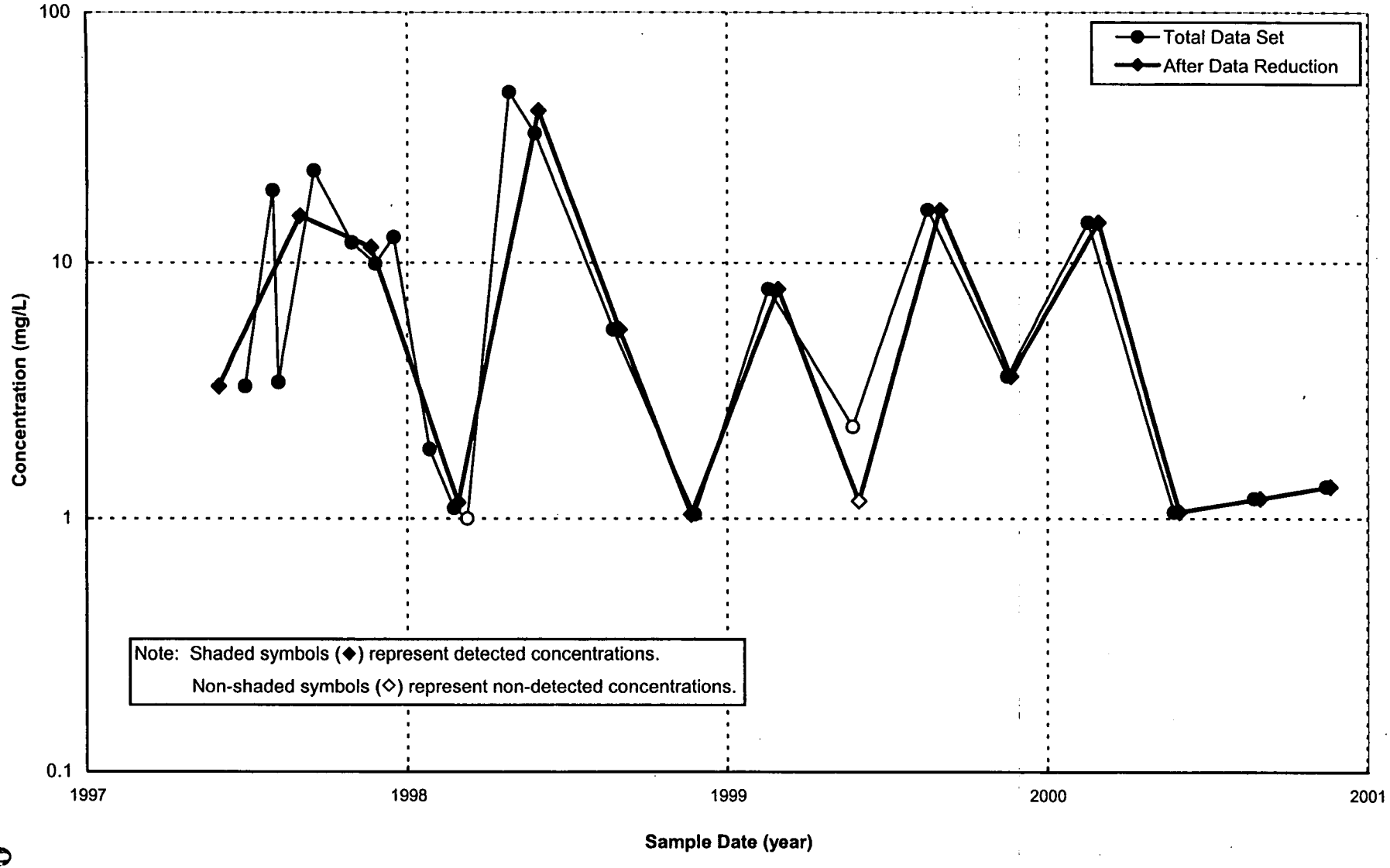

FIGURE B.2-9. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22200

DRAFT FINAL

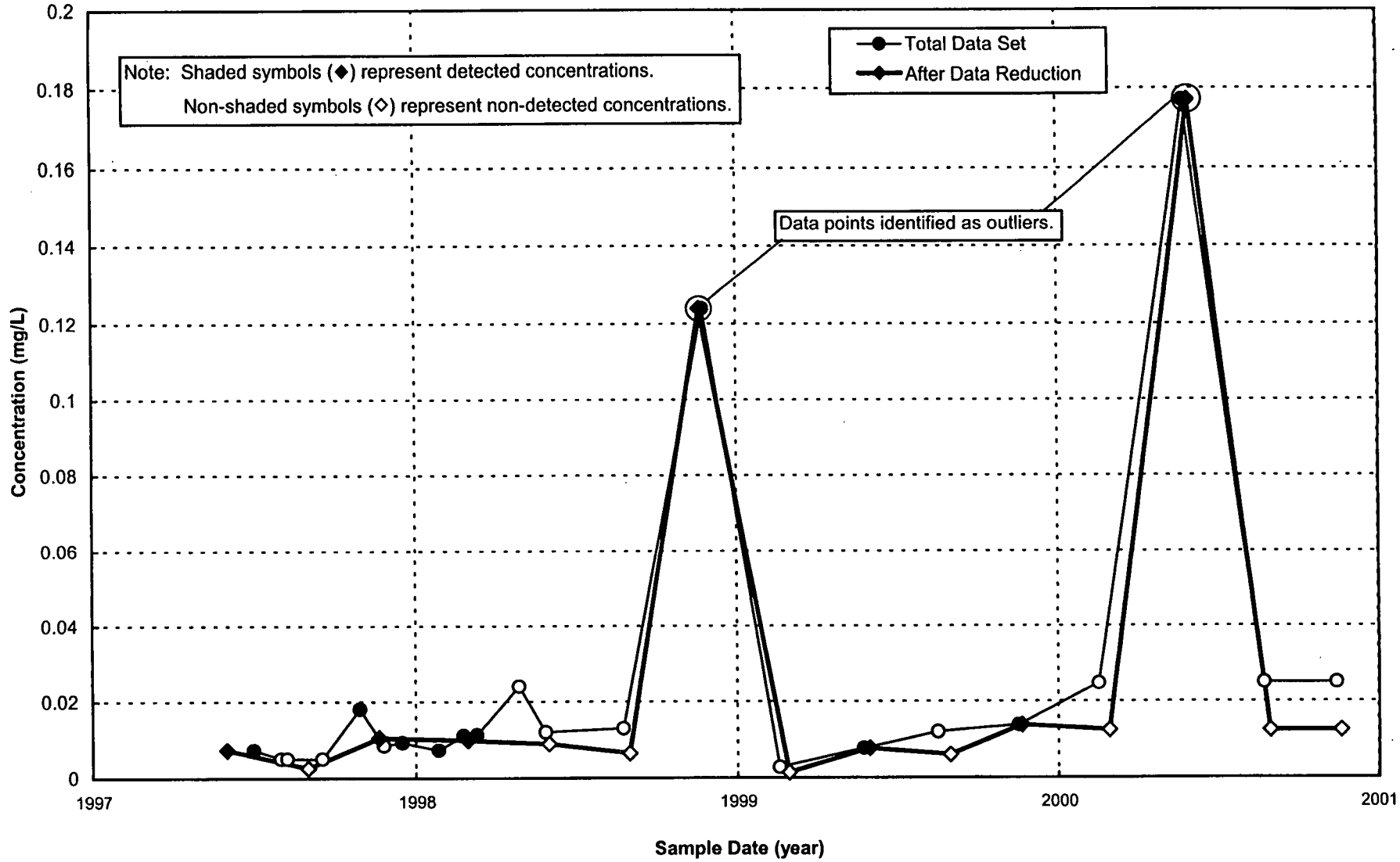

FIGURE B.2-10. TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22200

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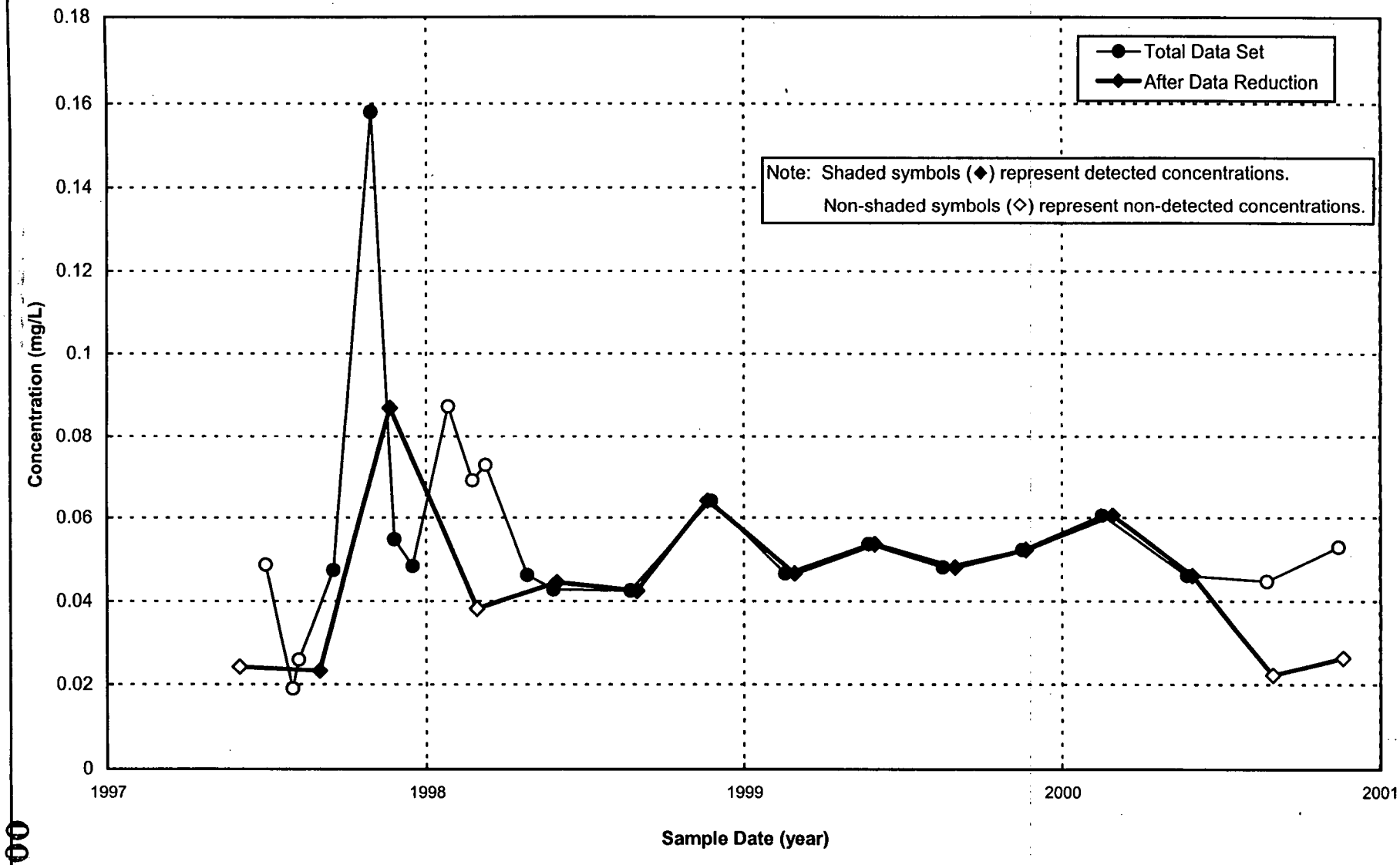

FIGURE B.2-11. BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22200

DRAFT FINAL

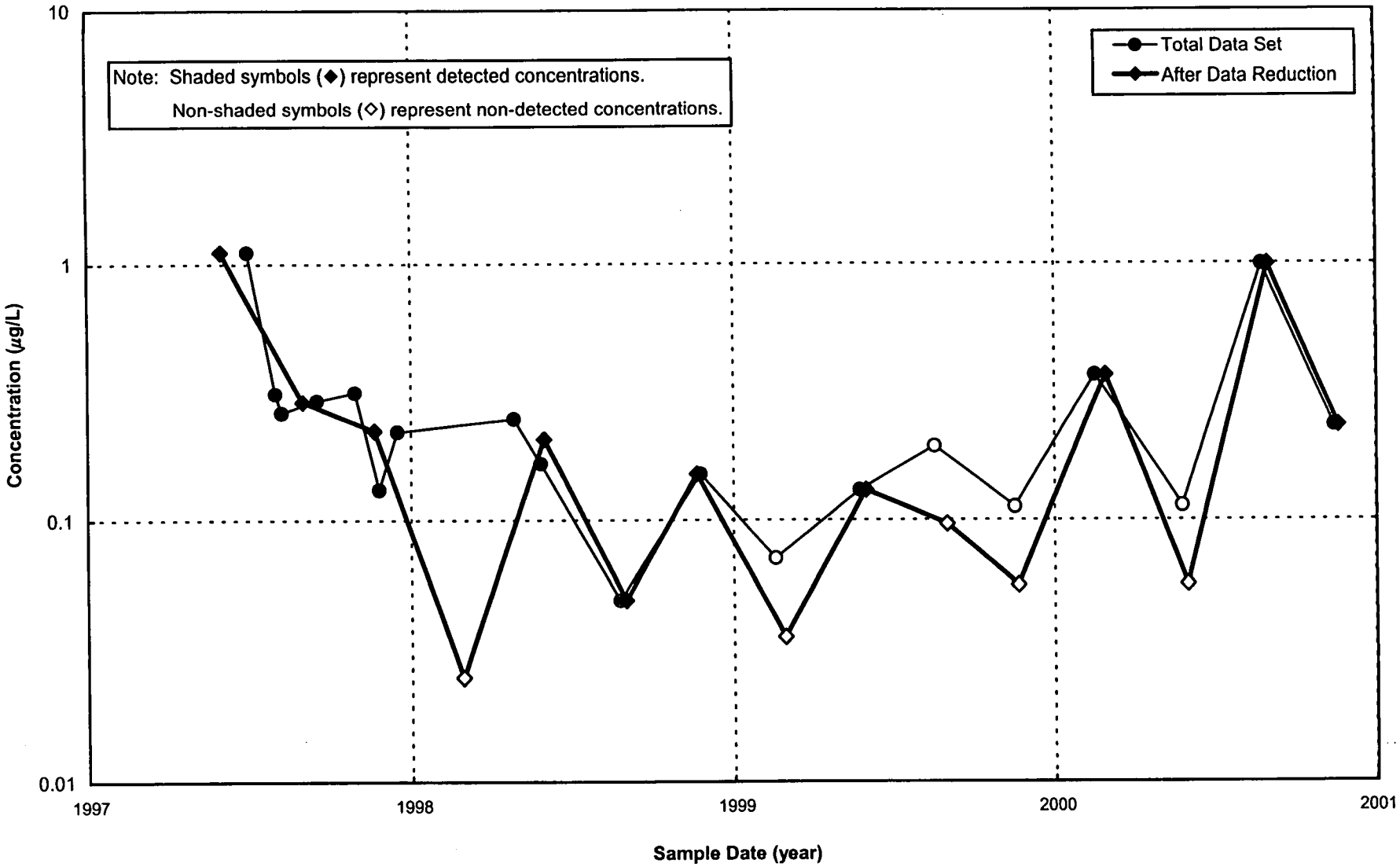

FIGURE B.2-12. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22200

DRAFT FINAL

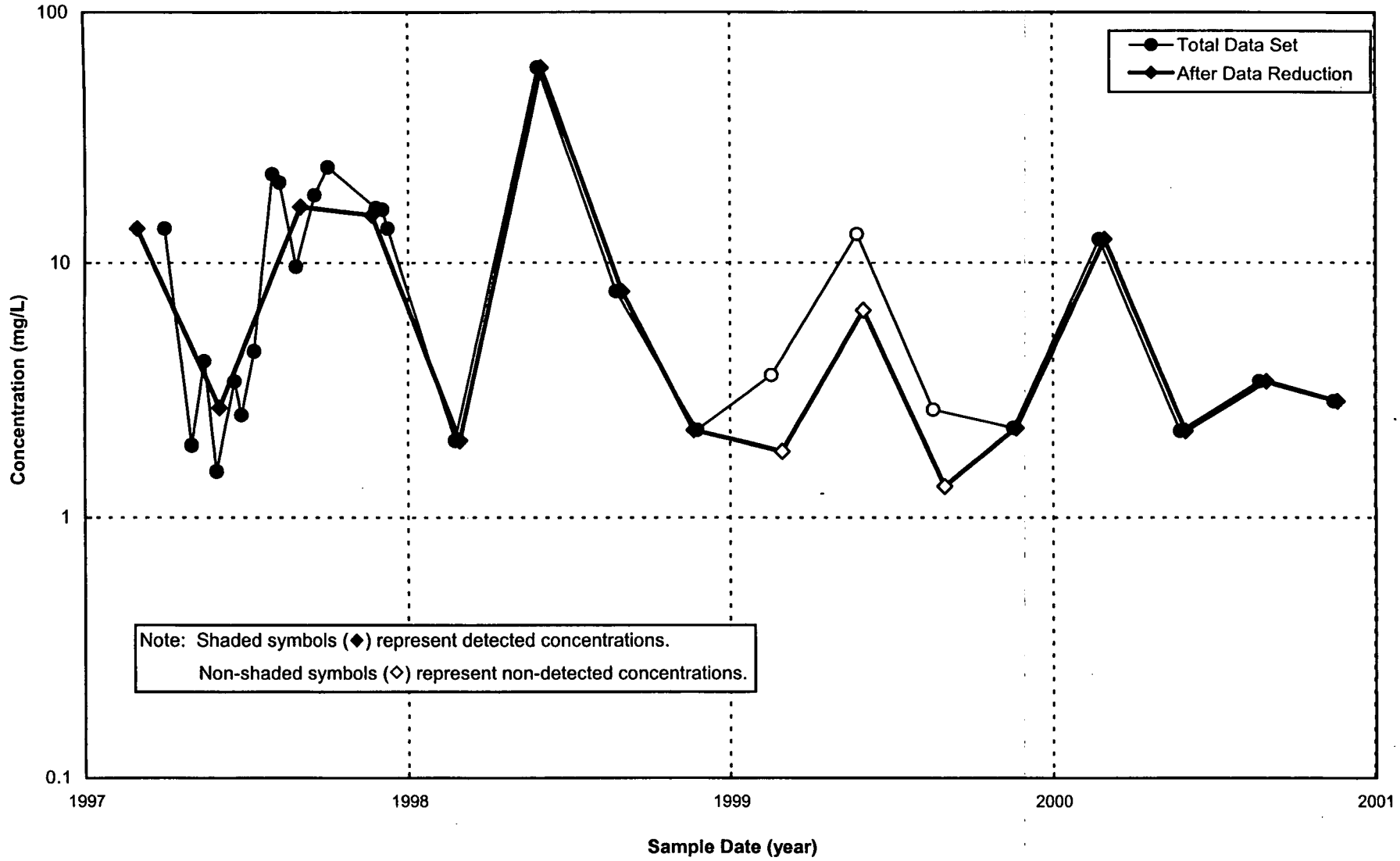

FIGURE B.2-13. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22201

DRAFT FINAL

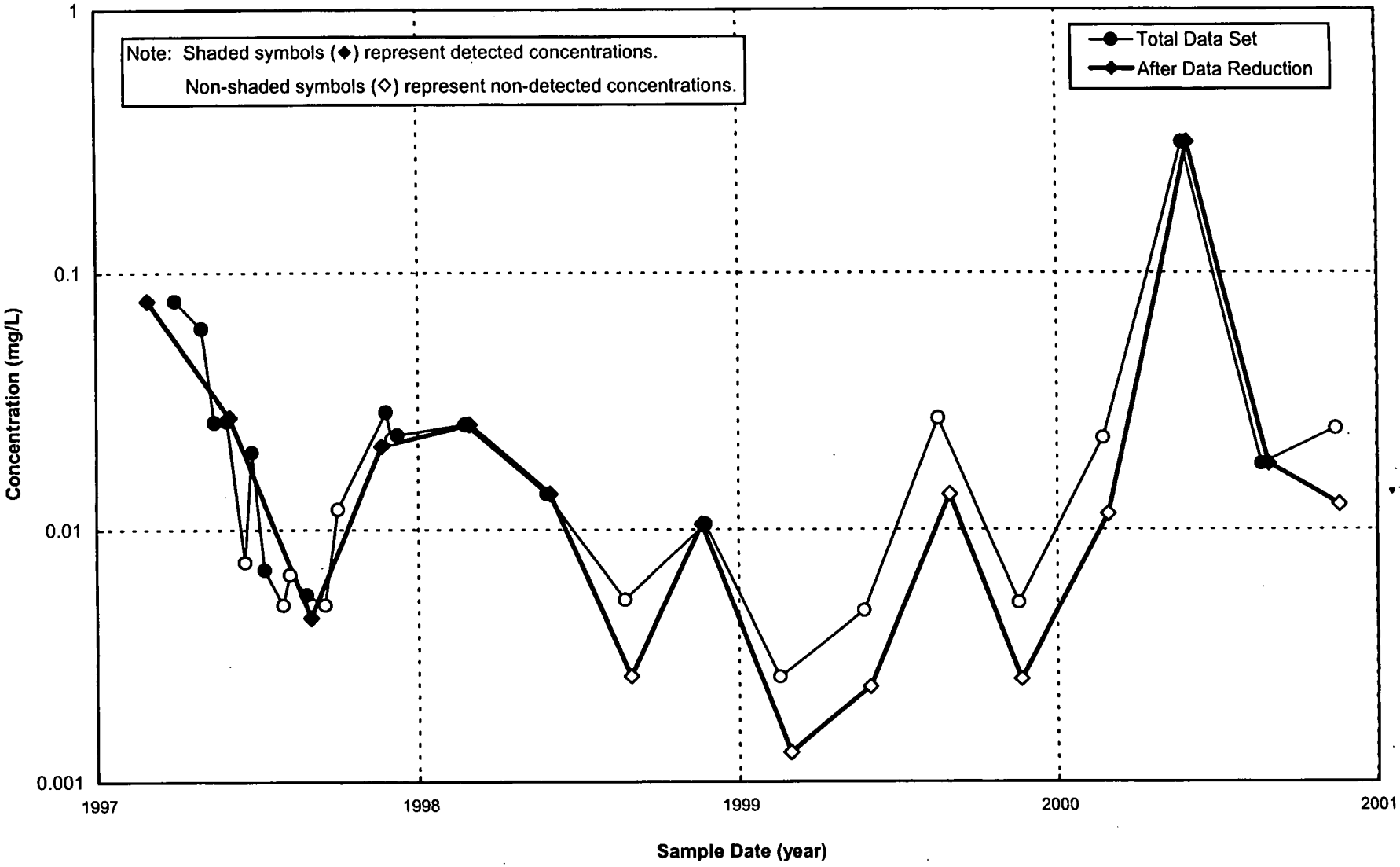

FIGURE B.2-14. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22201

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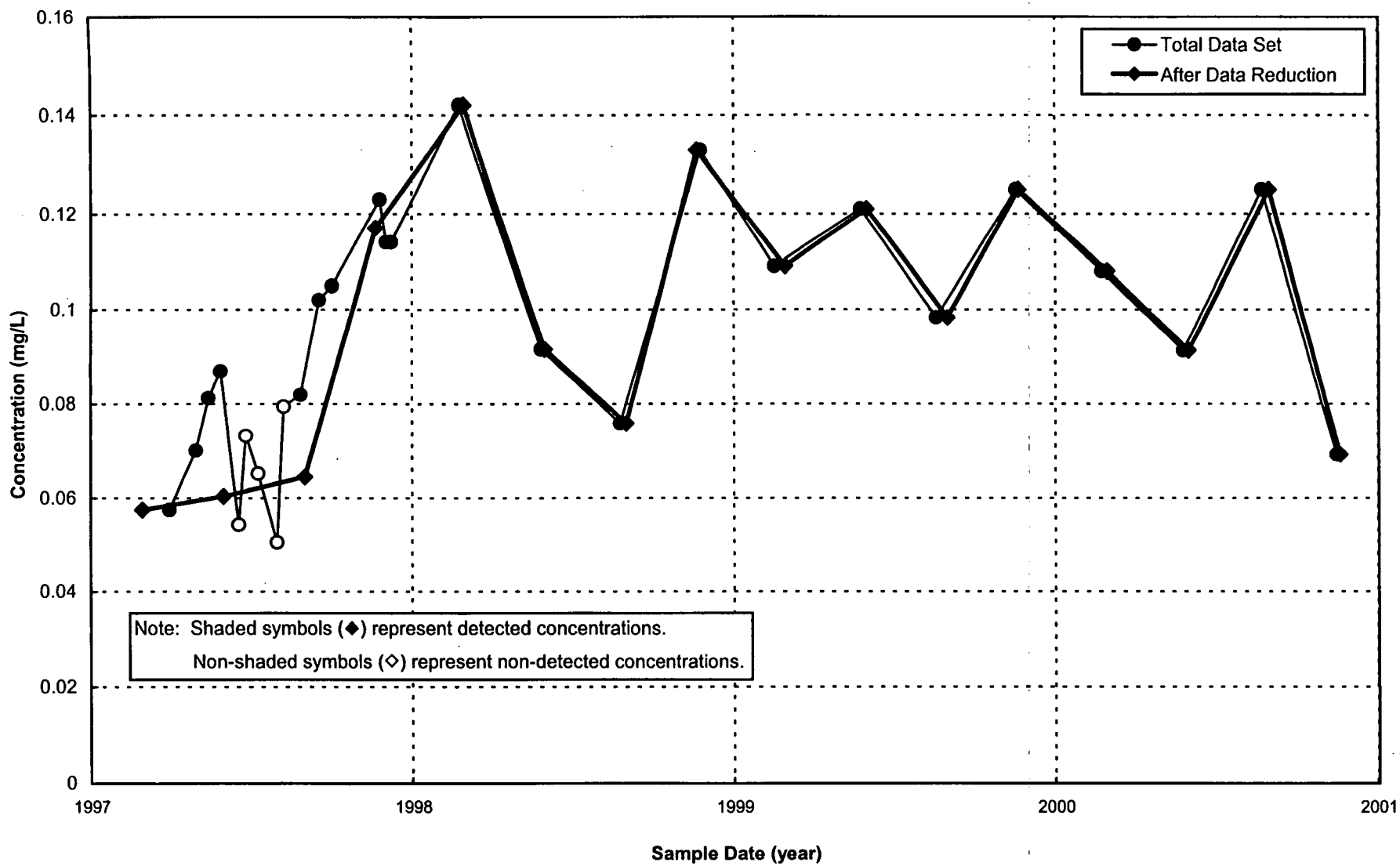

FIGURE B.2-15. BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22201

DRAFT FINAL

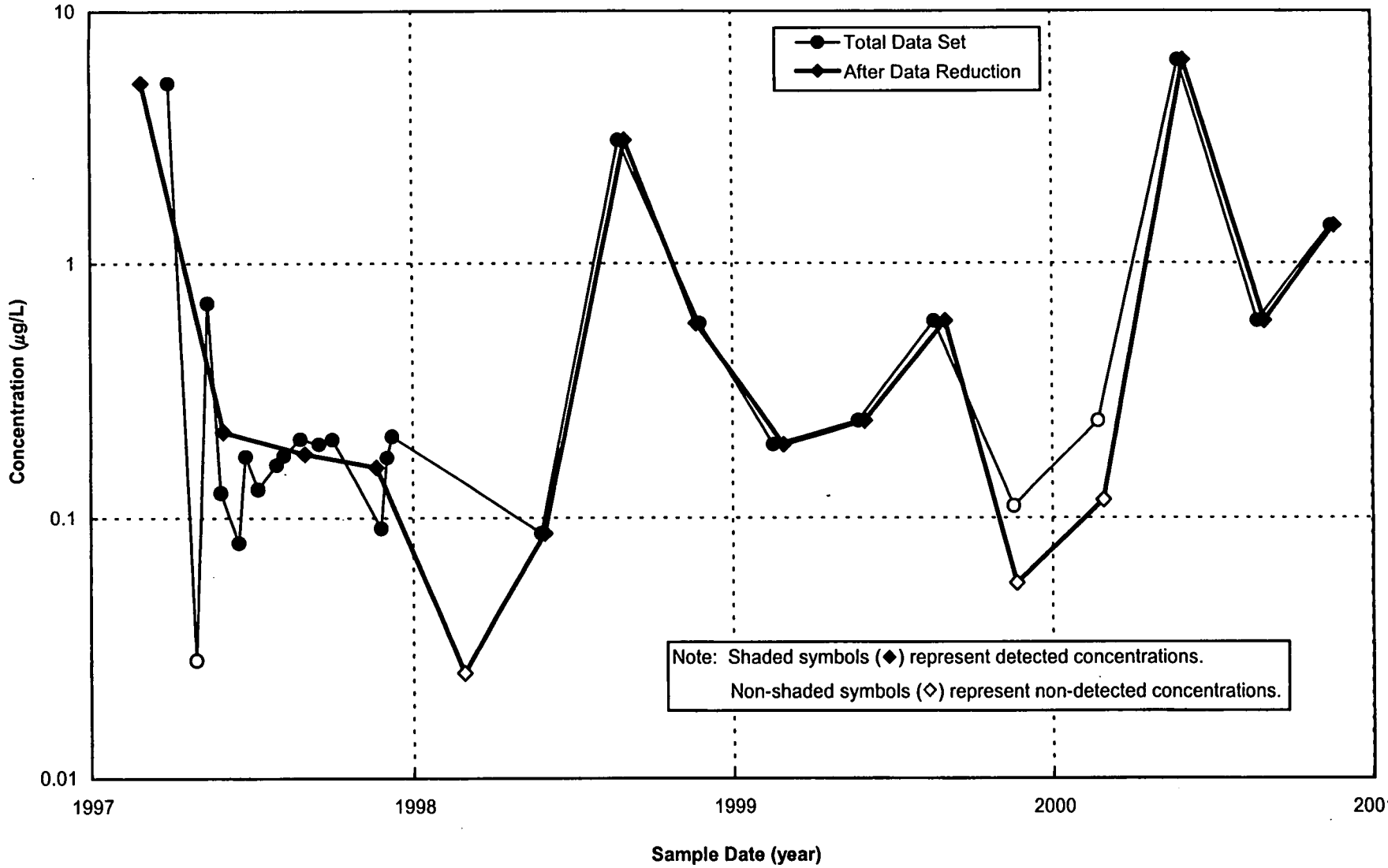

FIGURE B.2-16. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22201

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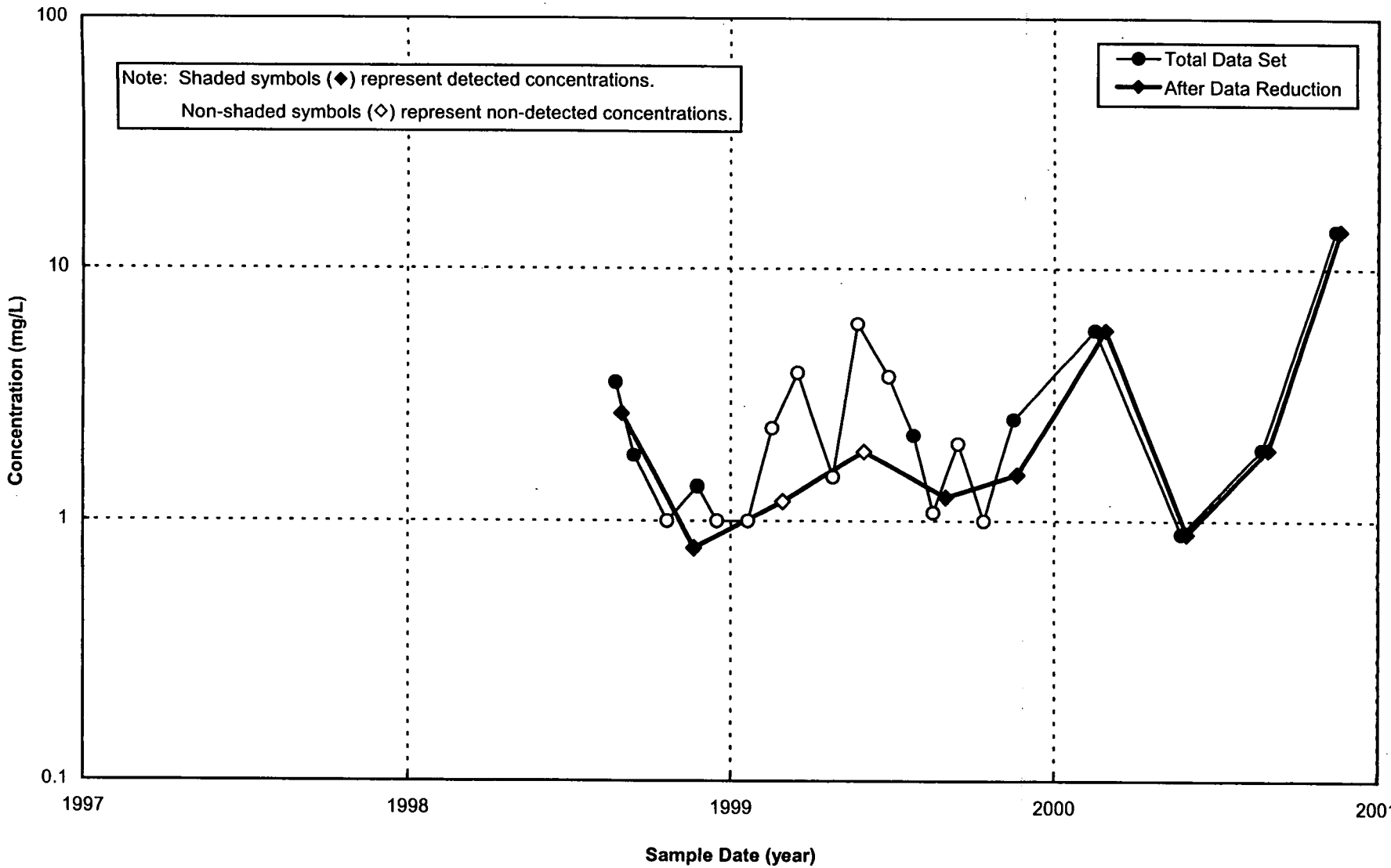

FIGURE B.2-17. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22203

DRAFT FINAL

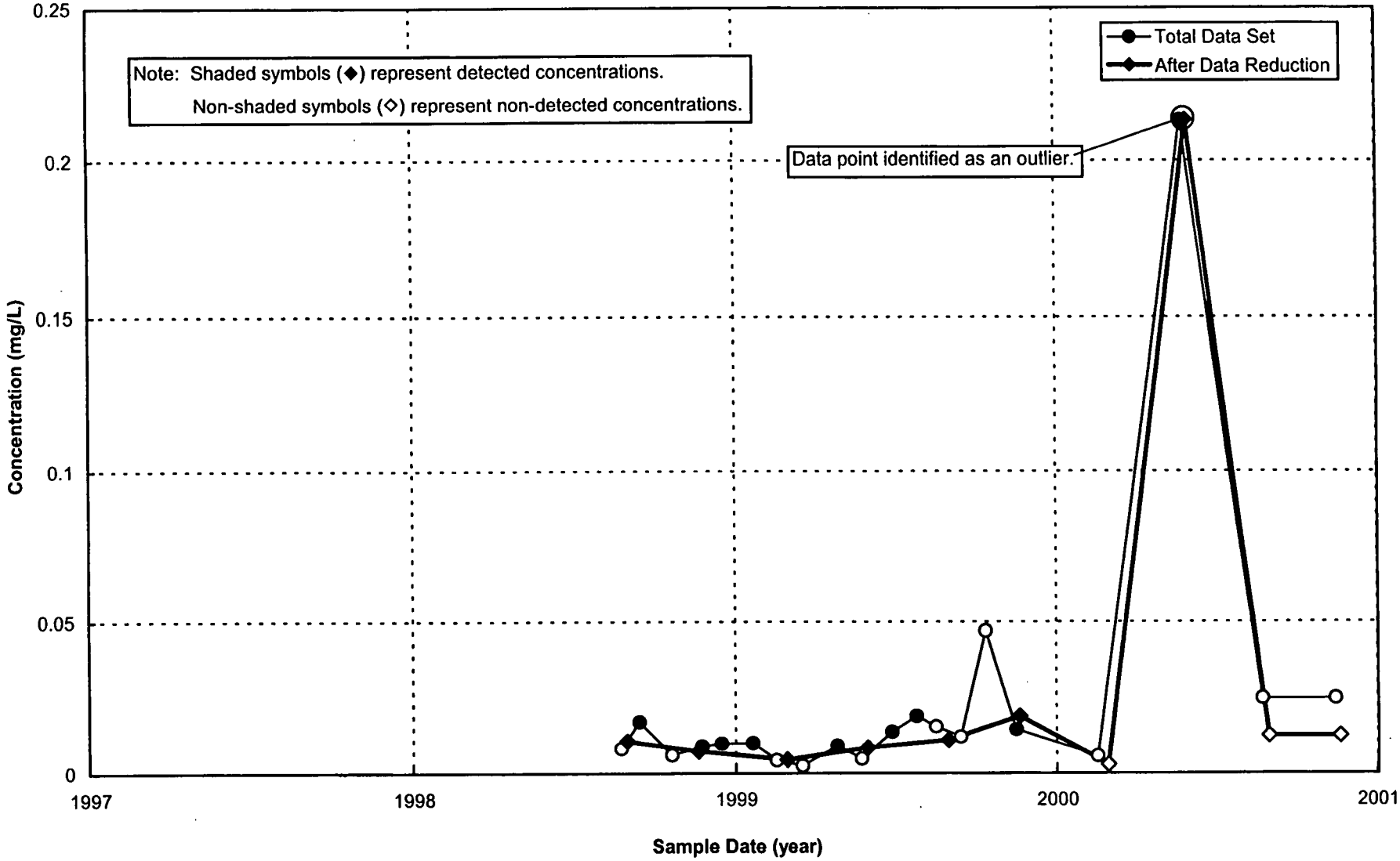

FIGURE B.2-18. TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22203

DRAFT FINAL

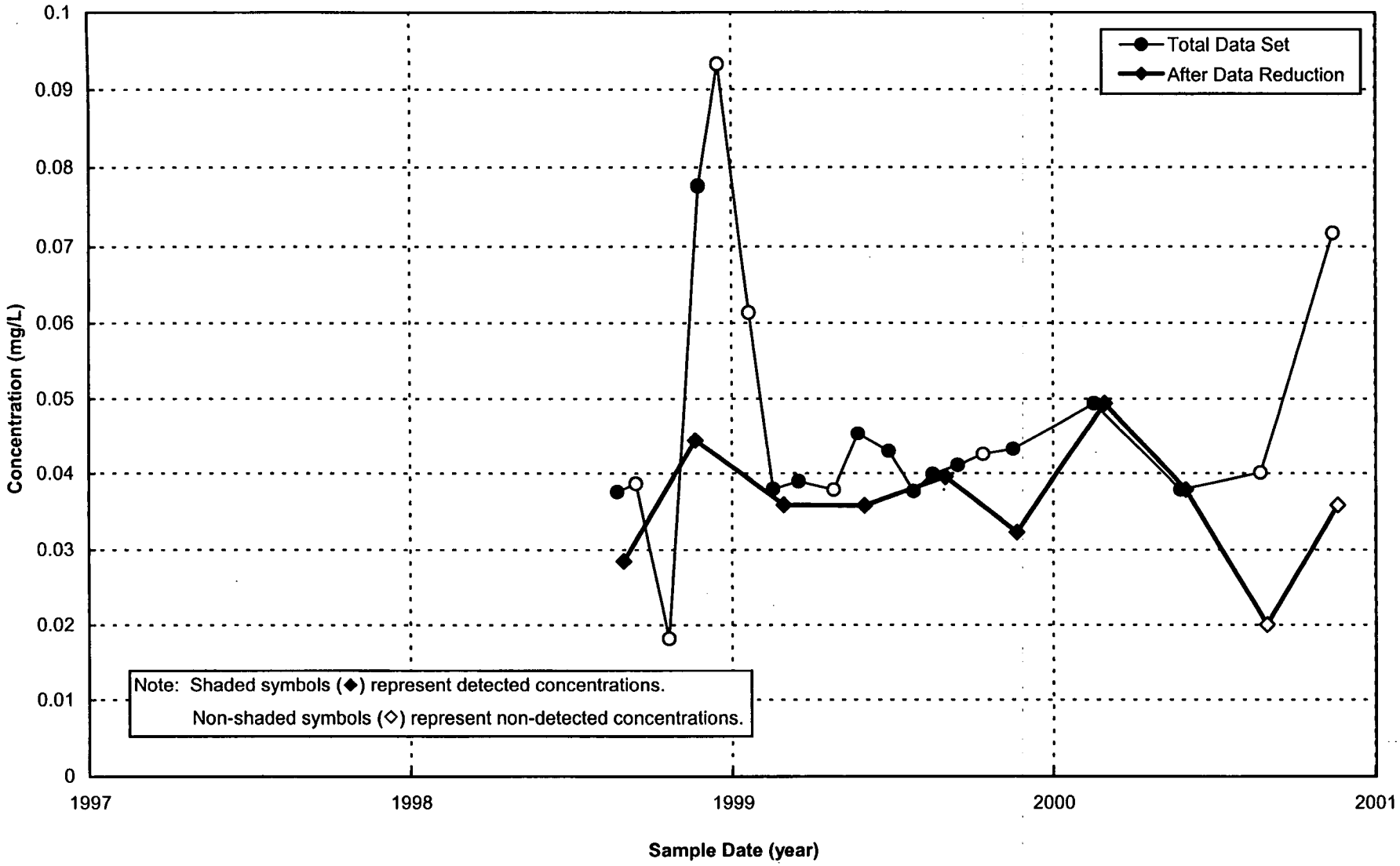

FIGURE B.2-19. BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22203

DRAFT FINAL

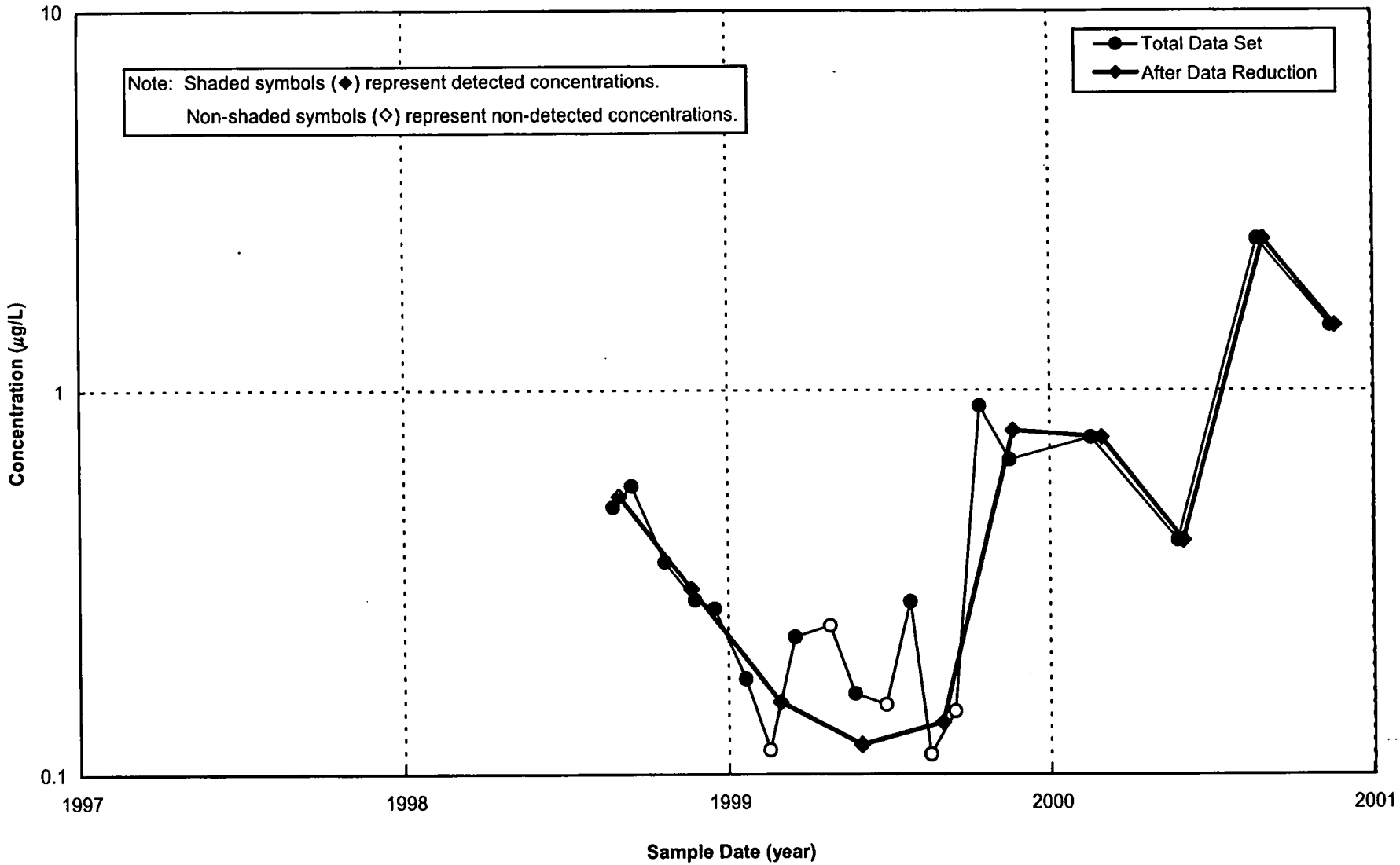

FIGURE B.2-20. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22203

DRAFT FINAL

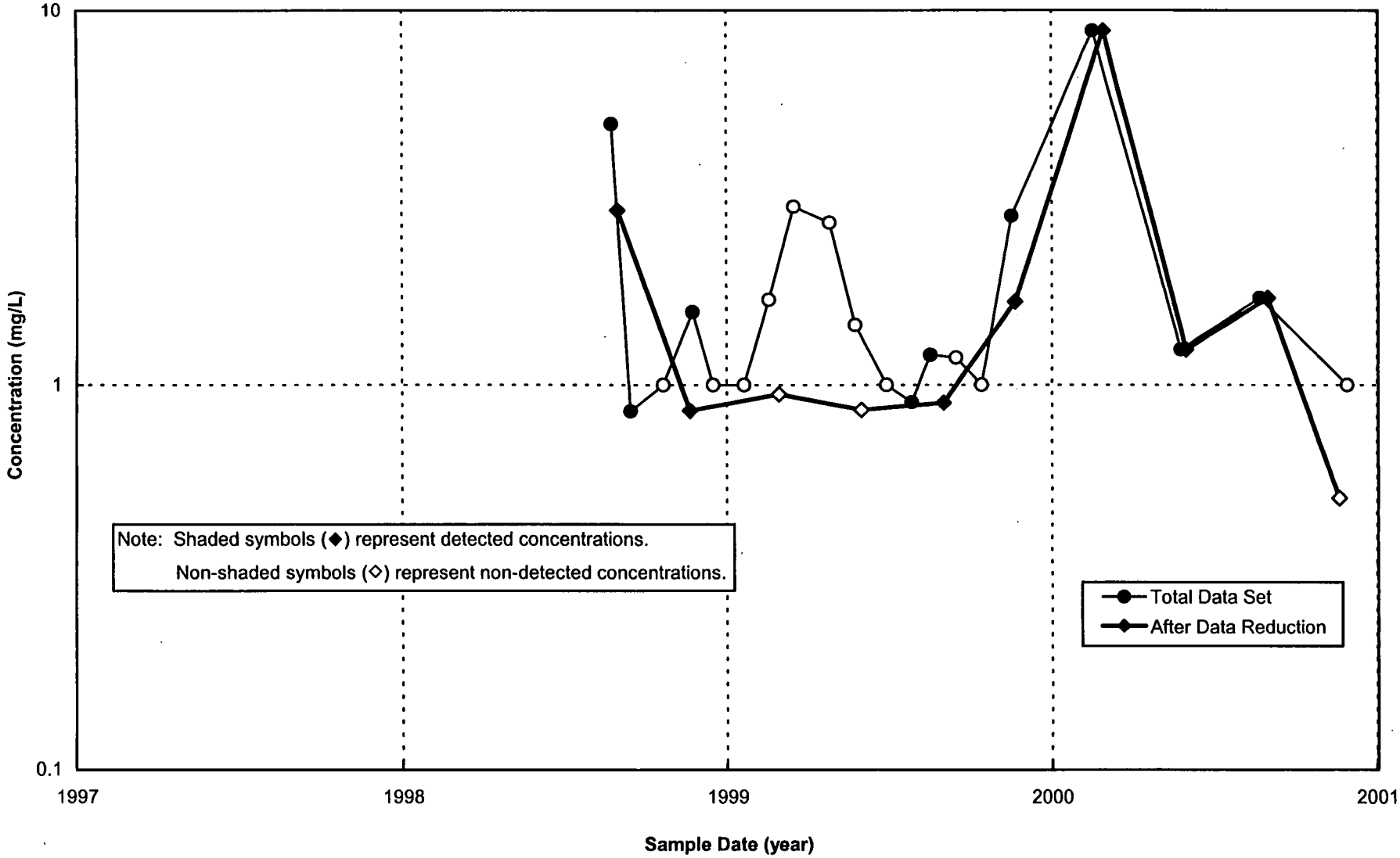

FIGURE B.2-21. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22204

DRAFT FINAL

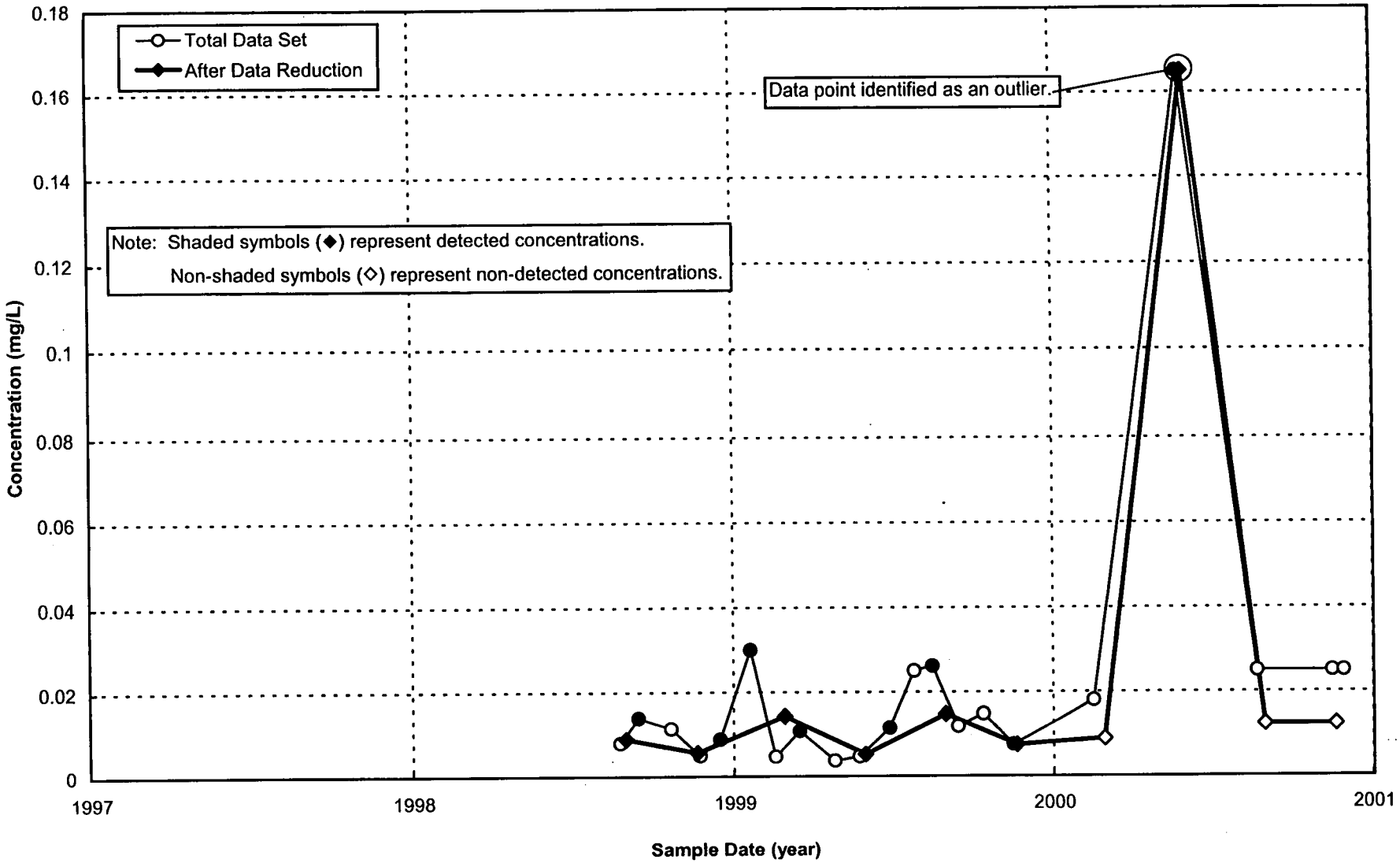

FIGURE B.2-22. TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22204

DRAFT FINAL

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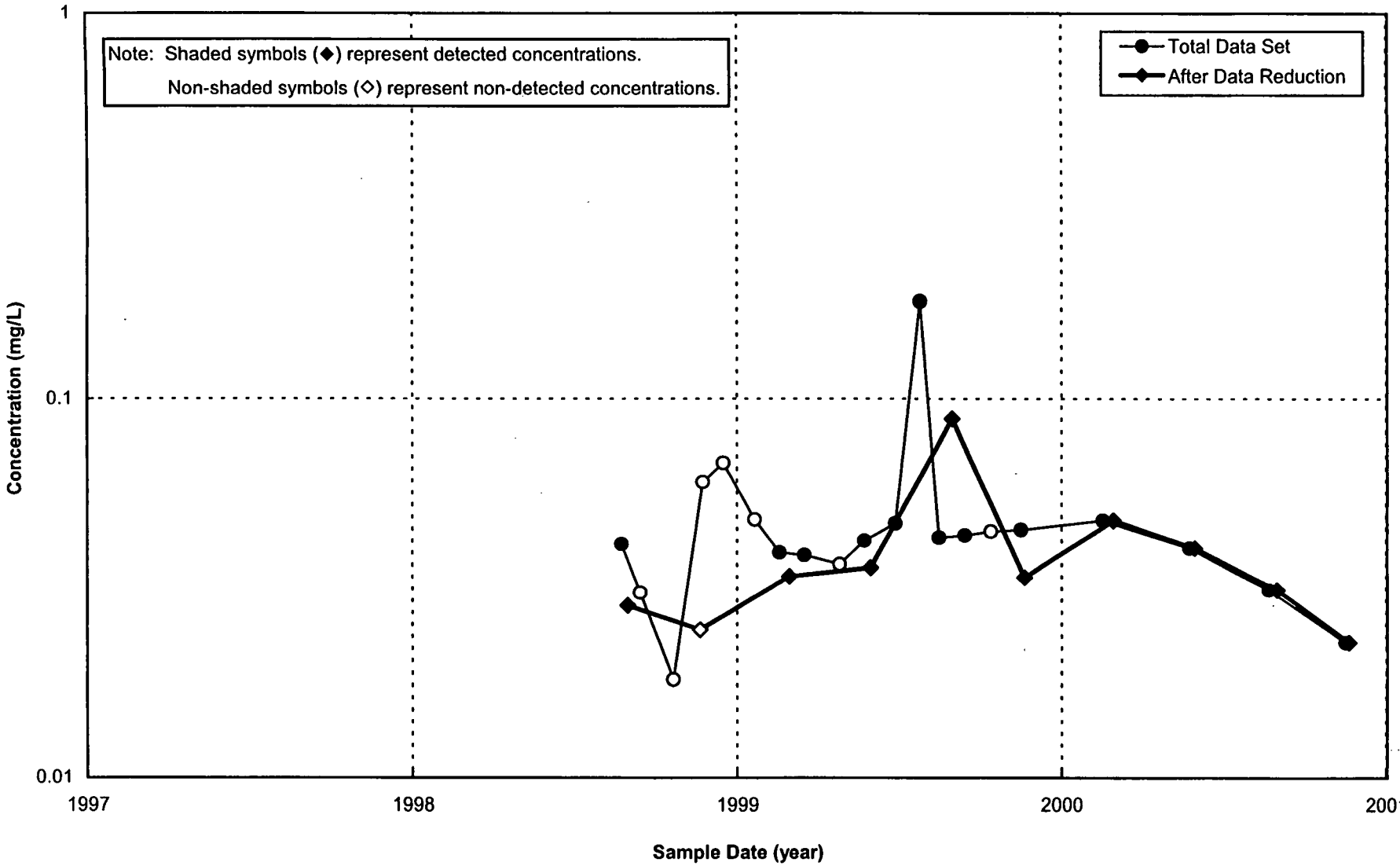

FIGURE B.2-23. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22204

DRAFT FINAL

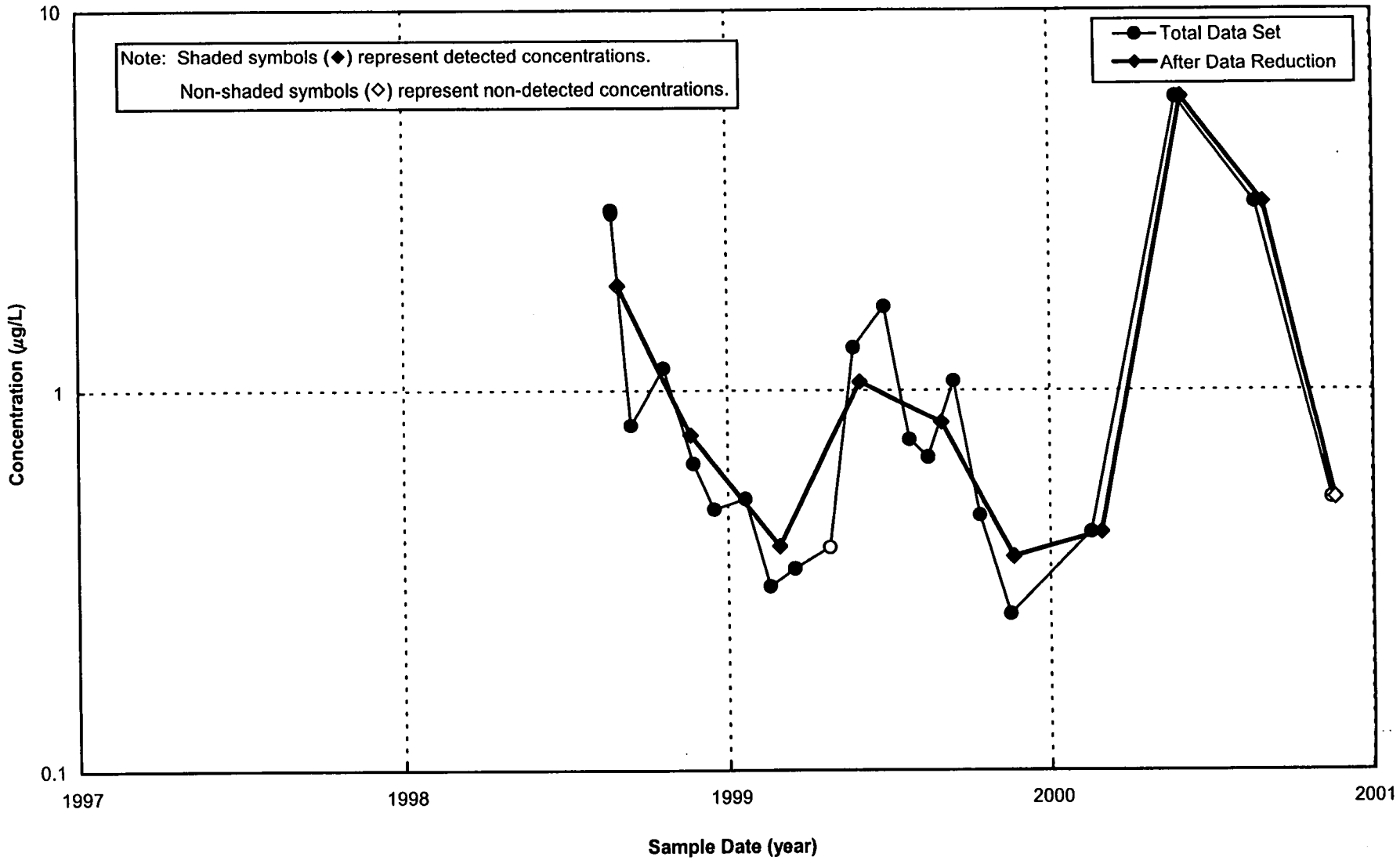

FIGURE B.2-24. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR GREAT MIAMI AQUIFER MONITORING WELL 22204

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Attachment B.3

ATTACHMENT B.3

LEACHATE COLLECTION SYSTEM GRAPHS

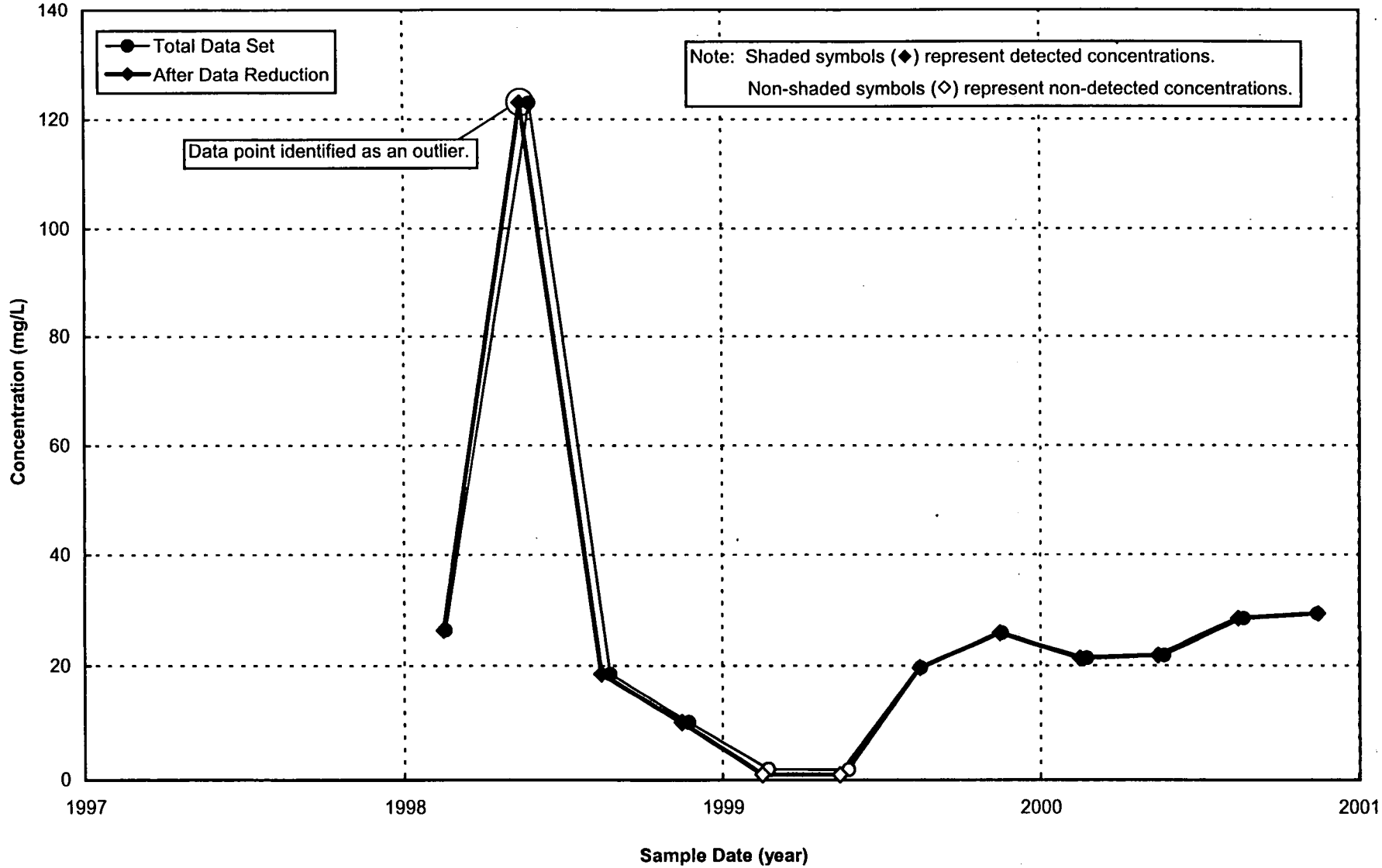

FIGURE B.3-1. TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12338C

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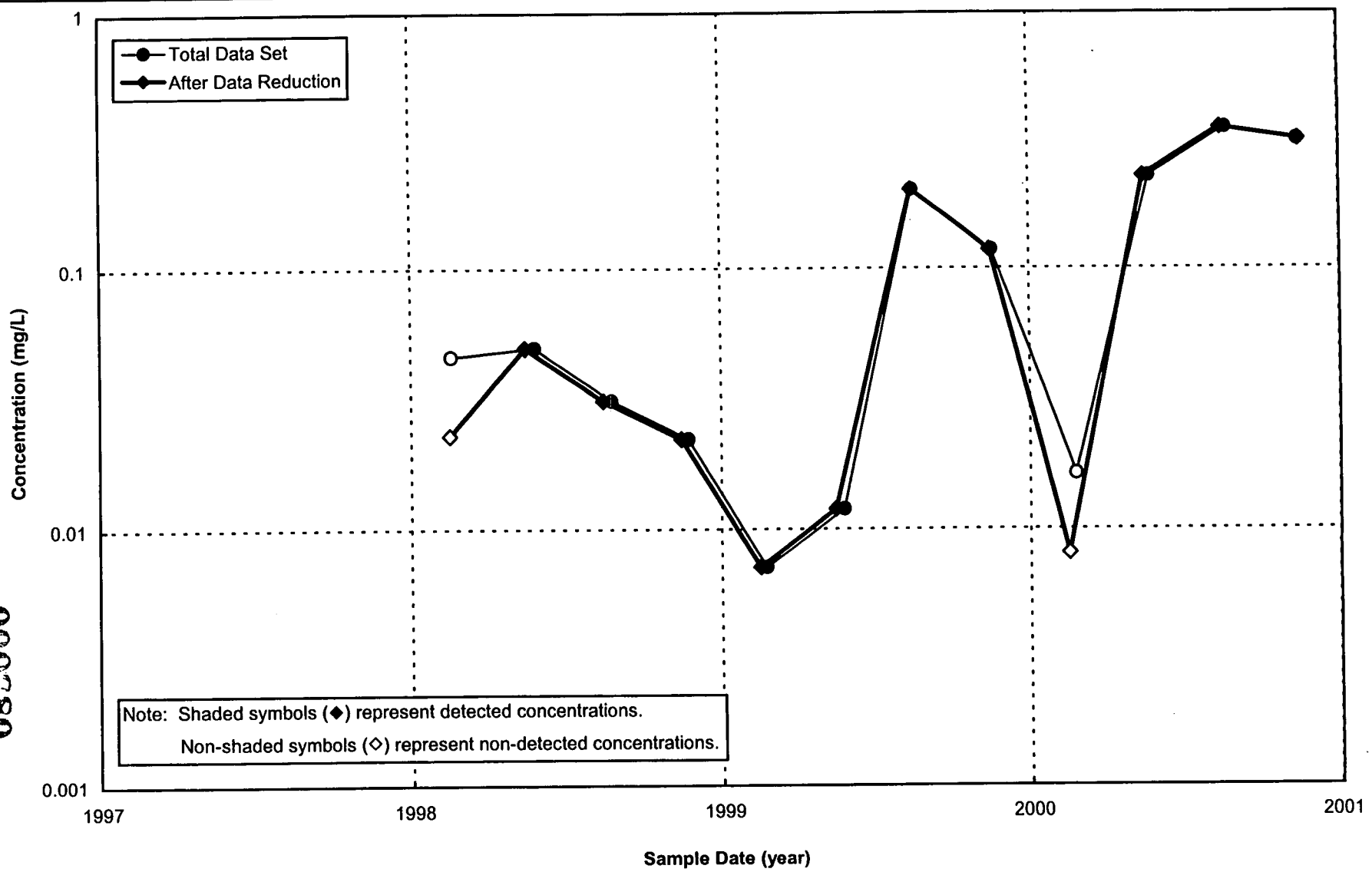

FIGURE B.3-2. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12338C

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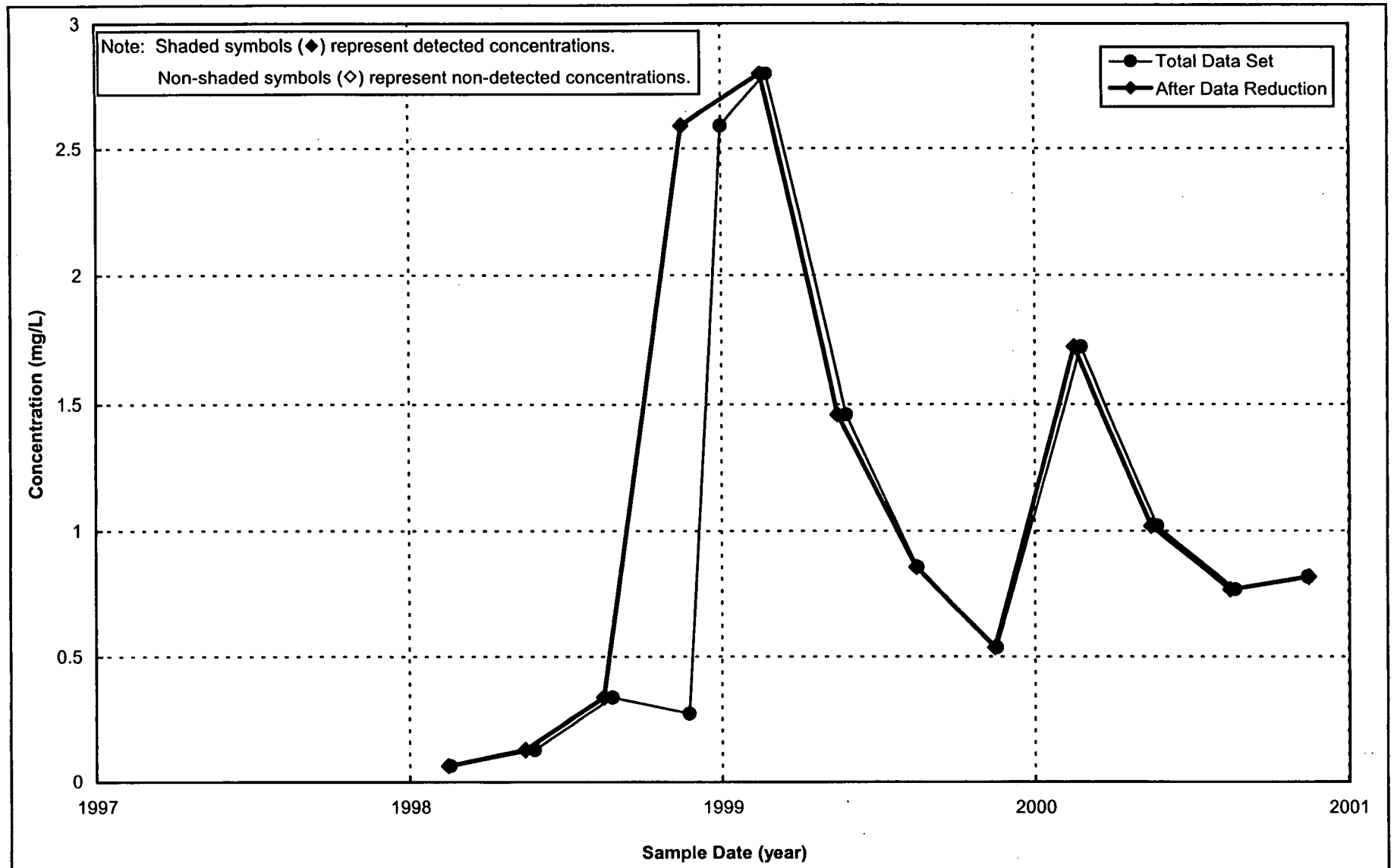

FIGURE B.3-3. BORON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12338C

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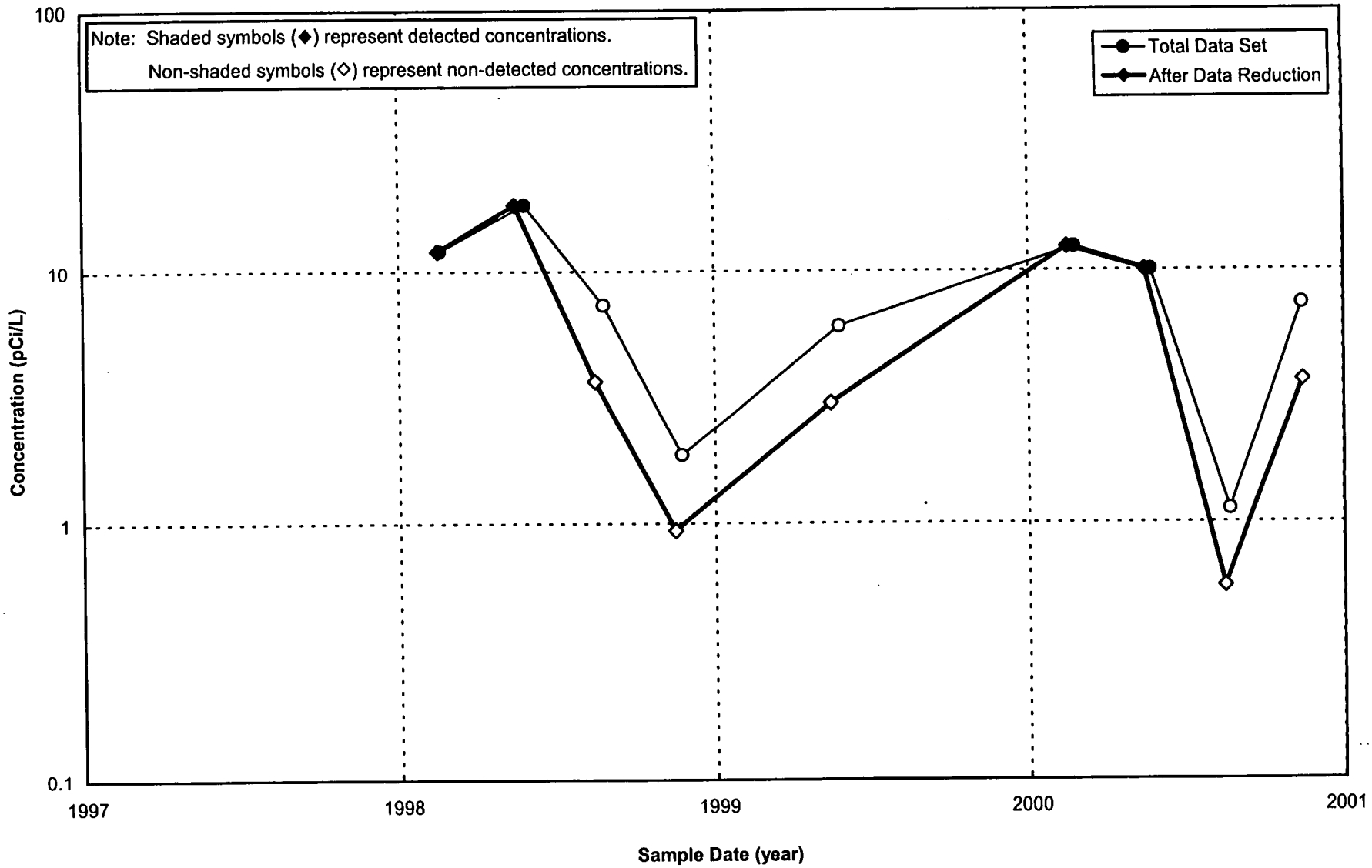

FIGURE B.3-4. LOG SCALE OF TECHNETIUM-99 CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12338C

DRAFT FINAL

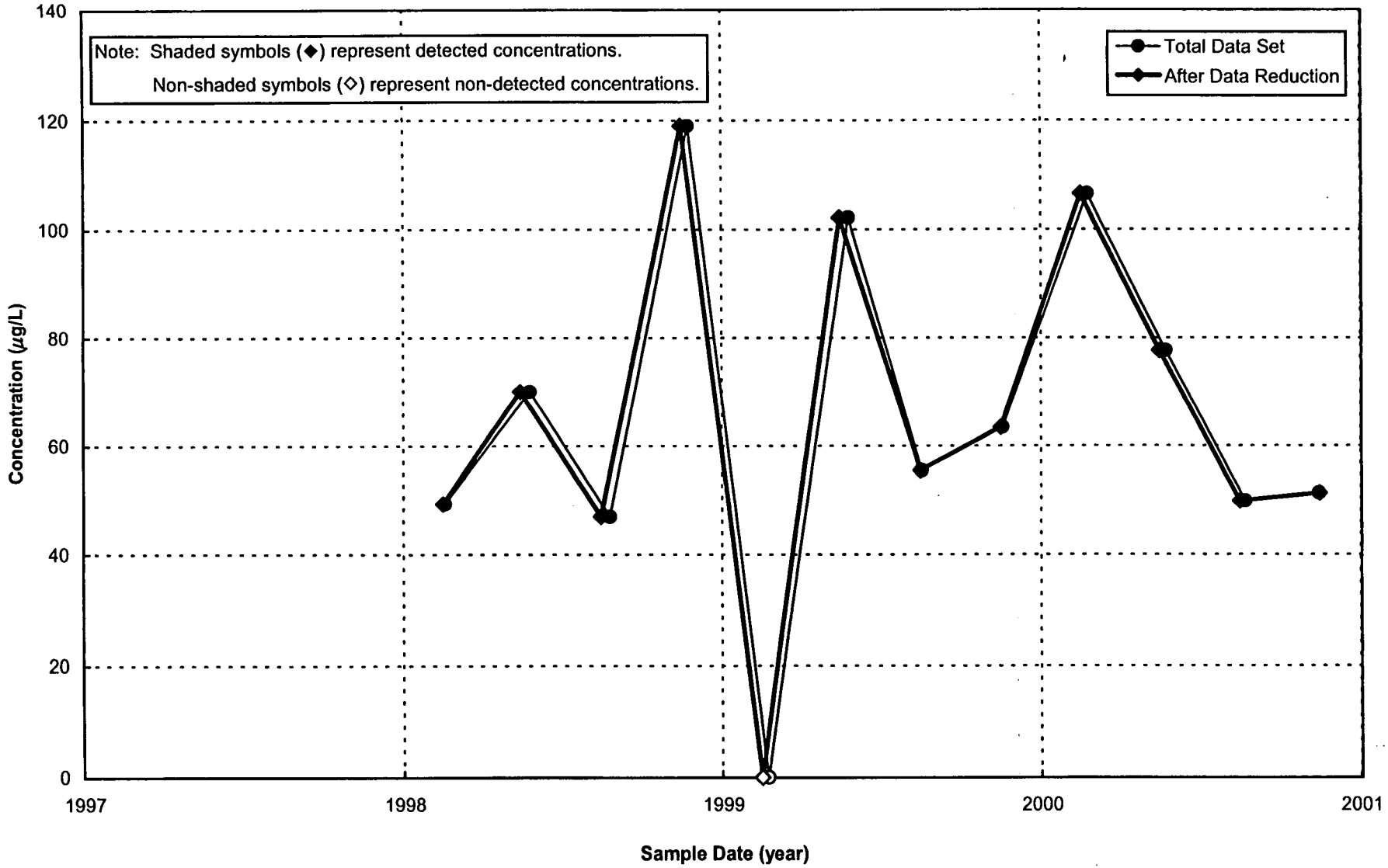

FIGURE B.3-5. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12338C

DRAFT FINAL

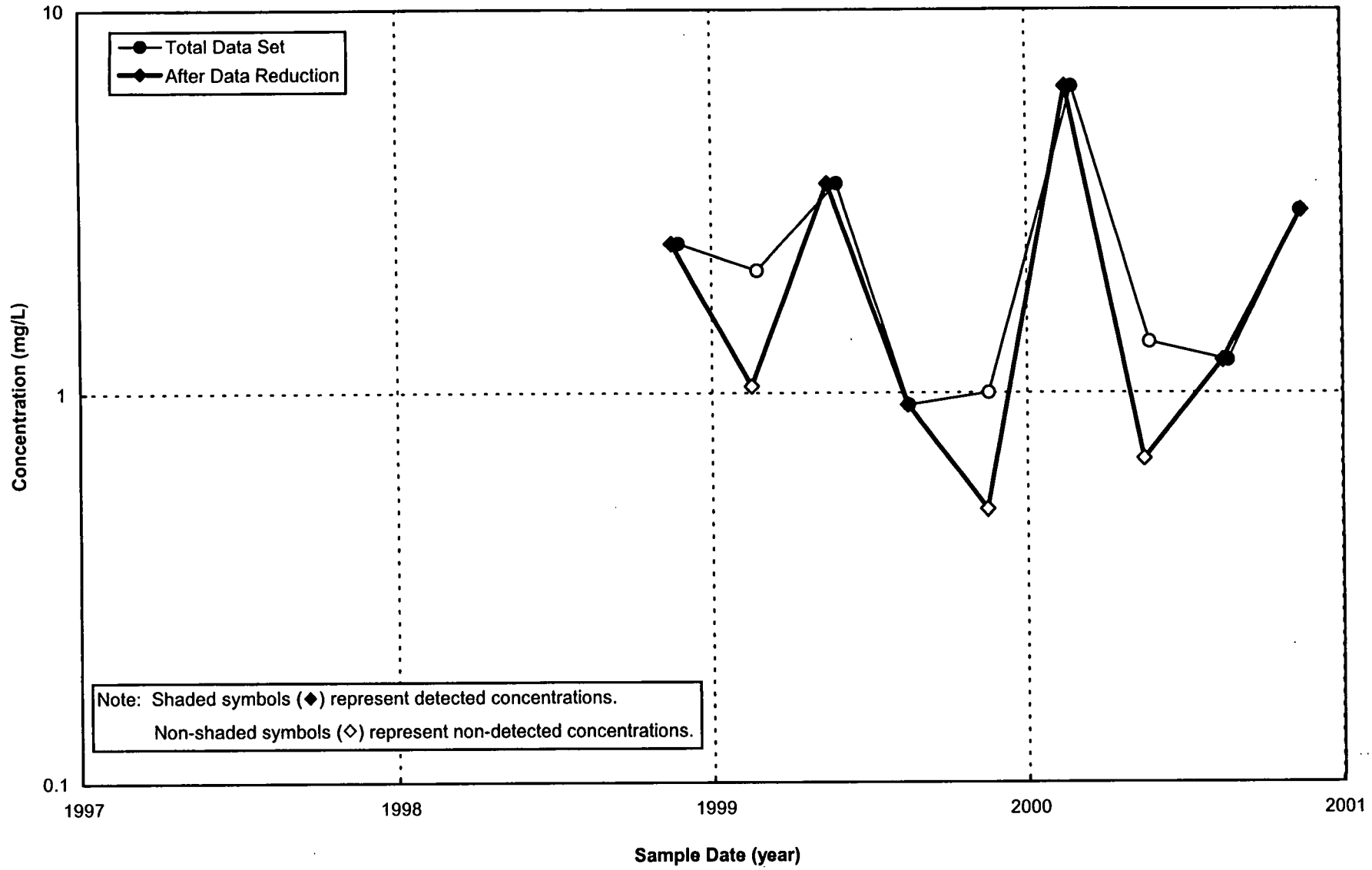

FIGURE B.3-6. LOG SCALE OF TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12339C

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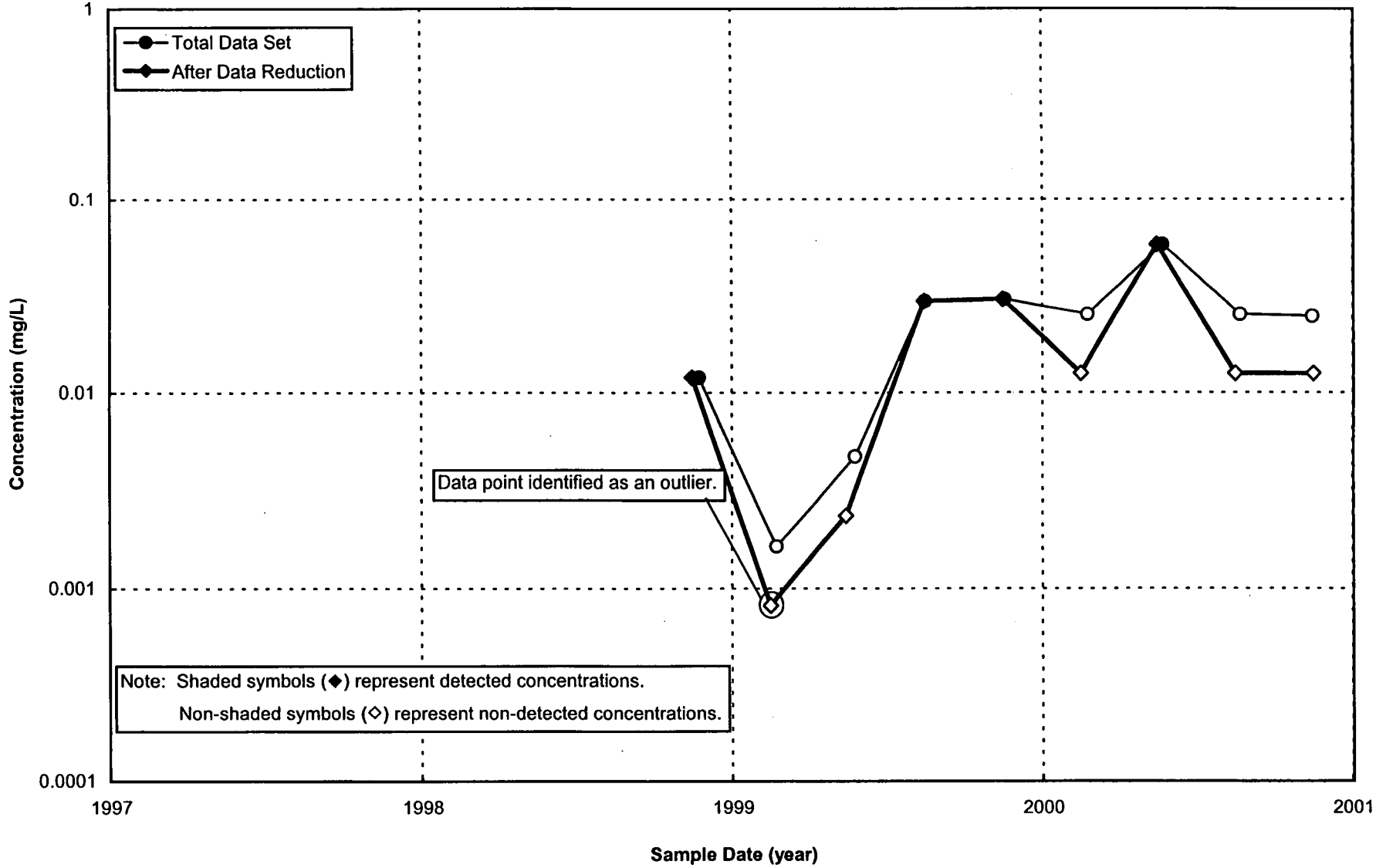

FIGURE B.3-7. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12339C

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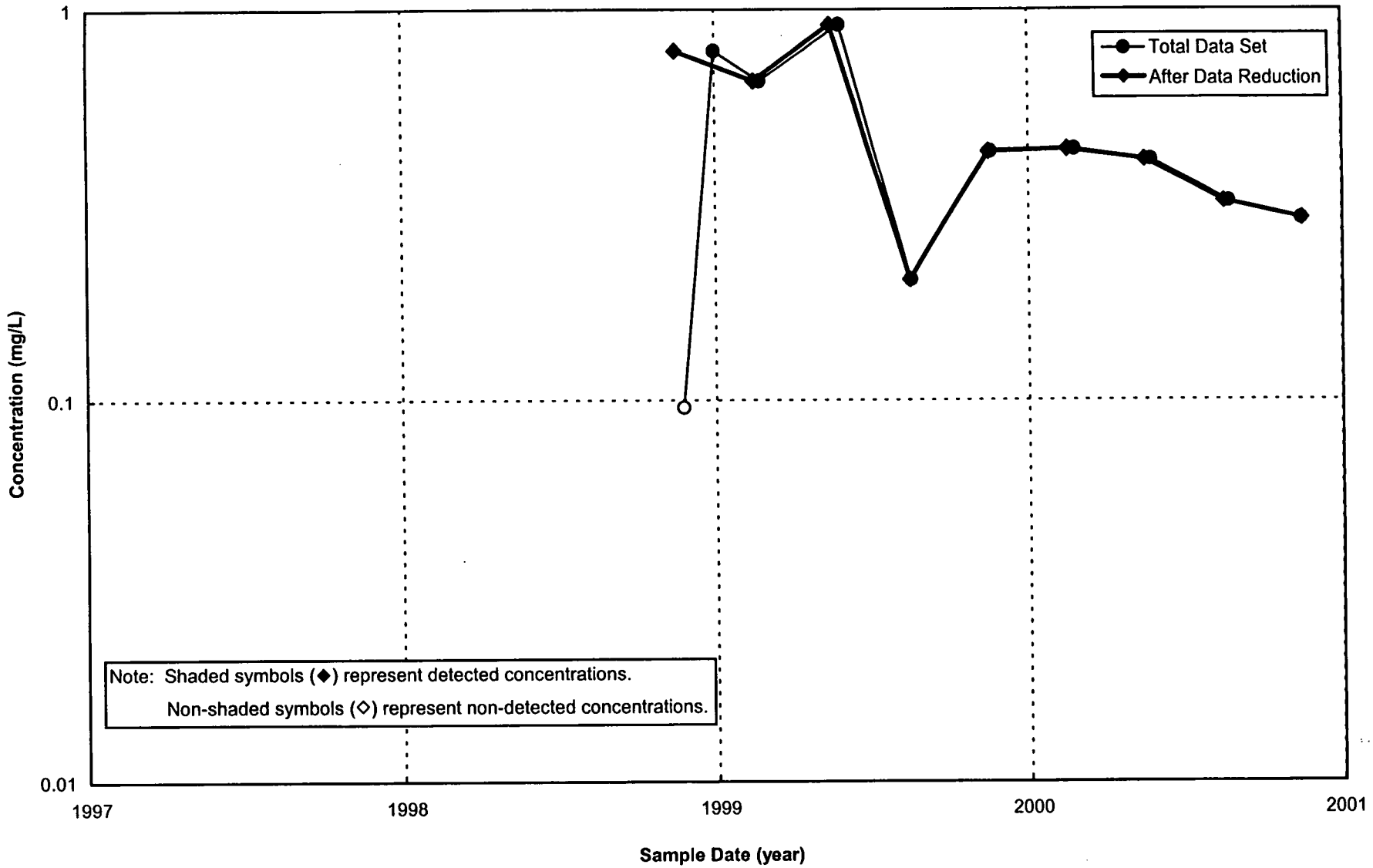

FIGURE B.3-8. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12339C

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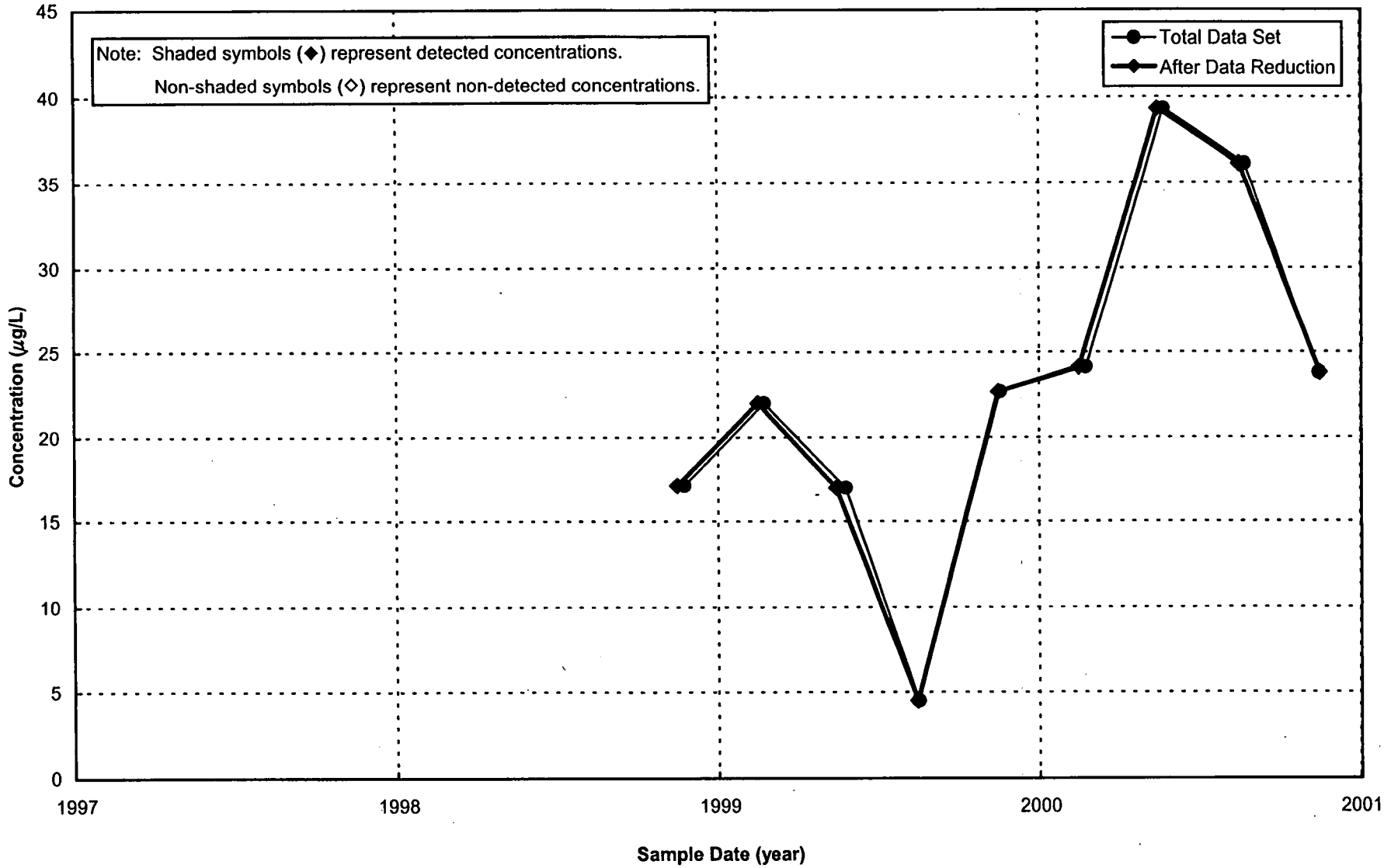

FIGURE B.3-9. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12339C

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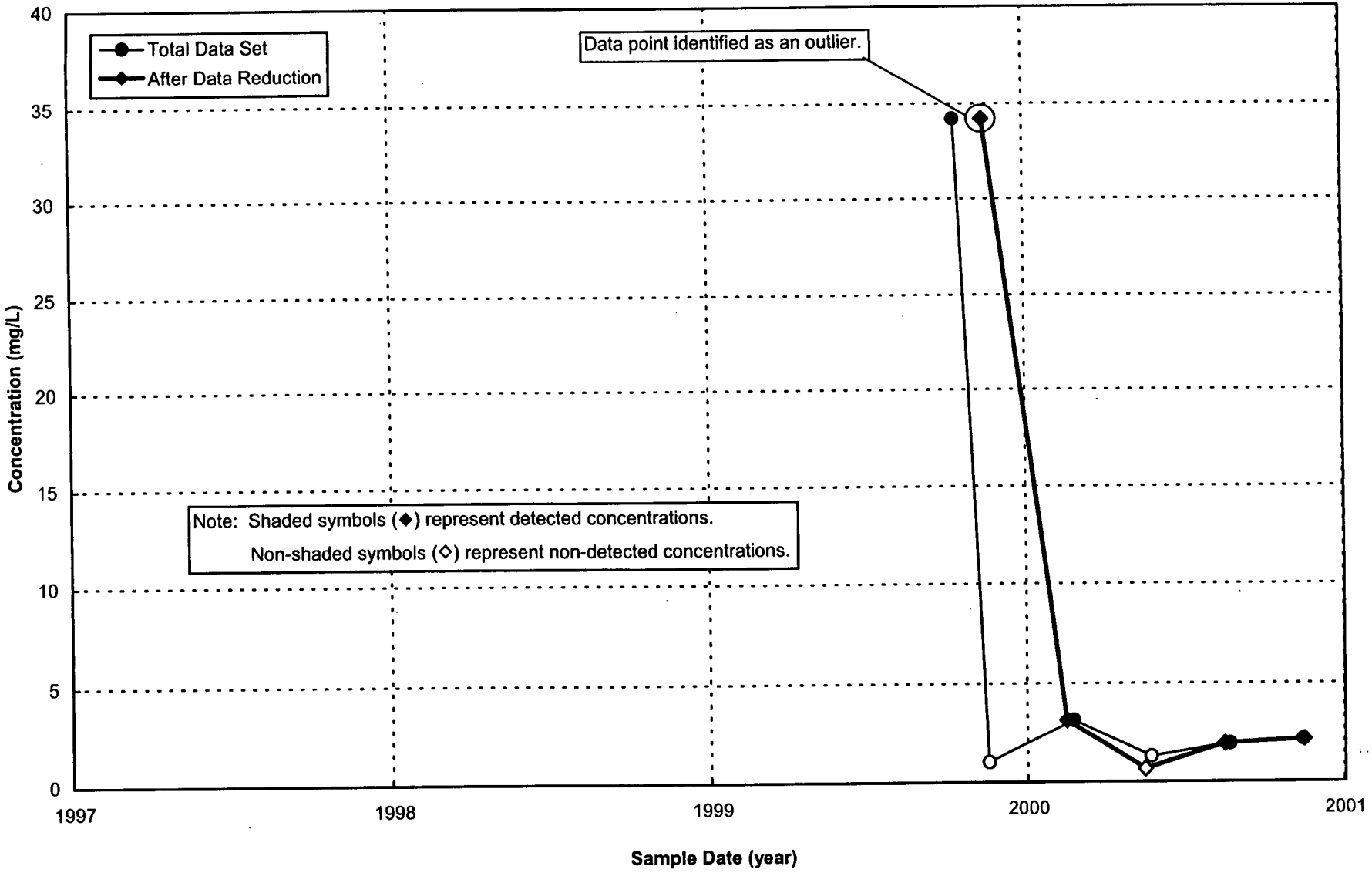

FIGURE B.3-10. TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12340C

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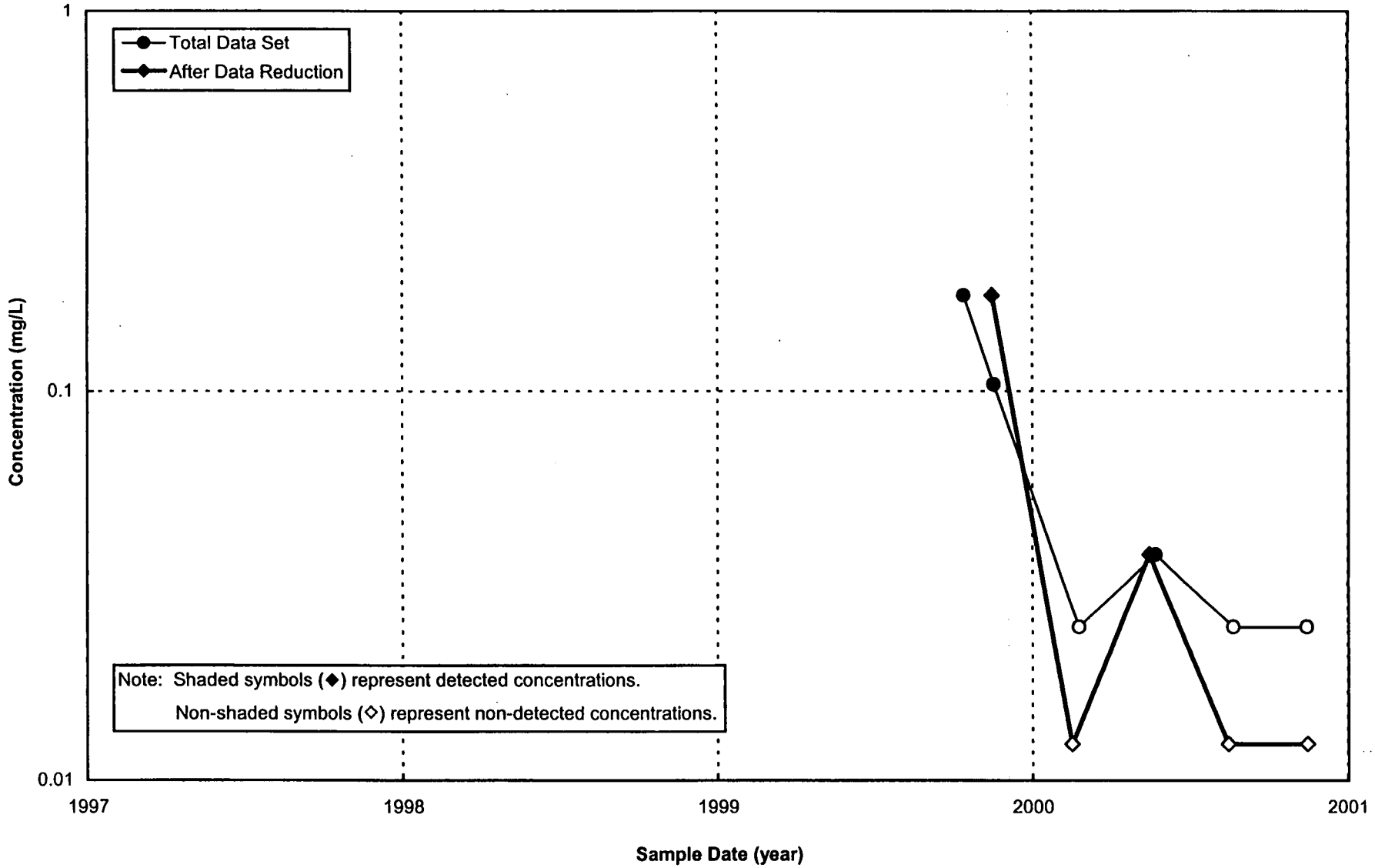

FIGURE B.3-11. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12340C

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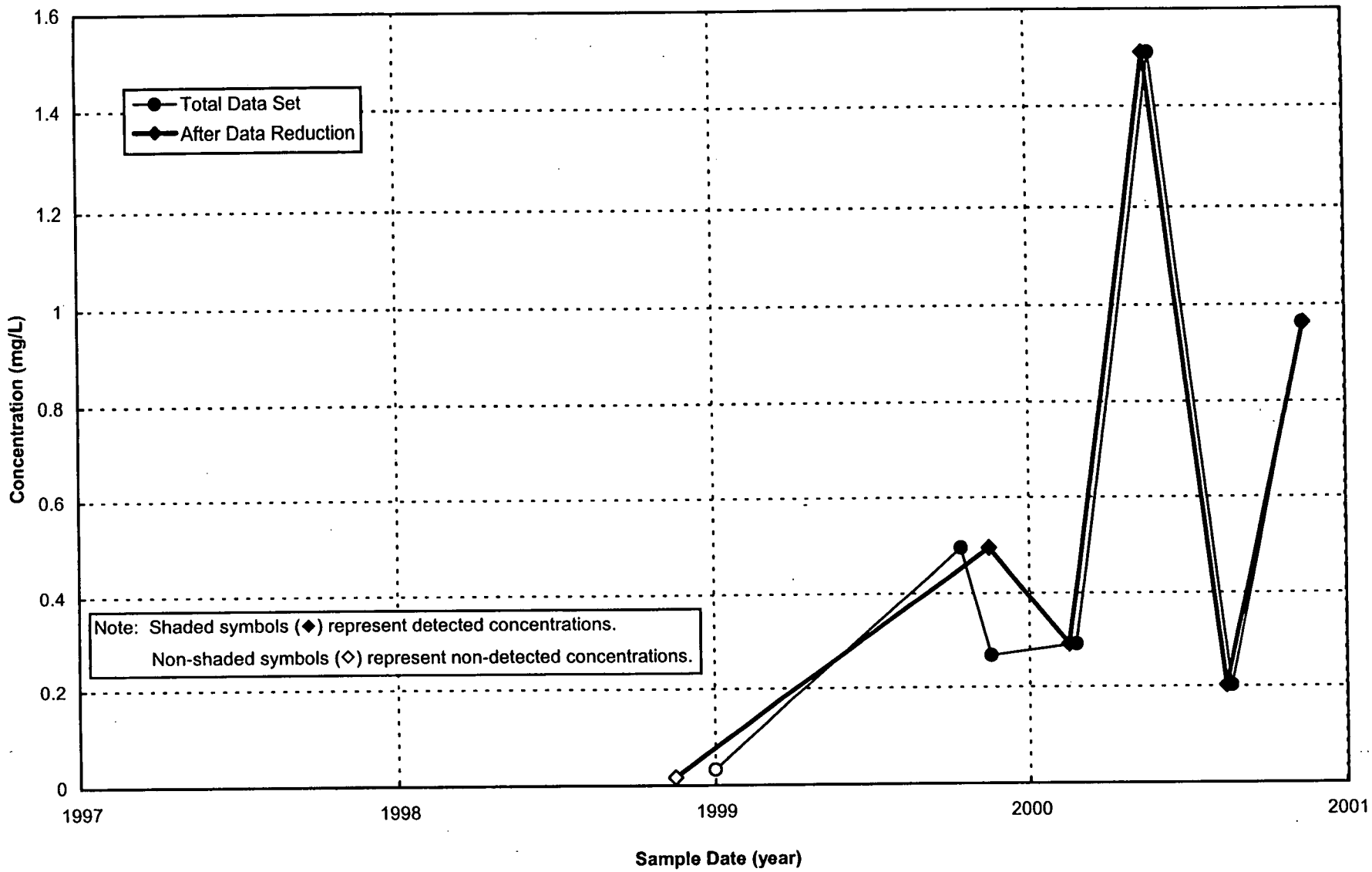

FIGURE B.3-12. BORON CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12340C

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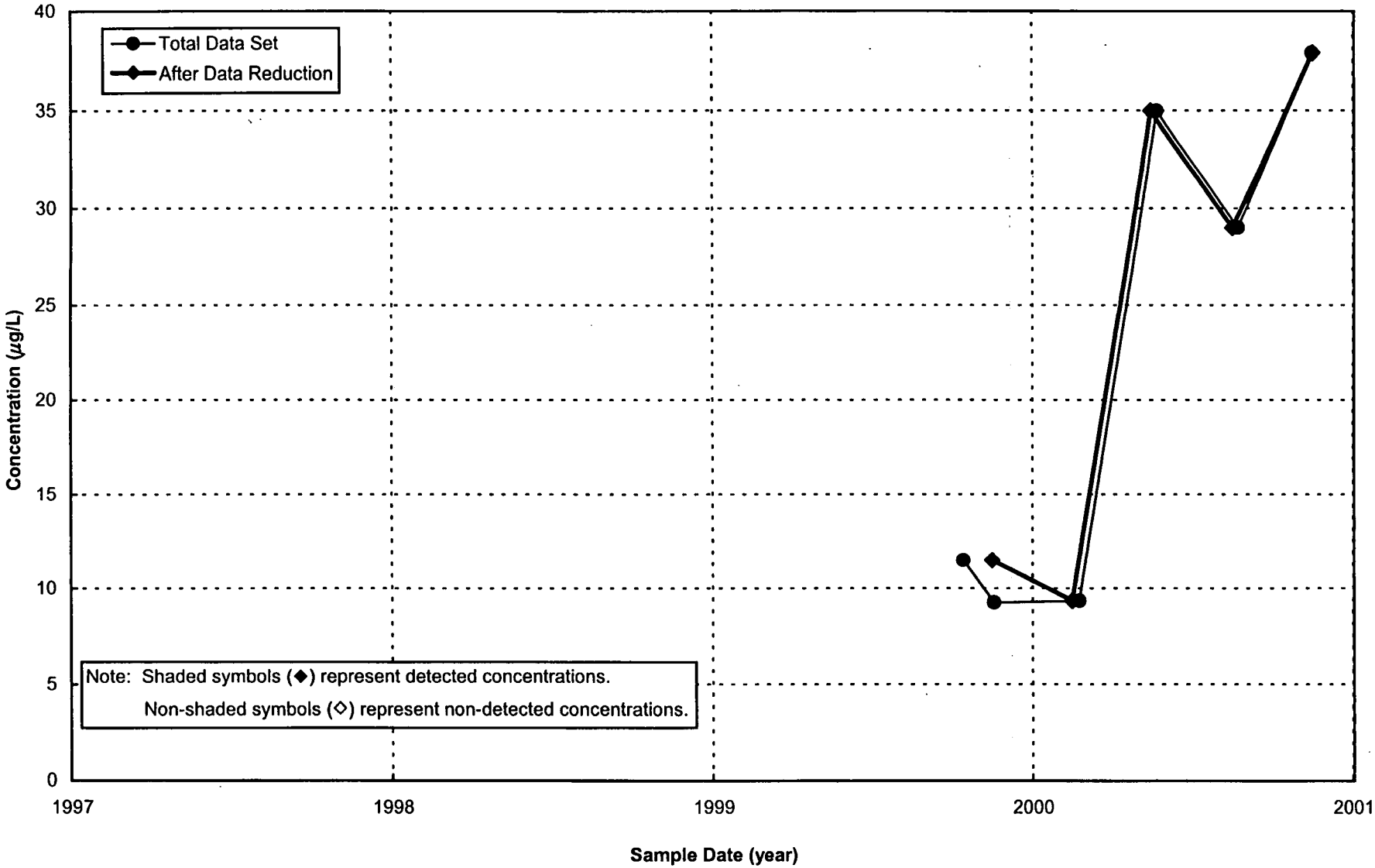

FIGURE B.3-13. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR LEACHATE COLLECTION SYSTEM 12340C

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Attachment B.4

ATTACHMENT B.4

LEAK DETECTION SYSTEM GRAPHS

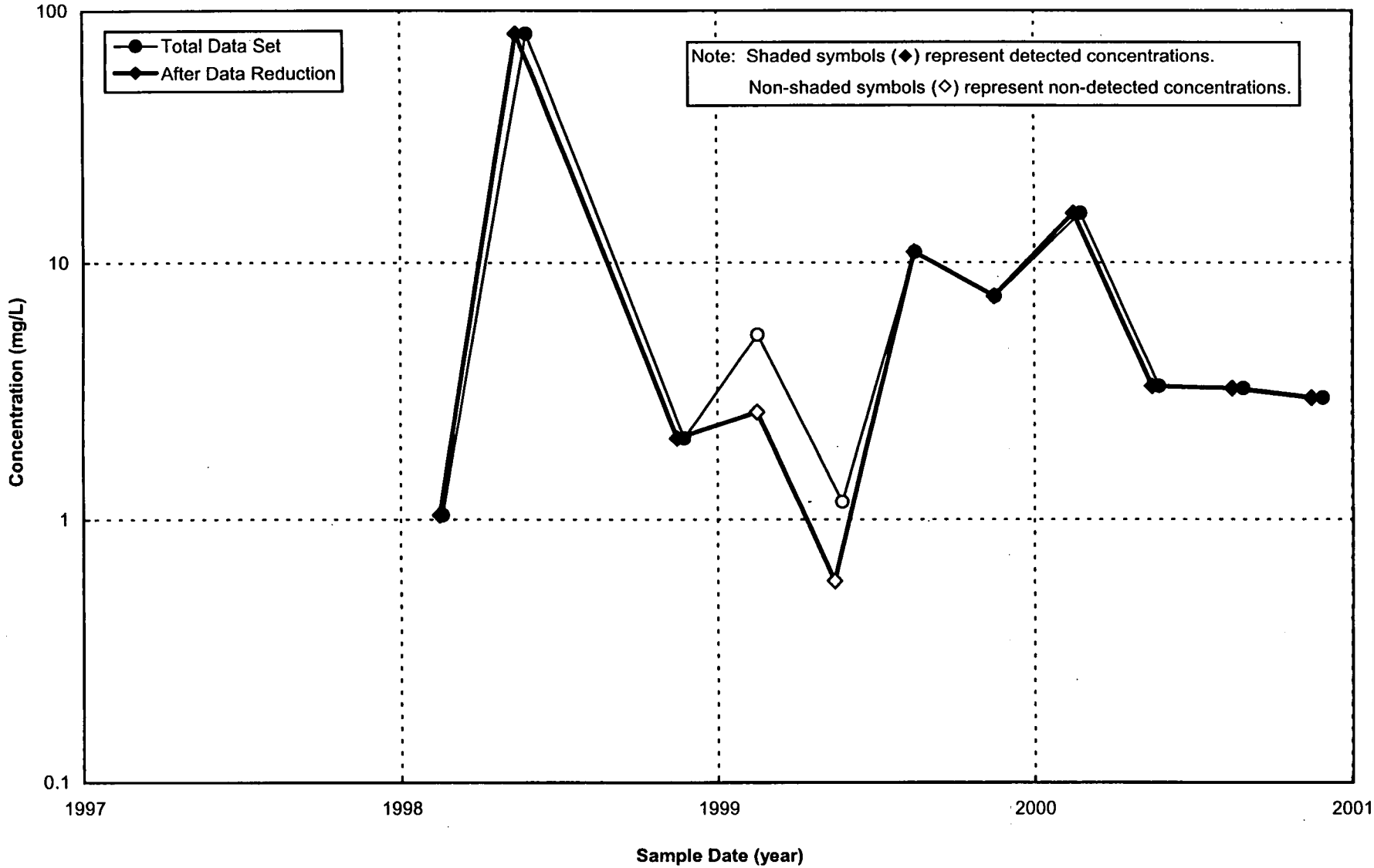

FIGURE B.4-1. LOG SCALE TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12338D

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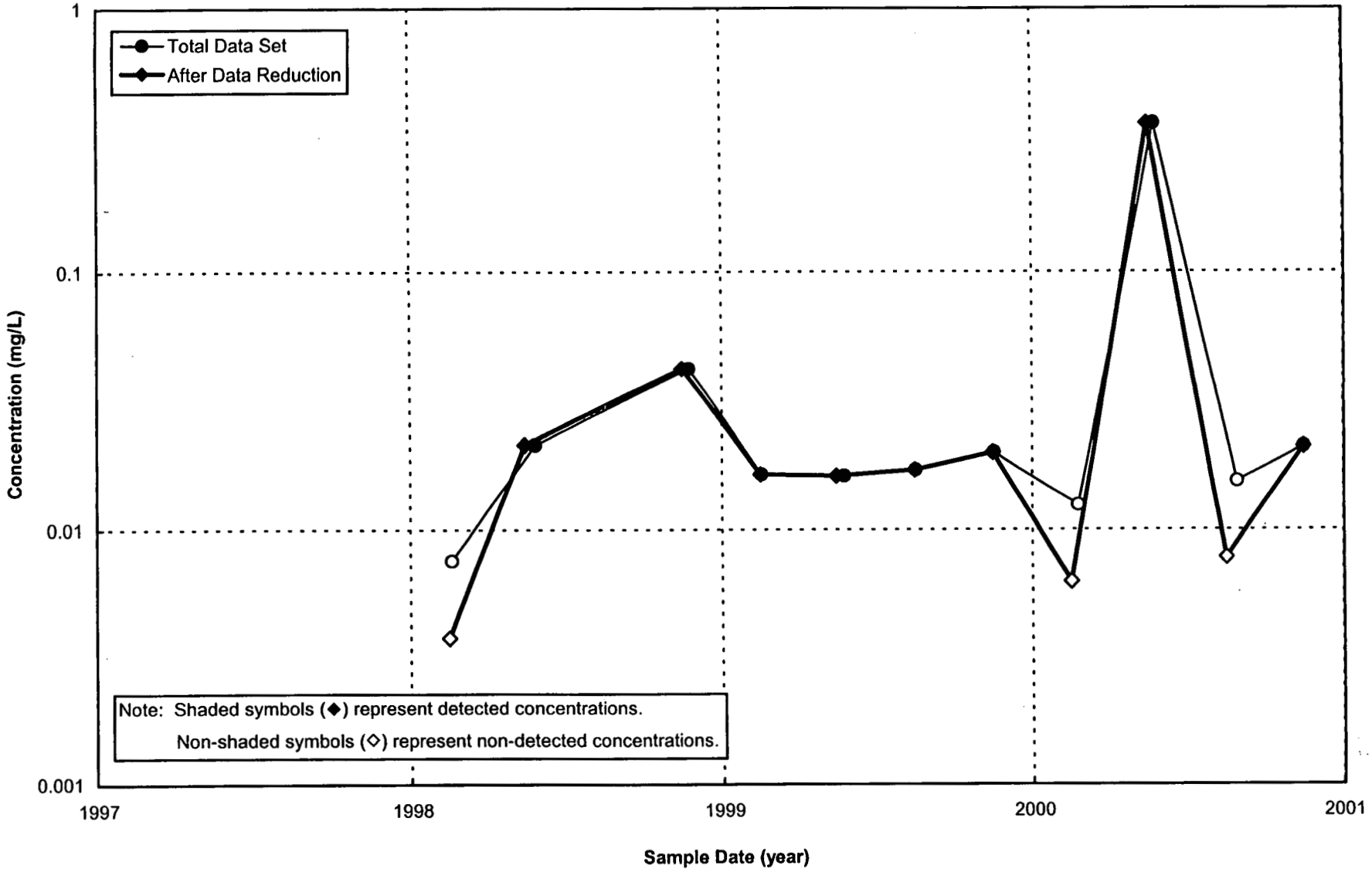

FIGURE B.4-2. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12338D

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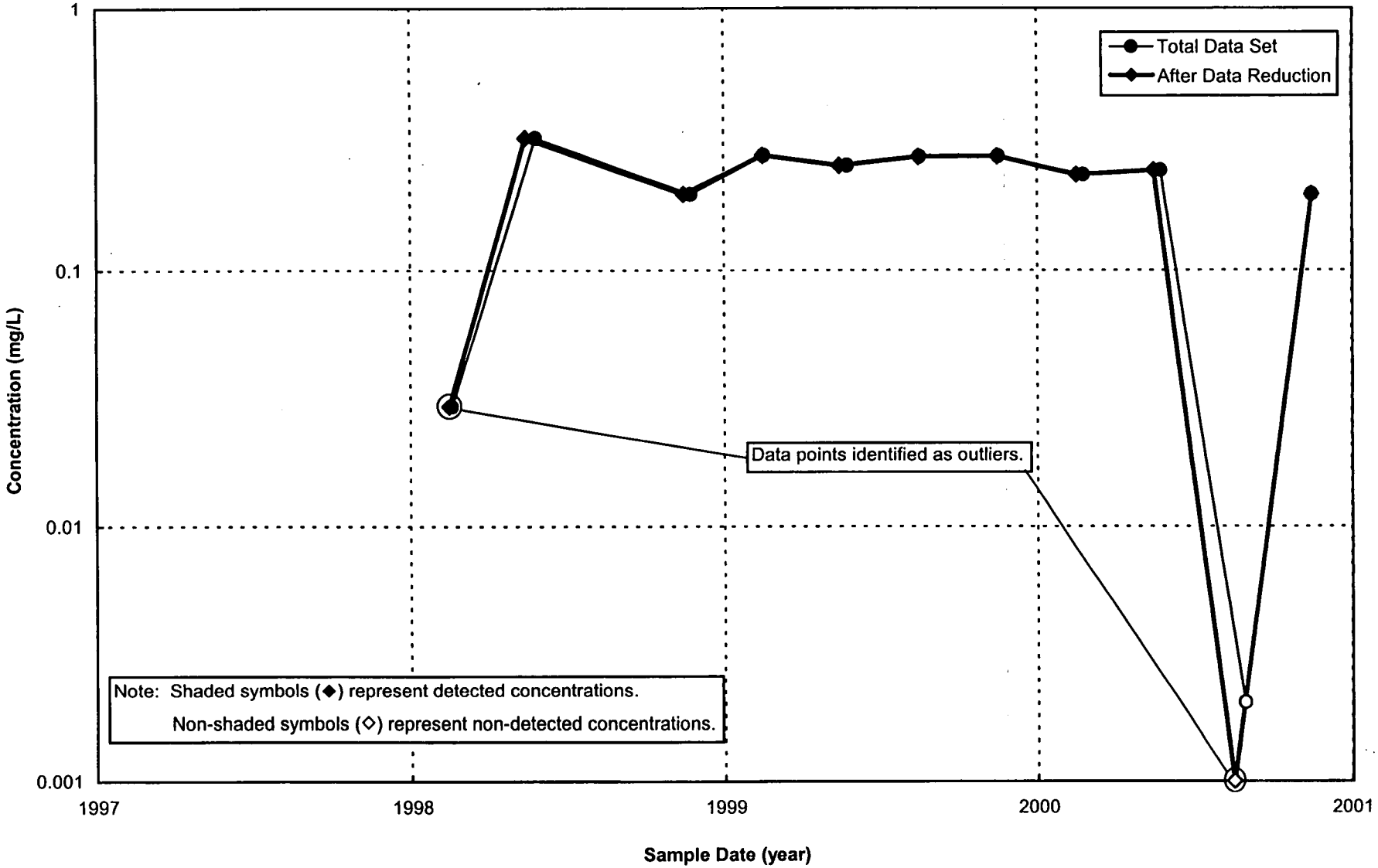

FIGURE B.4-3. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12338D

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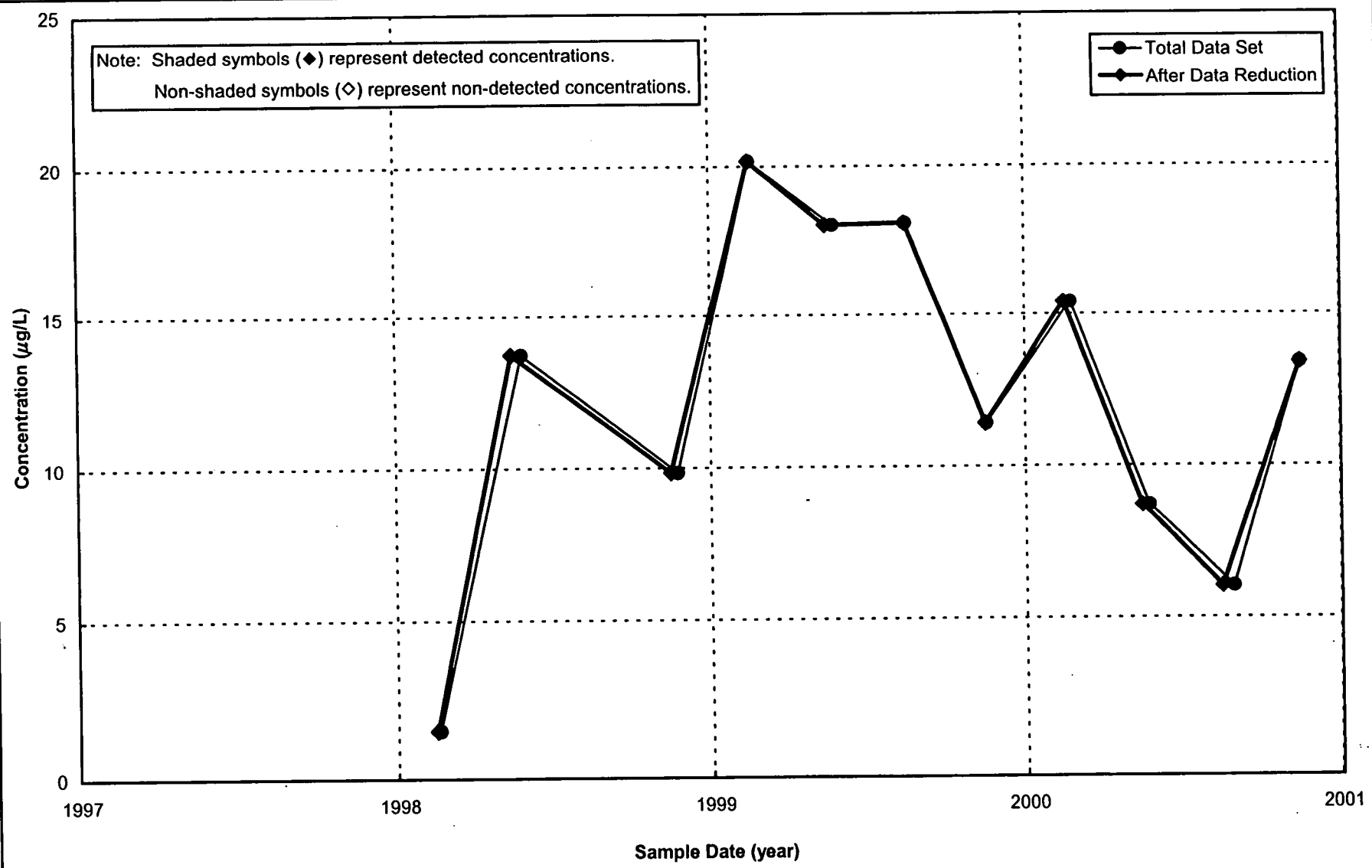

FIGURE B.4-4. TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12338D

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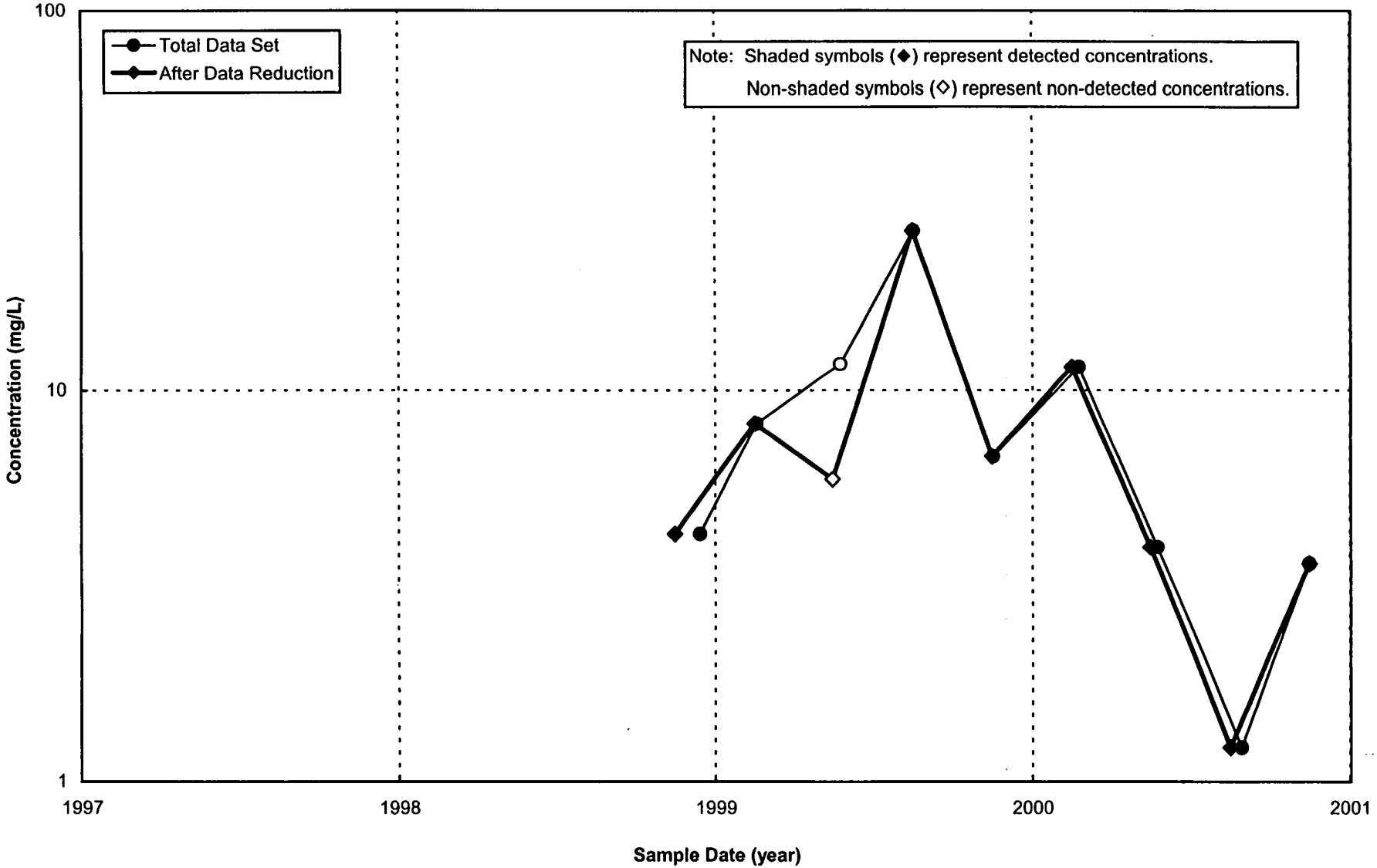

FIGURE B.4-5. LOG SCALE TOTAL ORGANIC CARBON CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12339D

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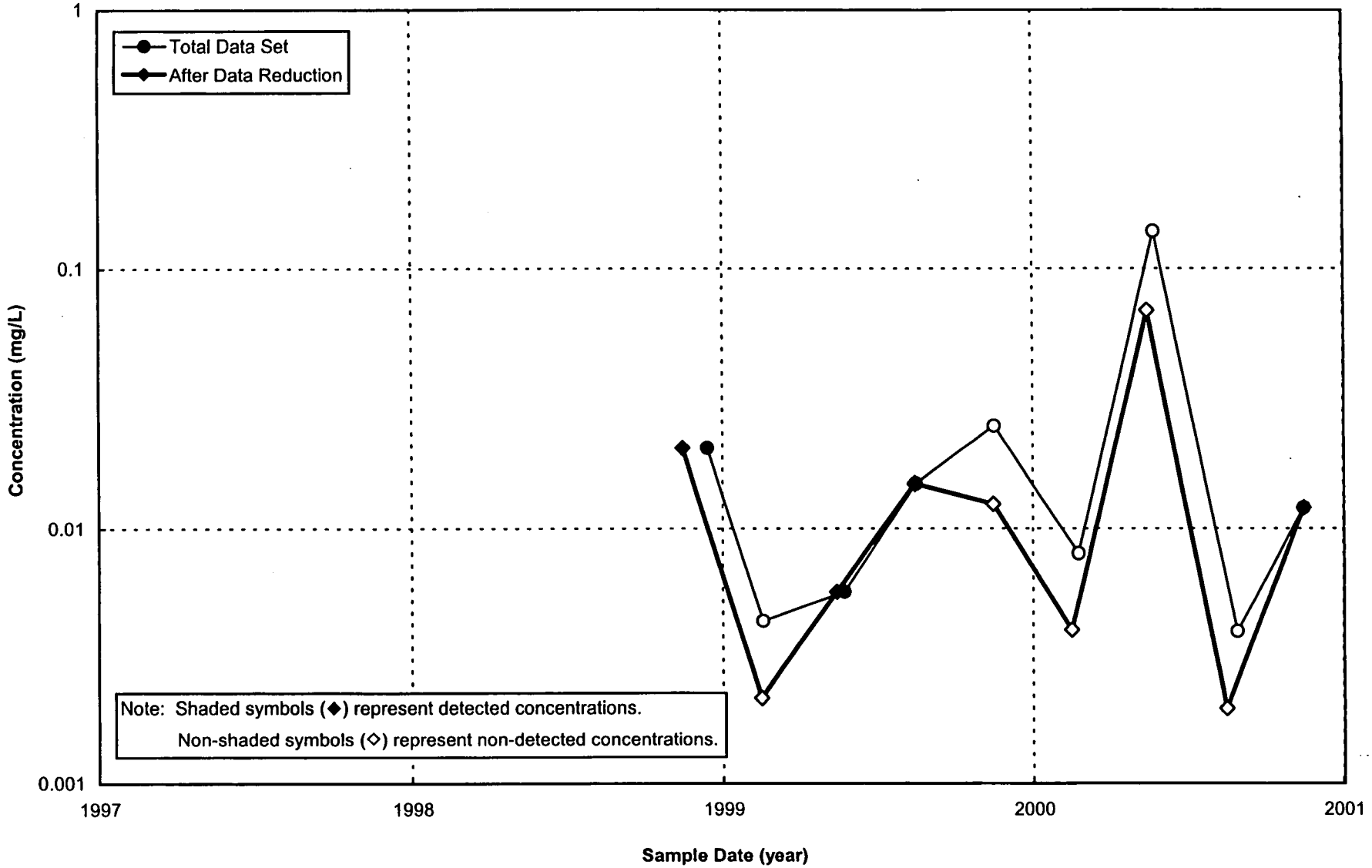

FIGURE B.4-6. LOG SCALE OF TOTAL ORGANIC HALOGENS CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12339D

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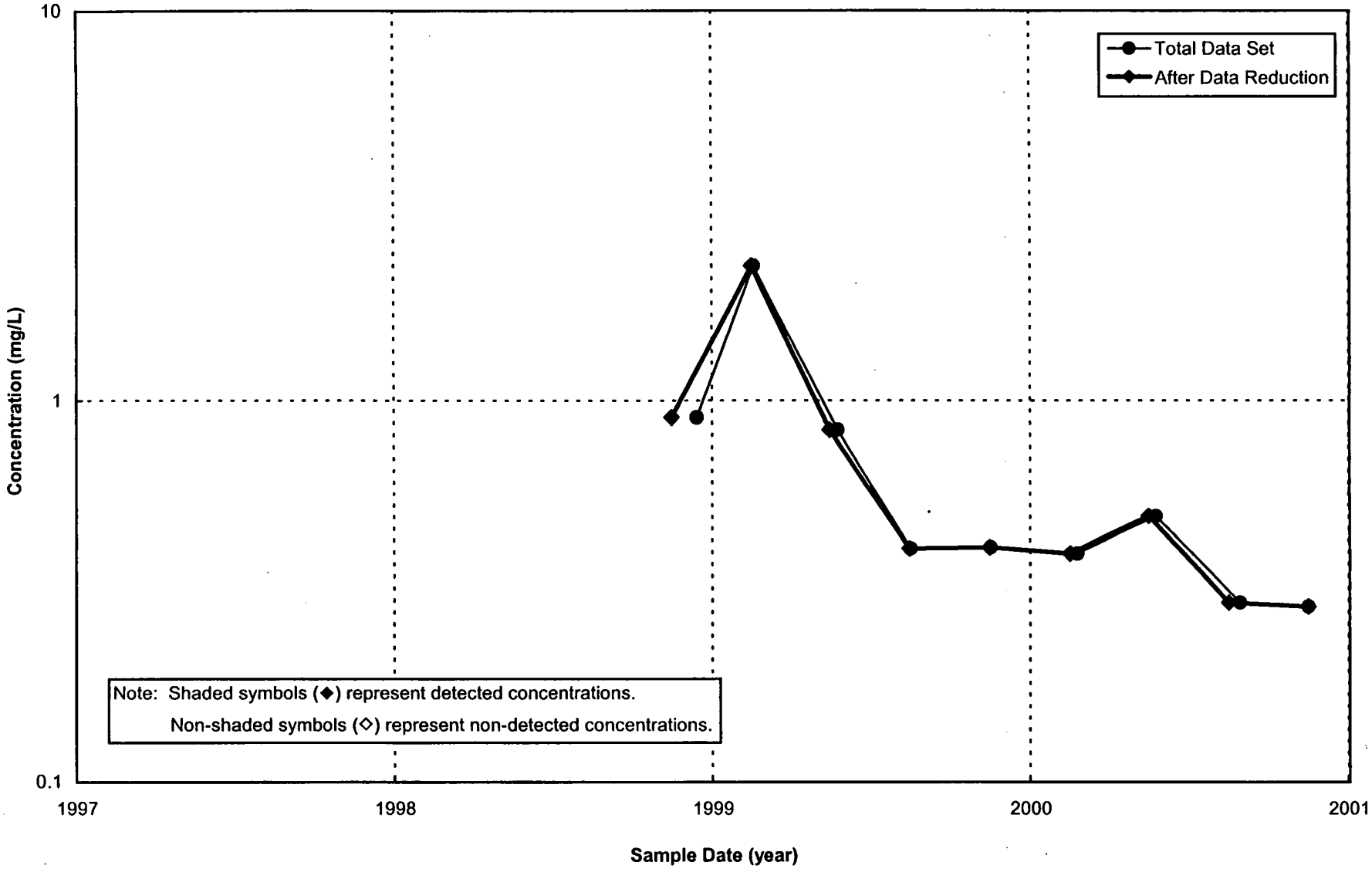

FIGURE B.4-7. LOG SCALE OF BORON CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12339D

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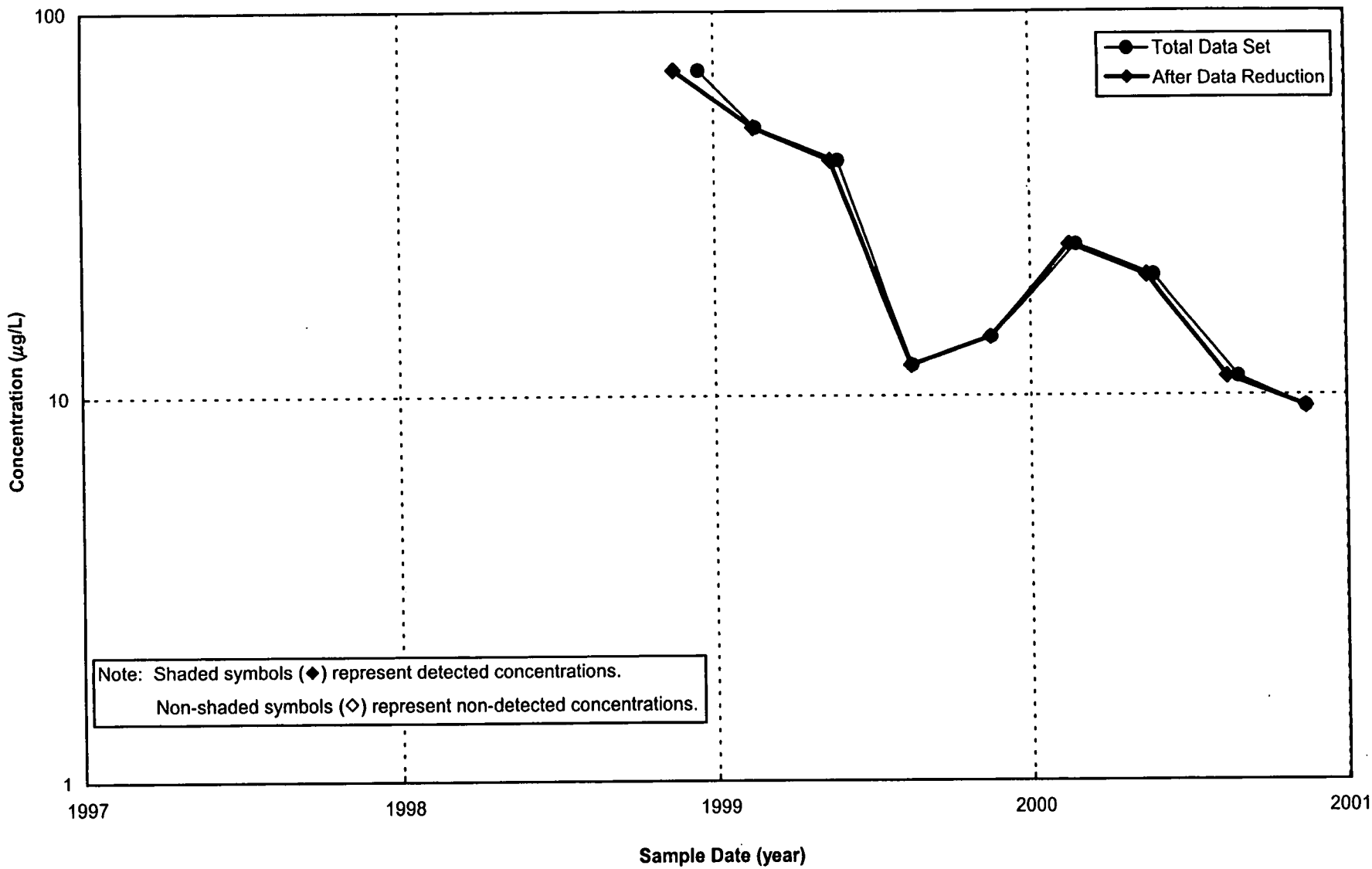

FIGURE B.4-8. LOG SCALE OF TOTAL URANIUM CONCENTRATION VS. TIME PLOT FOR LEAK DETECTION SYSTEM 12339D

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Appendix C

APPENDIX C

SHEWHART-CUSUM CONTROL CHART METHODOLOGY

APPENDIX C

This appendix shows the equations used to develop Shewhart-CUSUM control charts, equations to calculate Shewhart and CUSUM control limit concentrations, and an example of sample calculations. Section C.1 identifies the equations used to standardize the data, calculate CUSUM values, and generate the charts and control limit concentrations and Section C.2 provides an example of sample calculations. The control charts and control limit concentrations are provided in Appendix C, as attachments, for each horizon and for those wells/constituents where either trend or serial correlation was not an issue (Attachment C.1 horizontal till wells, Attachment C.2 Great Miami Aquifer wells, Attachment C.3 LCS, and Attachment C.4 LDS). Table C-1 identifies those wells/constituents that had no trend or serial correlation issues. The charts display Shewhart and CUSUM control limit concentrations in terms of back-calculated "real concentration values", where appropriate, and the maximum concentration values (after outlier removal). Maximum concentrations are provided to show the relationship between limits and the highest concentration or to provide reference information where limits can not be transformed to "real concentration values" (i.e., lognormally transformed data).

C.1 SHEWHART-CUSUM CONTROL CHART AND CONTROL LIMIT CONCENTRATION EQUATIONS

The following steps outline the procedure used to generate the Shewhart-CUSUM control charts (Steps 1 through 5) and the associated control limit concentrations (Steps 6 and 7) when appropriate. The Shewhart-CUSUM charts in Appendix C were created with baseline data after the data reduction step was performed as outlined in Appendix B. Baseline data were standardized and graphed to show the relationship of control limits to the baseline data and also to use for informational purposes.

Step 1. Select the following three parameters:

- SCL, the Shewhart control limit in standardized units
- *h*, the CUSUM control limit in standardized units
- *k*, a reference value used in the CUSUM calculations.

For groundwater, EPA guidance recommends a SCL equal to 4.5; *h* equal to 5; and *k* equal to 1.

Step 2. Calculate the mean, μ, and sample standard deviation, σ, from the baseline data set using the standard equations.

Step 3. Calculate the standardized mean for each monitoring period. For the Shewhart-CUSUM control charts presented in Appendix C, each of the baseline sample points were treated as a monitoring period mean result. In other words, each monitoring period consists of one sample ($n_i = 1$) so the monitoring period mean ($\overline{X}i$) is equivalent to the sample result. For each of the ith monitoring periods, T_i, at each well, for each constituent, the mean is standardized with respect to the baseline mean and sample standard deviation. The standardized mean, Z_i, is calculated using the following equation:

$$Z_i = (\overline{X}i - \mu)\frac{\sqrt{n_i}}{\sigma}$$

Since, for each of the ith monitoring periods n_i equals 1 and the mean equals the sample value, x_i, the equation becomes:

$$Z_i = \frac{(X_i - \mu)}{\sigma}$$

Step 4. Calculate the cumulative sum, S_i at each time point, T_i, in this case each sample date, such that:

$$S_i = \max\{0, (Z_i - k) + S_{i-1}\}$$

where max{A,B} is the function that selects the maximum of the two expressions A and B. In this case A = 0 and B = $(Z_i - k) + S_{i-1}$, thus, if B calculates to less than zero then zero is used. In this way, only positive cumulative deviations from the baseline mean are recorded. For the first time period (i = 1) replace S_{i-1} with zero such that $S_0 = 0$ (EPA 1989). The CUSUM, S_i, tracks cumulative positive deviations from the standardized mean over a continuous time span.

Step 5. Plot the values of Z_i and S_i versus time, T_i, on a chart for this combined Shewhart-CUSUM procedure (EPA 1989). "Out-of-control" limit conditions would occur during any T_i if for the first time $S_i \geq h$ (i.e., the sample period when the cumulative means [minus the k reference value] sum to greater than 5) or when $Z_i \geq$ SCL (i.e., the standardized sample period mean is greater than 4.5 standard deviations away). This may indicate contamination at the well (EPA 1989).

The Shewhart value, Z_i, detects abnormally high individual sample period mean deviations from baseline, whereas the CUSUM value, S_i, detects positive changes (i.e., those greater than baseline) whether they are increased mean, standard deviation, or both.

Step 6 and Step 7 demonstrate how to calculate concentrations associated with the SCL and h in non-standardized units. In order to demonstrate these calculations, the following terms SCL′ and h' will be used to describe the associated concentration values for the SCL and the h, respectively. These calculations are only appropriate if the underlying distribution was assumed to be normal. If the assumed distribution was lognormal then this method should not be used. When a lognormal distribution was assumed the data were log-transformed before any calculations were performed in order to "normalize" the data to meet the control chart usage requirements. The log-transformation is not a linear transformation and can not be simply "reverse transformed" in order to estimate values in "real" terms. The EPA document "Guidance for Data Quality Assessment – Practical Methods for Data Analysis [EPA QA/G-9] (EPA/600/R-96/084, July 1998) specifically states "Once the data have

been transformed, all statistical analysis must be performed on the transformed data. No attempt should be made to transform the data back to the original form because this can lead to biased estimates." This view is also given in "Statistical Methods for Environmental Pollution Monitoring" (R.O. Gilbert, 1987). Therefore, control limits for the lognormally distributed data are not provided on the control charts; however, maximum concentrations (i.e., after outlier removal) are provided for reference purposes.

Step 6: SCL′ (Shewhart Control Limit Concentration)

To determine the associated concentration values for SCL′, we start with the equation for the normalized sampling period average and work backwards to derive the value that is equivalent to 4.5 standardized units.

$$Z_i = (\overline{X}_i - \mu)\frac{\sqrt{n_i}}{\sigma}$$

where

Z_i = standardized mean,
$\overline{X}_i$ = sampling period mean for the ith period,
μ = baseline mean,
$\sqrt{n_i}$ = sample size for the ith period, and
σ = baseline standard deviation.

Because we are looking for the sampling period mean that would exceed 4.5 in standard units, we replace Z_i with 4.5. In the planned monitoring scheme, there will be one sample taken per sampling period. Therefore, n_i equals 1 and ($\overline{X}_i$) equals the single sample result (x_i). The new equation is:

{substituting x_i for $\overline{X}_i$ and 1 for n_i}

$$SCL = (x_i - \mu)\frac{\sqrt{1}}{\sigma}$$

{substituting 4.5 for SCL}

$$4.5 = \frac{(x_i - \mu)}{\sigma}$$

{multiplying both sides by σ}

$$4.5\sigma = x_i - \mu$$

{and, finally, adding m to both sides}

$$4.5\sigma + \mu = x_i$$

So, the value that would exceed the Shewhart Control Limit of 4.5 is equivalent to baseline mean plus 4.5 times the baseline standard deviation. Therefore,

$$SCL' = 4.5\sigma + \mu$$

Step 7: *h'* (CUSUM Control Limit Concentration)
To determine the associated concentration values for *h'*, we start with the equation for the normalized sampling period average and work backwards to derive the value that is equivalent to 5 standardized units.

The CUSUM control limit is the level that the cumulative positive deviation, S_i, from the baseline mean can not exceed. If the cumulative deviation calculates to a negative value, then S_i is set to 0 for use in the subsequent equation. The equation to calculate the current CUSUM S_i is:

$$S_i = \max\{0, (Z_i - k) + S_{i-1}\}$$

where

S_i = the current sampling period's CUSUM,
max = function that selects the maximum of the two values,
Z_i = standardized mean,
k = CUSUM reference value (1), and
S_{i-1} = the previous sampling period's CUSUM.

Clearly, the only choice in the "max" function that could exceed an *h* value of 5 is the "$(Z_i-k)+S_{i-1}$" part. Therefore, the equation to determine *h'* is:

$S_i = (Z_i - k) + S_{i-1}$
{substituting the *h*-value of 5 for S_i, 1 for the *k*-value}
$5 = (Z_i - 1) + S_{i-1}$
{adding 1 to each side}
$6 = Z_i + S_{i-1}$

So, the sum of the current standardized mean and the previous CUSUM cannot exceed 6. Because we are interested in the non-standardized value that represents the CUSUM control limit and not the additional Z_i that would put us over the control limit, we set S_{i-1} equal to 0. Substituting in the equation for the standardized mean, Z_i, we solve for x_i as we did for the SCL (see above):

$$6 = \frac{(x_i - \mu)}{\sigma}$$

{multiplying both sides by σ}

$$6\sigma = x_i - \mu$$

{and, finally, adding μ to both sides}

$$6\sigma + \mu = x_i$$

So, the value that would exceed the CUSUM control limit of 5 is equivalent to baseline mean plus 6 times the baseline standard deviation. Therefore,

$$h' = 6\sigma + \mu$$

C.2 SAMPLE CALCULATIONS

To illustrate the process of creating a Shewhart-CUSUM control chart the following example calculations are presented using total organic carbon data from horizontal till well 12338.

Step 1: Select Shewhart-CUSUM parameters

SCL (the Shewhart Control Limit in standardized units) = 4.5

h (the CUSUM control limit in standardized units) = 5

k (a reference value used in the CUSUM calculations) = 1.

Step 2: Calculate the mean and standard deviation of the baseline data set

Using the equations for mean and sample standard deviation:

mean, μ = 1.63 milligrams per liter (mg/L)

standard deviation, σ = 0.72 mg/L.

Step 3: Calculate the Z_i (standardized mean) for each sampling period

For this example only the standardized mean for the first sampling period will be calculated. The other remaining standardized means are calculated in a similar manner.

$$Z_i = (\overline{X}_i - \mu)\frac{\sqrt{n_i}}{\sigma}$$

where

Z_i = standardized mean,
$\overline{X}_i$ = sampling period mean for the ith period,
μ = baseline mean (7.79),
$\sqrt{n_i}$ = sample size for the ith period, and
σ = baseline standard deviation (2.84).

There was only one sample taken for the first sampling period, $i=1$, (total organic carbon = 1.1 "J" in mg/L total organic carbon) so n_i equals 1 and ($\overline{X}_i$) equals the single sample result (1.1). Substituting the known values into the above equation:

$$Z_1 = (1.1 - 1.628)\frac{\sqrt{1}}{0.724}$$

the square root of 1 is 1, and 1.1-1.628=-0.528, so

$$Z_1 = \frac{(-0.528)}{0.724}$$

therefore,

$$Z_1 = -0.729 \approx -0.73$$

The standardized mean of the first sampling period is -0.73 in standardized units.

Step 4: Calculate the cumulative sum, S_i

Again, for this example, only the cumulative sum, S_i, for the first sampling period will be calculated. Using the equation:

$$S_i = \max\{0, (Z_i - k) + S_{i-1}\}$$

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and substituting in the standardized mean calculated in Step 3 (-0.73) and the k value of 1. The remaining parameter value needed is S_{i-}. Since i=1 for the first sampling period, i-1=0 and by definition $S_0 = 0$. Therefore,

$$S_1 = \max\{0,(-0.73 - 1) + 0\}$$

then

$$S_1 = \max\{0,-1.73\} = 0.$$

So the cumulative sum, $S_1=0$.

Step 5: Plot the Z_i and S_i values

Table C-2 shows the baseline data and calculated results for total organic carbon at horizontal till well 12338 which would then be plotted on the control chart.

Step 6: Shewhart Control Limit Concentration

The following example shows the derived formula for calculating the associated concentration (non-standardized value) of the Shewhart control limit for total organic carbon baseline data from horizontal till well 12338. Starting with the derived formula for the SCL′:

$$SCL' = 4.5\sigma + \mu$$

{substituting 0.724 mg/L for σ and 1.628 mg/L for μ}

$$SCL' = (4.5 \times 0.724) + 1.628$$

$$SCL' = 4.89 \text{ mg/L}$$

So the Shewhart control limit calculated from the baseline data is equivalent to 4.89 mg/L for total organic carbon at the horizontal till well 12338.

Step 7: CUSUM Control Limit Concentration

The following example shows the derived formula for calculating the associated concentration (non-standardized value) of the CUSUM control limit for total organic carbon baseline data from horizontal till well 12338. Starting with the derived formula for the h':

$$h' = 6\sigma + \mu$$

{substituting 0.724 mg/L for σ and 1.628 mg/L for μ

$$h' = (6 \times 0.724) + 1.628$$

$$h' = 5.97 \text{ mg/L}$$

So the CUSUM control limit calculated from the baseline data is equivalent to 5.97 mg/L for total organic carbon at the horizontal till well 12338.

C.3 UPDATING BASELINE DATA SET AND REVISING CONTROL CHARTS

One of the basic assumptions of the control chart methodology is that the baseline data set and associated estimated parameters reflect current baseline conditions. As per Section 6.1 of the EPA guidance "Addendum to Interim Final Guidance" (July 1992) to EPA/530-SW-89-026 "Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities": '... if a Control Chart remains "in control" for a long period of time, the baseline parameters should be updated to include more recent observations as background data.' To this end, if it can be demonstrated that the control chart for the monitoring well remains "in control" then the baseline data set should be supplemented by the more recently collected data and new control limit parameters calculated. This has the benefit of allowing for better estimates of the true baseline mean and variance, and therefore, better (i.e. more accurate) estimates of the control limits.

The monitoring data will be accessed on an annual basis to determine if modifications to the baseline data set should be implemented to include data from the previous year and the control limit parameters will be recalculated. To determine if the recent data should be added to the baseline data set, a t-Test will be performed comparing the two data sets. If the test does not show a significant difference between the two data sets at the five percent significance level, then the data sets will be combined and the control limits recalculated. Additionally, the data will be trend tested and assessed for serial correlation to ensure that no trend exists and that there is no sample interdependence, respectively before incorporation of the newly collected data into the baseline data set.

- If the data collected over the previous one-year period can be demonstrated to be statistically similar to the baseline data set, then this data will be incorporated into the baseline data set and the control limits will be re-calculated. The end of the baseline period will then be defined as the last sampling event of the previous one-year period. A new control chart incorporating newly calculated control limits will be generated. Since all the currently collected data are now defined as "baseline", the newly generated control chart will contain no data – only control limits. Essentially, the control chart is "reset" with no current data and the newly calculated control limits incorporated.

- If the t-Test indicates a significant difference between the two data sets, then the newer data should only be included into the baseline data set if some specific factor can be identified why the baseline levels have naturally changed. And in this case, an assessment would be made to decide if it is appropriate to replace or supplement the original baseline data set with the more current data.

An additional situation may arise for those constituent/wells that currently statistically demonstrate a significant trend. Newly collected data in conjunction with the more recent baseline data may indicate that the system has reached a steady state (no longer any observed trend). The data will be assessed to determine if earlier collected baseline data can be eliminated to provide, with newly collected data, a trend-less baseline data set allowing for the control chart methodology to be instituted. The previously stated t-Test and trend analysis would still apply to this situation.

TABLE C-1

ON-SITE DISPOSAL FACILITY WELLS BY CELL HORIZON FOR CONSTITUENTS WITH NO SIGNIFICANT TREND AND NOT DETECTED SERIAL CORRELATION

Cell #	Horizon[a]	Location	Constituent	Distribution[b]
1	HTW	12338	Total Organic Carbon	Normal
			Total Organic Halogens	Normal
			Uranium, Total	Normal
2	HTW	12339	Total Organic Carbon	Lognormal
			Total Organic Halogens	Lognormal
			Boron	Normal
			Uranium, Total	Normal
3	HTW	12340	Total Organic Halogens	Lognormal
1	UGMA	22201	Total Organic Carbon	Lognormal
			Boron	Normal
			Uranium, Total	Lognormal
1	DGMA	22198	Total Organic Carbon	Lognormal
			Total Organic Halogens	Lognormal
			Boron	Lognormal
2	UGMA	22200	Total Organic Carbon	Lognormal
			Boron	Normal
			Uranium, Total	Lognormal
3	UGMA	22203	Total Organic Carbon	Lognormal
			Total Organic Halogens	Normal
			Boron	Normal
3	DGMA	22204	Total Organic Carbon	Lognormal
			Total Organic Halogens	Normal
			Uranium, Total	Lognormal
1	LCS	12338C	Technetium-99	Lognormal
			Uranium, Total	Normal
2	LCS	12339C	Total Organic Carbon	Lognormal
			Total Organic Halogens	Lognormal
3	LCS	12340C	Total Organic Carbon[c]	Normal
			Boron[c]	Normal
1	LDS	12338D	Total Organic Carbon	Lognormal
			Total Organic Halogens	Lognormal
			Uranium, Total	Normal
2	LDS	12339D	Total Organic Halogens	Lognormal

[a]HTW = Horizontal Till Well
UGMA = Upgradient Great Miami Aquifer
DMGA = Downgradient Great Miami Aquifer
LCS = Leachate Collection System
LDS = Leak Detection System
[b]Statistical method is Shapiro-Wilk Test.
[c]There was insufficient data in order to do serial correlation.

TABLE C-2

DATA COMBINED FOR SHEWHART-CUSUM CHART FOR TOTAL ORGANIC CARBON FROM HORIZONTAL TILL WELL 12338

Sample, i	Sample Date	Total Organic Carbon, X_i (mg/L)	Standard Mean, Z_i	Z_i-k	$(Z_i-k)+S_{i-1}$	CUSUM, S_i
1	1998-B6	1.1	-0.73	-1.73	-1.73	0.00
2	1999-B1	1.23	-0.55	-1.55	-1.55	0.00
3	1999-B2	1.47	-0.22	-1.22	-1.22	0.00
4	1999-B4	3.21	2.18	1.18	1.18	1.18
5	1999-B5	2.4	1.07	0.07	1.25	1.25
6	1999-B6	1.865	0.37	-0.63	0.62	0.62
7	2000-B2	0.5	-1.56	-2.56	-1.94	0.00
8	2000-B3	1.51	-0.16	-1.16	-1.16	0.00
9	2000-B4	1.1	-0.73	-1.73	-1.73	0.00
10	2000-B5	1.64	0.02	-0.98	-0.98	0.00
11	2000-B6	1.85	0.31	-0.69	-0.69	0.00

Attachment C.1

ATTACHMENT C.1

HORIZONTAL TILL WELL CONTROL CHARTS

FIGURE C.1-1. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 12338 - BASELINE CONTROL CHART

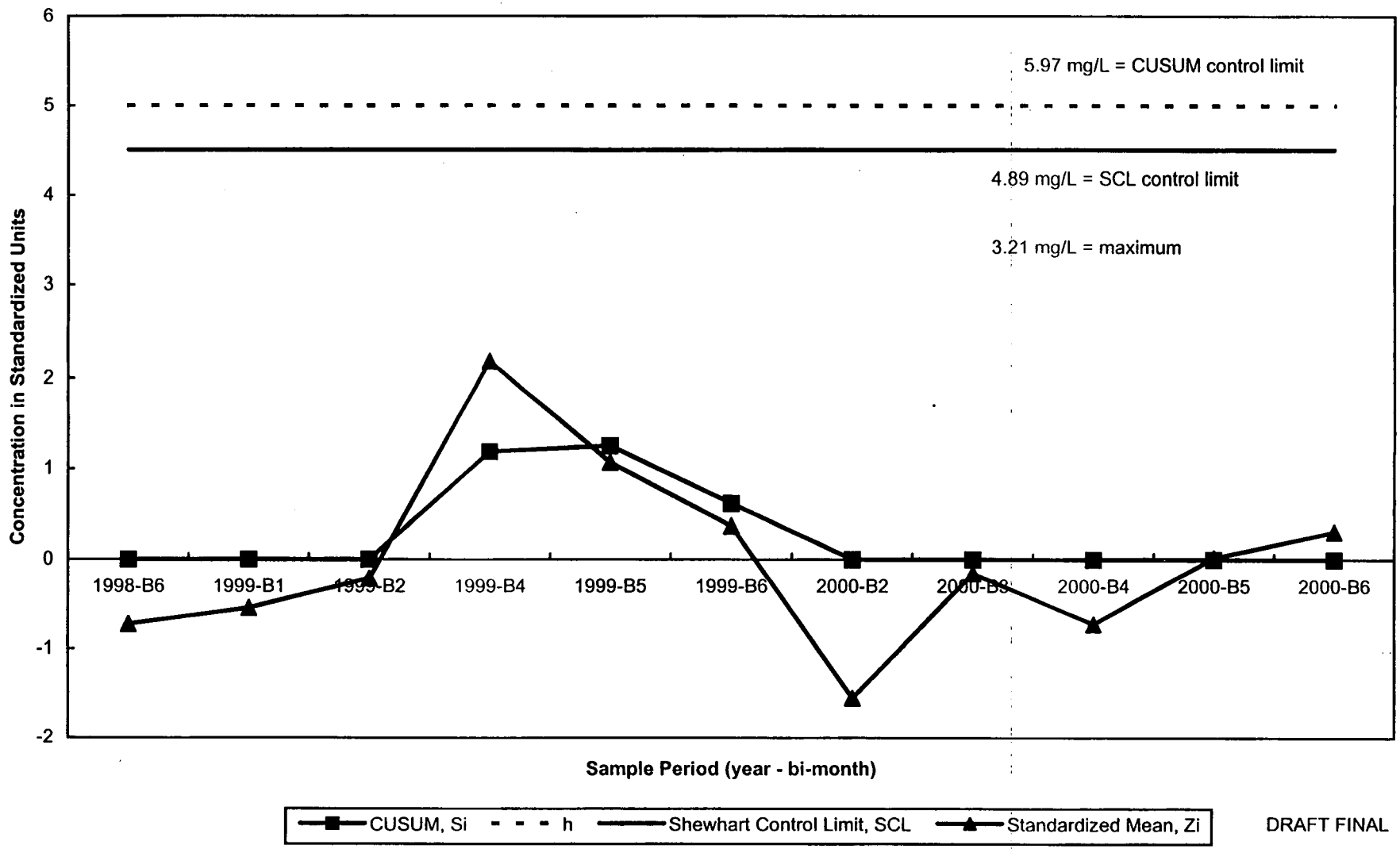

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FIGURE C.1-2. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12338 - BASELINE CONTROL CHART

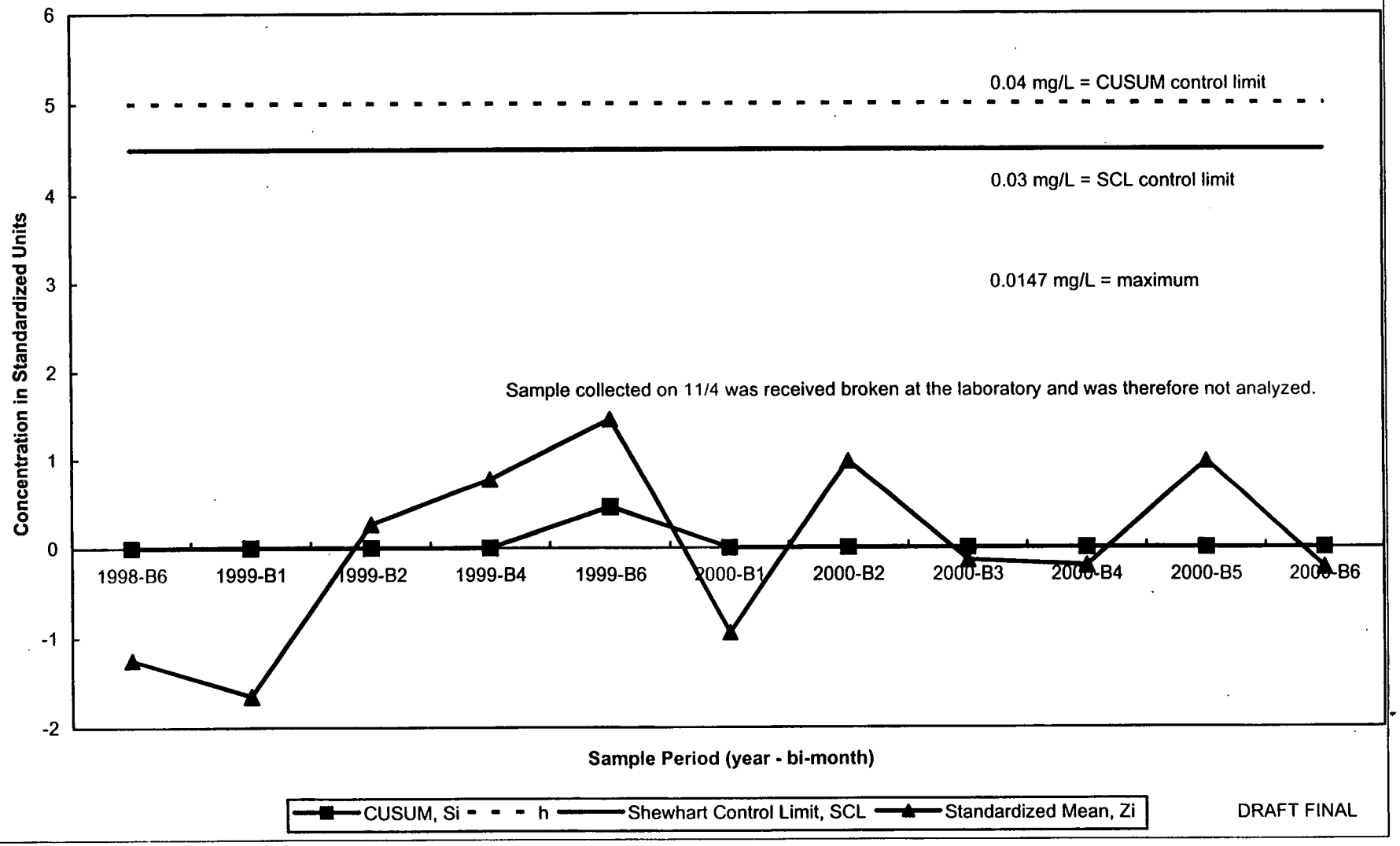

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FIGURE C.1-3. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 12338 - BASELINE CONTROL CHART

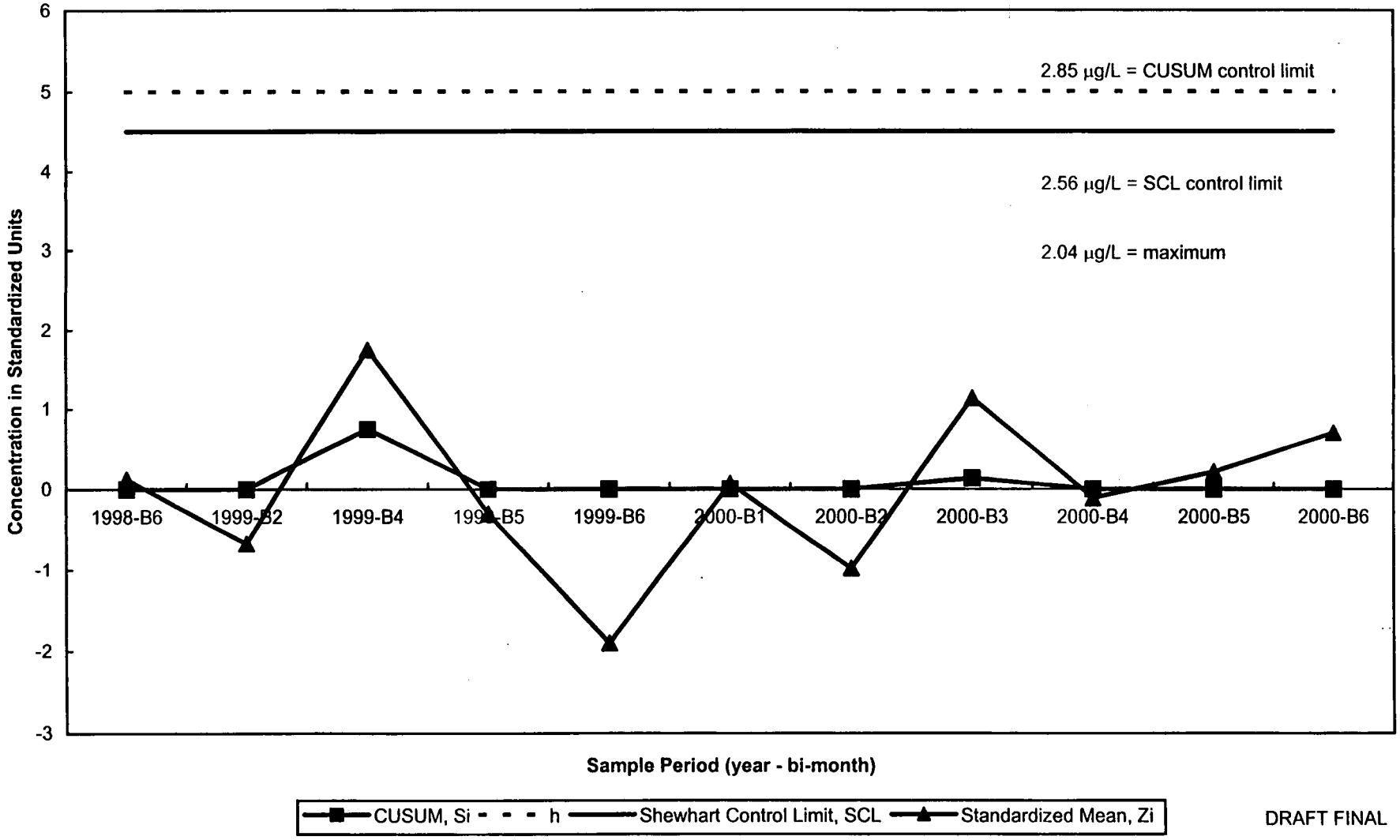

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FIGURE C.1-4. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 12339 - BASELINE CONTROL CHART

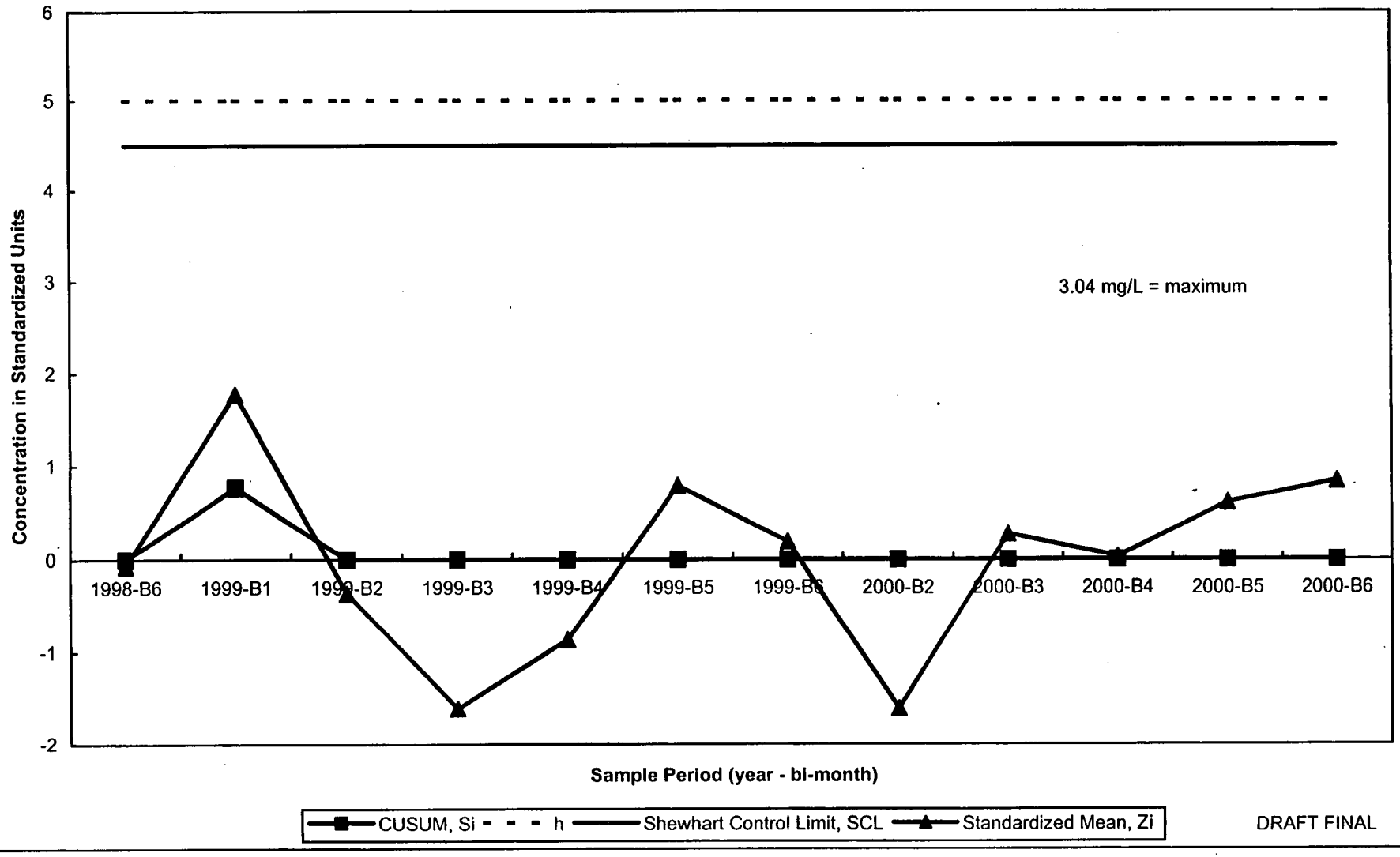

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FIGURE C.1-5. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12339 - BASELINE CONTROL CHART

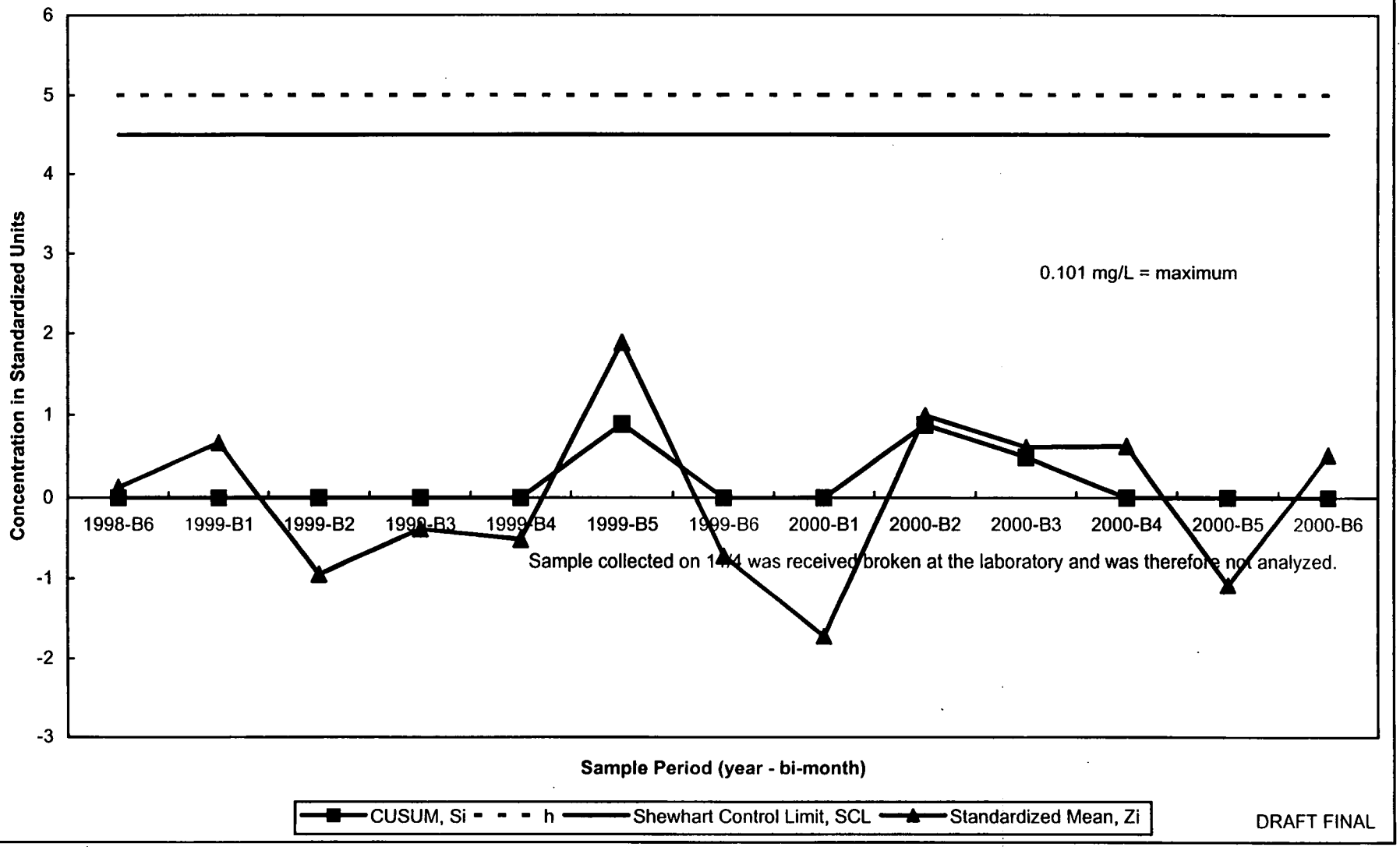

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FIGURE C.1-6. STANDARDIZED BORON
CONCENTRATIONS AT 12339 - BASELINE CONTROL CHART

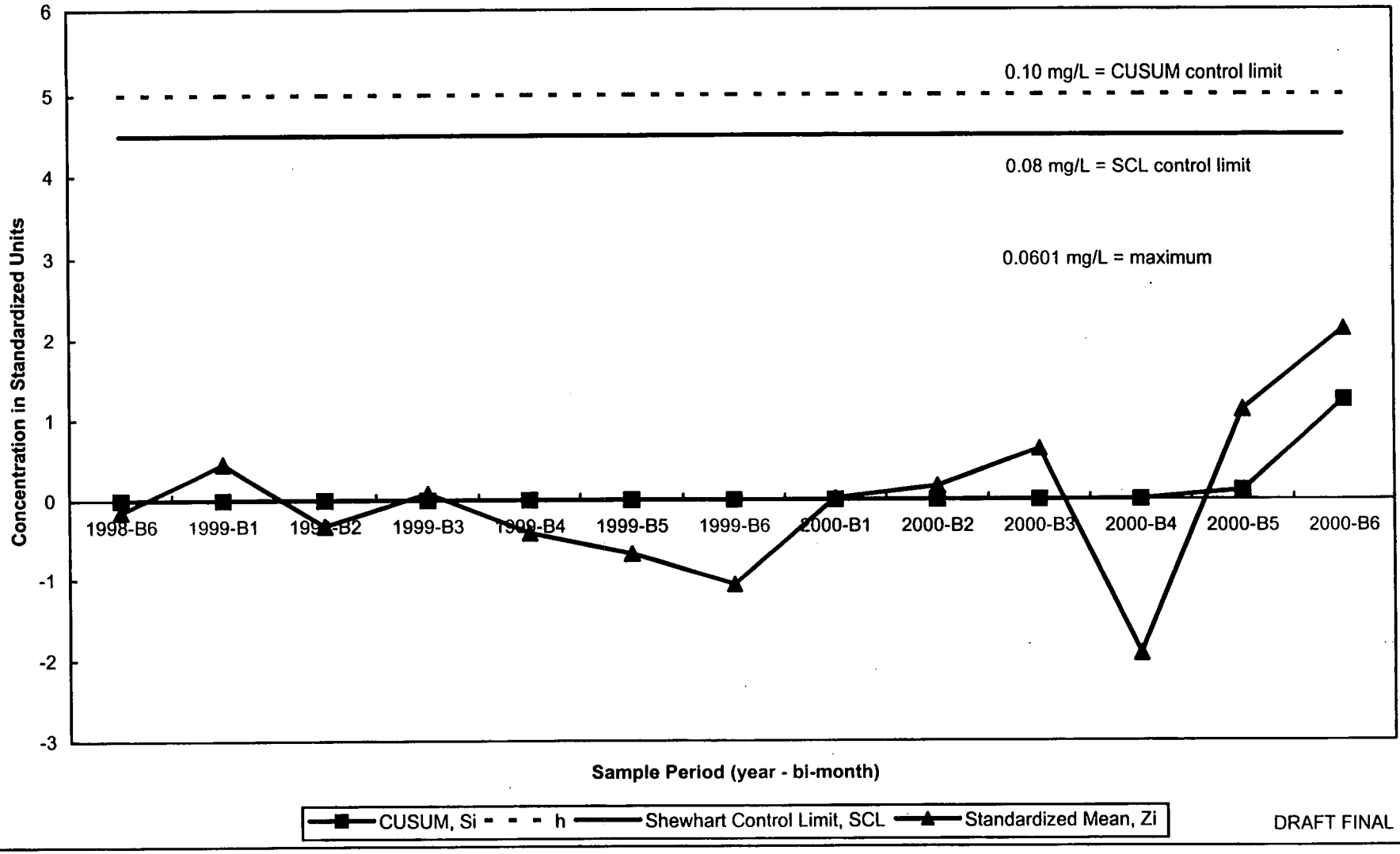

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FIGURE C.1-7. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 12339 - BASELINE CONTROL CHART

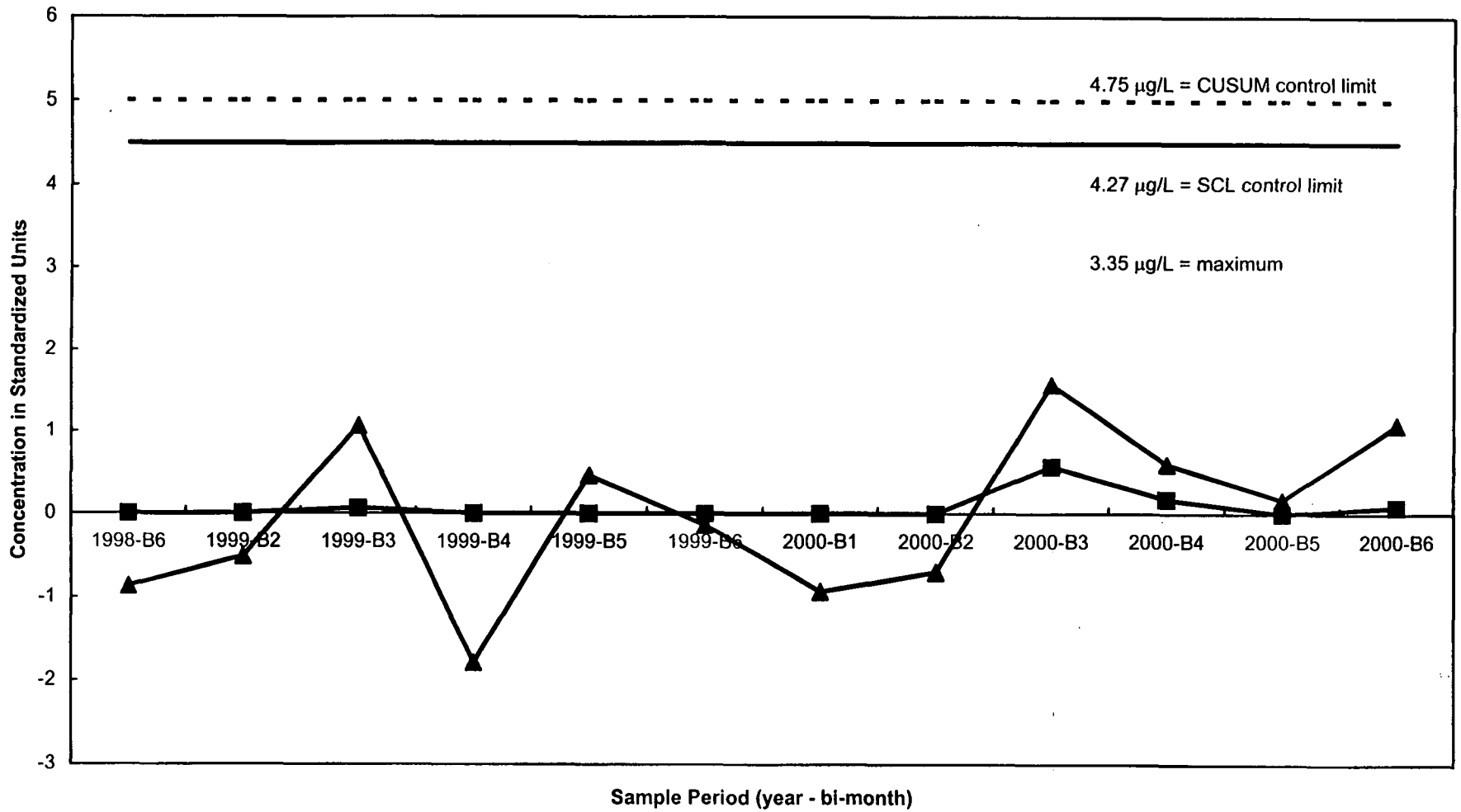

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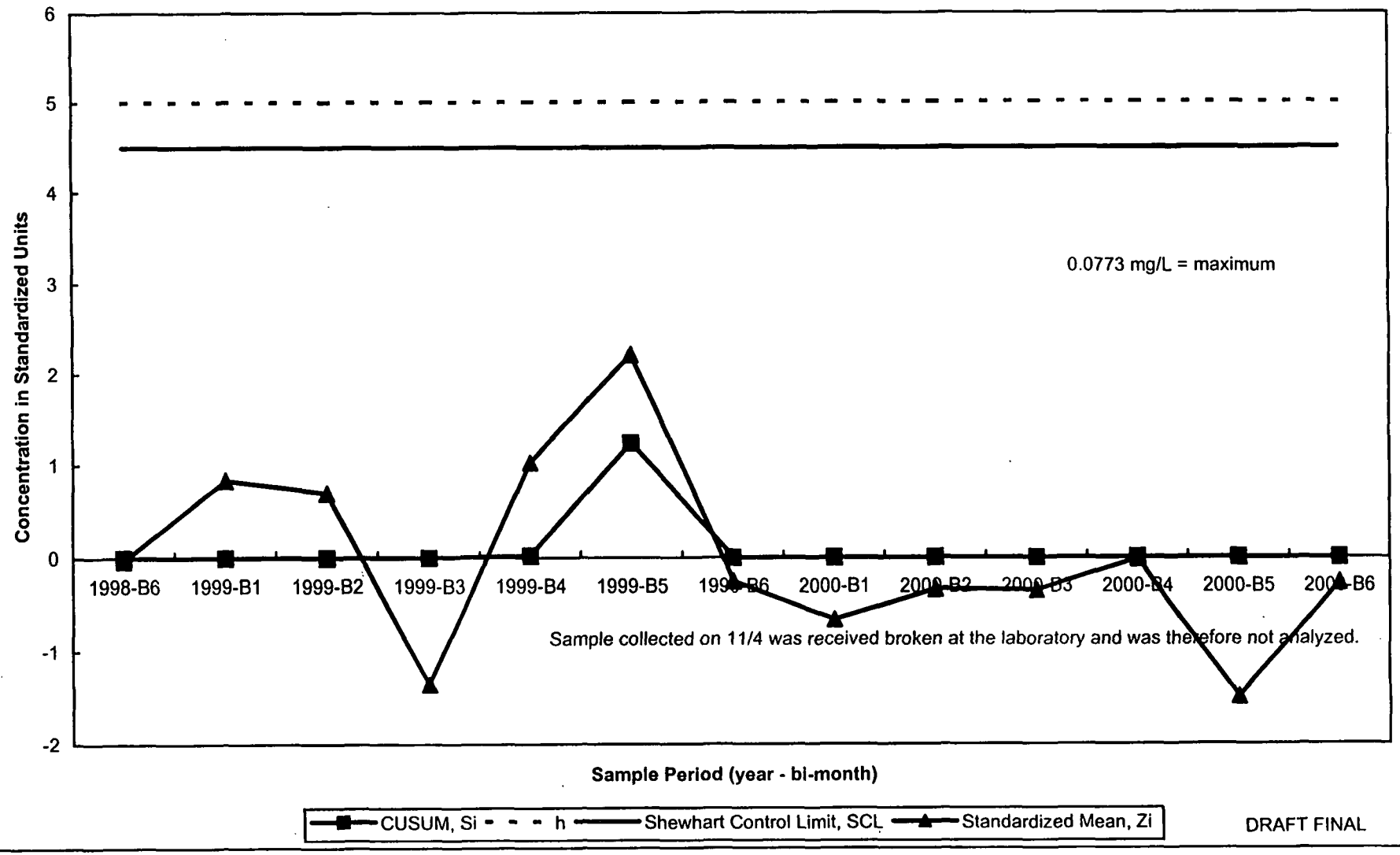
FIGURE C.1-8. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12340 - BASELINE CONTROL CHART



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Attachment C.2

ATTACHMENT C.2

GREAT MIAMI AQUIFER CONTROL CHARTS

FIGURE C.2-1. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 22201 - BASELINE CONTROL CHART

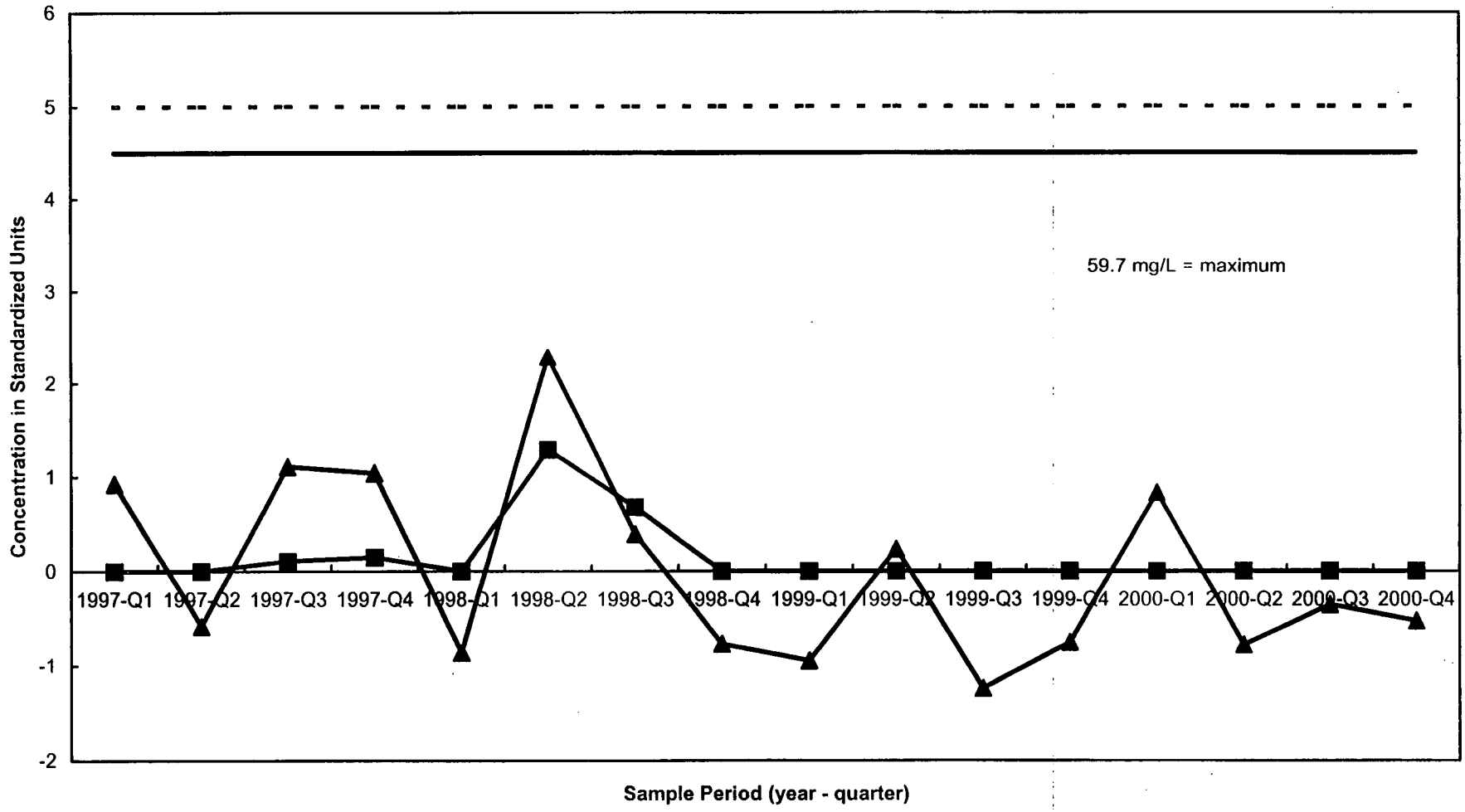

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FIGURE C.2-2. STANDARDIZED BORON CONCENTRATIONS AT 22201 - BASELINE CONTROL CHART

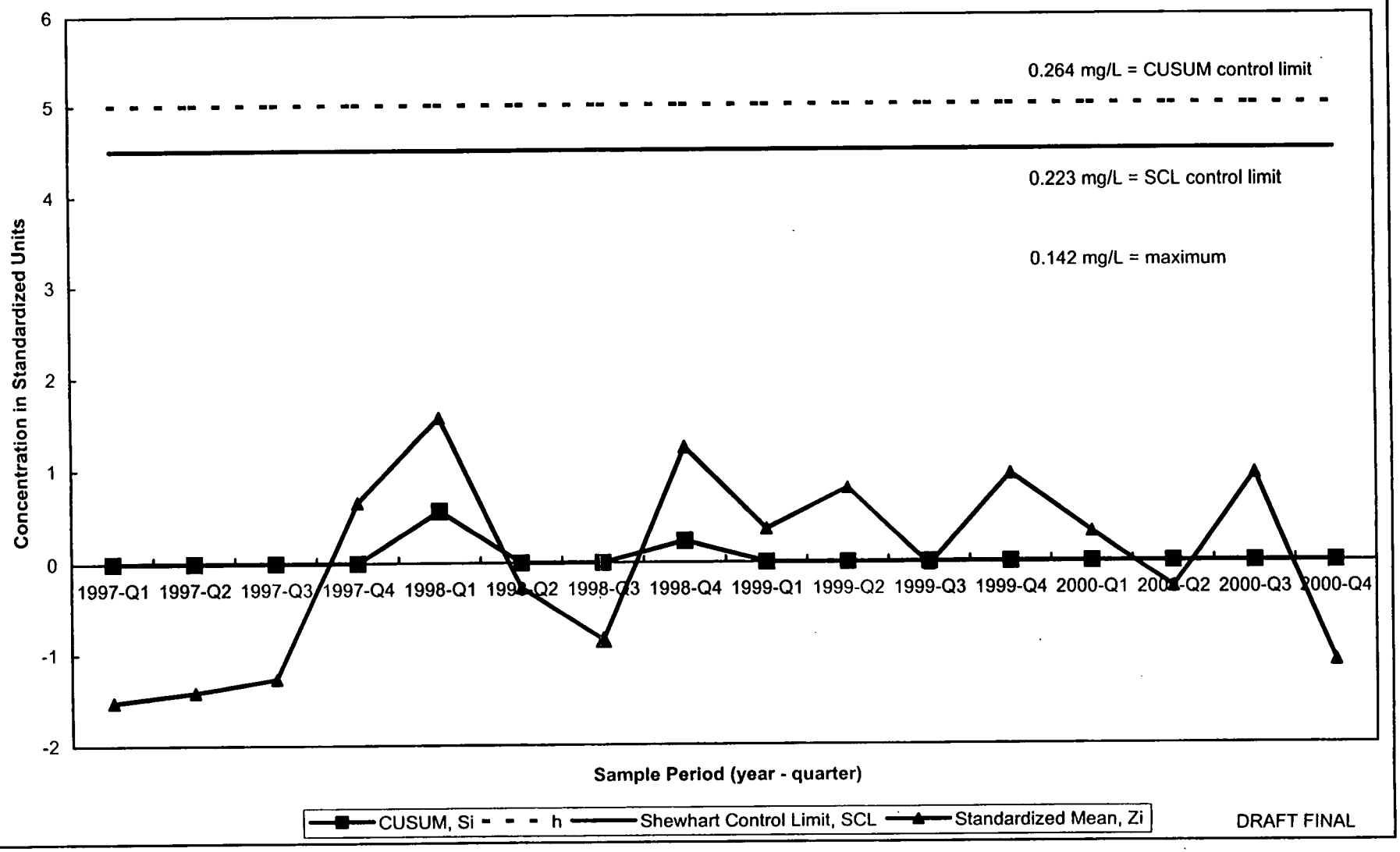

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FIGURE C.2-3. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 22201 - BASELINE CONTROL CHART

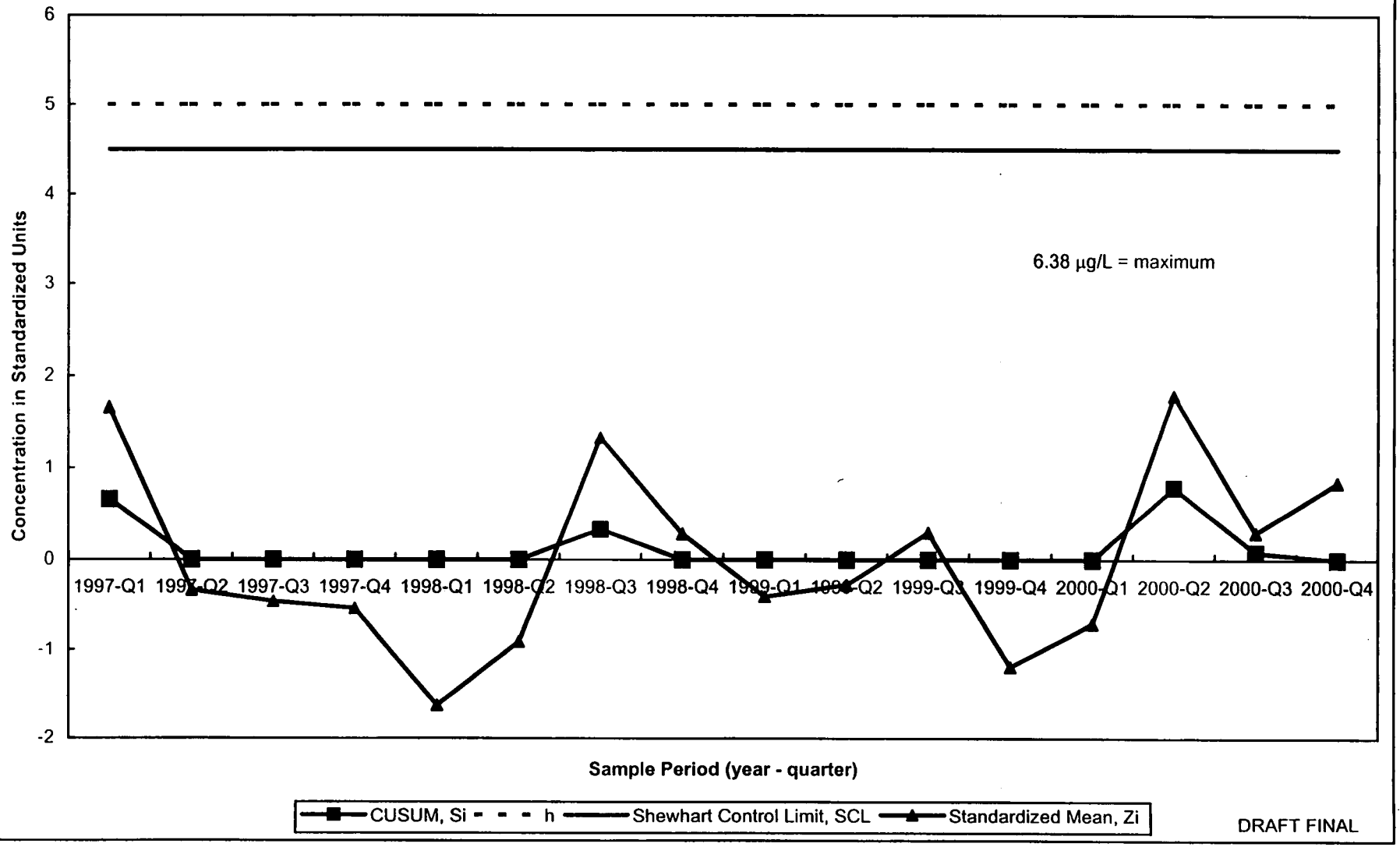

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FIGURE C.2-4. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 22198 - BASELINE CONTROL CHART

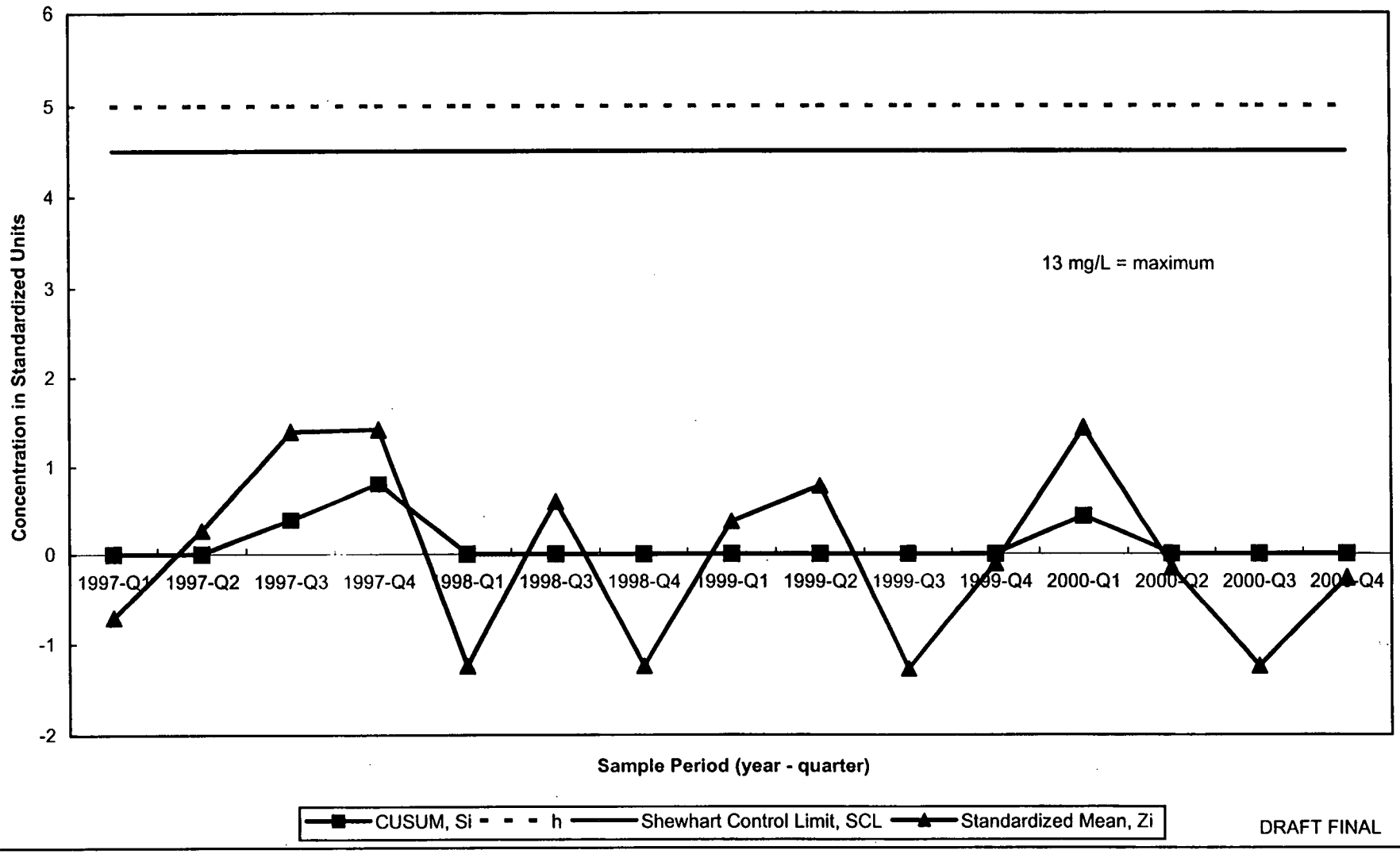

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FIGURE C.2-5. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 22198 - BASELINE CONTROL CHART

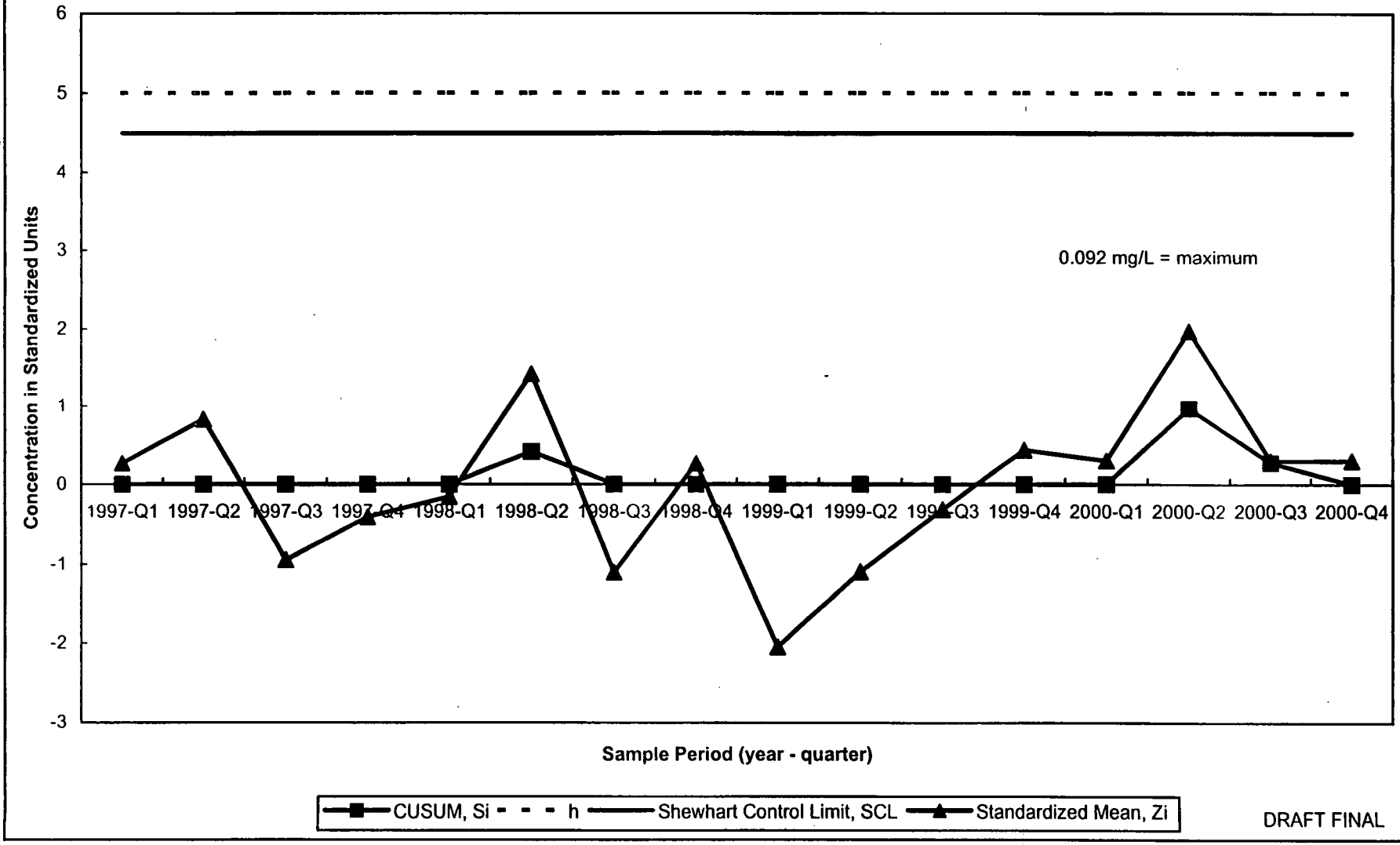

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FIGURE C.2-6. STANDARDIZED BORON CONCENTRATIONS AT 22198 - BASELINE CONTROL CHART

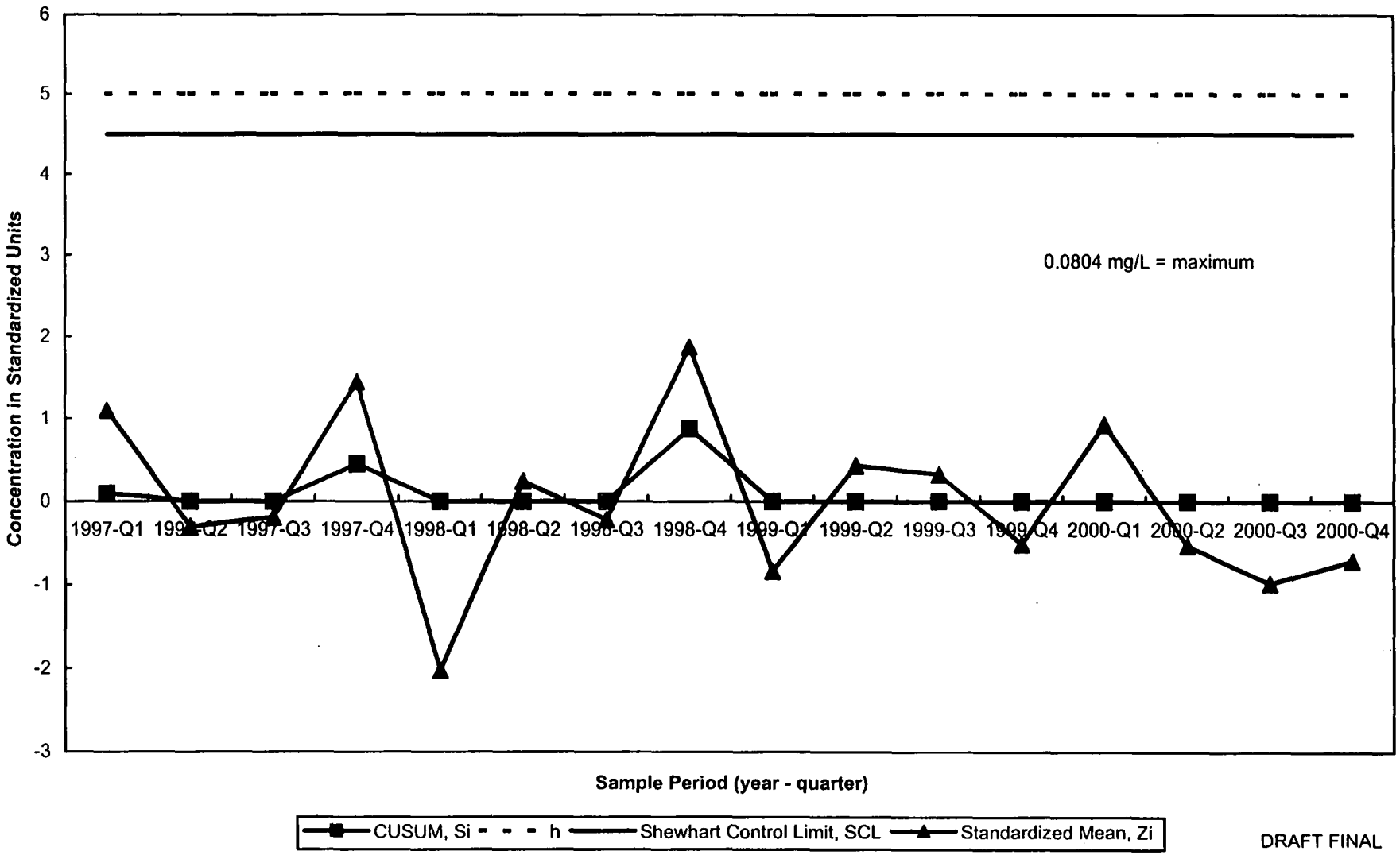

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FIGURE C.2-7. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 22200 - BASELINE CONTROL CHART

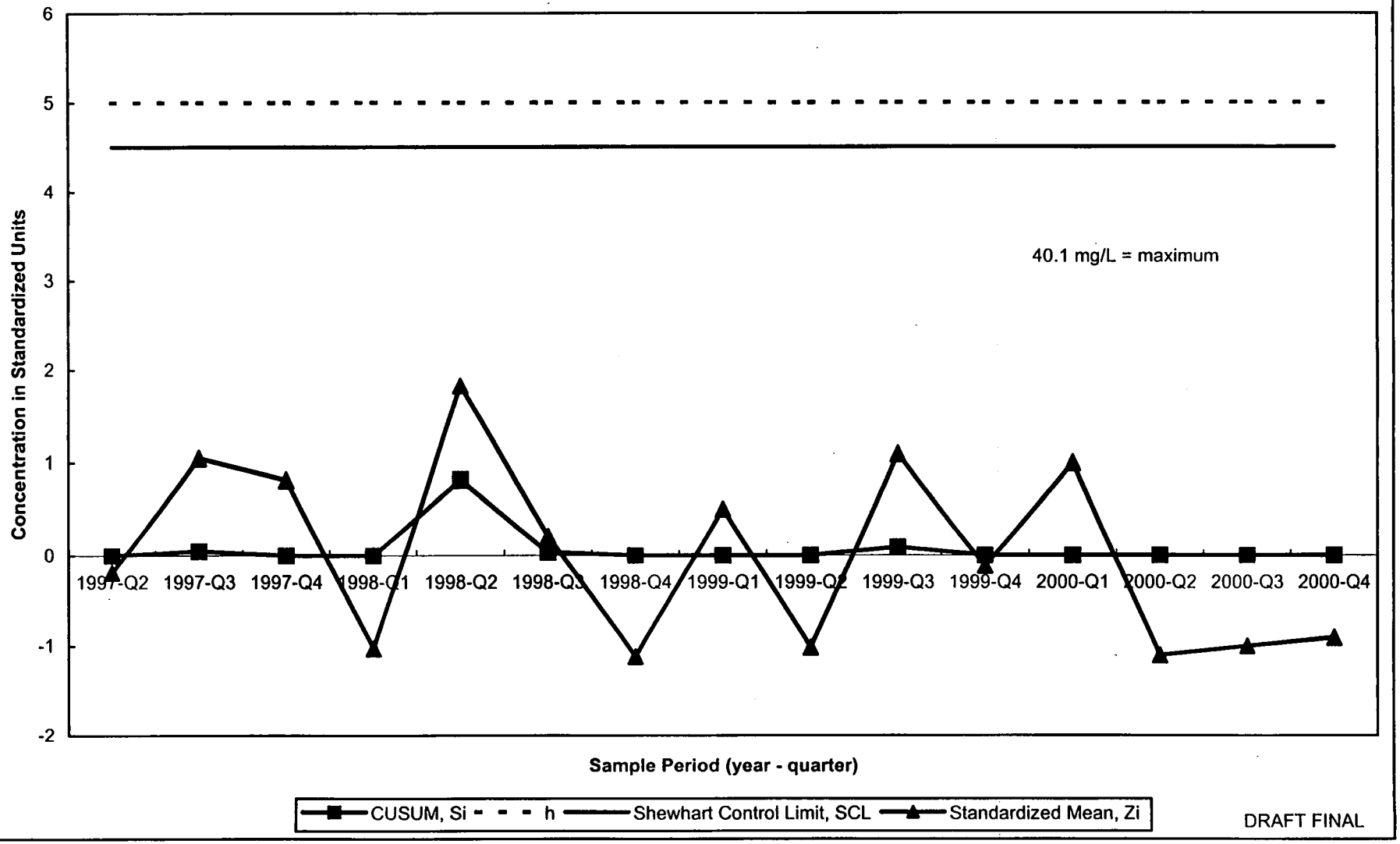

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FIGURE C.2-8. STANDARDIZED BORON
CONCENTRATIONS AT 22200 - BASELINE CONTROL CHART

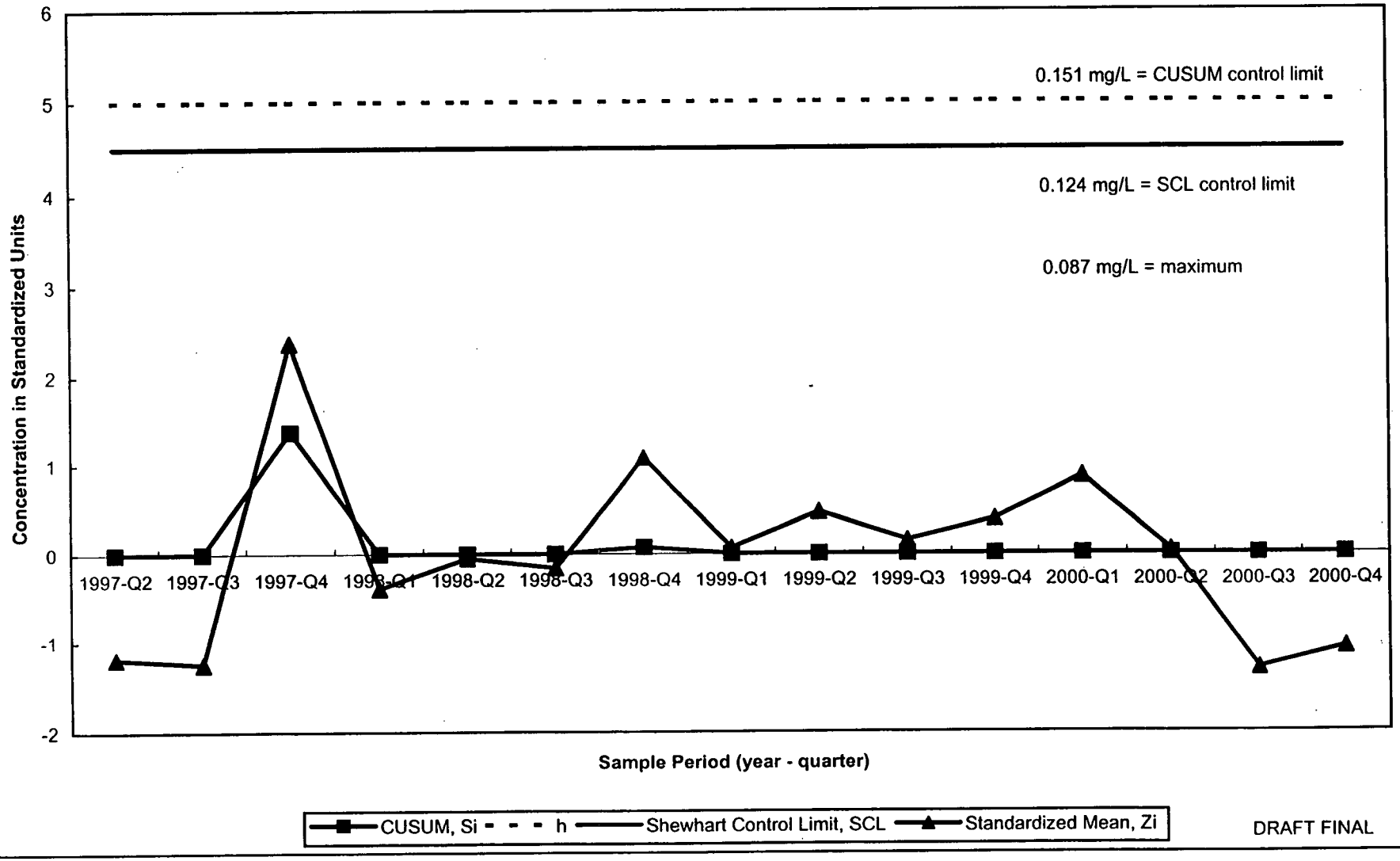

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FIGURE C.2-9. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 22200 - BASELINE CONTROL CHART

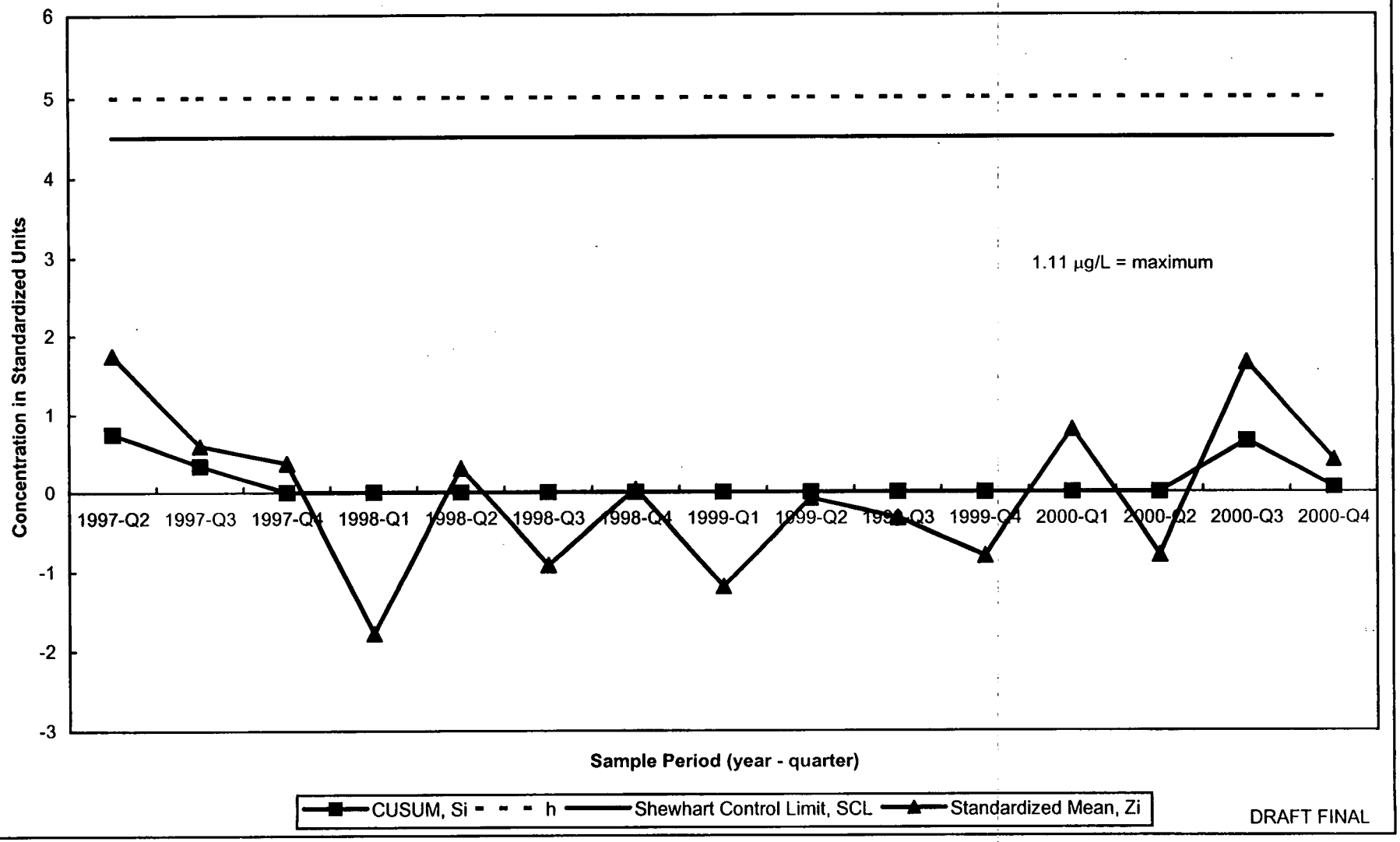

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FIGURE C.2-10. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT - 22203 BASELINE CONTROL CHART

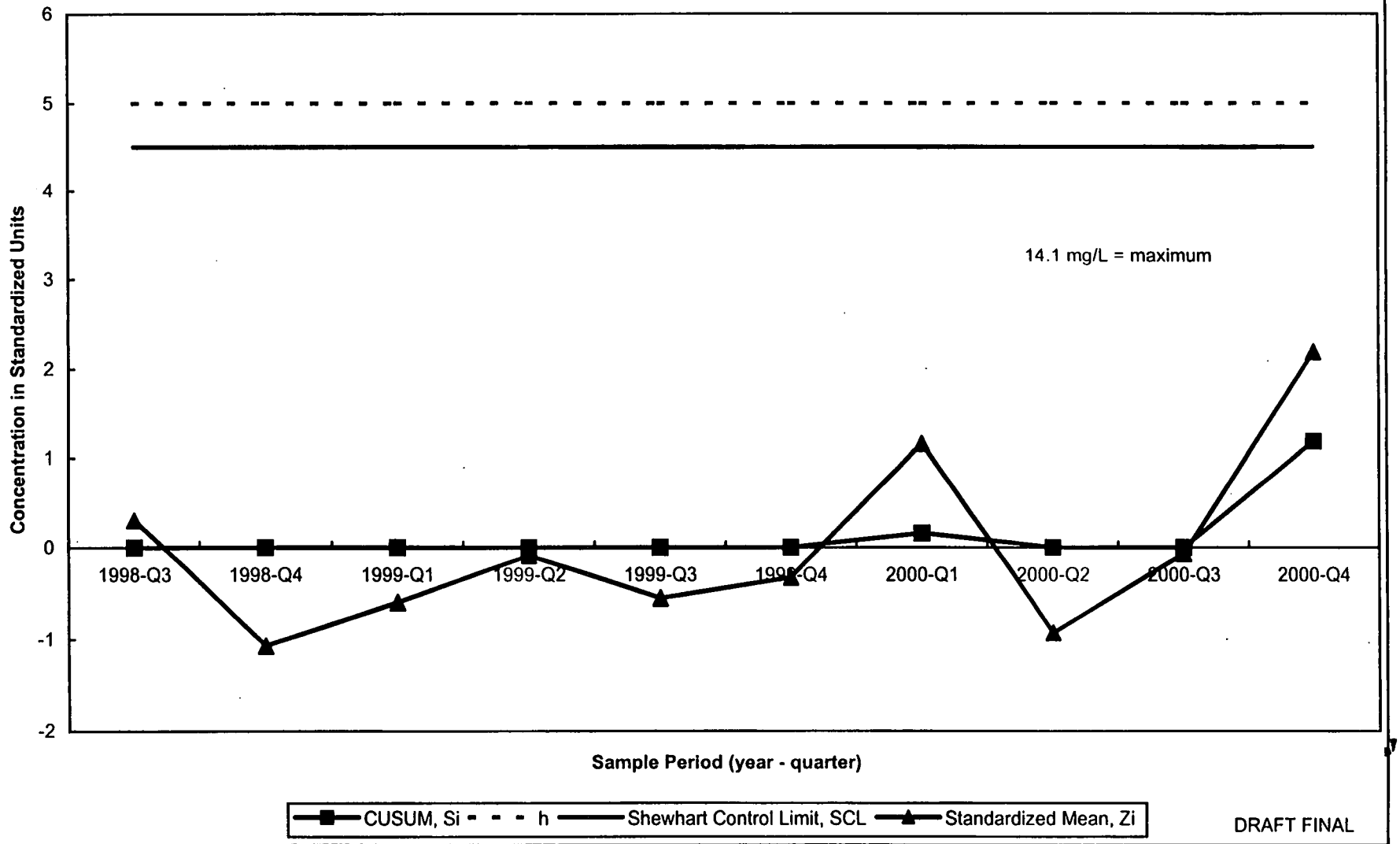

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FIGURE C.2-11. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 22203 - BASELINE CONTROL CHART

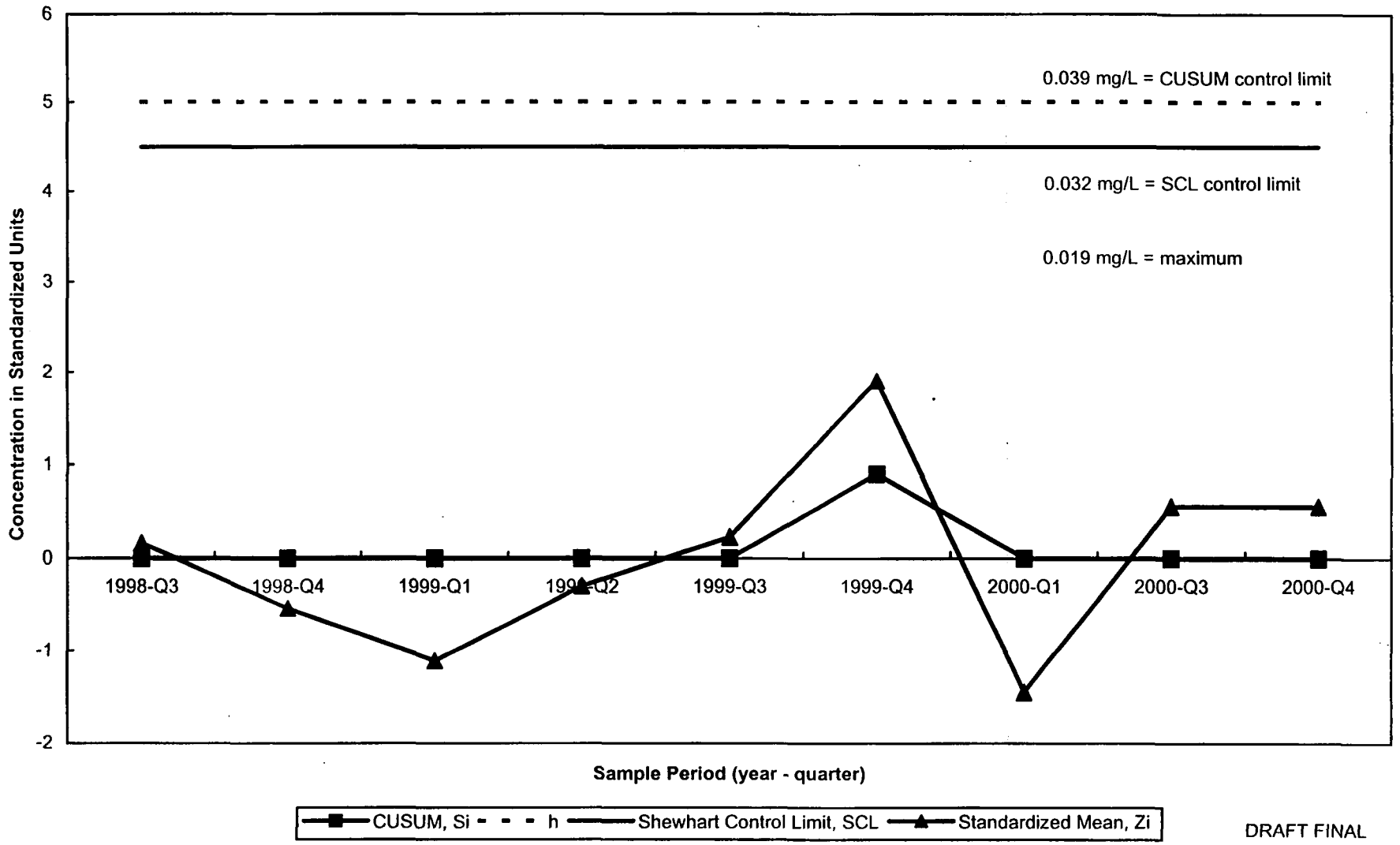

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FIGURE C.2-12. STANDARDIZED BORON
CONCENTRATIONS AT 22203 - BASELINE CONTROL CHART

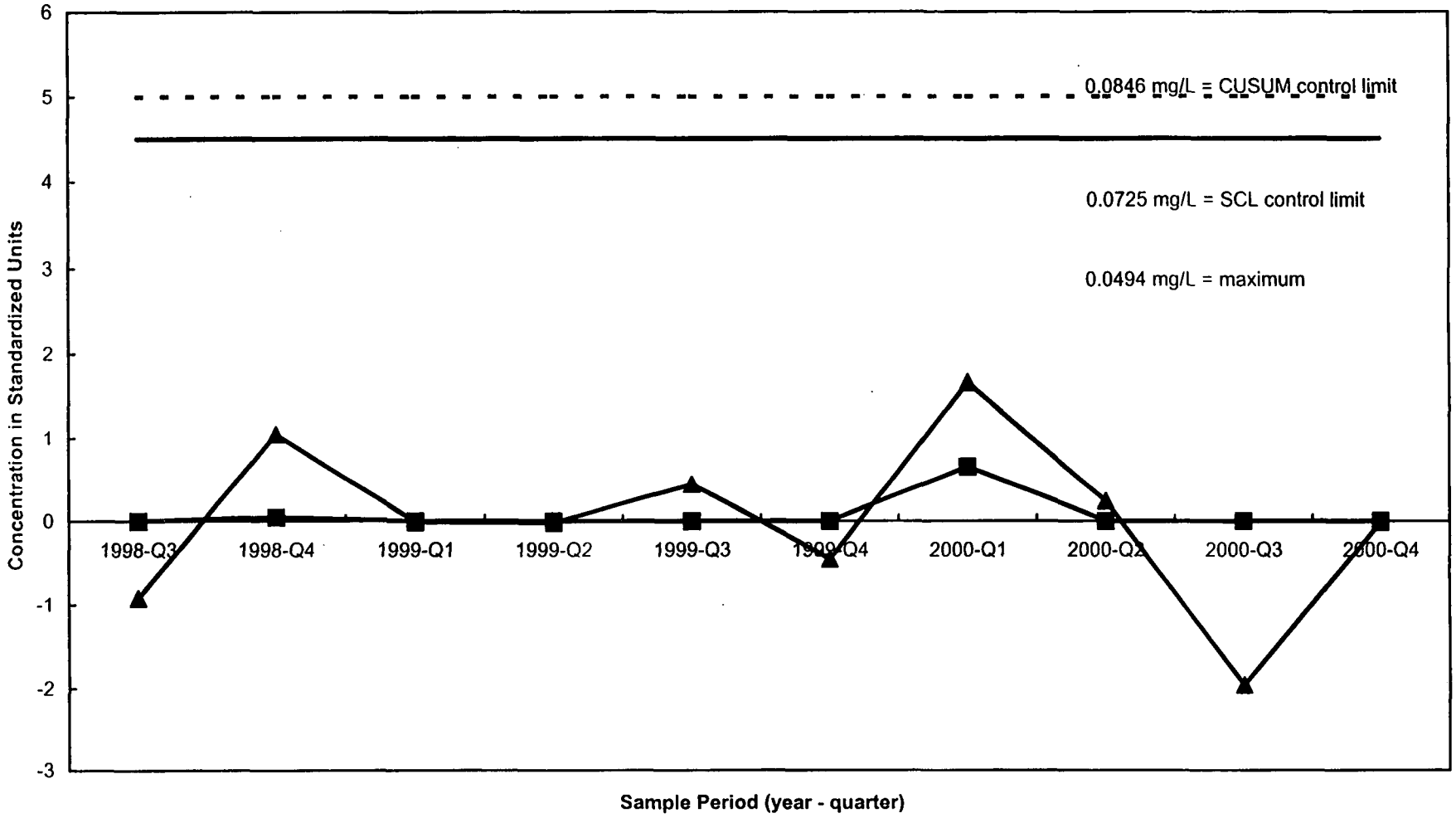

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FIGURE C.2-13. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 22204 - BASELINE CONTROL CHART

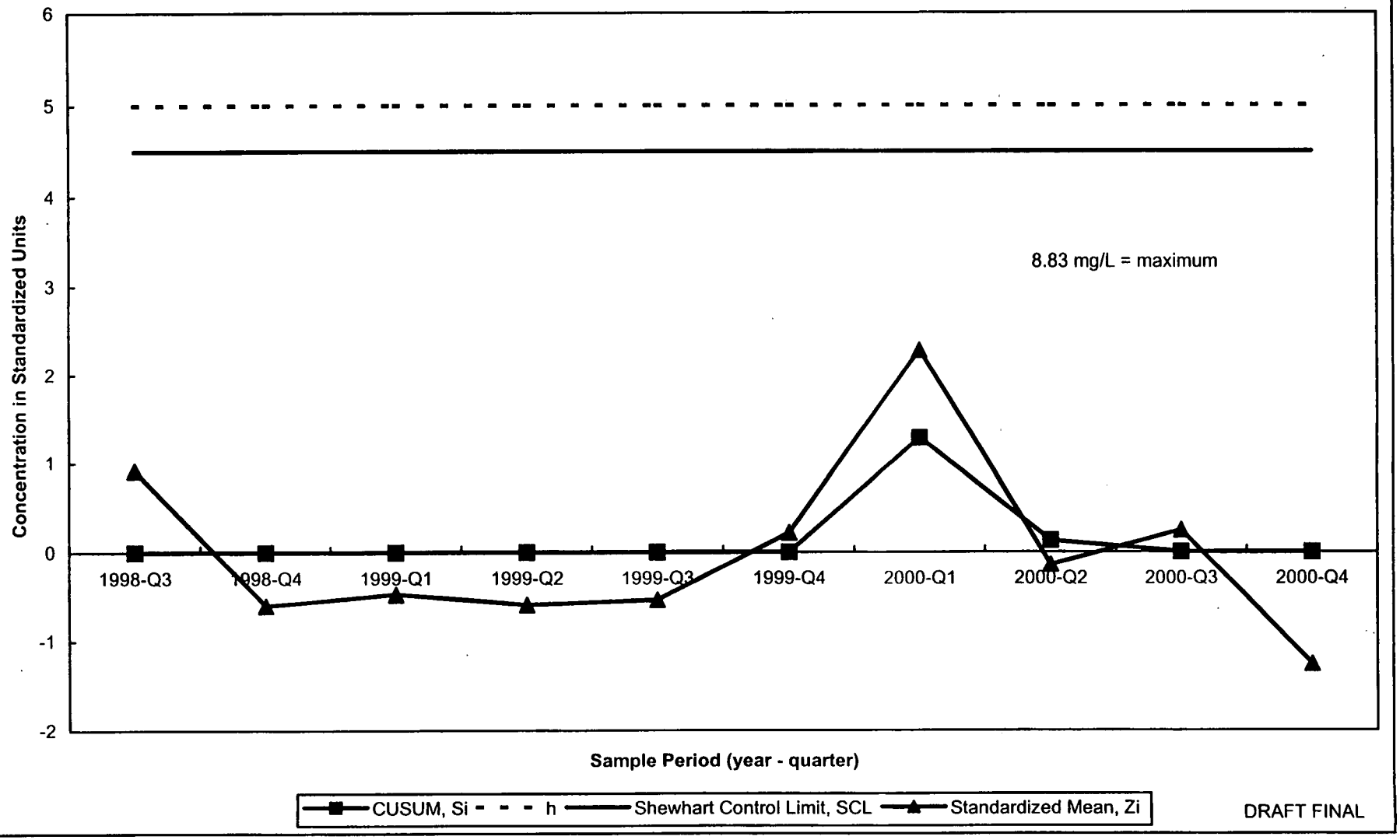

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FIGURE C.2-14. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 22204 - BASELINE CONTROL CHART

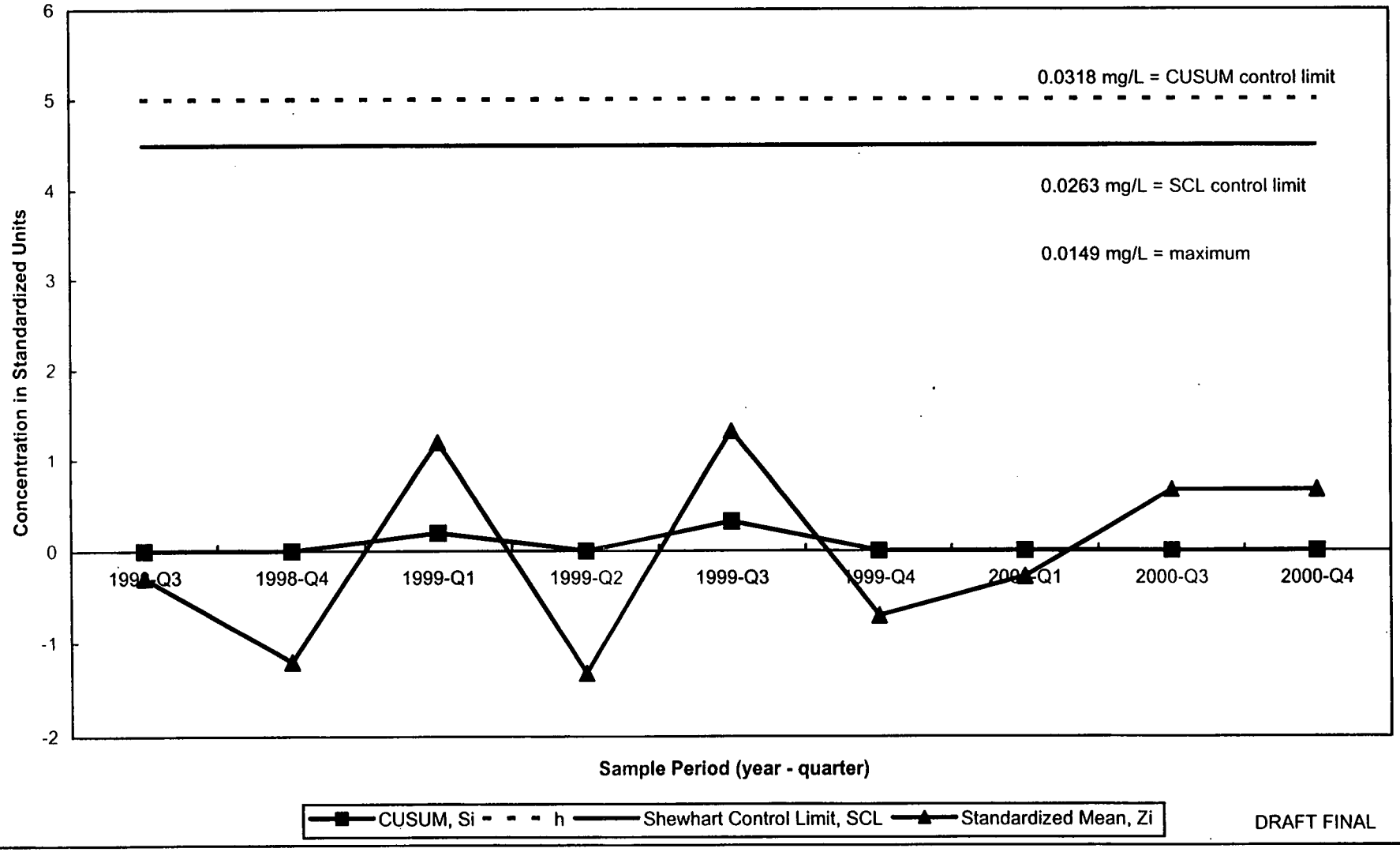

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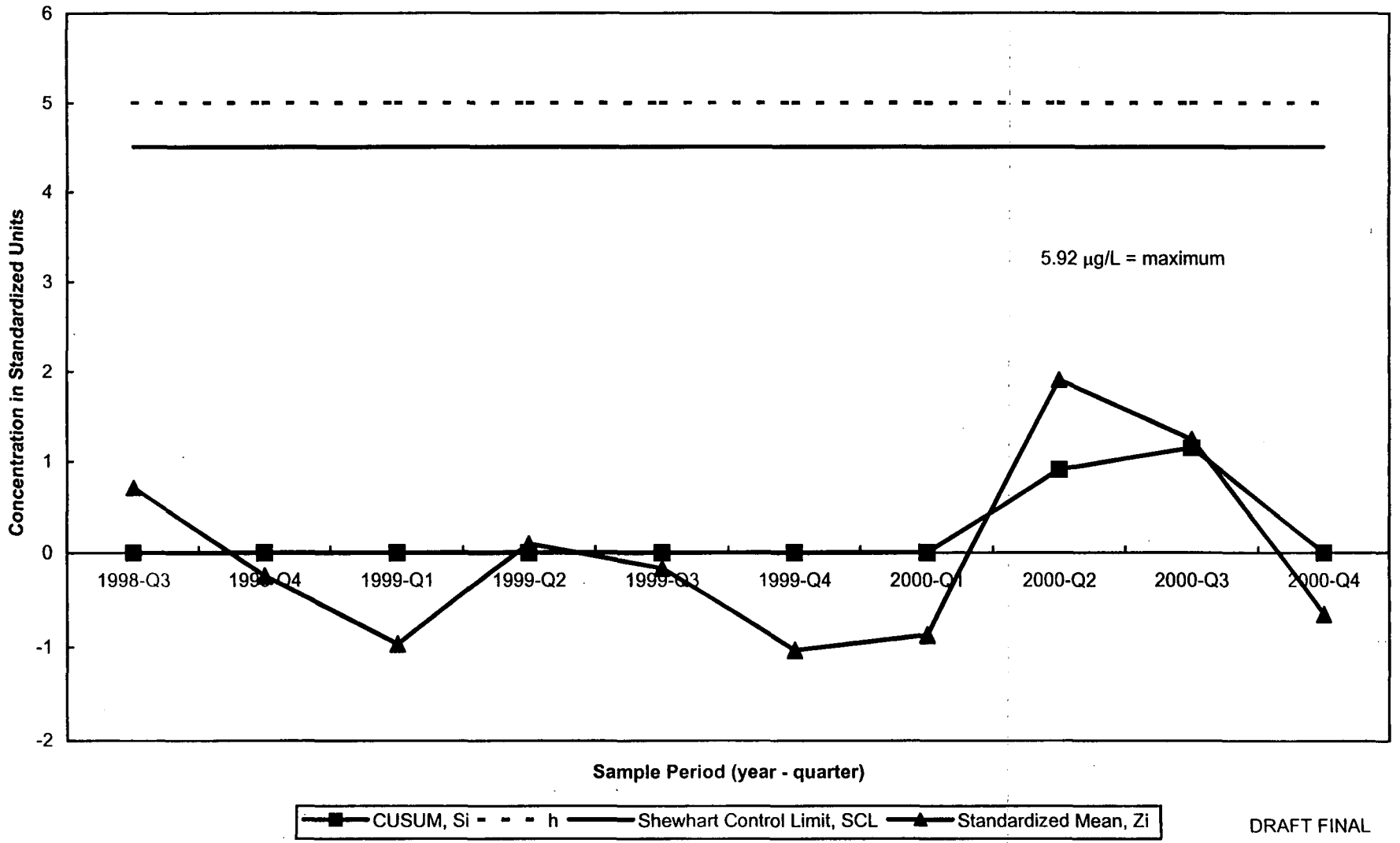
FIGURE C.2-15. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 22204 - BASELINE CONTROL CHART



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Attachment C.3

ATTACHMENT C.3

LEACHATE COLLECTION SYSTEM CONTROL CHARTS

FIGURE C.3-1. STANDARDIZED TECHNETIUM-99
CONCENTRATIONS AT 12338C - BASELINE CONTROL CHART

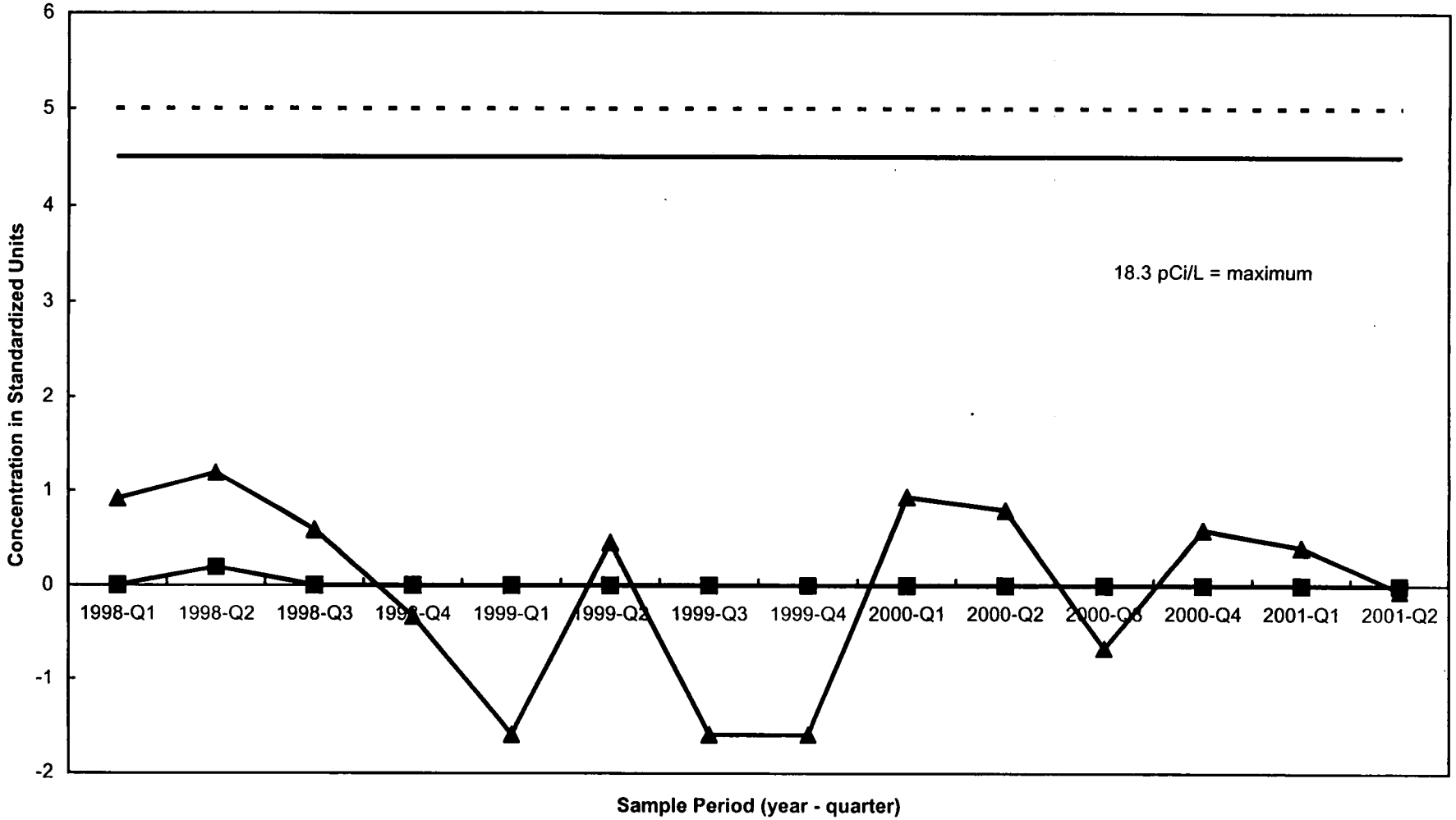

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FIGURE C.3-2. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 12338C - BASELINE CONTROL CHART

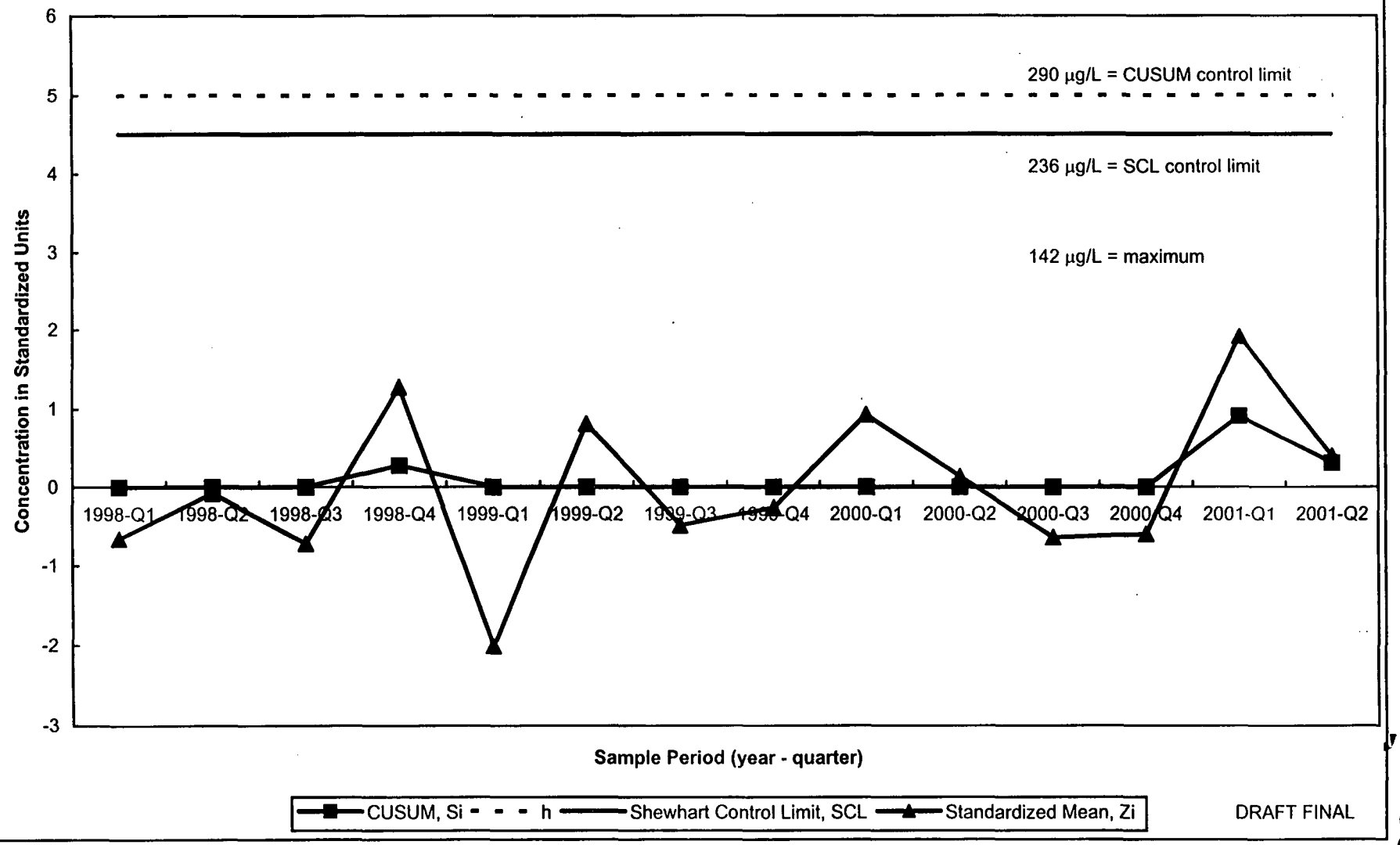

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FIGURE C.3-3. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 12339C - BASELINE CONTROL CHART

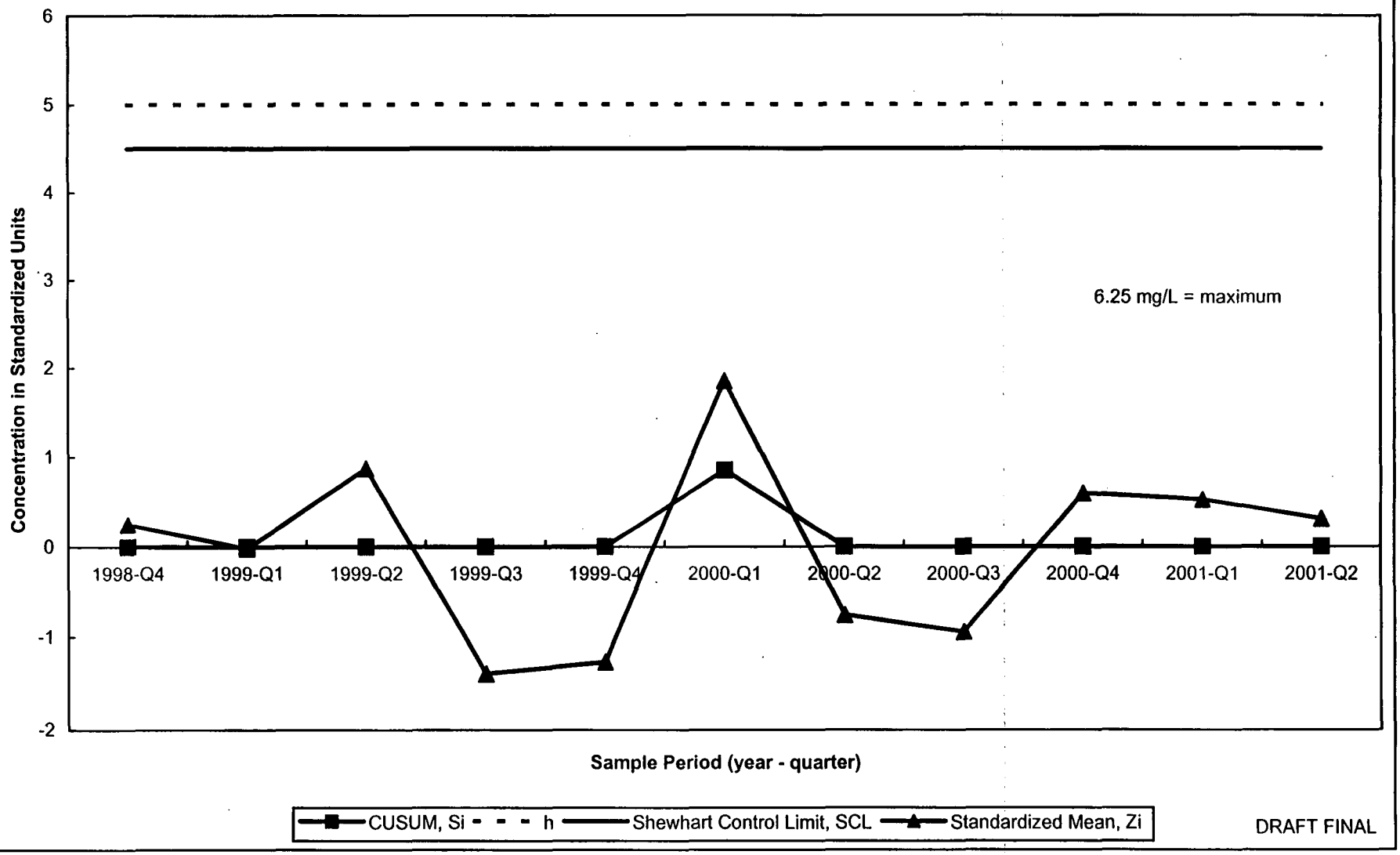

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FIGURE C.3-4. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12339C - BASELINE CONTROL CHART

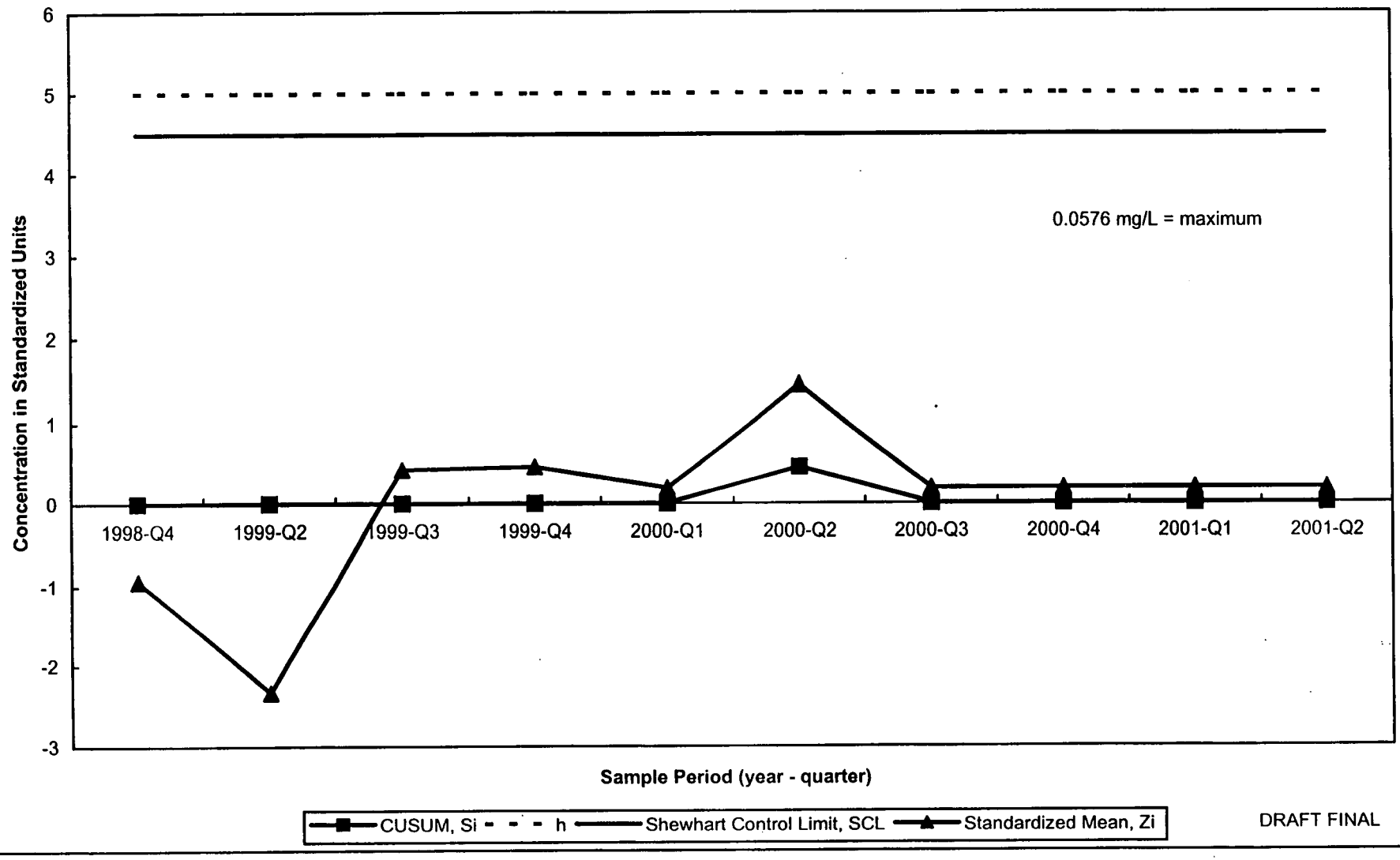

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FIGURE C.3-5. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 12340C - BASELINE CONTROL CHART

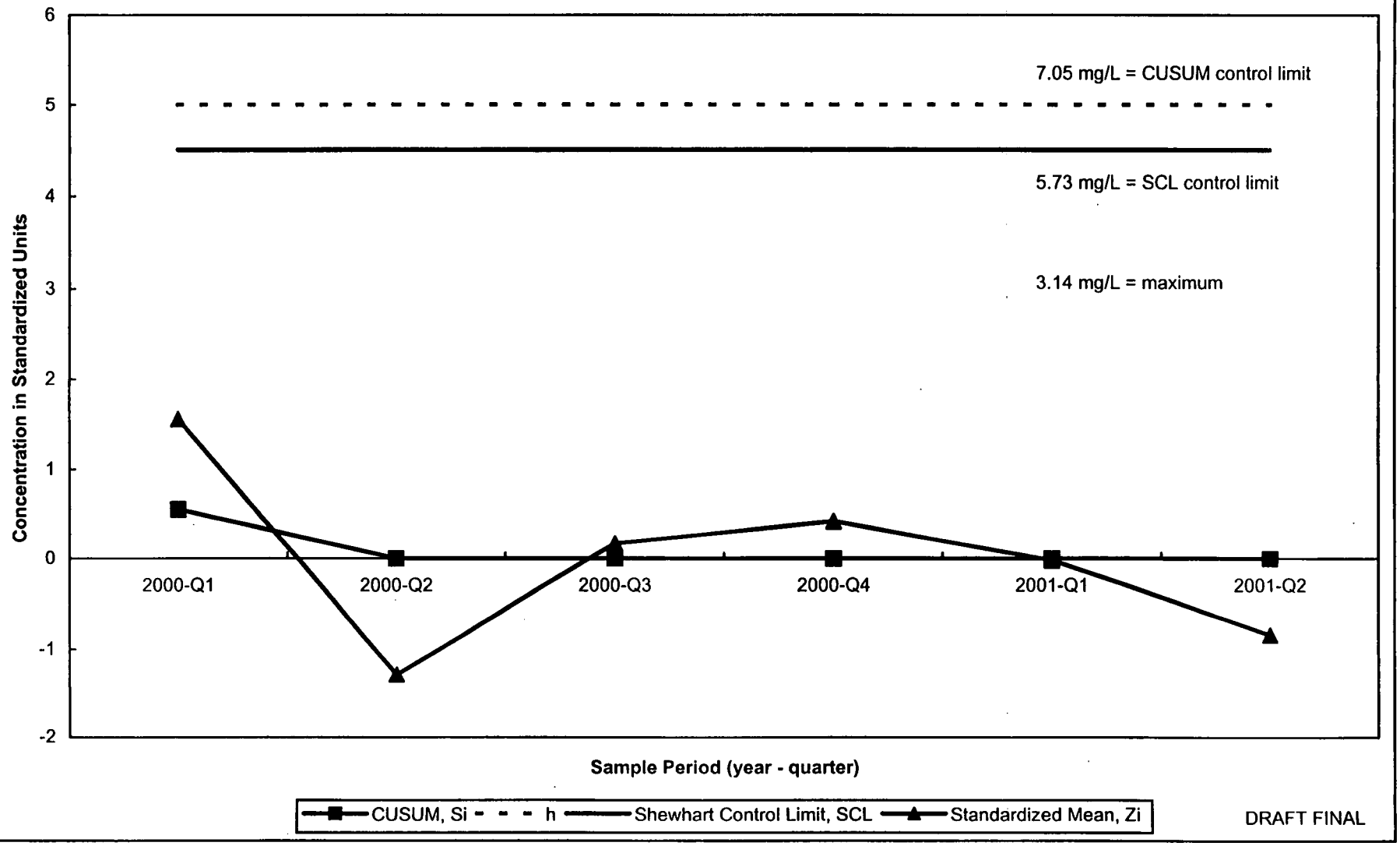

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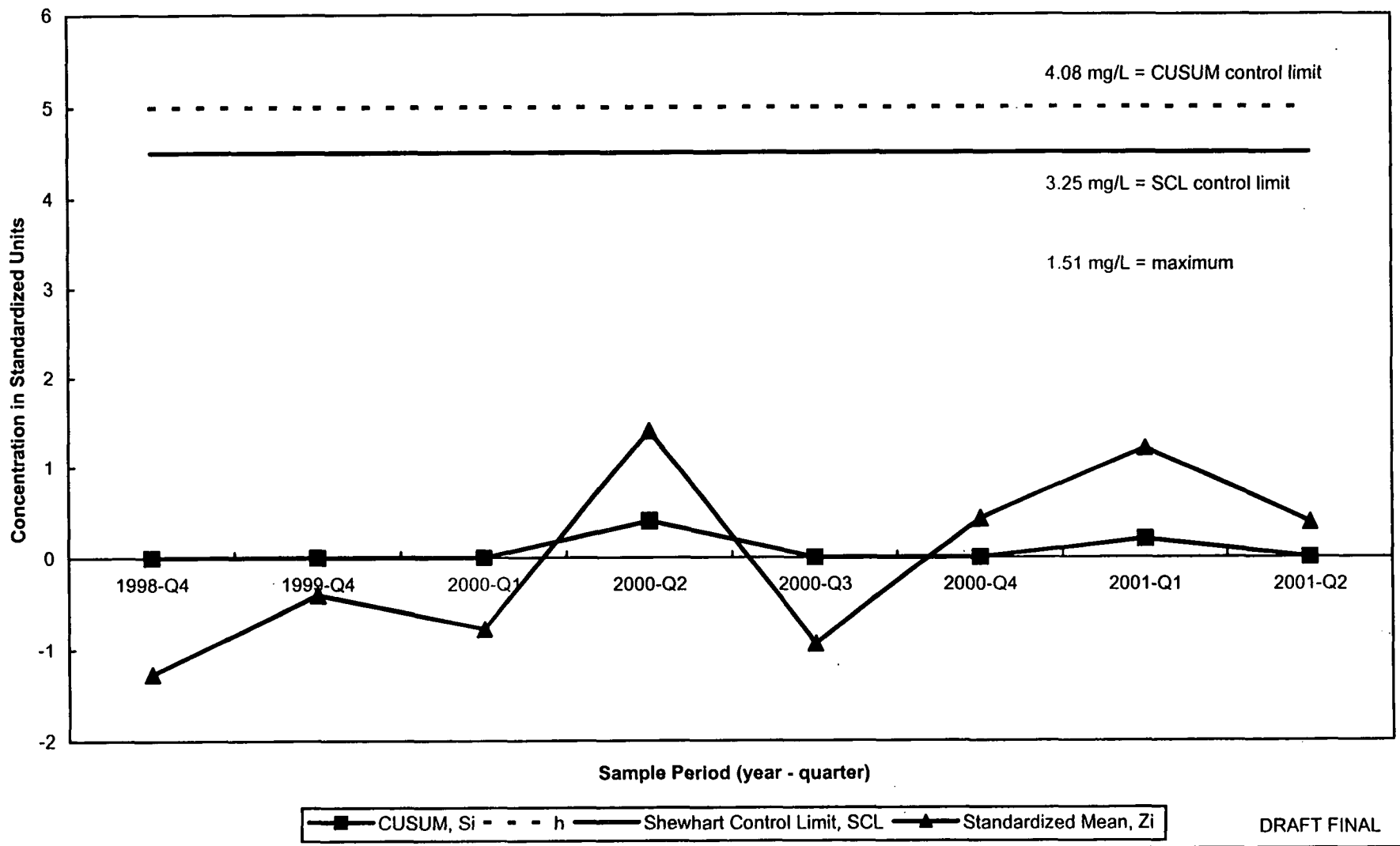
FIGURE C.3-6. STANDARDIZED BORON CONCENTRATIONS AT 12340C - BASELINE CONTROL CHART



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Attachment C.4

ATTACHMENT C.4

LEAK DETECTION SYSTEM CONTROL CHARTS

FIGURE C.4-1. STANDARDIZED TOTAL ORGANIC CARBON CONCENTRATIONS AT 12338D - BASELINE CONTROL CHART

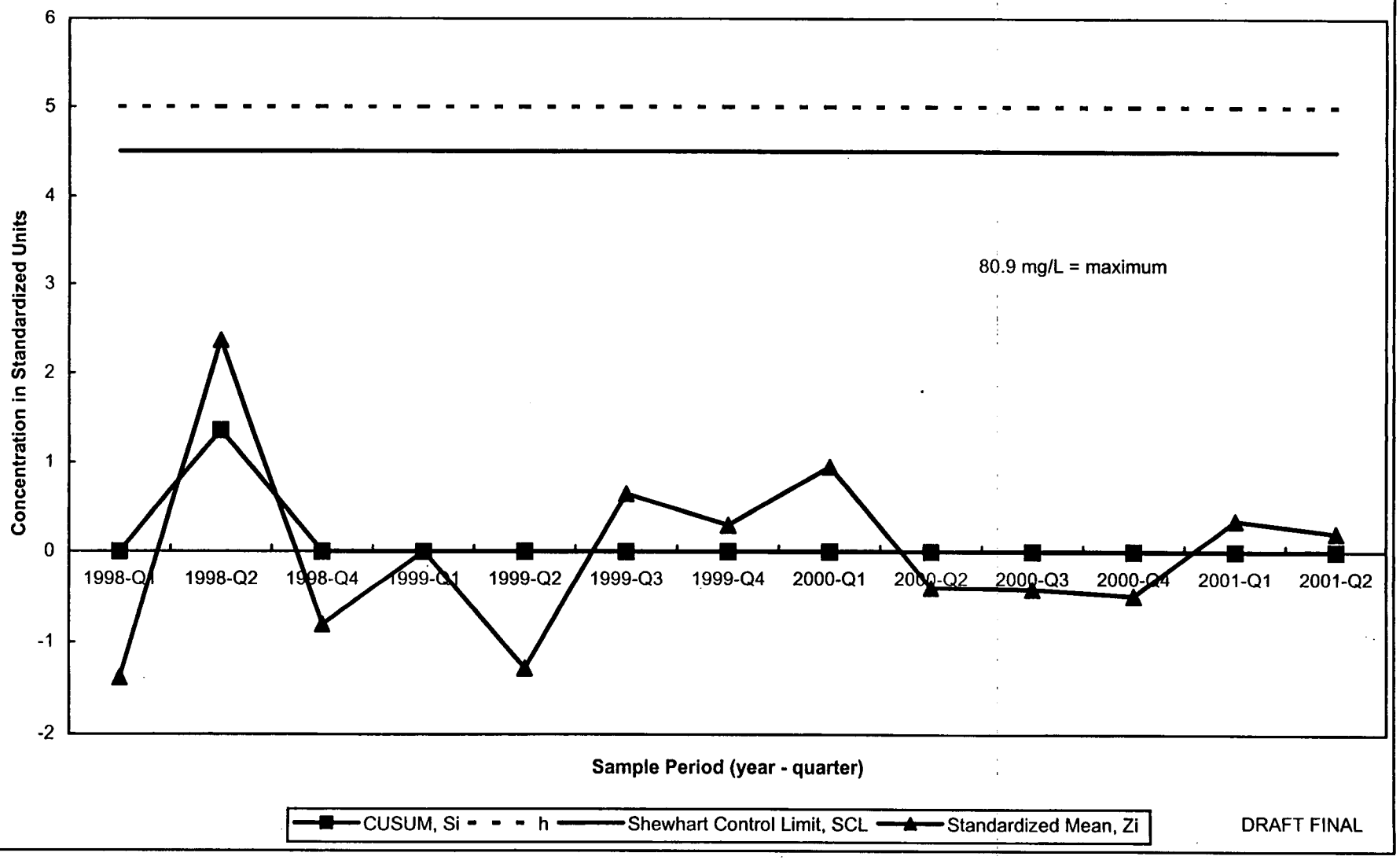

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FIGURE C.4-2. STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12338D - BASELINE CONTROL CHART

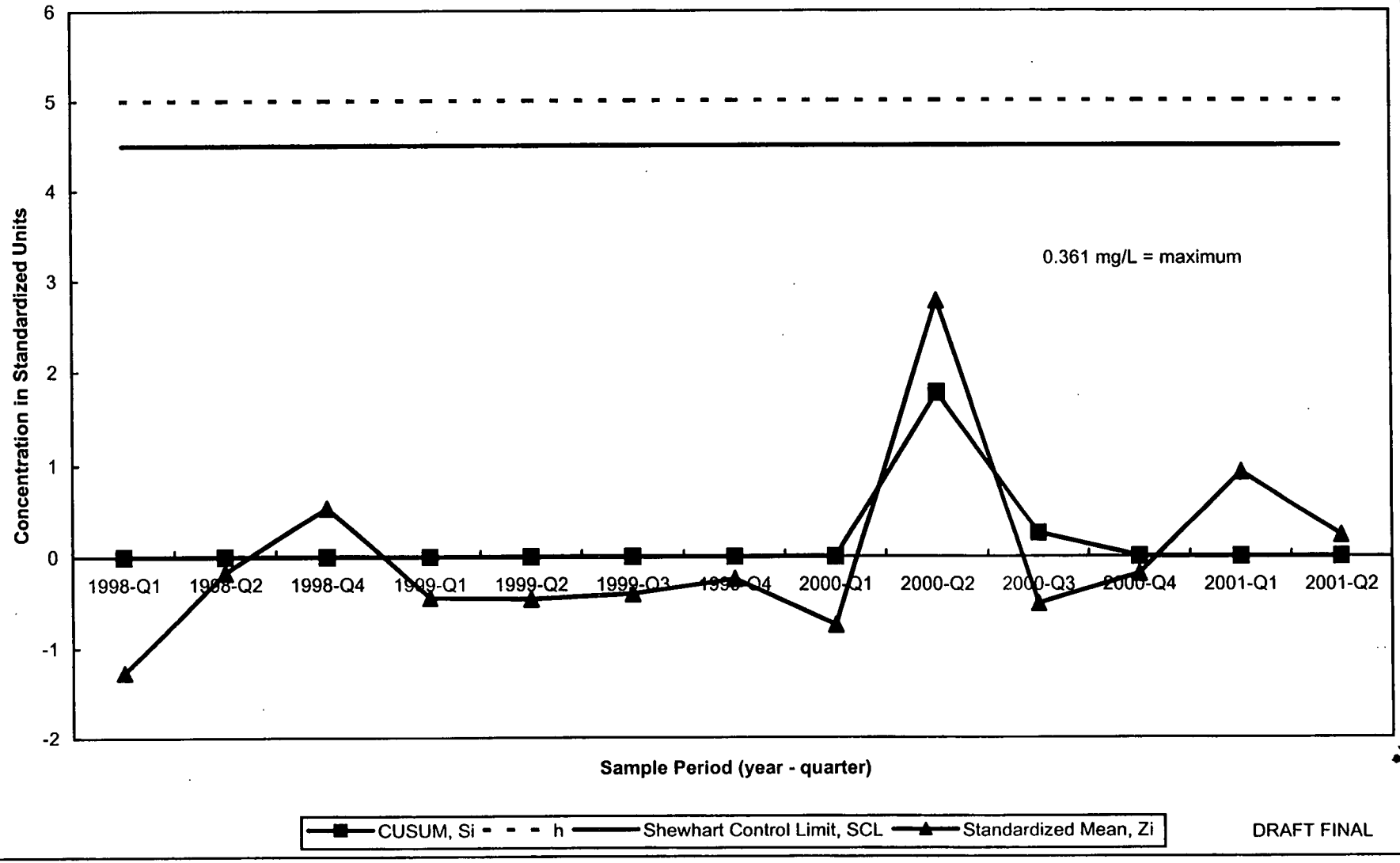

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FIGURE C.4-3. STANDARDIZED TOTAL URANIUM CONCENTRATIONS AT 12338D - BASELINE CONTROL CHART

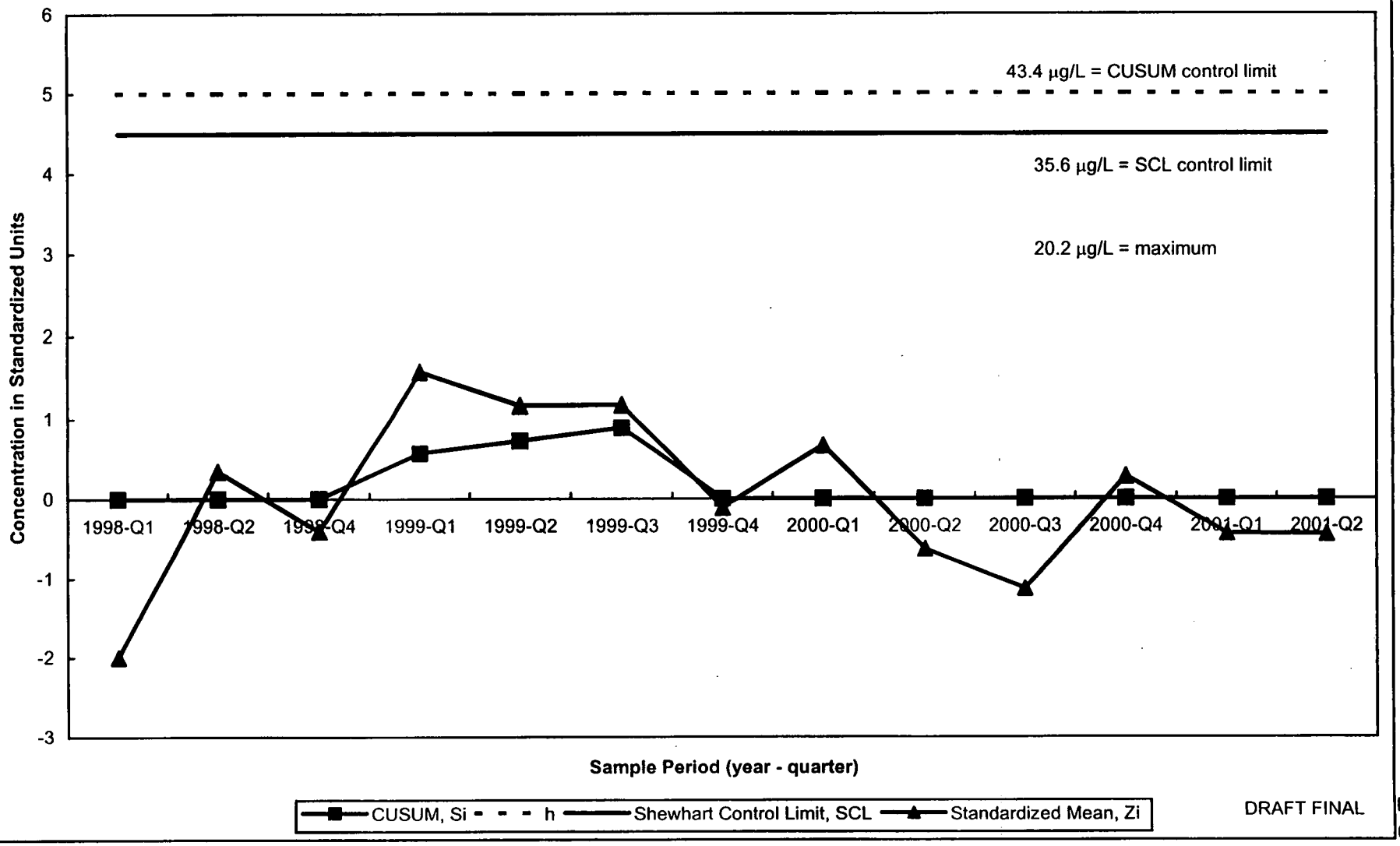

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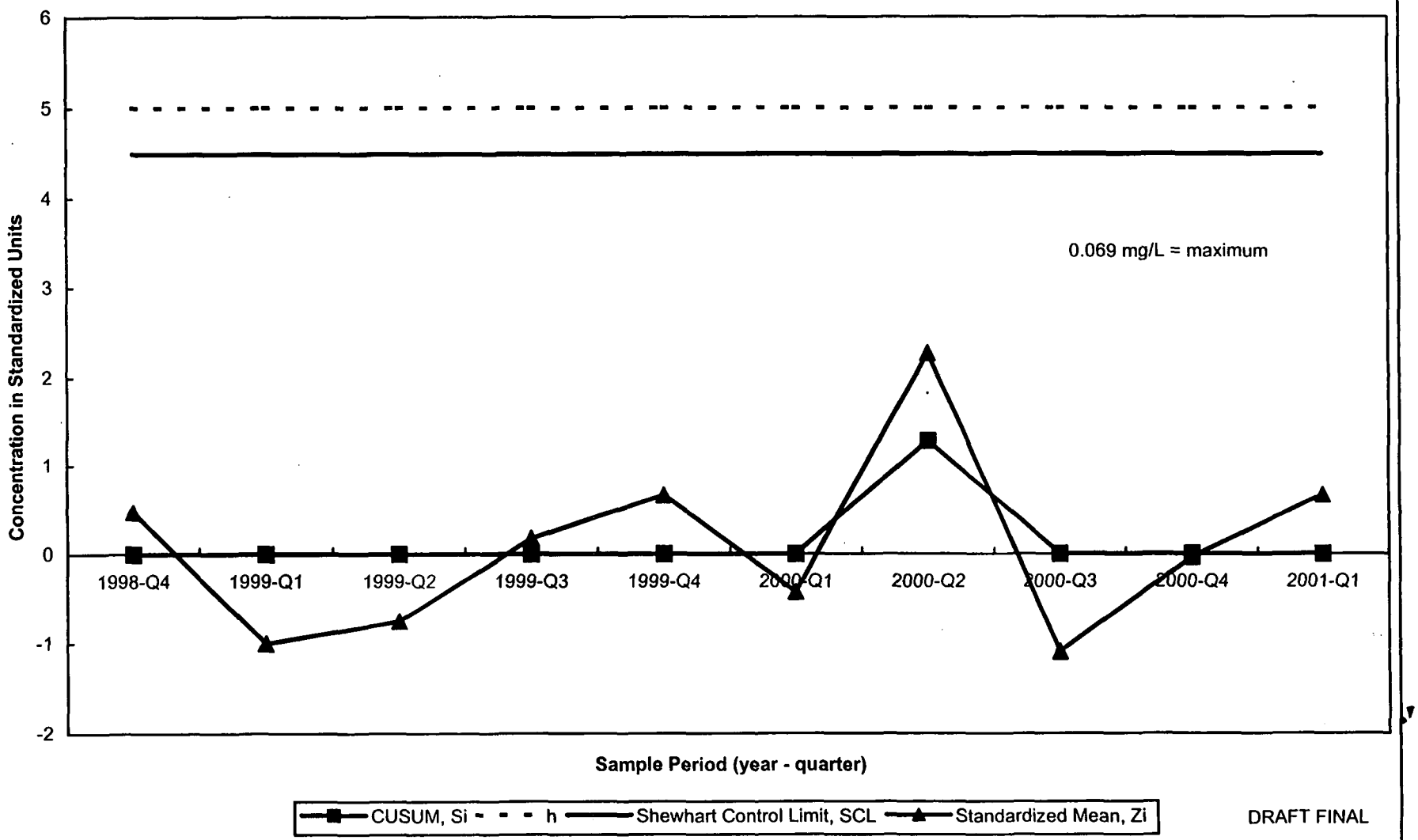
FIGURE C.4-4 STANDARDIZED TOTAL ORGANIC HALOGENS CONCENTRATIONS AT 12339D - BASELINE CONTROL CHART



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Appendix D

APPENDIX D

STATISTICAL EVALUATION ON WATER LEVEL AND TOTAL URANIUM CONCENTRATION RELATIONSHIPS

APPENDIX D

This appendix provides the statistical analysis with respect to evaluating the relationship between water levels (i.e., groundwater elevations) and total uranium concentrations in the on-site disposal facility Cells 1 through 3 Great Miami Aquifer wells. The statistical analysis was conducted by evaluating the following:

- Comparison of trends (Section D.1)
- Analysis of inverse trends (Section D.2).

D.1 COMPARISON OF TRENDS

The following steps were conducted to compare water level and total uranium concentration trends:

Step 1 Determine distribution type (lognormal distribution is the best fit for data)

Step 2 Log-transform data

Step 3 Standardize each data set in order to remove scale and unit differences so that data sets can be directly compared

Step 4 Using the Comparison of Regression Lines procedure in Statgraphics Plus for Windows 4.1 use the probability values (p-Values) of the Slopes term from the ANOVA table to assess the similarity of the trends. If the p-Value is very small (less than 0.05), then we can conclude that there is a significant difference between the two slopes indicating statistically different trends.

Step 5 Check for outliers (see methodology below). If present, then remove from the data set, return to Step 3, and re-standardize the data set without the outlier(s).

The statistical analytical results obtained from the above steps, for each on-site disposal facility Great Miami Aquifer well, is provided in Table D-1 under the columns associated with "Comparison of Slopes". For the same wells, Figures D-1 through D-6 provide a graphical display of water level/total uranium regression analysis.

D.1.1 Methodology Rationale

A standard correlation analysis involves comparing two sets of paired data. Therefore, every total uranium result will need a corresponding water level result, and vice versa. It should be noted that there are some additional water levels that do not have a corresponding total uranium result. Therefore, in order to facilitate the use of all available data, another method was used to ascertain whether both parameters (water levels and total uranium concentrations) were trending in a similar manner. The best method for this is a comparison of regression lines of each parameter versus time. A statistically

significant difference (i.e., p-Value < 0.05) would indicate that there is sufficient evidence to conclude that total uranium concentrations and water levels are exhibiting dissimilar trends.

D.1.2 Outlier Detection Methodology

Standard outlier tests such as Rosner's test or Dixon's test are not applicable for these analyses because a prerequisite for their use is that a trend not be evident in the data. Because the intent of the analysis is to detect the similarity or difference in trends, these methods are not appropriate. A common method for detecting potential outliers in a regression analysis is to look at the Studentized Residual, which is the distance, in standard units, a data point is from the fitted regression line. The distance is calculated from the line fitted without the suspected data point. This is, in essence, a comparison of the individual data point from the localized mean, which is unlike Rosner's or Dixon's tests in that they only look at the differences from the whole population of data points.

The technical aspects of this procedure are outlined in Madansky (1988) Chapter 4 "Identification of Outliers", Section 3 "Outliers in Regression." The actual table of critical values at the five percent significance level is provided in Table 12 of the Madansky reference. In general, with the sample sizes in this study, a Studentized Residual of greater than approximately 3.5 would indicate a potential outlier at the five percent significance level. One outlier was identified and removed for total uranium at Well 22201.

D.1.3 Findings

In each case, there is statistically significant evidence (at the five percent level) that the trends for total uranium and water level are not similar. A visual inspection of the associated regression analyses graphs (i.e., Figures D-1 through D-6) indicated that there might be not only differences between trends but that an inverse relationship may be present. Therefore, a second analysis (Section D.2) was performed to determine whether any of the wells exhibited a statistically significant inverse relationship.

D.2 ANALYSIS OF INVERSE TRENDS

The following steps were conducted to further evaluate water level and total uranium concentration trends, specifically to determine if there is a significant evidence of an inverse relationship (Note: outliers were removed as per Section D.1.2):

- Repeat Steps 1, 2, and 3 from Section D.1 above
- Step 3b: The standardized water level results were multiplied by (-1). This step reverses (inverts) all of the standardized water level data, because a standardized data set is centered on a mean equal to zero. For example, a result that was standardized to be slightly greater than the mean now becomes slightly less than the mean; and a result that was standardized to be much less than the mean now becomes much greater than the mean.
- Repeat Step 4 from Section D.1.

The statistical analytical results obtained from the above steps, for each on-site disposal facility Great Miami Aquifer well, is provided in Table D-1 under the columns associated with "Comparisons of Inverse Trends". For the same wells, Figures D-7 through D-12 provide a graphical display of water level (inverted)/total uranium regression analysis.

D.2.1 Methodology Rationale

In order to determine if there is a statistically significant inverse relationship between total uranium and water level, the standardized water level data was inverted (by multiplying by [-1]) and then the same Comparison of Regression Lines methodology was used as in D.1. Graphically, a water level regression line with negative slope is converted to a positive slope. If the total uranium regression line were not significantly different from the inverted water level regression line, then this would demonstrate that there is statistical evidence of an inverse relationship between the two parameters.

D.2.2 Findings

The comparison of regression lines methodology tests for significant differences between the two regression lines (trends). If there is a lack of statistical evidence that there is a difference between the two regression lines (the standardized water level data being inverted), then we may conclude that there is evidence of an inverse relationship. Large p-Values indicate there is strong evidence of an inverse relationship. Conversely, small p-Values would indicate that there is scant evidence of an inverse relationship. From the evaluation:

- Two of the six wells (22201 and 22203) had large p-Values (both greater than 0.15) and were judged to demonstrate "strong evidence" of an inverse relationship.
- One well (22198) was in the 0.05 to 0.15 range and was designated as demonstrating "some evidence" of an inverse relationship.
- Well 22199 had a p-Value of 0.04 and was deemed as only displaying "limited evidence" of an inverse relationship.
- The final two wells (22200 and 22204) had p-Values below 0.01 indicating that there was "no significant evidence" of an inverse relationship between total uranium concentrations and water levels.

In conclusion, at four of the six wells, an inverse relationship could not be rejected. As per Table D-1, the p-Value range to indicate an inverse relationship is a significance level greater than 0.01. Well 22199 had the lowest p-Value in this group at 0.04 (a four percent significance level). The relationship between water levels and total uranium concentrations for these four wells indicates that water levels have been decreasing over time and total uranium concentrations have been increasing. For the remaining two wells (22200 and 22204), water levels have been decreasing over time but total uranium concentrations have no discernable upward or downward trend.

TABLE D-1

SLOPE COMPARISON OF ON-SITE DISPOSAL FACILITY GREAT MIAMI AQUIFER WELLS FOR CELLS 1, 2, AND 3

		Comparison of Slopes				Comparison of Inverse Trends	
Cell	Well[a]	Water Level Slope	Total Uranium Slope	P-Value	Trend Direction Comparison[b]	P-Value	Inverse Trend Comparison[c]
1	22201[d] Up	Decreasing	Increasing	0.0000	Significantly Different	0.1521	Strong evidence of an Inverse Relationship
	22198 Dn	Decreasing	Increasing	0.0000	Significantly Different	0.1343	Some evidence of an Inverse Relationship
2	22200 Up	Decreasing	Invariable[e]	0.0005	Significantly Different	0.0024	No significant evidence of an Inverse Relationship
	22199 Dn	Decreasing	Increasing	0.0001	Significantly Different	0.0400	Limited evidence of an Inverse Relationship
3	22203 Up	Decreasing	Increasing	0.0000	Significantly Different	0.3429	Strong evidence of an Inverse Relationship
	22204 Dn	Decreasing	Invariable[e]	0.0089	Significantly Different	0.0073	No significant evidence of an Inverse Relationship

Note: Outliers identified as results having Studentized Residuals approximately > 3.5. This method was used because the deviation is calculated as the residual from the fitted regression line without the potential outlier.

[a]Up = Upgradient; Dn = Downgradient
[b]"Significantly different" – p-Value < 0.05
[c]"Strong evidence" – p-Value > 0.15
"Some Evidence" – 0.05 < p-Value ≤ 0.15
"Limited evidence" – 0.01< p-Value ≤ 0.05
"No significant evidence" – p-Value ≤ 0.01
[d]Total uranium outlier removed – 5.196 µg/L (3/31/97)
[e]Slope is so slight that it is considered invariable.

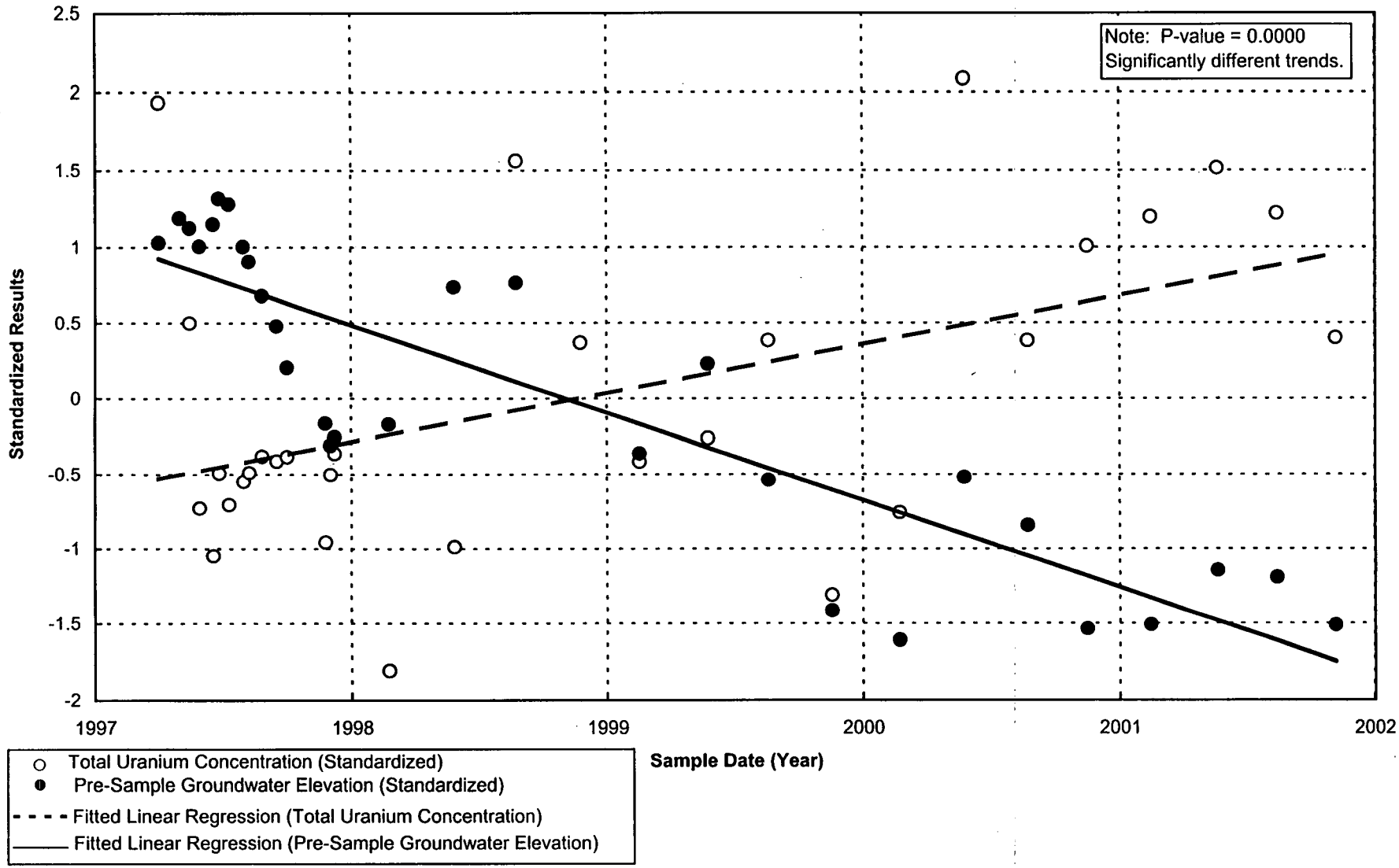

FIGURE D-1. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22201 (CELL 1 UPGRADIENT) DRAFT FINAL

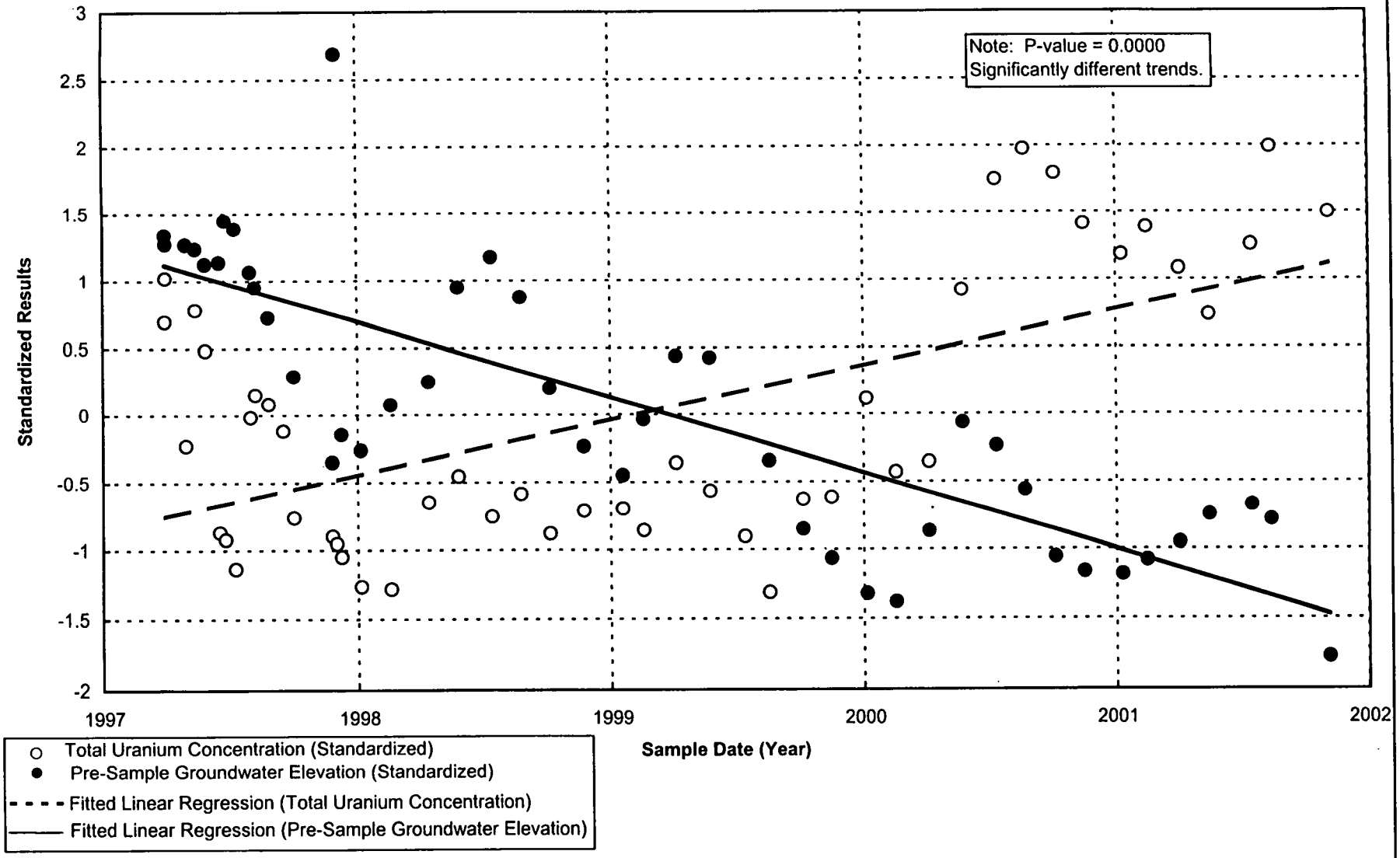

FIGURE D-2. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22198 (CELL 1 DOWNGRADIENT) DRAFT FINAL

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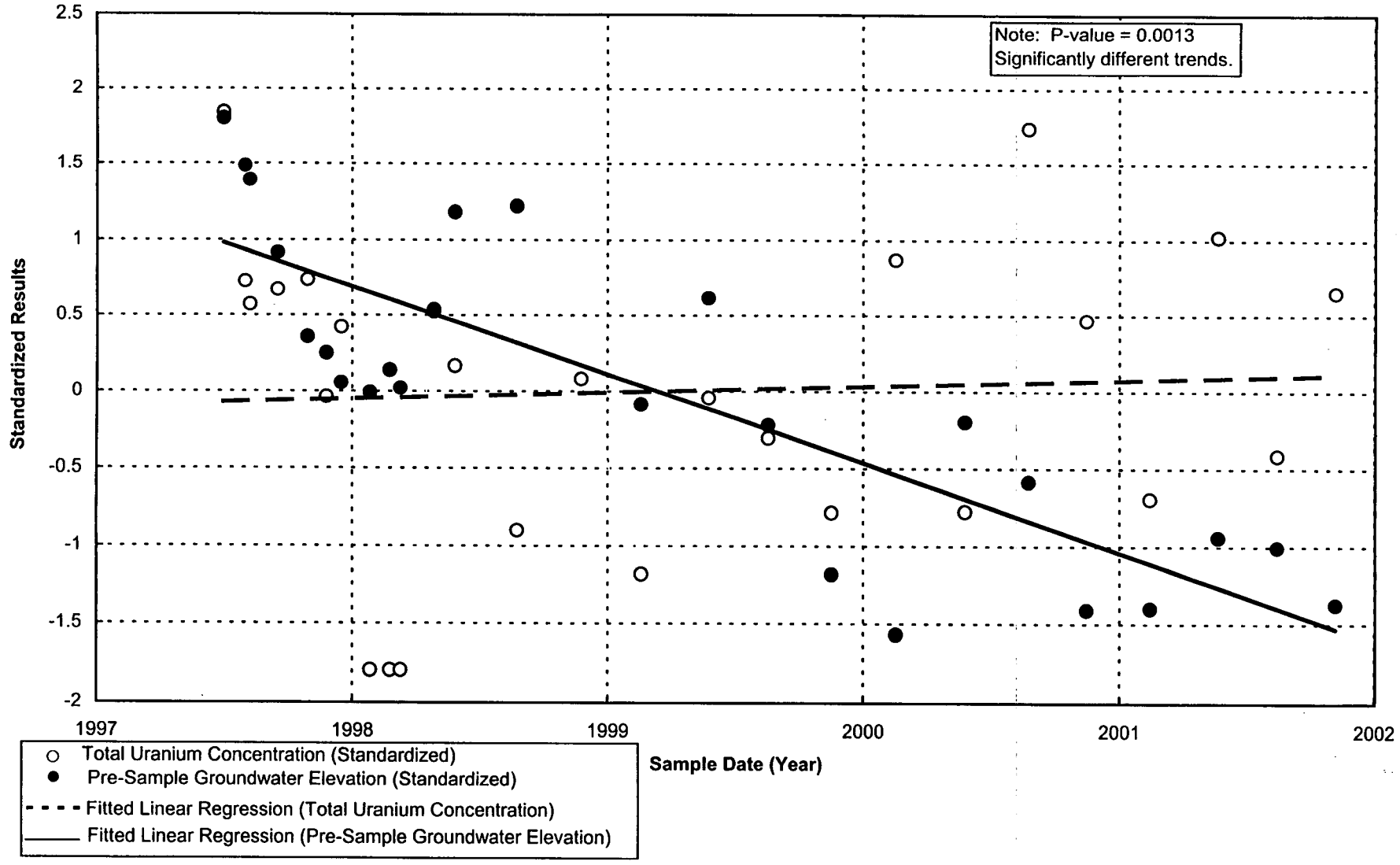

FIGURE D-3. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22200 (CELL 2 UPGRADIENT) DRAFT FINAL

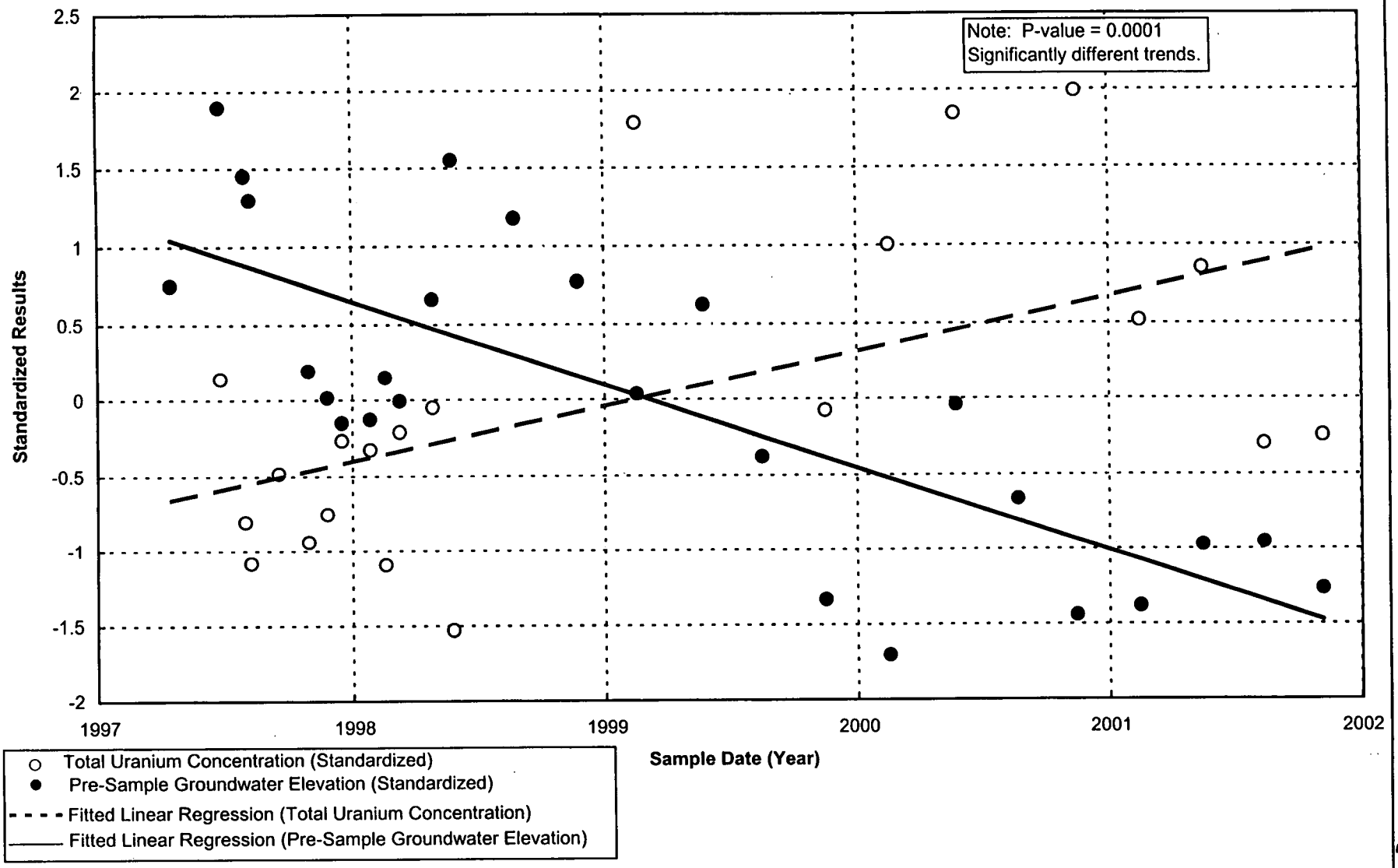

FIGURE D-4. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22199 (CELL 2 DOWNGRADIENT) DRAFT FINAL

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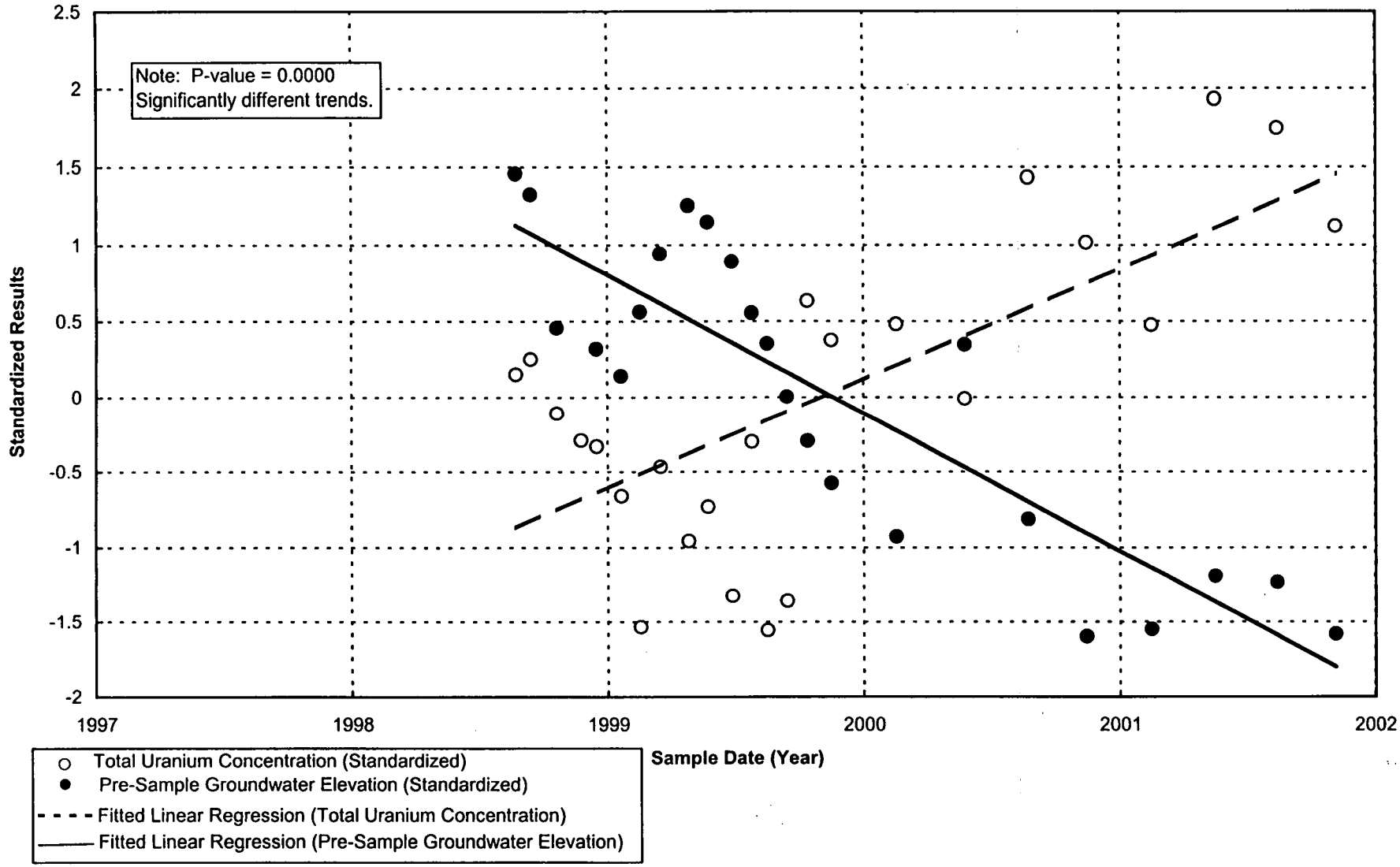

FIGURE D-5. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22203 (CELL 3 UPGRADIENT)

DRAFT FINAL

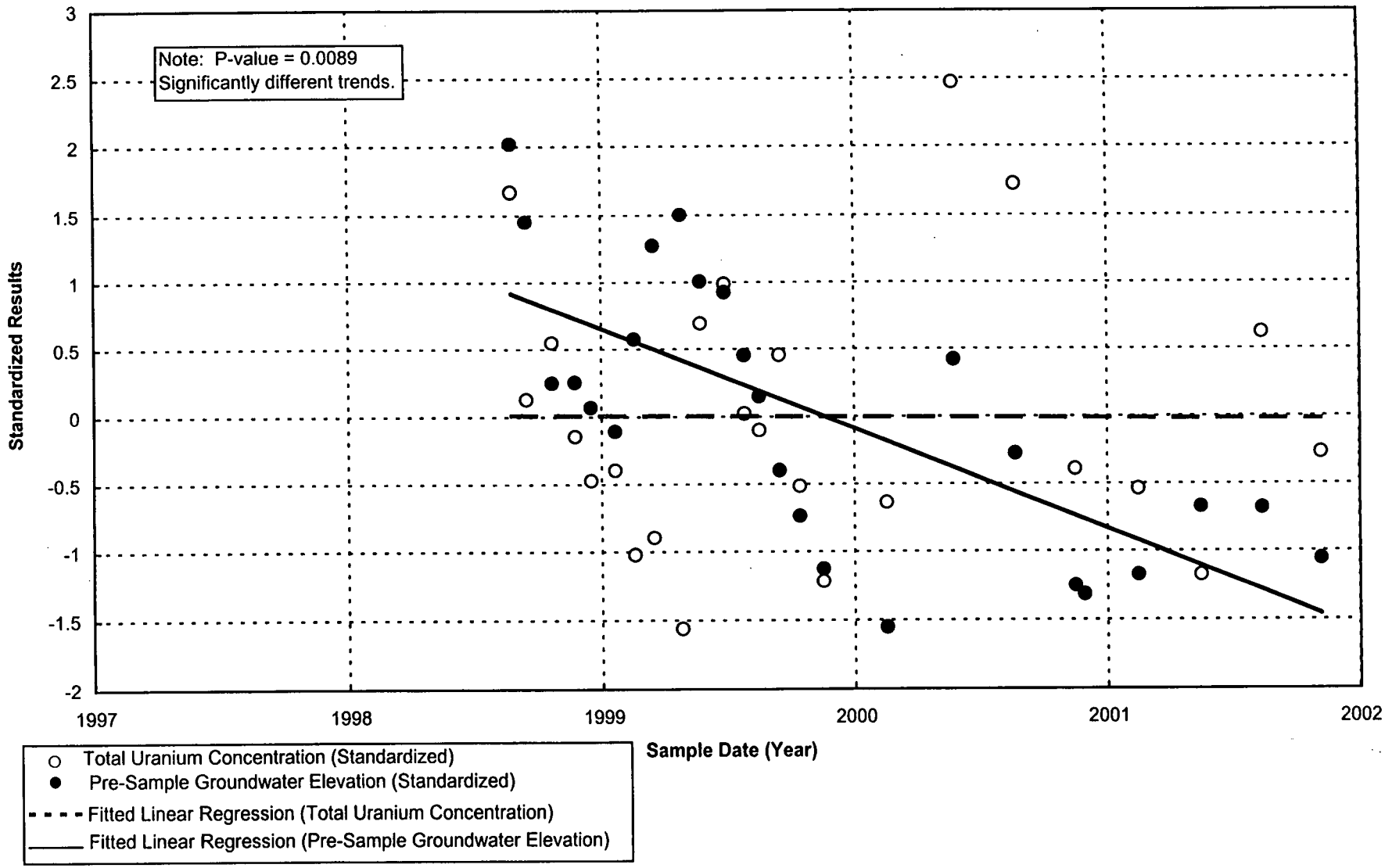

FIGURE D-6. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22204 (CELL 3 DOWNGRADIENT)

DRAFT FINAL

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43274

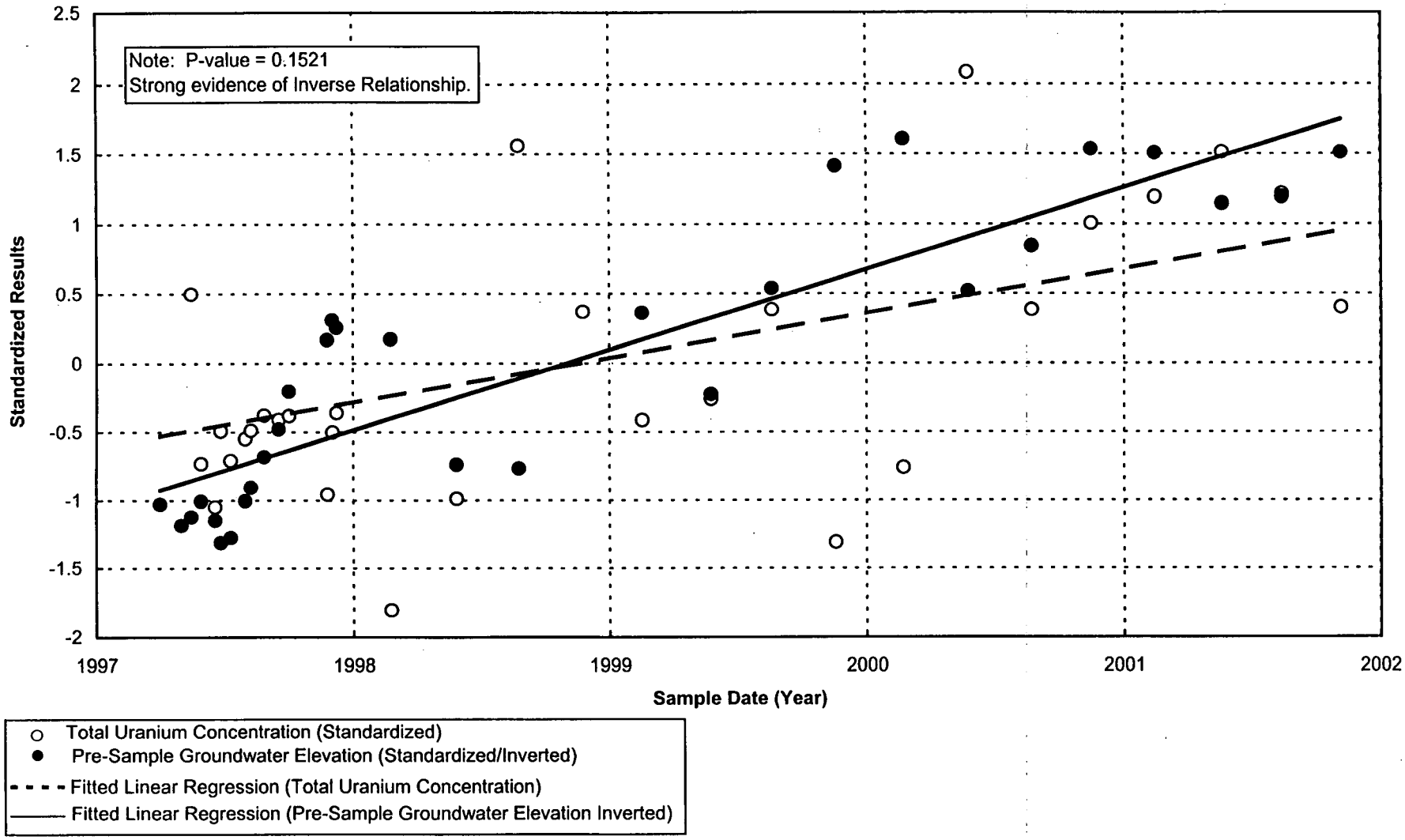

FIGURE D-7. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MOINITORING WELL 22201 (CELL 1 UPGRADIENT)

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4374

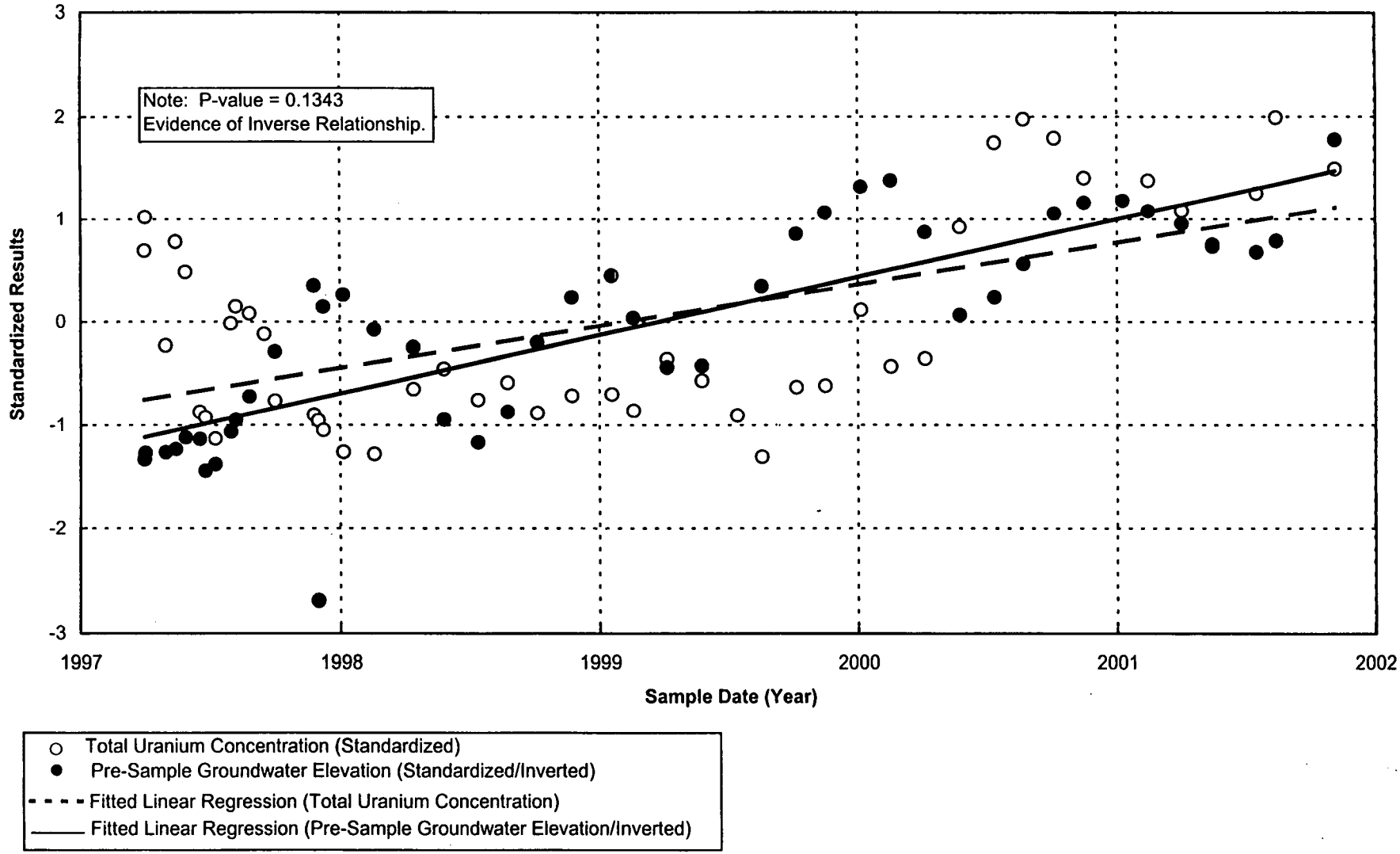

FIGURE D-8. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22198 (CELL 1 DOWNGRADIENT)

DRAFT FINAL

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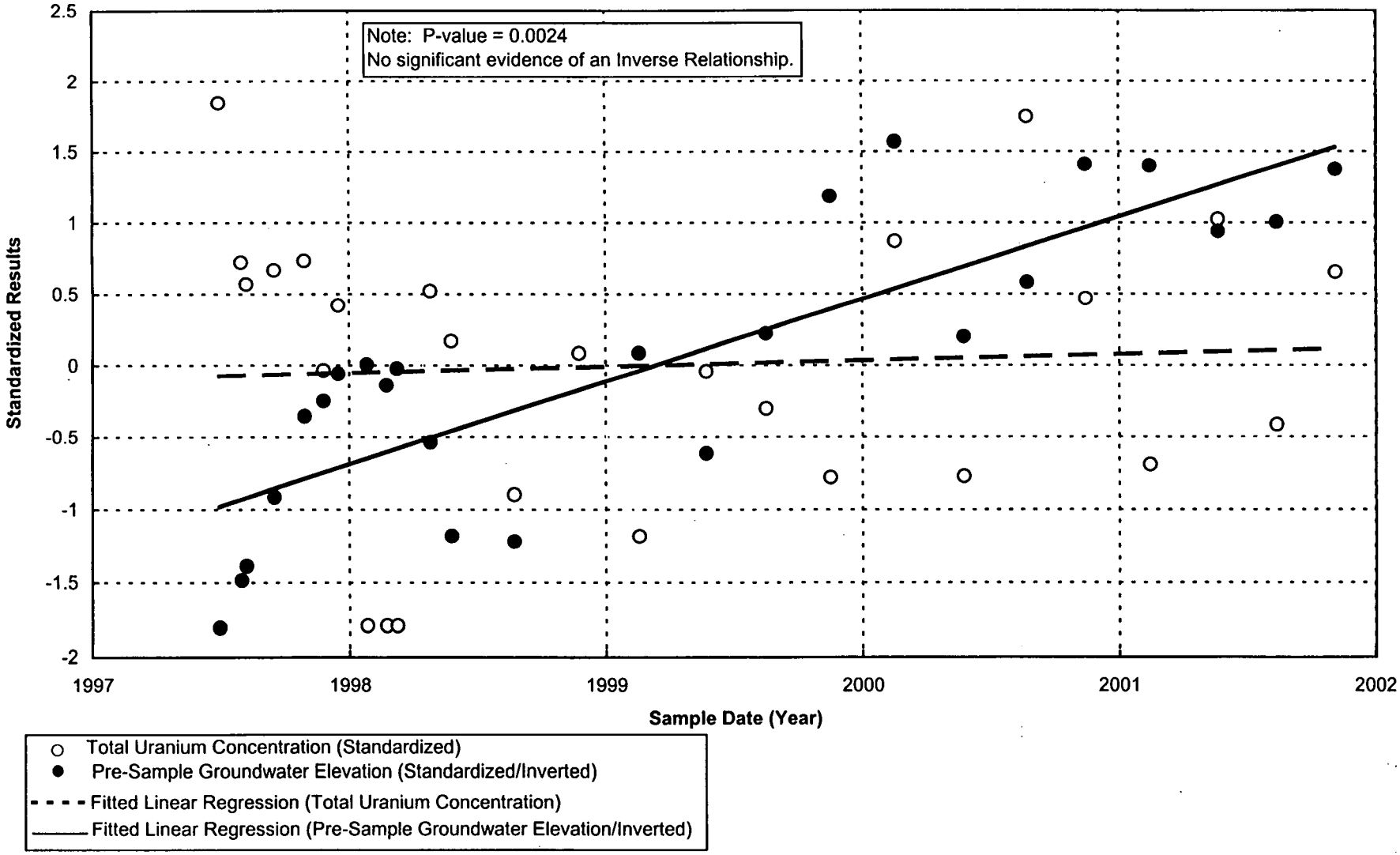

FIGURE D-9. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22200 (CELL 2 UPGRADIENT)

DRAFT FINAL

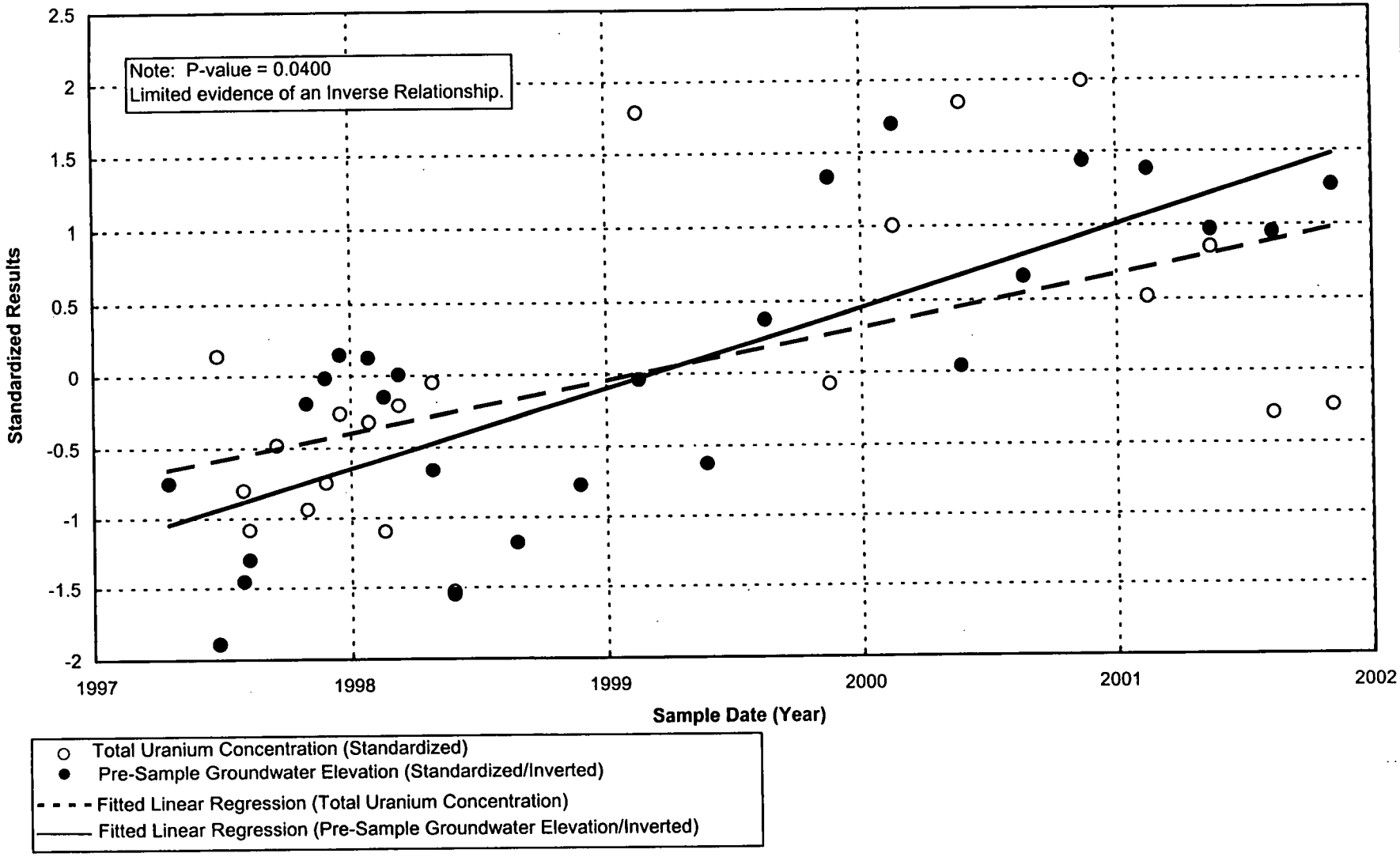

FIGURE D-10. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22199 (CELL 2 DOWNGRADIENT)

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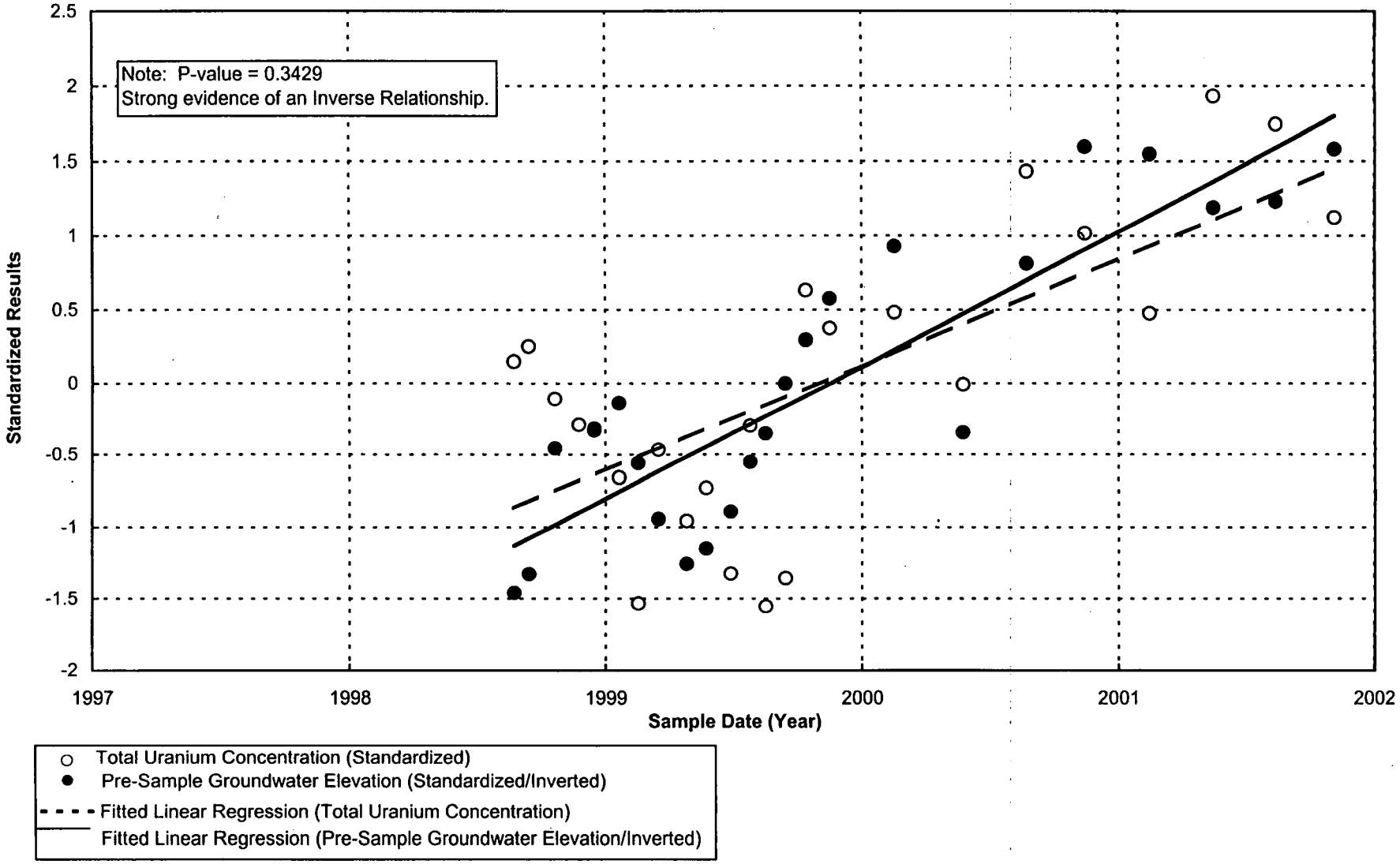

FIGURE D-11. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22203 (CELL 3 UPGRADIENT)

DRAFT FINAL

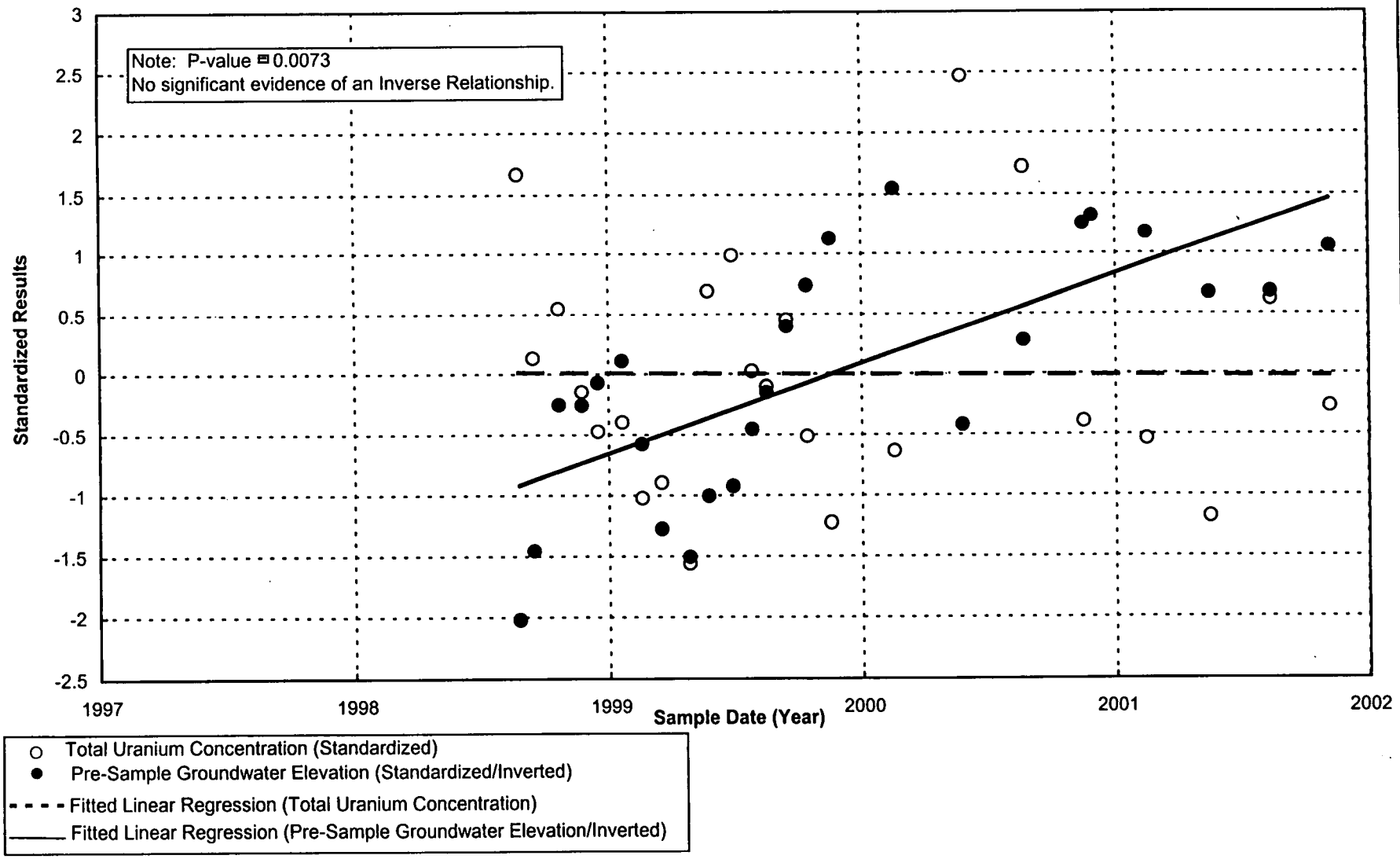

FIGURE D-12. FITTED LINEAR REGRESSION OF STANDARDIZED GROUNDWATER ELEVATIONS (INVERTED) AND TOTAL URANIUM CONCENTRATIONS FOR MONITORING WELL 22204 (CELL 4 DOWNGRADIENT)

DRAFT FINAL

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4374