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2008 Annual Status Report for the Boomsnub/Airco Superfund Site Hazel Dell, Washington

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LIST OF ACRONYMS AND ABBREVIATIONS

AFCEE	Air Force Center for Environmental Excellence
Boomsnub	Boomsnub Corporation
CAS	Columbia Analytical Services
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
Chromium	Hexavalent chromium
City	City of Vancouver
COV	Coefficient of variation
EA	EA Engineering, Science, and Technology, Inc.
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ft	Feet
GAC	Granular activated carbon
IWS	In-Well Stripping
LTMP	Long-Term Monitoring Plan
Linde	Linde, Inc.
MAROS	Monitoring and Remediation Optimization System
N/C	Not conducted
O&M	Operation and Maintenance
OU	Operable Unit
QASP	Quality Assurance and Sampling Plan
ROD	Record of Decision
SCADA	Supervisory Control and Data Acquisition
Site	Boomsnub/Airco Superfund Site
SVE	Soil Vapor Extraction
SWCAA	Southwest Clean Air Authority

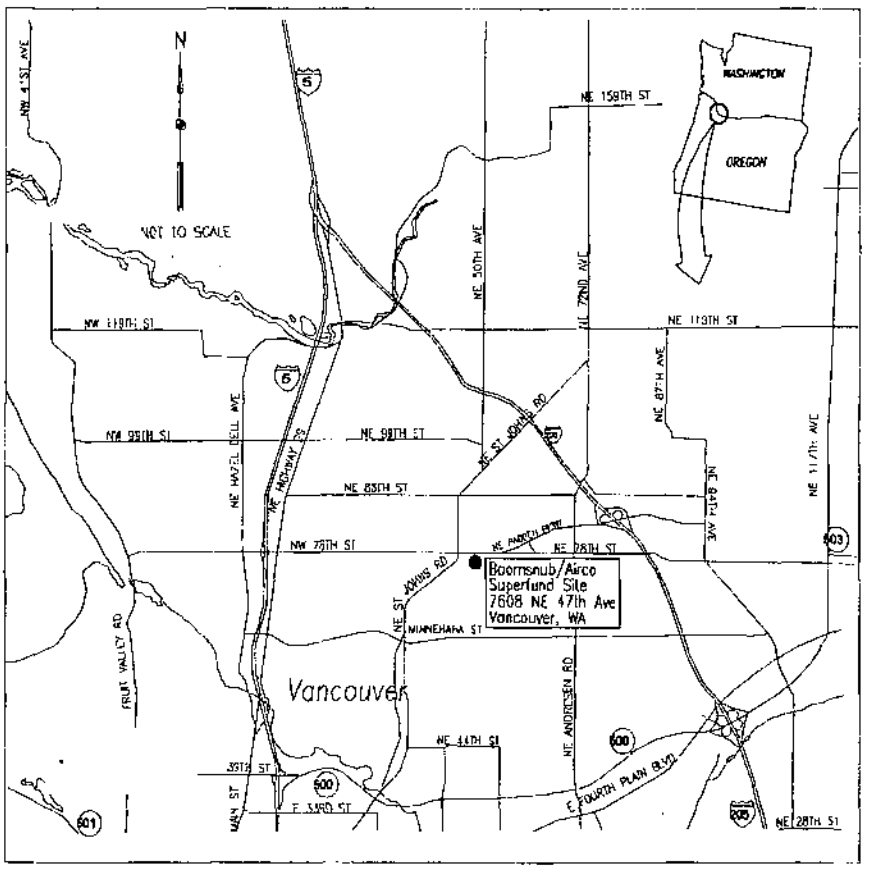
TCE	Trichloroethene
TOPPS	Toe-of-Plume Pilot Study
μg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per cubic meter
URS	URS Group, Inc.
VOC	Volatile organic compound
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

Introduction

This Annual Status Report summarizes information on activities that took place during 2008 at the Boomsnub/Airco Superfund Site (Site) in Hazel Dell, Washington. EA Engineering, Science, and Technology, Inc. (EA), under contract to Linde, Inc. (Linde), is currently operating and maintaining a site-wide groundwater extraction and treatment system (Operable Unit [OU]-3) and volatile organic compound (VOC) source removal system (OU-2) at the Site. Regulatory oversight is conducted by the U.S. Environmental Protection Agency (EPA).

Work at the Site is currently conducted under a Consent Decree (CD) between the EPA and Linde which was entered by the court on 29 June 2007. Work performed under the CD is equivalent to work performed under the previous Administrative Orders on Consent.



SITE LOCATION MAP

Site Background and Operating Objectives

In 1987, the Washington State Department of Ecology (Ecology) determined that a plume of chromium-contaminated groundwater was emanating from the Boomsnub Corporation (Boomsnub) manufacturing facility. In 1991, during cleanup activities at the Boomsnub facility, a second plume containing VOCs was detected and believed to be coming from the Linde property, located near the Boomsnub facility.

OU-2 VOC Source Removal Systems

Linde owns and operates an industrial gas production facility adjacent to the Boomsnub property. The Linde plant manufactures compressed and liquefied gas products including nitrogen, oxygen, and argon. The plant also stores and distributes other specialty gases such as hydrogen, and helium. The facility was built by Air Liquide America Corporation in 1963 and has been in operation since 1964.

Since the identification of the VOC plume in 1991, Linde has undertaken a number of steps to identify the extent of the VOC plume, mitigate the plume, and to control plume migration. The primary VOC of concern is trichloroethene (TCE), which serves as an indicator of VOC presence at the Site. Linde has conducted numerous site investigations, performed groundwater treatment, and conducted a removal action on their property at OU-2. The removal action involved constructing *in-situ* soil and groundwater treatment systems to address the VOC source area. The OU-2 systems are composed of the following components:

- An in-well stripping (IWS) system that vaporizes and partitions the VOCs in groundwater from the dissolved phase to the vapor phase.
- A soil vapor extraction (SVE) system that removes air (soil vapor) containing VOCs from the soil pore space.
- A granular activated carbon (GAC) adsorption system that treats the off-gas stream from the SVE and IWS systems prior to release to the atmosphere.
- Eleven groundwater monitoring wells installed to monitor the TCE source area remediation project. An additional 14 wells that were installed as part of the OU-3 monitoring system are also used to monitor the performance of TCE source area remediation.

Construction of the OU-2 IWS/SVE systems started in September 2003, with the systems becoming operational in February 2004. System components and groundwater quality are regularly monitored to assess compliance with cleanup and discharge standards as well as progress in meeting the remedial action objectives. Quarterly groundwater monitoring is conducted to assess the effectiveness of the TCE removal. The SVE System was shut down in March 2008 since the final valid rebound test was completed with a TCE concentration less than the baseline result. SVE system operations are considered complete.

The operating objectives of the OU-2 systems include the following:

- Remove VOCs from the vadose zone that may be acting as the source to groundwater.
- Remove VOCs from groundwater on the western portion of the Linde property.
- Halt the off-property migration of VOCs in groundwater.

OU-3 Site-wide Groundwater Extraction System

The purpose of the OU-3 groundwater extraction and treatment system is to remove hexavalent chromium (chromium) and VOCs that have been released to groundwater through historical industrial operations at the Boomsnub facility (chromium) and the adjacent Linde production facility (VOCs). There are two distinct contaminant release points, one for TCE and one for chromium. The contaminant plumes overlap and become commingled downgradient of the source areas.

The highest concentrations of site contaminants have occurred in a shallow groundwater-bearing zone referred to as the alluvial aquifer. The alluvial aquifer is not used as a municipal water supply, although a limited number of private wells pump from this aquifer. TCE and chromium have been detected, although at considerably lower concentrations, in the deeper groundwater-bearing zone, the Troutdale aquifer. The Troutdale aquifer serves as a municipal water supply for the City of Vancouver and Clark County. Municipal water supply wells are not located in areas known to contain elevated concentrations of contamninants detected at the Site.

The groundwater extraction and treatment system has been operational since 1990 and was constructed along the axis of the chromium plume. Since 1990, the system has been modified, upgraded, and expanded several times to handle the VOCs and chromium, to increase pumping and treatment capacity, and to increase removal efficiency. The groundwater extraction and treatment system is composed of the following major elements:

- A groundwater extraction well network that extracts and conveys groundwater to the treatment facility.
- An ion-exchange system that removes chromium from extracted groundwater.
- An air stripper system that removes TCE and other VOCs from extracted groundwater.
- A GAC system that removes VOCs from the air stripper off-gas.
- An infiltration gallery on the Linde property where the treated water is returned to the alluvial aquifer.
- A groundwater monitoring well network to monitor groundwater quality and extraction system effectiveness.

Over 125 groundwater monitoring wells were installed at the Site to define the nature and extent of groundwater impacts and to monitor cleanup activities. The extraction well network consists of 26 wells, most of which are converted monitoring wells. The 26 extraction wells are primarily screened in the alluvial aquifer.

The operating objectives of the groundwater extraction and treatment system include the following:

- Reduce further contaminant migration within the alluvial aquifer.
- Continue mass removal activities.
- Reduce contaminant migration into the Troutdale aquifer.

2008 OU-2 Systems Operations

The IWS system is operating within the performance standards established for the Site. The SVE system has completed operations and was shut down in March 2008. Groundwater and vapor sampling and analyses were conducted to monitor the OU-2 systems in accordance with the EPA-approved Site Operations and Maintenance (O&M) Manual.

To date, the IWS system has performed very well. By May 2006, TCE concentrations in groundwater had been reduced by more than 98% as a result of operation of the IWS system, and the average concentration of TCE in OU-2 performance monitoring wells was below the cleanup level. However, it is apparent from recent data trends that the system is no longer removing appreciable TCE mass from the source area groundwater, and continued operations may not be effective in removing significant mass of TCE from the aquifer. Since reaching 98% removal in 2006, the total mass of TCE removed by the system has not measurably increased, hovering between 98% and 99% removal through 2008. Also, the groundwater concentration of TCE in individual wells has not changed substantially over the past two years. The termination of the IWS system, as described in the Site Closure Plan, has begun by terminating treatment in selected IWS wells. Rebound testing was performed for the IWS system. Results from the rebound testing indicate that there have been no significant changes to groundwater concentrations.

February 2008 was the last month of routine monthly vapor sampling of the treatment system influent due to successful rebound testing, shutdown of the SVE system, and partial IWS system shutdown. Monthly vapor sampling of the effluent from the IWS GAC (sample port G1) continue to monitor emissions. Detected results did not exceed regulatory discharge limits.

2008 OU-3 System Operations

During 2008, the groundwater extraction and treatment system operated within the performance standards established for the Site. The system had average removal rates of approximately 98 percent for TCE and over 96 percent for chromium.

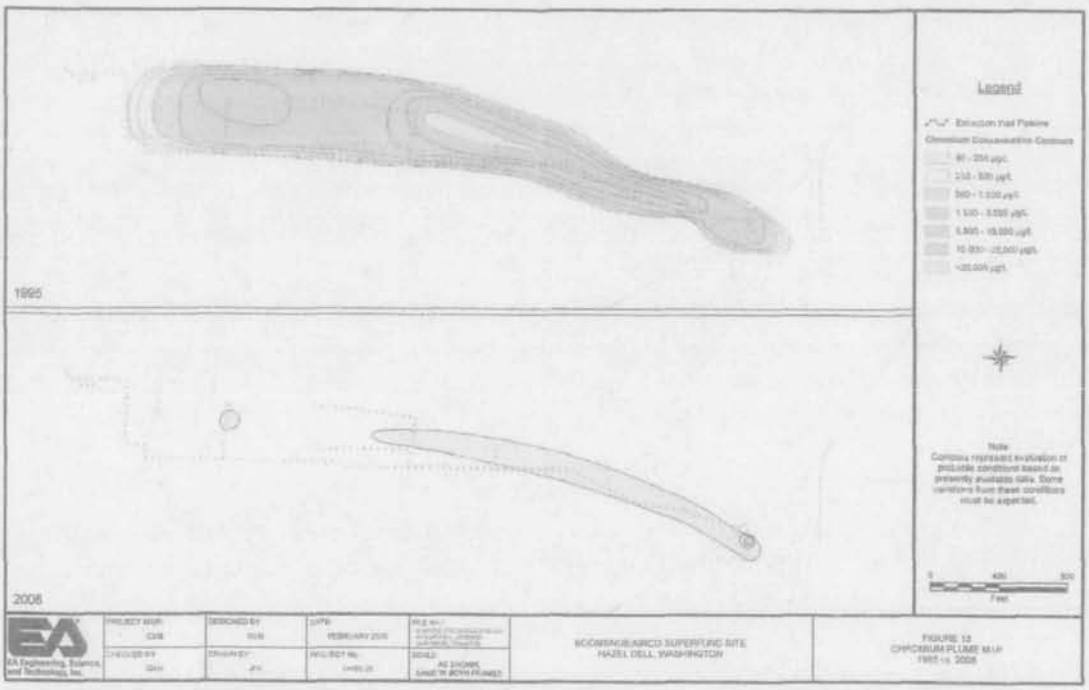
Treated groundwater from the Site is discharged back into the alluvial aquifer through the infiltration gallery located on the Linde property. All of the treatment system effluent was discharged to the infiltration gallery during the reporting period. The groundwater treatment system continues to meet the discharge criteria for required constituents.

On the basis of measured influent and effluent concentrations and the total monthly flow, approximately 55 pounds of chromium and 17 pounds of TCE were removed by the groundwater extraction and treatment system over the past year. This brings the cumulative total mass removal of chromium and TCE to approximately 22,146 and 2,135 pounds, respectively, since initiating operations in 1990. The mass of contaminants removed during the reporting period continued to decline compared to the previous reporting period. This is consistent with a continuing downward trend over the past few years and is reflected in the average influent concentration of chromium and TCE at the Site.

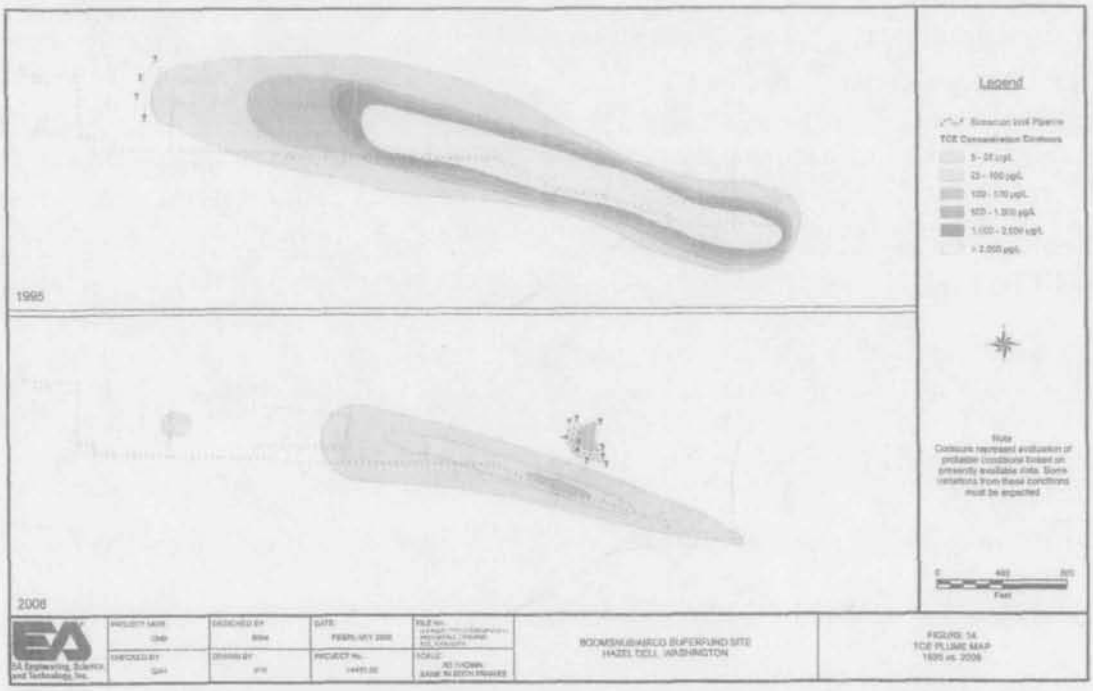
Semiannual groundwater monitoring was conducted in May and October 2008. Additional samples were collected during the Fall sampling event from wells on annual and biennial sampling schedules. Contaminant concentrations continue on a decreasing trend in Site wells, with the exception of well AMW-18.

During 2007 and early 2008, TCE concentrations increased significantly in well AMW-18, located near the northern boundary of the Site plume. In May 2008, an investigation was performed to evaluate the depth and concentration of TCE in groundwater in the well AMW-18 area. Although the source of the TCE groundwater contamination in this area was not identified, based on the data obtained, the source is not the same as for the OU-3 plume. Groundwater samples collected from well AMW-18 in July and October 2008 indicate that the TCE concentration is currently decreasing.

The following figures compare chromium and TCE concentrations in groundwater at the Site in 1995 and 2008. These figures indicate that the groundwater extraction and treatment system has been effective in mass removal and decreasing the footprint of the plume over time.



Chromium Concentrations (µg/L)



Trichloroethene Concentrations (µg/L)

The Toe-of-Plume Pilot Study (TOPPS) *in-situ* remediation was initiated in September 2006 to treat an area of recalcitrant contamination in the original Toe-of-Plume area. Groundwater samples from selected wells in the area were collected during Spring and Fall 2008 to continue performance monitoring. Results from these samples indicate TCE and chromium were not detected at concentrations exceeding the cleanup levels in 2008, confirming that the TOPPS is performing as expected.

Water level gauging and groundwater monitoring results indicate that hydraulic containment of the plumes has been maintained. A capture zone assessment for the new Toe-of-Plume area near the Church of God was performed in early 2008. The assessment was focused on groundwater capture, not mass removal. Based on that assessment, pumping rates in the downgradient portion of the extraction system were adjusted to optimize capture.

Annual Screening of Groundwater Monitoring Data

The first annual screening of groundwater monitoring data was conducted in accordance with the revised Closure Plan. The annual screening evaluates data collected at the Site since 1995 for each alluvial aquifer well currently sampled. The data is used to determine what changes, if any, should be made to current system operations and the well sampling schedule, and to determine if cleanup levels have been attained in groundwater. A combination of quantitative and qualitative evaluations of the Site data was used for the screening. The quantitative evaluation was performed using the Monitoring and Remediation Optimization System (MAROS) computer program. This program was developed by the Air Force Center for Environmental Excellence (AFCEE) to optimize long-term groundwater monitoring, determine when to terminate groundwater treatment, and demonstrate cleanup level attainment using statistics.

The MAROS evaluation of contaminant concentration trends indicated one well with an increasing trend; well AMW-18. As previously discussed, this well appears to be impacted by an unrelated offsite TCE plume.

As part of the annual screening, the current sampling frequency for each well is evaluated and, if appropriate, revised. The following factors were considered when proposing a revised sampling frequency for a well: the MAROS recommended sampling frequency, the use of the well at the Site, and the results from the MAROS evaluation of whether or not contaminants in groundwater are statistically below cleanup levels. Changes in sampling frequencies for 2009 are recommended for 21 alluvial aquifer wells, based on this evaluation. In most cases, these changes were for less frequent sampling. However, more frequent sampling was recommended for two wells in the well AMW-18 area.

Attainment monitoring is performed on a limited number of wells to assess whether post-treatment concentrations remain statistically below cleanup levels. Attainment monitoring is conducted on selected wells that represent different areas of the plume. The MAROS analysis has determined that the groundwater samples from the attainment wells for the Sentinel Toe wells group have attained the cleanup goals. This area of the plume is eligible for closure upon approval by EPA.

Planned 2008 Activities and Summary Status

Planned activities for 2008 were recommended in the 2007 Annual Status report. The status of these planned activities is summarized below:

- **Continue operating the remediation systems to meet operational objectives** — The remediation systems continue to meet operational objectives. The extraction system continues to provide containment for both plumes, preventing further migration of constituents of concern within the alluvial aquifer. The groundwater monitoring results continue to show overall downward trends for both TCE and chromium concentrations across the Site.

- **Move extraction system pipeline** — The pumping system and pipeline configuration on Parcel No. 144527 (formerly referred to as the Castry property) will be impacted by property development, and modifications will be required once development plans are finalized. The development is still in the planning stages. Modifications will not be made until county approved plans are provided by the Developer.

- **Continue rebound testing of SVE system and shut the system down if the results of vapor samples collected in January 2008 are below 65 micrograms per cubic meter ($\mu g/m^3$)** — The January TCE vapor samples were below the baseline of 65 $\mu g/m^3$; therefore, the SVE system was shut down on 3 March 2008.

- **Continue optimization of the IWS system** — System optimization continued to concentrate treatment to the center of the source area.

- **Continue monitoring the results of the Toe-of-Plume Pilot Study (TOPPS) program for Toe-of-Plume closeout** — The TOPPS has been effective at decreasing contaminant concentrations to below cleanup levels. Since the goals of the TOPPS have been met, a reduced number of groundwater samples were collected during 2008 sampling events.

- **Provide an alternative water supply for the private Residence on Parcel No. 149147-000** — The Bennett property was connected to the public water supply in April 2008.

- **Complete a capture zone assessment to address the new (Church of God) Toe-of-Plume area** — A capture zone assessment was completed in 2008 and results were documented in the Addendum to Groundwater Modeling Technical Memorandum No. 2, submitted to EPA in February 2008.

- **Investigate the source and extent of TCE contamination detected in monitoring well AMW-18** — A work plan for investigation of the AMW-18 area was submitted to EPA in April 2008. In May, a groundwater investigation was performed in the vicinity of well

AMW-18 to investigate the recent increase in TCE concentrations in groundwater samples from that well. The investigation was summarized in the *AMW-18 Area Investigation Report*, submitted to EPA in August 2008. Although the source of the TCE groundwater contamination in the well AMW-18 area was not identified, based on the existing data, it does not appear to be the result of actions by Linde or its predecessors.

- **Continue to work on obtaining easements and access agreements** — Negotiations continued with numerous property owners to obtain easements and access agreements.

- **Revise the Draft Closure Plan to include use of MAROS for the annual screening and attainment evaluation** — The Draft Closure Plan was revised and submitted to EPA in February 2009.

Recommendations and Planned Activities for 2009

The following activities are recommended and planned during the 2009 reporting period:

- Continue ongoing operations to meet operational objectives.

- Continue operation and optimization of the IWS system in accordance with EPA approved procedures.

- Continue to cooperate with EPA on investigation of the TCE plume present in the well AMW-18 area.

- Continue to work on obtaining easements and access agreements.

- Based on a review of sampling results over the past two years, wells AMW-44, AMW-45, and MW-30 should be removed from the TOPPS sampling schedule. Groundwater samples will be collected from wells AMW-43, MW-46, AMW-63 and MW-41 and analyzed for total chromium and VOCs. Samples from wells AMW-63 and MW-41 will also be analyzed for dissolved iron (EPA Method 6010B), total organic carbon (EPA Method 415.1), and ferrous iron (field test using a Hach Test Kit). The TOPPS monitoring program will be re-evaluated following receipt of analytical results from the Fall 2009 sampling event.

- Sample monitoring wells in accordance with the updated sampling schedule.

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1. INTRODUCTION

This Annual Status Report summarizes information on activities that took place during 2008 at the Boomsnub/Airco Superfund Site (Site) in Hazel Dell, Washington. EA Engineering, Science, and Technology, Inc. (EA), under contract to Linde, Inc. (Linde; formerly known as BOC Gases), is currently operating and maintaining a site-wide groundwater extraction and treatment system (Operable Unit [OU]-3) and a volatile organic compound (VOC) source removal system (OU-2). Regulatory oversight is conducted by the U.S. Environmental Protection Agency (EPA). The Annual Status Reports for OU-2 and OU-3 have been combined since 2005 into one report in order to provide a comprehensive report on Site operations. Work at the Site is currently conducted under the Consent Decree (CD) between the EPA and Linde which was entered by the court on 29 June 2007 (EPA 2007a).

1.1 Background

The Site is located in Hazel Dell, Washington, just north of the city limits of Vancouver, Washington and includes two adjacent facilities, the former Boomsnub Corporation (Boomsnub) chrome plating facility and the Linde facility. Linde owns and operates an industrial gas production facility adjacent to the Boomsnub property. The Linde plant manufactures compressed and liquefied gas products including nitrogen, oxygen, and argon. The plant also stores and distributes other specialty gases such as hydrogen and helium. The facility was built by Air Liquide America Corporation in 1963 and has been in operation since 1964.

The Site is divided into three operable units to manage cleanup activities: OU-1 (Boomsnub Soil); OU-2 (Linde Soil); and OU-3 (Site-wide Groundwater). A site location map is presented as Figure 1 and a site overview map as Figure 2.

In 1987, the Washington State Department of Ecology (Ecology) determined that a plume of chromium-contaminated groundwater was emanating from the Boomsnub facility. While cleanup activities were being conducted at the Boomsnub facility, VOCs were detected in groundwater samples and were suspected to be coming from the Linde property. Linde began investigating the nature and extent of VOCs in 1991. In June 1994, EPA took over the role of lead regulatory agency from Ecology and in April 1995 the Site was placed on the National Priorities List. There are two distinct contaminant release points, one for trichloroethene (TCE) and one for chromium. The groundwater contaminant plumes overlap and are commingled down gradient of the source areas. The plumes were found to extend approximately 4,400 feet (ft) in a west-northwest direction from the sources.

The primary VOC of concern is TCE, which serves as an indicator of VOC presence at the Site. Linde has conducted numerous site investigations, performed groundwater treatment, and conducted a removal action on their property at OU-2. Additionally, EPA conducted soil removal actions at OU-1 in 1994 and 2001 to remove the majority of the hexavalent chromium (chromium)-contaminated soils serving as a source for groundwater contamination.

The highest concentrations of site contaminants have occurred in a shallow groundwater-bearing zone referred to as the alluvial aquifer. The alluvial aquifer is not used as a municipal water supply, although a limited number of private wells pump from this aquifer. TCE and chromium have been detected, although at considerably lower concentrations, in the deeper groundwater-bearing zone, the Troutdale aquifer. The Troutdale aquifer serves as a municipal water supply for the City of Vancouver (City) and Clark County. Municipal water supply wells are not located in areas known to contain elevated concentrations of chemicals detected at the Boomsnub/Airco Superfund Site.

A groundwater extraction and treatment system is used to capture and treat Site groundwater. On the basis of monitoring data collected since 1995, the constituents of concern have not migrated past the current extraction well network. The monitoring and extraction well network for the Site is presented on Figure 3. The groundwater extraction and treatment system has been operational since 1990 and was constructed along the axis of the chromium plume. Since 1990, the system has been modified, upgraded, and expanded several times to handle the VOCs and chromium, to increase pumping and treatment capacity, and to increase removal efficiency.

Chromium is removed from the extracted groundwater using an ion-exchange system. VOCs are removed from the extracted groundwater using air stripping with granular activated carbon (GAC) treatment of the off-gases. The treatment facility is located on the Boomsnub property and the treated groundwater is discharged to an infiltration gallery located on the Linde property. The infiltration gallery was constructed during September and October 2005 and began receiving water in February 2006 (EA 2006a). Prior to the construction of the infiltration gallery, the treated groundwater was discharged to the City sanitary sewer system.

The Record of Decision (ROD; EPA 2000) for OU-1 and OU-3, dated February 2000, identified the remedy for the Site as continued groundwater extraction and treatment until groundwater cleanup levels are achieved throughout the groundwater plume. The remediation goals include the reduction of total chromium in groundwater to 80 micrograms per liter (μg/L) and the reduction of TCE to 5 μg/L.

An Action Memorandum, dated September 2001 (EPA 2001), was issued by EPA identifying the requirements for remediation activities for OU-2. On 18 September 2002, Linde and EPA entered into an Administrative Order on Consent, EPA Docket Number Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)-10-2001-0114 (EPA 2002), addressing the specific design, construction, and operational requirements for a Non-Time-Critical Removal Action for OU-2 to implement the requirements of the Action Memorandum. On 1 April 2002, Linde assumed interim responsibility for the operation and maintenance (O&M) of the groundwater extraction and treatment system.

In October 2002, URS Group, Inc. (URS), working under contract to EPA and in cooperation with representatives from the EPA Environmental Services Assistance Team, conducted additional soil characterization activities on Boomsnub property around the groundwater extraction and treatment system building. The purpose of the work was to identify areas in the shallow soils (15 ft or less deep) with concentrations of chromium above the cleanup levels

specified in the ROD. The results of the soil characterization activities were presented in the *Soil Characterization: Groundwater Treatment System Compound* report, finalized in April 2003 (URS 2003).

In September 2003, Linde began construction of the Non-Time Critical Removal Action at the Linde facility to address the VOC source area (OU-2). The selected remedial action was a combination of in-well stripping (IWS) and soil vapor extraction (SVE) systems to remove VOCs from both the soil and groundwater. The systems became operational in February 2004.

1.2 Purpose

The purpose of this report is to provide an overview of the activities for OU-2 and OU-3 at the Site. The reporting period is 1 January through 31 December 2008.

1.3 Operating Objectives

The operating objectives for OU-2, identified in the 2001 Action Memorandum (EPA 2001), include the following:

- Remove VOCs from the vadose zone that may be acting as the source to groundwater.
- Remove VOCs from groundwater on the western portion of the Linde property.
- Halt off-property migration of VOCs in groundwater.

The operating objectives for OU-3, defined in the ROD (EPA 2000), include the following:

- Reduce further contaminant migration within the alluvial aquifer (expansion of the plumes).
- Continue mass removal activities.
- Reduce contaminant migration into the Troutdale aquifer.

The overall operating objectives for the OU-3 system are to limit the potential for impacted groundwater to migrate beyond current limits and to maximize mass removal while meeting operational objectives of the treatment system. Activities at the Site are designed to meet these overall objectives.

1.4 Organization of this Document

This report is divided into 8 sections and 2 appendices:

- Section 1 provides the background, purpose, and operating objectives.

- Sections 2 and 3 present summaries of the system operations for OU-2 and OU-3, respectively.
- Section 4 discusses groundwater monitoring and trends.
- Section 5 summarizes additional site activities conducted during the reporting period.
- Section 6 discusses the annual screening of groundwater monitoring data to determine what changes, if any, should be made to current system operations and/or the well sampling schedule.
- Section 7 summarizes conclusions and presents recommendations and planned activities for 2009.
- Section 8 lists the references cited in this document.

Information on chromium and TCE concentrations in groundwater is presented in Appendices A and B, respectively. The information is presented both by well groupings and by individual wells. The appendices are organized in sections, as follows:

- Tables reporting chromium and TCE groundwater concentrations for the last four semiannual sampling events (and corresponding quarterly sampling events for OU-2) are provided in Appendices A-1 and B-1, respectively. The historical maximum concentration detected in each well sampled is also provided. Only wells sampled at least once during the previous four semiannual sampling events are included.
- Graphs showing chromium and TCE concentration trends by well grouping are presented in Appendices A-2 and B-2, respectively. These graphs allow a comparison of trends within geographical or hydrogeological groupings. They also allow immediate comparison of concentrations between wells in a grouping and the ability to identify potential outliers.
- Graphs showing chromium and TCE concentrations over time for individual wells are presented in Appendices A-3 and B-3, respectively. Additional information obtained as part of the annual screening of groundwater monitoring data is included with each graph for alluvial aquifer wells.

2. OU-2 SYSTEMS OPERATIONS

The IWS and SVE systems began full-scale operation on 3 February 2004. This section provides a summary of the OU-2 systems operations and monitoring conducted between 1 January and 31 December 2008. Groundwater and vapor sampling and analyses were conducted to monitor the OU-2 systems in accordance with the procedures in EA's EPA-approved *Operations and Maintenance Manual, Combined In-Well Stripping and Soil Vapor Extraction System* (EA 2004a). Locations of the OU-2 treatment and monitoring wells are shown on Figure 4.

2.1 Systems Operations

The IWS system is operating within the performance standards established for the Site. The SVE system has completed operations and was shut down in March 2008. The systems operations were manually checked by the Site operator at least monthly to confirm that both systems were operating within the design parameters. In addition, the operator remotely checked each system periodically using the Supervisory Control and Data Acquisition (SCADA) system to verify operations. The SCADA system is programmed to notify the operator of system malfunctions. Information specific to each system is presented in the Progress Reports (EA 2008c and EA 2008h) which are submitted on an annual basis. Data for October through December 2008 will be provided in the Progress Report to be submitted to EPA in May 2009. Modifications and/or repairs that were made to the system during the reporting period are presented in Table 1.

2.1.1 IWS System

Since startup, the system has been running 24 hours per day, with the exception of downtime to perform routine maintenance activities. The system was in operation over 97 percent of the reporting period, exceeding the 90 percent availability specified in the CD. Minimal periods of down time were due to maintenance requirements, power outages at the Site, and system alarms.

During 2008, the following modifications and/or significant repairs were made to the IWS system:

- Vapor monitoring of the influent to the IWS system was discontinued in January 2008 since TCE concentrations being removed by the system are too low to measure. Samples were collected monthly from the IWS GAC (sample port G1) to monitor emissions.

- In February, the blower motor on PB-2, in the IWS system, was replaced. The pulleys on the PB-2 blower and motor were re-aligned and the belts were replaced in March.

2.1.2 SVE System

Prior to system shutdown in March 2008 the SVE system was in operation 100 percent of the time. This exceeds the 90 percent availability specified in the CD.

During 2008, the following modifications and/or significant repairs were made to the SVE system:

- The SVE system was shut down (with EPA approval) in March 2008 in accordance with the proposal letter to discontinue summa canister sampling, submitted to EPA on 17 December 2007 (EA 2007c). Further details on the rebound testing and system shutdown are provided in Section 2.3.

2.1.3 Off-Gas Treatment System

The off-gas treatment system was operational during the reporting period whenever the IWS and/or SVE systems were in operation.

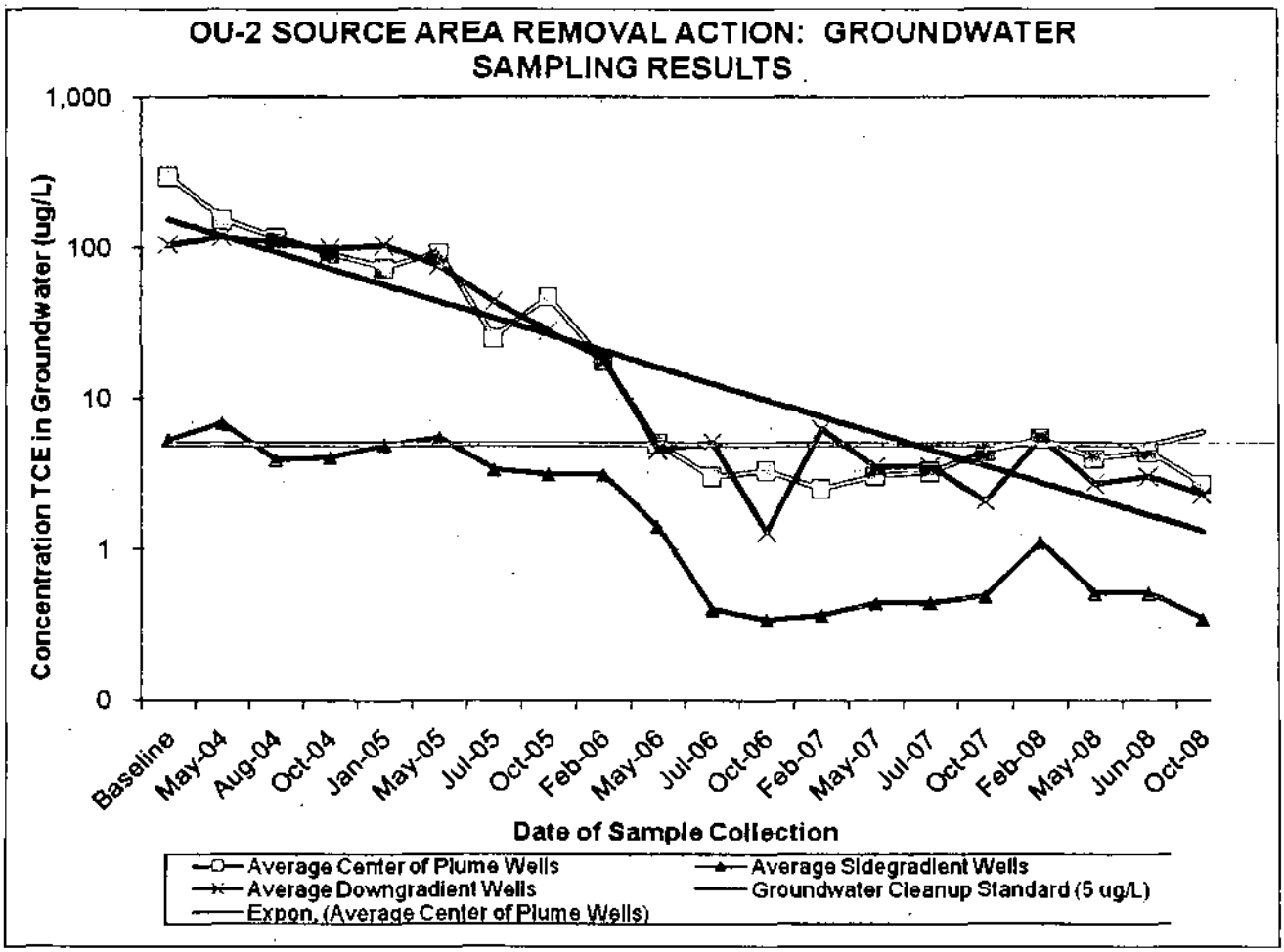
2.2 IWS System Monitoring and Termination

2.2.1 IWS System Monitoring

To monitor the IWS System performance, quarterly groundwater samples were collected from 25 OU-2 monitoring wells in January, May, July, and October 2008, as required in the O&M Manual (EA 2004a). For efficiency, overall cost control, and data comparability, the groundwater samples for the OU-2 monitoring program were collected concurrently with the samples collected for the semiannual sampling events in May and October.

The samples were submitted to Columbia Analytical Services (CAS) of Kelso, Washington and analyzed for VOCs using EPA Method 8260B. The analytical results for the samples collected from these wells are presented in the Progress Reports (EA 2008c and EA 2008h). Reporting for October, November, and December 2008 will be included in the Progress Report to be submitted to EPA in May 2009.

The following figure shows the average concentration of TCE in each of three OU-2 well groupings: "center of plume", "sidegradient", and "downgradient". The "center of plume" wells are most representative of the source area. A steep decline in the average TCE concentration in the "center of plume" wells has occurred since the start of system operations; however, this trend has slowed down since the majority of the contaminant mass has already been removed from the aquifer. The most recent groundwater results (October 2008) indicate that TCE concentrations in the groundwater have decreased over 98 percent in the "center of plume" wells since system startup.



2.2.2 IWS System Rebound Testing

Since starting IWS operations, TCE concentrations have decreased significantly in all monitoring wells across the VOC source area. Termination of the IWS system, as described in the Site Closure Plan and Closure Plan Volume II (EA 2007b and EA 2009), has begun by terminating treatment in wells IWS-1, IWS-2, IWS-7, IWS-8 and IWS-9. The concentration of TCE in groundwater was measured at the upper screens from some of these wells in January and July 2008 to confirm that TCE concentrations remained below the 5 µg/L groundwater cleanup level.. IWS wells were, and will continue to be, sampled as required in the Closure Plan. The analytical results are reported in the following table.

TCE Concentrations in IWS Wells Sampled

Well	January 2008 (µg/L)	July 2008 (µg/L)
IWS-2-S	0.63	--
IWS-7-S	1.0	0.99
IWS-8-S	0.50 U	--
IWS-9-S	0.63	1.1

NOTES:
U = Not detected at or above the method reporting limit.
µg/L = Micrograms per liter.
-- = Well offline.
S = Shallower screen.

To date, the IWS system has performed very well. As reported previously, by May 2006, TCE concentrations in groundwater had been reduced by more than 98% as a result of operation of the IWS system, and the average concentration of TCE in OU-2 performance monitoring wells was below the cleanup level. However, it is apparent from recent data trends that the system is no longer removing appreciable TCE mass from the source area groundwater, and continued operations may not be effective in removing significant mass of TCE from the aquifer. Since reaching 98% removal in 2006, the total mass of TCE removed by the system has not measurably increased, hovering between 98% and 99% removal through 2008. Additionally, the groundwater concentration of TCE in individual wells has not changed substantially over the past two years. In 2008, only two monitoring wells within OU-2 on the Linde property had TCE concentrations above the 5 µg/L cleanup level; AMW-2A and AMW-12A. Currently only four of the nine IWS wells are located in areas where the groundwater concentration of TCE exceeds the cleanup level.

To change the circulation patterns, EA shut off the air flow to IWS-4 from 10 June through 1 August and collected groundwater samples as normally scheduled during the July 2008 sampling event. After groundwater samples were collected, on 1 August, air flow to IWS-4 was reestablished and air flow to IWS-3 was shut off. Another round of groundwater samples was collected during the Fall 2008 sampling event. Using the two rounds of data collected, the system performance was reviewed to see if modifications to the groundwater flow patterns significantly changed groundwater concentrations of TCE in the source area. No significant changes to groundwater concentrations were observed. Continuing varied operation of IWS-3, IWS-4, IWS-5 and IWS-6 is planned.

2.3 SVE System Termination and Rebound Testing

The SVE system was put into operation in February 2004. Vapor samples were collected from the SVE blower to measure mass removal of TCE and from the SVE system effluent (prior to GAC treatment) to measure potential vapor emissions. The samples were collected using summa canisters and sent to CAS, Simi Valley California, for analysis by EPA Method TO-15.

On 13 July 2006, the SVE system was shut down to begin rebound testing since the SVE system had reached asymptotic operating conditions. The baseline concentration used to measure the test results was established at 65 micrograms per cubic meter ($\mu g/m^3$). In summary, rebound testing required successfully passing three rebound tests in order to shut down the SVE system. A single rebound test consisted of up to one month system downtime, followed by three months of system operations, at the end of which a vapor sample was collected and compared to baseline results.

The first test, conducted between July and November 2006, was passed with a measured concentration of TCE in December of 62 $\mu g/m^3$. The second rebound test was started in December 2006 and completed in April 2007. This second test was passed with a measured TCE concentration of 33 $\mu g/m^3$ in April.

The third rebound test was conducted between May and August 2007. The data, collected in August, was suspect since the sample and the duplicate sample results showed significant variance (67 $\mu g/m^3$ vs. 25 $\mu g/m^3$). Due to the large discrepancy between the sample and its duplicate, the third rebound test (August 2007) was considered invalid, and a fourth rebound test was conducted between October 2007 and February 2008. This test was passed with a measured TCE concentration of 33 $\mu g/m^3$.

A summary of the results of SVE rebound testing is presented in the following table. Additional information regarding sample collection and laboratory results was presented in the Progress Reports.

OU-2 SVE System Rebound Test Results

Rebound Test Completed	Sample Result (TCE-$\mu g/m^3$)	Duplicate Result (TCE-$\mu g/m^3$)	Notes
July 2006	65		Baseline sample.
November 2006	62	NA	Test Passed
April 2007	33	32	Test Passed
August 2007	67	25	Large discrepancy between duplicate and sample result. Test excluded.
February 2008	33	28	Test Passed

NOTES:
TCE = Trichloroethene
$\mu g/m^3$ = Micrograms per cubic meter

Since the final valid rebound test was completed with a TCE concentration less than the baseline result, SVE system operations were considered complete. The SVE system was shut shutdown, with EPA approval on 3 March 2008. The equipment trailer will remain in place until EPA agrees it is no longer needed.

2.4 Air Quality Monitoring

Treatment of the off-gas from the IWS and SVE systems was designed to meet the discharge limits of the Southwest Clean Air Authority (SWCAA), SWCAA 400, and Ecology requirements under Washington Administration Code (WAC) 173-460. One of the goals of system monitoring was to measure effluent concentrations to ensure that they did not exceed these standards.

Due to successful rebound testing, shutdown of the SVE system and partial shutdown of the IWS system, February 2008 was the last month of routine monthly vapor sampling of the treatment system influent (EPA 2007c). Monthly vapor sampling of the effluent from the IWS GAC (sample port G1) continued to monitor emissions.

Monthly vapor samples were collected and sent to CAS in Simi Valley, California. As required by the Quality Assurance and Sampling Plan (QASP; EA 2004b), samples were analyzed for the nine primary chemicals of concern in the vapor at the Site. The following table presents only detected concentrations.

Monthly Vapor Sample Results

Sample ID	Date	Trichlorofluoromethane (Freon-11)	Trichloroethene	Tetrachloroethene
011508-G1	15 January 2008	7.7	--	--
021308-G1	13 February 2008	2.2	--	1.6
041508-G1	15 April 2008	1.6	--	--
051308-G1	13 May 2008	2.8	0.9	4.9
061608-G1	16 June 2008	14	--	--
071408-G1	14 July 2008	65	--	--
081408-G1	14 August 2008	65	--	--
091108-G1	11 September 2008	90	--	--
101308-G1	13 October 2008	120	--	--
111708-G1	17 November 2008	98	--	--
121608-G1	16 December 2008	290	--	--

NOTE:
-- = Not detected above the method detection limit.
All results reported in micrograms per cubic meter ($\mu g/m^3$).
A vapor sample was not collected from sample port G1 in March.

Detected results did not exceed regulatory discharge limits. Trichlorofluoromethane is the only compound detected monthly. Concentrations appear to be increasing but are well below the regulatory limit of 43,748 pounds per year. It is recommended that use of summa canisters to monitor effluent discharges be discontinued in 2009, to be replaced by a less expensive monitoring method since vapor concentrations are significantly lower than regulatory requirements.

In the following table, the estimate of annual emissions for the 2008 reporting period is compared to regulatory limits for the annual emissions of specific compounds.

Estimated Chemical-Specific Emissions to Atmosphere, Jan-Dec 2008

	IWS (lb)	Limit (lb/year)	Exceeds Limit?
Vinyl Chloride	0.00	10	NO
Trichloroflouromethane	0.45	43,748	NO
1,1-Dichloroethene	0.00	10,500	NO
1,1-Dichloroethane	0.00	43,748	NO
Cis-1,2-Dichloroethene	0.00	43,748	NO
1,1,1-Trichloroethane	0.00	43,748	NO
Trichlorethene	0.00	50	NO
1,4-Dioxane	0.00	10	NO
Tetrachloroethene	0.04	500	NO

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3. OU-3 SYSTEM OPERATIONS

This section provides a summary of OU-3 system operations, system performance, and plume monitoring conducted from 1 January to 31 December 2008. The Toe-of-Plume Pilot Study (TOPPS) of *in-situ* remediation initiated in 2006 to address recalcitrant contaminants in the Toe-of-Plume area is also briefly discussed.

Groundwater sampling and analyses were conducted in accordance with the procedures in EA's EPA-approved QASP (EA 2004b).

3.1 System Operations

Routine system operation details are presented in the Progress Reports (EA 2008c and EA 2008h) submitted to EPA twice a year. Reporting for October, November, and December 2008 will be included in the Progress Report to be submitted in May 2009. Significant modifications and/or repairs that were made to the system during the reporting period are presented in Table 1.

3.1.1 Groundwater Extraction System

During the reporting period the groundwater extraction and treatment system operated within the performance standards established for the Site. The extraction well pumping rates were recorded once a month during the operating period. The recorded pumping rates are shown in Table 2.

3.1.2 Groundwater Treatment System

Routine monitoring of influent and effluent was conducted throughout the year. The system modifications for the current reporting period are summarized in the following sections.

3.1.2.1 Ion Exchange System

The system had an average chromium removal rate of over 96 percent in 2008. Any modifications or significant repairs made to the ion exchange system in 2008 are listed in Table 1.

3.1.2.2 Air Stripper

The system has averaged a TCE removal rate of approximately 98 percent in 2008. Any modifications or significant repairs made to the air stripper system in 2008 are listed in Table 1.

3.1.2.3 Linde Infiltration Gallery

Treated groundwater from the Site treatment system is discharged back into the alluvial aquifer through the infiltration gallery. The gallery is located in the southeast corner of the Linde property and is designed to accept 160 gallons per minute of treated water.

No modifications or significant repairs were made during the reporting period and 100 percent of the treatment system effluent was discharged to the infiltration gallery.

The infiltration gallery wells have been monitored for chromium and TCE on a semiannual basis. Results have all been near background concentrations and well below discharge standards of 3 µg/L for TCE and 24 µg/L for total chromium.

3.2 System Performance

3.2.1 Water Treated

During the reporting period, 78,574,541 gallons of groundwater were treated and discharged to the Linde infiltration gallery. No discharges were made to the City sanitary sewer system in 2008.

3.2.2 System Availability

The treatment system was operational for approximately 7,288 hours or approximately 97 percent of the reporting period. The availability ranged from 78 percent in December to 100 percent in April, May, June, July, August and September. The percent availability includes actual minutes of operation and scheduled down time.

3.2.3 Mass Removal

On the basis of measured influent and effluent concentrations and the total monthly groundwater flow, approximately 55 pounds of chromium and 17 pounds of TCE were removed by the groundwater extraction and treatment system during 2008. This brings the cumulative total mass of chromium and TCE removed to approximately 22,146 and 2,135 pounds, respectively, since initiating operations in 1990. The mass of contaminants removed during the reporting period continued to decline compared to the previous reporting period. This is consistent with a continuing downward trend over the past few years and is reflected in the average influent concentrations of chromium and TCE at the Site. Figure 5 shows the cumulative removal amounts for total chromium and TCE since June 1999.

The groundwater extraction and treatment system continues to meet the discharge criteria for required constituents. Effluent discharged to the Linde infiltration gallery had concentrations below the infiltration gallery initial discharge standards of 3 µg/L for TCE and 24 µg/L for total chromium.

Figure 6 depicts the total chromium and TCE concentrations in the extraction and treatment system influent and effluent. Figure 7 provides a monthly comparison of influent chromium and TCE concentrations over the past eight years.

3.3 Plume Monitoring

3.3.1 Semiannual Site-wide Groundwater Monitoring

Semiannual site-wide groundwater monitoring was conducted in May 2008 and October 2008, following the EPA approval of associated QASP addenda (EA 2008b and EA 2008f). Additional samples were collected during the Fall sampling event from wells on annual and biennial sampling schedules. Samples were analyzed for chromium using EPA Method 200 Series and/or VOCs using EPA Method 8260B. When well purge water did not meet turbidity standards, a dissolved chromium sample was collected in addition to the total chromium sample.

The samples were submitted to CAS of Kelso, Washington for analysis. For each semiannual sampling event, one chromium, and one VOC sample delivery group were validated by EA personnel.

In general, the semiannual sampling events were conducted as planned and no significant issues or problems were encountered.

3.3.2 Water Level Gauging Program

Depth-to-groundwater measurements were collected from monitoring and extraction wells at the Site during the Spring and Fall semiannual sampling events. Groundwater level data is collected to determine the groundwater flow direction and gradient and in support of the groundwater model. During both semiannual events in 2008, the measurements were made while the groundwater treatment system was actively pumping to assess groundwater flow under drawdown conditions.

The horizontal gradients for the alluvial and Troutdale aquifers were determined using data from the Fall 2008 water level gauging event. For the alluvial aquifer, the gradient across the Linde property was approximately 0.010 ft/ft. This area is presumably impacted by the infiltration gallery. Downgradient within the plume area (using an average from just west of the Boomsnub property to the Toe-of-Plume) the gradient was approximately 0.004 ft/ft. The flow direction for both areas of the plume (Linde and downgradient) is generally to the west-northwest.

For the Troutdale aquifer, the average hydraulic gradient across the Site area was approximately 0.006 ft/ft. The flow direction in this aquifer is generally to the west-southwest.

Because the groundwater extraction system was actively pumping during water level gauging, the vertical gradient could not be determined accurately. Generalized groundwater elevation

contour maps for the alluvial and Troutdale aquifers for the Fall 2008 water level gauging event are presented in Figures 8 and 9, respectively.

Water level gauging and groundwater monitoring results indicate that hydraulic containment of the plumes has been maintained. A capture zone assessment for the new Toe-of-Plume in the Church of God area was performed in early 2008, using multiple lines of evidence (EA 2008a). The assessment was focused on groundwater capture, not mass removal. Based on that assessment, pumping rates in the down gradient portion of the extraction system were adjusted to optimize capture.

3.4 Toe-of-Plume Pilot Study *In-Situ* Remediation

Since 1995, the groundwater extraction and treatment system at the Site has made significant progress in reducing plume size and contaminant concentrations in the groundwater. As of 2006, contamination in the area referred to as the original Toe-of-Plume had been reduced to a single "hot spot" immediately upgradient of extraction well MW-41. The hot spot area was believed to be located in the low permeability silt layer, at a depth of approximately 80 to 90 ft below ground surface. Experience with other extraction wells at the Site has demonstrated that contaminants in the silt layer are not effectively removed by pumping. Therefore, the TOPPS *in-situ* remediation was initiated in September 2006 in an effort to remediate the hot spot in the Toe-of-Plume area. Groundwater samples from selected Toe-of-Plume wells were collected during Spring and Fall 2008 sampling events to continue performance monitoring. Since the *in-situ* treatment was implemented, chromium and TCE have not been detected above the analytical method reporting limit in well MW-41. As a result, the sampling requirements for TOPPS wells were modified. During the 2008 semiannual sampling events, samples from TOPPS wells were not analyzed for sulfate or sulfide. Additionally, only two samples were analyzed for ferrous iron.

Groundwater sample analytical results and concentration trends from the TOPPS wells are discussed in Section 4.2.2.6. Table 3 summarizes the results related to remediation performance. The two major contaminants of concern, TCE and chromium, were not detected at concentrations exceeding the cleanup levels in 2008, confirming that the TOPPS is performing as expected.

Low dissolved oxygen levels in the hot spot area (MW-41 and AMW-63) in October 2008 provide an indication that the EHC-M™ is working as expected (see Table 3). Results from the post treatment quarterly sampling events indicate that the treatment is reducing chromium and TCE concentrations.

On the following table the presence of iron suggests that well MW-41 is under the influence of the EHC-M™ injections. As the zero-valent iron (a component of EHC-M™) reacts, Fe(II) is released. The dissolved iron moves with the water and is further oxidized to Fe(III) when reaching areas of more toxic conditions.

Concentration of Dissolved Iron in TOPPS Groundwater Samples

	Dissolved Iron (µg/L)	
	AMW-63*	MW-41
September 2006[1]	--*	3.6 B
January 2007	56.3	1150
May 2007	46.8	491
July 2007	111	1820
October 2007	13.2 B	842
May 2008	64.4	282
October 2008	19.7 B	206

NOTES:
µg/L = Micrograms per Liter.
* = New well installed in November 2006.
1 = Pre-injection data.
B = Estimated concentration that is less than the MRL but greater than or equal to the MDL.

3.5 Infiltration Gallery

The Linde infiltration gallery was constructed on the Linde property in Fall 2005 to discharge treated groundwater from the OU-3 treatment system back into the alluvial aquifer. In February 2006, the Linde infiltration gallery became operational and discharges to the City sanitary sewer were discontinued.

Groundwater samples are collected from four monitoring wells as part of the infiltration gallery monitoring program. The four wells are AMW-6A, AMW-7A, AMW-10A, and AMW-11A. Baseline sampling of these wells was conducted in October 2005, prior to the startup of the infiltration gallery. TCE was not detected in the monitoring wells sampled and chromium was detected at concentrations well below the cleanup level. Following start-up, the wells were sampled on a quarterly basis for six rounds. The wells are currently sampled semiannually and analyzed for VOCs and chromium. The monitoring results are provided in Table 4.

Effluent discharged to the Linde infiltration gallery has continued to have concentrations below the infiltration gallery initial discharge standards of 3 µg/L for TCE and 24 µg/L for total chromium. TCE and chromium concentrations in groundwater from the infiltration gallery monitoring wells remain well below the cleanup levels.

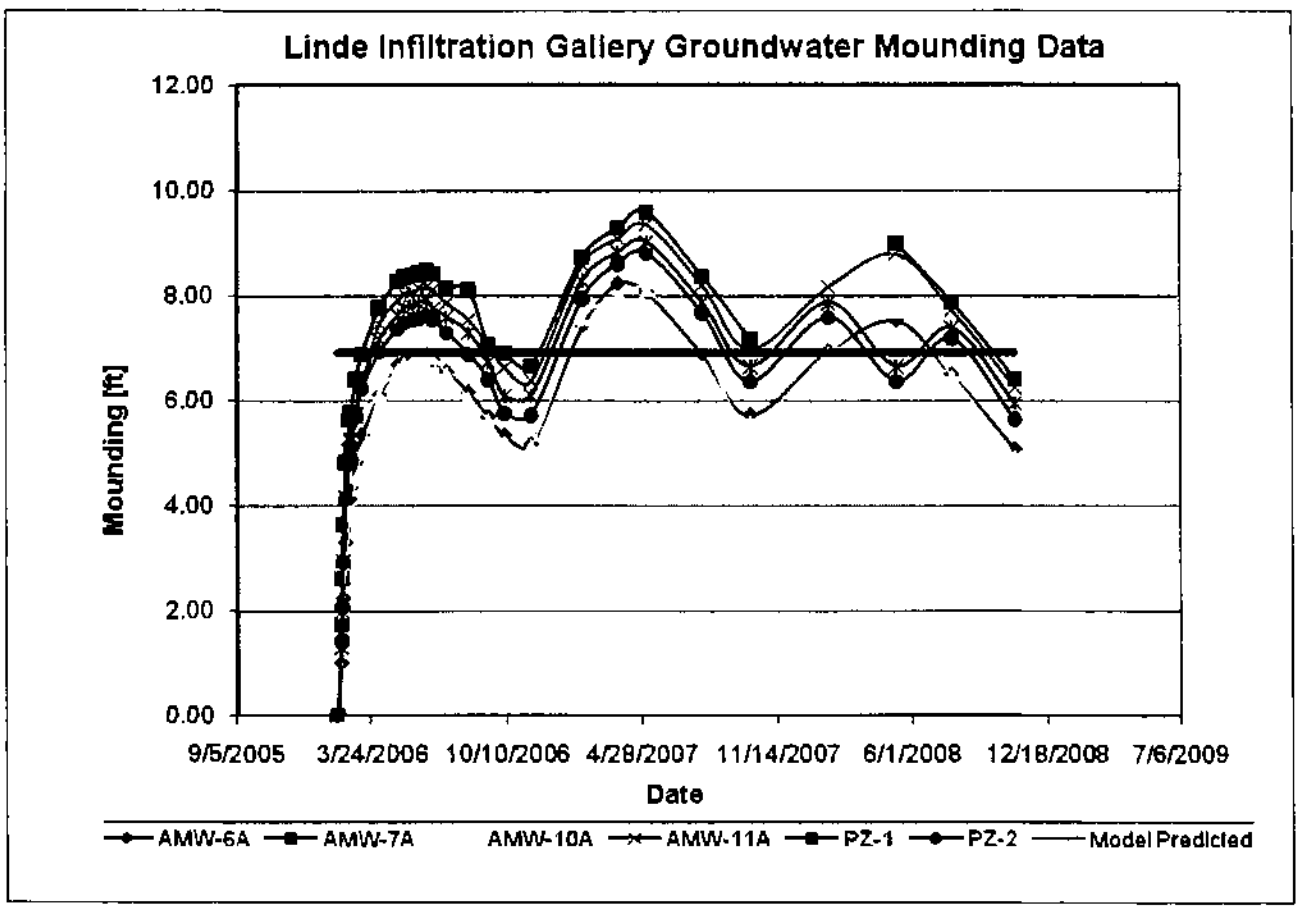
Since startup of the infiltration gallery, groundwater elevations have been monitored periodically to assess the impact on the water table near the gallery. The following table shows water elevations in the infiltration gallery monitoring wells during the reporting period.

Water Level Measurements

Date	AMW-6A	AMW-7A	AMW-10A	AMW-11A	PZ-1	PZ-2
January 2008	22.55	--	22.58	20.46	21.19	23.57
May 2008	21.96	20.49	21.82	19.83	22.41	24.78
July 2008	22.99	21.60	23.01	20.90	21.68	23.98
October 2008	24.41	23.06	24.56	22.37	23.11	25.51

NOTES:
Water levels are measured as depth to water from the top of well casing in feet.
The January measurement for AMW-7A had an erroneous reading and is not included.

The following figure shows the water table fluctuations in the infiltration gallery area since startup in February 2006 compared to the maximum mounding predicted during the design of the infiltration gallery using the groundwater model developed for the Site. The difference between the actual and predicted change in water levels can be attributed to seasonal fluctuations in the water table. Water level data for May and July 2008 appear to have inconsistent fluctuations. There are not enough data points to draw a conclusion; therefore, water levels in these wells will be observed for future inconsistencies. No changes to the infiltration gallery were made during the reporting period.



3.6 Systems Under Review

The following areas of the system are currently being evaluated to determine if modifications may be required:

- The pumping system and pipeline configuration on Parcel No. 144527 (formerly referred to as the Castry property) will be impacted by development of the parcel and modifications will be required once development plans are finalized. No date is set for completion of plans and start of site development work.

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4. GROUNDWATER MONITORING AND TRENDS

This section presents the concentration trends observed in groundwater since 1995 when EPA assumed regulatory responsibility for the Site—with a focus on data collected during 2008. Groundwater sampling and analysis was conducted to monitor the groundwater quality in extraction and monitoring wells in accordance with the procedures in EA's QASP (EA 2004b). Groundwater sampling and analysis of the OU-2 monitoring wells on the Linde property was conducted in accordance with the approved OU-2 O&M Manual (EA 2004a).

Task specific QASP addenda are prepared for each semiannual sampling event to be compliant with the schedule established in the Long-Term Monitoring Plan (LTMP; EA 2007a). The sampling schedule is reviewed and updated annually. The sampling schedule for 2008 was presented in the 2007 Annual Status Report (EA 2008e).

The Monitoring and Remediation Optimization System (MAROS) was used to perform an annual screening of groundwater monitoring data for the Site, as described in Section 6. Data used for the review were those collected from 1995 through the end of 2008. Results from this screening were used to evaluate the need for changes to the well sampling frequencies for 2009.

Table 5 presents the 2008 well sampling frequencies along with the recommended changes for 2009. Also included in Table 5 are well construction details, historical maximum concentrations of TCE and chromium in each well, and the most recent concentrations of TCE and chromium in each well. Table 6 provides a summary of the recommended well sampling frequencies for 2009 and the rationale for the frequency.

4.1 Well Groupings

To facilitate analysis of contaminant concentrations across the Site, sampling data are grouped by aquifer and geographical location as follows:

- Alluvial aquifer wells
  - Upgradient wells
  - TCE Source wells (includes OU-2 monitoring wells)
  - Proximal wells
  - Intermediate wells
  - Church of God wells
  - Toe-of-Plume wells (including Sentinel and Other toe wells)
- Troutdale aquifer wells.

The aquifer and geographic well groupings are presented on Figure 10. All wells except those identified as Troutdale aquifer wells are screened within or slightly below the alluvial aquifer.

4.2 Groundwater Trends

4.2.1 Overview

Groundwater monitoring results indicate that the current pumping scheme is maintaining control of the plume and that overall concentrations for both chromium and TCE are on decreasing trends.

The highest concentration of chromium during the 2008 reporting period was detected in the sample collected from well MW-4B (606 µg/L) during the Fall 2008 sampling event. The highest concentration of TCE was detected in the sample collected from well AMW-18 (460 D µg/L) during the Spring 2008 event. The elevated TCE concentrations detected in well AMW-18 appear to be related to a separate TCE plume north of the Site (see Section 4.2.2.4). The highest concentration of TCE in groundwater within the Site plume was detected in the sample from well MW-18E (250 D µg/L) during the Fall 2008 event. Wells for which the groundwater sampling results for 2008 exceeded the site cleanup levels for chromium and TCE are highlighted on Figures 11 and 12, respectively.

For this report, tables, figures, and graphs were used to assist in evaluating groundwater trends across the site:

- The extent of impacted groundwater, as determined from well sampling results obtained in 1995 and Fall 2008 is presented on Figure 13 for chromium and on Figure 14 for TCE. These figures illustrate that groundwater remedial actions have been effective in mass removal and in reducing the footprints of both the chromium and TCE plumes.

- Chromium and TCE concentration trends are presented in Appendices A and B, respectively. The information is presented both by well groupings and by individual wells. Within the appendices, wells are organized by well grouping. A table of contents is provided at the beginning of each section in the appendices.

Concentration trend charts for individual alluvial aquifer wells include additional statistical information obtained from the MAROS evaluation. This is discussed further in Section 6.

Specific information on trends observed in the well groupings within the monitoring network is discussed in the following sections. See Appendix A-1 for chromium concentration summary tables and Appendix B-1 for TCE concentration summary tables used in preparing these sections.

4.2.2 Alluvial Aquifer

4.2.2.1 Upgradient Wells

The Upgradient wells are located on the eastern half of the Linde property, east (upgradient) of the TCE source area. Four infiltration gallery wells are also included in this area. Groundwater

from the wells was analyzed for chromium and TCE; and concentrations detected were well below the cleanup levels during both sampling events.

4.2.2.2 TCE Source Wells

The TCE Source wells are located on the western half of the Linde property, in the vicinity of the TCE-impacted soil. These wells are typically sampled for TCE only, as part of the OU-2 monitoring program. One well, AMW-26, is sampled for TCE as part of the OU-3 monitoring program. The TCE concentration in the groundwater sample collected from well AMW-26 (collected during Fall only) was below the method detection limit.

The results for quarterly monitoring of the OU-2 wells are presented herein and in the Progress Reports (EA 2008c, EA 2008h). The quarterly analytical results for the 2008 reporting period are presented in Table 7. For comparison, results of baseline sampling (samples collected prior to system start-up) are also presented on the table.

Of the 25 OU-2 wells sampled in this area, four groundwater samples had TCE concentrations above the cleanup level of 5 µg/L: AMW-2A, AMW-12A, AMW-53A, and MW-1A. These wells are all "A" level wells. "A" level wells are the shallowest wells of the well cluster and are screened across in the water table. TCE did not exceed the cleanup level in samples from any of the deeper "B" or "C" level wells.

TCE concentrations in groundwater from wells AMW-2A and AMW-53A continue to fluctuate. TCE concentrations in groundwater from wells AMW-12A and MW-1A remain consistently above the cleanup level. MW-1A was the only well sampled for chromium during the reporting period (sampled Fall only) and the result was below the 80 µg/L cleanup level.

4.2.2.3 Proximal Wells

The Proximal wells are located west of the maintenance building (former machine shop) on the Boomsnub property and east of NE St. Johns Road. These wells are proximal to the chromium source. Four wells in the Proximal group were sampled during the Spring 2008 sampling event and 12 wells during the Fall 2008 event. The groundwater samples were analyzed for both chromium and TCE.

<u>Chromium</u>
During the reporting period chromium concentrations in groundwater remained above the cleanup level in MW-3A, MW-4B and MW-10C. Concentrations in these wells continue to fluctuate. Groundwater samples from well MW-4B, near the chromium source, continue to contain some of the highest concentrations of chromium in groundwater at the Site. Concentrations in this well decreased from 1,240 µg/L in Fall 2007 to 606 µg/L in Fall 2008. Chromium concentrations in groundwater samples from well PW-1B dropped below the cleanup level for the first time during the Spring 2008 sampling event and remained below during the Fall 2008 event. Chromium concentrations in groundwater samples from MW-2A dropped significantly from Fall 2007 (821 µg/L) to below the cleanup level in Fall 2008 (66 µg/L) for the

first time since 1997. However, it is noted that well MW-2A typically has very large fluctuations in chromium concentrations from one sampling event to the next.

TCE
TCE concentrations were above the cleanup level in groundwater from eight wells during 2008. The TCE concentrations in groundwater collected from wells MW-6B, MW-9B, MW-10B, MW-10C and MW-4B have consistently remained above the cleanup level but are on a decreasing trend. The TCE concentration in a sample from MW-12C exceeded the clean-up level during the reporting period; concentrations in this well appear to be fluctuating.

4.2.2.4 Intermediate Wells

The Intermediate wells are located west of NE St. Johns Road, north and south of NE 78th Street. Five intermediate wells were sampled in Spring 2008 and 13 in Fall 2008 for chromium; and six intermediate wells were sampled in Spring 2008 and 14 in Fall 2008 for TCE. In general, chromium and TCE concentrations have been on a decreasing trend in groundwater samples collected from these wells since 1995, although the concentrations are still above the cleanup level in a number of wells.

Chromium
Groundwater samples from five intermediate wells had chromium concentrations that remained above the clean-up level during the reporting period: MW-14C, MW-18D, MW-19D, MW-20D, and MW-40. Concentrations in groundwater samples from MW-19D are fluctuating with an overall decreasing trend. Chromium concentrations in the remainder of the intermediate wells have been steadily decreasing.

TCE
Groundwater samples from eleven intermediate wells had TCE concentrations that remained above the clean-up level during the reporting period: AMW-18, AMW-59, CPU-14, MW-14C, MW-14E, MW-15E, MW-16E, MW-18D, MW-18E, MW-19D, and MW-20D. With the exception of well AMW-18, TCE concentrations in groundwater samples from these wells have been steadily decreasing.

TCE concentrations in groundwater samples from well AMW-18 increased significantly during 2007 and early 2008. Samples were collected from well AMW-18 on a quarterly basis during 2008. In both January and May 2008, TCE was detected at a concentration of 460 μg/L. In July 2008, the TCE concentration decreased to 410 μg/L. In October 2008, the concentration decreased further to 390 μg/L. In May 2008, an investigation was performed to evaluate the depth and concentration of TCE in groundwater in the well AMW-18 area. Although the source of the TCE groundwater contamination in this area was not identified, based on the data obtained, the source is not the same as for the OU-3 plume (see Section 5.2).

4.2.2.5 Church of God Wells

The Church of God wells are located between the fence line in the vacant field north of NE 78th Street and the western Church of God property line. Groundwater samples were collected from eight wells in Spring 2008 and 12 wells in Fall 2008 and analyzed for chromium and TCE. In general, chromium and TCE concentrations in groundwater samples collected from wells in this area have been on a decreasing trend since 1995 although the concentrations are still above cleanup levels in several wells.

Chromium
Groundwater from one well (AMW-27) had a chromium concentration above the cleanup level during the reporting period. Concentrations in groundwater from wells in this area continue on a decreasing trend. Concentrations of chromium in groundwater from well MW-22D dropped below the cleanup level for the first time and remained below the cleanup level in Fall 2008. Chromium concentrations in well MW-49 dropped below the cleanup level in Spring 2008 for the first time since 2001 and remained below in Fall 2008. AMW-27 continues to have the highest concentrations of chromium in groundwater in this area. This well is screened in the silt layer (low permeability) below the alluvial aquifer. Other wells in this group are screened in sand (higher permeability) above this silt layer and exhibit lower chromium concentrations.

TCE
Groundwater from five wells had TCE concentrations above the cleanup level during the reporting period: AMW-27, AMW-61, MW-21D, MW-22D and MW-49. Concentrations in these wells continue on a decreasing trend. TCE in well MW-49 dropped below the cleanup level for the first time in Fall 2008.

4.2.2.6 Toe-of-Plume Wells

The Toe-of Plume wells are located west of the Church of God building. These wells are divided into two groups for discussion purposes: Sentinel wells and Other Toe wells.

Sentinel Wells: The Sentinel wells are monitoring wells located at or beyond the historical leading edge of the chromium plume. Four Sentinel wells were sampled in Spring 2008 and five in Fall 2008. Chromium concentrations in groundwater samples collected from these wells have remained consistently below the cleanup level. TCE has never been detected in groundwater samples from the Sentinel wells.

Other Toe Wells: The Other Toe wells are located west of the Church of God property and east of the Sentinel wells. Four Other Toe Wells were sampled during Spring 2008; and eight were sampled during Fall 2008 for both chromium and TCE.

With the exception of well MW-35, chromium and TCE concentrations in groundwater samples collected from the Other Toe Wells were below the cleanup levels in 2008. Chromium concentrations remain below the cleanup level in well MW-35. TCE concentrations in MW-35 had been below the cleanup level since Summer 2004 but increased to 5.5 μg/L in Spring 2007.

TCE concentrations in MW-35 remained above the cleanup level during Fall 2007 and Spring 2008 then dropped below the cleanup level again in Fall 2008 (4.9 µg/L).

4.2.3 Troutdale Aquifer Wells

One Troutdale aquifer well (AMW-62) was sampled in Spring 2008 for chromium and TCE. In Fall 2008 eleven wells were sampled for chromium and TCE.

Chromium
Chromium was not detected above the cleanup level in any of the groundwater samples collected during the reporting period from Troutdale Aquifer wells.

TCE
TCE was detected above the cleanup level in groundwater collected from wells AMW-24, MW-33, and the private well (Parcel No. 149147-000 also referred to as the Bennett property) during the Fall 2008 event. These concentrations are similar to those reported for the past several years.

5. OTHER ACTIVITIES

During the reporting period, the following additional activities were performed.

5.1 Access Agreements and Easements

Per the CD, access agreements and easements are being obtained for non-Linde owned properties with the purpose of gaining access to conduct activities related to the CD. These agreements will comply with the requirements of Sections 25 and 26 in the CD (EPA 2007a). EA has recorded agreements or amendments from eleven property owners. Negotiations are underway with the remaining designated property owners.

5.2 AMW-18 Area Investigation

Site monitoring data indicate the OU-3 TCE plume has shown a significant decrease in concentrations and size over time. However, TCE concentrations in well AMW-18, located near the northern Site boundary, increased significantly during 2007 and early 2008. EA submitted a workplan to EPA on 4 April 2008 for an investigation in this area (EA 2008d). In May 2008, an investigation was performed to evaluate the depth and concentration of TCE in groundwater in the well AMW-18 area, and to evaluate possible source areas for the TCE detected in the well. Based on the results of the investigation the source of the TCE groundwater contamination in this area was not identified; however, the data indicates the source is not the same as for the OU-3 plume. Based on existing data, the contamination does not appear to be the result of actions by Linde or its predecessors. The investigation was summarized in the *AMW-18 Area Investigation Report* (EA 2008g).

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6. ANNUAL SCREENING OF GROUNDWATER MONITORING DATA

This section summarizes the first Annual Screening of groundwater monitoring data conducted in accordance with the revised Closure Plan (EA 2009). The annual screening evaluates data collected at the Site since 1995 (the year the Site was placed on the National Priorities List) for each alluvial aquifer monitoring and extraction well referenced in the LTMP (EA 2007a). The data are used to determine what changes, if any, should be made to current system operations and the well sampling schedule, and to determine if cleanup levels have been attained in groundwater.

A combination of quantitative and qualitative evaluations of the Site data was used to derive the recommendations for the Annual Screening. The Air Force Center for Environmental Excellence (AFCEE) MAROS version 2.2 was used for the quantitative evaluation. MAROS is a computer program developed to optimize long term groundwater monitoring, determine when to terminate groundwater treatment, and demonstrate cleanup level attainment using statistics. Using statistical analyses, MAROS is capable of making recommendations on sampling frequencies and is able to determine if groundwater concentrations are statistically below cleanup levels. The qualitative evaluation consisted of professional judgment based on over 15 years of Site experience. The quantitative and qualitative evaluations do not always reach the same conclusions. When this occurs, professional judgment takes priority.

Annual Screening recommendations fall into five categories:

- Redundancy: Determines if a well provides unique data on a constituent (TCE and/or chromium) that cannot be seen in other wells.
- System Operations: Determines if modifications to operations are necessary to achieve concentrations below cleanup levels.
- Sampling Frequency: Determines sampling frequencies for wells that require continued monitoring.
- Termination: Determines whether constituents detected in samples from wells are statistically below cleanup levels. Aids in the decision to terminate treatment and/or discontinue monitoring.
- Attainment: Used in the analysis of attainment wells as identified in the Closure Plan (EA 2009). Attainment wells are considered "attained" if contaminant concentrations in post-treatment samples from the well are statistically below cleanup levels. Aids in the decision to close down an area of concern and leads to site closure.

Factors used in the quantitative evaluation are presented in the 2008 MAROS Results Summary Table (Table 8). In the table, wells are presented by well groupings (as presented in Section 4.1) to demonstrate what is happening in specific areas of the plume.

6.1 Redundancy

Monitoring of a well may be discontinued based on the redundancy analysis in MAROS. This analysis evaluates whether or not a well provides unique information and recommends elimination of wells that do not provide unique information. If MAROS indicates a well is statistically redundant for both TCE and chromium, it may be eliminated from future monitoring because there will be no statistically significant loss of information.

The MAROS redundancy analysis is based on the Delaunay method. "The well redundancy analysis using the Delaunay method is designed to select the minimum number of sampling locations based on the spatial analysis of the relative importance of each sampling location in the monitoring network. The approach allows elimination of sampling locations that have little impact on the historical characterization of a contaminant plume" (EPA 2007b).

Table 8 shows that well MW-3C is redundant for TCE. No wells were found to be redundant for both TCE and chromium.

6.2 System Operations

If contaminant concentration trends in a well are increasing or fluctuating above and below cleanup levels, modifications to the extraction system operations may be necessary. Trend analysis was conducted using MAROS and graphs of contaminant concentrations. Professional judgment was used to determine if continued operations would bring the well into compliance with cleanup levels or if modifications to system operations are necessary.

MAROS uses the Mann-Kendall nonparametric evaluation to determine the concentration trend (Mann-Kendall trend) for each well. The Mann-Kendall evaluation is considered to be one of the best ways to evaluate concentration trends because it handles data variation well; and it does not assume the data fits into a specific distribution (EPA 2007b). Some wells will not have sufficient data for the Mann-Kendall evaluation to output a trend and MAROS will indicate that the well concentration has no trend.

In some cases where the Mann-Kendall trend indicates an increasing or possibly increasing concentration trend, trends are due to data outliers or the use of different detection limits and may not be a true representation of the trend (see TCE graph for Sentinel well AMW-44). For these wells, a qualitative evaluation of the trend graphs was used to determine if any action needed to be taken.

The Mann-Kendall trends for TCE and chromium are presented in Table 8. The graphs were reviewed for wells with Mann-Kendall trends that were increasing or possibly increasing. AMW-18 was the only well that appeared to have a true increasing trend.

TCE concentrations increased in well AMW-18 in 2006, 2007, and 2008. TCE contamination in the AMW-18 area was investigated and reported on in 2008 (EA 2008g). The elevated TCE

concentrations in this area appear to be related to a separate plume north of the Site TCE plume. TCE concentrations in well AMW-18 decreased somewhat in July 2008 and Oct 2008, but remain well above the cleanup level. No system modifications are recommended based on the presence of this offsite plume; however, well AMW-18 will be monitored semiannually to document changes in contaminant concentration.

6.3 Sampling Frequency

As part of the Annual Screening, the current sampling frequency for each well is evaluated and, if appropriate, revised. When proposing a revised sampling frequency for a well, the following factors were considered: the current sampling frequency, the MAROS recommended sampling frequency, the use of the well at the Site, and the results from the MAROS Data Sufficiency module. These factors are presented in the Wells and Recommended Sampling Frequencies Table (Table 5).

The MAROS Data Sufficiency module uses the sequential T-test to determine if contaminants in groundwater are statistically below cleanup levels (AFCEE 2006). For wells with groundwater concentrations statistically below cleanup levels for TCE and/or chromium, sampling will be discontinued for TCE and/or chromium unless the qualitative analysis identifies a need for data from the well.

For wells that are not eligible to have sampling discontinued, MAROS uses a Modified Cost Effective Sampling method to propose sampling frequencies for individual wells (AFCEE 2006). The resulting frequencies are "based on the magnitude, direction, and uncertainty of its concentration trends" (EPA 2007b). The recommendations made by MAROS are considered preliminary since they are the lowest frequencies needed to provide the adequate amount of data to reach statistical cleanup and may not correspond with the monitoring objectives of that well. For example, if MAROS recommends annual sampling, but the well is used to monitor treatment system performance, sampling may be conducted more frequently until the treatment is complete. Alternatively, for wells not designated as an attainment well, MAROS may recommend more sampling than is necessary.

Table 5 shows the current sampling frequency for each well along with the MAROS recommended sampling frequency. These were evaluated for each well, and sampling frequency recommendations for 2009 were determined using professional judgment. Changes to the sampling frequency for alluvial aquifer wells recommended for 2009 include the following:

- No further sampling was recommended for the following seven wells: MW-3C, MW-17E, MW-37, AMW-44, AMW-45, MW-30, and MW-47.
- Reduced sampling frequencies were recommended for the following 12 wells: AMW-1B, AMW-2B, AMW-26, AMW-19B, AMW-52C, AMW-53B, AMW-53C, AMW-54C, AMW-55C, RAMW-2C, AMW-56C, and AMW-18.

- Increased sampling frequencies were recommended for two wells: AMW-17 and MW-15E.
- For wells AMW-17, AMW-18, and MW-15E, it is recommended that chromium sampling be discontinued and the well be sampled for VOCs only.
- No change in frequency was recommended for the remaining 77 alluvial aquifer wells.

These changes are indicated in Table 5. More detailed descriptions of the reasoning behind the recommended changes are provided in Table 9.

Since the OU-3 groundwater pump and treat system treats the alluvial aquifer, and not the Troutdale aquifer, the MAROS analysis was not used on Troutdale wells. A qualitative analysis was completed to re-evaluate the sampling frequencies for the Troutdale wells. The only change recommended was for well AMW-62. The sampling frequency was changed from semiannual to annual; the reasoning is provided in Table 6. General information for Troutdale wells is provided in Table 5.

6.4 Termination

"Termination", in this annual screening process, refers to the termination (shutdown) of an extraction well or the discontinuation of monitoring of a well. The MAROS Data Sufficiency module uses the sequential T-test to classify wells as statistically below cleanup levels and aids in the decision to terminate treatment and/or discontinue monitoring.

The sequential T-test outputs two "cleanup statuses" per well, one for data with a normal distribution and one for a lognormal distribution. The coefficient of variation (COV) was used to determine which distribution best represents the data collected from each well. The COV is a measure of the variation of data points from the mean. If the COV was less than 1.00 then the data showed little scatter and the normal distribution results were used. If the COV was greater than 1.00, the lognormal distribution results were used. The "Cleanup Status" columns in Table 8 present the final cleanup status for results.

In Table 8, the sequential T-test classifies wells as Attained, Continue Sampling, or Not Conducted (N/C). *"Attained indicates the mean concentration is significantly below the cleanup goal, and has achieved the TargetLevel"* (AFCEE 2006). The *TargetLevel* default value is 0.8 times the cleanup goal. MAROS recommends continuing sampling for wells that need more data to be considered attained and statistically below cleanup levels. The sequential T-test was not conducted on wells with a cleanup status N/C due to their small sample sizes (less than four samples).

The cleanup status in Table 8 was used to determine if the contaminant concentration was statistically below cleanup levels. Only wells that were classified as attained were considered statistically below cleanup levels based on the MAROS definition.

With the exception of the TCE Source wells, only wells that are statistically below cleanup levels for both constituents will be considered clean. TCE Source wells only need to be statistically below cleanup levels for TCE since the area has not contained chromium contamination. If concentrations for a well are statistically below cleanup levels for the contaminants of concern, professional judgment was used to determine if further treatment is necessary.

For extraction wells that are actively pumping when MAROS indicates cleanup has been achieved for TCE and chromium, pumping may be terminated. Monitoring will continue at these wells to ensure that cleanup levels are maintained as the well returns to equilibrium.

Results from the MAROS Data Sufficiency module and professional judgment suggest that OU-3 monitoring be discontinued for Sentinel Toe wells AMW-44, AMW-45, MW-30, and MW-47. The Sentinel wells grouping have reached attainment (See Section 6.5). AMW-43 is located in the Sentinel Toe well grouping, and meets the criteria to discontinue monitoring; however,-this well will continue to be sampled as part of the TOPPS monitoring program.

TCE and chromium have never exceeded cleanup levels in MW-17E and MW-37. The MAROS evaluation concluded that TCE and chromium concentrations in these two wells are statistically below cleanup levels and no further sampling is required.

None of the active pumping wells have achieved cleanup levels.

6.5 Attainment

Attainment monitoring is performed on a limited number of wells to assess whether post-treatment concentrations remain statistically below cleanup levels. Attainment monitoring is conducted on a subset of wells that represent different areas of the plume. The guidelines for handling the analytical results from attainment monitoring are presented in the Closure Plan (EA 2009). The following areas of the plume (as defined in the LTMP [EA 2007a]) were selected for attainment monitoring:

- Source Area
- Proximal Area
- Intermediate Area
- Church of God Area
- Other Toe of Plume Area
- Sentinel Toe of Plume Area.

The MAROS Data Sufficiency module uses the sequential T-test to classify wells as attained. With the exception of the TCE Source wells, only wells that have reached attainment for both constituents (TCE and chromium) will be considered attained. Table 10 presents the complete analysis of the attainment wells. A summary is presented below.

Attainment Well Name	Wells Statistically "Attained" Cleanup Goals
TCE Source Wells	
AMW-12A	No
MW-1A	No
Proximal Wells	
MW-6B	No
MW-10C	No
PW-1B	No
Intermediate Wells	
MW-14E	No
MW-18D	No
MW-19D	No
MW-20D	No
Church of God Wells	
MW-21D	No
MW-26D	No
MW-27D	No
Other Toe Wells	
MW-31	No
MW-41	No
Sentinel Toe Wells	
AMW-45	Yes
MW-47	Yes

Wells in the Sentinel Toe well grouping are monitoring wells located at or beyond the historical leading edge of the chromium plume and are a part of the Toe-of-Plume wells. Chromium concentrations in groundwater samples collected from the Sentinel Toe well grouping have remained consistently below the cleanup level. TCE has never been detected in the Sentinel Toe well grouping. MAROS analysis has determined that the groundwater samples from the attainment wells for the Sentinel Toe wells group have attained the cleanup goals. This area of the plume is eligible for closure upon approval by EPA.

6.6 Annual Well Screening Conclusions and Recommendations

Based on the results of the 2008 Annual Screening of the groundwater monitoring data, the following conclusions were made:

- The redundancy analysis showed no wells were redundant for both TCE and chromium.
- No modifications to system operations are necessary at this time.

- A summary of the recommended changes to sampling frequencies is presented in the following table. See Table 6 for individual well recommendations. Note that for three of the wells in the Intermediate Wells Grouping, no further sampling is required for chromium; therefore, the well will be sampled for VOCs only.

Summary of Recommended Changes to the Sampling Frequency

Well Grouping	Total Wells	No. of Wells Recommended to have Sampling Discontinued	No. of Wells with Reduced Sampling Frequency	No. of Wells with Increased Sampling Frequency	No. of Wells with No Change in Frequency
Upgradient Wells	5	-	-	-	5
TCE Source Wells	27	-	11	-	16
Proximal Wells	25	1	-	-	24
Intermediate Wells	16	1	1 (VOCs Only)	2 (VOCs Only)	12
Church of God Wells	12	-	-	-	12
Other Toe Wells	8	1	-	-	7
Sentinel Toe Wells	5	4	-	-	1
Total No. of Wells	**98**	**7**	**12**	**2**	**77**

- The Sentinel Toe of Plume area has groundwater concentrations that have attained the cleanup goals and the area is eligible for closure. Sampling of wells in this area (AMW-44, AMW-45, MW-30 and MW-47) will be discontinued with the exception of AMW-43, which will be used temporarily as part of the TOPPS monitoring program. With the closure of the Sentinel Toe of Plume area, the Other Toe of Plume area will become the most downgradient plume area being monitored.

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7. CONCLUSIONS, RECOMMENDATIONS, AND PLANNED ACTIVITIES

The following sections summarize the conclusions regarding the 2008 reporting period, as well as recommendations and planned activities for 2009.

7.1 Conclusions

In order to meet the operating objectives for OU-2 and OU-3, planned activities for 2008 were recommended in the 2007 Annual Status report. The status of these planned activities is summarized below:

- **Continue operating the remediation systems to meet operational objectives** — The remediation systems continue to meet operational objectives. The extraction system continues to provide containment for both plumes, preventing further migration of constituents of concern within the alluvial aquifer. The groundwater monitoring results continue to show overall downward trends for both TCE and chromium concentrations across the Site. The size of the plumes and contaminant concentrations has been greatly reduced since 1995.

- **Move extraction system pipeline** — The pumping system and pipeline configuration on Parcel No. 144527 (formerly referred to as the Castry property) will be impacted by property development, and modifications will be required once development plans are finalized. The development is still in the planning stages. Potential modifications to the system and pipeline configuration will not be determined until county approved plans for the parcel are provided by the Developer.

- **Continue rebound testing of SVE system and shut the system down if the results of vapor samples collected in January 2008 are below 65 $\mu g/m^3$** — The January TCE vapor samples were below the baseline of 65 $\mu g/m^3$ and the SVE system was shut down on 3 March 2008. Further discussion can be found in Section 2.3.

- **Continue optimization of the IWS system** — System optimization continued to concentrate treatment to the center of the source area.

- **Continue monitoring the results of the TOPPS program for Toe-of-Plume closeout** — TOPPS has been effective at decreasing contaminant concentrations to below cleanup levels. Since the goals of the TOPPS have been met, a reduced number of groundwater samples were collected during 2008 sampling events.

- **Provide an alternative water supply for the private Residence on Parcel No. 149147-000** — The Bennett property was connected to the public water supply in April 2008.

- **Complete a capture zone assessment to address the new (Church of God) Toe-of-Plume area** — A capture zone assessment was completed in 2008 and results were recorded in the Addendum to Groundwater Modeling Technical Memorandum No. 2 submitted to EPA in February 2008 (EA 2008a).

- **Investigate the source and extent of TCE contamination detected in monitoring well AMW-18** — A workplan for investigation of the AMW-18 plume was submitted to EPA in April 2008. In May 2008, the EPA-approved work plan was implemented and a groundwater study was performed in the vicinity of well AMW-18 to investigate the recent increase in TCE concentrations in groundwater samples from that well. The investigation was summarized in the *AMW-18 Area Investigation Report*, dated August 2008 (EA 2008g). Although the source of the TCE groundwater contamination in the well AMW-18 area was not identified, based on the existing data, the TCE is not associated with the Site TCE plume and does not appear to be the result of actions by Linde or its predecessors.

- **Continue to work on obtaining easements and access agreements** — Negotiations continued with numerous property owners to obtain easements and access agreements.

- **Revise the Draft Closure Plan to include use of MAROS for the annual screening and attainment evaluation** — The Draft Closure Plan was revised and submitted to EPA in February 2009 (EA 2009).

The following additional activity occurred during the 2008 reporting period:

- Monitoring well MW-20D was damaged during lawn mowing in August. The vault was replaced and bollards were installed to prevent future damage to the new vault. At the same time, bollards were installed around well MW-21D to protect it from similar damage.

7.2 Recommendations and Planned Activities for 2009

EA recommends and plans to complete the following activities during the 2009 reporting period:

- Continue ongoing operations to meet operational objectives.

- Continue operation and optimization of the IWS system in accordance with EPA approved procedures.

- Continue to cooperate with EPA on investigation of the TCE plume present in the well AMW-18 area.

- Continue to work on obtaining easements and access agreements.

- Based on a review of sampling results over the past two years, wells AMW-44, AMW-45, and MW-30 should be removed from the TOPPS sampling schedule. Groundwater samples will be collected from wells AMW-43, MW-46, AMW-63 and MW-41 and analyzed for total chromium and VOCs. Samples from wells AMW-63 and MW-41 will also be analyzed for dissolved iron (EPA Method 6010B), total organic carbon (EPA Method 415.1), and ferrous iron (field test using a Hach Test Kit). The TOPPS monitoring program will be re-evaluated following receipt of analytical results from the Fall 2009 sampling event.

- Sample monitoring wells in accordance with the updated sampling schedule included on Tables 5 and 6.

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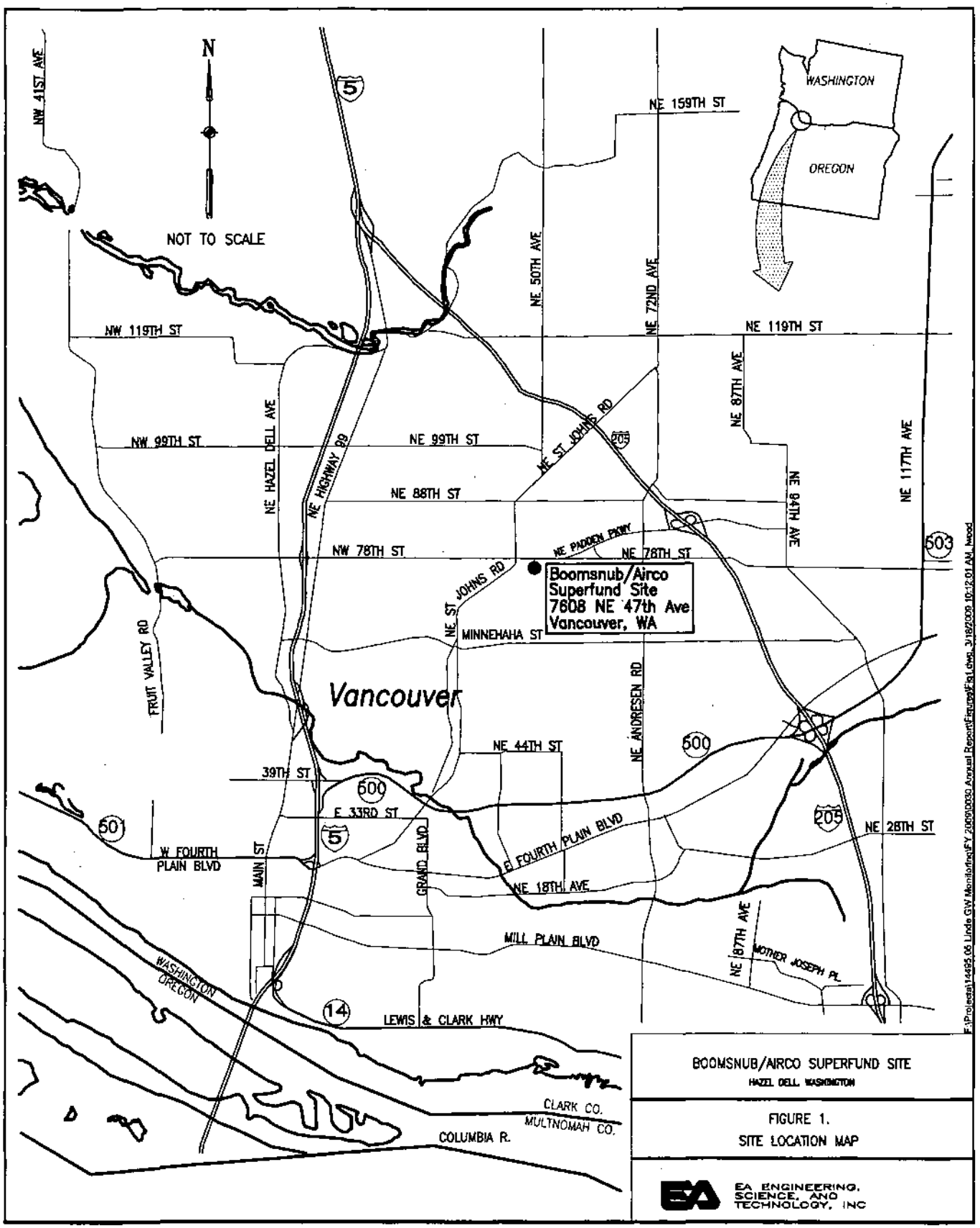
Figures

FIGURES



BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON

FIGURE 1.
SITE LOCATION MAP

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BOOMSNUB/AIRCO SUPERFUND SITE

HAZEL DELL, WASHINGTON

FIGURE 2.

SITE OVERVIEW MAP

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC

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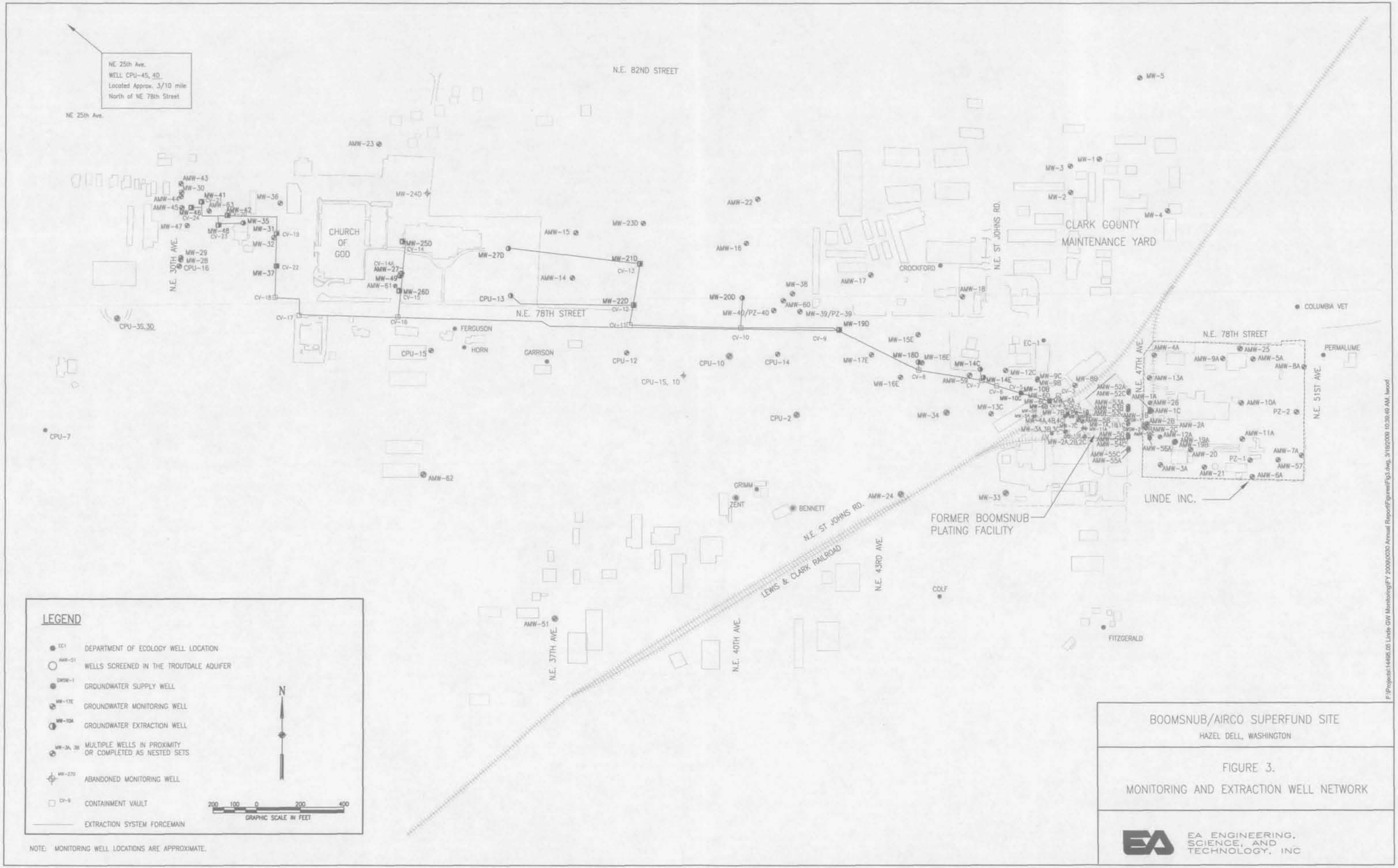
NE 25th Ave.
WELL CPU-4S, 4D
Located Approx. 3/10 mile
North of NE 78th Street
NE 25th Ave.
N.E. 82ND STREET
N.E. 78TH STREET
N.E. 30TH AVE.
CHURCH OF GOD
CLARK COUNTY MAINTENANCE YARD
N.E. ST JOHNS RD.
CROCKFORD
FERGUSON
HORN
GARRISON
GRIMM
ZENT
BENNETT
LEWIS & CLARK RAILROAD
N.E. 37TH AVE.
N.E. 40TH AVE.
N.E. 43RD AVE.
N.E. 47TH AVE.
N.E. 51ST AVE.
COLF
FITZGERALD
COLUMBIA VET
PERMALUME
FORMER BOOMSNUB PLATING FACILITY
LINDE INC.
LEGEND
DEPARTMENT OF ECOLOGY WELL LOCATION
WELLS SCREENED IN THE TROUTDALE AQUIFER
GROUNDWATER SUPPLY WELL
GROUNDWATER MONITORING WELL
GROUNDWATER EXTRACTION WELL
MULTIPLE WELLS IN PROXIMITY OR COMPLETED AS NESTED SETS
ABANDONED MONITORING WELL
CONTAINMENT VAULT
EXTRACTION SYSTEM FORCEMAIN
N
200 100 0 200 400
GRAPHIC SCALE IN FEET
NOTE: MONITORING WELL LOCATIONS ARE APPROXIMATE.
BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON
FIGURE 3.
MONITORING AND EXTRACTION WELL NETWORK
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC
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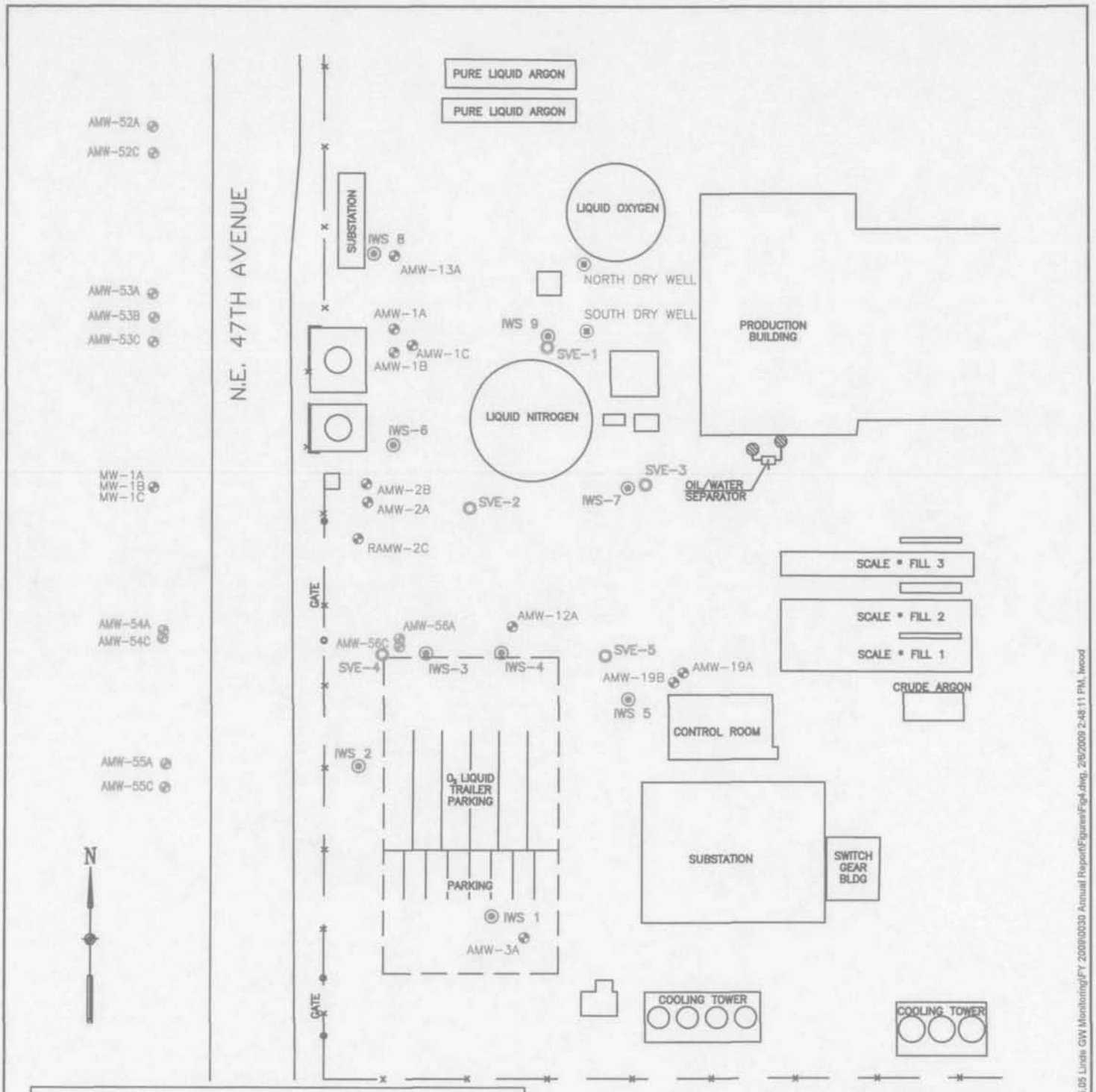


LEGEND

- DRY WELL
- AMW-3A SOURCE AREA MONITORING WELL
- AMW-55C DOWNGRADIENT MONITORING WELL
- IWS IN WELL STRIPPING WELL
- SVE-6 SOIL VAPOR EXTRACTION WELL
  - A – SCREENED AT WATER TABLE ~ 25' TO 35' BGS
  - B – SCREENED AT MIDAQUIFER ~ 45' TO 55' BGS
  - C – SCREENED AT BASE OF AQUIFER ~ 60' TO 70' BGS

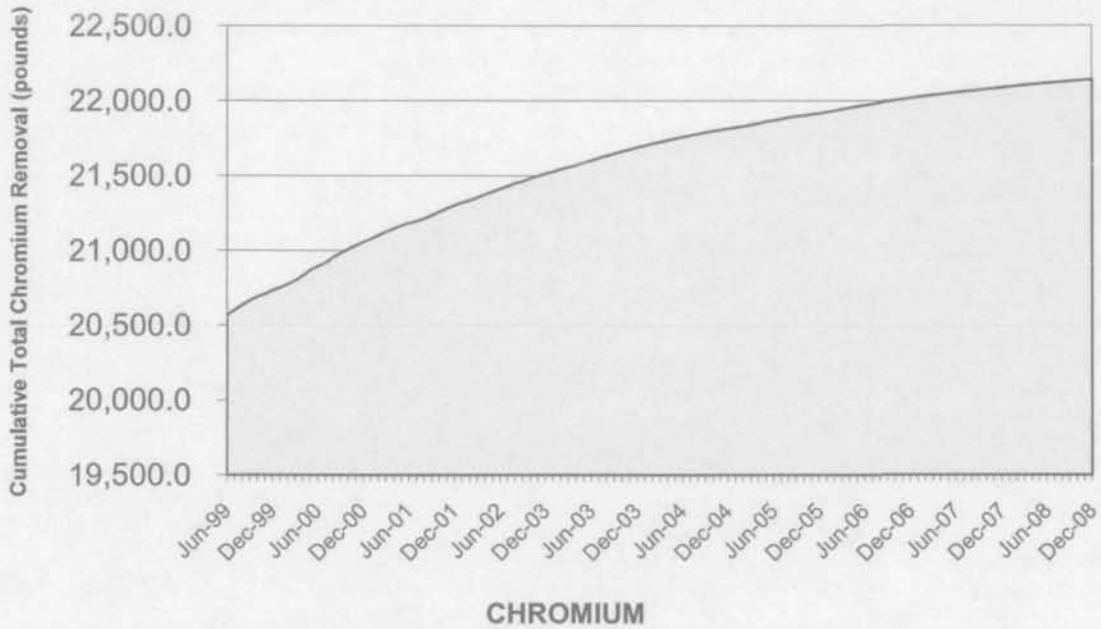
NOTE: WELL LOCATIONS ARE APPROXIMATE

BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON

FIGURE 4
OU-2 TREATMENT AND MONITORING WELLS

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC

FIGURE 5. CUMULATIVE REMOVAL OVER TIME



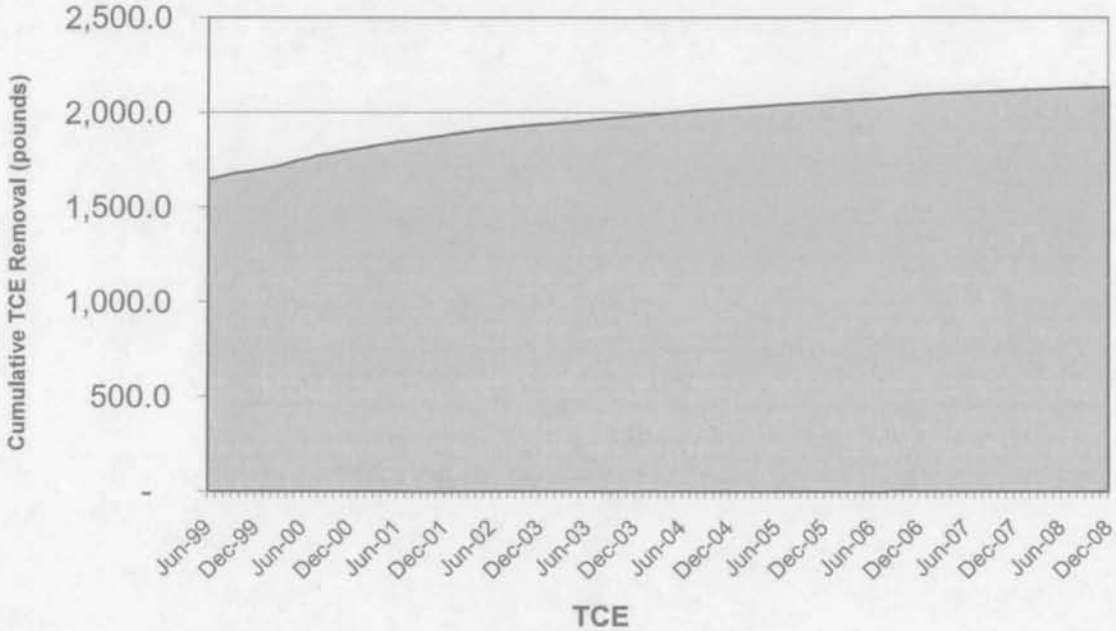
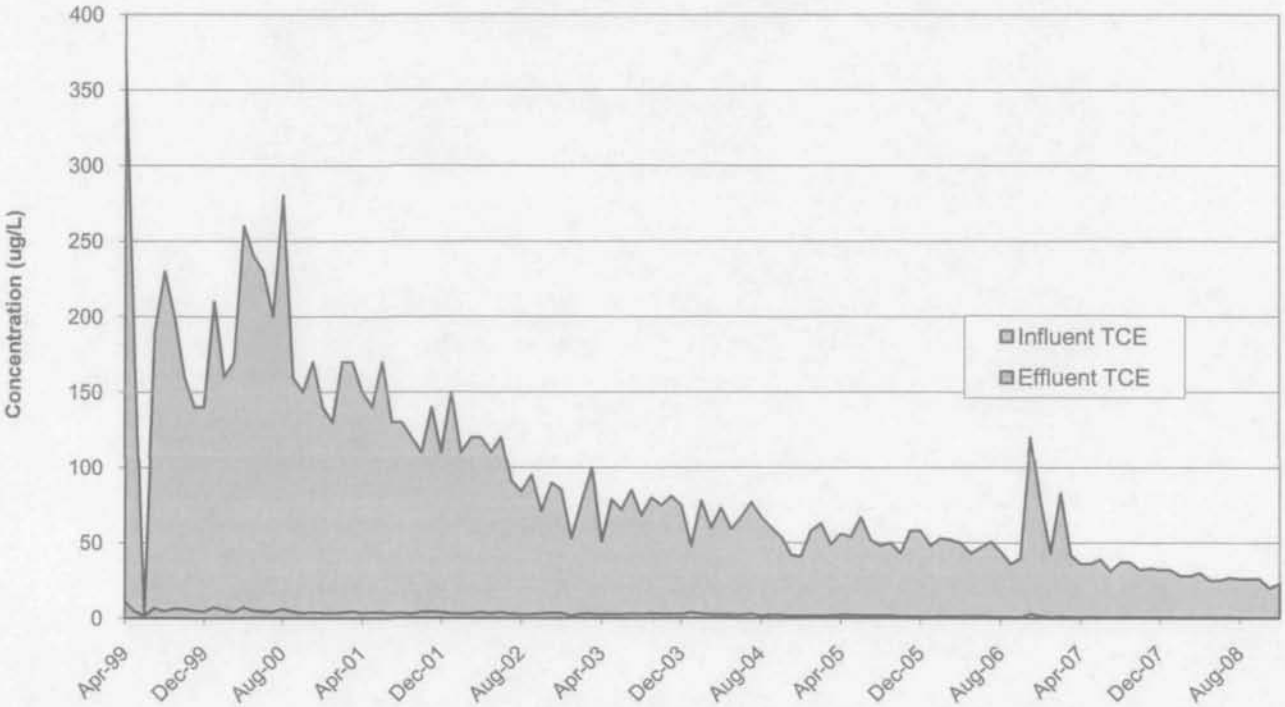


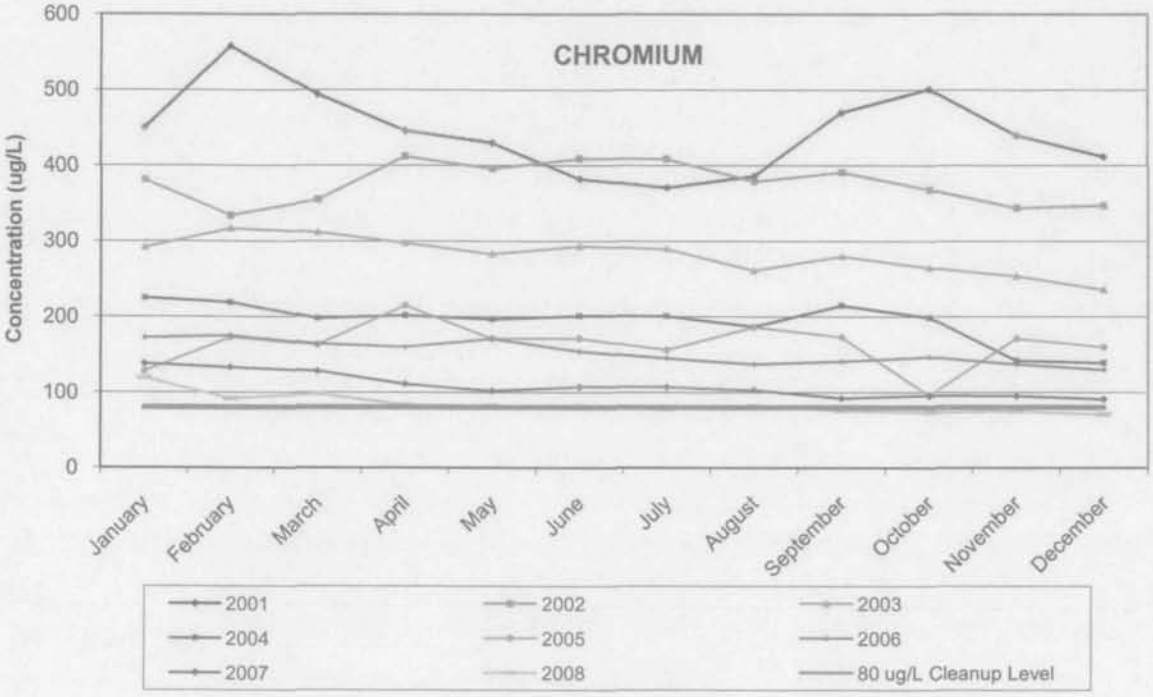
FIGURE 6. INFLUENT AND EFFLUENT CONCENTRATIONS VERSUS TIME

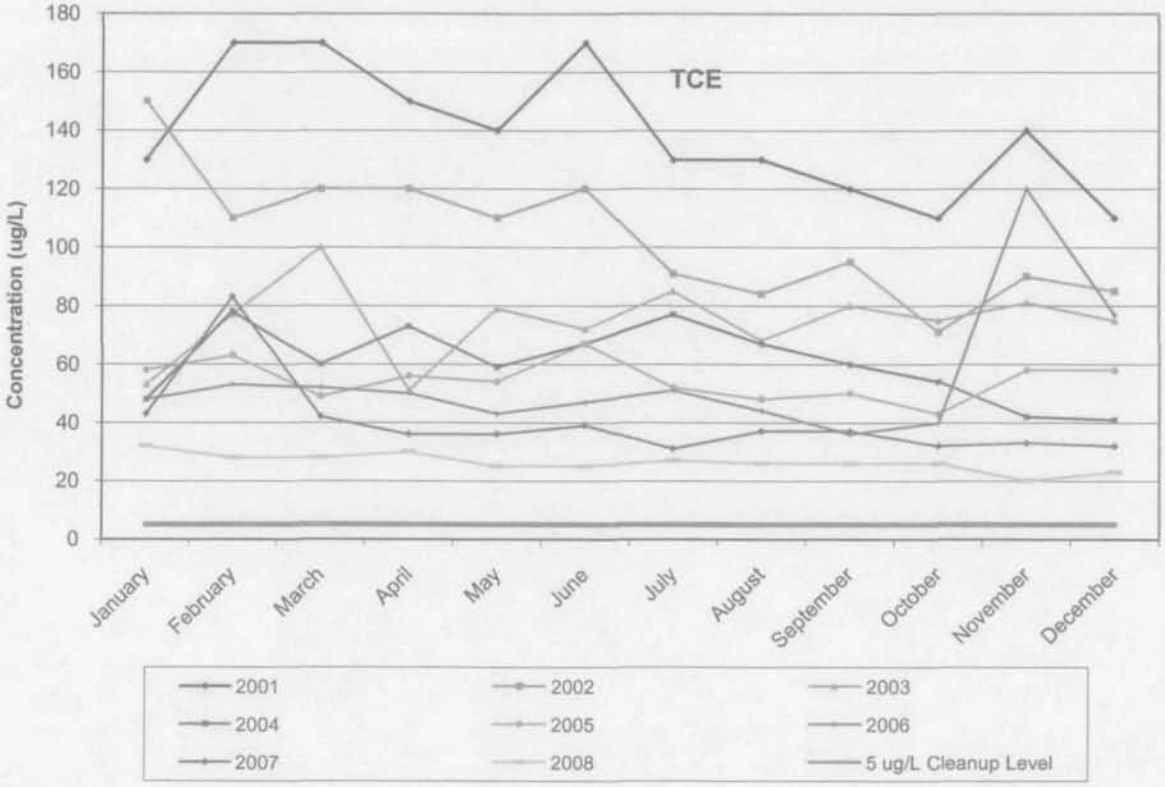
CHROMIUM

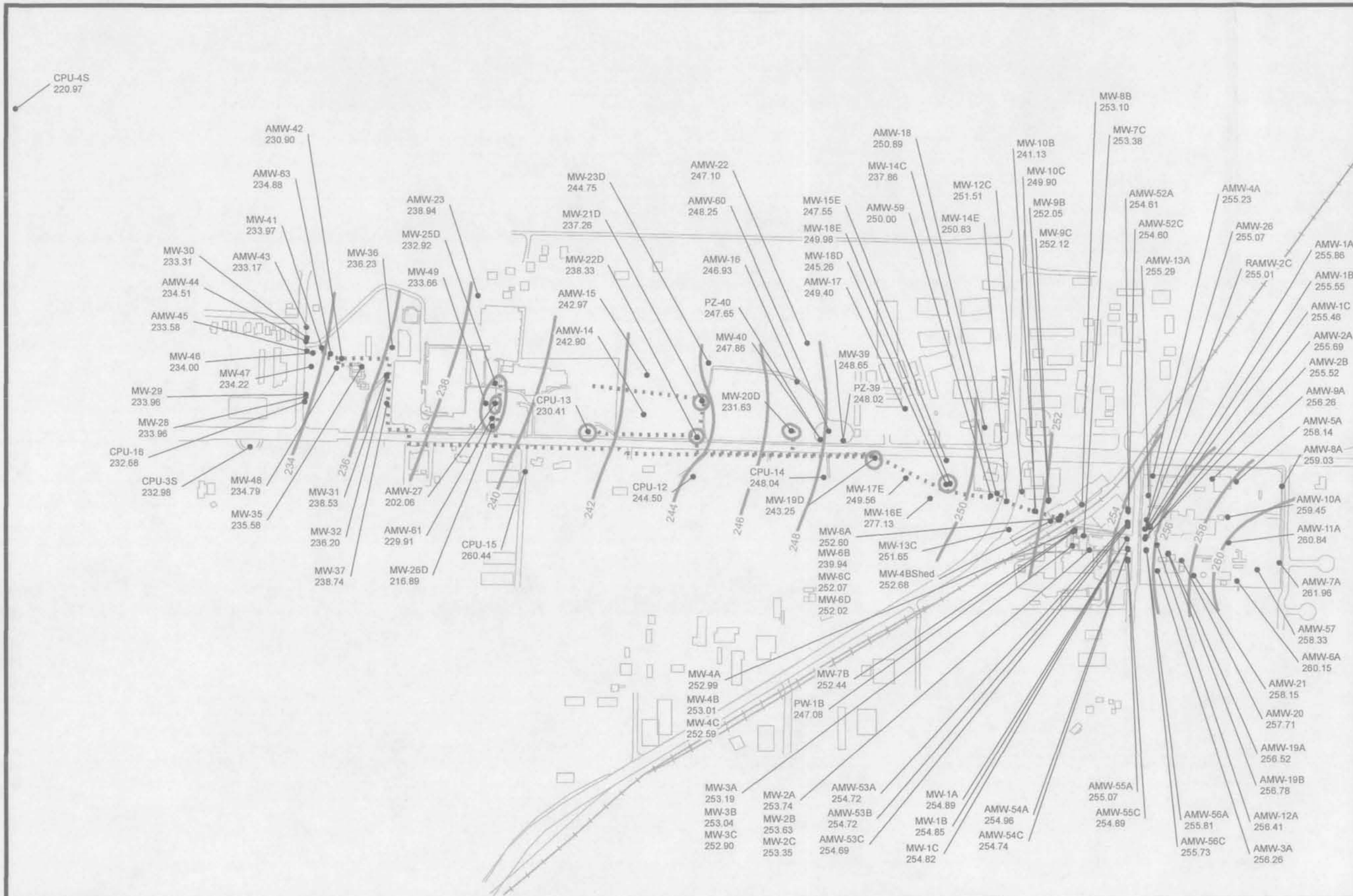


TCE

FIGURE 7. INFLUENT CONCENTRATIONS OVER TIME







Legend

Monitoring Well Location with Water Elevation (ft. MSL)
AMW-1A
255.86

Extraction Well Pipeline

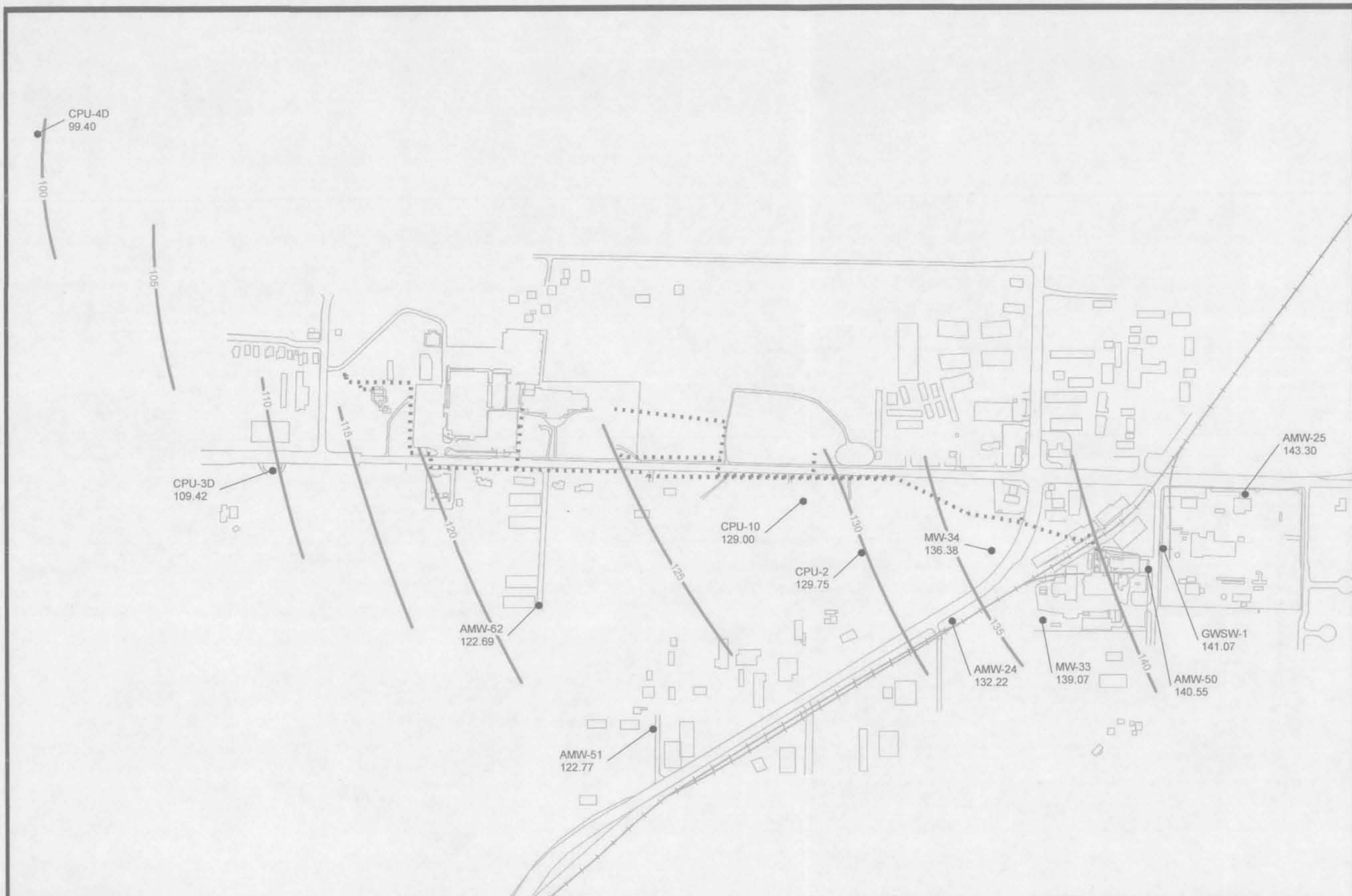
Groundwater Elevation Contours

Notes:
1) Groundwater extraction system was in operation at the time of water level gauging.
2) Contours represent evaluation of probable conditions based on presently available data. Some variation from these conditions must be expected.
3) Well locations are approximate.

0 500 1,000
Feet

EA Engineering, Science, and Technology, Inc.

PROJECT MGR: CMB	DESIGNED BY: BSM	DATE: FEBRUARY 2009	FILE No.: Q:\PROJECTS\GIS\BOC\BOCGIS\ARCGIS\FALL_2008\MXD\ALLUVIAL_GW_FALL08_F8.mxd	BOOMSNUB/AIRCO SUPERFUND SITE HAZEL DELL, WASHINGTON	FIGURE 8 ALLUVIAL AQUIFER GROUNDWATER CONTOURS FALL 2008
CHECKED BY: GAH	DRAWN BY: JPK	PROJECT No.: 14495.05	SCALE: AS SHOWN		



Legend

Monitoring Well Location with Water Elevation (ft. MSL)
AMW-50
140.55

Extraction Well Pipeline

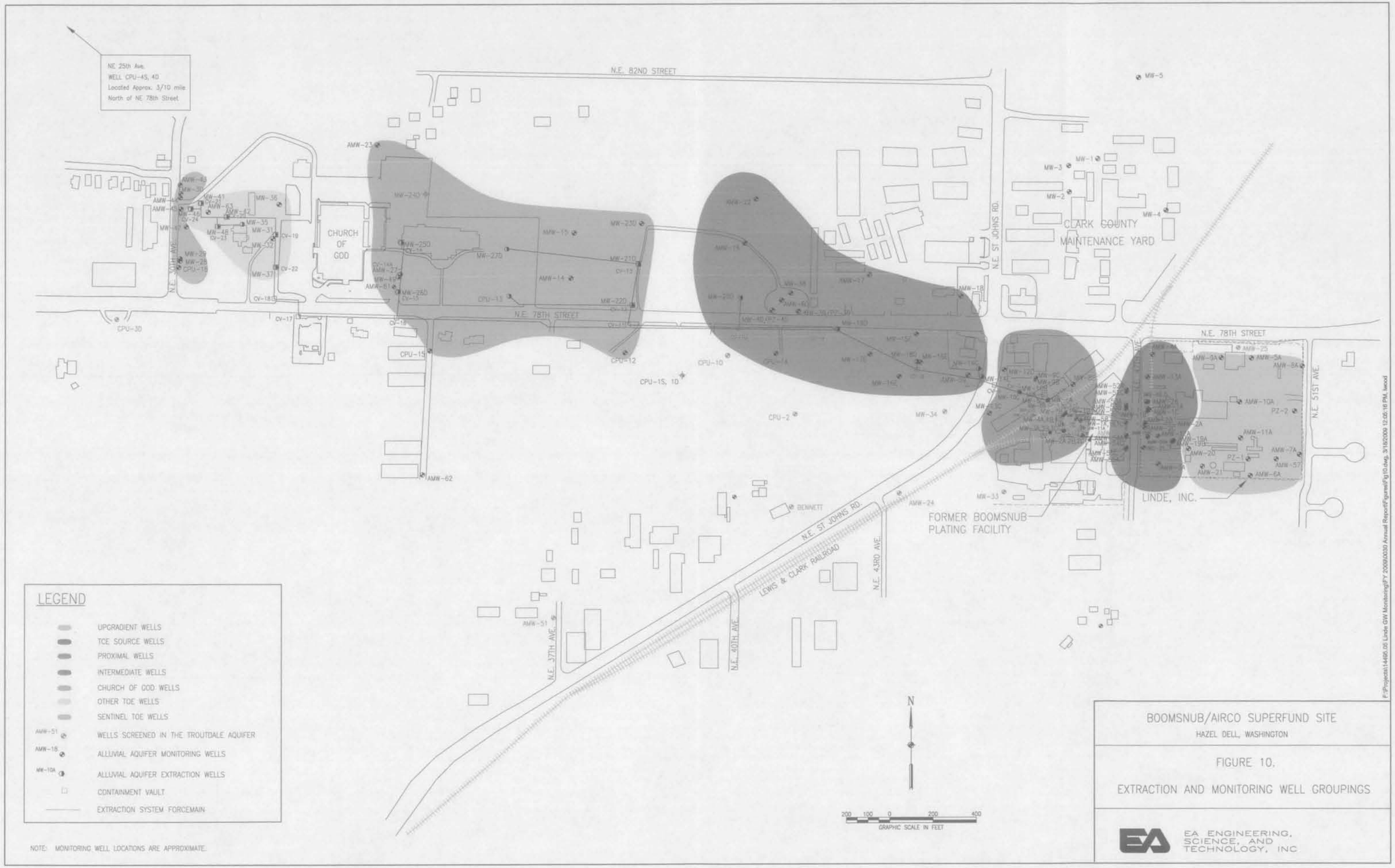
Groundwater Elevation Contours

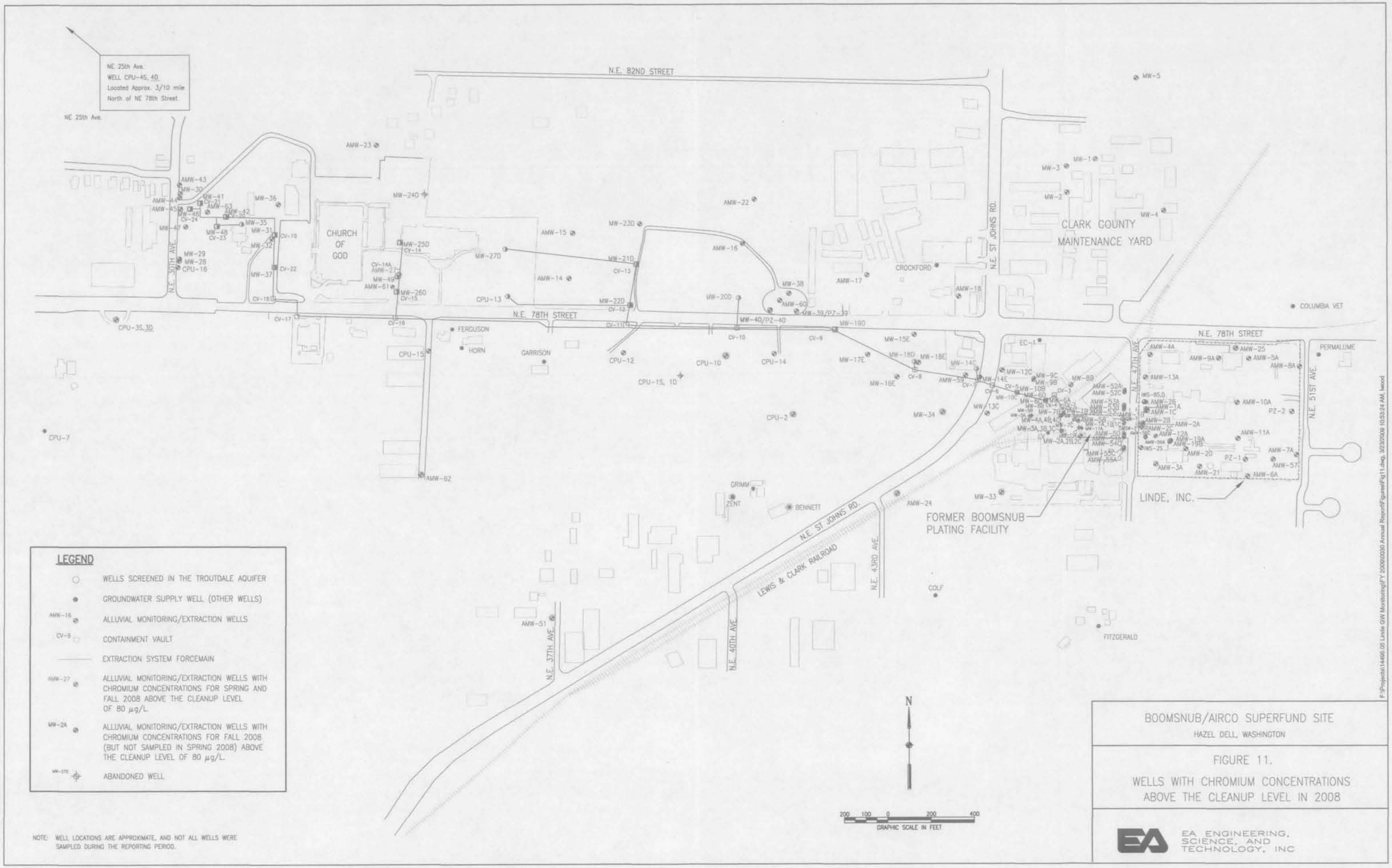
Notes:
1) Groundwater extraction system was in operation at the time of water level gauging.
2) Contours represent evaluation of probable conditions based on presently available data. Some variation from these conditions must be expected.
3) Well locations are approximate.

0 500 1,000
Feet

EA Engineering, Science, and Technology, Inc.

PROJECT MGR: CMB	DESIGNED BY: BSM	DATE: FEBRUARY 2009	FILE No.: Q:\PROJECTS\GIS\BOC\BOCGIS\ARCGIS\FALL_2008\MXD\TROUTDALE_GW_FALL08_F9.mxd	BOOMSNUB/AIRCO SUPERFUND SITE HAZEL DELL, WASHINGTON	FIGURE 9 TROUTDALE AQUIFER GROUNDWATER CONTOURS, FALL 2008
CHECKED BY: GAH	DRAWN BY: JPK	PROJECT No.: 14495.05	SCALE: AS SHOWN		


NE 25th Ave.
WELL CPU-4S, 4D
Located Approx. 3/10 mile
North of NE 78th Street
N.E. 82ND STREET
N.E. 78TH STREET
N.E. 50TH AVE.
CHURCH OF GOD
N.E. ST JOHNS RD.
CLARK COUNTY MAINTENANCE YARD
N.E. 51ST AVE.
LINDE, INC.
FORMER BOOMSNUB PLATING FACILITY
BENNETT
LEWIS & CLARK RAILROAD
N.E. 43RD AVE.
N.E. 40TH AVE.
N.E. 37TH AVE.
CPU-30
CPU-15
CPU-12
CPU-10
CPU-1S, 1D
CPU-2
CPU-13
AMW-62
AMW-51
AMW-24
MW-33
MW-34
MW-5
MW-1
MW-2
MW-3
MW-4
LEGEND
UPGRADIENT WELLS
TCE SOURCE WELLS
PROXIMAL WELLS
INTERMEDIATE WELLS
CHURCH OF GOD WELLS
OTHER TOE WELLS
SENTINEL TOE WELLS
AMW-51 WELLS SCREENED IN THE TROUTDALE AQUIFER
AMW-18 ALLUVIAL AQUIFER MONITORING WELLS
MW-10A ALLUVIAL AQUIFER EXTRACTION WELLS
CONTAINMENT VAULT
EXTRACTION SYSTEM FORCEMAIN
NOTE: MONITORING WELL LOCATIONS ARE APPROXIMATE.
N
200 100 0 200 400
GRAPHIC SCALE IN FEET
BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON
FIGURE 10.
EXTRACTION AND MONITORING WELL GROUPINGS
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC
F:\Projects\14486.06 Linde GW Monitoring\FY 2009\2030 Annual Report\Figures\Fig10.dwg, 3/18/2009 12:05:16 PM, lwood



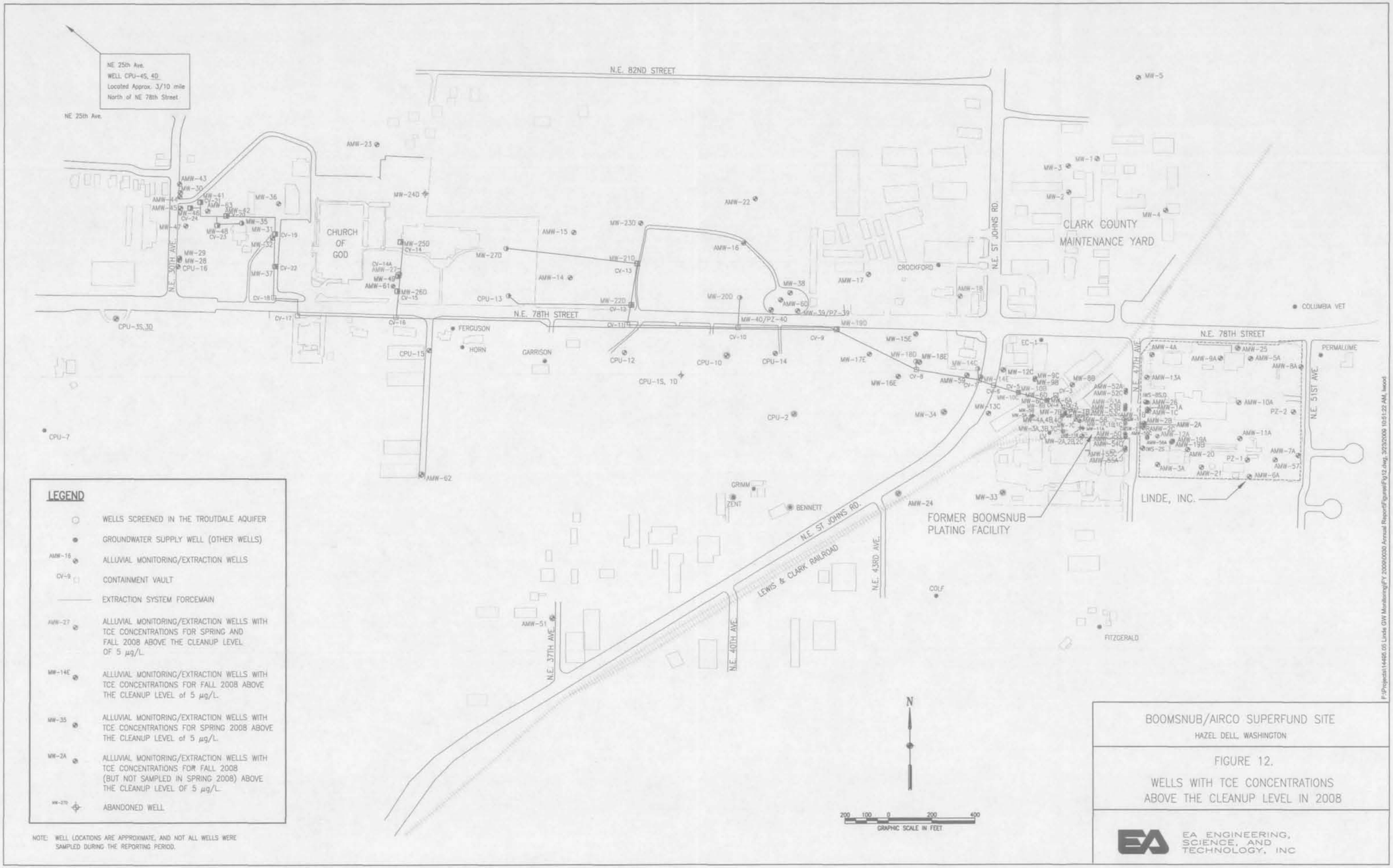
BOOMSNUB/AIRCO SUPERFUND SITE

HAZEL DELL, WASHINGTON

FIGURE 11.

WELLS WITH CHROMIUM CONCENTRATIONS ABOVE THE CLEANUP LEVEL IN 2008

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC



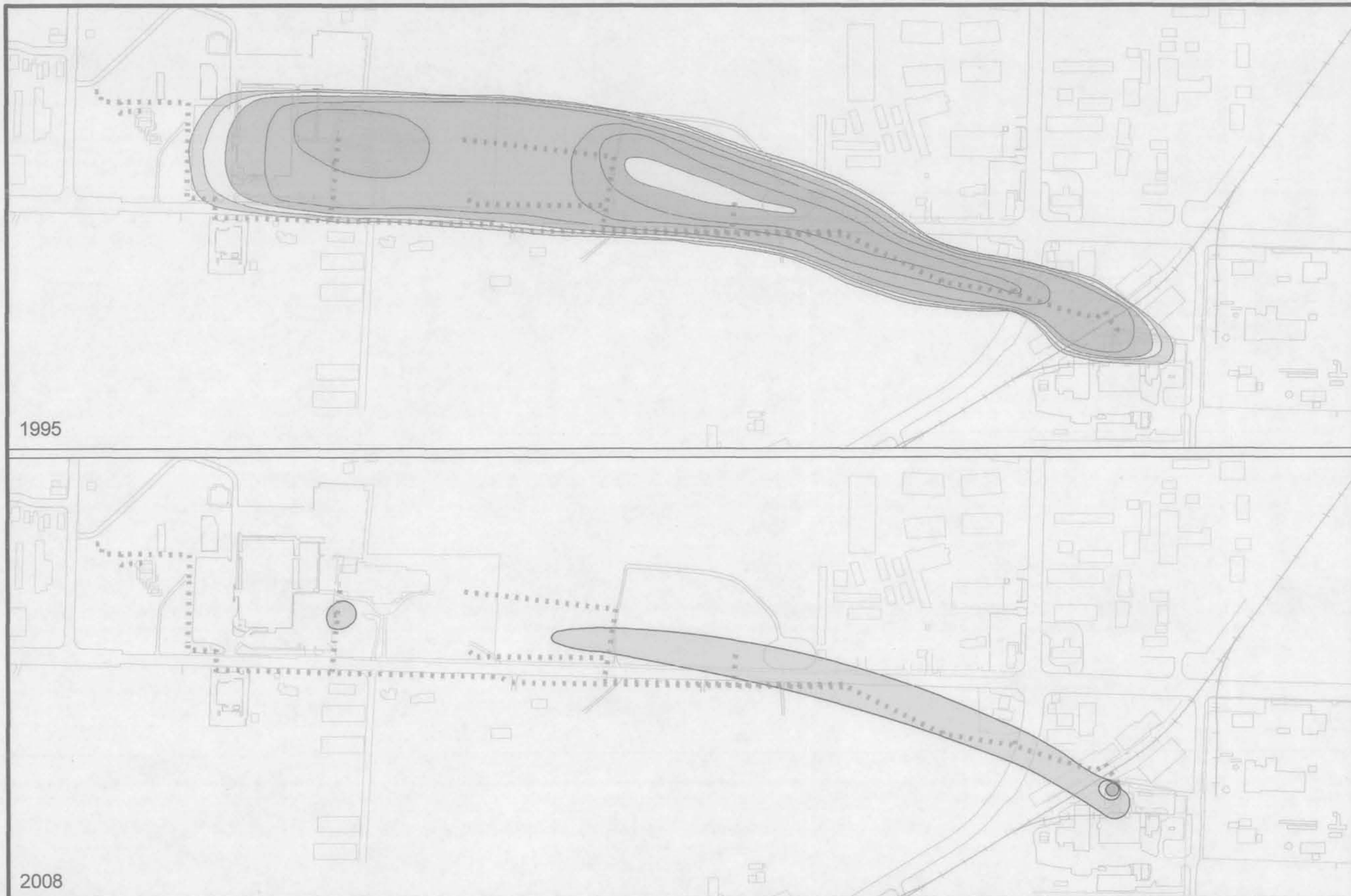
BOOMSNUB/AIRCO SUPERFUND SITE

HAZEL DELL, WASHINGTON

FIGURE 12.

WELLS WITH TCE CONCENTRATIONS ABOVE THE CLEANUP LEVEL IN 2008

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC



Legend

Extraction Well Pipeline

Chromium Concentration Contours

- 80 - 250 µg/L
- 250 - 500 µg/L
- 500 - 1,500 µg/L
- 1,500 - 5,000 µg/L
- 5,000 - 10,000 µg/L
- 10,000 - 20,000 µg/L
- >20,000 µg/L

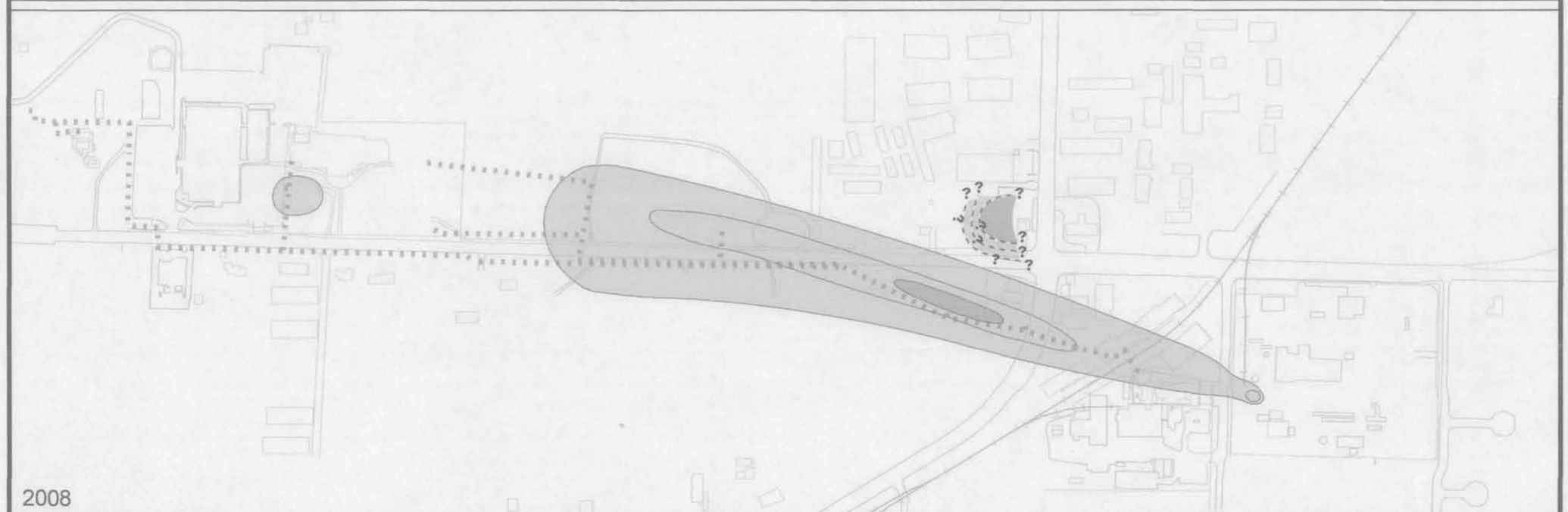
Note:
Contours represent evaluation of probable conditions based on presently available data. Some variations from these conditions must be expected.

0 400 800
Feet

EA Engineering, Science, and Technology, Inc.	PROJECT MGR: CMB	DESIGNED BY: BSM	DATE: FEBRUARY 2009	FILE No.: Q:\PROJECTS\GIS\BOC\BOCGIS\ARCGIS\FALL_2008\MXD\CHROMIUM_1995vs2008
	CHECKED BY: GAH	DRAWN BY: JPK	PROJECT No.: 14495.05	SCALE: AS SHOWN, SAME IN BOTH FRAMES

BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON

FIGURE 13
CHROMIUM PLUME MAP
1995 vs. 2008



Legend

Extraction Well Pipeline

TCE Concentration Contours

- 5 - 25 µg/L
- 25 - 100 µg/L
- 100 - 500 µg/L
- 500 - 1,000 µg/L
- 1,000 - 2,000 µg/L
- > 2,000 µg/L

Note:
Contours represent evaluation of probable conditions based on presently available data. Some variations from these conditions must be expected.

0 400 800
Feet

EA Engineering, Science, and Technology, Inc.	PROJECT MGR: CMB	DESIGNED BY: BSM	DATE: FEBRUARY 2009	FILE No.: Q:\PROJECTS\GIS\BOC\BOCGIS\ARCGIS\FALL_2008\MXD\TCE_1995vs2008
	CHECKED BY: GAH	DRAWN BY: JPK	PROJECT No.: 14495.05	SCALE: AS SHOWN, SAME IN BOTH FRAMES

BOOMSNUB/AIRCO SUPERFUND SITE
HAZEL DELL, WASHINGTON

FIGURE 14
TCE PLUME MAP
1995 vs. 2008

Tables

TABLES

TABLE 1. SYSTEM MODIFICATIONS AND REPAIRS IN 2008

Date	Wells	Well Group	Modification/Repair
January	CV-9	OU-3	Replaced a faulty pump float in CV-9.
		OU-2	Vapor monitoring of the influent to the in-well stripping system was discontinued since the TCE concentrations being removed by the system are too low to measure.
February	--	--	Replaced face plates on the variable frequency drives (VFD).
	--	OU-2	Replaced blower motor on PB-2.
March	--	--	Replaced final discharge pump and VFD. Re-plumbed discharge pump pipe fittings to new pump size and installed and connected wiring to the new VFD.
	--	OU-2	Re-aligned pulleys on the PB-2 blower and motor. Also replaced belts.
	--	OU-2	Rebound testing was successful and the SVE system was shut down on 3 March.
June	--	OU-3	The discharge hose cam-lock fitting on ion exchange vessel 3 leaked and the hose was replaced.
September	AMW-27	Church of God	Replaced pump in AMW-27 and replaced the door on the pump control shed.
	MW-20D and MW-21D	Intermediate	Well MW-20 was damaged during lawn mowing in August. Replaced vault at MW-20D. Installed bollards around MW-20D and MW-21D.
October	MW-20D	Intermediate	Replaced pump, re-plumbed MW-20 and installed pump controller.
December	--	OU-3	Removed old air stripper tower from pad.

Notes:
CV = control vault.
VFD = variable frequency drive.

TABLE 2. 2008 EXTRACTION WELL PUMPING RATES

	Flow Rates (gpm)											
Well ID	**January**	**February**	**March**	**April**	**May**	**June**	**July**	**August**	**September**	**October**	**November**	**December**
PW-1B	9.5	9.5	9.5	9.5	9.5	9.5	9.4	9.4	9.2	9.4	9.4	9.5
AMW-27	1	1	1	1	1	1	1	1	1	1	1	1
AMW-42	0	0	0	0	0	0	0	0	0	0	0	0
AMW-59	0	0	0	0	0	0	0	0	0	0	0	0
MW-6B	7.6	0	7.6	7.6	7.6	7.6	7.6	7.6	7.4	7.5	7.5	7.5
MW-10B	9.4	0	9.4	9.4	9.4	9.2	9.2	8.5	8	8	8	8
MW-10C	10	10.2	10	10	10	10	10	10	9	9	9	9
MW-14C	12	12.2	12	12	12	12	12.2	12.2	12.1	12.2	12	12
MW-14E	9	9	9	9	8.8	8.8	8.8	8	8.2	8.2	8	8
MW-18D	7.4	7.5	7.5	7.6	7.5	7.3	7.8	7.8	7.4	7.4	7.2	7.2
MW-18E	0	0	0	0	0	0	0	0	0	0	0	0
MW-19D	9	9	9	9	9	9	8.2	8.3	9.5	9.5	8	8
MW-20D	10.5	10.8	10.5	10.5	10.5	10.5	11.1	11.07	10.5	14.9	14.9	15
MW-21D	7.03	7.03	7.03	7.03	7	6.9	6.9	7	6.8	6.8	6.8	6.8
MW-22D	12	12.7	12	12.2	12.2	12.2	13.5	13.5	12.3	12	11.5	11.5
MW-25D	11	11.2	11	11	11	11	0	0	11.6	11.5	11.2	11.2
MW-26D	13	13.5	13	13	13	13	15	15	13	13	12.4	12.5
MW-27D	3.8	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.8	3.4	3.4
MW-31	0	0	0	0	0	0	0	0	0	0	0	0
MW-35	0	0	0	0	0	0	0	0	0	0	0	0
MW-37	0	0	0	0	0	0	0	0	0	0	0	0
MW-41	0	0	0	0	0	0	0	0	0	0	0	0
MW-46	0	0	0	0	0	0	0	0	0	0	0	0
MW-48	0	0	0	0	0	0	0	0	0	0	0	0
MW-49	10.5	11.2	10.7	10.7	10.6	10.1	12.5	12.4	10.5	10.5	10	10
CPU-13	13.2	13.3	13.2	13.2	13.2	13.2	13.1	13.5	13.6	13.3	13.1	13.2
Total	**155.9**	**141.9**	**156.1**	**156.4**	**156**	**155**	**150**	**149**	**153.7**	**158**	**153.4**	**153.8**

Note: gpm = gallons per minute

TABLE 3. CONCENTRATIONS OF TCE, CHROMIUM AND DISSOLVED OXYGEN IN TOPPS GROUNDWATER SAMPLES

Sampling Date	AMW-43	AMW-44	AMW-45	AMW-63*	MW-30	MW-41	MW-46
TCE (µg/L)							
April 2006[1]	0.5 U	0.5 U	0.5 U	--*	0.5 U	6.2	0.5 U
October 2006[2]	0.5 U	0.5 U	0.5 U	--*	0.5 U	0.5 U	0.5 U
January 2007	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
May 2007	0.5 U	0.5 U	0.5 U	0.17 J	0.5 U	0.5 U	0.5 U
July 2007	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
October 2007	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
May 2008	0.5 U	0.5 U	0.5 U	0.08 J	0.5 U	0.5 U	0.5 U
October 2008	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chromium (µg/L)							
April 2006[1]	5.5 UJ	5.8 UJ	8.8 UJ	--*	5.0 U	165	11.8 UJ
October 2006[2]	5.0 U	5.0 U	7.3	--*	5.0 U	10.8 UJ	6.7 UJ
January 2007	2.8 B	3.1 B	3.9 B	9.5	5.0 U	5.0 U	8.5
May 2007	5.0 U	5.0 U	5.0 U	9.5	5.0	5.0 U	5.0 U
July 2007	5.0 U	5.0 U	5.0 U	10.6	5.0 U	5.0 U	3.8 B
October 2007	3.3 B	5.0 U	7.0	6.3	3.1 B	5.0 U	5.0 U
May 2008	6.8	5.0 U	8.0	19.5**	3.0 B	4.4 B	3.5 B
October 2008	19.7 B	4.9 B	9.8	8.2	5.0 U	0.9 U	5.2
Dissolved Oxygen (mg/L)							
April 2006[1]	5.67	3.46	1.92	--*	6.44	3.38	4.08
October 2006[2]	5.71	4.80	1.89	--*	5.06	3.62	3.86
January 2007	5.67	2.53	4.27	0.81	5.71	0.09	3.46
May 2007	5.71	1.56	6.00	4.07	2.74	0.10	0.09
July 2007	5.09	0.79	4.99	1.60	2.80	0.24	0.58
October 2007	4.58	0.11	6.03	0.85	2.96	0.08	0.21
May 2008	5.6	0.17	5.81	2.9	3.52	0.1	0.15
October 2008	4.45	3.53	6.21	1.42	0.06	0	0.95

NOTES:

*	New well installed in November 2006.
**	The total chromium result of 19.5 µg/L for AMW-63 may be a false positive based on contamination of the associated rinsate blank.
1	Pre-injection data (April 26, 2006).
2	Post-injection data (October 4, 2006).
U	Not detected above the MRL or MDL.
UJ	The analylte was not detected, but the associated limit of quantitation is estimated due to discrepancies in quality control criteria.
B or J	Estimated concentration that is less than the method reporting limit but greater than or equal to the method detection limit.

TABLE 4. CONCENTRATIONS OF TCE AND CHROMIUM IN INFILTRATION GALLERY GROUNDWATER SAMPLES

TCE (µg/L)				
Sampling Date	**AMW-6A**	**AMW-7A**	**AMW-10A**	**AMW-11A**
October 2005 (Baseline)	0.5 U	0.5 U	NS	0.5 U
February 2006	0.5 U	0.5 U	0.5 U	0.5 U
May 2006	0.57	0.5 U	0.5 U	0.98
July 2006	0.91	0.61	0.5 U	0.95
October 2006	0.69	0.65	0.5 U	0.81
January 2007	0.89	1.0	0.5 U	1.5
May 2007	0.93	0.72	0.67	0.94
October 2007	0.66	0.57	0.55	0.66
May 2008	0.65	0.52	0.39 J	0.66
October 2008	0.51	0.46 J	0.42 J	0.46 J
Chromium (µg/L)				
October 2005 (Baseline)	4.8*	4.7*	NS	5
February 2006	17.7	5	5.4	3.4
May 2006	16.5	4 B	6.6	4.5 B
July 2006	6.4	2 B	2.8 B	6.2
October 2006	8.6	4.4 B	0.5 U	9.4
January 2007	10.4	5 U	3.4 B	5 U
May 2007	7.3	5.2	5 U	6.1
October 2007	17.7	3 B	4.2 B	3 U
May 2008	5 U	5 U	12.5	4.1 B
October 2008	5.2	4 B	5.9	5.9

NOTES:
U = Not detected at or above the method reporting limit.
B = The result is an estimated concentration that is less than the Method Reporting Limit (MRL) but greater than or equal to the Method Detection Limit (MDL).
NS = Not Sampled.
* = Sampled December 2005, October 2005 data rejected and well was re-sampled.
µg/L = Micrograms per liter.

TABLE 5. WELLS AND RECOMMENDED SAMPLING FREQUENCIES

Well Name	Well Type	GW Model Layer	Top of Screen		Bottom of Screen		TCE					Chromium					2008 Sampling Frequency		MAROS Recommended Sampling Frequency		2009 Recommendations	Rationale for Frequency
			Depth	Elevation	Depth	Elevation	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	TCE	Chromium	TCE	Chromium		
Troutdale Wells																						
AMW-24	M/D	6	190	74.72	200	64.72	8.00	18.00	14.00	10/23/2008	NA	U	6.2	2.9	10/23/2008	NA	Annual	Annual	NA	NA	NC	Troutdale well - TCE impacted
AMW-25	M/D	6	215	67.94	225	57.94	U	U	U	10/22/2008	NA	U	4.1	U	10/22/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted; upgradient well
AMW-50	M/D	6	185.19	97.59	195.19	87.59	U	0.16	U	10/22/2008	NA	U	37.7	2.3	10/22/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
AMW-51	M/D	6	185.7	72.74	195.7	62.74	U	0.32	0.11	10/23/2008	NA	U	10.1	6.2	10/23/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
AMW-62	M/D	6	185.73	72.93	195.73	62.93	U	U	U	10/22/2008	NA	U	U	U	10/22/2008	NA	Semiannual	Semiannual	NA	NA	Annual	Troutdale well - well installed 11/06 - unimpacted
CPU-2	M	6	186.13	73.4	196.13	63.4	U	U	U	10/27/2008	NA	U	14	U	10/27/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
CPU-3D	M/D	6	212.38	34.39	217.38	29.39	U	U	U	10/23/2008	NA	U	11	2.1	10/23/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
CPU-10	M	6	186.9	74.34	196.9	64.34	U	U	U	10/27/2008	NA	U	13.2	2.2	10/27/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
MW-33	M/D	6	205	67.55	215	57.55	6.40	19.00	7.70	10/28/2008	NA	U	12	2.1	10/28/2008	NA	Annual	Annual	NA	NA	NC	Troutdale well - TCE impacted
MW-34	M/D	6	195	72.33	205	62.33	U	U	U	10/23/2008	NA	U	25.4	2.7	10/23/2008	NA	Biennial	Biennial	NA	NA	NC	Troutdale well - unimpacted
BENNETT	Other	N/A	N/A	N/A	180	N/A	5.10	9.30	9.00	10/29/2008	NA	U	U	U	10/29/2008	NA	Annual	Annual	NA	NA	NC	Troutdale well - TCE impacted (private, non-potable)
Upgradient Wells																						
AMW-6A	M/D	1	24	260.56	34	250.56	U	0.93	0.51	10/22/2008	No	U	17.7	5.2	10/22/2008	Yes	Semiannual	Semiannual	Annual	NFS	NC	Infiltration gallery well
AMW-7A	M/D	1	24.25	260.77	34.25	250.77	U	1.00	0.46	10/22/2008	Yes	U	5.2	4.0	10/22/2008	Yes	Semiannual	Semiannual	NFS	NFS	NC	Infiltration gallery well
AMW-8A	M	1	24.5	260.99	34.5	250.99	0.91	692.00	0.91	10/22/2008	No	U	U	U	10/13/1995	No	Semiannual		Annual	Annual	NC	Upgradient well (furthest upgradient) check for possible offsite TCE impacts
AMW-10A	M/D	1	21.5	262.51	31.5	252.51	U	0.79	0.42	10/22/2008	Yes	U	12.5	5.9	10/22/2008	Yes	Semiannual	Semiannual	NFS	NFS	NC	Infiltration gallery well
AMW-11A	M/D	1	24	259.21	34	249.21	U	1.50	0.46	10/22/2008	Yes	U	9.4	5.9	10/22/2008	Yes	Semiannual	Semiannual	NFS	NFS	NC	Infiltration gallery well
TCE Source Wells																						
AMW-1A	M	1	24.24	259.85	34.24	249.85	U	1290.00	0.39	10/22/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-1B	M	1	46.49	237.62	56.49	227.62	U	82.20	0.50	10/22/2008	No						Quarterly		Annual		Annual	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-1C	M	2	69	215.06	79	205.06	U	73.90	U	10/22/2008	No						Annual		Annual		NC	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-2A	M	1	24.2	259.83	34.2	249.83	1.1	5350.00	18.00	10/22/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-2B	M	1/2	47	237.11	57	227.11	U	30.80	0.61	10/22/2008	No						Quarterly		Annual		Annual	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-3A	M	1	24.5	259.42	34.5	249.42	0.16	34.00	0.48	10/22/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly
AMW-4A	M	1	23.9	259.84	33.9	249.84	U	0.40	0.16	1/29/2008	Yes						Every 5 years		NFS		NC	Source area - for TCE (upgradient of Cr source area) with TCE below the criterion
AMW-12A	**M**	**1**	**24.05**	**259.69**	**34.05**	**249.69**	**19**	**19300**	**25**	**10/21/2008**	**No**						**Quarterly**		**Annual**		NC	**OU2 monitoring plan - TCE sampled quarterly**
AMW-13A	M	1	23.8	260.08	33.8	250.08	U	74.80	0.21	10/22/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly
AMW-19A	M	1	25	258.94	35	248.94	1.6	490.00	1.90	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-19B	M	1/2	44.5	239.47	54.5	229.47	U	0.77	0.72	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-26	M	1	24.2	258.82	34.2	248.82	U	100.00	0.24	10/22/2008	No						Quarterly		Annual		Semiannual	Source area - for TCE (upgradient of Cr source area) with TCE below the criteria.
AMW-52A	M	1	24.55	255.85	34.55	245.85	U	29.00	0.07	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-52C	M	1/2	63.63	216.75	73.63	206.75	U	U	U	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-53A	M	1	22.2	258.85	32.2	248.85	1.2	240.00	8.90	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-53B	M	1	44.55	236.65	54.55	226.65	0.43	2.70	0.53	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-53C	M	2	64.21	217.2	74.21	207.2	U	U	U	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)

TABLE 5. WELLS AND RECOMMENDED SAMPLING FREQUENCIES

Well Name	Well Type	GW Model Layer	Top of Screen		Bottom of Screen		TCE					Chromium					2008 Sampling Frequency		MAROS Recommended Sampling Frequency		2009 Recommendations	Rationale for Frequency
			Depth	Elevation	Depth	Elevation	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	TCE	Chromium	TCE	Chromium		
AMW-54A	M	1	24.3	259.01	34.3	249.01	0.53	190.00	1.90	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-54C	M	2	64.74	218.38	74.74	208.38	U	0.26	0.26	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-55A	M	1	20.83	261.28	30.83	251.28	0.4	39.00	0.65	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-55C	M	2	58.45	224.26	68.45	214.26	U	0.23	0.23	10/21/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-56A	M	1	25.24	258.43	35.24	248.43	0.38	610.00	0.90	10/21/2008	No						Quarterly		Annual		NC	OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-56C	M	2	57.4	226.27	67.4	216.27	U	0.39	0.39	10/21/2008	Yes						Quarterly		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
MW-1A	M	**1**	**28.36**	**257.13**	**38.26**	**247.23**	**7.4**	**3900**	**7**	**7/28/2008**	**No**	**U**	**162**	**U**	**10/11/2006**	**No**	**Quarterly**	**Biennial**	**Annual**	**Annual**	NC	**OU2 monitoring plan - TCE sampled quarterly (also Cr background well and well cluster)**
MW-1B	M	2	54.49	230.98	59.49	225.98	U	400.00	U	10/21/2008	No						Annual		Annual		NC	OU2 monitoring plan - less frequent sampling (also well cluster)
MW-1C	M	3	72.14	213.31	77.14	208.31	U	92.00	U	10/21/2008	No						Annual		Annual		NC	OU2 monitoring plan - less frequent sampling (also well cluster)
RAMW-2C	M	2	60.55	222.68	70.55	212.68	U	0.90	0.27	10/22/2008	Yes						Annual		NFS		Every 5 years	OU2 monitoring plan - less frequent sampling (also well cluster)
Proximal Wells																						
AMW-58	M	4	109.43	170.65	114.43	165.65	0.89	9.20	0.89	10/29/2008	No	U	34.7	3.3	10/29/2008	No	Biennial	Biennial	Quarterly	Annual	NC	Plume area - not included in any other category - impacted (silt well)
MW-2A	M	1	32.09	250.48	37.09	245.48	2.5	24.70	4.70	10/28/2008	No	29.2	2660.0	66.0	10/28/2008	No	Biennial	Annual	Annual	Annual	NC	Well cluster - most impacted and Cr hotspot
MW-2B	M	1	52.64	229.85	57.64	224.85	5.9	29.00	6.50	10/8/2004	No	U	26.4	U	10/8/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NC	Well cluster - less frequent sampling
MW-2C	M	3	81.64	200.79	86.64	195.79	2.1	40.50	2.10	10/8/2004	No	U	11.6	3.8	10/8/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NC	Well cluster - less frequent sampling
MW-3A	M	1	22.34	257.87	32.34	247.87	U	2.40	0.23	10/29/2008	Yes	132	1820.0	132.0	10/29/2008	No	Biennial	Biennial	NFS	Annual	NC	Well cluster - most impacted
MW-3B	M	1	51.39	228.94	56.39	223.94	3.9	32.00	3.90	10/11/2004	No	5.2	23.3	6.8	10/11/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NC	Well cluster - less frequent sampling
MW-3C	M	3	78.39	201.96	83.39	196.96	3.8	20.40	3.80	10/11/2004	No	U	9.3	6.1	10/11/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NFS	Well cluster - per MAROS redundant and NFS
MW-4A	M	1	26.81	253.49	36.81	243.49	0.8	210.00	3.50	10/12/2004	No	558	5320.0	832.0	10/12/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - less frequent sampling
MW-4B	M	1	39.7	240.45	44.7	235.45	0.94	600.00	7.20	10/29/2008	No	353	15500.0	606.0	10/29/2008	No	Biennial	Annual	Annual	Annual	NC	Well cluster - most impacted and Cr hotspot
MW-4BShed	M	1	52.9	227.57	57.9	222.57	5.2	198.00	5.20	10/12/2004	No	95.3	8580.0	101.0	10/12/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - less frequent sampling
MW-4C	M	3	74.7	205.21	79.7	200.21	10	40.00	11.00	10/8/2004	No	107	248.0	126.0	10/8/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - less frequent sampling
MW-6A	M	1	18.25	260.52	28.25	250.52	U	38.10	U	10/3/1997	No	U	27.5	U	10/3/1997	No	Every 5 years	Every 5 years	Quarterly	Annual	NC	Well cluster - less frequent sampling
MW-6B	E	**1**	**45.75**	**227.57**	**55.75**	**217.57**	**5.7**	**1230**	**5.7**	**10/20/2008**	**No**	**10.9**	**13000**	**23.6**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active (also well cluster with highest concentration)**
MW-6C	M	2	71.55	207.1	81.55	197.1	9.7	66.70	9.70	10/8/2004	No	8.63	400.0	18.9	10/8/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - less frequent sampling
MW-6D	M	3/4	100.45	178.45	110.45	168.45	6.7	63.50	6.70	10/11/2004	No	U	15.0	6.1	10/11/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NC	Well cluster - less frequent sampling
MW-7B	M	1	47	233.02	57	223.02	62	984.00	110.00	10/11/2004	No	35.4	932.0	35.4	10/11/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - adjacent to MW-4 cluster, less frequent sampling
MW-7C	M	2/3	69	210.94	79	200.94	0.74	26.50	0.74	10/11/2004	No	U	174.0	8.5	10/11/2004	No	Every 5 years	Every 5 years	Annual	Annual	NC	Well cluster - less frequent sampling
MW-8B	M	1	46.9	233.8	56.9	223.8	6	3070.00	6.00	10/29/2008	No	U	13.0	7.3	10/29/2008	Yes	Biennial	Biennial	Annual	NFS	NC	Plume area - not included in any other category - impacted
MW-9B	M	1	44.9	230.52	54.9	220.52	9.3	2100.00	9.30	10/29/2008	No	U	429.0	3.6	10/29/2008	No	Biennial	Biennial	Annual	Annual	NC	Well cluster - most impacted
MW-9C	M	1	65	210.44	75	200.44	10	2280.00	10.00	10/13/2004	No	U	12.8	12.8	10/13/2004	Yes	Every 5 years	Every 5 years	Annual	NFS	NC	Well cluster - less frequent sampling
MW-10B	E	1	48	225.24	58	215.24	5.2	1300.00	25.00	10/20/2008	No	31	3600.0	49.4	10/20/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active (also well

TABLE 5. WELLS AND RECOMMENDED SAMPLING FREQUENCIES

Well Name	Well Type	GW Model Layer	Top of Screen		Bottom of Screen		TCE					Chromium					2008 Sampling Frequency		MAROS Recommended Sampling Frequency		2009 Recommendations	Rationale for Frequency
			Depth	Elevation	Depth	Elevation	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	TCE	Chromium	TCE	Chromium		
MW-10C	E	**1**	**70**	**203.25**	**80**	**193.25**	**6**	**1500**	**6**	**10/20/2008**	**No**	**99**	**6400**	**108.0**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active (also well cluster)**
MW-12C	M	1	71.2	203.11	81.2	193.11	7.4	9430.00	15.00	10/28/2008	No	U	19.0	U	10/28/2008	Yes	Annual	Annual	Annual	NFS	NC	Plume boundary
MW-13C	M	1	65.03	206.94	75.03	196.94	1.9	35.00	1.90	10/28/2008	No	27.7	122.0	27.7	10/28/2008	No	Annual	Annual	Annual	Annual	NC	Plume boundary
PW-1B	E	**1**	**48**	**228.56**	**58**	**218.56**	**4.4**	**900**	**4.4**	**10/20/2008**	**No**	**59.5**	**13000**	**69.7**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
Intermediate Wells																						
AMW-16	M	2	76.83	185.15	86.83	175.15	2.7	80.70	2.70	10/28/2008	No	U	3.0	U	10/28/2008	Yes	Annual	Annual	Annual	NFS	NC	Plume boundary
AMW-17	M/D	1	81	180.87	91	170.87	1.2	66.90	1.20	10/23/2008	No	U	4.6	2.6	10/23/2008	Yes	Annual	Annual	Annual	NFS	Semiannual (TCE only)	Plume boundary - also in northern TCE plume investigation area
AMW-18	M	1	92.69	186.15	102.69	176.15	U	460.00	390.00	10/22/2008	No	U	2.4	U	10/10/2007	Yes	Quarterly	Quarterly	Quarterly	NFS	Semiannual (TCE only)	Plume boundary - also in northern TCE plume investigation area
AMW-59	M/D	3	134.74	134.6295	139.74	129.6295	91	310.00	95.00	10/21/2008	No	U	7.9	2.6	10/21/2008	Yes	Annual	Annual	Annual	NFS	NC	Plume area - hotspot (silt well)
AMW-60	M	3	103.5	162.25	108.5	157.25	0.72	0.94	0.94	4/28/2005	No	U	8.9	8.9	4/28/2005	No	Every 5 years	Every 5 years	Annual	Annual	NC	Plume area - not included in any other category - below cleanup levels (silt well)
CPU-14	M	2	60.43	197.13	70.43	187.13	9.8	63.00	9.80	10/28/2008	No	31.9	957.0	31.9	10/28/2008	No	Annual	Annual	Annual	Annual	NC	Plume boundary
MW-14C	E	1	70	201.22	80	191.22	20	2500.00	20.00	10/20/2008	No	104	20000.0	104.0	10/20/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active (also well cluster)
MW-14E	E	**2**	**115**	**153.95**	**125**	**143.95**	**95**	**6540**	95.00	10/20/2008	No	**52.6**	**21200**	**52.6**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active (also well cluster)**
MW-15E	M	3	95.7	168.97	105.7	158.97	9.2	1100.00	9.90	10/29/2008	No	U	18.0	3.3	10/29/2008	Yes	Biennial	Biennial	Annual	NFS	Semiannual (TCE only)	Plume area - impacted, also in northern TCE plume investigation area
MW-16E	M	2	111.1	147.25	121.1	137.35	U	5.70	5.10	10/29/2008	No	U	16.1	U	10/29/2008	No	Annual	Annual	Annual	Biennial	NC	Plume boundary
MW-17E	M	2	99.9	159.42	109.9	149.42	U	0.85	0.23	10/8/2004	Yes	U	U	U	10/8/2004	Yes	Every 5 years	Every 5 years	NFS	NFS	NFS	TCE and Cr statistically below cleanup levels
MW-18D	E	**1**	**73.4**	**189.34**	**93.4**	**169.34**	**66**	**7800**	**95**	**10/20/2008**	**No**	**168**	**23100**	**168**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active (also well cluster)**
MW-18E	M/D	3	112.57	149.1965	122.57	139.1965	174	2700.00	250.00	10/29/2008	No	U	729.0	2.4	10/29/2008	No	Annual	Annual	Annual	Annual	NC	Plume area - hotspot
MW-19D	E	**1**	**76.2**	**181.78**	**91.2**	**166.78**	**12**	**6300**	**48**	**10/20/2008**	**No**	217	**23000**	**217**	**10/20/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
MW-20D	E	**2**	**79.7**	**193.45**	**89.7**	**183.45**	**48**	**4100**	**48**	**10/30/2008**	**No**	**130**	**51000**	**130**	**10/30/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
MW-40	M	1	60.93	205.35	65.93	200.35	1.2	36.00	1.20	10/29/2008	No	97.6	443.0	126.0	10/29/2008	No	Biennial	Biennial	Annual	Annual	NC	Plume area - not included in any other category (also IWS pilot study well) - impacted
Church of God Wells																						
AMW-14	M	2	58.19	215.7089	68.19	205.7089	1	506.00	1.00	10/28/2008	No	72.4	8300.0	72.4	10/28/2008	No	Biennial	Biennial	Annual	Annual	NC	Plume area - not included in any other category - impacted
AMW-27	E	3	78	194.6	88	184.6	18	83.00	23.00	10/21/2008	No	102	7630.0	157.0	10/21/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active
AMW-61	M	3	91.86	181.92	96.86	176.92	6.5	43.00	6.50	10/29/2008	No	17.3	1410.0	17.3	10/29/2008	No	Biennial	Biennial	Quarterly	Quarterly	NC	Plume area - not included in any other category - impacted (silt well)
CPU-12	M	2	61.12	214.11	71.12	204.11	U	13.00	4.00	10/29/2008	No	6.5	245.0	6.5	10/29/2008	No	Annual	Annual	Annual	Annual	NC	Plume boundary
CPU-13	E	3	80	198.9898	90	188.9898	2.2	110.00	2.20	10/21/2008	No	26.6	5000.0	26.6	10/21/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active
MW-21D	E	**2**	**56**	**201.56**	**66**	**191.56**	**11**	**3000**	**11**	**10/20/2008**	**No**	18	35000.0	18.0	10/20/2008	No	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
MW-22D	E	3	54	215.02	64	205.02	11	390.00	11.00	10/20/2008	No	57.4	11000.0	57.4	10/20/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active
MW-23D	M	3	75.86	191.7004	90.86	176.7004	U	67.00	2.60	10/28/2008	No	U	6.7	U	10/28/2008	Yes	Annual	Annual	Annual	NFS	NC	Plume boundary
MW-25D	E	2	70	202.13	80	192.13	1.9	200.00	1.90	10/21/2008	No	U	16000.0	3.0	10/21/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active
MW-26D	E	**3**	**83**	**189.86**	**93**	**179.86**	**U**	**52**	**1.9**	**10/21/2008**	**No**	**23.5**	**4800**	**24**	**10/21/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
MW-27D	E	**2**	**61.1**	**208.15**	**71.1**	**198.147**	**U**	**280**	**0.62**	**10/21/2008**	**No**	**6.4**	**6940**	**6**	**10/21/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	NC	**Extraction well - active**
MW-49	E	2	71.2	200.48	81.2	190.48	U	340.00	**4.9**	10/21/2008	No	14.1	1160.0	41.7	10/21/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - active
Other/Toe Wells																						
AMW-42	E	3	87	168.8803	102	153.8803	U	65.00	1.20	10/20/2008	No	U	2280.0	23.7	10/20/2008	No	Annual	Annual	Annual	Annual	NC	Extraction well - inactive

TABLE 5. WELLS AND RECOMMENDED SAMPLING FREQUENCIES

Well Name	Well Type	GW Model Layer	Top of Screen		Bottom of Screen		TCE					Chromium					2008 Sampling Frequency		MAROS Recommended Sampling Frequency		2009 Recommendations	Rationale for Frequency
			Depth	Elevation	Depth	Elevation	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Most Recent Sample Date	Conc. Statistically Below Cleanup Levels	TCE	Chromium	TCE	Chromium		
AMW-63	M	2	76.13	181.29	86.13	171.29	U	0.17	U	10/28/2008	No	U	10.6	U	10/28/2008	No	Semiannual	Semiannual	Annual	Annual	NC	TOPPS monitoring (installed 11/06)
MW-31	**E**	**2**	**75**	**187.88**	**85**	**177.88**	**0.36**	**32**	**0.36**	**10/20/2008**	**No**	**U**	**535**	**12.9**	**10/20/2008**	**No**	**Annual**	**Annual**	**Annual**	**Annual**	**NC**	**Extraction well - inactive**
MW-35	E/M	2	79.5	176.2018	89.5	166.2018	U	110.00	4.90	10/28/2008	No	U	7280.0	36.1	10/28/2008	No	Semiannual	Semiannual	Annual	Annual	NC	Extraction well - inactive, with more frequent monitoring for local hot spot
MW-37	E	3	82	181.09	102	161.09	U	U	U	10/20/2008	Yes	U	18.0	4.1	10/20/2008	Yes	Annual	Annual	NFS	NFS	NFS	Inactive extraction well - TCE and Cr statistically below cleanup levels
MW-41	**E/M**	**2**	**74**	**179.08**	**84**	**169.085**	**U**	**8.3**	**U**	**10/27/2008**	**No**	**U**	**216**	**U**	**10/27/2008**	**No**	**Semi-annual**	**Semi-annual**	**Annual**	**Annual**	**NC**	**TOPPS monitoring (also inactive extraction well)**
MW-46	E/M	2	74.45	173.3389	84.45	163.3389	U	U	U	10/27/2008	Yes	U	28.0	U	10/27/2008	No	Semiannual	Semiannual	NFS	Biennial	NC	TOPPS monitoring (also inactive extraction well)
MW-48	E	2	76.2	172.62	86.2	162.62	U	20.00	U	10/20/2008	No	U	37.8	4.0	10/20/2008	Yes	Annual	Annual	Annual	NFS	NC	Extraction well - inactive
Sentinel Toe Wells																						
AMW-43	M/D	2	72	175.71	85	162.71	U	U	U	10/21/2008	Yes	U	7.8	3.7	10/21/2008	Yes	Semiannual	Semiannual	NFS	NFS	NC	TOPPS monitoring (Sentinel toe well - north of plume area)
AMW-44	M.D	2	71	176.82	81	166.82	U	U	U	10/21/2008	Yes	U	57.8	4.9	10/21/2008	Yes	Semiannual	Semiannual	NFS	NFS	NFS	TCE and Cr statistically below cleanup levels.
AMW-45	**M/D**	**2**	**67**	**177.87**	**77**	**167.87**	**U**	**U**	**U**	**10/21/2008**	**Yes**	**U**	**30.8**	**9.80**	**10/21/2008**	**Yes**	**Semi-annual**	**Semi-annual**	**NFS**	**NFS**	**NFS**	**TCE and Cr statistically below cleanup levels.**
MW-30	M/D	1/2	51	195.75	61	185.75	U	U	U	10/21/2008	Yes	U	5.8	U	10/21/2008	Yes	Semiannual	Semiannual	NFS	NFS	NFS	TCE and Cr statistically below cleanup levels.
MW-47	**M/D**	**2**	**72.7**	**173.69**	**82.7**	**163.69**	**U**	**U**	**U**	**10/21/2008**	**Yes**	**U**	**17**	**3.20**	**10/21/2008**	**Yes**	**Annual**	**Annual**	**NFS**	**NFS**	**NFS**	**TCE and Cr statistically below cleanup levels.**

NOTES:

Blue highlight = attainment well with groundwater concentrations statistically below the cleanup goals (for both TCE and Cr)
Bolded well = attainment well
Cr = chromium
E = extraction well
E/M = extraction well with pump pulled; now sampled as a monitoring well
GW = groundwater
M = monitoring well
MAROS = Monitoring and Remediation Optimization System
M/D = monitoring well with dedicated pump installed
NA = not applicable
NFS = no further sampling
NC = no change to the current sampling frequency
TCE = trichloroethene
TOPPS = toe of plume pilot study
U = undetected
µg/L = micrograms per liter
Site cleanup levels are 5 µg/L for TCE and 80 µg/L for chromium.
Data used for the Annual Screening are from 1995 to the present.
Biennial sampling - these wells will be sampled next in Fall 2010.
Every 5 years - these wells will be sampled next in Fall 2009.

TABLE 6. SUMMARY OF WELL SAMPLING FREQUENCIES

Well Name	Well Type	Recommendation						Rationale for Recommendation
		Quarterly	Semi-annual	Annual	Biennial	Every 5 Years	No Further Sampling	
Troutdale Wells								
AMW-24	M/D			X				Troutdale well - TCE impacted
AMW-25	M/D				X			Troutdale well - unimpacted; upgradient well
AMW-50	M/D				X			Troutdale well - unimpacted
AMW-51	M/D				X			Troutdale well - unimpacted
AMW-62	M/D			X				Troutdale well - well installed 11/06 - unimpacted
CPU-2	M				X			Troutdale well - unimpacted
CPU-3D	M/D				X			Troutdale well - unimpacted
CPU-10	M				X			Troutdale well - unimpacted
MW-33	M/D			X				Troutdale well - TCE impacted
MW-34	M/D				X			Troutdale well - unimpacted
BENNETT	Other			X				Troutdale well - TCE impacted (private, non-potable)
Upgradient Wells								
AMW-6A	M/D		X					Infiltration gallery well
AMW-7A	M/D		X					Infiltration gallery well
AMW-8A	M		TCE					Upgradient well (furthest upgradient) - check for possible offsite TCE impacts
AMW-10A	M/D		X					Infiltration gallery well
AMW-11A	M/D		X					Infiltration gallery well
TCE Source Wells								
AMW-1A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-1B	M			TCE				OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-1C	M			TCE				OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-2A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-2B	M			TCE				OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-3A	M	TCE						OU2 monitoring plan - TCE sampled quarterly
AMW-4A	M					TCE		Source area - for TCE (upgradient of Cr source area) with TCE below the criterion
AMW-12A	M	TCE						OU2 monitoring plan - TCE sampled quarterly
AMW-13A	M	TCE						OU2 monitoring plan - TCE sampled quarterly
AMW-19A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-19B	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-26	M		TCE					Source area - for TCE (upgradient of Cr source area) with TCE below the criteria.
AMW-52A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-52C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-53A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)

TABLE 6. SUMMARY OF WELL SAMPLING FREQUENCIES

Well Name	Well Type	Recommendation						Rationale for Recommendation
		Quarterly	Semi-annual	Annual	Biennial	Every 5 Years	No Further Sampling	
AMW-53B	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-53C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-54A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-54C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-55A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-55C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
AMW-56A	M	TCE						OU2 monitoring plan - TCE sampled quarterly (also well cluster)
AMW-56C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
MW-1A	M	TCE			Cr			OU2 monitoring plan - TCE sampled quarterly (also Cr background well and well cluster)
MW-1B	M			TCE				OU2 monitoring plan - less frequent sampling (also well cluster)
MW-1C	M			TCE				OU2 monitoring plan - less frequent sampling (also well cluster)
RAMW-2C	M					TCE		OU2 monitoring plan - less frequent sampling (also well cluster)
Proximal Wells								
AMW-58	M				X			Plume area - not included in any other category - impacted (silt well)
MW-2A	M			Cr	TCE			Well cluster - most impacted and Cr hotspot
MW-2B	M					X		Well cluster - less frequent sampling
MW-2C	M					X		Well cluster - less frequent sampling
MW-3A	M				X			Well cluster - most impacted
MW-3B	M					X		Well cluster - less frequent sampling
MW-3C	M						X	Well cluster - Per MAROS, redundant and NFS
MW-4A	M					X		Well cluster - less frequent sampling
MW-4B	M			Cr	TCE			Well cluster - most impacted and Cr hotspot
MW-4BShed	M					X		Well cluster - less frequent sampling
MW-4C	M					X		Well cluster - less frequent sampling
MW-6A	M					X		Well cluster - less frequent sampling
MW-6B	E		X					Extraction well - active (also well cluster with highest concentration)
MW-6C	M					X		Well cluster - less frequent sampling
MW-6D	M					X		Well cluster - less frequent sampling
MW-7B	M					X		Well cluster - adjacent to MW-4 cluster, less frequent sampling
MW-7C	M					X		Well cluster - less frequent sampling
MW-8B	M				X			Plume area - not included in any other category - impacted
MW-9B	M				X			Well cluster - most impacted
MW-9C	M					X		Well cluster - less frequent sampling

TABLE 6. SUMMARY OF WELL SAMPLING FREQUENCIES

Well Name	Well Type	Recommendation						Rationale for Recommendation
		Quarterly	Semi-annual	Annual	Biennial	Every 5 Years	No Further Sampling	
MW-10B	E		X					Extraction well - active (also well cluster)
MW-10C	E		X					Extraction well - active (also well cluster)
MW-12C	M			X				Plume boundary
MW-13C	M			X				Plume boundary
PW-1B	E		X					Extraction well - active
Intermediate Wells								
AMW-16	M			X				Plume boundary
AMW-17	M/D		TCE					Plume boundary - also in northern TCE plume investigation area
AMW-18	M		TCE					Plume boundary - also in northern TCE plume investigation area
AMW-59	M/D			X				Plume area - hotspot (silt well)
AMW-60	M					X		Plume area - not included in any other category - below cleanup levels (silt well)
CPU-14	M			X				Plume boundary
MW-14C	E		X					Extraction well - active (also well cluster)
MW-14E	E		X					Extraction well - active (also well cluster)
MW-15E	M		TCE					Plume area - impacted, also in northern TCE plume investigation area
MW-16E	M			X				Plume boundary
MW-17E	M						X	TCE and Cr statistically below cleanup levels
MW-18D	E		X					Extraction well - active (also well cluster)
MW-18E	M/D			X				Plume area - hotspot
MW-19D	E		X					Extraction well - active
MW-20D	E		X					Extraction well - active
MW-40	M				X			Plume area - not included in any other category (also IWS pilot study well) - impacted
Church of God Wells								
AMW-14	M				X			Plume area - not included in any other category - impacted
AMW-27	E		X					Extraction well - active
AMW-61	M				X			Plume area - not included in any other category - impacted (silt well)
CPU-12	M			X				Plume boundary
CPU-13	E		X					Extraction well - active
MW-21D	E		X					Extraction well - active
MW-22D	E		X					Extraction well - active
MW-23D	M			X				Plume boundary
MW-25D	E		X					Extraction well - active
MW-26D	E		X					Extraction well - active
MW-27D	E		X					Extraction well - active
MW-49	E		X					Extraction well - active

TABLE 6. SUMMARY OF WELL SAMPLING FREQUENCIES

Well Name	Well Type	Recommendation						Rationale for Recommendation
		Quarterly	Semi-annual	Annual	Biennial	Every 5 Years	No Further Sampling	
Other Toe Wells								
AMW-42	E			X				Extraction well - inactive
AMW-63	M		X					TOPPS monitoring (installed 11/06)
MW-31	E			X				Extraction well - inactive
MW-35	E/M		X					Extraction well - inactive, with more frequent monitoring for local hot spot
MW-37	E						X	Inactive extraction well - TCE and Cr statistically below cleanup levels
MW-41	E/M		X					TOPPS monitoring (also inactive extraction well)
MW-46	E/M		X					TOPPS monitoring (also inactive extraction well)
MW-48	E			X				Extraction well - inactive
Sentinel Toe Wells								
AMW-43	M/D		X					TOPPS monitoring (Sentinel toe well - north of plume area)
AMW-44	M.D						X	TCE and Cr statistically below cleanup levels.
AMW-45	M/D						X	TCE and Cr statistically below cleanup levels.
MW-30	M/D						X	TCE and Cr statistically below cleanup levels.
MW-47	M/D						X	TCE and Cr statistically below cleanup levels.
Total Wells:		12	31	23	17	22	7	**Total 112 (MW-1A, MW-2A, and WM-4B are in 2 categories)**

NOTES:

Cr	=	Chromium
E	=	Extraction well
E/M	=	Extraction well with pump pulled; now sampled as a monitoring well
M	=	Monitoring well
M/D	=	Monitoring well with dedicated pump installed
MAROS	=	Monitoring and Remediation Optimization System
TCE	=	Trichloroethene
TOPPS	=	Toe-of-Plume Pilot Study
X	=	TCE and Chromium are both sampled

TABLE 7. OU-2 QUARTERLY SAMPLING RESULTS FOR TCE SOURCE WELLS

Well ID	Baseline*	January 2008	May (Spring) 2008	July 2008	October (Fall) 2008
Center of Plume Wells					
AMW-1A	**220 D**	1.6	0.26 J	0.30 J	0.39 J
AMW-1B	0.73	0.37 J	0.41 J	0.39 J	05.0
AMW-1C	0.50 U	0.50 U	--	--	0.50 U
AMW-2A	**1,000 D**	**15**	1.1	4.5	**18**
AMW-2B	0.40 J	0.59	0.64	0.67	0.61
RAMW-2C	0.17 J	0.50 U	--	--	0.27 J
AMW-12A	**1,200 D**	**33**	**27**	**26**	**26**
AMW-19A	**290 D**	1.6	1.6	1.9	1.9
AMW-19B	NS	0.66	--	--	0.72
AMW-56A	**610 D**	0.90	0.75	1.2	0.97
AMW-56C	0.19 J	0.29 J	0.30 J	0.33 J	0.39 J
Sidegradient Wells					
AMW-3A	**8.0**	0.66	0.52	0.52	0.48 J
AMW-13A	2.7	1.6	0.08 J	0.50 U	0.21 J
Downgradient Wells					
AMW-52A	0.53	0.50 U	0.10 J	0.50 U	0.07 J
AMW-52C	0.50 U	--	--	--	0.50 U
AMW-53A	**240 D**	**13**	4.4	**5.9**	**8.9**
AMW-53B	2.0	--	--	--	0.53
AMW-53C	0.50 U	--	--	--	0.50 U
AMW-54A	**120 D**	0.96	0.84	1.0	1.9
AMW-54C	0.50 U	--	--	--	0.26 J
AMW-55A	**22**	1.2	0.72	0.48 J	0.65
AMW-55C	0.50 U	--	--	--	0.23 J
MW-1A	**880 D**	**12**	**7.6**	**7.4**	**13**
MW-1B	0.14 J	--	--	--	0.50 U
MW-1C	0.50 U	--	--	--	0.50 U

NOTES: D = The reported result is from a sample dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than the Method Detection Limit.
-- = Not Sampled.
U = The analyte was not detected above the specified reporting limit.
* = Baseline samples for wells installed as part of the removal action were collected in December 2003. Baseline data from existing wells was collected during the Fall 2003 semiannual sampling event.

When duplicate samples are collected, the maximum of the two results is reported.
Results in **red** indicate the concentration exceeds the cleanup level of 5.0 µg/L.
Monitoring wells shown in **red** had concentrations above the cleanup level of 5.0 µg/L during the reporting period.
All results reported in micrograms per liter (µg/L).

TABLE 8. 2008 MAROS RESULTS SUMMARY

Well Name	TCE								Chromium								MAROS Recommended Sampling Frequency	
	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant	TCE	Chromium
				Normal Distribution	Lognormal Distribution							Normal Distribution	Lognormal Distribution					
Upgradient Wells																		
AMW-6A	6	PI	0.51	Cont Sampling	Cont Sampling	Cont Sampling	No		4	S	0.59	Attained	Cont Sampling	Attained	Yes		Annual	NFS
AMW-7A	11	I	0.62	Attained	Cont Sampling	Attained	Yes		6	PD	0.19	Attained	Attained	Attained	Yes		NFS	NFS
AMW-8A	13	D	1.58	Cont Sampling	Cont Sampling	Cont Sampling	No		1	N/A	0.00	N/C	N/C	N/C	No		Annual	Annual
AMW-10A	5	S	0.49	Attained	Cont Sampling	Attained	Yes		4	S	0.44	Attained	Cont Sampling	Attained	Yes		NFS	NFS
AMW-11A	6	NT	0.63	Attained	Cont Sampling	Attained	Yes		5	NT	0.37	Attained	Cont Sampling	Attained	Yes		NFS	NFS
TCE Source Wells																		
AMW-1A	14	D	1.45	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-1B	10	D	2.62	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-1C	9	NT	2.62	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-2A	14	D	1.04	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-2B	10	NT	1.82	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-3A	14	D	0.85	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-4A	6	D	0.36	Attained	Cont Sampling	Attained	Yes										NFS	
AMW-12A	**14**	**D**	**1.34**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**										**Annual**	
AMW-13A	14	NT	1.83	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-19A	12	D	1.19	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-19B	7	NT	0.66	Attained	Cont Sampling	Attained	Yes										NFS	
AMW-26	12	D	1.25	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-52A	6	S	0.68	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-52C	6	S	0.00	Attained	Attained	Attained	Yes										NFS	
AMW-53A	6	PD	1.53	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-53B	6	D	0.60	Attained	Cont Sampling	Attained	Yes										NFS	
AMW-53C	6	S	0.00	Attained	Attained	Attained	Yes										NFS	
AMW-54A	6	D	1.09	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-54C	6	NT	0.02	Attained	Attained	Attained	Yes										NFS	
AMW-55A	5	NT	1.29	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-55C	6	S	0.03	Attained	Attained	Attained	Yes										NFS	
AMW-56A	6	D	2.08	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
AMW-56C	6	I	0.18	Attained	Cont Sampling	Attained	Yes										NFS	
MW-1A	**14**	**D**	**0.76**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**10**	**NT**	**1.97**	**Attained**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-1B	11	NT	2.23	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
MW-1C	10	NT	2.62	Cont Sampling	Cont Sampling	Cont Sampling	No										Annual	
RAMW-2C	8	S	0.72	Attained	Cont Sampling	Attained	Yes										NFS	
Proximal Wells																		
AMW-58	3	N/A	0.00	N/C	N/C	N/C	No		3	N/A	0.00	N/C	N/C	N/C	No		Quarterly	Annual
MW-2A	12	PD	0.54	Cont Sampling	Not Attained	Cont Sampling	No		13	NT	1.02	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-2B	9	D	0.59	Cont Sampling	Not Attained	Cont Sampling	No		9	NT	0.77	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-2C	6	D	1.09	Cont Sampling	Cont Sampling	Cont Sampling	No		6	NT	0.57	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-3A	11	S	0.65	Attained	Cont Sampling	Attained	Yes		11	D	0.55	Cont Sampling	Not Attained	Cont Sampling	No		NFS	Annual
MW-3B	7	S	0.74	Cont Sampling	Cont Sampling	Cont Sampling	No		7	S	0.36	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-3C	6	D	0.44	Cont Sampling	Cont Sampling	Cont Sampling	No	TRUE	6	NT	0.33	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-4A	9	NT	1.96	Cont Sampling	Cont Sampling	Cont Sampling	No		9	S	0.77	Cont Sampling	Not Attained	Cont Sampling	No		Annual	Annual
MW-4B	7	NT	2.23	Cont Sampling	Cont Sampling	Cont Sampling	No		7	S	0.74	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-4BShed	7	D	1.33	Cont Sampling	Cont Sampling	Cont Sampling	No		8	D	1.35	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-4C	4	S	0.44	Cont Sampling	Cont Sampling	Cont Sampling	No		4	S	0.30	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-6A	2	N/A	0.00	N/C	N/C	N/C	No		2	N/A	0.00	N/C	N/C	N/C	No		Quarterly	Annual
MW-6B	**14**	**D**	**1.21**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.84**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-6C	8	S	0.49	Cont Sampling	Not Attained	Cont Sampling	No		8	NT	1.38	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual

TABLE 8. 2008 MAROS RESULTS SUMMARY

Well Name	TCE								Chromium								MAROS Recommended Sampling Frequency	
	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant		
				Normal Distribution	Lognormal Distribution							Normal Distribution	Lognormal Distribution				TCE	Chromium
MW-6D	5	D	0.50	Cont Sampling	Cont Sampling	Cont Sampling	No		5	NT	0.51	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-7B	4	S	0.75	Cont Sampling	Cont Sampling	Cont Sampling	No		4	D	1.58	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-7C	4	D	1.45	Cont Sampling	Cont Sampling	Cont Sampling	No		4	S	0.52	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-8B	7	D	1.63	Cont Sampling	Cont Sampling	Cont Sampling	No		7	NT	0.65	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-9B	8	D	1.32	Cont Sampling	Cont Sampling	Cont Sampling	No		8	D	1.65	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-9C	5	D	1.35	Cont Sampling	Cont Sampling	Cont Sampling	No		5	I	0.87	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-10B	14	NT	1.51	Cont Sampling	Not Attained	Not Attained	No		14	D	0.77	Cont Sampling	Not Attained	Cont Sampling	No		Annual	Annual
MW-10C	**14**	**D**	**1.49**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**PD**	**1.82**	**Cont Sampling**	**Not Attained**	**Not Attained**	**No**		**Annual**	**Annual**
MW-12C	14	D	2.35	Cont Sampling	Cont Sampling	Cont Sampling	No		14	S	0.57	Attained	Attained	Attained	Yes		Annual	NFS
MW-13C	14	D	0.78	Cont Sampling	Not Attained	Cont Sampling	No		14	D	0.49	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
PW-1B	**14**	**D**	**1.05**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.44**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
Intermediate Wells																		
AMW-16	13	D	1.10	Cont Sampling	Cont Sampling	Cont Sampling	No		13	NT	0.56	Attained	Cont Sampling	Attained	Yes		Annual	NFS
AMW-17	13	D	1.62	Cont Sampling	Cont Sampling	Cont Sampling	No		13	PI	0.54	Attained	Cont Sampling	Attained	Yes		Annual	NFS
AMW-18	12	I	2.31	Cont Sampling	Cont Sampling	Cont Sampling	No		11	NT	0.43	Attained	Cont Sampling	Attained	Yes		Quarterly	NFS
AMW-59	4	S	0.37	Cont Sampling	Cont Sampling	Cont Sampling	No		4	S	0.32	Attained	Cont Sampling	Attained	Yes		Annual	NFS
AMW-60	1	N/A	0.00	N/C	N/C	N/C	No		1	N/A	0.00	N/C	N/C	N/C	No		Annual	Annual
CPU-14	14	D	0.55	Cont Sampling	Not Attained	Cont Sampling	No		14	D	0.78	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-14C	14	D	1.48	Cont Sampling	Cont Sampling	Cont Sampling	No		14	D	1.31	Cont Sampling	Not Attained	Not Attained	No		Annual	Annual
MW-14E	**14**	**D**	**1.48**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.90**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-15E	9	D	1.70	Cont Sampling	Cont Sampling	Cont Sampling	No		9	NT	0.45	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-16E	9	I	0.79	Cont Sampling	Cont Sampling	Cont Sampling	No		9	NT	1.03	Attained	Cont Sampling	Cont Sampling	No		Annual	Biennial
MW-17E	4	S	0.68	Attained	Cont Sampling	Attained	Yes		4	S	0.50	Attained	Cont Sampling	Attained	Yes		NFS	NFS
MW-18D	**14**	**D**	**1.32**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.51**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-18E	13	D	0.94	Cont Sampling	Not Attained	Cont Sampling	No		13	PI	0.52	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-19D	**14**	**D**	**1.42**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.71**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-20D	**14**	**D**	**1.19**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.67**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-40	6	D	1.40	Cont Sampling	Cont Sampling	Cont Sampling	No		6	S	0.50	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
Church of God Wells																		
AMW-14	10	D	2.37	Cont Sampling	Cont Sampling	Cont Sampling	No		10	D	2.19	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
AMW-27	11	D	0.26	Cont Sampling	Not Attained	Cont Sampling	No		11	D	0.87	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
AMW-61	3	N/A	0.00	N/C	N/C	N/C	No		3	N/A	0.00	N/C	N/C	N/C	No		Quarterly	Quarterly
CPU-12	14	NT	0.52	Cont Sampling	Cont Sampling	Cont Sampling	No		14	D	1.23	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
CPU-13	14	D	1.32	Cont Sampling	Cont Sampling	Cont Sampling	No		14	D	1.36	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-21D	**14**	**D**	**1.71**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**2.13**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-22D	14	D	0.91	Cont Sampling	Not Attained	Cont Sampling	No		14	D	1.38	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-23D	14	D	0.95	Cont Sampling	Not Attained	Cont Sampling	No		14	PI	0.64	Attained	Cont Sampling	Attained	Yes		Annual	NFS
MW-25D	14	D	1.39	Cont Sampling	Cont Sampling	Cont Sampling	No		14	D	2.36	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
MW-26D	**14**	**D**	**0.99**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.12**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-27D	**14**	**D**	**1.39**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**14**	**D**	**1.78**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-49	9	S	0.82	Cont Sampling	Cont Sampling	Cont Sampling	No		8	D	0.76	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
Other Toe Wells																		
AMW-42	10	D	1.50	Cont Sampling	Cont Sampling	Cont Sampling	No		10	D	1.37	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual
AMW-63	2	N/A	0.00	N/C	N/C	N/C	No		2	N/A	0.00	N/C	N/C	N/C	No		Annual	Annual
MW-31	**11**	**D**	**1.88**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**11**	**D**	**2.22**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-35	10	D	1.56	Cont Sampling	Cont Sampling	Cont Sampling	No		10	D	2.84	Cont Sampling	Cont Sampling	Cont Sampling	No		Annual	Annual

TABLE 8. 2008 MAROS RESULTS SUMMARY

Well Name	TCE								Chromium								MAROS Recommended Sampling Frequency	
	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant	Sample Size	MK Trend	Coefficient of Variation (COV)	Sequential T-Test Result		Cleanup Status	Conc. Statistically Below Cleanup Levels	MAROS Statistically Redundant		
				Normal Distribution	Lognormal Distribution							Normal Distribution	Lognormal Distribution				TCE	Chromium
MW-37	11	NT	0.60	Attained	Cont Sampling	Attained	Yes		11	NT	0.59	Attained	Cont Sampling	Attained	Yes		NFS	NFS
MW-41	**10**	**I**	**1.15**	**Cont Sampling**	**Cont Sampling**	**Cont Sampling**	**No**		**10**	**NT**	**1.05**	**Attained**	**Cont Sampling**	**Cont Sampling**	**No**		**Annual**	**Annual**
MW-46	10	NT	0.66	Attained	Cont Sampling	Attained	Yes		10	NT	1.11	Attained	Cont Sampling	Cont Sampling	No		NFS	Biennial
MW-48	10	I	0.68	Cont Sampling	Cont Sampling	Cont Sampling	No		10	NT	0.50	Attained	Cont Sampling	Attained	Yes		Annual	NFS
Sentinel Toe Wells																		
AMW-43	10	PI	0.65	Attained	Cont Sampling	Attained	Yes		10	PI	0.69	Attained	Cont Sampling	Attained	Yes		NFS	NFS
AMW-44	10	I	0.74	Attained	Cont Sampling	Attained	Yes		10	NT	0.85	Attained	Cont Sampling	Attained	Yes		NFS	NFS
AMW-45	**10**	**I**	**0.73**	**Attained**	**Cont Sampling**	**Attained**	**Yes**		**10**	**PI**	**0.45**	**Attained**	**Cont Sampling**	**Attained**	**Yes**		**NFS**	**NFS**
MW-30	9	D	0.29	Attained	Attained	Attained	Yes		9	NT	0.57	Attained	Cont Sampling	Attained	Yes		NFS	NFS
MW-47	**10**	**I**	**0.75**	**Attained**	**Cont Sampling**	**Attained**	**Yes**		**10**	**NT**	**0.75**	**Attained**	**Cont Sampling**	**Attained**	**Yes**		**NFS**	**NFS**

NOTES:

Blue highlight = attainment well with groundwater concentrations statistically below the cleanup goals (for both TCE and Cr)
Bolded well = attainment well
D = decreasing
I = increasing
MAROS = Monitoring and Remediation Optimization System
MK = Mann-Kendall
N/A = not applicable
N/C = not conducted due to small sample size (<4 samples)
NT = no trend
PD = probably decreasing
PI = probably increasing
S = stable
TCE = trichlorocthene

TABLE 9. CHANGES TO RECOMMENDED WELL SAMPLING FREQUENCY FOR 2009

Well Group	Well ID	Sampling Frequency		Reason for Change
		From	To	
Troutdale	AMW-62	Semiannual	Annual	This well was installed in November 2006 and has been sampled on a semiannual basis for the last two years. All results for VOCs and Cr have been below the DL. This will bring the sampling frequency closer to that used for unimpacted Troutdale wells (every two years).
TCE Source	AMW-26	Quarterly	Semiannual	TCE has been below the cleanup level in this well since 2003, and below 0.5 ug/L (the typical DL) since 2006. This well was sampled quarterly due to a request by EPA; however, such frequent sampling is no longer warranted. (The MAROS evaluation recommends annual sampling.)
	AMW-1B, AMW-2B	Quarterly	Annual	TCE has been below the cleanup level in this well since 1995. The MAROS evaluation recommends annual sampling.
	AMW-19B, AMW-52C, AMW-53B, AMW-53C, AMW-54C, AMW-55C, RAMW-2C	Annual	Every 5 years	The TCE concentration is statistically below the cleanup level in each of these OU-2 wells. According to the MAROS evaluation, no further sampling is required. At least one more sample will be collected before discontinuing sampling.
	AMW-56C	Quarterly	Every 5 years	
Proximal	MW-3C	Every 5 years	NFS	This well is one of the less frequently sampled wells in a cluster. According to the MAROS evaluation, the well is redundant for TCE and the recommendation for chromium sampling is NFS.
Intermediate	AMW-17	Annual	Semiannual*	More frequent sampling will be performed to monitor for possible impacts from the northern (offsite) TCE plume. The sampling frequency will be the same as for well AMW-18. (Note that during 2008 the sampling frequency in this well was temporarily increased to quarterly.) According to the MAROS evaluation, no further sampling is required for chromium; therefore, the well will be sampled for VOCs only.
	AMW-18	Quarterly	Semiannual*	This well is impacted by the northern (offsite) TCE plume. TCE concentrations are decreasing and semiannual sampling will be sufficient to monitor changes in the northern plume. According to the MAROS evaluation, no further sampling is required for chromium; therefore, the well is sampled for VOCs only using a PDB.
	MW-15E	Biennial	Semiannual*	More frequent sampling will be performed to monitor for possible impacts from the northern (offsite) TCE plume. According to the MAROS evaluation, no further sampling is required for chromium; therefore, the well will be sampled for VOCs only using a PDB.

TABLE 9. CHANGES TO RECOMMENDED WELL SAMPLING FREQUENCY FOR 2009

Well Group	Well ID	Sampling Frequency		Reason for Change
		From	To	
	MW-17E	Every 5 years	NFS	TCE and chromium have never exceeded the cleanup level in this well. According to the MAROS evaluation, TCE and chromium concentrations are statistically below cleanup levels and no further sampling is required.
Other Toe	MW-37	Annual	NFS	TCE and chromium have never exceeded the cleanup level in this well. According to the MAROS evaluation, TCE and chromium concentrations are statistically below cleanup levels and no further sampling is required.
Sentinel Toe	AMW-44	Semiannual	NFS	Wells AMW-44, AMW-45, and MW-30 were being sampled as part of the TOPPS monitoring program. These wells, along with MW-47, are statistically below cleanup levels. According to the MAROS evaluation, no further sampling is required.
	AMW-45	Semiannual	NFS	
	MW-30	Semiannual	NFS	
	MW-47	Annual	NFS	

NOTES:

Cr = Chromium.
DL = Detection limit.
MAROS = Monitoring and Remediation Optimization System.
NFS = No further sampling.
PDB = Passive diffusion bag sampler.
TCE = Trichloroethene.
VOC = Volatile organic compound.
* = This recommendation was made in the *AMW-18 Area Investigation Report, Boomsnub/Airco Superfund Site*, August 2008.

TABLE 10. ATTAINMENT WELLS

Well Name	TCE					Chromium				
	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Date of Most Recent Sample	Concentrations Statistically Below Cleanup Levels/Attained	Min. Conc. (µg/L)	Max. Conc. (µg/L)	Most Recent Conc. (µg/L)	Date of Most Recent Sample	Concentrations Statistically Below Cleanup Levels/Attained
TCE Source Wells										
AMW-12A	19.00	19,300	25.00	10/21/2008	No					
MW-1A	7.40	3,900	7.40	7/28/2008	No	U	162.00	U	10/11/2006	No
Proximal Wells										
MW-6B	5.70	1,230	5.70	10/20/2008	No	10.90	13,000	23.60	10/20/2008	No
MW-10C	6.00	1,500	6.00	10/20/2008	No	99.00	6,400	108.00	10/20/2008	No
PW-1B	4.40	900	4.40	10/20/2008	No	59.50	13,000	69.70	10/20/2008	No
Intermediate Wells										
MW-14E	95.00	6,540	95.00	10/20/2008	No	52.60	21,200	52.60	10/20/2008	No
MW-18D	66.00	7,800	95.00	10/20/2008	No	168.00	23,100	168.00	10/20/2008	No
MW-19D	12.00	6,300	48.00	10/20/2008	No	217.00	23,000	217.00	10/20/2008	No
MW-20D	48.00	4,100	48.00	10/30/2008	No	130.00	51,000	130.00	10/30/2008	No
Church of God Wells										
MW-21D	11.00	3,000	11.00	10/20/2008	No	18.00	35,000	18.00	10/20/2008	No
MW-26D	U	52	1.90	10/21/2008	No	23.50	4,800	23.50	10/21/2008	No
MW-27D	U	280	0.62	10/21/2008	No	6.40	6,940	6.40	10/21/2008	No
Other Toe Wells										
MW-31	0.36	32	0.36	10/20/2008	No	U	535	12.90	10/20/2008	No
MW-41	U	8.3	U	10/27/2008	No	U	216	U	10/27/2008	No
Sentinel Wells										
AMW-45	U	U	U	10/21/2008	Yes	U	30.80	9.80	10/21/2008	Yes
MW-47	U	U	U	10/21/2008	Yes	U	17.00	3.20	10/21/2008	Yes

NOTES:

Blue highlight = attainment Wells with groundwater concentrations statistically below the cleanup goals (for both TCE and Cr)
Cr = chromium
TCE = trichloroethene
µg/L = micrograms per liter
U = undetected

Appendix A

APPENDIX A

CHROMIUM CONCENTRATIONS IN GROUNDWATER

Appendix A-1

APPENDIX A-1

CHROMIUM CONCENTRATIONS – SUMMARY TABLES

UPGRADIENT WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-6A	2/3/2006	17.7	7.3	17.7	3.6 B	5.2
AMW-7A	2/2/2006	5 B	5.2	3 B	5 U	4 B
AMW-10A	10/11/1995	8.5 J	5 U	4.2 B	12.5	5.9
AMW-11A	10/5/2006	9.4	6.1	5 U	4.1 B	5.9

NOTE: B/J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
U = Analyte not detected above the specified reporting limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).

TCE SOURCE AND PROXIMAL WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
TCE Source Well						
MW-1A	7/15/1993	**240**	--	--	--	12.5
Proximal Wells						
AMW-58	4/27/2006	**34.7**	--	--	--	3.3 J
MW-2A	12/14/1992	**18,000**	--	**821**	--	66
MW-3A	4/15/1987	**9,980**	--	--	--	**132**
MW-4B	11/15/1993	**20,000**	--	**1,240**	--	**606**
MW-6B	3/6/1991	**146,000**	56.1	37.6	47	23.6
MW-8B	11/15/1993	**140**	--	--	--	7.3
MW-9B	6/11/1993	**1,400**	--	--	--	3.6 B
MW-10B	11/25/1991	**86,500**	78.5	65.4	67.6	49.4
MW-10C	6/23/1992	**65,000**	**200**	**177**	**189**	**108**
MW-12C	4/21/1993	**4,400**	--	5 U	--	3.7 B
MW-13C	11/13/1992	**450**	--	33.4	--	32.1
PW-1B	1/11/1991	**368,000**	**98.9**	**121**	59.5	69.7

NOTES: -- = Well not sampled during this monitoring event.
U = Analyte not detected above the specified reporting limit.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 80 µg/L.
Wells shown in red were above the cleanup level of 80 µg/L for the reporting period.

INTERMEDIATE WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-16	10/9/2002	3 B	--	5 U	--	5 U
AMW-17	9/30/1998	4.6	--	5 U	--	2.6 B
AMW-18	5/5/1998	2.4	--	5 U	--	--
AMW-59	4/28/2005	7.9	--	4.8 J	--	2.6 B
CPU-14	11/11/1994	1,700	--	49.6	--	31.9
MW-14C	6/23/1992	**170,000**	**135**	**123**	**116**	**104**
MW-14E	11/13/1992	**150,000**	71.6	73.8	69.9	52.6
MW-15E	4/21/1993	**130**	--	--	--	3.3 J
MW-16E	4/21/1993	35	--	5 U	--	5 U
MW-18D	4/21/1993	**71,000**	**276**	**243**	**224**	**168**
MW-18E	5/25/1993	**34,000**	--	5 U	--	2.4 J
MW-19D	4/21/1993	**89,000**	**274**	**266**	**279**	**217**
MW-20D	9/21/1993	**85,000**	**154**	**143**	**143**	**130**
MW-40	10/15/2002	**443**	**--**	**--**	**--**	**126**

NOTES: B/J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
U = Analyte not detected above the specified reporting limit.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 80 µg/L.
Wells shown in red were above the cleanup level of 80 µg/L for the reporting period.

CHURCH OF GOD WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-14	4/20/1995	**8,300**	--	--	--	72.4*
AMW-27	6/2/1999	**7,630**	**562**	**289**	**230**	**157**
AMW-61	10/11/2006	**1,410**	--	--	--	17.3
CPU-12	10/23/2000	**245**	--	6.6	--	7.6
CPU-13	8/15/1994	**8,800**	41.3	37.9	34.7	26.6
MW-21D	8/18/1993	**44,000**	25.5	24	19.2	18
MW-22D	7/15/1993	**36,000**	**92.2**	**81.3**	68.2	57.4
MW-23D	9/21/1993	**8,500**	--	3 B	--	1.6 UJ
MW-25D	5/23/1995	**16,000**	5 U	4.8 J	4.3 J	3 B
MW-26D	1/17/1996	**4,800**	27.6	29.5	24.6	23.5
MW-27D	5/16/1996	**6,940**	--	9.8	7.6	6.4
MW-49	12/21/2000	**36,800**	**162**	**96.6**	55.6	41.7

NOTES:
B/J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
U = Analyte not detected above the specified reporting limit.
UJ = The analyte was not detected, but the associated limit of quantitation is estimated.
* = Well AMW-14 had an elevated turbidity; therefore, the results for dissolved chromium were used. The total chromium concentration was 87.4 µg/L.

Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 80 µg/L.
Wells shown in red were above the cleanup level of 80 µg/L for the reporting period.

TOE OF PLUME WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
Sentinel:						
AMW-43	10/4/2001	7.8	5 U	3.3 B	6.8	3.7 B
AMW-44	9/14/1999	57.8	5 U	5 U	5 U	4.9 B
AMW-45	5/5/1999	30.8	5 U	7	8	9.8
MW-30	10/21/1996	5.8	5 U	3.1 B	3 J	5 U
MW-47	10/4/1999	17	--	5 U	--	3.2 B
Other:						
AMW-42	5/10/1999	**2,280**	29	28.1	--	23.7
AMW-63	7/24/2007	10.6	9.5	6.3	19.5 UJ	8.2 UJ
MW-31	10/2/1998	**535**	--	11.1	--	12.9
MW-35	9/14/1999	**8,050**	39.6	34.8	39.6 UJ	36.1
MW-37	5/3/1999	18	--	5 J	--	4.1 B
MW-41	10/19/2004	**216**	5 U	5 U	4.4 UJ	5 U
MW-46	6/23/1999	28	5 U	5 U	3.5 UJ	5.2 UJ
MW-48	1/12/2000	37.8	--	6.7	--	4.0 B

NOTES:
B/J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
U = Analyte not detected above the specified reporting limit.
UJ = The analyte was not detected, but the associated limit of quantitation is estimated.
Results are in micrograms per liter (µg/L).
Results shown in **red** are above the cleanup level of 80 µg/L.

TROUTDALE WELLS
CHROMIUM CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-24	10/2/2006	6.2	--	5 U	--	2.9 B
AMW-25	10/2/2006	4.1 B	--	--	--	5 U
AMW-50	10/7/2002	37.7	--	--	--	2.3 B
AMW-51	10/3/2006	10.1	--	--	--	6.2
AMW-62	10/3/2007	5 U	5 U	5 U	5 U	5 U
CPU-2	10/19/2000	14	--	--	--	5 U
CPU-3D	10/3/2001	11	--	--	--	2.1 B
CPU-10	10/13/2003	13.2	--	--	--	2.2 B
MW-33	10/8/2001	15	5.4	6	--	2.1 B
MW-34	10/3/2006	25.4	--	--	--	2.7 B
PRIVATE (BENNETT)	10/4/2006	5 U	--	5 U	--	5 U

NOTES:
B = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
– = Well not sampled during this monitoring event.
U = Analyte not detected above the specified reporting limit.
UJ = The analyte was not detected, but the associated limit of quantitation is estimated.
Results are in micrograms per liter (µg/L).

BIENNIAL WELLS
CHROMIUM CONCENTRATION SUMMARY

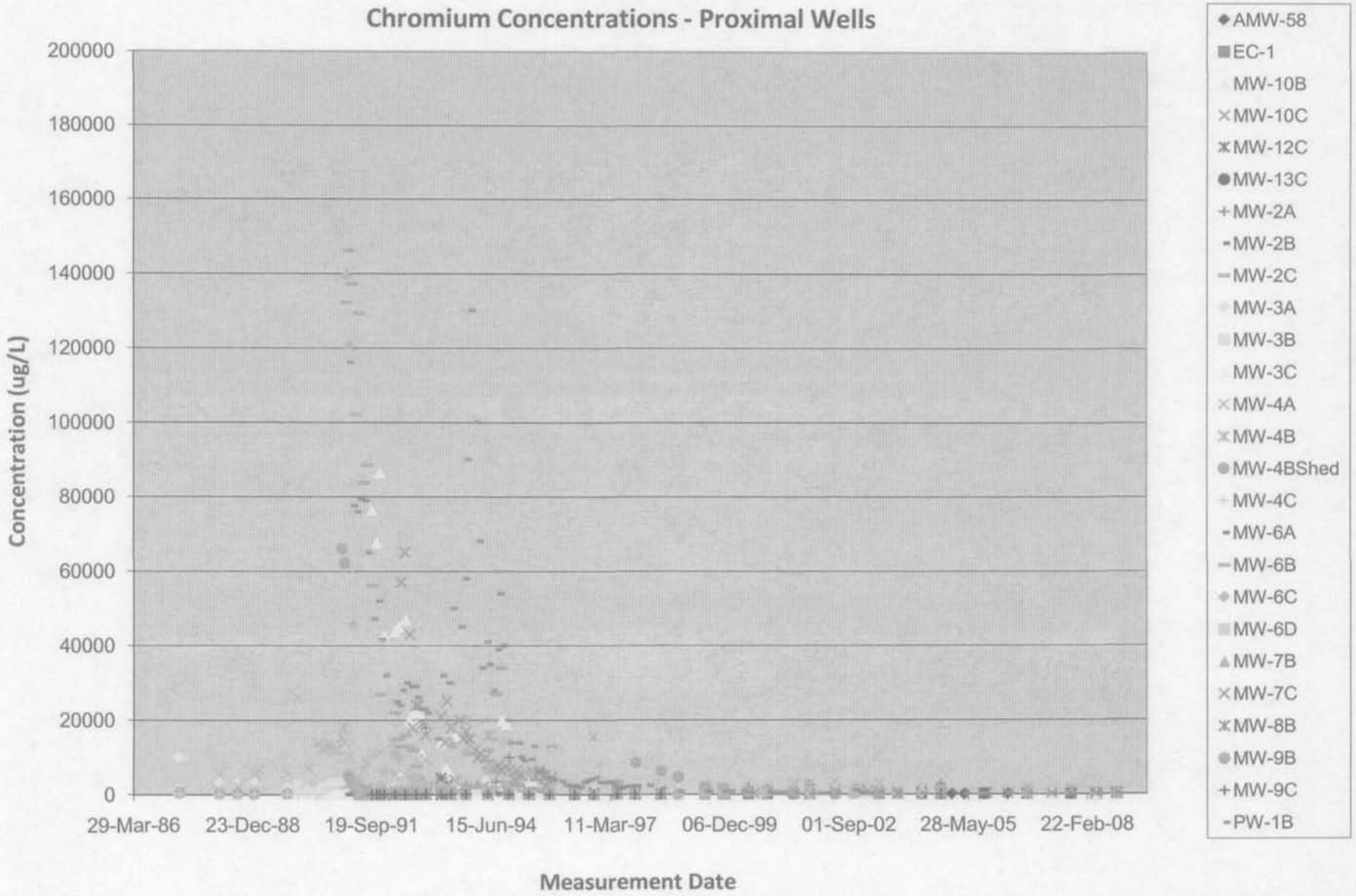
Well Grouping	Wells	Historical Maximum		Last Sampling		Fall 2008
		Date	Result	Date	Result	
TCE Soure Wells	MW-1A	7/15/1993	**240**	10/11/2006	3 UJ	12.5
Proximal Source Wells	AMW-58	4/27/2006	**34.7**	10/13/2006	2.6 J	3.3 J
	MW-3A	4/15/1987	**9,980**	10/12/2006	**386**	**132**
	MW-8B	11/15/1993	**140**	10/11/2004	6.3	7.3
	MW-9B	6/11/1993	**1,400**	10/10/2006	6.1 UJ	3.6 J
Intermediate Wells	MW-15E	4/21/1993	**130**	4/27/2005	73.8	3.3 J
	MW-40	10/15/2002	**443**	10/7/2004	**271**	**126**
Church of God Wells	AMW-14	4/20/1995	**8,300**	10/7/2004	**113**	72.4*
	AMW-61	10/11/2006	**1,410**	10/11/2006	**1,410**	17.3
Troutdale Wells	AMW-25	10/2/2006	4.1 B	10/2/2006	4.1 B	5 U
	AMW-50	10/7/2002	37.7	10/2/2006	3.5 B	2.3 B
	AMW-51	10/3/2006	10.1	10/3/2006	10.1	6.2
	CPU-2	10/19/200	14	10/2/2006	3 UJ	5 U
	CPU-3D	10/2/2001	11	10/3/2006	2.7 B	2.1 B
	CPU-10	10/13/2003	13.2	10/10/2006	8.6 UJ	2.2 B
	MW-34	10/3/2006	25.4	10/3/2006	25.4	2.7 B

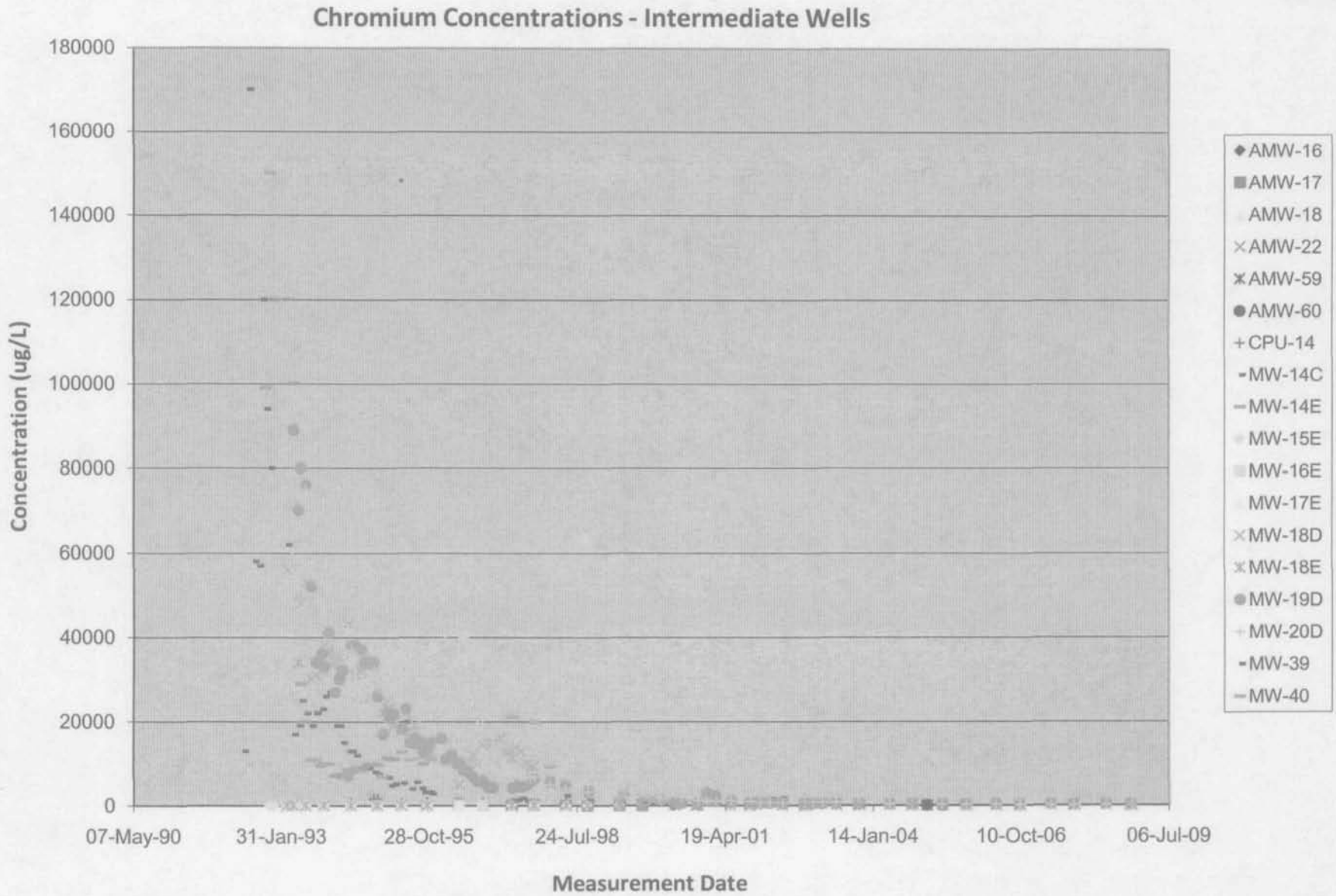
NOTES
D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
U = Analyte not detected above the specified reporting limit.
-- = Well not sampled during this monitoring event.
* = This well had an elevated turbidity; therefore, the results for dissolved chromium were used.

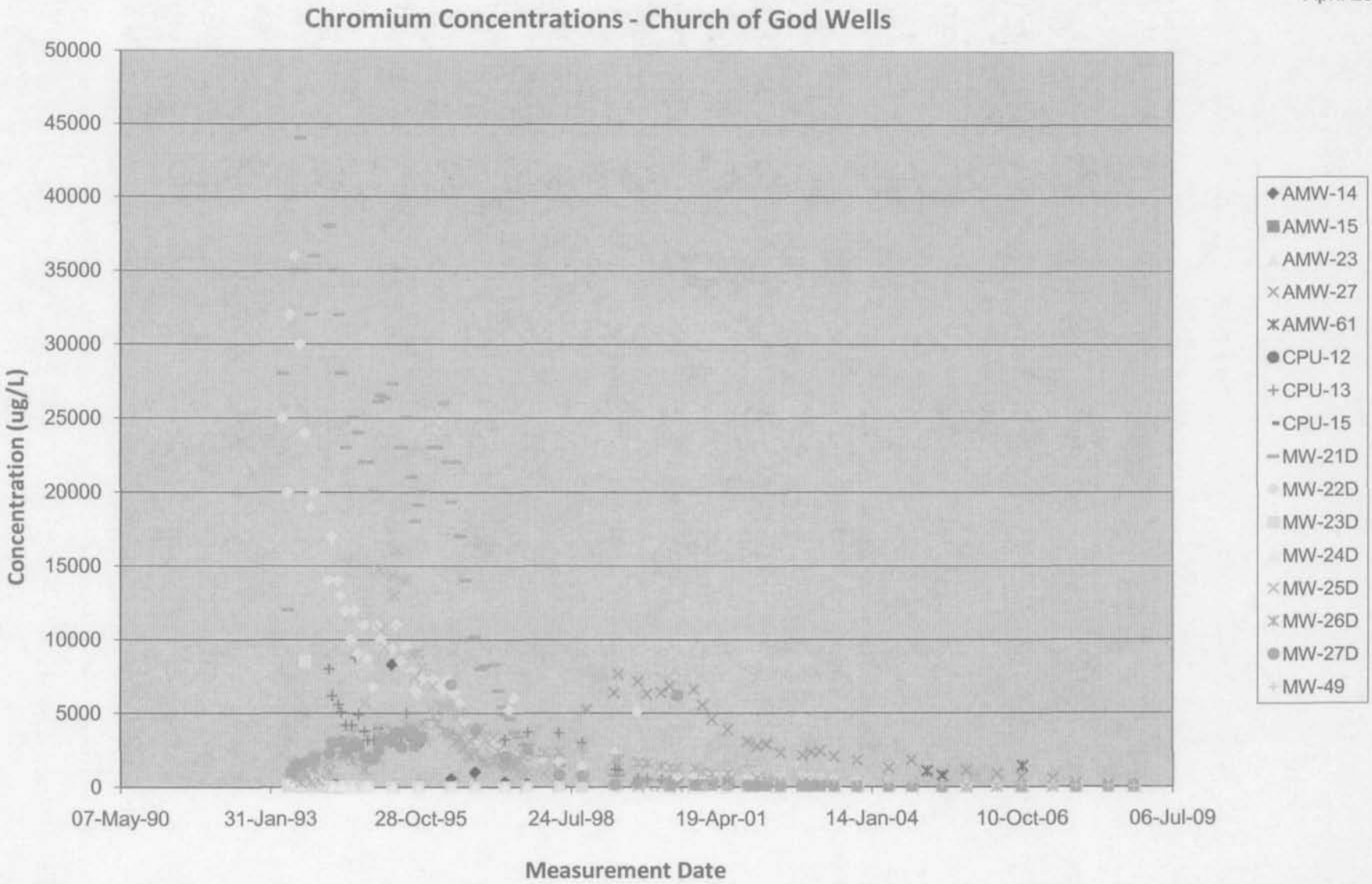
Results are in micrograms per liter (µg/L).
Results shown in **red** are above the cleanup level of 80 µg/L.
Wells shown in **red** were above the cleanup level of 80 µg/L for the reporting period.

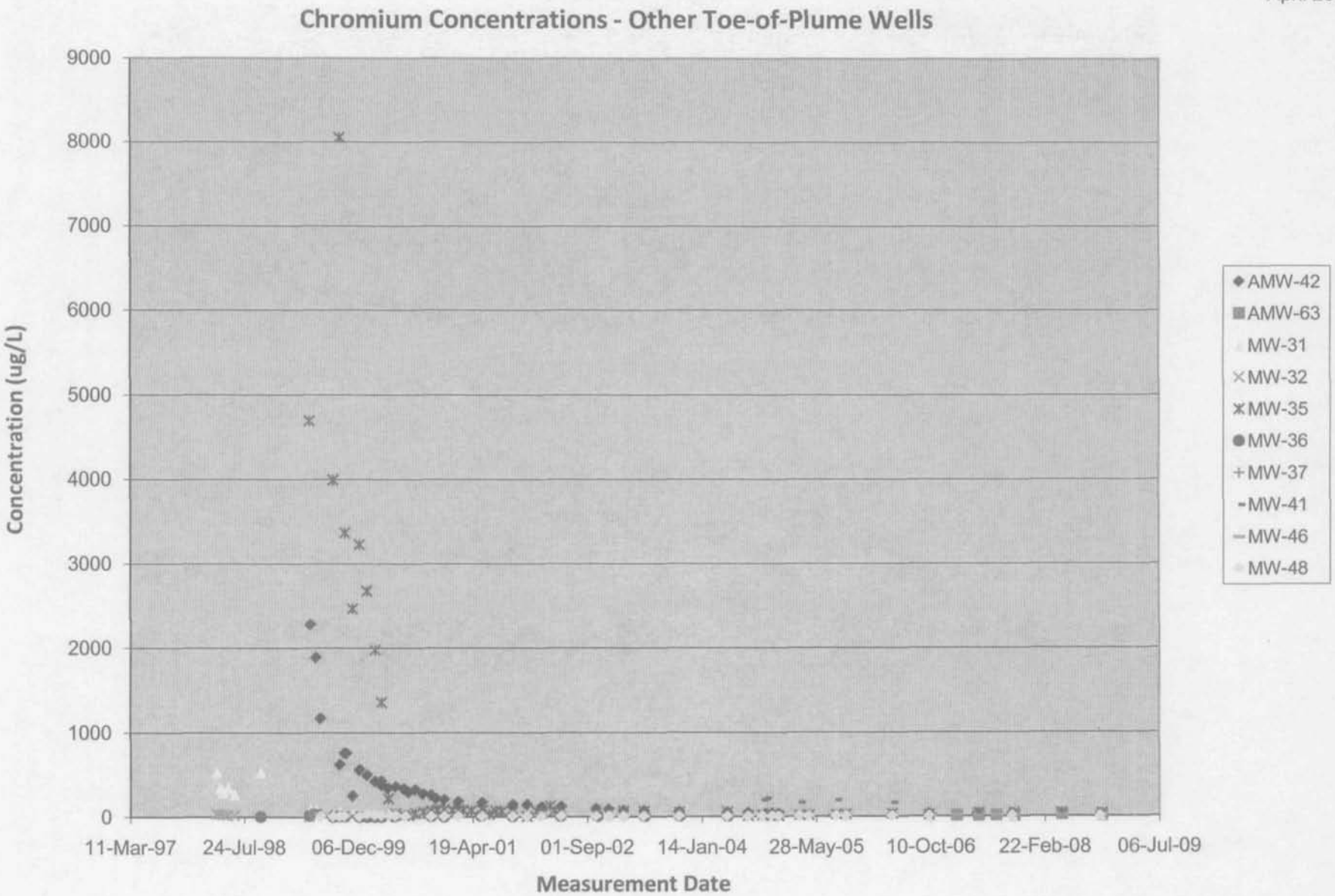
APPENDIX A-2

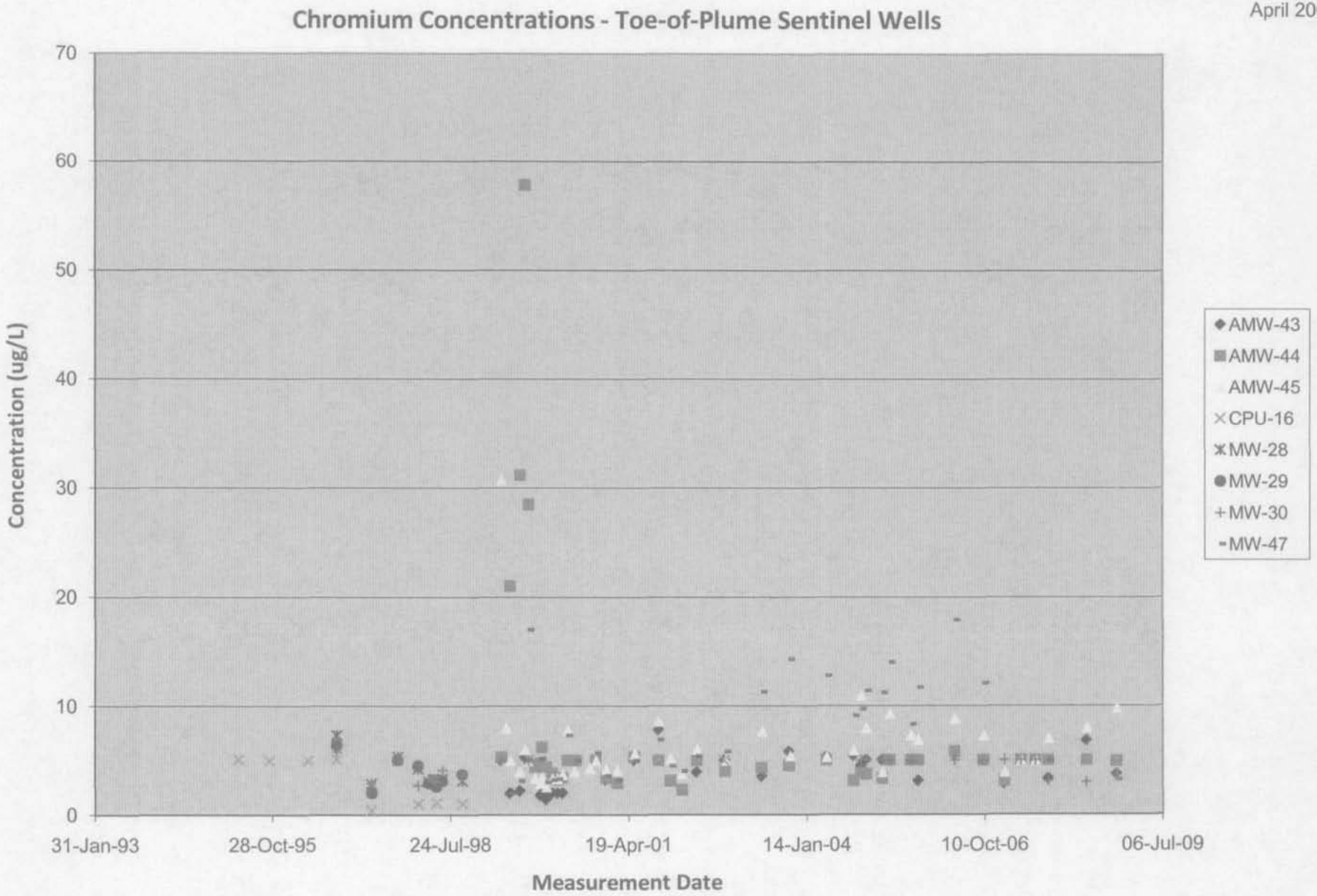
CHROMIUM CONCENTRATIONS – BY WELL GROUPING

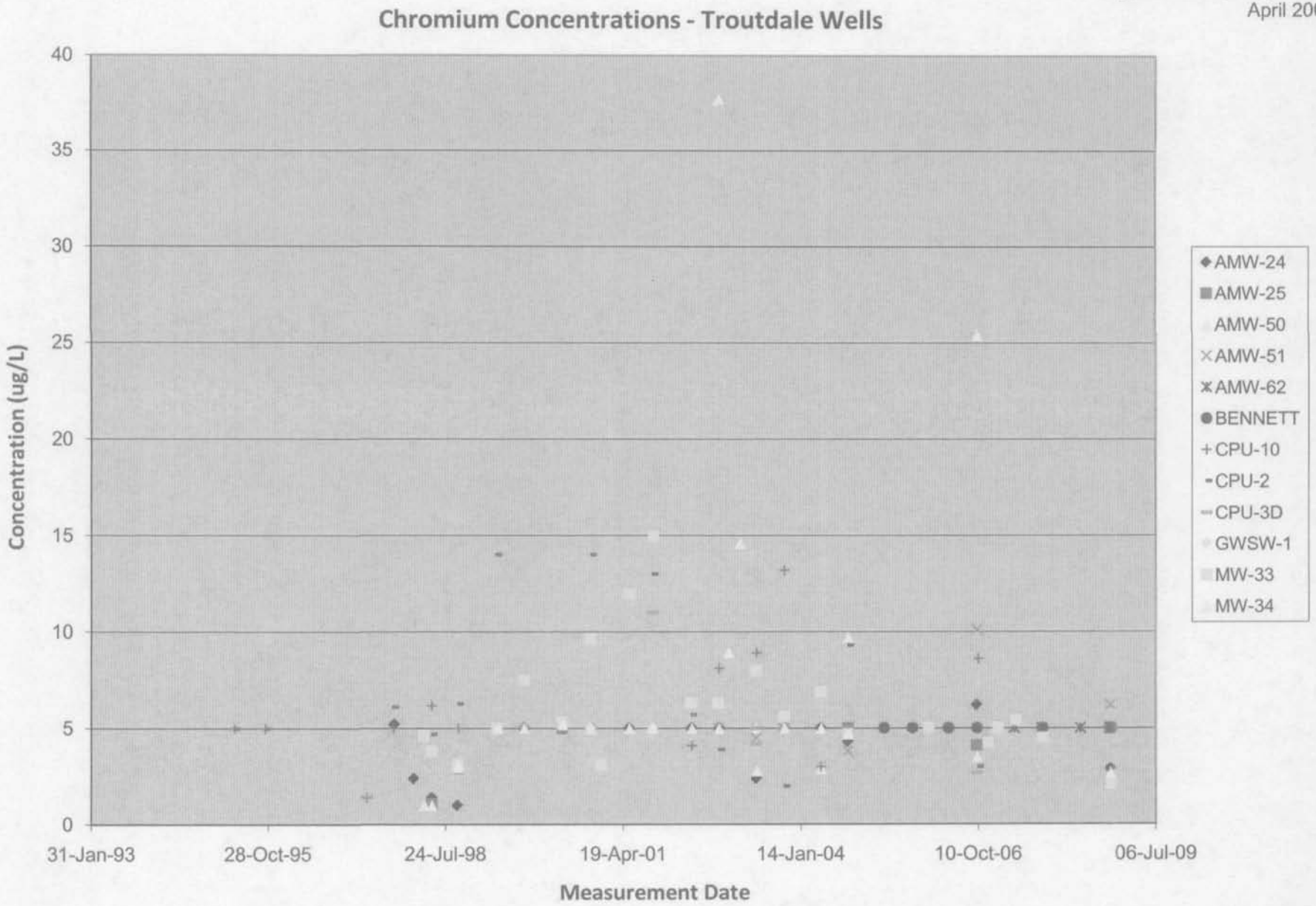

Chromium Concentrations - Proximal Wells
Concentration (ug/L)
200000
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
29-Mar-86
23-Dec-88
19-Sep-91
15-Jun-94
11-Mar-97
06-Dec-99
01-Sep-02
28-May-05
22-Feb-08
Measurement Date
AMW-58
EC-1
MW-10B
MW-10C
MW-12C
MW-13C
MW-2A
MW-2B
MW-2C
MW-3A
MW-3B
MW-3C
MW-4A
MW-4B
MW-4BShed
MW-4C
MW-6A
MW-6B
MW-6C
MW-6D
MW-7B
MW-7C
MW-8B
MW-9B
MW-9C
PW-1B


Chromium Concentrations - Intermediate Wells
Concentration (ug/L)
180000
160000
140000
120000
100000
80000
60000
40000
20000
0
07-May-90
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-16
AMW-17
AMW-18
AMW-22
AMW-59
AMW-60
CPU-14
MW-14C
MW-14E
MW-15E
MW-16E
MW-17E
MW-18D
MW-18E
MW-19D
MW-20D
MW-39
MW-40


Chromium Concentrations - Church of God Wells
Concentration (ug/L)
50000
45000
40000
35000
30000
25000
20000
15000
10000
5000
0
07-May-90
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-14
AMW-15
AMW-23
AMW-27
AMW-61
CPU-12
CPU-13
CPU-15
MW-21D
MW-22D
MW-23D
MW-24D
MW-25D
MW-26D
MW-27D
MW-49


Chromium Concentrations - Other Toe-of-Plume Wells
Concentration (ug/L)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
11-Mar-97
24-Jul-98
06-Dec-99
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
Measurement Date
AMW-42
AMW-63
MW-31
MW-32
MW-35
MW-36
MW-37
MW-41
MW-46
MW-48


Chromium Concentrations - Toe-of-Plume Sentinel Wells
Concentration (ug/L)
70
60
50
40
30
20
10
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-43
AMW-44
AMW-45
CPU-16
MW-28
MW-29
MW-30
MW-47


Chromium Concentrations - Troutdale Wells
Concentration (ug/L)
40
35
30
25
20
15
10
5
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-24
AMW-25
AMW-50
AMW-51
AMW-62
BENNETT
CPU-10
CPU-2
CPU-3D
GWSW-1
MW-33
MW-34

APPENDIX A-3

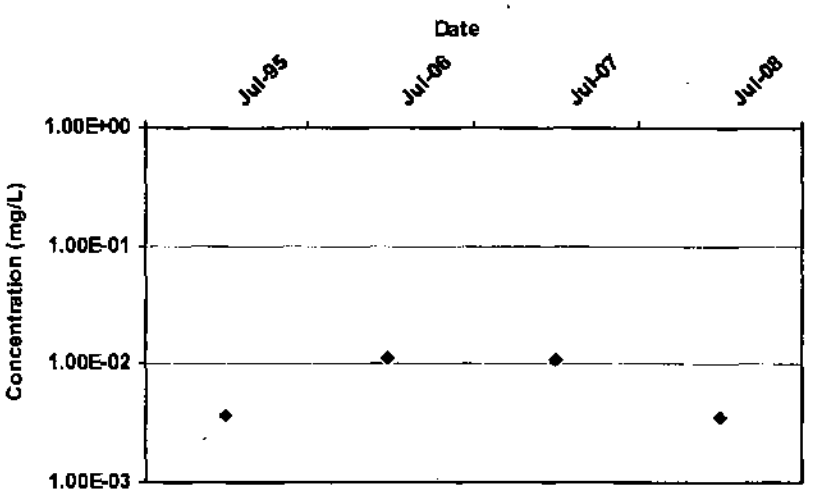
CHROMIUM CONCENTRATIONS – INDIVIDUAL WELLS

UPGRADIENT WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-6A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-2

Confidence in Trend:
62.5%

Coefficient of Variation:
0.59

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

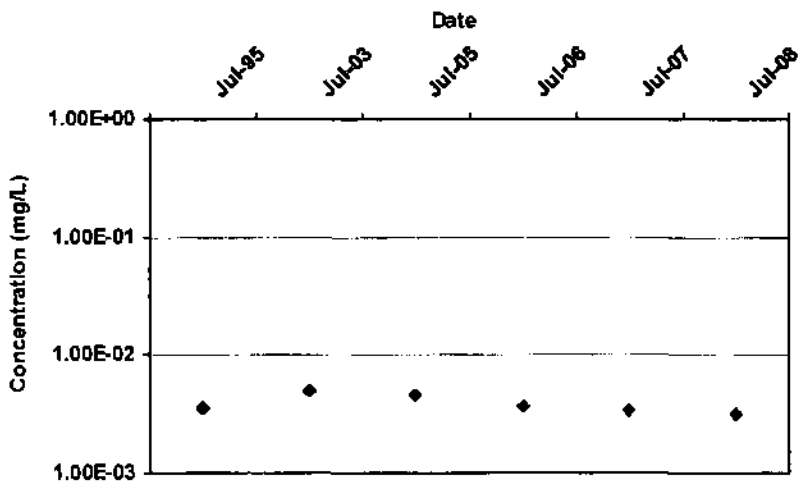
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-6A	T	7/1/1995	CHROMIUM, HEXAVALENT	3.7E-03		2	1
AMW-6A	T	7/1/2006	CHROMIUM, HEXAVALENT	1.1E-02		4	4
AMW-6A	T	7/1/2007	CHROMIUM, HEXAVALENT	1.1E-02		3	3
AMW-6A	T	7/1/2008	CHROMIUM, HEXAVALENT	3.6E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-7A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-9

Confidence in Trend:
93.2%

Coefficient of Variation:
0.19

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

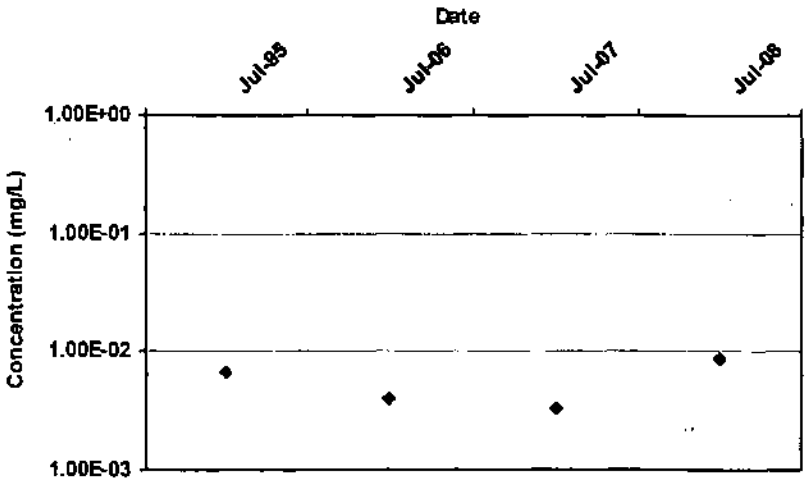
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-7A	T	7/1/1995	CHROMIUM, HEXAVALENT	3.5E-03		2	1
AMW-7A	T	7/1/2003	CHROMIUM, HEXAVALENT	5.0E-03	ND	1	0
AMW-7A	T	7/1/2005	CHROMIUM, HEXAVALENT	4.7E-03		1	1
AMW-7A	T	7/1/2006	CHROMIUM, HEXAVALENT	3.6E-03		4	4
AMW-7A	T	7/1/2007	CHROMIUM, HEXAVALENT	3.4E-03		3	2
AMW-7A	T	7/1/2008	CHROMIUM, HEXAVALENT	3.2E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-10A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
37.5%

Coefficient of Variation:
0.44

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

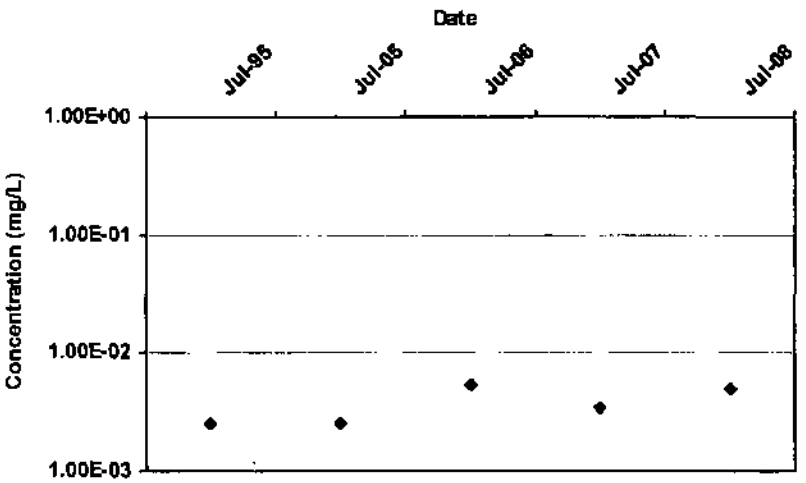
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-10A	T	7/1/1995	CHROMIUM, HEXAVALENT	6.6E-03		2	2
AMW-10A	T	7/1/2006	CHROMIUM, HEXAVALENT	4.0E-03		4	3
AMW-10A	T	7/1/2007	CHROMIUM, HEXAVALENT	3.3E-03		3	2
AMW-10A	T	7/1/2008	CHROMIUM, HEXAVALENT	6.6E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-11A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
5

Confidence in Trend:
82.1%

Coefficient of Variation:
0.37

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-11A	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-11A	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-11A	T	7/1/2006	CHROMIUM, HEXAVALENT	5.5E-03		4	4
AMW-11A	T	7/1/2007	CHROMIUM, HEXAVALENT	3.4E-03		3	1
AMW-11A	T	7/1/2008	CHROMIUM, HEXAVALENT	4.9E-03		2	2

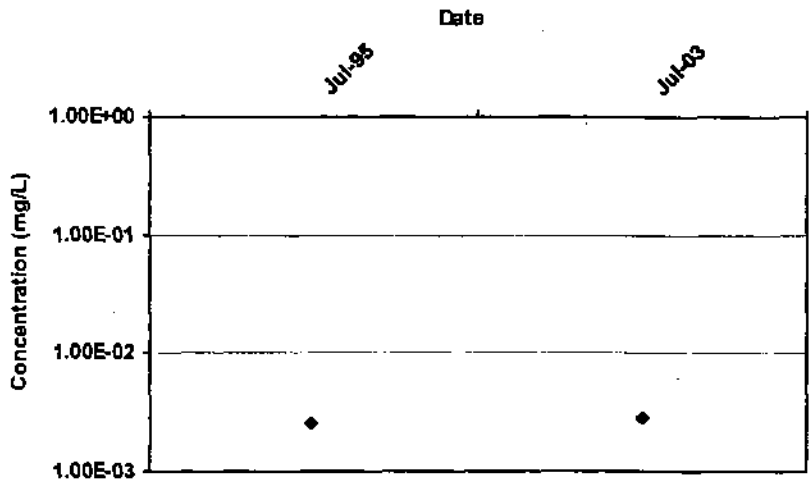
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

TCE SOURCE WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-2A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 0.0%

Coefficient of Variation: 0.00

Mann Kendall Concentration Trend: (See Note) N/A

Data Table:

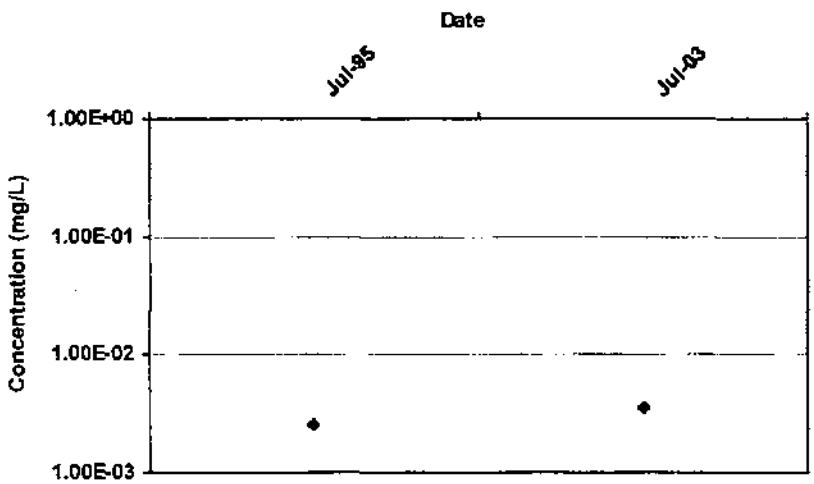
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-2A	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-2A	T	7/1/2003	CHROMIUM, HEXAVALENT	2.8E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-2B
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

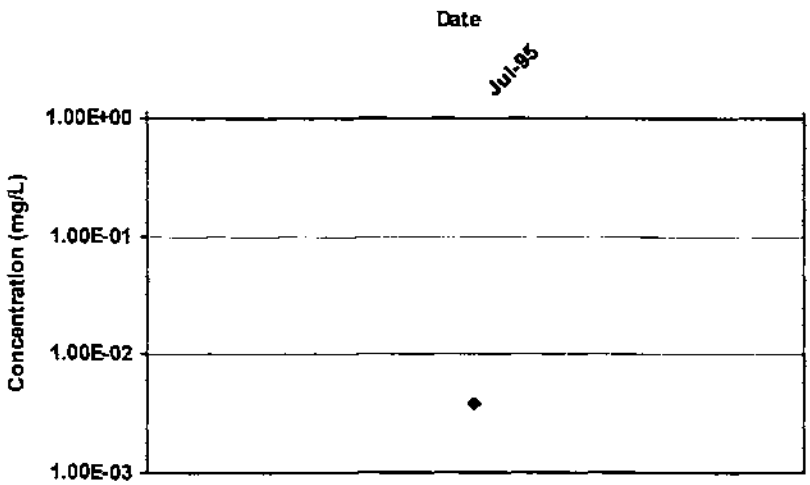
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-2B	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-2B	T	7/1/2003	CHROMIUM, HEXAVALENT	3.5E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-3A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concantration Trend: (See Note)
N/A

Data Table:

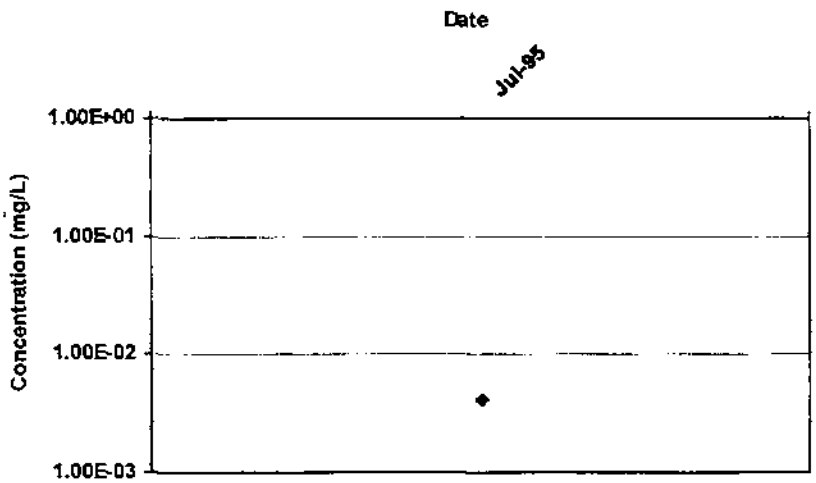
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-3A	T	7/1/1995	CHROMIUM, HEXAVALENT	3.9E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-4A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

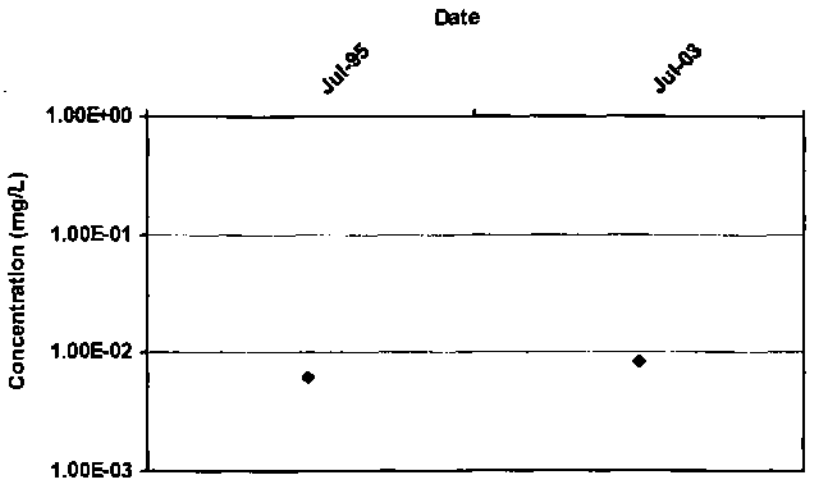
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-4A	T	7/1/1995	CHROMIUM, HEXAVALENT	4.2E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-12A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

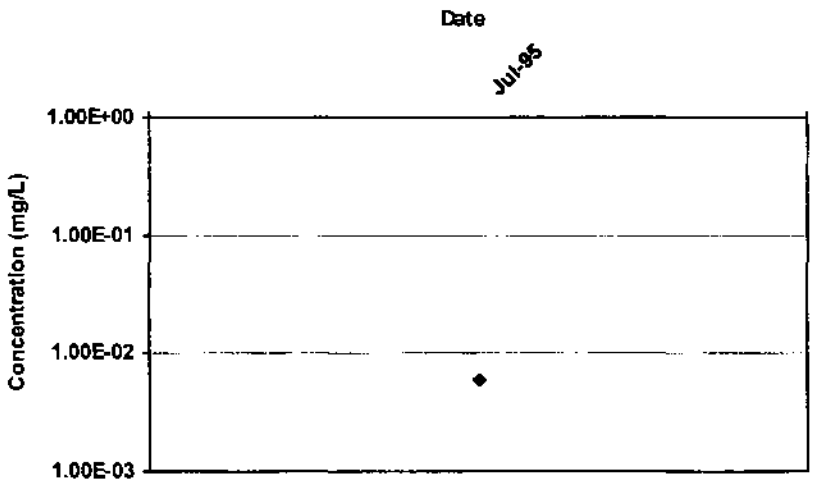
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-12A	T	7/1/1995	CHROMIUM, HEXAVALENT	6.3E-03		2	1
AMW-12A	T	7/1/2003	CHROMIUM, HEXAVALENT	8.3E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-13A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence In Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

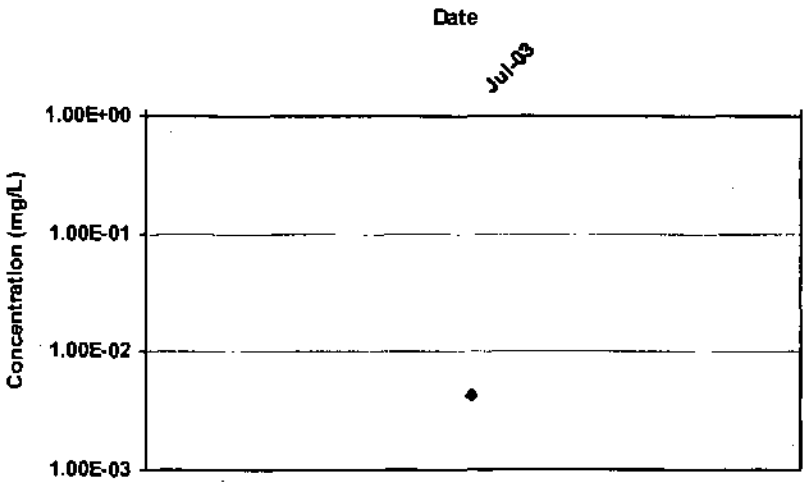
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-13A	T	7/1/1995	CHROMIUM, HEXAVALENT	5.9E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: RAMW-2C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
RAMW-2C	T	7/1/2003	CHROMIUM, HEXAVALENT	4.3E-03		1	1

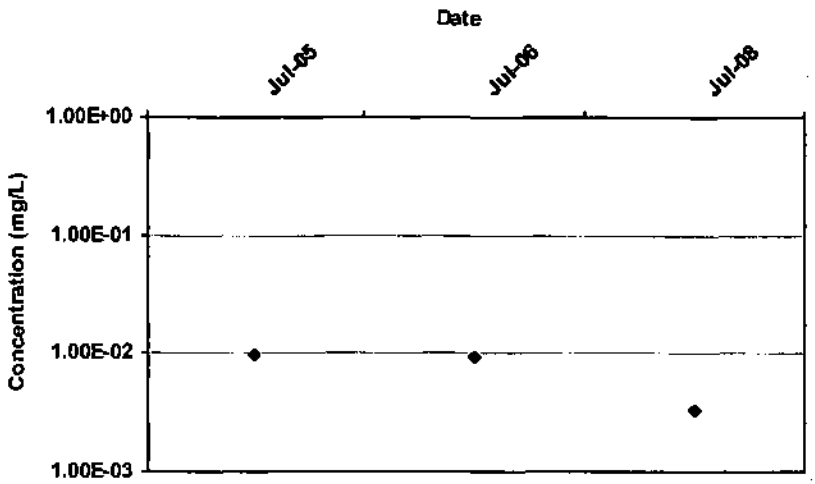
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

PROXIMAL WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-58
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

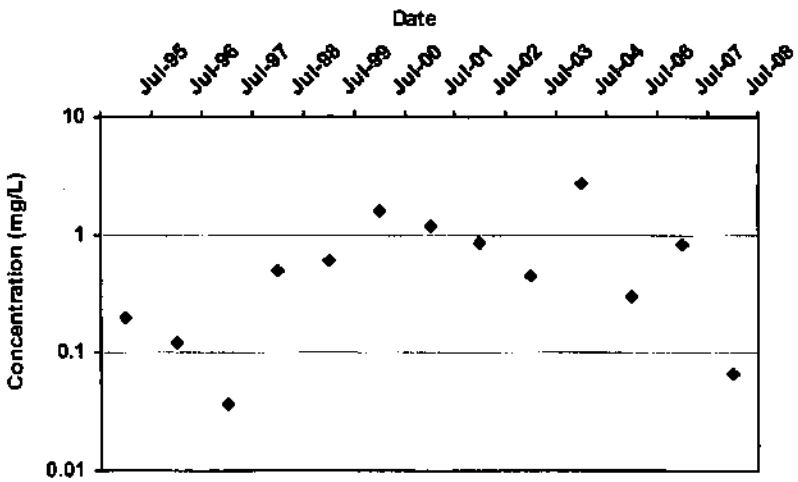
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-58	S	7/1/2005	CHROMIUM, HEXAVALENT	9.6E-03		3	2
AMW-58	S	7/1/2006	CHROMIUM, HEXAVALENT	9.5E-03		2	2
AMW-58	S	7/1/2008	CHROMIUM, HEXAVALENT	3.3E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2A
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
12

Confidence in Trend:
74.5%

Coefficient of Variation:
1.02

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

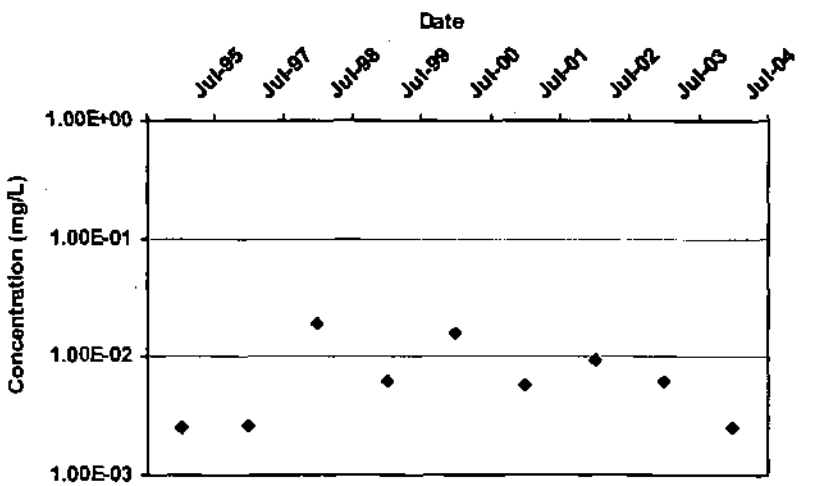
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2A	S	7/1/1995	CHROMIUM, HEXAVALENT	2.0E-01		2	2
MW-2A	S	7/1/1996	CHROMIUM, HEXAVALENT	1.2E-01		2	2
MW-2A	S	7/1/1997	CHROMIUM, HEXAVALENT	3.7E-02		2	2
MW-2A	S	7/1/1998	CHROMIUM, HEXAVALENT	5.1E-01		2	2
MW-2A	S	7/1/1999	CHROMIUM, HEXAVALENT	6.2E-01		2	2
MW-2A	S	7/1/2000	CHROMIUM, HEXAVALENT	1.6E+00		2	2
MW-2A	S	7/1/2001	CHROMIUM, HEXAVALENT	1.2E+00		2	2
MW-2A	S	7/1/2002	CHROMIUM, HEXAVALENT	8.6E-01		2	2
MW-2A	S	7/1/2003	CHROMIUM, HEXAVALENT	4.5E-01		2	2
MW-2A	S	7/1/2004	CHROMIUM, HEXAVALENT	2.7E+00		1	1
MW-2A	S	7/1/2006	CHROMIUM, HEXAVALENT	3.0E-01		1	1
MW-2A	S	7/1/2007	CHROMIUM, HEXAVALENT	8.2E-01		1	1
MW-2A	S	7/1/2008	CHROMIUM, HEXAVALENT	6.6E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
1

Confidence in Trend:
50.0%

Coefficient of Variation:
0.77

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

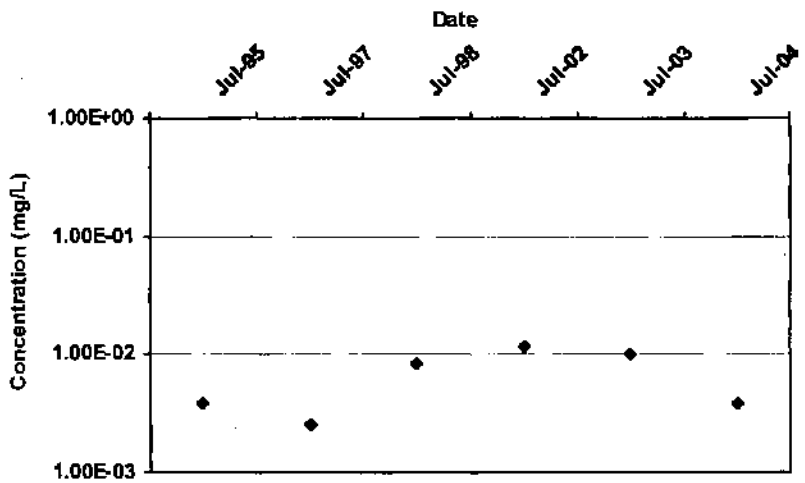
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2B	S	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-2B	S	7/1/1997	CHROMIUM, HEXAVALENT	2.7E-03	ND	1	0
MW-2B	S	7/1/1998	CHROMIUM, HEXAVALENT	1.9E-02		2	2
MW-2B	S	7/1/1999	CHROMIUM, HEXAVALENT	6.3E-03		2	2
MW-2B	S	7/1/2000	CHROMIUM, HEXAVALENT	1.6E-02		2	2
MW-2B	S	7/1/2001	CHROMIUM, HEXAVALENT	5.7E-03		1	1
MW-2B	S	7/1/2002	CHROMIUM, HEXAVALENT	9.4E-03		1	1
MW-2B	S	7/1/2003	CHROMIUM, HEXAVALENT	6.3E-03		1	1
MW-2B	S	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2C
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
3

Confidence in Trend:
64.0%

Coefficient of Variation:
0.57

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

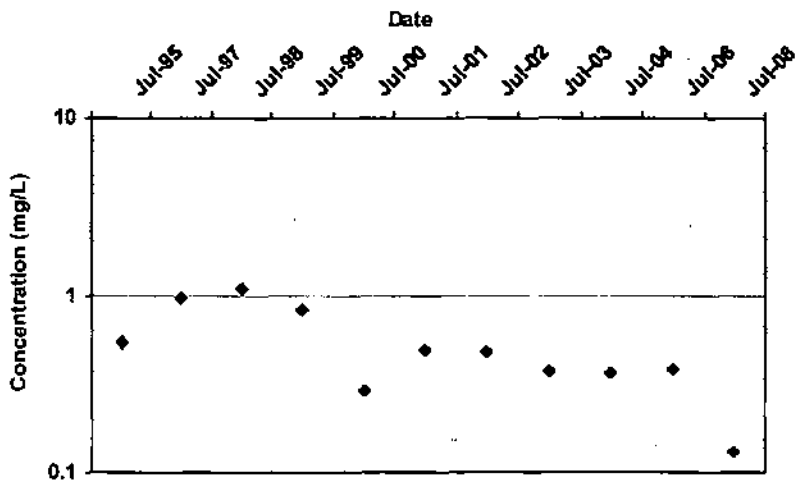
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2C	S	7/1/1995	CHROMIUM, HEXAVALENT	3.9E-03		2	1
MW-2C	S	7/1/1997	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-2C	S	7/1/1998	CHROMIUM, HEXAVALENT	8.4E-03		1	1
MW-2C	S	7/1/2002	CHROMIUM, HEXAVALENT	1.2E-02		1	1
MW-2C	S	7/1/2003	CHROMIUM, HEXAVALENT	1.0E-02		1	1
MW-2C	S	7/1/2004	CHROMIUM, HEXAVALENT	3.8E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3A
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-33

Confidence in Trend:
99.5%

Coefficient of Variation:
0.55

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

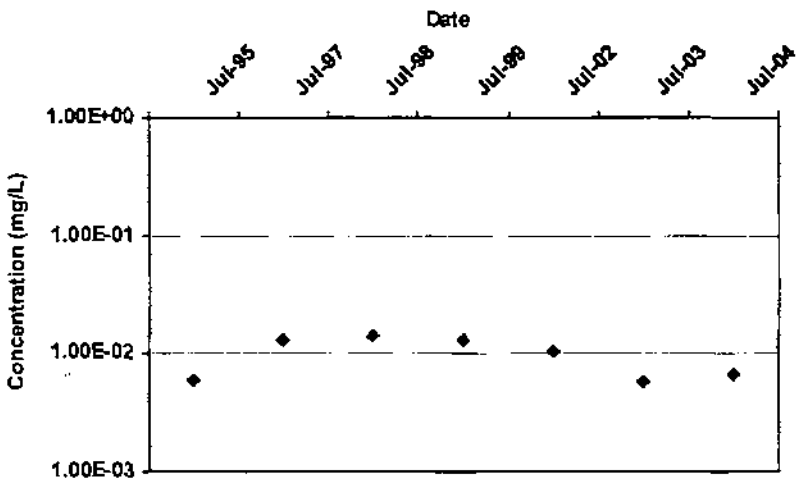
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3A	S	7/1/1995	CHROMIUM, HEXAVALENT	5.4E-01		2	2
MW-3A	S	7/1/1997	CHROMIUM, HEXAVALENT	9.6E-01		2	2
MW-3A	S	7/1/1998	CHROMIUM, HEXAVALENT	1.1E+00		2	2
MW-3A	S	7/1/1999	CHROMIUM, HEXAVALENT	8.4E-01		2	2
MW-3A	S	7/1/2000	CHROMIUM, HEXAVALENT	2.9E-01		2	2
MW-3A	S	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-01		2	2
MW-3A	S	7/1/2002	CHROMIUM, HEXAVALENT	4.8E-01		2	2
MW-3A	S	7/1/2003	CHROMIUM, HEXAVALENT	3.8E-01		2	2
MW-3A	S	7/1/2004	CHROMIUM, HEXAVALENT	3.6E-01		2	2
MW-3A	S	7/1/2006	CHROMIUM, HEXAVALENT	3.9E-01		1	1
MW-3A	S	7/1/2008	CHROMIUM, HEXAVALENT	1.3E-01		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-7

Confidence in Trend:
80.9%

Coefficient of Variation:
0.36

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

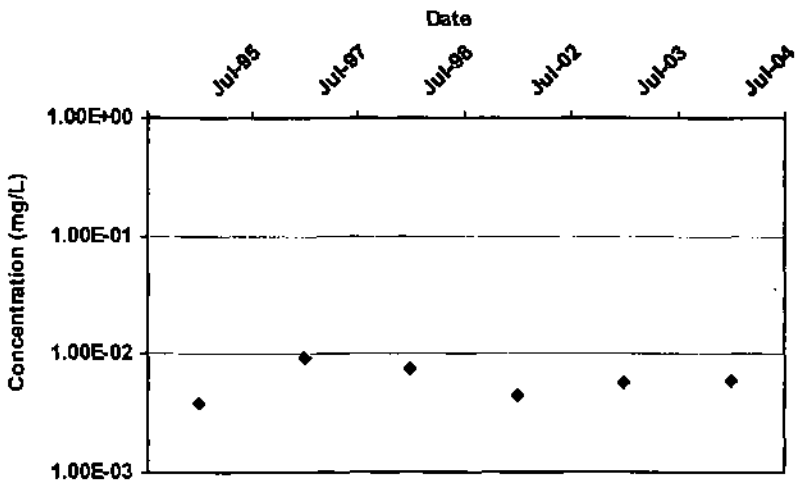
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3B	S	7/1/1995	CHROMIUM, HEXAVALENT	6.0E-03		2	2
MW-3B	S	7/1/1997	CHROMIUM, HEXAVALENT	1.3E-02		1	1
MW-3B	S	7/1/1998	CHROMIUM, HEXAVALENT	1.4E-02		2	2
MW-3B	S	7/1/1999	CHROMIUM, HEXAVALENT	1.3E-02		2	2
MW-3B	S	7/1/2002	CHROMIUM, HEXAVALENT	1.0E-02		1	1
MW-3B	S	7/1/2003	CHROMIUM, HEXAVALENT	5.8E-03		1	1
MW-3B	S	7/1/2004	CHROMIUM, HEXAVALENT	6.8E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3C
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
1

Confidence in Trend:
50.0%

Coefficient of Variation:
0.33

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

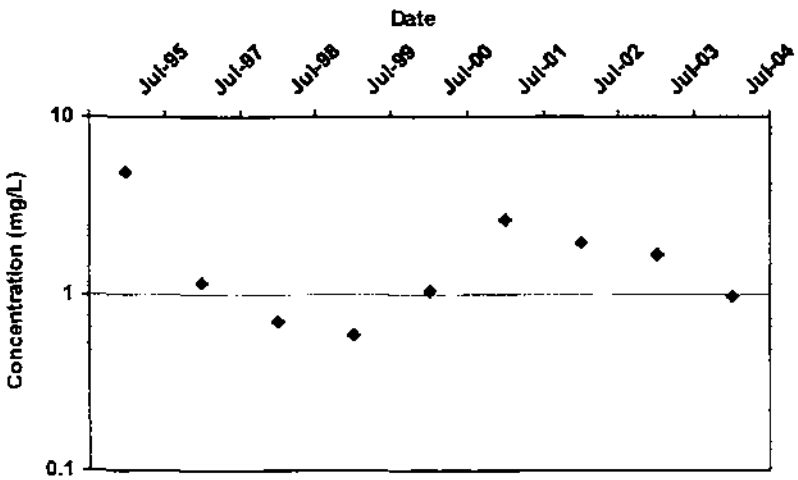
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3C	S	7/1/1995	CHROMIUM, HEXAVALENT	3.8E-03		2	1
MW-3C	S	7/1/1997	CHROMIUM, HEXAVALENT	9.3E-03		1	1
MW-3C	S	7/1/1998	CHROMIUM, HEXAVALENT	7.7E-03		1	1
MW-3C	S	7/1/2002	CHROMIUM, HEXAVALENT	4.4E-03		1	1
MW-3C	S	7/1/2003	CHROMIUM, HEXAVALENT	5.8E-03		1	1
MW-3C	S	7/1/2004	CHROMIUM, HEXAVALENT	6.1E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4A
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-4

Confidence in Trend:
61.9%

Coefficient of Variation:
0.77

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

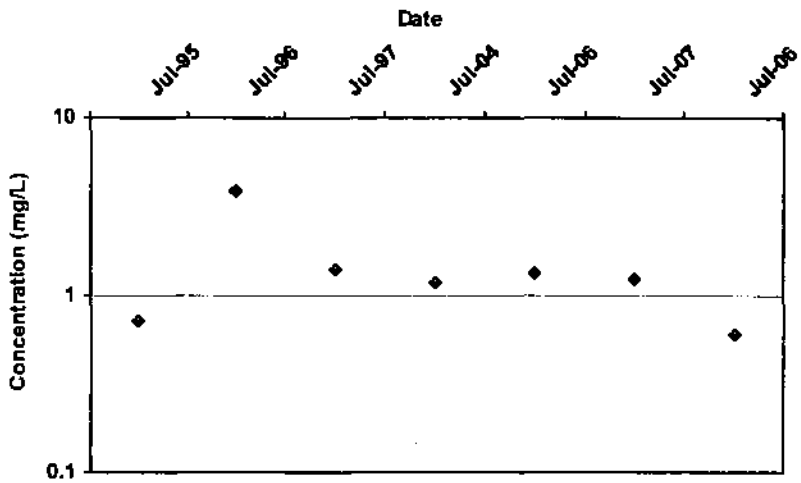
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4A	S	7/1/1995	CHROMIUM, HEXAVALENT	4.8E+00		2	2
MW-4A	S	7/1/1997	CHROMIUM, HEXAVALENT	1.1E+00		2	2
MW-4A	S	7/1/1998	CHROMIUM, HEXAVALENT	7.0E-01		2	2
MW-4A	S	7/1/1999	CHROMIUM, HEXAVALENT	5.8E-01		2	2
MW-4A	S	7/1/2000	CHROMIUM, HEXAVALENT	1.0E+00		2	2
MW-4A	S	7/1/2001	CHROMIUM, HEXAVALENT	2.6E+00		2	2
MW-4A	S	7/1/2002	CHROMIUM, HEXAVALENT	2.0E+00		2	2
MW-4A	S	7/1/2003	CHROMIUM, HEXAVALENT	1.7E+00		2	2
MW-4A	S	7/1/2004	CHROMIUM, HEXAVALENT	9.7E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-7

Confidence in Trend:
80.9%

Coefficient of Variation:
0.74

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

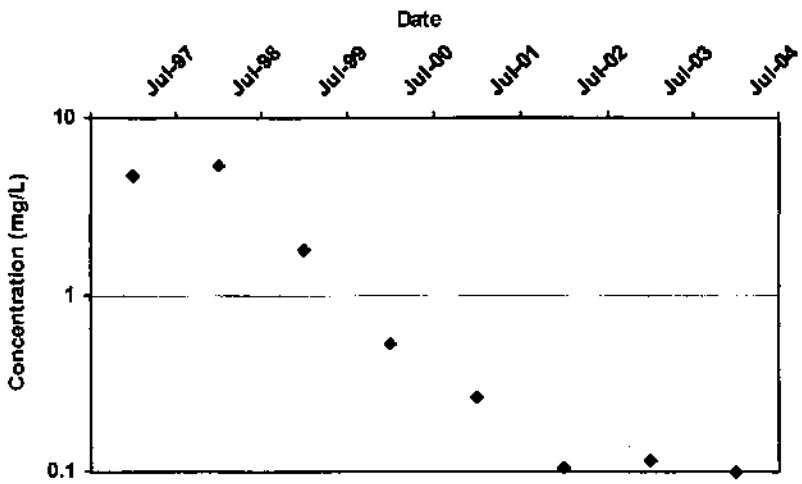
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4B	S	7/1/1995	CHROMIUM, HEXAVALENT	7.1E-01		2	2
MW-4B	S	7/1/1996	CHROMIUM, HEXAVALENT	3.8E+00		2	2
MW-4B	S	7/1/1997	CHROMIUM, HEXAVALENT	1.4E+00		1	1
MW-4B	S	7/1/2004	CHROMIUM, HEXAVALENT	1.2E+00		1	1
MW-4B	S	7/1/2006	CHROMIUM, HEXAVALENT	1.3E+00		1	1
MW-4B	S	7/1/2007	CHROMIUM, HEXAVALENT	1.2E+00		1	1
MW-4B	S	7/1/2008	CHROMIUM, HEXAVALENT	6.1E-01		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4BShed
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-24

Confidence in Trend:
99.9%

Coefficient of Variation:
1.35

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

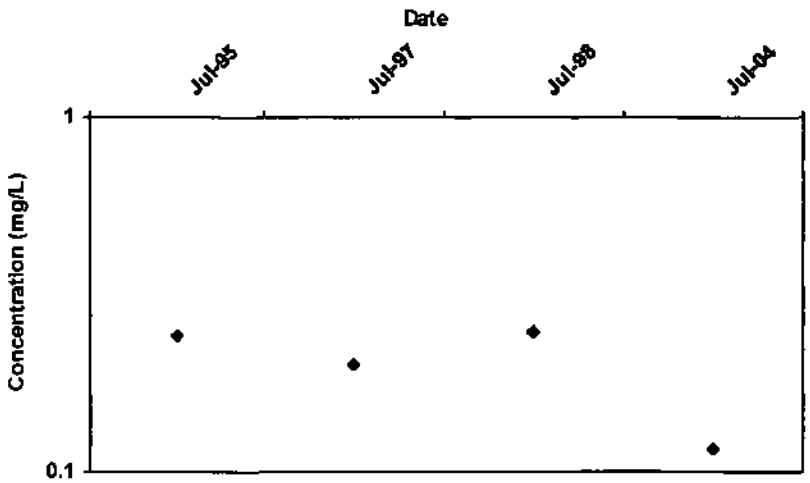
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4BShed	S	7/1/1997	CHROMIUM, HEXAVALENT	4.8E+00		2	2
MW-4BShed	S	7/1/1998	CHROMIUM, HEXAVALENT	5.4E+00		2	2
MW-4BShed	S	7/1/1999	CHROMIUM, HEXAVALENT	1.8E+00		2	2
MW-4BShed	S	7/1/2000	CHROMIUM, HEXAVALENT	5.3E-01		2	2
MW-4BShed	S	7/1/2001	CHROMIUM, HEXAVALENT	2.6E-01		2	2
MW-4BShed	S	7/1/2002	CHROMIUM, HEXAVALENT	1.1E-01		2	2
MW-4BShed	S	7/1/2003	CHROMIUM, HEXAVALENT	1.2E-01		2	2
MW-4BShed	S	7/1/2004	CHROMIUM, HEXAVALENT	1.0E-01		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4C
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-2

Confidence in Trend:
62.5%

Coefficient of Variation:
0.30

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

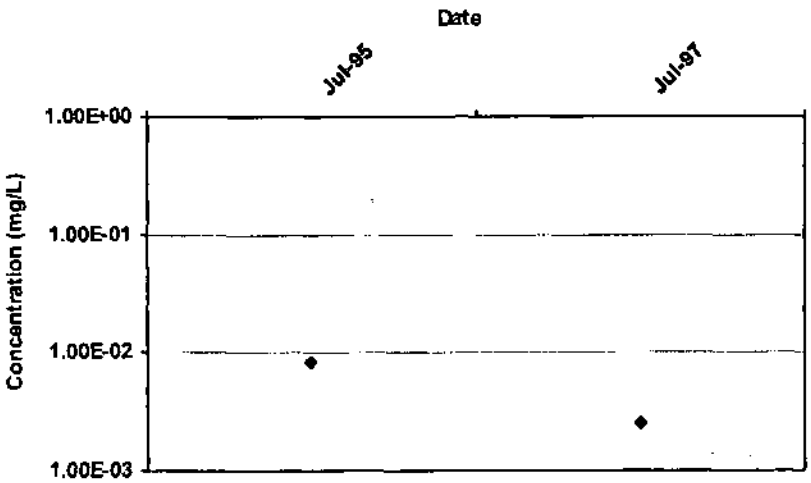
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4C	S	7/1/1995	CHROMIUM, HEXAVALENT	2.4E-01		2	2
MW-4C	S	7/1/1997	CHROMIUM, HEXAVALENT	2.0E-01		2	2
MW-4C	S	7/1/1998	CHROMIUM, HEXAVALENT	2.5E-01		1	1
MW-4C	S	7/1/2004	CHROMIUM, HEXAVALENT	1.2E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6A
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

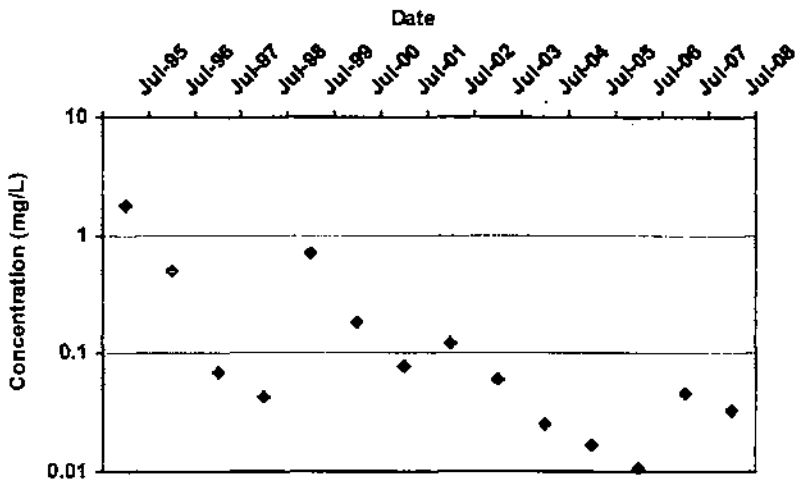
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6A	T	7/1/1995	CHROMIUM, HEXAVALENT	8.3E-03		2	1
MW-6A	T	7/1/1997	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-55

Confidence in Trend:

99.9%

Coefficient of Variation:

1.84

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

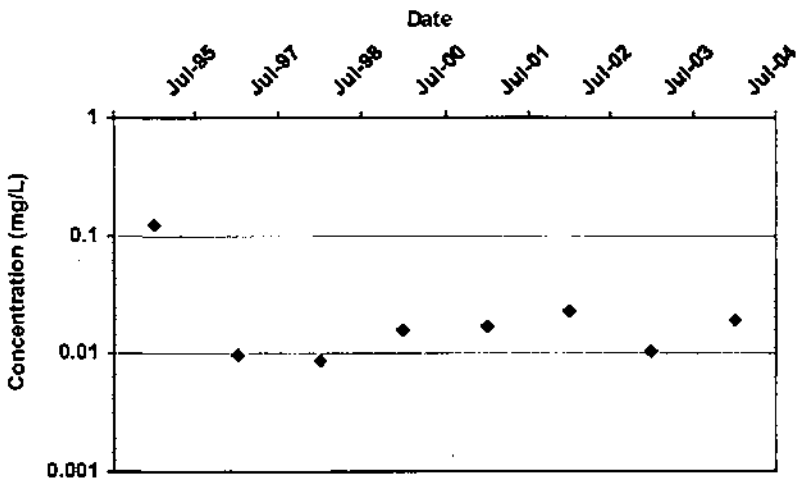
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6B	S	7/1/1995	CHROMIUM, HEXAVALENT	1.8E+00		11	11
MW-6B	S	7/1/1996	CHROMIUM, HEXAVALENT	5.0E-01		2	2
MW-6B	S	7/1/1997	CHROMIUM, HEXAVALENT	6.9E-02		2	2
MW-6B	S	7/1/1998	CHROMIUM, HEXAVALENT	4.4E-02		2	2
MW-6B	S	7/1/1999	CHROMIUM, HEXAVALENT	7.0E-01		2	2
MW-6B	S	7/1/2000	CHROMIUM, HEXAVALENT	1.9E-01		3	3
MW-6B	S	7/1/2001	CHROMIUM, HEXAVALENT	7.7E-02		2	2
MW-6B	S	7/1/2002	CHROMIUM, HEXAVALENT	1.2E-01		3	3
MW-6B	S	7/1/2003	CHROMIUM, HEXAVALENT	6.1E-02		3	3
MW-6B	S	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-02		2	2
MW-6B	S	7/1/2005	CHROMIUM, HEXAVALENT	1.7E-02		1	1
MW-6B	S	7/1/2006	CHROMIUM, HEXAVALENT	1.1E-02		1	1
MW-6B	S	7/1/2007	CHROMIUM, HEXAVALENT	4.6E-02		2	2
MW-6B	S	7/1/2008	CHROMIUM, HEXAVALENT	3.3E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to Insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6C
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 4

Confidence in Trend: 64.0%

Coefficient of Variation: 1.38

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

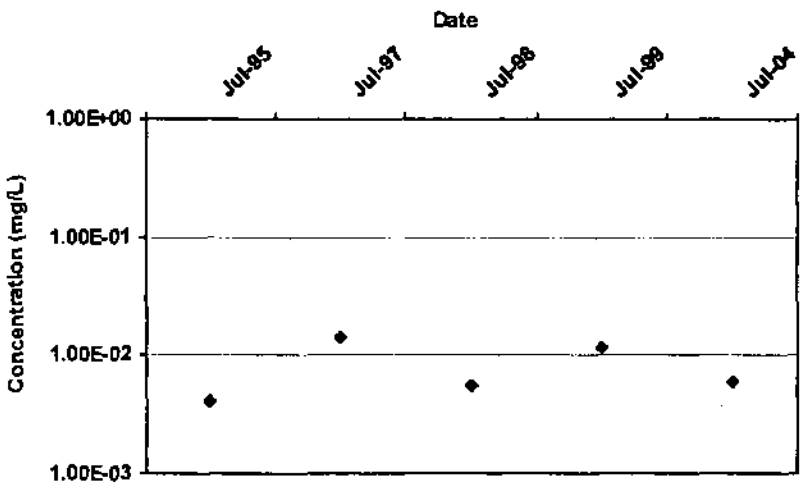
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6C	S	7/1/1995	CHROMIUM, HEXAVALENT	1.3E-01		2	2
MW-6C	S	7/1/1997	CHROMIUM, HEXAVALENT	9.6E-03		1	1
MW-6C	S	7/1/1998	CHROMIUM, HEXAVALENT	8.6E-03		1	1
MW-6C	S	7/1/2000	CHROMIUM, HEXAVALENT	1.6E-02		1	1
MW-6C	S	7/1/2001	CHROMIUM, HEXAVALENT	1.7E-02		1	1
MW-6C	S	7/1/2002	CHROMIUM, HEXAVALENT	2.3E-02		1	1
MW-6C	S	7/1/2003	CHROMIUM, HEXAVALENT	1.1E-02		1	1
MW-6C	S	7/1/2004	CHROMIUM, HEXAVALENT	1.9E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6D
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
2

Confidence in Trend:
59.2%

Coefficient of Variation:
0.51

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

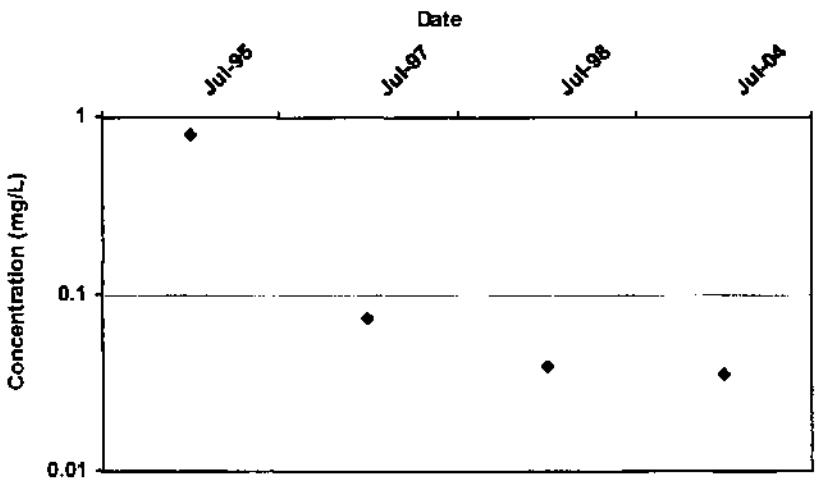
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6D	S	7/1/1995	CHROMIUM, HEXAVALENT	4.2E-03		2	1
MW-6D	S	7/1/1997	CHROMIUM, HEXAVALENT	1.4E-02		1	1
MW-6D	S	7/1/1998	CHROMIUM, HEXAVALENT	5.6E-03		1	1
MW-6D	S	7/1/1999	CHROMIUM, HEXAVALENT	1.2E-02		2	2
MW-6D	S	7/1/2004	CHROMIUM, HEXAVALENT	6.1E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-7B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: *1/2 Detection Limit*
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
95.8%

Coefficient of Variation:
1.58

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

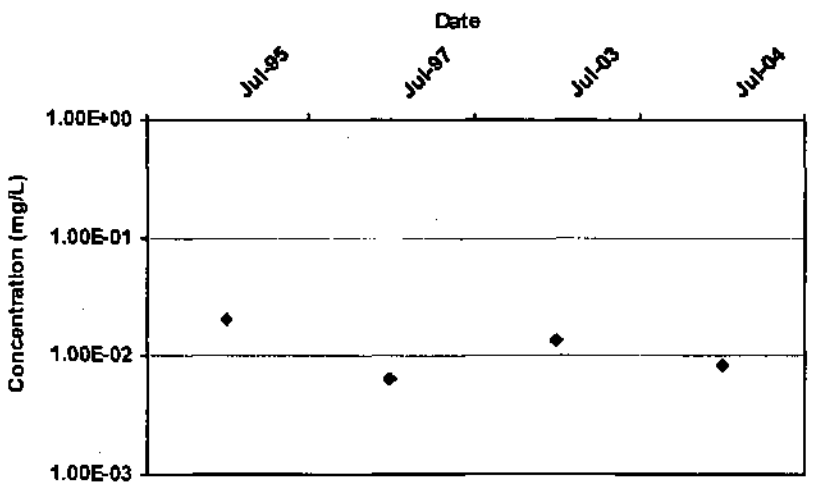
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-7B	S	7/1/1995	CHROMIUM, HEXAVALENT	7.9E-01		2	2
MW-7B	S	7/1/1997	CHROMIUM, HEXAVALENT	7.3E-02		1	1
MW-7B	S	7/1/1998	CHROMIUM, HEXAVALENT	3.9E-02		1	1
MW-7B	S	7/1/2004	CHROMIUM, HEXAVALENT	3.5E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-7C
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-2

Confidence in Trend:
62.5%

Coefficient of Variation:
0.52

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

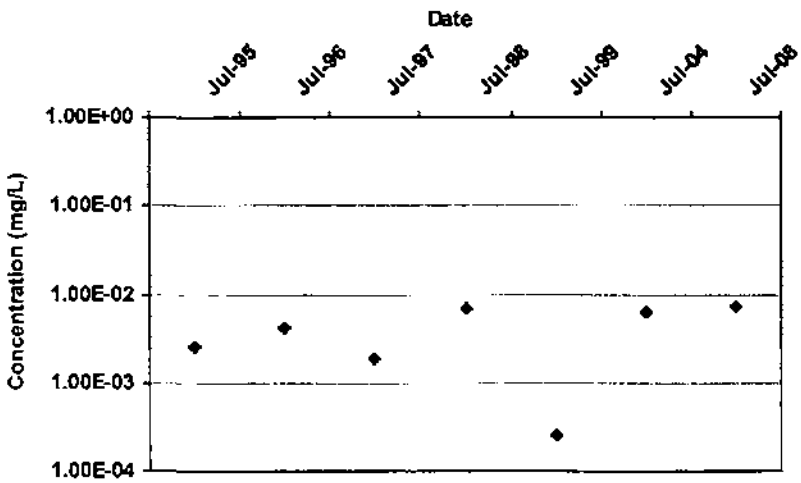
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-7C	S	7/1/1995	CHROMIUM, HEXAVALENT	2.1E-02		2	1
MW-7C	S	7/1/1997	CHROMIUM, HEXAVALENT	6.5E-03		1	1
MW-7C	S	7/1/2003	CHROMIUM, HEXAVALENT	1.4E-02		1	1
MW-7C	S	7/1/2004	CHROMIUM, HEXAVALENT	8.5E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-8B
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
7

Confidence in Trend:
80.9%

Coefficient of Variation:
0.65

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

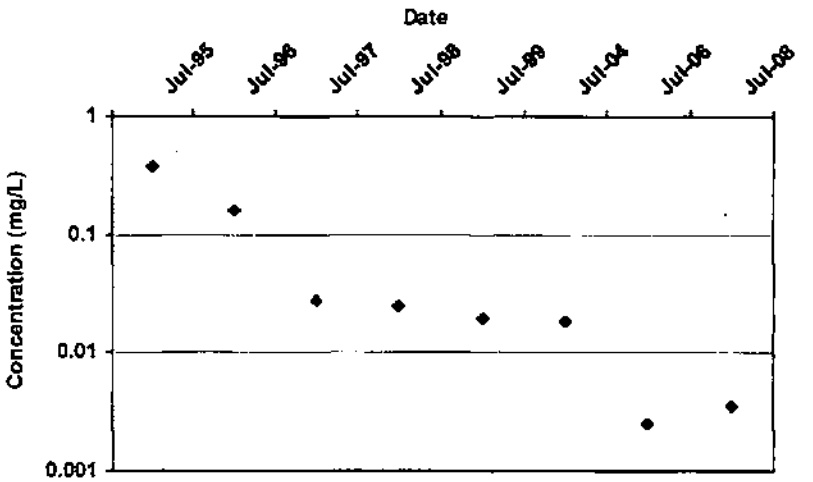
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-8B	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-8B	T	7/1/1996	CHROMIUM, HEXAVALENT	4.1E-03		2	1
MW-8B	T	7/1/1997	CHROMIUM, HEXAVALENT	1.9E-03	ND	2	0
MW-8B	T	7/1/1998	CHROMIUM, HEXAVALENT	6.8E-03		1	1
MW-8B	T	7/1/1999	CHROMIUM, HEXAVALENT	2.5E-04		2	1
MW-8B	T	7/1/2004	CHROMIUM, HEXAVALENT	6.3E-03		1	1
MW-8B	T	7/1/2008	CHROMIUM, HEXAVALENT	7.3E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-9B
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-26

Confidence in Trend:
100.0%

Coefficient of Variation:
1.65

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

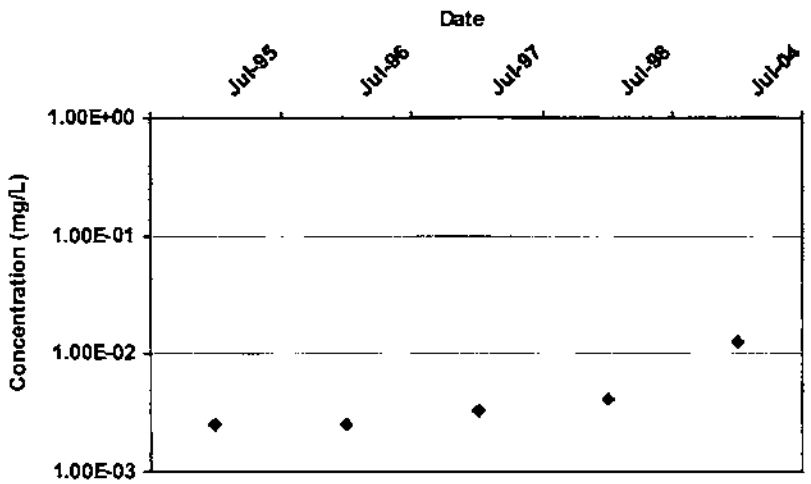
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-9B	T	7/1/1995	CHROMIUM, HEXAVALENT	3.8E-01		2	2
MW-9B	T	7/1/1996	CHROMIUM, HEXAVALENT	1.6E-01		2	2
MW-9B	T	7/1/1997	CHROMIUM, HEXAVALENT	2.7E-02		2	2
MW-9B	T	7/1/1998	CHROMIUM, HEXAVALENT	2.4E-02		2	2
MW-9B	T	7/1/1999	CHROMIUM, HEXAVALENT	2.0E-02		2	2
MW-9B	T	7/1/2004	CHROMIUM, HEXAVALENT	1.8E-02		1	1
MW-9B	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-9B	T	7/1/2008	CHROMIUM, HEXAVALENT	3.6E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-9C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
9

Confidence in Trend:
97.5%

Coefficient of Variation:
0.87

Mann Kendall Concentration Trend: (See Note)
I

Data Table:

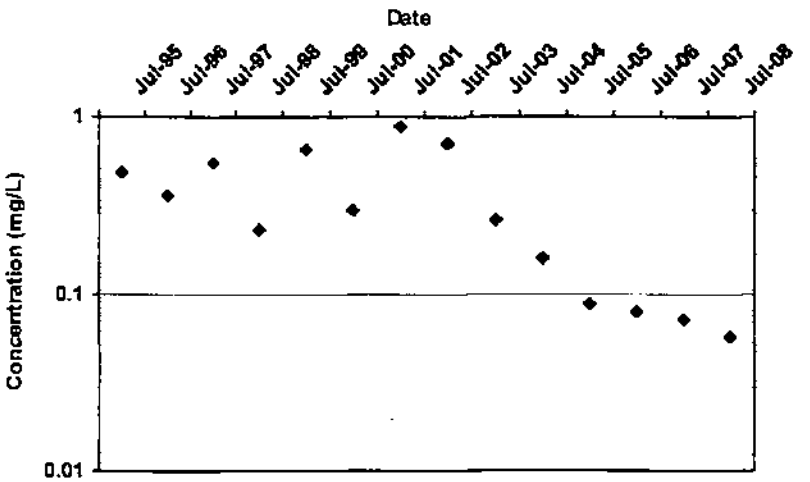
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-9C	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-9C	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-9C	T	7/1/1997	CHROMIUM, HEXAVALENT	3.3E-03		2	1
MW-9C	T	7/1/1998	CHROMIUM, HEXAVALENT	4.1E-03		1	1
MW-9C	T	7/1/2004	CHROMIUM, HEXAVALENT	1.3E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-10B
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-51

Confidence in Trend:
99.8%

Coefficient of Variation:
0.77

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

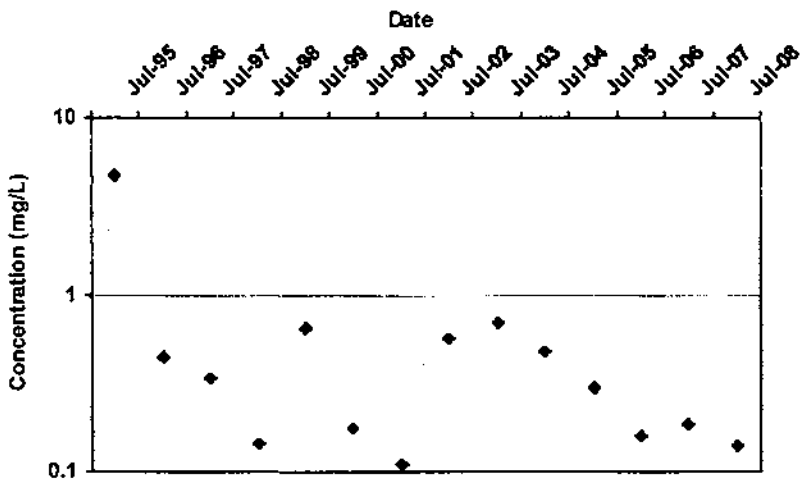
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-10B	T	7/1/1995	CHROMIUM, HEXAVALENT	4.9E-01		11	11
MW-10B	T	7/1/1996	CHROMIUM, HEXAVALENT	3.6E-01		2	2
MW-10B	T	7/1/1997	CHROMIUM, HEXAVALENT	5.5E-01		2	2
MW-10B	T	7/1/1998	CHROMIUM, HEXAVALENT	2.3E-01		2	2
MW-10B	T	7/1/1999	CHROMIUM, HEXAVALENT	6.6E-01		2	2
MW-10B	T	7/1/2000	CHROMIUM, HEXAVALENT	2.9E-01		3	3
MW-10B	T	7/1/2001	CHROMIUM, HEXAVALENT	8.9E-01		2	2
MW-10B	T	7/1/2002	CHROMIUM, HEXAVALENT	7.0E-01		3	3
MW-10B	T	7/1/2003	CHROMIUM, HEXAVALENT	2.6E-01		3	3
MW-10B	T	7/1/2004	CHROMIUM, HEXAVALENT	1.6E-01		2	2
MW-10B	T	7/1/2005	CHROMIUM, HEXAVALENT	8.7E-02		1	1
MW-10B	T	7/1/2006	CHROMIUM, HEXAVALENT	7.9E-02		1	1
MW-10B	T	7/1/2007	CHROMIUM, HEXAVALENT	7.2E-02		2	2
MW-10B	T	7/1/2008	CHROMIUM, HEXAVALENT	5.8E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-10C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-29

Confidence in Trend:

93.7%

Coefficient of Variation:

1.82

Mann Kendall Concentration Trend: (See Note)

PD

Data Table:

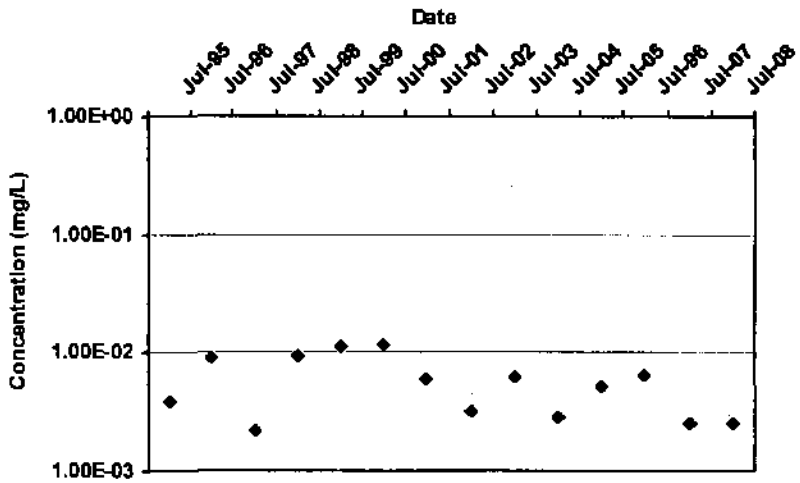
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-10C	T	7/1/1995	CHROMIUM, HEXAVALENT	4.7E+00		11	11
MW-10C	T	7/1/1996	CHROMIUM, HEXAVALENT	4.5E-01		2	2
MW-10C	T	7/1/1997	CHROMIUM, HEXAVALENT	3.4E-01		2	2
MW-10C	T	7/1/1998	CHROMIUM, HEXAVALENT	1.5E-01		2	2
MW-10C	T	7/1/1999	CHROMIUM, HEXAVALENT	6.5E-01		2	2
MW-10C	T	7/1/2000	CHROMIUM, HEXAVALENT	1.8E-01		3	3
MW-10C	T	7/1/2001	CHROMIUM, HEXAVALENT	1.1E-01		2	2
MW-10C	T	7/1/2002	CHROMIUM, HEXAVALENT	5.7E-01		3	3
MW-10C	T	7/1/2003	CHROMIUM, HEXAVALENT	6.9E-01		3	3
MW-10C	T	7/1/2004	CHROMIUM, HEXAVALENT	4.8E-01		2	2
MW-10C	T	7/1/2005	CHROMIUM, HEXAVALENT	3.0E-01		2	2
MW-10C	T	7/1/2006	CHROMIUM, HEXAVALENT	1.6E-01		2	2
MW-10C	T	7/1/2007	CHROMIUM, HEXAVALENT	1.9E-01		2	2
MW-10C	T	7/1/2008	CHROMIUM, HEXAVALENT	1.4E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-12C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-22

Confidence In Trend:

87.2%

Coefficient of Variation:

0.57

Mann Kendall Concentration Trend: (See Note)

S

Data Table:

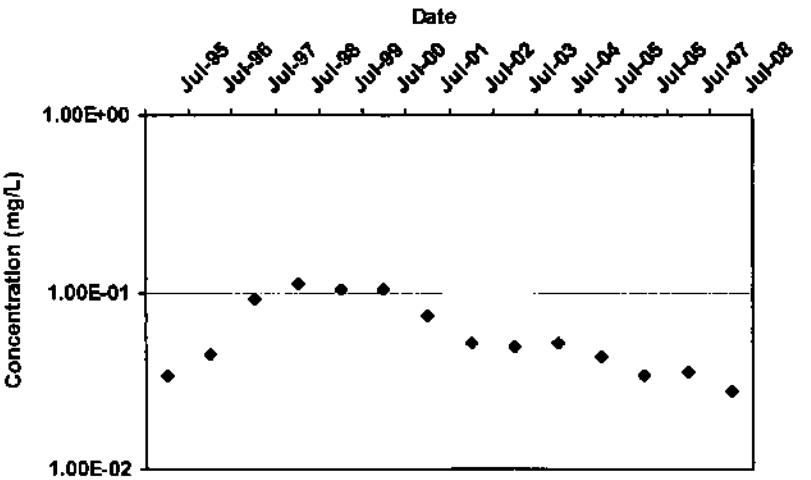
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-12C	T	7/1/1995	CHROMIUM, HEXAVALENT	3.9E-03		2	1
MW-12C	T	7/1/1996	CHROMIUM, HEXAVALENT	9.0E-03		2	2
MW-12C	T	7/1/1997	CHROMIUM, HEXAVALENT	2.2E-03	ND	2	0
MW-12C	T	7/1/1998	CHROMIUM, HEXAVALENT	9.4E-03		2	2
MW-12C	T	7/1/1999	CHROMIUM, HEXAVALENT	1.1E-02		2	2
MW-12C	T	7/1/2000	CHROMIUM, HEXAVALENT	1.2E-02		2	2
MW-12C	T	7/1/2001	CHROMIUM, HEXAVALENT	6.1E-03		1	1
MW-12C	T	7/1/2002	CHROMIUM, HEXAVALENT	3.2E-03		1	1
MW-12C	T	7/1/2003	CHROMIUM, HEXAVALENT	6.3E-03		2	2
MW-12C	T	7/1/2004	CHROMIUM, HEXAVALENT	2.9E-03		2	1
MW-12C	T	7/1/2005	CHROMIUM, HEXAVALENT	5.2E-03		1	1
MW-12C	T	7/1/2006	CHROMIUM, HEXAVALENT	6.5E-03		1	1
MW-12C	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-12C	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-13C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-41

Confidence in Trend:

98.7%

Coefficient of Variation:

0.49

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

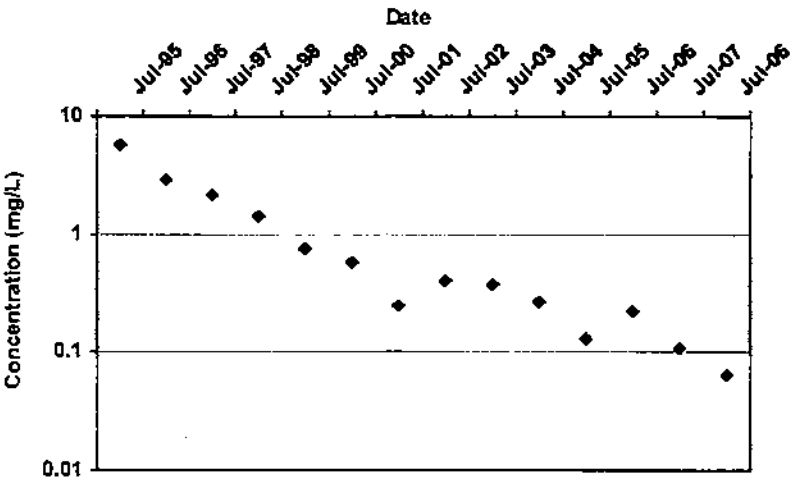
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13C	T	7/1/1995	CHROMIUM, HEXAVALENT	3.4E-02		2	2
MW-13C	T	7/1/1996	CHROMIUM, HEXAVALENT	4.5E-02		2	2
MW-13C	T	7/1/1997	CHROMIUM, HEXAVALENT	9.1E-02		2	2
MW-13C	T	7/1/1998	CHROMIUM, HEXAVALENT	1.1E-01		2	2
MW-13C	T	7/1/1999	CHROMIUM, HEXAVALENT	1.0E-01		2	2
MW-13C	T	7/1/2000	CHROMIUM, HEXAVALENT	1.0E-01		2	2
MW-13C	T	7/1/2001	CHROMIUM, HEXAVALENT	7.3E-02		2	2
MW-13C	T	7/1/2002	CHROMIUM, HEXAVALENT	5.2E-02		2	2
MW-13C	T	7/1/2003	CHROMIUM, HEXAVALENT	5.0E-02		2	2
MW-13C	T	7/1/2004	CHROMIUM, HEXAVALENT	5.2E-02		2	2
MW-13C	T	7/1/2005	CHROMIUM, HEXAVALENT	4.4E-02		1	1
MW-13C	T	7/1/2006	CHROMIUM, HEXAVALENT	3.4E-02		1	1
MW-13C	T	7/1/2007	CHROMIUM, HEXAVALENT	3.5E-02		1	1
MW-13C	T	7/1/2008	CHROMIUM, HEXAVALENT	2.8E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: PW-1B
Well Type: S
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-83

Confidence in Trend:

100.0%

Coefficient of Variation:

1.44

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
PW-1B	S	7/1/1995	CHROMIUM, HEXAVALENT	5.8E+00		11	11
PW-1B	S	7/1/1996	CHROMIUM, HEXAVALENT	3.0E+00		12	12
PW-1B	S	7/1/1997	CHROMIUM, HEXAVALENT	2.1E+00		9	9
PW-1B	S	7/1/1998	CHROMIUM, HEXAVALENT	1.4E+00		3	3
PW-1B	S	7/1/1999	CHROMIUM, HEXAVALENT	7.7E-01		4	4
PW-1B	S	7/1/2000	CHROMIUM, HEXAVALENT	5.9E-01		4	4
PW-1B	S	7/1/2001	CHROMIUM, HEXAVALENT	2.5E-01		4	4
PW-1B	S	7/1/2002	CHROMIUM, HEXAVALENT	4.1E-01		4	4
PW-1B	S	7/1/2003	CHROMIUM, HEXAVALENT	3.8E-01		3	3
PW-1B	S	7/1/2004	CHROMIUM, HEXAVALENT	2.7E-01		2	2
PW-1B	S	7/1/2005	CHROMIUM, HEXAVALENT	1.3E-01		2	2
PW-1B	S	7/1/2006	CHROMIUM, HEXAVALENT	2.2E-01		2	2
PW-1B	S	7/1/2007	CHROMIUM, HEXAVALENT	1.1E-01		2	2
PW-1B	S	7/1/2008	CHROMIUM, HEXAVALENT	6.4E-02		2	2

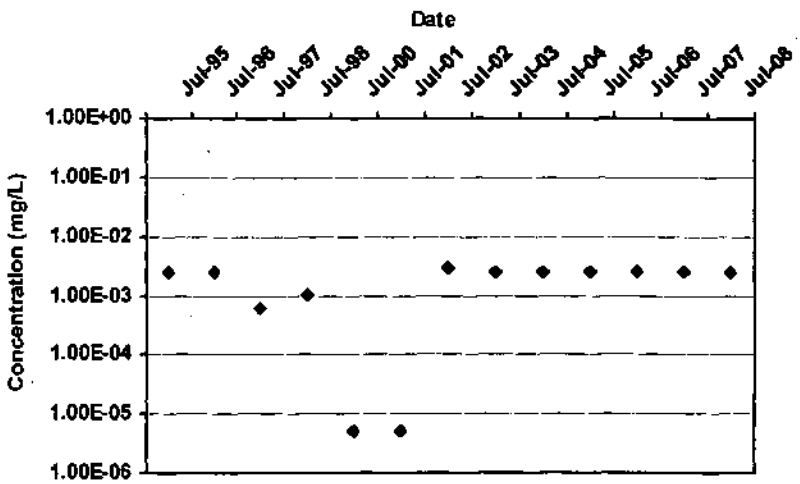
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

INTERMEDIATE WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-16
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

13

Confidence in Trend:

76.4%

Coefficient of Variation:

0.56

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

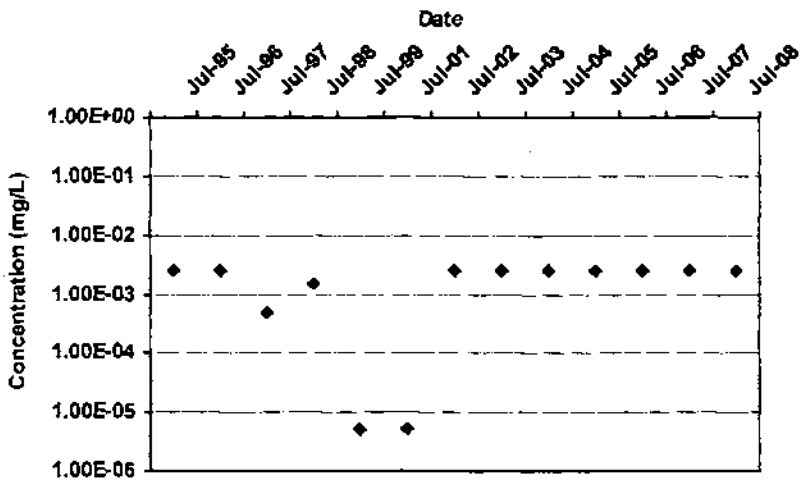
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-16	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-16	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-16	T	7/1/1997	CHROMIUM, HEXAVALENT	6.1E-04	ND	2	0
AMW-16	T	7/1/1998	CHROMIUM, HEXAVALENT	1.0E-03		2	1
AMW-16	T	7/1/2000	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
AMW-16	T	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-06	ND	1	0
AMW-16	T	7/1/2002	CHROMIUM, HEXAVALENT	3.0E-03		1	1
AMW-16	T	7/1/2003	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-16	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-16	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-16	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-16	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-16	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-17
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
25

Confidence in Trend:
92.7%

Coefficient of Variation:
0.54

Mann Kendall Concentration Trend: (See Note)
PI

Data Table:

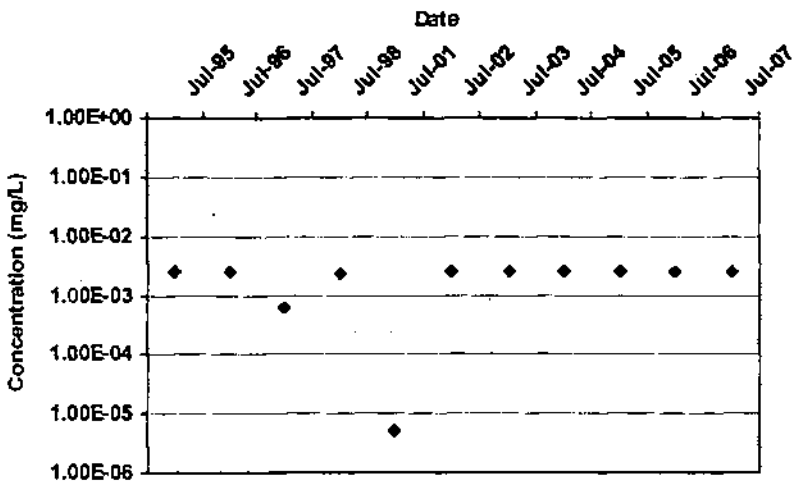
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-17	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-17	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-17	T	7/1/1997	CHROMIUM, HEXAVALENT	5.0E-04	ND	2	0
AMW-17	T	7/1/1998	CHROMIUM, HEXAVALENT	1.5E-03		2	1
AMW-17	T	7/1/1999	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
AMW-17	T	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-06	ND	1	0
AMW-17	T	7/1/2002	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2003	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-17	T	7/1/2008	CHROMIUM, HEXAVALENT	2.6E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-18
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

11

Confidence in Trend:

77.7%

Coefficient of Variation:

0.43

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

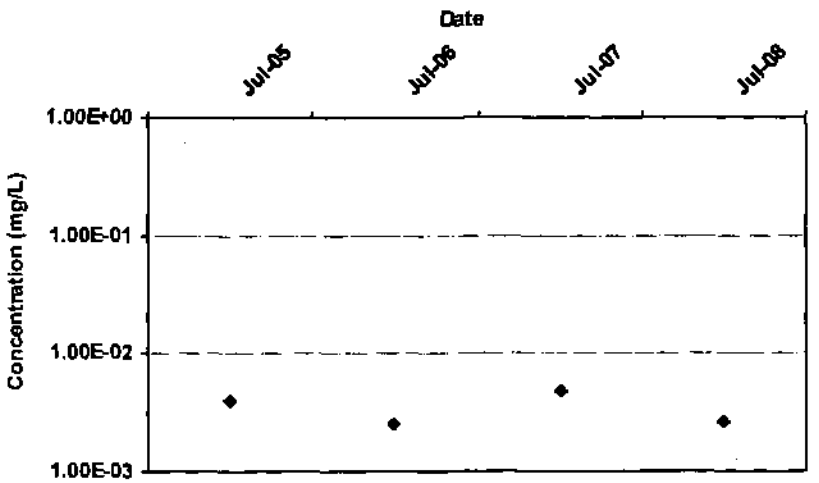
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-18	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-18	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-18	T	7/1/1997	CHROMIUM, HEXAVALENT	6.1E-04	ND	2	0
AMW-18	T	7/1/1998	CHROMIUM, HEXAVALENT	2.4E-03		1	1
AMW-18	T	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-06	ND	1	0
AMW-18	T	7/1/2002	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-18	T	7/1/2003	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-18	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-18	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-18	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
AMW-18	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-59
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 37.5%

Coefficient of Variation: 0.32

Mann Kendall Concentration Trend: (See Note) S

Data Table:

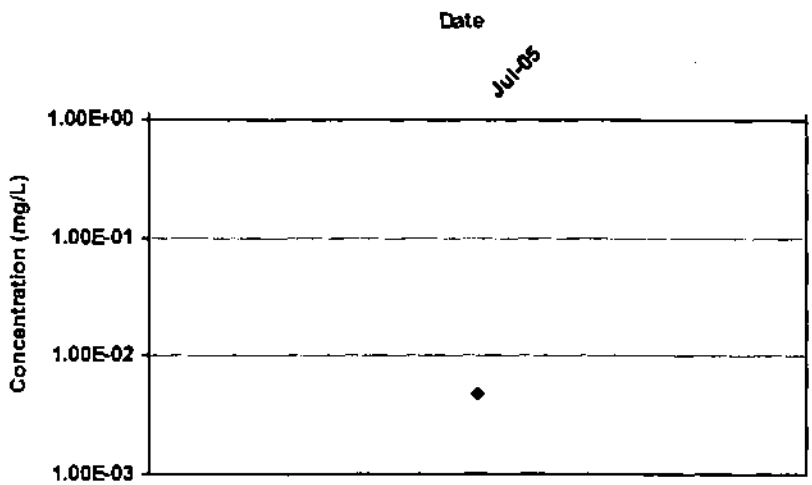
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-59	T	7/1/2005	CHROMIUM, HEXAVALENT	4.0E-03		3	2
AMW-59	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-59	T	7/1/2007	CHROMIUM, HEXAVALENT	4.8E-03		1	1
AMW-59	T	7/1/2008	CHROMIUM, HEXAVALENT	2.6E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-60
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

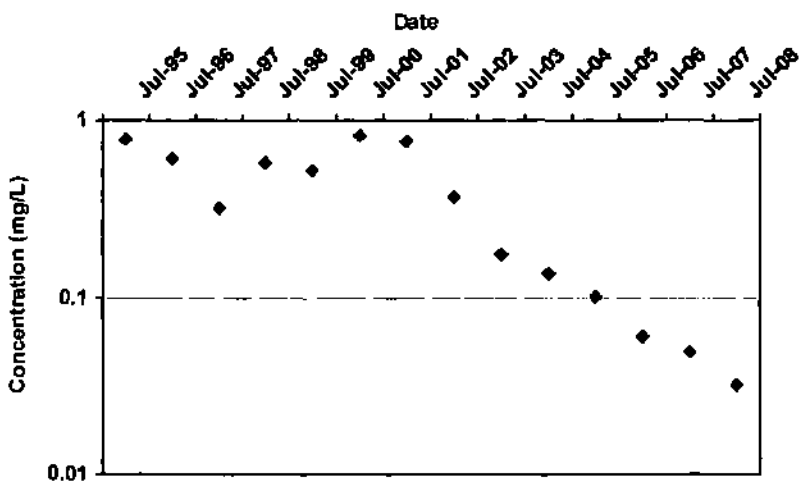
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-60	T	7/1/2005	CHROMIUM, HEXAVALENT	4.7E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-14
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-67

Confidence in Trend:
100.0%

Coefficient of Variation:
0.78

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

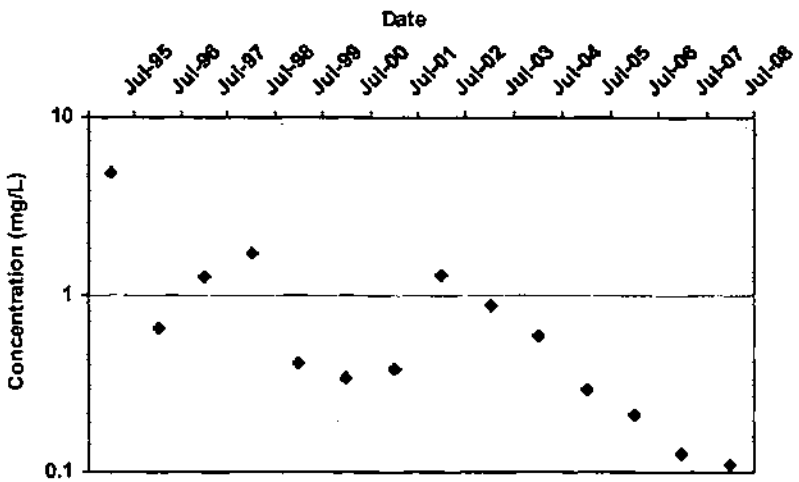
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-14	T	7/1/1995	CHROMIUM, HEXAVALENT	7.8E-01		2	2
CPU-14	T	7/1/1996	CHROMIUM, HEXAVALENT	6.0E-01		2	2
CPU-14	T	7/1/1997	CHROMIUM, HEXAVALENT	3.2E-01		1	1
CPU-14	T	7/1/1998	CHROMIUM, HEXAVALENT	5.8E-01		2	2
CPU-14	T	7/1/1999	CHROMIUM, HEXAVALENT	5.2E-01		2	2
CPU-14	T	7/1/2000	CHROMIUM, HEXAVALENT	8.2E-01		2	2
CPU-14	T	7/1/2001	CHROMIUM, HEXAVALENT	7.7E-01		2	2
CPU-14	T	7/1/2002	CHROMIUM, HEXAVALENT	3.7E-01		2	2
CPU-14	T	7/1/2003	CHROMIUM, HEXAVALENT	1.8E-01		2	2
CPU-14	T	7/1/2004	CHROMIUM, HEXAVALENT	1.4E-01		2	2
CPU-14	T	7/1/2005	CHROMIUM, HEXAVALENT	1.0E-01		2	2
CPU-14	T	7/1/2006	CHROMIUM, HEXAVALENT	6.1E-02		1	1
CPU-14	T	7/1/2007	CHROMIUM, HEXAVALENT	4.9E-02		1	1
CPU-14	T	7/1/2008	CHROMIUM, HEXAVALENT	3.2E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-14C
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-59

Confidence in Trend:
100.0%

Coefficient of Variation:
1.31

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

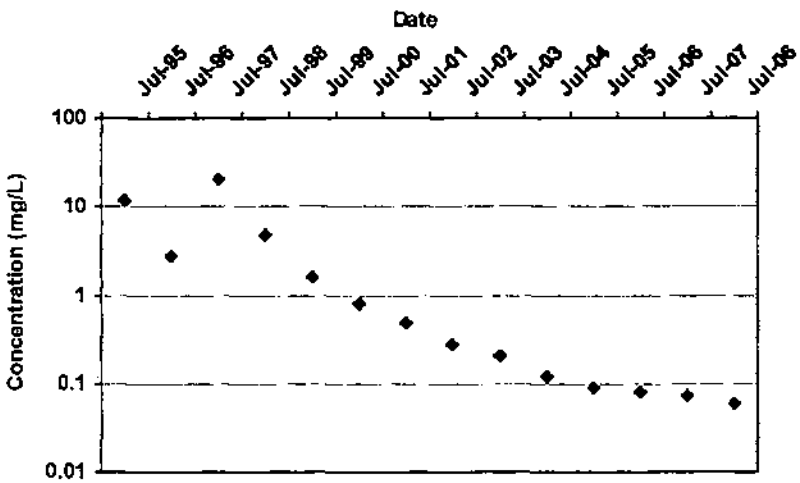
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-14C	T	7/1/1995	CHROMIUM, HEXAVALENT	4.8E+00		11	11
MW-14C	T	7/1/1996	CHROMIUM, HEXAVALENT	6.4E-01		2	2
MW-14C	T	7/1/1997	CHROMIUM, HEXAVALENT	1.3E+00		6	6
MW-14C	T	7/1/1998	CHROMIUM, HEXAVALENT	1.7E+00		2	2
MW-14C	T	7/1/1999	CHROMIUM, HEXAVALENT	4.1E-01		3	3
MW-14C	T	7/1/2000	CHROMIUM, HEXAVALENT	3.4E-01		5	5
MW-14C	T	7/1/2001	CHROMIUM, HEXAVALENT	3.8E-01		4	4
MW-14C	T	7/1/2002	CHROMIUM, HEXAVALENT	1.3E+00		4	4
MW-14C	T	7/1/2003	CHROMIUM, HEXAVALENT	8.7E-01		3	3
MW-14C	T	7/1/2004	CHROMIUM, HEXAVALENT	5.9E-01		2	2
MW-14C	T	7/1/2005	CHROMIUM, HEXAVALENT	2.9E-01		2	2
MW-14C	T	7/1/2006	CHROMIUM, HEXAVALENT	2.1E-01		2	2
MW-14C	T	7/1/2007	CHROMIUM, HEXAVALENT	1.3E-01		2	2
MW-14C	T	7/1/2008	CHROMIUM, HEXAVALENT	1.1E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-14E
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-85

Confidence in Trend:
100.0%

Coefficient of Variation:
1.90

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

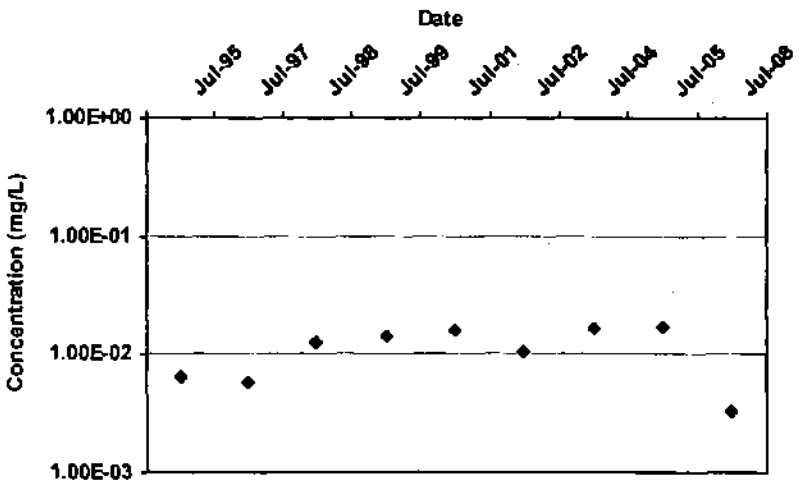
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-14E	T	7/1/1995	CHROMIUM, HEXAVALENT	1.2E+01		11	11
MW-14E	T	7/1/1996	CHROMIUM, HEXAVALENT	2.7E+00		2	2
MW-14E	T	7/1/1997	CHROMIUM, HEXAVALENT	2.0E+01		2	2
MW-14E	T	7/1/1998	CHROMIUM, HEXAVALENT	4.9E+00		3	3
MW-14E	T	7/1/1999	CHROMIUM, HEXAVALENT	1.6E+00		4	4
MW-14E	T	7/1/2000	CHROMIUM, HEXAVALENT	8.0E-01		5	5
MW-14E	T	7/1/2001	CHROMIUM, HEXAVALENT	4.8E-01		4	4
MW-14E	T	7/1/2002	CHROMIUM, HEXAVALENT	2.8E-01		4	4
MW-14E	T	7/1/2003	CHROMIUM, HEXAVALENT	2.1E-01		3	3
MW-14E	T	7/1/2004	CHROMIUM, HEXAVALENT	1.2E-01		2	2
MW-14E	T	7/1/2005	CHROMIUM, HEXAVALENT	9.0E-02		2	2
MW-14E	T	7/1/2006	CHROMIUM, HEXAVALENT	8.0E-02		2	2
MW-14E	T	7/1/2007	CHROMIUM, HEXAVALENT	7.3E-02		2	2
MW-14E	T	7/1/2008	CHROMIUM, HEXAVALENT	6.1E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-15E
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
12

Confidence in Trend:
87.0%

Coefficient of Variation:
0.45

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

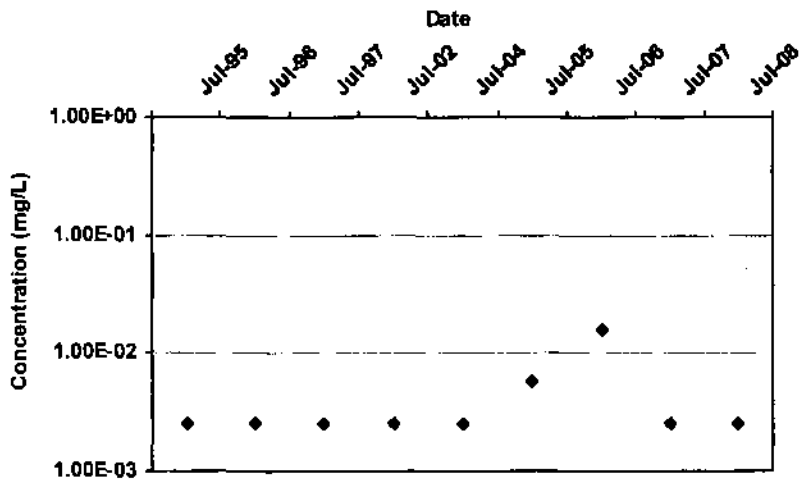
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-15E	T	7/1/1995	CHROMIUM, HEXAVALENT	6.5E-03		2	2
MW-15E	T	7/1/1997	CHROMIUM, HEXAVALENT	5.8E-03		2	1
MW-15E	T	7/1/1998	CHROMIUM, HEXAVALENT	1.3E-02		2	2
MW-15E	T	7/1/1999	CHROMIUM, HEXAVALENT	1.4E-02		2	2
MW-15E	T	7/1/2001	CHROMIUM, HEXAVALENT	1.6E-02		1	1
MW-15E	T	7/1/2002	CHROMIUM, HEXAVALENT	1.1E-02		1	1
MW-15E	T	7/1/2004	CHROMIUM, HEXAVALENT	1.6E-02		1	1
MW-15E	T	7/1/2005	CHROMIUM, HEXAVALENT	1.7E-02		1	1
MW-15E	T	7/1/2008	CHROMIUM, HEXAVALENT	3.3E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-16E
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
7

Confidence in Trend:
72.8%

Coefficient of Variation:
1.03

Mann Kendall Concentration Trend: *(See Note)*
NT

Data Table:

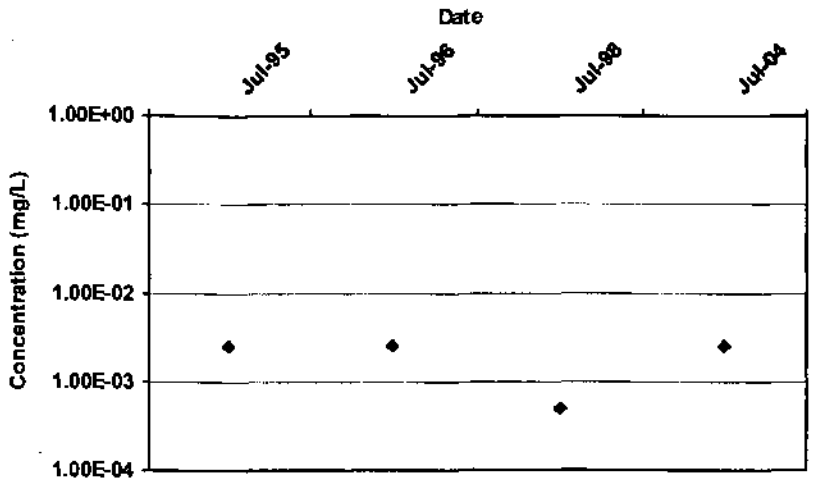
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-16E	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-16E	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-16E	T	7/1/1997	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-16E	T	7/1/2002	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-16E	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-16E	T	7/1/2005	CHROMIUM, HEXAVALENT	5.8E-03		1	1
MW-16E	T	7/1/2006	CHROMIUM, HEXAVALENT	1.6E-02		1	1
MW-16E	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-16E	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-17E
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-1

Confidence in Trend:
50.0%

Coefficient of Variation:
0.50

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

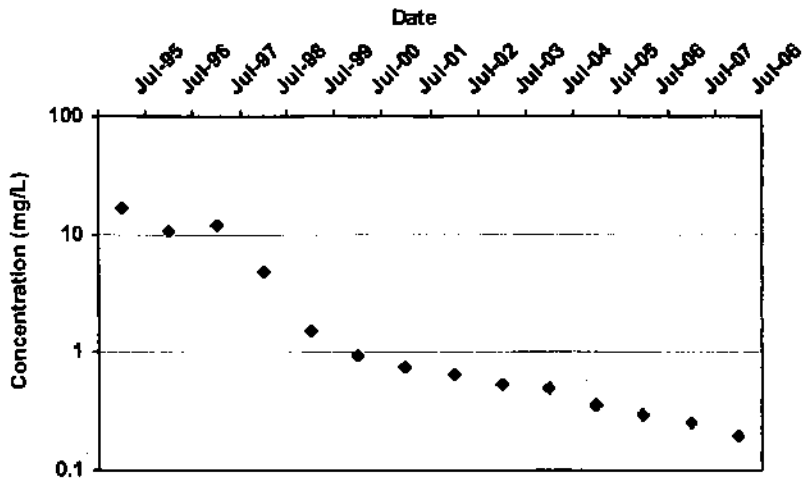
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-17E	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-17E	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-17E	T	7/1/1998	CHROMIUM, HEXAVALENT	5.0E-04	ND	1	0
MW-17E	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-18D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-89

Confidence in Trend:

100.0%

Coefficient of Variation:

1.51

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

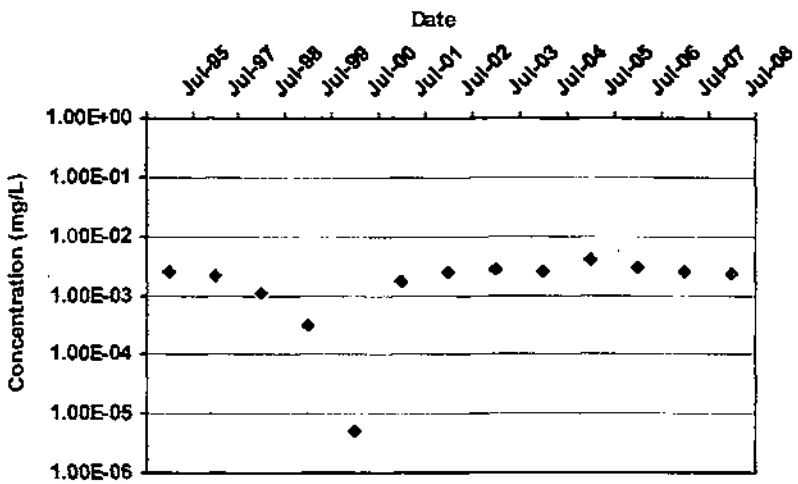
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-18D	T	7/1/1995	CHROMIUM, HEXAVALENT	1.7E+01		11	11
MW-18D	T	7/1/1996	CHROMIUM, HEXAVALENT	1.1E+01		8	8
MW-18D	T	7/1/1997	CHROMIUM, HEXAVALENT	1.2E+01		9	9
MW-18D	T	7/1/1998	CHROMIUM, HEXAVALENT	4.9E+00		3	3
MW-18D	T	7/1/1999	CHROMIUM, HEXAVALENT	1.5E+00		4	4
MW-18D	T	7/1/2000	CHROMIUM, HEXAVALENT	9.3E-01		5	5
MW-18D	T	7/1/2001	CHROMIUM, HEXAVALENT	7.6E-01		2	2
MW-18D	T	7/1/2002	CHROMIUM, HEXAVALENT	6.4E-01		4	4
MW-18D	T	7/1/2003	CHROMIUM, HEXAVALENT	5.4E-01		3	3
MW-18D	T	7/1/2004	CHROMIUM, HEXAVALENT	5.0E-01		2	2
MW-18D	T	7/1/2005	CHROMIUM, HEXAVALENT	3.6E-01		2	2
MW-18D	T	7/1/2006	CHROMIUM, HEXAVALENT	2.9E-01		2	2
MW-18D	T	7/1/2007	CHROMIUM, HEXAVALENT	2.6E-01		2	2
MW-18D	T	7/1/2008	CHROMIUM, HEXAVALENT	1.9E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-18E
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

24

Confidence in Trend:

91.8%

Coefficient of Variation:

0.52

Mann Kendall Concentration Trend: (See Note)

PI

Data Table:

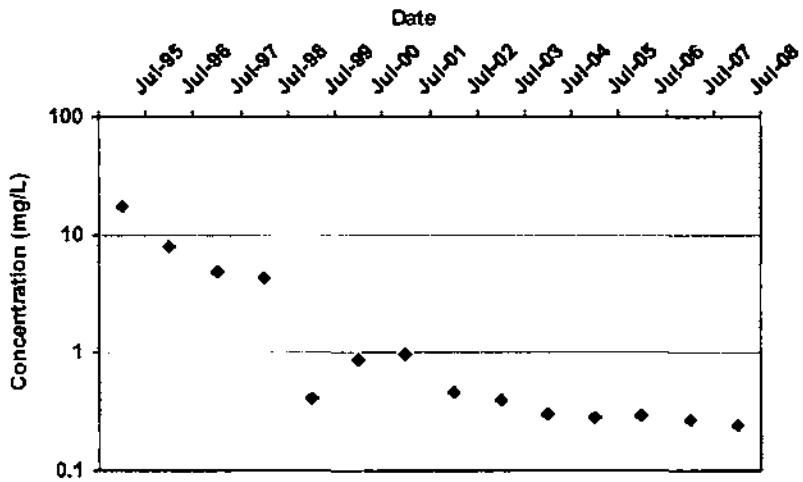
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-18E	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-18E	T	7/1/1997	CHROMIUM, HEXAVALENT	2.2E-03	ND	2	0
MW-18E	T	7/1/1998	CHROMIUM, HEXAVALENT	1.1E-03		2	2
MW-18E	T	7/1/1999	CHROMIUM, HEXAVALENT	3.1E-04		2	1
MW-18E	T	7/1/2000	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
MW-18E	T	7/1/2001	CHROMIUM, HEXAVALENT	1.8E-03		4	2
MW-18E	T	7/1/2002	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-18E	T	7/1/2003	CHROMIUM, HEXAVALENT	2.6E-03		2	1
MW-18E	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-18E	T	7/1/2005	CHROMIUM, HEXAVALENT	4.1E-03		1	1
MW-18E	T	7/1/2006	CHROMIUM, HEXAVALENT	3.0E-03		2	1
MW-18E	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-18E	T	7/1/2008	CHROMIUM, HEXAVALENT	2.4E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-19D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-81

Confidence in Trend:

100.0%

Coefficient of Variation:

1.71

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

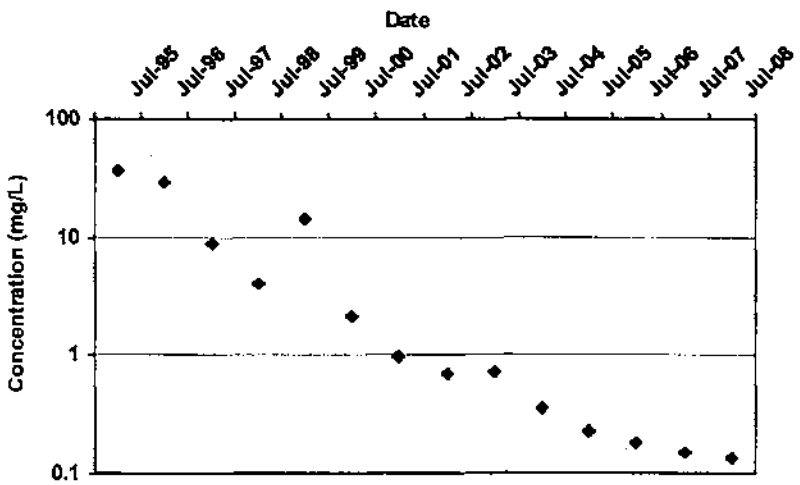
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-19D	T	7/1/1995	CHROMIUM, HEXAVALENT	1.7E+01		11	11
MW-19D	T	7/1/1996	CHROMIUM, HEXAVALENT	7.9E+00		12	12
MW-19D	T	7/1/1997	CHROMIUM, HEXAVALENT	4.9E+00		6	6
MW-19D	T	7/1/1998	CHROMIUM, HEXAVALENT	4.4E+00		3	3
MW-19D	T	7/1/1999	CHROMIUM, HEXAVALENT	4.1E-01		1	1
MW-19D	T	7/1/2000	CHROMIUM, HEXAVALENT	8.8E-01		4	4
MW-19D	T	7/1/2001	CHROMIUM, HEXAVALENT	9.8E-01		4	4
MW-19D	T	7/1/2002	CHROMIUM, HEXAVALENT	4.6E-01		4	4
MW-19D	T	7/1/2003	CHROMIUM, HEXAVALENT	4.0E-01		3	3
MW-19D	T	7/1/2004	CHROMIUM, HEXAVALENT	3.0E-01		2	2
MW-19D	T	7/1/2005	CHROMIUM, HEXAVALENT	2.8E-01		2	2
MW-19D	T	7/1/2006	CHROMIUM, HEXAVALENT	2.9E-01		2	2
MW-19D	T	7/1/2007	CHROMIUM, HEXAVALENT	2.7E-01		2	2
MW-19D	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-20D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-85

Confidence in Trend:
100.0%

Coefficient of Variation:
1.67

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

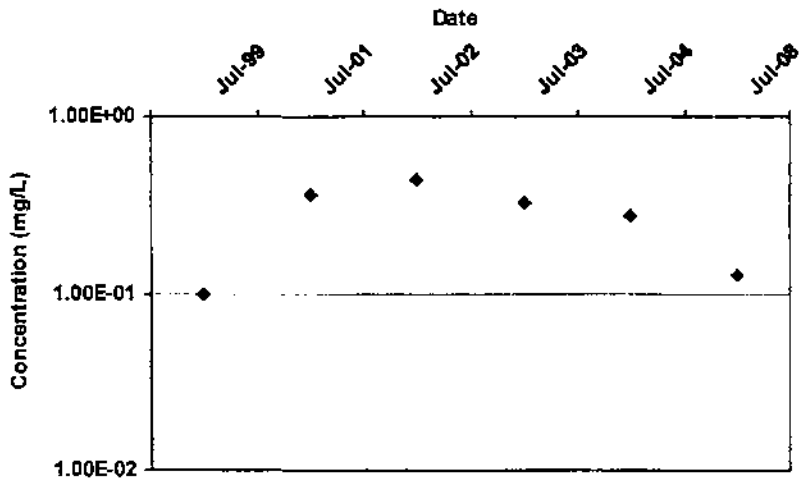
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-20D	T	7/1/1995	CHROMIUM, HEXAVALENT	3.6E+01		11	11
MW-20D	T	7/1/1996	CHROMIUM, HEXAVALENT	2.9E+01		12	12
MW-20D	T	7/1/1997	CHROMIUM, HEXAVALENT	8.7E+00		9	9
MW-20D	T	7/1/1998	CHROMIUM, HEXAVALENT	4.0E+00		3	3
MW-20D	T	7/1/1999	CHROMIUM, HEXAVALENT	1.5E+01		1	1
MW-20D	T	7/1/2000	CHROMIUM, HEXAVALENT	2.2E+00		5	5
MW-20D	T	7/1/2001	CHROMIUM, HEXAVALENT	9.9E-01		4	4
MW-20D	T	7/1/2002	CHROMIUM, HEXAVALENT	6.9E-01		4	4
MW-20D	T	7/1/2003	CHROMIUM, HEXAVALENT	7.4E-01		3	3
MW-20D	T	7/1/2004	CHROMIUM, HEXAVALENT	3.5E-01		2	2
MW-20D	T	7/1/2005	CHROMIUM, HEXAVALENT	2.3E-01		2	2
MW-20D	T	7/1/2006	CHROMIUM, HEXAVALENT	1.8E-01		2	2
MW-20D	T	7/1/2007	CHROMIUM, HEXAVALENT	1.5E-01		2	2
MW-20D	T	7/1/2008	CHROMIUM, HEXAVALENT	1.4E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-40
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -3

Confidence in Trend: 64.0%

Coefficient of Variation: 0.50

Mann Kendall Concentration Trend: (See Note) S

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-40	T	7/1/1999	CHROMIUM, HEXAVALENT	9.8E-02		1	1
MW-40	T	7/1/2001	CHROMIUM, HEXAVALENT	3.6E-01		1	1
MW-40	T	7/1/2002	CHROMIUM, HEXAVALENT	4.4E-01		1	1
MW-40	T	7/1/2003	CHROMIUM, HEXAVALENT	3.3E-01		1	1
MW-40	T	7/1/2004	CHROMIUM, HEXAVALENT	2.7E-01		1	1
MW-40	T	7/1/2008	CHROMIUM, HEXAVALENT	1.3E-01		1	1

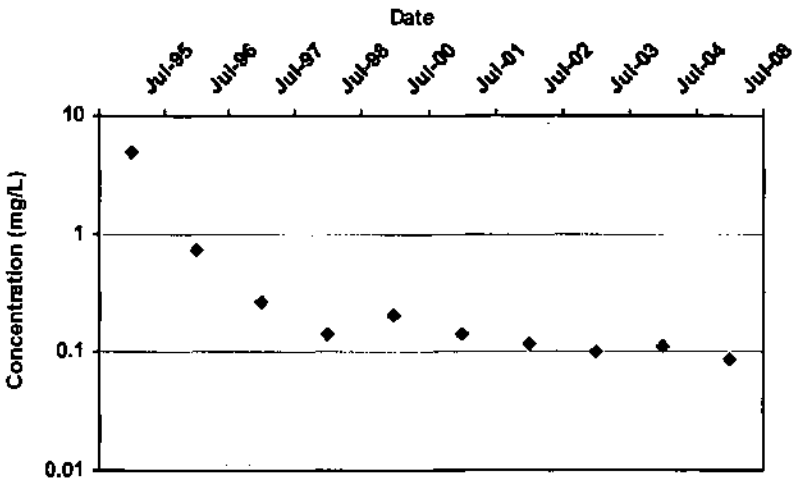
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

CHURCH OF GOD WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-14
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-39

Confidence in Trend:

100.0%

Coefficient of Variation:

2.19

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

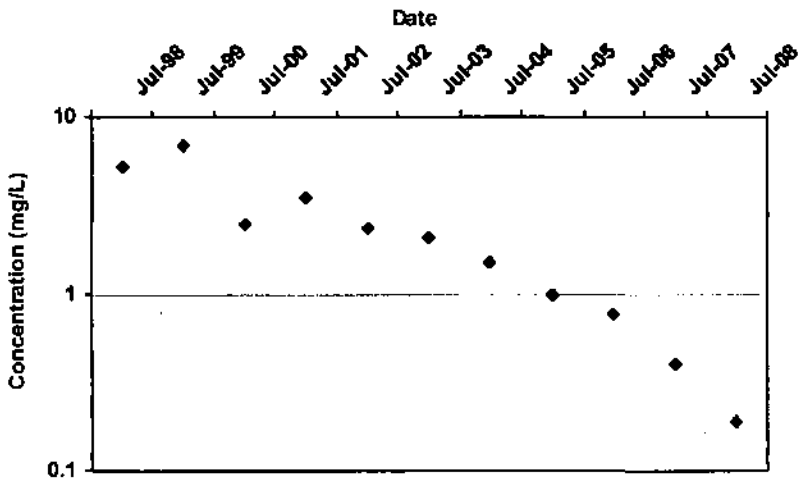
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-14	T	7/1/1995	CHROMIUM, HEXAVALENT	4.9E+00		2	2
AMW-14	T	7/1/1996	CHROMIUM, HEXAVALENT	7.4E-01		2	2
AMW-14	T	7/1/1997	CHROMIUM, HEXAVALENT	2.7E-01		2	2
AMW-14	T	7/1/1998	CHROMIUM, HEXAVALENT	1.4E-01		1	1
AMW-14	T	7/1/2000	CHROMIUM, HEXAVALENT	2.1E-01		1	1
AMW-14	T	7/1/2001	CHROMIUM, HEXAVALENT	1.4E-01		2	2
AMW-14	T	7/1/2002	CHROMIUM, HEXAVALENT	1.2E-01		2	2
AMW-14	T	7/1/2003	CHROMIUM, HEXAVALENT	1.0E-01		2	2
AMW-14	T	7/1/2004	CHROMIUM, HEXAVALENT	1.1E-01		1	1
AMW-14	T	7/1/2008	CHROMIUM, HEXAVALENT	8.7E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to Insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-27
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-51

Confidence in Trend:
100.0%

Coefficient of Variation:
0.87

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

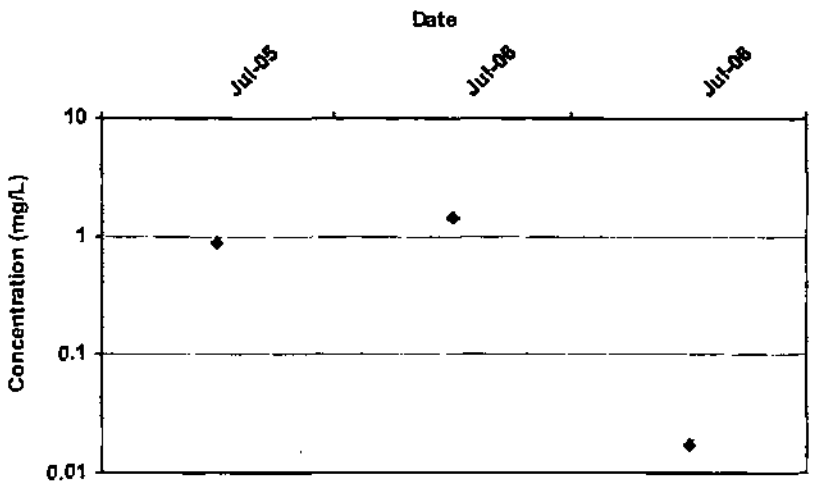
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-27	T	7/1/1998	CHROMIUM, HEXAVALENT	5.2E+00		1	1
AMW-27	T	7/1/1999	CHROMIUM, HEXAVALENT	6.8E+00		4	4
AMW-27	T	7/1/2000	CHROMIUM, HEXAVALENT	2.5E+00		5	5
AMW-27	T	7/1/2001	CHROMIUM, HEXAVALENT	3.5E+00		4	4
AMW-27	T	7/1/2002	CHROMIUM, HEXAVALENT	2.3E+00		4	4
AMW-27	T	7/1/2003	CHROMIUM, HEXAVALENT	2.1E+00		3	3
AMW-27	T	7/1/2004	CHROMIUM, HEXAVALENT	1.5E+00		2	2
AMW-27	T	7/1/2005	CHROMIUM, HEXAVALENT	9.8E-01		2	2
AMW-27	T	7/1/2006	CHROMIUM, HEXAVALENT	7.7E-01		2	2
AMW-27	T	7/1/2007	CHROMIUM, HEXAVALENT	4.0E-01		2	2
AMW-27	T	7/1/2008	CHROMIUM, HEXAVALENT	1.9E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-61
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

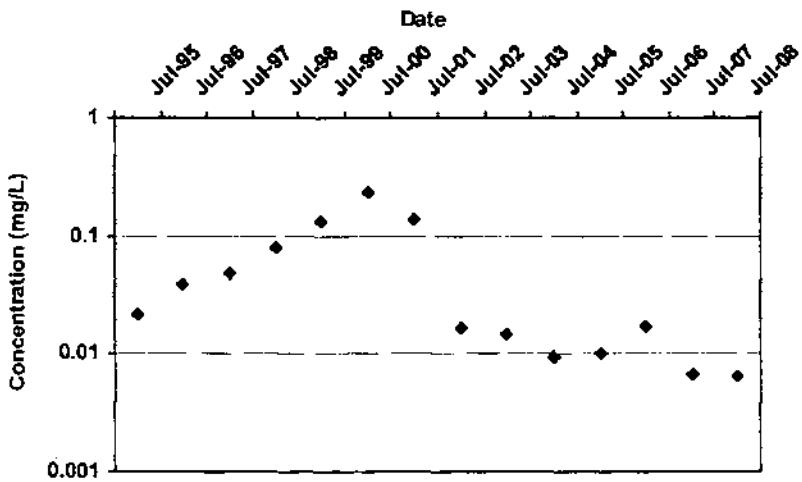
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-61	T	7/1/2005	CHROMIUM, HEXAVALENT	8.8E-01		2	2
AMW-61	T	7/1/2006	CHROMIUM, HEXAVALENT	1.4E+00		1	1
AMW-61	T	7/1/2008	CHROMIUM, HEXAVALENT	1.7E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-12
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-41

Confidence in Trend:

98.7%

Coefficient of Variation:

1.23

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

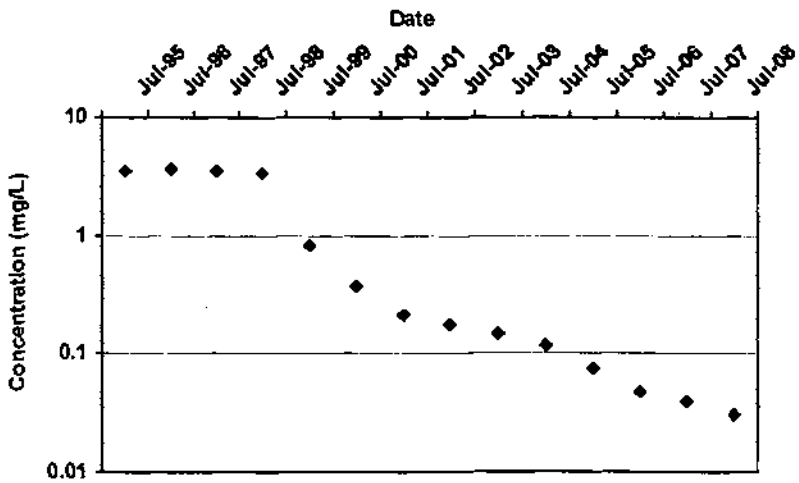
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-12	T	7/1/1995	CHROMIUM, HEXAVALENT	2.1E-02		2	2
CPU-12	T	7/1/1996	CHROMIUM, HEXAVALENT	3.8E-02		2	2
CPU-12	T	7/1/1997	CHROMIUM, HEXAVALENT	4.9E-02		2	2
CPU-12	T	7/1/1998	CHROMIUM, HEXAVALENT	8.0E-02		2	2
CPU-12	T	7/1/1999	CHROMIUM, HEXAVALENT	1.3E-01		2	2
CPU-12	T	7/1/2000	CHROMIUM, HEXAVALENT	2.3E-01		2	2
CPU-12	T	7/1/2001	CHROMIUM, HEXAVALENT	1.4E-01		2	2
CPU-12	T	7/1/2002	CHROMIUM, HEXAVALENT	1.7E-02		2	2
CPU-12	T	7/1/2003	CHROMIUM, HEXAVALENT	1.5E-02		2	2
CPU-12	T	7/1/2004	CHROMIUM, HEXAVALENT	9.5E-03		2	2
CPU-12	T	7/1/2005	CHROMIUM, HEXAVALENT	1.0E-02		2	2
CPU-12	T	7/1/2006	CHROMIUM, HEXAVALENT	1.7E-02		1	1
CPU-12	T	7/1/2007	CHROMIUM, HEXAVALENT	6.6E-03		1	1
CPU-12	T	7/1/2008	CHROMIUM, HEXAVALENT	6.5E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-13
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-87

Confidence in Trend:

100.0%

Coefficient of Variation:

1.36

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

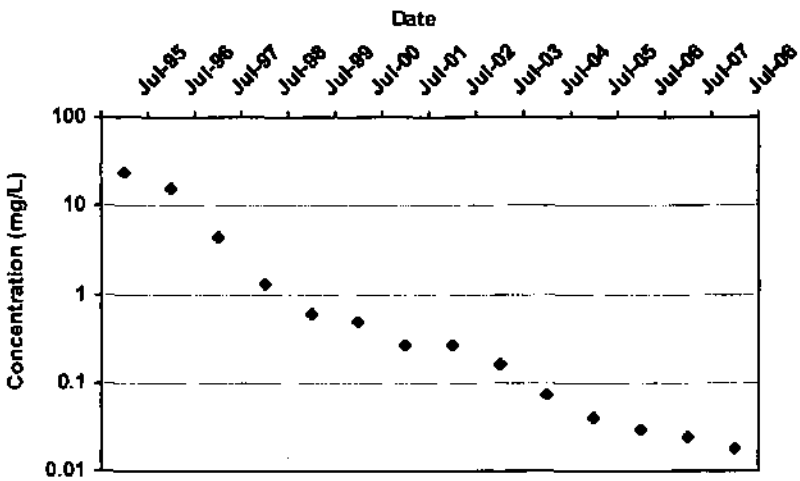
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-13	T	7/1/1995	CHROMIUM, HEXAVALENT	3.5E+00		11	11
CPU-13	T	7/1/1996	CHROMIUM, HEXAVALENT	3.6E+00		2	2
CPU-13	T	7/1/1997	CHROMIUM, HEXAVALENT	3.5E+00		2	2
CPU-13	T	7/1/1998	CHROMIUM, HEXAVALENT	3.3E+00		2	2
CPU-13	T	7/1/1999	CHROMIUM, HEXAVALENT	8.3E-01		4	4
CPU-13	T	7/1/2000	CHROMIUM, HEXAVALENT	3.8E-01		5	5
CPU-13	T	7/1/2001	CHROMIUM, HEXAVALENT	2.1E-01		4	4
CPU-13	T	7/1/2002	CHROMIUM, HEXAVALENT	1.8E-01		4	4
CPU-13	T	7/1/2003	CHROMIUM, HEXAVALENT	1.5E-01		3	3
CPU-13	T	7/1/2004	CHROMIUM, HEXAVALENT	1.2E-01		2	2
CPU-13	T	7/1/2005	CHROMIUM, HEXAVALENT	7.4E-02		2	2
CPU-13	T	7/1/2006	CHROMIUM, HEXAVALENT	4.9E-02		2	2
CPU-13	T	7/1/2007	CHROMIUM, HEXAVALENT	4.0E-02		2	2
CPU-13	T	7/1/2008	CHROMIUM, HEXAVALENT	3.0E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-21D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-91

Confidence in Trend:
100.0%

Coefficient of Variation:
2.13

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

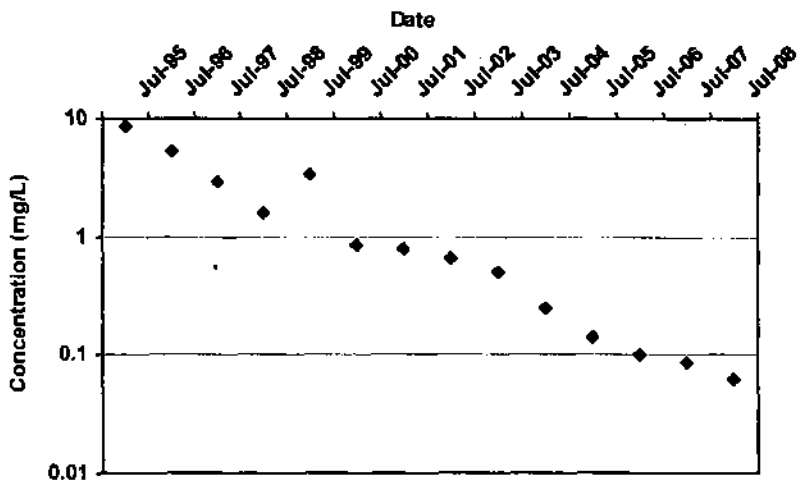
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-21D	T	7/1/1995	CHROMIUM, HEXAVALENT	2.3E+01		11	11
MW-21D	T	7/1/1996	CHROMIUM, HEXAVALENT	1.6E+01		12	12
MW-21D	T	7/1/1997	CHROMIUM, HEXAVALENT	4.4E+00		9	9
MW-21D	T	7/1/1998	CHROMIUM, HEXAVALENT	1.3E+00		3	3
MW-21D	T	7/1/1999	CHROMIUM, HEXAVALENT	5.8E-01		4	4
MW-21D	T	7/1/2000	CHROMIUM, HEXAVALENT	4.8E-01		5	5
MW-21D	T	7/1/2001	CHROMIUM, HEXAVALENT	2.6E-01		4	4
MW-21D	T	7/1/2002	CHROMIUM, HEXAVALENT	2.6E-01		4	4
MW-21D	T	7/1/2003	CHROMIUM, HEXAVALENT	1.6E-01		3	3
MW-21D	T	7/1/2004	CHROMIUM, HEXAVALENT	7.2E-02		2	2
MW-21D	T	7/1/2005	CHROMIUM, HEXAVALENT	4.0E-02		2	2
MW-21D	T	7/1/2006	CHROMIUM, HEXAVALENT	3.0E-02		2	2
MW-21D	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-02		2	2
MW-21D	T	7/1/2008	CHROMIUM, HEXAVALENT	1.9E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-22D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-87

Confidence In Trend:

100.0%

Coefficient of Variation:

1.38

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

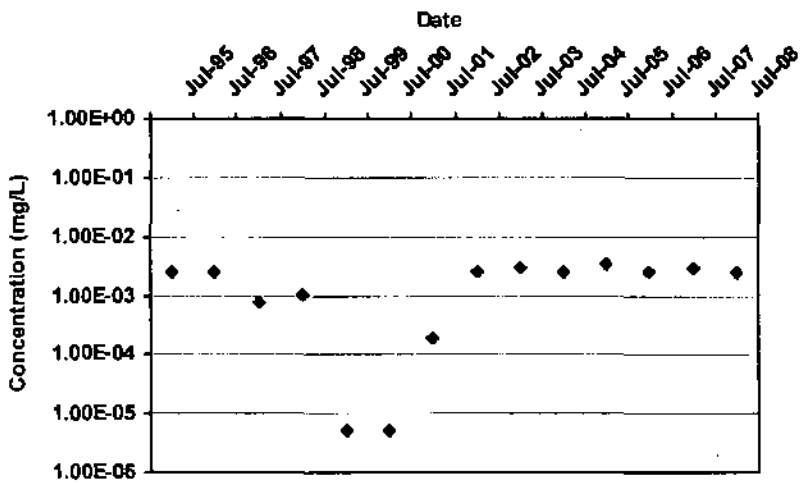
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-22D	T	7/1/1995	CHROMIUM, HEXAVALENT	8.5E+00		11	11
MW-22D	T	7/1/1996	CHROMIUM, HEXAVALENT	5.3E+00		11	11
MW-22D	T	7/1/1997	CHROMIUM, HEXAVALENT	2.9E+00		9	9
MW-22D	T	7/1/1998	CHROMIUM, HEXAVALENT	1.6E+00		3	3
MW-22D	T	7/1/1999	CHROMIUM, HEXAVALENT	3.4E+00		2	2
MW-22D	T	7/1/2000	CHROMIUM, HEXAVALENT	8.6E-01		4	4
MW-22D	T	7/1/2001	CHROMIUM, HEXAVALENT	8.0E-01		4	4
MW-22D	T	7/1/2002	CHROMIUM, HEXAVALENT	6.5E-01		3	3
MW-22D	T	7/1/2003	CHROMIUM, HEXAVALENT	5.0E-01		3	3
MW-22D	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-01		2	2
MW-22D	T	7/1/2005	CHROMIUM, HEXAVALENT	1.4E-01		2	2
MW-22D	T	7/1/2006	CHROMIUM, HEXAVALENT	1.0E-01		2	2
MW-22D	T	7/1/2007	CHROMIUM, HEXAVALENT	8.7E-02		2	2
MW-22D	T	7/1/2008	CHROMIUM, HEXAVALENT	6.3E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-23D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
27

Confidence in Trend:
92.1%

Coefficient of Variation:
0.64

Mann Kendall Concentration Trend: (See Note)
PI

Data Table:

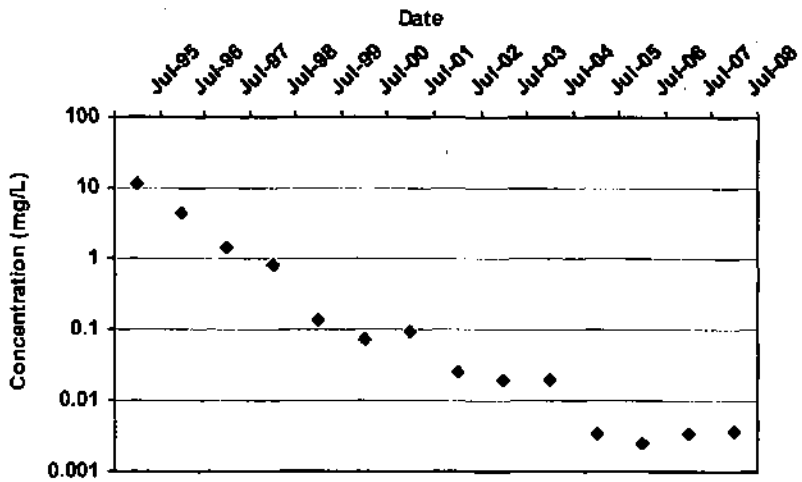
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-23D	T	7/1/1995	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-23D	T	7/1/1996	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-23D	T	7/1/1997	CHROMIUM, HEXAVALENT	7.9E-04	ND	2	0
MW-23D	T	7/1/1998	CHROMIUM, HEXAVALENT	1.0E-03		2	1
MW-23D	T	7/1/1999	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
MW-23D	T	7/1/2000	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
MW-23D	T	7/1/2001	CHROMIUM, HEXAVALENT	1.8E-04		2	1
MW-23D	T	7/1/2002	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-23D	T	7/1/2003	CHROMIUM, HEXAVALENT	3.0E-03		2	1
MW-23D	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-23D	T	7/1/2005	CHROMIUM, HEXAVALENT	3.5E-03		2	1
MW-23D	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-23D	T	7/1/2007	CHROMIUM, HEXAVALENT	3.0E-03		1	1
MW-23D	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-25D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-79

Confidence in Trend:

100.0%

Coefficient of Variation:

2.36

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

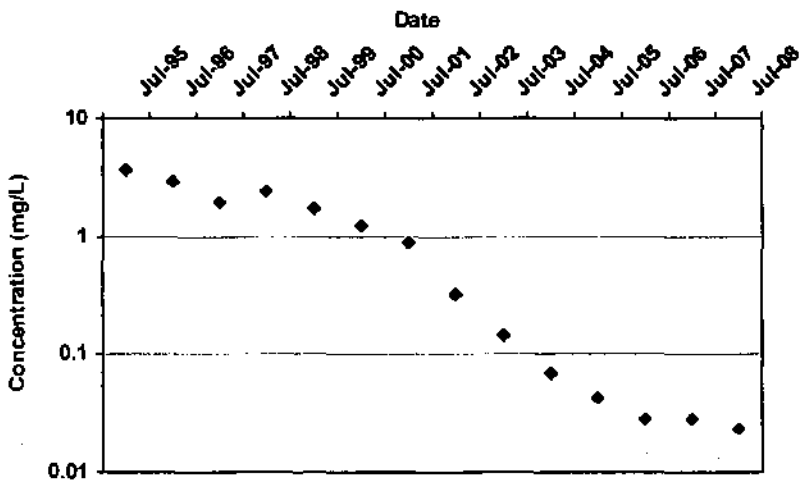
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-25D	T	7/1/1995	CHROMIUM, HEXAVALENT	1.1E+01		12	12
MW-25D	T	7/1/1996	CHROMIUM, HEXAVALENT	4.6E+00		12	12
MW-25D	T	7/1/1997	CHROMIUM, HEXAVALENT	1.5E+00		9	9
MW-25D	T	7/1/1998	CHROMIUM, HEXAVALENT	8.1E-01		3	3
MW-25D	T	7/1/1999	CHROMIUM, HEXAVALENT	1.4E-01		4	4
MW-25D	T	7/1/2000	CHROMIUM, HEXAVALENT	7.5E-02		5	5
MW-25D	T	7/1/2001	CHROMIUM, HEXAVALENT	9.2E-02		4	4
MW-25D	T	7/1/2002	CHROMIUM, HEXAVALENT	2.6E-02		4	4
MW-25D	T	7/1/2003	CHROMIUM, HEXAVALENT	2.0E-02		3	3
MW-25D	T	7/1/2004	CHROMIUM, HEXAVALENT	2.0E-02		2	2
MW-25D	T	7/1/2005	CHROMIUM, HEXAVALENT	3.4E-03		1	1
MW-25D	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-25D	T	7/1/2007	CHROMIUM, HEXAVALENT	3.5E-03		2	1
MW-25D	T	7/1/2008	CHROMIUM, HEXAVALENT	3.6E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-26D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-87

Confidence in Trend:
100.0%

Coefficient of Variation:
1.12

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

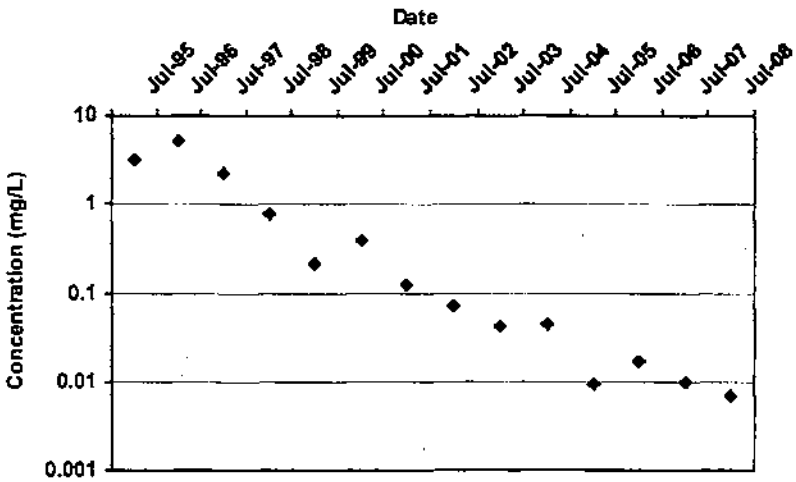
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-26D	T	7/1/1995	CHROMIUM, HEXAVALENT	3.6E+00		11	11
MW-26D	T	7/1/1996	CHROMIUM, HEXAVALENT	2.9E+00		12	12
MW-26D	T	7/1/1997	CHROMIUM, HEXAVALENT	1.9E+00		9	9
MW-26D	T	7/1/1998	CHROMIUM, HEXAVALENT	2.4E+00		3	3
MW-26D	T	7/1/1999	CHROMIUM, HEXAVALENT	1.7E+00		4	4
MW-26D	T	7/1/2000	CHROMIUM, HEXAVALENT	1.3E+00		5	5
MW-26D	T	7/1/2001	CHROMIUM, HEXAVALENT	8.8E-01		4	4
MW-26D	T	7/1/2002	CHROMIUM, HEXAVALENT	3.3E-01		4	4
MW-26D	T	7/1/2003	CHROMIUM, HEXAVALENT	1.5E-01		3	3
MW-26D	T	7/1/2004	CHROMIUM, HEXAVALENT	6.9E-02		2	2
MW-26D	T	7/1/2005	CHROMIUM, HEXAVALENT	4.4E-02		2	2
MW-26D	T	7/1/2006	CHROMIUM, HEXAVALENT	2.8E-02		2	2
MW-26D	T	7/1/2007	CHROMIUM, HEXAVALENT	2.9E-02		2	2
MW-26D	T	7/1/2008	CHROMIUM, HEXAVALENT	2.4E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-27D
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-81

Confidence in Trend:

100.0%

Coefficient of Variation:

1.78

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

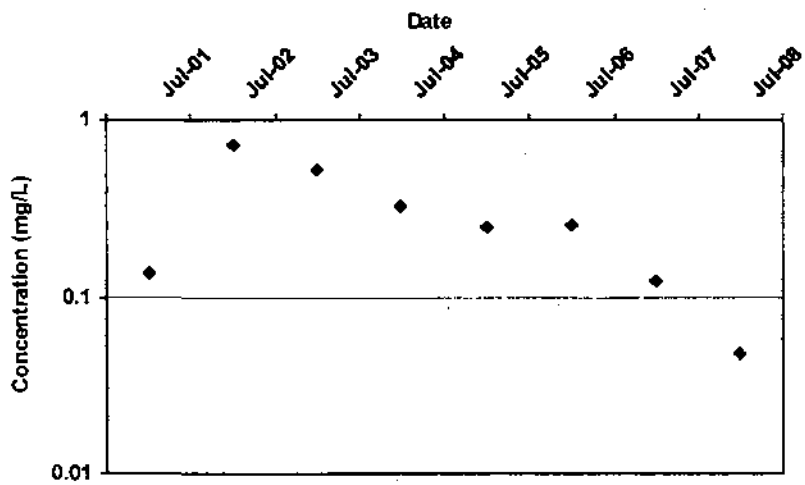
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-27D	T	7/1/1995	CHROMIUM, HEXAVALENT	3.1E+00		11	11
MW-27D	T	7/1/1996	CHROMIUM, HEXAVALENT	5.1E+00		2	2
MW-27D	T	7/1/1997	CHROMIUM, HEXAVALENT	2.3E+00		2	2
MW-27D	T	7/1/1998	CHROMIUM, HEXAVALENT	7.8E-01		2	2
MW-27D	T	7/1/1999	CHROMIUM, HEXAVALENT	2.2E-01		2	2
MW-27D	T	7/1/2000	CHROMIUM, HEXAVALENT	3.9E-01		4	4
MW-27D	T	7/1/2001	CHROMIUM, HEXAVALENT	1.2E-01		4	4
MW-27D	T	7/1/2002	CHROMIUM, HEXAVALENT	7.2E-02		4	4
MW-27D	T	7/1/2003	CHROMIUM, HEXAVALENT	4.2E-02		3	3
MW-27D	T	7/1/2004	CHROMIUM, HEXAVALENT	4.4E-02		2	2
MW-27D	T	7/1/2005	CHROMIUM, HEXAVALENT	9.6E-03		1	1
MW-27D	T	7/1/2006	CHROMIUM, HEXAVALENT	1.8E-02		1	1
MW-27D	T	7/1/2007	CHROMIUM, HEXAVALENT	9.8E-03		1	1
MW-27D	T	7/1/2008	CHROMIUM, HEXAVALENT	7.0E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-49
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-16

Confidence in Trend:
96.9%

Coefficient of Variation:
0.76

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-49	T	7/1/2001	CHROMIUM, HEXAVALENT	1.4E-01		4	4
MW-49	T	7/1/2002	CHROMIUM, HEXAVALENT	7.3E-01		4	4
MW-49	T	7/1/2003	CHROMIUM, HEXAVALENT	5.2E-01		3	3
MW-49	T	7/1/2004	CHROMIUM, HEXAVALENT	3.3E-01		2	2
MW-49	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-01		2	2
MW-49	T	7/1/2006	CHROMIUM, HEXAVALENT	2.6E-01		2	2
MW-49	T	7/1/2007	CHROMIUM, HEXAVALENT	1.3E-01		2	2
MW-49	T	7/1/2008	CHROMIUM, HEXAVALENT	4.6E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

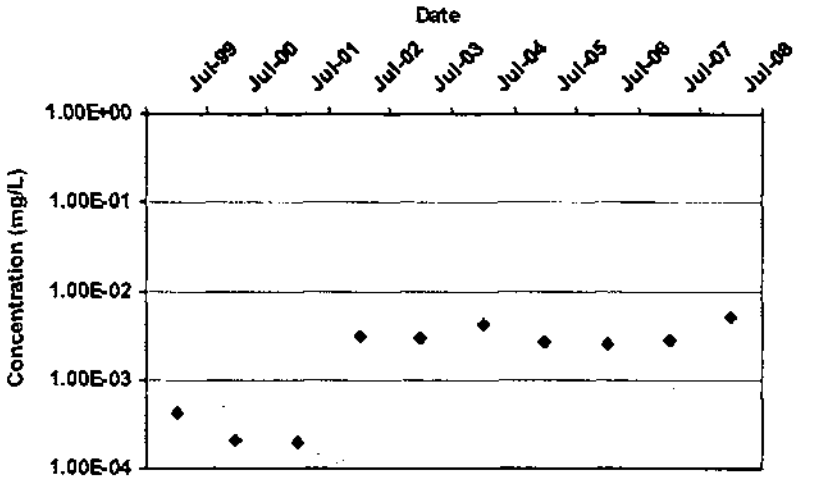
TOE OF PLUME

Sentinel Wells

MAROS Mann-Kendall Statistics Summary

Well: AMW-43
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

17

Confidence in Trend:

92.2%

Coefficient of Variation:

0.69

Mann Kendall Concentration Trend: (See Note)

PI

Data Table:

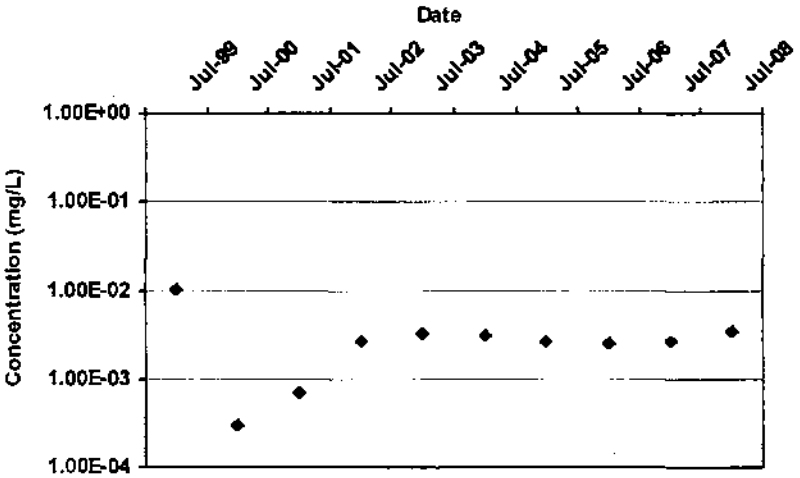
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-43	T	7/1/1999	CHROMIUM, HEXAVALENT	4.1E-04		7	5
AMW-43	T	7/1/2000	CHROMIUM, HEXAVALENT	2.1E-04		8	5
AMW-43	T	7/1/2001	CHROMIUM, HEXAVALENT	2.0E-04		2	1
AMW-43	T	7/1/2002	CHROMIUM, HEXAVALENT	3.1E-03		2	1
AMW-43	T	7/1/2003	CHROMIUM, HEXAVALENT	3.0E-03		2	1
AMW-43	T	7/1/2004	CHROMIUM, HEXAVALENT	4.2E-03		4	3
AMW-43	T	7/1/2005	CHROMIUM, HEXAVALENT	2.6E-03		4	1
AMW-43	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-43	T	7/1/2007	CHROMIUM, HEXAVALENT	2.8E-03		4	2
AMW-43	T	7/1/2008	CHROMIUM, HEXAVALENT	5.0E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-44
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
3

Confidence in Trend:
56.9%

Coefficient of Variation:
0.85

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

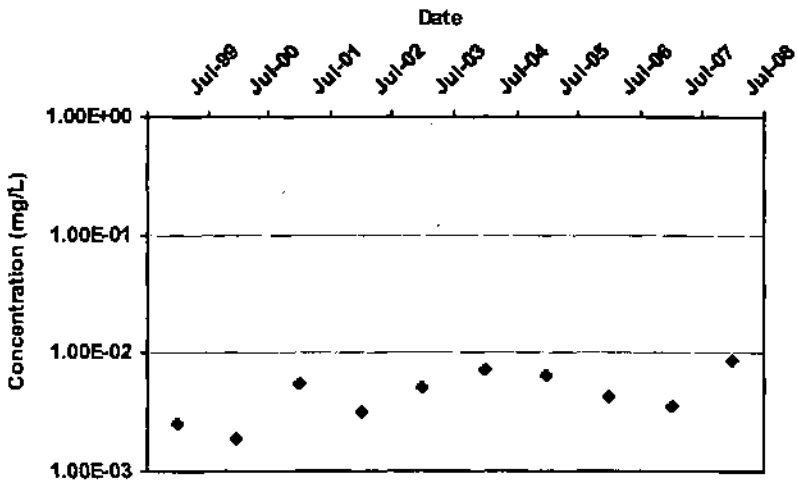
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-44	T	7/1/1999	CHROMIUM, HEXAVALENT	1.0E-02		8	8
AMW-44	T	7/1/2000	CHROMIUM, HEXAVALENT	3.1E-04		8	5
AMW-44	T	7/1/2001	CHROMIUM, HEXAVALENT	7.0E-04		4	3
AMW-44	T	7/1/2002	CHROMIUM, HEXAVALENT	2.7E-03		3	2
AMW-44	T	7/1/2003	CHROMIUM, HEXAVALENT	3.3E-03		2	1
AMW-44	T	7/1/2004	CHROMIUM, HEXAVALENT	3.1E-03		4	3
AMW-44	T	7/1/2005	CHROMIUM, HEXAVALENT	2.7E-03		4	1
AMW-44	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
AMW-44	T	7/1/2007	CHROMIUM, HEXAVALENT	2.6E-03		4	1
AMW-44	T	7/1/2008	CHROMIUM, HEXAVALENT	3.5E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-45
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
19

Confidence in Trend:
94.6%

Coefficient of Variation:
0.45

Mann Kendall Concentration Trend: (See Note)
PI

Data Table:

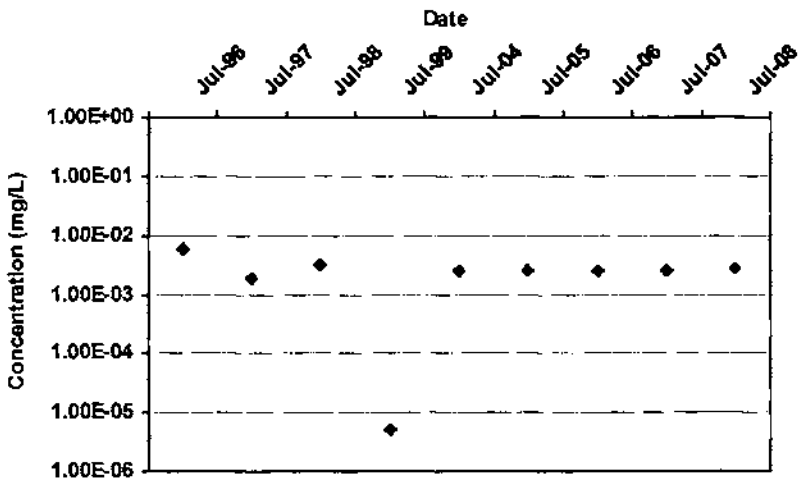
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-45	T	7/1/1999	CHROMIUM, HEXAVALENT	2.5E-03		9	8
AMW-45	T	7/1/2000	CHROMIUM, HEXAVALENT	1.9E-03		9	8
AMW-45	T	7/1/2001	CHROMIUM, HEXAVALENT	5.7E-03		4	4
AMW-45	T	7/1/2002	CHROMIUM, HEXAVALENT	3.2E-03		3	2
AMW-45	T	7/1/2003	CHROMIUM, HEXAVALENT	5.2E-03		2	2
AMW-45	T	7/1/2004	CHROMIUM, HEXAVALENT	7.2E-03		4	4
AMW-45	T	7/1/2005	CHROMIUM, HEXAVALENT	6.5E-03		4	4
AMW-45	T	7/1/2006	CHROMIUM, HEXAVALENT	4.3E-03		2	1
AMW-45	T	7/1/2007	CHROMIUM, HEXAVALENT	3.6E-03		4	2
AMW-45	T	7/1/2008	CHROMIUM, HEXAVALENT	8.9E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-30
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
3

Confidence in Trend:
58.0%

Coefficient of Variation:
0.57

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

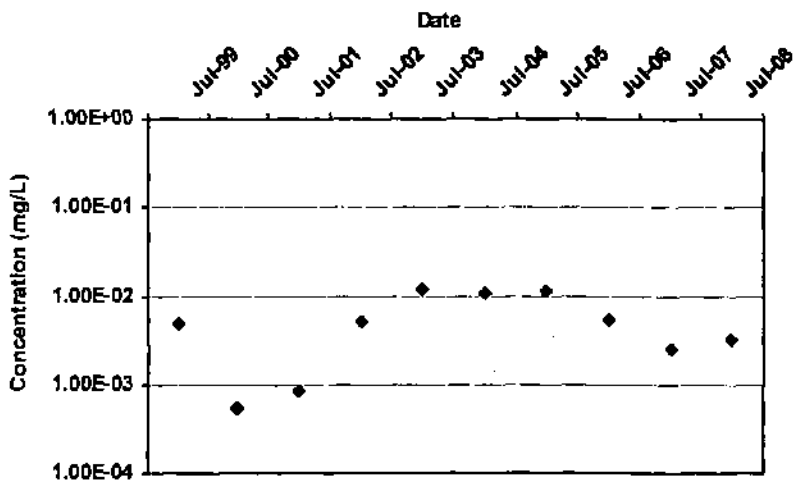
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-30	T	7/1/1996	CHROMIUM, HEXAVALENT	5.8E-03		1	1
MW-30	T	7/1/1997	CHROMIUM, HEXAVALENT	1.9E-03	ND	2	0
MW-30	T	7/1/1998	CHROMIUM, HEXAVALENT	3.1E-03		6	6
MW-30	T	7/1/1999	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
MW-30	T	7/1/2004	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-30	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	3	0
MW-30	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-30	T	7/1/2007	CHROMIUM, HEXAVALENT	2.6E-03		4	1
MW-30	T	7/1/2008	CHROMIUM, HEXAVALENT	2.7E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-47
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 7

Confidence in Trend: 70.0%

Coefficient of Variation: 0.75

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-47	T	7/1/1999	CHROMIUM, HEXAVALENT	4.9E-03		5	5
MW-47	T	7/1/2000	CHROMIUM, HEXAVALENT	5.6E-04		7	5
MW-47	T	7/1/2001	CHROMIUM, HEXAVALENT	8.4E-04		4	3
MW-47	T	7/1/2002	CHROMIUM, HEXAVALENT	5.0E-03		3	3
MW-47	T	7/1/2003	CHROMIUM, HEXAVALENT	1.2E-02		2	2
MW-47	T	7/1/2004	CHROMIUM, HEXAVALENT	1.1E-02		4	4
MW-47	T	7/1/2005	CHROMIUM, HEXAVALENT	1.1E-02		4	4
MW-47	T	7/1/2006	CHROMIUM, HEXAVALENT	5.5E-03		2	1
MW-47	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-47	T	7/1/2008	CHROMIUM, HEXAVALENT	3.2E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

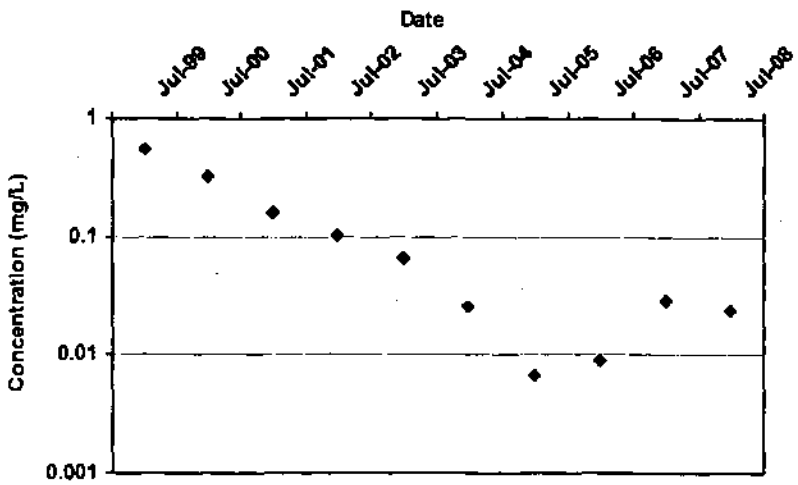
TOE OF PLUME

Other Toe Wells

MAROS Mann-Kendall Statistics Summary

Well: AMW-42
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-33

Confidence in Trend:
99.9%

Coefficient of Variation:
1.37

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

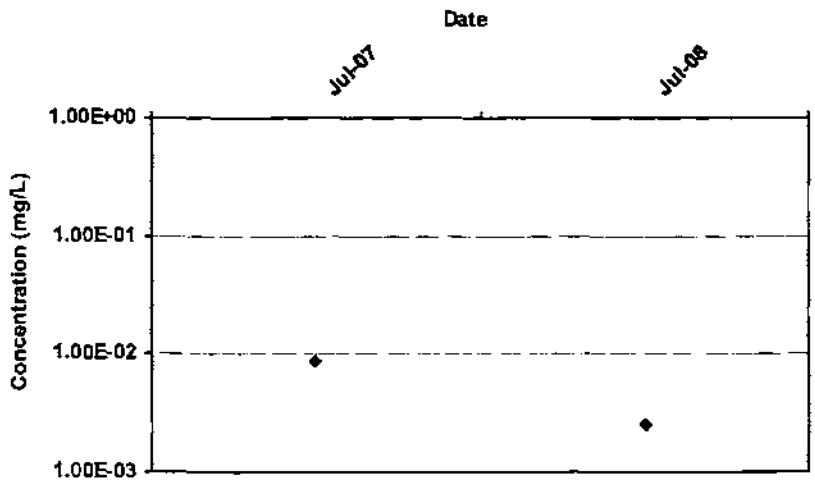
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-42	T	7/1/1999	CHROMIUM, HEXAVALENT	5.5E-01		10	10
AMW-42	T	7/1/2000	CHROMIUM, HEXAVALENT	3.2E-01		13	13
AMW-42	T	7/1/2001	CHROMIUM, HEXAVALENT	1.6E-01		4	4
AMW-42	T	7/1/2002	CHROMIUM, HEXAVALENT	1.0E-01		4	4
AMW-42	T	7/1/2003	CHROMIUM, HEXAVALENT	6.4E-02		3	3
AMW-42	T	7/1/2004	CHROMIUM, HEXAVALENT	2.6E-02		6	6
AMW-42	T	7/1/2005	CHROMIUM, HEXAVALENT	6.6E-03		4	4
AMW-42	T	7/1/2006	CHROMIUM, HEXAVALENT	9.0E-03		2	1
AMW-42	T	7/1/2007	CHROMIUM, HEXAVALENT	2.9E-02		2	2
AMW-42	T	7/1/2008	CHROMIUM, HEXAVALENT	2.4E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-63
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

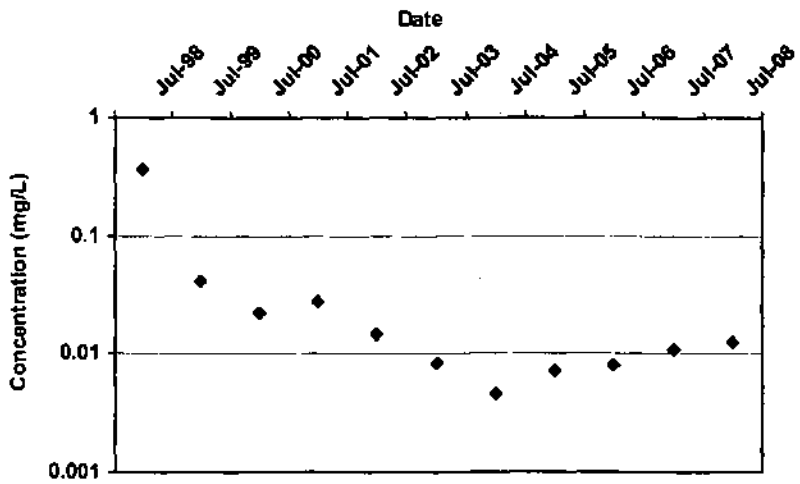
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-63	T	7/1/2007	CHROMIUM, HEXAVALENT	8.8E-03		4	4
AMW-63	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - *Due to insufficient Data (< 4 sampling events); ND = Non-detect*

MAROS Mann-Kendall Statistics Summary

Well: MW-31
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-29

Confidence in Trend:

98.7%

Coefficient of Variation:

2.22

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

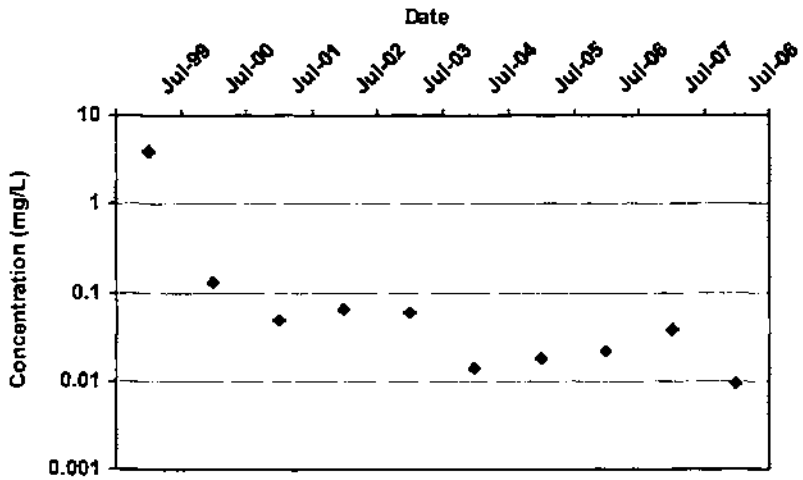
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-31	T	7/1/1998	CHROMIUM, HEXAVALENT	3.7E-01		6	6
MW-31	T	7/1/1999	CHROMIUM, HEXAVALENT	4.2E-02		8	8
MW-31	T	7/1/2000	CHROMIUM, HEXAVALENT	2.2E-02		13	13
MW-31	T	7/1/2001	CHROMIUM, HEXAVALENT	2.7E-02		2	2
MW-31	T	7/1/2002	CHROMIUM, HEXAVALENT	1.5E-02		3	3
MW-31	T	7/1/2003	CHROMIUM, HEXAVALENT	8.3E-03		3	3
MW-31	T	7/1/2004	CHROMIUM, HEXAVALENT	4.7E-03		2	1
MW-31	T	7/1/2005	CHROMIUM, HEXAVALENT	7.3E-03		1	1
MW-31	T	7/1/2006	CHROMIUM, HEXAVALENT	8.1E-03		1	1
MW-31	T	7/1/2007	CHROMIUM, HEXAVALENT	1.1E-02		1	1
MW-31	T	7/1/2008	CHROMIUM, HEXAVALENT	1.3E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-35
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-29

Confidence in Trend:
99.5%

Coefficient of Variation:
2.84

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

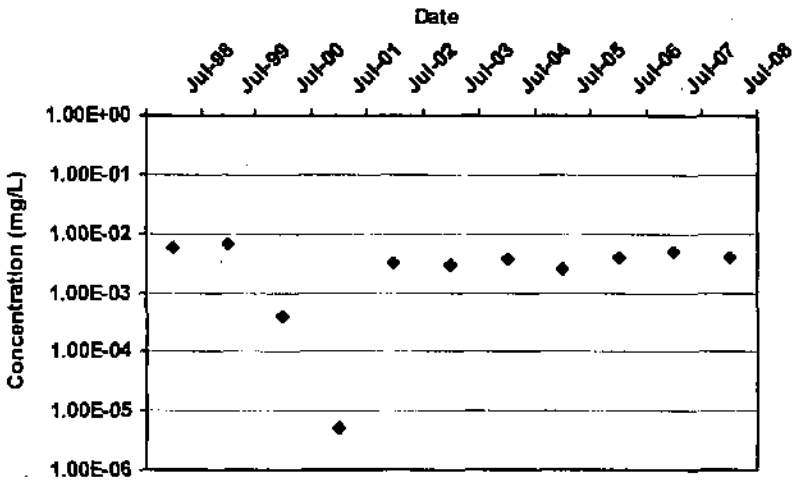
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-35	T	7/1/1999	CHROMIUM, HEXAVALENT	3.9E+00		6	6
MW-35	T	7/1/2000	CHROMIUM, HEXAVALENT	1.3E-01		12	12
MW-35	T	7/1/2001	CHROMIUM, HEXAVALENT	4.8E-02		10	10
MW-35	T	7/1/2002	CHROMIUM, HEXAVALENT	6.6E-02		7	7
MW-35	T	7/1/2003	CHROMIUM, HEXAVALENT	5.8E-02		3	3
MW-35	T	7/1/2004	CHROMIUM, HEXAVALENT	1.4E-02		5	5
MW-35	T	7/1/2005	CHROMIUM, HEXAVALENT	1.8E-02		4	4
MW-35	T	7/1/2006	CHROMIUM, HEXAVALENT	2.2E-02		2	2
MW-35	T	7/1/2007	CHROMIUM, HEXAVALENT	3.7E-02		2	2
MW-35	T	7/1/2008	CHROMIUM, HEXAVALENT	9.5E-03		2	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-37
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
7

Confidence in Trend:
67.6%

Coefficient of Variation:
0.59

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

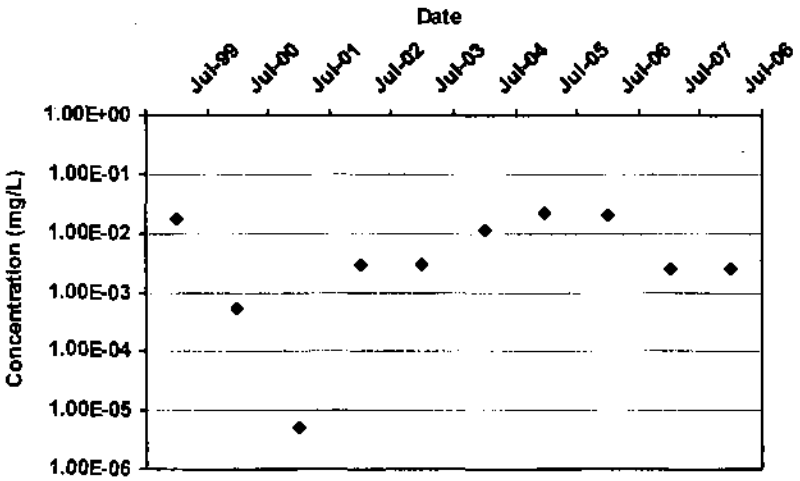
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-37	T	7/1/1998	CHROMIUM, HEXAVALENT	5.9E-03		1	1
MW-37	T	7/1/1999	CHROMIUM, HEXAVALENT	6.8E-03		5	5
MW-37	T	7/1/2000	CHROMIUM, HEXAVALENT	4.1E-04		6	4
MW-37	T	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-06	ND	2	0
MW-37	T	7/1/2002	CHROMIUM, HEXAVALENT	3.1E-03		3	2
MW-37	T	7/1/2003	CHROMIUM, HEXAVALENT	2.9E-03		3	2
MW-37	T	7/1/2004	CHROMIUM, HEXAVALENT	3.8E-03		2	1
MW-37	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	1	0
MW-37	T	7/1/2006	CHROMIUM, HEXAVALENT	4.0E-03		1	1
MW-37	T	7/1/2007	CHROMIUM, HEXAVALENT	5.0E-03		1	1
MW-37	T	7/1/2008	CHROMIUM, HEXAVALENT	4.1E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-41
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
4

Confidence in Trend:
60.3%

Coefficient of Variation:
1.05

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

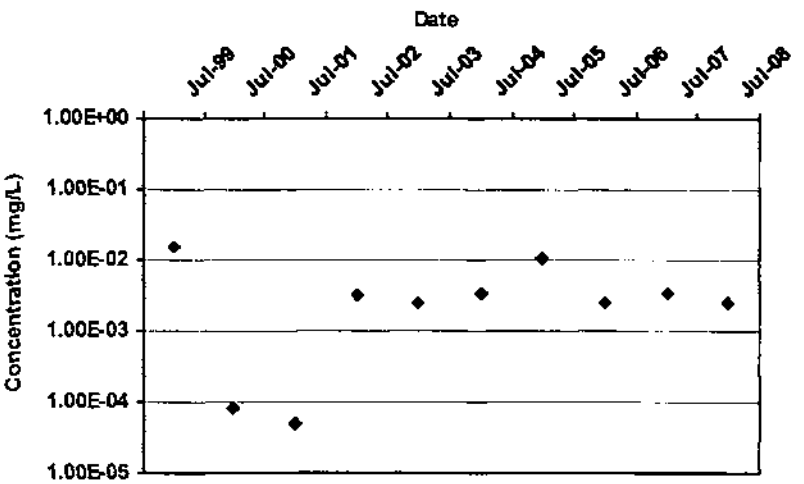
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-41	T	7/1/1999	CHROMIUM, HEXAVALENT	1.8E-02		8	8
MW-41	T	7/1/2000	CHROMIUM, HEXAVALENT	5.3E-04		13	9
MW-41	T	7/1/2001	CHROMIUM, HEXAVALENT	5.0E-06	ND	4	0
MW-41	T	7/1/2002	CHROMIUM, HEXAVALENT	3.0E-03		4	2
MW-41	T	7/1/2003	CHROMIUM, HEXAVALENT	2.9E-03		3	1
MW-41	T	7/1/2004	CHROMIUM, HEXAVALENT	1.1E-02		6	3
MW-41	T	7/1/2005	CHROMIUM, HEXAVALENT	2.2E-02		5	4
MW-41	T	7/1/2006	CHROMIUM, HEXAVALENT	2.0E-02		2	1
MW-41	T	7/1/2007	CHROMIUM, HEXAVALENT	2.5E-03	ND	4	0
MW-41	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-46
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
4

Confidence in Trend:
60.3%

Coefficient of Variation:
1.11

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

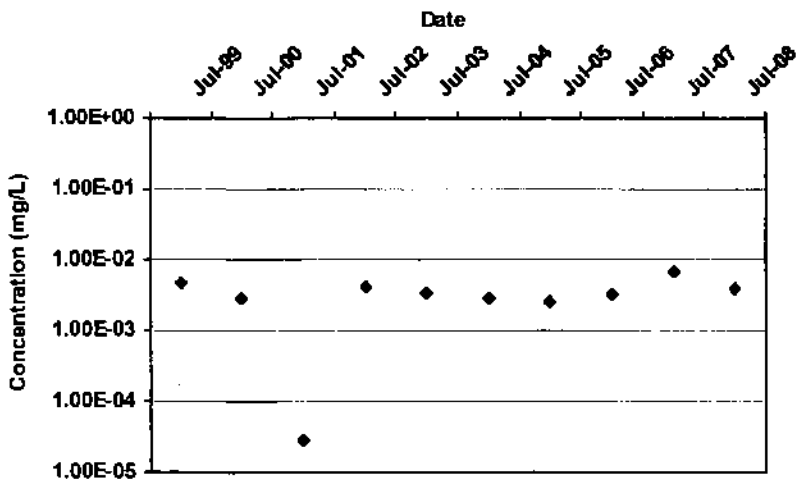
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-46	T	7/1/1999	CHROMIUM, HEXAVALENT	1.6E-02		5	5
MW-46	T	7/1/2000	CHROMIUM, HEXAVALENT	8.5E-05		9	4
MW-46	T	7/1/2001	CHROMIUM, HEXAVALENT	5.2E-05		3	1
MW-46	T	7/1/2002	CHROMIUM, HEXAVALENT	3.4E-03		3	2
MW-46	T	7/1/2003	CHROMIUM, HEXAVALENT	2.5E-03		3	1
MW-46	T	7/1/2004	CHROMIUM, HEXAVALENT	3.6E-03		5	3
MW-46	T	7/1/2005	CHROMIUM, HEXAVALENT	1.0E-02		4	4
MW-46	T	7/1/2006	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0
MW-46	T	7/1/2007	CHROMIUM, HEXAVALENT	3.4E-03		4	2
MW-46	T	7/1/2008	CHROMIUM, HEXAVALENT	2.5E-03	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-48
Well Type: T
COC: CHROMIUM, HEXAVALENT

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
5

Confidence in Trend:
63.6%

Coefficient of Variation:
0.50

Mann Kendall Concentration Trend: (See Note)
NT

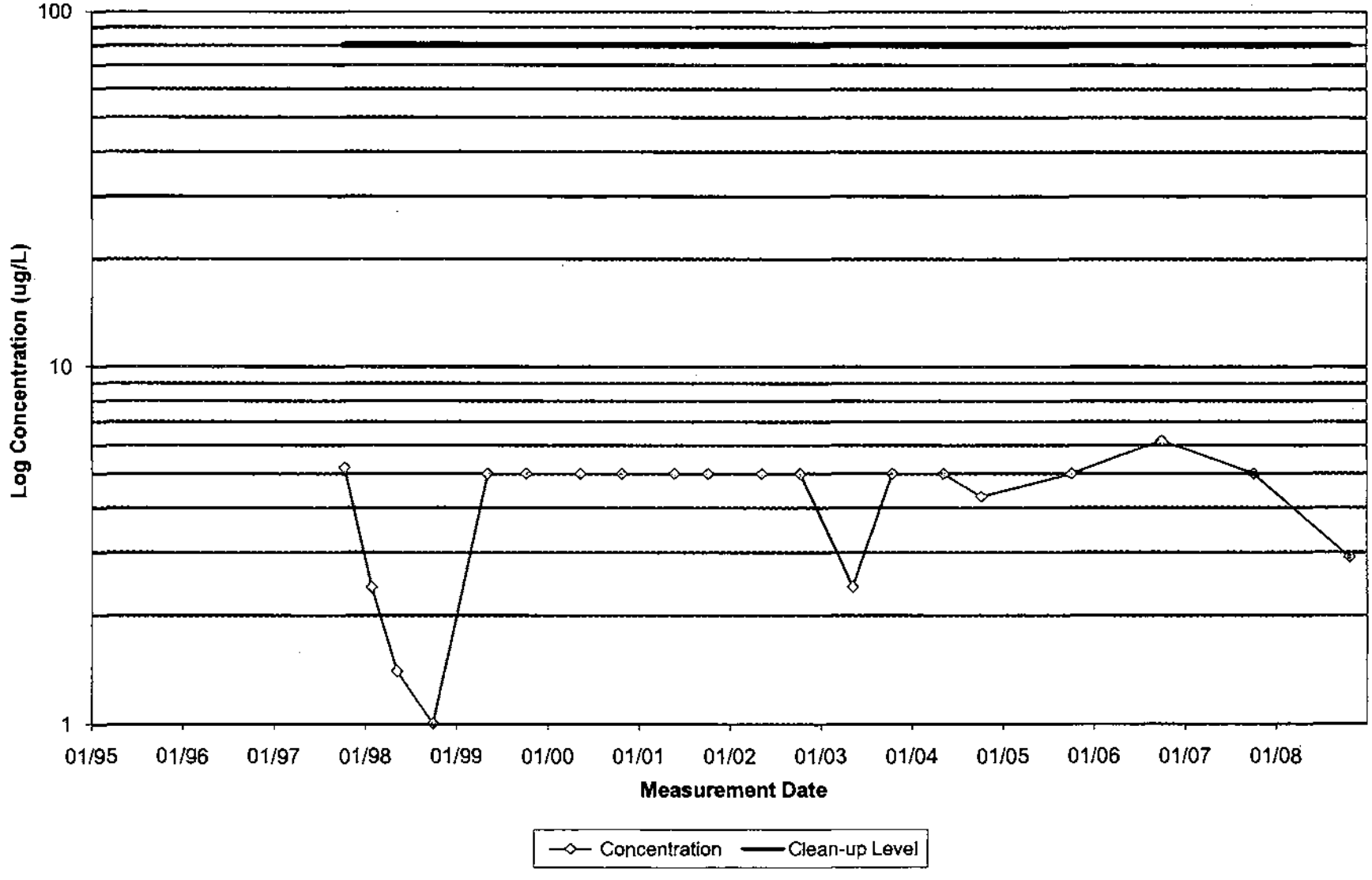
Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-48	T	7/1/1999	CHROMIUM, HEXAVALENT	4.7E-03		5	5
MW-48	T	7/1/2000	CHROMIUM, HEXAVALENT	2.8E-03		9	7
MW-48	T	7/1/2001	CHROMIUM, HEXAVALENT	2.9E-05		4	1
MW-48	T	7/1/2002	CHROMIUM, HEXAVALENT	4.3E-03		4	3
MW-48	T	7/1/2003	CHROMIUM, HEXAVALENT	3.5E-03		3	3
MW-48	T	7/1/2004	CHROMIUM, HEXAVALENT	2.9E-03		5	2
MW-48	T	7/1/2005	CHROMIUM, HEXAVALENT	2.5E-03	ND	4	0
MW-48	T	7/1/2006	CHROMIUM, HEXAVALENT	3.2E-03		2	1
MW-48	T	7/1/2007	CHROMIUM, HEXAVALENT	6.7E-03		1	1
MW-48	T	7/1/2008	CHROMIUM, HEXAVALENT	4.0E-03		1	1

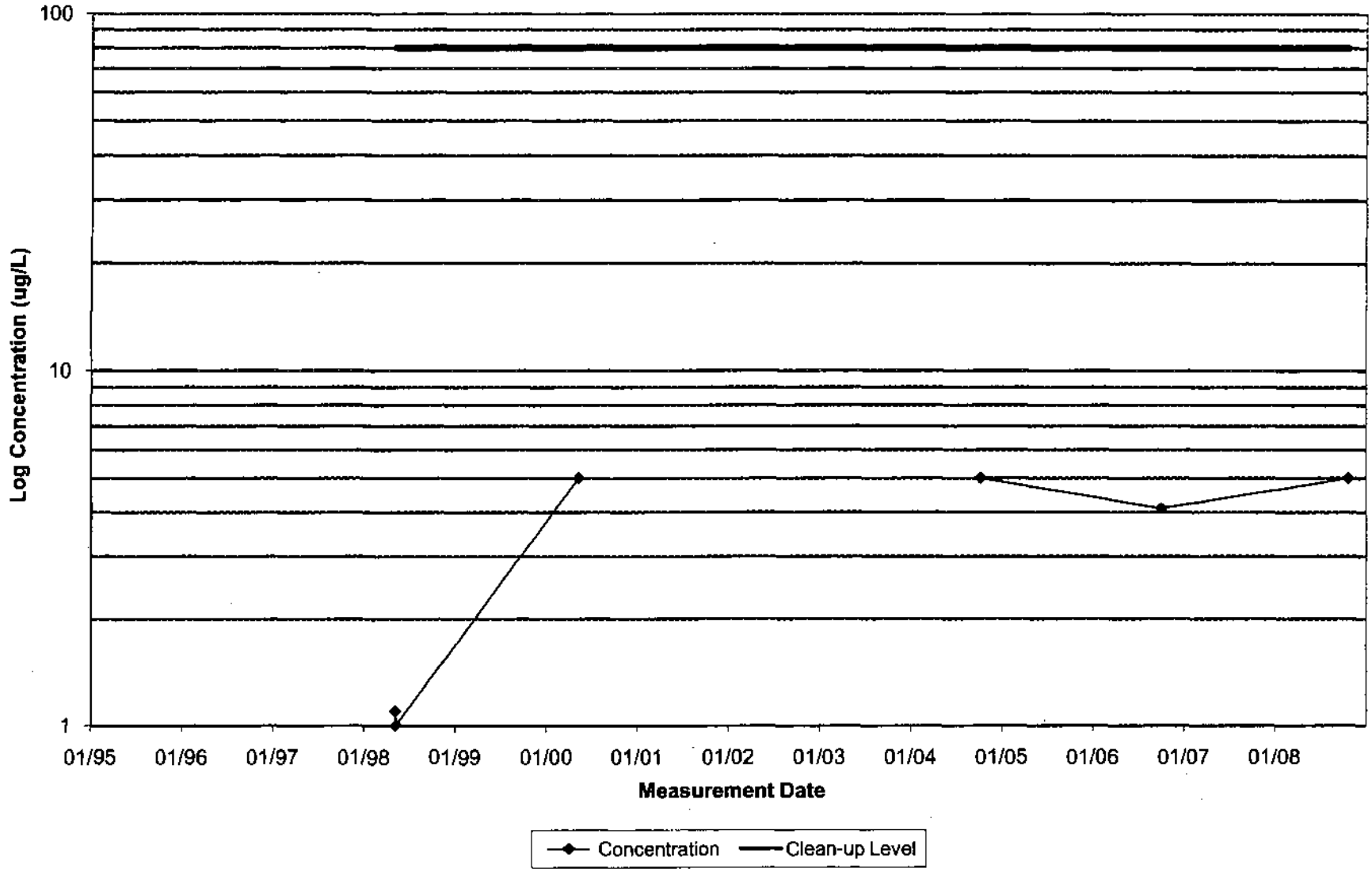
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

TROUTDALE WELLS

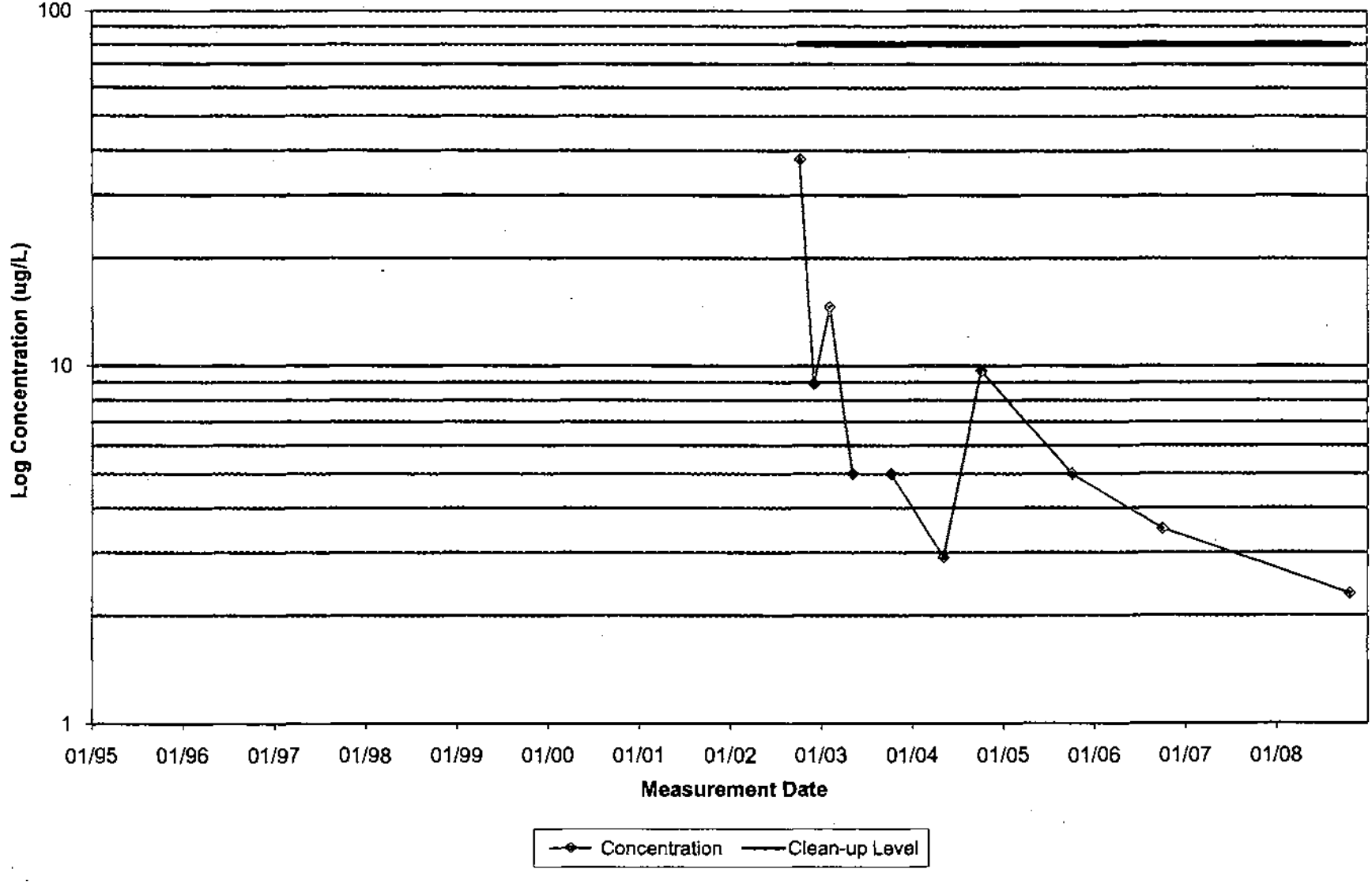
AMW-24 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

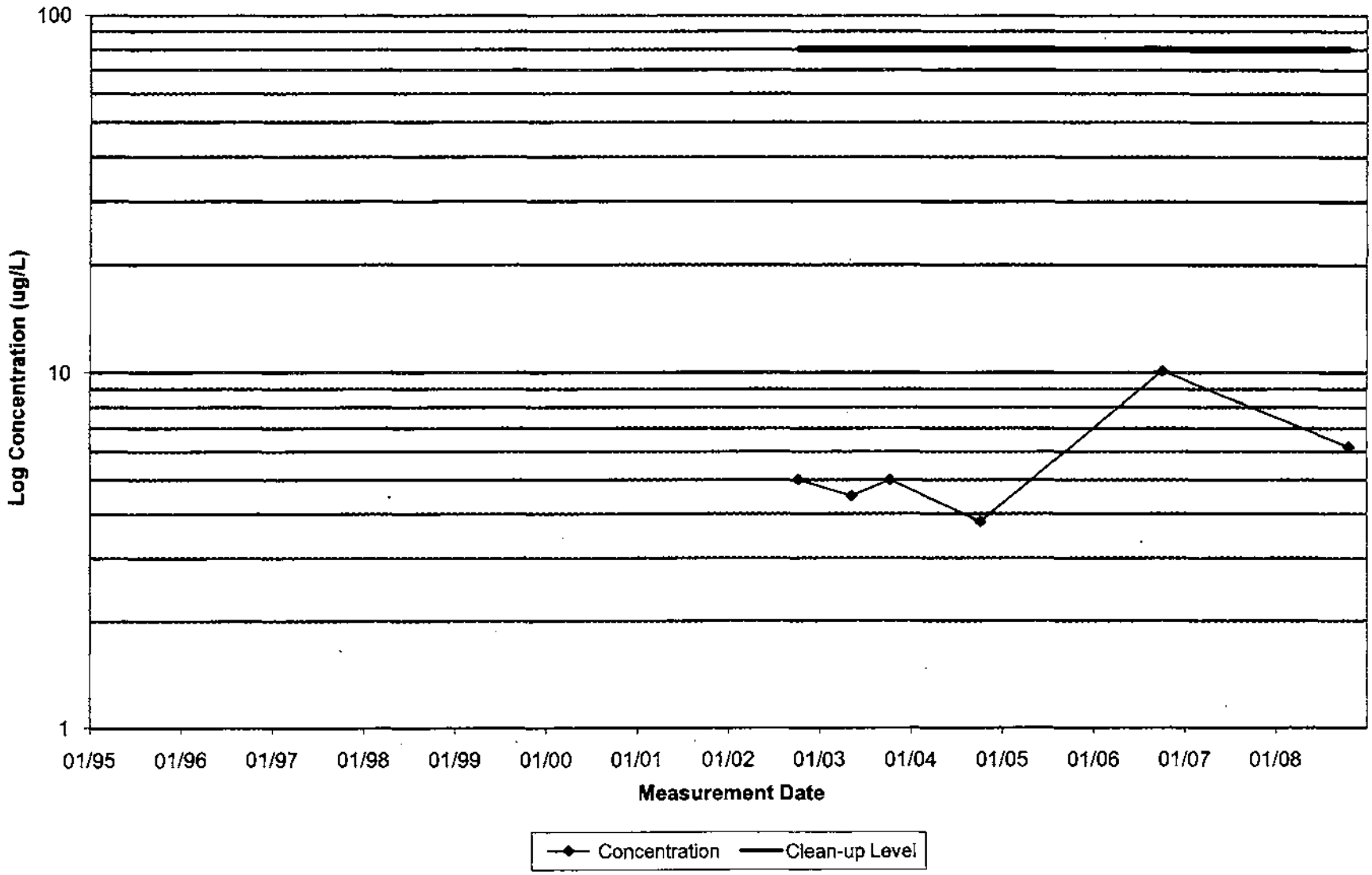
AMW-25 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

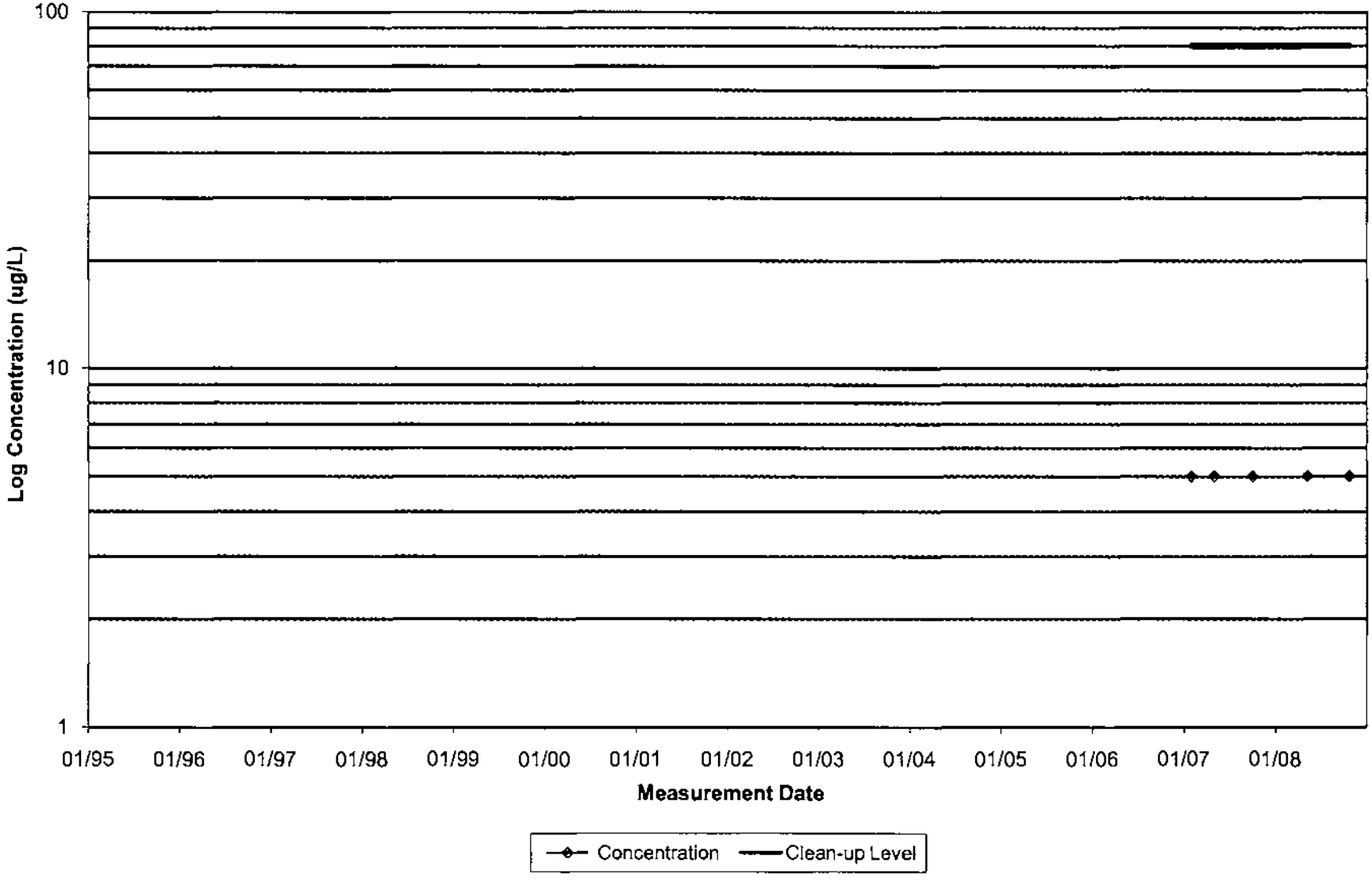
AMW-50 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

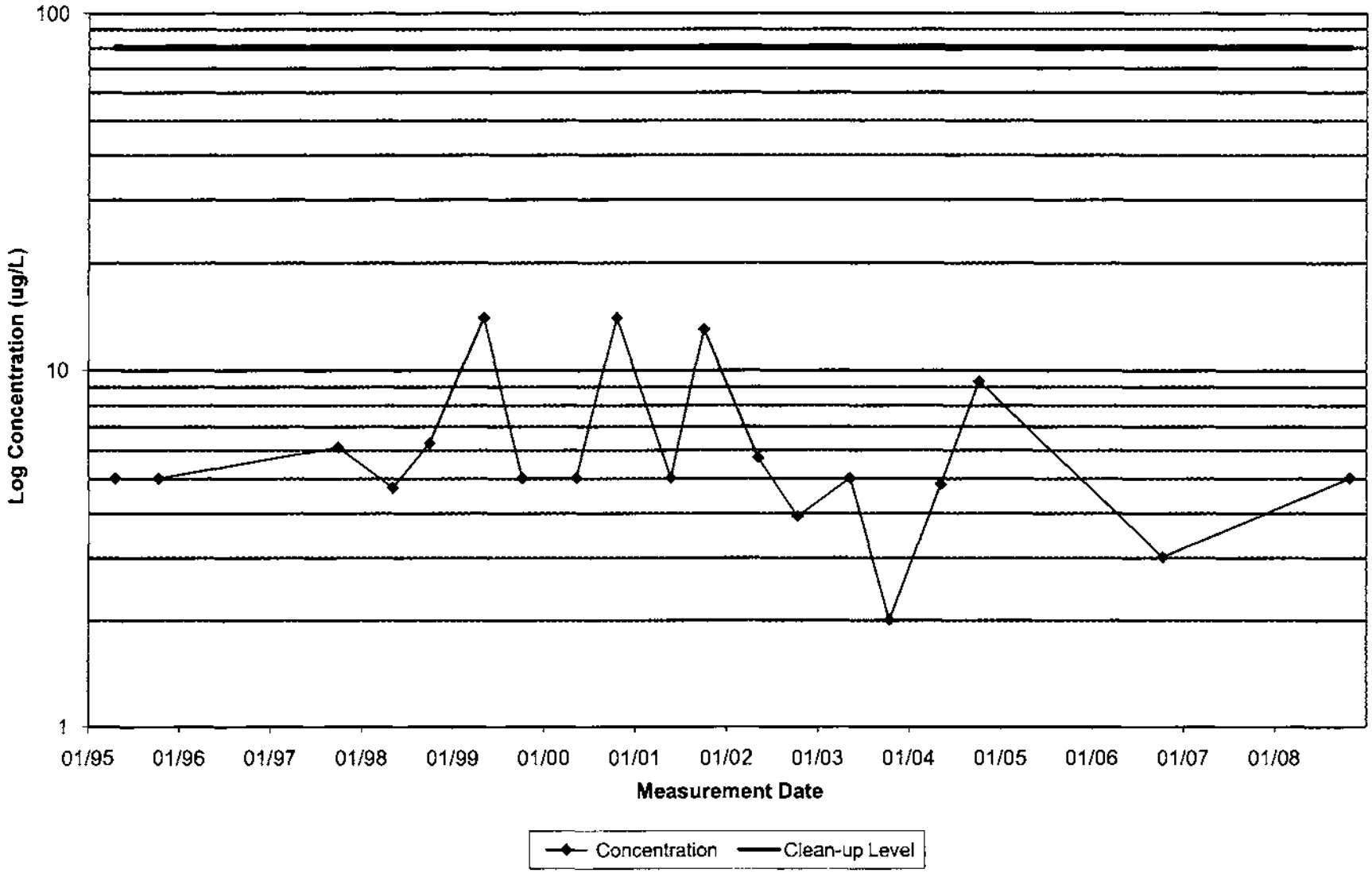
AMW-51 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

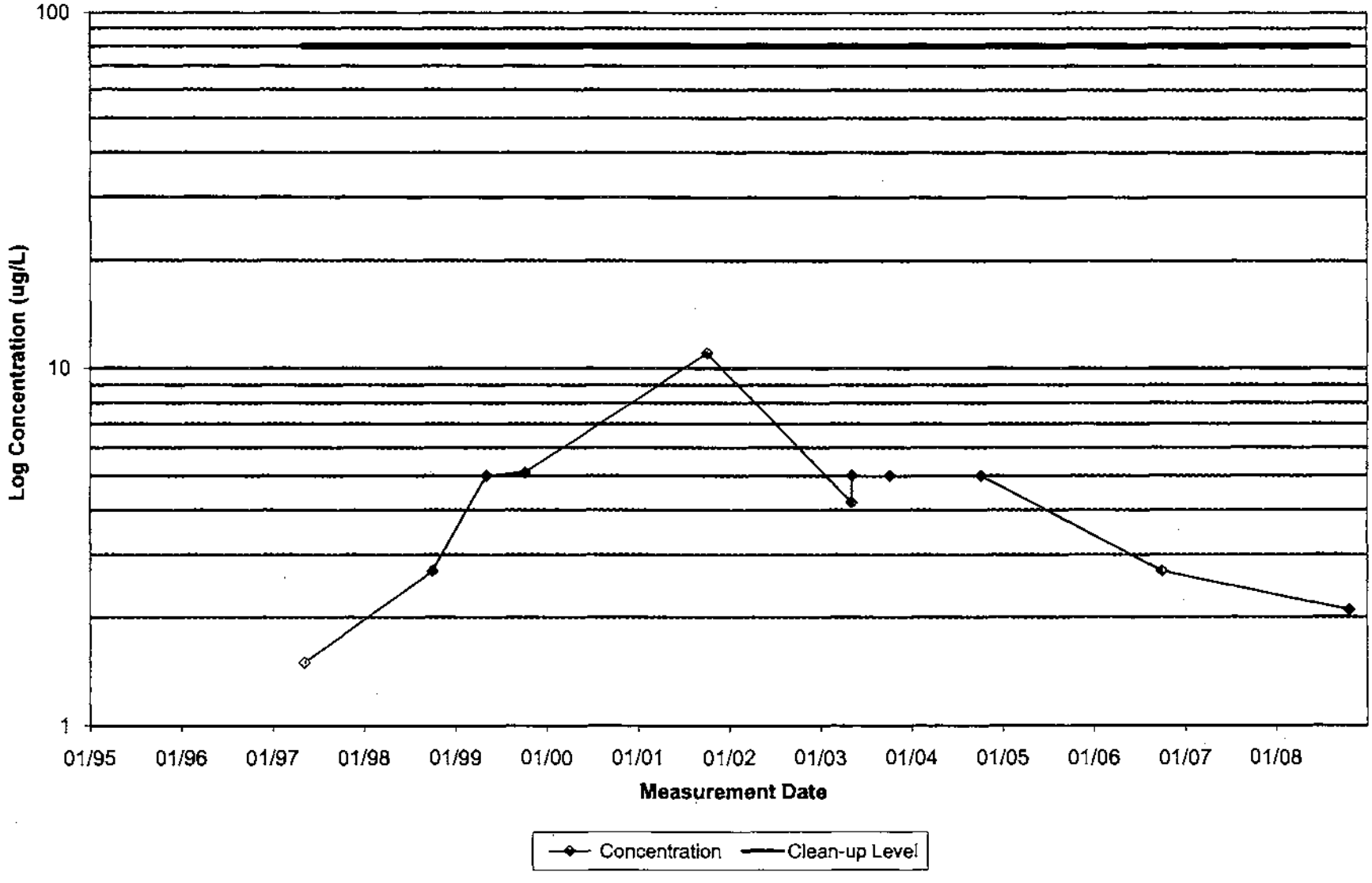
AMW-62 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

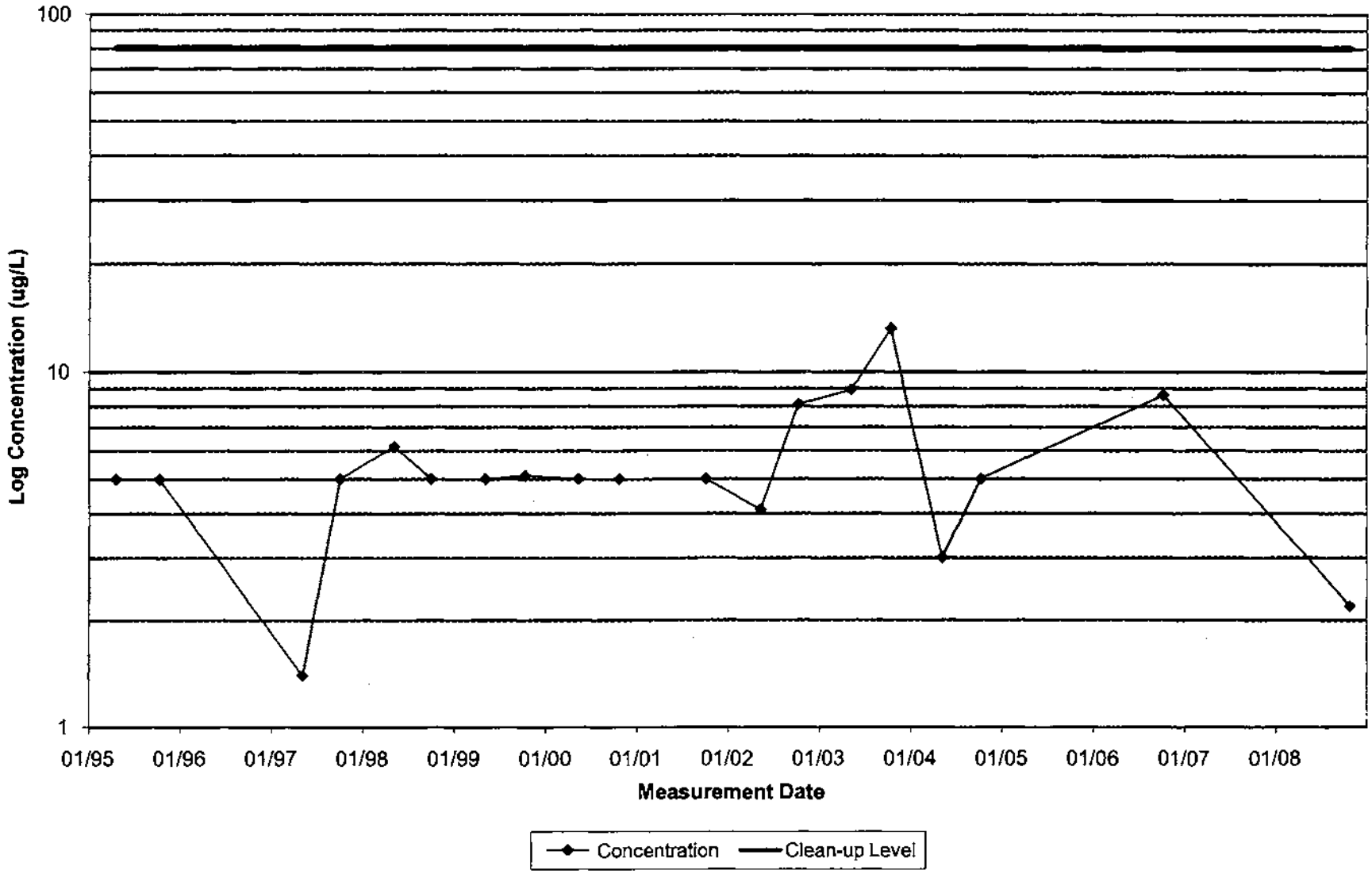
CPU-2 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

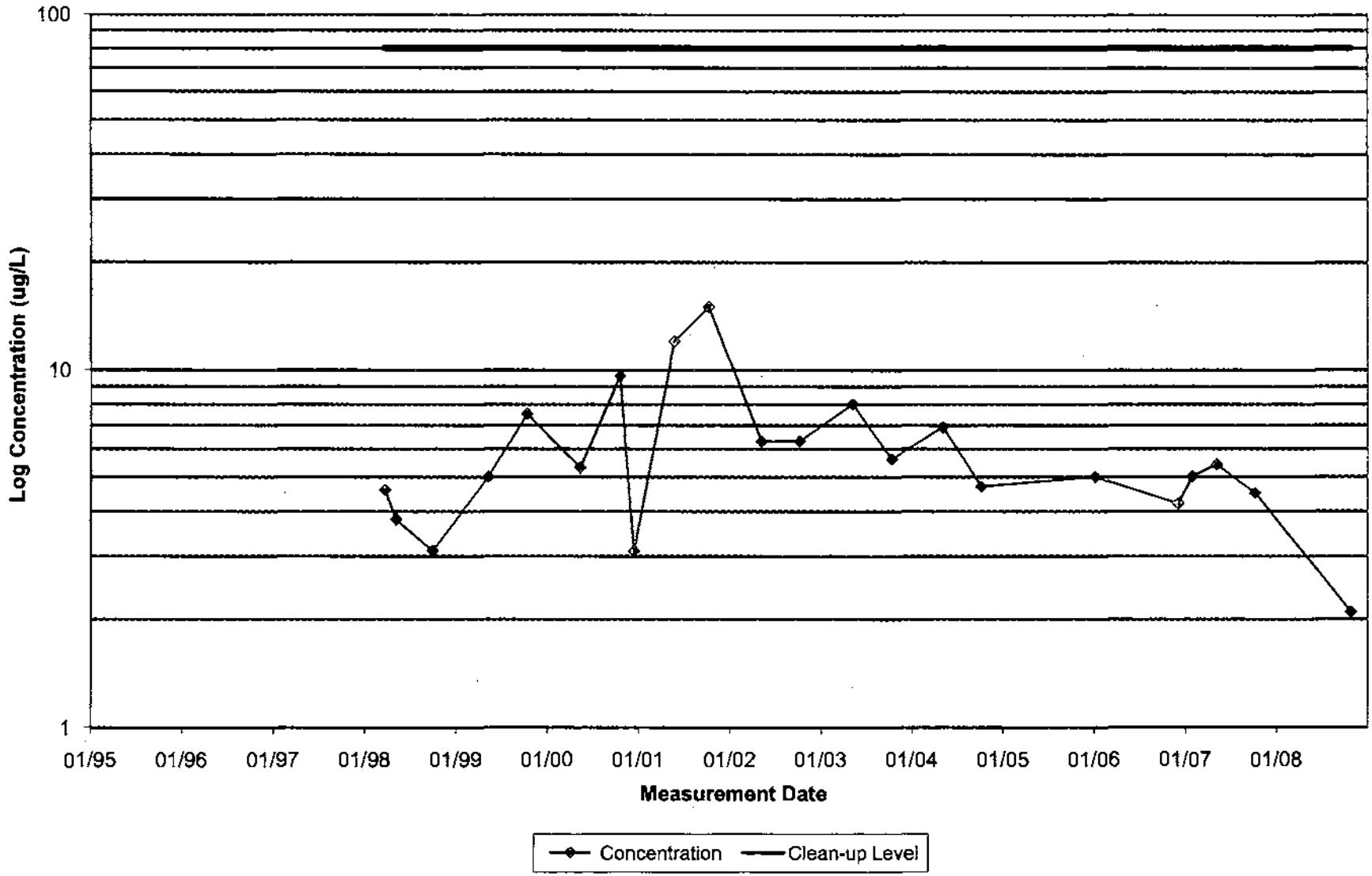
CPU-3D - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

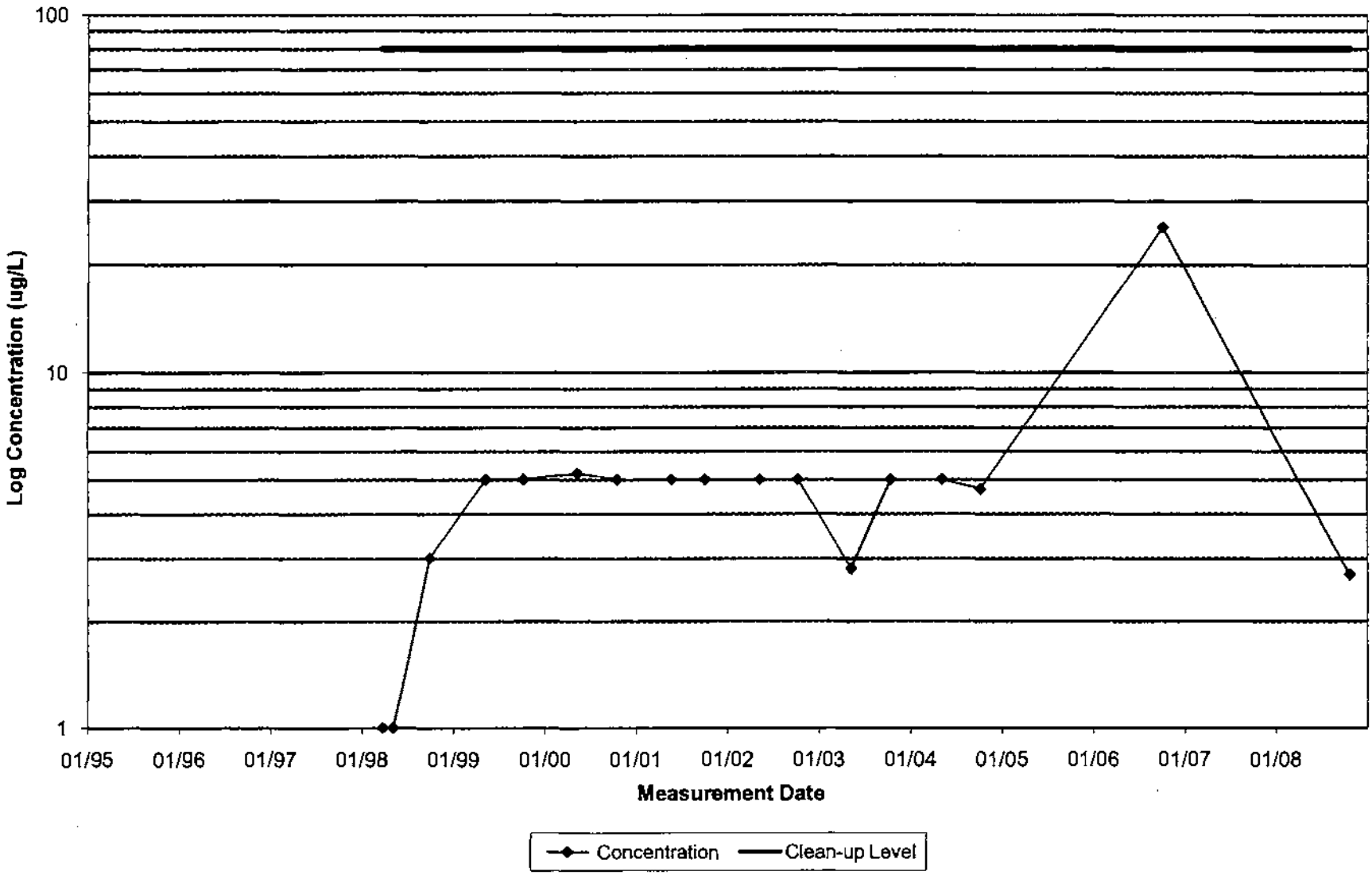
CPU-10 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

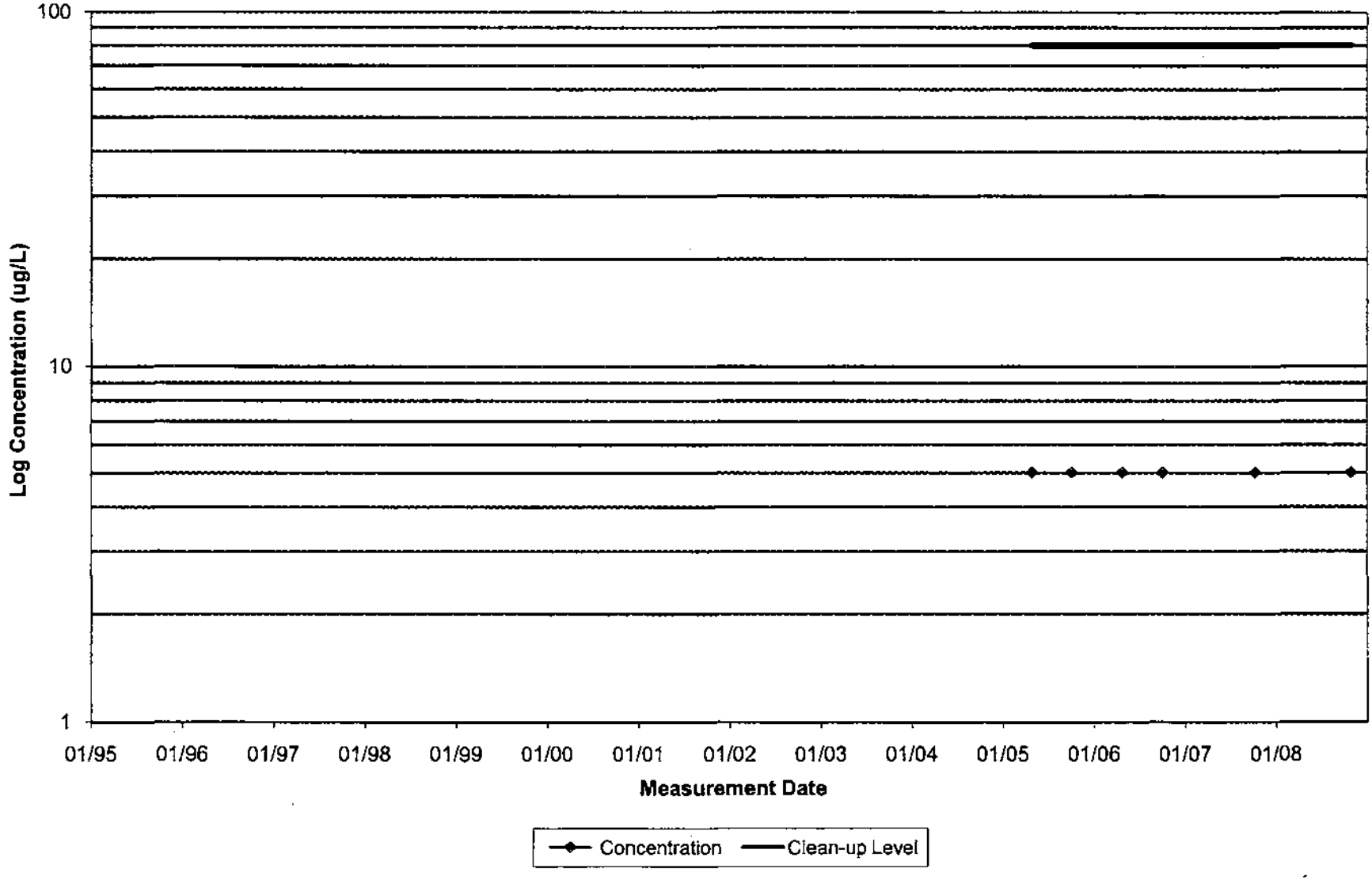
MW-33 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

MW-34 - Cr (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

BENNETT - Cr (ug/L)



Appendix B

APPENDIX B

TCE CONCENTRATIONS IN GROUNDWATER

Appendix B-1

APPENDIX B-1

TCE CONCENTRATIONS – SUMMARY TABLES

UPGRADIENT WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-6A	7/27/2006	0.91	0.93	0.66	0.65	0.51
AMW-7A	10/5/2006	0.65	0.72	0.57	0.52	0.46 J
AMW-8A	4/25/1995	**692**	1.7	1.4	1.4	0.91
AMW-10A	4/19/1995	0.79 J	0.67	0.55	0.39 J	0.42 J
AMW-11A	4/28/2006	0.98	0.94	0.66	0.66	0.46 J

NOTES: J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
U = Analyte not detected above the specified reporting limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 5 µg/L.

TCE SOURCE WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-1A	10/12/1995	**1,290**	0.34 J	**6.1**	0.26 J	0.39 J
AMW-1B	4/26/1995	**82.2**	0.30 J	0.30 J	0.41 J	0.50
AMW-1C	4/25/1995	**73.9**	0.50 U	0.50 U	--	0.50 U
AMW-2A	10/13/1995	**5,350**	1.4	**6.8**	1.1	**18**
AMW-2B	4/26/1995	**30.8 J**	0.21 J	0.18 J	0.64	0.61
RAMW-2C	10/7/1997	0.9	0.18 J	0.50 U	--	0.27 J
AMW-3A	5/15/1996	**34**	0.38 J	0.48 J	0.52	0.48 J
AMW-12A	5/9/1997	**19,300 J**	**25**	**31**	**27**	**26**
AMW-13A	10/12/1995	**74.8**	0.50 U	0.50 U	0.50 U	0.21 J
AMW-19A	5/14/2002	**490 D**	1.7	2.3	1.6	1.9
AMW-19B	10/3/2007	0.77	--	0.77	--	0.72
AMW-26	10/2/2001	**100 D**	--	0.50 U	0.20 J	0.24 J
AMW-52A	2/1/2006	**29**	0.50 U	0.50 U	0.10 J	0.07 J
AMW-52C	10/4/2006	0.50 U	--	0.50 U	--	0.50 U
AMW-53A	12/9/2003	**240 D**	1.2	**7.6**	4.4	**8.9**
AMW-53B	8/3/2004	2.7	--	0.43	--	0.53
AMW-53C	10/4/2006	0.50 U	--	0.50 U	--	0.50 U
AMW-54A	10/12/2004	**190 D**	0.70	1.4	0.84	1.9
AMW-54C	10/21/2008	0.26 J	--	0.50 U	--	0.26 J
AMW-55A	8/3/2004	**39**	0.45 J	0.43 J	0.72	0.65
AMW-55C	10/21/2008	0.23 J	--	0.50 U	--	0.23 J
AMW-56A	12/9/2003	**610 D**	0.47 J	1.7	0.75	0.97

TCE SOURCE WELLS
TCE CONCENTRATIONS SUMMARY Continued

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-56C	5/10/2004	0.19 J	0.50 U	0.50 U	0.30 J	0.39 J
MW-1A	5/10/1999	**3,900 D**	**15**	**12**	**7.6**	**13**
MW-1B	6/28/2000	**400**	--	0.50 U	--	0.50 U
MW-1C	4/27/1995	**92**	--	0.50 U	--	0.50 U

NOTES D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
U = Analyte not detected above the specified reporting limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 5 µg/L.
Wells shown in red were above the cleanup level of 5 µg/L during the 2008 reporting period.

PROXIMAL WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
MW-2A	5/2/1995	**24.7**	--	--	--	4.7
MW-3A	10/17/1995	2.4	--	--	--	0.23 J
MW-4B	5/10/1999	**600 D**	--	--	--	**7.2**
MW-6B	5/10/1997	**1,230**	**56 J**	**18**	**10**	**5.7**
MW-8B	4/26/1995	**3,070**	--	--	--	**6.0**
MW-9B	5/16/1995	**2,100**	--	--	--	**9.3**
MW-10B	10/8/1997	**1,300**	**38 J**	**29**	**28**	**25**
MW-10C	10/6/1998	**1,500 J**	**55 J**	**15**	**7.9**	**6.0**
MW-12C	4/26/1995	**9,430**	--	**7.4**	--	**15**
MW-13C	5/15/1996	**35**	--	2.4	--	2.1
AMW-58	1/14/2005	**9.2**	--	--	--	0.89
PW-1B	5/5/1999	**900 D**	**15 J**	**10**	**6.2**	4.5

NOTES: D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in **red** are above the cleanup level of 5 µg/L.
Wells shown in **red** were above the cleanup level of 5 µg/L during the 2008 reporting period.

INTERMEDIATE PLUME WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-16	4/25/1995	87	--	2.7	--	2.7
AMW-17	4/24/1995	66.9	--	1.5	--	1.2
AMW-18	12/11/2007	**410 D**	--	**330 D***	**460**	**390 D**
AMW-59	10/4/2006	**310 D**	--	**180 D**	--	**95 D**
CPU-14	10/23/2000	**63**	--	**10**	--	**9.8**
MW-14C	5/4/1998	**2,500**	**31 J**	**28**	**28**	**20**
MW-14E	5/10/1997	**6,540**	**130 J**	**100**	**100**	**95 D**
MW-15E	5/8/1997	**1,100**	--	--	--	**9.9**
MW-16E	10/9/2007	**5.7**	--	**5.7**	--	**5.1**
MW-18D	1/19/1995	**7,800 J**	**180 J**	**160**	**120**	**95 D**
MW-18E	5/12/1998	**2,700**	--	**320 D**	--	**250 D**
MW-19D	2/3/1995	**6,300 J**	**61 J**	**55**	**47**	**48**
MW-20D	10/11/1999	**4,100 J**	**60 J**	**60**	**58**	**48**
MW-40	10/12/1999	36	--	--	--	1.2

NOTES: D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
* = A confirmation sample collected on 11 December 2007 had a result of 410 D µg/L.
Results are in micrograms per liter (µg/L).
Results shown in **red** are above the cleanup level of 5 µg/L.
Wells shown in **red** were above the cleanup level of 5 µg/L during the 2008 reporting period.

CHURCH OF GOD WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-14	4/20/1995	**506**	--	--	--	1.0
AMW-27	6/2/1999	**83**	**52 J**	**33**	**29**	**23**
AMW-61	10/11/2006	**43**	--	--	--	**6.5**
CPU-12	5/7/2002	**13**	--	3.4	--	4.0
CPU-13	10/8/1997	**110**	3.3 J	2.4	2.6	2.2
MW-21D	2/3/1995	**3,000 J**	**16 J**	**12**	**14**	**11**
MW-22D	6/9/1997	**390**	**18 J**	**15**	**14**	**11**
MW-23D	10/1/1998	**67**	--	3.5	--	2.6
MW-25D	1/19/1995	**200 J**	2.6 J	2.0	1.9	1.9
MW-26D	10/10/2001	**52**	1.7 J	1.7	1.8	1.9
MW-27D	10/8/1997	**280**	--	1.5	0.76	0.62
MW-49	12/21/2000	**340 D**	**8.4 J**	**6.3**	**5.0**	4.9

NOTES: D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 5 µg/L.
Wells shown in red were above the cleanup level of 5 µg/L during the 2008 reporting period.

TOE OF PLUME WELLS
TCE CONCENTRATION SUMMARY

Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
Sentinel:						
AMW-43	10/4/2006	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
AMW-44	10/4/2006	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
AMW-45	10/4/2006	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
MW-30	10/4/2006	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
MW-47	10/4/2006	0.50 U	--	0.50 U	--	0.50 U
Other:						
AMW-42	5/10/1999	**73**	0.68 J	0.82	--	1.2
AMW-63	5/7/2007	0.17 J	0.17 J	0.50 U	0.80 UJ	0.50 U
MW-31	5/12/1998	**32**	--	0.39 J	--	0.36 J
MW-35	9/14/1999	**110 D**	**5.5**	**7.1**	**5.9**	**4.9**
MW-37	10/3/2006	0.50 U	--	0.50 U	--	0.50 U
MW-41	10/19/2004	**8.3**	0.50 U	0.50 U	0.50 U	0.50 U
MW-46	10/12/2006	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
MW-48	2/14/2001	**20**	--	0.50 U	--	0.50 U

NOTES: D = Reported result is from a dilution.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
U = Analyte not detected above the specified reporting limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 5 µg/L.
Wells shown in red were above the cleanup level of 5 µg/L during the 2008 reporting period.

TROUTDALE WELLS
TCE CONCENTRATION SUMMARY

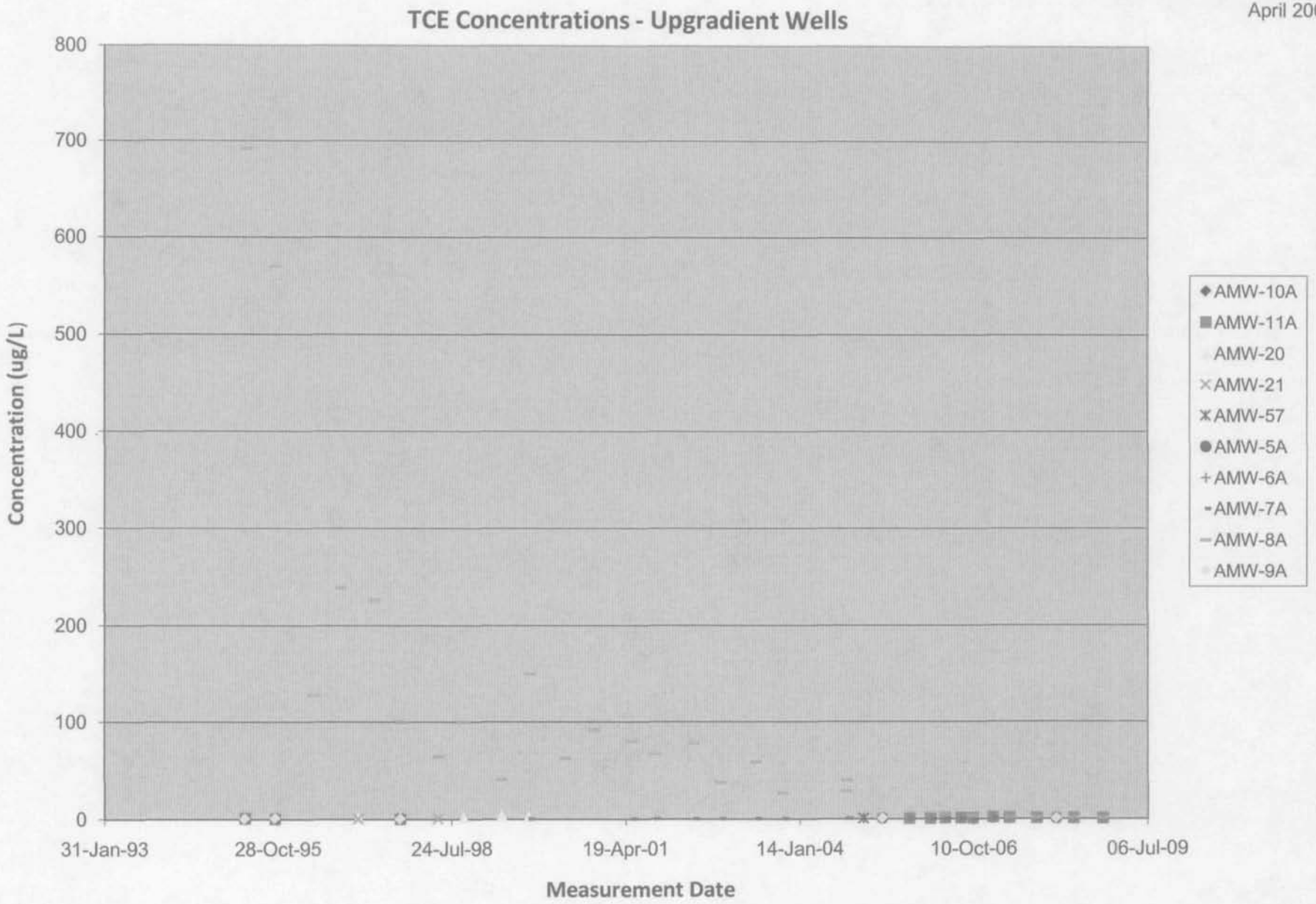
Wells	Historical Maximum		Spring 2007	Fall 2007	Spring 2008	Fall 2008
	Date	Result				
AMW-24	10/7/1999	**25**	--	**17**	--	**14**
AMW-25	10/2/2006	0.50 U	--	--	--	0.50 U
AMW-50	6/28/2002	0.16 J	--	--	--	0.50 U
AMW-51	7/26/2002	0.32 J	--	--	--	0.11 J
AMW-62	10/3/2007	0.50 U	0.50 U	0.50 U	0.50 U	0.50 U
CPU-2	10/10/2006	0.50 U	--	--	--	0.50 U
CPU-3D	10/3/2006	0.50 U	--	--	--	0.50 U
CPU-10	10/10/2006	0.50 U	--	--	--	0.50 U
MW-33	10/8/2001	**19**	--	**9.6**	--	**7.7**
MW-34	10/3/2006	0.50 U	--	--	--	0.50 U
PRIVATE (BENNETT)	10/5/2005	**9.3**	--	**8.3**	--	**9.0**

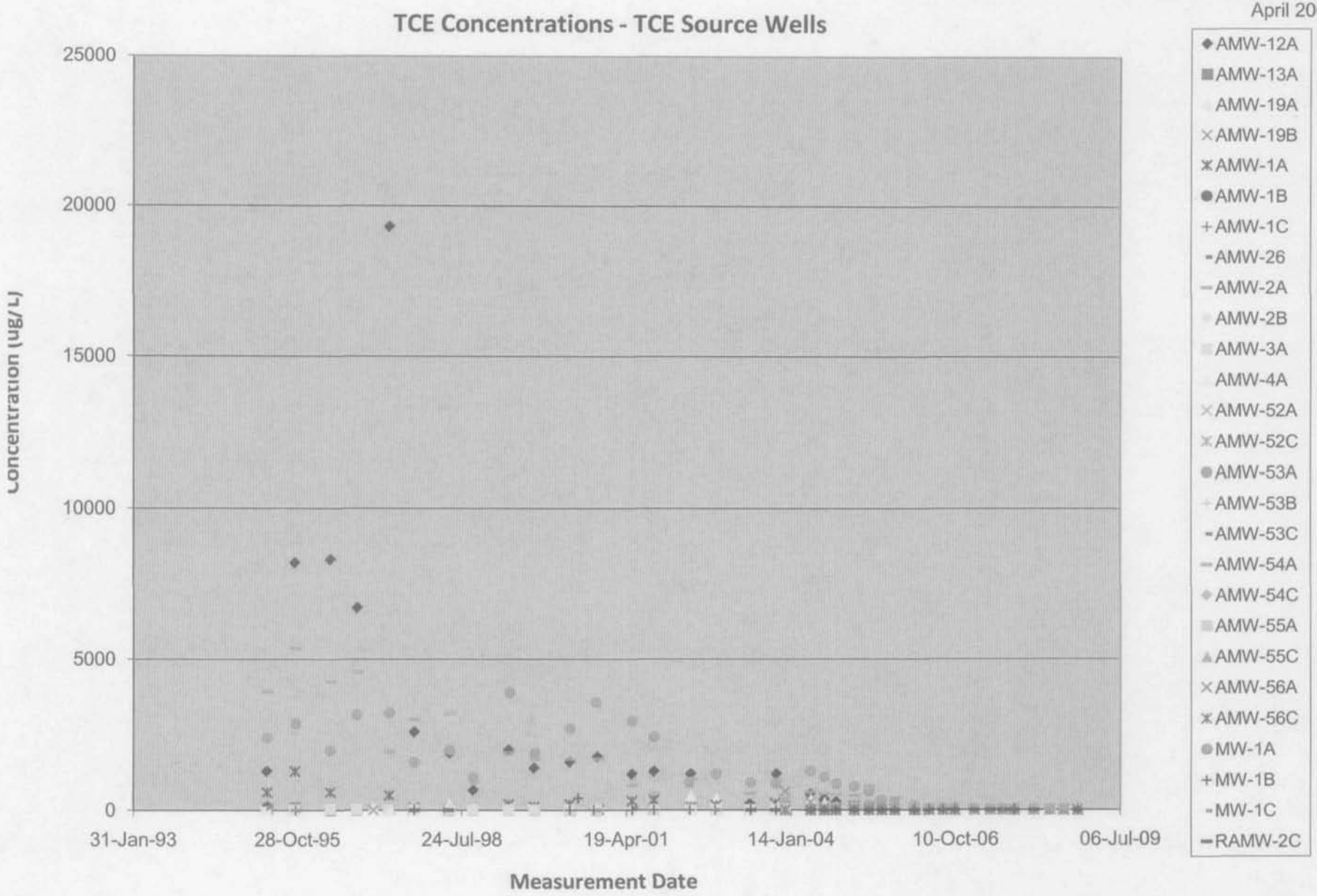
NOTES: U = Analyte not detected above the specified reporting limit.
J = The result is an estimated concentration that is less than the Method Reporting Limit but greater than or equal to the Method Detection Limit.
-- = Well not sampled during this monitoring event.
Results are in micrograms per liter (µg/L).
Results shown in red are above the cleanup level of 5 µg/L.
Wells shown in red were above the cleanup level of 5 µg/L during the 2008 reporting period.

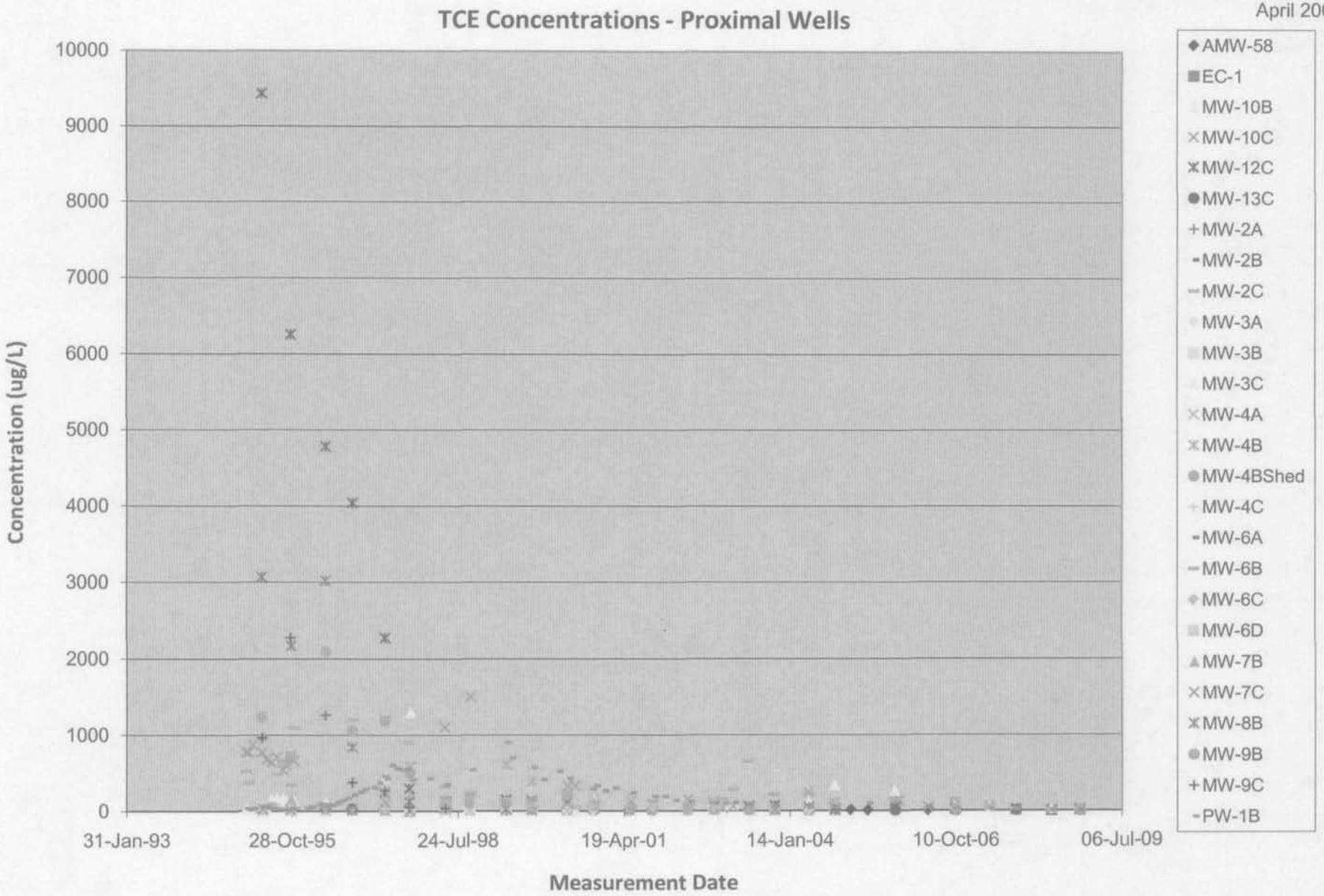
Appendix B-2

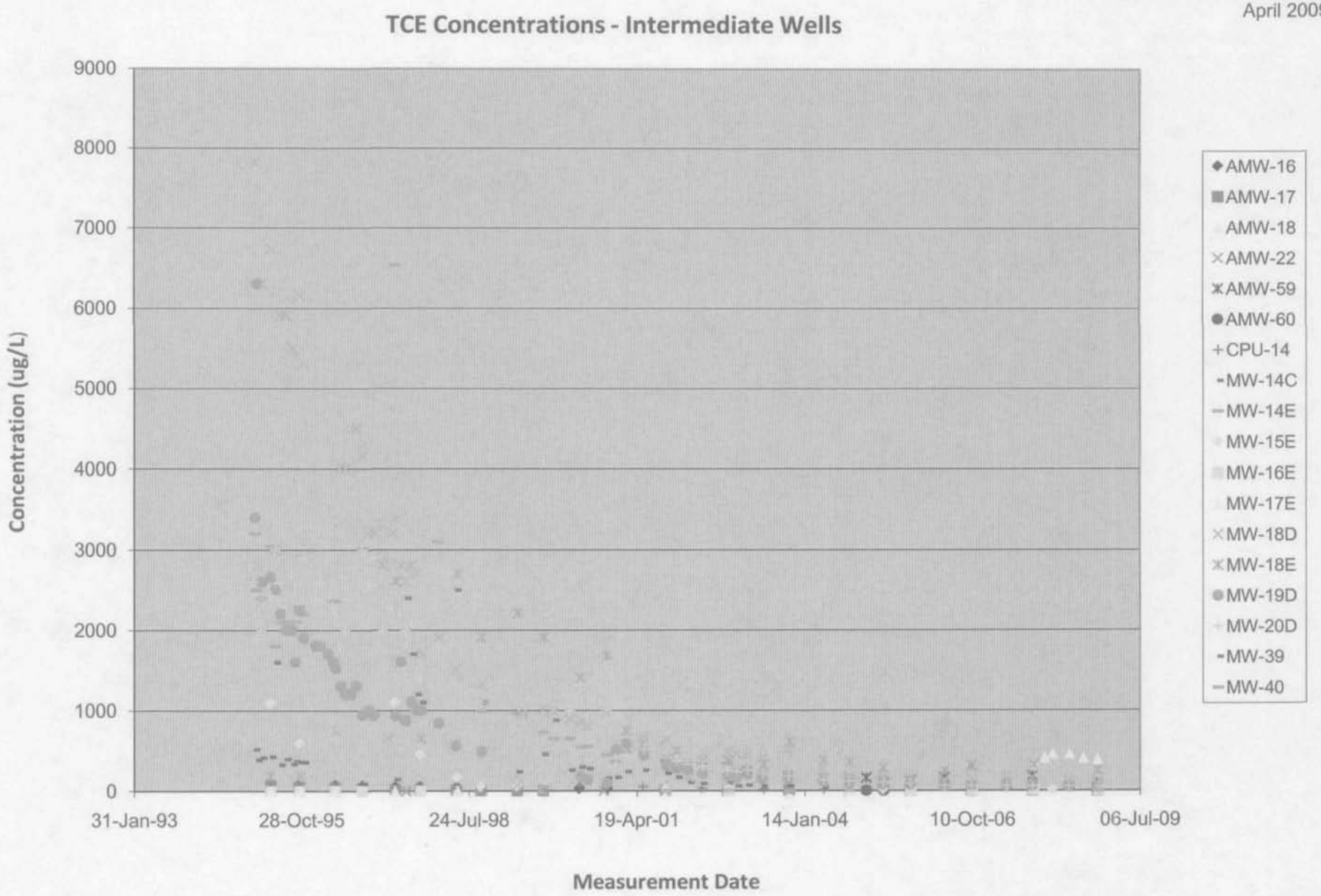
APPENDIX B-2

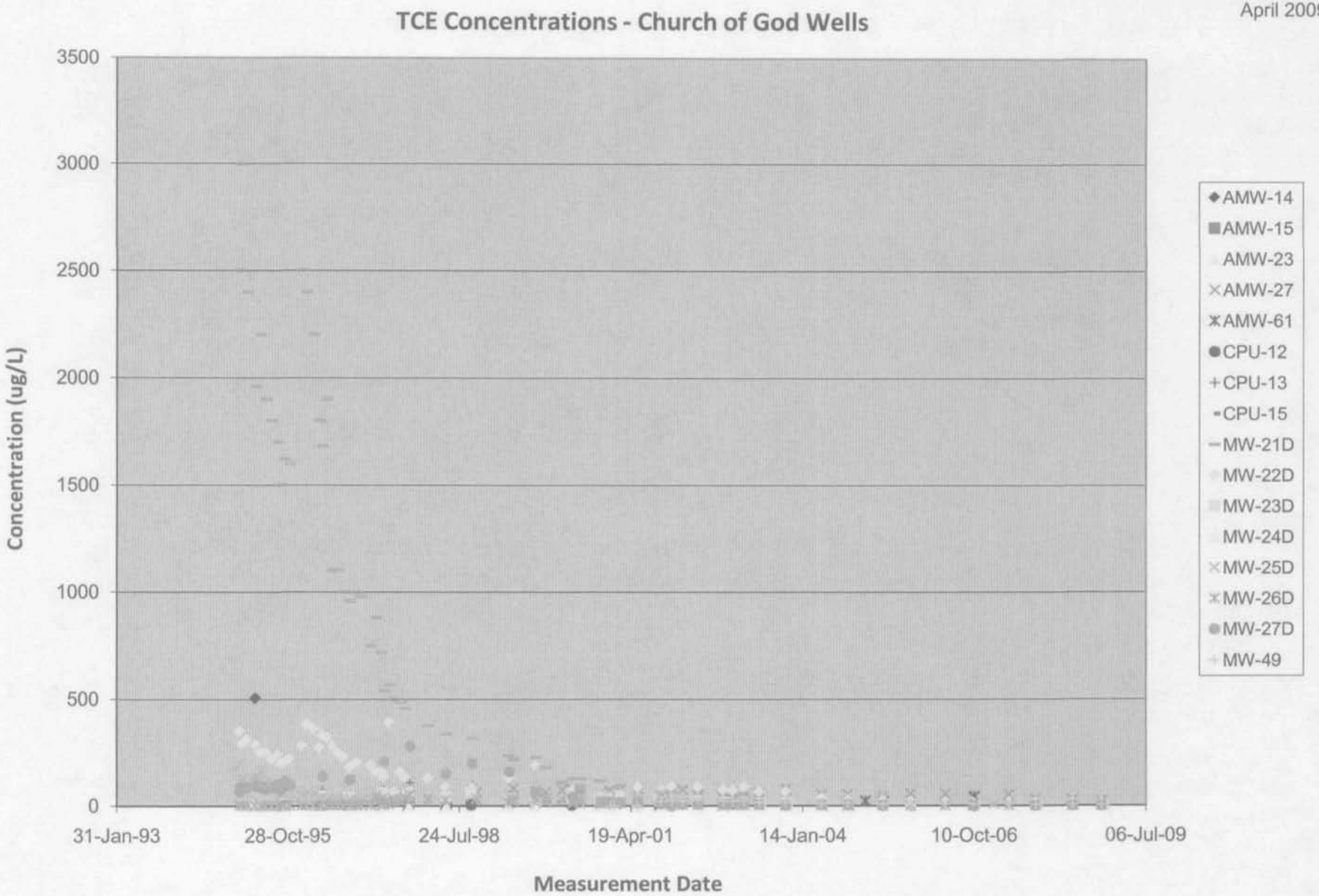
TCE CONCENTRATIONS – BY WELL GROUPING

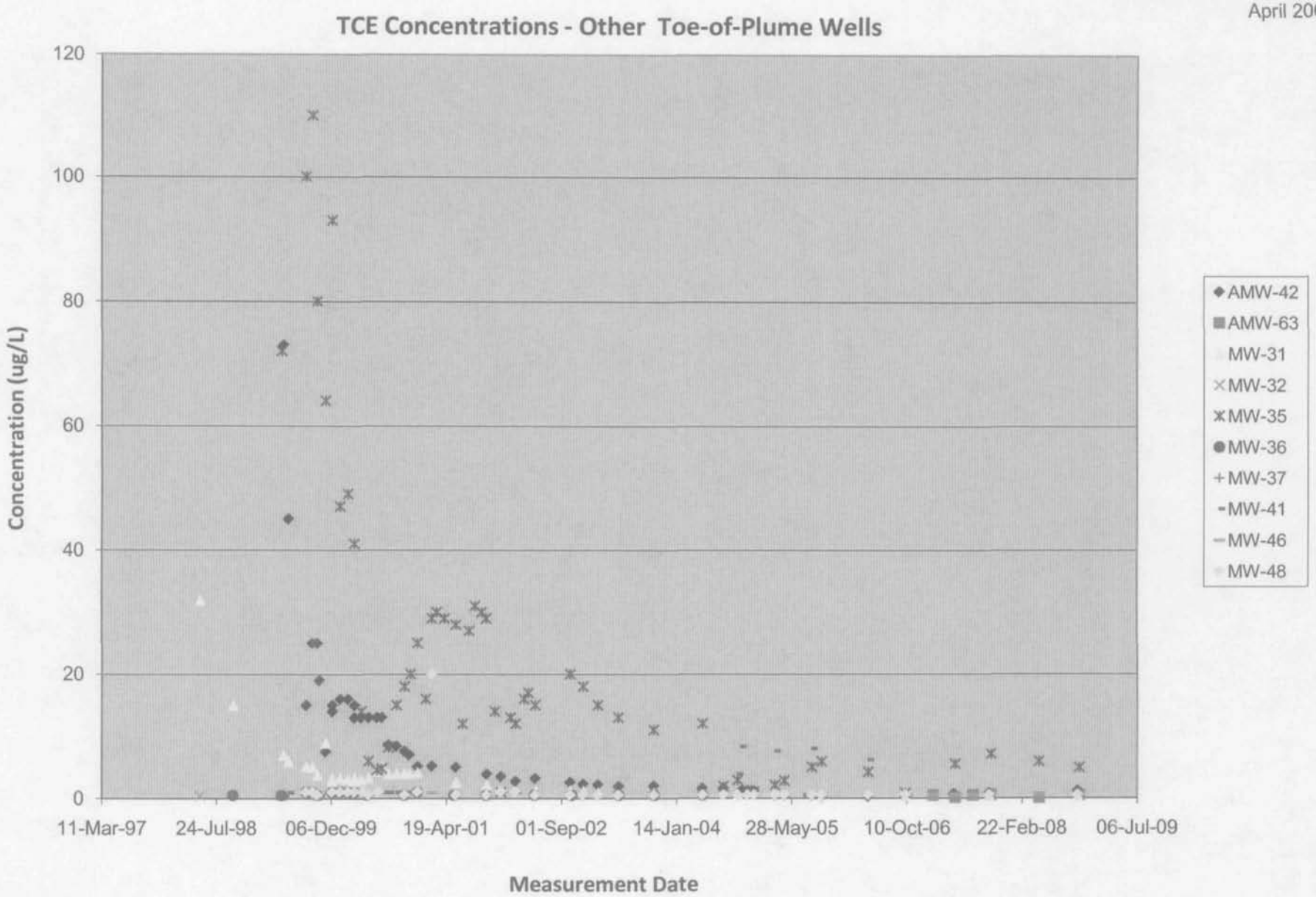

TCE Concentrations - Upgradient Wells
800
700
600
500
400
300
200
100
0
Concentration (ug/L)
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-10A
AMW-11A
AMW-20
AMW-21
AMW-57
AMW-5A
AMW-6A
AMW-7A
AMW-8A
AMW-9A

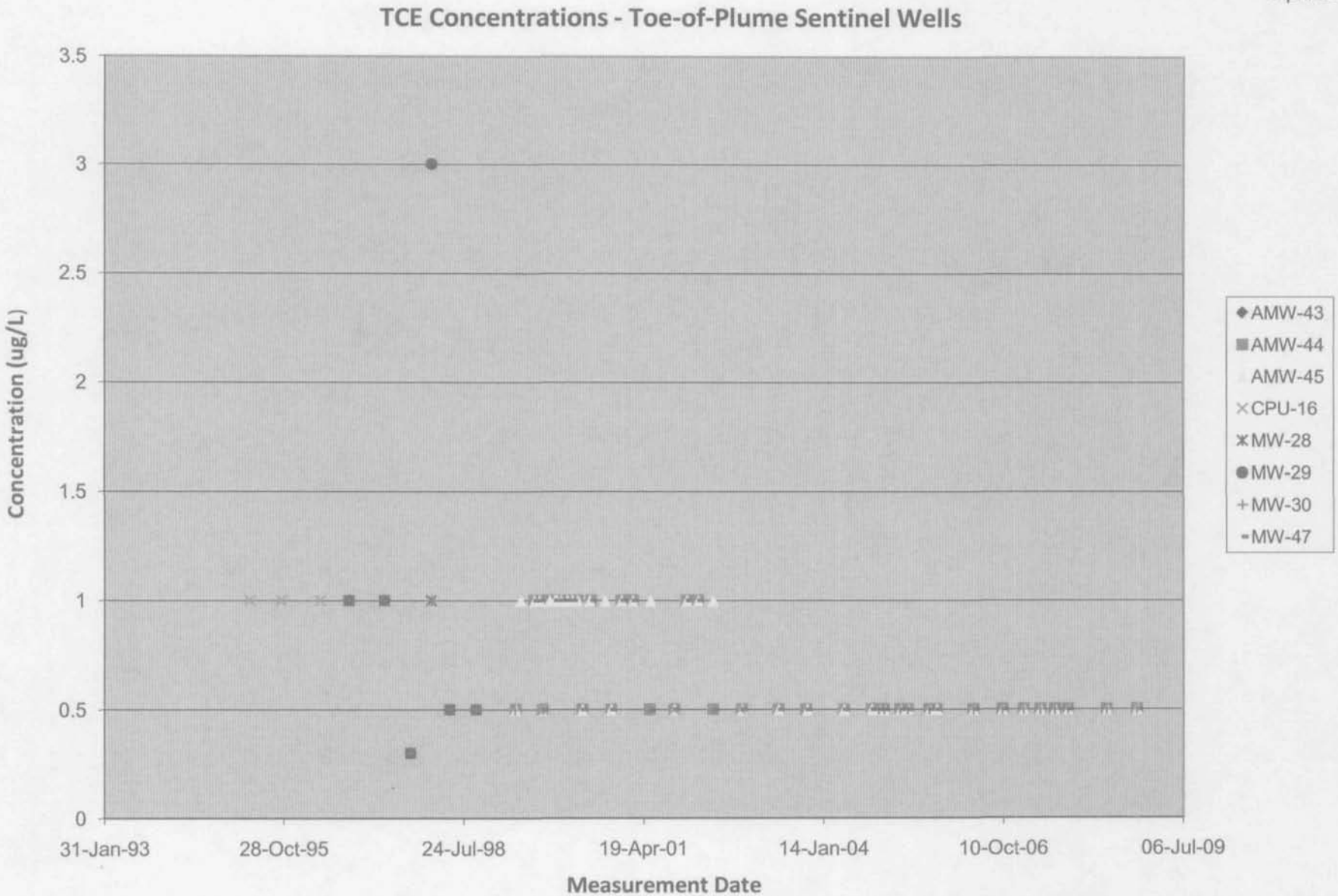

TCE Concentrations - TCE Source Wells
25000
20000
15000
10000
5000
0
Concentration (ug/L)
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-12A
AMW-13A
AMW-19A
AMW-19B
AMW-1A
AMW-1B
AMW-1C
AMW-26
AMW-2A
AMW-2B
AMW-3A
AMW-4A
AMW-52A
AMW-52C
AMW-53A
AMW-53B
AMW-53C
AMW-54A
AMW-54C
AMW-55A
AMW-55C
AMW-56A
AMW-56C
MW-1A
MW-1B
MW-1C
RAMW-2C

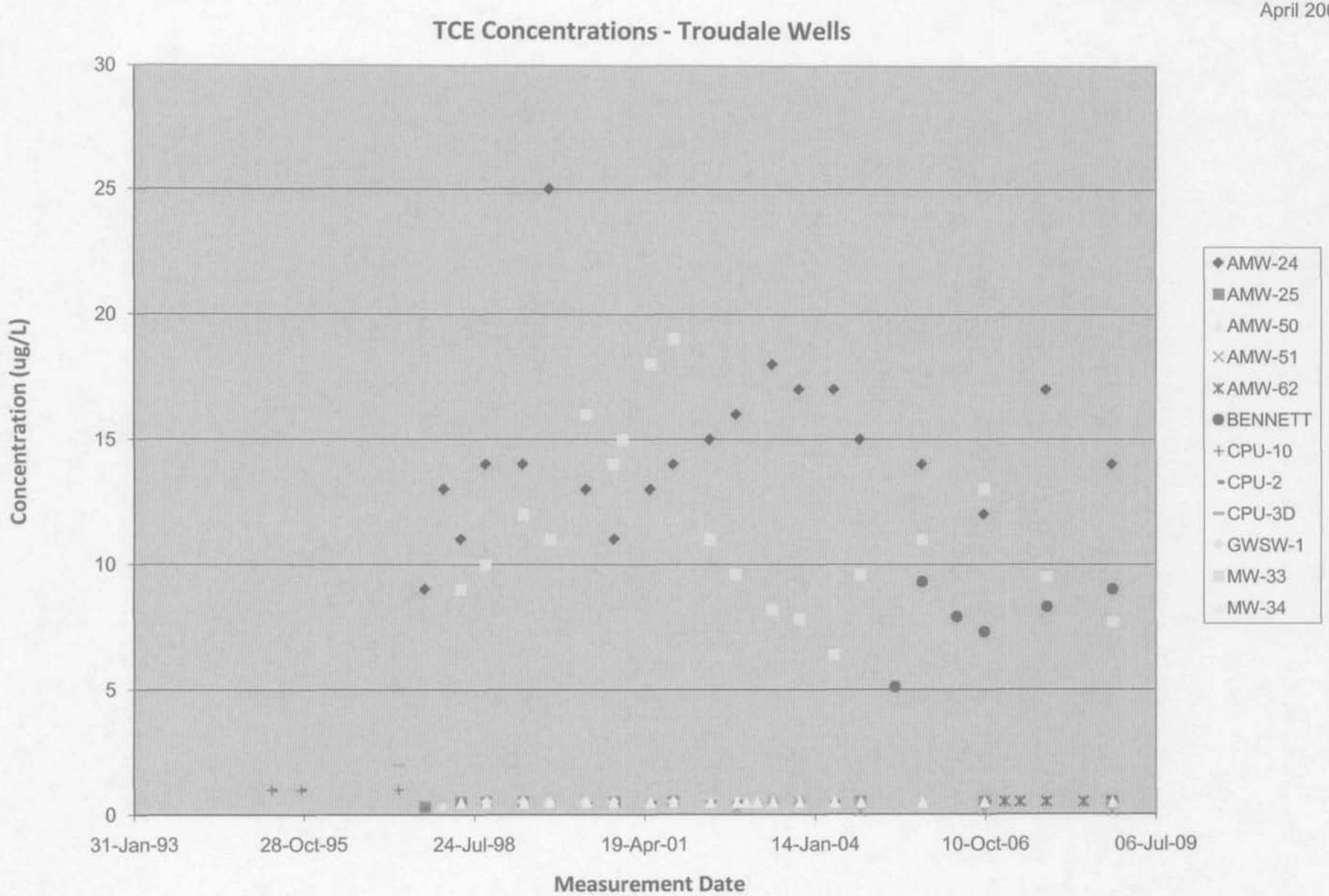

TCE Concentrations - Proximal Wells
Concentration (ug/L)
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-58
EC-1
MW-10B
MW-10C
MW-12C
MW-13C
MW-2A
MW-2B
MW-2C
MW-3A
MW-3B
MW-3C
MW-4A
MW-4B
MW-4BShed
MW-4C
MW-6A
MW-6B
MW-6C
MW-6D
MW-7B
MW-7C
MW-8B
MW-9B
MW-9C
PW-1B


TCE Concentrations - Intermediate Wells
Concentration (ug/L)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-16
AMW-17
AMW-18
AMW-22
AMW-59
AMW-60
CPU-14
MW-14C
MW-14E
MW-15E
MW-16E
MW-17E
MW-18D
MW-18E
MW-19D
MW-20D
MW-39
MW-40


TCE Concentrations - Church of God Wells
3500
3000
2500
2000
1500
1000
500
0
Concentration (ug/L)
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-14
AMW-15
AMW-23
AMW-27
AMW-61
CPU-12
CPU-13
CPU-15
MW-21D
MW-22D
MW-23D
MW-24D
MW-25D
MW-26D
MW-27D
MW-49


TCE Concentrations - Other Toe-of-Plume Wells
Concentration (ug/L)
120
100
80
60
40
20
0
11-Mar-97
24-Jul-98
06-Dec-99
19-Apr-01
01-Sep-02
14-Jan-04
28-May-05
10-Oct-06
22-Feb-08
06-Jul-09
Measurement Date
AMW-42
AMW-63
MW-31
MW-32
MW-35
MW-36
MW-37
MW-41
MW-46
MW-48


TCE Concentrations - Toe-of-Plume Sentinel Wells
Concentration (ug/L)
3.5
3
2.5
2
1.5
1
0.5
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-43
AMW-44
AMW-45
CPU-16
MW-28
MW-29
MW-30
MW-47


TCE Concentrations - Troudale Wells
Concentration (ug/L)
30
25
20
15
10
5
0
31-Jan-93
28-Oct-95
24-Jul-98
19-Apr-01
14-Jan-04
10-Oct-06
06-Jul-09
Measurement Date
AMW-24
AMW-25
AMW-50
AMW-51
AMW-62
BENNETT
CPU-10
CPU-2
CPU-3D
GWSW-1
MW-33
MW-34

APPENDIX B-3

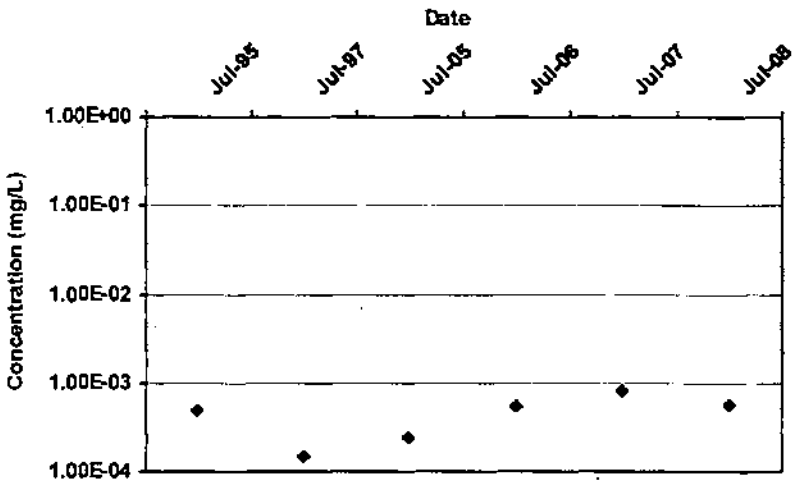
TCE CONCENTRATIONS – INDIVIDUAL WELLS

UPGRADIENT WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-6A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
9

Confidence in Trend:
93.2%

Coefficient of Variation:
0.51

Mann Kendall Concentration Trend: (See Note)
PI

Data Table:

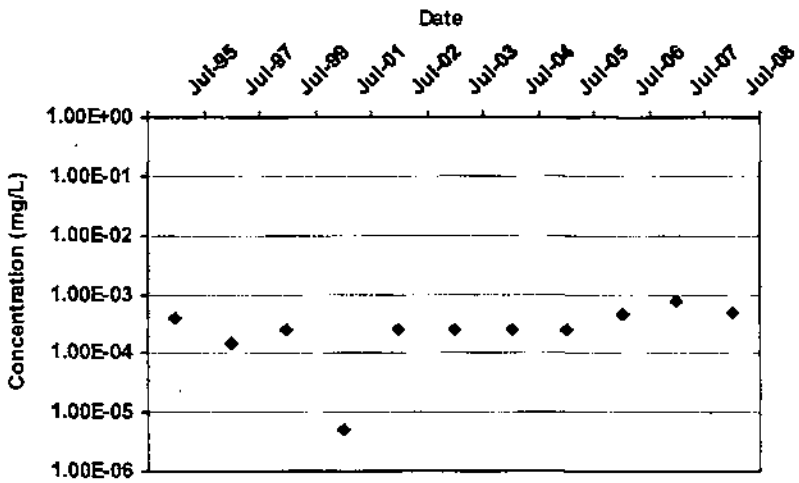
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-6A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	5.0E-04	ND	2	0
AMW-6A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
AMW-6A	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-6A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	5.5E-04		4	3
AMW-6A	T	7/1/2007	TRICHLOROETHYLENE (TCE)	8.2E-04		3	3
AMW-6A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.8E-04		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-7A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 25

Confidence in Trend: 97.0%

Coefficient of Variation: 0.62

Mann Kendall Concentration Trend: (See Note) I

Data Table:

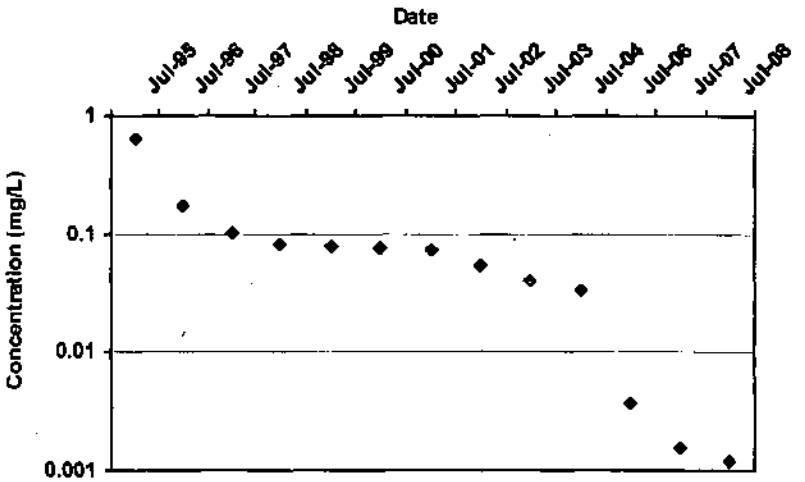
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-7A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	4.0E-04		2	1
AMW-7A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
AMW-7A	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-7A	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	2	0
AMW-7A	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-7A	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-7A	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-7A	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-7A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.7E-04		4	3
AMW-7A	T	7/1/2007	TRICHLOROETHYLENE (TCE)	7.4E-04		3	3
AMW-7A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.9E-04		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-8A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-78

Confidence in Trend:

100.0%

Coefficient of Variation:

1.58

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

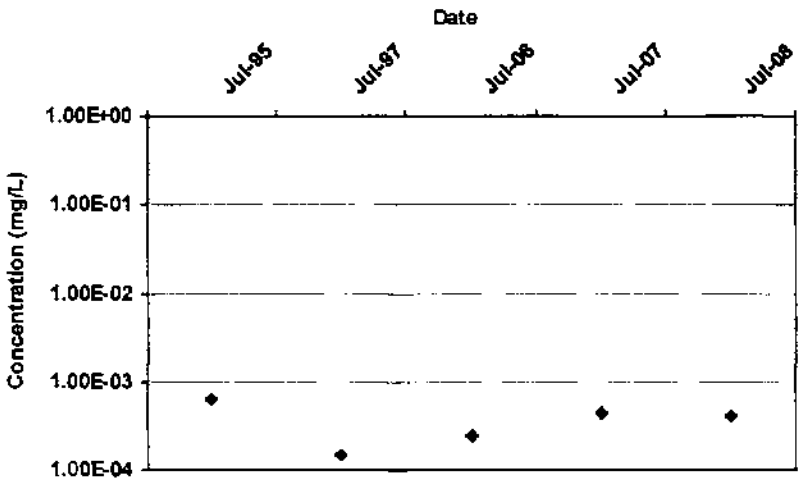
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-8A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	6.3E-01		2	2
AMW-8A	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.7E-01		2	2
AMW-8A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.0E-01		2	2
AMW-8A	T	7/1/1998	TRICHLOROETHYLENE (TCE)	8.1E-02		2	2
AMW-8A	T	7/1/1999	TRICHLOROETHYLENE (TCE)	7.8E-02		2	2
AMW-8A	T	7/1/2000	TRICHLOROETHYLENE (TCE)	7.6E-02		2	2
AMW-8A	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.4E-02		2	2
AMW-8A	T	7/1/2002	TRICHLOROETHYLENE (TCE)	5.5E-02		2	2
AMW-8A	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.0E-02		2	2
AMW-8A	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.4E-02		2	2
AMW-8A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	3.8E-03		2	2
AMW-8A	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.5E-03		2	2
AMW-8A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-03		3	3

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-10A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
40.8%

Coefficient of Variation:
0.49

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

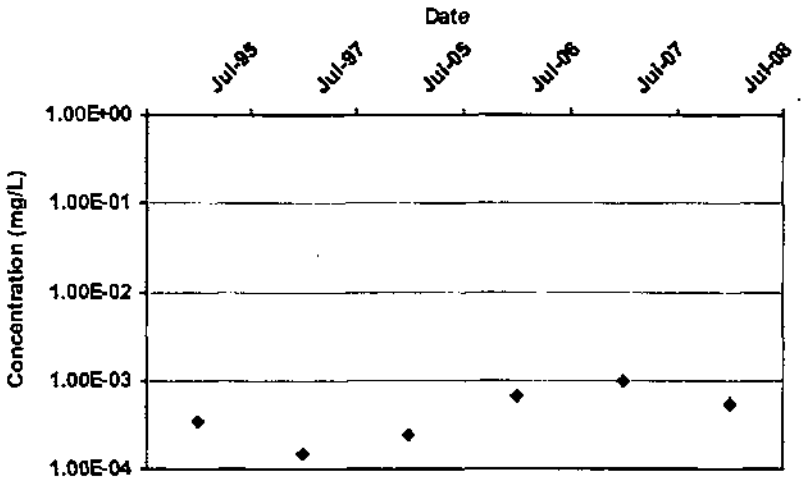
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-10A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	6.3E-04		2	1
AMW-10A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
AMW-10A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-10A	T	7/1/2007	TRICHLOROETHYLENE (TCE)	4.5E-04		3	2
AMW-10A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.0E-04		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-11A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 7

Confidence in Trend: 86.4%

Coefficient of Variation: 0.63

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-11A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.4E-04		2	1
AMW-11A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
AMW-11A	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-11A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	6.6E-04		4	3
AMW-11A	T	7/1/2007	TRICHLOROETHYLENE (TCE)	9.8E-04		3	3
AMW-11A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.5E-04		2	2

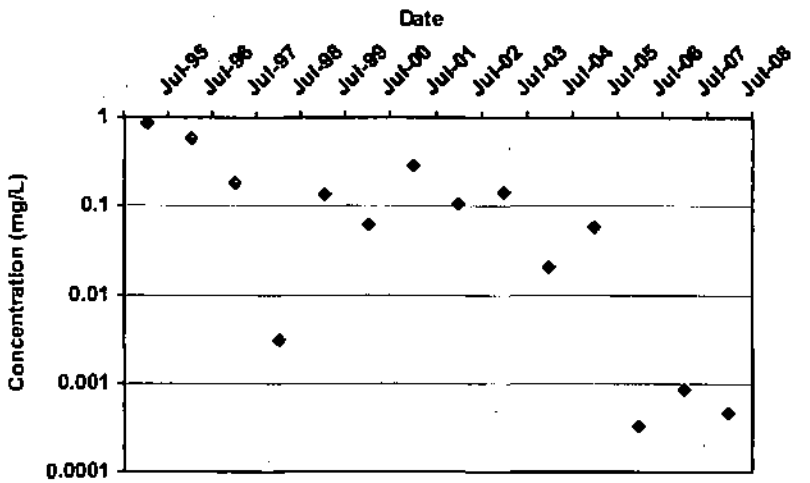
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

TCE SOURCE WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-1A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-57

Confidence in Trend:

99.9%

Coefficient of Variation:

1.45

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

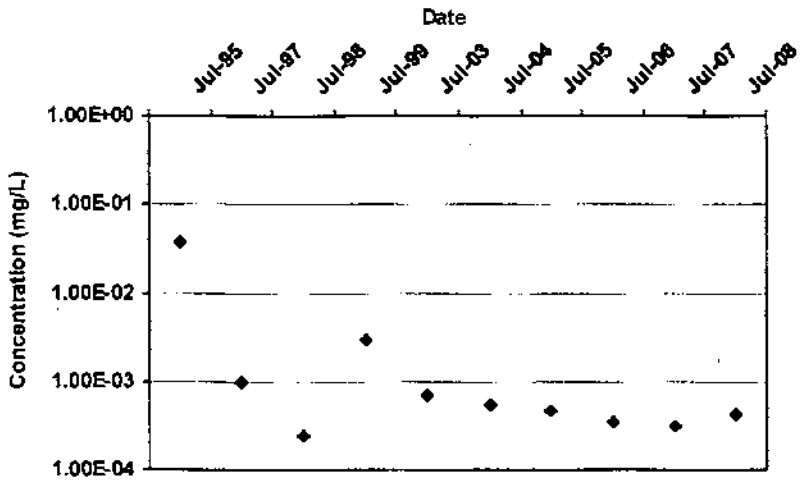
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-1A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	8.7E-01		2	2
AMW-1A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	5.9E-01		1	1
AMW-1A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.8E-01		2	2
AMW-1A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	3.1E-03		2	1
AMW-1A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	1.3E-01		2	2
AMW-1A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	6.0E-02		2	2
AMW-1A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	2.9E-01		2	2
AMW-1A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	1.0E-01		2	2
AMW-1A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	1.4E-01		2	2
AMW-1A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.0E-02		3	3
AMW-1A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	5.9E-02		4	4
AMW-1A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.2E-04		4	4
AMW-1A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	8.5E-04		4	4
AMW-1A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	4.7E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-1B
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-25

Confidence in Trend:
98.6%

Coefficient of Variation:
2.62

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

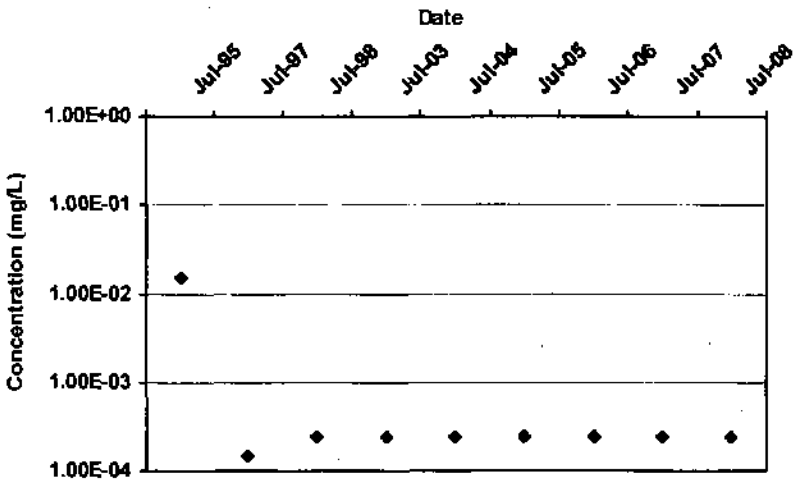
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-1B	S	7/1/1995	TRICHLOROETHYLENE (TCE)	3.8E-02		2	2
AMW-1B	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.0E-03		1	1
AMW-1B	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-1B	S	7/1/1999	TRICHLOROETHYLENE (TCE)	3.0E-03		2	2
AMW-1B	S	7/1/2003	TRICHLOROETHYLENE (TCE)	6.9E-04		2	2
AMW-1B	S	7/1/2004	TRICHLOROETHYLENE (TCE)	5.5E-04		3	3
AMW-1B	S	7/1/2005	TRICHLOROETHYLENE (TCE)	4.7E-04		4	4
AMW-1B	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.5E-04		4	4
AMW-1B	S	7/1/2007	TRICHLOROETHYLENE (TCE)	3.2E-04		4	4
AMW-1B	S	7/1/2008	TRICHLOROETHYLENE (TCE)	4.1E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-1C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
58.0%

Coefficient of Variation:
2.62

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

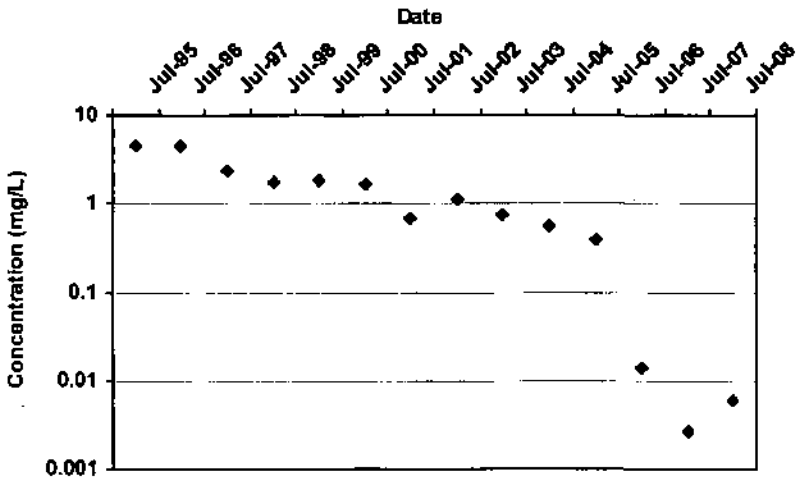
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-1C	S	7/1/1995	TRICHLOROETHYLENE (TCE)	1.5E-02		2	2
AMW-1C	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
AMW-1C	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-1C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-1C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
AMW-1C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-1C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-1C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-1C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-2A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-83

Confidence in Trend:
100.0%

Coefficient of Variation:
1.04

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

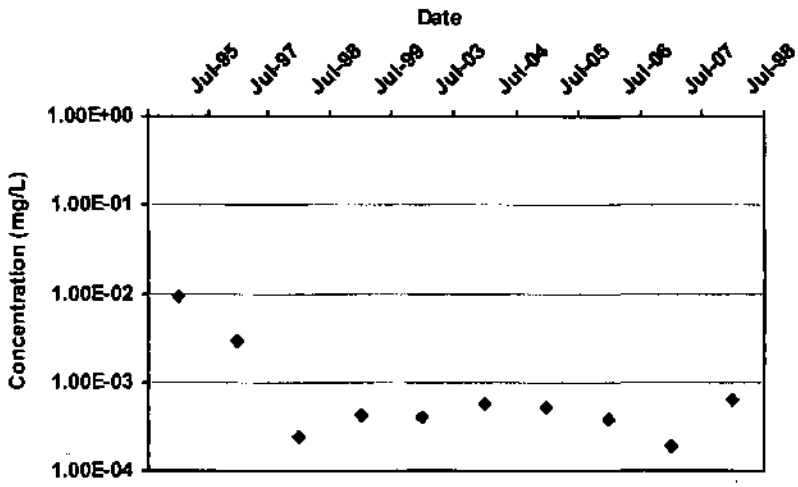
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-2A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	4.6E+00		2	2
AMW-2A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	4.4E+00		2	2
AMW-2A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	2.4E+00		2	2
AMW-2A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	1.7E+00		2	2
AMW-2A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	1.8E+00		2	2
AMW-2A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	1.7E+00		2	2
AMW-2A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	6.7E-01		2	2
AMW-2A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	1.1E+00		2	2
AMW-2A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	7.4E-01		2	2
AMW-2A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	5.6E-01		3	3
AMW-2A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	3.9E-01		4	4
AMW-2A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	1.4E-02		4	4
AMW-2A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.7E-03		4	4
AMW-2A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	6.0E-03		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-2B
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-13

Confidence in Trend:
85.4%

Coefficient of Variation:
1.82

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

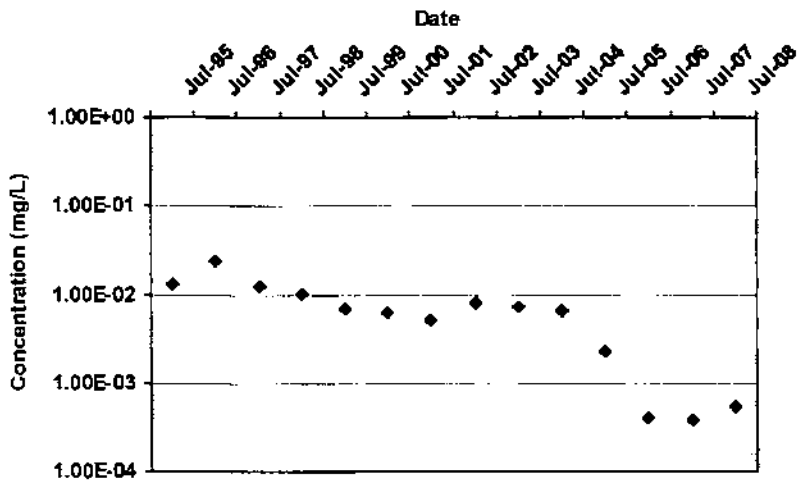
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-2B	S	7/1/1995	TRICHLOROETHYLENE (TCE)	9.4E-03		2	1
AMW-2B	S	7/1/1997	TRICHLOROETHYLENE (TCE)	3.0E-03		1	1
AMW-2B	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-2B	S	7/1/1999	TRICHLOROETHYLENE (TCE)	4.2E-04		2	1
AMW-2B	S	7/1/2003	TRICHLOROETHYLENE (TCE)	4.0E-04		2	2
AMW-2B	S	7/1/2004	TRICHLOROETHYLENE (TCE)	5.8E-04		3	3
AMW-2B	S	7/1/2005	TRICHLOROETHYLENE (TCE)	5.2E-04		4	4
AMW-2B	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.8E-04		4	4
AMW-2B	S	7/1/2007	TRICHLOROETHYLENE (TCE)	1.9E-04		4	4
AMW-2B	S	7/1/2008	TRICHLOROETHYLENE (TCE)	6.3E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-3A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-69

Confidence in Trend:
100.0%

Coefficient of Variation:
0.85

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

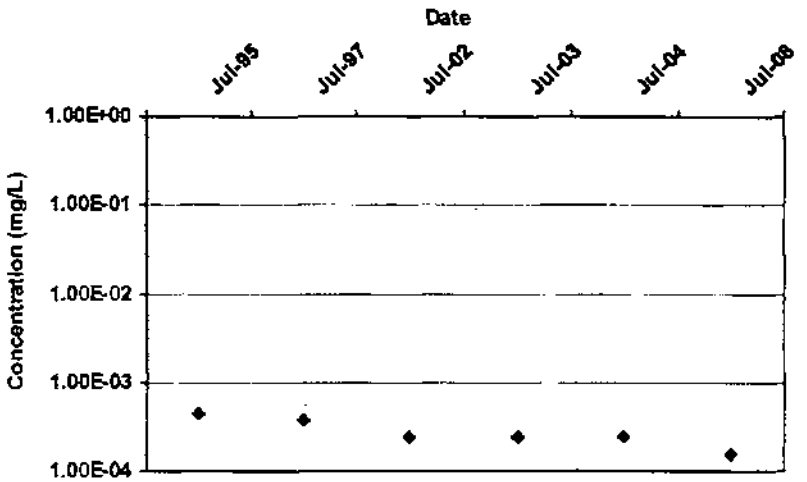
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-3A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	1.3E-02		2	2
AMW-3A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	2.4E-02		2	2
AMW-3A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2
AMW-3A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	1.0E-02		2	2
AMW-3A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	6.9E-03		2	2
AMW-3A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	6.2E-03		2	2
AMW-3A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-03		1	1
AMW-3A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	7.9E-03		2	2
AMW-3A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	7.3E-03		2	2
AMW-3A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	6.5E-03		3	3
AMW-3A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.3E-03		4	4
AMW-3A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	4.1E-04		4	4
AMW-3A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	3.8E-04		4	4
AMW-3A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	5.4E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-4A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-12

Confidence in Trend:
98.2%

Coefficient of Variation:
0.36

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

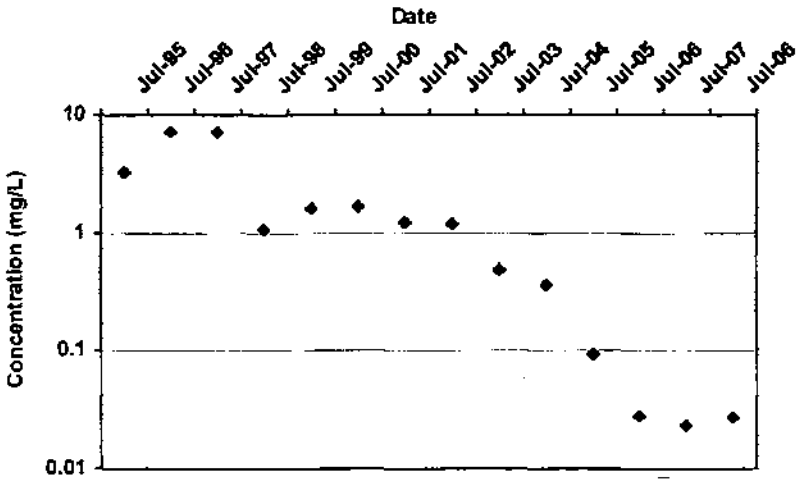
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-4A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	4.5E-04		2	1
AMW-4A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	3.9E-04	ND	2	0
AMW-4A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-4A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-4A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-4A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	1.6E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-12A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-75

Confidence in Trend:

100.0%

Coefficient of Variation:

1.34

***Mann Kendall* Concentration Trend: (See Note)**

D

Data Table:

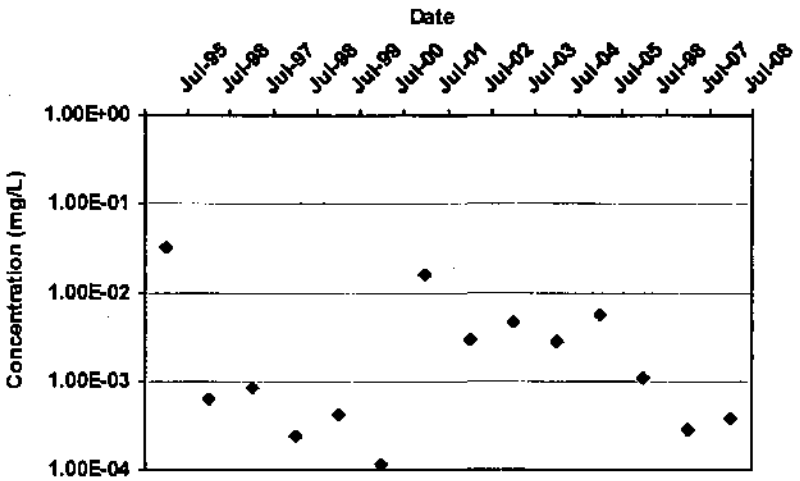
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-12A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	3.3E+00		2	2
AMW-12A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	7.2E+00		2	2
AMW-12A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	7.1E+00		2	2
AMW-12A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	1.1E+00		2	2
AMW-12A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	1.6E+00		2	2
AMW-12A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	1.7E+00		2	2
AMW-12A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	1.2E+00		2	2
AMW-12A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	1.2E+00		2	2
AMW-12A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	4.9E-01		2	2
AMW-12A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	3.5E-01		3	3
AMW-12A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	9.3E-02		4	4
AMW-12A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.9E-02		4	4
AMW-12A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.4E-02		4	4
AMW-12A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.7E-02		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-13A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-9

Confidence in Trend:

66.6%

Coefficient of Variation:

1.83

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

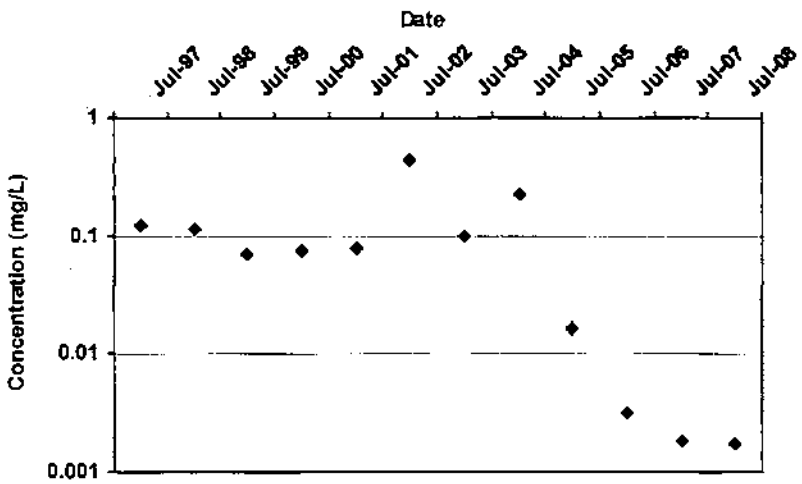
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-13A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	3.3E-02		2	2
AMW-13A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	6.4E-04		2	1
AMW-13A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	6.4E-04		2	1
AMW-13A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-13A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	4.2E-04		2	1
AMW-13A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	1.2E-04		2	1
AMW-13A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	1.6E-02		1	1
AMW-13A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	2.9E-03		2	2
AMW-13A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	4.7E-03		2	2
AMW-13A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.8E-03		3	3
AMW-13A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	5.8E-03		4	4
AMW-13A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	1.1E-03		4	3
AMW-13A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.9E-04		4	1
AMW-13A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	3.8E-04		4	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-19A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-32

Confidence in Trend:
98.4%

Coefficient of Variation:
1.19

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

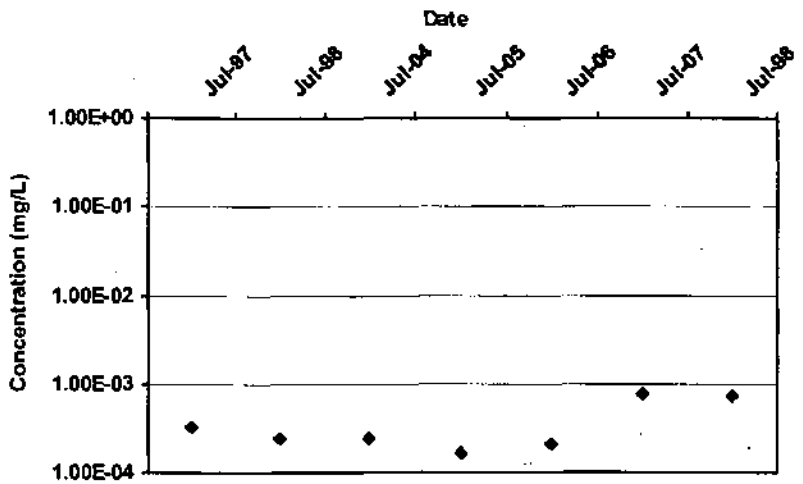
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-19A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
AMW-19A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	1.1E-01		2	2
AMW-19A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	7.0E-02		2	2
AMW-19A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	7.5E-02		1	1
AMW-19A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	7.9E-02		2	2
AMW-19A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	4.4E-01		2	2
AMW-19A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	9.8E-02		2	2
AMW-19A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.3E-01		3	3
AMW-19A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	1.6E-02		4	4
AMW-19A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.2E-03		4	4
AMW-19A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	1.8E-03		4	4
AMW-19A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	1.7E-03		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-19B
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
1

Confidence in Trend:
50.0%

Coefficient of Variation:
0.66

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

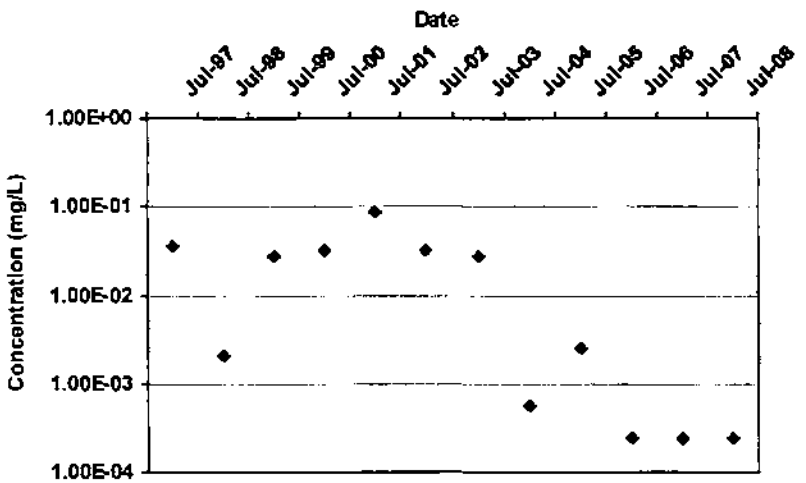
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-19B	S	7/1/1997	TRICHLOROETHYLENE (TCE)	3.2E-04		2	1
AMW-19B	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-19B	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.4E-04		3	3
AMW-19B	S	7/1/2005	TRICHLOROETHYLENE (TCE)	1.6E-04		4	4
AMW-19B	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.2E-04		4	1
AMW-19B	S	7/1/2007	TRICHLOROETHYLENE (TCE)	7.7E-04		1	1
AMW-19B	S	7/1/2008	TRICHLOROETHYLENE (TCE)	7.2E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-26
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-41

Confidence in Trend:
99.8%

Coefficient of Variation:
1.25

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

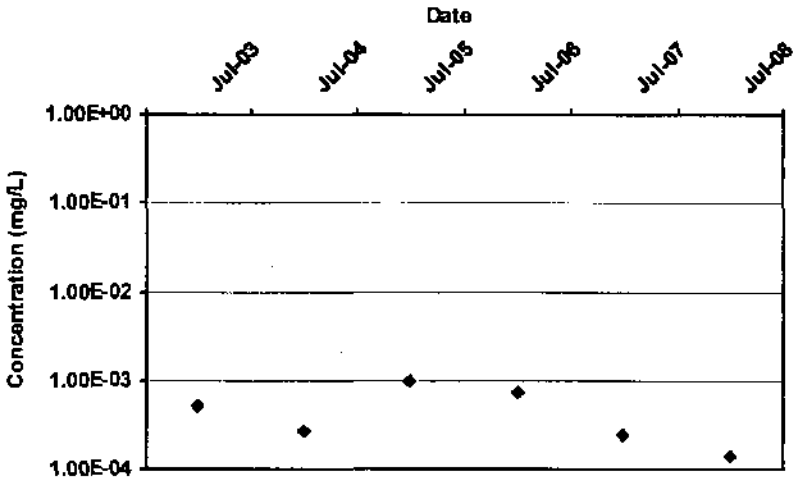
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-26	S	7/1/1997	TRICHLOROETHYLENE (TCE)	3.6E-02		1	1
AMW-26	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.1E-03		2	1
AMW-26	S	7/1/1999	TRICHLOROETHYLENE (TCE)	2.8E-02		2	2
AMW-26	S	7/1/2000	TRICHLOROETHYLENE (TCE)	3.3E-02		2	2
AMW-26	S	7/1/2001	TRICHLOROETHYLENE (TCE)	8.8E-02		2	2
AMW-26	S	7/1/2002	TRICHLOROETHYLENE (TCE)	3.2E-02		2	2
AMW-26	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.7E-02		2	2
AMW-26	S	7/1/2004	TRICHLOROETHYLENE (TCE)	5.6E-04		2	2
AMW-26	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.6E-03		1	1
AMW-26	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-26	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-26	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.4E-04		4	3

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-52A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-7

Confidence in Trend:
86.4%

Coefficient of Variation:
0.68

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

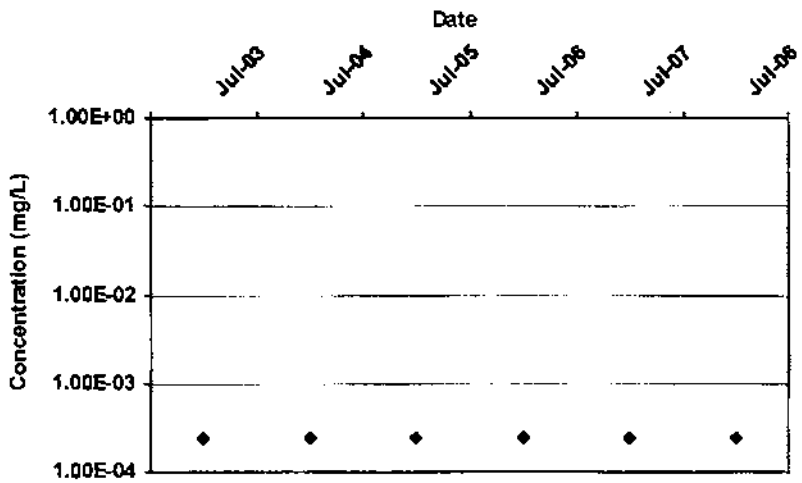
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-52A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	5.3E-04		1	1
AMW-52A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.6E-04		3	3
AMW-52A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	1.0E-03		4	4
AMW-52A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	7.2E-04		4	3
AMW-52A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-52A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	1.4E-04		4	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-52C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
64.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

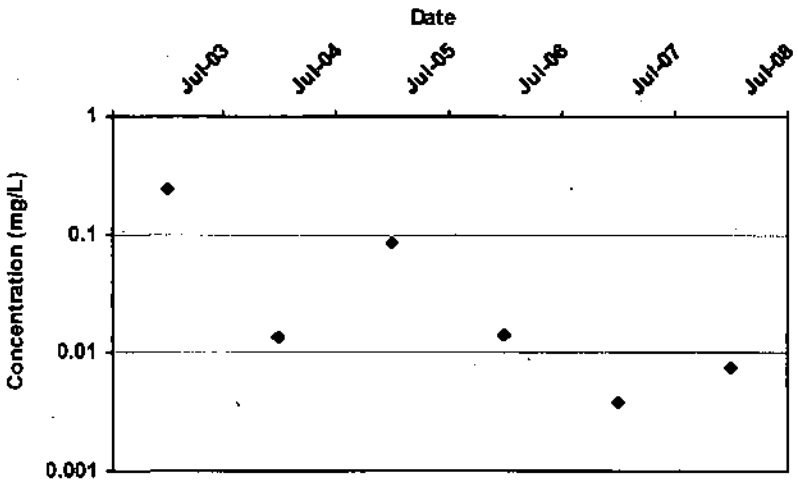
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-52C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-52C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
AMW-52C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-52C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-52C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-52C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-53A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-9

Confidence in Trend:
93.2%

Coefficient of Variation:
1.53

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

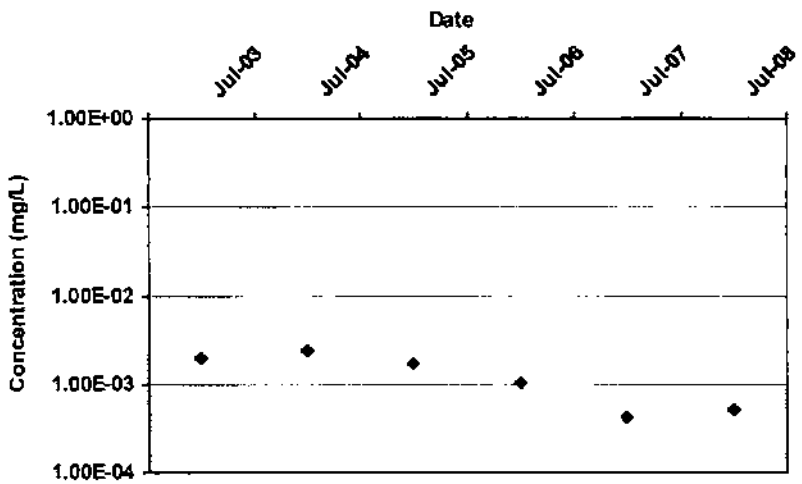
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-53A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.4E-01		1	1
AMW-53A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	1.4E-02		3	3
AMW-53A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	8.4E-02		4	4
AMW-53A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	1.4E-02		4	4
AMW-53A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	3.8E-03		4	4
AMW-53A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	7.4E-03		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-53B
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -11

Confidence in Trend: 97.2%

Coefficient of Variation: 0.60

Mann Kendall Concentration Trend: (See Note) D

Data Table:

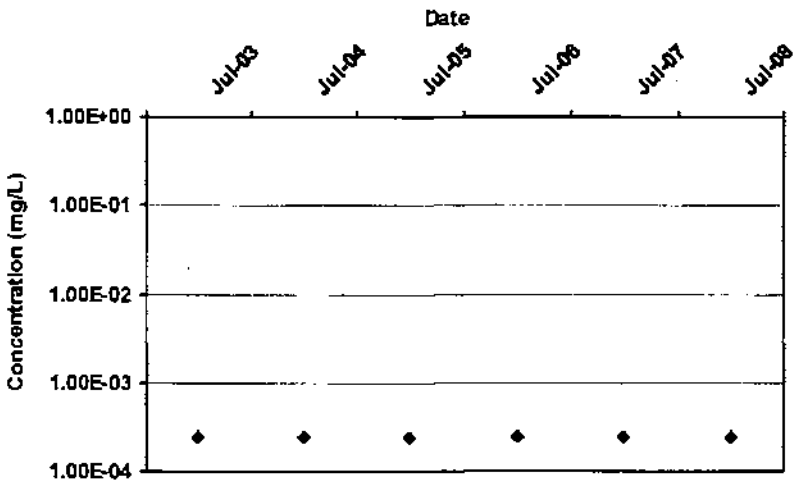
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-53B	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.0E-03		1	1
AMW-53B	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.4E-03		3	3
AMW-53B	S	7/1/2005	TRICHLOROETHYLENE (TCE)	1.7E-03		4	4
AMW-53B	S	7/1/2006	TRICHLOROETHYLENE (TCE)	1.0E-03		4	4
AMW-53B	S	7/1/2007	TRICHLOROETHYLENE (TCE)	4.3E-04		1	1
AMW-53B	S	7/1/2008	TRICHLOROETHYLENE (TCE)	5.3E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-53C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
64.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

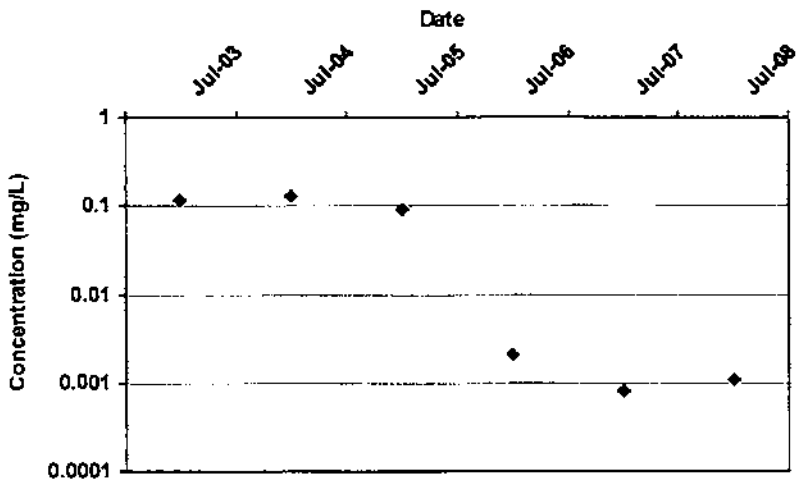
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-53C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-53C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
AMW-53C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-53C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-53C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-53C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-54A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-11

Confidence in Trend:
97.2%

Coefficient of Variation:
1.09

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

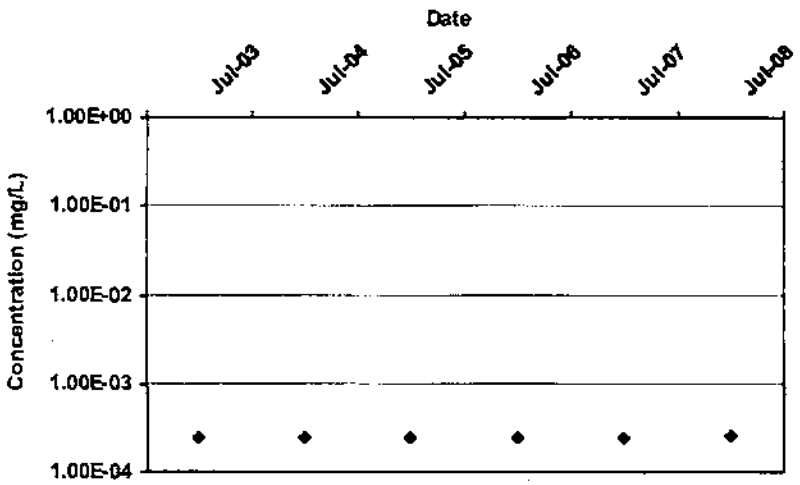
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-54A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	1.2E-01		1	1
AMW-54A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	1.3E-01		3	3
AMW-54A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	9.0E-02		4	4
AMW-54A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.1E-03		4	4
AMW-54A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	8.1E-04		4	4
AMW-54A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	1.1E-03		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-54C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 3

Confidence in Trend: 64.0%

Coefficient of Variation: 0.02

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

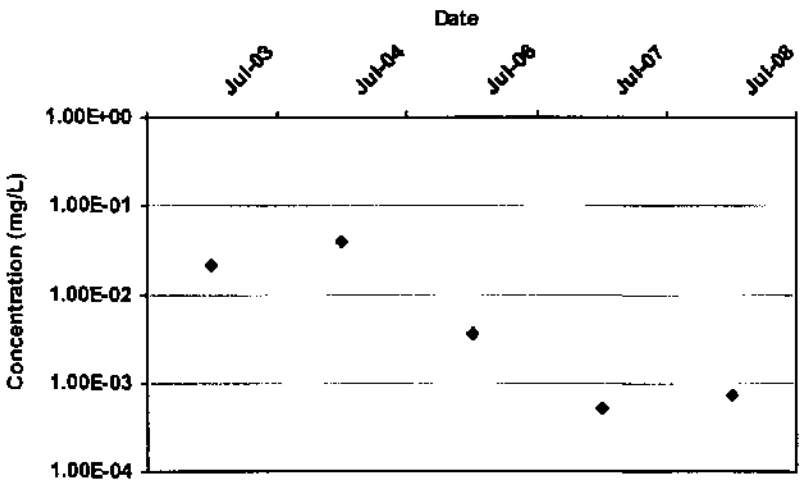
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-54C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-54C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
AMW-54C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-54C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-54C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-54C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.6E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-55A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
88.3%

Coefficient of Variation:
1.29

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

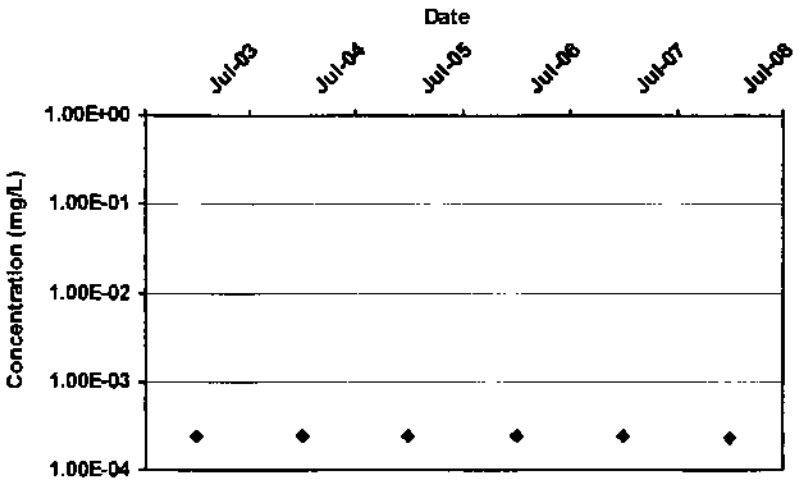
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-55A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.2E-02		1	1
AMW-55A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	3.9E-02		2	2
AMW-55A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.5E-03		4	4
AMW-55A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	5.1E-04		4	4
AMW-55A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	7.2E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-55C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-7

Confidence in Trend:
86.4%

Coefficient of Variation:
0.03

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

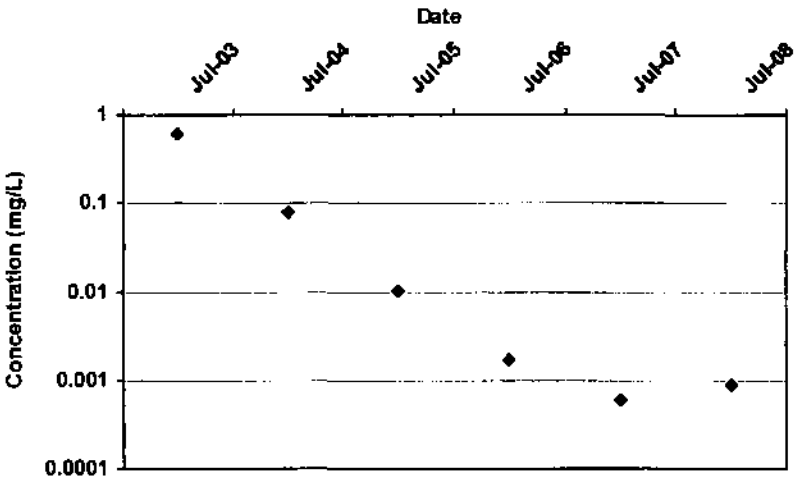
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-55C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-55C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
AMW-55C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-55C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-55C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-55C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.3E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-56A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-13

Confidence in Trend:
99.2%

Coefficient of Variation:
2.08

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

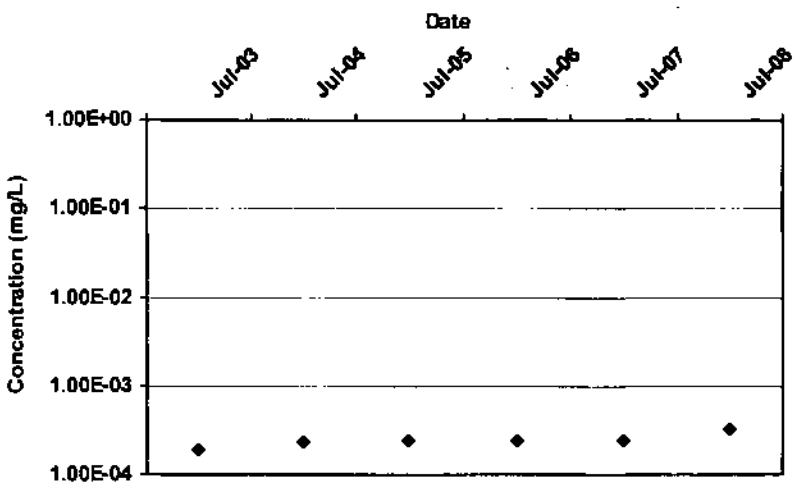
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-56A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	6.1E-01		1	1
AMW-56A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	7.8E-02		3	3
AMW-56A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	1.0E-02		4	4
AMW-56A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	1.7E-03		4	4
AMW-56A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	6.1E-04		4	4
AMW-56A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	9.1E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-56C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
12

Confidence in Trend:
98.2%

Coefficient of Variation:
0.18

Mann Kendall Concentration Trend: (See Note)
I

Data Table:

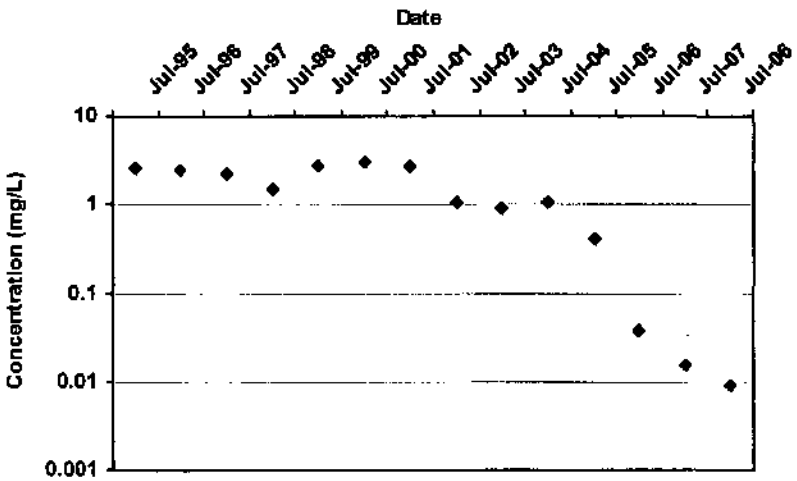
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-56C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	1.9E-04		1	1
AMW-56C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.3E-04		3	1
AMW-56C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-56C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-56C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-56C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	3.3E-04		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-1A
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-61

Confidence in Trend:
100.0%

Coefficient of Variation:
0.76

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

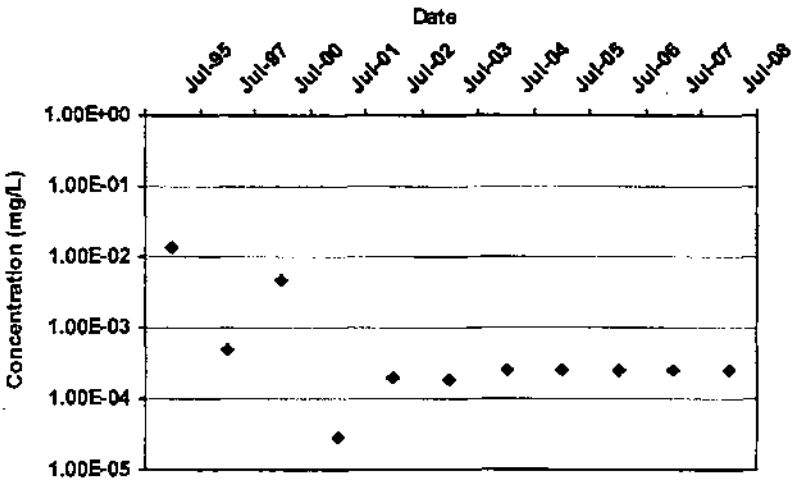
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-1A	S	7/1/1995	TRICHLOROETHYLENE (TCE)	2.6E+00		2	2
MW-1A	S	7/1/1996	TRICHLOROETHYLENE (TCE)	2.5E+00		2	2
MW-1A	S	7/1/1997	TRICHLOROETHYLENE (TCE)	2.3E+00		2	2
MW-1A	S	7/1/1998	TRICHLOROETHYLENE (TCE)	1.5E+00		2	2
MW-1A	S	7/1/1999	TRICHLOROETHYLENE (TCE)	2.7E+00		2	2
MW-1A	S	7/1/2000	TRICHLOROETHYLENE (TCE)	3.1E+00		2	2
MW-1A	S	7/1/2001	TRICHLOROETHYLENE (TCE)	2.7E+00		2	2
MW-1A	S	7/1/2002	TRICHLOROETHYLENE (TCE)	1.1E+00		2	2
MW-1A	S	7/1/2003	TRICHLOROETHYLENE (TCE)	9.0E-01		2	2
MW-1A	S	7/1/2004	TRICHLOROETHYLENE (TCE)	1.1E+00		3	3
MW-1A	S	7/1/2005	TRICHLOROETHYLENE (TCE)	4.2E-01		4	4
MW-1A	S	7/1/2006	TRICHLOROETHYLENE (TCE)	3.8E-02		4	4
MW-1A	S	7/1/2007	TRICHLOROETHYLENE (TCE)	1.5E-02		4	4
MW-1A	S	7/1/2008	TRICHLOROETHYLENE (TCE)	8.8E-03		3	3

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-1B
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-12

Confidence in Trend:

79.9%

Coefficient of Variation:

2.23

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

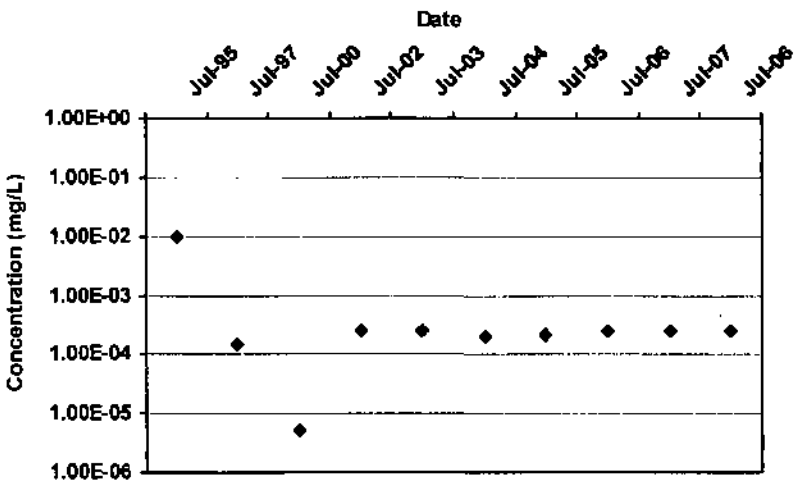
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-1B	S	7/1/1995	TRICHLOROETHYLENE (TCE)	1.4E-02		2	2
MW-1B	S	7/1/1997	TRICHLOROETHYLENE (TCE)	5.0E-04		1	1
MW-1B	S	7/1/2000	TRICHLOROETHYLENE (TCE)	4.8E-03		3	3
MW-1B	S	7/1/2001	TRICHLOROETHYLENE (TCE)	2.9E-05		2	1
MW-1B	S	7/1/2002	TRICHLOROETHYLENE (TCE)	1.9E-04		2	1
MW-1B	S	7/1/2003	TRICHLOROETHYLENE (TCE)	1.9E-04		2	1
MW-1B	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-1B	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.8E-04		4	2
MW-1B	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.6E-04		4	1
MW-1B	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-1B	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-1C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

7

Confidence in Trend:

70.0%

Coefficient of Variation:

2.62

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

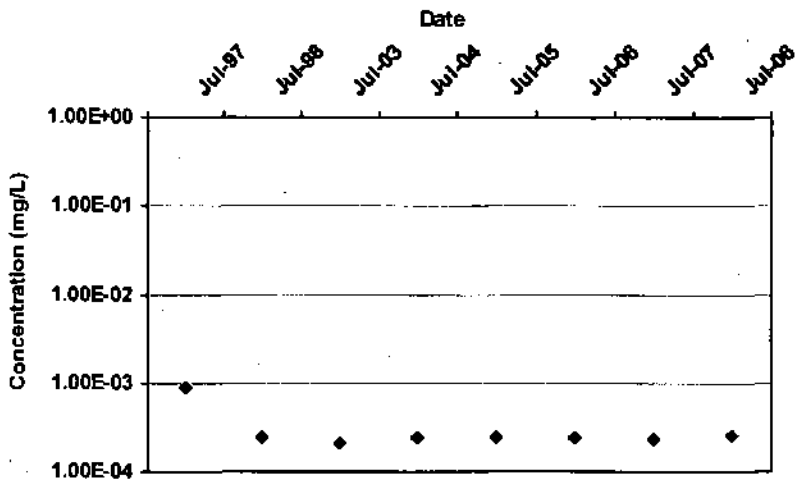
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-1C	S	7/1/1995	TRICHLOROETHYLENE (TCE)	1.0E-02		2	2
MW-1C	S	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
MW-1C	S	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	1	0
MW-1C	S	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-1C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-1C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.1E-04		3	1
MW-1C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.2E-04		4	1
MW-1C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-1C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-1C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: RAMW-2C
Well Type: S
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
59.4%

Coefficient of Variation:
0.72

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
RAMW-2C	S	7/1/1997	TRICHLOROETHYLENE (TCE)	9.0E-04		1	1
RAMW-2C	S	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
RAMW-2C	S	7/1/2003	TRICHLOROETHYLENE (TCE)	2.1E-04		2	1
RAMW-2C	S	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
RAMW-2C	S	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
RAMW-2C	S	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
RAMW-2C	S	7/1/2007	TRICHLOROETHYLENE (TCE)	2.3E-04		4	1
RAMW-2C	S	7/1/2008	TRICHLOROETHYLENE (TCE)	2.6E-04		2	1

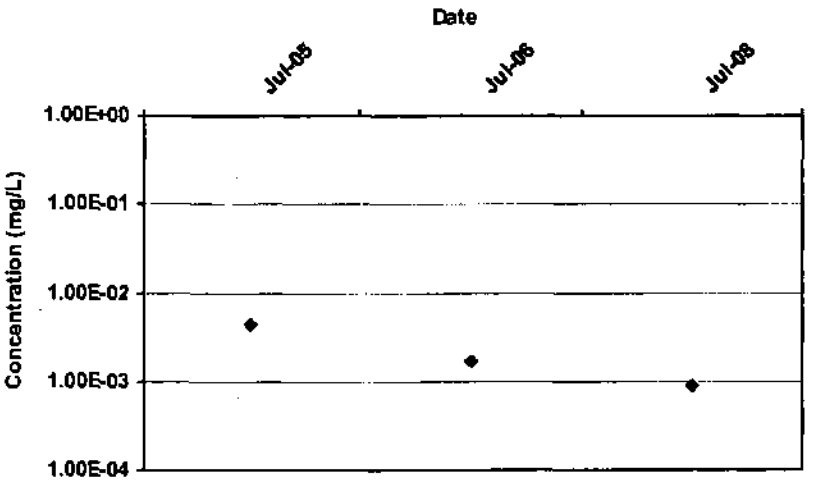
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

PROXIMAL WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-58
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

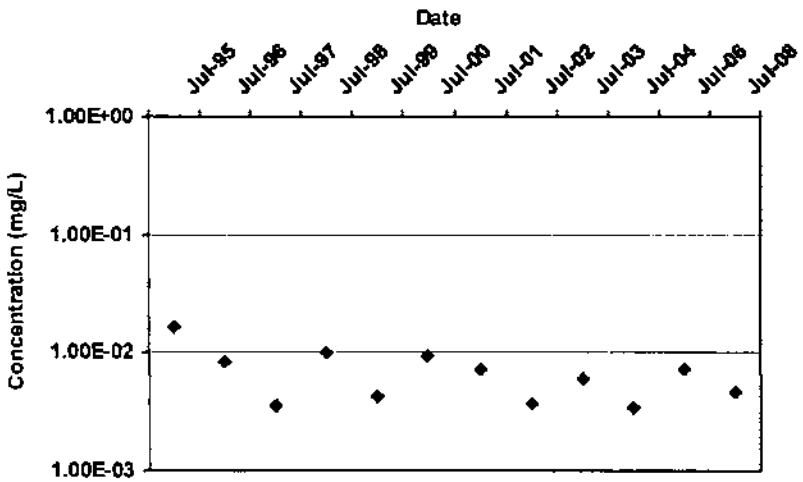
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-58	T	7/1/2005	TRICHLOROETHYLENE (TCE)	4.4E-03		3	3
AMW-58	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.7E-03		2	2
AMW-58	T	7/1/2008	TRICHLOROETHYLENE (TCE)	8.9E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-24

Confidence in Trend:
94.2%

Coefficient of Variation:
0.54

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

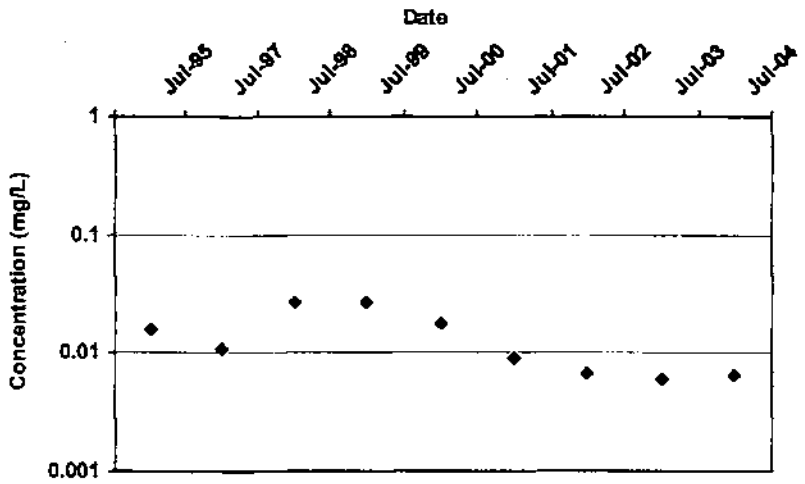
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.6E-02		2	2
MW-2A	T	7/1/1996	TRICHLOROETHYLENE (TCE)	8.4E-03		2	2
MW-2A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	3.5E-03		2	2
MW-2A	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.0E-02		2	2
MW-2A	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.3E-03		2	2
MW-2A	T	7/1/2000	TRICHLOROETHYLENE (TCE)	9.4E-03		2	2
MW-2A	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.3E-03		2	2
MW-2A	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.7E-03		2	2
MW-2A	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.9E-03		2	2
MW-2A	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.4E-03		1	1
MW-2A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	7.3E-03		1	1
MW-2A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.7E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-22

Confidence in Trend:
98.8%

Coefficient of Variation:
0.59

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

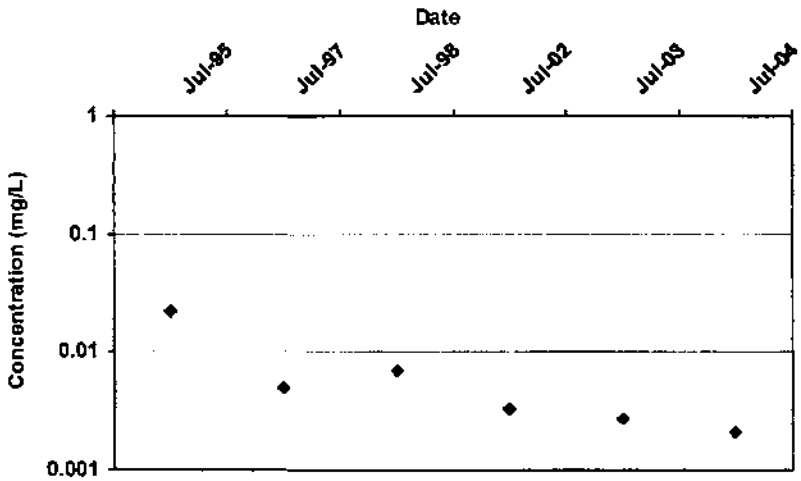
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.6E-02		2	2
MW-2B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.1E-02		1	1
MW-2B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.7E-02		2	2
MW-2B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.6E-02		2	2
MW-2B	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.8E-02		2	2
MW-2B	T	7/1/2001	TRICHLOROETHYLENE (TCE)	9.0E-03		1	1
MW-2B	T	7/1/2002	TRICHLOROETHYLENE (TCE)	6.8E-03		1	1
MW-2B	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.9E-03		1	1
MW-2B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	6.5E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-2C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -13

Confidence in Trend: 99.2%

Coefficient of Variation: 1.09

Mann Kendall Concentration Trend: (See Note) D

Data Table:

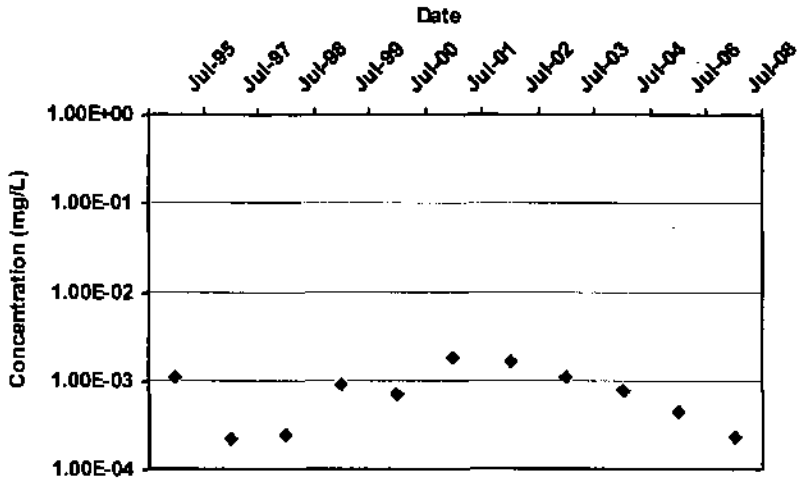
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-2C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.3E-02		2	2
MW-2C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	5.0E-03		1	1
MW-2C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	7.0E-03		1	1
MW-2C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.3E-03		1	1
MW-2C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.7E-03		1	1
MW-2C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.1E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-3

Confidence in Trend:

56.0%

Coefficient of Variation:

0.65

Mann Kendall Concentration Trend: (See Note)

S

Data Table:

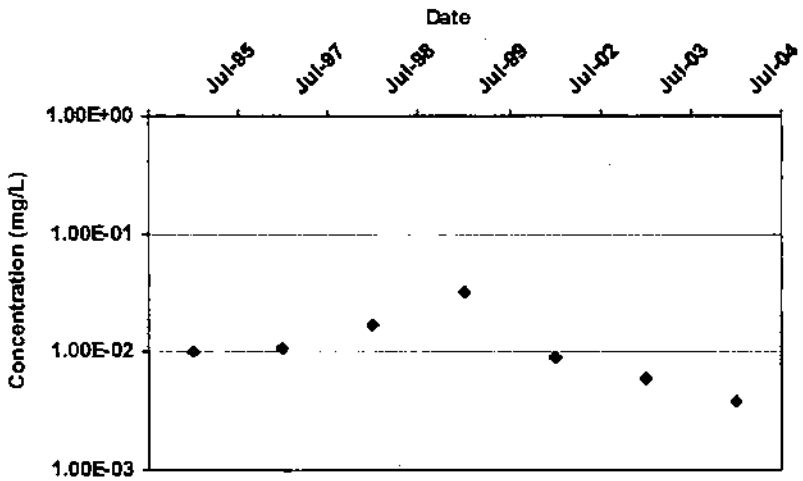
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.1E-03		2	1
MW-3A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.2E-04		2	1
MW-3A	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-3A	T	7/1/1999	TRICHLOROETHYLENE (TCE)	9.0E-04		1	1
MW-3A	T	7/1/2000	TRICHLOROETHYLENE (TCE)	6.9E-04		2	2
MW-3A	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.8E-03		2	2
MW-3A	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.6E-03		2	2
MW-3A	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.1E-03		2	2
MW-3A	T	7/1/2004	TRICHLOROETHYLENE (TCE)	7.7E-04		2	2
MW-3A	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.4E-04		1	1
MW-3A	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.3E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-9

Confidence in Trend:
88.1%

Coefficient of Variation:
0.74

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

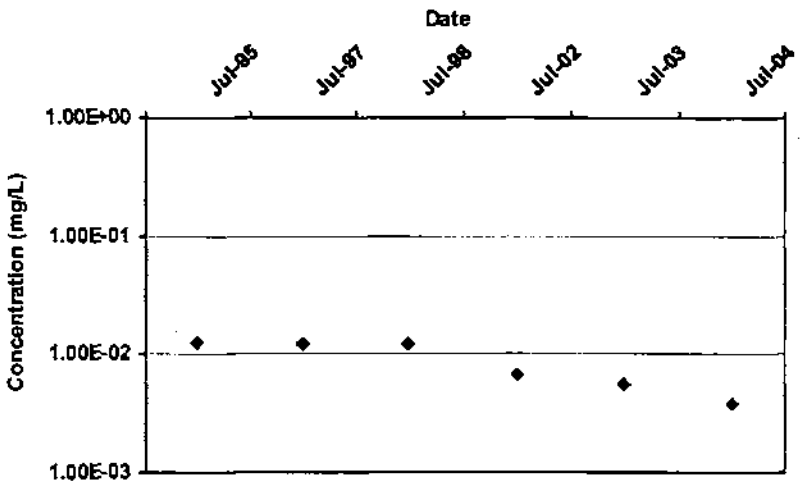
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.0E-02		2	2
MW-3B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.1E-02		1	1
MW-3B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.7E-02		2	2
MW-3B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	3.2E-02		2	2
MW-3B	T	7/1/2002	TRICHLOROETHYLENE (TCE)	9.2E-03		1	1
MW-3B	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.9E-03		1	1
MW-3B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.9E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-3C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-14

Confidence in Trend:
99.6%

Coefficient of Variation:
0.44

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

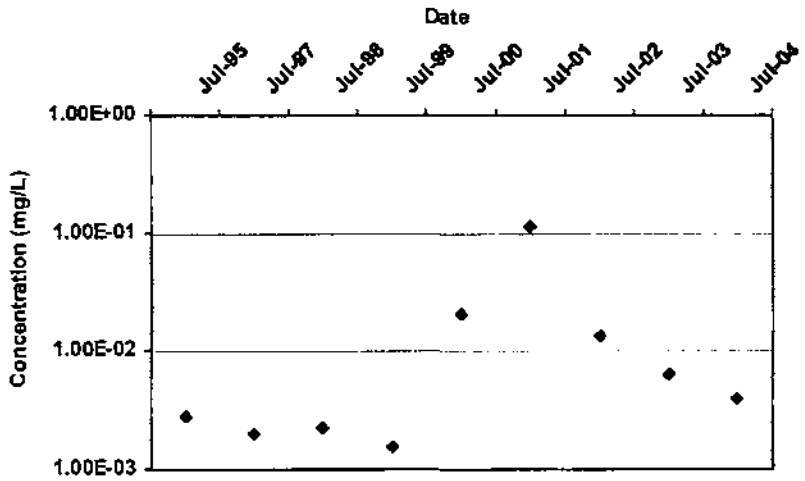
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-3C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.3E-02		2	2
MW-3C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.2E-02		1	1
MW-3C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.2E-02		1	1
MW-3C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	6.8E-03		1	1
MW-3C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.6E-03		1	1
MW-3C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.8E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 8

Confidence in Trend: 76.2%

Coefficient of Variation: 1.96

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

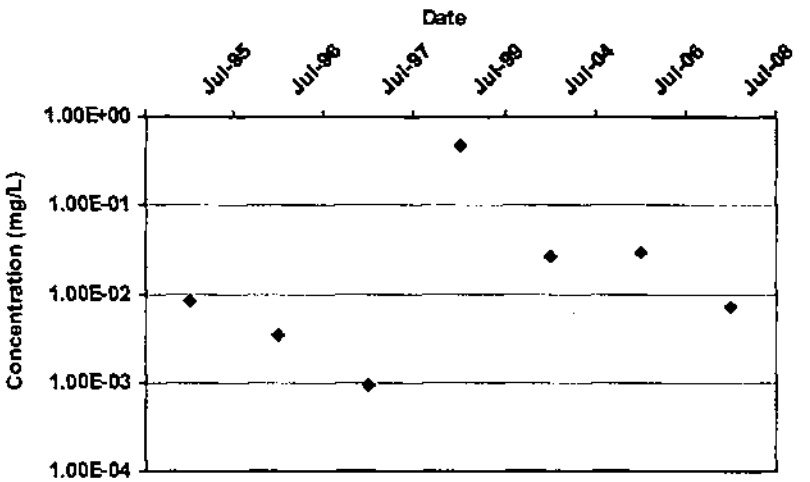
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.9E-03		2	2
MW-4A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.0E-03		2	2
MW-4A	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.2E-03		2	2
MW-4A	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.5E-03		2	2
MW-4A	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.1E-02		2	2
MW-4A	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-4A	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.3E-02		2	2
MW-4A	T	7/1/2003	TRICHLOROETHYLENE (TCE)	6.5E-03		2	2
MW-4A	T	7/1/2004	TRICHLOROETHYLENE (TCE)	4.1E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
3

Confidence in Trend:
61.4%

Coefficient of Variation:
2.23

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

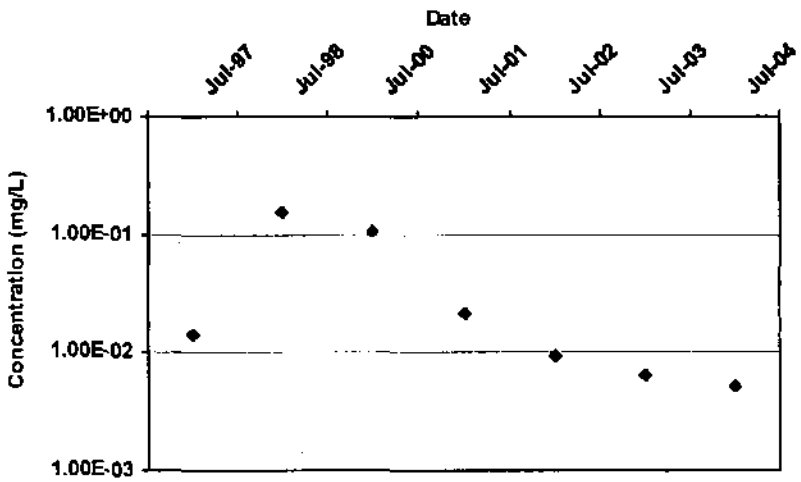
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	8.2E-03		2	2
MW-4B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.5E-03		2	2
MW-4B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	9.4E-04		1	1
MW-4B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.8E-01		2	2
MW-4B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.6E-02		1	1
MW-4B	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.9E-02		1	1
MW-4B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	7.2E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4BShed
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-15

Confidence in Trend:
98.5%

Coefficient of Variation:
1.33

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

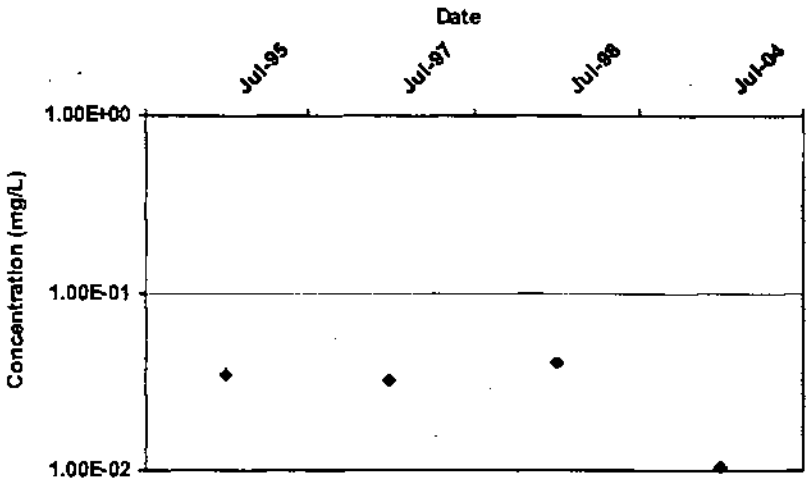
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4BShed	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.4E-02		2	2
MW-4BShed	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.6E-01		2	2
MW-4BShed	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.1E-01		2	2
MW-4BShed	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.1E-02		2	2
MW-4BShed	T	7/1/2002	TRICHLOROETHYLENE (TCE)	9.5E-03		2	2
MW-4BShed	T	7/1/2003	TRICHLOROETHYLENE (TCE)	6.5E-03		2	2
MW-4BShed	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.2E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-4C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-2

Confidence in Trend:
62.5%

Coefficient of Variation:
0.44

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

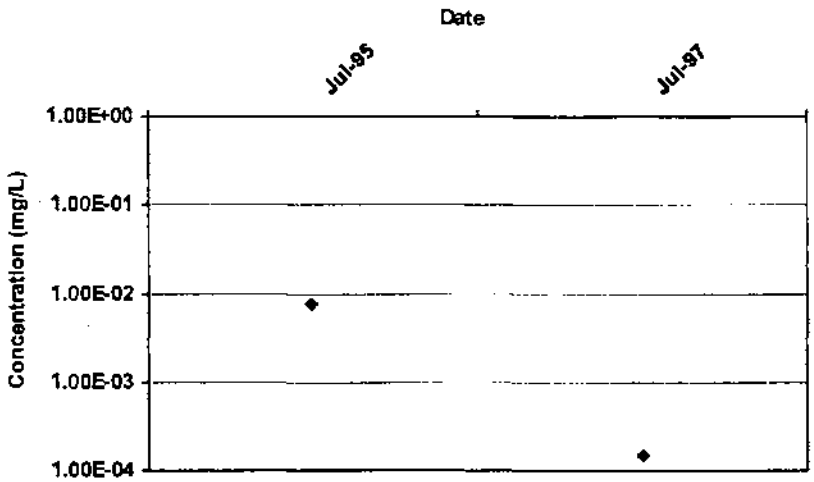
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-4C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.4E-02		2	2
MW-4C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	3.2E-02		2	2
MW-4C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	4.0E-02		1	1
MW-4C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.0E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6A
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 0.0%

Coefficient of Variation: 0.00

Mann Kendall Concentration Trend: (See Note) N/A

Data Table:

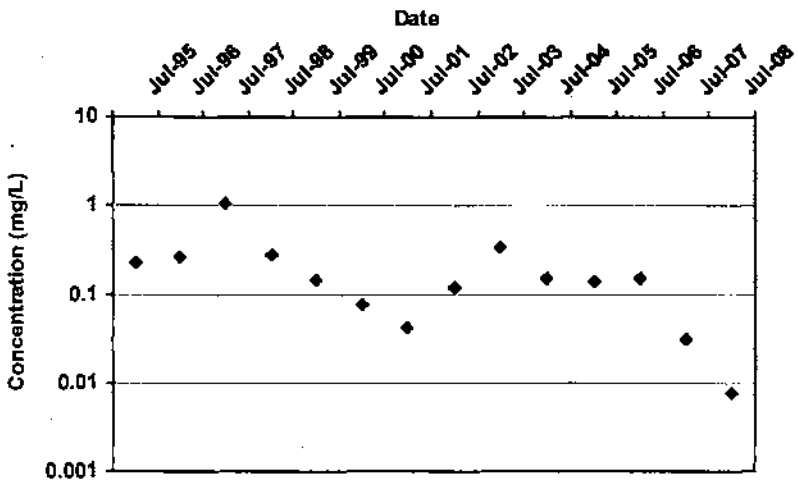
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6A	T	7/1/1995	TRICHLOROETHYLENE (TCE)	7.6E-03		2	2
MW-6A	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-39

Confidence in Trend:

98.2%

Coefficient of Variation:

1.21

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

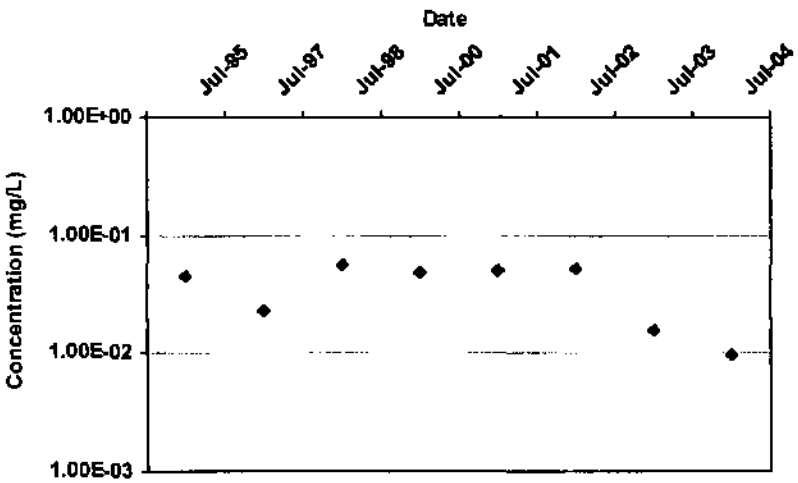
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.2E-01		11	11
MW-6B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.6E-01		2	2
MW-6B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.1E+00		2	2
MW-6B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.8E-01		2	2
MW-6B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.4E-01		2	2
MW-6B	T	7/1/2000	TRICHLOROETHYLENE (TCE)	7.6E-02		3	3
MW-6B	T	7/1/2001	TRICHLOROETHYLENE (TCE)	4.2E-02		2	2
MW-6B	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.2E-01		3	3
MW-6B	T	7/1/2003	TRICHLOROETHYLENE (TCE)	3.4E-01		3	3
MW-6B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.5E-01		2	2
MW-6B	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.4E-01		1	1
MW-6B	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.5E-01		1	1
MW-6B	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.2E-02		2	2
MW-6B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	7.5E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
72.6%

Coefficient of Variation:
0.49

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

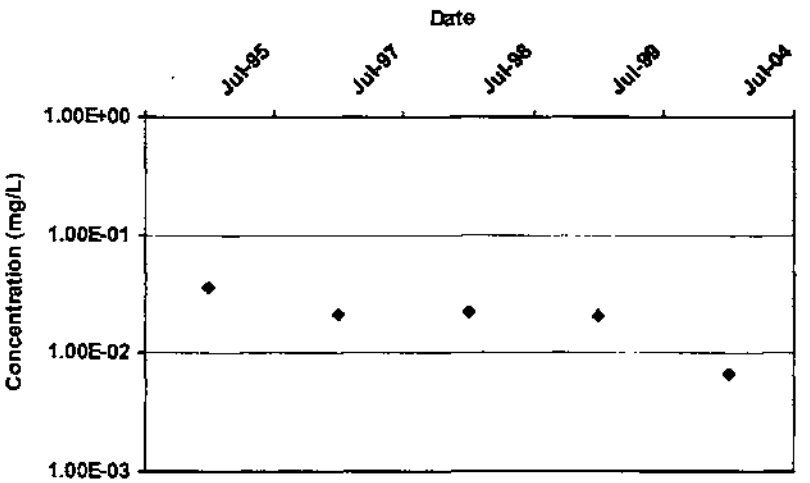
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	4.5E-02		2	2
MW-6C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.3E-02		1	1
MW-6C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	5.7E-02		1	1
MW-6C	T	7/1/2000	TRICHLOROETHYLENE (TCE)	4.8E-02		1	1
MW-6C	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-02		1	1
MW-6C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	5.2E-02		1	1
MW-6C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.6E-02		1	1
MW-6C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	9.7E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-6D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-8

Confidence in Trend:
95.8%

Coefficient of Variation:
0.50

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

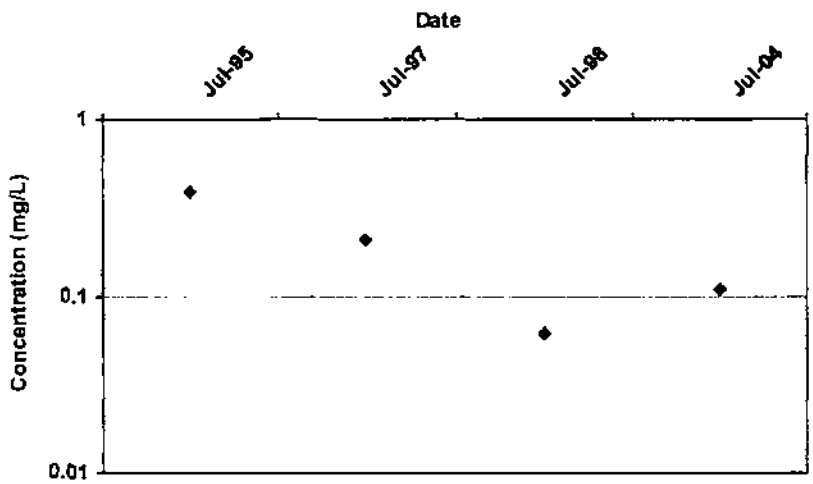
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-6D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.7E-02		2	2
MW-6D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.1E-02		1	1
MW-6D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.2E-02		1	1
MW-6D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.1E-02		2	2
MW-6D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	6.7E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-7B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-4

Confidence in Trend:
83.3%

Coefficient of Variation:
0.75

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

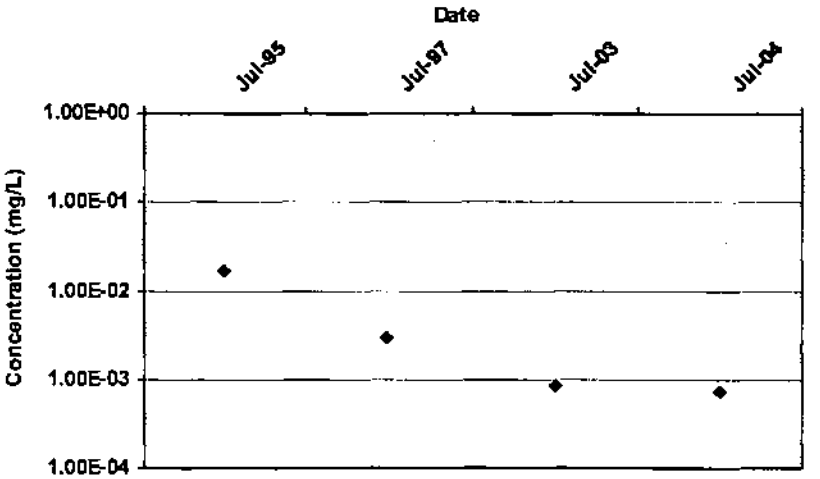
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-7B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.9E-01		2	2
MW-7B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.1E-01		1	1
MW-7B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	6.2E-02		1	1
MW-7B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.1E-01		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-7C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-6

Confidence in Trend:

95.8%

Coefficient of Variation:

1.45

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

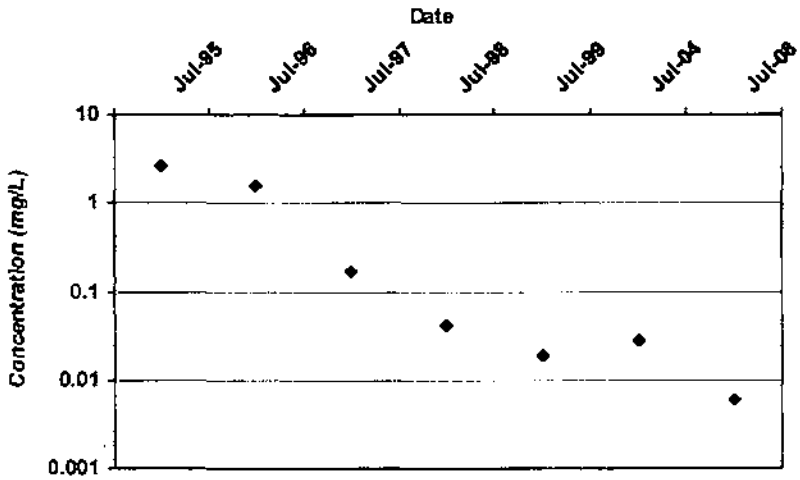
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-7C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.7E-02		2	2
MW-7C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	3.0E-03		1	1
MW-7C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	8.5E-04		1	1
MW-7C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	7.4E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-8B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-19

Confidence in Trend:
99.9%

Coefficient of Variation:
1.63

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

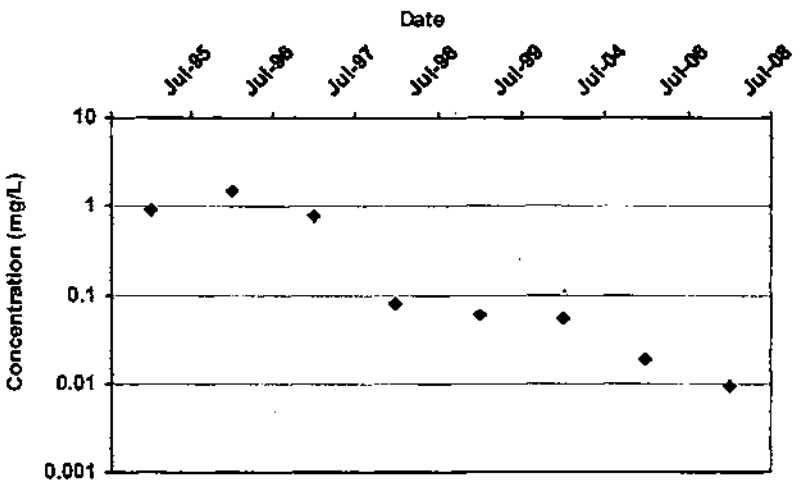
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-8B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.6E+00		2	2
MW-8B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.6E+00		2	2
MW-8B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.7E-01		2	2
MW-8B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	4.1E-02		1	1
MW-8B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.9E-02		2	2
MW-8B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.8E-02		1	1
MW-8B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	6.0E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-9B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-26

Confidence in Trend:
100.0%

Coefficient of Variation:
1.32

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

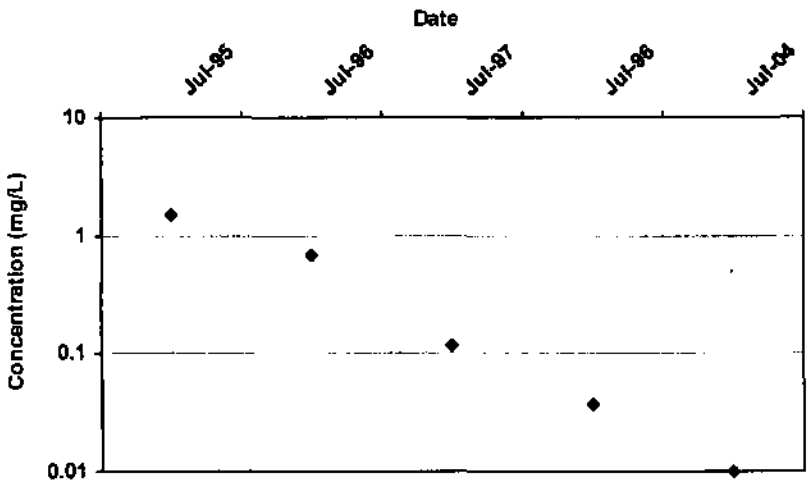
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-9B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	9.4E-01		2	2
MW-9B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.5E+00		2	2
MW-9B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	7.8E-01		2	2
MW-9B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	8.1E-02		2	2
MW-9B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	6.0E-02		2	2
MW-9B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.5E-02		1	1
MW-9B	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.9E-02		1	1
MW-9B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	9.3E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-9C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-10

Confidence in Trend:
99.2%

Coefficient of Variation:
1.35

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

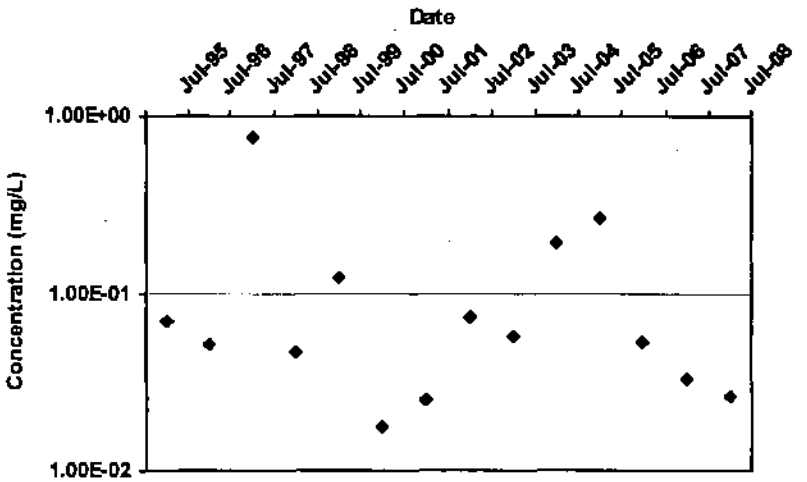
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-9C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.5E+00		2	2
MW-9C	T	7/1/1996	TRICHLOROETHYLENE (TCE)	6.9E-01		2	2
MW-9C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-9C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	3.7E-02		1	1
MW-9C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.0E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-10B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-11

Confidence in Trend:

70.5%

Coefficient of Variation:

1.51

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

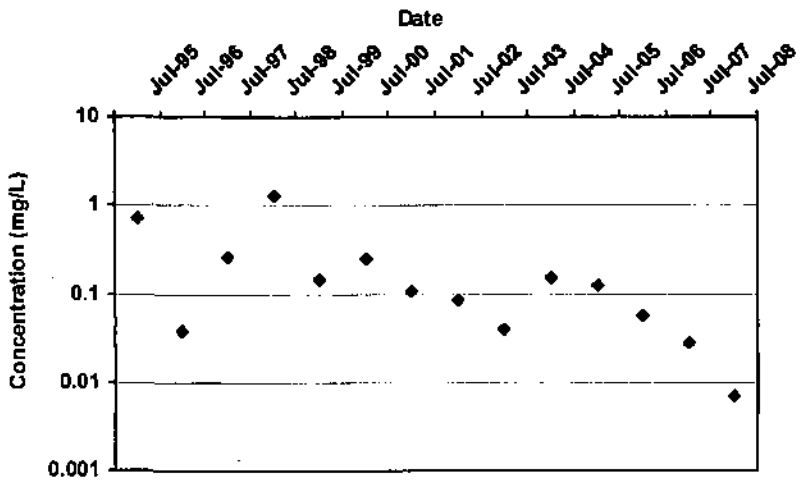
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-10B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	7.0E-02		11	11
MW-10B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	5.2E-02		2	2
MW-10B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	7.5E-01		2	2
MW-10B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	4.7E-02		2	2
MW-10B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-10B	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.8E-02		3	3
MW-10B	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.5E-02		2	2
MW-10B	T	7/1/2002	TRICHLOROETHYLENE (TCE)	7.3E-02		3	3
MW-10B	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.6E-02		3	3
MW-10B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.9E-01		2	2
MW-10B	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.7E-01		1	1
MW-10B	T	7/1/2006	TRICHLOROETHYLENE (TCE)	5.3E-02		1	1
MW-10B	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.3E-02		2	2
MW-10B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.6E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-10C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-49

Confidence in Trend:

99.7%

Coefficient of Variation:

1.49

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

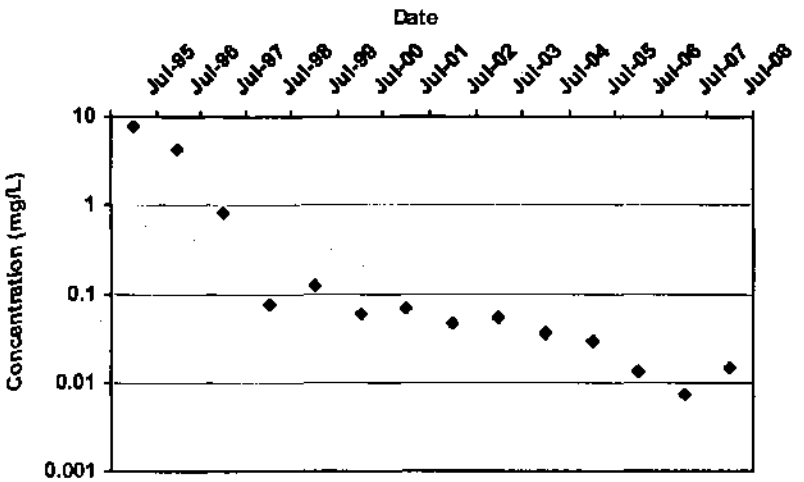
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-10C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	7.0E-01		11	11
MW-10C	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.7E-02		2	2
MW-10C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.6E-01		2	2
MW-10C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.3E+00		2	2
MW-10C	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.4E-01		2	2
MW-10C	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.5E-01		3	3
MW-10C	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.1E-01		2	2
MW-10C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	8.3E-02		3	3
MW-10C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.1E-02		3	3
MW-10C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.5E-01		2	2
MW-10C	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-10C	T	7/1/2006	TRICHLOROETHYLENE (TCE)	5.6E-02		2	2
MW-10C	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.9E-02		2	2
MW-10C	T	7/1/2008	TRICHLOROETHYLENE (TCE)	6.9E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-12C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-81

Confidence in Trend:

100.0%

Coefficient of Variation:

2.35

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

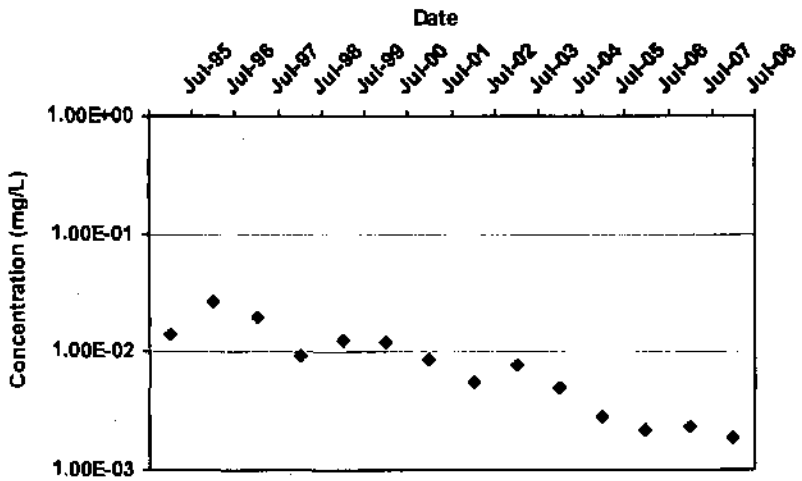
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-12C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	7.7E+00		2	2
MW-12C	T	7/1/1996	TRICHLOROETHYLENE (TCE)	4.4E+00		2	2
MW-12C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	8.1E-01		2	2
MW-12C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	7.7E-02		2	2
MW-12C	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-12C	T	7/1/2000	TRICHLOROETHYLENE (TCE)	6.1E-02		2	2
MW-12C	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.0E-02		1	1
MW-12C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	4.6E-02		1	1
MW-12C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.5E-02		2	2
MW-12C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.6E-02		2	2
MW-12C	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.9E-02		1	1
MW-12C	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.3E-02		1	1
MW-12C	T	7/1/2007	TRICHLOROETHYLENE (TCE)	7.4E-03		1	1
MW-12C	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.5E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-13C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-79

Confidence in Trend:

100.0%

Coefficient of Variation:

0.78

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

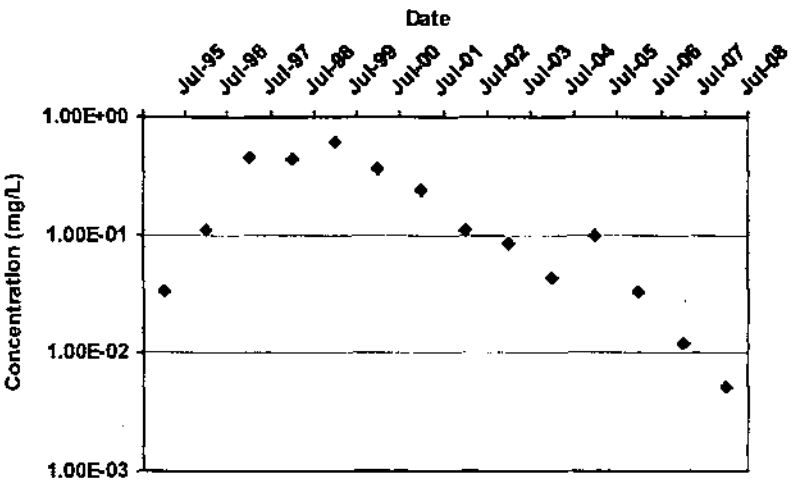
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.4E-02		2	2
MW-13C	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.7E-02		2	2
MW-13C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.0E-02		2	2
MW-13C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	9.5E-03		2	2
MW-13C	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2
MW-13C	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2
MW-13C	T	7/1/2001	TRICHLOROETHYLENE (TCE)	8.8E-03		2	2
MW-13C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	5.7E-03		2	2
MW-13C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	7.9E-03		2	2
MW-13C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	4.9E-03		2	2
MW-13C	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.8E-03		1	1
MW-13C	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.2E-03		1	1
MW-13C	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.4E-03		1	1
MW-13C	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.9E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: PW-1B
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-49

Confidence in Trend:
99.7%

Coefficient of Variation:
1.05

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
PW-1B	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.3E-02		11	11
PW-1B	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.1E-01		12	12
PW-1B	T	7/1/1997	TRICHLOROETHYLENE (TCE)	4.6E-01		9	9
PW-1B	T	7/1/1998	TRICHLOROETHYLENE (TCE)	4.3E-01		3	3
PW-1B	T	7/1/1999	TRICHLOROETHYLENE (TCE)	6.1E-01		4	4
PW-1B	T	7/1/2000	TRICHLOROETHYLENE (TCE)	3.7E-01		5	5
PW-1B	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.4E-01		4	4
PW-1B	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.1E-01		4	4
PW-1B	T	7/1/2003	TRICHLOROETHYLENE (TCE)	8.5E-02		3	3
PW-1B	T	7/1/2004	TRICHLOROETHYLENE (TCE)	4.4E-02		2	2
PW-1B	T	7/1/2005	TRICHLOROETHYLENE (TCE)	9.7E-02		2	2
PW-1B	T	7/1/2006	TRICHLOROETHYLENE (TCE)	3.4E-02		2	2
PW-1B	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2
PW-1B	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.2E-03		2	2

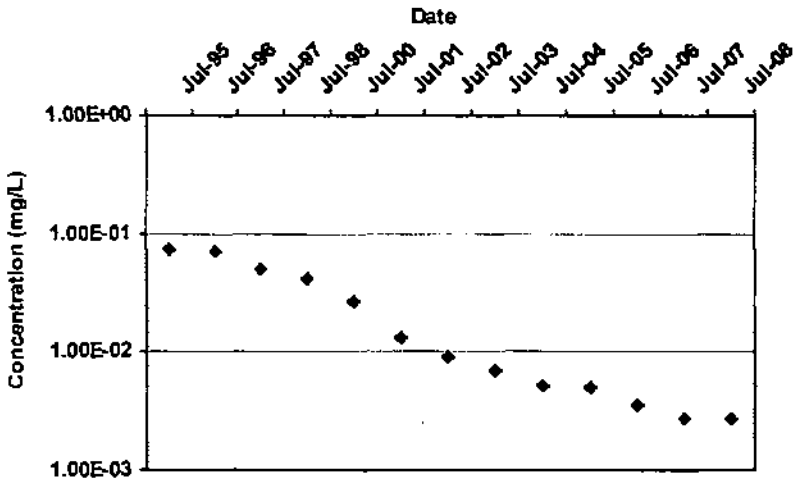
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

INTERMEDIATE WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-16
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-77

Confidence in Trend:

100.0%

Coefficient of Variation:

1.10

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

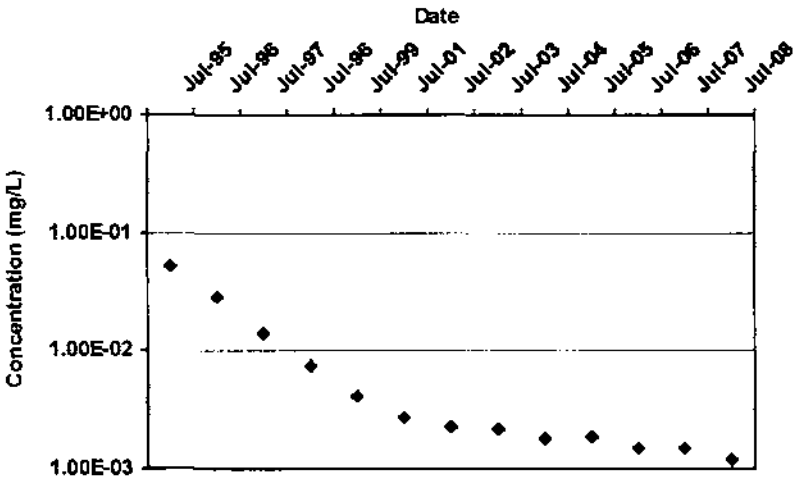
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-16	T	7/1/1995	TRICHLOROETHYLENE (TCE)	7.4E-02		2	2
AMW-16	T	7/1/1996	TRICHLOROETHYLENE (TCE)	6.9E-02		2	2
AMW-16	T	7/1/1997	TRICHLOROETHYLENE (TCE)	5.1E-02		2	2
AMW-16	T	7/1/1998	TRICHLOROETHYLENE (TCE)	4.2E-02		2	2
AMW-16	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.7E-02		2	2
AMW-16	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.3E-02		1	1
AMW-16	T	7/1/2002	TRICHLOROETHYLENE (TCE)	9.0E-03		1	1
AMW-16	T	7/1/2003	TRICHLOROETHYLENE (TCE)	7.0E-03		1	1
AMW-16	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.1E-03		1	1
AMW-16	T	7/1/2005	TRICHLOROETHYLENE (TCE)	5.0E-03		1	1
AMW-16	T	7/1/2006	TRICHLOROETHYLENE (TCE)	3.6E-03		1	1
AMW-16	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.7E-03		1	1
AMW-16	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.7E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-17
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -75

Confidence in Trend: 100.0%

Coefficient of Variation: 1.62

Mann Kendall Concentration Trend: (See Note) D

Data Table:

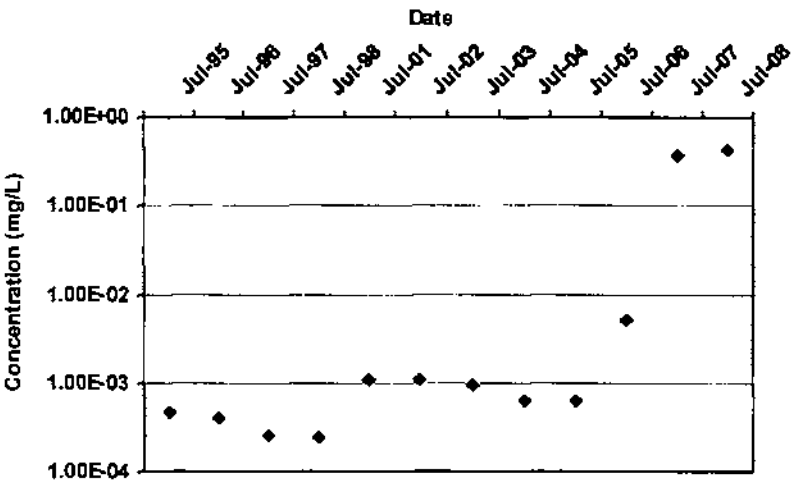
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-17	T	7/1/1995	TRICHLOROETHYLENE (TCE)	5.3E-02		2	2
AMW-17	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.8E-02		2	2
AMW-17	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.4E-02		2	2
AMW-17	T	7/1/1998	TRICHLOROETHYLENE (TCE)	7.5E-03		2	2
AMW-17	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.1E-03		2	2
AMW-17	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.7E-03		1	1
AMW-17	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.3E-03		1	1
AMW-17	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.2E-03		1	1
AMW-17	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.8E-03		1	1
AMW-17	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.9E-03		1	1
AMW-17	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.5E-03		1	1
AMW-17	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.5E-03		1	1
AMW-17	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-18
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

35

Confidence in Trend:

99.2%

Coefficient of Variation:

2.31

Mann Kendall Concentration Trend: (See Note)

I

Data Table:

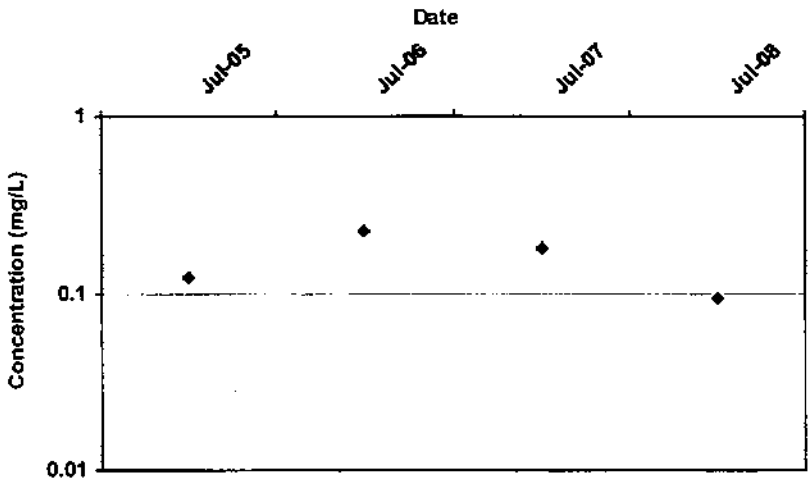
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-18	T	7/1/1995	TRICHLOROETHYLENE (TCE)	4.7E-04		2	2
AMW-18	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.9E-04		2	1
AMW-18	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.5E-04		2	1
AMW-18	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
AMW-18	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.1E-03		1	1
AMW-18	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.1E-03		1	1
AMW-18	T	7/1/2003	TRICHLOROETHYLENE (TCE)	9.5E-04		1	1
AMW-18	T	7/1/2004	TRICHLOROETHYLENE (TCE)	6.4E-04		1	1
AMW-18	T	7/1/2005	TRICHLOROETHYLENE (TCE)	6.2E-04		1	1
AMW-18	T	7/1/2006	TRICHLOROETHYLENE (TCE)	5.1E-03		1	1
AMW-18	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.7E-01		2	2
AMW-18	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.3E-01		4	4

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-59
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-2

Confidence in Trend:
62.5%

Coefficient of Variation:
0.37

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

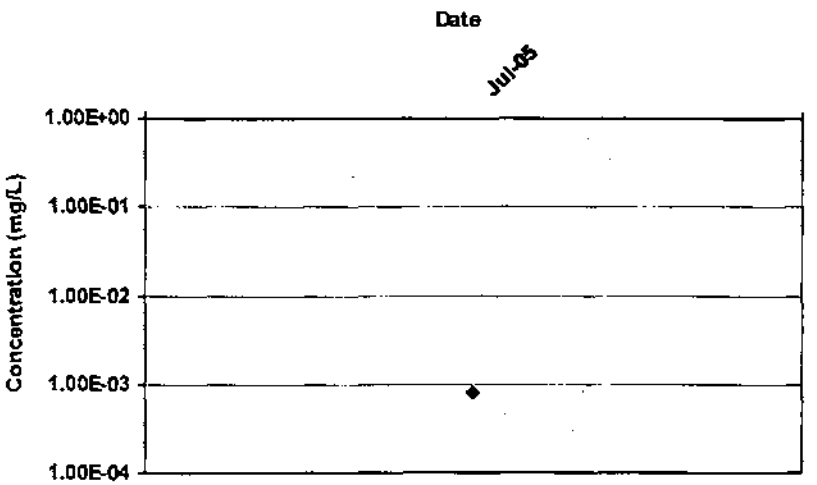
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-59	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.2E-01		3	3
AMW-59	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.2E-01		2	2
AMW-59	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.8E-01		1	1
AMW-59	T	7/1/2008	TRICHLOROETHYLENE (TCE)	9.5E-02		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-60
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

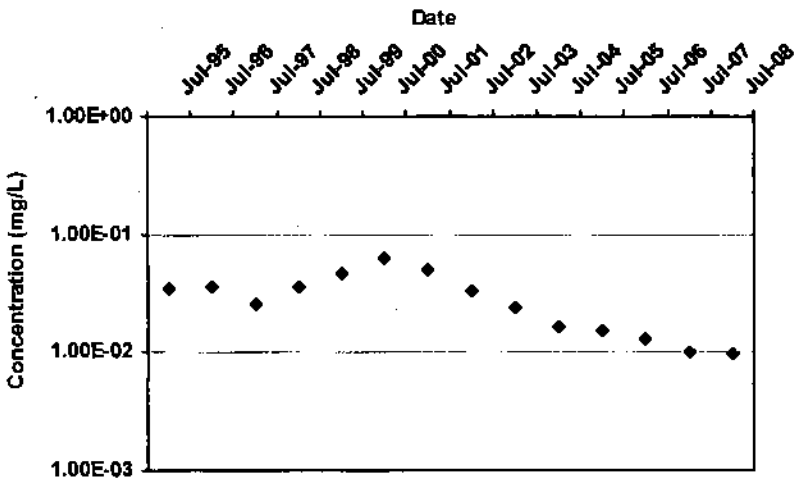
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-60	T	7/1/2005	TRICHLOROETHYLENE (TCE)	8.2E-04		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-14
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-55

Confidence in Trend:
99.9%

Coefficient of Variation:
0.55

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

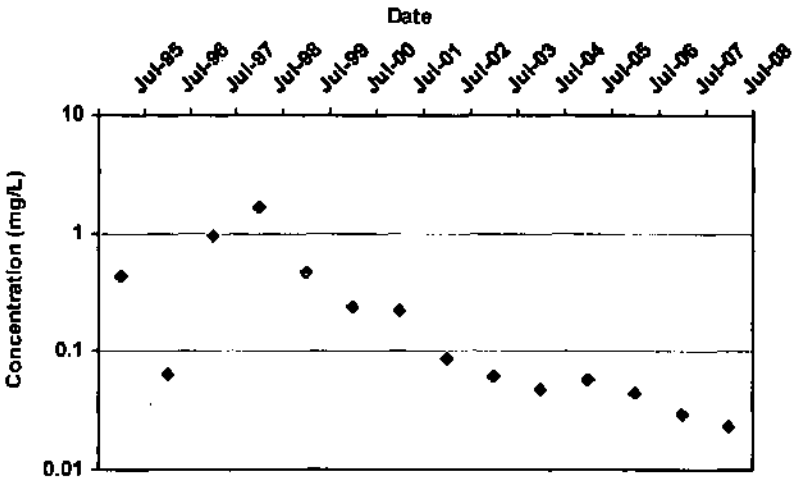
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-14	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.4E-02		2	2
CPU-14	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.6E-02		2	2
CPU-14	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.6E-02		1	1
CPU-14	T	7/1/1998	TRICHLOROETHYLENE (TCE)	3.6E-02		2	2
CPU-14	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.7E-02		2	2
CPU-14	T	7/1/2000	TRICHLOROETHYLENE (TCE)	6.3E-02		2	2
CPU-14	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-02		2	2
CPU-14	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.3E-02		2	2
CPU-14	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.3E-02		2	2
CPU-14	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.6E-02		2	2
CPU-14	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.5E-02		2	2
CPU-14	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.3E-02		1	1
CPU-14	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.0E-02		1	1
CPU-14	T	7/1/2008	TRICHLOROETHYLENE (TCE)	9.8E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-14C
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-69

Confidence in Trend:

100.0%

Coefficient of Variation:

1.48

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

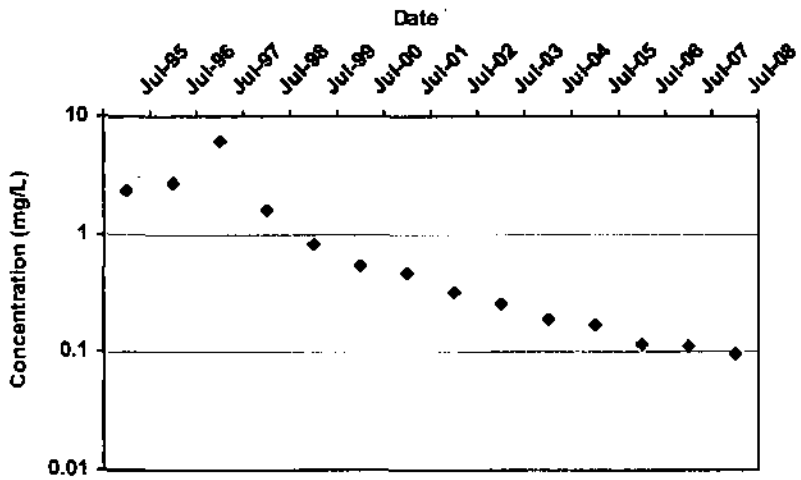
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-14C	T	7/1/1995	TRICHLOROETHYLENE (TCE)	4.4E-01		11	11
MW-14C	T	7/1/1996	TRICHLOROETHYLENE (TCE)	6.5E-02		2	2
MW-14C	T	7/1/1997	TRICHLOROETHYLENE (TCE)	9.4E-01		6	6
MW-14C	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.7E+00		2	2
MW-14C	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.6E-01		3	3
MW-14C	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.4E-01		5	5
MW-14C	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.2E-01		4	4
MW-14C	T	7/1/2002	TRICHLOROETHYLENE (TCE)	8.9E-02		4	4
MW-14C	T	7/1/2003	TRICHLOROETHYLENE (TCE)	6.3E-02		3	3
MW-14C	T	7/1/2004	TRICHLOROETHYLENE (TCE)	4.8E-02		2	2
MW-14C	T	7/1/2005	TRICHLOROETHYLENE (TCE)	5.7E-02		2	2
MW-14C	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.4E-02		2	2
MW-14C	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.9E-02		2	2
MW-14C	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.4E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-14E
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-85

Confidence in Trend:
100.0%

Coefficient of Variation:
1.48

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

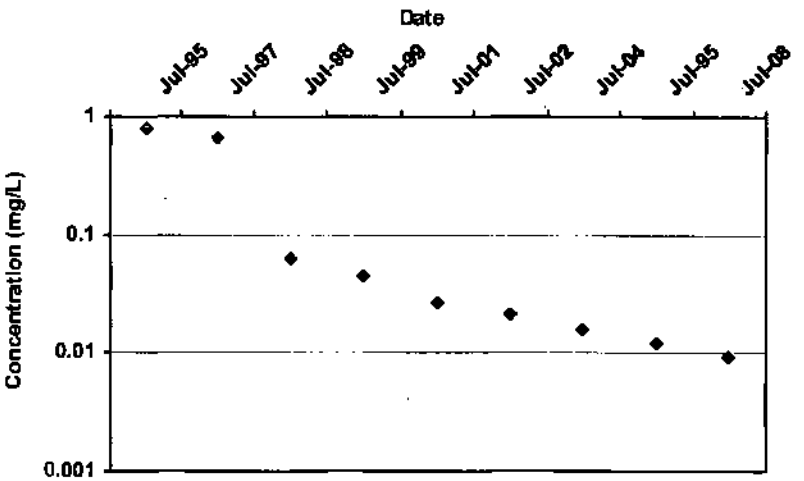
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-14E	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.3E+00		11	11
MW-14E	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.7E+00		2	2
MW-14E	T	7/1/1997	TRICHLOROETHYLENE (TCE)	6.2E+00		2	2
MW-14E	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.6E+00		3	3
MW-14E	T	7/1/1999	TRICHLOROETHYLENE (TCE)	8.1E-01		4	4
MW-14E	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.4E-01		5	5
MW-14E	T	7/1/2001	TRICHLOROETHYLENE (TCE)	4.7E-01		4	4
MW-14E	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.3E-01		4	4
MW-14E	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.6E-01		3	3
MW-14E	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.9E-01		2	2
MW-14E	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.7E-01		2	2
MW-14E	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.2E-01		2	2
MW-14E	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.1E-01		2	2
MW-14E	T	7/1/2008	TRICHLOROETHYLENE (TCE)	9.7E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-15E
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-36

Confidence in Trend:
100.0%

Coefficient of Variation:
1.70

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

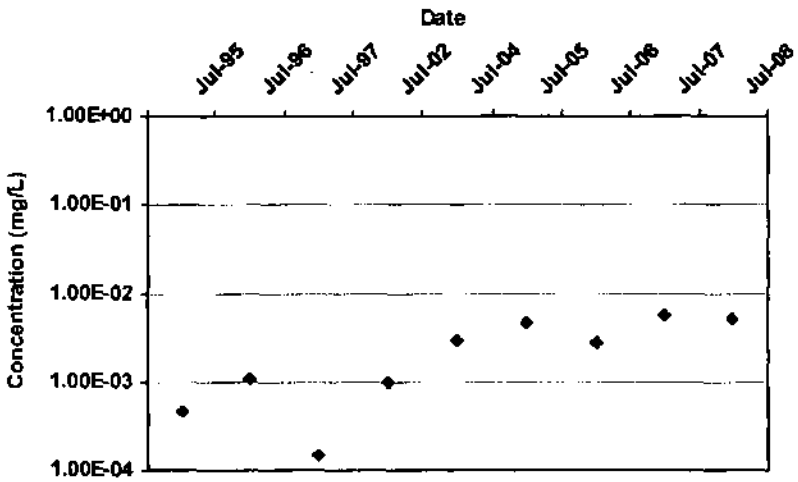
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-15E	T	7/1/1995	TRICHLOROETHYLENE (TCE)	8.1E-01		2	2
MW-15E	T	7/1/1997	TRICHLOROETHYLENE (TCE)	6.7E-01		2	2
MW-15E	T	7/1/1998	TRICHLOROETHYLENE (TCE)	6.3E-02		2	2
MW-15E	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.5E-02		2	2
MW-15E	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.7E-02		1	1
MW-15E	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.1E-02		1	1
MW-15E	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.6E-02		1	1
MW-15E	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.2E-02		1	1
MW-15E	T	7/1/2008	TRICHLOROETHYLENE (TCE)	9.5E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-16E
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 24

Confidence in Trend: 99.4%

Coefficient of Variation: 0.79

Mann Kendall Concentration Trend: (See Note) I

Data Table:

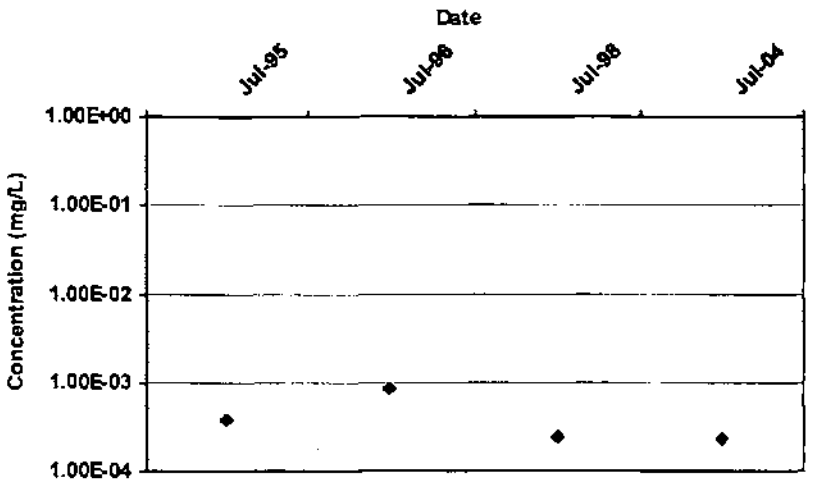
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-16E	T	7/1/1995	TRICHLOROETHYLENE (TCE)	4.6E-04		2	2
MW-16E	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.1E-03		2	2
MW-16E	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.5E-04	ND	1	0
MW-16E	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.0E-03		1	1
MW-16E	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.0E-03		1	1
MW-16E	T	7/1/2005	TRICHLOROETHYLENE (TCE)	4.6E-03		1	1
MW-16E	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.8E-03		1	1
MW-16E	T	7/1/2007	TRICHLOROETHYLENE (TCE)	5.7E-03		1	1
MW-16E	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.1E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-17E
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-4

Confidence in Trend:
83.3%

Coefficient of Variation:
0.68

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

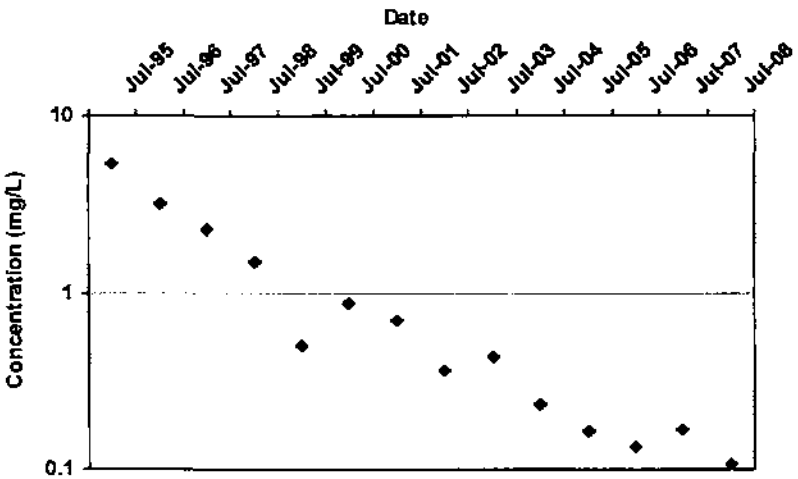
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-17E	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.8E-04		2	1
MW-17E	T	7/1/1996	TRICHLOROETHYLENE (TCE)	8.5E-04		1	1
MW-17E	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-17E	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.3E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-18D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-81

Confidence in Trend:

100.0%

Coefficient of Variation:

1.32

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

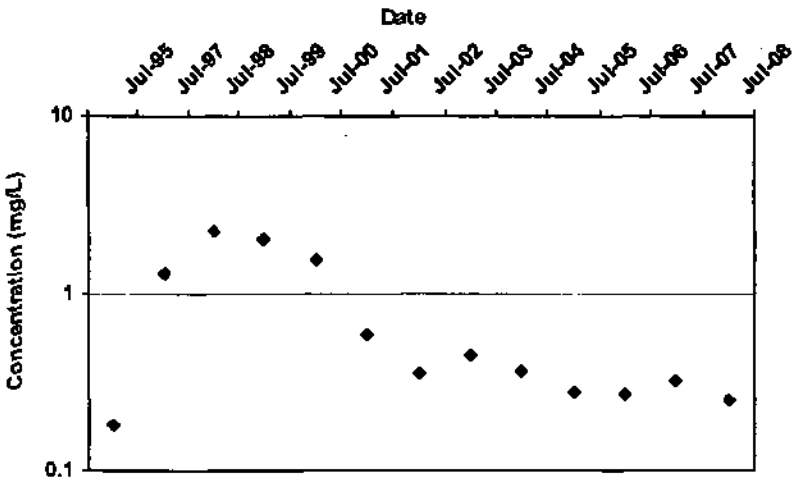
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-18D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	5.3E+00		11	11
MW-18D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.2E+00		8	8
MW-18D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.3E+00		9	9
MW-18D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.5E+00		3	3
MW-18D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	5.0E-01		4	4
MW-18D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	8.7E-01		5	5
MW-18D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.0E-01		2	2
MW-18D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.6E-01		4	4
MW-18D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.4E-01		3	3
MW-18D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.3E-01		2	2
MW-18D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.6E-01		2	2
MW-18D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.3E-01		2	2
MW-18D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.7E-01		2	2
MW-18D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.1E-01		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-18E
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-40

Confidence in Trend:

99.3%

Coefficient of Variation:

0.94

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

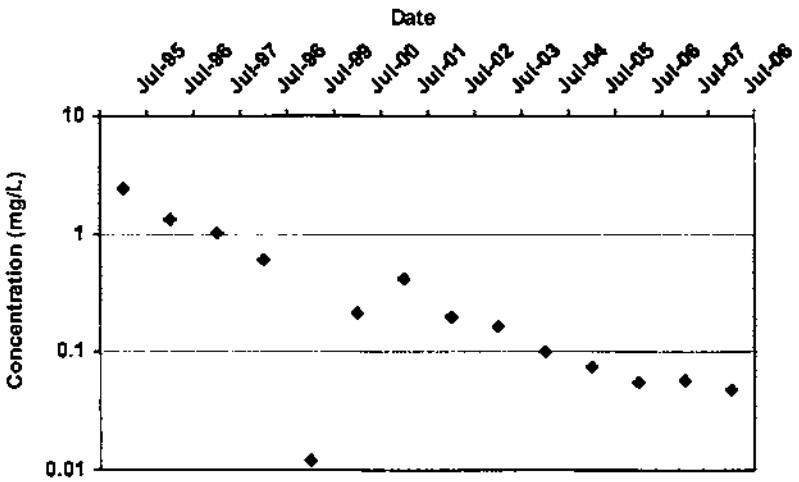
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-18E	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.8E-01		2	2
MW-18E	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.3E+00		2	2
MW-18E	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.3E+00		2	2
MW-18E	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.0E+00		2	2
MW-18E	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.5E+00		2	2
MW-18E	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.8E-01		4	4
MW-18E	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.6E-01		2	2
MW-18E	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.4E-01		2	2
MW-18E	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.6E-01		2	2
MW-18E	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.8E-01		1	1
MW-18E	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.7E-01		2	2
MW-18E	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.2E-01		1	1
MW-18E	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-01		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-19D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-69

Confidence in Trend:
100.0%

Coefficient of Variation:
1.42

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

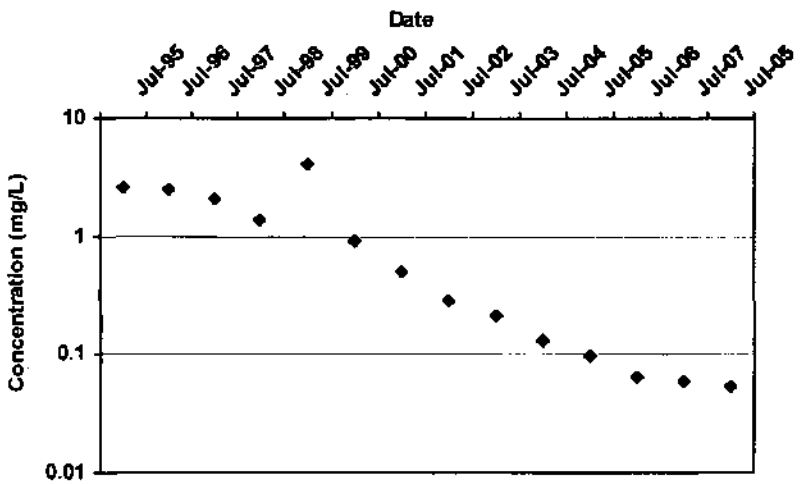
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-19D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.4E+00		11	11
MW-19D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.3E+00		12	12
MW-19D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.0E+00		6	6
MW-19D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	6.1E-01		3	3
MW-19D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.2E-02		1	1
MW-19D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.1E-01		4	4
MW-19D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	4.2E-01		4	4
MW-19D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.0E-01		4	4
MW-19D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.7E-01		3	3
MW-19D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.0E-01		2	2
MW-19D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	7.5E-02		2	2
MW-19D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	5.6E-02		2	2
MW-19D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	5.8E-02		2	2
MW-19D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.7E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-20D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-83

Confidence in Trend:
100.0%

Coefficient of Variation:
1.19

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

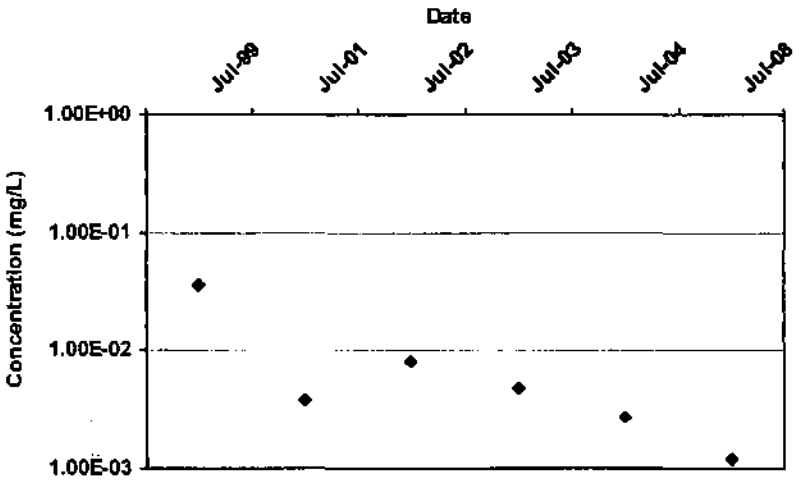
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-20D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.6E+00		11	11
MW-20D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.5E+00		12	12
MW-20D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.1E+00		9	9
MW-20D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.4E+00		3	3
MW-20D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.1E+00		1	1
MW-20D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	9.2E-01		5	5
MW-20D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-01		4	4
MW-20D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.9E-01		4	4
MW-20D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.1E-01		3	3
MW-20D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.3E-01		2	2
MW-20D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	9.6E-02		2	2
MW-20D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	6.4E-02		2	2
MW-20D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	6.0E-02		2	2
MW-20D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.3E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-40
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-11

Confidence in Trend:
97.2%

Coefficient of Variation:
1.40

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-40	T	7/1/1999	TRICHLOROETHYLENE (TCE)	3.6E-02		1	1
MW-40	T	7/1/2001	TRICHLOROETHYLENE (TCE)	3.9E-03		1	1
MW-40	T	7/1/2002	TRICHLOROETHYLENE (TCE)	8.2E-03		1	1
MW-40	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.8E-03		1	1
MW-40	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.7E-03		1	1
MW-40	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-03		1	1

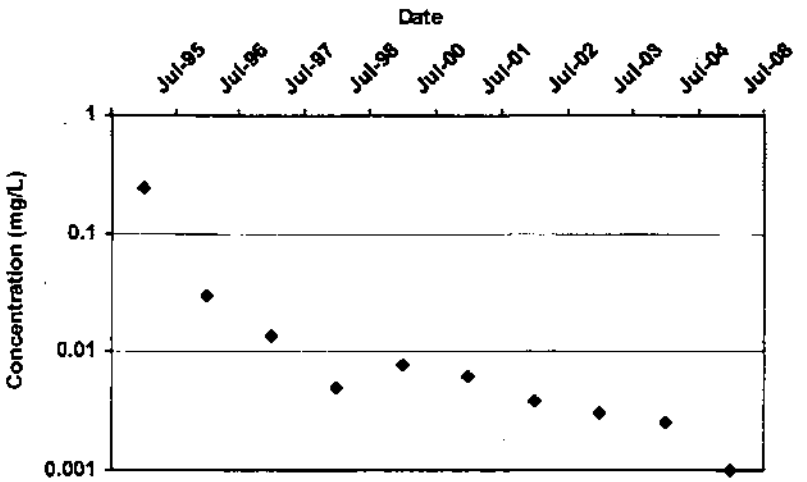
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

CHURCH OF GOD WELLS

MAROS Mann-Kendall Statistics Summary

Well: AMW-14
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-41

Confidence in Trend:

100.0%

Coefficient of Variation:

2.37

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

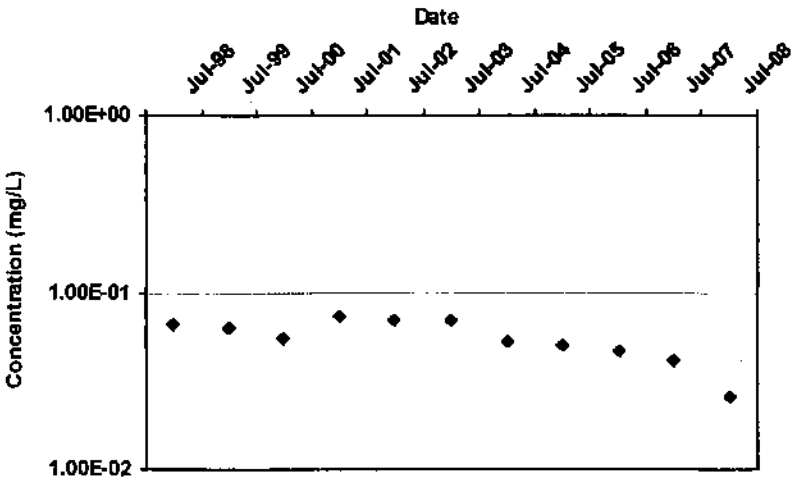
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-14	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.4E-01		2	2
AMW-14	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.0E-02		2	2
AMW-14	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.3E-02		2	2
AMW-14	T	7/1/1998	TRICHLOROETHYLENE (TCE)	5.0E-03		1	1
AMW-14	T	7/1/2000	TRICHLOROETHYLENE (TCE)	7.9E-03		1	1
AMW-14	T	7/1/2001	TRICHLOROETHYLENE (TCE)	6.2E-03		2	2
AMW-14	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.6E-03		2	2
AMW-14	T	7/1/2003	TRICHLOROETHYLENE (TCE)	3.0E-03		2	2
AMW-14	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-03		1	1
AMW-14	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.0E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-27
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-37

Confidence in Trend:
99.8%

Coefficient of Variation:
0.26

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

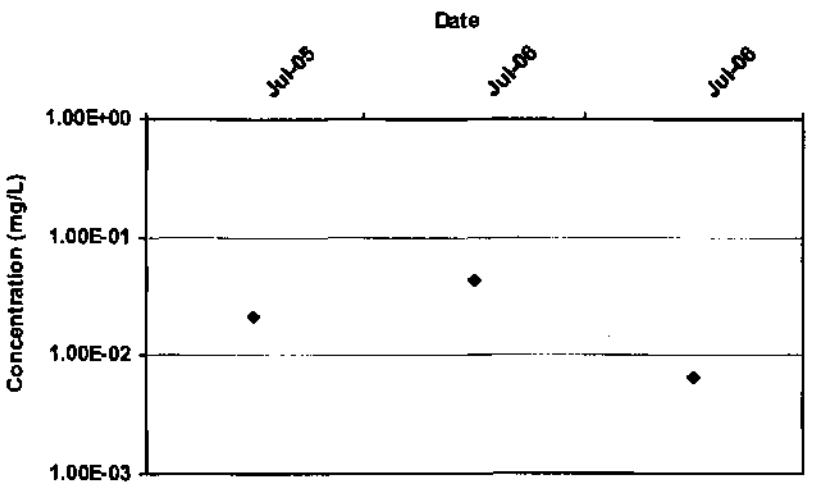
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-27	T	7/1/1998	TRICHLOROETHYLENE (TCE)	6.6E-02		1	1
AMW-27	T	7/1/1999	TRICHLOROETHYLENE (TCE)	6.3E-02		4	4
AMW-27	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.6E-02		5	5
AMW-27	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.3E-02		4	4
AMW-27	T	7/1/2002	TRICHLOROETHYLENE (TCE)	7.0E-02		4	4
AMW-27	T	7/1/2003	TRICHLOROETHYLENE (TCE)	6.9E-02		3	3
AMW-27	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.3E-02		2	2
AMW-27	T	7/1/2005	TRICHLOROETHYLENE (TCE)	5.0E-02		2	2
AMW-27	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.6E-02		2	2
AMW-27	T	7/1/2007	TRICHLOROETHYLENE (TCE)	4.1E-02		2	2
AMW-27	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.6E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-61
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

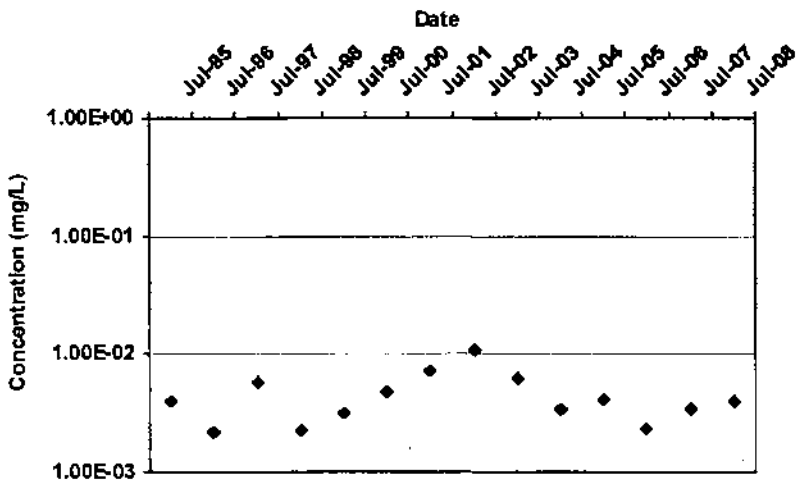
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-61	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.1E-02		2	2
AMW-61	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.3E-02		1	1
AMW-61	T	7/1/2008	TRICHLOROETHYLENE (TCE)	6.5E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-12
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
7

Confidence in Trend:
62.6%

Coefficient of Variation:
0.52

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

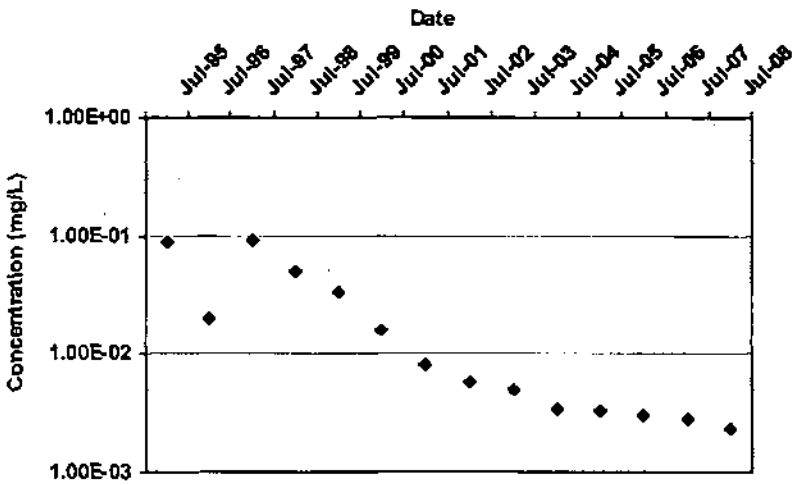
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-12	T	7/1/1995	TRICHLOROETHYLENE (TCE)	3.9E-03		2	1
CPU-12	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.2E-03		2	1
CPU-12	T	7/1/1997	TRICHLOROETHYLENE (TCE)	5.7E-03		2	2
CPU-12	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.2E-03		2	2
CPU-12	T	7/1/1999	TRICHLOROETHYLENE (TCE)	3.2E-03		2	2
CPU-12	T	7/1/2000	TRICHLOROETHYLENE (TCE)	4.8E-03		2	2
CPU-12	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.1E-03		2	2
CPU-12	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.1E-02		2	2
CPU-12	T	7/1/2003	TRICHLOROETHYLENE (TCE)	6.1E-03		2	2
CPU-12	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.4E-03		2	2
CPU-12	T	7/1/2005	TRICHLOROETHYLENE (TCE)	4.1E-03		2	2
CPU-12	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.4E-03		1	1
CPU-12	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.4E-03		1	1
CPU-12	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.0E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: CPU-13
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-83

Confidence in Trend:

100.0%

Coefficient of Variation:

1.32

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

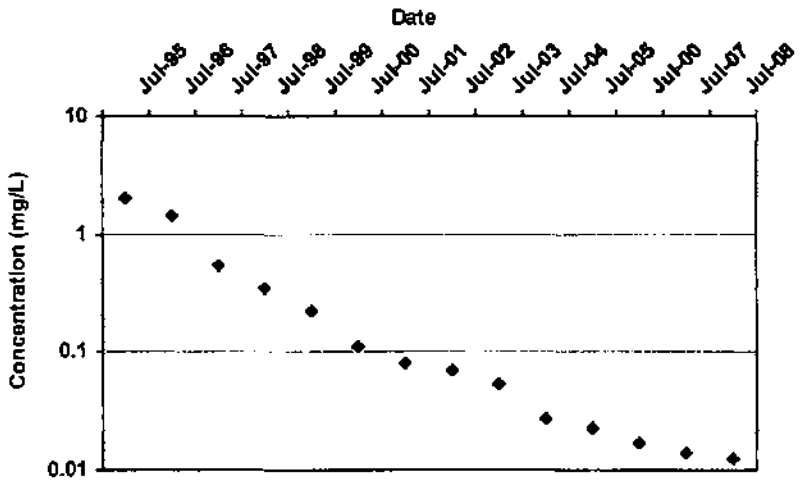
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
CPU-13	T	7/1/1995	TRICHLOROETHYLENE (TCE)	9.0E-02		11	11
CPU-13	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.0E-02		2	2
CPU-13	T	7/1/1997	TRICHLOROETHYLENE (TCE)	9.2E-02		2	2
CPU-13	T	7/1/1998	TRICHLOROETHYLENE (TCE)	5.0E-02		2	2
CPU-13	T	7/1/1999	TRICHLOROETHYLENE (TCE)	3.4E-02		4	4
CPU-13	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.6E-02		5	5
CPU-13	T	7/1/2001	TRICHLOROETHYLENE (TCE)	8.0E-03		4	4
CPU-13	T	7/1/2002	TRICHLOROETHYLENE (TCE)	5.8E-03		4	4
CPU-13	T	7/1/2003	TRICHLOROETHYLENE (TCE)	4.9E-03		3	3
CPU-13	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.4E-03		2	2
CPU-13	T	7/1/2005	TRICHLOROETHYLENE (TCE)	3.3E-03		2	2
CPU-13	T	7/1/2006	TRICHLOROETHYLENE (TCE)	3.0E-03		2	2
CPU-13	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.8E-03		2	2
CPU-13	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.4E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-21D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-91

Confidence in Trend:
100.0%

Coefficient of Variation:
1.71

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

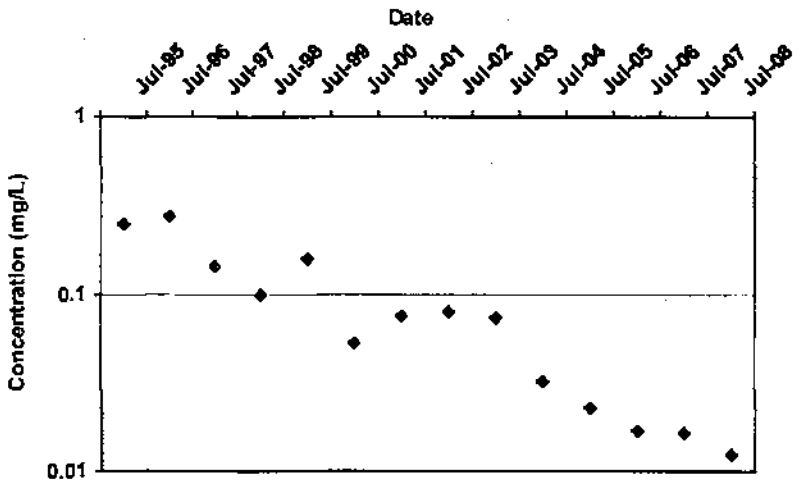
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-21D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.0E+00		11	11
MW-21D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.4E+00		12	12
MW-21D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	5.5E-01		9	9
MW-21D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	3.5E-01		3	3
MW-21D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.2E-01		4	4
MW-21D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.1E-01		5	5
MW-21D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	8.1E-02		4	4
MW-21D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	6.9E-02		4	4
MW-21D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.4E-02		3	3
MW-21D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.7E-02		2	2
MW-21D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.2E-02		2	2
MW-21D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.7E-02		2	2
MW-21D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.4E-02		2	2
MW-21D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to Insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-22D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-77

Confidence in Trend:

100.0%

Coefficient of Variation:

0.91

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

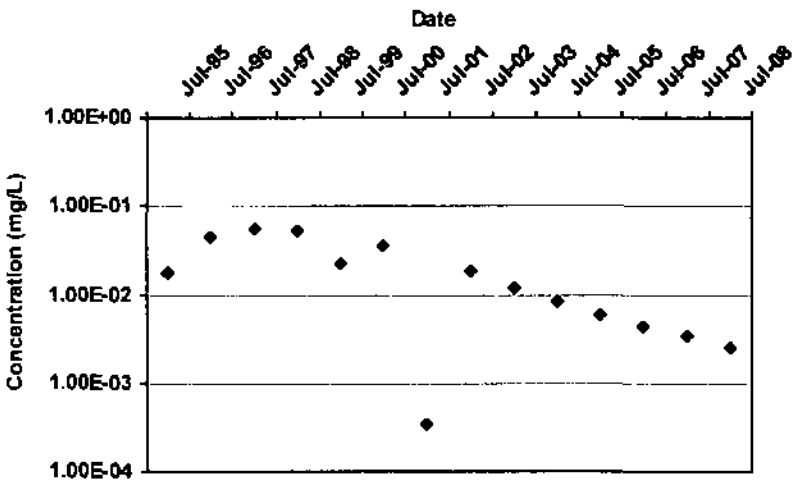
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-22D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.5E-01		11	11
MW-22D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	2.7E-01		11	11
MW-22D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.4E-01		9	9
MW-22D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	9.9E-02		3	3
MW-22D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.6E-01		2	2
MW-22D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.3E-02		4	4
MW-22D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	7.5E-02		4	4
MW-22D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	7.8E-02		3	3
MW-22D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	7.3E-02		3	3
MW-22D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.2E-02		2	2
MW-22D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.3E-02		2	2
MW-22D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.7E-02		2	2
MW-22D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.6E-02		2	2
MW-22D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-23D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-59

Confidence in Trend:
100.0%

Coefficient of Variation:
0.95

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

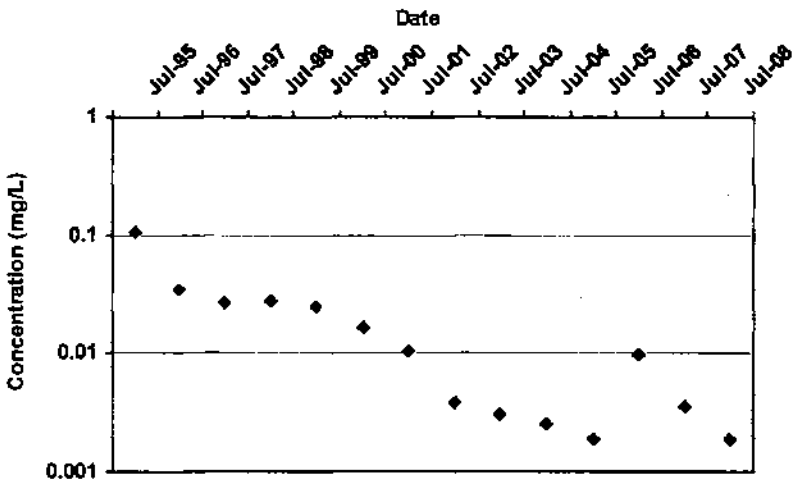
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-23D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.7E-02		2	2
MW-23D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	4.6E-02		2	2
MW-23D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	5.6E-02		2	2
MW-23D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	5.3E-02		2	2
MW-23D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.3E-02		2	2
MW-23D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	3.5E-02		2	2
MW-23D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	3.5E-04		2	1
MW-23D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.9E-02		2	2
MW-23D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.2E-02		2	2
MW-23D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	8.4E-03		2	2
MW-23D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	5.9E-03		2	2
MW-23D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.4E-03		1	1
MW-23D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.5E-03		1	1
MW-23D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.6E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-25D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

-74

Confidence in Trend:

100.0%

Coefficient of Variation:

1.39

Mann Kendall Concentration Trend: (See Note)

D

Data Table:

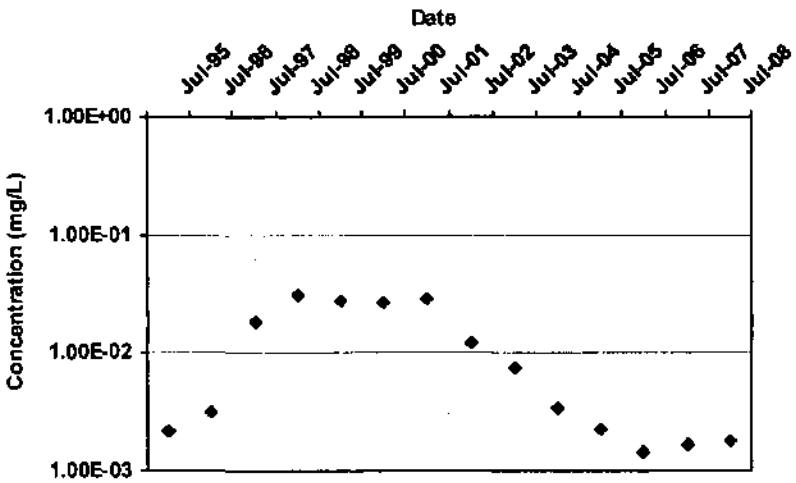
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-25D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	1.1E-01		12	12
MW-25D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.4E-02		12	12
MW-25D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.7E-02		9	9
MW-25D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.8E-02		3	3
MW-25D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.4E-02		4	4
MW-25D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.6E-02		5	5
MW-25D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.1E-02		4	4
MW-25D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	3.8E-03		4	4
MW-25D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	3.1E-03		3	3
MW-25D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.6E-03		2	2
MW-25D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.9E-03		1	1
MW-25D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	9.9E-03		1	1
MW-25D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.6E-03		3	3
MW-25D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.9E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-26D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-37

Confidence in Trend:
97.6%

Coefficient of Variation:
0.99

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

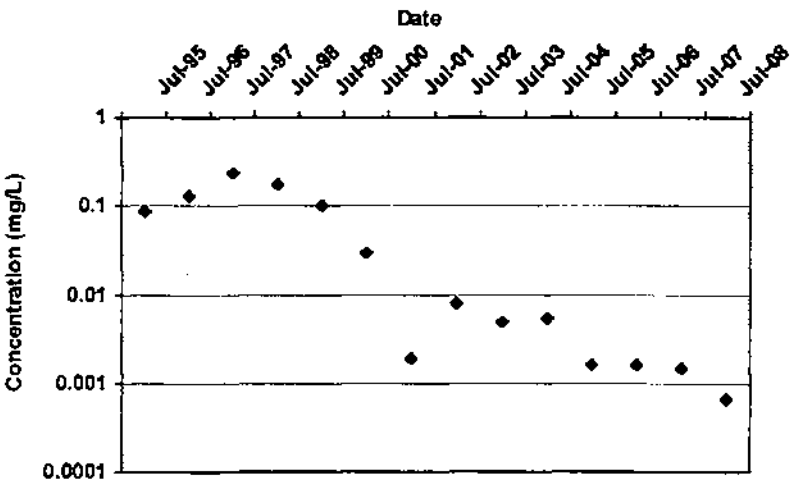
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-26D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	2.2E-03		11	10
MW-26D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	3.1E-03		12	12
MW-26D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	1.9E-02		9	9
MW-26D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	3.1E-02		3	3
MW-26D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.7E-02		4	4
MW-26D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	2.7E-02		5	5
MW-26D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.9E-02		4	4
MW-26D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.2E-02		4	4
MW-26D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	7.4E-03		3	3
MW-26D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	3.4E-03		2	2
MW-26D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.3E-03		2	2
MW-26D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.4E-03		2	2
MW-26D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.7E-03		2	2
MW-26D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.8E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-27D
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-70

Confidence in Trend:
100.0%

Coefficient of Variation:
1.39

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

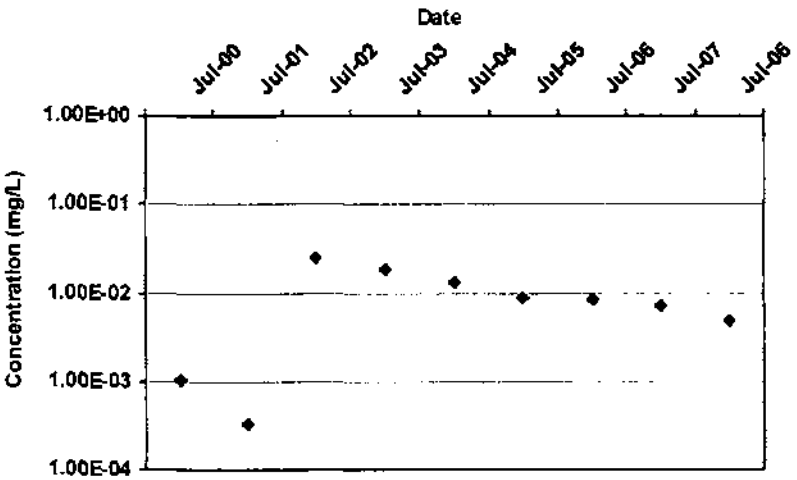
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-27D	T	7/1/1995	TRICHLOROETHYLENE (TCE)	8.9E-02		11	11
MW-27D	T	7/1/1996	TRICHLOROETHYLENE (TCE)	1.3E-01		2	2
MW-27D	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.4E-01		2	2
MW-27D	T	7/1/1998	TRICHLOROETHYLENE (TCE)	1.7E-01		2	2
MW-27D	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.0E-01		2	2
MW-27D	T	7/1/2000	TRICHLOROETHYLENE (TCE)	3.0E-02		4	4
MW-27D	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.9E-03		4	3
MW-27D	T	7/1/2002	TRICHLOROETHYLENE (TCE)	8.1E-03		4	4
MW-27D	T	7/1/2003	TRICHLOROETHYLENE (TCE)	5.0E-03		3	3
MW-27D	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.3E-03		2	2
MW-27D	T	7/1/2005	TRICHLOROETHYLENE (TCE)	1.6E-03		1	1
MW-27D	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.6E-03		1	1
MW-27D	T	7/1/2007	TRICHLOROETHYLENE (TCE)	1.5E-03		1	1
MW-27D	T	7/1/2008	TRICHLOROETHYLENE (TCE)	6.6E-04		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-49
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-8

Confidence In Trend:
76.2%

Coefficient of Variation:
0.82

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-49	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.0E-03		3	2
MW-49	T	7/1/2001	TRICHLOROETHYLENE (TCE)	3.4E-04		4	2
MW-49	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-02		4	4
MW-49	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.9E-02		3	3
MW-49	T	7/1/2004	TRICHLOROETHYLENE (TCE)	1.3E-02		2	2
MW-49	T	7/1/2005	TRICHLOROETHYLENE (TCE)	9.0E-03		2	2
MW-49	T	7/1/2006	TRICHLOROETHYLENE (TCE)	8.5E-03		2	2
MW-49	T	7/1/2007	TRICHLOROETHYLENE (TCE)	7.3E-03		2	2
MW-49	T	7/1/2008	TRICHLOROETHYLENE (TCE)	4.9E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

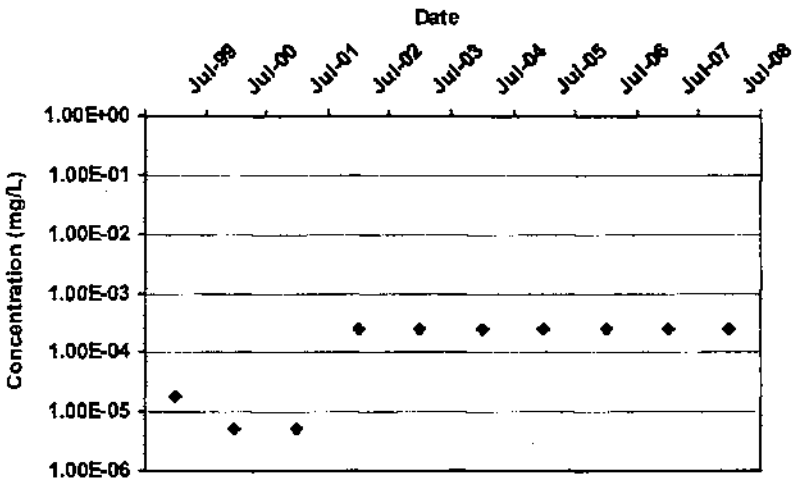
TOE OF PLUME

Sentinel Wells

MAROS Mann-Kendall Statistics Summary

Well: AMW-43
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
19

Confidence in Trend:
94.6%

Coefficient of Variation:
0.65

Mann Kendall Concentration Trend: (See Note)
PI

Data Table:

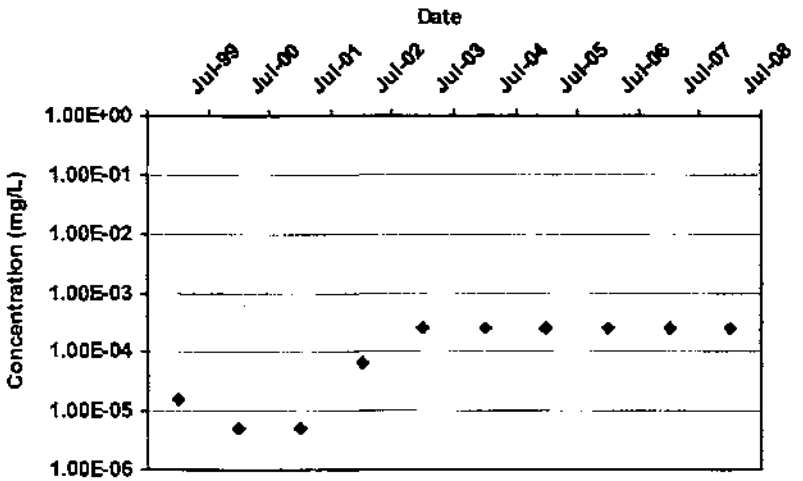
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-43	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.8E-05	ND	6	0
AMW-43	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	8	0
AMW-43	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	2	0
AMW-43	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-43	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-43	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-43	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-43	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-43	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-43	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-44
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
25

Confidence in Trend:
98.6%

Coefficient of Variation:
0.74

Mann Kendall Concentration Trend: (See Note)
I

Data Table:

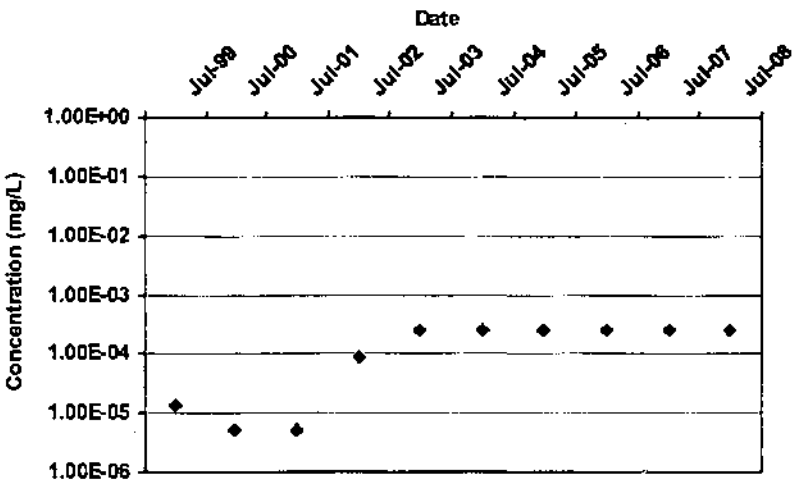
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-44	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.5E-05	ND	7	0
AMW-44	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	8	0
AMW-44	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	4	0
AMW-44	T	7/1/2002	TRICHLOROETHYLENE (TCE)	6.8E-05	ND	3	0
AMW-44	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-44	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-44	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-44	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-44	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-44	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-45
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 24

Confidence in Trend: 98.2%

Coefficient of Variation: 0.73

Mann Kendall Concentration Trend: (See Note) I

Data Table:

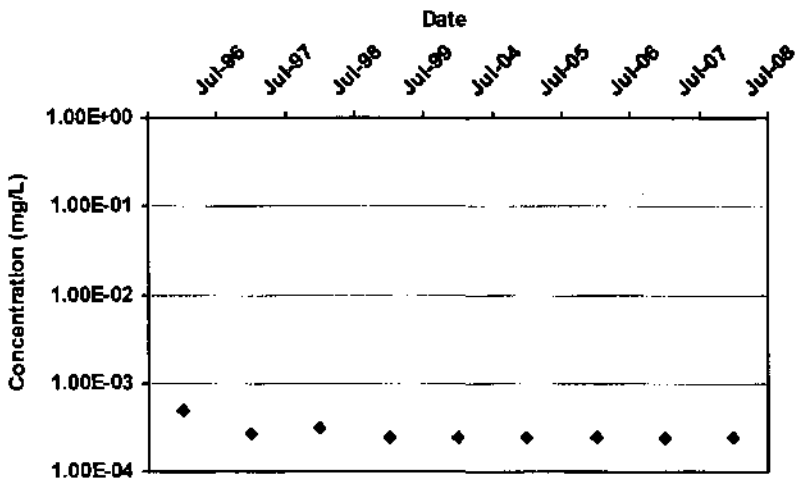
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-45	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.3E-05	ND	8	0
AMW-45	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	9	0
AMW-45	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	4	0
AMW-45	T	7/1/2002	TRICHLOROETHYLENE (TCE)	8.5E-05	ND	3	0
AMW-45	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-45	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-45	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-45	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
AMW-45	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
AMW-45	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-30
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-20

Confidence in Trend:
97.8%

Coefficient of Variation:
0.29

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

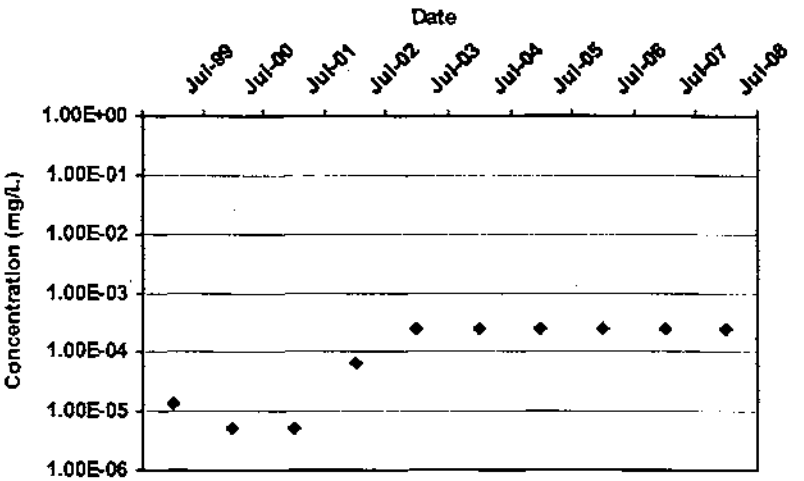
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-30	T	7/1/1996	TRICHLOROETHYLENE (TCE)	5.0E-04	ND	1	0
MW-30	T	7/1/1997	TRICHLOROETHYLENE (TCE)	2.7E-04	ND	2	0
MW-30	T	7/1/1998	TRICHLOROETHYLENE (TCE)	3.1E-04	ND	3	0
MW-30	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-30	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-30	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-30	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-30	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-30	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-47
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
24

Confidence In Trend:
98.2%

Coefficient of Variation:
0.75

Mann Kendall Concentration Trend: (See Note)
I

Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-47	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.3E-05	ND	4	0
MW-47	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	7	0
MW-47	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	4	0
MW-47	T	7/1/2002	TRICHLOROETHYLENE (TCE)	6.8E-05	ND	3	0
MW-47	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-47	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-47	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-47	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-47	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-47	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

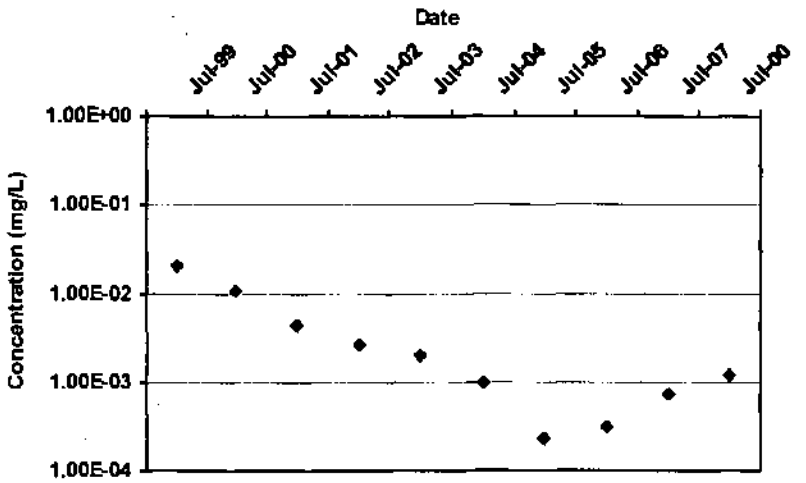
TOE OF PLUME

Other Toe Wells

MAROS Mann-Kendall Statistics Summary

Well: AMW-42
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-31

Confidence in Trend:
99.8%

Coefficient of Variation:
1.50

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

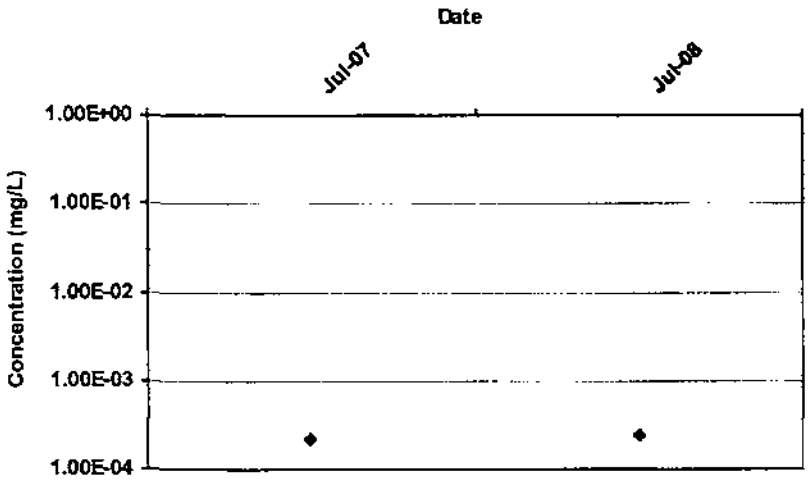
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-42	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.1E-02		9	9
AMW-42	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.1E-02		13	13
AMW-42	T	7/1/2001	TRICHLOROETHYLENE (TCE)	4.3E-03		4	4
AMW-42	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.7E-03		4	4
AMW-42	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.0E-03		3	3
AMW-42	T	7/1/2004	TRICHLOROETHYLENE (TCE)	9.9E-04		6	5
AMW-42	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.3E-04		4	1
AMW-42	T	7/1/2006	TRICHLOROETHYLENE (TCE)	3.1E-04		2	2
AMW-42	T	7/1/2007	TRICHLOROETHYLENE (TCE)	7.5E-04		2	2
AMW-42	T	7/1/2008	TRICHLOROETHYLENE (TCE)	1.2E-03		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: AMW-63
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
0.0%

Coefficient of Variation:
0.00

Mann Kendall Concentration Trend: (See Note)
N/A

Data Table:

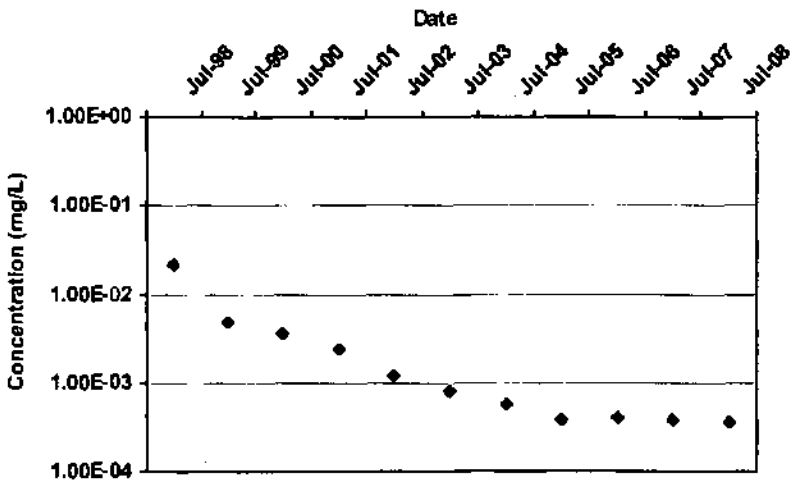
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
AMW-63	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.3E-04		4	1
AMW-63	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-31
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-51

Confidence in Trend:
100.0%

Coefficient of Variation:
1.88

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

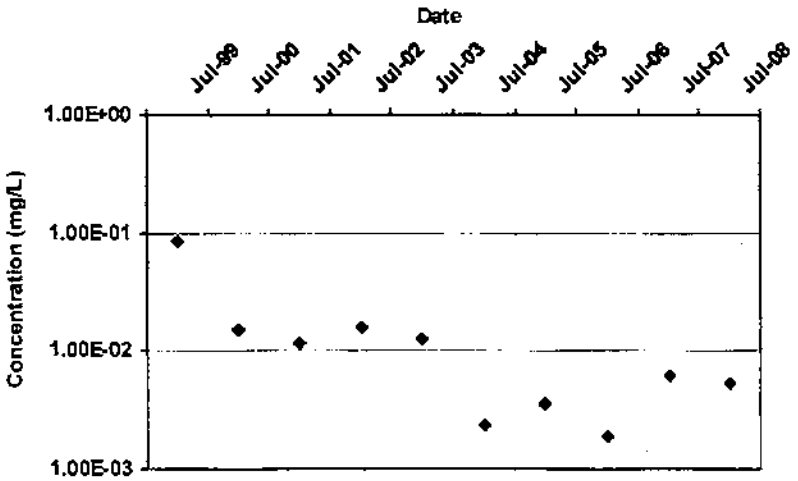
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-31	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.2E-02		2	2
MW-31	T	7/1/1999	TRICHLOROETHYLENE (TCE)	4.9E-03		8	8
MW-31	T	7/1/2000	TRICHLOROETHYLENE (TCE)	3.7E-03		13	13
MW-31	T	7/1/2001	TRICHLOROETHYLENE (TCE)	2.4E-03		2	2
MW-31	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.2E-03		3	3
MW-31	T	7/1/2003	TRICHLOROETHYLENE (TCE)	7.9E-04		3	3
MW-31	T	7/1/2004	TRICHLOROETHYLENE (TCE)	5.7E-04		2	2
MW-31	T	7/1/2005	TRICHLOROETHYLENE (TCE)	3.8E-04		1	1
MW-31	T	7/1/2006	TRICHLOROETHYLENE (TCE)	4.0E-04		1	1
MW-31	T	7/1/2007	TRICHLOROETHYLENE (TCE)	3.9E-04		1	1
MW-31	T	7/1/2008	TRICHLOROETHYLENE (TCE)	3.6E-04		1	1

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-35
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-25

Confidence in Trend:
98.6%

Coefficient of Variation:
1.56

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

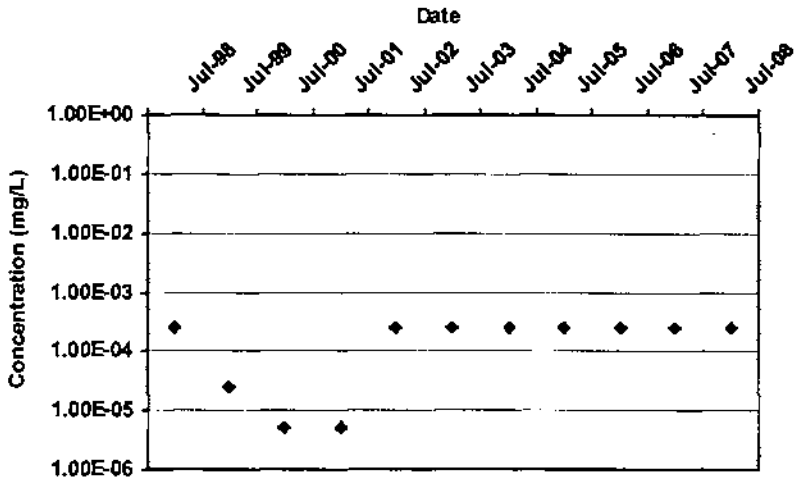
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-35	T	7/1/1999	TRICHLOROETHYLENE (TCE)	8.6E-02		6	6
MW-35	T	7/1/2000	TRICHLOROETHYLENE (TCE)	1.5E-02		12	12
MW-35	T	7/1/2001	TRICHLOROETHYLENE (TCE)	1.2E-02		12	11
MW-35	T	7/1/2002	TRICHLOROETHYLENE (TCE)	1.6E-02		7	7
MW-35	T	7/1/2003	TRICHLOROETHYLENE (TCE)	1.3E-02		3	3
MW-35	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.4E-03		5	5
MW-35	T	7/1/2005	TRICHLOROETHYLENE (TCE)	3.6E-03		4	4
MW-35	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.9E-03		2	2
MW-35	T	7/1/2007	TRICHLOROETHYLENE (TCE)	6.2E-03		2	2
MW-35	T	7/1/2008	TRICHLOROETHYLENE (TCE)	5.4E-03		2	2

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-37
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

7

Confidence in Trend:

67.6%

Coefficient of Variation:

0.60

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

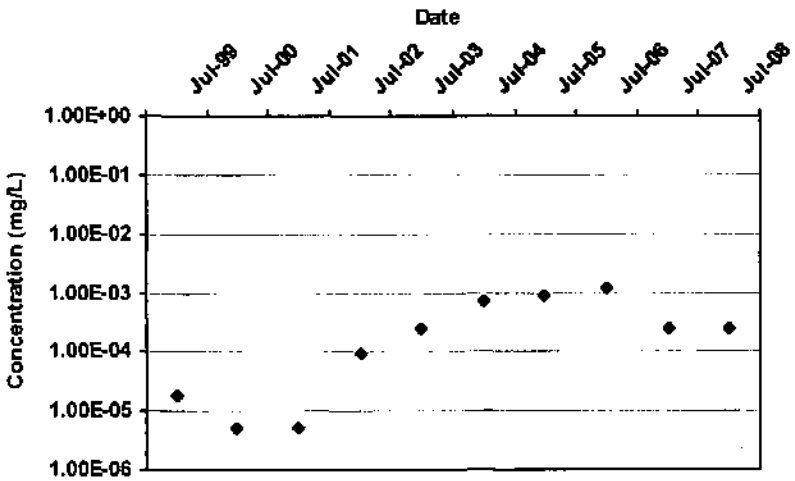
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-37	T	7/1/1998	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-37	T	7/1/1999	TRICHLOROETHYLENE (TCE)	2.4E-05	ND	5	0
MW-37	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	6	0
MW-37	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	2	0
MW-37	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-37	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-37	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-37	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-37	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-37	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-37	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-41
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 24

Confidence in Trend: 98.2%

Coefficient of Variation: 1.15

Mann Kendall Concentration Trend: (See Note)

Data Table:

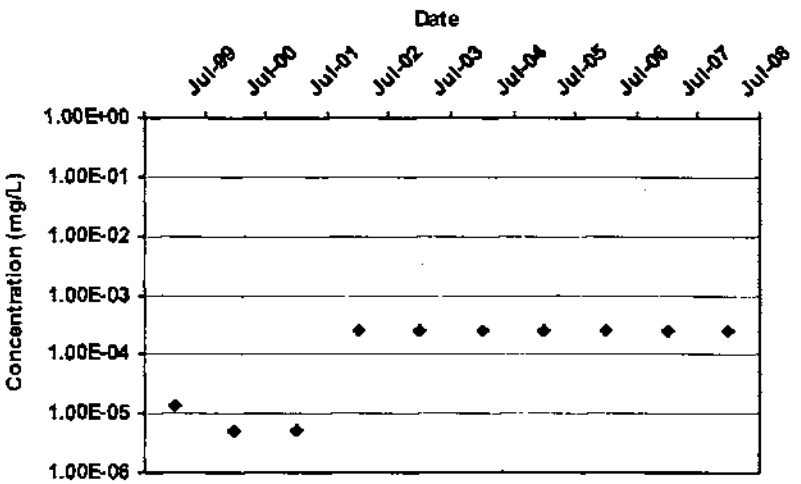
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-41	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.8E-05	ND	9	0
MW-41	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	13	0
MW-41	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	4	0
MW-41	T	7/1/2002	TRICHLOROETHYLENE (TCE)	9.4E-05	ND	4	0
MW-41	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-41	T	7/1/2004	TRICHLOROETHYLENE (TCE)	7.1E-04		6	2
MW-41	T	7/1/2005	TRICHLOROETHYLENE (TCE)	8.7E-04		5	4
MW-41	T	7/1/2006	TRICHLOROETHYLENE (TCE)	1.2E-03		2	1
MW-41	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-41	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-46
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 **to** 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:

13

Confidence in Trend:

85.4%

Coefficient of Variation:

0.66

Mann Kendall Concentration Trend: (See Note)

NT

Data Table:

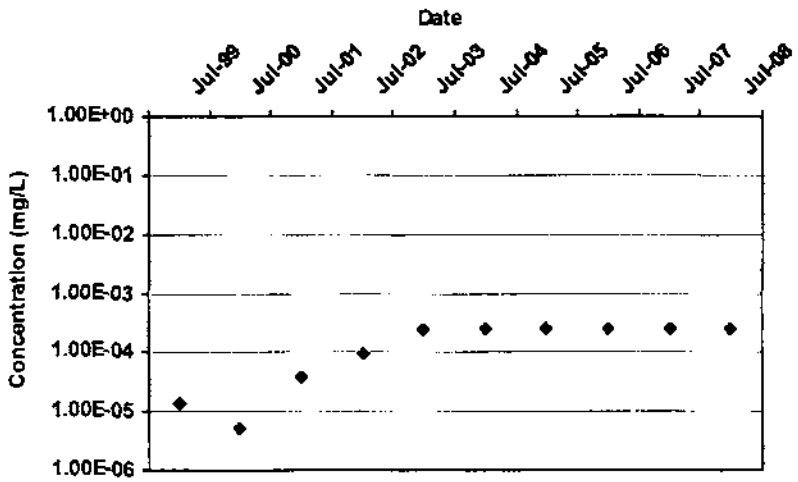
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-46	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.3E-05	ND	4	0
MW-46	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	9	0
MW-46	T	7/1/2001	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	3	0
MW-46	T	7/1/2002	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-46	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-46	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	5	0
MW-46	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-46	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-46	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-46	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0

Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-48
Well Type: T
COC: TRICHLOROETHYLENE (TCE)

Time Period: 1/19/1995 to 10/30/2008
Consolidation Period: Yearly
Consolidation Type: Geometric Mean
Duplicate Consolidation: Maximum
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 27

Confidence in Trend: 99.2%

Coefficient of Variation: 0.68

Mann Kendall Concentration Trend: (See Note) I

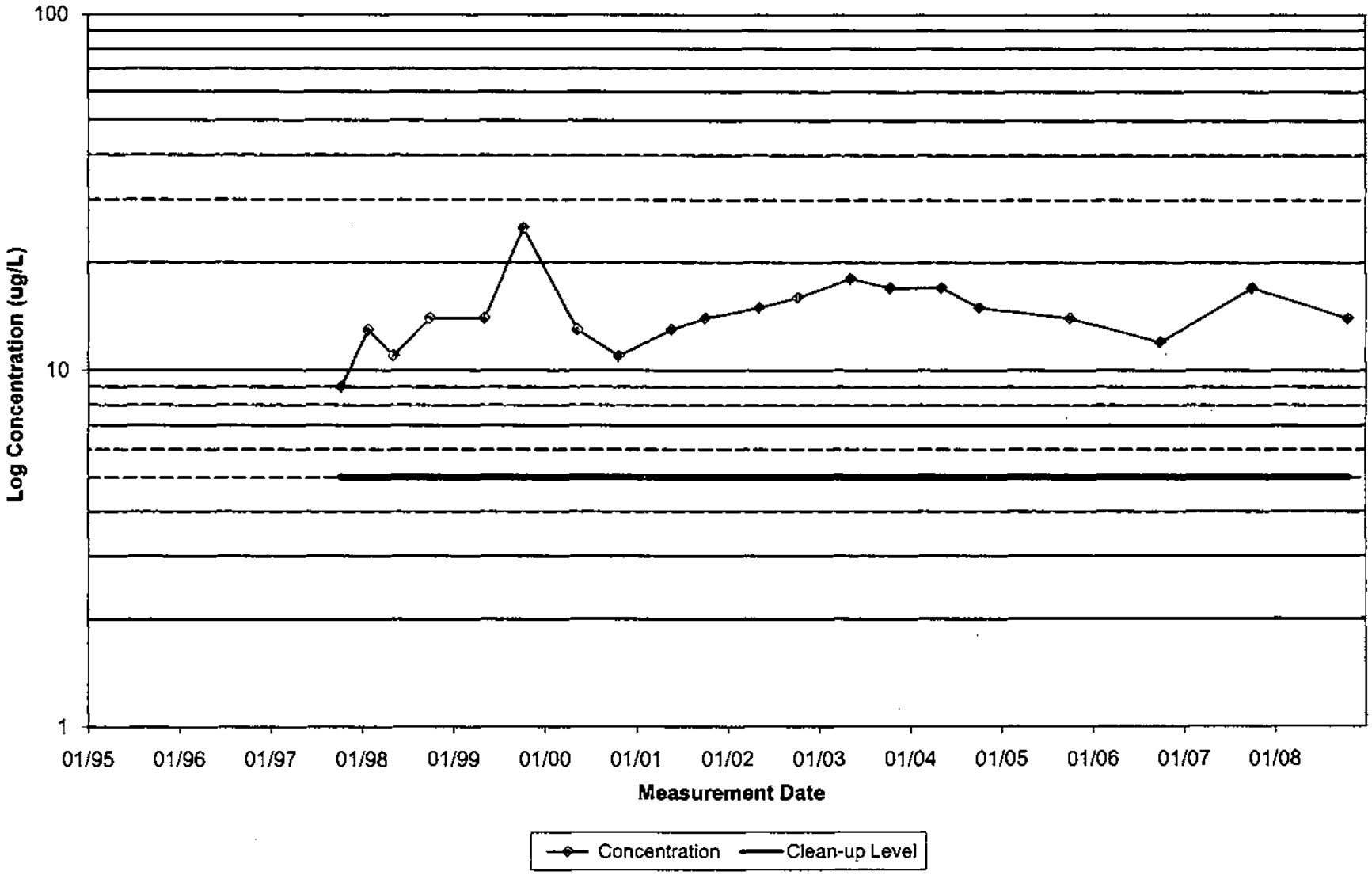
Data Table:

Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-48	T	7/1/1999	TRICHLOROETHYLENE (TCE)	1.3E-05	ND	4	0
MW-48	T	7/1/2000	TRICHLOROETHYLENE (TCE)	5.0E-06	ND	9	0
MW-48	T	7/1/2001	TRICHLOROETHYLENE (TCE)	4.0E-05		4	1
MW-48	T	7/1/2002	TRICHLOROETHYLENE (TCE)	9.4E-05	ND	4	0
MW-48	T	7/1/2003	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	3	0
MW-48	T	7/1/2004	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	5	0
MW-48	T	7/1/2005	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	4	0
MW-48	T	7/1/2006	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	2	0
MW-48	T	7/1/2007	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0
MW-48	T	7/1/2008	TRICHLOROETHYLENE (TCE)	2.5E-04	ND	1	0

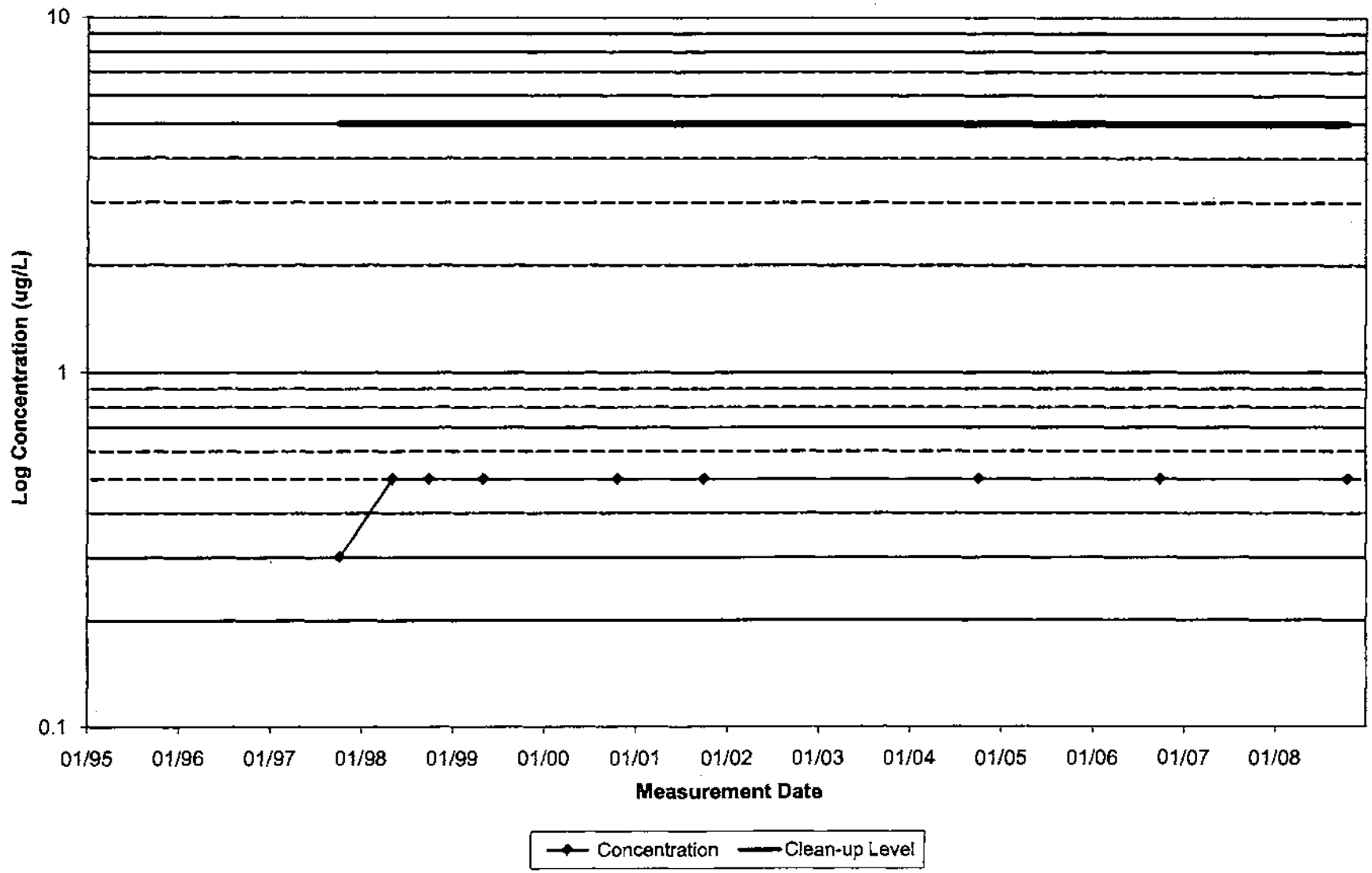
Note: Increasing (I); Probably Increasing (PI); Stable (S); Probably Decreasing (PD); Decreasing (D); No Trend (NT); Not Applicable (N/A) - Due to insufficient Data (< 4 sampling events); ND = Non-detect

TROUTDALE WELLS

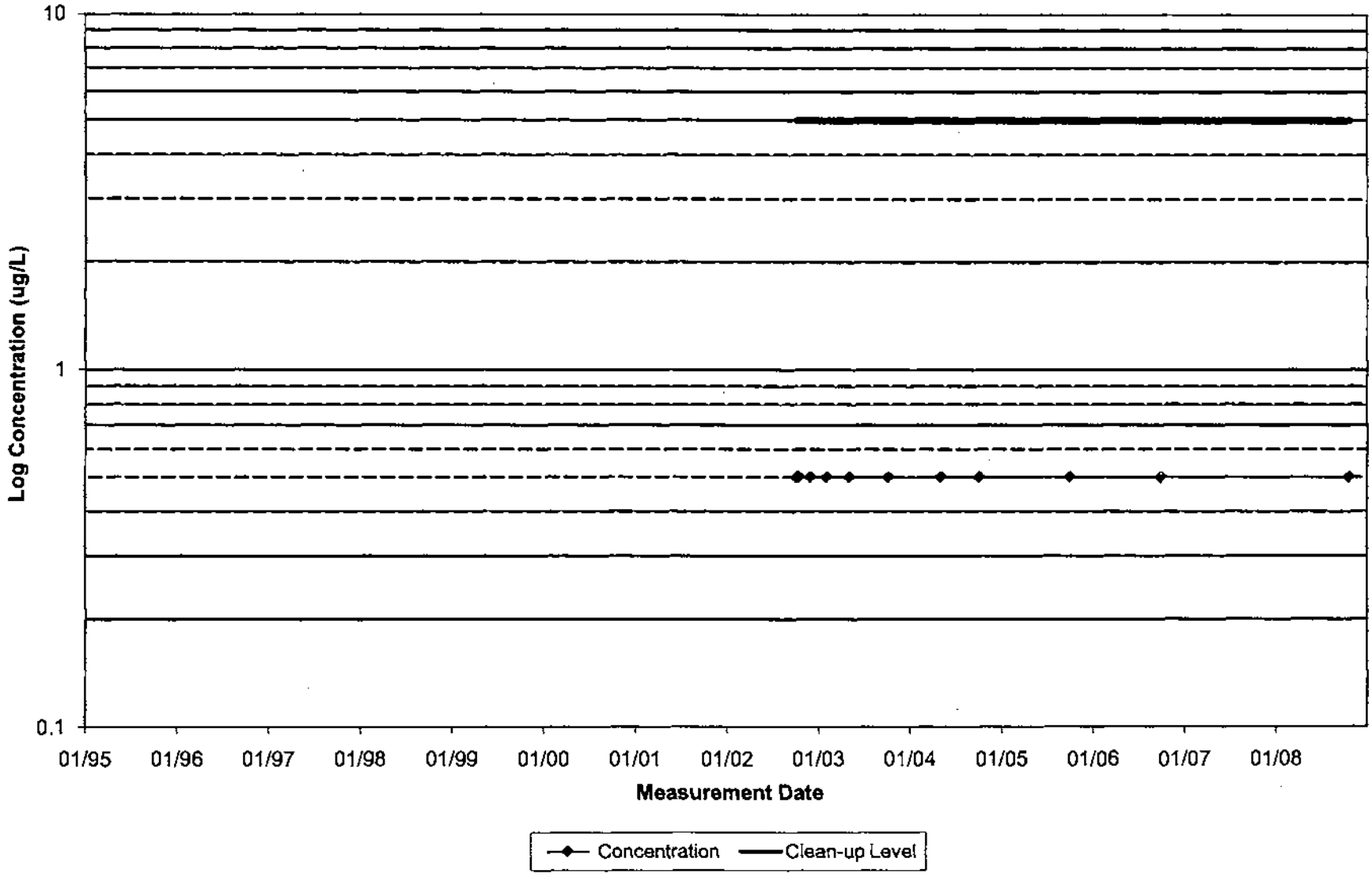
AMW-24 - TCE (ug/L)



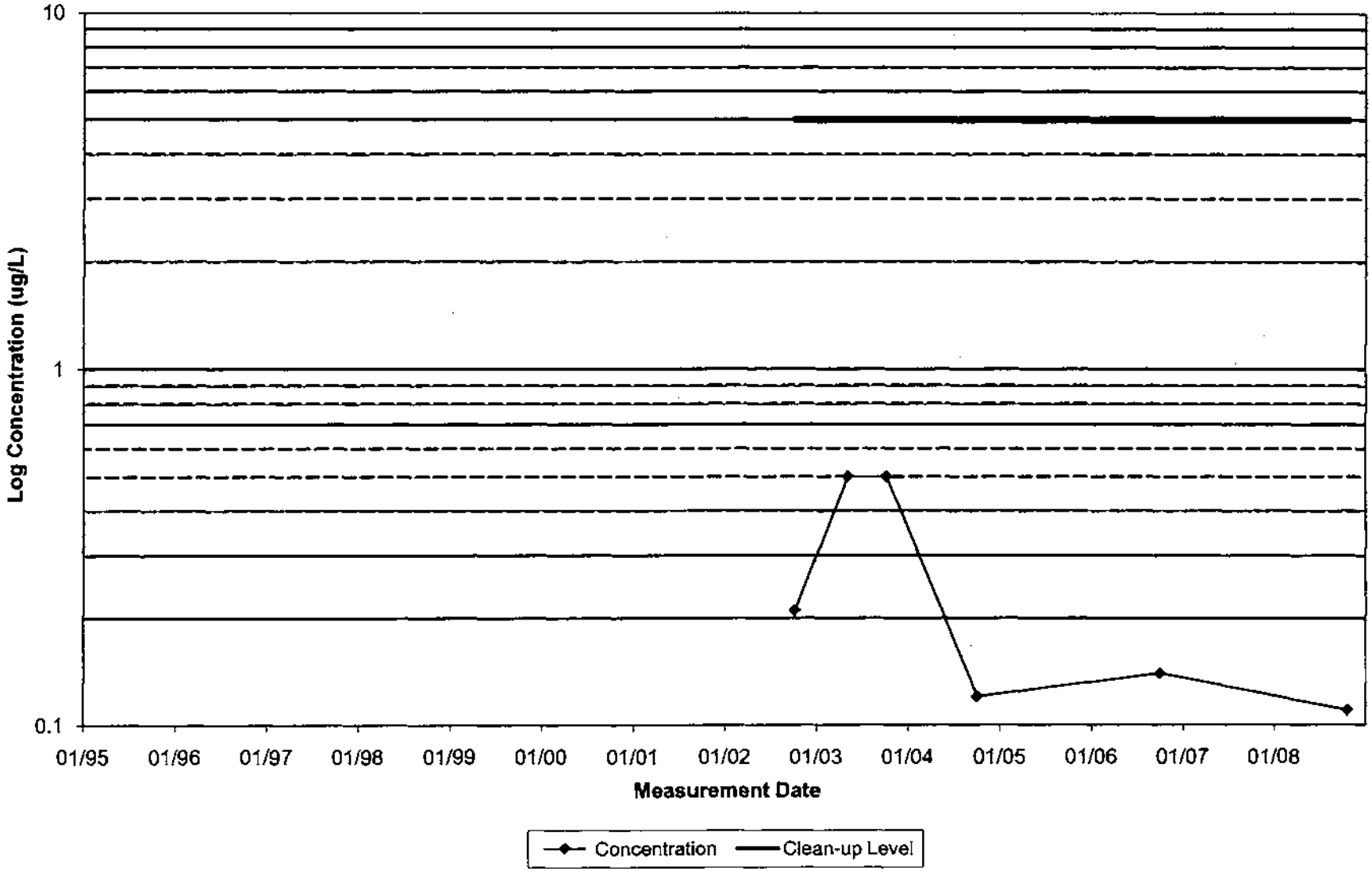
AMW-25 - TCE (ug/L)



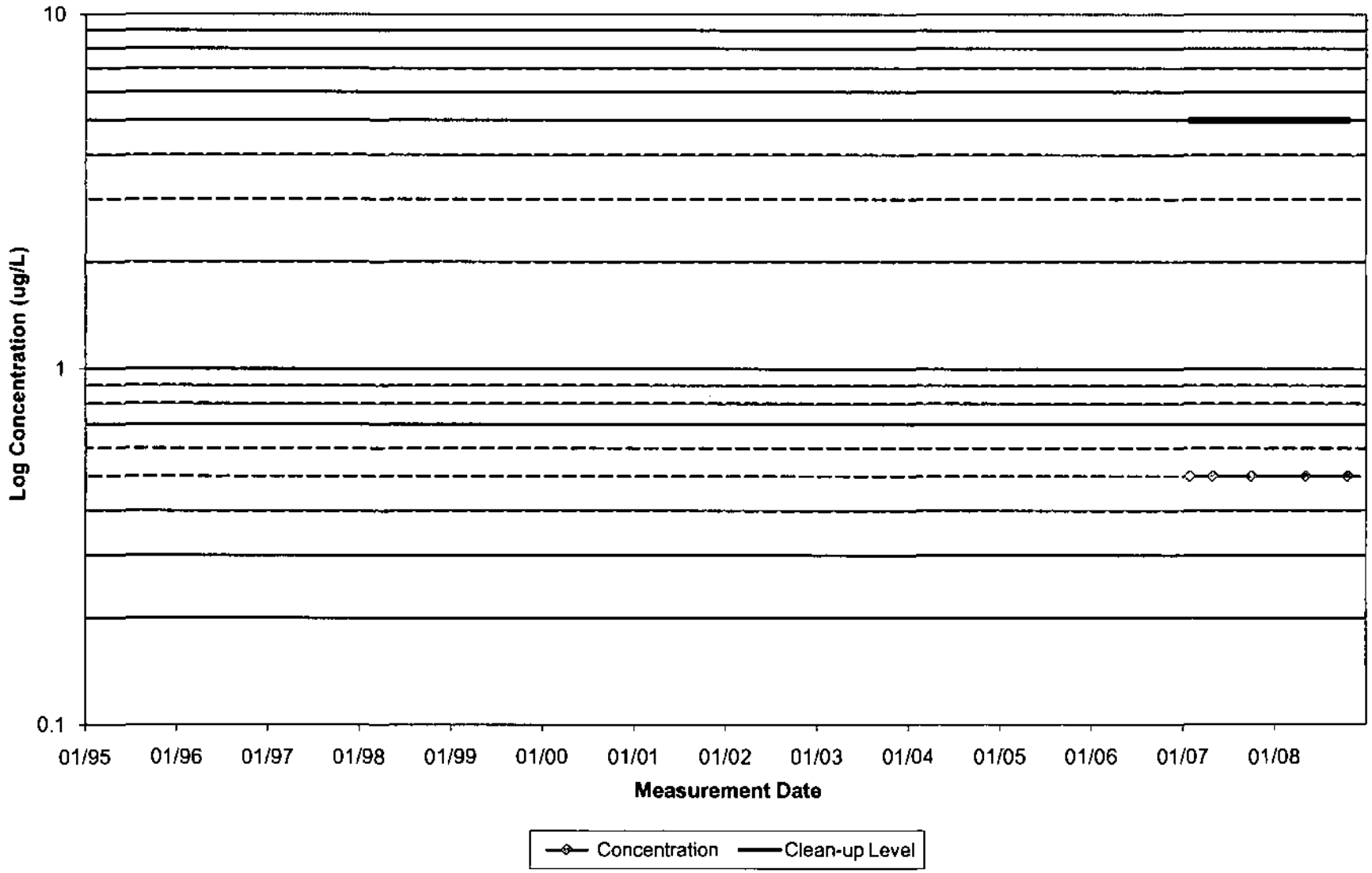
AMW-50 - TCE (ug/L)



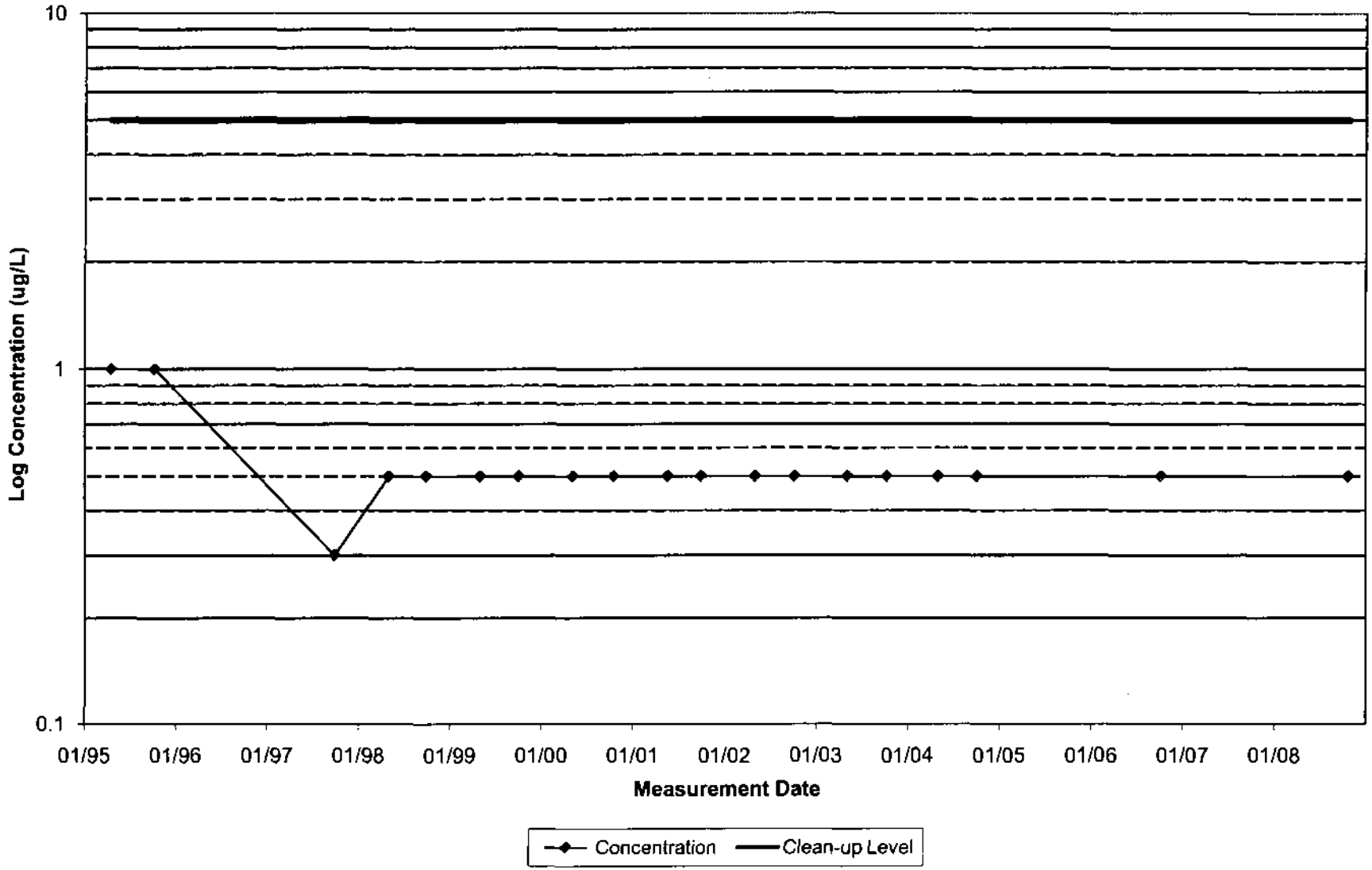
AMW-51 - TCE (ug/L)



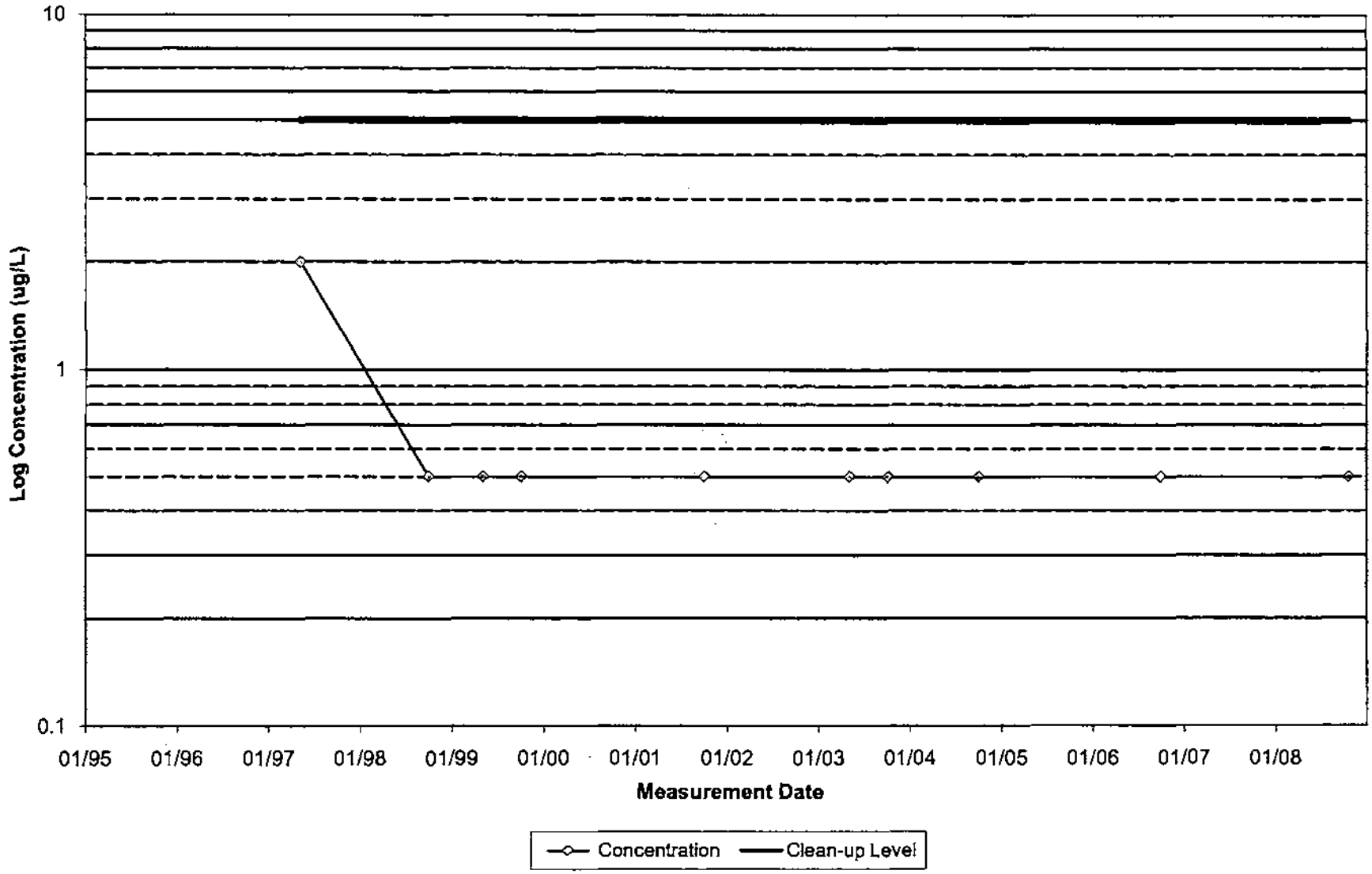
AMW-62 - TCE (ug/L)



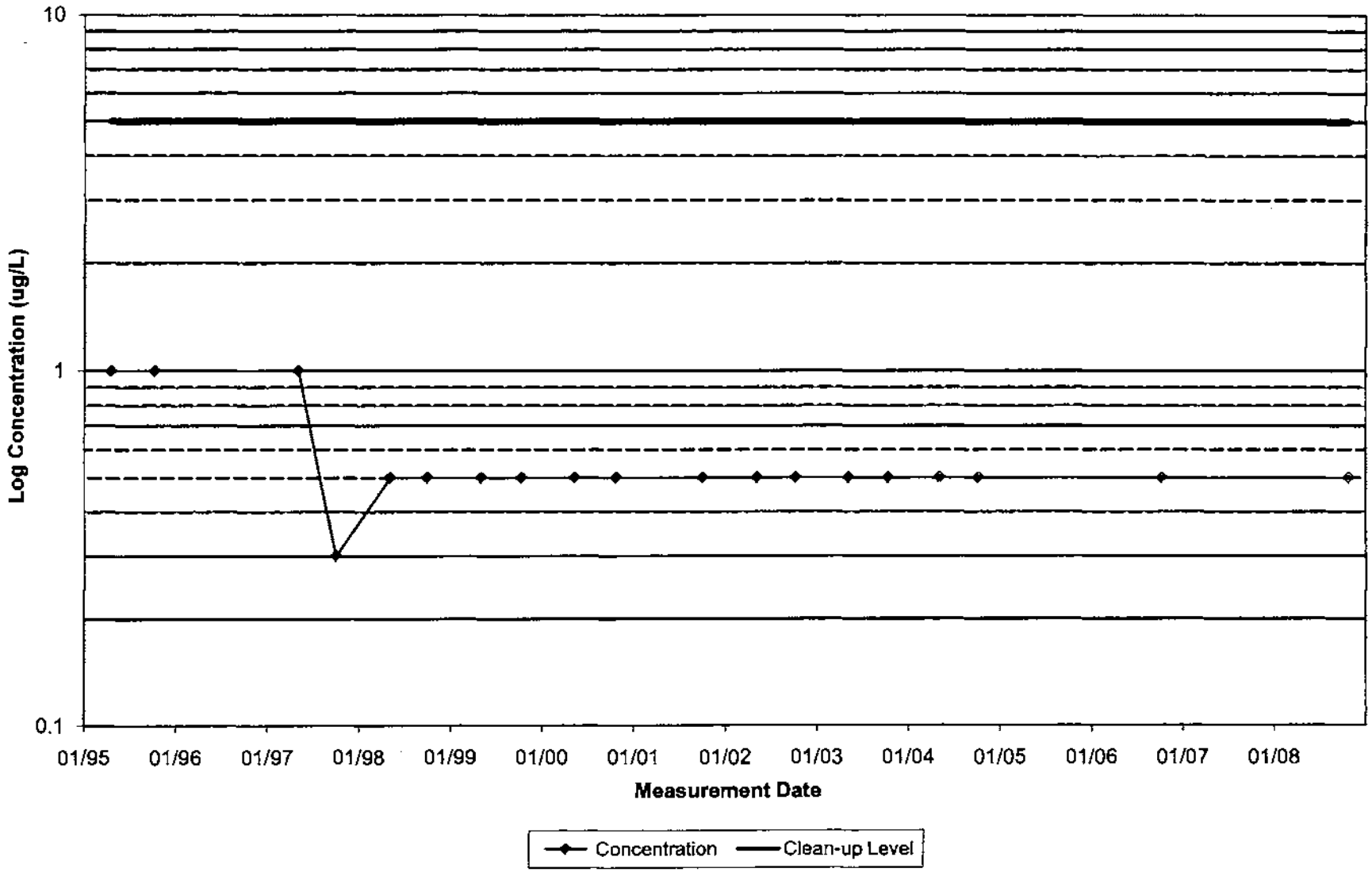
CPU-2 - TCE (ug/L)


10
1
0.1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

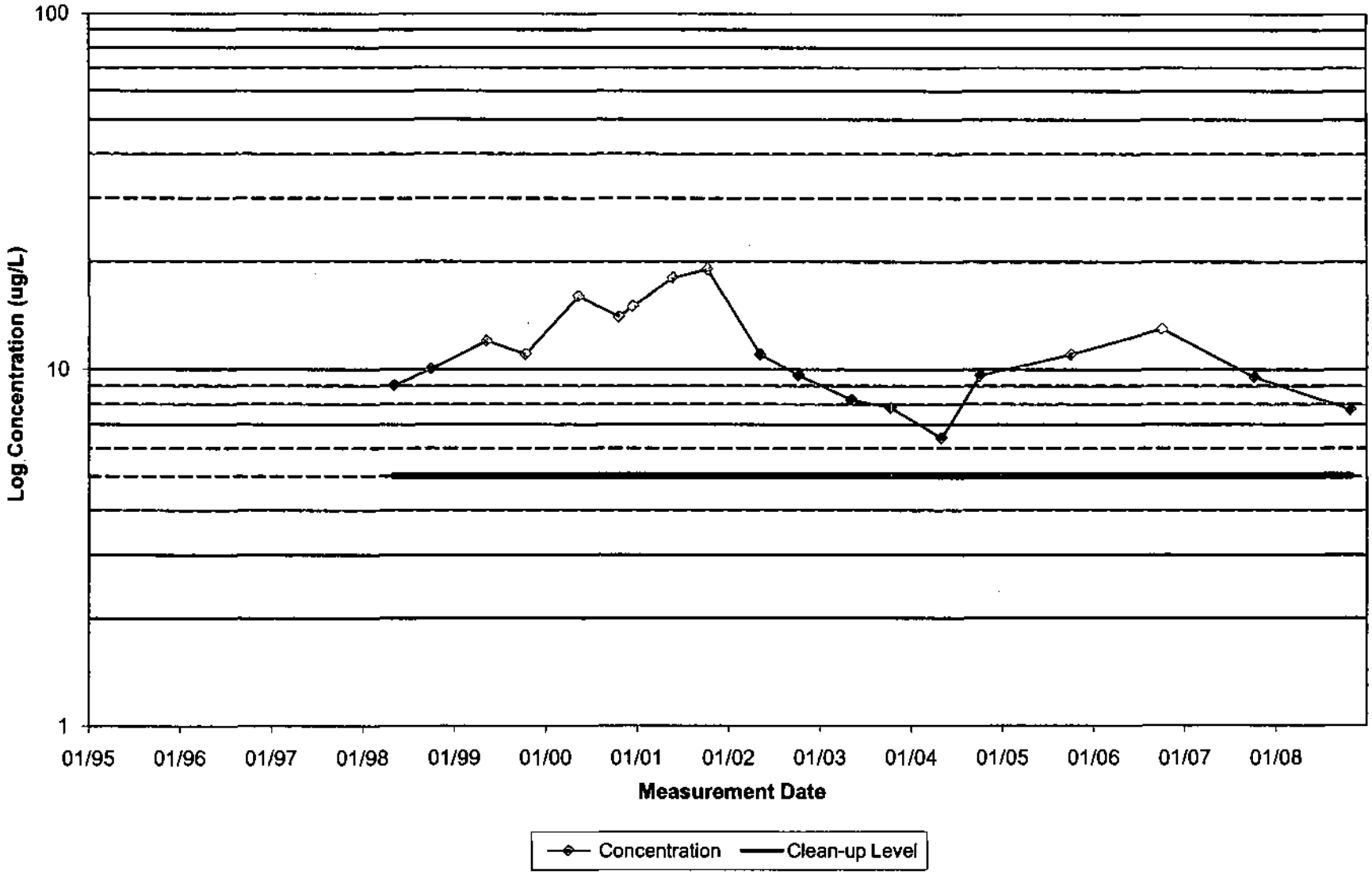
CPU-3D - TCE (ug/L)



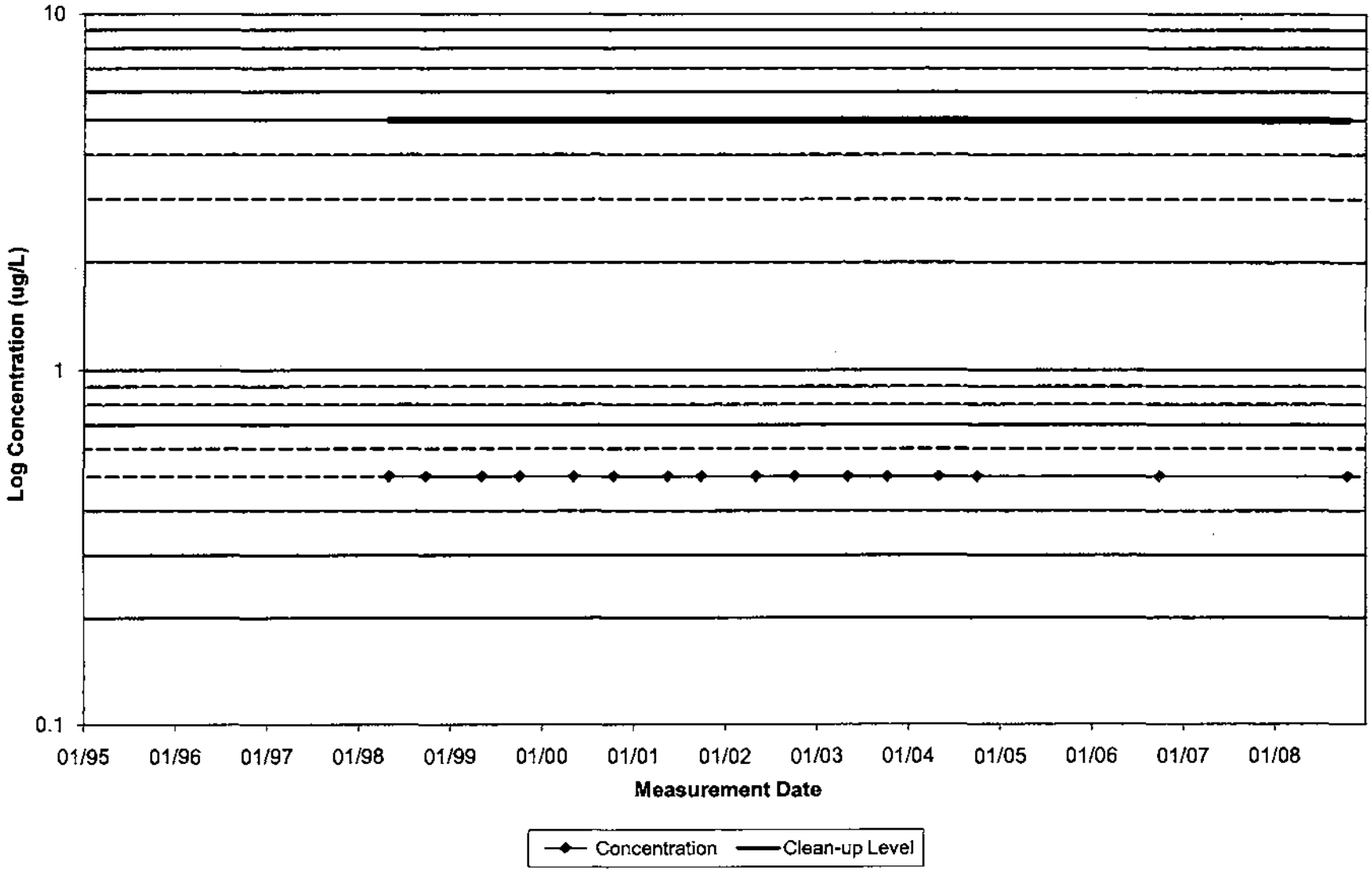
CPU-10 - TCE (ug/L)



MW-33 - TCE (ug/L)


100
10
1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
01/02
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

MW-34 - TCE (ug/L)


10
1
0.1
Log Concentration (ug/L)
01/95
01/96
01/97
01/98
01/99
01/00
01/01
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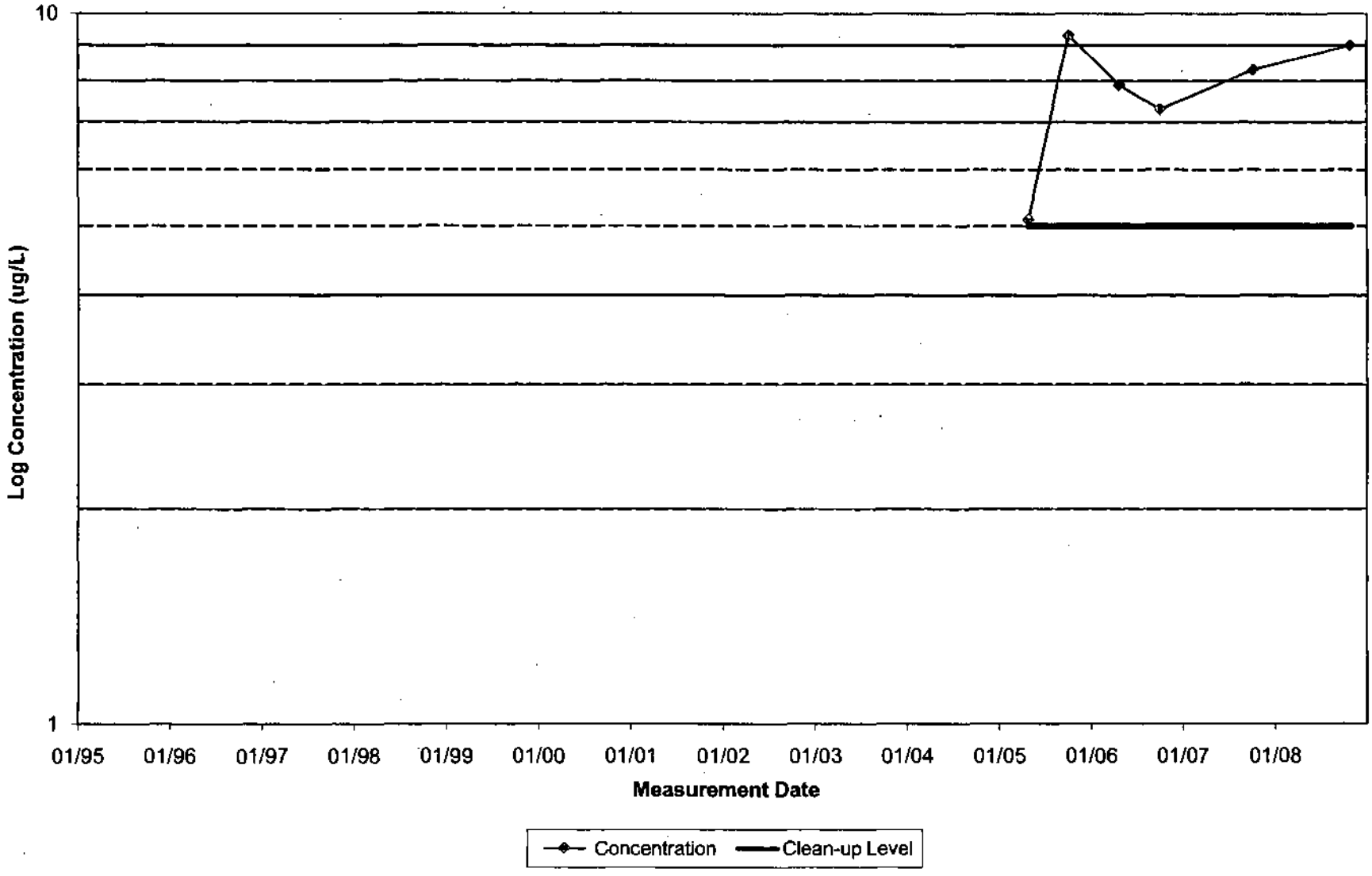
01/03
01/04
01/05
01/06
01/07
01/08
Measurement Date
Concentration
Clean-up Level

BENNETT - TCE (ug/L)