AECOM Environment

Prepared for:
BASF Corporation
Florham Park, NJ

Prepared by:
AECOM
Raleigh, NC
60135952.0610
September 2010

June 2010 Semi-Annual Corrective Action Monitoring Report

BASF Corporation
4330 Chesapeake Drive
Charlotte, North Carolina
Groundwater Incident # 12130

AECOM Environment

Prepared for:
BASF Corporation
Florham Park, NJ

Prepared by:
AECOM
Raleigh, NC
60135952.0610
September 2010

June 2010 Semi-Annual Corrective Action Monitoring Report

BASF Corporation
4330 Chesapeake Drive
Charlotte, North Carolina
Groundwater Incident # 12130

Prepared By Brian Ray
Senior Project Manager

Reviewed By Matthew Zenker, PE
Senior Engineer

Contents

1.0 Introduction 1-1

1.1 Background 1-1

1.2 Soil Vapor Extraction Systems 1-2

2.0 Methods 2-1

2.1 Sampling Plan 2-1

2.2 Groundwater Sampling Procedures 2-1

2.2.1 Low-flow Sampling Techniques 2-1

3.0 Results 3-1

3.1 Groundwater Flow 3-1

3.2 Quality Control/Data Validation 3-1

3.3 Groundwater Quality 3-2

3.3.1 Comparison to Previous Results for Volatile Organic Compounds 3-2

3.3.2 Effectiveness of Natural Attenuation 3-4

4.0 Soil Vapor Extraction Systems Status 4-1

5.0 Conclusions 5-1

6.0 References 6-1

List of Appendices

Appendix A Groundwater Sample Collection Records

Appendix B June 2010 Laboratory and Data Validation Reports

Appendix C Historical VOC Results and Trend Graphs

Appendix D Historical Natural Attenuation Parameters

List of Tables

Table 1 Water Level Measurements

Table 2 Summary of Intra-Aquifer Flow

Table 3 Groundwater Analytical Results - VOCs

Table 4 Field Measured Parameters

Table 5 Geochemical Parameters

Table 6 VOC Mass Removal – Maintenance Building SVE System

Table 7 VOC Mass Removal – Sulfochlorination Building SVE System

List of Figures

Figure 1 Site Location Map

Figure 2 Site Plan

Figure 3 Shallow Aquifer Potentiometric Surface Map, June 2010

Figure 4 Estimated Extent of 2L Standard Exceedance for PCE in Groundwater, June 2010

Figure 5 Hydrogeologic Cross-Sections

Executive Summary

This monitoring report summarizes the results from the groundwater sampling event conducted in June 2010 by AECOM, Inc. on behalf of BASF Corporation (BASF) at 4330 Chesapeake Drive, Charlotte, North Carolina. Corrective action of volatile organic compounds (VOCs) in groundwater is being pursued through natural attenuation, with semi-annual monitoring of groundwater quality in accordance with the approved Corrective Action Plan (CAP, ENSR 1997). Additionally, VOC impacted soil is being treated via soil vapor extraction (SVE) in accordance with the approved Soil Corrective Action Plan (ENSR 2006).

During the June 2010 sampling event, groundwater samples were collected using low-flow techniques from monitoring wells MW-8B, MW-9, MW-10, MW-11A, MW-11B, MW-12, MW-14A, MW-14B, MW-15AR, MW-15BR, MW-16AR, MW-16BR, MW-17B, MW-18B, MW-19B1, MW-20A, MW-20B, MW-21AR, MW-21BR, MW-22A, MW-22B, MW-23A, MW-23B and MW-24A. Samples were analyzed for VOCs by United States Environmental Protection Agency Method 8260B.

Monitoring results for the June 2010 semi-annual CAP monitoring event indicate groundwater is migrating to the east-northeast, under a hydraulic gradient of 0.024 feet per foot, which is consistent with previous events. Furthermore, the results indicate that tetrachloroethene concentrations were generally consistent with recent sampling events. The horizontal extent of the plume has remained stable since June 2009 in the downgradient direction at wells MW-21AR and MW-21BR near the property boundary. VOC concentrations in this well pair will continue to be monitored closely during future sampling events.

Startup of the SVE system to address VOC impacted soil in the unsaturated zone at and beneath the sulfochlorination and the maintenance buildings occurred on November 8, 2007. BASF is currently conducting monthly operation and maintenance of the system. To date, approximately 170 pounds of chlorinated volatile organic chemicals (CVOCs) have been removed by the maintenance building SVE system and 1,660 pounds of CVOCs have been removed by the sulfochlorination building SVE system.

Performance monitoring and reporting will continue to be conducted on a semi-annual basis in accordance with the approved CAP (ENSR, 1997). The next sampling event is scheduled for December 2010.

1.0 Introduction

The BASF Corporation (BASF) facility located at 4330 Chesapeake Drive in Charlotte, Mecklenburg County, North Carolina (the site) (Figure 1) is undergoing corrective action for volatile organic compounds (VOCs) in groundwater. The February 1997 Corrective Action Plan (CAP), prepared by AECOM (at the time operating as ENSR Consulting and Engineering NC, Inc. [ENSR]) on behalf of BASF, was approved by the North Carolina Department of Environment, Health and Natural Resources, now the Department of Environment and Natural Resources (NCDENR) Division of Water Quality (DWQ), on April 29, 1997. Corrective action of VOCs in groundwater is being pursued through natural attenuation, with semi-annual monitoring of groundwater quality to assess the effectiveness of natural attenuation processes. Corrective Action is in compliance with the rules stipulated in North Carolina Administrative Code (NCAC), Title 15A Subchapter 2L.0106(l) for sites undergoing remediation via natural attenuation processes.

Additionally, to treat source area VOC impacts to soil and also to control vapor intrusion into the maintenance building and sulfochlorination building, BASF has been operating soil vapor extraction systems (SVE) at each building since 2007. Further information regarding the SVE systems is found in Sections 1.2 and 4.0.

1.1 Background

Final CAP approval was granted based on evidence that the VOC impacted source soils had been removed. The former source area was located behind the maintenance building paint shed, along the fence line between monitoring wells MW-11A and MW-12 (Figure 2). BASF removed approximately 497 tons of contaminated soil from this area in August 1994.

The City of Charlotte leased the BASF property east of the main facility in 2005 and began construction of a maintenance facility. During construction of the City of Charlotte Northpointe Boulevard Street Maintenance Facility, six existing BASF monitoring wells (MW-15A, MW-15B, MW-16A, MW-16B, MW-21A and MW-21B) were destroyed and two damaged (MW-20A and MW-20B). The wells were replaced and/or repaired by the City of Charlotte in the Fall/Winter of 2006 following completion of the facility. The replacement wells were named as follows: MW-15AR, MW-15BR, MW-16AR, MW-16BR, MW-21AR and MW-21BR. To repair monitoring wells MW-20A and MW-20B, the polyvinyl chloride casings of the wells were cut flush to the ground surface and new protective covers were installed. Following installation/repair, the location and top of casing elevation for each well was surveyed by a North Carolina Licensed Surveyor.

In 2005, BASF initiated additional investigations at the site to assess whether other source areas of VOC impacted soil were present. The findings of the investigations revealed the presence of VOC impacted soils at concentrations exceeding applicable North Carolina cleanup levels in the vicinity of the Sulfochlorination and the Maintenance Building (Figure 2). The results of the investigations were summarized in the Source Investigation Report submitted to NCDENR in 2005. Following a review of the report, the NCDENR DWQ issued a notice of regulatory requirements (NORR) to BASF on December 1, 2005. The NORR required BASF to submit a Soil Corrective Action Plan (SCAP) to address the impacted soils at each location. BASF submitted a SCAP to NCDENR DWQ in March 2006 proposing SVE as the remediation technology. In April 2006, NCDENR DWQ approved the SCAP.

1.2 Soil Vapor Extraction Systems

During the Fall of 2006, BASF solicited bids from several environmental consultants to design and construct the SVE systems. In April 2007, AECOM (ENSR) was awarded the contract to design, install and start-up the SVE systems. The objectives of the SVE systems are to reduce indoor air concentrations of VOCs detected in the sulfochlorination and maintenance buildings to below applicable risk levels (1×10^{-6}), as presently defined, and remove mass from soil in the treatment areas. The SVE system for the maintenance building includes four SVE wells manifolded to one 7.5-horsepower (hp) high vacuum blower sufficient to provide an air flow rate of 130 actual cubic feet per minute (ACFM) at 19 inches of mercury (in Hg) vacuum. The SVE system for the sulfochlorination building includes 10 SVE wells and two vacuum blowers, one 10-hp and one 15-hp, capable of producing a combined air flow rate of 540 ACFM of air at 18 in Hg vacuum. Construction of the SVE systems began in August 2007 and was completed in November 2007. Both systems were started on November 8, 2007. Operation and maintenance of both systems is conducted on a monthly basis and includes quarterly air sampling of the SVE system(s) exhaust and semi-annual air sampling of the SVE wells. In addition, indoor air samples are collected on an annual basis to evaluate effectiveness of the SVE systems at reducing indoor air exposure risks.

2.0 Methods

This sampling event represents the first semi-annual sampling of calendar year 2010. The sampling event was conducted between June 7 and 9, 2010. AECOM personnel performed field activities including collection of groundwater samples and field measurement of water levels and limited geochemical parameters. In general, well purging, sampling and sample handling procedures were conducted according to AECOM, NCDENR and United States Environmental Protection Agency (EPA) Region IV protocols (EPA, 2007a), as recorded on groundwater sample collection records included in Appendix A.

2.1 Sampling Plan

In accordance with the established groundwater monitoring program for the site, the following monitoring wells are sampled on a semi-annual basis:

MW-6	MW-12	MW-17B	MW-22A
MW-8A	MW-14A	MW-18B	MW-22B
MW-8B	MW-14B	MW-19B1	MW-23A
MW-9	MW-15AR	MW-20A	MW-23B
MW-10	MW-15BR	MW-20B	MW-24A
MW-11A	MW-16AR	MW-21AR	
MW-11B	MW-16BR	MW-21BR	

In addition, the Caldwell private supply well is typically sampled in June of each year. The Caldwell's sold their property to Mr. William Newton in December 2006. Mr. Newton is currently renting the property but as of 2009 is no longer using the well for drinking purposes. Mr. Newton indicated that the property was connected to the City of Charlotte water supply in late 2009 and that the well pump is no longer operational. Consequently, a sample could not be collected during the June 2010 event. Since the well is no longer being used for drinking purposes and chemicals of concern associated with the BASF site have not historically been detected in the well, BASF proposes to remove this well from the sampling schedule. Well MW-19B is no longer sampled on a semi-annual basis and was replaced by MW-19B1 in December 2004. During the June 2010 sampling event, wells MW-6 and MW-8A were dry and therefore groundwater samples were not collected.

2.2 Groundwater Sampling Procedures

Prior to sampling, static groundwater levels were measured in each monitoring well. Low-flow purge techniques using a peristaltic, electric submersible pump with dedicated tubing, or dedicated bladder-pump equipment were used for purging and sampling monitoring wells. Refer to the sample collection records (Appendix A) for the sampling methods used at each well location.

2.2.1 Low-flow Sampling Techniques

Wells MW-9, MW-10, MW-14A, MW-15AR, MW-16AR, MW-18B, MW-19B1, MW-20A, MW-20B, MW-21AR, MW-22A, MW-23A, MW-23B, and MW-24A were purged using a peristaltic pump or electric submersible pump. Dedicated bladder pumps were used to purge wells MW-8B, MW-11A, MW-11B, MW-12, MW-14B, MW-15BR, MW-16BR, MW-17B, MW-21BR, and MW-22B. The wells were purged

by pumping groundwater at a rate of 100 to 250 milliliters per minute (mL/min). Water levels were monitored approximately every five minutes and a steady flow rate was maintained to stabilize the water level. Field parameters (temperature, pH, specific conductance, oxidation-reduction potential, and dissolved oxygen) were measured during purging to facilitate obtaining a sample representative of formation water

After purging, groundwater samples were collected at a flow rate between 100 and 200 mL/min. Following sample collection, when the well yielded enough water, final measurements of field parameters were made and recorded on field data sheets (Appendix A). No field parameter measurements were collected from wells MW-6 and MW-8A as they were dry during the June 2010 sampling event.

Sample handling, packaging, preservation and storage were conducted in accordance with AECOM, NCDENR and EPA protocols (EPA, 2007b). Samples were submitted under chain of custody control to Lancaster Laboratories, Inc. for laboratory analysis of VOCs by EPA Method 8260B.To assist in evaluating the potential for favorable conditions for biodegradation processes, groundwater samples collected from monitoring wells MW-8B, MW-10, MW-15B, MW-19B1, MW-21A, MW-21B, MW-22A, and MW-22B during the June 2010 sampling event were analyzed for the following geochemical parameters: dissolved oxygen, pH, oxidation-reduction potential, chloride, total iron, carbon dioxide, alkalinity, nitrate, nitrite, sulfate, and sulfide.

3.0 Results

3.1 Groundwater Flow

Water level measurements collected in June 2010 are listed in Table 1. Shallow potentiometric elevations and contours are presented on Figure 3 and indicate that in June 2010, shallow groundwater was flowing to the east - northeast. This is consistent with previous events. The hydraulic gradient in June 2010 as measured between wells MW-22A and MW-21AR was 0.024 feet per foot (ft/ft), which is consistent to historic measurements.

Downward vertical gradients were present during the June 2010 sampling event at well pairs MW-15AR/MW-15BR, MW-16AR/16BR, MW-21A/MW-21B and MW-22A/22B. Table 2 summarizes the vertical gradients observed during the current monitoring event between the saprolite (shallow) and partially weathered rock (deep) portions of the aquifer system. The gradients are consistent with previous events.

3.2 Quality Control/Data Validation

The data package from Lancaster was reviewed for conformance to the requirements of the *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-07-003, July 2008. The data validation report is presented in Appendix B. The data was validated by AECOM using the following procedures:

- The list of analytical results was verified against chain-of-custody documentation to verify that the requested tests were performed and that the field identification number matched the identification on the laboratory report.
- Date sampled and date analyzed were inspected to verify that required holding times were met.
- Surrogate spikes and duplicates were examined to verify that percent recoveries were within ranges as specified by EPA SW-846.
- Dilution factors were checked to verify that analytical results and detection limits were reported correctly.
- Laboratory blank results were examined to verify that samples were analyzed as specified by EPA SW 846 protocols.

The data from the June 2010 data package were found to be acceptable for use with the following qualifications:

- Method 8260B: The equipment blank (EB-1) had detection for methylene chloride between the method detection limit and reporting limit. Theassociated samples with detections between the MDL and reporting limit were reported non-detect at the reporting limit. The associated samples with detections above the reporting limit and less than 5 times the EB concentration were qualified "J" (estimated).

- Method 8260B: The matrix spike recovery was outside of the acceptable limits biased high for tetrachloroethene in sample MW-21BR. The tetrachloroethene result in sample MW-21BR was qualified.
- Method 300.0: The matrix spike recovery was outside of the acceptable limits biased high for chloride in sample MW-8B. The chloride results for the of the associated samples were qualified.

3.3 Groundwater Quality

VOC results for commonly detected compounds are summarized in Table 3. Field parameters for the wells sampled are listed in Table 4. The following compounds were detected at levels equal to or above their respective Title 15A NCAC Subchapter 2L groundwater standards (2L Standard) during this event:

- Tetrachloroethene (PCE) was detected at levels above the 2L Standard (0.7 micrograms per liter [µg/L]) in the samples collected from eight shallow wells (MW-10, MW-11A, MW-12, MW-16AR, MW-21AR, MW-22A, MW-23A, and MW-24A) and ten deep wells (MW-8B, MW-11B, MW-14B, MW-15BR, MW-16BR, MW-17B, MW-18B, MW-21BR, MW-22B, and MW-23B). The distribution of PCE in both the shallow and deep wells is shown on Figure 4.
- Trichloroethene (TCE) was detected at levels above the 2L Standard (3.0 µg/L) at three shallow wells (MW-22A, MW-23A, and MW-24A) and five deep wells (MW-8B, MW-11B, MW-15BR, MW-17B, and MW-18B).
- 1,2-Dichloropropane was detected at levels above the 2L Standard (0.6 µg/L) at one shallow well (MW-11A) and three deep wells (MW-11B, MW-17B, and MW-18B).
- Cis-1,2-dichloroethene (cis-1,2-DCE) was detected at a level above the 2L Standard (70 µg/L) at one shallow well (MW-22A).
- Trans-1,2-dichloroethene, chloroform, benzene, xylene isomers, and toluene were also detected, but their concentrations were below the respective 2L Standards.

Figures 4 and 5 illustrate the estimated horizontal and vertical extent of PCE concentrations in site wells in June 2010. Because other compound exceedances were less extensive, only PCE is depicted in these figures.

3.3.1 Comparison to Previous Results for Volatile Organic Compounds

A summary of VOC results for historical sampling events is provided in Appendix C[1]. The trend graphs in Appendix C show VOC concentrations for selected wells[2].

---

[1] Note that the lists of compounds in Appendix C represent various analytical methods for VOCs. As such, all compounds listed have not been analyzed during every sampling event.

[2] Trend graphs are provided for all compounds/wells exhibiting histories of sustained detections (see Appendix C).

Plume Perimeter Wells (Shallow)

Shallow wells outside or near the edge of the shallow plume boundary shown on Figure 4 are MW-6, MW-9, MW-14A, MW-15AR, MW-20A and MW-21AR.

Historically, few VOC detections have occurred among the shallow plume perimeter wells. Laboratory analytical results of the sample collected from well MW-21AR during June 2010 reported PCE at a concentration (8.2 µg/L) slightly above the 2L Standard (0.7 µg/L). PCE was first detected in well MW-21AR in 2005 and the concentrations have generally remained stable since. Additionally, wells MW-9 had a reported detection of PCE at estimated (J) concentration of 0.4 J µg/L. The concentration is below the 2L Standard (0.7 µg/L). PCE has been detected sporadically in well MW-9. Groundwater samples were not collected from shallow groundwater monitoring well MW-6 due to lack of water.

Plume Perimeter Wells (Deep)

Deep wells outside or near the edge of the deep plume boundary shown on Figure 4 are MW-19B1, MW-20B, MW-21BR and MW-23B. Few VOCs have historically been detected at these well locations; however, PCE was detected in the groundwater samples collected from monitoring wells MW-21BR (12 µg/L) and MW-23B (5.6 µg/L) above the 2L Standard (0.7 µg/L). PCE has been detected in MW-21BR since 2004 and concentration increases were observed between 2004 and 2009. A slight decrease was observed between the December 2009 and June 2010 sampling events (see Appendix C).

Plume Interior Wells (Shallow)

Shallow wells within the plume boundary shown on Figure 4 are MW-8A, MW-10, MW-11A, MW-12, MW-16AR, MW-22A, MW-23 and MW-24A. PCE concentrations in wells MW-10, MW-11A, MW-12, MW-23A and MW-24A either decreased or were similar to previous sampling events and remained below peak levels of 1998 (Appendix C). PCE concentrations have been trending downward in wells MW-10, MW-11A and MW-12. Although PCE concentrations in MW-16AR increased between 2004 and 2006, the concentrations since 2006 have remained relatively stable. A groundwater sample was not collected from shallow groundwater monitoring well MW-8A due to lack of water.

Plume Interior Wells (Deep)

Deep wells within or near the plume boundary shown on Figure 4 are MW-8B, MW-11B, MW-14B, MW-15BR, MW-16BR, MW-17B, MW-18B, MW-22B and MW-23B.

- PCE concentrations remained relatively stable in well MW-14B between the June 2004 and December 2008 events and decreased between the December 2008 and June 2009 events. However, the PCE concentrations have increased since June 2009.
- PCE concentrations in well MW-15BR had been increasing since 2001; however, the PCE concentrations have remained stable between the June 2009 and June 2010 events.
- PCE concentrations in source area well MW-17B have been decreasing since 2005 and generally remained stable in source area well MW-18B during the same period.
- PCE concentrations in well MW-8B increased between 2003 and 2006 and have remained stable since 2006; PCE concentrations in MW-11B have remained relatively stable since 2007.
- PCE concentrations in well MW-22B decreased between 2007 and 2009 and have remained stable since 2009. PCE concentrations in MW-23B have been increasing since 2007.

However, the concentration decreased slightly between December 2009 (9.1 µg/L) and June 2010 (5.6 µg/L).

- TCE and cis-1,2-DCE, daughter products of PCE, have been present in several wells indicating likely dechlorination of PCE. Chloroform has persisted at low levels at several deep wells (e.g. MW- 8B, MW -11B, and MW-17B) in recent years. However, due to a change in the 2L groundwater standard for chloroform from 0.19 µg/L to 70 µg/L, these concentrations are no longer above the applicable 2L standard.

3.3.2 Effectiveness of Natural Attenuation

Indicators of natural attenuation effectiveness at the site include concentration trends, changes in the extent of the groundwater plume, occurrence of daughter products, and trends in other natural attenuation indicator parameters. As presented in the CAP (February 1997), the extent of 2L standard exceedances contracted substantially between July 1994 and June 1996.

During the June 2010 monitoring event, VOC concentrations were generally consistent with previous results. PCE trends over the past several sampling events show steady concentrations at deep source-area well MW-18B. The lateral extent of VOCs in the partially weathered rock zone also showed slightly increasing trends between 2004 and 2009 in well MW-21BR.

Reductive dechlorination of PCE results in the formation of daughter products TCE, cis-1, 2-DCE and vinyl chloride. TCE and (in some wells) cis-1,2-DCE are present with detections generally occurring at wells containing the highest levels of PCE, indicating some level of dechlorination is likely occurring. Other attenuation mechanisms such as dilution and dispersion are likely assisting in plume attenuation.

Parent to daughter product trends

The ratio of parent compound PCE to daughter compounds (i.e. TCE, DCE isomers, and vinyl chloride) can indicate progressive biological degradation of PCE. Concentrations of TCE, cis-1,2-dichloroethene, and trans-1,2-dichloroethene have been detected in site groundwater at the site, suggesting PCE is likely undergoing limited reductive dechlorination.

Geochemical parameters

As mentioned in Section 2.2.1, geochemical parameters were collected from several wells to assist in evaluating the potential for favorable conditions for biodegradation processes. A summary of geochemical parameters are discussed below and are summarized on Tables 4 and 5. A summary of historical laboratory analytical results for indicator parameters is present in Appendix D.

pH: Reductive dechlorination is best supported when pH levels fall between 5 and 9 (EPA, 1998). Sixteen of the 24 wells had recorded values of pH measured were between 5 and 9, which is within the optimum range for reductive dechlorination.

Dissolved oxygen (DO): Reductive dechlorination is most likely to occur when DO concentrations are less than 0.5 milligrams per liter (mg/L). DO measurements measured during June 2010 ranged from 0.52 mg/L to 11.28 mg/L. These levels are consistent with previous readings. These readings indicate that groundwater in majority of the wells are aerobic, which limits reductive dechlorination of chlorinated solvents. Low DO is found at some locations (e.g., wells MW-18B and MW-22A) which indicates favorable conditions for reductive dechlorination.

Oxidation-reduction potential (ORP): Oxidation-reduction reactions indicate electron activity in the groundwater and infer the tendency of ions to transfer electrons. Though ORP levels below +50 millivolts (mV) allow reductive dechlorination reactions to occur, optimal levels are -100 mV or lower. The measured ORP values during the June 2010 event ranged from -258.6 mV to 189.9 mV. Locations with low ORP indicate conditions favorable for reductive dechlorination.

Other inorganic parameters: Reductive dechlorination is most likely to occur when ferrous iron concentrations are greater than 1 mg/L, nitrate levels are less than 1 mg/L, and sulfate concentrations are less than 20 mg/L.

Ferrous iron was detected at MW-22A (2.0 mg/L), MW-21AR (0.3 mg/L), and MW-21BR(0.4 mg/L). Recorded nitrate concentrations were less than or equal to 1 mg/L at monitoring wells MW-19B1, MW-22A and MW-22B. Nitrate values ranged from less than 0.16 mg/L to 3.8 mg/L. Sulfate concentrations were within the optimum range for each well sampled. Sulfide was not detected above laboratory detection limits from any well where it was sampled.

Biodegradation potential conclusions

Site groundwater data suggest the following conclusions with respect to natural attenuation:

Reductive dechlorination of PCE results in the formation of daughter products TCE, cis-1, 2-DCE and vinyl chloride. Concentrations of TCE (in some wells), cis-1,2-DCE and trans-1, 2-DCE are present with detections generally occurring at wells containing the highest levels of PCE, indicating that limited dechlorination is occurring. The biogeochemical parameters generally indicate aerobic conditions in some wells and slight anaerobic conditions in other wells. Natural attenuation of groundwater VOCs at the site is dependent on other natural attenuation mechanisms such as dilution, dispersion and volatilization.

The site data suggest the following conclusions with respect to natural attenuation:

- In the source areas (i.e. maintenance building and sulfochlorination building), VOC attenuation appears to be occurring, and the presence of some daughter products indicate limited dechlorination of PCE.
- Physical processes of attenuation (i.e., dilution and dispersion) have limited the downgradient extent of the plume; however, reductive dechlorination appears to be the less active reduction mechanism at the site.
- The SVE systems have assisted in removing residual VOCs in the vadose zone. By removing these VOCs, potential continued leaching of VOCs to groundwater has been controlled thus allowing natural attenuation of impacted groundwater.

4.0 Soil Vapor Extraction Systems Status

SVE systems were installed and started at the maintenance and sulfochlorination buildings in November 2007. Based on results of SVE effluent samples and air flow measurements collected from each system, approximately 170 pounds of VOCs have been removed by the maintenance building SVE system and approximately 1,660 pounds of VOCs have been removed from the sulfochlorination SVE system (Tables 6 and 7). Furthermore, effluent results indicate that gas phase VOC concentrations in both systems have decreased 99.95 percent since startup.

Based on the results of the SVE well and indoor air samples collected in December 2009, only SVE wells S-1, S-3, S-9 (sulfochlorination building) and S-11 and S-13 (maintenance building) are currently active. SVE air samples were collected from the wells in June 2010. In general, the June 2010 results were consistent with December 2009 data. The next SVE well and indoor sampling event is scheduled for December 2010. Any additional modifications/evaluations of the system to increase the efficiency, while at the same time protecting risks to indoor air, will be conducted following the December 2010 event.

5.0 Conclusions

The following conclusions are based on the results from the June 2010 sampling event at the site.

- Shallow groundwater during the June 2010 sampling event was flowing to the east – northeast, under a hydraulic gradient of 0.024ft/ft, which is consistent with previous events.
- The results of the June 2010 semi-annual CAP monitoring event indicate that PCE concentrations were generally consistent with recent sampling events.
- The horizontal extent of the plume has remained stable since June 2009 in the downgradient direction at wells MW-21AR and MW-21BR near the property boundary. VOC concentrations in this well pair will continue to be monitored closely during future sampling events. As documented in the December 2008 Semi-Annual Corrective Action Monitoring Report (AECOM, 2009), the downgradient plume concentrations were evaluated for potential indoor air migration and potential future downgradient stream impact. The screening for indoor air intrusion indicated that unacceptable levels would not occur given the concentrations in groundwater. Furthermore, fate and transport modeling conducted in 2008 indicated that the plume is not expected to impact the downgradient stream.
- The shallow and deep wells that were installed during supplemental assessments in 2004 and 2005 (i.e. MW-22, MW-23 and MW-24) contain elevated concentrations of VOCs, which prompted the expansion of the contaminant plume contours westward beneath the main plant areas. Concentrations in these wells have remained stable since installation.
- Startup of the SVE system to address VOC impacted soil in the unsaturated zone at and beneath the sulfochlorination and the maintenance buildings occurred on November 8, 2007. BASF is currently conducting monthly operation and maintenance of the system. To date, approximately 170 pounds of chlorinated volatile organic chemicals (CVOCs) have been removed by the maintenance building SVE system and 1,660 pounds of CVOCs have been removed by the sulfochlorination building SVE system.
- The results of the sampling event indicate that the requirements for the CAP previously approved for the site are still being met. Therefore, BASF will continue to monitor the groundwater plume in accordance with the CAP on a semi-annual basis. As stated in Section 2.1, the Caldwell water supply well is no longer being used and BASF proposes to remove the well from the sampling plan. The next semi-annual groundwater monitoring event will occur in December 2010, with a semi-annual monitoring report to follow within 60 days after receipt and validation of analytical data.

6.0 References

AECOM, 2009. Semi-Annual Corrective Action Monitoring Report, BASF Facility, Charlotte, North Carolina.

ENSR, 1997. Natural Attenuation Groundwater Corrective Action Plan (CAP), BASF Facility, Charlotte, North Carolina.

ENSR, 2006. Soil Corrective Action Plan (SCAP), BASF Facility, Charlotte, North Carolina.

EPA, 1998. Technical Protocol for Evaluating Natural Attenuation of Chlorinated Solvents in Ground Water. EPA/600/R-98/128. September 1998.

EPA, 2007a. Operating Procedure – Groundwater Sampling. SESDPROC-301-R1. November 1, 2007.

EPA, 2007b. Operating Procedure – Packing, Marking, Labeling and Shipping of Environmental and Waste Samples. SESDPROC-209-R1, November 1, 2007.

Tables

AECOM

Table 1
Water Level Measurements
BASF Facility
Charlotte, North Carolina
June 2010

Well Number	Total Depth (ft)	Screen Interval B.M.P.	Screen Length (ft)	Measuring Point Elevation (ft)	Depth to Water (ft B.M.P.)	Water Level Elevation (ft)
MW-6	38.00	28 - 38	10.00	773.72	DRY	NM
MW-8A	41.50	31.5 - 41.5	10.00	785.33	DRY	NM
MW-8B	95.00	85 - 95	10.00	786.18	45.71	740.47
MW-9	50.24	40 - 50.24	10.24	781.86	41.41	740.45
MW-10	48.06	38 - 48	10.00	779.52	43.35	736.17
MW-11A	53.60	42 - 53.6	11.60	782.26	42.46	739.80
MW-11B	92.10	80 - 92.10	12.10	782.88	42.85	740.03
MW-12	54.00	44 - 54	10.00	777.80	39.87	737.93
MW-14A	35.00	15 - 35	20.00	753.82	20.67	733.15
MW-14B	79.00	74 - 79	5.00	751.64	19.41	732.23
MW-15AR	48.00	27 - 42.5	15.50	754.03	19.26	734.77
MW-15BR	92.50	82.5 - 92.5	10.00	753.68	21.04	732.64
MW-16AR	42.00	27 - 42	15.00	768.57	35.09	733.48
MW-16BR	88.00	73 - 88	15.00	768.73	35.70	733.03
MW-17B	68.50	18 - 68.5	50.50	782.84	42.02	740.82
MW-18B	71.15	18 - 71.15	53.15	782.93	42.10	740.83
MW-19B1	55.00	45 - 55	10.00	729.15	10.05	719.10
MW-20A	40.00	30 - 40	10.00	752.45	18.39	734.06
MW-20B	68.00	63 - 68	5.00	751.17	20.90	730.27
MW-21AR	30.00	20 - 30	10.00	733.96	14.21	719.75
MW-21BR	57.00	47 - 57	5.00	734.15	14.43	719.72
MW-22A	50.00	40 - 50	10.00	787.76	42.90	744.86
MW-22B	90.00	80 - 90	10.00	786.89	42.97	743.92
MW-23A	50.00	45 - 55	10.00	780.75	37.30	743.45
MW-23B	90.00	69 - 79	10.00	780.77	36.65	744.12
MW-24A	55.00	45 - 55	10.00	780.01	37.00	743.01

Notes:
ft - feet
B.M.P - Below Measuring Point
NM - No Measurement

AECOM

Table 2
Summary of Intra-Aquifer Flow
BASF Facility
Charlotte, North Carolina
June 2010

Well ID	Date	WL Elev. (ft, msl)	Screen Midpoint Elev. (ft, msl)	Gradient (ft/ft)	Direction	Aquifer
MW-11A	Jun-10	739.80	734.46	-0.006	Upward	Saprolite
MW-11B		740.03	696.83			PWR
MW-15AR	Jun-10	734.77	711.02	0.041	Downward	Saprolite
MW-15BR		732.64	659.18			PWR
MW-16AR	Jun-10	733.48	715.57	0.010	Downward	Saprolite
MW-16BR		733.03	669.23			PWR
MW-21AR	Jun-10	719.75	708.95	0.001	Downward	Saprolite
MW-21BR		719.72	676.65			PWR
MW-22A	Jun-10	744.86	742.76	0.023	Downward	Saprolite
MW-22B		743.92	701.89			PWR

Notes:
WL Elev. - Water Level Elevation
ft msl - Feet relative to mean sea level
Positive gradient is downward (shallow well head > deep well head).

AECOM

Table 3
Groundwater Analytical Results - VOCs
BASF Facility
Charlotte, NC
June 2010

Well Number	1,2-DICHLORO-PROPANE	BENZENE	CHLOROFORM	CIS-1,2-DI-CHLOROETHENE	METHYLENE CHLORIDE	O-XYLENE	TETRACHLORO-ETHENE (PCE)	TOLUENE	TRANS-1,2-DICHLOROETHENE	TRICHLORO-ETHYLENE
15A NCAC 2L Groundwater Standard	ug/l 0.6	ug/l 1	ug/l 70	ug/l 70	ug/l 5	ug/l 500	ug/l 0.7	ug/l 600	ug/l 100	ug/l 3
MW-8B	<0.1	<0.1	3.5	1.6	<0.2	<0.1	**120**	<0.1	<0.1	**5.3**
MW-9	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	0.4 J	<0.1	<0.1	<0.1
MW-10	<0.1	<0.1	0.3 J	<0.1	<0.2	<0.1	**6.5**	<0.1	<0.1	<0.1
MW-11A	**0.7**	<0.1	<0.1	0.9	<0.2	<0.1	**40**	<0.1	<0.1	0.4 J
MW-11B	**4**	<0.2	1.6	4.2	<0.4	<0.2	**160**	<0.2	<0.2	**68**
MW-12	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	**21**	<0.1	<0.1	<0.1
MW-14A	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1
MW-14B	<0.1	<0.1	0.8	0.7	<0.2	<0.1	**13**	<0.1	<0.1	0.5
MW-15AR	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1
MW-15BR	<0.1	<0.1	3.9	17	<0.2	<0.1	**120**	<0.1	1	**16**
MW-16AR	<0.1	<0.1	0.3 J	<0.1	<0.2	<0.1	**12**	<0.1	<0.1	<0.1
MW-16BR	<0.1	<0.1	1.4	0.7	<0.2	<0.1	**10**	<0.1	<0.1	0.8
MW-17B	**20**	<1.0	1.9 J	6.1	<5 U	<1.0	**890**	<1.0	<1.0	**7.6**
MW-18B DUP	**14**	<1.0	1.3 J	8.6	<2.0	<1.0	**690**	<1.0	<1.0	**6.8**
MW-18B	**14**	<2.0	<2.0	8.4 J	<4.0	<2.0	**610**	<2.0	<2.0	**6.5 J**
MW-19B1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1
MW-20A	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1
MW-20B	<0.1	0.4 J	<0.1	<0.1	<0.2	0.1 J	0.3 J	0.1 J	<0.1	<0.1
MW-21AR	<0.1	<0.1	0.4 J	0.3 J	<0.2	<0.1	**8.2**	<0.1	<0.1	0.2 J
MW-21BR	<0.1	<0.1	0.5 J	0.4 J	<0.2	<0.1	**12 J**	<0.1	<0.1	0.3 J
MW-22A	<2.0	<2.0	61	**250**	<10 U	<2.0	**2400**	<2.0	8.4 J	**300**
MW-22B	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	**6**	<0.1	<0.1	0.2 J
MW-23A	<0.2	<0.2	1.9	1.8	<1 U	<0.2	**160**	<0.2	<0.2	**14**
MW-23B	<0.1	<0.1	1.0	2.3	<0.2	<0.1	**5.6**	<0.1	<0.1	**2.1**
MW-24A	<0.5	<0.5	6.6	7.3	2.7 J	<0.5	**280**	<0.5	<0.5	**13**

Notes:

µg/L - micrograms per liter

Bold indicates exceedance of 15A NCAC 2L Groundwater Standard

J - Analyte concentration is estimated.

U - The analyte was not detected above the reported sample quantitation limit (see data validation summary).

Wells MW-6 and MW-8A were dry during the June 2010 sampling and therefore not sampled.

AECOM

Table 4
Field Measured Parameters
BASF Facility
Charlotte, North Carolina
June 2010

Well ID	Dissolved Oxygen (mg/L)	ORP (mV)	pH (SU)	Specific Conductance (mS/cm)	Temperature (C)	Turbidity (NTU)	Carbon Dioxide (mg/L)	Ferrous Iron (mg/L)
MW-8B	5.74	123.7	4.89	0.059	20.35	0	80	0.2
MW-9	7.87	101.8	4.51	0.187	19.55	NM	NM	NM
MW-10	8.41	165.2	5.82	0.043	20.77	198	30	0.8
MW-11A	8.12	143.2	5.40	0.025	18.99	NM	NM	NM
MW-11B	1.90	114.3	5.81	0.115	19.88	NM	NM	NM
MW-12	7.65	189.9	4.55	0.056	19.25	NM	NM	NM
MW-14A	0.53	-10.8	4.07	0.042	18.27	NM	NM	NM
MW-14B	8.41	51.7	6.34	0.086	15.90	NM	NM	NM
MW-15AR	9.02	77.8	5.81	0.033	19.20	NM	NM	NM
MW-15BR	5.10	113.6	4.68	0.068	17.73	26.9	25	0.2
MW-16AR	4.33	-50.8	4.29	0.025	19.44	NM	NM	NM
MW-16BR	0.62	-3.1	7.38	0.449	17.30	NM	NM	NM
MW-17B	11.16	63.4	4.33	0.055	20.27	NM	NM	NM
MW-18B	0.66	116.1	5.61	0.700	19.76	NM	NM	NM
MW-19B1	5.60	5.8	7.20	0.208	18.59	5.11	45	0.5
MW-20A	6.87	-49.7	5.00	0.032	19.14	NM	NM	NM
MW-20B	0.52	-258.6	10.79	0.176	18.85	NM	NM	NM
MW-21AR	4.20	82.7	6.40	0.090	20.04	7.62	50	0.3
MW-21BR	5.85	10.7	5.15	0.060	18.65	20.60	40	0.4
MW-22A	0.90	143.5	4.76	0.045	21.42	4.88	80	2.0
MW-22B	11.28	19.7	5.56	0.052	19.84	28.9	15	0.2
MW-23A	1.08	64.9	5.51	1.672	21.44	NM	NM	NM
MW-23B	3.95	12.8	10.11	0.133	21.96	NM	NM	NM
MW-24A	6.25	168.7	5.88	0.955	20.27	NM	NM	NM

Notes:
C - degrees Celsius
mS/cm - milliseimens per centimeter
mg/L - milligrams per liter
mv - millivolts
NM - not measured
SU - Standard Units
Wells MW-6 and MW-8A were dry during the June 2010 sampling and therefore not sampled.
Field Measurements collected at surface in flow

AECOM

Table 5
Groundwater Analytical Results - Geochemical Parameters
BASF Facility
Charlotte, North Carolina
June 7 through 9, 2010

Well Number	Alkalinity to pH 4.5 mg/l	Alkalinity to pH 8.3 mg/l	Chloride mg/l	Iron mg/l	Nitrite-N mg/l	Nitrate-N mg/l	Sulfate mg/l	Sulfide mg/l	TOC mg/l
MW-8B	37.3	< 0.46	3.7 J+	< 0.0522	< 0.015	3.8	< 1.5	< 0.054	0.82 J
MW-10	0.83 J	< 0.46	3.0 J+	5.51	< 0.015	2.0	< 1.5	< 0.054	1.4
MW-15BR	33.9	< 0.46	5.5 J+	0.554	< 0.015	3.1	2.0 J	< 0.054	0.67 J
MW-19B1	75.4	< 0.46	9.3	2.07	< 0.015	0.56	17.5	< 0.054	0.72 J
MW-21AR	30.7	< 0.46	5.0 J+	0.493	< 0.015	1.1	4.2 J	< 0.054	< 0.50
MW-21BR	33.9	< 0.46	3.0 J+	0.746	< 0.015	1.4	2.6 J	< 0.054	< 0.50
MW-22A	10.5	< 0.46	1.9 J	0.806	< 0.015	0.32	< 1.5	< 0.054	9.8
MW-22B	21.1	< 0.46	1.4 J	2.11	< 0.015	0.16	< 1.5	< 0.054	< 0.50

Notes:
mg/L - milligrams per liter
N - nitrogen
TOC - total organic carbon
< not detected by the laboratory
J - Analyte concentration is estimated.
J+ - Analyte concentration is estimated biased high.

AECOM

Table 6
VOC Mass Removal
Maintenance Building SVE System
BASF Charlotte Facility

Month	Q (cfm)	C (ppm-v)	MW (g/mole)	ER (lbs/day)	Days	Monthly Total (lbs)	Cumulative (lbs)
Nov 2007	77	108.35	158.29	5.01	30	150.3	150.3
Dec 2007	77	3.627	160.59	0.17	31	5.3	155.6
Jan 2008	77	3.497	161.8	0.17	31	5.1	160.7
Feb 2008	77	0.8913	160.6	0.04	29	1.2	161.9
Mar 2008	77	1.056	153.4	0.05	31	1.5	163.4
Apr 2008	77	0.6514	161.52	0.03	30	0.9	164.3
May 2008	77	0.5545	157.97	0.03	31	0.8	165.1
June 2008	77	0.4261	157.41	0.02	30	0.6	165.7
July 2008	77	0.3721	152.94	0.02	31	0.5	166.2
Aug 2008	77	0.3357	140.44	0.01	31	0.4	166.6
Sept 2008	77	0.2713	152.12	0.01	30	0.4	167.0
Oct 2008	77	0.4685	130.22	0.02	31	0.6	167.5
Nov 2008	77	0.1268	158.21	0.01	30	0.2	167.7
Dec 2008	77	0.1691	157.6	0.007786	31	0.2	168.0
Jan 2009	77	0.1241	159.44	0.00578	31	0.2	168.1
May 2009	27.4	0.2138	162.09	0.003603	120	0.4	168.6
July 2009	77	0.1369	158.4	0.006335	78	0.5	169.1
Oct 2009	77	0.1099	158.2	0.005079	76	0.4	169.5
Jan 2010	77	0.0488	161.88	0.002308	84	0.2	169.7
April 2010	77	0.059	161.16	0.002778	101	0.3	169.9
June 2010	77	0.046	165.83	0.002228	55	0.1	170.1

Notes:

Emission Rate Calculation (when C has units of ppm-v)

ER=C*Q*MW*3.794E-6

ER = Emission Rate in pounds/day

C = Total hydrocarbon concentration in ppm-v (Monthly lab data analyzed using EPA Method TO-15 or similar method)

Q = Approximate volumetric Flow Rate of Air in cubic feet/minute (Monthly Average)

3.794E-6 = Conversion Factor with units of lb-mole min/ft^3 ppm-v day

MW = Molecular Weight of contaminant in g/mole as calculated based on volume percentage of constutuents dectected by analysis.

ppm-v = (mg/m3)*(24.41 L/mole air @ 20°C)/MW g/mole

AECOM

Table 7
VOC Mass Removal
Sulfochlorination Building SVE System
BASF Charlotte Facility

Month	Q (cfm)	C (ppm-v)	MW (g/mole)	ER (lbs/day)	Days	Monthly Total (lbs)	Cummulative (lbs)
Nov 2007	275	318.44	154.85	51.45	30	1543.4	1,543.4
Dec 2007	275	3.627	156.44	0.59	31	18.4	1,561.8
Jan 2008	275	3.497	157.43	0.57	31	17.8	1,579.6
Feb 2008	273.3	2.1871	153.81	0.35	29	10.1	1,589.7
Mar 2008	272.0	1.545	156.27	0.25	31	7.7	1,597.4
Apr 2008	264.0	2.1251	155.95	0.33	30	10.0	1,607.4
May 2008	250.0	1.9023	156.31	0.28	31	8.7	1,616.1
June 2008	254.0	1.6816	155.68	0.25	30	7.6	1,623.7
July 2008	249.0	1.3912	155.28	0.20	31	6.3	1,630.0
Aug 2008	255.1	0.9019	151	0.13	31	4.1	1,634.1
Sept 2008	266.7	0.6012	155.9	0.09	30	2.8	1,637.0
Oct 2008	275.1	0.5053	153.07	0.08	31	2.5	1,639.5
Nov 2008	278.9	0.7185	107.29	0.08	30	2.4	1,641.9
Dec 2008	235.8	0.4042	155.15	0.056103	31	1.7	1,643.7
Jan 2009	285.6	0.2369	154.79	0.039734	31	1.2	1,644.9
May 2009	315.5	0.2152	156.55	0.040327	120	4.8	1,649.7
Aug 2009	315.5	0.2213	155.33	0.041147	78	3.2	1,652.9
Oct 2009	315.5	0.2522	156.41	0.047218	76	3.6	1,656.5
Jan 2010	315.5	0.1333	149.61	0.023872	84	2.0	1,658.5
April 2010	315.5	0.0201	151.83	0.003653	101	0.4	1,658.9
June 2010	315.5	0.116	151.28	0.021006	55	1.2	1,660.1

Notes:

Emission Rate Calculation (when C has units of ppm-v)

ER=C*Q*MW*3.794E-6

ER = Emission Rate in pounds/day

C = Total hydrocarbon concentration in ppm-v (Monthly lab data analyzed using EPA Method TO-15 or similar method)

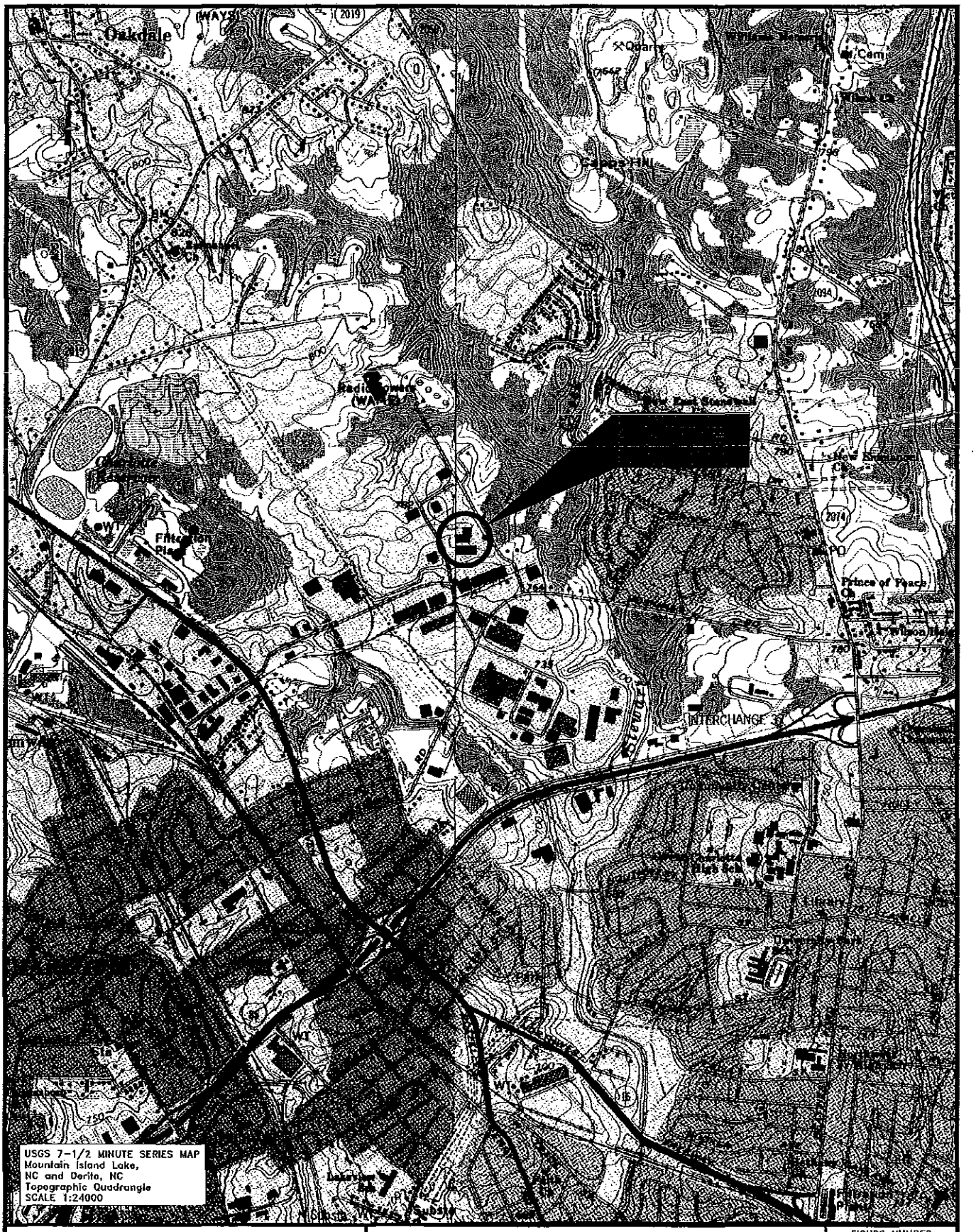
Q = Approximate volumetric Flow Rate of Air in cubic feet/minute (Monthly Average)

3.794E-6 = Conversion Factor with units of lb-mole min/ft^3 ppm-v day

MW = Molecular Weight of contaminant in g/mole as calculated based on volume percentage of constutuents dectected by analysis.

ppm-v = (mg/m3)*(24.41 L/mole air @ 20°C)/MW g/mole

Figures



AECOM

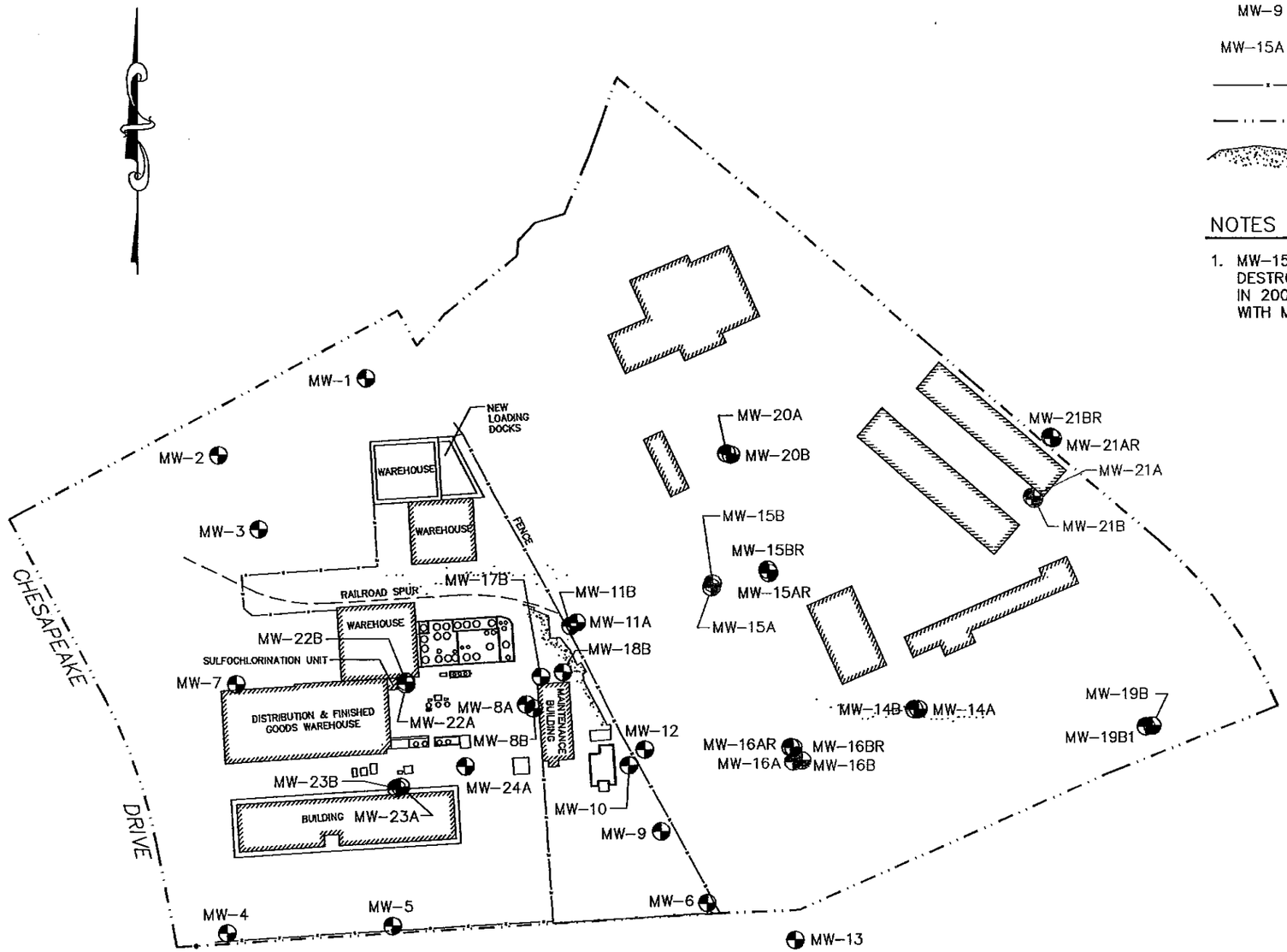
AECOM North Carolina, Inc.
RALEIGH, NORTH CAROLINA 27615
PHONE: (919) 872-6600
FAX: (919) 872-7996
WEB: HTTP://WWW.AECOM.COM

SITE LOCATION MAP

BASF Corporation
Charlotte, North Carolina

FIGURE NUMBER: 1

DRAWN BY:	DATE:	PROJECT NUMBER:	DRAWING NUMBER:
KLR	8/6/10	60135952.0610	A100431A



LEGEND

MW-9	MONITORING WELL
MW-15A	DESTROYED MONITORING WELL
	FENCE LINE
	BASF PROPERTY LINE
	EDGE OF CONCRETE

NOTES

1. MW-15/B, MW-16A/B, AND MW-21A/B WERE DESTROYED DURING CONSTRUCTION ACTIVITIES IN 2006. THEY WERE SUBSEQUENTLY REPLACED WITH MW-15AR/BR, MW-16AR/BR, AND MW-21AR/BR.

SOURCE:
THIS MAP WAS CONSTRUCTED FROM SURVEYS CONDUCTED BY CONCORD ENGINEERING & SURVEY, INC. (MAY 1993; JAN. 1994 AND SEPT. 1998) AND R.B. PHARR & ASSOCIATES, P.A. (JULY 1995, 2003). OUTLINE OF BASF FACILITY BUILDINGS (EXCLUDING MAINTENANCE SHOP, PAINT SHED, AND SETTLING TANKS) WERE OBTAINED FROM FACILITY DRAWING NUMBER 9340-15-401. OUTLINES OF CITY OF CHARLOTTE FACILITY BUILDINGS WERE OBTAINED FROM CITY OF CHARLOTTE AERIAL PHOTOGRAPHY.

200 0 200

SCALE IN FEET
1" = 200'

REVISIONS		
NO.:	DESCRIPTION:	DATE: BY:

DESIGNED BY:
DRAWN BY: KLR
CHECKED BY:
APPROVED BY:

AECOM

AECOM North Carolina, Inc.
RALEIGH, NORTH CAROLINA 27615
PHONE: (919) 872-6600
FAX: (919) 872-7996
WEB: HTTP://WWW.AECOM.COM

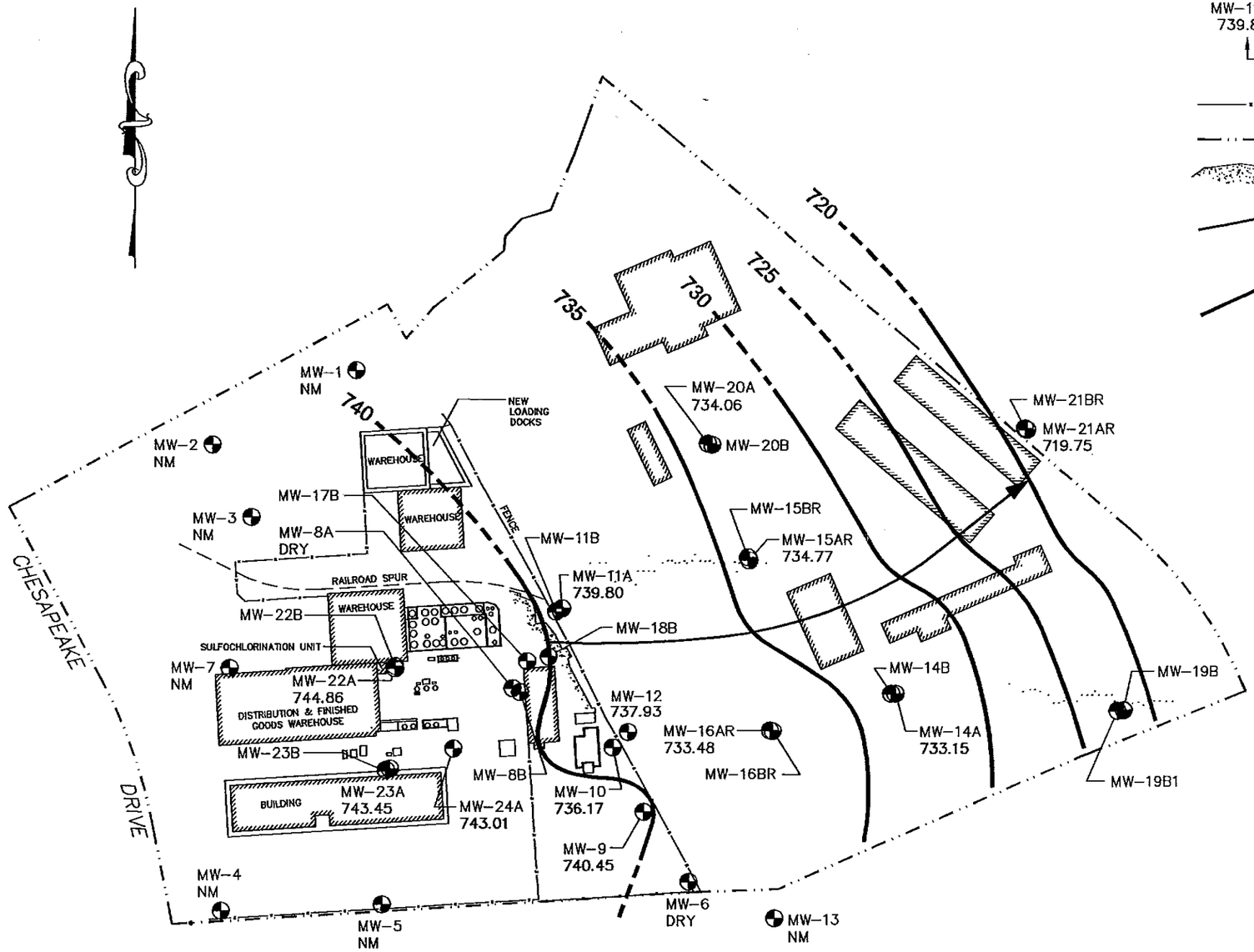
SITE PLAN

BASF Corporation
Charlotte, North Carolina

PROJECT NUMBER: 60135952.0610
DATE: 8/6/10
SCALE: 1"=200'

FIGURE NUMBER: 2

SHEET NUMBER: B100432B



LEGEND

- MW-11A 739.80 — MONITORING WELL; WATER ELEVATION (ft/msl), MEASURED 06/10
- FENCE LINE
- BASF PROPERTY LINE
- EDGE OF CONCRETE
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 720 — WATER TABLE EQUIPOTENTIAL LINE BASED ON WATER ELEVATIONS FOR JUNE 2010 (ft/msl) (DASHED WHERE INFERRED)

NOTES

1. WATER ELEVATIONS FROM DEEPER SERIES WELLS (MW-8B, MW-11B, MW-14B, MW-15BR, MW-16BR, MW-17B, MW-18B, MW-19B, MW-19B1, MW-20B, MW-21BR, MW-22B AND MW-23B) NOT USED TO CREATE MAP.
2. CONTOUR INTERVAL = 5 ft
3. WATER LEVELS MEASURED ON JUNE 10, 2010.
4. GROUNDWATER FLOW, WHERE INFERRED, BASED ON PRIOR AND HISTORICAL DATA TRENDS.
5. NM = NOT MEASURED

SOURCE:
THIS MAP WAS CONSTRUCTED FROM SURVEYS CONDUCTED BY CONCORD ENGINEERING & SURVEY, INC. (MAY 1993; JAN. 1994 AND SEPT. 1998) AND R.B. PHARR & ASSOCIATES, P.A. (JULY 1995, 2003). OUTLINE OF BASF FACILITY BUILDINGS (EXCLUDING MAINTENANCE SHOP, PAINT SHED, AND SETTLING TANKS) WERE OBTAINED FROM FACILITY DRAWING NUMBER 9340-15-401. OUTLINES OF CITY OF CHARLOTTE FACILITY BUILDINGS WERE OBTAINED FROM CITY OF CHARLOTTE AERIAL PHOTOGRAPHY.

200 0 200
SCALE IN FEET
1" = 200'

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:
DRAWN BY: KLR
CHECKED BY:
APPROVED BY:

AECOM

AECOM North Carolina, Inc.
RALEIGH, NORTH CAROLINA 27615
PHONE: (919) 872-6600
FAX: (919) 872-7996
WEB: HTTP://WWW.AECOM.COM

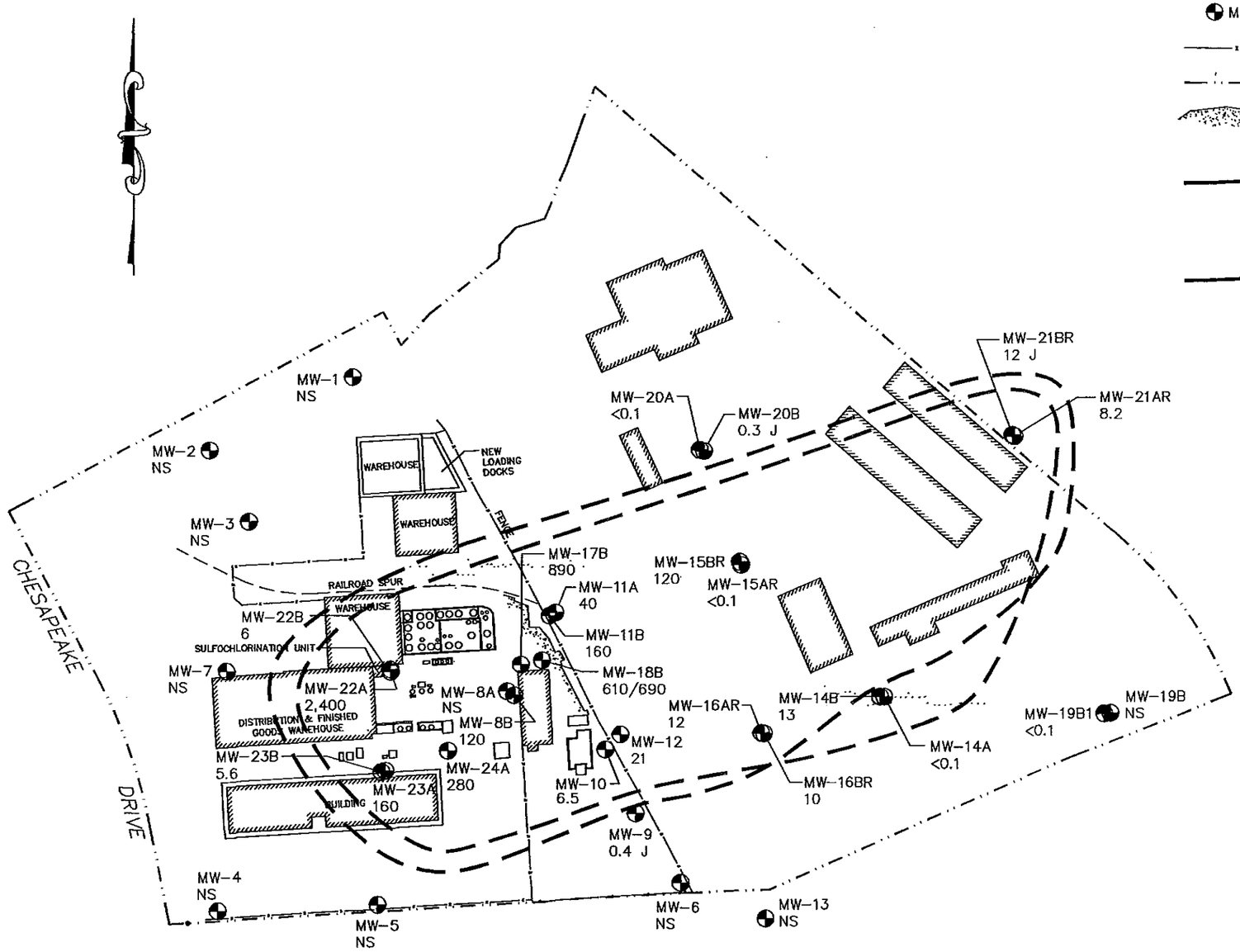
SHALLOW AQUIFER POTENTIOMETRIC SURFACE MAP JUNE 2010

BASF Corporation
Charlotte, North Carolina

SCALE:	DATE:	PROJECT NUMBER:
1"=200'	8/13/10	60135952.0610

FIGURE NUMBER: 3

SHEET NUMBER: B100433B



LEGEND

MW-1	MONITORING WELL
	FENCE LINE
	BASF PROPERTY LINE
	EDGE OF CONCRETE
	ESTIMATED EXTENT OF PLUME EXCEEDING THE 15A NCAC 2L STANDARD FOR PCE (0.7 ug/L) – DEEP WELLS (DASHED WHERE INFERRED)
	ESTIMATED EXTENT OF PLUME EXCEEDING THE 15A NCAC 2L STANDARD FOR PCE (0.7 ug/L) – SHALLOW WELLS (DASHED WHERE INFERRED)

NOTES

1. MONITORING WELLS MW-15A/B, MW-16A/B, MW-20A/B, AND MW-21A/B WERE DESTROYED DURING CONSTRUCTION ACTIVITIES IN 2006. THEY WERE SUBSEQUENTLY REPLACED WITH MW-15AR/BR, MW-16AR/BR, MW-20AR/BR, AND MW-21AR/BR.

MONITORING WELL DATA

1000	TETRACHLOROETHENE (PCE) CONCENTRATION (ug/L) IN 6/10 GREEN = SHALLOW WELLS BLUE = DEEP WELLS
<	BELOW LABORATORY DETECTION LIMIT (0.1 ug/L)
J	ESTIMATED VALUE
NS	NOT SAMPLED THIS PERIOD

200 0 200

SCALE IN FEET
1" = 200'

SOURCE:
THIS MAP WAS CONSTRUCTED FROM SURVEYS CONDUCTED BY CONCORD ENGINEERING & SURVEY, INC. (MAY 1993; JAN. 1994 AND SEPT. 1998) AND R.B. PHARR & ASSOCIATES, P.A. (JULY 1995, 2003). OUTLINE OF BASF FACILITY BUILDINGS (EXCLUDING MAINTENANCE SHOP, PAINT SHED, AND SETTLING TANKS) WERE OBTAINED FROM FACILITY DRAWING NUMBER 9340-15-401. OUTLINES OF CITY OF CHARLOTTE FACILITY BUILDINGS WERE OBTAINED FROM CITY OF CHARLOTTE AERIAL PHOTOGRAPHY.

REVISIONS			
NO.:	DESCRIPTION:	DATE:	BY:

DESIGNED BY:
DRAWN BY: KLR
CHECKED BY:
APPROVED BY:

AECOM

AECOM North Carolina, Inc.
RALEIGH, NORTH CAROLINA 27615
PHONE: (919) 872-6600
FAX: (919) 872-7996
WEB: HTTP://WWW.AECOM.COM

ESTIMATED EXTENT OF 2L STANDARD EXCEEDANCE FOR PCE IN GROUNDWATER JUNE 2010

BASF Corporation
Charlotte, North Carolina

SCALE:	DATE:	PROJECT NUMBER:
1"=200'	8/13/10	60135952.0610

FIGURE NUMBER: 4

SHEET NUMBER: C100434C

Figure 5
Oversized Figure

Appendix A

Groundwater Sample Collection Records

ENSR | AECOM

Well ID: **MW-6**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/8/2010
Time: Start N/A am/pm
Finish N/A am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: 90 sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length N/A
c. Length of Water Column N/A (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth DRY
d. Calculated System Volume (see back) N/A

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor

Well DRY No Samples

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
				8260B	

Comments Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon. Field Test Ferrous Iron and Carbon Dioxide

Signature [signature] Date 6/8/10

ENSR | AECOM

Well ID: **MW-8A**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date:	6/8/2010	Time: Start	N/A am/pm
Project No:	60135952.61			Finish	N/A am/pm
Site Location:	Charlotte, NC				
Weather Conds:	70° & sunny	Collector(s):	D. Babineau / L. Kemp		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length _____ c. Length of Water Column _____ (a-b)

Casing Diameter/Material: 2" PVC

b. Water Table Depth Dry d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder (N/A)

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
		Well								
		DRY		NO	Samples					

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
				8260B	

Comments _____

Signature _____ Date 6/8/10

ENSR | AECOM

Well ID: **MW-8B**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/8/2010 Time: Start 1625 am/pm
Project No: 60135952.61 Finish 1730 am/pm
Site Location: Charlotte, NC
Weather Conds: Sunny 90's Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 95' c. Length of Water Column 49.29 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 45.71 d. Calculated System Volume (see back) 30.45

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used: Make: YSI Model: 556 Serial Number: #2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1635	2.5	20.24	4.90	0.065	5.21	186.9	8.5	100	46.21	Clear
1640	1.5	20.28	4.98	0.060	5.55	174.4	0.0		46.31	Clear
1645	1.5	20.31	5.00	0.060	5.69	119.5	0.0		46.21	"
1650	1.5	20.35	4.89	0.059	5.74	123.7	0.0		46.12	

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☑	☐	☒
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-8B		10		8260B	1700

Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon. Field Test Ferrous Iron and Carbon Dioxide

CO_2 = 80 Fe = 0.2

Signature: [signature] Date: 6-8-10

ENSR | AECOM

Well ID: **MW-9**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/8/2010 Time: Start 1415 am/pm
Project No: 60135952.61 Finish 1450 am/pm
Site Location: Charlotte, NC
Weather Conds: Sunny 90's Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 50.24 c. Length of Water Column 8.83 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 41.41 d. Calculated System Volume (see back) 5.45

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	K2029

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1415 1425	4.5	20.30	4.72	0.190	7.94	79.8	NA	~200	42.86	Cloudy
1430	2.5	20.27	4.60	0.186	7.93	89.3			42.86	Cloudy
1435	3.0	20.35	4.52	0.187	7.98	97.8			42.78	Cloudy
1440	3.5	19.55	4.51	0.187	7.87	101.8			44.33	Cloudy

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☑	☐	☐
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-9	VOA	3	HCl	8260B	1450

Comments 1440 reading, monsoon pump was pumping faster than before, slowed down

Signature [signature] Date 6-8-10

ENSR | AECOM

Well ID: **MW-10**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/8/2010 Time: Start 1410 am/pm
Project No: 60135952.61 Finish 1510 am/pm
Site Location: Charlotte, NC
Weather Conds: ~90° & sunny Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 48.00 c. Length of Water Column 4.65 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 43.35 d. Calculated System Volume (see back) 2.87

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1415	Initial	19.21	5.85	38	7.70	136.6	203	~150	* N/A	clear/none
1420	2.0	19.73	5.86	43	8.35	162.7	204	~150		clear/none
1425	4.0	20.17	5.82	43	8.41	125.2	198	~150		clear/none
1430	Well went Dry - Allowed to Recharge then Sampled									

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☒	☐
Have parameters stabilized	☐	☒	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-10				8260B	1450

CO_2 = 30 mg/L Fe^+ = 0.8 mg/L

Comments Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon.
Field Test Ferrous Iron and Carbon Dioxide

* Water Below pump no readings taken on Drawdown

Signature [signature] Date 6/8/10

ENSR | AECOM

Well ID: MW-11A

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/2/2010
Time: Start 1210 am/pm
Finish 1240 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: ~85 & sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 53.60 c. Length of Water Column 11.14 (a-b)

Casing Diameter/Material 2" PVC

b. Water Table Depth 42.46 d. Calculated System Volume (see back) 6.88

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2023

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1217	Initial	19.02	5.48	26	6.58	143.1	N/A	~150	43.26	cloudy/none
1220	4.0	19.03	5.42	25	7.29	145.6	↓	↓	43.78	cloudy/none
1223	5.5	19.00	5.40	24	8.05	144.0	↓	↓	43.85	clear/none
1226	7.5	18.99	5.40	25	8.10	144.2	↓	↓	43.95	clear/none
1229	9.5	18.99	5.40	25	8.12	143.3	↓	↓	44.00	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-11A	Von	3	HCl	8260B	1232

Comments

Signature [signature] Date 6/2/10

ENSR | AECOM

Well ID: **MW-11B**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/9/2010
Time: Start 1236 am/pm
Finish am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: ~85° Sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 92.10
c. Length of Water Column 49.25 (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth 42.85
d. Calculated System Volume (see back) 30.42

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1246	1.25	20.10	5.90	115	3.02	121.5	N/A	~180	43.20	Clear
1249	.5	19.19	5.86	115	2.64	119.8	↓	↓	43.21	Clear
1252	0.5	19.96	5.82	115	2.08	117.8	↓	↓	43.20	Clear
1255	0.5	19.56	5.81	115	2.06	115.9	↓	↓	43.20	Clear
1258	0.5	19.88	5.81	115	1.90	114.3	↓	↓	43.20	Clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-11B	VOA	3	HCl	8260B	1305

Comments

Signature [signature] Date 6/9/10

ENSR | AECOM

Well ID: **MW-12**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/9/2010 Time: Start 1132 am/pm
Project No: 60135952.61 Finish 1150 am/pm
Site Location: Charlotte, NC
Weather Conds: Overcast, 90's Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 54' c. Length of Water Column 14.13 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 39.87 d. Calculated System Volume (see back) 8.72

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	A7028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1132	1	20.14	4.61	70	7.62	191.0	NA	160	40.31	Clear
1135	300ml	20.18	4.59	65	7.27	191.8	NA	1	40.25	1
1138	300ml	20.11	4.58	61	7.28	191.1	NA	1	40.25	1
1142	300ml	19.99	4.57	58	7.28	190.8	NA	1	40.25	1
1144	300ml	19.74	4.59	56	7.47	189.4	NA	1	40.26	1
1147	300ml	19.75	4.55	56	7.65	189.9	NA	1	40.25	1

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-12	VOA	3	HCl	8260B	1150

Comments

Signature [signature] Date 6-9-10

ENSR | AECOM

Well ID: **MW-14A**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/7/2010
Time: Start 1500 am/pm
Finish 1540 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: Sunny, 90°
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 35
c. Length of Water Column 14.33 (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth 20.67
d. Calculated System Volume (see back) 8.853 .6178

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2628

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1510	3.5	18.42	4.14	0.75	1.82	1.1		~150	21.70	Clear
1515	0.80	18.18	4.06	0.061	0.59	-20.5			21.86	Clear
1520	0.75	19.05	4.00	0.061	0.73	-31.3			21.76	Clear
1525	1.5	17.88	4.08	0.091 *	0.57	-16.3		200.	22.22	Clear
1530	1.0	17.89	3.98	0.051 *	0.52	-15.7		↓	22.39	Clear
1535	1.0	18.27	4.07	0.042	0.53	-10.8		↓	22.43	Clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-14A	VOA	3	HCl	8260B	1540

Comments Monsoon pump fluctuating @ 1520 monsoon would note run at 150ml/min so increase to ~200 & conductivity fluctuates

Signature _____ Date _____

ENSR | AECOM

Well ID: **MW-14B**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/7/2010	Time: Start 1555 am/pm
Project No:	60135952.61		Finish 1625 am/pm
Site Location:	Charlotte, NC		
Weather Conds:	~90° Sunny	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 79.05 c. Length of Water Column 59.59 (a-b)

Casing Diameter/Material 2" PVC

b. Water Table Depth 19.41 d. Calculated System Volume (see back) 36.81

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1605	Initial	15.76	6.48	87	8.31	37.3	N/A	~150	20.31	Clear/none
1609	8.0	15.95	6.35	88	8.34	45.9			20.38	clear/none
1612	9.5	15.90	6.36	88	8.36	48.6			20.39	clear/none
1615	10.5	15.90	6.34	86	8.41	51.7			20.42	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-14B	VOA	3	HCl	8260B	1617

Comments

Signature [signature] Date 6/7/10

ENSR | AECOM

Well ID: 15 AR

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/8/2010
Time: Start 0845 am/pm
Finish 0925 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: ~75° ↓ sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 48.00
c. Length of Water Column 28.74 (a-b)
Casing Diameter/Material 2" pvc
b. Water Table Depth 19.26
d. Calculated System Volume (see back) 17.75

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0855	1.5	18.86	6.11	104	9.76	84.3	N/A	100	19.58	clear/none
0905	2.5	19.60	5.96	51	8.62	76.6	↓	↓	19.59	clear/none
0908	3.0	19.86	5.91	43	9.08	72.2			19.58	clear/none
0911	3.5	19.39	5.90	37	8.96	71.8			19.59	clear/none
0914	4.0	19.25	5.82	34	9.02	76.8			19.59	clear/none
0917	4.5	19.20	5.81	33	9.02	72.8			19.60	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-15AR	VOA	3	HCl	8260B	0920

Comments

Signature [signature] Date 6/8/10

ENSR | AECOM

Well ID: **MW-15Br**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/8/2010	Time: Start 0855 am/pm
Project No:	60135952.61		Finish 0950 am/pm
Site Location:	Charlotte, NC		
Weather Conds:	~75° + sunny	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 92.50 c. Length of Water Column 71.46 (a-b)

Casing Diameter/Material: 2" PVC

b. Water Table Depth 21.04 d. Calculated System Volume (see back) _____

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2030

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0905	3.5	17.27	4.83	0.049	6.84	108.5	52.1	~150ml	21.11	Cloudy
0910	1.25	17.54	4.71	0.062	5.36	111.5	41.9	"	21.11	Cloudy
0915	1.25	17.69	4.76	0.095	5.17	112.8	29.7		21.11	Cloudy
0920	1.25	17.77	4.73	0.076	5.09	112.0	42.0		21.11	Cloudy
0925	1.25	17.73	4.68	0.068	5.10	113.6	31.1		21.11	
0935	1.25						34.6			
0940	1.25						31.00			

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-15Br		10		8260B	0950

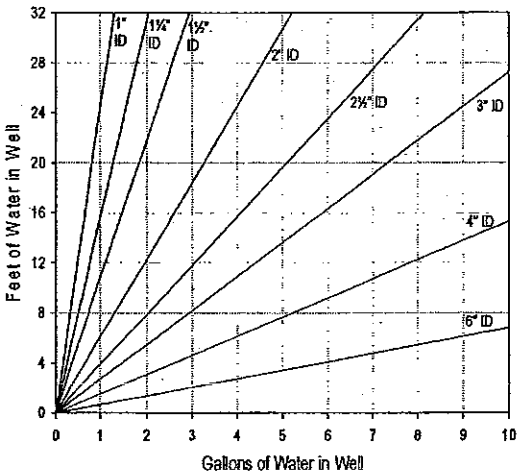
Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon. Field Test Ferrous Iron and Carbon Dioxide

$Fe^{+} = 0.2$ $CO_2 = 95$

Signature: [signature] Date: 6/8/10

MW-15Br

Purge Volume Calculation



Volume / Linear Ft. of Pipe		
ID (in)	Gallon	Liter
0.25	0.0025	0.0097
0.375	0.0057	0.0217
0.5	0.0102	0.0386
0.75	0.0229	0.0869
1	0.0408	0.1544
1.25	0.0637	0.2413
1.5	0.0918	0.3475
2	0.1632	0.6178
2.5	0.2550	0.9653
3	0.3672	1.3900
4	0.6528	2.4711
6	1.4688	5.5600

(continued from front)

Time (24 hr)	Volume Removed (Liters)	Temp (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (ft)	Color/Odor
6945							26.9			

ENSR | AECOM

Well ID: **MW-16Ar**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/7/2010 Time: Start 1330 am/pm
Project No: 60135952.61 Finish 1420 am/pm
Site Location: Charlotte, NC
Weather Conds: Sunny, 90° Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 42' c. Length of Water Column 6.91 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 35.09 d. Calculated System Volume (see back) 4.268

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1340	5.56	18.54	4.42	0.025	4.53	16.5		~150	37.04	cloudy
1344	3.00	18.56	4.47	0.027	4.80	4.9		~150	36.06	Cloudy
1349	500 ml	19.07	4.25	0.026	4.30	-19.1		~150	35.87	Cloudy
1355	750 ml	19.47	4.26	0.027	4.35	-41.0		~150	36.04	clear
1400 1358	750 ml	19.80	4.49	0.037	4.37	-52.9		~150	36.26	clear
1405	750 ml	19.44	4.29	0.025	4.33	-50.8		~150	36.16	clear

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☐	☑	☐

If no or N/A - Explain below.
Turbidity / conductivity fluctuates with monsoon flactuation

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-16Ar	VOA	3	HCL	8260B	1410

Comments @ 1343 noticed pump rate increased so slowed down to ~150ml/min.
* ORP/Conductivity fluctuating, monsoon flow fluctuates a little as well

Signature [signature] Date 6/7/10

ENSR | AECOM

Well ID: **MW-16Br**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/7/2010 Time: Start 1335 am/pm
Project No: 60135952.61 Finish 1415 am/pm
Site Location: Charlotte, NC
Weather Conds: ~90° Sunny Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 88.06 c. Length of Water Column 52.36 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 35.70 d. Calculated System Volume (see back) 32.31

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1345	Initial	17.41	7.28	463	0.75	13.5	N/A	~150	46.3	clear/none
1348	6.0	17.33	7.34	459	0.70	4.4		~150	49.45	clear/none
1351	7.5	17.33	7.36	455	0.65	1.3		~150	51.26	clear/none
1354	9.0	17.30	7.38	451	0.63	-1.7		~150	53.17	clear/none
1357	10.5	17.30	7.38	449	0.62	-3.1		~150	54.07	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-16BR	VOA	3	HCl	8260B	1400

Comments

Signature [signature] Date 6/7/10

ENSR | AECOM

Well ID: **MW-17B**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/9/2010	Time: Start 1020 am/pm
Project No:	60135952.61		Finish 1055 am/pm
Site Location:	Charlotte, NC		
Weather Conds:	Sunny, 90's	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 68.50 c. Length of Water Column 24.48 (a-b)

Casing Diameter/Material 2" PVC

b. Water Table Depth 42.02 d. Calculated System Volume (see back) 15.12

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	43028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1030	2.5	20.24	4.59	0.047	11.37	63.0	NA	100 ml/min	42.65	Clear
1033	1.5	20.25	4.60	0.054	11.78	53.1			42.91	Clear
1036	1.5	20.23	4.52	0.056	11.58	48.5			43.00	
1039	0.5	20.19	4.43	0.055	11.50	46.7			43.05	
1043	0.5	20.18	4.39	0.054	11.38	54.1			43.14	
1046	0.5	20.21	4.36	0.055	11.29	60.1			43.21	
1049	0.5	20.27	4.37	0.055	11.16	63.4			43.28	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-17B	VOA	3	HCl	8260B	1055

Comments

Signature [signature] Date 6/9/10

ENSR | AECOM

Well ID: **MW-18B**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/9/2010
Time: Start 1030 am/pm
Finish 1100 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: ~75° & sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 71.15
c. Length of Water Column 29.05 (a-b)
b. Water Table Depth 42.10
d. Calculated System Volume (see back) 161.51

Casing Diameter/Material: 6" Steel

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#20289

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1040	Initial	19.73	5.57	706	0.81	122.0	NA	150	42.82	Clear/none
1043	6.0	19.34	5.58	703	0.70	118.2	↓	↓	42.91	Clear/none
1046	9.0	19.71	5.60	702	0.68	117.7			43.02	Clear/none
1049	11.0	19.76	5.61	700	0.66	116.1				Clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-18B	VOA	3	HCl	8260B	1050

Comments: Dup-1 taken on well

Signature: [signature] Date: 6/9/10

ENSR | AECOM

Well ID: **MW-19B1**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/7/2010	Time: Start 1450 am/pm
Project No:	60135952.61		Finish 1535 am/pm
Site Location:	Charlotte, NC		
Weather Conds:	~90° + sunny	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 55.50 c. Length of Water Column 45.45 (a-b)

b. Water Table Depth 10.05 d. Calculated System Volume (see back) 28.07

Casing Diameter/Material 2" PVC

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1504	4.0	18.72	6.77	209	5.91	22.2	58.13	150	10.15	clear/none
1507	5.0	18.61	6.84	209	5.71	20.6	7.29		10.16	clear/none
1510	6.0	18.58	7.15	208	5.67	8.3	6.18		10.19	clear/none
1513	7.0	18.57	7.18	208	5.63	6.2	5.03		10.19	clear/none
1516	8.0	18.59	7.20	208	5.60	5.8	5.11		10.19	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☒	☐	☐
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-19B1	VOA	3	HCl	8260B	1520

Comments Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon.
Field Test Ferrous Iron and Carbon Dioxide
Fe^{+} = 0.5mg/L CO_2 = 45mg/L

Signature [signature] Date 6/7/10

ENSR | AECOM

Well ID: **MW-20A**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/8/2010	Time: Start 1030 am/pm
Project No:	60135952.61		Finish 1105 am/pm
Site Location:	Charlotte, NC		
Weather Conds:		Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 40.06 c. Length of Water Column 21.61 (a-b)

b. Water Table Depth 18.39 d. Calculated System Volume (see back) 13.35

Casing Diameter/Material 2" PVC

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1030	1.50	19.23	7.64	0.028	6.76	-76.4	NA	~100	18.72	Clear
1035	500ml	19.35	6.49	0.029	6.73	-31.0		~100	18.73	Clear
1040	500ml	19.36	6.76	0.029	6.40	-75.6		~100	18.73	Clear
1045	500ml	19.16	6.86	0.034	6.45	-82.0		~100	18.73	Clear
1050	500ml	19.05	4.78	0.031	6.84	-50.7	NA	~100	18.73	Clear
1055	500ml	19.03	5.01	0.033	6.94	-41.6		~100	18.78	
1100		19.14	5.00	0.035	6.87	-49.7		~100	18.78	

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☐
Has required turbidity been reached	☐	☐	☐
Have parameters stabilized	☐	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-20A	VOA	3	HCl	8260B	1105

Comments

Signature [signature] Date 6-8-10

ENSR | AECOM

Well ID: **MW-20B**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date:	6/8/2010	Time: Start	1017 am/pm
Project No:	60135952.61			Finish	1100 am/pm
Site Location:	Charlotte, NC				
Weather Conds:	~86 ☀ Sunny	Collector(s):	D. Babineau / L. Kemp		

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 68.05 c. Length of Water Column 47.1 (a-b)

Casing Diameter/Material 2" PVC

b. Water Table Depth 20.90 d. Calculated System Volume (see back) 29.09

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	8028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1027	4.0	18.54	10.72	173	1.32	-248.8	N/A	200	26.35	clear/none
1030	6.0	18.86	10.75	170	0.58	-247.2	↓	↓	28.05	clear/none
1033	8.0	19.77	10.73	171	0.50	-250.3	↓	↓	28.10	clear/none
1036	10.0	18.34	10.82	175	0.54	-252.3	↓	↓	30.09	clear/none
1039	12.0	18.85	10.79	176	0.52	-258.0	↓	↓	31.21	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-20B				8260B	1040

Comments

Signature [signature] Date 6/8/10

ENSR | AECOM

Well ID: **MW-21Ar**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/8/2010 Time: Start 1130 am/pm
Project No: 60135952.61 Finish 1230 am/pm
Site Location: Charlotte, NC
Weather Conds: ~90° & sunny Collector(s): D. Babineau / L. Kemp

P

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 30.00 c. Length of Water Column 15.79 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 14.21 d. Calculated System Volume (see back) 9.75

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	- D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	2	20.14	6.78	94	4.55	62.4	14.40	100	14.40	cloudy
1147	3	20.10	6.58	93	4.48	70.4	11.6		14.42	clear/none
1150	4.5	20.14	6.43	93	4.26	77.2	9.12		14.43	clear/none
1153	5.5	20.03	6.43	91	4.19	80.4	8.34		14.46	clear/none
1156	6.5	20.08	6.40	90	4.20	82.7	7.62		14.47	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-21Ar		10		8260B	1200

Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon.
Field Test Ferrous Iron and Carbon Dioxide
CO_2 = 50 mg/L Fe^{2+} = 0.3 mg/L

Signature [signature] Date 6/8/10

14.43

ENSR | AECOM

Well ID: **MW-21Br**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/8/2010	Time: Start 1130 am/pm
Project No:	60135952.61		Finish _____ am/pm
Site Location:	Charlotte, NC		
Weather Conds:	Sunny 90's	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 57.06 c. Length of Water Column 42.57 (a-b)

b. Water Table Depth 14.43 d. Calculated System Volume (see back) 26.89

Casing Diameter/Material: 2" PVC

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	# 2038

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1140	3.5	18.23	5.05	0.061	5.86	60.2	136	~150	14.51	Cloudy
1145	1.5	18.33	5.22	0.070	5.84	58.7	63.6	~	14.75	Cloudy
1150	1.25	18.35	5.20	0.057	5.92	45.8	37.3	~	14.73	Cloudy
1200	2.5	18.56	5.17	0.054	6.54	41.4	43.2	—	14.79	Cloudy
1210	2.5	18.46	5.16	0.057	6.08	12.6	30.9	—	14.78	Cloudy
1220	2.5	18.48	5.16	0.058	5.97	3.2	26.10	—	14.79	Cloudy
1230	2.5	18.45	5.15	0.060	5.85	10.7	20.60	—	14.79	Cloudy

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-21Br		10		8260B	1235

Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon. Field Test Ferrous Iron and Carbon Dioxide

CO_2 = 40 Fe = 0.4

Signature: [signature] Date: 6-8-10

ENSR | AECOM

Well ID: **MW-22A**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/9/2010 Time: Start 0900 am/pm
Project No: 60135952.61 Finish _____ am/pm
Site Location: Charlotte, NC
Weather Conds: ~75°, sunny Collector(s): D. Babineau / L. Kemp

P

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 50.00 c. Length of Water Column 7.1 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 42.90 d. Calculated System Volume (see back) 4.38

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used: Make: YSI Model: 556 Serial Number: # 2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
0910	3.0	20.60	4.77	53	3.04	138.6	8.69	~150	44.56	clear/none
0913	6.0	20.91	5.02	59	2.08	124.9	11.5		44.60	clear/none
0916	8.5	21.37	4.82	48	1.46	136.3	5.31		44.57	clear/none
0919	10.5	21.51	4.81	47	1.05	136.8	5.15		44.62	clear/none
0922	11.5	21.35	4.78	45	0.96	140.2	5.42		44.65	clear/none
0925	13.5	21.38	4.76	45	0.95	143.0	5.17		44.67	clear/none
0928	15.5	21.42	4.76	45	0.90	143.5	5.10		44.70	clear/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒ 4.88 @ sample
Has required turbidity been reached	☒	☐	☐
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-22A				8260B	0935

Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon.
Field Test Ferrous Iron and Carbon Dioxide
CO_2 = 80 mg/L Fe = 2.0

Signature: [signature] Date: 6/9/10

ENSR | AECOM

Well ID: **MW-22B**

Low Flow Ground Water Sample Collection Record

Client:	BASF-Charlotte, NC	Date: 6/9/2010	Time: Start 0900 am/pm
Project No:	60135952.61		Finish 1000 am/pm
Site Location:	Charlotte, NC		
Weather Conds:	Sunny, 90's	Collector(s):	D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 90.00 c. Length of Water Column 57.03 (a-b)

b. Water Table Depth ~~[illegible]~~ 42.97 d. Calculated System Volume (see back) 35.23

Casing Diameter/Material: 2" PVC

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

	Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
4 hrs	0910	3	19.66	5.70	0.054	11.29	28.6	40.3	100 ml	43.39	Cloudy
	0915	0.75	19.69	5.60	0.060	11.47	27.3	30.0	100	43.39	Cloudy
	0920	0.75	19.88	5.61	0.059	11.20	20.9	28.6		43.41	Cloudy
930	~~0925~~	1.25	19.91	5.54	0.054	11.50	21.3	23.0		43.42	Cloudy
940	~~0935~~	1.25	20.00	5.58	0.058	11.20	17.2	25.2		43.42	"
	0950	1.25	19.84	5.56	0.052	11.28	19.7	28.9		43.42	"
	1000										

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☑	☐
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

Turbidity kept increasing

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-22B		11		8260B	100

Comments: Biogeochemical Parameters: Alkalinity, chloride, total iron, nitrate, nitrite, sulfate, sulfide, total organic carbon.
Field Test Ferrous Iron and Carbon Dioxide

Conductivity [illegible]
CO_2 = 15 Fe = 0.2

Signature [signature] Date 6-9-10

ENSR | AECOM

Well ID: **MW-23A**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/8/2010
Time: Start 1525 am/pm
Finish 1610 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: Sunny, 90's
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 55
c. Length of Water Column 17.70 (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth 37.30
d. Calculated System Volume (see back) 10.93

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1535	2	21.48	5.21	1.694	1.29	66.2	N.A	~200	37.50	Cloudy
1540	3	21.14	5.24	1.688	1.10	65.8		~300	39.00	Cloudy
1545	2	21.27	5.26	1.668	1.00	61.8		800	38.10	Cloudy
1550	2	21.44	5.51	1.672	1.08	64.2		~200	38.14	Cloudy

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☑
Has required turbidity been reached	☐	☐	☑
Have parameters stabilized	☑	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-23A	VOA	3	HCl	8260B	1555

Comments

Signature [signature] Date 6-8-10

ENSR | AECOM

Well ID: **MW-23B**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC Date: 6/8/2010 Time: Start 1525 am/pm
Project No: 60135952.61 Finish 1600 am/pm
Site Location: Charlotte, NC
Weather Conds: ~95° sunny Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 90.00 c. Length of Water Column 53.35 (a-b) Casing Diameter/Material 2" PVC

b. Water Table Depth 36.65 d. Calculated System Volume (see back) 32.95

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used: Make YSI Model 556 Serial Number H2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1535	4.0	22.22	10.10	130	4.27	35.2	N/A	150	42.26	cloudy/none
1538	6.0	22.72	10.14	133	3.91	19.4	↓	↓	42.20	cloudy/none
1541	8.0	21.21	10.15	134	4.00	15.2			43.10	cloudy/none
1544	10.0	21.06	10.11	133	3.95	12.8			43.17	cloudy/none

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

(continued on back)

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-23B	VOA	3	HCl	8260B	1545

Comments

Signature [signature] Date 6/8/10

ENSR | AECOM

Well ID: **MW-24A**

Low Flow Ground Water Sample Collection Record

Client: BASF-Charlotte, NC
Date: 6/8/2010
Time: Start 1615 am/pm
Finish 1645 am/pm
Project No: 60135952.61
Site Location: Charlotte, NC
Weather Conds: ~95°F, Sunny
Collector(s): D. Babineau / L. Kemp

1. WATER LEVEL DATA: (measured from Top of Casing)

a. Total Well Length 55.00
c. Length of Water Column 18.00 (a-b)
Casing Diameter/Material 2" PVC
b. Water Table Depth 37.00
d. Calculated System Volume (see back) 1.12

2. WELL PURGE DATA

a. Purge Method: Peristaltic / Monsoon / Bladder

b. Acceptance Criteria defined (see workplan)

- Temperature	3%	-D.O.	10%
- pH	± 1.0 unit	- ORP	± 10mV
- Sp. Cond.	3%	- Drawdown	< 0.3'

c. Field Testing Equipment used:

Make	Model	Serial Number
YSI	556	#2028

Time (24hr)	Volume Removed (Liters)	Temp. (°C)	pH	Spec. Cond. (µS/cm)	DO (mg/L)	ORP (mV)	Turbidity (NTU)	Flow Rate (ml/min)	Drawdown (feet)	Color/Odor
1620	Initial	20.19	7.06	1024	5.72	129.4	N/A	~150	41.16	cloudy/none
1623	3.5	20.13	6.81	1015	5.72	135.5			43.29	cloudy/none
1626	4.5	20.31	5.85	952	6.23	170.0			44.17	cloudy/none
1629	5.5	20.24	5.87	954	6.25	169.2			44.34	clear/none
1632	6.5	20.27	5.88	955	6.25	168.7			44.61	clear/none

(continued on back)

d. Acceptance criteria pass/fail

	Yes	No	N/A
Has required volume been removed	☐	☐	☒
Has required turbidity been reached	☐	☐	☒
Have parameters stabilized	☒	☐	☐

If no or N/A - Explain below.

3. SAMPLE COLLECTION: Method: Peristaltic / Monsoon / Bladder

Sample ID	Container Type	No. of Containers	Preservation	Analysis Req.	Time
MW-24A	VOA	3	HCl	8260B	1635

Comments

Signature [signature] Date 6/8/10

Analysis Request/Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 240211

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #:

Project Name/#: BASF/60135952.610 PWSID #:

Project Manager: BRIAN Ray P.O.#:

Sampler: D. Bolineau Quote #:

Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) Analyses Requested / Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES)	Other	Total # of Containers	8260B	Alkalinity	TOC	Total Iron	chloride	nitrate	sulfate	sulfide	nitrite	Remarks
MW-14A	6/7/10	1540	X			X		3	X									contact D. Bolineau
MW-14B	↓	1617	↓			↓		3	X									w/ Any questions
MW-16AR	↓	1410	↓			↓		3	X									
MW-16BR	↓	1400	↓			↓		3	X									
MW-19BI	↓	1520	↓			↓		10	X	X	X	X	X	X	X	X	X	
EB-1	↓	1650	↓			↓		3	X									

(6) Temperature of samples upon receipt (if requested)

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard TAT
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-372-6600 Fax #:
E-mail address: Brian.Ray@aecom.com

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No
Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.)
Type VI (Raw Data Only) Internal COC Required? Yes / No

SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Bolineau	6/7/10				
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 240212

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #:

Project Name/#: BAF 60135952.60 PWSID #:

Project Manager: Brian Ray P.O.#:

Sampler: D. Babian Quote #:

Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES)	Other	Total # of Containers	VOCs								Remarks
MW-23A	6/8/10	1555	X			X			X								
MW-23B	↓	1545	↓			↓			X								
MW-24	↓	1635							X								
TB-1	6/8/10 N/A	N/A							X								
			X		h												
			X		h												
			X		h												
			X		h												CEIO

Matrix

Temperature of samples upon receipt (if requested)

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush X
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: N/A
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #:
E-mail address: Brian.Ray@Aecom

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No
Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.)
Type VI (Raw Data Only) Internal COC Required? Yes / No _____

SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 240214

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #: _____

Project Name/#: BASF/60135952.610 PWSID #: _____

Project Manager: Brian Ray P.O.#: _____

Sampler: D. Robinson Quote #: _____

Name of state where samples were collected: _____

For Lab Use Only
FSC: _____
SCR#: _____

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES)	Other	Total # of Containers	Alkalinity	Chloride	Total Iron	Nitrate	Nitrite	Sulfate	Sulfide	TOC	Remarks
MW-8B	6/8/10	1700	X			X		7	X	X	X	X	X	X	X	X	Contact
MW-21BR		1235						7	X	X	X	X	X	X	X	X	D. Robinson w/ An.
MW-10		1450						7	X	X	X	X	X	X	X	X	Questions
MW-15BR		0950						7	X	X	X	X	X	X	X	X	
MW-21AR		1200						7	X	X	X	X	X	X	X	X	

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard TAT
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #: _____
E-mail address: Brian.Ray@Aecom

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No _____

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Robinson	6/8/10				
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 240213

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #:

Project Name/#: BASF/60135952.610 PWSID #:

Project Manager: Brian Ray P.O.#:

Sampler: D. Bohner Quote #:

Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix (4): Soil	Water (☐ Potable ☐ NPDES Check if Applicable)	Other	Total # of Containers	(5) Analyses Requested / Preservation Codes: VOCs								Remarks	(6) Temperature of samples upon receipt (if requested)
MW-8B	6/8/10	1700	X			X		3	X									
MW-21BR		1235						3	X									
MW-10		1450						3	X									
MW-15BR		0950						3	X									
MW-21AR		1200						3	X									
MW-9		1450						3	X									
MW-15AR		0920						3	X									
MW-20A		1105						3	X									
MW-20B		1040						3	X									

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)

Date results are needed: STD 10 Day

Rush results requested by (please circle): Phone Fax E-mail

Phone #: 919-872-6660 Fax #:

E-mail address: Brian.Ray@aecom.com

(8) **Data Package Options** (please circle if required)

Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)

Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Bohner	6/8/10				
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Analysis Request/Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # _____ Group# _____ Sample # _____

COC # 240210

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #: _____

Project Name/#: BASF / 60135952.610 PWSID #: _____

Project Manager: Brian Ray P.O.#: _____

Sampler: D. Robinson Quote #: _____

Name of state where samples were collected: NC

For Lab Use Only
FSC: _____
SCR#: 91396

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification | Date Collected | Time Collected | (3) Grab | Composite | Matrix (4): Soil | Water (☐ Potable ☐ NPDES Check if Applicable) | Other | Total # of Containers | (5) Analyses Requested / Preservation Codes: 8260B - VOCs | Alkalinity | Chloride | Total IRON | Nitrate | Nitrite | Sulfate | Sulfide | TOC | Remarks | (6) Temperature of samples upon receipt (if requested)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	8260B - VOCs	Alkalinity	Chloride	Total IRON	Nitrate	Nitrite	Sulfate	Sulfide	TOC	Remarks
MW-11A	6/9/10	1232	X			X		3	X									contact David Robinson w/ any questions
MW-11B		1305						3	X									
MW-12		1150						3	X									
MW-17B		1055						3	X									
MW-18B		1050						3	X	DS								Final codes.
MW-22A		0935						10	X	X	X	X	X	X	X	X	X	
MW-22B		1000						10	X	X	X	X	X	X	X	X	X	
Dup-1		—						3	X									

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: _____
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #: _____
E-mail address: Brian.Ray@aecom.com

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No _____

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	6/10/10	1410			
D. Robinson / FedEx	6/9/10				

Appendix B

June 2010 Laboratory and Data Validation Reports

AECOM

AECOM
1360 Peachtree St. NE,
Suite 500
Atlanta, GA, 30309
www.aecom.com

404-965-9600 tel
404-965-9605 fax

Memorandum

Date: July 20, 2010

To: Brian Ray/Raleigh

File: BASF Charlotte DV June 2010

From: Robert Davis/Atlanta

Subject: Level 2 Data Validation for BASF Charlotte groundwater samples

Distribution:

Limited validation was performed on three data packages from Lancaster Laboratories in Lancaster, Pennsylvania for groundwater samples. The samples were collected at the BASF facility in Charlotte, North Carolina on June 7-9, 2010.

The data were reviewed for conformance to method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Superfund Organic Methods Data Review*, USEPA-540-R-07-003, July 2008, with additional reference to *USEPA Contract Laboratory Program (CLP) National Functional Guidelines for Organic Data Review*, EPA 540/R-99-008, May 1999 as they applied to the methodology used. Field duplicate RPD control limits were taken from the *USEPA Region I Laboratory Data Validation Functional Guidelines for Evaluating Organics Analyses*, February 1988, upheld in DRAFT 1993. Inorganic data were evaluated based on method specifications and the validation criteria set forth in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, EPA-540-R-04-004, October 2004, as they applied to the analytical methods employed.

- Method 8260B – Volatile Organic Compounds (VOC) by Gas Chromatography/Mass Spectrometry (GC/MS),
- Method 6010B – Metals by Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES),
- Method SM20 2320B – Alkalinity to pH 8.3 and pH 4.5,
- Method 353.2- Nitrate,
- Method 353.2 – Nitrite,
- Method 300.0 – Chloride,
- Method 300.0 – Sulfate,
- Method SM20 4500 – Sulfide, and
- Method SM20 5310C – Total Organic Carbon.

Review Elements

Sample data were reviewed for the following parameters:

- Agreement of analyses conducted with chain-of-custody (COC) requests,

- Holding times/sample preservation,
- Calibrations,
- Method blanks/equipment blanks/trip blanks,
- Surrogate results,
- Laboratory control sample (LCS) results,
- Matrix spike/matrix spike duplicate (MS/MSD) results, and
- Field precision results.

Samples

AECOM Environment collected the following groundwater samples from the BASF facility in Charlotte, North Carolina.

1197668

Lab ID	Sample ID	Lab ID	Sample ID
5999907	MW-14A	5999910	MW-16BR
5999908	MW-14B	5999911	MW-19B1
5999909	MW-16AR	5999912	EB-1

1197941

Lab ID	Sample ID	Lab ID	Sample ID
6001390	MW-8B	6001397	MW-20A
6001391	MW-21BR	6001398	MW-20B
6001392	MW-10	6001399	MW-23A
6001393	MW-15BR	6001400	MW-23B
6001394	MW-21AR	6001401	MW-24
6001395	MW-9	6001402	TB-10137
6001396	MW-15AR		

1198116

Lab ID	Sample ID	Lab ID	Sample ID
6002298	MW-11A	6002302	MW-18B
6002299	MW-11B	6002303	MW-22A
6002300	MW-12	6002304	MW-22B
6002301	MW-17B	6002305	DUP-1

Analytical Results

In general, the data are valid as reported and may be used for decision making purposes. Sample data are qualified with "U" (the analyte was not detected above the level of the reported sample quantitation limit) or "J" (the associated numerical value is the approximate concentration of the analyte in the sample.) See Table 1.

Positive results less than the reporting limit (i.e., practical quantitation limit), but greater than the method detection limit (MDL) were qualified "J," as estimated concentrations, due to increased uncertainty near the detection limit. These "J" qualifiers were maintained in this data validation.

Method 8260B: Samples MW-23A, MW-24A, MW-11B, MW-17B, MW-18B, MW-22A, and DUP-1 required dilutions to bring certain compounds within the calibration range; resulting in elevated detection limits.

DISCUSSION

Agreement of Analyses Conducted with COC Requests

Sample reports were checked to verify that the results corresponded to analytical requests as designated on the COC.

Holding Times and Preservation

All samples were analyzed within the holding times required by the methods.

All samples were chemically preserved to the proper pH.

All of the coolers were received within the 4±2° C requirement.

Calibrations and GC/MS Hardware Tunes

Gas chromatography-mass spectrometry tune summaries were not submitted for validation in this Level II data package. Initial and continuing calibration data were not submitted for validation.

Blanks

No analytes were detected at concentrations exceeding the reporting limits for the method blanks, equipment blanks, or the trip blanks with the following exceptions:

Method 8260B: EB-1 had detection for Methylene Chloride between the MDL and reporting limit. All associated samples with detections between the MDL and reporting limit were reported non-detect at the reporting limit. All associated samples with detections above the reporting limit and less than 5 times the EB concentration were qualified "J" (estimated). See Table 1.

Method 8260B: The method blank had detection for Methylene Chloride in batch G101682AA. All of the associated samples were greater than 5 times the method blank concentration; therefore, data qualification was not required.

Surrogate Recoveries

The surrogate recoveries were acceptable for all analyses.

Laboratory Control Samples

Laboratory control standards (LCS) for all of the analytes were within the quality control limits with the following exceptions:

Method 8260B: The LCS recovery for Acetone in batch G101701AA was outside of the quality control limits biased high. All of the associated samples were non-detect for Acetone; therefore, data qualification was not required.

Matrix Spike/Matrix Spike Duplicates

Matrix spike and matrix spike duplicates that were performed on non-project samples were not evaluated because matrix similarity to project samples could not be assumed.

The matrix spike/matrix spike duplicate (MS/MSD) recoveries and precision on client samples were all within the advisory limits with the following exceptions:

Method 8260B: The matrix spike recovery was outside of the acceptable limits biased high for Tetrachloroethene in sample MW-21BR. The Tetrachloroethane result in sample MW-21BR was qualified. See Table 1.

Method 300.0: The matrix spike recovery was outside of the acceptable limits biased high for Chloride in sample MW-8B. The Chloride results for all of the associated samples were qualified. See Table 1.

Field Precision

A field duplicate was collected on sample MW-18B. See Table 2 for the Relative Percent Differences (RPDs) for all compounds for which there were detections. The RPDs between the original and field duplicate were all within the acceptable criteria.

AECOM

Table 1
Qualified Analytical Data

Sample ID	Method	Analyte	Lab Result	Lab Qual	Validated Result	Validation Qualifier	Units	Reason Codes
MW-16AR	8260B	Chloroform	0.30	J	0.30	J	µg/L	BRL
MW-19B1	5310C	TOC	0.72	J	0.72	J	mg/L	BRL
MW-8B	5310C	TOC	0.82	J	0.82	J	mg/L	BRL
MW-8B	300.0	Chloride	3.7		3.7	J+	mg/L	MS
MW-21BR	8260B	Chloroform	0.50	J	0.50	J	µg/L	BRL
MW-21BR	8260B	cis-1,2-Dichloroethene	0.40	J	0.40	J	µg/L	BRL
MW-21BR	8260B	Trichloroethene	0.30	J	0.30	J	µg/L	BRL
MW-21BR	8260B	Tetrachloroethene	12		12	J	µg/L	MS
MW-21BR	300.0	Sulfate	2.6	J	2.6	J	mg/L	BRL
MW-21BR	300.0	Chloride	3.0		3.0	J+	mg/L	MS
MW-10	8260B	Chloroform	0.30	J	0.30	J	µg/L	BRL
MW-10	300.0	Chloride	3.0		3.0	J+	mg/L	MS
MW-10	2320B	Alkalinity to pH 4.5	0.83	J	0.83	J	mg/L	BRL
MW-15BR	300.0	Sulfate	2.0	J	2.0	J	mg/L	BRL
MW-15BR	300.0	Chloride	5.5		5.5	J+	mg/L	MS
MW-15BR	5310C	TOC	0.67	J	0.67	J	mg/L	BRL
MW-21AR	8260B	Chloroform	0.40	J	0.40	J	µg/L	BRL
MW-21AR	8260B	cis-1,2-Dichloroethene	0.30	J	0.30	J	µg/L	BRL
MW-21AR	8260B	Trichloroethene	0.20	J	0.20	J	µg/L	BRL
MW-21AR	300.0	Chloride	5.0		5.0	J+	mg/L	MS
MW-21AR	300.0	Sulfate	4.2	J	4.2	J	mg/L	BRL
MW-9	8260B	Tetrachloroethene	0.40	J	0.40	J	µg/L	BRL
MW-20B	8260B	Benzene	0.40	J	0.40	J	µg/L	BRL
MW-20B	8260B	Tetrachloroethene	0.30	J	0.30	J	µg/L	BRL
MW-20B	8260B	Toluene	0.10	J	0.10	J	µg/L	BRL
MW-20B	8260B	m+p-Xylene	0.20	J	0.20	J	µg/L	BRL
MW-20B	8260B	o-Xylene	0.10	J	0.10	J	µg/L	BRL
MW-23A	8260B	Methylene Chloride	0.60	J	1.0	U	µg/L	EB
MW-24A	8260B	Methylene Chloride	2.7		2.7	J	µg/L	EB
MW-11A	8260B	Trichloroethene	0.40		0.40	J	µg/L	BRL
MW-17B	8260B	Chloroform	1.9	J	1.9	J	µg/L	BRL
MW-17B	8260B	Methylene Chloride	2.1	J	5.0	U	µg/L	EB
MW-18B	8260B	cis-1,2-Dichloroethene	8.4	J	8.4	J	µg/L	BRL
MW-18B	8260B	Trichloroethene	6.5	J	6.5	J	µg/L	BRL
MW-22A	8260B	trans-1,2-Dichloroethene	8.4	J	8.4	J	µg/L	BRL
MW-22A	8260B	Methylene Chloride	4.2	J	10	U	µg/L	EB
MW-22A	300.0	Chloride	1.9	J	1.9	J	mg/L	BRL
MW-22B	8260B	Trichloroethene	0.20	J	0.20	J	µg/L	BRL
MW-22B	300.0	Chloride	1.4	J	1.4	J	mg/L	BRL
DUP-1	8260B	Chloroform	1.3	J	1.3	J	µg/L	BRL

[illegible] USEPA defined data validation qualifiers applied in this data evaluation:

J: The associated numerical value is the approximate concentration of the analyte in the sample.

J+: The associated numerical value is the approximate concentration of the analyte in the sample biased high.

U: The analyte was not detected above the level of the reported sample quantitation limit.

Reason Codes:

EB: Equipment blank contamination.

MS: The matrix spike recovery is outside of the quality control limits.

BRL: Analyte concentration is greater than the method detection limit but less than the reporting limit.

Table 2
Field Precision

Method	Compound	FS	FD	Unit	% RPD
8260B	cis-1,2-Dichloroethene	8.4 J	8.6	µg/L	2.4
8260B	1,2-Dichloropropane	14	14	µg/L	0
8260B	Trichloroethene	6.5 J	6.8	µg/L	4.5
8260B	Chloroform	ND	1.3 J	µg/L	NC *
8260B	Tetrachloroethene	610	690	µg/L	12

% RPD: Relative percent difference between the primary sample result and the sample duplicate result.

ND – Not detected.

NC – Not calculated.

* - The difference between the primary and field duplicate results was less than the reporting limit for results less than five times the reporting limit. Variation of this magnitude is acceptable.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

June 18, 2010

Project: BASF - Charlotte

Submittal Date: 06/08/2010
Group Number: 1197668
PO Number: 2075129
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-14A Grab Water	5999907
MW-14B Grab Water	5999908
MW-16AR Grab Water	5999909
MW-16BR Grab Water	5999910
MW-19B1 Grab Water	5999911
EB-1 Grab Water	5999912

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO AECOM Environment Attn: Brian Ray

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300 Ext. 1576

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-14A Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999907
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 15:40 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA14A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-14A Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999907
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 15:40 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA14A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 13:53	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 13:53	Jason M Long	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-14B Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999908
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 16:17 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA14B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	0.8	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	0.7	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	13	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	0.5	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-14B Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999908
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 16:17 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA14B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 14:15	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 14:15	Jason M Long	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-16AR Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999909
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 14:10 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA16A

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	N.D.		0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	0.3	J	0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	12		0.1	1
02898	Toluene	108-88-3	N.D.		0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	N.D.		0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	N.D.		0.1	1
02898	o-Xylene	95-47-6	N.D.		0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-16AR Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999909
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 14:10 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA16A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 14:37	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 14:37	Jason M Long	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-16BR Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999910
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 14:00 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA16B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	1.4	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	0.7	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	10	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	0.8	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-16BR Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999910
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 14:00 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA16B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 14:58	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 14:58	Jason M Long	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-19B1 Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999911
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 15:20 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA19B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	2.07	0.0522	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00224	Chloride	16887-00-6	9.3	1.0	5
00228	Sulfate	14808-79-8	17.5	1.5	5
	EPA 353.2		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	0.56	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-19B1 Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999911
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 15:20 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BA19B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	0.72 J	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	75.4	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 15:19	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 15:19	Jason M Long	1
01754	Iron	SW-846 6010B	1	101592812001	06/09/2010 03:43	Tara L Snyder	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101592812001	06/08/2010 14:30	James L Mertz	1
00224	Chloride	EPA 300.0	1	10168196102A	06/17/2010 19:46	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10168196102A	06/17/2010 19:46	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10162106101A	06/11/2010 15:53	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	10159105101A	06/08/2010 20:18	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10160049503A	06/09/2010 05:22	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10160020201A	06/09/2010 12:26	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10160020201A	06/09/2010 12:26	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023001A	06/10/2010 14:36	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: EB-1 Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999912
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 16:50 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BASEB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	0.7	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: EB-1 Grab Water
240211
BASF - Charlotte

LLI Sample # WW 5999912
LLI Group # 1197668
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/07/2010 16:50 by DB

Submitted: 06/08/2010 09:20
Reported: 06/18/2010 15:25
Discard: 07/03/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BASEB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101621AA	06/11/2010 22:08	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101621AA	06/11/2010 22:08	Jason M Long	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/18/10 at 03:25 PM

Group Number: 1197668

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G101621AA	Sample number(s): 5999907-5999912							
Acetone	N.D.	3.0	ug/l	107	105	74-137	3	30
Benzene	N.D.	0.1	ug/l	98	97	80-120	1	30
Bromodichloromethane	N.D.	0.1	ug/l	98	99	80-120	1	30
Bromoform	N.D.	0.1	ug/l	86	86	70-128	1	30
Bromomethane	N.D.	0.1	ug/l	81	79	66-124	2	30
2-Butanone	N.D.	1.0	ug/l	115	113	71-149	2	30
Carbon Disulfide	N.D.	0.4	ug/l	100	100	73-133	0	30
Carbon Tetrachloride	N.D.	0.1	ug/l	102	101	80-129	1	30
Chlorobenzene	N.D.	0.1	ug/l	99	97	80-120	2	30
Chloroethane	N.D.	0.1	ug/l	88	86	67-124	2	30
Chloroform	N.D.	0.1	ug/l	100	100	80-120	1	30
Chloromethane	N.D.	0.2	ug/l	86	83	55-135	3	30
Dibromochloromethane	N.D.	0.1	ug/l	99	98	80-120	1	30
1,1-Dichloroethane	N.D.	0.1	ug/l	103	101	80-120	2	30
1,2-Dichloroethane	N.D.	0.1	ug/l	103	102	80-127	1	30
1,1-Dichloroethene	N.D.	0.1	ug/l	98	97	80-123	2	30
cis-1,2-Dichloroethene	N.D.	0.1	ug/l	97	96	80-120	1	30
trans-1,2-Dichloroethene	N.D.	0.1	ug/l	98	97	80-120	1	30
1,2-Dichloropropane	N.D.	0.1	ug/l	101	101	80-120	0	30
cis-1,3-Dichloropropene	N.D.	0.1	ug/l	93	94	74-120	1	30
trans-1,3-Dichloropropene	N.D.	0.1	ug/l	97	97	80-120	1	30
Ethylbenzene	N.D.	0.1	ug/l	99	98	80-120	1	30
2-Hexanone	N.D.	1.0	ug/l	108	107	75-124	1	30
4-Methyl-2-Pentanone	N.D.	1.0	ug/l	108	105	70-123	3	30
Methylene Chloride	N.D.	0.2	ug/l	90	90	80-120	1	30
Styrene	N.D.	0.1	ug/l	101	100	80-120	1	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	ug/l	99	100	80-125	0	30
Tetrachloroethene	N.D.	0.1	ug/l	100	98	80-120	2	30
Toluene	N.D.	0.1	ug/l	98	96	80-120	2	30
1,1,1-Trichloroethane	N.D.	0.1	ug/l	100	99	80-121	1	30
1,1,2-Trichloroethane	N.D.	0.1	ug/l	100	98	80-120	2	30
Trichloroethene	N.D.	0.1	ug/l	98	97	80-120	1	30
Vinyl Chloride	N.D.	0.1	ug/l	88	85	55-126	4	30
m+p-Xylene	N.D.	0.1	ug/l	99	97	80-120	2	30
o-Xylene	N.D.	0.1	ug/l	99	97	80-120	1	30
Batch number: 101592812001	Sample number(s): 5999911							
Iron	N.D.	0.0522	mg/l	104		80-120		
Batch number: 10159105101A	Sample number(s): 5999911							
Nitrite Nitrogen	N.D.	0.015	mg/l	100		90-110		
Batch number: 10160049503A	Sample number(s): 5999911							
Total Organic Carbon	N.D.	0.50	mg/l	100		91-113		
Batch number: 10162106101A	Sample number(s): 5999911							

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/18/10 at 03:25 PM

Group Number: 1197668

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nitrate Nitrogen	N.D.	0.040	mg/l	101		90-110		
Batch number: 10168196102A	Sample number(s): 5999911							
Chloride	N.D.	0.20	mg/l	94		90-110		
Sulfate	N.D.	0.30	mg/l	103		89-110		
Batch number: 10160020201A	Sample number(s): 5999911							
Alkalinity to pH 4.5	N.D.	0.46	mg/l as CaCO3	100		98-103		
Batch number: 10161023001A	Sample number(s): 5999911							
Sulfide	N.D.	0.054	mg/l	99		90-110		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: G101621AA	Sample number(s): 5999907-5999912 UNSPK: 5999907								
Acetone	126		57-163						
Benzene	104		87-126						
Bromodichloromethane	100		82-133						
Bromoform	72		65-126						
Bromomethane	89		66-137						
2-Butanone	132		58-168						
Carbon Disulfide	108		82-147						
Carbon Tetrachloride	113		86-152						
Chlorobenzene	105		87-120						
Chloroethane	97		70-139						
Chloroform	107		86-136						
Chloromethane	93		55-152						
Dibromochloromethane	93		79-125						
1,1-Dichloroethane	107		89-128						
1,2-Dichloroethane	106		83-143						
1,1-Dichloroethene	110		88-137						
cis-1,2-Dichloroethene	102		82-129						
trans-1,2-Dichloroethene	106		88-127						
1,2-Dichloropropane	107		83-126						
cis-1,3-Dichloropropene	96		63-127						
trans-1,3-Dichloropropene	96		71-128						
Ethylbenzene	106		80-140						
2-Hexanone	104		63-145						
4-Methyl-2-Pentanone	100		69-133						
Methylene Chloride	89		84-122						
Styrene	97		39-162						
1,1,2,2-Tetrachloroethane	101		70-125						
Tetrachloroethene	110		86-129						
Toluene	104		83-127						
1,1,1-Trichloroethane	108		81-152						
1,1,2-Trichloroethane	102		85-129						

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/18/10 at 03:25 PM

Group Number: 1197668

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Trichloroethene	106		85-131						
Vinyl Chloride	97		57-150						
m+p-Xylene	104		84-125						
o-Xylene	103		84-125						
Batch number: 101592812001	Sample number(s): 5999911 UNSPK: 5999911 BKG: 5999911								
Iron	103	95	75-125	3	20	2.07	2.02	2	20
Batch number: 10159105101A	Sample number(s): 5999911 UNSPK: P999375 BKG: P999375								
Nitrite Nitrogen	103		90-110			N.D.	N.D.	0 (1)	20
Batch number: 10160049503A	Sample number(s): 5999911 UNSPK: 5999911 BKG: 5999911								
Total Organic Carbon	105		64-141			0.72 J	0.71 J	2 (1)	4
Batch number: 10162106101A	Sample number(s): 5999911 UNSPK: P000943 BKG: P000943								
Nitrate Nitrogen	88*		90-110			9.9	10.1	2	2
Batch number: 10168196102A	Sample number(s): 5999911 UNSPK: 5999911 BKG: 5999911								
Chloride	99		90-110			9.3	9.1	2 (1)	20
Sulfate	104		90-110			17.5	17.5	0 (1)	20
Batch number: 10160020201A	Sample number(s): 5999911 UNSPK: P998261 BKG: P998261								
Alkalinity to pH 4.5	99		73-121			122	122	0	5
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	5
Batch number: 10161023001A	Sample number(s): 5999911 UNSPK: P000849 BKG: P002451								
Sulfide	112	113	69-133	1	5	0.49	0.48	0 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL VOCs by 25 ml purge
Batch number: G101621AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5999907	99	101	99	97
5999908	99	100	99	97
5999909	98	100	99	97
5999910	98	97	100	96
5999911	97	98	99	96
5999912	97	96	99	96
Blank	99	100	100	98
LCS	100	99	101	98
LCSD	99	98	100	98
MS	99	97	101	97
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/18/10 at 03:25 PM

Group Number: 1197668

Surrogate Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. # 10118 Group# 1197668 Sample # 5999907-12

COC # 240211

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: AECOM Acct. #:
Project Name/#: BASF/60135952.610 PWSID #:
Project Manager: BRIAN Ray P.O.#:
Sampler: D. Bolineau Quote #:
Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5) (6)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES)	Other	Total # of Containers	8260B	Alkalinity	TOC	Total Iron	chloride	nitrate	sulfate	sulfide	nitrite	Remarks	Temperature of samples upon receipt (if requested)
MW-14A	6/7/10	1540	X			X		3	X									contact D. Bolineau w/ any questions	
MW-14B	↓	1617	↓			↓		3	X										
MW-16AR	↓	1410	↓			↓		3	X										
MW-16BR	↓	1400	↓			↓		3	X										
MW-19B1	↓	1520	↓			↓		10	X	X	X	X	X	X	X	X	X		
EB-1	↓	1650	↓			↓		3	X										

(7)
Turnaround Time Requested (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard TAT
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #:
E-mail address: Brian.Ray@aecom.com

(8)
Data Package Options (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Bolineau	6/7/10				

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

Issued by Dept. 6042 Management
2102.05

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: AECOM

Date of Receipt: 6/8/10

Time of Receipt: 920

Source Code: SO-1

Unpacker Emp. No.: 2316

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9493	5.6°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody 0

Paperwork Discrepancy/Unpacking Problems:

- MW-198I's TOC bottle had a cracked lid.

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	6/8/10	1020	Unpacking / Storage
Mary Beth Reed	6/8/10	1033	Place in Storage or (Entry)
			Entry
			Entry

Issued by Dept. 6042 Management
2174.05

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

June 21, 2010

Project: BASF - Charlotte

Submittal Date: 06/09/2010
Group Number: 1197941
PO Number: 2075129
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-8B Grab Water	6001390
MW-21BR Grab Water	6001391
MW-10 Grab Water	6001392
MW-15BR Grab Water	6001393
MW-21AR Grab Water	6001394
MW-9 Grab Water	6001395
MW-15AR Grab Water	6001396
MW-20A Grab Water	6001397
MW-20B Grab Water	6001398
MW-23A Grab Water	6001399
MW-23B Grab Water	6001400
MW-24 Grab Water	6001401
TB-10137 Water	6001402

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO AECOM Environment Attn: Brian Ray

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300 Ext. 1576

Respectfully Submitted,

Robert Strocko Jr.
Manager

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-8B Grab Water
BASF - Charlotte

LLI Sample # WW 6001390
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 17:00 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive.
Raleigh, NC 27615

CHA8B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B 25mL purge**	ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	3.5	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	1.6	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	120	1.0	10
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	5.3	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1
Metals		**SW-846 6010B**	mg/l	mg/l	
01754	Iron	7439-89-6	N.D.	0.0522	1
Wet Chemistry		**EPA 300.0**	mg/l	mg/l	
00224	Chloride	16887-00-6	3.7	1.0	5
00228	Sulfate	14808-79-8	N.D.	1.5	5
		EPA 353.2	mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	3.8	0.20	5
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
		SM20 5310 C	mg/l	mg/l	

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-8B Grab Water
BASF - Charlotte

LLI Sample # WW 6001390
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 17:00 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA8B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	0.82 J	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	37.3	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 01:55	Angela D Sneeringer	1
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 02:16	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 01:55	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101652AA	06/15/2010 02:16	Angela D Sneeringer	10
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 15:55	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 15:10	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 15:10	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106101B	06/16/2010 12:20	K Robert Caulfeild-James	5
00219	Nitrite Nitrogen	EPA 353.2	1	10160105102B	06/09/2010 20:56	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10162049502A	06/11/2010 04:02	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-21BR Grab Water
BASF - Charlotte

LLI Sample # WW 6001391
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 12:35 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH21B

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	N.D.		0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	0.5	J	0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	0.4	J	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	12		0.1	1
02898	Toluene	108-88-3	N.D.		0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	0.3	J	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	N.D.		0.1	1
02898	o-Xylene	95-47-6	N.D.		0.1	1
Metals	**SW-846 6010B**		mg/l		mg/l	
01754	Iron	7439-89-6	0.746		0.0522	1
Wet Chemistry	**EPA 300.0**		mg/l		mg/l	
00224	Chloride	16887-00-6	3.0		1.0	5
00228	Sulfate	14808-79-8	2.6	J	1.5	5
	EPA 353.2		mg/l		mg/l	
00220	Nitrate Nitrogen	14797-55-8	1.4		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	SM20 5310 C		mg/l		mg/l	

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-21BR Grab Water
BASF - Charlotte

LLI Sample # WW 6001391
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 12:35 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH21B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	N.D.	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	33.9	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 02:38	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 02:38	Angela D Sneeringer	1
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 16:15	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 15:57	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 15:57	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106101B	06/16/2010 12:24	K Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	10160105102B	06/09/2010 20:57	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10162049502A	06/11/2010 04:09	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-10 Grab Water
BASF - Charlotte

LLI Sample # WW 6001392
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 14:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA10

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	N.D.		0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	0.3	J	0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	6.5		0.1	1
02898	Toluene	108-88-3	N.D.		0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	N.D.		0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	N.D.		0.1	1
02898	o-Xylene	95-47-6	N.D.		0.1	1
Metals	**SW-846 6010B**		mg/l		mg/l	
01754	Iron	7439-89-6	5.51		0.0522	1
Wet Chemistry	**EPA 300.0**		mg/l		mg/l	
00224	Chloride	16887-00-6	3.0		1.0	5
00228	Sulfate	14808-79-8	N.D.		1.5	5
	EPA 353.2		mg/l		mg/l	
00220	Nitrate Nitrogen	14797-55-8	2.0		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
	SM20 5310 C		mg/l		mg/l	

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-10 Grab Water
BASF - Charlotte

LLI Sample # WW 6001392
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 14:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	1.4	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	0.83 J	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 03:00	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 03:00	Angela D Sneeringer	1
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 16:19	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 16:12	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 16:12	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106101B	06/16/2010 12:25	K Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	10160105102B	06/09/2010 20:59	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10162049502A	06/11/2010 04:17	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-15BR Grab Water
BASF - Charlotte

LLI Sample # WW 6001393
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 09:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH15B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	3.9	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	17	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	1	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	120	1.0	10
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	16	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1
Metals	**SW-846 6010B**		mg/l	mg/l	
01754	Iron	7439-89-6	0.554	0.0522	1
Wet Chemistry	**EPA 300.0**		mg/l	mg/l	
00224	Chloride	16887-00-6	5.5	1.0	5
00228	Sulfate	14808-79-8	2.0 J	1.5	5
	EPA 353.2		mg/l	mg/l	
00220	Nitrate Nitrogen	14797-55-8	3.1	0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.	0.015	1
	SM20 5310 C		mg/l	mg/l	

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-15BR Grab Water
BASF - Charlotte

LLI Sample # WW 6001393
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 09:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH15B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	0.67 J	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	33.9	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 04:05	Angela D Sneeringer	1
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 04:27	Angela D Sneeringer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 04:05	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101652AA	06/15/2010 04:27	Angela D Sneeringer	10
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 16:29	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 16:27	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 16:27	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106101B	06/16/2010 12:26	K Robert Caulfeild-James	1
00219	Nitrite Nitrogen	EPA 353.2	1	10160105103A	06/09/2010 21:14	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10162049502A	06/11/2010 04:24	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-21AR Grab Water
BASF - Charlotte

LLI Sample # WW 6001394
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 12:00 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH21A

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B 25mL purge**	**ug/l**		**ug/l**	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	N.D.		0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	0.4	J	0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	0.3	J	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	8.2		0.1	1
02898	Toluene	108-88-3	N.D.		0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	0.2	J	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	N.D.		0.1	1
02898	o-Xylene	95-47-6	N.D.		0.1	1
Metals		**SW-846 6010B**	**mg/l**		**mg/l**	
01754	Iron	7439-89-6	0.493		0.0522	1
Wet Chemistry		**EPA 300.0**	**mg/l**		**mg/l**	
00224	Chloride	16887-00-6	5.0		1.0	5
00228	Sulfate	14808-79-8	4.2	J	1.5	5
		EPA 353.2	**mg/l**		**mg/l**	
00220	Nitrate Nitrogen	14797-55-8	1.1		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1
		SM20 5310 C	**mg/l**		**mg/l**	

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-21AR Grab Water
BASF - Charlotte

LLI Sample # WW 6001394
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 12:00 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH21A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	**SM20 5310 C**		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	N.D.	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	30.7	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 04:48	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 04:48	Angela D Sneeringer	1
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 16:33	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 17:14	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 17:14	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106102B	06/16/2010 17:00	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	10160105103A	06/09/2010 21:02	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10162049502A	06/11/2010 04:31	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-9 Grab Water
BASF - Charlotte

LLI Sample # WW 6001395
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 14:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA-9

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	0.4 J	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-9 Grab Water
BASF - Charlotte

LLI Sample # WW 6001395
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 14:50 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA-9

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B .25mL purge	1	G101652AA	06/15/2010 05:10	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 05:10	Angela D Sneeringer	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-15AR Grab Water
BASF - Charlotte

LLI Sample # WW 6001396
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 09:20 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH15A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-15AR Grab Water
BASF - Charlotte

LLI Sample # WW 6001396
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 09:20 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH15A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 05:31	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 05:31	Angela D Sneeringer	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20A Grab Water
BASF - Charlotte

LLI Sample # WW 6001397
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 11:05 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH20A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20A Grab Water
BASF - Charlotte

LLI Sample # WW 6001397
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 11:05 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH20A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 05:53	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 05:53	Angela D Sneeringer	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20B Grab Water
BASF - Charlotte

LLI Sample # WW 6001398
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 10:40 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH20B

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	0.4	J	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	N.D.		0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	0.3	J	0.1	1
02898	Toluene	108-88-3	0.1	J	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	N.D.		0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	0.2	J	0.1	1
02898	o-Xylene	95-47-6	0.1	J	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-20B Grab Water
BASF - Charlotte

LLI Sample # WW 6001398
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 10:40 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH20B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 06:14	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 06:14	Angela D Sneeringer	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-23A Grab Water
BASF - Charlotte

LLI Sample # WW 6001399
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 15:55 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH23A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	6.0	2
02898	Benzene	71-43-2	N.D.	0.2	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	2
02898	Bromoform	75-25-2	N.D.	0.2	2
02898	Bromomethane	74-83-9	N.D.	0.2	2
02898	2-Butanone	78-93-3	N.D.	2.0	2
02898	Carbon Disulfide	75-15-0	N.D.	0.8	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	2
02898	Chloroethane	75-00-3	N.D.	0.2	2
02898	Chloroform	67-66-3	1.9	0.2	2
02898	Chloromethane	74-87-3	N.D.	0.4	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	2
02898	1,1-Dichloroethane	75-34-3	N.D.	0.2	2
02898	1,2-Dichloroethane	107-06-2	N.D.	0.2	2
02898	1,1-Dichloroethene	75-35-4	N.D.	0.2	2
02898	cis-1,2-Dichloroethene	156-59-2	1.8	0.2	2
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	2
02898	1,2-Dichloropropane	78-87-5	N.D.	0.2	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	2
02898	2-Hexanone	591-78-6	N.D.	2.0	2
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	2.0	2
02898	Methylene Chloride	75-09-2	0.6 J	0.4	2
02898	Styrene	100-42-5	N.D.	0.2	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	2
02898	Tetrachloroethene	127-18-4	160	2.0	20
02898	Toluene	108-88-3	N.D.	0.2	2
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	2
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	2
02898	Trichloroethene	79-01-6	14	0.2	2
02898	Vinyl Chloride	75-01-4	N.D.	0.2	2
02898	m+p-Xylene	179601-23-1	N.D.	0.2	2
02898	o-Xylene	95-47-6	N.D.	0.2	2

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-23A Grab Water
BASF - Charlotte

LLI Sample # WW 6001399
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 15:55 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH23A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 06:36	Angela D Sneeringer	2
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 06:57	Angela D Sneeringer	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 06:36	Angela D Sneeringer	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101652AA	06/15/2010 06:57	Angela D Sneeringer	20

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-23B Grab Water
BASF - Charlotte

LLI Sample # WW 6001400
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 15:45 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH23B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	1.0	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	2.3	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	5.6	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	2.1	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-23B Grab Water
BASF - Charlotte

LLI Sample # WW 6001400
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 15:45 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CH23B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 07:20	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 07:20	Angela D Sneeringer	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-24 Grab Water
BASF - Charlotte

LLI Sample # WW 6001401
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 16:35 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA24

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	15	5
02898	Benzene	71-43-2	N.D.	0.5	5
02898	Bromodichloromethane	75-27-4	N.D.	0.5	5
02898	Bromoform	75-25-2	N.D.	0.5	5
02898	Bromomethane	74-83-9	N.D.	0.5	5
02898	2-Butanone	78-93-3	N.D.	5.0	5
02898	Carbon Disulfide	75-15-0	N.D.	2.0	5
02898	Carbon Tetrachloride	56-23-5	N.D.	0.5	5
02898	Chlorobenzene	108-90-7	N.D.	0.5	5
02898	Chloroethane	75-00-3	N.D.	0.5	5
02898	Chloroform	67-66-3	6.6	0.5	5
02898	Chloromethane	74-87-3	N.D.	1.0	5
02898	Dibromochloromethane	124-48-1	N.D.	0.5	5
02898	1,1-Dichloroethane	75-34-3	N.D.	0.5	5
02898	1,2-Dichloroethane	107-06-2	N.D.	0.5	5
02898	1,1-Dichloroethene	75-35-4	N.D.	0.5	5
02898	cis-1,2-Dichloroethene	156-59-2	7.3	0.5	5
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	5
02898	1,2-Dichloropropane	78-87-5	N.D.	0.5	5
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	5
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	5
02898	Ethylbenzene	100-41-4	N.D.	0.5	5
02898	2-Hexanone	591-78-6	N.D.	5.0	5
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	5.0	5
02898	Methylene Chloride	75-09-2	2.7	1.0	5
02898	Styrene	100-42-5	N.D.	0.5	5
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.5	5
02898	Tetrachloroethene	127-18-4	280	5.0	50
02898	Toluene	108-88-3	N.D.	0.5	5
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.5	5
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.5	5
02898	Trichloroethene	79-01-6	13	0.5	5
02898	Vinyl Chloride	75-01-4	N.D.	0.5	5
02898	m+p-Xylene	179601-23-1	N.D.	0.5	5
02898	o-Xylene	95-47-6	N.D.	0.5	5

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories
2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-24 Grab Water
BASF - Charlotte

LLI Sample # WW 6001401
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010 16:35 by DB

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHA24

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 07:41	Angela D Sneeringer	5
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 08:02	Angela D Sneeringer	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 07:41	Angela D Sneeringer	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101652AA	06/15/2010 08:02	Angela D Sneeringer	50

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: TB-10137 Water
BASF - Charlotte

LLI Sample # WW 6001402
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHATB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: TB-10137 Water
BASF - Charlotte

LLI Sample # WW 6001402
LLI Group # 1197941
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/08/2010

Submitted: 06/09/2010 09:00
Reported: 06/21/2010 15:30
Discard: 07/06/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

CHATB

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101652AA	06/15/2010 01:12	Angela D Sneeringer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101652AA	06/15/2010 01:12	Angela D Sneeringer	1

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/21/10 at 03:30 PM

Group Number: 1197941

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G101652AA	Sample number(s): 6001390-6001402							
Acetone	N.D.	3.0	ug/l	117	110	74-137	6	30
Benzene	N.D.	0.1	ug/l	93	97	80-120	4	30
Bromodichloromethane	N.D.	0.1	ug/l	95	99	80-120	4	30
Bromoform	N.D.	0.1	ug/l	88	93	70-128	6	30
Bromomethane	N.D.	0.1	ug/l	76	78	66-124	3	30
2-Butanone	N.D.	1.0	ug/l	106	105	71-149	1	30
Carbon Disulfide	N.D.	0.4	ug/l	92	105	73-133	14	30
Carbon Tetrachloride	N.D.	0.1	ug/l	97	104	80-129	7	30
Chlorobenzene	N.D.	0.1	ug/l	95	99	80-120	4	30
Chloroethane	N.D.	0.1	ug/l	82	84	67-124	2	30
Chloroform	N.D.	0.1	ug/l	95	98	80-120	4	30
Chloromethane	N.D.	0.2	ug/l	85	86	55-135	1	30
Dibromochloromethane	N.D.	0.1	ug/l	97	103	80-120	6	30
1,1-Dichloroethane	N.D.	0.1	ug/l	96	102	80-120	6	30
1,2-Dichloroethane	N.D.	0.1	ug/l	98	100	80-127	2	30
1,1-Dichloroethene	N.D.	0.1	ug/l	97	101	80-123	4	30
cis-1,2-Dichloroethene	N.D.	0.1	ug/l	93	97	80-120	4	30
trans-1,2-Dichloroethene	N.D.	0.1	ug/l	95	99	80-120	4	30
1,2-Dichloropropane	N.D.	0.1	ug/l	97	100	80-120	3	30
cis-1,3-Dichloropropene	N.D.	0.1	ug/l	88	95	74-120	8	30
trans-1,3-Dichloropropene	N.D.	0.1	ug/l	92	99	80-120	7	30
Ethylbenzene	N.D.	0.1	ug/l	93	97	80-120	4	30
2-Hexanone	N.D.	1.0	ug/l	111	112	75-124	1	30
4-Methyl-2-Pentanone	N.D.	1.0	ug/l	110	108	70-123	2	30
Methylene Chloride	N.D.	0.2	ug/l	102	101	80-120	1	30
Styrene	N.D.	0.1	ug/l	97	101	80-120	3	30
1,1,2,2-Tetrachloroethane	N.D.	0.1	ug/l	105	106	80-125	1	30
Tetrachloroethene	N.D.	0.1	ug/l	96	101	80-120	5	30
Toluene	N.D.	0.1	ug/l	92	96	80-120	4	30
1,1,1-Trichloroethane	N.D.	0.1	ug/l	95	99	80-121	4	30
1,1,2-Trichloroethane	N.D.	0.1	ug/l	101	102	80-120	1	30
Trichloroethene	N.D.	0.1	ug/l	94	98	80-120	4	30
Vinyl Chloride	N.D.	0.1	ug/l	84	83	55-126	1	30
m+p-Xylene	N.D.	0.1	ug/l	93	97	80-120	4	30
o-Xylene	N.D.	0.1	ug/l	95	99	80-120	4	30
Batch number: 101612812001	Sample number(s): 6001390-6001394							
Iron	N.D.	0.0522	mg/l	105		90-112		
Batch number: 10160105102B	Sample number(s): 6001390-6001392							
Nitrite Nitrogen	N.D.	0.015	mg/l	103		90-110		
Batch number: 10160105103A	Sample number(s): 6001393-6001394							
Nitrite Nitrogen	N.D.	0.015	mg/l	104		90-110		
Batch number: 10162049502A	Sample number(s): 6001390-6001394							

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/21/10 at 03:30 PM

Group Number: 1197941

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Organic Carbon	N.D.	0.50	mg/l	95		91-113		
Batch number: 10167106101B	Sample number(s): 6001390-6001393							
Nitrate Nitrogen	N.D.	0.040	mg/l	102		90-110		
Batch number: 10167106102B	Sample number(s): 6001394							
Nitrate Nitrogen	N.D.	0.040	mg/l	100		90-110		
Batch number: 10170196101B	Sample number(s): 6001390-6001394							
Chloride	N.D.	0.20	mg/l	94		90-110		
Sulfate	N.D.	0.30	mg/l	102		89-110		
Batch number: 10161023002A	Sample number(s): 6001390-6001394							
Sulfide	N.D.	0.054	mg/l	98		90-110		
Batch number: 10165020203A	Sample number(s): 6001390-6001394							
Alkalinity to pH 4.5	N.D.	0.46	mg/l as CaCO3	100		98-103		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: G101652AA	Sample number(s): 6001390-6001402 UNSPK: 6001391								
Acetone	114		57-163						
Benzene	110		87-126						
Bromodichloromethane	107		82-133						
Bromoform	93		65-126						
Bromomethane	80		66-137						
2-Butanone	102		58-168						
Carbon Disulfide	127		82-147						
Carbon Tetrachloride	124		86-152						
Chlorobenzene	108		87-120						
Chloroethane	89		70-139						
Chloroform	112		86-136						
Chloromethane	97		55-152						
Dibromochloromethane	107		79-125						
1,1-Dichloroethane	113		89-128						
1,2-Dichloroethane	107		83-143						
1,1-Dichloroethene	123		88-137						
cis-1,2-Dichloroethene	110		82-129						
trans-1,2-Dichloroethene	115		88-127						
1,2-Dichloropropane	110		83-126						
cis-1,3-Dichloropropene	105		63-127						
trans-1,3-Dichloropropene	105		71-128						
Ethylbenzene	109		80-140						
2-Hexanone	108		63-145						
4-Methyl-2-Pentanone	107		69-133						
Methylene Chloride	96		84-122						

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/21/10 at 03:30 PM

Group Number: 1197941

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Styrene	106		39-162						
1,1,2,2-Tetrachloroethane	105		70-125						
Tetrachloroethene	149*		86-129						
Toluene	107		83-127						
1,1,1-Trichloroethane	115		81-152						
1,1,2-Trichloroethane	105		85-129						
Trichloroethene	113		85-131						
Vinyl Chloride	101		57-150						
m+p-Xylene	109		84-125						
o-Xylene	108		84-125						
Batch number: 101612812001	Sample number(s): 6001390-6001394 UNSPK: 6001390 BKG: 6001390								
Iron	110	111	75-125	0	20	N.D.	N.D.	0 (1)	20
Batch number: 10160105102B	Sample number(s): 6001390-6001392 UNSPK: P000884 BKG: P000884								
Nitrite Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Batch number: 10160105103A	Sample number(s): 6001393-6001394 UNSPK: 6001394 BKG: 6001394								
Nitrite Nitrogen	106		90-110			N.D.	N.D.	0 (1)	20
Batch number: 10162049502A	Sample number(s): 6001390-6001394 UNSPK: P002097 BKG: P002097								
Total Organic Carbon	104		64-141			1.4	1.8	21* (1)	4
Batch number: 10167106101B	Sample number(s): 6001390-6001393 UNSPK: 6001390 BKG: 6001390								
Nitrate Nitrogen	110		90-110			3.8	3.8	0	2
Batch number: 10167106102B	Sample number(s): 6001394 UNSPK: 6001394 BKG: 6001394								
Nitrate Nitrogen	96		90-110			1.1	1.1	3*	2
Batch number: 10170196101B	Sample number(s): 6001390-6001394 UNSPK: 6001390 BKG: 6001390								
Chloride	119*		90-110			3.7	3.7	2 (1)	20
Sulfate	109		90-110			N.D.	N.D.	0 (1)	20
Batch number: 10161023002A	Sample number(s): 6001390-6001394 UNSPK: 6001390 BKG: P001529								
Sulfide	95	95	69-133	1	5	3.5	3.5	0	5
Batch number: 10165020203A	Sample number(s): 6001390-6001394 UNSPK: P001003 BKG: P001003								
Alkalinity to pH 4.5	99		73-121			325	323	1	5
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL VOCs by 25 ml purge
Batch number: G101652AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6001390	98	98	99	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/21/10 at 03:30 PM

Group Number: 1197941

Surrogate Quality Control

6001391	99	106	98	97
6001392	97	99	98	96
6001393	100	100	96	96
6001394	99	100	98	96
6001395	99	100	96	95
6001396	98	101	98	95
6001397	98	98	99	95
6001398	98	101	97	96
6001399	97	97	99	95
6001400	98	99	97	96
6001401	98	99	98	94
6001402	99	103	98	98
Blank	98	100	99	98
LCS	100	99	100	98
LCSD	100	104	99	97
MS	99	98	100	97
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 10118 Group# 119794 Sample # 6001390-402 **COC # 240214**

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: AECOM Acct. #:
Project Name/#: BASF/60135952.610 PWSID #:
Project Manager: Brian Ray P.O.#:
Sampler: D. Bolinear Quote #:
Name of state where samples were collected:

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4) (5)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water (☐ Potable ☐ NPDES Check if Applicable)	Matrix: Other	Total # of Containers	Alkalinity	Chloride	Total Iron	Nitrate	Nitrite	Sulfate	Sulfide	TOC	Remarks (6) Temperature of samples upon receipt (if requested)
MW-8B	6/8/10	1700	X			X		7	X	X	X	X	X	X	X	X	contact
MW-21BR		1235						7	X	X	X	X	X	X	X	X	D. Bolinear w/ any
MW-10		1450						7	X	X	X	X	X	X	X	X	questions
MW-15BR		0950						7	X	X	X	X	X	X	X	X	
MW-21AR		1200						7	X	X	X	X	X	X	X	X	
																	DB not included

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard TAT
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-1600 Fax #:
E-mail address: Brian.Ray@AECOM

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ) Site-specific QC (MS/MSD/Dup)? Yes No
Type IV (CLP SOW) (If yes, indicate QC sample and submit triplicate volume.)
Type VI (Raw Data Only) Internal COC Required? Yes / No
SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Bolinear	6/8/10				
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: Kristin Kight	6-9-10	0900

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 1197941 Group# ~~6001390~~ 1197941 Sample # 6001390-402

COC # 240213

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #:

Project Name/#: BASF/60135952.610 PWSID #:

Project Manager: Brian Ray P.O.#:

Sampler: D. Bohner Quote #:

Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Matrix (4) Soil	Water (Check if Potable / NPDES Applicable)	Other	Total # of Containers	(5) Analyses Requested / Preservation Codes: VOCs	TOC							Remarks	(6) Temperature of samples upon receipt (if requested)
MW-8B	6/8/10	1700	X			X		5	X	X								
MW-21BR		1235						5	X	X								
MW-10		1450						5	X	X								
MW-15BR		0950						5	X	X								
MW-21AR		1200						5	X	X								
MW-9		1450						3	X									
MW-15AR		0920						3	X									
MW-20A		1105						3	X									
MW-20B		1040						3	X									

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: STD 10 Day
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #:
E-mail address: Brian.Ray@aecom.com

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
D. Bohner	6/8/10				
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: Kristin Zugh	Date 6-9-10	Time 0900

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 10118 Group# 1197941 Sample # 6001390-402 **COC # 240212**

Please print. Instructions on reverse side correspond with circled numbers.

(1)
Client: AECOM Acct. #:
Project Name/#: BASF 60135952, 60 PWSID #:
Project Manager: Brian Ray P.O.#:
Sampler: D. Babikow Quote #:
Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#:

(5) Analyses Requested / Preservation Codes: VOCs

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) (3) (4)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water (Potable / NPDES Check if Applicable)	Other	Total # of Containers	VOCs	Remarks	(6) Temperature of samples upon receipt (if requested)
MW-23A	6/8/10	1555	X			X			X		
MW-23B	↓	1545	↓			↓			X		
MW-24	↓	1635							X		
TB-10137	6/8/10 N/A	N/A	↓			↓			X		

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: N/A
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6600 Fax #:
E-mail address: Brian.Ray@Aecom

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)
Site-specific QC (MS/MSD/Dup)? Yes No
(Yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No
SDG Complete? Yes No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by: Kristin Leigh	6-9-10	0900

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: AECOM

Date of Receipt: 6-9-10

Time of Receipt: 0900

Source Code: 50-1

Unpacker Emp. No.: 2123

Shipping Container Sealed: (YES) NO

Custody Seal Present * : YES (NO)

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	1396	1.8-3.5°	ST	WI	Y	L	
2	~~92~~ 9422	3.0°	TB	↓	↓	↓	
3							
4							
5							
6							

(3) KMZ 6-9-10

Number of Trip Blanks received NOT listed on chain of custody 0

Paperwork Discrepancy/Unpacking Problems:

received (1) MW-20A vial broken

2 trip blanks total received

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
Kristin Zeigler	6-9-10	1205	Unpacking
Ida Nesland	6/9/10	1230	Place in Storage or (Entry)
			Entry
			Entry

Lancaster Laboratories

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
		*****	Duplicate analysis not within control limits
U	Compound was not detected	**+**	Correlation coefficient for MSA <0.995
X,Y,Z	Defined in case narrative		

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

June 22, 2010

Project: BASF - Charlotte

Submittal Date: 06/10/2010
Group Number: 1198116
PO Number: 2075129
State of Sample Origin: NC

Client Sample Description	Lancaster Labs (LLI) #
MW-11A Grab Water	6002298
MW-11B Grab Water	6002299
MW-12 Grab Water	6002300
MW-17B Grab Water	6002301
MW-18B Grab Water	6002302
MW-22A Grab Water	6002303
MW-22B Grab Water	6002304
DUP-1 Grab Water	6002305

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO AECOM Environment Attn: Brian Ray

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300 Ext. 1576

Respectfully Submitted,

Robert Heisey

Robert Heisey
Senior Specialist

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-11A Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002298
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 12:32 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC11A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	0.9	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	0.7	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	40	0.2	2
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	0.4 J	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-11A Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002298
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 12:32 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC11A

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 18:12	Jason M Long	2
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101701AA	06/19/2010 10:06	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 18:12	Jason M Long	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101701AA	06/19/2010 10:06	Jason M Long	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-11B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002299
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 13:05 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC11B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	6.0	2
02898	Benzene	71-43-2	N.D.	0.2	2
02898	Bromodichloromethane	75-27-4	N.D.	0.2	2
02898	Bromoform	75-25-2	N.D.	0.2	2
02898	Bromomethane	74-83-9	N.D.	0.2	2
02898	2-Butanone	78-93-3	N.D.	2.0	2
02898	Carbon Disulfide	75-15-0	N.D.	0.8	2
02898	Carbon Tetrachloride	56-23-5	N.D.	0.2	2
02898	Chlorobenzene	108-90-7	N.D.	0.2	2
02898	Chloroethane	75-00-3	N.D.	0.2	2
02898	Chloroform	67-66-3	1.6	0.2	2
02898	Chloromethane	74-87-3	N.D.	0.4	2
02898	Dibromochloromethane	124-48-1	N.D.	0.2	2
02898	1,1-Dichloroethane	75-34-3	N.D.	0.2	2
02898	1,2-Dichloroethane	107-06-2	N.D.	0.2	2
02898	1,1-Dichloroethene	75-35-4	N.D.	0.2	2
02898	cis-1,2-Dichloroethene	156-59-2	4.2	0.2	2
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.2	2
02898	1,2-Dichloropropane	78-87-5	4.0	0.2	2
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.2	2
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.2	2
02898	Ethylbenzene	100-41-4	N.D.	0.2	2
02898	2-Hexanone	591-78-6	N.D.	2.0	2
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	2.0	2
02898	Methylene Chloride	75-09-2	N.D.	0.4	2
02898	Styrene	100-42-5	N.D.	0.2	2
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.2	2
02898	Tetrachloroethene	127-18-4	160	2.0	20
02898	Toluene	108-88-3	N.D.	0.2	2
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.2	2
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.2	2
02898	Trichloroethene	79-01-6	68	2.0	20
02898	Vinyl Chloride	75-01-4	N.D.	0.2	2
02898	m+p-Xylene	179601-23-1	N.D.	0.2	2
02898	o-Xylene	95-47-6	N.D.	0.2	2

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-11B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002299
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 13:05 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC11B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 18:55	Jason M Long	2
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 19:17	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 18:55	Jason M Long	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101682AA	06/17/2010 19:17	Jason M Long	20

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-12 Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002300
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 11:50 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BCM12

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	3.0	1
02898	Benzene	71-43-2	N.D.	0.1	1
02898	Bromodichloromethane	75-27-4	N.D.	0.1	1
02898	Bromoform	75-25-2	N.D.	0.1	1
02898	Bromomethane	74-83-9	N.D.	0.1	1
02898	2-Butanone	78-93-3	N.D.	1.0	1
02898	Carbon Disulfide	75-15-0	N.D.	0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	1
02898	Chloroethane	75-00-3	N.D.	0.1	1
02898	Chloroform	67-66-3	N.D.	0.1	1
02898	Chloromethane	74-87-3	N.D.	0.2	1
02898	Dibromochloromethane	124-48-1	N.D.	0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.	0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.	0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.1	1
02898	Ethylbenzene	100-41-4	N.D.	0.1	1
02898	2-Hexanone	591-78-6	N.D.	1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	1.0	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1
02898	Styrene	100-42-5	N.D.	0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	0.1	1
02898	Tetrachloroethene	127-18-4	21	0.5	5
02898	Toluene	108-88-3	N.D.	0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.	0.1	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	1
02898	m+p-Xylene	179601-23-1	N.D.	0.1	1
02898	o-Xylene	95-47-6	N.D.	0.1	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Sample Description: MW-12 Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002300
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 11:50 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BCM12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 19:38	Jason M Long	1
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 20:00	Jason M Long	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 19:38	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101682AA	06/17/2010 20:00	Jason M Long	5

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-17B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002301
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:55 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC17B

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		30	10
02898	Benzene	71-43-2	N.D.		1.0	10
02898	Bromodichloromethane	75-27-4	N.D.		1.0	10
02898	Bromoform	75-25-2	N.D.		1.0	10
02898	Bromomethane	74-83-9	N.D.		1.0	10
02898	2-Butanone	78-93-3	N.D.		10	10
02898	Carbon Disulfide	75-15-0	N.D.		4.0	10
02898	Carbon Tetrachloride	56-23-5	N.D.		1.0	10
02898	Chlorobenzene	108-90-7	N.D.		1.0	10
02898	Chloroethane	75-00-3	N.D.		1.0	10
02898	Chloroform	67-66-3	1.9	J	1.0	10
02898	Chloromethane	74-87-3	N.D.		2.0	10
02898	Dibromochloromethane	124-48-1	N.D.		1.0	10
02898	1,1-Dichloroethane	75-34-3	N.D.		1.0	10
02898	1,2-Dichloroethane	107-06-2	N.D.		1.0	10
02898	1,1-Dichloroethene	75-35-4	N.D.		1.0	10
02898	cis-1,2-Dichloroethene	156-59-2	6.1		1.0	10
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		1.0	10
02898	1,2-Dichloropropane	78-87-5	20		1.0	10
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		1.0	10
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		1.0	10
02898	Ethylbenzene	100-41-4	N.D.		1.0	10
02898	2-Hexanone	591-78-6	N.D.		10	10
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		10	10
02898	Methylene Chloride	75-09-2	2.1	J	2.0	10
02898	Styrene	100-42-5	N.D.		1.0	10
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		1.0	10
02898	Tetrachloroethene	127-18-4	890		10	100
02898	Toluene	108-88-3	N.D.		1.0	10
02898	1,1,1-Trichloroethane	71-55-6	N.D.		1.0	10
02898	1,1,2-Trichloroethane	79-00-5	N.D.		1.0	10
02898	Trichloroethene	79-01-6	7.6		1.0	10
02898	Vinyl Chloride	75-01-4	N.D.		1.0	10
02898	m+p-Xylene	179601-23-1	N.D.		1.0	10
02898	o-Xylene	95-47-6	N.D.		1.0	10

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-17B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002301
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:55 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC17B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101701AA	06/19/2010 10:28	Jason M Long	10
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101701AA	06/19/2010 10:49	Jason M Long	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101701AA	06/19/2010 10:28	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101701AA	06/19/2010 10:49	Jason M Long	100

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-18B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002302
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:50 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC18B

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		60	20
02898	Benzene	71-43-2	N.D.		2.0	20
02898	Bromodichloromethane	75-27-4	N.D.		2.0	20
02898	Bromoform	75-25-2	N.D.		2.0	20
02898	Bromomethane	74-83-9	N.D.		2.0	20
02898	2-Butanone	78-93-3	N.D.		20	20
02898	Carbon Disulfide	75-15-0	N.D.		8.0	20
02898	Carbon Tetrachloride	56-23-5	N.D.		2.0	20
02898	Chlorobenzene	108-90-7	N.D.		2.0	20
02898	Chloroethane	75-00-3	N.D.		2.0	20
02898	Chloroform	67-66-3	N.D.		2.0	20
02898	Chloromethane	74-87-3	N.D.		4.0	20
02898	Dibromochloromethane	124-48-1	N.D.		2.0	20
02898	1,1-Dichloroethane	75-34-3	N.D.		2.0	20
02898	1,2-Dichloroethane	107-06-2	N.D.		2.0	20
02898	1,1-Dichloroethene	75-35-4	N.D.		2.0	20
02898	cis-1,2-Dichloroethene	156-59-2	8.4	J	2.0	20
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		2.0	20
02898	1,2-Dichloropropane	78-87-5	14		2.0	20
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		2.0	20
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		2.0	20
02898	Ethylbenzene	100-41-4	N.D.		2.0	20
02898	2-Hexanone	591-78-6	N.D.		20	20
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		20	20
02898	Methylene Chloride	75-09-2	N.D.		4.0	20
02898	Styrene	100-42-5	N.D.		2.0	20
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		2.0	20
02898	Tetrachloroethene	127-18-4	610		20	200
02898	Toluene	108-88-3	N.D.		2.0	20
02898	1,1,1-Trichloroethane	71-55-6	N.D.		2.0	20
02898	1,1,2-Trichloroethane	79-00-5	N.D.		2.0	20
02898	Trichloroethene	79-01-6	6.5	J	2.0	20
02898	Vinyl Chloride	75-01-4	N.D.		2.0	20
02898	m+p-Xylene	179601-23-1	N.D.		2.0	20
02898	o-Xylene	95-47-6	N.D.		2.0	20

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-18B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002302
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:50 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC18B

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 21:04	Jason M Long	20
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 21:26	Jason M Long	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 21:04	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101682AA	06/17/2010 21:26	Jason M Long	200

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-22A Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002303
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 09:35 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC22A

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		60	20
02898	Benzene	71-43-2	N.D.		2.0	20
02898	Bromodichloromethane	75-27-4	N.D.		2.0	20
02898	Bromoform	75-25-2	N.D.		2.0	20
02898	Bromomethane	74-83-9	N.D.		2.0	20
02898	2-Butanone	78-93-3	N.D.		20	20
02898	Carbon Disulfide	75-15-0	N.D.		8.0	20
02898	Carbon Tetrachloride	56-23-5	N.D.		2.0	20
02898	Chlorobenzene	108-90-7	N.D.		2.0	20
02898	Chloroethane	75-00-3	N.D.		2.0	20
02898	Chloroform	67-66-3	61		2.0	20
02898	Chloromethane	74-87-3	N.D.		4.0	20
02898	Dibromochloromethane	124-48-1	N.D.		2.0	20
02898	1,1-Dichloroethane	75-34-3	N.D.		2.0	20
02898	1,2-Dichloroethane	107-06-2	N.D.		2.0	20
02898	1,1-Dichloroethene	75-35-4	N.D.		2.0	20
02898	cis-1,2-Dichloroethene	156-59-2	250		2.0	20
02898	trans-1,2-Dichloroethene	156-60-5	8.4	J	2.0	20
02898	1,2-Dichloropropane	78-87-5	N.D.		2.0	20
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		2.0	20
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		2.0	20
02898	Ethylbenzene	100-41-4	N.D.		2.0	20
02898	2-Hexanone	591-78-6	N.D.		20	20
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		20	20
02898	Methylene Chloride	75-09-2	4.2	J	4.0	20
02898	Styrene	100-42-5	N.D.		2.0	20
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		2.0	20
02898	Tetrachloroethene	127-18-4	2,400		20	200
02898	Toluene	108-88-3	N.D.		2.0	20
02898	1,1,1-Trichloroethane	71-55-6	N.D.		2.0	20
02898	1,1,2-Trichloroethane	79-00-5	N.D.		2.0	20
02898	Trichloroethene	79-01-6	300		2.0	20
02898	Vinyl Chloride	75-01-4	N.D.		2.0	20
02898	m+p-Xylene	179601-23-1	N.D.		2.0	20
02898	o-Xylene	95-47-6	N.D.		2.0	20
Metals	**SW-846 6010B**		mg/l		mg/l	
01754	Iron	7439-89-6	0.806		0.0522	1
Wet Chemistry	**EPA 300.0**		mg/l		mg/l	
00224	Chloride	16887-00-6	1.9	J	1.0	5
00228	Sulfate	14808-79-8	N.D.		1.5	5
	EPA 353.2		mg/l		mg/l	
00220	Nitrate Nitrogen	14797-55-8	0.32		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-22A Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002303
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 09:35 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC22A

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	SM20 5310 C		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	9.8	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	10.5	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010	21:48	Jason M Long	20
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010	22:10	Jason M Long	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010	21:48	Jason M Long	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101682AA	06/17/2010	22:10	Jason M Long	200
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010	16:36	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010	21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010	18:30	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010	18:30	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106103B	06/16/2010	18:14	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	10161105101B	06/10/2010	22:09	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10165049501A	06/14/2010	02:49	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010	19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010	19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010	16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: MW-22B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002304
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:00 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC22B

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l		ug/l	
02898	Acetone	67-64-1	N.D.		3.0	1
02898	Benzene	71-43-2	N.D.		0.1	1
02898	Bromodichloromethane	75-27-4	N.D.		0.1	1
02898	Bromoform	75-25-2	N.D.		0.1	1
02898	Bromomethane	74-83-9	N.D.		0.1	1
02898	2-Butanone	78-93-3	N.D.		1.0	1
02898	Carbon Disulfide	75-15-0	N.D.		0.4	1
02898	Carbon Tetrachloride	56-23-5	N.D.		0.1	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	1
02898	Chloroethane	75-00-3	N.D.		0.1	1
02898	Chloroform	67-66-3	N.D.		0.1	1
02898	Chloromethane	74-87-3	N.D.		0.2	1
02898	Dibromochloromethane	124-48-1	N.D.		0.1	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	1
02898	cis-1,2-Dichloroethene	156-59-2	N.D.		0.1	1
02898	trans-1,2-Dichloroethene	156-60-5	N.D.		0.1	1
02898	1,2-Dichloropropane	78-87-5	N.D.		0.1	1
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.		0.1	1
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.		0.1	1
02898	Ethylbenzene	100-41-4	N.D.		0.1	1
02898	2-Hexanone	591-78-6	N.D.		1.0	1
02898	4-Methyl-2-Pentanone	108-10-1	N.D.		1.0	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1
02898	Styrene	100-42-5	N.D.		0.1	1
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.1	1
02898	Tetrachloroethene	127-18-4	6.0		0.1	1
02898	Toluene	108-88-3	N.D.		0.1	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1
02898	1,1,2-Trichloroethane	79-00-5	N.D.		0.1	1
02898	Trichloroethene	79-01-6	0.2	J	0.1	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	1
02898	m+p-Xylene	179601-23-1	N.D.		0.1	1
02898	o-Xylene	95-47-6	N.D.		0.1	1
Metals	SW-846 6010B		mg/l		mg/l	
01754	Iron	7439-89-6	2.11		0.0522	1
Wet Chemistry	EPA 300.0		mg/l		mg/l	
00224	Chloride	16887-00-6	1.4	J	1.0	5
00228	Sulfate	14808-79-8	N.D.		1.5	5
	EPA 353.2		mg/l		mg/l	
00220	Nitrate Nitrogen	14797-55-8	0.16		0.040	1
00219	Nitrite Nitrogen	14797-65-0	N.D.		0.015	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax:717-656-2681 • www.lancasterlabs.com

Sample Description: MW-22B Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002304
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 10:00 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BC22B

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Wet Chemistry	SM20 5310 C		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	N.D.	0.50	1
	SM20 2320 B		mg/l as CaCO3	mg/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	21.1	0.46	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	0.46	1
	SM20 4500 S2 D		mg/l	mg/l	
00230	Sulfide	18496-25-8	N.D.	0.054	1

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 14:57	Jason M Long	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 14:57	Jason M Long	1
01754	Iron	SW-846 6010B	1	101612812001	06/11/2010 16:40	John P Hook	1
02812	3030C Acid-Extractable Metals	SM20 3030C	1	101612812001	06/10/2010 21:00	Mirit S Shenouda	1
00224	Chloride	EPA 300.0	1	10170196101B	06/19/2010 18:15	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10170196101B	06/19/2010 18:15	Ashley M Adams	5
00220	Nitrate Nitrogen	EPA 353.2	1	10167106103B	06/16/2010 18:13	Venia B McFadden	1
00219	Nitrite Nitrogen	EPA 353.2	1	10161105101B	06/10/2010 21:20	Joseph E McKenzie	1
00273	Total Organic Carbon	SM20 5310 C	1	10165049501A	06/14/2010 02:55	James S Mathiot	1
00202	Alkalinity to pH 4.5	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	10165020203A	06/14/2010 19:58	Geraldine C Smith	1
00230	Sulfide	SM20 4500 S2 D	1	10161023002A	06/10/2010 16:02	Geraldine C Smith	1

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-1 Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002305
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BCDU1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	
02898	Acetone	67-64-1	N.D.	30	10
02898	Benzene	71-43-2	N.D.	1.0	10
02898	Bromodichloromethane	75-27-4	N.D.	1.0	10
02898	Bromoform	75-25-2	N.D.	1.0	10
02898	Bromomethane	74-83-9	N.D.	1.0	10
02898	2-Butanone	78-93-3	N.D.	10	10
02898	Carbon Disulfide	75-15-0	N.D.	4.0	10
02898	Carbon Tetrachloride	56-23-5	N.D.	1.0	10
02898	Chlorobenzene	108-90-7	N.D.	1.0	10
02898	Chloroethane	75-00-3	N.D.	1.0	10
02898	Chloroform	67-66-3	1.3 J	1.0	10
02898	Chloromethane	74-87-3	N.D.	2.0	10
02898	Dibromochloromethane	124-48-1	N.D.	1.0	10
02898	1,1-Dichloroethane	75-34-3	N.D.	1.0	10
02898	1,2-Dichloroethane	107-06-2	N.D.	1.0	10
02898	1,1-Dichloroethene	75-35-4	N.D.	1.0	10
02898	cis-1,2-Dichloroethene	156-59-2	8.6	1.0	10
02898	trans-1,2-Dichloroethene	156-60-5	N.D.	1.0	10
02898	1,2-Dichloropropane	78-87-5	14	1.0	10
02898	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.0	10
02898	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.0	10
02898	Ethylbenzene	100-41-4	N.D.	1.0	10
02898	2-Hexanone	591-78-6	N.D.	10	10
02898	4-Methyl-2-Pentanone	108-10-1	N.D.	10	10
02898	Methylene Chloride	75-09-2	N.D.	2.0	10
02898	Styrene	100-42-5	N.D.	1.0	10
02898	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.0	10
02898	Tetrachloroethene	127-18-4	690	10	100
02898	Toluene	108-88-3	N.D.	1.0	10
02898	1,1,1-Trichloroethane	71-55-6	N.D.	1.0	10
02898	1,1,2-Trichloroethane	79-00-5	N.D.	1.0	10
02898	Trichloroethene	79-01-6	6.8	1.0	10
02898	Vinyl Chloride	75-01-4	N.D.	1.0	10
02898	m+p-Xylene	179601-23-1	N.D.	1.0	10
02898	o-Xylene	95-47-6	N.D.	1.0	10

General Sample Comments

State of North Carolina Lab Certification No. 521
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Lancaster Laboratories

Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Sample Description: DUP-1 Grab Water
240210
BASF - Charlotte

LLI Sample # WW 6002305
LLI Group # 1198116
Account # 10118

Project Name: BASF - Charlotte

Collected: 06/09/2010 by DB

Submitted: 06/10/2010 08:45
Reported: 06/22/2010 12:18
Discard: 07/07/2010

AECOM Environment
Suite 306
8540 Colonnade Center Drive
Raleigh, NC 27615

BCDU1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 22:32	Jason M Long	10
02898	TCL VOCs by 25 ml purge	SW-846 8260B 25mL purge	1	G101682AA	06/17/2010 22:54	Jason M Long	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G101682AA	06/17/2010 22:32	Jason M Long	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G101682AA	06/17/2010 22:54	Jason M Long	100

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/22/10 at 12:18 PM

Group Number: 1198116

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result		Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: G101682AA	Sample number(s): 6002298-6002300,6002302-6002305								
Acetone	N.D.		3.0	ug/l	117	111	74-137	5	30
Benzene	N.D.		0.1	ug/l	99	103	80-120	4	30
Bromodichloromethane	N.D.		0.1	ug/l	98	102	80-120	3	30
Bromoform	N.D.		0.1	ug/l	97	100	70-128	3	30
Bromomethane	N.D.		0.1	ug/l	75	78	66-124	4	30
2-Butanone	N.D.		1.0	ug/l	104	106	71-149	1	30
Carbon Disulfide	N.D.		0.4	ug/l	119	124	73-133	4	30
Carbon Tetrachloride	N.D.		0.1	ug/l	108	113	80-129	4	30
Chlorobenzene	N.D.		0.1	ug/l	98	102	80-120	4	30
Chloroethane	N.D.		0.1	ug/l	78	79	67-124	2	30
Chloroform	N.D.		0.1	ug/l	100	104	80-120	4	30
Chloromethane	N.D.		0.2	ug/l	75	76	55-135	1	30
Dibromochloromethane	N.D.		0.1	ug/l	103	107	80-120	3	30
1,1-Dichloroethane	N.D.		0.1	ug/l	101	106	80-120	5	30
1,2-Dichloroethane	N.D.		0.1	ug/l	102	104	80-127	2	30
1,1-Dichloroethene	N.D.		0.1	ug/l	102	106	80-123	4	30
cis-1,2-Dichloroethene	N.D.		0.1	ug/l	97	101	80-120	3	30
trans-1,2-Dichloroethene	N.D.		0.1	ug/l	100	103	80-120	3	30
1,2-Dichloropropane	N.D.		0.1	ug/l	100	104	80-120	4	30
cis-1,3-Dichloropropene	N.D.		0.1	ug/l	98	103	74-120	5	30
trans-1,3-Dichloropropene	N.D.		0.1	ug/l	103	107	80-120	4	30
Ethylbenzene	N.D.		0.1	ug/l	97	101	80-120	4	30
2-Hexanone	N.D.		1.0	ug/l	103	106	75-124	3	30
4-Methyl-2-Pentanone	N.D.		1.0	ug/l	102	104	70-123	2	30
Methylene Chloride	0.2	J	0.2	ug/l	96	99	80-120	3	30
Styrene	N.D.		0.1	ug/l	98	101	80-120	4	30
1,1,2,2-Tetrachloroethane	N.D.		0.1	ug/l	101	102	80-125	1	30
Tetrachloroethene	N.D.		0.1	ug/l	100	104	80-120	4	30
Toluene	N.D.		0.1	ug/l	95	98	80-120	4	30
1,1,1-Trichloroethane	N.D.		0.1	ug/l	101	105	80-121	4	30
1,1,2-Trichloroethane	N.D.		0.1	ug/l	101	104	80-120	3	30
Trichloroethene	N.D.		0.1	ug/l	96	100	80-120	4	30
Vinyl Chloride	N.D.		0.1	ug/l	77	79	55-126	2	30
m+p-Xylene	N.D.		0.1	ug/l	97	100	80-120	3	30
o-Xylene	N.D.		0.1	ug/l	96	101	80-120	5	30
Batch number: G101701AA	Sample number(s): 6002298,6002301								
Acetone	N.D.		3.0	ug/l	141*		74-137		
Benzene	N.D.		0.1	ug/l	101		80-120		
Bromodichloromethane	N.D.		0.1	ug/l	105		80-120		
Bromoform	N.D.		0.1	ug/l	107		70-128		
Bromomethane	N.D.		0.1	ug/l	81		66-124		
2-Butanone	N.D.		1.0	ug/l	125		71-149		
Carbon Disulfide	N.D.		0.4	ug/l	120		73-133		
Carbon Tetrachloride	N.D.		0.1	ug/l	113		80-129		
Chlorobenzene	N.D.		0.1	ug/l	102		80-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/22/10 at 12:18 PM

Group Number: 1198116

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloroethane	N.D.	0.1	ug/l	86		67-124		
Chloroform	N.D.	0.1	ug/l	104		80-120		
Chloromethane	N.D.	0.2	ug/l	80		55-135		
Dibromochloromethane	N.D.	0.1	ug/l	112		80-120		
1,1-Dichloroethane	N.D.	0.1	ug/l	107		80-120		
1,2-Dichloroethane	N.D.	0.1	ug/l	100		80-127		
1,1-Dichloroethene	N.D.	0.1	ug/l	110		80-123		
cis-1,2-Dichloroethene	N.D.	0.1	ug/l	98		80-120		
trans-1,2-Dichloroethene	N.D.	0.1	ug/l	103		80-120		
1,2-Dichloropropane	N.D.	0.1	ug/l	103		80-120		
cis-1,3-Dichloropropene	N.D.	0.1	ug/l	100		74-120		
trans-1,3-Dichloropropene	N.D.	0.1	ug/l	109		80-120		
Ethylbenzene	N.D.	0.1	ug/l	103		80-120		
2-Hexanone	N.D.	1.0	ug/l	97		75-124		
4-Methyl-2-Pentanone	N.D.	1.0	ug/l	96		70-123		
Methylene Chloride	N.D.	0.2	ug/l	94		80-120		
Styrene	N.D.	0.1	ug/l	102		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.1	ug/l	98		80-125		
Tetrachloroethene	N.D.	0.1	ug/l	105		80-120		
Toluene	N.D.	0.1	ug/l	100		80-120		
1,1,1-Trichloroethane	N.D.	0.1	ug/l	105		80-121		
1,1,2-Trichloroethane	N.D.	0.1	ug/l	99		80-120		
Trichloroethene	N.D.	0.1	ug/l	100		80-120		
Vinyl Chloride	N.D.	0.1	ug/l	86		55-126		
m+p-Xylene	N.D.	0.1	ug/l	103		80-120		
o-Xylene	N.D.	0.1	ug/l	102		80-120		
Batch number: 101612812001	Sample number(s): 6002303-6002304							
Iron	N.D.	0.0522	mg/l	105		90-112		
Batch number: 10161105101B	Sample number(s): 6002303-6002304							
Nitrite Nitrogen	N.D.	0.015	mg/l	99	101	90-110	2	20
Batch number: 10165049501A	Sample number(s): 6002303-6002304							
Total Organic Carbon	N.D.	0.50	mg/l	103		91-113		
Batch number: 10167106103B	Sample number(s): 6002303-6002304							
Nitrate Nitrogen	N.D.	0.040	mg/l	101	98	90-110	4	20
Batch number: 10170196101B	Sample number(s): 6002303-6002304							
Chloride	N.D.	0.20	mg/l	94		90-110		
Sulfate	N.D.	0.30	mg/l	102		89-110		
Batch number: 10161023002A	Sample number(s): 6002303-6002304							
Sulfide	N.D.	0.054	mg/l	98		90-110		
Batch number: 10165020203A	Sample number(s): 6002303-6002304							
Alkalinity to pH 4.5	N.D.	0.46	mg/l as CaCO3	100		98-103		

Sample Matrix Quality Control

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment Group Number: 1198116
Reported: 06/22/10 at 12:18 PM
Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: G101682AA	Sample number(s): 6002298-6002300,6002302-6002305 UNSPK: P008569								
Acetone	137		57-163						
Benzene	108		87-126						
Bromodichloromethane	108		82-133						
Bromoform	100		65-126						
Bromomethane	77		66-137						
2-Butanone	152		58-168						
Carbon Disulfide	133		82-147						
Carbon Tetrachloride	123		86-152						
Chlorobenzene	107		87-120						
Chloroethane	81		70-139						
Chloroform	109		86-136						
Chloromethane	73		55-152						
Dibromochloromethane	110		79-125						
1,1-Dichloroethane	109		89-128						
1,2-Dichloroethane	105		83-143						
1,1-Dichloroethene	118		88-137						
cis-1,2-Dichloroethene	117		82-129						
trans-1,2-Dichloroethene	114		88-127						
1,2-Dichloropropane	109		83-126						
cis-1,3-Dichloropropene	102		63-127						
trans-1,3-Dichloropropene	106		71-128						
Ethylbenzene	108		80-140						
2-Hexanone	101		63-145						
4-Methyl-2-Pentanone	93		69-133						
Methylene Chloride	93		84-122						
Styrene	101		39-162						
1,1,2,2-Tetrachloroethane	103		70-125						
Tetrachloroethene	114		86-129						
Toluene	106		83-127						
1,1,1-Trichloroethane	114		81-152						
1,1,2-Trichloroethane	104		85-129						
Trichloroethene	184*		85-131						
Vinyl Chloride	82		57-150						
m+p-Xylene	108		84-125						
o-Xylene	105		84-125						
Batch number: G101701AA	Sample number(s): 6002298,6002301 UNSPK: P009631								
Acetone	119	124	57-163	5	30				
Benzene	105	104	87-126	0	30				
Bromodichloromethane	103	104	82-133	1	30				
Bromoform	97	99	65-126	2	30				
Bromomethane	82	80	66-137	2	30				
2-Butanone	106	111	58-168	5	30				
Carbon Disulfide	124	123	82-147	1	30				
Carbon Tetrachloride	121	120	86-152	1	30				
Chlorobenzene	105	105	87-120	0	30				
Chloroethane	88	87	70-139	1	30				
Chloroform	107	107	86-136	0	30				
Chloromethane	80	79	55-152	2	30				
Dibromochloromethane	106	111	79-125	4	30				
1,1-Dichloroethane	111	108	89-128	3	30				
1,2-Dichloroethane	100	101	83-143	1	30				
1,1-Dichloroethene	115	114	88-137	1	30				

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/22/10 at 12:18 PM

Group Number: 1198116

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
cis-1,2-Dichloroethene	106	106	82-129	0	30				
trans-1,2-Dichloroethene	106	104	88-127	2	30				
1,2-Dichloropropane	105	105	83-126	0	30				
cis-1,3-Dichloropropene	105	107	63-127	2	30				
trans-1,3-Dichloropropene	104	106	71-128	3	30				
Ethylbenzene	103	102	80-140	1	30				
2-Hexanone	96	101	63-145	5	30				
4-Methyl-2-Pentanone	98	99	69-133	2	30				
Methylene Chloride	93	93	84-122	0	30				
Styrene	40	32*	39-162	22	30				
1,1,2,2-Tetrachloroethane	98	100	70-125	3	30				
Tetrachloroethene	113	116	86-129	2	30				
Toluene	101	103	83-127	2	30				
1,1,1-Trichloroethane	111	111	81-152	0	30				
1,1,2-Trichloroethane	97	102	85-129	5	30				
Trichloroethene	108	106	85-131	2	30				
Vinyl Chloride	87	85	57-150	2	30				
m+p-Xylene	94	91	84-125	3	30				
o-Xylene	95	93	84-125	2	30				
Batch number: 101612812001	Sample number(s): 6002303-6002304 UNSPK: P001390 BKG: P001390								
Iron	110	111	75-125	0	20	N.D.	N.D.	0 (1)	20
Batch number: 10161105101B	Sample number(s): 6002303-6002304 UNSPK: P002272 BKG: P002272								
Nitrite Nitrogen	90		90-110			0.042 J	0.045 J	7 (1)	20
Batch number: 10165049501A	Sample number(s): 6002303-6002304 UNSPK: P002862 BKG: P002862								
Total Organic Carbon	77		64-141			9.3	9.4	1	4
Batch number: 10167106103B	Sample number(s): 6002303-6002304 UNSPK: P002307 BKG: P002307								
Nitrate Nitrogen	101		90-110			1.4	1.4	2	2
Batch number: 10170196101B	Sample number(s): 6002303-6002304 UNSPK: P001390 BKG: P001390								
Chloride	119*		90-110			3.7	3.7	2 (1)	20
Sulfate	109		90-110			N.D.	N.D.	0 (1)	20
Batch number: 10161023002A	Sample number(s): 6002303-6002304 UNSPK: P001390 BKG: P001529								
Sulfide	95	95	69-133	1	5	3.5	3.5	0	5
Batch number: 10165020203A	Sample number(s): 6002303-6002304 UNSPK: P001003 BKG: P001003								
Alkalinity to pH 4.5	99		73-121			325	323	1	5
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	5

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCL VOCs by 25 ml purge
Batch number: G101682AA

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Quality Control Summary

Client Name: AECOM Environment
Reported: 06/22/10 at 12:18 PM

Group Number: 1198116

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6002299	99	102	99	93
6002300	99	100	97	92
6002302	99	101	97	92
6002303	101	102	96	92
6002304	99	102	97	94
6002305	100	103	96	91
Blank	97	102	98	94
LCS	99	102	100	97
LCSD	100	101	99	97
MS	97	97	100	96
Limits:	77-114	74-113	77-110	78-110

Analysis Name: TCL VOCs by 25 ml purge
Batch number: G101701AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6002298	101	98	99	95
6002301	101	97	99	94
Blank	103	102	100	95
LCS	101	96	101	97
MS	101	97	100	97
MSD	102	98	102	96
Limits:	77-114	74-113	77-110	78-110

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 10118 Group# 1198116 Sample # 6002298-305

COC # 240210

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: AECOM Acct. #:

Project Name/#: BASF / 60135952.610 PWSID #:

Project Manager: Brian Ray P.O.#:

Sampler: D. Babineau Quote #:

Name of state where samples were collected: NC

For Lab Use Only
FSC:
SCR#: 91396

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(2) Sample Identification | Date Collected | Time Collected | (3) Grab | Composite | Matrix (4): Soil | Water (☐ Potable ☐ NPDES Check if Applicable) | Other | Total # of Containers | (5) Analyses Requested / Preservation Codes: 8260B-VOCs | Alkalinity | Chloride | Total Iron | Nitrate | Nitrite | Sulfate | Sulfide | TOC | Remarks | (6) Temperature of samples upon receipt (if requested)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Other	Total # of Containers	8260B-VOCs	Alkalinity	Chloride	Total Iron	Nitrate	Nitrite	Sulfate	Sulfide	TOC	Remarks
MW-11A	6/9/10	1232	X			X		3	X									contact David Babineau w/ any questions
MW-11B		1305						3	X									
MW-12		1150						3	X									
MW-17B		1055						3	X									
MW-18B		1050						3	X	03								Final codes.
MW-22A		0935						10	X	X	X	X	X	X	X	X	X	
MW-22B		1000						10	X	X	X	X	X	X	X	X	X	
Dup-1		—						3	X									

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: 919-872-6800 Fax #:
E-mail address: Brian.Ray@Aecom.com

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
If yes, indicate QC sample and submit triplicate volume:
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	6/9/10	1417			
D. Babineau [signature]	6/9/10				
			Deborah A Reid	6/10/10	0845

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: AECOM

Date of Receipt: 6/10/10

Time of Receipt: 0845

Source Code: SO-1

Unpacker Emp. No.: 208

Shipping Container Sealed: YES NO

Custody Seal Present * : YES NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: Chilled Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9493	3.3	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody Ø

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
DaReslund	6/10/10	1000	Unpacking to storage
Kristin Ingle	6-10-10	1018	Place in Storage or Entry
			Entry
			Entry

Issued by Dept. 6042 Management
2174.05

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL LANCASTER LABORATORIES BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF LANCASTER LABORATORIES AND (B) WHETHER LANCASTER LABORATORIES HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Lancaster Laboratories which includes any conditions that vary from the Standard Terms and Conditions, and Lancaster hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Appendix C

Historical VOC Results and Trend Graphs

Parameter	CALDWELL 7/7/1998	CALDWELL 7/13/1999	CALDWELL 6/14/2000	CALDWELL 6/28/2001	CALDWELL 6/21/2002	CALDWELL 6/24/2003	CALDWELL 6/3/2004
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
O-XYLENE							
STYRENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

CALDWELL 8/23/2005	CALDWELL 2/6/2007	CALDWELL 7/18/2007	CALDWELL 6/11/2008	CALDWELL 6/3/2009
				22
				0.6
				48
				7.8
			0.3 J	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-1 3/7/1994	MW-1 11/23/1994	MW-1 2/28/1995	MW-1 5/30/1995	MW-1 8/29/1995	MW-1 12/20/1995	MW-1 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE	8						
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-10 3/7/1994	MW-10 11/23/1994	MW-10 2/24/1995	MW-10 5/30/1995	MW-10 8/29/1995	MW-10 12/20/1995	MW-10 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	130	73	206	65	79	90.1	63.4
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-10 12/6/1996	MW-10 6/23/1997	MW-10 12/5/1997	MW-10 7/9/1998	MW-10 12/1/1998	MW-10 7/13/1999	MW-10 12/8/1999	MW-10 6/14/2000	MW-10 12/13/2000
								2.5
								2.6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

69.3	67.8	61.4	92.8 D	153	61	42	29	42
								1.3

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-10 6/26/2001	MW-10 12/12/2001	MW-10 6/19/2002	MW-10 12/12/2002	MW-10 6/24/2003	MW-10 12/2/2003	MW-10 6/1/2004	MW-10 12/7/2004	MW-10 8/23/2005
3.9	7.7	5	4.4	2		0.9 J		
	13							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

77	55	80	43	49	42	42	37	40
	24							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-10 12/13/2005	MW-10 1/29/2007	MW-10 7/18/2007	MW-10 12/5/2007	MW-10 6/10/2008	MW-10 12/3/2008	MW-10 6/3/2009	MW-10 12/3/2009
					4.1 J		5.0 U
0.8 J			0.8 J	0.7	0.9	0.7	0.6
					0.2 J		
					0.2 J		0.1 J

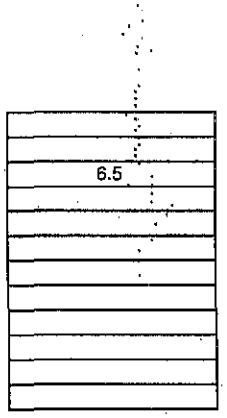
Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

35	30	27	31	25	17	19	13
						0.1 J	0.2 J
					0.3 J	0.1 J	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-10 6/8/2010
0.3 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration



Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-11A 3/7/1994	MW-11A 11/23/1994	MW-11A 2/24/1995	MW-11A 5/30/1995	MW-11A 8/29/1995	MW-11A 12/19/1995	MW-11A 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE						30.8	
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE		19	6.4				15.9
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	505	996	946	1170	2810	2230	2180
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE						30.8	6.4
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11A 12/6/1996	MW-11A 6/24/1997	MW-11A 12/4/1997	MW-11A 3/17/1998	MW-11A 7/10/1998	MW-11A 12/2/1998	MW-11A 7/14/1999	MW-11A 12/8/1999	MW-11A 6/14/2000
						12		13
						28		
					187	7.6		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

59.8	1060	1120	14.9 D	1530 D	776	580	290	630
	12.8			6 D	56.4	10		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11A 12/14/2000	MW-11A 6/28/2001	MW-11A 12/13/2001	MW-11A 6/21/2002	MW-11A 12/13/2002	MW-11A 6/25/2003	MW-11A 12/3/2003	MW-11A 6/10/2004	MW-11A 12/8/2004
		8.6						
7.8	12		14	21	13	7.3	9	11
	2.3			1.1	3.2	2.7	4 J	5 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

510	880	800	780	910	1700	1300	1000	1300
3.1	3.2	4.6	3.1	5.3	6.8	4.6	5 J	6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11A 8/23/2005	MW-11A 12/14/2005	MW-11A 1/30/2007	MW-11A 7/18/2007	MW-11A 12/5/2007	MW-11A 6/11/2008	MW-11A 12/4/2008	MW-11A 6/3/2009
9	8	6	3 J	5 J	3.9	5.1	3.3
			2 J				
3 J	3 J	2 J	4 J	2 J			0.7 J
					2.4	2.0 J	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

1000	940	1000	130	760	760	690	640
5 J	5 J	5 J	130	3 J	2.4	2.4 J	1.8 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11A 12/3/2009	MW-11A 6/9/2010
2.6	0.7
10 U	
63	0.9

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

220	40
4.2	0.4 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-11B 3/7/1994	MW-11B 11/23/1994	MW-11B 2/24/1995	MW-11B 5/30/1995	MW-11B 8/29/1995	MW-11B 12/19/1995	MW-11B 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	2				7.5	8	
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE	2						
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11B 12/5/1996	MW-11B 6/24/1997	MW-11B 12/4/1997	MW-11B 3/17/1998	MW-11B 7/10/1998	MW-11B 12/2/1998	MW-11B 7/14/1999	MW-11B 12/9/1999	MW-11B 6/14/2000
						10		
						10 B		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

9.6	8.8	13.2	6.3 D	58.2 D	53.5	18	18.5	13
8.5								
5.4		8.9	16.9 D	15.9 D	12.6	17	18.8	24
24.1								

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11B 12/14/2000	MW-11B 6/28/2001	MW-11B 12/13/2001	MW-11B 6/21/2002	MW-11B 12/13/2002	MW-11B 6/25/2003	MW-11B 12/3/2003	MW-11B 6/2/2004	MW-11B 12/8/2004
							2 J	3 J
							0.9 J	1 J
	1.9			1	1.8		2 J	3 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

38	35	49	9	60	35	61	80	90
37	43	59	21	90	110	59	89	110

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11B 8/23/2005	MW-11B 12/14/2005	MW-11B 1/30/2007	MW-11B DUP 1/30/2007	MW-11B 7/18/2007	MW-11B DUP 7/18/2007	MW-11B 12/5/2007	MW-11B DUP 12/5/2007	MW-11B 6/11/2008
3 J	3 J	2 J	2 J	5	5	4 J	4 J	3.3
1 J	1 J	2 J	2 J			2 J	2 J	1.7
3 J	3 J	5	5 J	2 J	2 J	4 J	4 J	4.7
								0.3

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

100	110	110	120	800	790	150	150	150
120	120	170	170	3 J	3 J	130	130	110

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-11B 12/4/2008	MW-11B 6/3/2009	MW-11B 12/3/2009	MW-11B 6/9/2010
4.2	3.6	4.3	4.0
		10 U	
1.9	1.9	1.7	1.6
5.1	5.9	4.6	4.2

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

140	150	160	160
96	91	80	68

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-12 3/7/1994	MW-12 11/23/1994	MW-12 2/24/1995	MW-12 5/30/1995	MW-12 8/29/1995	MW-12 12/18/1995	MW-12 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							5.4
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	41	103	13.3	69	1.5	55.6	87.1
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-12 12/5/1996	MW-12 6/23/1997	MW-12 12/4/1997	MW-12 7/9/1998	MW-12 12/2/1998	MW-12 7/14/1999	MW-12 12/7/1999	MW-12 6/14/2000	MW-12 12/14/2000

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

68.4	62.3		38.7 D	252	74	66	52	83
6								
								1.8

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-12 6/27/2001	MW-12 12/12/2001	MW-12 6/20/2002	MW-12 12/12/2002	MW-12 6/24/2003	MW-12 12/2/2003	MW-12 6/2/2004	MW-12 12/8/2004	MW-12 8/23/2005
1.2	1.2		1.5	2.5				
			9.5					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

110	100	80	130	110	58	56	57	51

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-12 12/14/2005	MW-12 1/30/2007	MW-12 12/5/2007	MW-12 6/11/2008	MW-12 12/4/2008	MW-12 6/3/2009	MW-12 12/2/2009	MW-12 6/9/2010
						5.0 U	
			0.2	0.3 J	0.2 J	0.1 J	
				0.3 J			
			0.2				

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

48	46	47	38	37	27	23	21

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-13 11/23/1994	MW-13 2/28/1995	MW-13 5/30/1995	MW-13 8/29/1995	MW-13 12/18/1995	MW-13 6/25/1996	MW-13 12/6/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
STYRENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-13 6/23/1997	MW-13 12/4/1997	MW-13 7/8/1998	MW-13 12/2/1998	MW-13 7/14/1999
				31
				10 B

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-14A 3/7/1994	MW-14A 11/23/1994	MW-14A 2/24/1995	MW-14A 5/30/1995	MW-14A 8/29/1995	MW-14A 12/18/1995	MW-14A 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-14A 12/5/1996	MW-14A 6/23/1997	MW-14A 12/4/1997	MW-14A 7/9/1998	MW-14A 12/2/1998	MW-14A 7/14/1999	MW-14A 12/8/1999	MW-14A 6/14/2000	MW-14A 12/14/2000
					10 B			

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

						5		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-14A 6/27/2001	MW-14A 12/13/2001	MW-14A 6/20/2002	MW-14A 12/13/2002	MW-14A 6/24/2003	MW-14A 12/2/2003	MW-14A 6/2/2004	MW-14A 12/8/2004	MW-14A 8/24/2005

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

							1 J	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-14A 2/1/2006	MW-14A 12/4/2007	MW-14A 6/10/2008	MW-14A 12/4/2008	MW-14A 6/2/2009	MW-14A 12/1/2009	MW-14A 6/7/2010

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

			1.3			
			0.1 J			

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-14B 6/3/2004	MW-14B 12/8/2004	MW-14B 8/24/2005	MW-14B 2/1/2006	MW-14B 7/18/2007	MW-14B 12/4/2007	MW-14B 6/10/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							20
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM	0.8 J	0.8 J	0.8 J	0.8 J		1 J	0.6
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE						0.9 J	0.6
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE							
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	12	13	14	11	11	14	11
TOLUENE							0.4
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE							0.4
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-14B 12/4/2008	MW-14B 6/2/2009	MW-14B 12/1/2009	MW-14B 6/7/2010
	3.2 J		
4.1 J	120		
	0.6		
0.9		0.9	0.8
0.7	0.1 J	0.6	0.7
13	0.7	12	13
	1		
0.5		0.5	0.5

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-15A 3/7/1994	MW-15A 11/23/1994	MW-15A 2/24/1995	MW-15A 5/30/1995	MW-15A 8/29/1995	MW-15A 12/18/1995
1,1,1-TRICHLOROETHANE (TCA)						
1,1,2,2-TETRACHLOROETHANE						
1,1,2-TRICHLOROETHANE						
1,1-DICHLOROETHANE						
1,1-DICHLOROETHENE						
1,2,3-TRICHLOROPROPANE						
1,2-DIBROMOETHANE (EDB)						
1,2-DICHLOROBENZENE						
1,2-DICHLOROETHANE						
1,2-DICHLOROPROPANE						
1,3-DICHLOROBENZENE						
1,4-DICHLOROBENZENE						
2-BUTANONE (MEK)						
2-CHLOROETHYL VINYL ETHER						
2-HEXANONE						
4-METHYL-2-PENTANONE (MIBK)						
ACETONE						
ACRYLONITRILE						
BENZENE						
BROMODICHLOROMETHANE						
BROMOFORM						
BROMOMETHANE						
CARBON DISULFIDE						
CARBON TETRACHLORIDE						
CHLOROBENZENE						
CHLOROETHANE						
CHLOROFORM						
CHLOROMETHANE						
Cis/Trans-1,2-Dichloroethene						
CIS-1,2-DICHLOROETHENE						
CIS-1,3-DICHLOROPROPENE						
DIBROMOCHLOROMETHANE						
DIBROMOMETHANE						
DICHLORODIFLUOROMETHANE						
DIISOPROPYL ETHER						
ETHYLBENZENE						
METHYL TERT-BUTYL ETHER						
METHYLENE CHLORIDE						
NAPHTHALENE						
STYRENE						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)						
TOLUENE						
TRANS-1,2-DICHLOROETHENE						
TRANS-1,3-DICHLOROPROPENE						
TRANS-1,4-DICHLOROBUTENE						
TRICHLOROETHYLENE						
TRICHLOROFLUOROMETHANE						
VINYL ACETATE						
VINYL CHLORIDE						
Xylene (Total)						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15A 6/25/1996	MW-15A 12/5/1996	MW-15A 6/24/1997	MW-15A 12/4/1997	MW-15A 7/9/1998	MW-15A 12/2/1998	MW-15A 7/15/1999	MW-15A 12/9/1999
						10 B	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15A 6/14/2000	MW-15A 12/14/2000	MW-15A 6/28/2001	MW-15A 12/13/2001	MW-15A 6/20/2002	MW-15A 12/13/2002	MW-15A 6/24/2003	MW-15A 12/3/2003

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15A 6/2/2004	MW-15A 12/8/2004	MW-15A 1/31/2007	MW-15A 7/18/2007	MW-15A 12/4/2007

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-15AR 6/9/2008	MW-15AR 12/3/2008	MW-15AR 6/1/2009	MW-15AR 12/1/2009	MW-15AR 6/8/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE					
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM					
CHLOROMETHANE					
CIS-1,2-DICHLOROETHENE					
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES					
METHYLENE CHLORIDE					
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)					
TOLUENE					
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE					
VINYL CHLORIDE					
Xylene (Total)					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-15B 3/7/1994	MW-15B 11/23/1994	MW-15B 2/24/1995	MW-15B 5/30/1995	MW-15B 8/29/1995	MW-15B 12/18/1995
1,1,1-TRICHLOROETHANE (TCA)						
1,1,2,2-TETRACHLOROETHANE						
1,1,2-TRICHLOROETHANE						
1,1-DICHLOROETHANE						
1,1-DICHLOROETHENE						
1,2,3-TRICHLOROPROPANE						
1,2-DIBROMOETHANE (EDB)						
1,2-DICHLOROBENZENE						
1,2-DICHLOROETHANE						
1,2-DICHLOROPROPANE						
1,3-DICHLOROBENZENE						
1,4-DICHLOROBENZENE						
2-BUTANONE (MEK)						
2-CHLOROETHYL VINYL ETHER						
2-HEXANONE						
4-METHYL-2-PENTANONE (MIBK)						
ACETONE						
ACRYLONITRILE						
BENZENE						
BROMODICHLOROMETHANE						
BROMOFORM						
BROMOMETHANE						
CARBON DISULFIDE						
CARBON TETRACHLORIDE						
CHLOROBENZENE						
CHLOROETHANE						
CHLOROFORM						
CHLOROMETHANE						
Cis/Trans-1,2-Dichloroethene						
CIS-1,2-DICHLOROETHENE						
CIS-1,3-DICHLOROPROPENE						
DIBROMOCHLOROMETHANE						
DIBROMOMETHANE						
DICHLORODIFLUOROMETHANE						
DIISOPROPYL ETHER						
ETHYLBENZENE						
METHYL TERT-BUTYL ETHER						
METHYLENE CHLORIDE						
NAPHTHALENE						
STYRENE						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)	6					
TOLUENE						
TRANS-1,2-DICHLOROETHENE						
TRANS-1,3-DICHLOROPROPENE						
TRANS-1,4-DICHLOROBUTENE						
TRICHLOROETHYLENE						
TRICHLOROFLUOROMETHANE						
VINYL ACETATE						
VINYL CHLORIDE						
Xylene (Total)						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15B 12/22/1995	MW-15B 6/25/1996	MW-15B 12/5/1996	MW-15B 6/24/1997	MW-15B 12/4/1997	MW-15B 7/9/1998	MW-15B 12/2/1998	MW-15B 7/15/1999
							16
							10 B

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

						13	6
					5.2 D		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15B 12/10/1999	MW-15B 6/14/2000	MW-15B 12/14/2000	MW-15B 6/28/2001	MW-15B 12/13/2001	MW-15B 6/20/2002	MW-15B 12/13/2002	MW-15B 6/24/2003
				1.2		1.5	1.6
			2				1.2

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

6.9		13	8.8	12	13	34	31
		8.2	4.9	7.4	6.1	10	11

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-15B 12/3/2003	MW-15B 6/2/2004	MW-15B 12/8/2004	MW-15B 1/31/2007	MW-15B 7/19/2007	MW-15B 12/4/2007
	2 J	2 J	3 J	3 J	3 J
	2 J	2 J	11	11	14

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

39	51	58	70	76	88
12	14	14	10	9	12

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-15BR 6/9/2008	MW-15BR 12/3/2008	MW-15BR 6/1/2009	MW-15BR 12/1/2009	MW-15BR 6/8/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE					
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM	3.6	3.7	4.1	4.0	3.9
CHLOROMETHANE					
CIS-1,2-DICHLOROETHENE	15	16	18	18	17
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES					
METHYLENE CHLORIDE					
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)	110	97	120	120	120
TOLUENE					
TRANS-1,2-DICHLOROETHENE	0.4	0.2 J	0.3 J	0.2 J	1
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE	14	14	16	17	16
VINYL CHLORIDE					
Xylene (Total)					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-16A 3/7/1994	MW-16A 11/23/1994	MW-16A 2/24/1995	MW-16A 5/30/1995	MW-16A 8/29/1995	MW-16A 12/18/1995
1,1,1-TRICHLOROETHANE (TCA)						
1,1,2,2-TETRACHLOROETHANE						
1,1,2-TRICHLOROETHANE						
1,1-DICHLOROETHANE						
1,1-DICHLOROETHENE						
1,2,3-TRICHLOROPROPANE						
1,2-DIBROMOETHANE (EDB)						
1,2-DICHLOROBENZENE						
1,2-DICHLOROETHANE						
1,2-DICHLOROPROPANE						
1,3-DICHLOROBENZENE						
1,4-DICHLOROBENZENE						
2-BUTANONE (MEK)						
2-CHLOROETHYL VINYL ETHER						
2-HEXANONE						
4-METHYL-2-PENTANONE (MIBK)						
ACETONE						
ACRYLONITRILE						
BENZENE						
BROMODICHLOROMETHANE						
BROMOFORM						
BROMOMETHANE						
CARBON DISULFIDE						
CARBON TETRACHLORIDE						
CHLOROBENZENE						
CHLOROETHANE						
CHLOROFORM						
CHLOROMETHANE						
Cis/Trans-1,2-Dichloroethene						
CIS-1,2-DICHLOROETHENE						
CIS-1,3-DICHLOROPROPENE						
DIBROMOCHLOROMETHANE						
DIBROMOMETHANE						
DICHLORODIFLUOROMETHANE						
DIISOPROPYL ETHER						
ETHYLBENZENE						
METHYL TERT-BUTYL ETHER						
METHYLENE CHLORIDE						
NAPHTHALENE						
STYRENE						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)						
TOLUENE						
TRANS-1,2-DICHLOROETHENE						
TRANS-1,3-DICHLOROPROPENE						
TRANS-1,4-DICHLOROBUTENE						
TRICHLOROETHYLENE						
TRICHLOROFLUOROMETHANE						
VINYL ACETATE						
VINYL CHLORIDE						
Xylene (Total)						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16A 6/25/1996	MW-16A 12/5/1996	MW-16A 6/23/1997	MW-16A 12/4/1997	MW-16A 7/9/1998	MW-16A 12/2/1998	MW-16A 7/14/1999	MW-16A 12/8/1999
						10 B	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16A 6/14/2000	MW-16A 12/14/2000	MW-16A 6/28/2001	MW-16A 12/13/2001	MW-16A 6/20/2002	MW-16A 12/12/2002	MW-16A 6/24/2003	MW-16A 12/3/2003
					3.4		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16A 6/2/2004	MW-16A 12/8/2004	MW-16A 1/31/2007	MW-16A 7/18/2007	MW-16A 12/4/2007

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

		13	10	11

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-16AR 6/10/2008	MW-16AR 12/3/2008	MW-16AR 6/2/2009	MW-16AR 12/1/2009	MW-16AR 6/7/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE					
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM	0.2	0.2 J	0.3 J	0.2 J	0.3 J
CHLOROMETHANE					
CIS-1,2-DICHLOROETHENE					
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES					
METHYLENE CHLORIDE					
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)	13	11	14	9.6	12
TOLUENE					
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE					
VINYL CHLORIDE					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-16B 3/7/1994	MW-16B 11/23/1994	MW-16B 2/24/1995	MW-16B 5/30/1995	MW-16B 8/29/1995	MW-16B 12/18/1995
1,1,1-TRICHLOROETHANE (TCA)						
1,1,2,2-TETRACHLOROETHANE						
1,1,2-TRICHLOROETHANE						
1,1-DICHLOROETHANE						
1,1-DICHLOROETHENE						
1,2,3-TRICHLOROPROPANE						
1,2-DIBROMOETHANE (EDB)						
1,2-DICHLOROBENZENE						
1,2-DICHLOROETHANE						
1,2-DICHLOROPROPANE						
1,3-DICHLOROBENZENE						
1,4-DICHLOROBENZENE						
2-BUTANONE (MEK)						
2-CHLOROETHYL VINYL ETHER						
2-HEXANONE						
4-METHYL-2-PENTANONE (MIBK)						
ACETONE						
ACRYLONITRILE						
BENZENE						
BROMODICHLOROMETHANE						
BROMOFORM						
BROMOMETHANE						
CARBON DISULFIDE						
CARBON TETRACHLORIDE						
CHLOROBENZENE						
CHLOROETHANE						
CHLOROFORM						
CHLOROMETHANE						
Cis/Trans-1,2-Dichloroethene						
CIS-1,2-DICHLOROETHENE						
CIS-1,3-DICHLOROPROPENE						
DIBROMOCHLOROMETHANE						
DIBROMOMETHANE						
DICHLORODIFLUOROMETHANE						
DIISOPROPYL ETHER						
ETHYLBENZENE						
METHYL TERT-BUTYL ETHER						
METHYLENE CHLORIDE						
NAPHTHALENE						
STYRENE						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)	28	18	64.9	13	21.6	15.4
TOLUENE						
TRANS-1,2-DICHLOROETHENE						
TRANS-1,3-DICHLOROPROPENE						
TRANS-1,4-DICHLOROBUTENE						
TRICHLOROETHYLENE						
TRICHLOROFLUOROMETHANE						
VINYL ACETATE						
VINYL CHLORIDE						
Xylene (Total)						

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16B 6/25/1996	MW-16B 12/5/1996	MW-16B 6/24/1997	MW-16B 12/4/1997	MW-16B 7/9/1998	MW-16B 12/2/1998	MW-16B 7/15/1999	MW-16B 12/9/1999
						15	
						11 B	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

17.2	18.4	13.6	15.8	19.9	47	16	15.4

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16B 6/14/2000	MW-16B 12/14/2000	MW-16B 6/28/2001	MW-16B 12/13/2001	MW-16B 6/20/2002	MW-16B 12/12/2002	MW-16B 6/24/2003	MW-16B 12/3/2003
	1.6						
		1.5	1.9	1.3	2.1	2.2	
		2.3			1.2	1.6	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

11	13	14	19	7.8	29	28	25
	1.5				1.1		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-16B 6/2/2004	MW-16B 12/8/2004	MW-16B 1/31/2007	MW-16B 7/18/2007	MW-16B 12/4/2007
		16 J	42	
2 J	2 J	2 J		
2 J	2 J	1 J		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

29	27	10	3 J	3 J
		1 J	0.8 J	0.3 J
1 J	1 J			

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-16BR 6/10/2008	MW-16BR 12/3/2008	MW-16BR 6/2/2009	MW-16BR 12/1/2009	MW-16BR 6/7/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE	3.1				
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM	0.4	0.9	2.1	0.8	1.4
CHLOROMETHANE	0.3				
CIS-1,2-DICHLOROETHENE	0.6	0.6	1.1	0.2 J	0.7
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES					
METHYLENE CHLORIDE					
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)	7.0	7.1	19	3.1	10
TOLUENE	0.5				
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE	0.6	0.6	1.2	0.5 J	0.8
VINYL CHLORIDE					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-17B 12/21/1995	MW-17B 6/25/1996	MW-17B 12/6/1996	MW-17B 6/23/1997	MW-17B 12/5/1997	MW-17B 3/17/1998	MW-17B 7/10/1998
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE				6.7			22 D
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE					13.3	76.6	29.1 D
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	383	604		415	561	244 D	2160 D
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE	117	57.3	81.5	35.2	38.2	29.9	40.4 D
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-17B 12/1/1998	MW-17B 7/14/1999	MW-17B 12/9/1999	MW-17B 6/14/2000	MW-17B 12/13/2000	MW-17B 6/27/2001	MW-17B 12/12/2001	MW-17B 6/21/2002	MW-17B 12/11/2002
						9.4		
				13	8.8		6.1	
	6.6	5.9		2.8	3.6	5.6	4.5	6
7.1	36	25	19	9.6	17	29	27	31
	11 B							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

863	490	190	530	830	990	940	1100	880
15.3	37	28	19	50	18	21	18	20

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-17B 6/25/2003	MW-17B 12/2/2003	MW-17B 6/1/2004	MW-17B 12/7/2004	MW-17B 8/22/2005	MW-17B 12/13/2005	MW-17B 1/29/2007	MW-17B 7/18/2007	MW-17B 12/5/2007
	35	32 J	32	36	34	29	35	14
7.1	2		4 J	3 J	3 J	3 J	3 J	3 J
99	19	21 J	23	15	15	14	13	19

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

830	2000	1800	2000	1500	1500	1900	1600	1300
20	21	20 J	21	17	18	18	17	14

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-17B 6/11/2008	MW-17B 12/3/2008	MW-17B 6/2/2009	MW-17B 12/2/2009	MW-17B 6/9/2010
13	13	16	15	20
2.8	2.8 J	2.2 J	2.0 J	1.9 J
13	14	6.6	8.4	6.1
2.4	2.3 J			

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

1600	1500	1500	1100	890
12	13	10	9.5	7.6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-18B 11/23/1994	MW-18B 12/21/1995	MW-18B 6/25/1996	MW-18B 12/6/1996	MW-18B 6/24/1997	MW-18B 12/5/1997	MW-18B 3/17/1998
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE		65.3	36.2	90.8	100	178	31.2
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE						38	12.8
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	360	3120	1460		3350	7090	1800 D
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE		131	145	129	57.3	78.5	71.4 D
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-18B 7/10/1998	MW-18B 12/1/1998	MW-18B 7/14/1999	MW-18B 12/10/1999	MW-18B 6/14/2000	MW-18B 12/13/2000	MW-18B 6/27/2001	MW-18B 12/12/2001	MW-18B 6/19/2002
91.1 D		150	54.8	35	6	37		24
							1.1	
					3.7	4.2	5.4	4.2
48.1 D	44.8	38	16	12	17	19	54	11

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

6140 D	15700	6900	1320	1100	830	1800	8900 E	1700
113 D	76.9	68	68.3	46	19	52	60	41

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-18B 12/11/2002	MW-18B 6/25/2003	MW-18B 12/2/2003	MW-18B 6/1/2004	MW-18B 12/7/2004	MW-18B 8/22/2005	MW-18B 12/13/2005	MW-18B 1/29/2007	MW-18B 7/18/2007
120	77	78	35 J	76	77	19	39	130
		3.3		4 J	4 J		3 J	5 J
38	27	27	16 J	32	32	9 J	29	48

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

4200	4100	2600	1500	3000	1800	1300	2600	3400
40	42	40	20 J	29	27	10 J	25	41

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-18B 12/5/2007	MW-18B 6/10/2008	MW-18B DUP 6/10/2008	MW-18B 12/3/2008	MW-18B DUP 12/3/2008	MW-18B 6/3/2009	MW-18B DUP 6/3/2009
200	95	97	100	100	74	71
5 J					4.1 J	4.0 J
65	43	42	36	36	26	25
			27	25		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

4800	3600	3800	3000	2800	2700	2700
					2.8 J	2.7 J
49	34	36	33	34	27	25

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-18B 12/2/2009	MW-18B DUP 12/2/2009	MW-18B DUP 6/9/2010	MW-18B 6/9/2010
86	80	14	14
3.1 J		1.3 J	
26	29	8.6	8.4 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

2800	2800	690	610
26	25 J	6.8	6.5 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-19B 7/10/1998	MW-19B 12/2/1998	MW-19B 7/15/1999	MW-19B 12/9/1999	MW-19B 6/14/2000	MW-19B 12/13/2002	MW-19B 12/2/2003
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE			8.7 B				
NAPHTHALENE							
O-XYLENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

STYRENE							
TETRACHLOROETHENE (PCE)	8.1 D						
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-19B 7/18/2007	MW-19B 12/4/2007	MW-19B 6/9/2008	MW-19B 12/2/2008
			5.5
			0.1 J
			0.3 J
		1.3	0.4 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

			0.2 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-19B1 12/8/2004	MW-19B1 8/24/2005	MW-19B1 12/20/2005	MW-19B1 7/19/2007	MW-19B1 12/4/2007	MW-19B1 6/9/2008	MW-19B1 12/2/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE				3 J			
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-19B1 6/2/2009	MW-19B1 12/1/2009	MW-19B1 6/7/2010

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-2 12/20/1995	MW-2 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)		
1,1,2,2-TETRACHLOROETHANE		
1,1,2-TRICHLOROETHANE		
1,1-DICHLOROETHANE		
1,1-DICHLOROETHENE		
1,2-DIBROMOETHANE (EDB)		
1,2-DICHLOROBENZENE		
1,2-DICHLOROETHANE		
1,2-DICHLOROPROPANE		
1,3-DICHLOROBENZENE		
1,4-DICHLOROBENZENE		
2-BUTANONE (MEK)		
2-CHLOROETHYL VINYL ETHER		
BENZENE		
BROMODICHLOROMETHANE		
BROMOFORM		
BROMOMETHANE		
CARBON TETRACHLORIDE		
CHLOROBENZENE		
CHLOROETHANE		
CHLOROFORM		
CHLOROMETHANE		
Cis/Trans-1,2-Dichloroethene		
CIS-1,3-DICHLOROPROPENE		
DIBROMOCHLOROMETHANE		
DICHLORODIFLUOROMETHANE		
DIISOPROPYL ETHER		
ETHYLBENZENE		
METHYL TERT-BUTYL ETHER		
METHYLENE CHLORIDE		
NAPHTHALENE		
TETRACHLOROETHENE (PCE)		
TOLUENE		
TRANS-1,2-DICHLOROETHENE		
TRANS-1,3-DICHLOROPROPENE		
TRICHLOROETHYLENE		
TRICHLOROFLUOROMETHANE		
VINYL CHLORIDE		
Xylene (Total)		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-20A 6/3/2004	MW-20A 12/8/2004	MW-20A 2/6/2007	MW-20A 12/4/2007	MW-20A 6/10/2008	MW-20A 12/2/2008	MW-20A 6/1/2009
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE				6 J			
BENZENE				0.5 J			
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES						0.2 J	
METHYLENE CHLORIDE							
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-20A 12/2/2009	MW-20A 6/8/2010
5.0 U	
0.2 J	
0.3 J	
0.1 J	
0.2 J	
0.2 J	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-20B 6/3/2004	MW-20B 12/8/2004	MW-20B 7/18/2007	MW-20B 12/4/2007	MW-20B 6/10/2008	MW-20B 12/2/2008	MW-20B 6/1/2009
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE					5.0		
BENZENE					0.5	0.5 J	0.3 J
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE		3 J					
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE					0.2	0.2 J	
M,P-XYLENES					0.4	0.5 J	0.2 J
METHYLENE CHLORIDE							
O-XYLENE					0.3	0.2 J	0.1 J
STYRENE							
TETRACHLOROETHENE (PCE)					0.1	0.2 J	0.3 J
TOLUENE	2 J	1 J			0.4	0.3 J	0.2 J
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-20B 12/2/2009	MW-20B 6/8/2010
	0.4 J
	0.2 J
	0.1 J
	0.3 J
	0.1 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-21A 12/8/2004	MW-21A 1/31/2007	MW-21A 7/19/2007	MW-21A 12/4/2007
1,1,1-TRICHLOROETHANE (TCA)				
1,1,2,2-TETRACHLOROETHANE				
1,1,2-TRICHLOROETHANE				
1,1-DICHLOROETHANE				
1,1-DICHLOROETHENE				
1,2-DICHLOROETHANE				
1,2-DICHLOROPROPANE				
2-BUTANONE (MEK)				
2-HEXANONE				
4-METHYL-2-PENTANONE (MIBK)				
ACETONE				
BENZENE				
BROMODICHLOROMETHANE				
BROMOFORM				
BROMOMETHANE				
CARBON DISULFIDE				
CARBON TETRACHLORIDE				
CHLOROBENZENE				
CHLOROETHANE				
CHLOROFORM				
CHLOROMETHANE				
CIS-1,2-DICHLOROETHENE				
CIS-1,3-DICHLOROPROPENE				
DIBROMOCHLOROMETHANE				
ETHYLBENZENE				
METHYLENE CHLORIDE				
STYRENE				
TETRACHLOROETHENE (PCE)		7	6	6
TOLUENE				
TRANS-1,2-DICHLOROETHENE				
TRANS-1,3-DICHLOROPROPENE				
TRICHLOROETHYLENE				
VINYL CHLORIDE				
Xylene (Total)				

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-21AR 6/9/2008	MW-21AR 12/2/2008	MW-21AR 6/1/2009	MW-21AR 12/2/2009	MW-21AR 6/8/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE					
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM	0.3	0.3 J	0.3 J	0.4 J	0.4 J
CHLOROMETHANE					
CIS-1,2-DICHLOROETHENE	0.2	0.2 J	0.2 J	0.2 J	0.3 J
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES		0.1 J			
METHYLENE CHLORIDE	0.3				
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)	7.8	6.3	5.7	7.2	8.2
TOLUENE					
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE	0.2	0.1 J	0.1 J	0.2 J	0.2 J
VINYL CHLORIDE					
Xylene (Total)					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-21B 12/8/2004	MW-21B 1/31/2007	MW-21B 7/19/2007	MW-21B 12/4/2007
1,1,1-TRICHLOROETHANE (TCA)				
1,1,2,2-TETRACHLOROETHANE				
1,1,2-TRICHLOROETHANE				
1,1-DICHLOROETHANE				
1,1-DICHLOROETHENE				
1,2-DICHLOROETHANE				
1,2-DICHLOROPROPANE				
2-BUTANONE (MEK)				
2-HEXANONE				
4-METHYL-2-PENTANONE (MIBK)				
ACETONE				
BENZENE				
BROMODICHLOROMETHANE				
BROMOFORM				
BROMOMETHANE				
CARBON DISULFIDE				
CARBON TETRACHLORIDE				
CHLOROBENZENE				
CHLOROETHANE				
CHLOROFORM				
CHLOROMETHANE				
CIS-1,2-DICHLOROETHENE				
CIS-1,3-DICHLOROPROPENE				
DIBROMOCHLOROMETHANE				
ETHYLBENZENE				
METHYLENE CHLORIDE				
STYRENE				
TETRACHLOROETHENE (PCE)	2 J	9	7	8
TOLUENE				
TRANS-1,2-DICHLOROETHENE				
TRANS-1,3-DICHLOROPROPENE				
TRICHLOROETHYLENE				
VINYL CHLORIDE				
Xylene (Total)				

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-21BR 6/9/2008	MW-21BR 12/3/2008	MW-21BR 6/1/2009	MW-21BR 12/2/2009	MW-21BR 6/8/2010
1,1,1-TRICHLOROETHANE (TCA)					
1,1,2,2-TETRACHLOROETHANE					
1,1,2-TRICHLOROETHANE					
1,1-DICHLOROETHANE					
1,1-DICHLOROETHENE					
1,2-DICHLOROETHANE					
1,2-DICHLOROPROPANE					
2-BUTANONE (MEK)					
2-HEXANONE					
4-METHYL-2-PENTANONE (MIBK)					
ACETONE					
BENZENE					
BROMODICHLOROMETHANE					
BROMOFORM					
BROMOMETHANE					
CARBON DISULFIDE					
CARBON TETRACHLORIDE					
CHLOROBENZENE					
CHLOROETHANE					
CHLOROFORM	0.4	0.5 J	0.5	0.5	0.5 J
CHLOROMETHANE					
CIS-1,2-DICHLOROETHENE	0.1	0.3 J	0.3 J	0.4 J	0.4 J
CIS-1,3-DICHLOROPROPENE					
DIBROMOCHLOROMETHANE					
ETHYLBENZENE					
M,P-XYLENES					
METHYLENE CHLORIDE					
O-XYLENE					
STYRENE					
TETRACHLOROETHENE (PCE)	6.9	11	13	13	12 J
TOLUENE					
TRANS-1,2-DICHLOROETHENE					
TRANS-1,3-DICHLOROPROPENE					
TRICHLOROETHYLENE	0.1	0.2 J	0.3 J	0.3 J	0.3 J
VINYL CHLORIDE					
Xylene (Total)					

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-22A 8/23/2005	MW-22A 12/14/2005	MW-22A 1/29/2007	MW-22A 7/18/2007	MW-22A 12/5/2007	MW-22A 6/10/2008	MW-22A 12/4/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM	54	70	56	79	53	48	64
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE	100	170	110	210	150	150	170
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE							2.3 J
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	1500	3100	1800	3300	1700	1600	1400
TOLUENE							
TRANS-1,2-DICHLOROETHENE	5	7 J	5 J	8 J	6 J	6.5	7.6
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE	250	360	260	400	260	230	250
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-22A 6/3/2009	MW-22A 12/3/2009	MW-22A 6/9/2010
67	64	61
220	240	250
2400	2300	2400
7.8	7.7 J	8.4 J
320	310	300

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-22B N	MW-22B N	MW-22B N	MW-22B N	MW-22B N	MW-22B N	MW-22B N
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE							
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	9	4 J	8	11	5 J	2.9	4.7
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE						0.1	0.3 J
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-22B N	MW-22B N	MW-22B N
2.3	4.2	6.0
	0.3 J	0.2 J

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-23A 8/23/2005	MW-23A 12/13/2005	MW-23A 1/30/2007	MW-23A 7/18/2007	MW-23A 12/5/2007	MW-23A 6/11/2008	MW-23A 12/3/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM	4 J	4 J	4 J	4 J	3 J	2.6	2.4
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE	1 J	2 J	2 J	2 J	3 J	2.2	2.6
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							0.5 J
METHYLENE CHLORIDE						1.3	0.7 J
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	280	270	310	280	300	320	230
TOLUENE							0.3 J
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE	20	23	25	26	25	21	20
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-23A 6/2/2009	MW-23A 12/2/2009	MW-23A 6/8/2010
2.8	2.2	1.9
2.1	1.9	1.8
310	210	160
24	18	14

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-23B 8/23/2005	MW-23B 12/13/2005	MW-23B 1/31/2007	MW-23B 7/18/2007	MW-23B 12/5/2007	MW-23B 6/11/2008	MW-23B 12/3/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE						0.1	
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE			2 J				
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM	4 J	0.8 J	7	3 J	3 J	6.7	1.8
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE			3 J	2 J	4 J	2.5	1.5
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE						0.2	
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	10	1 J	6	3 J	6	7.0	8.0
TOLUENE	1 J	2 J					
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE	1 J		2 J	2 J	3 J	3.2	2.9
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-23B 6/2/2009	MW-23B 12/2/2009	MW-23B 6/8/2010
	5.0 U	
1.4	2.9	1.0
2.0	3.6	2.3
	0.2 J	
8.1	9.1	5.6
	0.2 J	
2.4	3.7	2.1

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-24A 8/24/2005	MW-24A 12/13/2005	MW-24A 1/29/2007	MW-24A 7/18/2007	MW-24A 12/5/2007	MW-24A 6/11/2008	MW-24A 12/3/2008
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
2-BUTANONE (MEK)							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM	21	17	14	12	9	11	11
CHLOROMETHANE							
CIS-1,2-DICHLOROETHENE	33	22	12	9	8	14	13
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
ETHYLBENZENE							
M,P-XYLENES							
METHYLENE CHLORIDE						1.3	
O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	780	430	460	390	410	480	450
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRICHLOROETHYLENE	55	39	27	22	19	23	23
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-24A 6/2/2009	MW-24A 12/3/2009	MW-24A 6/8/2010
13	9.3	6.6
12	10	7.3
		2.7 J
470 J	430	280
24	20	13

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-3 3/7/1994	MW-3 11/23/1994	MW-3 2/24/1995	MW-3 5/30/1995	MW-3 8/29/1995	MW-3 12/21/1995	MW-3 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-4 3/7/1994	MW-4 11/23/1994	MW-4 2/28/1995	MW-4 5/30/1995	MW-4 8/29/1995	MW-4 12/20/1995	MW-4 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-5 3/7/1994	MW-5 11/23/1994	MW-5 2/24/1995	MW-5 5/30/1995	MW-5 8/29/1995	MW-5 12/20/1995	MW-5 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-6 3/7/1994	MW-6 11/23/1994	MW-6 2/24/1995	MW-6 5/30/1995	MW-6 8/29/1995	MW-6 12/19/1995	MW-6 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
STYRENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)	6						
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-6 12/6/1996	MW-6 6/23/1997	MW-6 12/4/1997	MW-6 7/8/1998	MW-6 12/1/1998	MW-6 7/13/1999	MW-6 12/7/1999	MW-6 6/14/2000	MW-6 6/26/2001

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-6 6/24/2003	MW-6 12/3/2003	MW-6 6/1/2004	MW-6 8/23/2005	MW-6 12/14/2005	MW-6 1/29/2007

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-7 3/7/1994	MW-7 11/23/1994	MW-7 2/24/1995	MW-7 5/30/1995	MW-7 8/29/1995	MW-7 12/20/1995	MW-7 6/25/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
TETRACHLOROETHENE (PCE)							
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL CHLORIDE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-8 2/24/1995
1,1,1-TRICHLOROETHANE (TCA)	
1,1,2,2-TETRACHLOROETHANE	
1,1,2-TRICHLOROETHANE	
1,1-DICHLOROETHANE	
1,1-DICHLOROETHENE	
1,2-DICHLOROBENZENE	
1,2-DICHLOROETHANE	
1,2-DICHLOROPROPANE	
1,3-DICHLOROBENZENE	
1,4-DICHLOROBENZENE	
2-CHLOROETHYL VINYL ETHER	
BROMODICHLOROMETHANE	
BROMOFORM	
BROMOMETHANE	
CARBON TETRACHLORIDE	
CHLOROBENZENE	
CHLOROETHANE	
CHLOROFORM	
CHLOROMETHANE	
CIS-1,2-DICHLOROETHENE	
CIS-1,3-DICHLOROPROPENE	
DIBROMOCHLOROMETHANE	
DICHLORODIFLUOROMETHANE	
METHYLENE CHLORIDE	
TETRACHLOROETHENE (PCE)	
TRANS-1,2-DICHLOROETHENE	
TRANS-1,4-DICHLOROBUTENE	
TRICHLOROETHYLENE	
TRICHLOROFLUOROMETHANE	
VINYL CHLORIDE	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-8A 12/21/1995	MW-8A 6/25/1996	MW-8A 12/6/1996	MW-8A 6/23/1997	MW-8A 12/5/1997	MW-8A 3/17/1998	MW-8A 7/10/1998
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							5.7 D
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							
STYRENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

TETRACHLOROETHENE (PCE)	598	636		379	478	480 D	475 D
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE	7		6				
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-8A 12/1/1998	MW-8A 7/13/1999	MW-8A 6/14/2000	MW-8A 12/2/2003
			17
	11 B		

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

798	300	170	460
			3.6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-8B 3/7/1994	MW-8B 11/23/1994	MW-8B 5/30/1995	MW-8B 8/29/1995	MW-8B 12/21/1995	MW-8B 6/25/1996	MW-8B 12/6/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)	17		14	8.6	11.7	18.4	34.1
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE		22			31.1	18.4	19.1
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-8B 6/24/1997	MW-8B 12/5/1997	MW-8B 3/17/1998	MW-8B 7/10/1998	MW-8B 12/1/1998	MW-8B 7/13/1999	MW-8B 12/8/1999	MW-8B 6/14/2000	MW-8B 12/13/2000
								5.1
			5.2 D	8.6	7.7	9.1		13
								2.3

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

20.9	23.7	19.8 D	48 D	114	42	23		44
17.9	20.1	22.6 D	33.2 D	29	24	20	8.1	20

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-8B 6/27/2001	MW-8B 12/12/2001	MW-8B 6/19/2002	MW-8B 12/12/2002	MW-8B 6/25/2003	MW-8B 12/2/2003	MW-8B 6/1/2004	MW-8B 12/7/2004	MW-8B 8/22/2005
5.8	6.5	6.4	5.8	5.4	3.8	6	6	5
11		9	9.3	7.3	6.8	9	9	6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

49	54	62	61	53	63	71	79	74
21		21	20	18	16	18	16	13

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-8B 12/13/2005	MW-8B 1/29/2007	MW-8B 7/19/2007	MW-8B 12/5/2007	MW-8B 6/10/2008	MW-8B 12/3/2008	MW-8B 6/2/2009	MW-8B 12/3/2009
6	6	5 J	5 J	4.1	4.1	4.7	4.0
7	5	3 J	4 J	3.1	2.3	1.8	1.9

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

100	130	120	140	120	120	140	140
13	12	9	9	7.6	7.1	7.4	6.4

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-8B 6/8/2010
3.5
1.6

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

120
5.3

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

Compound	MW-9 11/23/1994	MW-9 2/24/1995	MW-9 5/30/1995	MW-9 8/29/1995	MW-9 12/19/1995	MW-9 6/25/1996	MW-9 12/6/1996
1,1,1-TRICHLOROETHANE (TCA)							
1,1,2,2-TETRACHLOROETHANE							
1,1,2-TRICHLOROETHANE							
1,1-DICHLOROETHANE							
1,1-DICHLOROETHENE							
1,2,3-TRICHLOROPROPANE							
1,2-DIBROMOETHANE (EDB)							
1,2-DICHLOROBENZENE							
1,2-DICHLOROETHANE							
1,2-DICHLOROPROPANE							
1,3-DICHLOROBENZENE							
1,4-DICHLOROBENZENE							
2-BUTANONE (MEK)							
2-CHLOROETHYL VINYL ETHER							
2-HEXANONE							
4-METHYL-2-PENTANONE (MIBK)							
ACETONE							
ACRYLONITRILE							
BENZENE							
BROMODICHLOROMETHANE							
BROMOFORM							
BROMOMETHANE							
CARBON DISULFIDE							
CARBON TETRACHLORIDE							
CHLOROBENZENE							
CHLOROETHANE							
CHLOROFORM							
CHLOROMETHANE							
Cis/Trans-1,2-Dichloroethene							
CIS-1,2-DICHLOROETHENE							
CIS-1,3-DICHLOROPROPENE							
DIBROMOCHLOROMETHANE							
DIBROMOMETHANE							
DICHLORODIFLUOROMETHANE							
DIISOPROPYL ETHER							
ETHYLBENZENE							
M,P-XYLENES							
METHYL TERT-BUTYL ETHER							
METHYLENE CHLORIDE							
NAPHTHALENE							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

O-XYLENE							
STYRENE							
TETRACHLOROETHENE (PCE)		3.4					
TOLUENE							
TRANS-1,2-DICHLOROETHENE							
TRANS-1,3-DICHLOROPROPENE							
TRANS-1,4-DICHLOROBUTENE							
TRICHLOROETHYLENE							
TRICHLOROFLUOROMETHANE							
VINYL ACETATE							
VINYL CHLORIDE							
Xylene (Total)							

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-9 6/23/1997	MW-9 12/5/1997	MW-9 7/9/1998	MW-9 12/1/1998	MW-9 7/13/1999	MW-9 12/7/1999	MW-9 6/14/2000	MW-9 12/13/2000	MW-9 6/26/2001

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

	5.9						1.3	

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

MW-9 12/11/2001	MW-9 6/19/2002	MW-9 12/12/2002	MW-9 6/24/2003	MW-9 12/2/2003	MW-9 6/1/2004	MW-9 12/7/2004	MW-9 8/22/2005	MW-9 12/13/2005

Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

2	1.3			1.6	1 J	1 J	1 J	1 J

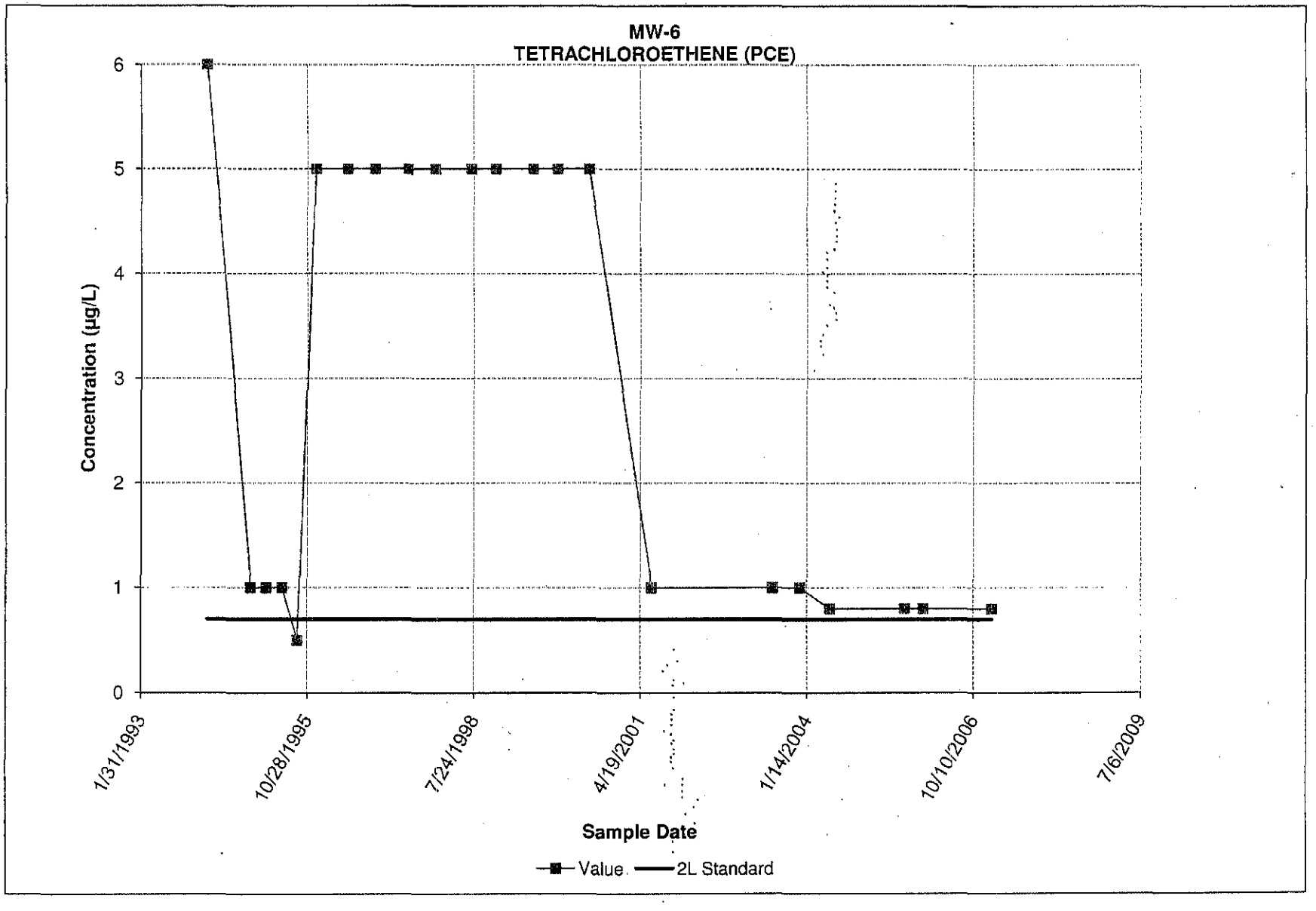
Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

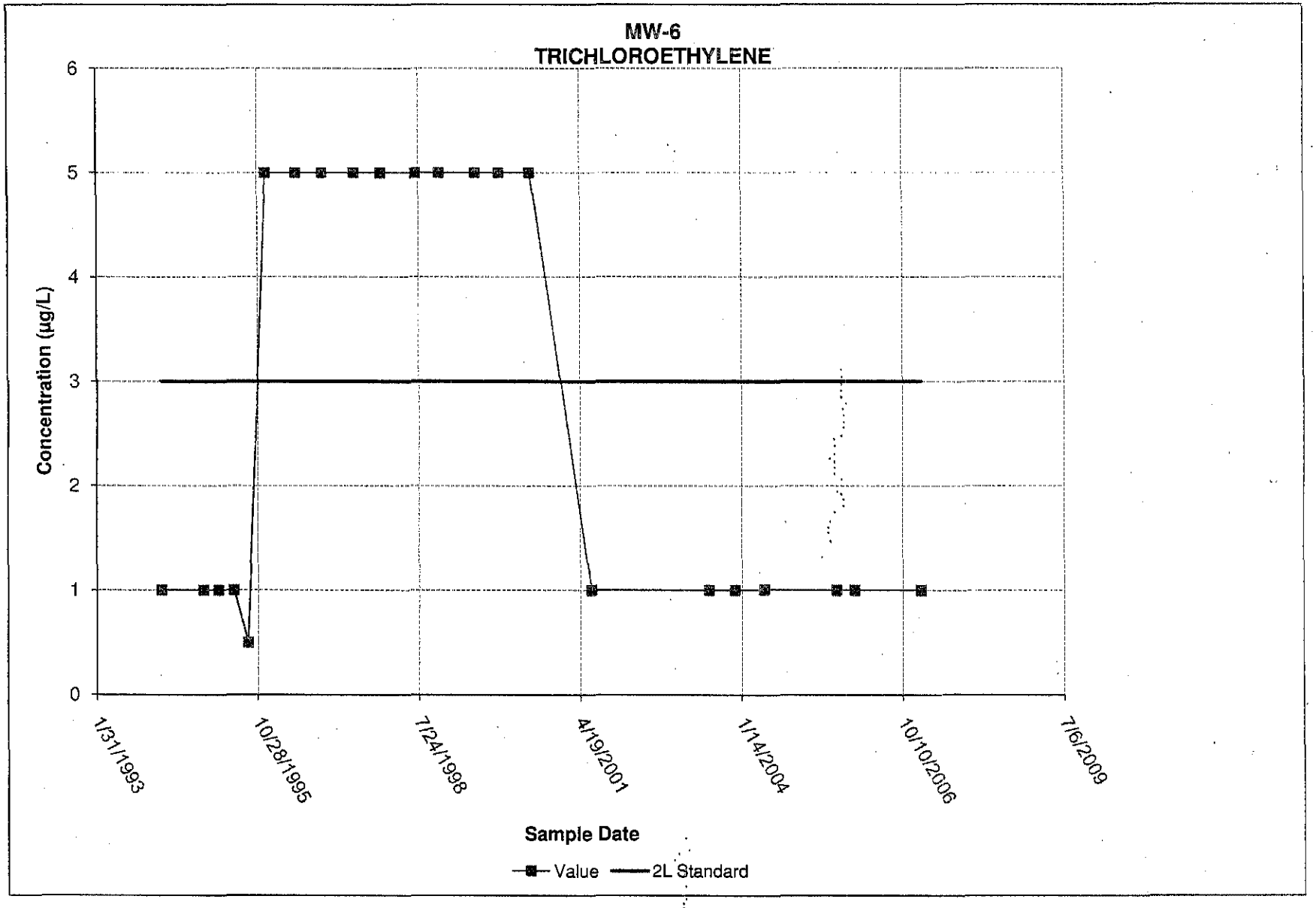
MW-9 1/29/2007	MW-9 7/18/2007	MW-9 12/5/2007	MW-9 6/10/2008	MW-9 12/4/2008	MW-9 6/3/2009	MW-9 12/3/2009	MW-9 6/8/2010
				6.0			
				0.4 J			

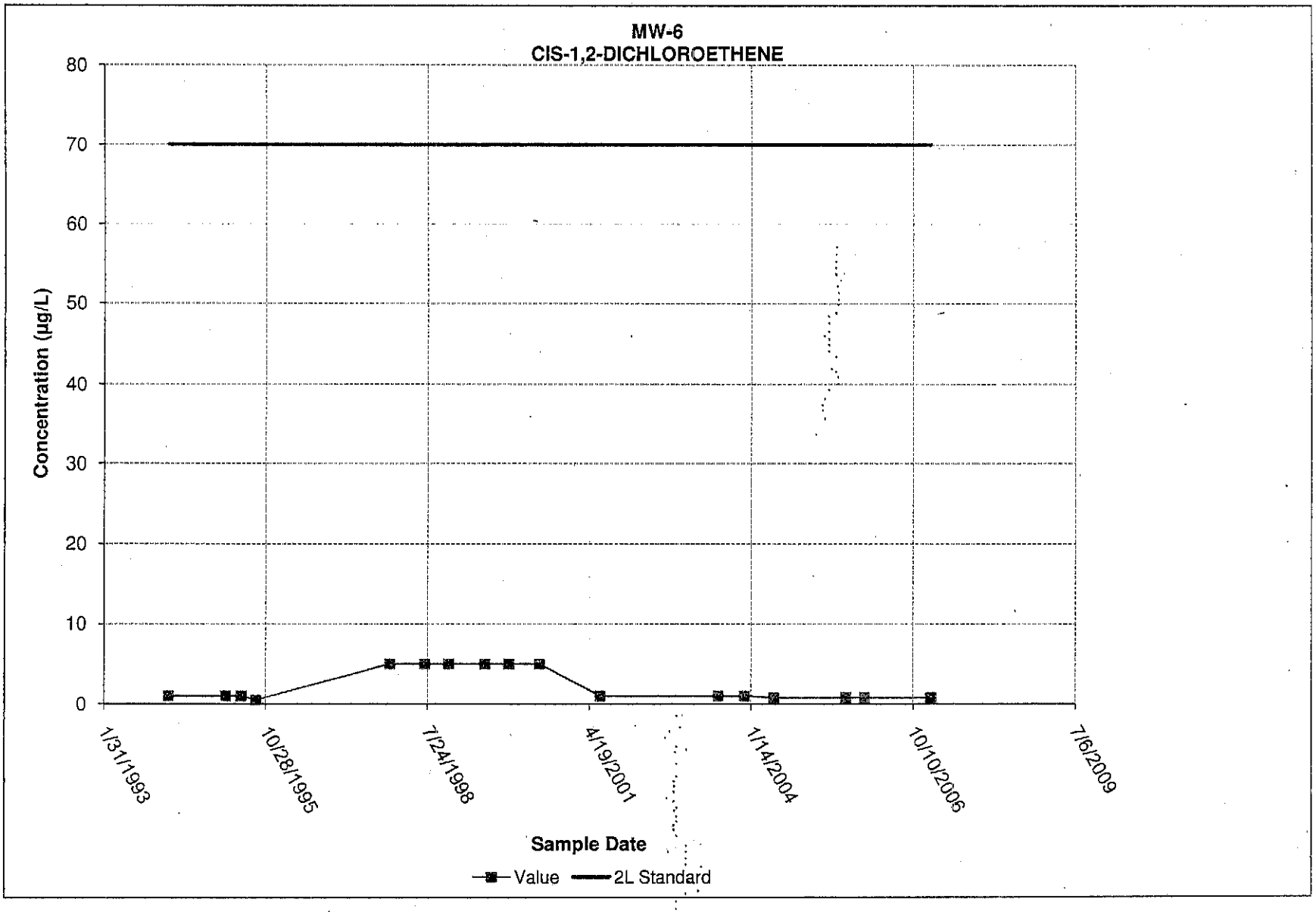
Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

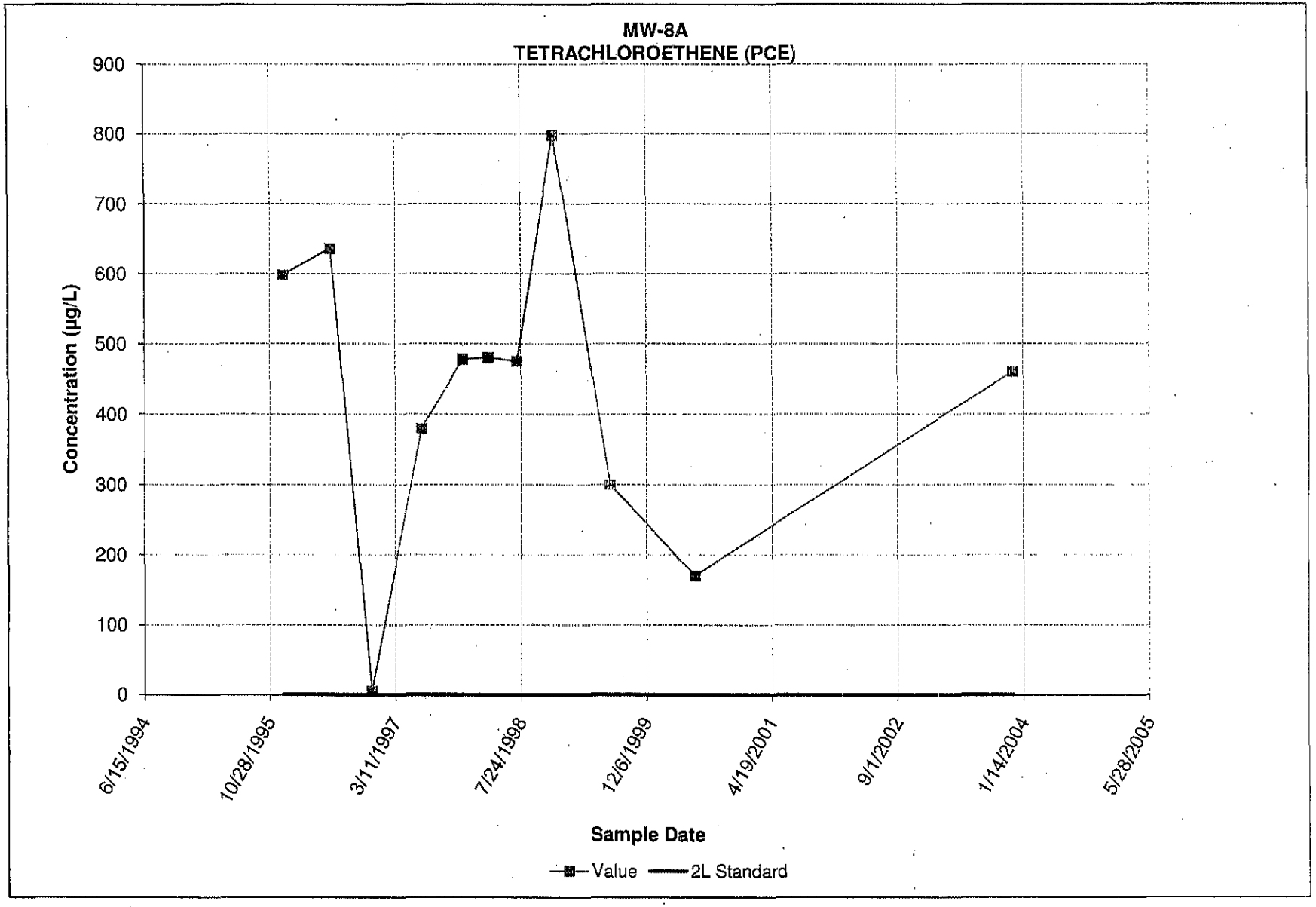
1 J	0.9 J	0.9 J	0.5	1.8	0.7	0.5 J	0.4 J

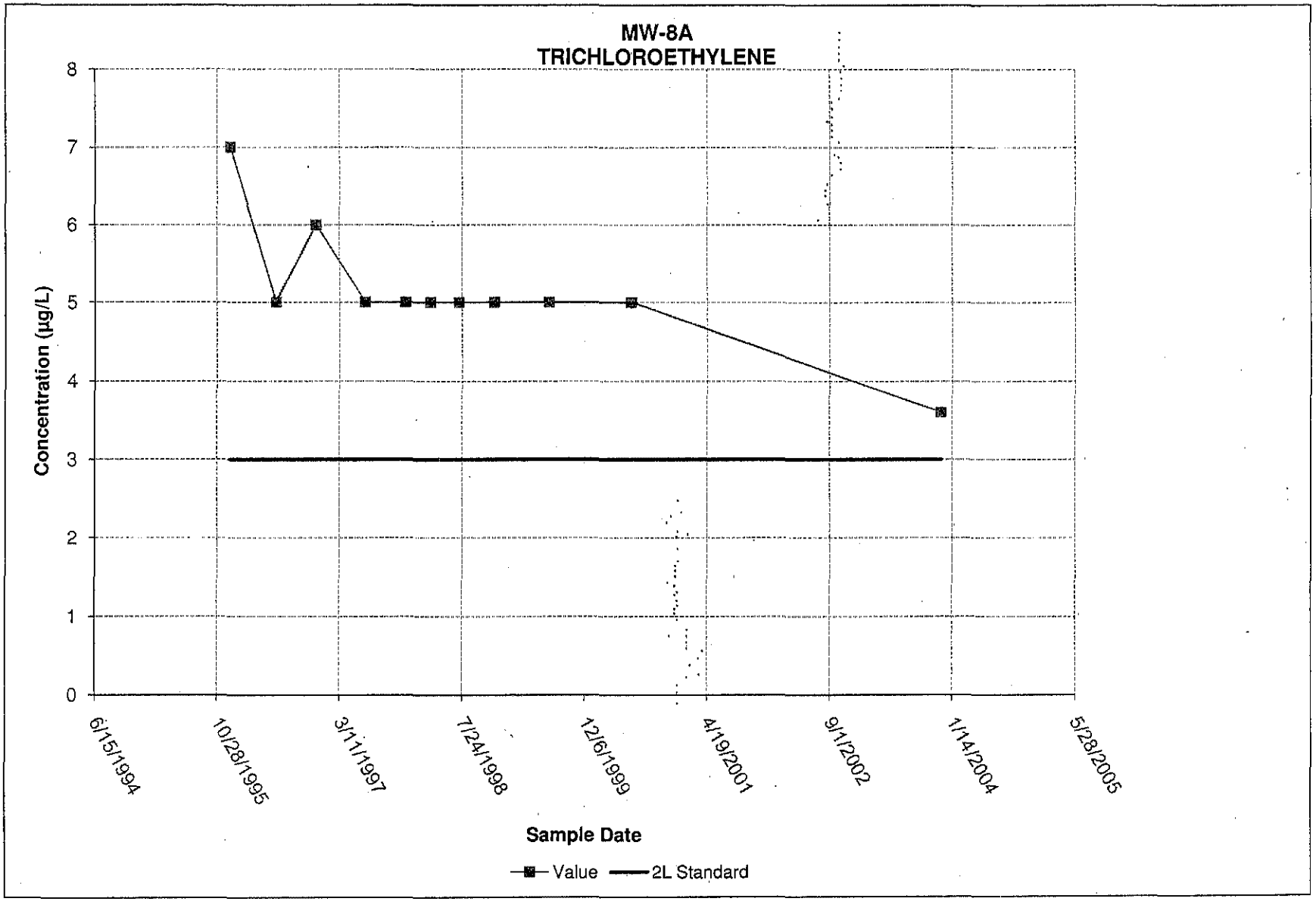
Results in µg/L.
Blank spaces indicate analyzed compound was not detected.
J - estimated concentration

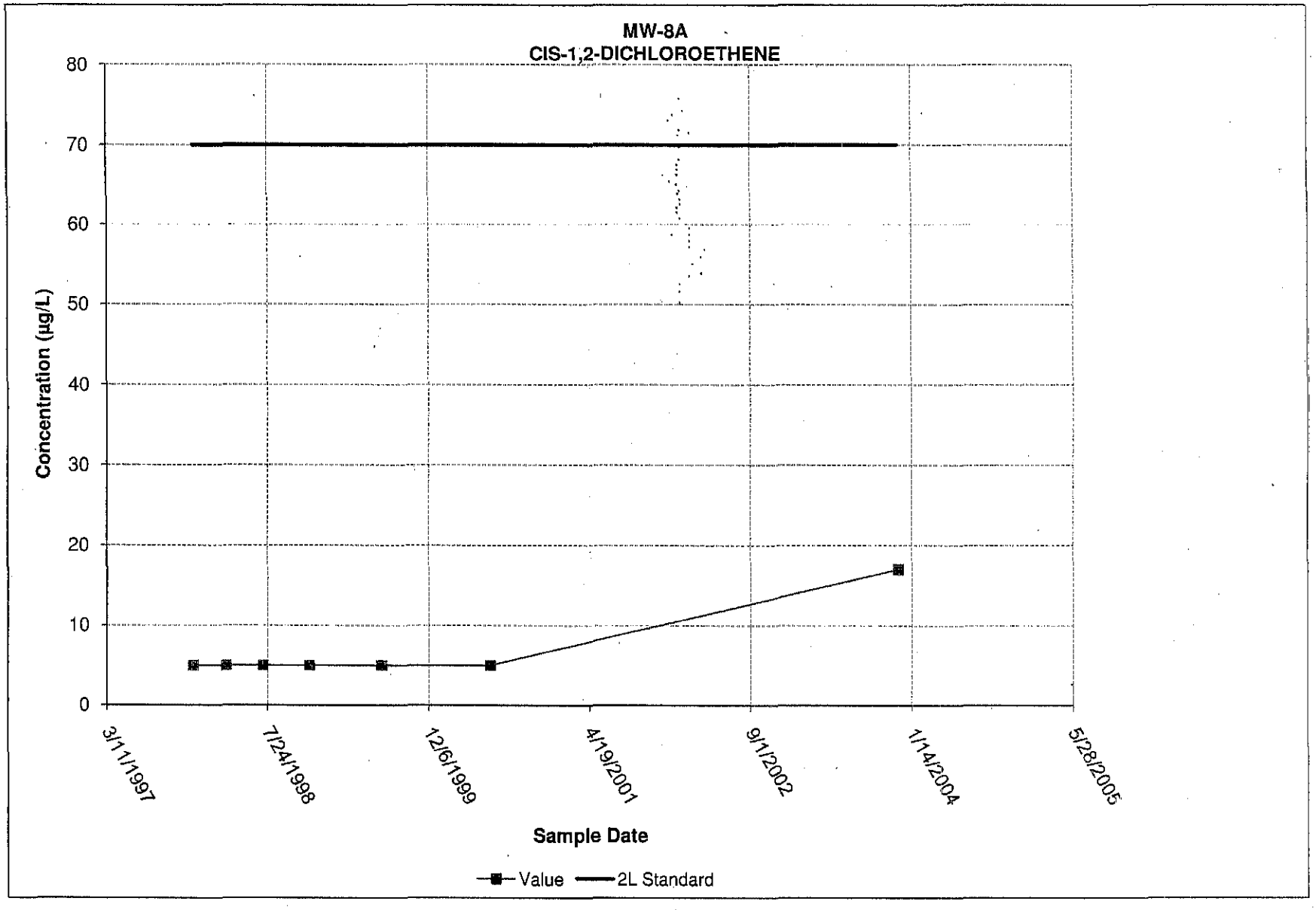

MW-6
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
Sample Date
Value
2L Standard

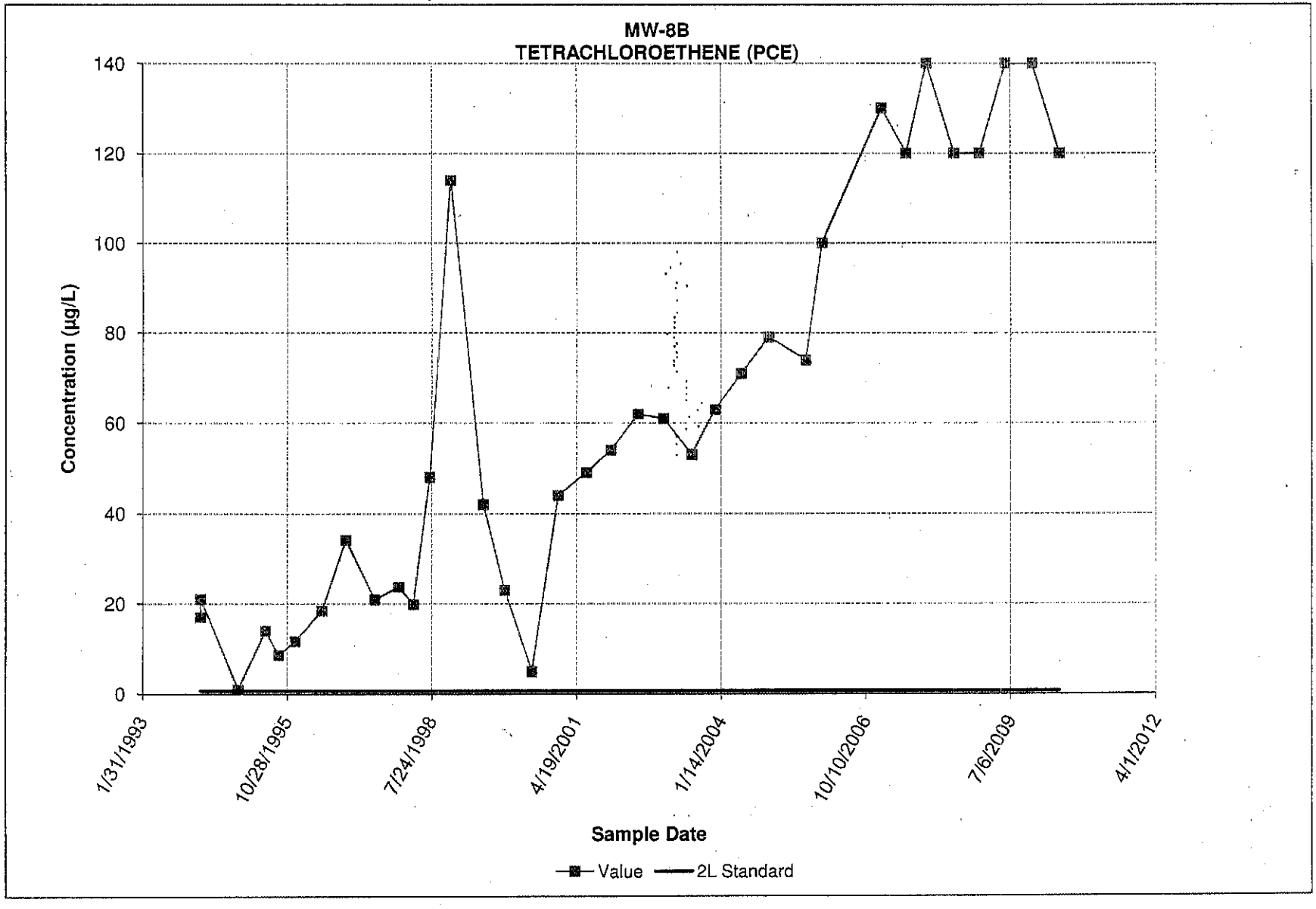

MW-6
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
Sample Date
Value
2L Standard

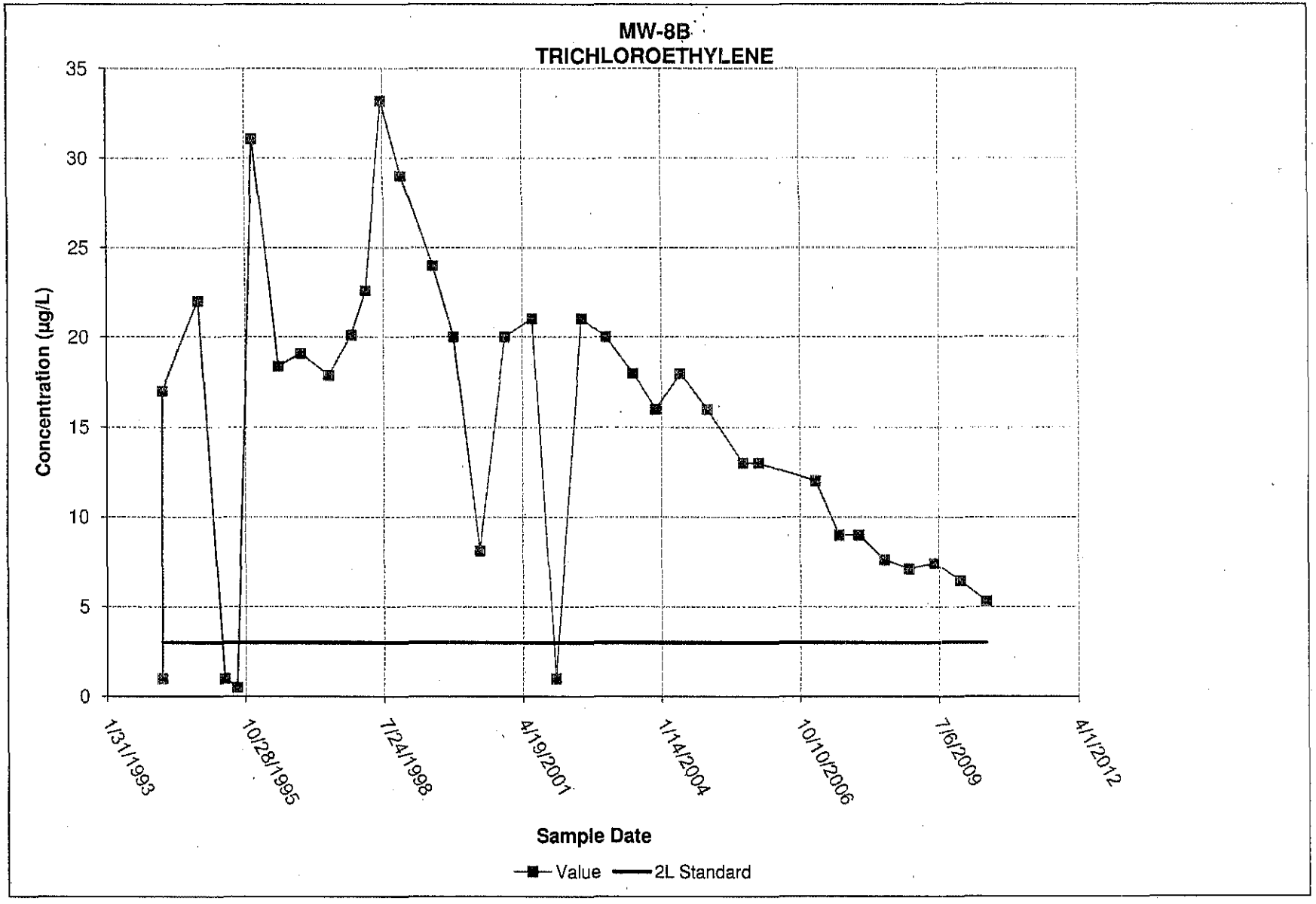

MW-6
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
Sample Date
Value
2L Standard

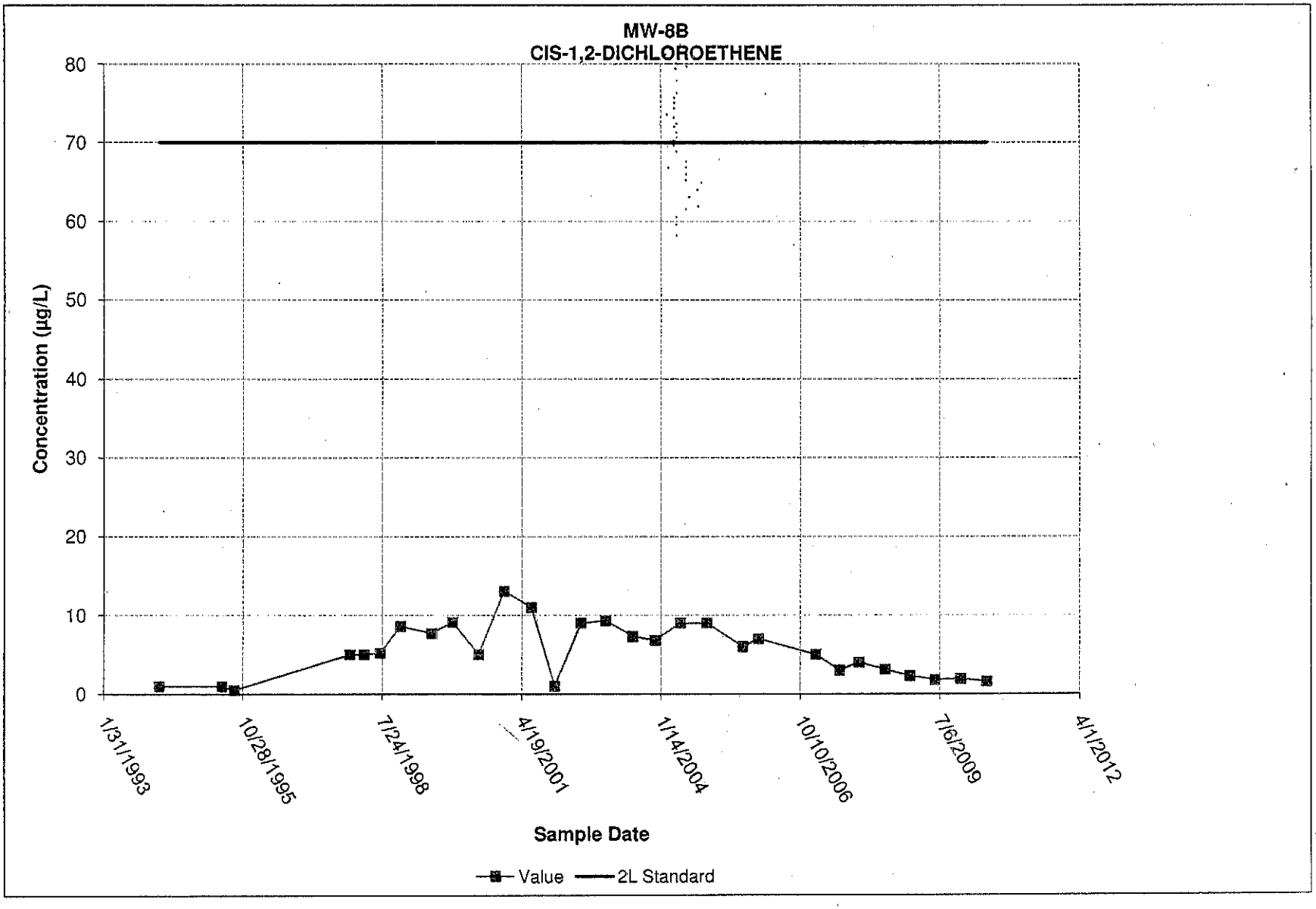

MW-8A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
900
800
700
600
500
400
300
200
100
0
6/15/1994
10/28/1995
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
Sample Date
Value
2L Standard

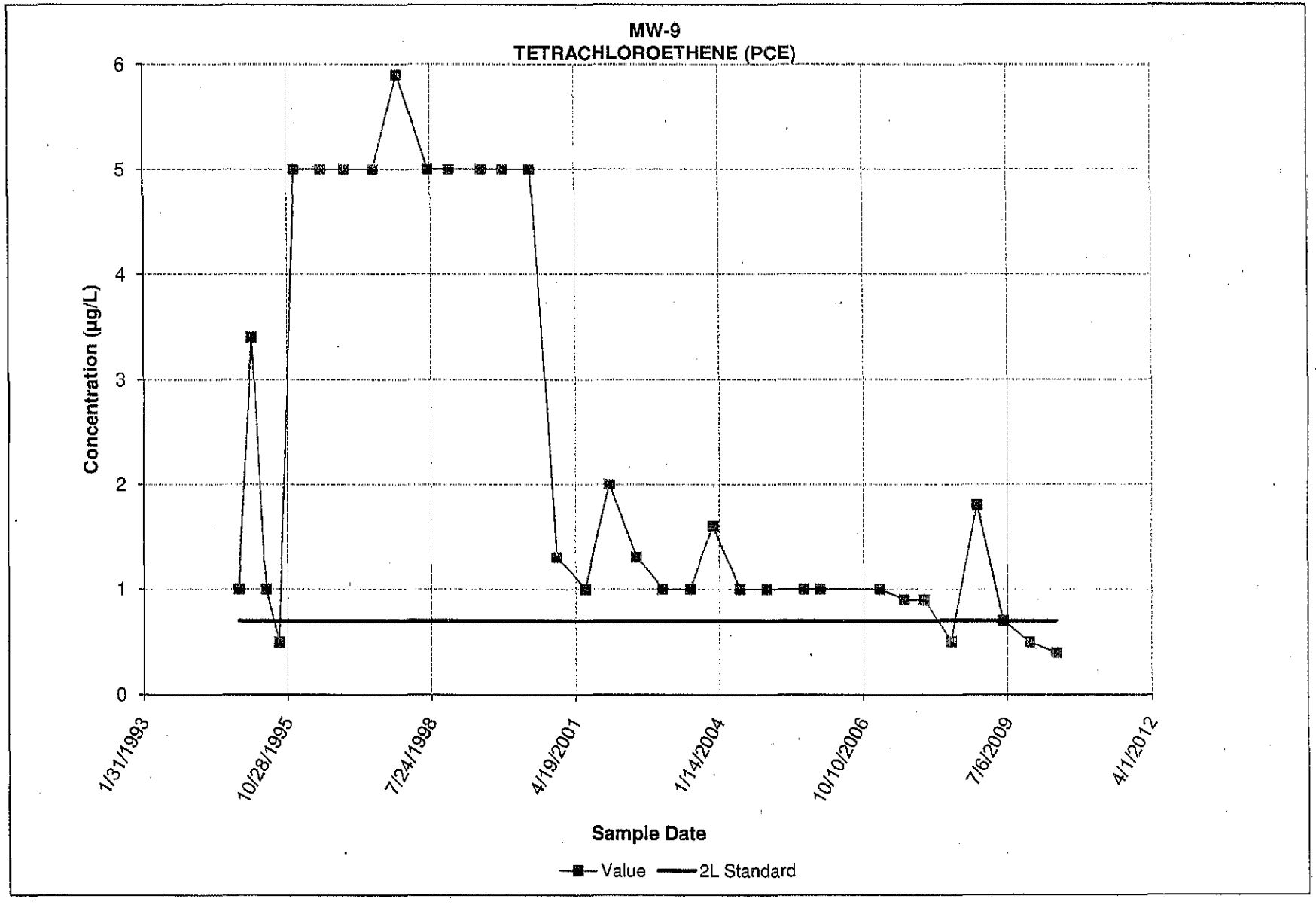

MW-8A
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
7
8
6/15/1994
10/28/1995
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
Sample Date
Value
2L Standard

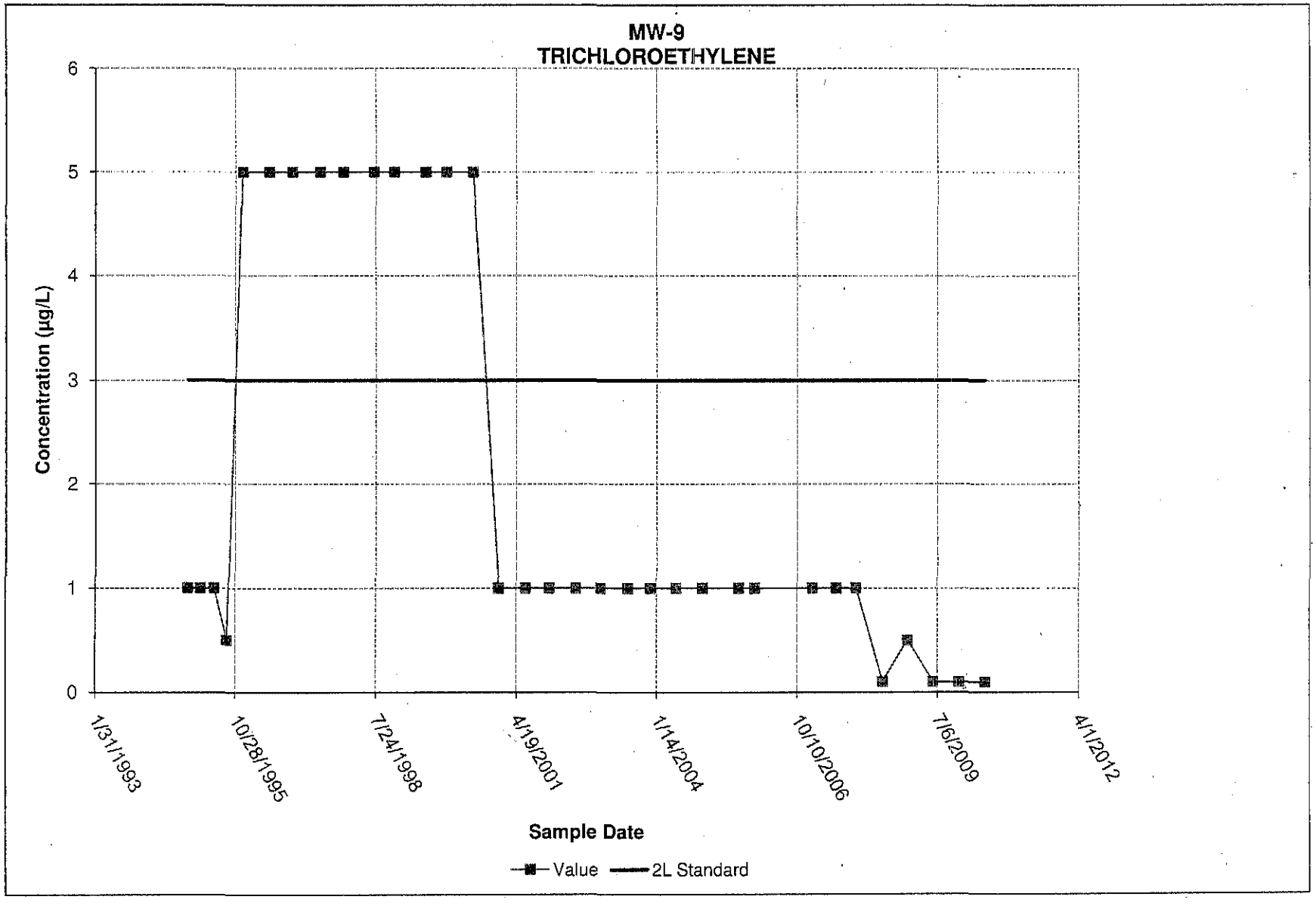

MW-8A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
Sample Date
Value
2L Standard

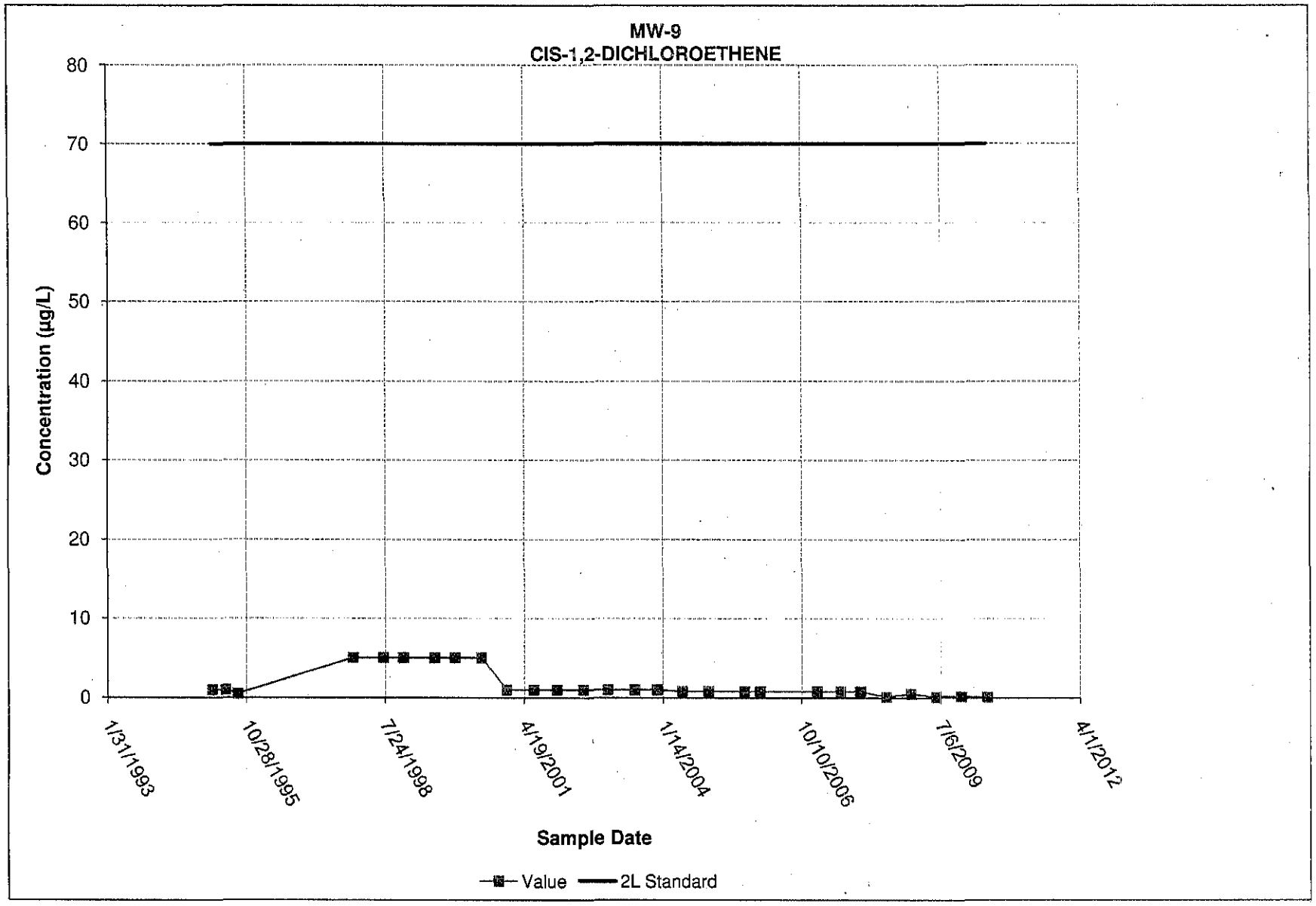

MW-8B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

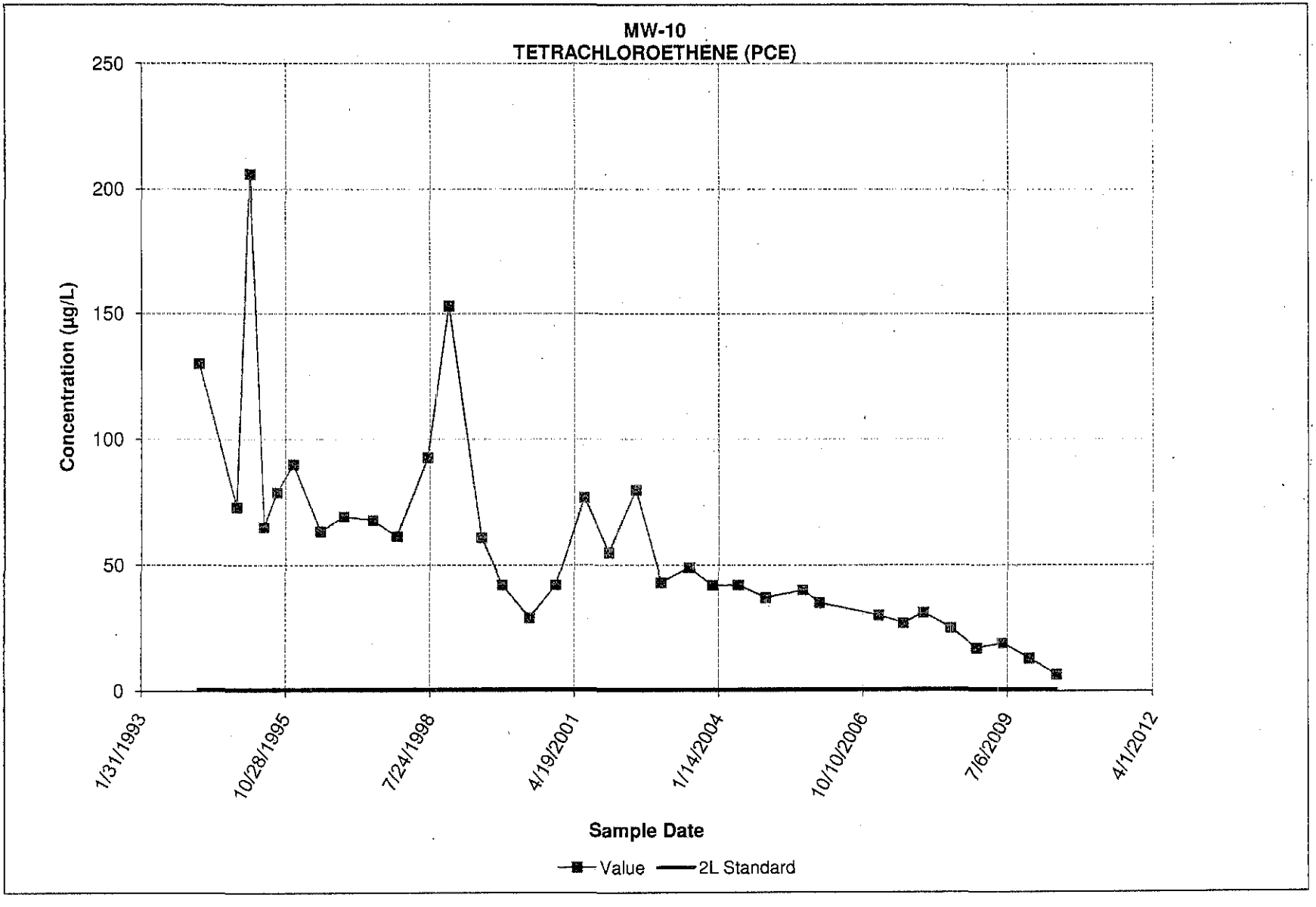

MW-8B
TRICHLOROETHYLENE
Concentration (µg/L)
35
30
25
20
15
10
5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

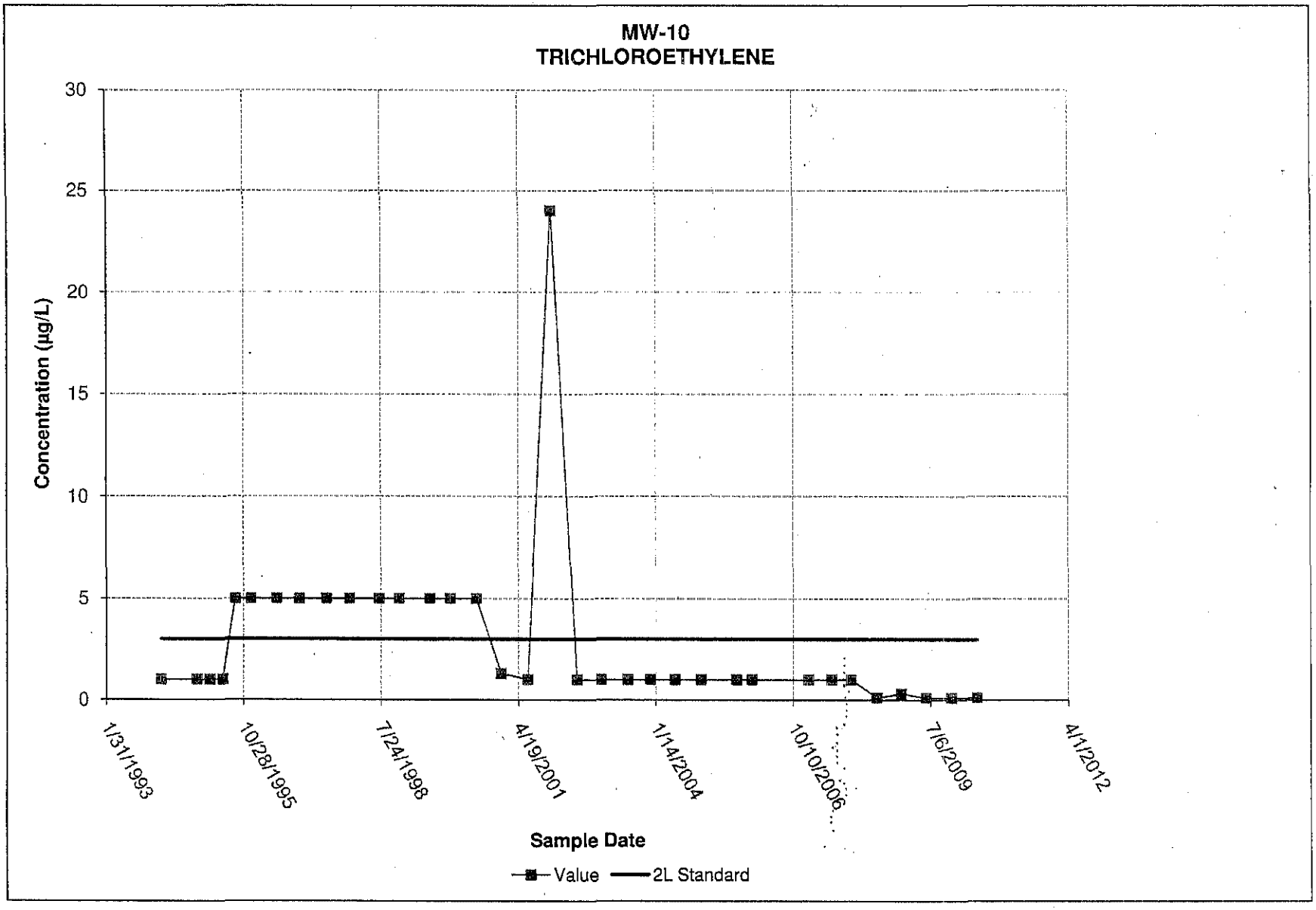

MW-8B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

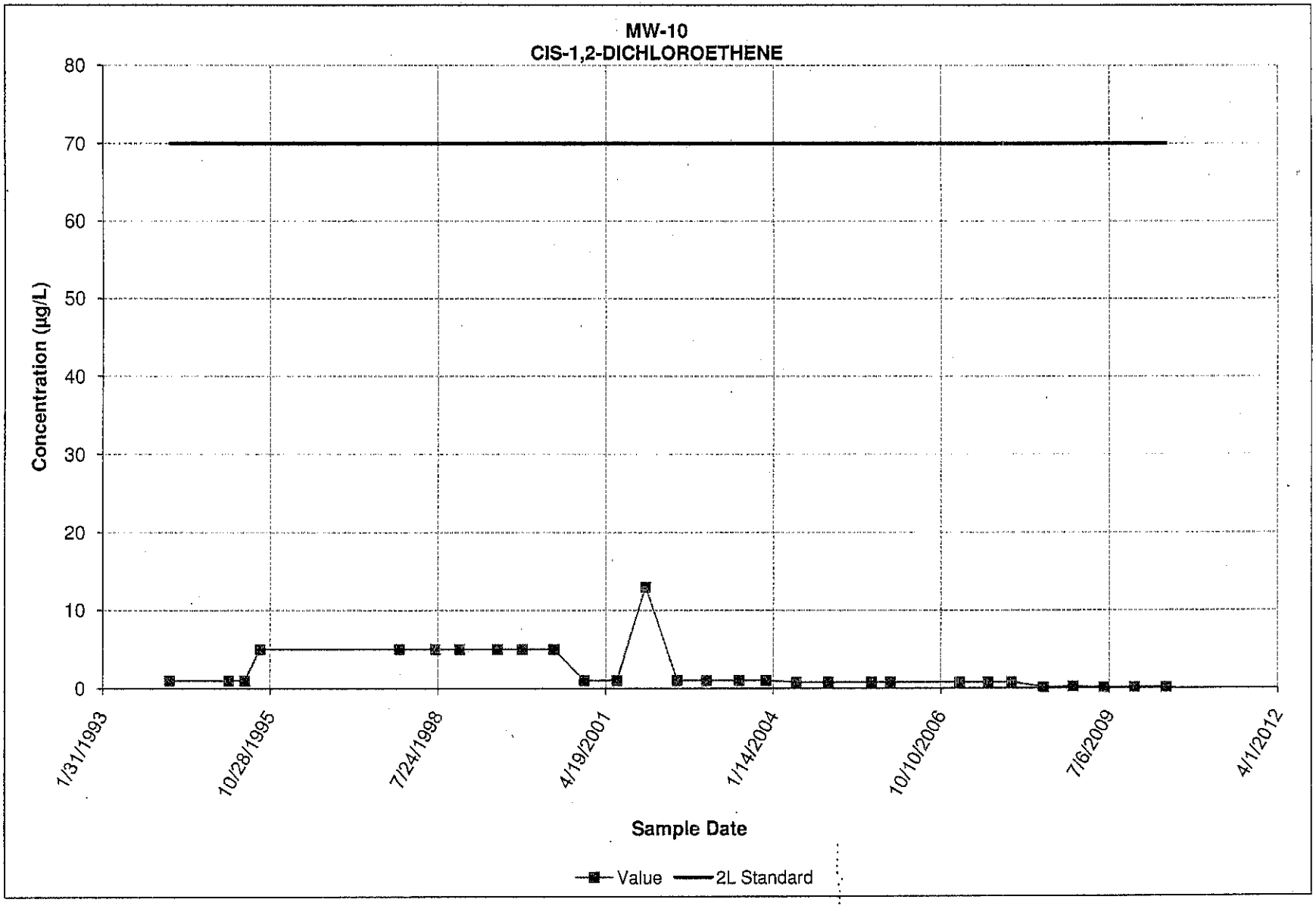

MW-9
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

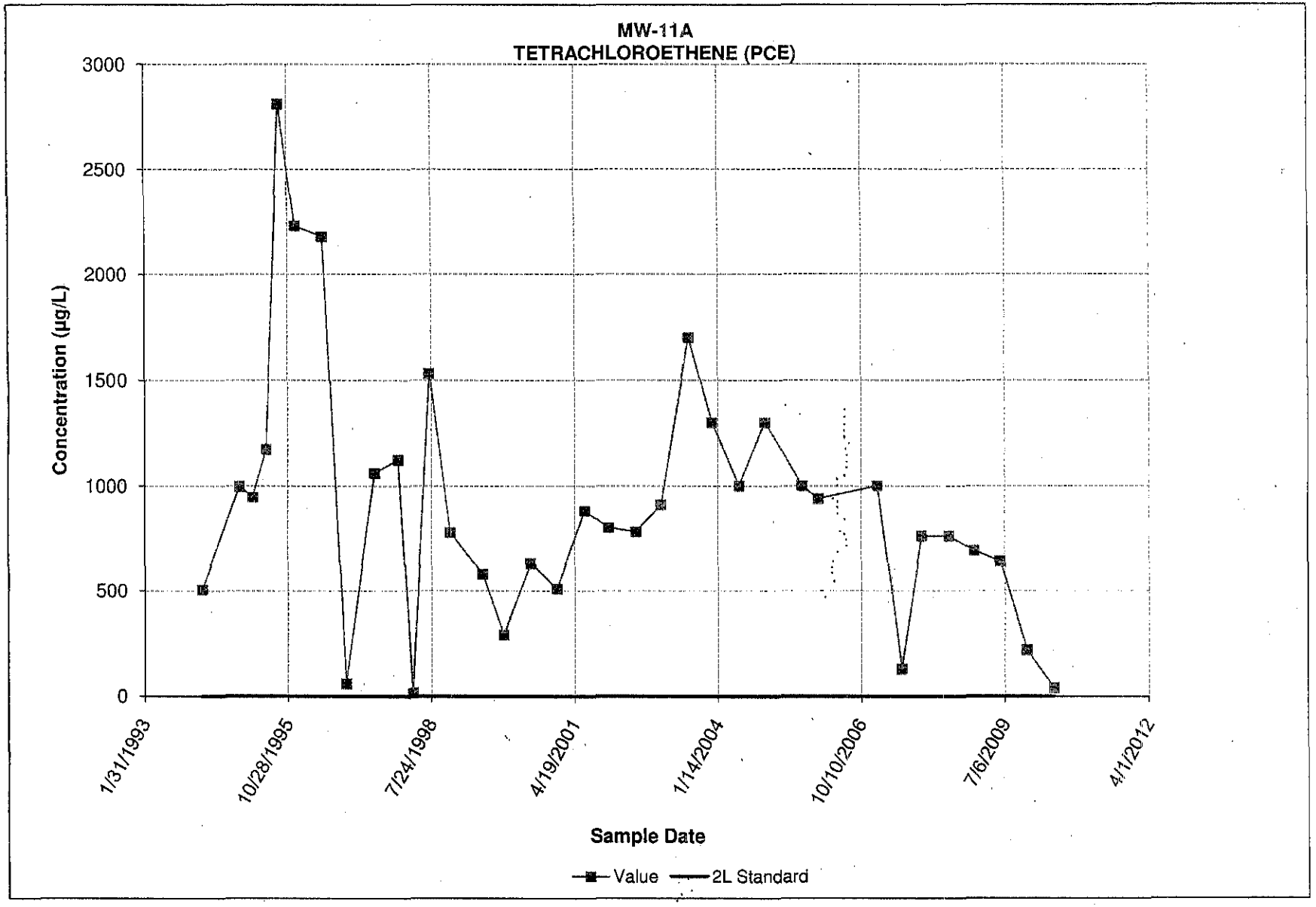

MW-9
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

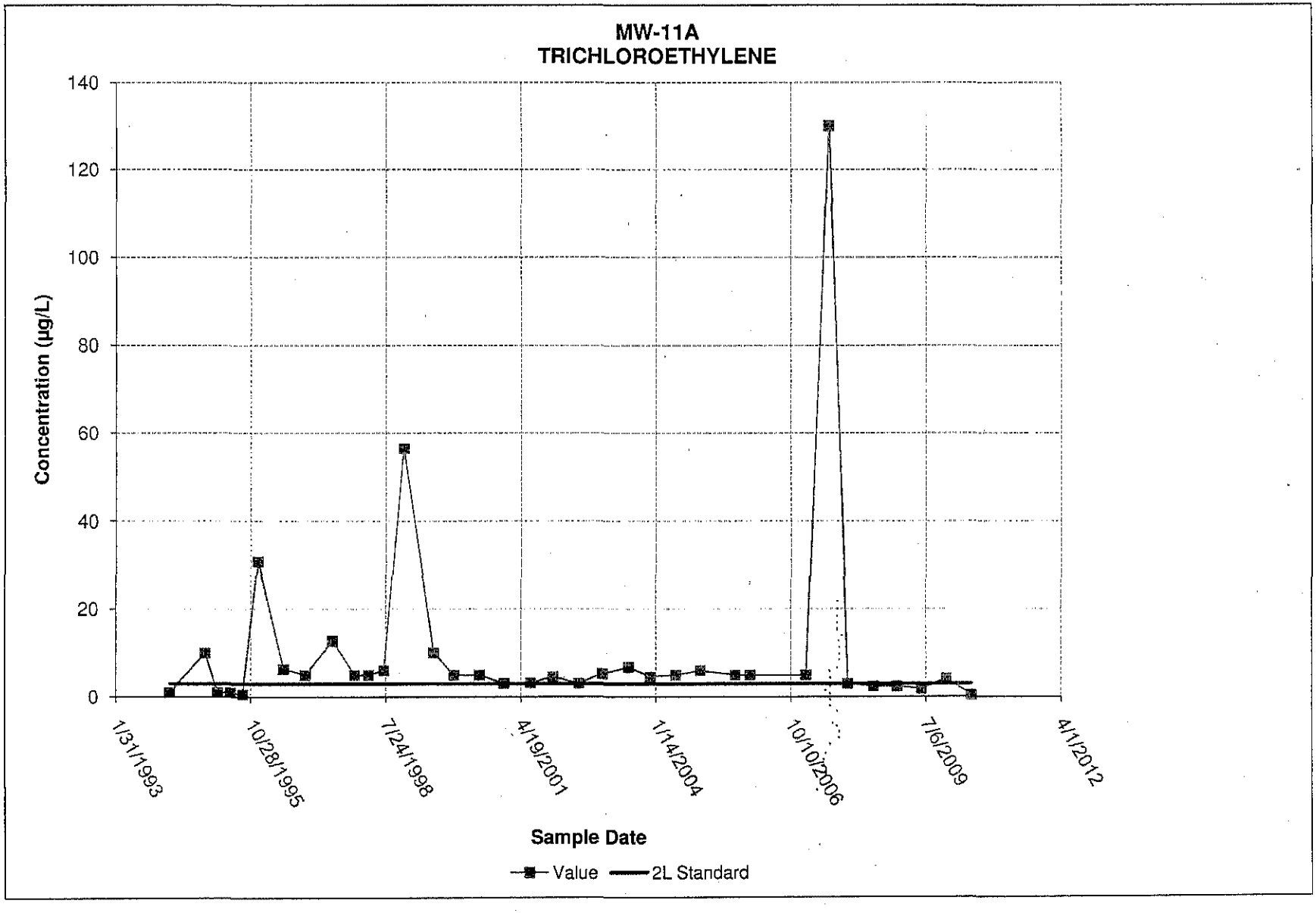

MW-9
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

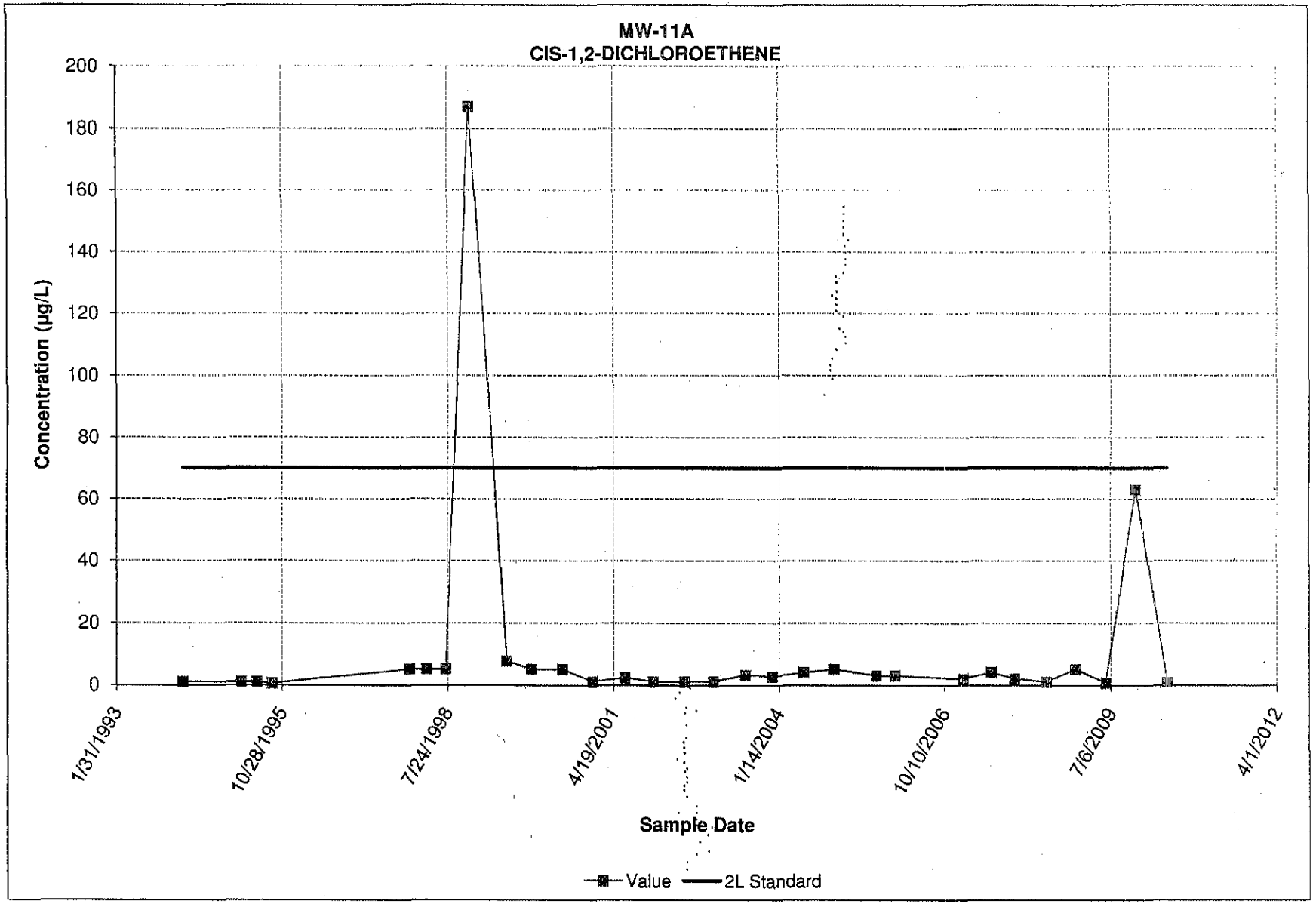

MW-10
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
250
200
150
100
50
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

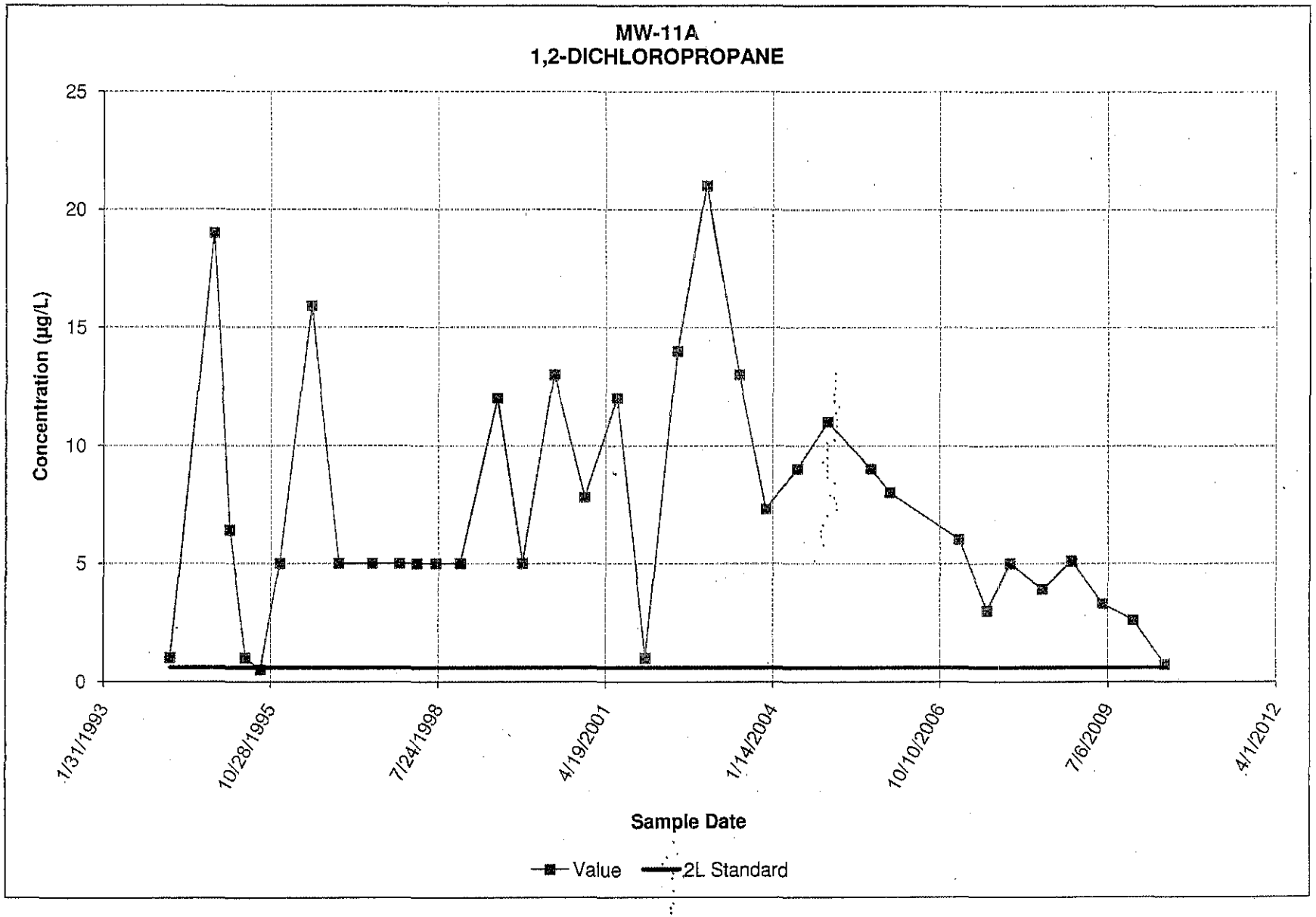

MW-10
TRICHLOROETHYLENE
Concentration (µg/L)
30
25
20
15
10
5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

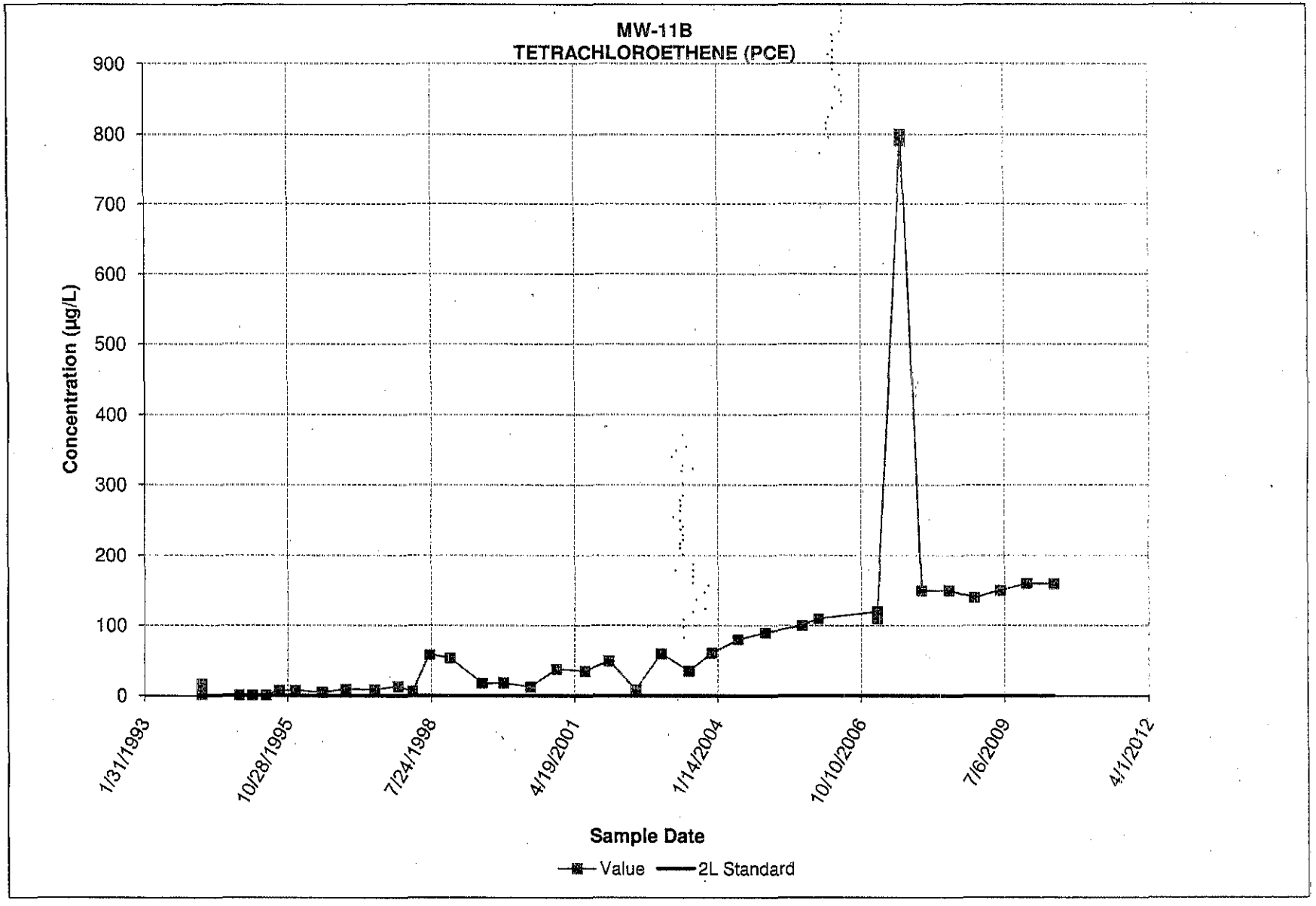

MW-10
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

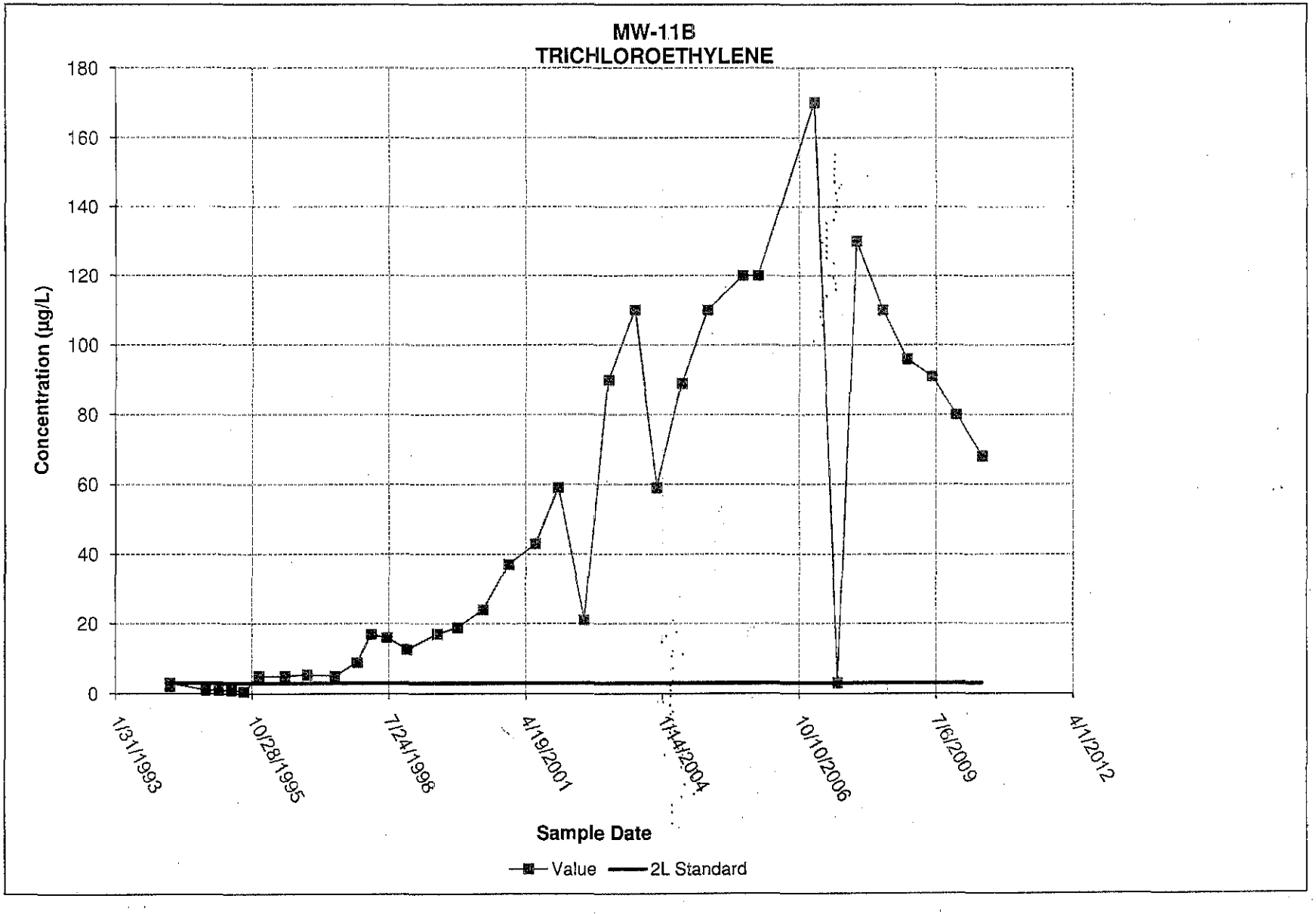

MW-11A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
3000
2500
2000
1500
1000
500
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

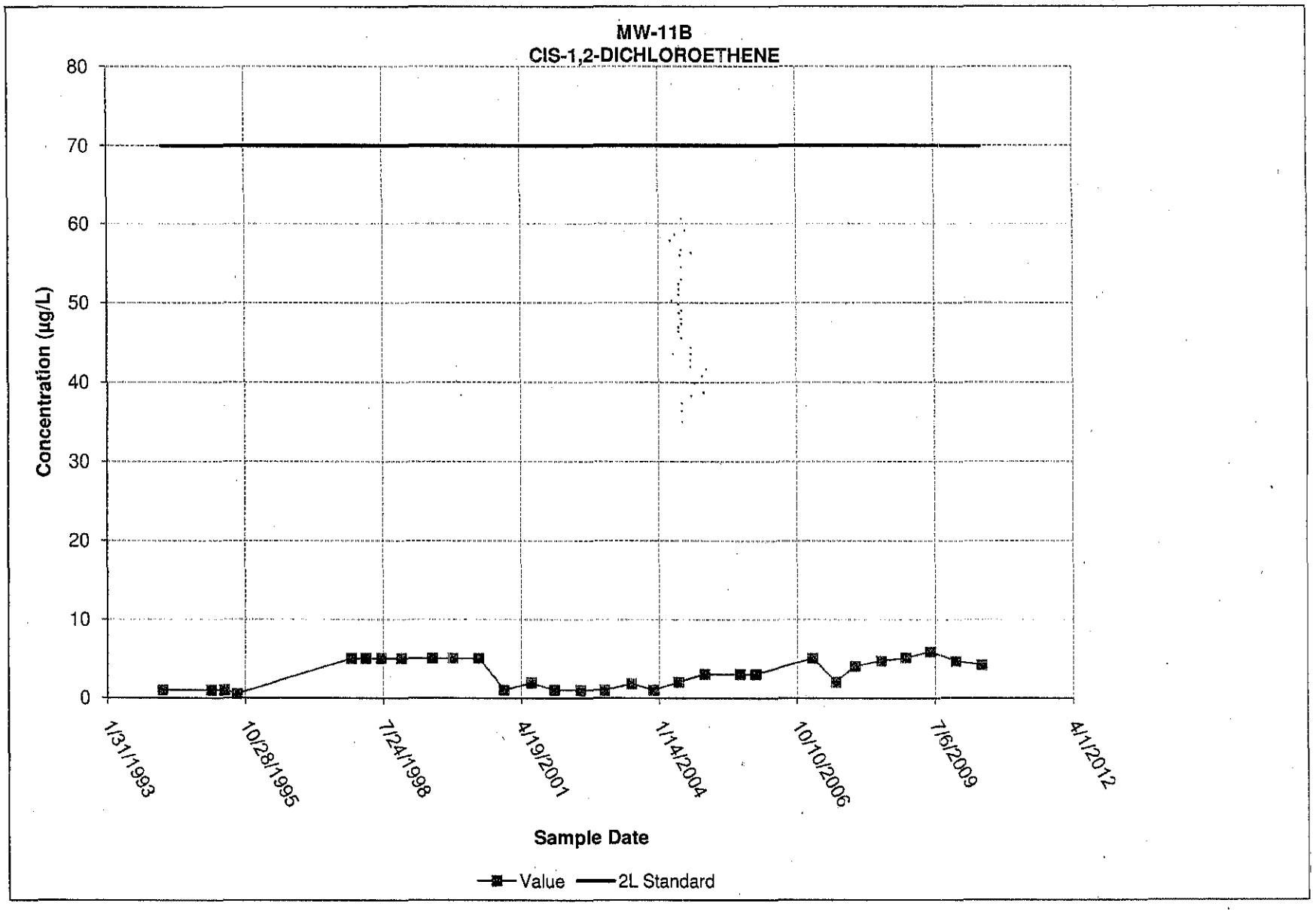

MW-11A
TRICHLOROETHYLENE
Concentration (µg/L)
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

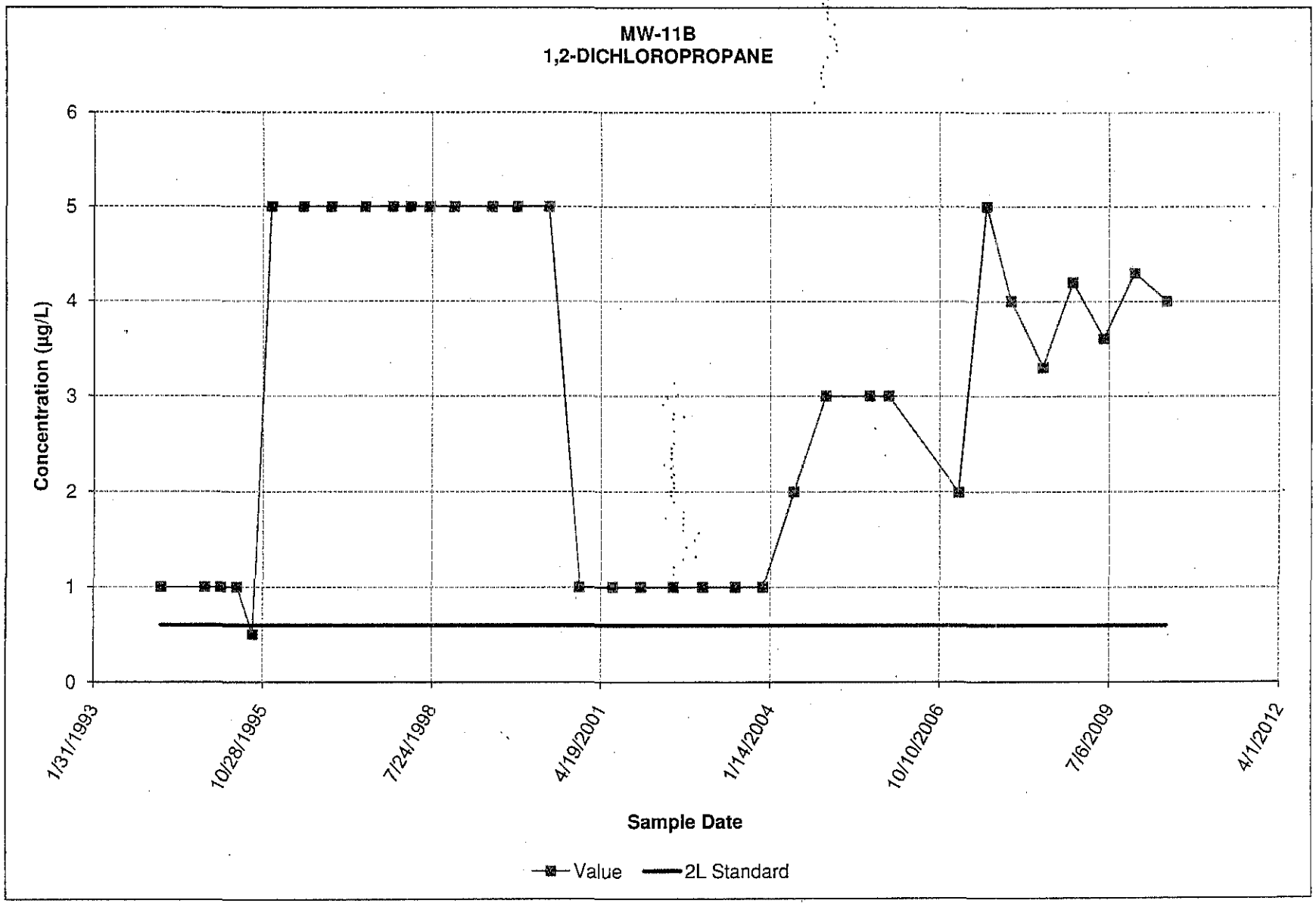

MW-11A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
200
180
160
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

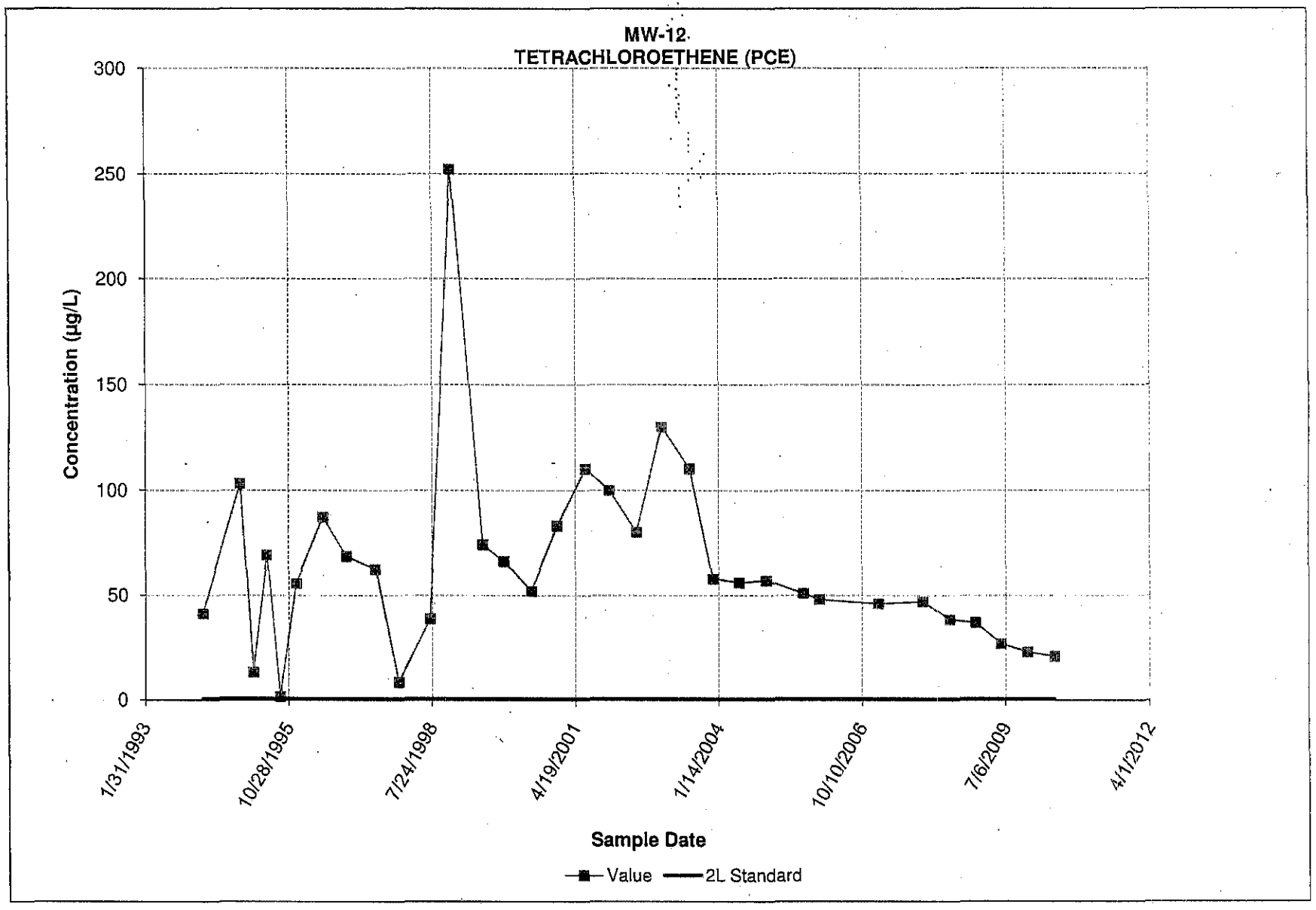

MW-11A
1,2-DICHLOROPROPANE
Concentration (µg/L)
25
20
15
10
5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

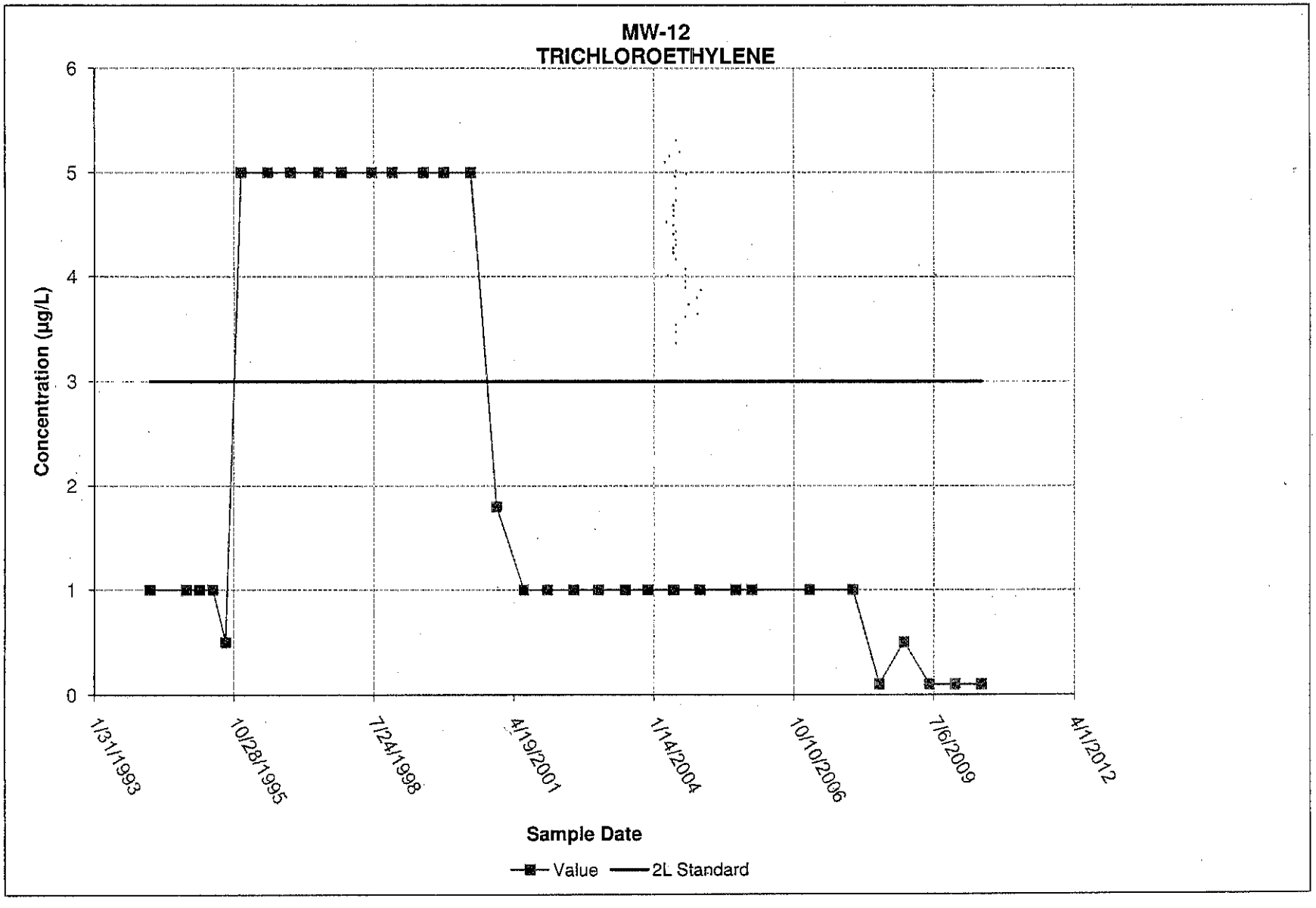

MW-11B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
900
800
700
600
500
400
300
200
100
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

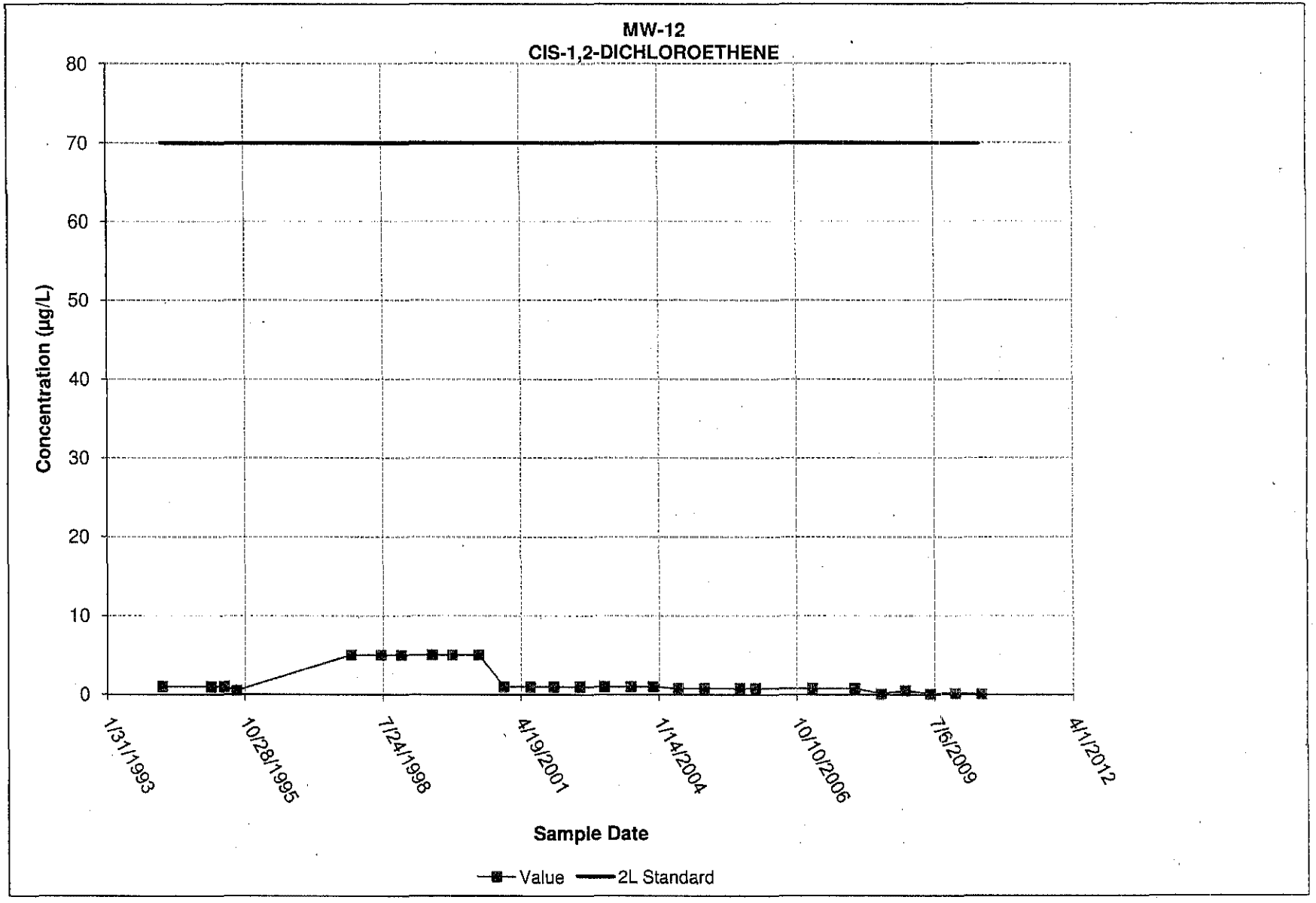

MW-11B
TRICHLOROETHYLENE
Concentration (µg/L)
180
160
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1996
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

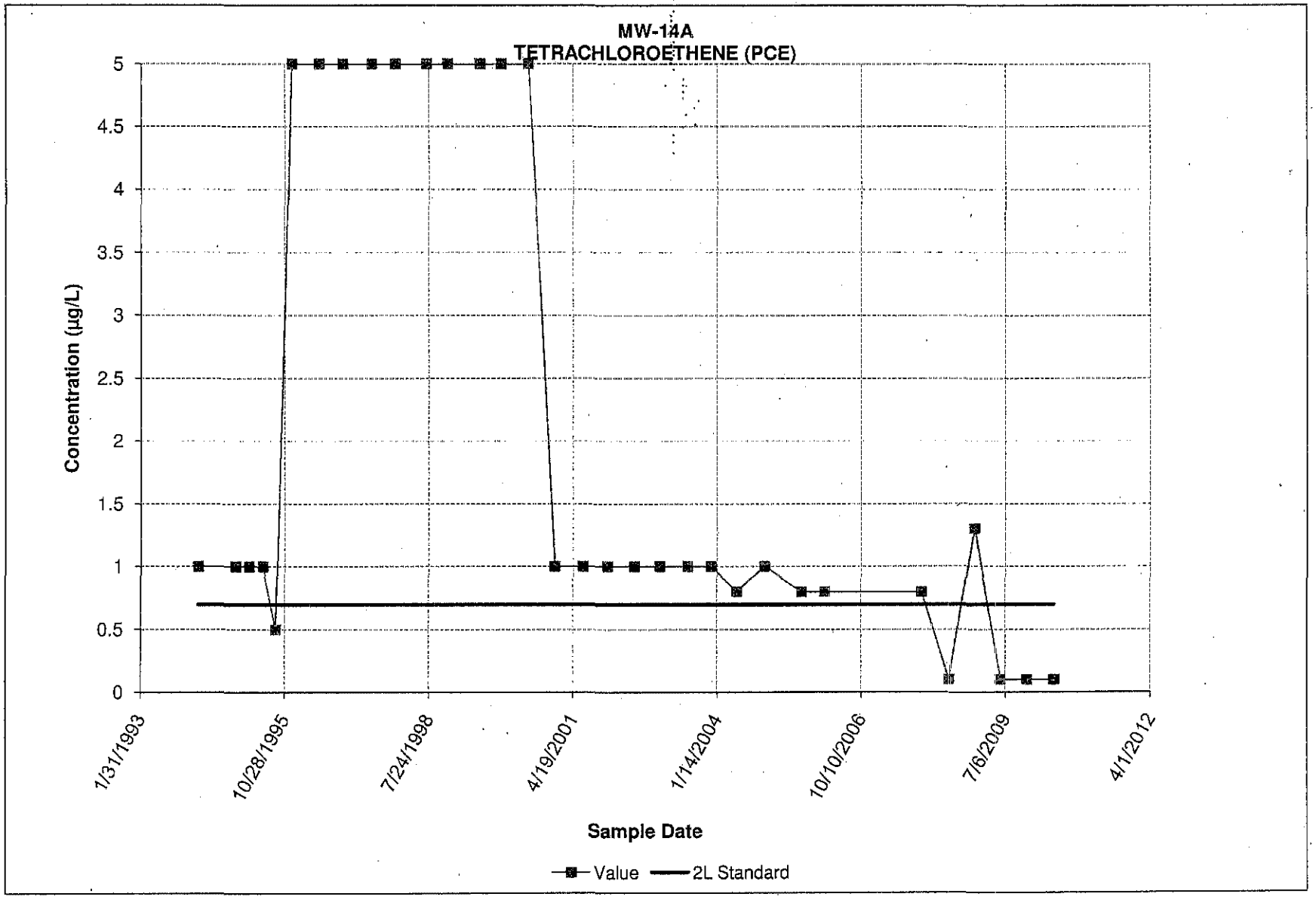

MW-11B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

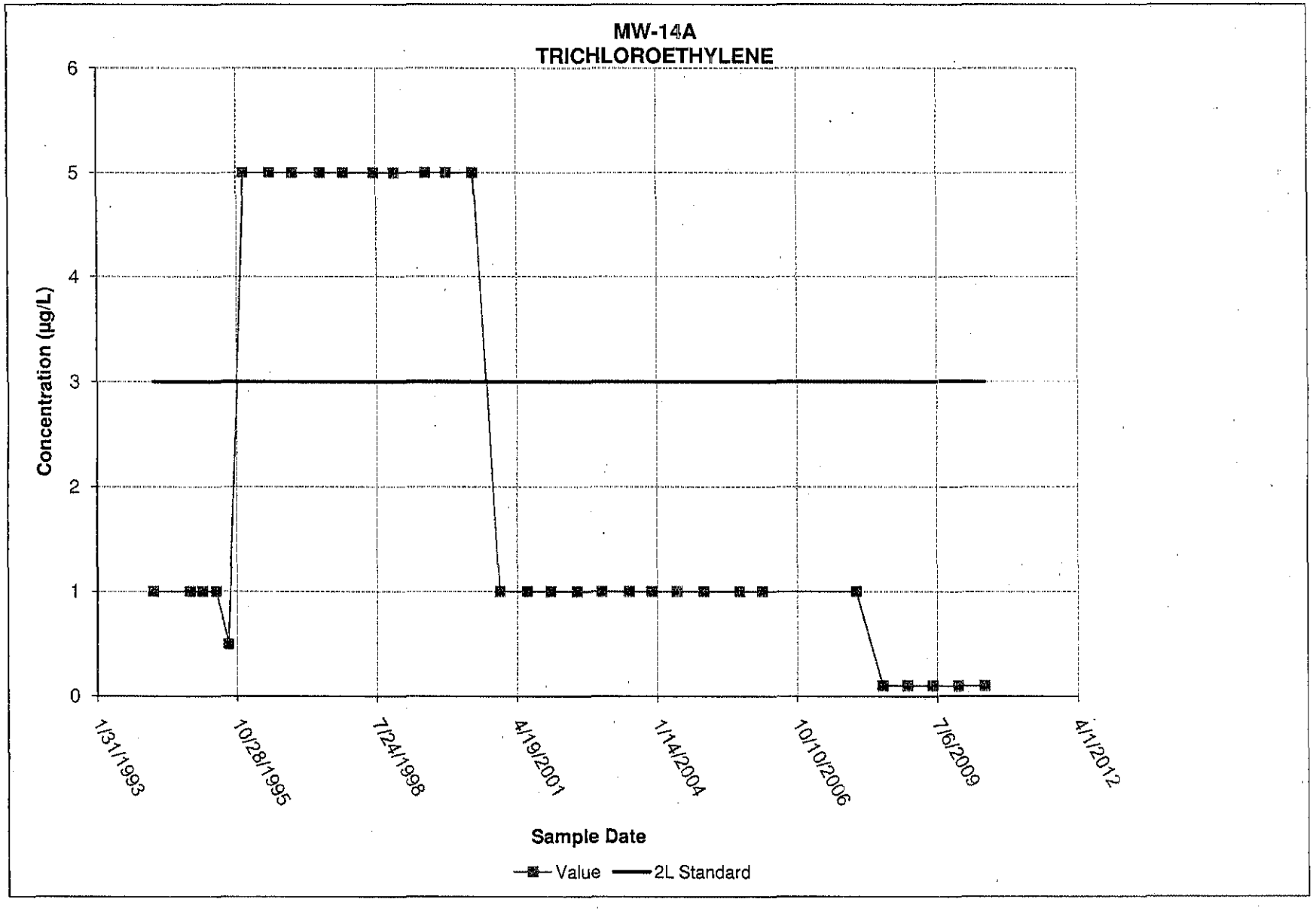

MW-11B
1,2-DICHLOROPROPANE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

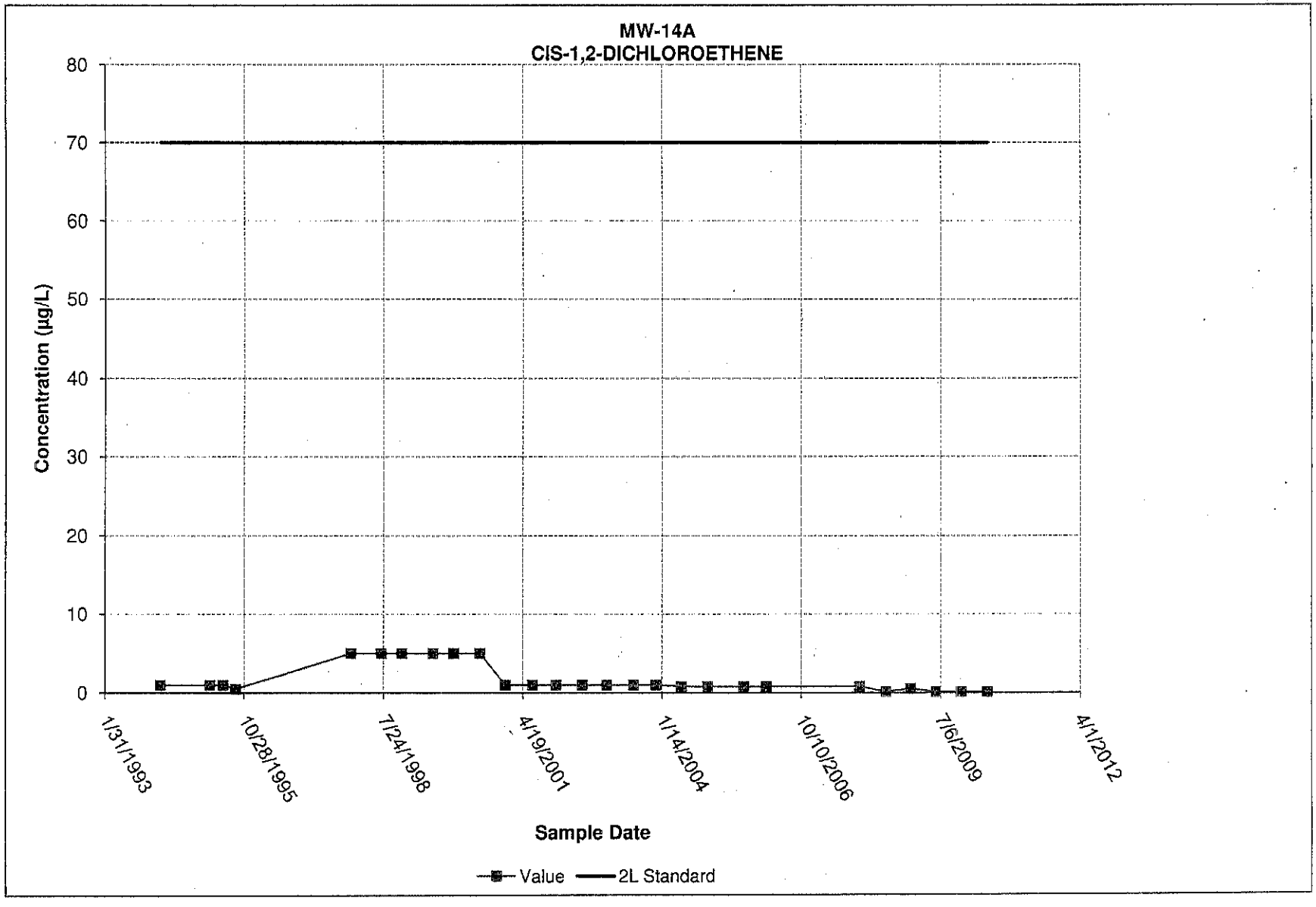

MW-12
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
300
250
200
150
100
50
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

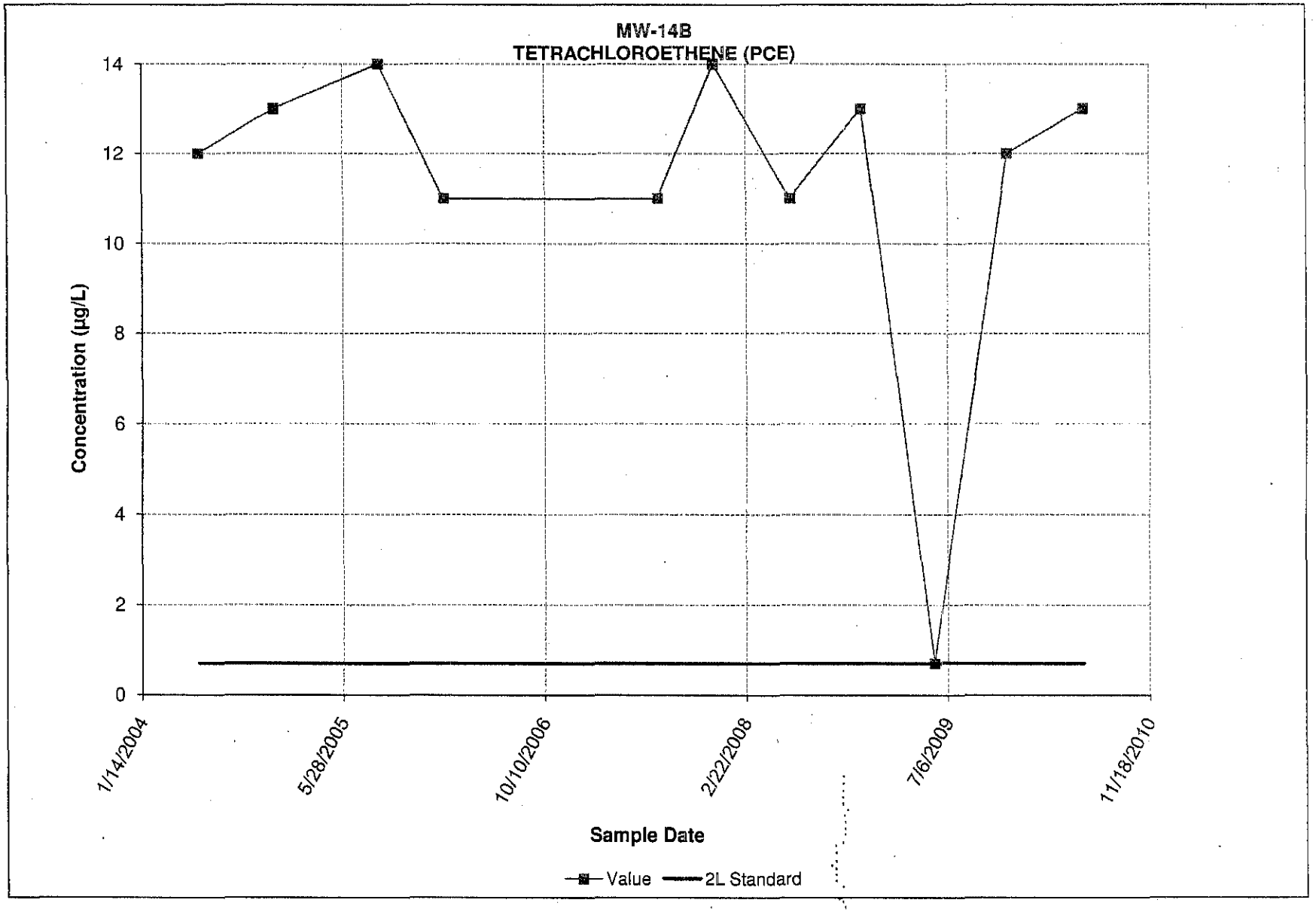

MW-12
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

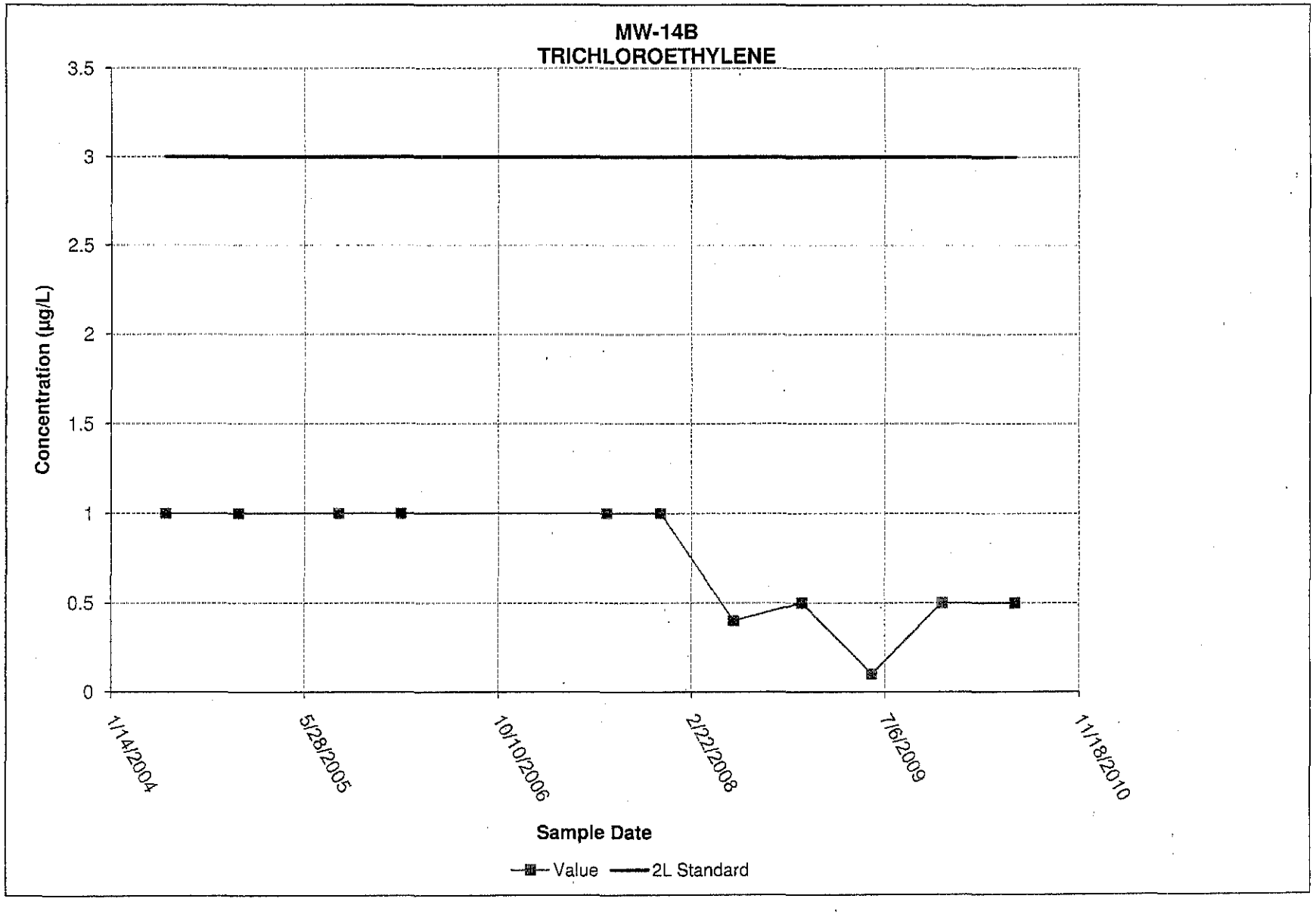

MW-12
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

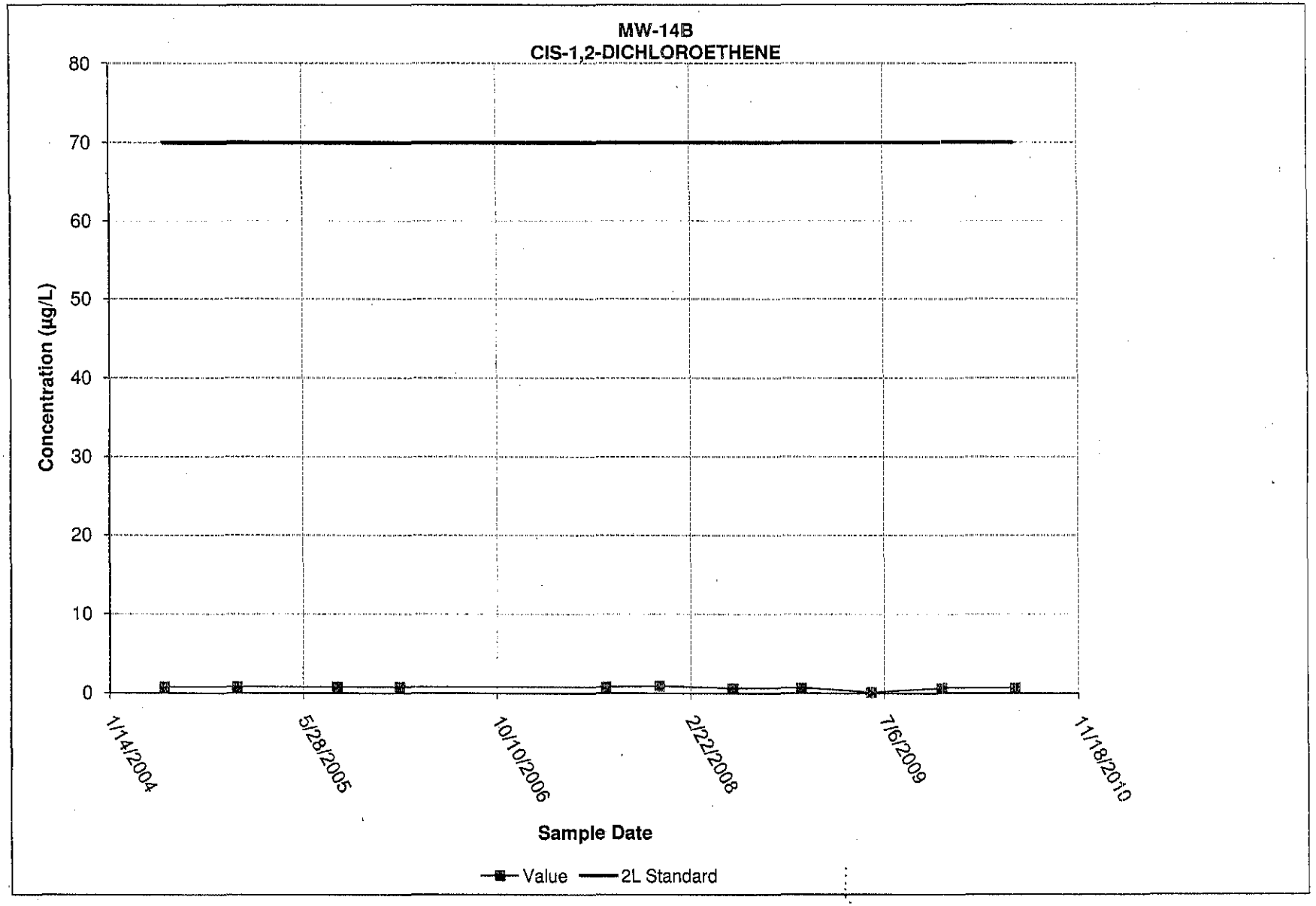

MW-14A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

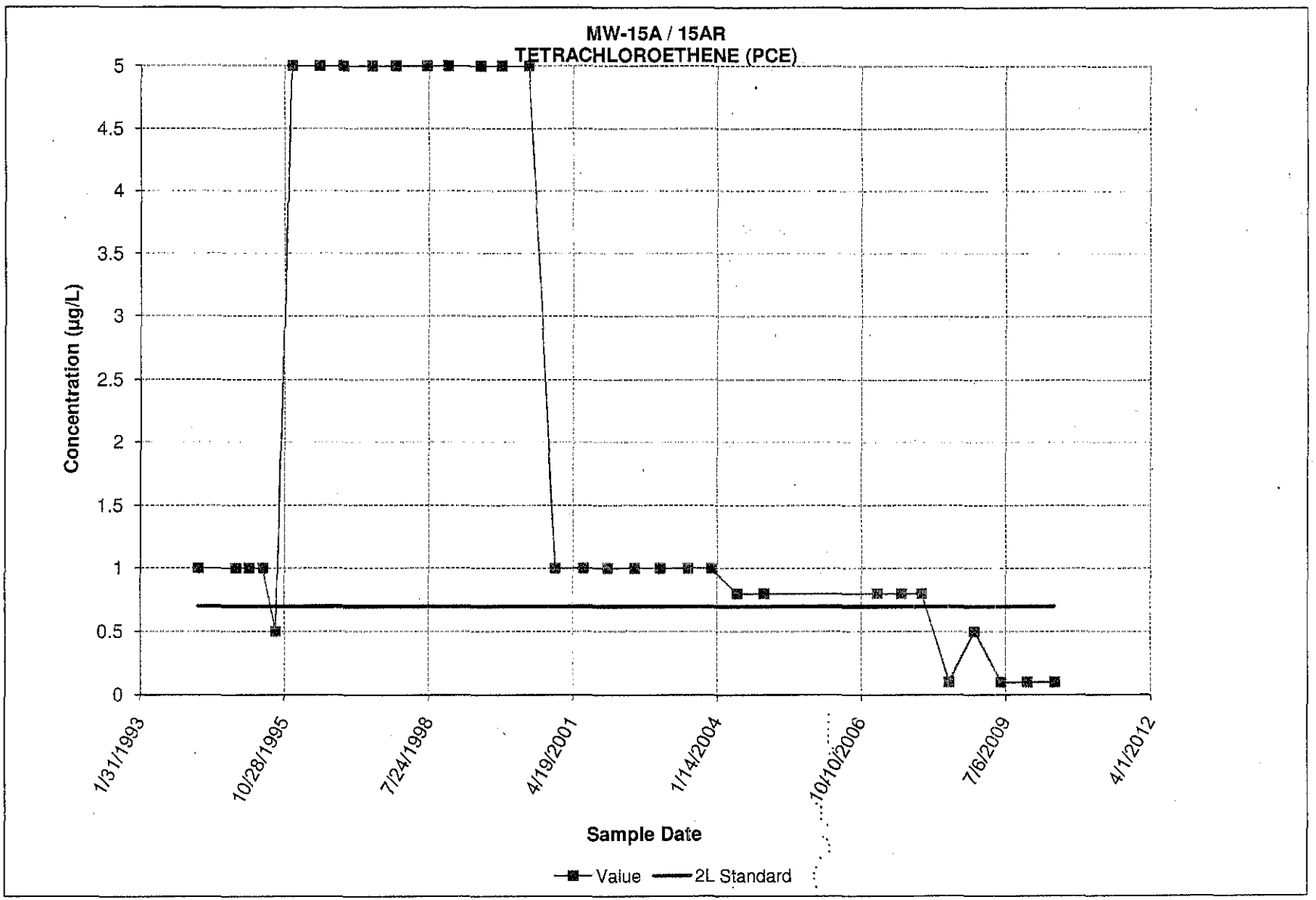

MW-14A
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

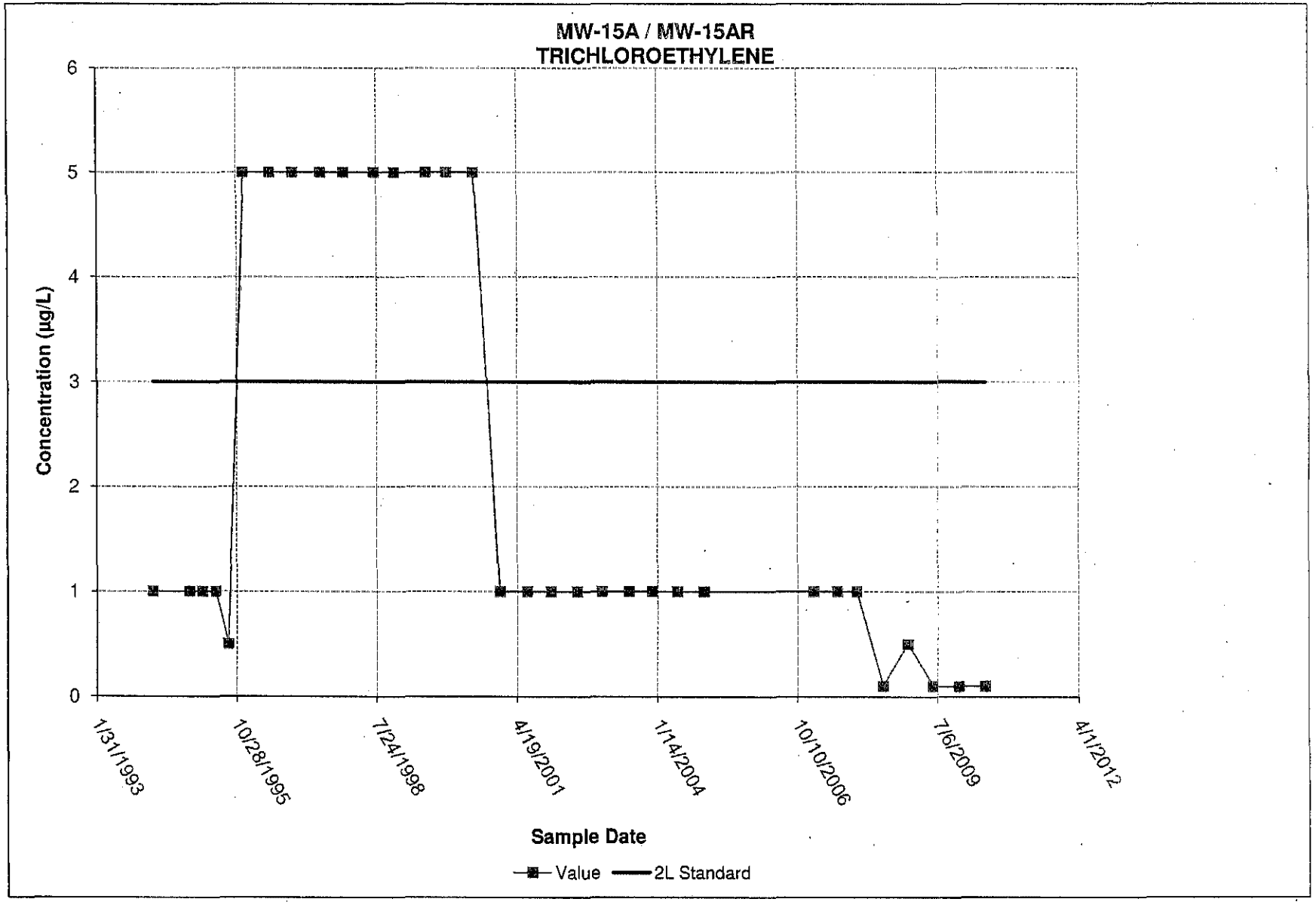

MW-14A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

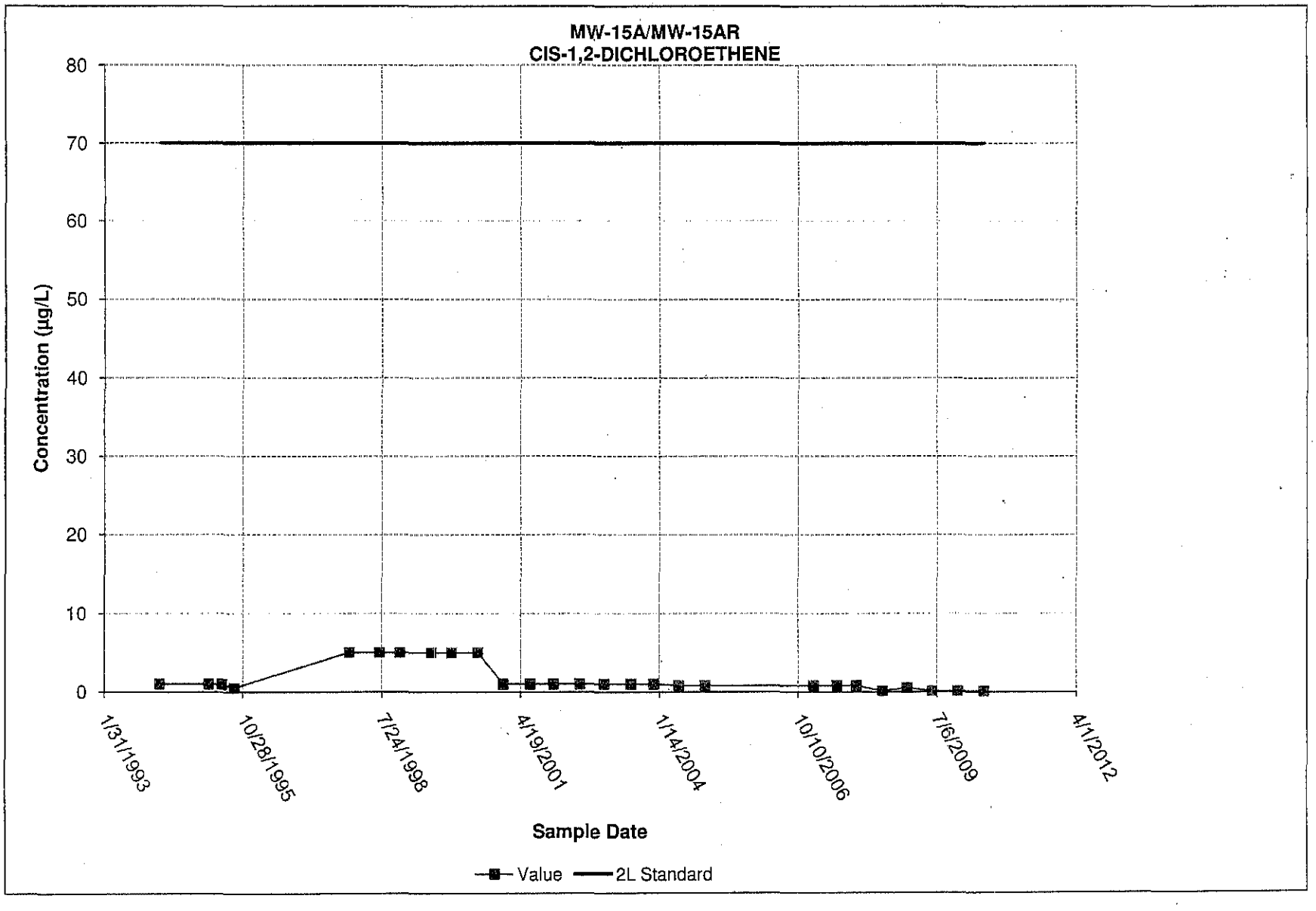

MW-14B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
14
12
10
8
6
4
2
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

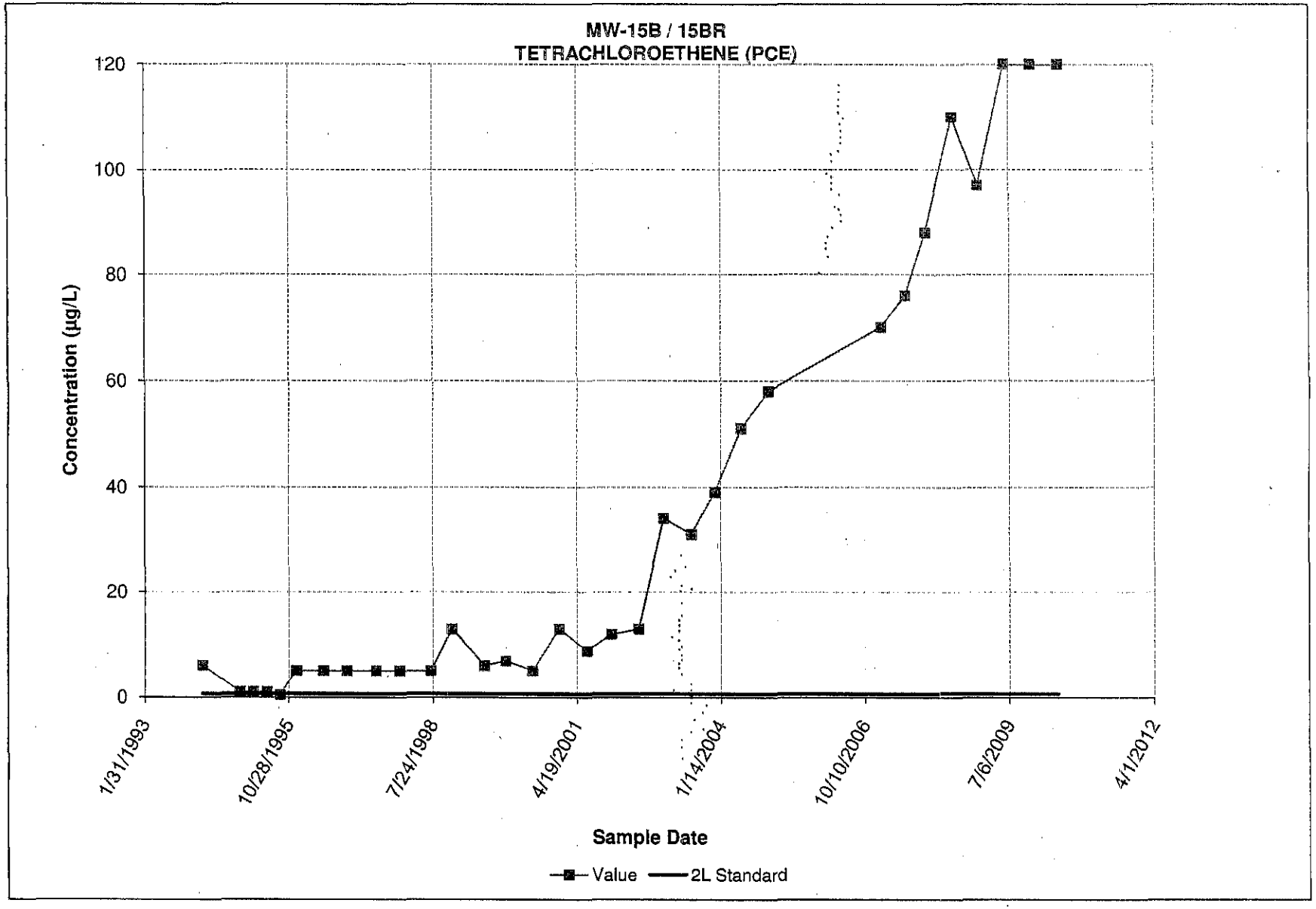

MW-14B
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

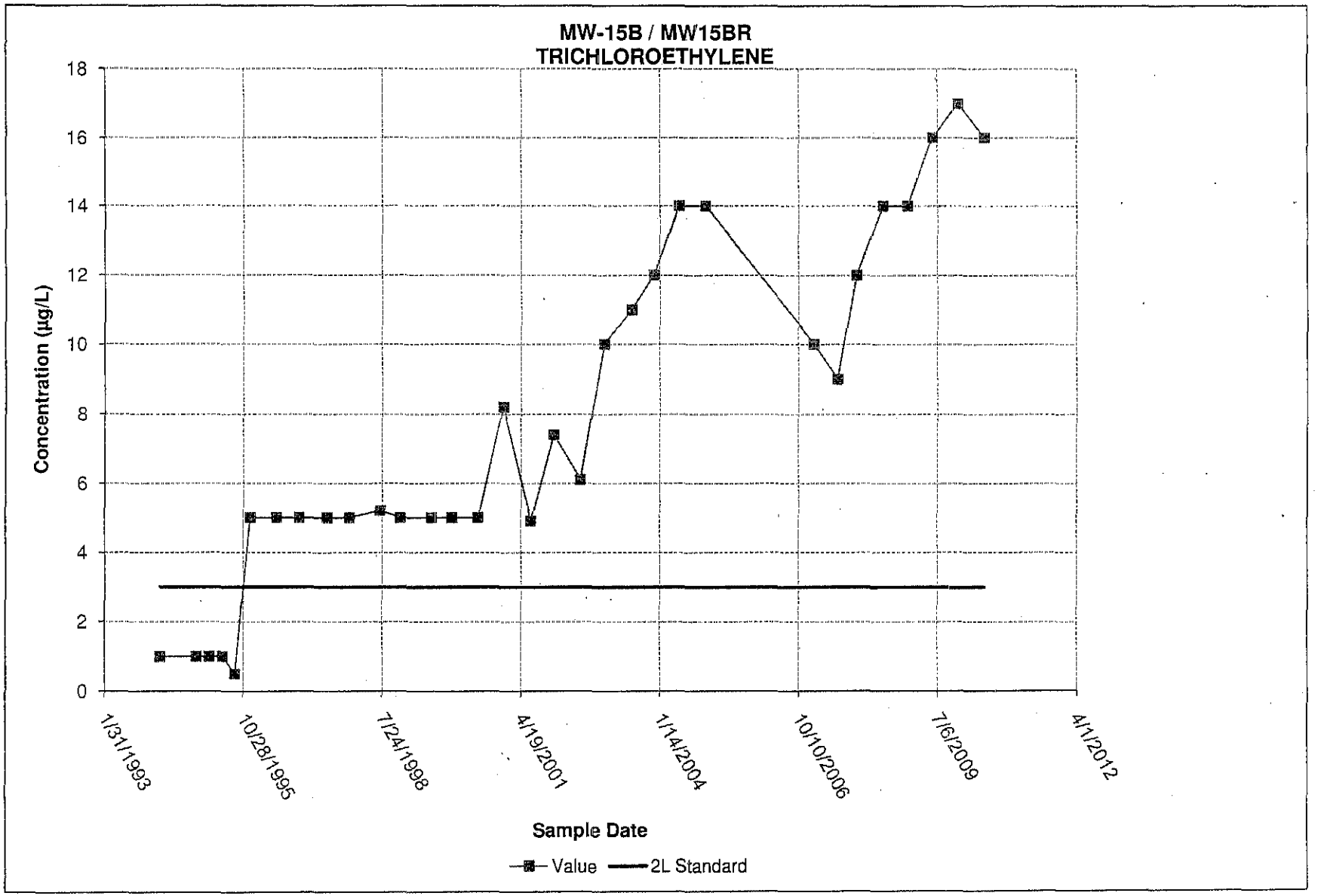

MW-14B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

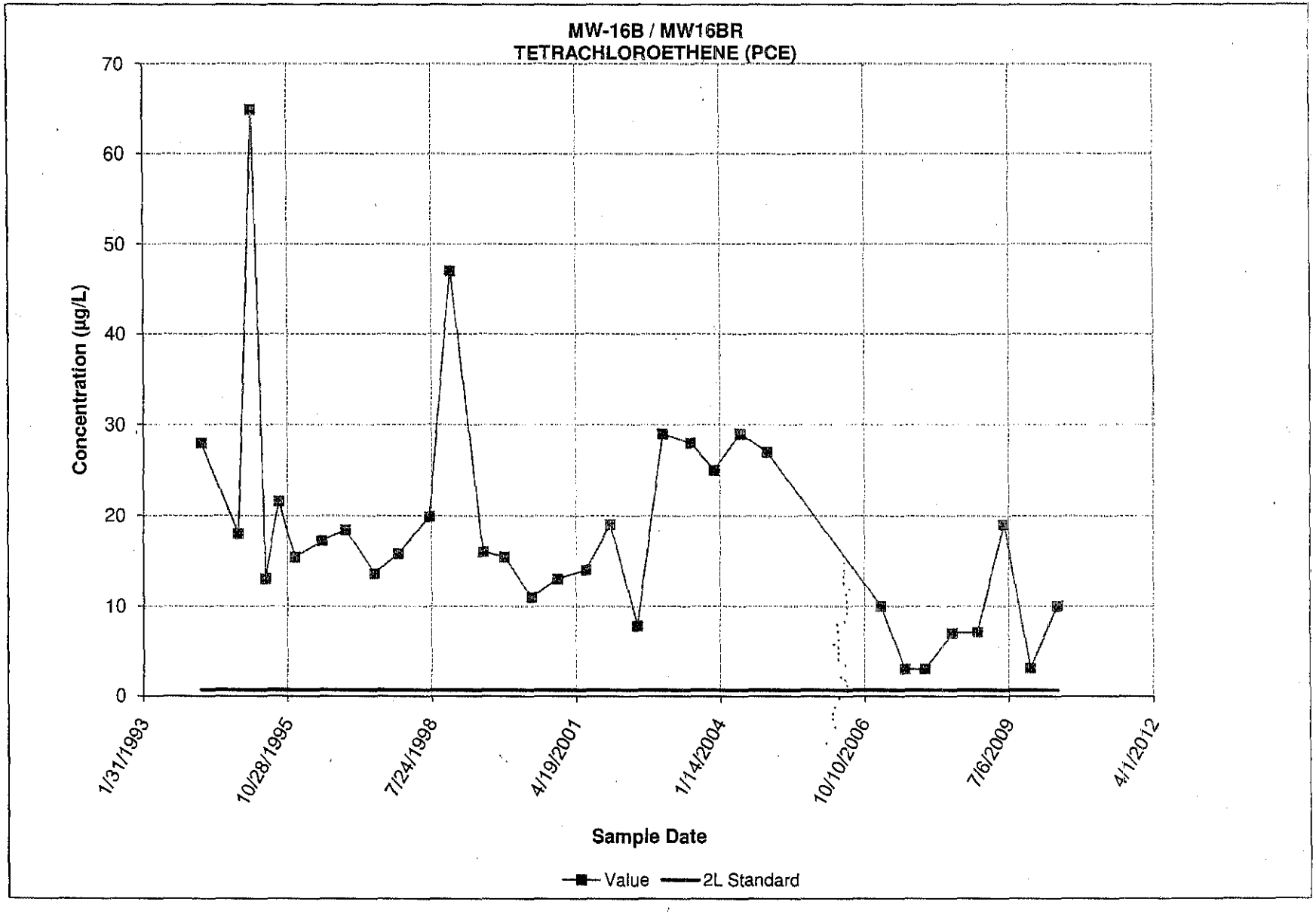

MW-15A / 15AR
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

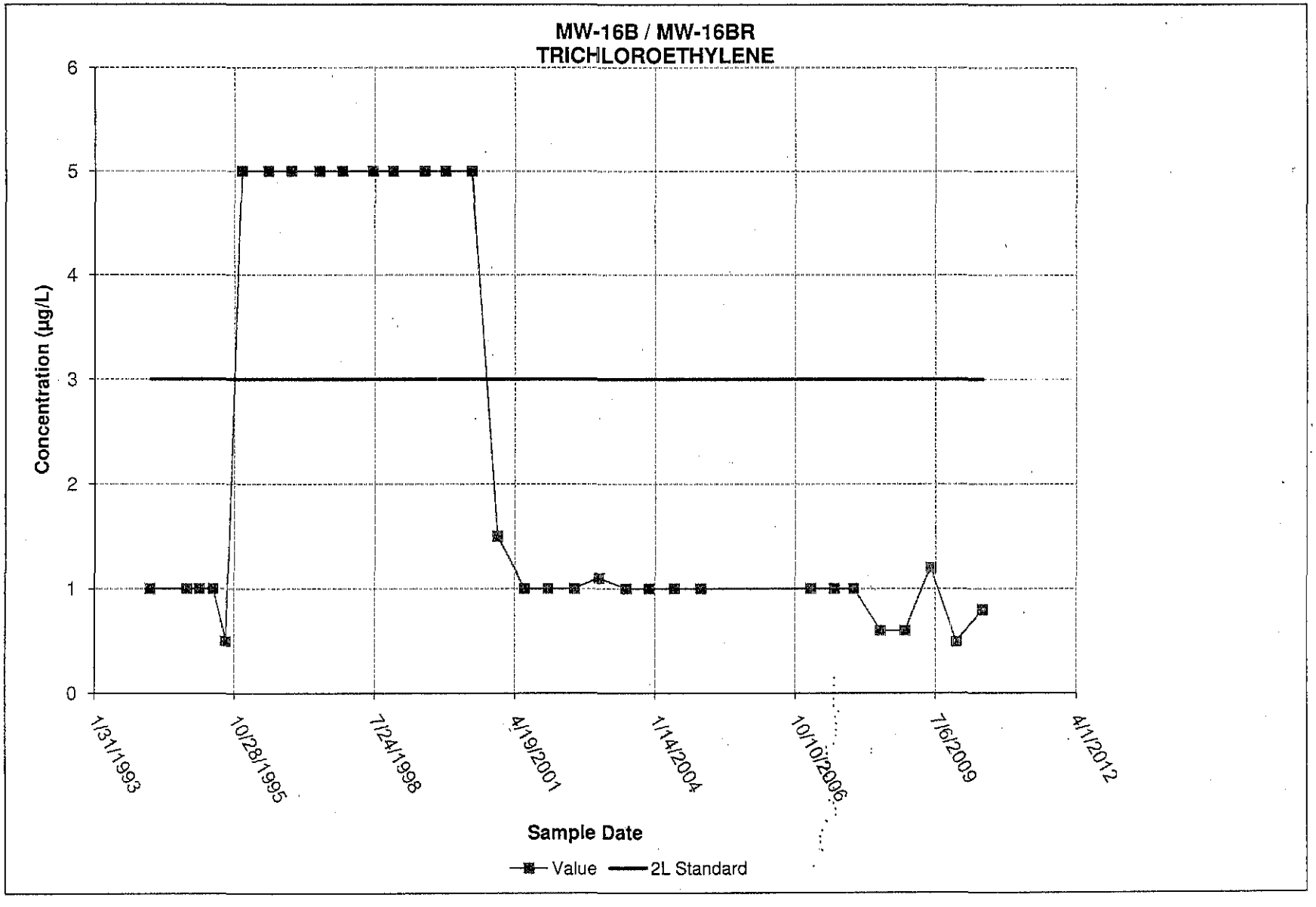

MW-15A / MW-15AR
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

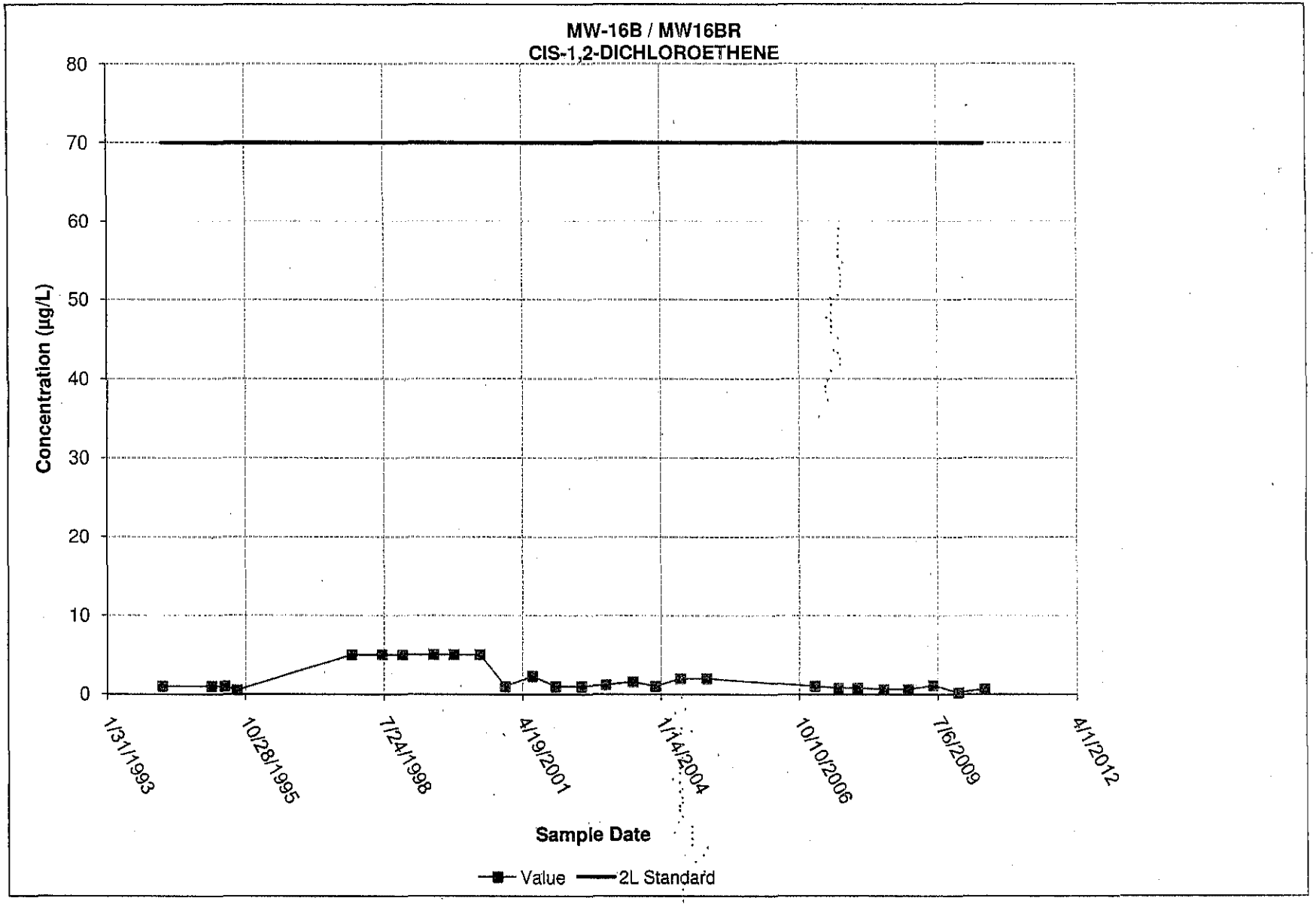

MW-15A/MW-15AR
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

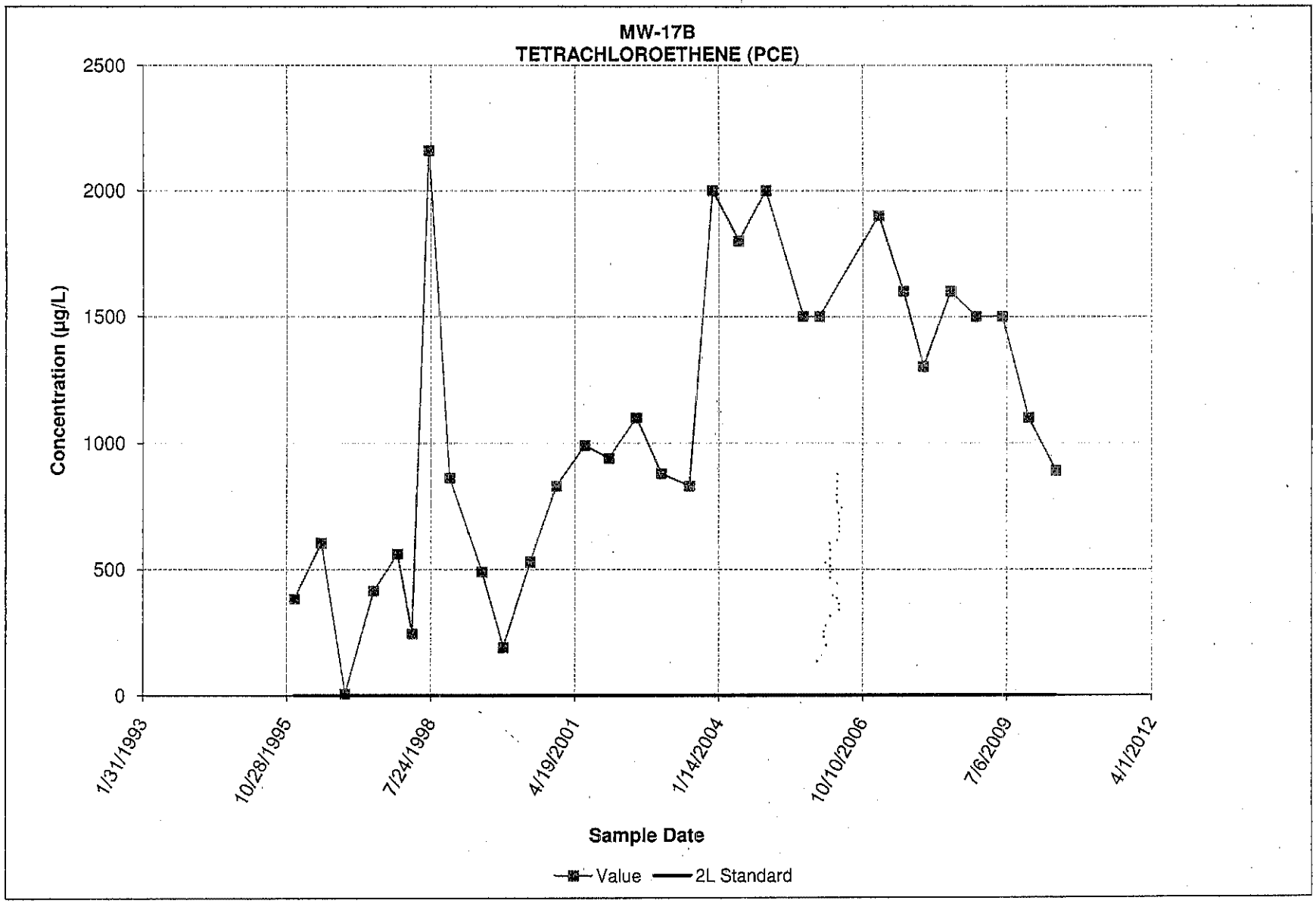

MW-15B / 15BR
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

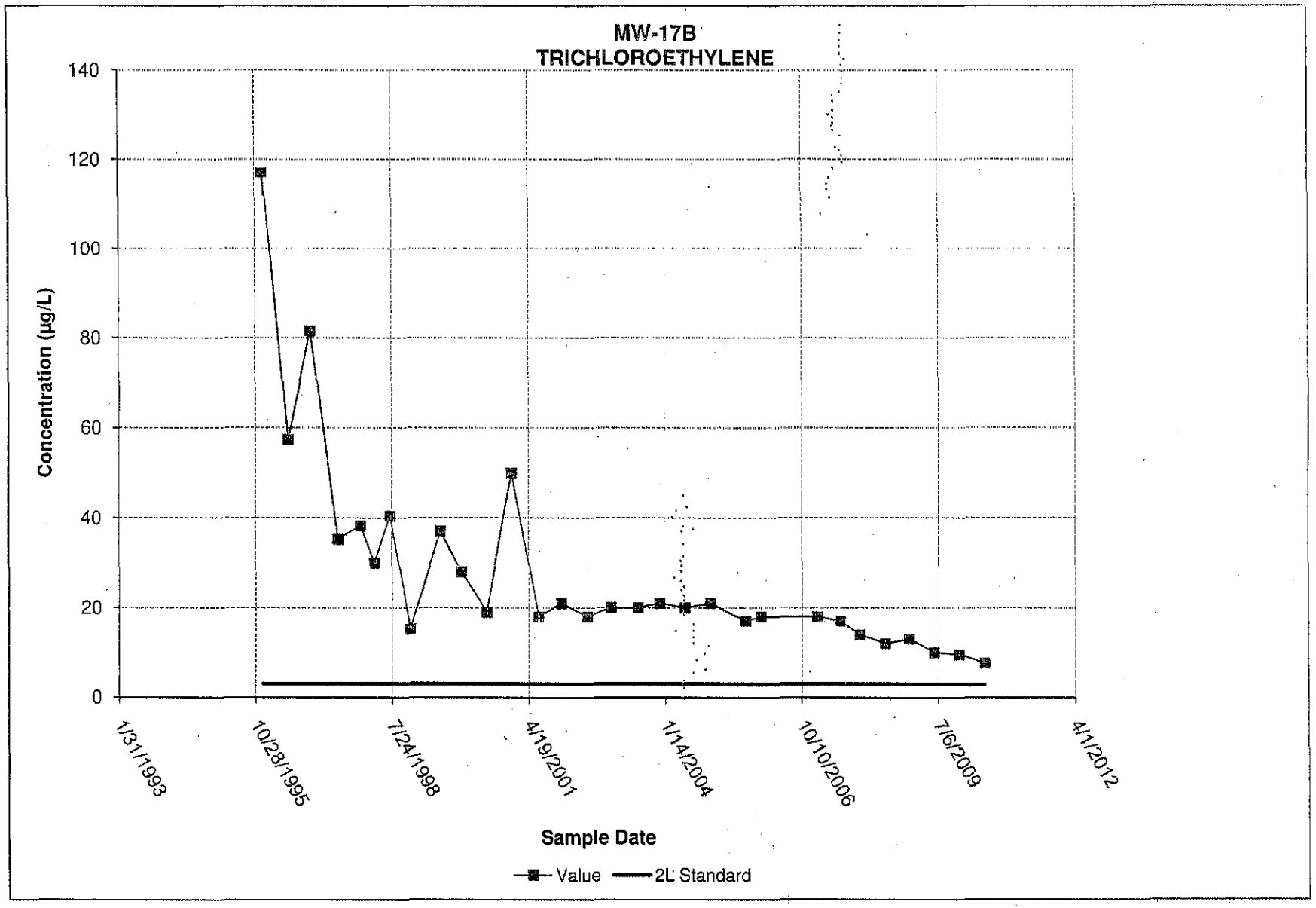

MW-15B / MW15BR
TRICHLOROETHYLENE
Concentration (µg/L)
0
2
4
6
8
10
12
14
16
18
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

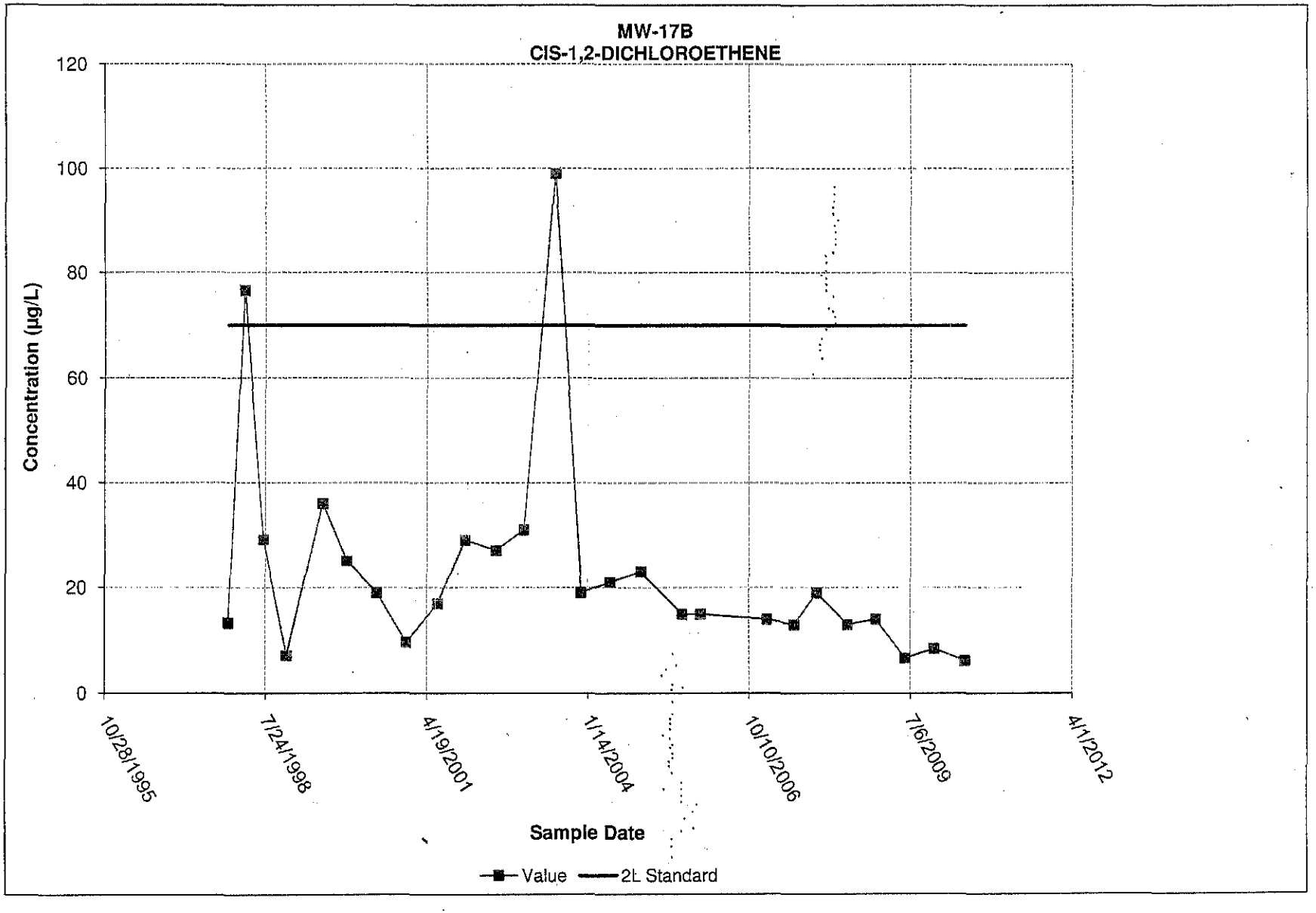

MW-16B / MW16BR
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

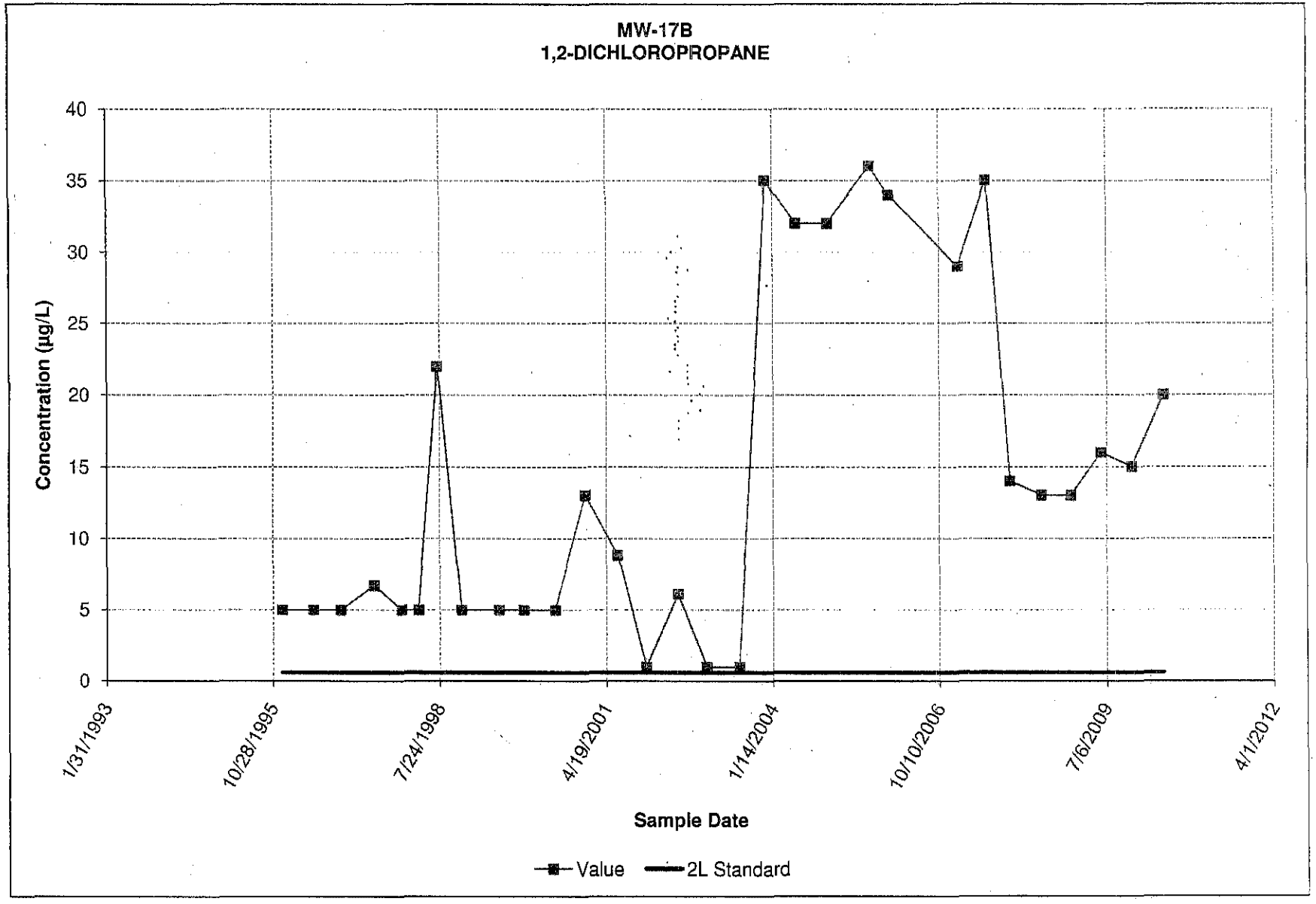

MW-16B / MW-16BR
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

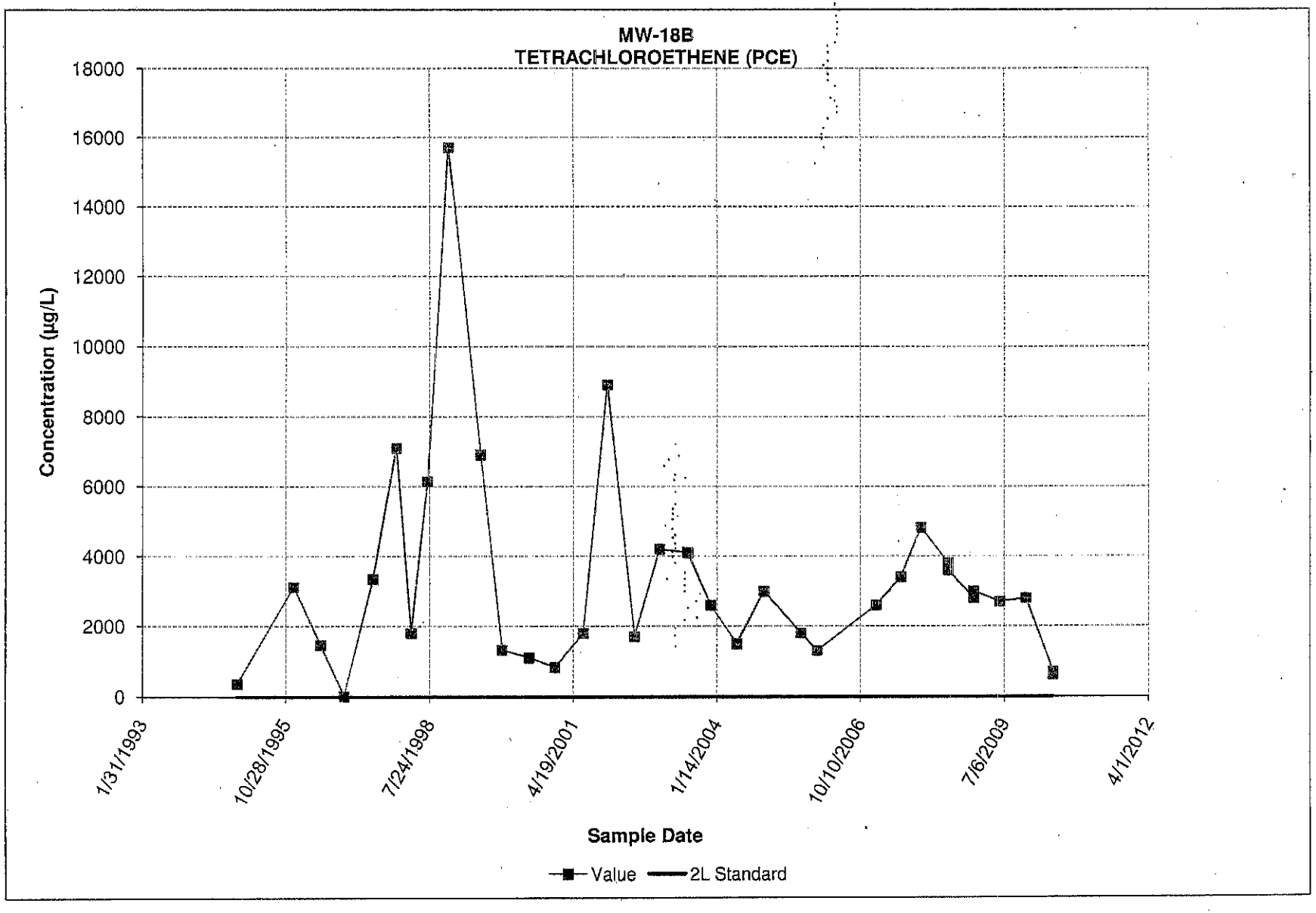

MW-16B / MW16BR
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

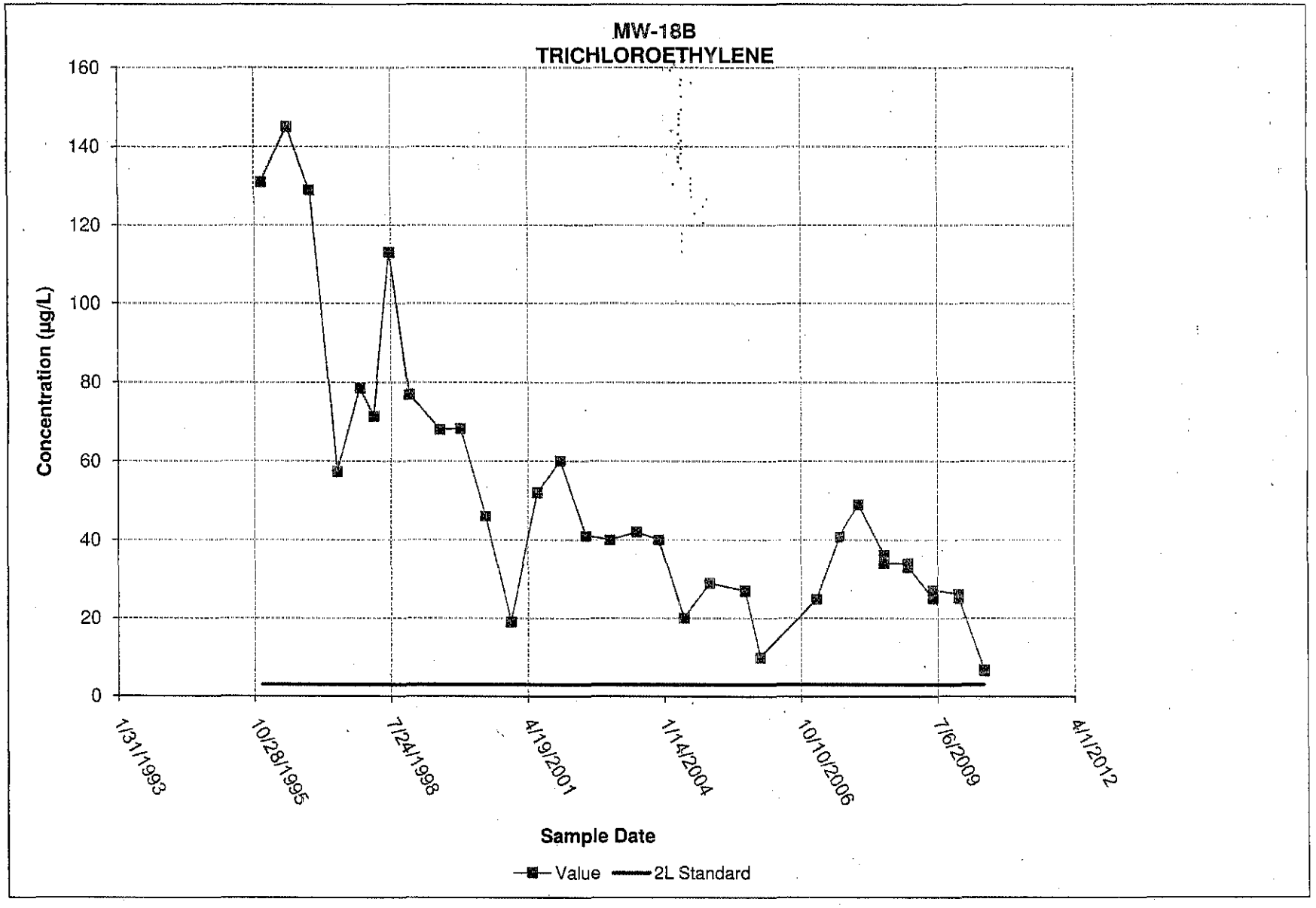

MW-17B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
2500
2000
1500
1000
500
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

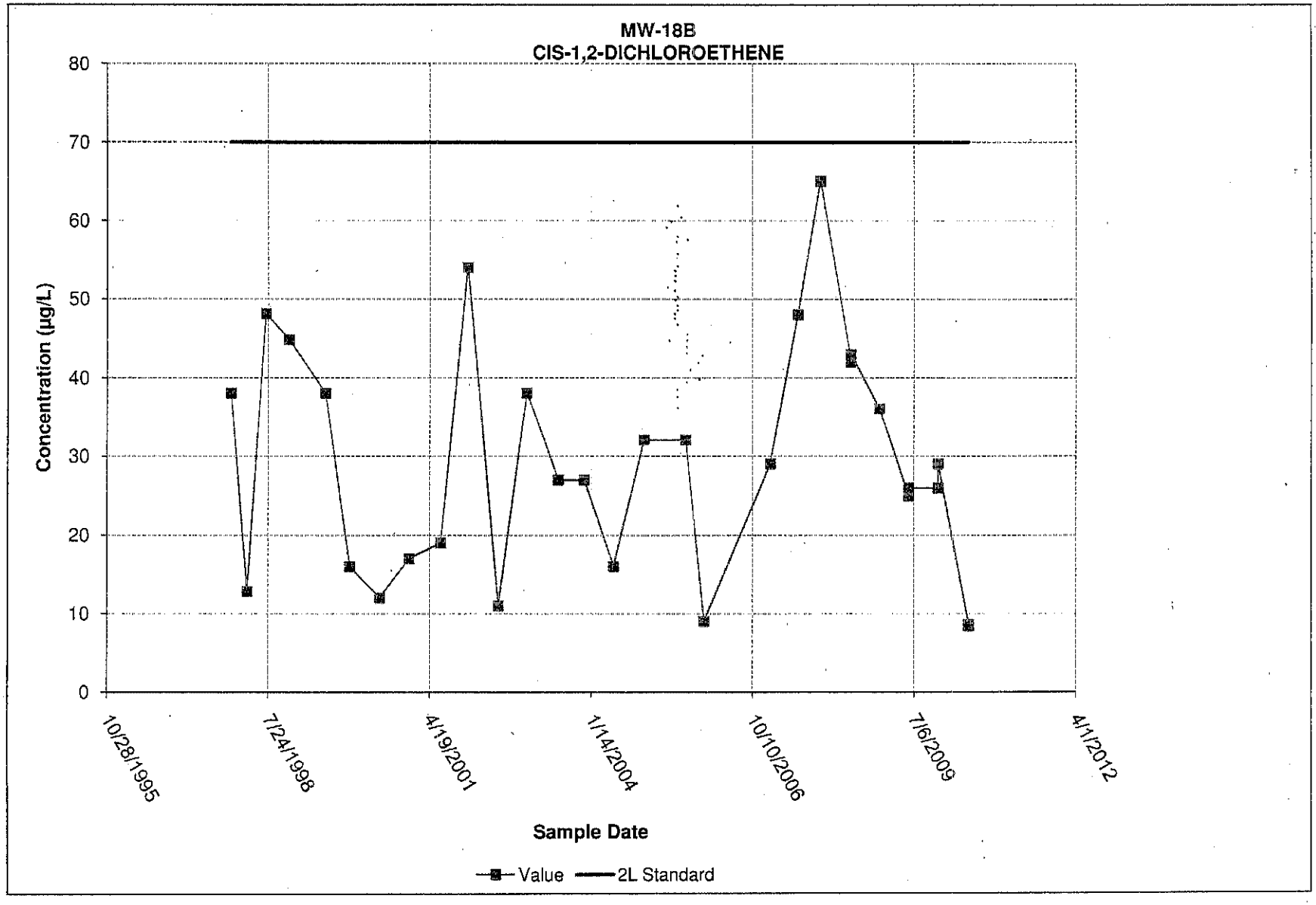

MW-17B
TRICHLOROETHYLENE
Concentration (µg/L)
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

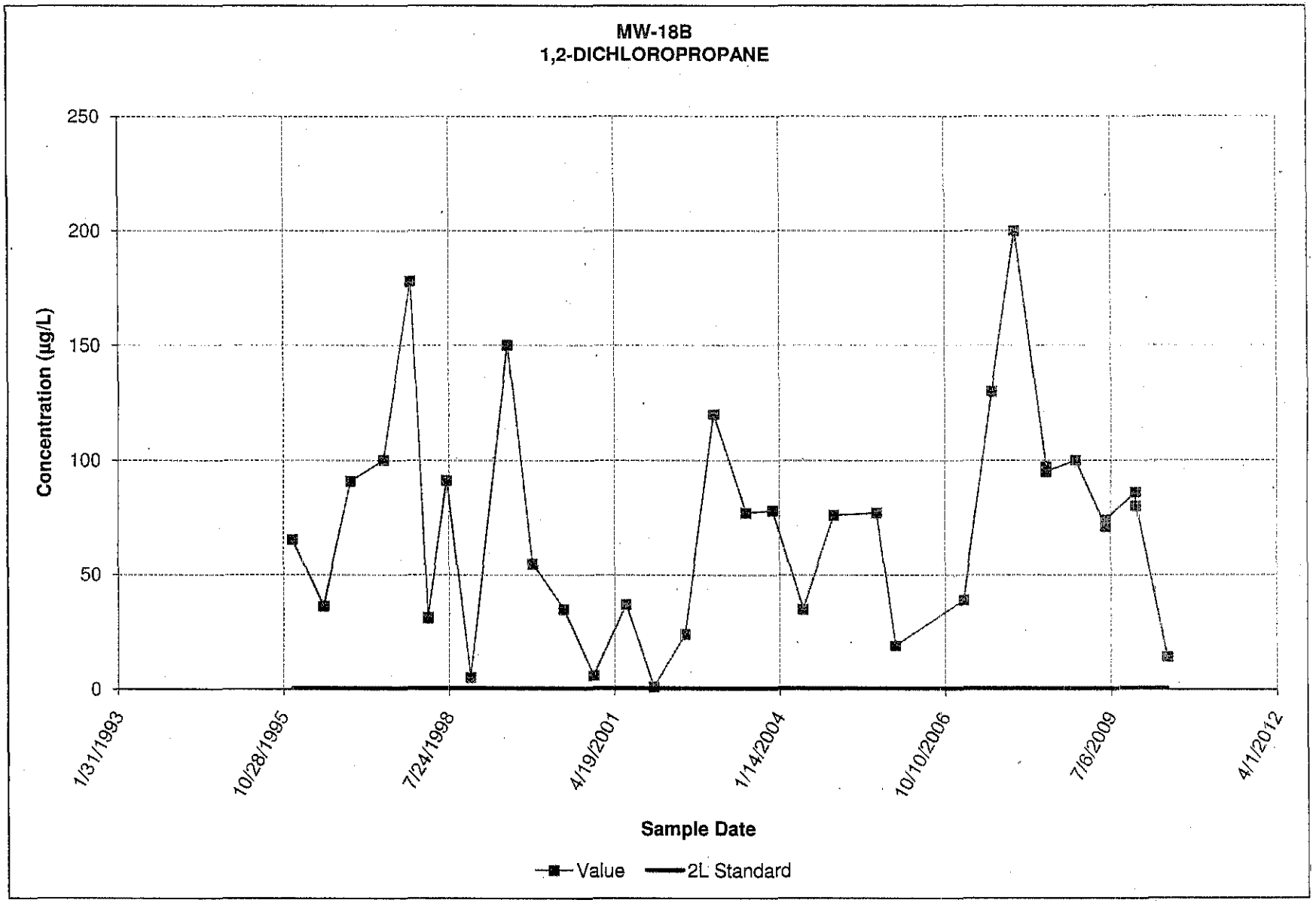

MW-17B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
120
100
80
60
40
20
0
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

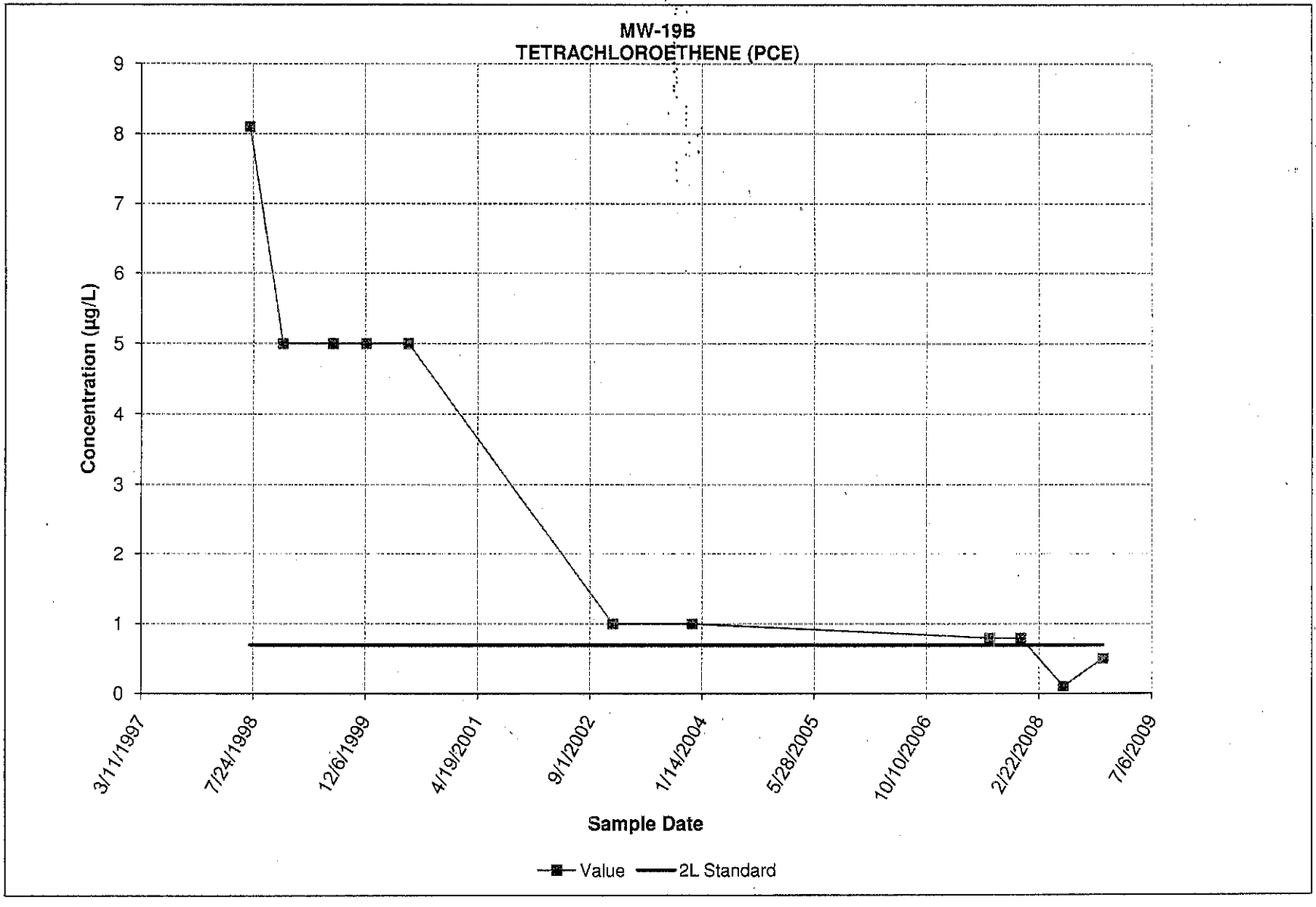

MW-17B
1,2-DICHLOROPROPANE
Concentration (µg/L)
40
35
30
25
20
15
10
5
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

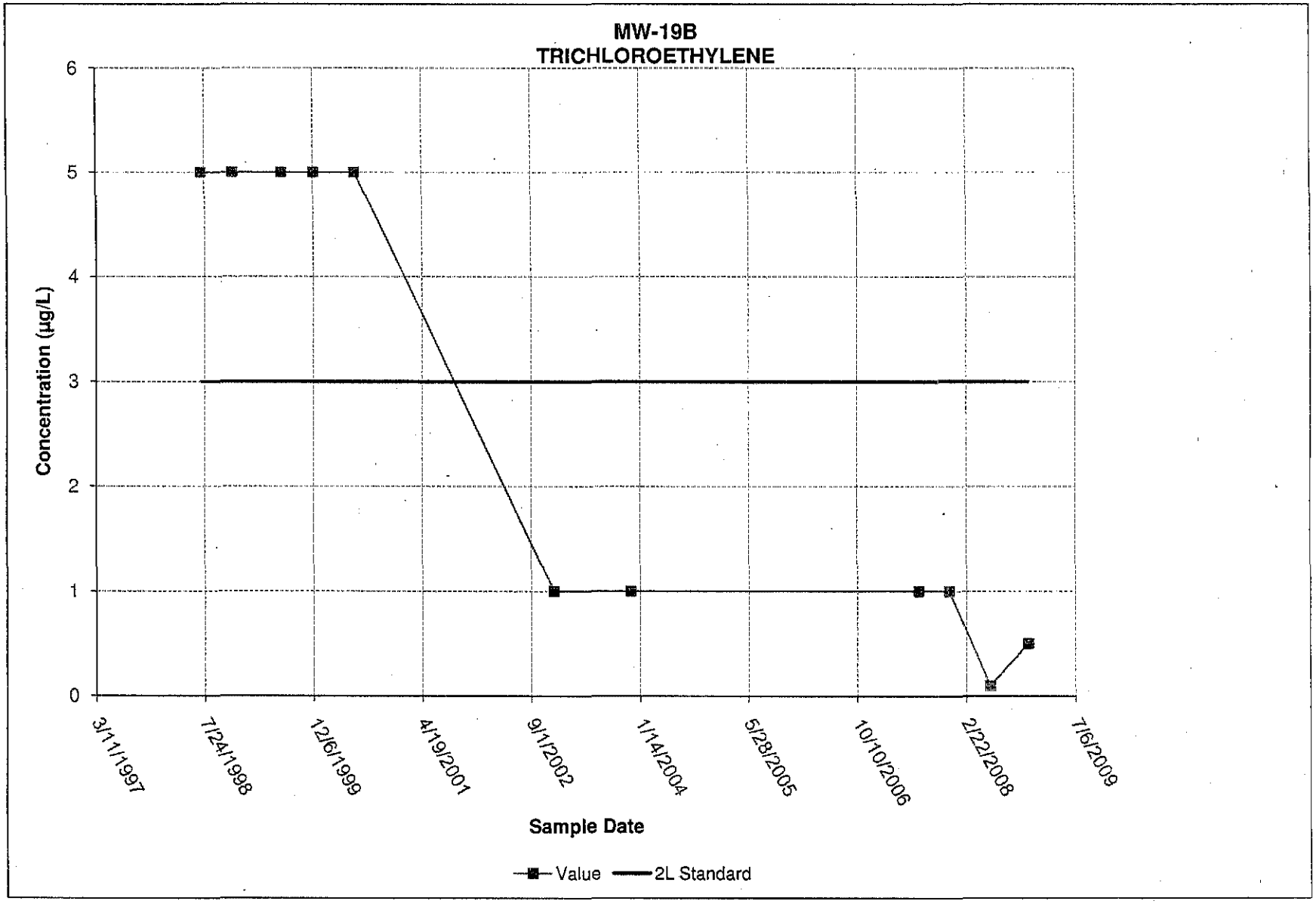

MW-18B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

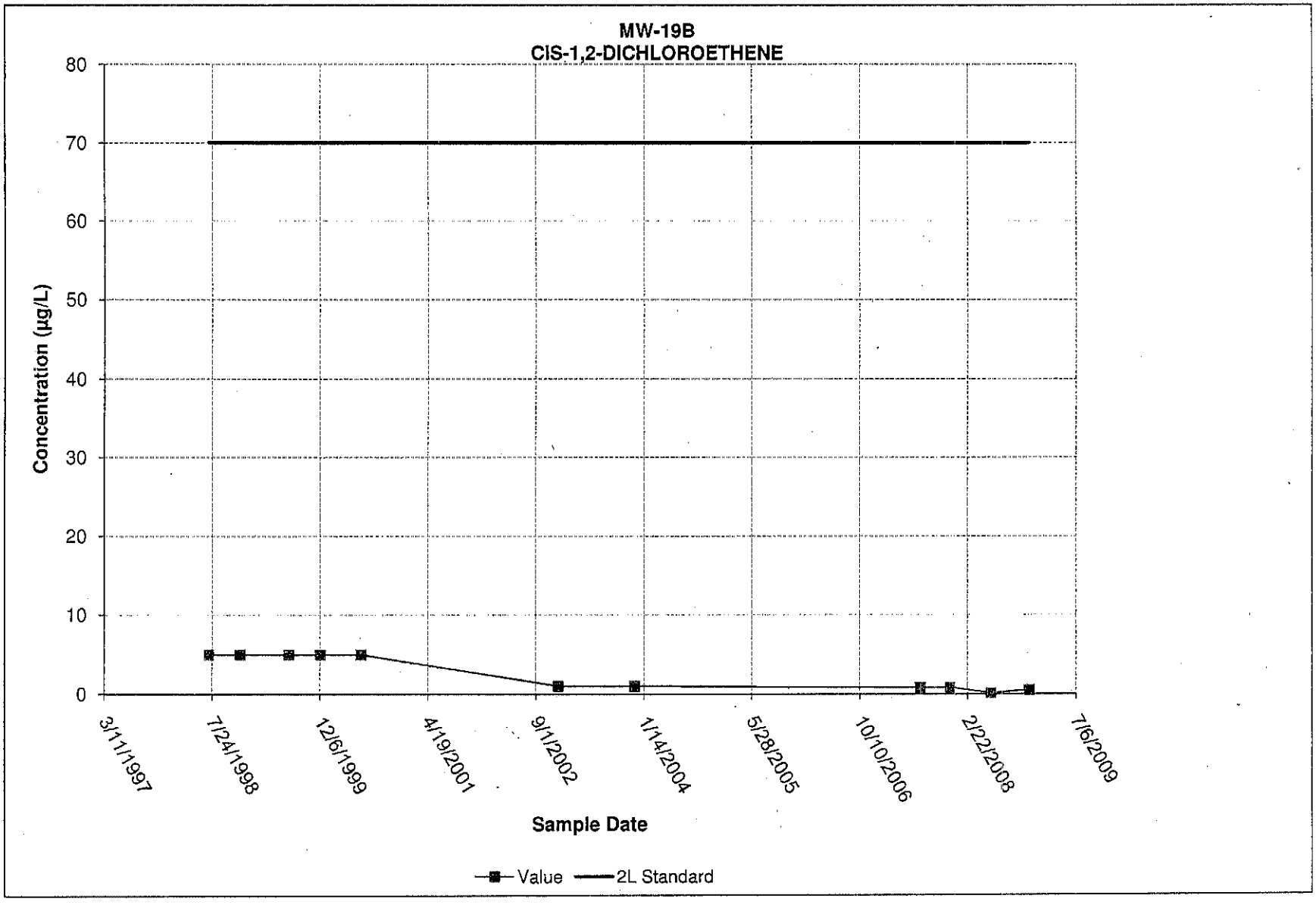

MW-18B
TRICHLOROETHYLENE
Concentration (µg/L)
160
140
120
100
80
60
40
20
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

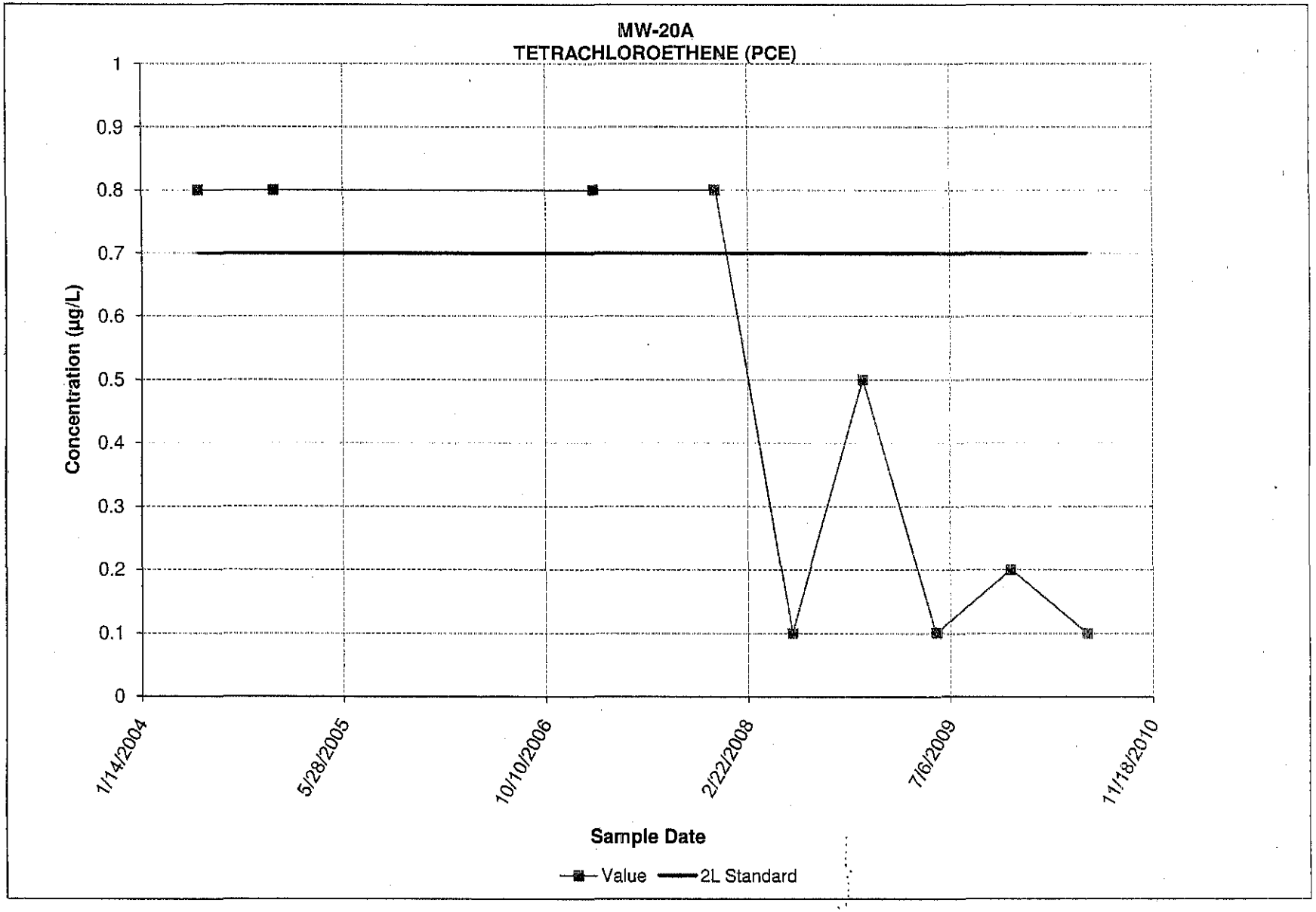

MW-18B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

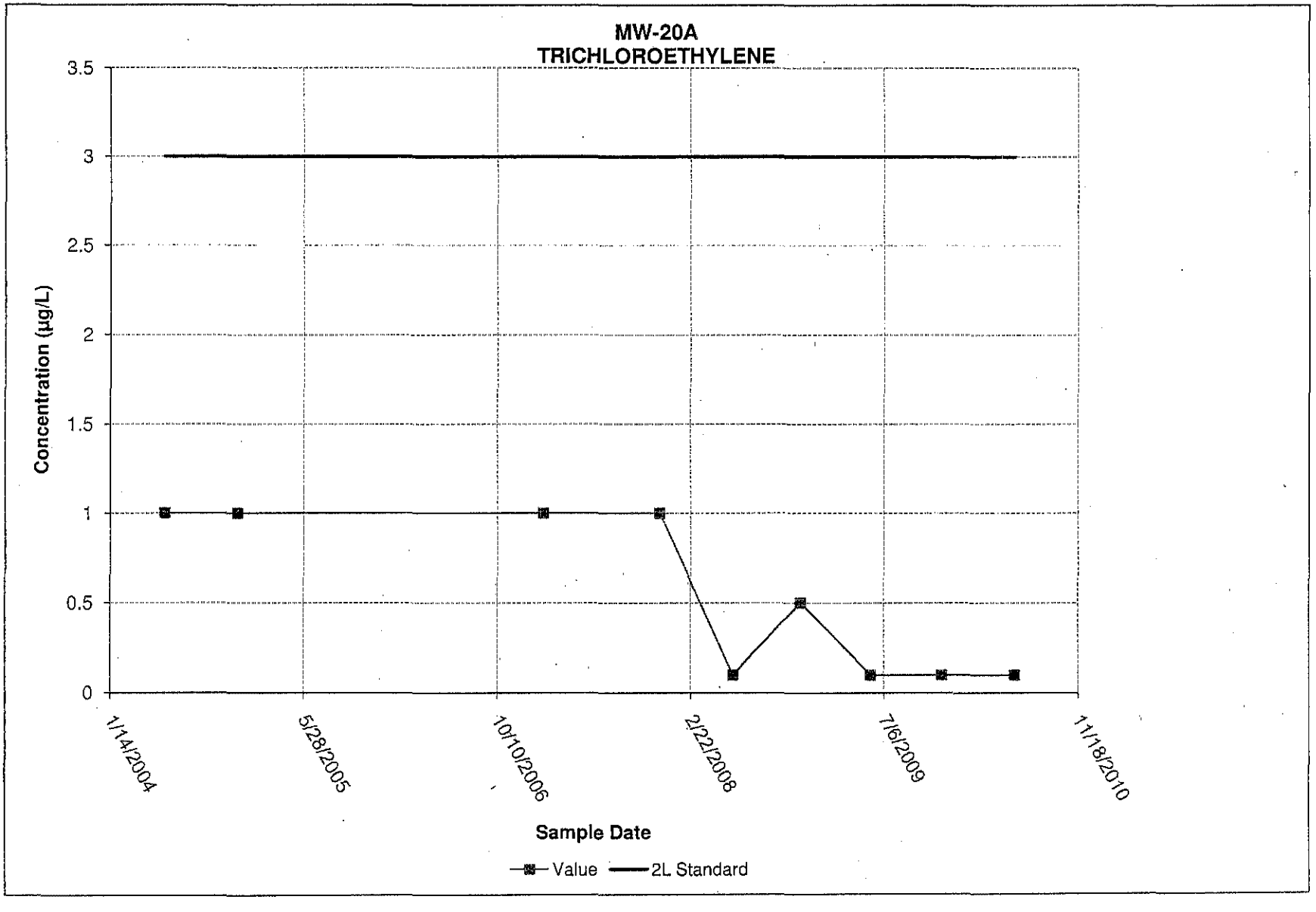

MW-18B
1,2-DICHLOROPROPANE
Concentration (µg/L)
250
200
150
100
50
0
1/31/1993
10/28/1995
7/24/1998
4/19/2001
1/14/2004
10/10/2006
7/6/2009
4/1/2012
Sample Date
Value
2L Standard

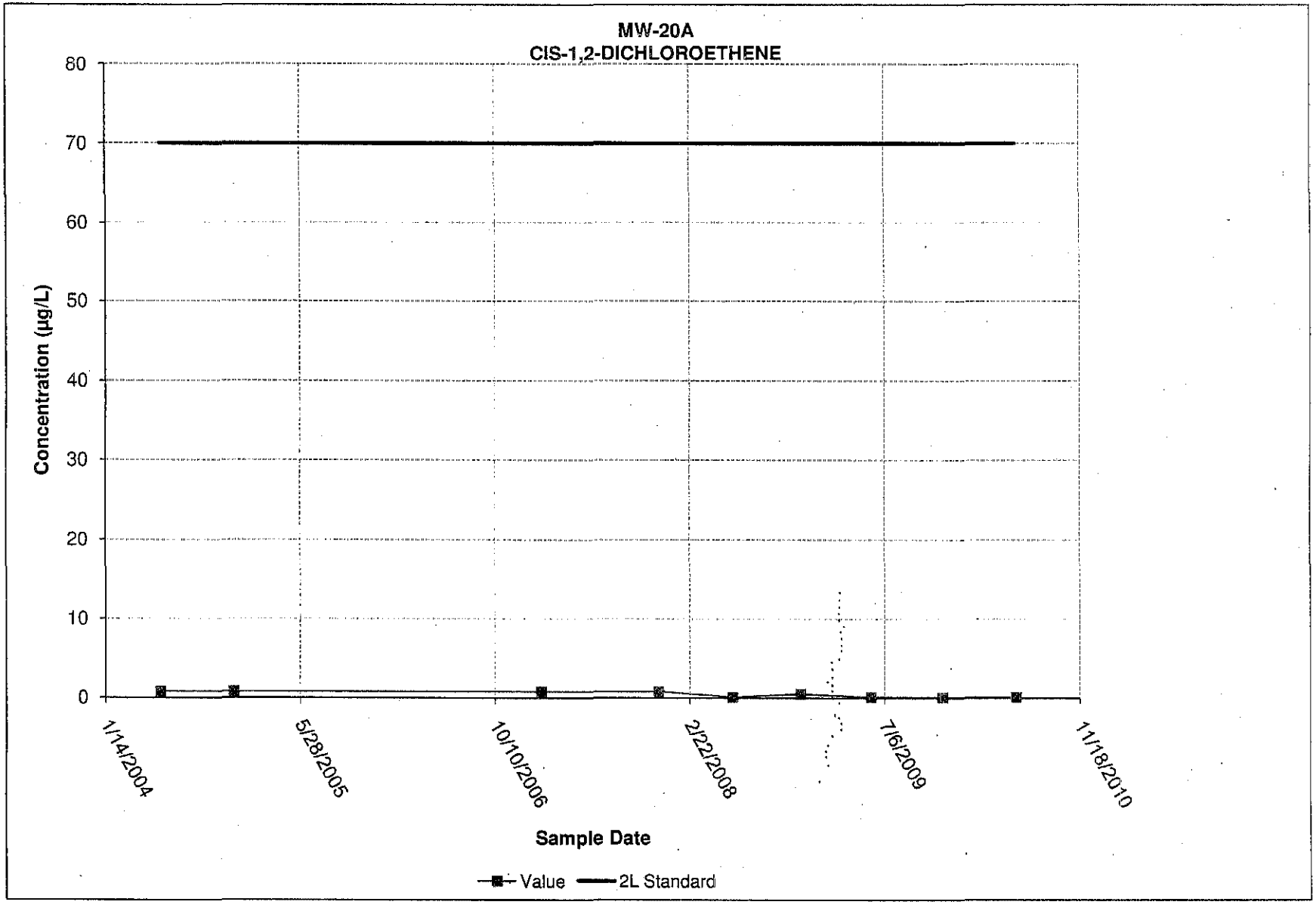

MW-19B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
0
1
2
3
4
5
6
7
8
9
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
Sample Date
Value
2L Standard

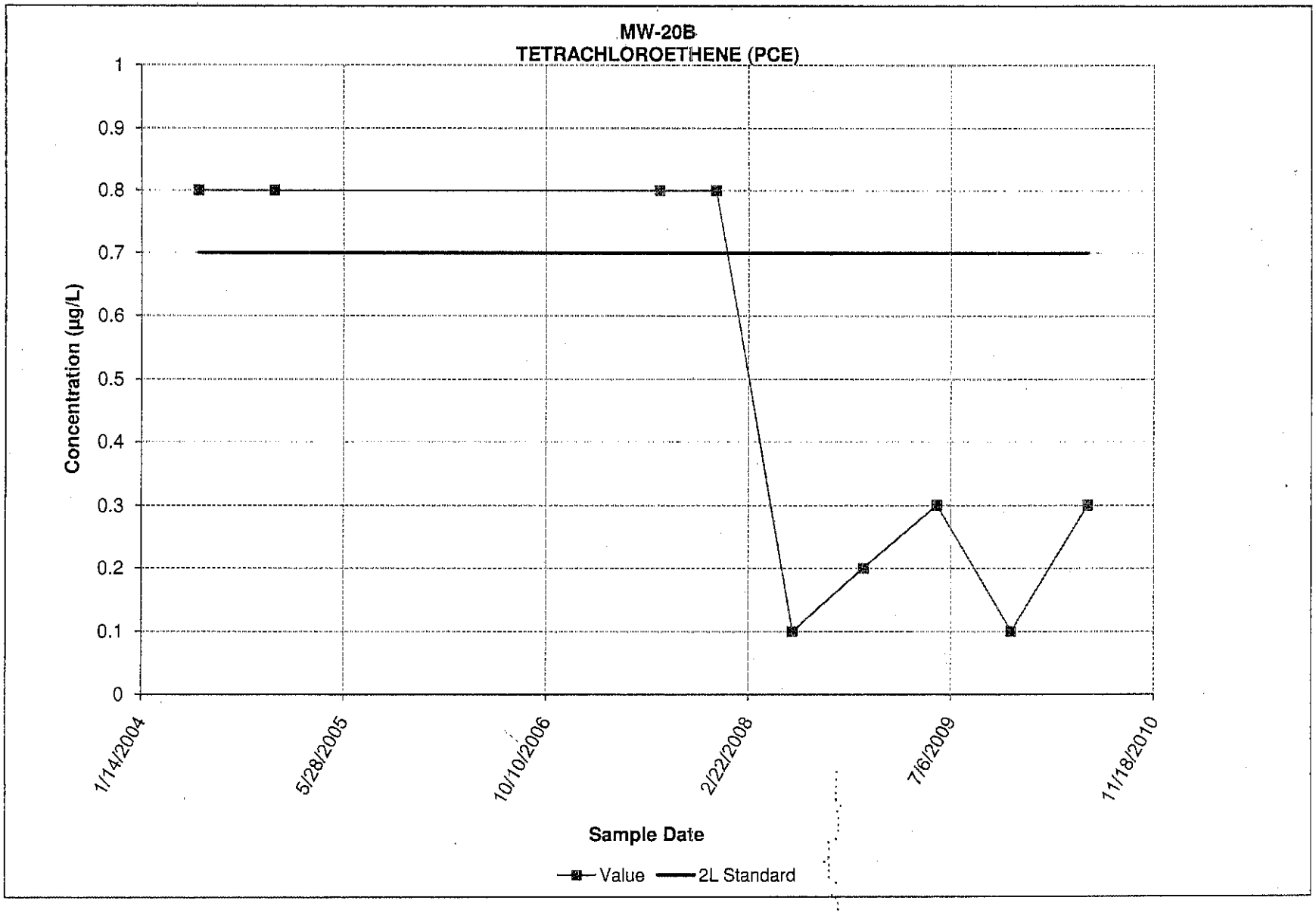

MW-19B
TRICHLOROETHYLENE
Concentration (µg/L)
0
1
2
3
4
5
6
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
Sample Date
Value
2L Standard

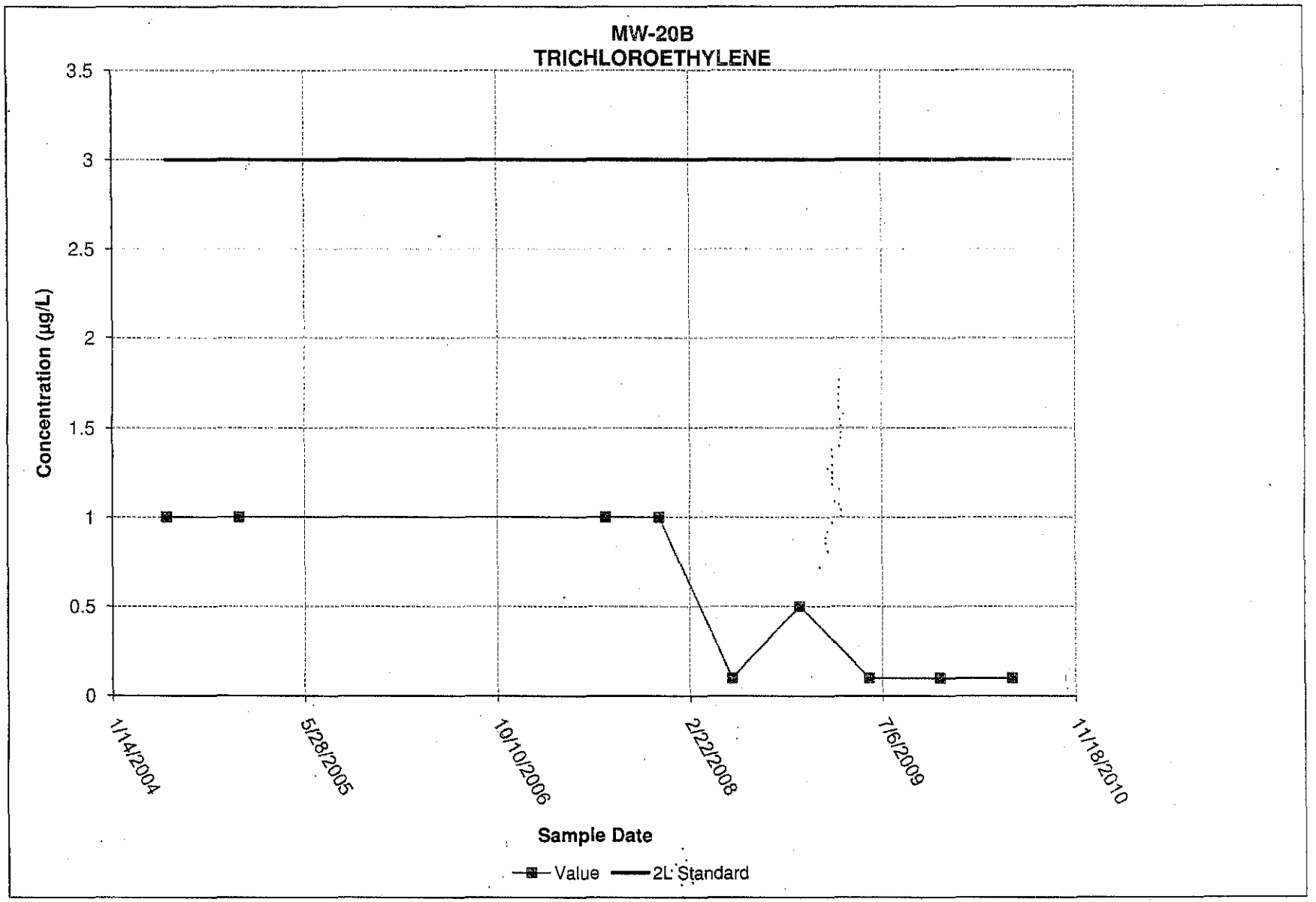

MW-19B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
3/11/1997
7/24/1998
12/6/1999
4/19/2001
9/1/2002
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
Sample Date
Value
2L Standard

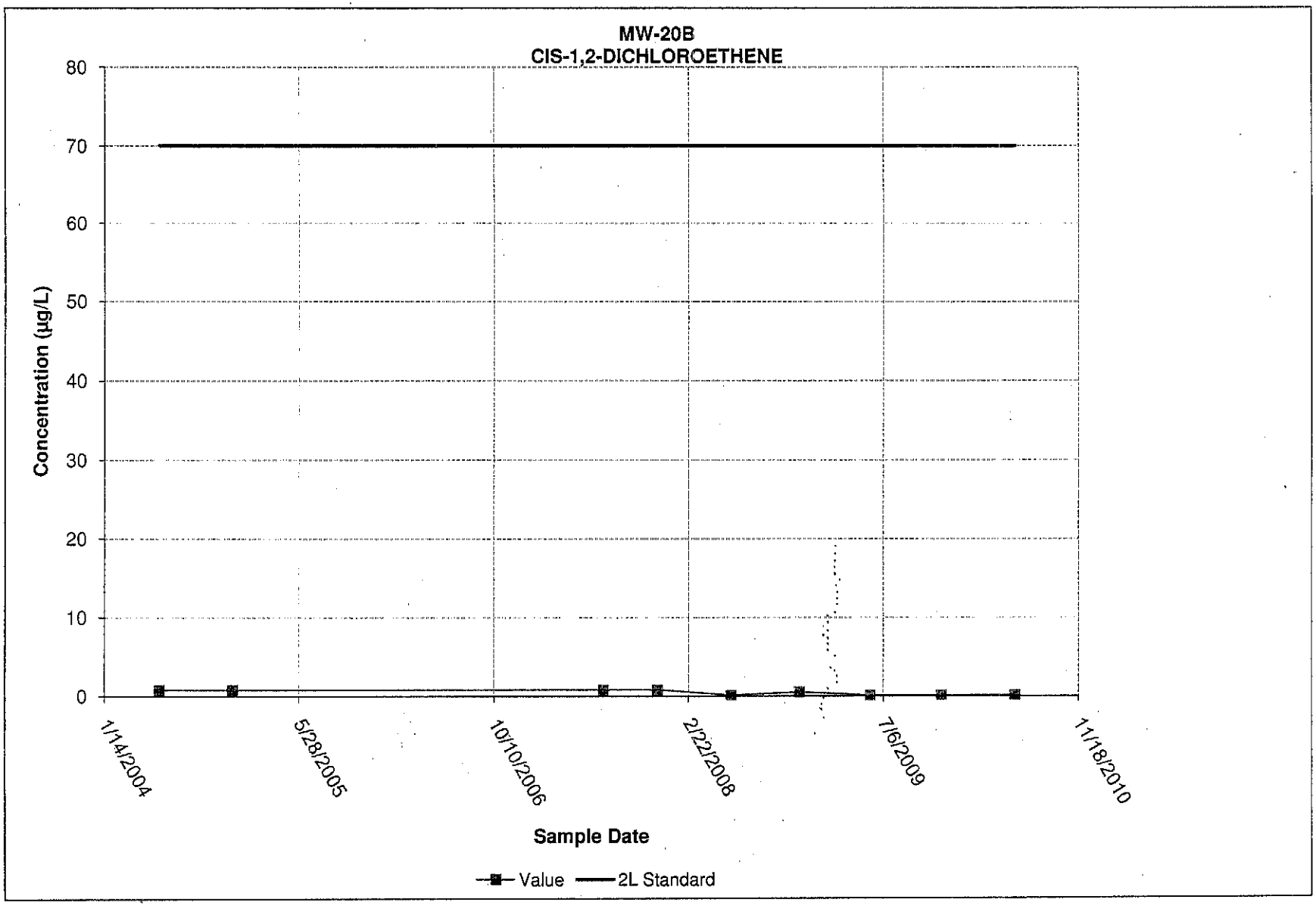

MW-20A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

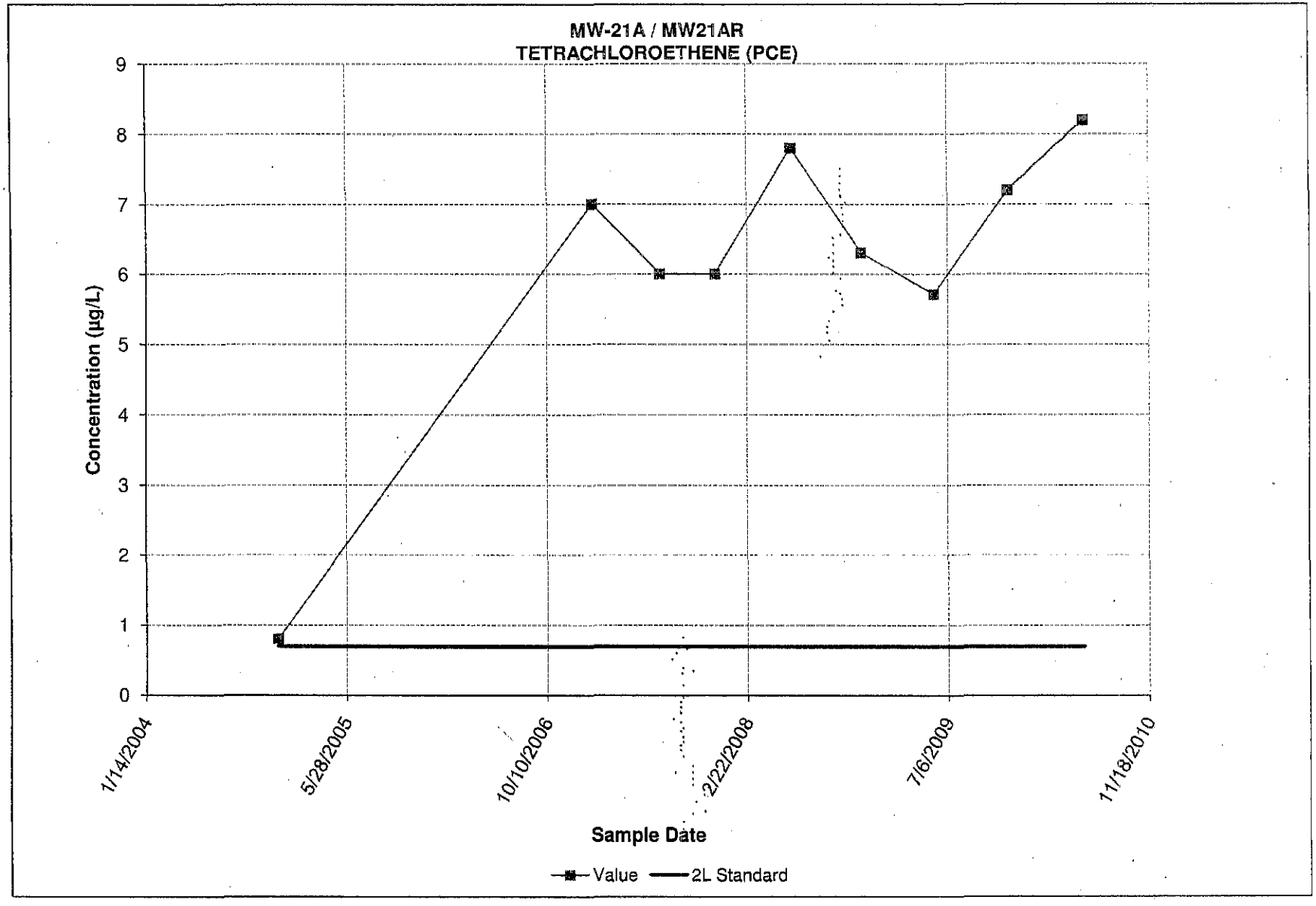

MW-20A
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

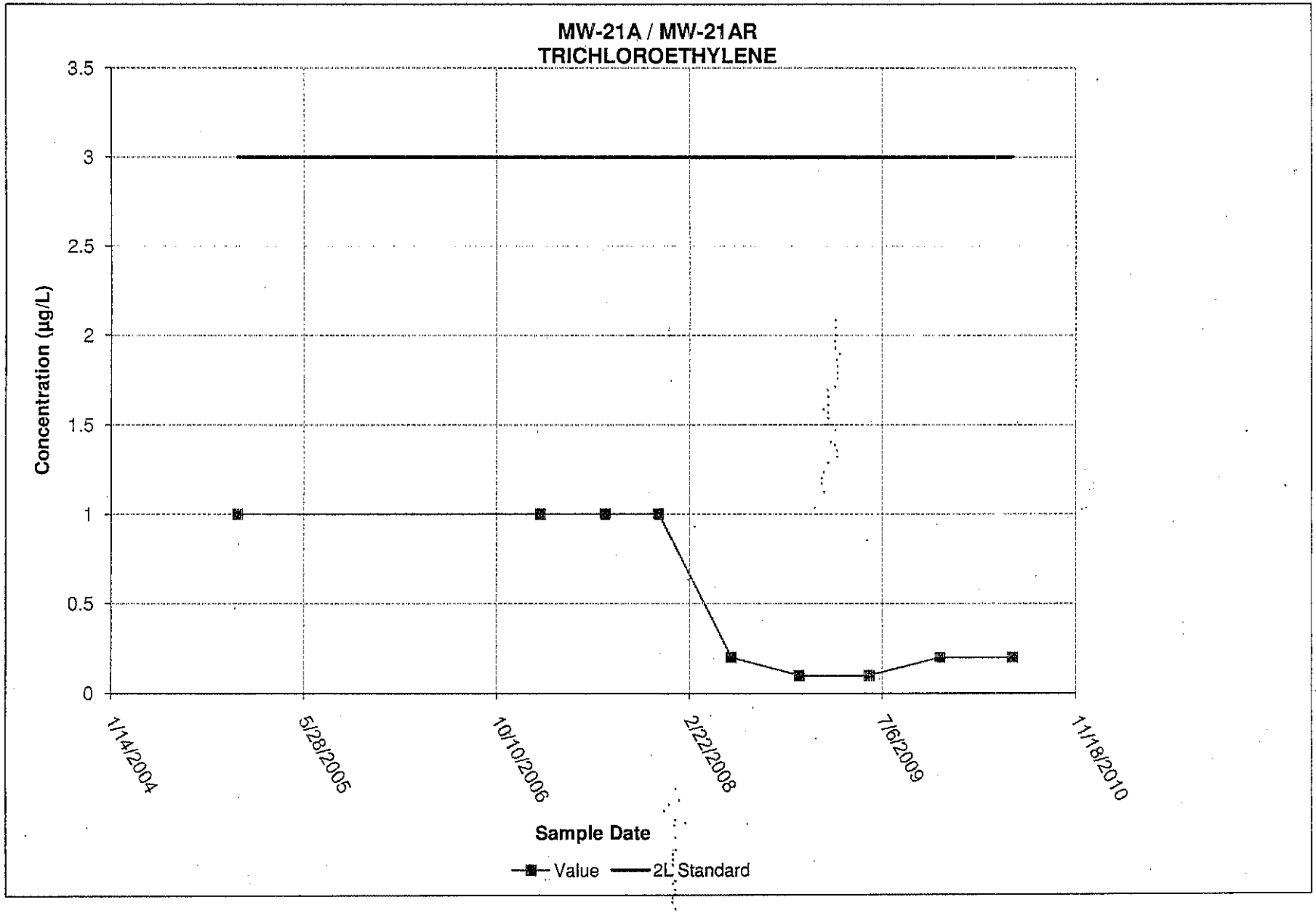

MW-20A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

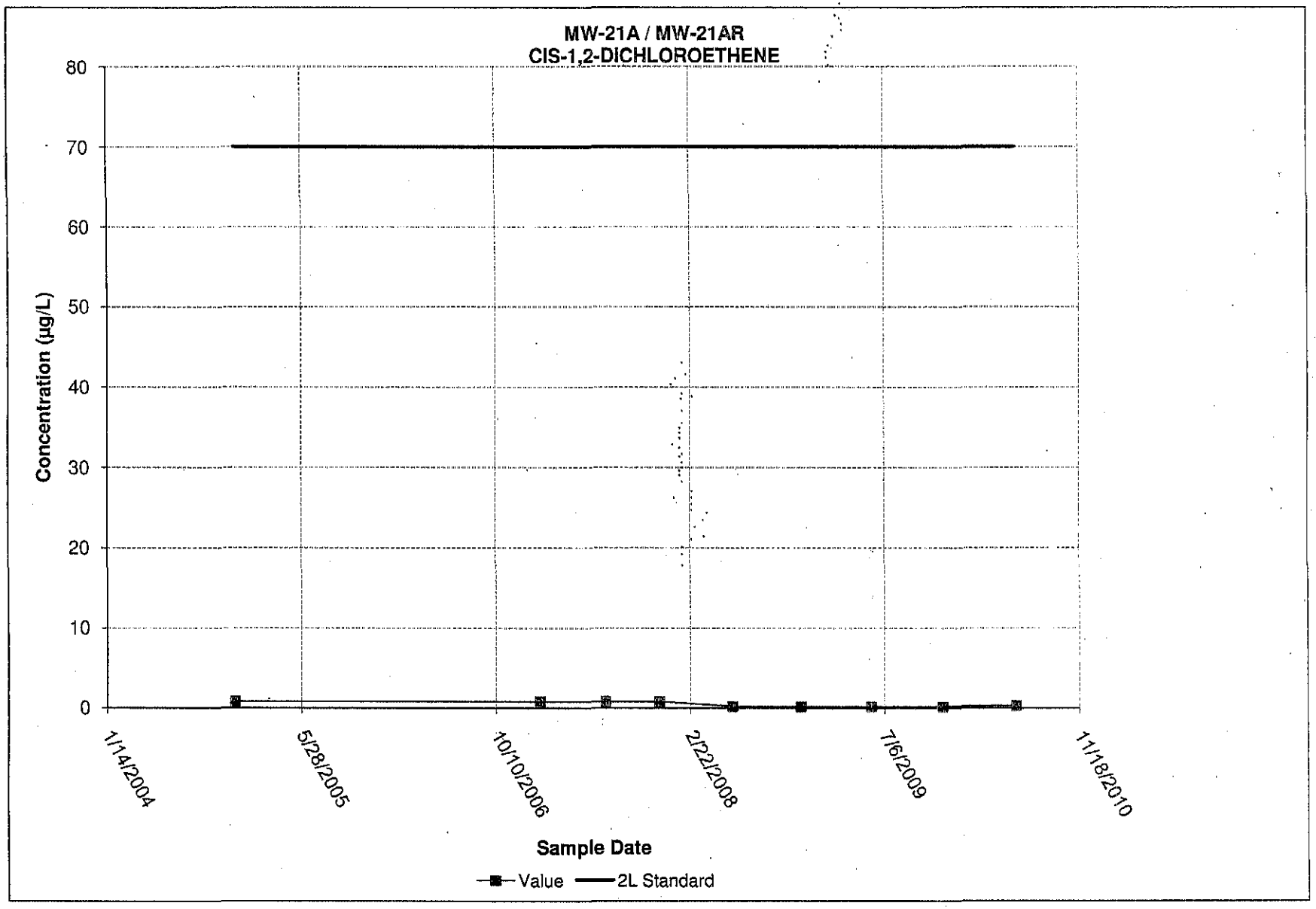

MW-20B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

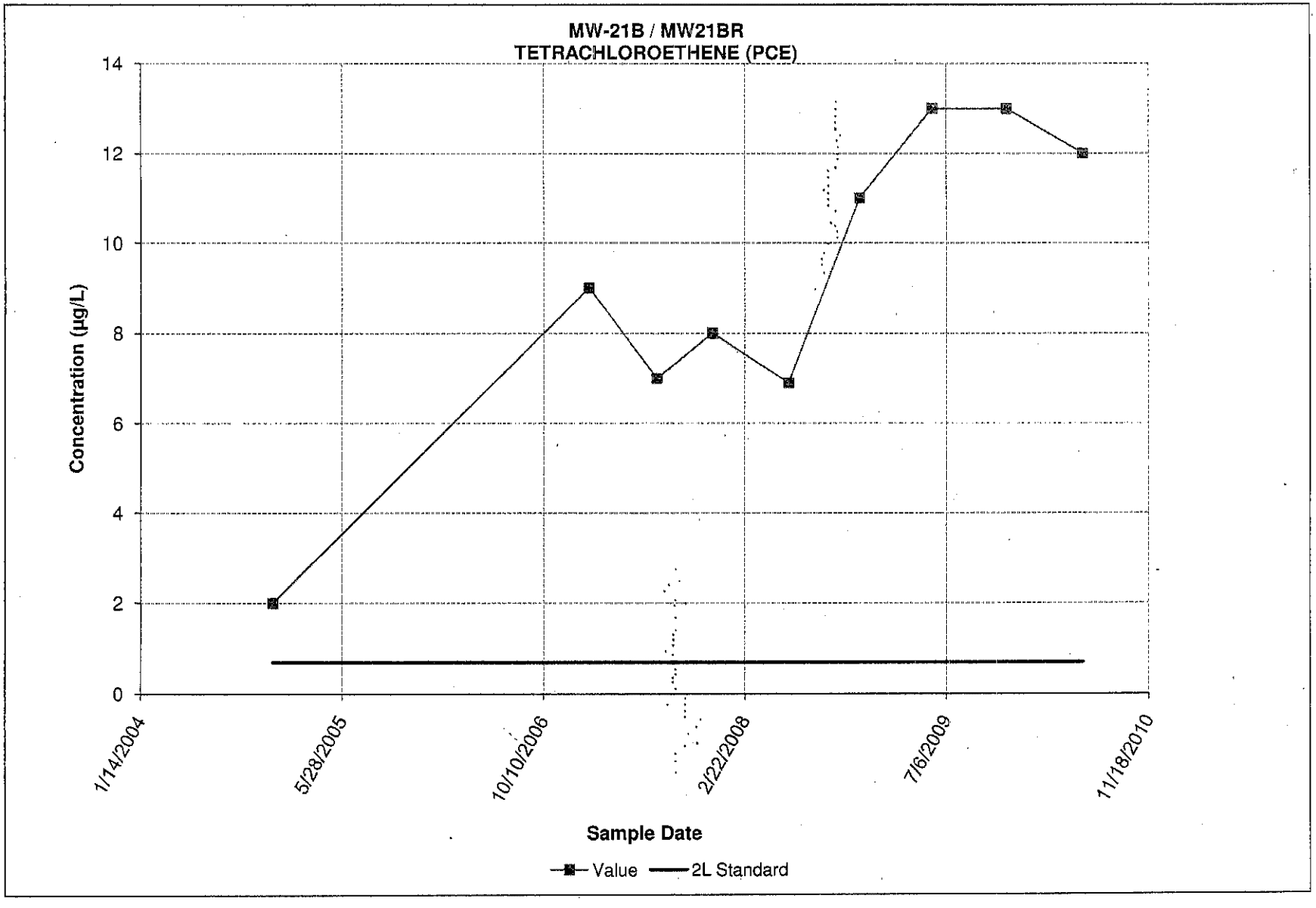

MW-20B
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

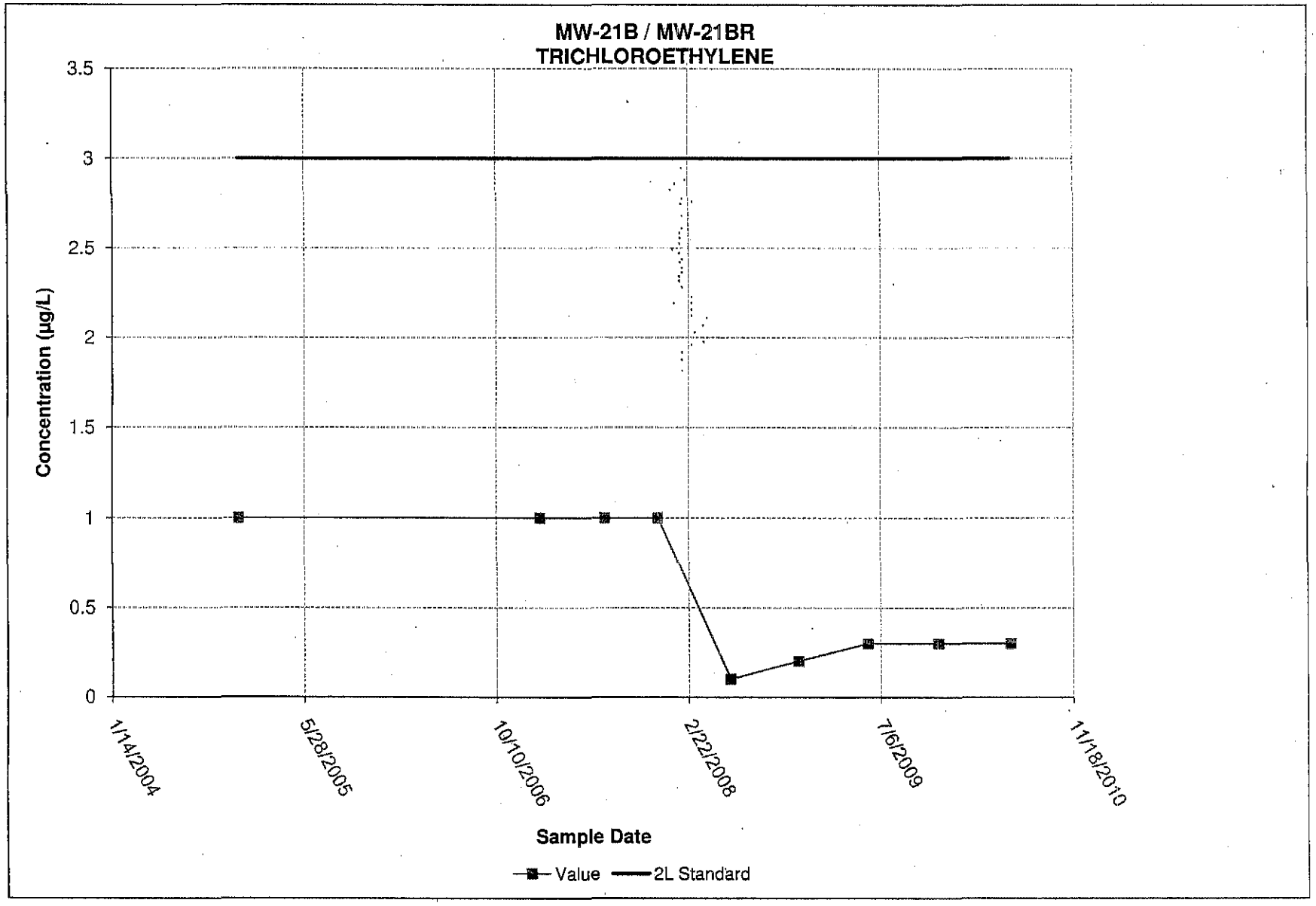

MW-20B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

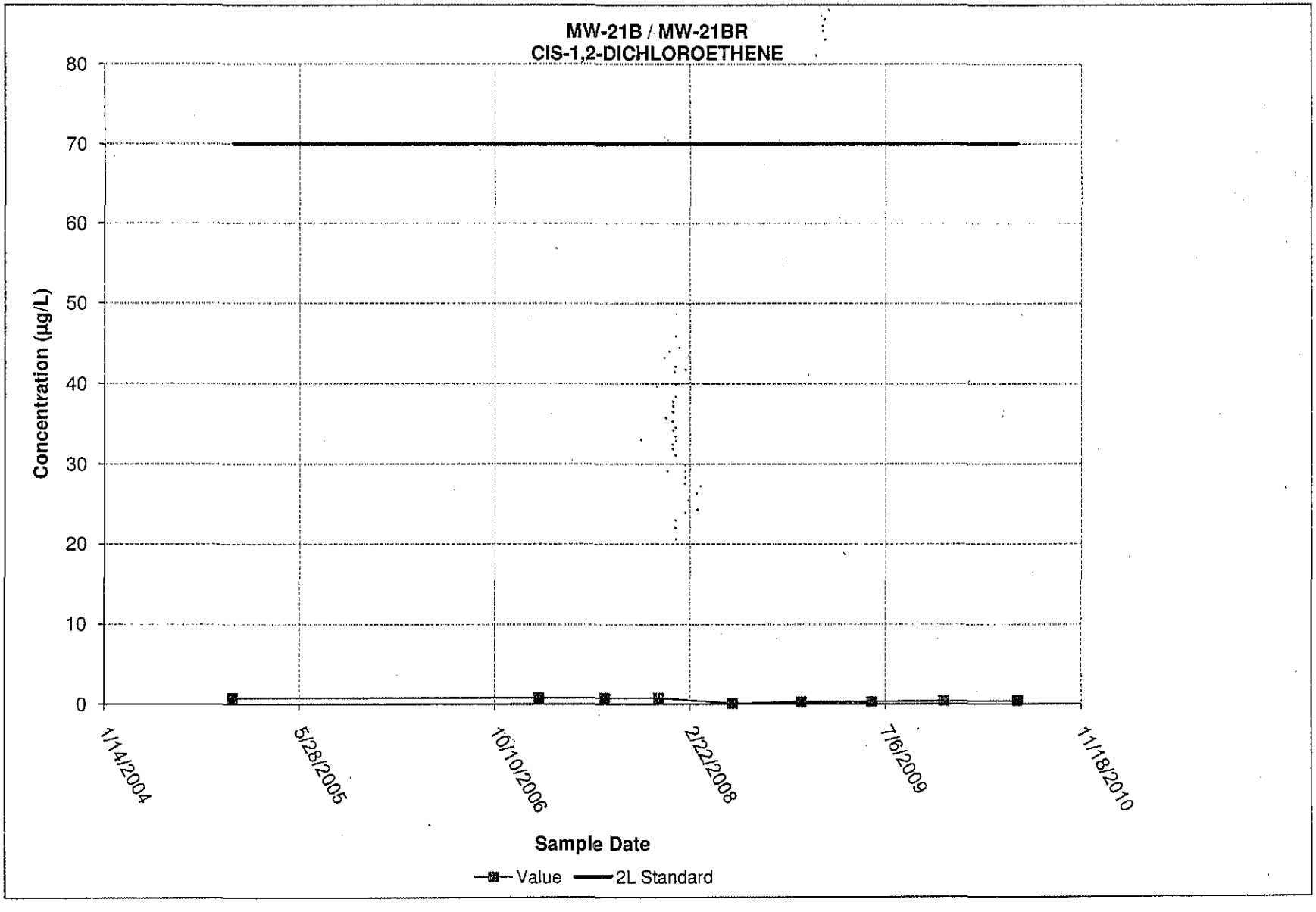

MW-21A / MW21AR
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
0
1
2
3
4
5
6
7
8
9
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

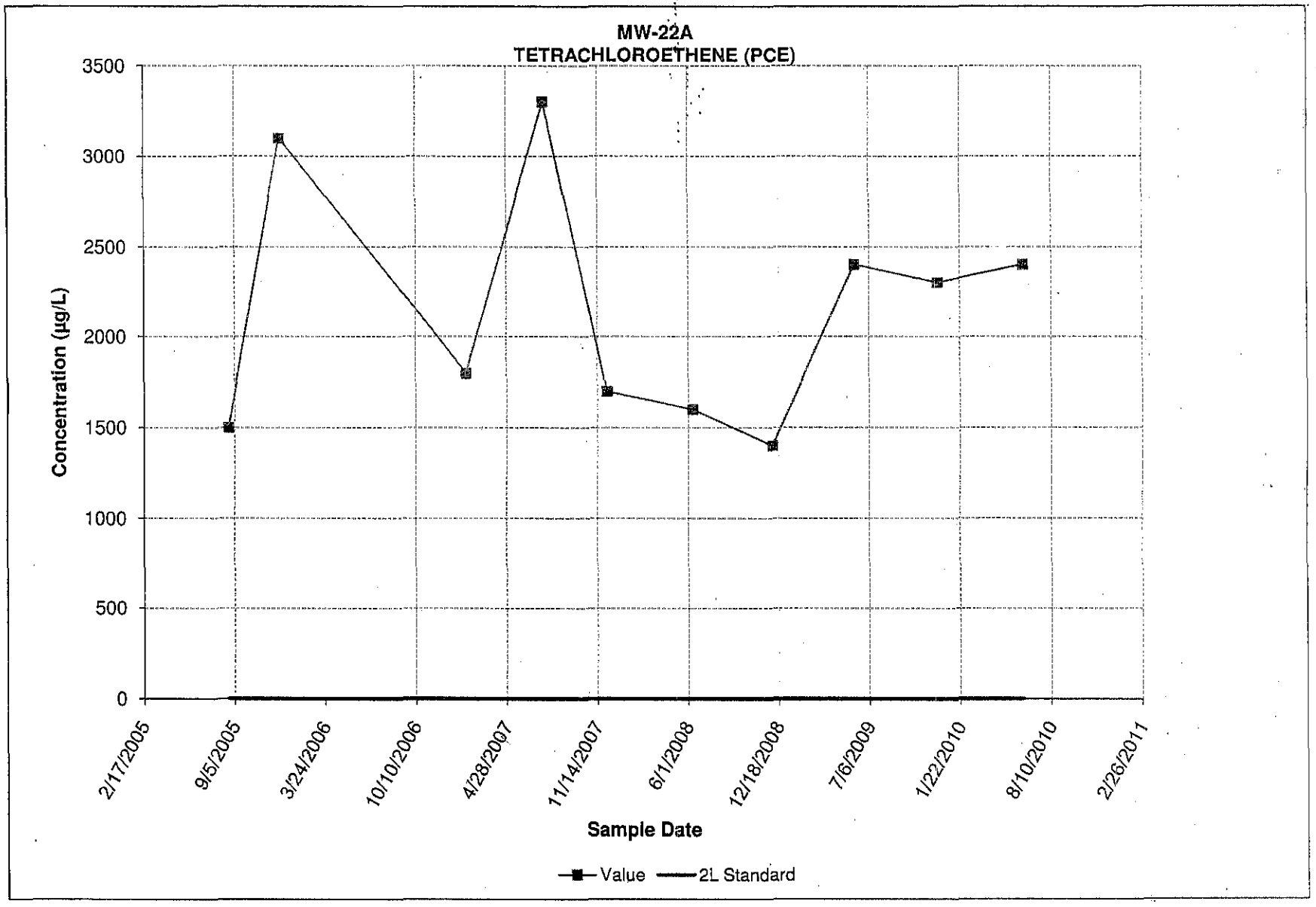

MW-21A / MW-21AR
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

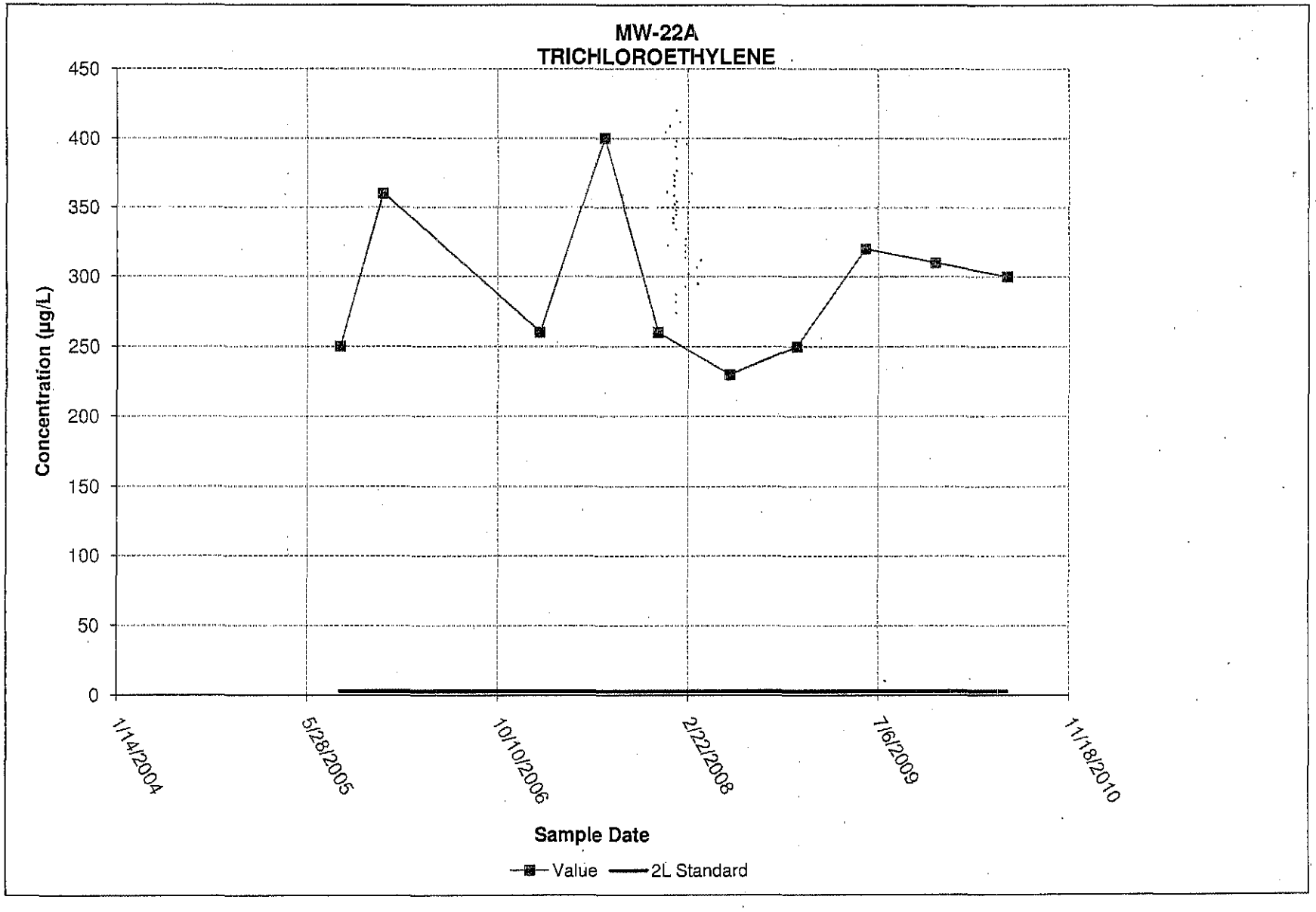

MW-21A / MW-21AR
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

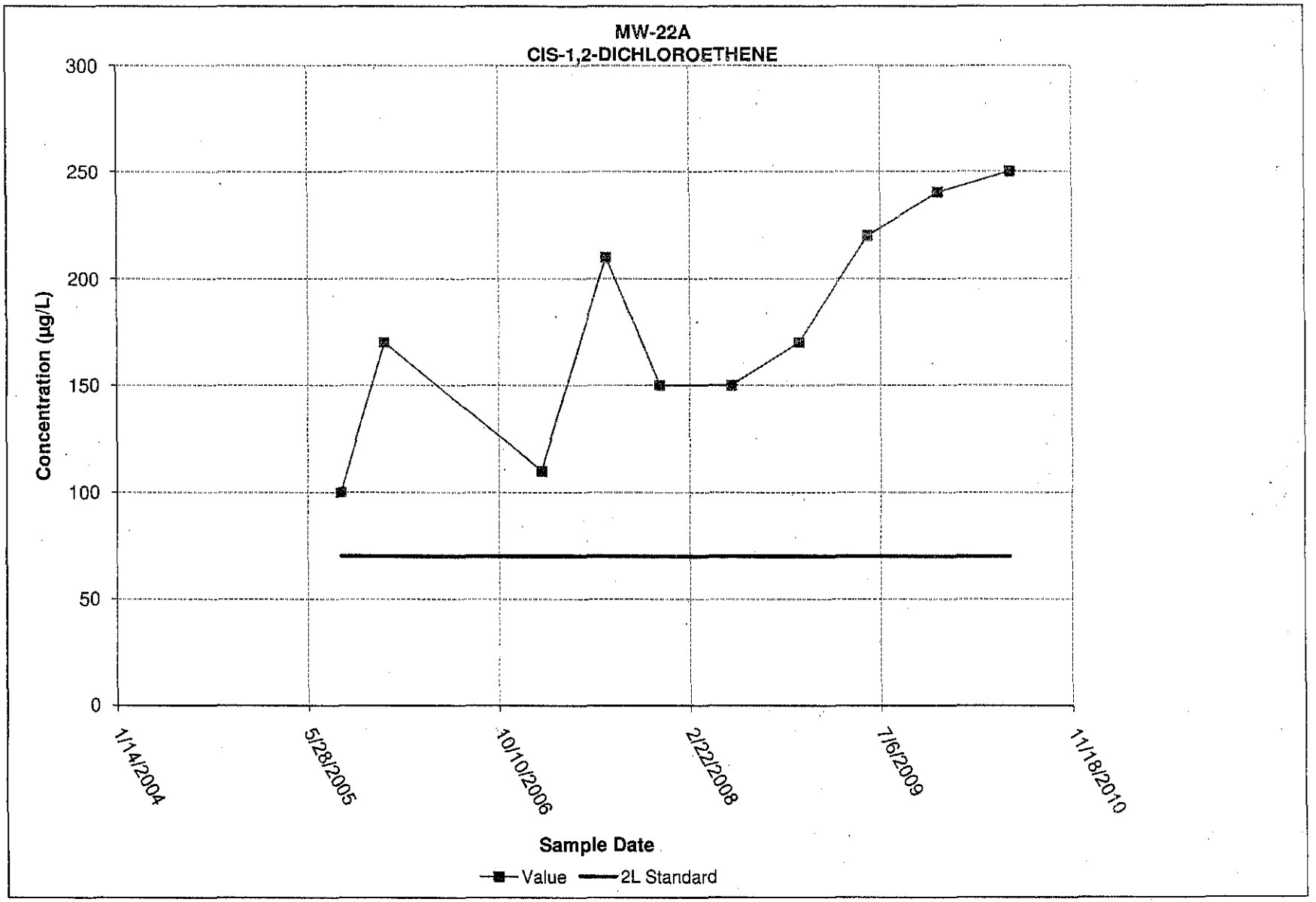

MW-21B / MW21BR
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
14
12
10
8
6
4
2
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

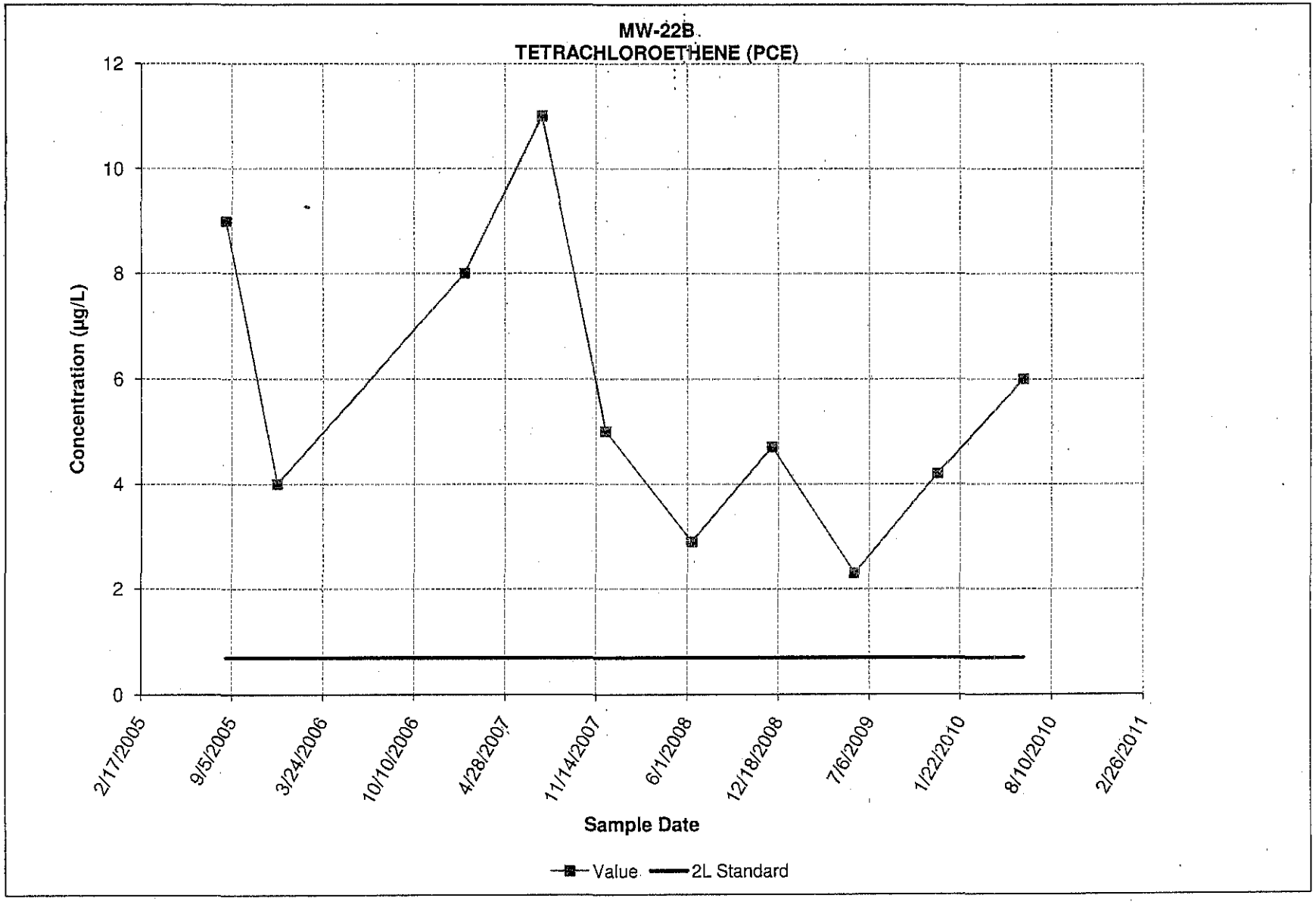

MW-21B / MW-21BR
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

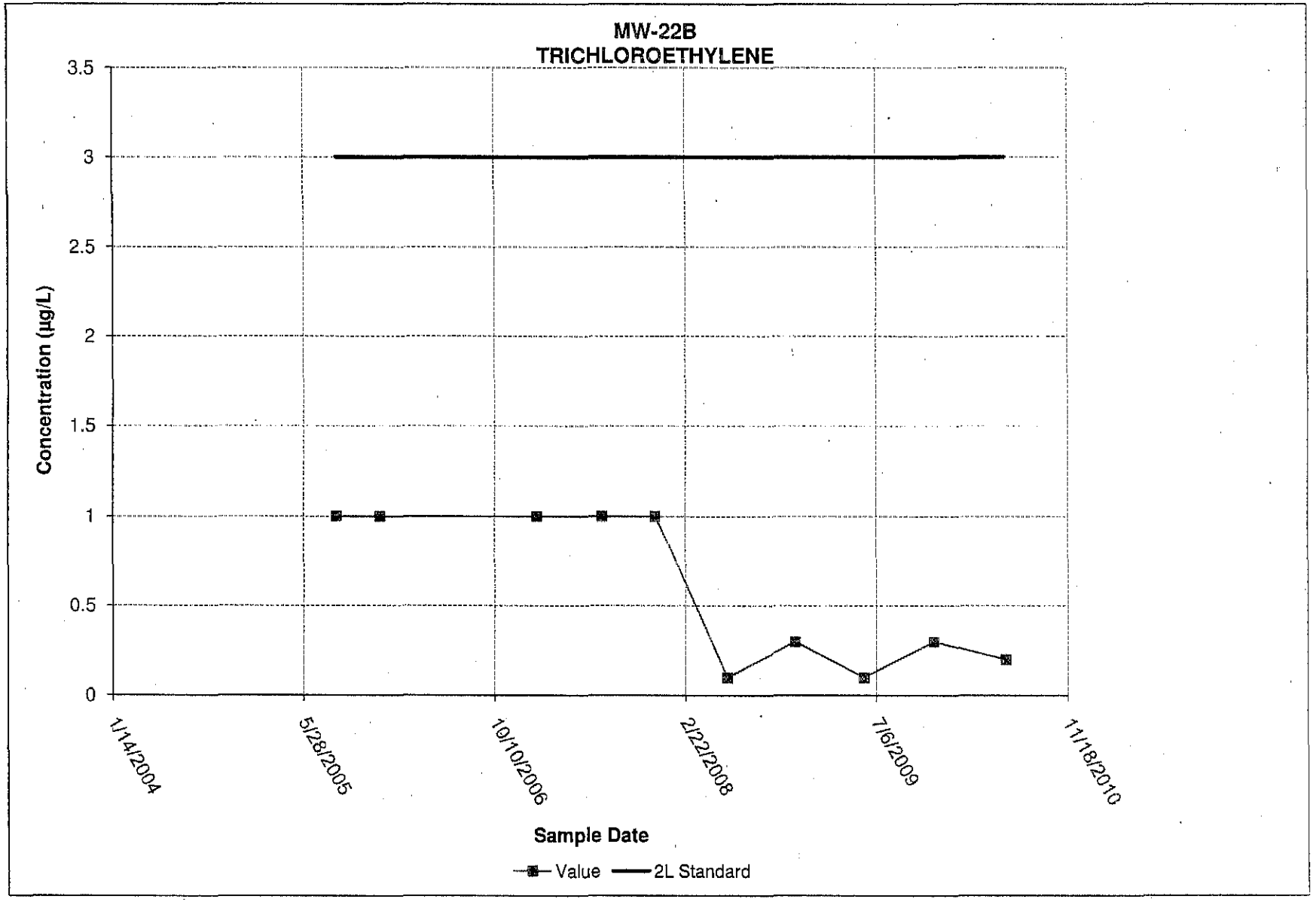

MW-21B / MW-21BR
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

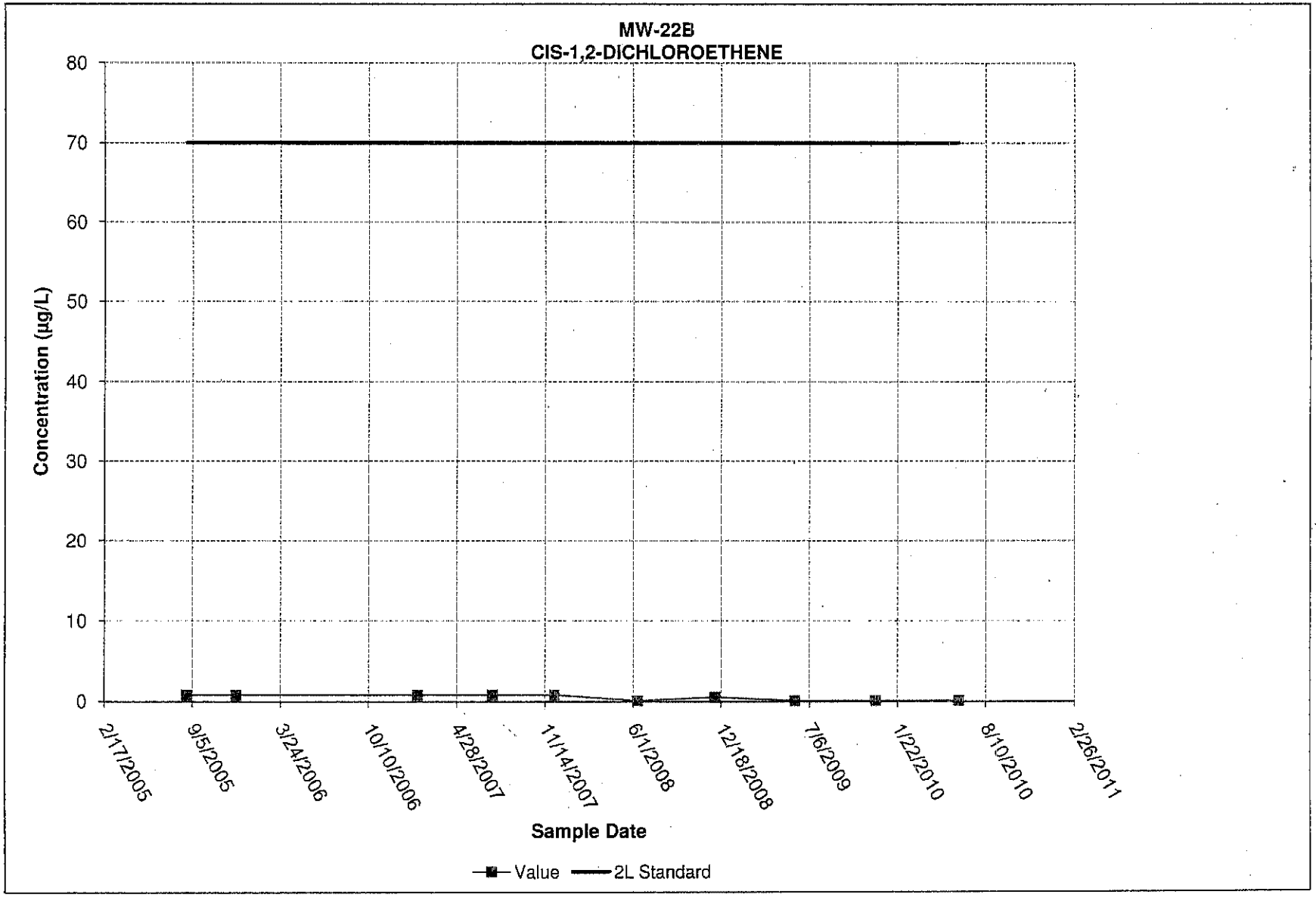

MW-22A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
3500
3000
2500
2000
1500
1000
500
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard

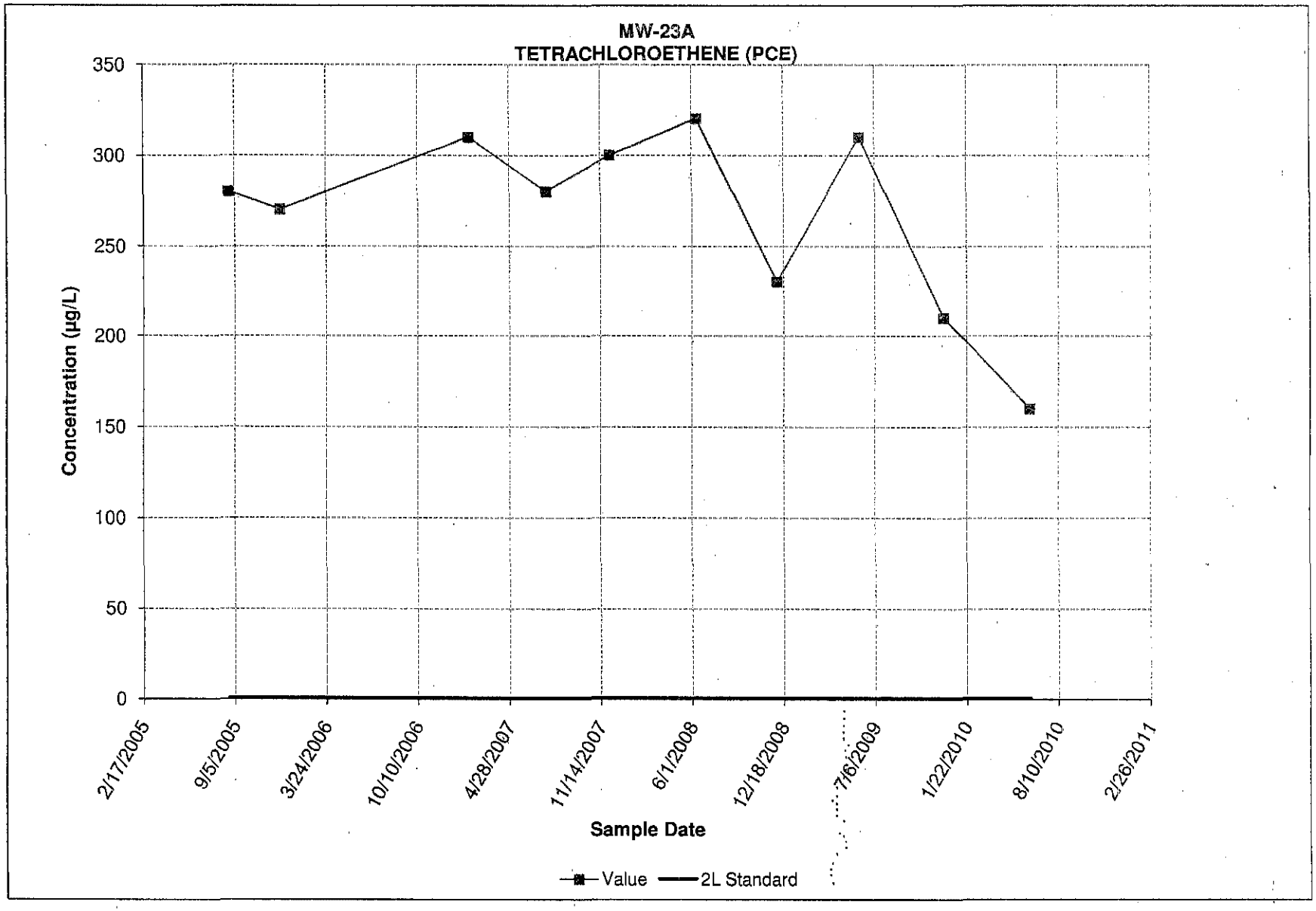

MW-22A
TRICHLOROETHYLENE
Concentration (µg/L)
450
400
350
300
250
200
150
100
50
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

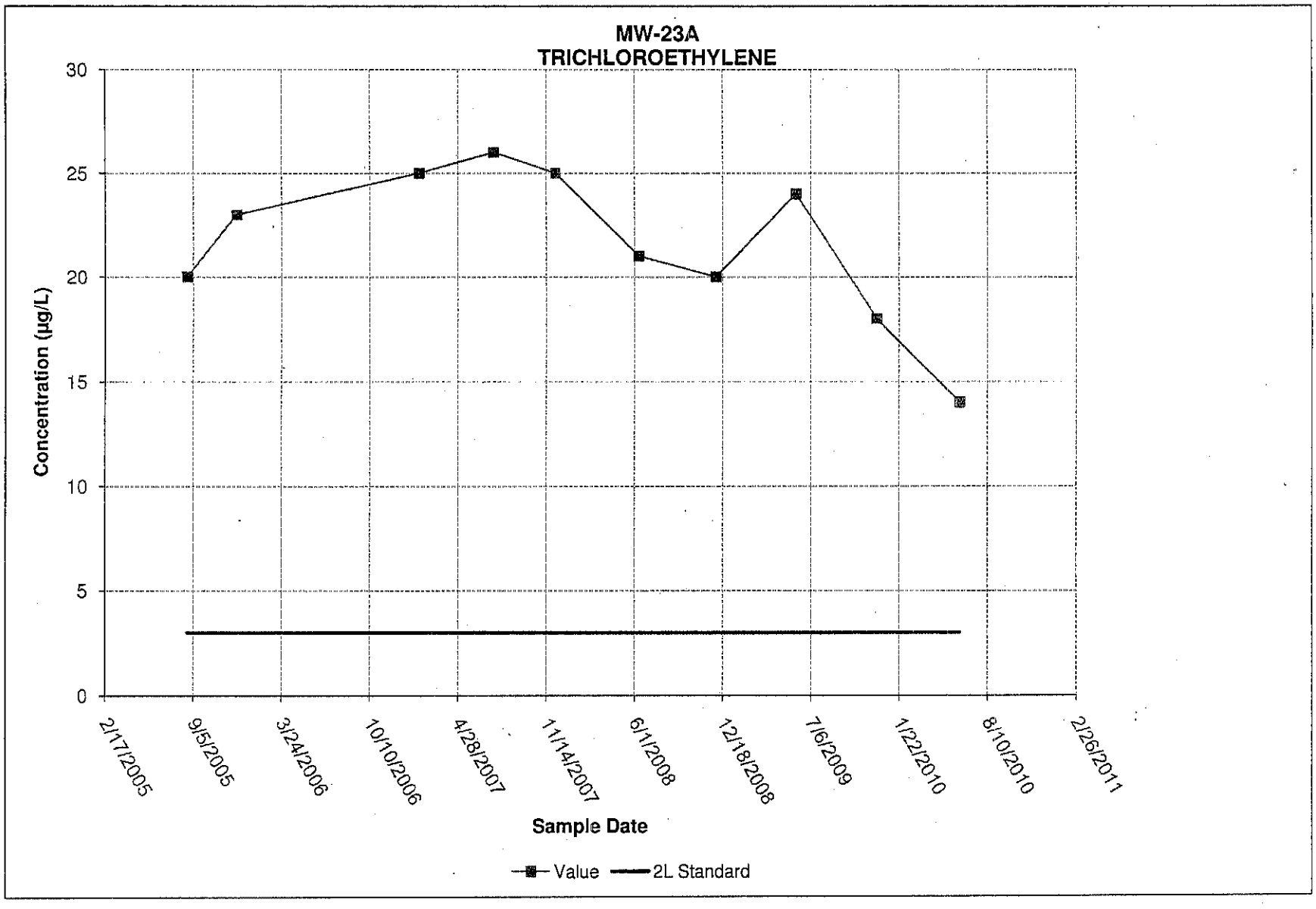

MW-22A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
300
250
200
150
100
50
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

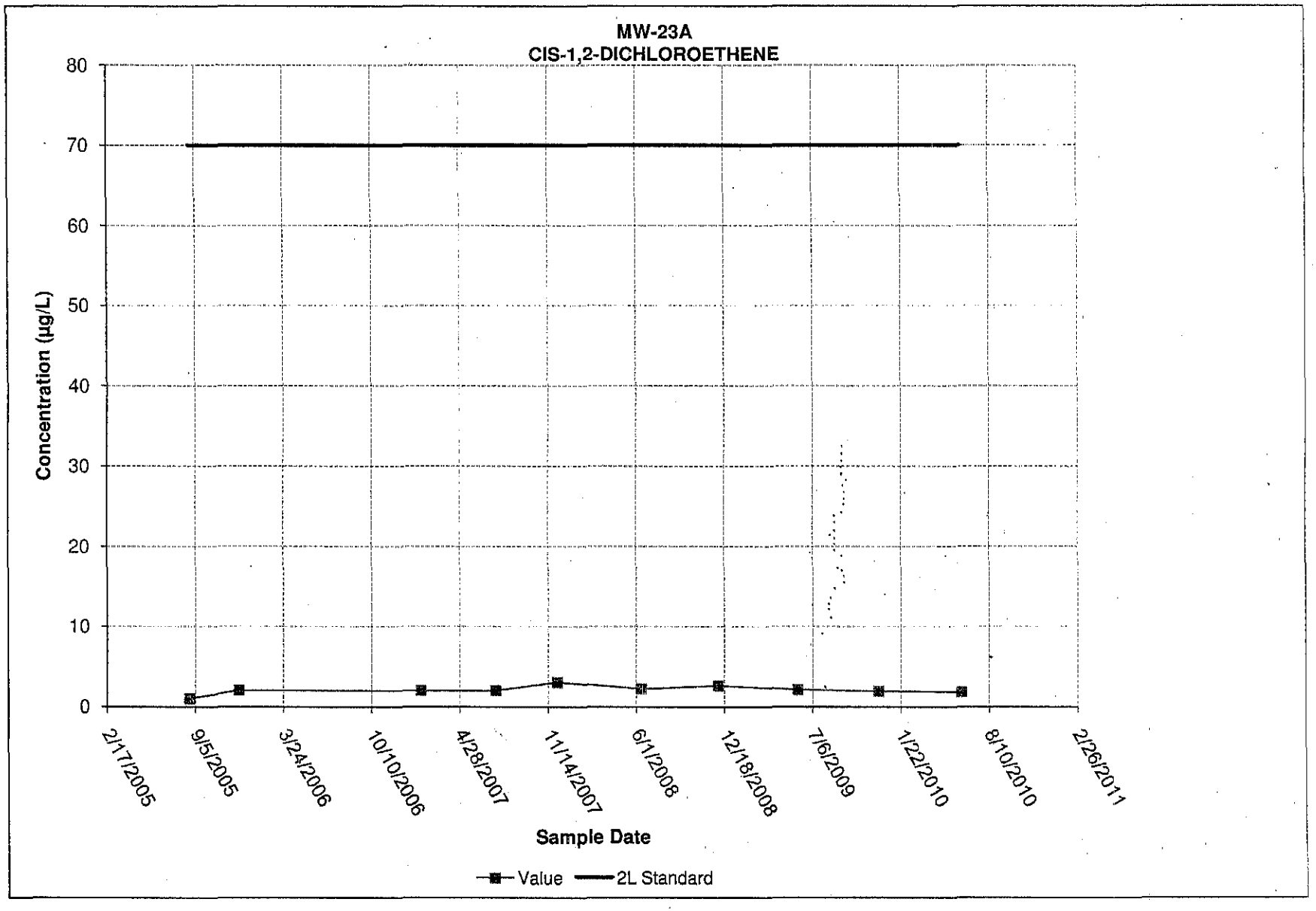

MW-22B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
12
10
8
6
4
2
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard

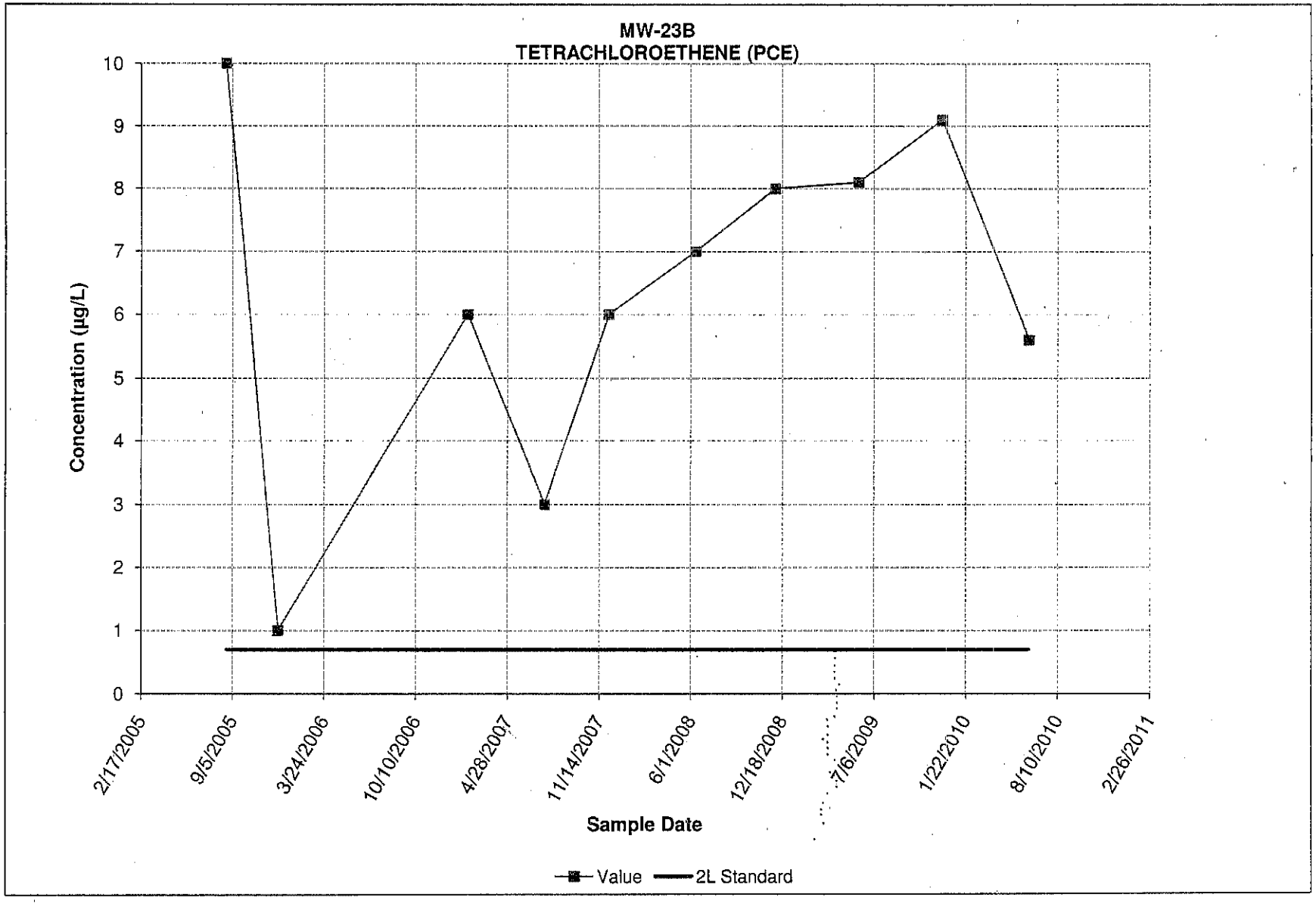

MW-22B
TRICHLOROETHYLENE
Concentration (µg/L)
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard

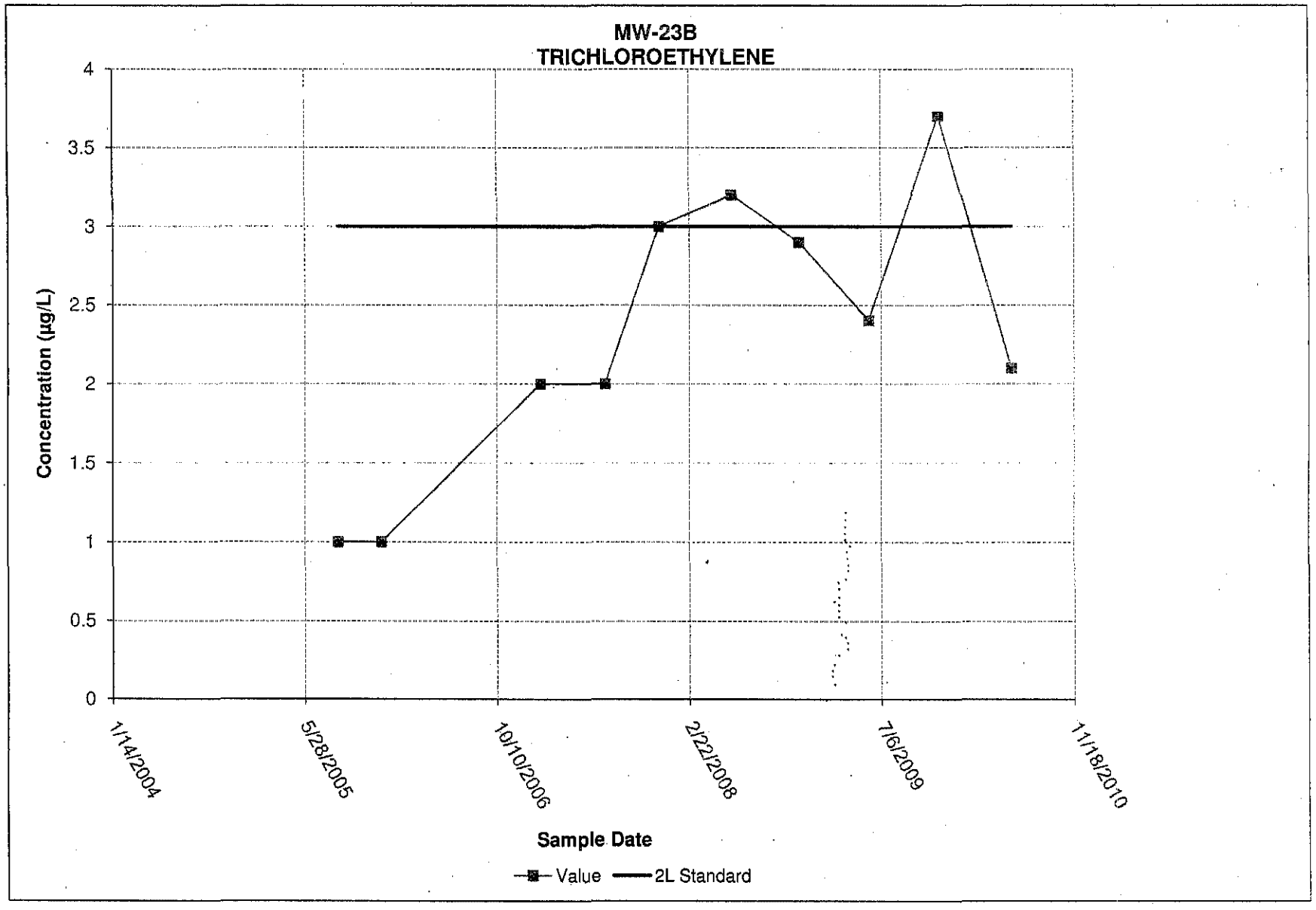

MW-22B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard

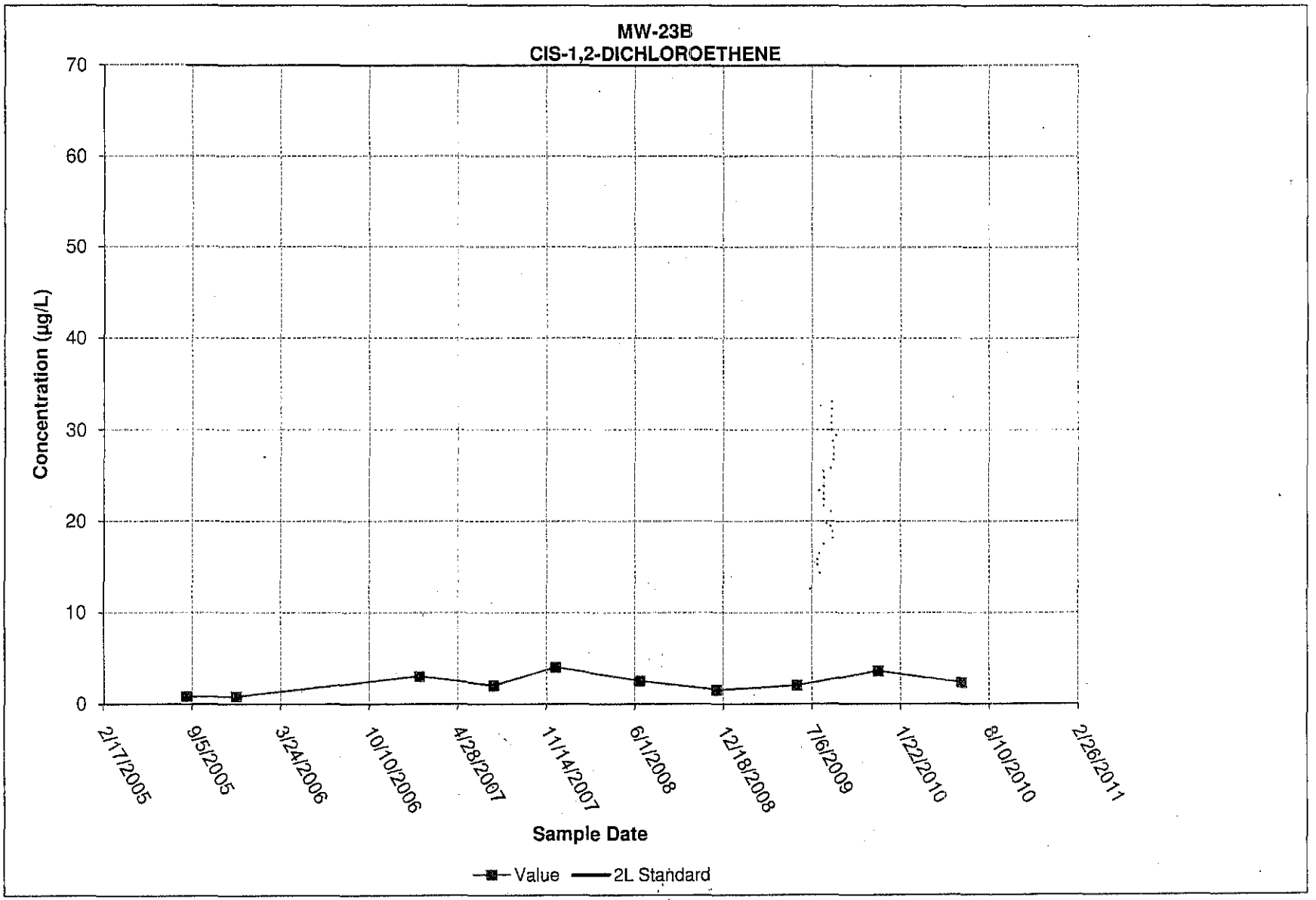

MW-23A
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
350
300
250
200
150
100
50
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard

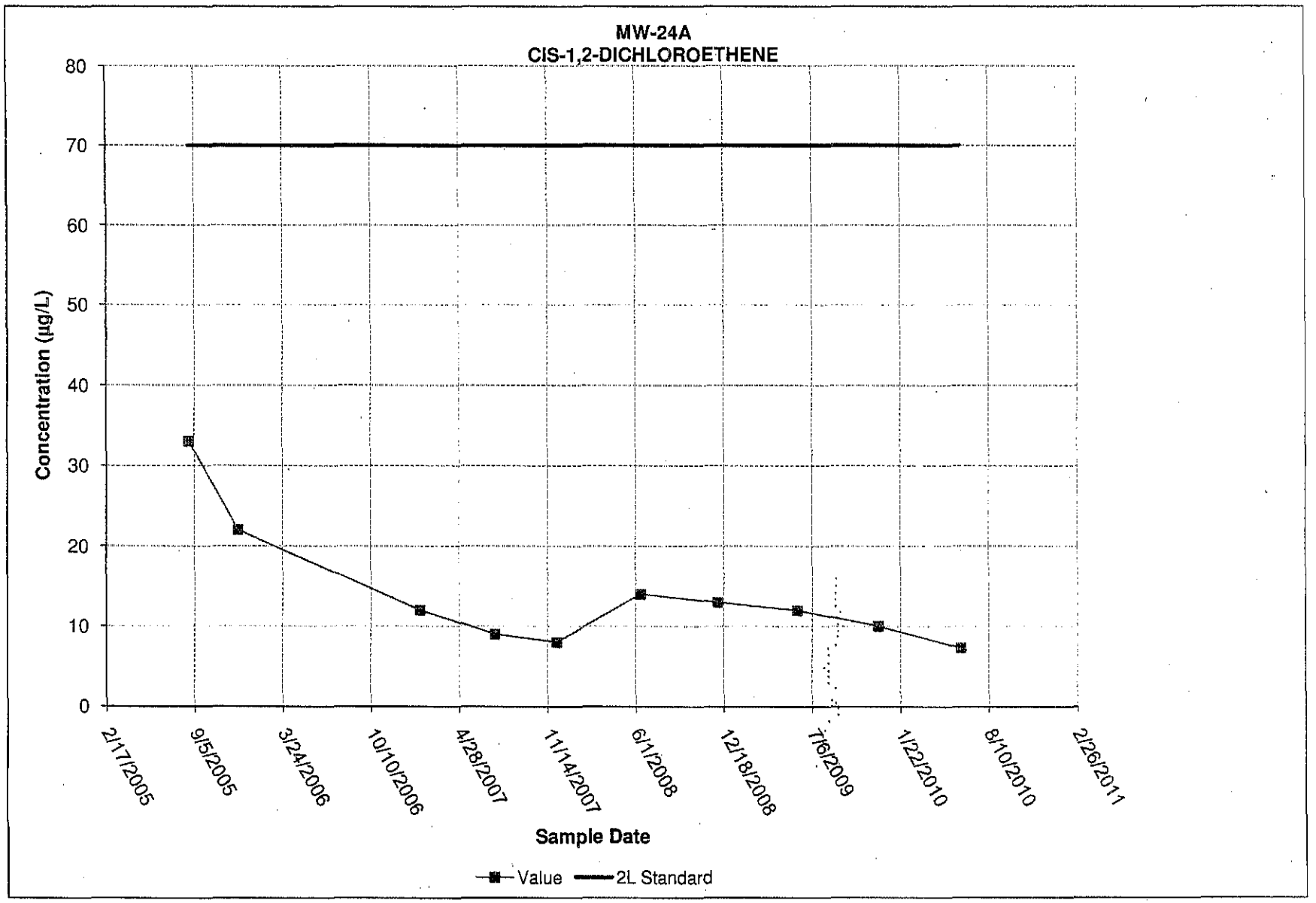

MW-23A
TRICHLOROETHYLENE
Concentration (µg/L)
30
25
20
15
10
5
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard


MW-23A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard


MW-23B
TETRACHLOROETHENE (PCE)
Concentration (µg/L)
10
9
8
7
6
5
4
3
2
1
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard


MW-23B
TRICHLOROETHYLENE
Concentration (µg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
1/14/2004
5/28/2005
10/10/2006
2/22/2008
7/6/2009
11/18/2010
Sample Date
Value
2L Standard


MW-23B
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
70
60
50
40
30
20
10
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard


MW-24A
CIS-1,2-DICHLOROETHENE
Concentration (µg/L)
80
70
60
50
40
30
20
10
0
2/17/2005
9/5/2005
3/24/2006
10/10/2006
4/28/2007
11/14/2007
6/1/2008
12/18/2008
7/6/2009
1/22/2010
8/10/2010
2/26/2011
Sample Date
Value
2L Standard

Appendix D

Historical Natural Attenuation Parameters

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-19B	MW-19B	MW-19B
	7/10/1998	6/14/2000	12/13/2002
ALKALINITY	59	210	210
CHLORIDE	3.48	19	5
IRON	2.88		0.58
NITRATE - N	0.774		3
NITRITE - N	<0.02		0.086
SULFATE	4.83		30
SULFITE	<1.00		<1
TOC	3.8		25

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-19B1	MW-19B1	MW-19B1	MW-19B1	MW-19B1
	8/24/2005	12/20/2005	7/19/2007	6/2/2009	6/7/2010
ALKALINITY TO PH 4.5	59.1	54.9	59.1	73.3	75.4
ALKALINITY TO PH 8.3	<0.41	<0.46	0.46	< 0.46	< 0.46
CHLORIDE	9.2	8.0	6.8	8.3	9.3
IRON	6.55	34.8	6.93	0.603	2.07
NITRATE - N	0.72	0.72	0.68	0.73	0.56
NITRITE - N	<0.015	0.020	0.015	< 0.015 UJ	< 0.015
SULFATE	12.2	10.9	8.0	12.3	17.5
SULFIDE			0.054	< 0.054	< 0.054
SULFITE	<1.2 UJ	<1.2			
TOC	1.2	1.6	1.0	2.3	0.72 J

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-21A	MW-21A	MW-21AR	MW-21AR
	7/19/2007	6/9/2008	6/1/2009	6/8/2010
ALKALINITY TO PH 4.5	34.0	33.6	41.2	30.7
ALKALINITY TO PH 8.3	0.46	<0.46	< 0.46	< 0.46
CHLORIDE	4.1	3.8	4.4	5.0 J+
IRON	6.59	0.87	0.504	0.493
NITRATE - N	1.0	0.94	0.54	1.1
NITRITE - N	0.015	<0.015	< 0.015	< 0.015
SULFATE	4.3	4.5 J	4.5 J	4.2 J
SULFIDE	0.13	<0.054	< 0.054	< 0.054
TOC	1.0	1.2	4.3	< 0.50

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-21B	MW-21B	MW-21BR	MW-21BR
	7/19/2007	6/9/2008	6/1/2009	6/8/2010
ALKALINITY TO PH 4.5	34.9	35.4	35.0	33.9
ALKALINITY TO PH 8.3	0.46	<0.46	< 0.46	< 0.46
CHLORIDE	4.0	4.3	4.2	3.0 J+
IRON	1.62	0.402	0.166 J	0.746
NITRATE - N	1.1	1.3	1.3	1.4
NITRITE - N	0.015	<0.015	< 0.015	< 0.015
SULFATE	26.2	3.8 J	2.8 J	2.6 J
SULFIDE	0.054	<0.054	< 0.054	< 0.054
TOC	1.0	0.57 J	< 0.50	< 0.50

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A	MW-22A
	8/23/2005	12/14/2005	7/18/2007	6/10/2008	6/3/2009	6/9/2010
ALKALINITY TO PH 4.5	7.7	10	8.7	8.8	11.2	10.5
ALKALINITY TO PH 8.3	<0.41	<0.46	0.46	<0.46	< 0.46	< 0.46
CHLORIDE	3.3	2.8	3.6	3	4.0	1.9 J
IRON	7.58	1.03	3.74	2.76	5.49	0.806
NITRATE - N	0.74	0.72	0.075	0.17	0.25	0.32
NITRITE - N	<0.015	0.020 J	0.015	<0.015	< 0.015	< 0.015
SULFATE	1.9	<1.5	3.2	2.9 J	< 1.5	< 1.5
SULFIDE			0.054	<0.054	< 0.054	< 0.054
SULFITE	<1.2 UJ	<1.2				
TOC	19.8	20.8	14.3	13.3	11.0	9.8

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B	MW-22B
	8/23/2005	12/14/2005	7/18/2007	6/10/2008	6/3/2009	6/9/2010
ALKALINITY TO PH 4.5	31.5	25.3	21.6	20.8	21.6	21.1
ALKALINITY TO PH 8.3	<0.41	<0.46	0.46	<0.46	< 0.46	< 0.46
CHLORIDE	5.5	2.1	2.3	2.4	2.4	1.4 J
IRON	14.0	3.68	1.83	1.71	1.59	2.11
NITRATE - N	0.061	0.2	0.19	0.18	0.22	0.16
NITRITE - N	<0.015	<0.015	0.015	0.041 J	0.022 J	< 0.015
SULFATE	5.1	2.1 J	2.0	2.3 J	1.9 J	< 1.5
SULFIDE			0.054	<0.054	< 0.054	< 0.054
SULFITE	<1.2 UJ	<1.2				
TOC	0.62	1.5 J	1.0	0.58 J	1.4	< 0.50

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-23A	MW-23A
	8/23/2005	12/13/2005
ALKALINITY TO PH 4.5	13.6	15.8
ALKALINITY TO PH 8.3	<0.41	<0.46
CHLORIDE	148	138
IRON	28.6	6.52
NITRATE - N	205	226
NITRITE - N	0.025	<0.015
SULFATE	25.8	23.3
SULFITE	<1.2 UJ	<1.2
TOC	3.9	8.9

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-23B	MW-23B
	8/23/2005	12/13/2005
ALKALINITY TO PH 4.5	73.2	74.1
ALKALINITY TO PH 8.3	<0.41	<0.46
CHLORIDE	51.5	35.9
IRON	1.62	0.21
NITRATE - N	<0.040	<0.040
NITRITE - N	<0.015	<0.015
SULFATE	10.9	1.9 J
SULFITE	<1.2 UJ	<1.2
TOC	2.1	3

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

Appendix D
Historical Natural Attenuation Parameters

COMPOUND	MW-24A	MW-24A
	8/24/2005	12/13/2005
ALKALINITY TO PH 4.5	15.6	39.3
ALKALINITY TO PH 8.3	<0.41	<0.46
CHLORIDE	120	125
IRON	48.7	20.2
NITRATE - N	54.8	51.5
NITRITE - N	0.15	0.066
SULFATE	37.8	67.3
SULFITE	<1.2 UJ	<1.2
TOC	2.8	3.2

Results in mg/L.
< - Analyte not detected at referenced detection limit.
UJ - Estimated non-detect value due to quality control non-conformance.
J - Estimated concentation.
Blank spaces indicate that analyte was not selected for analysis.

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental and energy. With 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A *Fortune 500* company, AECOM serves clients in more than 100 countries and had revenue of $6.1 billion during the 12-month period ended June 30, 2009. More information on AECOM and its services can be found at www.aecom.com.

AECOM
2 Technology Park Drive
Westford, Massachusetts 01886
T: +1.978.589.3000
F: +1.978.589.3100
AskEnvironment@aecom.com