US EPA RECORDS CENTER REGION 5
516657

REMEDIAL ACTION CONTRACT 2 FOR REMEDIAL, ENFORCEMENT OVERSIGHT, AND NON-TIME-CRITICAL REMOVAL ACTIVITIES IN REGION 5

LONG-TERM REMEDIAL ACTION PERFORMANCE REPORT – 2008 THROUGH 2009 OPERATING YEAR DOUGLAS ROAD LANDFILL SUPERFUND SITE MISHAWAKA, INDIANA

Prepared for
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Date Submitted:	October 23, 2009
U.S. EPA Region:	5
Work Assignment No:	002-LRLR-052H
Contract No:	EP-S5-06-02
Prepared by:	SulTRAC
Project Manager:	William Earle
Telephone No:	(312) 443-0550 ext.12
EPA Work Assignment Manager:	Dion Novak
Telephone No:	(312) 886-4737

CONTENTS

Section Page

ABBREVIATIONS AND ACRONYMS iii
1.0 INTRODUCTION 1
2.0 SITE BACKGROUND 2
2.1 SITE DESCRIPTION 2
2.2 PREVIOUS INVESTIGATIONS 2
2.2.1 Remedial Investigation 3
2.2.2 Feasibility Study 3
2.3 RECORD OF DECISION 3
2.4 REMEDIAL DESIGN 4
2.5 LONG-TERM REMEDIAL ACTION 5
3.0 2008 THROUGH 2009 OPERATING YEAR 7
3.1 GROUNDWATER MONITORING ANALYTICAL RESULTS 7
3.1.1 Volatile Organic Compound Analytical Results and Trend Analysis 7
3.1.2 Arsenic Analytical Results 8
3.1.3 Summary of Groundwater Monitoring Results 9
3.2 GROUNDWATER EXTRACTION 9
3.3 TREATMENT WETLAND SYSTEM EFFLUENT RESULTS 10
4.0 SUMMARY AND RECOMMENDATIONS 12
4.1 GROUNDWATER TREND ANALYSIS 12
4.2 RECOMMENDATIONS 12
5.0 REFERENCES 13

FIGURES

1 SITE LOCATION MAP
2 TREATMENT WETLAND SYSTEM
3 MONITORING NETWORK
4 GROUNDWATER CONTOURS – MAY 2009
5 VOCs IN GROUNDWATER – MAY 2009
6 ARSENIC IN GROUNDWATER – MAY 2009

SulTRAC

October 23, 2009

Mr. Dion Novak
Work Assignment Manager (SR-6J)
Remedial Response Unit No. 1
U.S. Environmental Protection Agency Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Subject: **Response to EPA Comments on "Long-Term Remedial Action Performance Report – 2008 through 2009 Operating Year" (LTRA Performance Report)**
Douglas Road Landfill Superfund Site
Mishawaka, Indiana
Remedial Action Contract II (RAC II) EP-S5-06-02
Work Assignment No. 002-LRLR-052H

Dear Mr. Novak:

In accordance with the work plan approved by the U.S. Environmental Protection Agency (EPA) on October 9, 2006, SulTRAC is submitting the Long Term Remedial Action (LTRA) Performance Report for the 2008 through 2009 operating year. The LTRA report is included as enclosure 1 to this letter.

If you have any questions regarding the response to EPA comments or the LTRA Performance Report, please call me at (312) 443-0550, extension 12, or send me an e-mail message at wearle@onesullivan.com.

Sincerely,

William Earle

William Earle
SulTRAC Project Manager

Enclosure

cc: Norvelle Merrill-Crawford, EPA Contracting Officer (letter only)
Ron Riesing, SulTRAC Program Manager (letter only)

TABLES

1 PROPOSED DISCHARGE LIMITS AND EFFLUENT SAMPLE RESULTS

2 MAXIMUM DETECTED CONCENTRATIONS OF GROUNDWATER CHEMICALS OF CONCERN

3 GROUNDWATER TOTAL VOC CONCENTRATIONS

4 GROUNDWATER VOC CONCENTRATIONS EXCEEDING REMEDIATION GOALS

5 GROUNDWATER ARSENIC CONCENTRATIONS

6 GROUNDWATER EXTRACTION WELL SUMMARY

Appendix

A TECHNICAL MEMORANDUM, ANNUAL GROUNDWATER MONITORING, MAY 18 THROUGH 21, 2009

B ANNUAL GROUNDWATER ANALYTICAL RESULTS

C TECHNICAL MEMORANDUM, STATISTICAL TREND ANALYSIS

ABBREVIATIONS AND ACRONYMS

µg/L	Microgram per liter
Douglas Road	Douglas Road Landfill Superfund
EPA	U.S. Environmental Protection Agency
FS	Feasibility study
gpm	Gallons per minute
IDEM	Indiana Department of Environmental Management
LTRA	Long-term remedial action
MAROS	Monitoring and Remediation Optimization System
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and maintenance
OU	Operable Unit
POTW	Publicly owned treatment works
RAC	Remedial Action Contract
RCRA	Resource Conservation and Recovery Act
RI	Remedial investigation
ROD	Record of decision
TCE	Trichloroethene
Uniroyal	Uniroyal Plastics, Inc.
VOC	Volatile organic compound
WA	Work Assignment

1.0 INTRODUCTION

Under the U.S. Environmental Protection Agency (EPA) Remedial Action Contract (RAC) 2 for Region 5, Contract No. EP-S5-06-02, Work Assignment (WA) No. 002-LRLR-052H, SulTRAC has prepared this long-term remedial action (LTRA) performance report to document the ongoing cleanup of contaminated groundwater at the Douglas Road Landfill Superfund (Douglas Road) site in Mishawaka, St. Joseph County, Indiana.

Under this WA, SulTRAC implemented and managed the remedial action for the site from August 1, 2008, through July 31, 2009. This LTRA report discusses the site background (Section 2.0), summarizes the 2008 and 2009 operating year (Section 3.0), provides a summary and recommendations (Section 4.0) and provides a list of references used to prepare the report (Section 5.0).

2.0 SITE BACKGROUND

This section discusses the site description, previous investigations, the record of decision (ROD), the remedial design, and the LTRA at the Douglas Road site.

2.1 SITE DESCRIPTION

The Douglas Road site is located near the northwest corner of Douglas and Grape Roads in Mishawaka, St Joseph County, Indiana (see Figure 1). The 16-acre site is bounded by the Indiana Toll Road (Interstate Highways 80 and 90) to the north, a shopping center and an apartment complex to the east, residential and commercial properties and Douglas Road to the south, and a new residential development to the west. Juday Creek is located approximately 1,800 south of the site. The groundwater treatment and monitoring system includes components located as far west as State Route 23, and as far south as Juday Creek.

The site was excavated as a gravel pit in the early 1950s, and the gravel removed from the site was used for construction of the Indiana Toll Road. Uniroyal Plastics, Inc. (Uniroyal), leased the gravel pit and used it as a repository for plant wastes between 1954 and 1979. From 1954 to 1971, Uniroyal disposed of solvents, fly ash, paper, wood stock, rubber, and plastic scrap in the landfill. From 1971 to 1979, Uniroyal disposed of fly ash only in the landfill. In December 1979, the site was closed to avoid compliance with impending Resource Conservation and Recovery Act (RCRA) regulations pertaining to landfill operations.

An estimated 302,400 gallons of hazardous waste was disposed at the landfill. Liquid wastes include methyl ethyl ketone, acetone, tetrahydrofuran, toluene, hexane, and xylene. Historical aerial photographs of the landfill indicate that several pits containing liquid may have been used for disposal over the years. The largest pit was located in the center of the landfill.

Since 2001, the site has been undergoing an LTRA. The remedial action is scheduled to continue under this WA.

2.2 PREVIOUS INVESTIGATIONS

This section discusses the remedial investigation (RI) and feasibility study (FS) conducted at the Douglas Road site.

2.2.1 Remedial Investigation

An RI was conducted in 1994 and 1995 at the Douglas Road site (CH2M Hill 1995a). The RI determined that on- and off-site soils were contaminated and that a groundwater contaminant plume containing volatile organic compounds (VOC) and metals had migrated about 3,800 feet southwest of the landfill. The highest concentrations were observed near the center of the landfill's western boundary, and 13 compounds were detected at up to 15,000 micrograms per liter (µg/L). Concentrations of VOCs decreased west of the landfill, with only trace levels of VOCs observed at the western monitoring locations.

Residential and monitoring well sampling results indicated that the contamination had not reached Juday Creek. However, many nearby private residential water supplies were affected by the contaminant plume. To remove the exposure pathway, EPA installed a public water system in 1995 to supply water to area homes and businesses.

2.2.2 Feasibility Study

Based on the RI results, an FS was conducted in 1994 and 1995 to develop and evaluate remedial action alternatives for the site (CH2M Hill 1995b and d). To provide an exposure barrier to contaminated surface soils and to minimize infiltration, the FS recommended that contaminated on- and off-site soils be excavated, placed within the boundaries of the Douglas Road site, and covered by a multi-layer cap. To remediate the contaminated aquifer, the FS recommended that the contaminated groundwater be extracted, treated, and discharged using a surface flow treatment wetland system (see Figure 2) (CH2M Hill 1995d).

2.3 RECORD OF DECISION

Based on the RI/FS results, EPA, in conjunction with the Indiana Department of Environmental Management (IDEM), selected remedial action alternatives for both a landfill ROD (signed July 13, 2995) and a groundwater ROD (signed on May 3, 1996) in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (EPA 1995 and EPA 1996). The RODs address the following remedial actions:

- Excavating on- and off-site contaminated soils and placing them within the Douglas Road site landfill
- Constructing a multi-layer cap over the Douglas Road landfill

- Extracting groundwater using extraction wells to contain contaminated groundwater in the downgradient direction of the plume
- Treating groundwater using a surface flow treatment wetland system
- Reinfiltrating at least some of the treated effluent from the wetland system through an infiltration basin
- Discharging the remaining treated effluent to Juday Creek in compliance with substantive requirements of the National Pollutant Discharge Elimination System (NPDES) permit developed for the site by IDEM
- Constructing stormwater management facilities to capture and route on-site runoff to the treatment wetland system infiltration basin
- Monitoring groundwater and the source area to ensure that remediation goals are met and that downgradient water supplies are not adversely affected by groundwater contamination
- Performing biological, water quality, and sediment monitoring of Juday Creek
- Performing long-term operation and maintenance (O&M) of the remedy to ensure protection of public health and the environment

2.4 REMEDIAL DESIGN

The site was divided into two operable units (OU1 and OU2) for the cleanup. OU1 addressed soil contamination and installation of the landfill cap. OU2 involved the construction of an artificial wetland for groundwater treatment. OU2 was further subdivided into two separate phases. OU2 Phase I involved excavation of the wetland area, and OU2 Phase 2 involved actual construction of the artificial wetland and the accompanying groundwater extraction system. The last component of the wetland construction was the installation of a filter strip to provide additional infiltration in the vicinity of Juday Creek to augment off-site groundwater discharge from the site.

The design for the landfill cap was completed in June 1995 (CH2M Hill 1995c) and revised in June 1997 (CH2M Hill 1997b). The landfill cap was completed in 1999. The multi-barrier cap was graded to promote surface drainage from the site and vegetated to control erosion. Stormwater runoff from the site is directed to the wetland system infiltration basin.

The remedial design for groundwater extraction and surface flow treatment system was completed in January 1997 (CH2M Hill 1997a). The design included groundwater extraction through five extraction wells to contain the contaminant plume. The maximum total extraction rate of the five wells was 1,000 gallons per minute (gpm). Extracted groundwater was conveyed to an on-site treatment wetland system.

Initially, the system was operated so that no water was discharged off site. Up to 225 gpm of treated effluent from the wetland system was permitted for discharge to a filter strip along Juday Creek owned by the City of Mishawaka. The remaining treated effluent was either directed to the infiltration basin or lost through evapotranspiration (evaporation and transpiration through plants). The discharge agreement with the City of Mishawaka was finalized on March 26, 2002. If heavy rains cause extreme flooding of the treatment wetland system, an automated system shuts off the extraction wells. A discharge pipeline (minus the final connection) from the wetland to the City of Mishawaka publicly owned treatment works (POTW) sewer system is included in the system design.

Final construction of the remedial action was completed in September 2000. Routine O&M as defined in the site-specific O&M manual (CH2M Hill 2000) was initiated in October 2000. On October 1, 2004, IDEM assumed O&M of the landfill, including operations of the landfill system (CH2M Hill 2006). CH2M Hill assumed O&M of the groundwater extraction and treatment wetland system, including the following activities:

- Three times per week: Measure and record flow rate and total flow from the flow meter for each extraction well; inspect record, and adjust water levels for the wetland cells and infiltration basin
- Three times per week or as necessary: Remove debris buildup from influent and effluent piping, stop logs, and stormwater management facilities; inspect the Juday Creek filter strip to ensure it is free of obstructions
- Monthly: Examine condition of pumps; inspect and characterize wetland vegetation, and replant as needed
- Monthly: Inspect structural integrity of berms and perimeter ditches; perform regular management of berm vegetation; inspect all fences and gates for integrity
- Quarterly: Inspect, control, and remove nuisance plant and animal species

SulTRAC assumed O&M of the groundwater extraction and treatment wetland system from CH2M Hill on August 1, 2007.

2.5 LONG-TERM REMEDIAL ACTION

The objective of the LTRA is to remediate contaminated groundwater through groundwater extraction and treatment using the treatment wetland system. Groundwater samples are collected annually from the monitoring well network, including the extraction wells, and analyzed for VOCs, arsenic, and lead to verify that the cleanup levels and the discharge limits as specified in the ROD are met. The discharge limits were initially identified for eight chemicals of concern, but iron was dropped from the list because

of its ubiquity in the area. The ROD does not address lead, but lead will be monitored because it was detected in samples collected from extraction wells (CH2M Hill 2006). A treatment wetland system effluent sample also is collected monthly and analyzed for VOCs, arsenic, and lead to verify that the cleanup levels and the discharge limits as specified in the ROD are met. Discharge limits were identified for one inorganic chemicals of concern (arsenic), while another inorganic chemical (lead) is also monitored.

Table 1 lists the treatment wetland system effluent analytical results and the discharge limits proposed in the ROD.

3.0 2008 THROUGH 2009 OPERATING YEAR

The 2008 through 2009 operating year covers the period from August 1, 2008, through July 31, 2009. This section discusses the groundwater monitoring analytical results, groundwater extraction, and treatment wetland system effluent results.

3.1 GROUNDWATER MONITORING ANALYTICAL RESULTS

Thirty-three monitoring wells are present at 17 locations at the Douglas Road site and in surrounding areas to monitor changes in the groundwater contaminant concentrations (see Figure 3). Access to offsite monitoring wells MW-06 and MW-08 were problematic in the past. Therefore, the two well nests were abandoned in December 2001 (CH2M Hill 2006). Of the removed wells, analytical results for samples collected from MW-06I, MW-08S, and MW-08I did not show any site-related contamination and did not provide critical information for the groundwater flow analysis. However, samples from MW-06S did show site contamination, and this well was used to define the contaminant plume (Ch2MHill 2006). Replacement well MW-06SR was established at a nearby on-site location in April 2003 so that monitoring of the area could continue.

This section compares analytical results from previous monitoring events to the results for the monitoring event conducted in May 2009 for VOCs and arsenic. Appendix A provides a technical memorandum summarizing the May 2009 annual groundwater monitoring event, and Appendix B provides the annual groundwater analytical results. Table 2 summarizes the maximum detected concentrations of groundwater chemicals of concern since 1994. Figure 4 shows the groundwater contours in May 2009.

3.1.1 Volatile Organic Compound Analytical Results and Trend Analysis

During the May 2009 monitoring event, a total of 12 VOCs were detected in groundwater samples. Only four VOCs (benzene, chlorobenzene, trichloroethene, and vinyl chloride) identified as chemicals of concern at the site were detected in the wells. No VOC chemicals of concern were detected above the remediation goals. Table 3 summarizes the groundwater total VOC concentrations, and Table 4 summarizes the VOCs detected at concentrations exceeding the remediation goals. Figure 5 shows the total VOC concentrations measured at each well in May 2009. To date, only three monitoring wells, MW-03S, MW-05S, and MW-06SR, have had concentrations of VOCs at levels exceeding the remedial goals. No off-site monitoring wells contained detectable concentrations of the VOCs of concern at the site. Since 1994, remedial actions have decreased the total VOC concentrations in groundwater significantly. The highest VOC concentrations historically have been observed at MW-03S, MW-06SR,

and MW-11S. However, the VOCs detected at MW-11S are not chemicals of concern for the Douglas Road site. A limited discussion of VOC trends is included below. This discussion is based on an analysis of the data using the Monitoring and Remediation Optimization System (MAROS) software. Appendix C provides a description of the MAROS software and how it was used to conduct the trend analysis. The MAROS software was used to evaluate data during operation of the treatment system (November 2000 through May 2009) and for more recent data (2005 to 2009).

Two time periods were used for trend analysis: one to show long-term trends (November 2000 through May 2009) and the other to show recent trends (May 2005 through May 2009). The long-term trend covers the entire period of operation for the groundwater treatment system from September 2000 to the present. The recent trend analysis provides insight regarding what has been happening the last few years. At least four sets of data are required for a trend analysis, so the recent trend analysis has the minimum number of data points. The resulting Mann Kendall and linear regression trend analyses were run to produce individual well graphs and well summary reports (see Appendix C).

The statistical trends for the Douglas Road site analytical results were slightly different for each time period analyzed. For the long-term trend analysis (November 2000 through May 2009), when sufficient data were available for a trend analysis, at least one of the methods identified a decreasing trend except for VOCs at MW-06SR. No trend was identified in the total VOC data, although a decreasing trend was identified for each VOC included in the trend analysis. No trend analysis was possible for several well/chemical combinations because of there being too few detections for specific chemicals to perform the analysis. For the recent trend analysis period (May 2005 through May 2009), the contaminant concentrations were either stable or decreasing except for MW-06SR, which had a potentially increasing trend using the linear regression method and no trend using the Mann-Kendall method.

3.1.2 Arsenic Analytical Results

Table 5 summarizes the arsenic concentrations in groundwater since 1994. Figure 6 shows the arsenic concentrations measured in each well screened within the shallow interval in May 2009.

Arsenic concentrations have shown some fluctuation since August 1994 across the Douglas Road site, and arsenic concentrations have exceeded the remediation goal of 5 µg/L at 10 different monitoring well locations. However, during any single sampling event, arsenic concentrations have exceeded the remediation goal at no more than five monitoring wells. Since August 1994, on-site arsenic concentrations have been sporadic but are steadily decreasing downgradient of the site (CH2M Hill

2006). Historically, arsenic was detected above the remediation goal during more than two events at MW-03S, MW-04S, MW-04I, MW-06/MW-06SR, MW-09S, and MW-10S. Over the last 4 years, MW-06S has consistently yielded samples containing the highest arsenic concentrations. However, these concentrations have been consistent with historical concentrations.

A trend analysis also was conducted for arsenic concentrations, and a long-term decreasing trend was identified at both MW-03S and MW-06SR. The recent (2005 through 2009) trend shows decreasing arsenic concentrations at MW-03S and stable concentrations at MW-06S. Appendix C summarizes the trend analysis.

3.1.3 Summary of Groundwater Monitoring Results

The long-term trend analysis indicates decreasing VOC and arsenic trends at all wells with sufficient data. Insufficient data generally resulted from wells with non-detect results. Recent trend analyses indicate either stable or decreasing trends. What @ MW06R

3.2 GROUNDWATER EXTRACTION

A groundwater extraction system consisting of five extraction wells was installed to contain the contaminant plume. Table 6 provides an annual groundwater extraction summary since operation of the groundwater treatment system began. Figure 3 shows the monitoring network, including the extraction well locations. Extraction wells EXT-1A and EXT-2 are located east of the treatment wetlands, near what was the center of the groundwater plume. Extraction wells EXT-3 and EXT-4 are downgradient of the infiltration basin. Extraction well EXT-5 is located in the off-site residential area to the southwest in the most downgradient part of the contaminant plume.

After gathering 3 years of wetland effluent data that indicated that the effluent water quality was at background levels, the previous operator proposed that system operations be modified. The original system was designed and operated to extract and contain groundwater downgradient of the infiltration basin. Based on the quality of effluent discharged into the infiltration basin, water extraction appeared unnecessary. Without the requirement to contain water infiltrating the aquifer, more attention could be given to extracting water from the contaminant plume, allowing more expedient remediation. Furthermore, because of the apparently successful remediation of the off-site plume, extraction of the off-site groundwater could be discontinued. EPA concurred with these operating modifications, and during the 2003 through 2004 operating year, extraction focused on EXT-1A and EXT-2, which are positioned to remediate the on-site contaminant plume (CH2M Hill 2006). After the 2006 sampling event, extraction

detected in geoprobe

of groundwater from the off-site well (EXT-5) resumed. This change was made because VOCs were detected in off-site monitoring wells and during subsequent Geoprobe groundwater sampling. The operation of EXT-5 continued through the 2008 and 2009 operating year.

Groundwater extraction well operation depends on the rate of inputs from precipitation and the rate of losses through discharge, evapotranspiration, and infiltration. Discharge of treated effluent from the wetland to the filter strip near Juday Creek, formerly set at a rate not to exceed 225 gpm, was eliminated during the 2004 through 2005 operating year because the infiltration basin was able to handle all of the treated water. Precipitation, evapotranspiration, and infiltration rates vary seasonally with day length, temperature, and regional groundwater levels.

During the August 2008 through July 2009 operating period, extraction wells EXT-2 and EXT-5 were used at the Douglas Road site and all extracted water was allowed to either evaporate or infiltrate into the ground. Neither the Juday Creek discharge nor the unfinished discharge to the City of Mishawaka sewer system was used, nor is it likely that these discharges will be used. No water was discharged from the site to either Juday Creek or the City of Mishawaka sewer system.

plans for future geoprobing?

During the 2008 through 2009 operating year, a total of approximately 89.3 million gallons of groundwater was extracted, of which approximately 60 percent was from EXT-5, the off-site extraction well. Attention has been focused on EXT-5 to capture off-site groundwater contamination discovered during a direct-push technology investigation in 2006 and still present in 2008 (SulTRAC 2008).

During September 2009, the system was shut down for several days due to record-setting rain events.

3.3 TREATMENT WETLAND SYSTEM EFFLUENT RESULTS

Figure 2 shows the treatment wetland system. Table 1 summarizes the treatment wetland system effluent analytical results and the proposed discharge limits. The surface flow treatment wetland system has four cells. Cells 1 and 2 have synthetic liners and work in parallel, each treating half of the combined flow from the five groundwater extraction wells. Cell 3 also has a synthetic liner and is designed to polish the combined effluent from Cells 1 and 2. Cell 4 is an unlined infiltration basin that allows reinfiltration of 100 percent of the treated groundwater under present operating conditions. The discharge into the City of Mishawaka storm sewer has never been fully connected and has never been used. Effluent samples were collected monthly from Cell 3 to track performance of the treatment wetland system.

During the 2008 through 2009 operating year, no contaminants of concern were detected above the discharge criteria.

4.0 SUMMARY AND RECOMMENDATIONS

This section discusses a groundwater trend analysis and presents recommendations for ongoing operations at the site.

4.1 GROUNDWATER TREND ANALYSIS

As discussed above in Section 3.1, the operation of the groundwater extraction and remediation system has resulted in decreasing concentrations of chemicals of concern at many monitoring wells. The long-term trend analysis of groundwater sample results indicates decreasing concentrations. However, some stabilization out of the trend is occurring. The near-term trend should be re-evaluated after the next round of groundwater sampling. Why

4.2 RECOMMENDATIONS

Based on the sampling results, the groundwater extraction and treatment system is successfully reducing contaminant concentrations. SulTRAC recommends that the groundwater system continue operation with EXT-2 and EXT-5. The purpose of EXT-2 is to contain groundwater from near the site. The purpose of continued operation of EXT-5 is to address an area of TCE exceeding the remediation goal.

Continued annual monitoring of groundwater in the monitoring wells is recommended.

when next geoprobe sampling? yearly? every 2 yrs?

5.0 REFERENCES

CH2M Hill. 1995a. "Remedial Investigation Report – Douglas Road Landfill, Mishawaka, Indiana." February.

CH2M Hill. 1995b. "Focused Feasibility Study Report – Douglas Road Landfill, Mishawaka, Indiana." February.

CH2M Hill. 1995c. "Site Remedial Action Final Design Submittal – Douglas Road Landfill, Mishawaka, Indiana." June.

CH2M Hill. 1995d. "Feasibility Report – Douglas Road Landfill, Mishawaka, Indiana." September.

CH2M Hill. 1997a. "Site Remedial Action Final Design Submittal- Douglas Road Landfill, Mishawaka, Indiana." June.

CH2M Hill. 1997b. "Revised Site Remedial Action Final Design Submittal – Douglas Road Landfill – Mishawaka, Indiana."

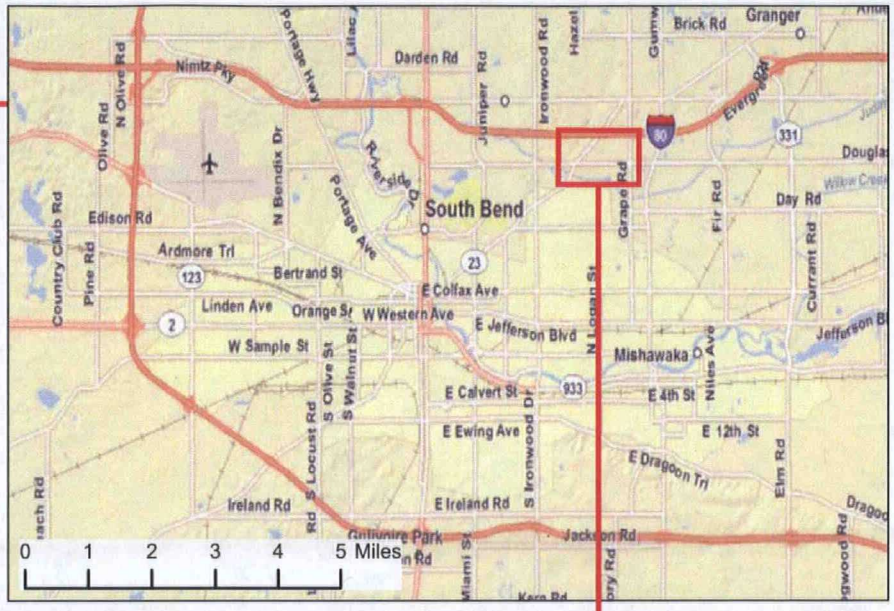
CH2M Hill. 2000. "O&M Manual – Douglas Road Landfill, St. Joseph County, Indiana." October.

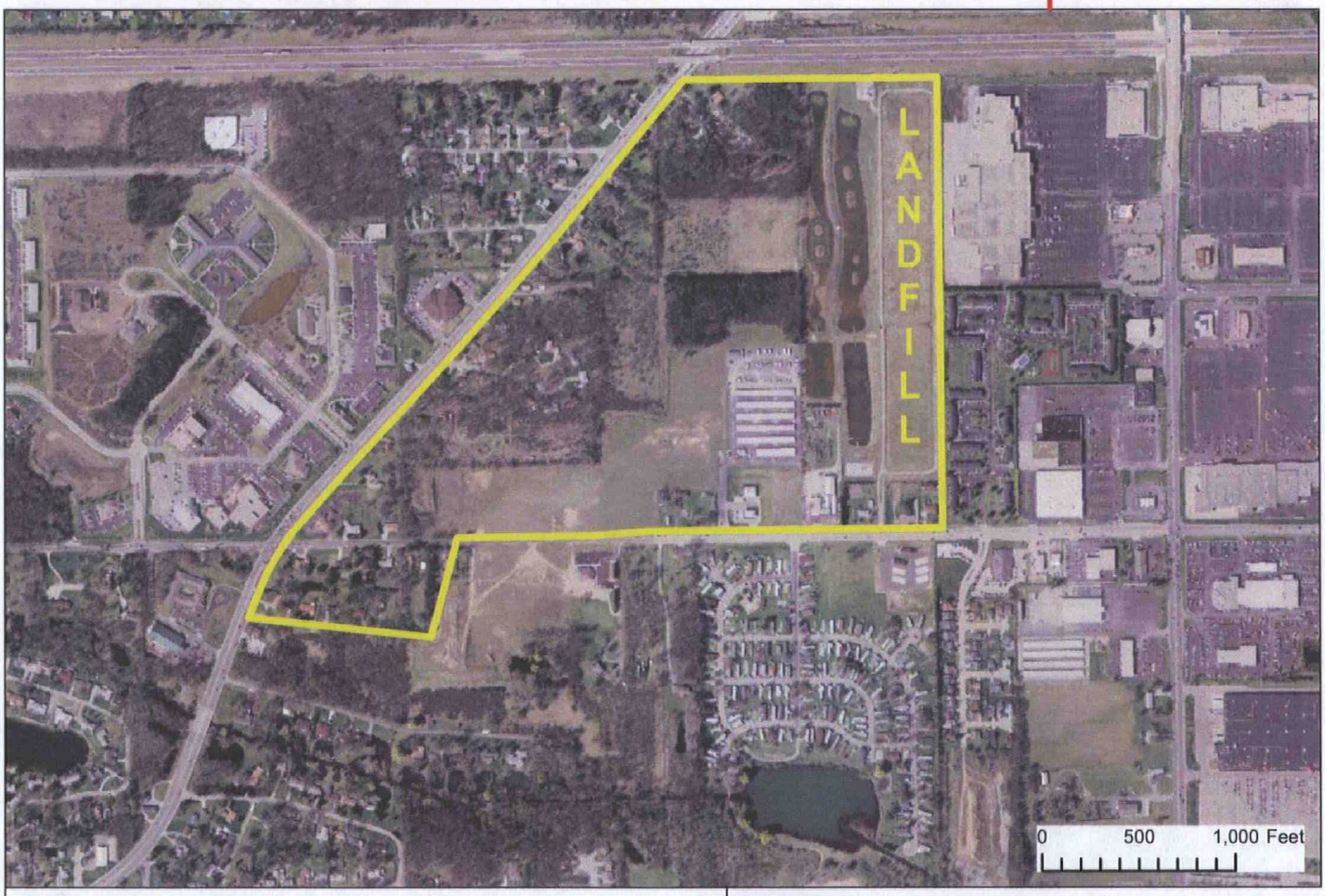
CH2M Hill. 2006. "Long Term Remedial Action, 2006 Performance Report Submittal – Douglas Road Landfill –Mishawaka, Indiana." June.

U.S. Environmental Protection Agency (EPA). 1995. "EPA Superfund Record of Decision: Douglass Road/Uniroyal, Inc. Landfill, EPA ID: IND980607881, OU 01, Mishawaka, IN". July 13.

EPA. 1996. "EPA Superfund Record of Decision: Douglass Road/Uniroyal, Inc. Landfill, EPA ID: IND980607881, OU 02, Mishawaka, IN". May 3.

SulTRAC. 2008. Memorandum, "Douglas Road Landfill Site – May 2008 Geoprobe Investigation Direct Push Groundwater Sampling, September.





Approximate site boundary

N

Imagery Sources:
ESRI Resource Center
ISDP (Indiana Spatial Data Portal)

DOUGLAS ROAD LANDFILL
ST JOSEPH COUNTY, MISHAWAKA, INDIANA

LONGTERM REMEDIATION ACTION REPORT

FIGURE 1

SITE LOCATION MAP

EPA REGION 5 RAC 2 | REVISION 0 | OCTOBER 2009

ST SulTRAC

Pages 20-24 are non-responsive

TABLES

TABLE 1
PROPOSED DISCHARGE LIMITS AND EFFLUENT SAMPLE RESULTS

Contaminant	Proposed Discharge Limit	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Jul-09
1,1-DCA	90.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-DCA	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	5.0	2.6	1.2	0.56 J	ND	0.72 J	ND	0.52 J	1.3	1	1.2	1.4 J	2.1
Benzene	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	Not listed	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	Not listed	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	Not listed	ND	ND	0.092 J	ND	ND	ND	0.33 J	ND	0.3 J	0.56 J	ND	ND
TCE	5.0	ND	ND	ND	0.36J	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

All results are in micrograms per liter

DCA	Dichlororethane
J	Estimated value
ND	Not detected
TCE	Trichloroethene

TABLE 2
MAXIMUM DETECTED CONCENTRATION OF GROUNDWATER CHEMICALS OF CONCERN

Contaminant	RG[a]	May-94	Aug-94	Nov-99	Nov-00	May-01	Dec-01	May-02	Dec-02	May-03	May-04	May-05	Apr-06	May-07	Apr-08	May-09
Vinyl chloride	1 0	ND	ND	ND	ND	2.8	ND	ND	1.3	ND	0 2J	ND	ND	0.75	ND	0 43
Chloroethane	2,085,700	91.0	41 0J	36.0	97.0	44 0	65 0	1.8	ND	39.0	14.9	7.5	21.0	2.6	4.9	ND
1,1-DCA	3,530	4 0J	8.0	8 3	1 2	1.8	1.3	ND	ND	ND	0.5J	ND	ND	1 5	ND	ND
1.2-DCA	1.0	16.0J	10.0	ND	ND	1.8	2.4	ND	ND	10.0	ND	3.5	15.0	0 95	2.8	ND
Benzene	2 8	55.0	25.0J	9.6	31.0	19 0	34.0	3.7	ND	4.4	4.7	ND	3.1	ND	4.6	ND
TCE	5.0	1.0J	1.0	5.3	1.7	ND	ND	ND	ND	ND	0.2J	ND	ND	1.6	4 4	0.74
Chlorobenzene	Not listed	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2	1.9
Arsenic	5.0	9.4J	24.8	35 0	25.0	28.0	73.0	31.0	7.9	29.0	10.0	17.0	20.0	27.5	24.6	13.4
Lead	Not listed	ND	ND	ND	12.0	ND	ND	ND	ND	ND	0.4	2.4	26 0	3.9	6.6J	2 7

Notes:

All results are in micrograms per liter.

Highlighted concentrations exceed RGs

DCA	Dichloroethane
J	Estimated value
ND	Not detected
RG	Remediation goal
TCE	Trichloroethene
a	From May 1996 Record of Decision

TABLE 3
GROUNDWATER TOTAL VOC CONCENTRATIONS

Sampling Location	May-94[a]	Aug-94	Nov-99	Nov-00	May-01	Dec-01	May-02	Dec-02	May-03	May-04	May-05	Apr-06	May-07	Apr-08	May-09
MW-03S	16.595	6,035	61.6	1,328	228.6	25.1	9.2	ND	4.2	ND	ND	0.74J	1.02	3.05	0.3
MW-04S	ND	14	20.2	Dry	Dry	ND	ND	ND	63.1	28.0	18.1	46.7	ND	1.1	Dry
MW-05S	ND	ND	ND	ND	ND	ND	ND	ND	1.1	ND	ND	ND	0.27	2.4	0.36
MW-06S	18.0	36.0	10.4	NA	NA	105.5	WR	WR	63.1	28.0	18.1	46.7	9.85	19.95	1.9
MW-07S	ND	ND	ND	ND	ND	ND	ND	4.7	ND	ND	ND	ND	ND	1.1	ND
MW-09S	0.0	5.0	9.9	9.0	7.6	ND	9.0	ND	Dry	0.4	ND	ND	NS	NS	Dry
MW-10S	1.0	6.0	ND	1.6	1.6	ND	1.0	ND	ND	ND	ND	ND	ND	ND	ND
MW-11S	NI	NI	110.0	110.0	84.0	60.0	40.0	38.0	36.0	24.9	19.0	22.0	0.7J	ND	11
MW-13S	NI	NI	14.4	5.6	51.0	4.6	8.0	10.6	3.4	8.4	3.6	3.2	3.7	2.36	ND
MW-14I	NI	NI	4.9	1.2	ND	ND	ND	ND	1.5	ND	ND	ND	ND	1.2	ND
MW-14S	NI	NI	4.8	ND	ND	ND	1.0	ND	DRY	0.1	ND	ND	ND	1.0	ND
MW-15S	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	0.46J	1.69	ND
MW-15I	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	0.53J	0.67	ND
MW-17S	NI	NI	ND	ND	ND	6.2	5.0	ND	ND	ND	ND	ND	0.5J	ND	ND
MW-17I	NI	NI	2.1	1.2	6.9	9.0	9.0	ND	1.5	0.5	ND	ND	ND	ND	ND

Notes

All results are in micrograms per liter

J	Estimated value
NA	No access
ND	Not detected
NI	Not installed
NS	Not sampled
WR	Well removed
VOC	Volatile organic compound
a	Data prior to May 2007 are from CH2M Hill 2006

TABLE 4
GROUNDWATER VOC CONCENTRATIONS EXCEEDING REMEDIATION GOALS

Sampling Location	Contaminant	RG[a]	May-94	Aug-94	Nov-99	Nov-00	May-01	Dec-01	May-02	Nov-02	May-03	May-04	May-05	Apr-06	May-07	Apr-08	May-09
MW-03S	1,2-DCA	1	16J	3J	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Benzene	2.8	55.0	25J	9.6	31.0	19.0	10.0	3.7	ND	ND	ND	ND	ND	ND	0 85	ND
MW-06S	1,2-DCA	1	8.0	ND	ND	NS	NS	2.4	NS	NS	10.0	ND	3.5	15.0	ND	2.8	ND
	Benzene	2.8	2.0	2 7	2.7	NS	NS	34.0	NS	ND	ND	4.7	ND	3.1	0.95	1 5	ND
MW-13S	Vinyl chloride	1	NI	ND	ND	ND	ND	ND	ND	1.3	ND	0.2J	ND	ND	ND	ND	ND

Notes
All results are in micrograms per liter
Highlighted concentrations exceed RGs.

DCA	Dichloroethane
J	Estimated value
ND	Not detected
NI	Not installed
NS	Not sampled
RG	Remediation goal
VOC	Volatile organic compound
a	From May 1996 Record of Decision

TABLE 5
GROUNDWATER ARSENIC CONCENTRATIONS

Sampling Location	RG[a]	Aug-94	Nov-99	Nov-00	May-01	Dec-01	May-02	Dec-02	May-03	May-04	May-05	Apr-06	May-07	Apr-08	May-09
MW-02S	5	IU	IU	IU	IU	IU	IU	IU	IU	IU	IU	8.8	3.1	ND	ND
MW-03S	5	24.8	35.0	25.0	28.0	27.0	31.0	ND	15.0	ND	14.0	11.0	12.4	10.0	8.7
MW-03I	5	NI	NI	NI	ND	ND	ND	ND	ND	10.0	ND	ND	3.5	ND	ND
MW-04S	5	10.8	13.0	Dry	Dry	8.1	8.3	ND	4.3	ND	7.6	7.3	3.9	1.0	Dry
MW-04I	5	1.0	ND	7.2	8.5	ND	ND	7.9	ND	5.4J	ND	ND	NS	NS	ND
MW-06S	5	15.3	26.0	NA	NA	73.0	WR	WR	29.0	22.0	17.0	20.0	27.5	24.6	13.4
MW-09S	5	9.6	14.0	14.0	14.0	ND	15.0	ND	ND	3.7J	ND	ND	NS	NS	Dry
MW-10S	5	8.4	ND	6.7	5.5	1.6	5.0	ND	ND	Dry	3.2	3.7	6.9	2.0	ND
MW-13I	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	2.3	5.2	0.86J	ND
MW-15S	5	NI	ND	5.4	3.0	3.0	2.0	ND	ND	1.6	ND	ND	4.8	0.63J	ND

Notes:

All results are in micrograms per liter

Highlighted concentrations exceed RGs

IU	Information unavailable
J	Estimated value
NA	No access
ND	Not detected
NI	Not installed
NS	Not sampled
RG	Remediation goal
WR	Well removed
a	From May 1996 Record of Decision

TABLE 6
GROUNDWATER EXTRACTION WELLS SUMMARY

Location	2000-2001 Total	2001-2002 Total	2002-2003 Total	2003-2004 Total	2004-2005 Total	2005-2006 Total[a,b]	2006-2007 Total[c]	2007-2008 Total[d]	2008-2009 Total[e]	Cumulative Extraction
EXT-1	0	9.0	26.5	59.2	52.4	43.5	19.6	2.2	0	212.4
EXT-2	0	14.0	41.3	68.4	78.4	32.0	0	3.4	34.4	271.9
EXT-3	38.0		10	2.0	22.6	2.9	0	0	0	75.5
EXT-4	0	3.0	8.0	0	0	0	0	0	0	11.0
EXT-5	87.0	52.0	69.5	1.9	0	0	94.1	62.2	54.9	421.6
Total Extraction	**125.0**	**89.0**	**155.3**	**131.5**	**153.4**	**78.4**	**113.7**	**67.8**	**89.3**	**914.1**

Notes:

Units are millions of gallons

All periods are from October of the first year through September of the next year

a The 2005-2006 period covers October 2005 through April 2006

b SulTRAC has no data for May-July 2006

c The 2006-2007 period covers August 2006 through July 2007

d The 2007-2008 period covers August 2007 through July 2008

e The 2008-2009 period covers August 2008 through July 2009

APPENDIX A

TECHNICAL MEMORANDUM
ANNUAL GROUNDWATER MONITORING
MAY 18 THROUGH 21, 2009
DOUGLAS ROAD LANDFILL SUPERFUND SITE
MISHAWAKA, ST JOSEPH COUNTY, INDIANA

(Eight Pages)

1.0 INTRODUCTION

Under the U.S. Environmental Protection Agency (EPA) Remedial Action Contract (RAC) 2 for Region 5, Contract No. EP-S5-06-02, Work Assignment No. 002-LRLR-052H, SulTRAC has prepared this technical memorandum report for the annual groundwater monitoring event at the Douglas Road Landfill Superfund (Douglas Road) site in Mishawaka, St. Joseph County, Indiana.

This technical memorandum summarizes groundwater monitoring and SulTRAC's annual groundwater monitoring activities conducted in May 2009, including issues and developments that arose during the groundwater sampling event and future site activities to be performed at the Douglas Road site.

Appendix A-A of this technical memorandum contains a photographic log of SulTRAC's field activities, Appendix A-B contains a copy of SulTRAC's field notes, and Appendix A-C contains copies of SulTRAC's monitoring well sampling sheets. The attachment to the report contains one figure showing the site and the monitoring well locations.

2.0 GROUNDWATER MONITORING

A total of 36 monitoring wells were initially installed at 17 locations at the Douglas Road site and in surrounding areas to monitor groundwater contaminant concentrations (see figure in the attachment). Property access at well locations MW-06 and MW-08 have been problematic in the past, and the two well nests were abandoned in December 2001. A replacement well for MW-06S (MW-06SR) was installed on site in April 2003 because of historical contamination and the need to gather data there. A total of 33 monitoring wells comprise the current monitoring network

The following sections discuss the hydrostratigraphic units and the groundwater flow properties at the Douglas Road site.

2.1 HYDROSTRATIGRAPHIC UNITS

The monitoring wells at the Douglas Road site are divided into three hydrostratigraphic units.

- The shallow unit consists of brown sand, approximately 20 to 50 feet thick, extending from the ground surface at an elevation of approximately 750 feet above mean sea level (msl) to an elevation of 700 feet above msl, at its lowest point.
- The intermediate unit consists of brown sand and gravel, roughly 15 to 45 feet thick, extending from 730 feet to 685 feet above msl. There is no unit of fine material that could be considered "confining" between the shallow and intermediate hydrostratigraphic zones.
- The deep unit consists of gray sand and gravel, approximately 10 feet thick, extending from roughly 660 to 650 feet above msl. The deep unit is separated from the shallow and intermediate units by a thin silty clay layer 5 to 15 feet thick.

Of the monitoring wells used at present, thirty-one were installed in the shallow and intermediate hydrostratigaphic units (identified with the letters "S" or "I" at the end of the well designation), and two monitoring wells were installed in the deep unit (identified with the letter "D"). Five extraction wells were installed in both the upper and intermediate hydrostratigraphic units, four on-site (EXT-1A, EXT-2, EXT-3, and EXT-4) and one off-site (EXT-5).

2.2 GROUNDWATER FLOW PROPERTIES

Groundwater levels recorded during sampling indicate a horizontal groundwater gradient to the west-southwest at approximately 0.0057 feet per feet (ft/ft) in the upper hydrostratigraphic unit and 0.0017 ft/ft in the intermediate unit. Groundwater gradients for the deep hydrostratigraphic

unit could not be calculated because of few measurement points.

Vertical gradients were calculated at well groupings where groundwater elevations were available for both shallow and intermediate well pairs or intermediate and deep well pairs. MW-01, MW-02, and MW-17 indicated a slight downward gradient between the shallow and intermediate well pairs (between 0.0044 to 0.0361 ft/ft). MW-03, MW-05, MW-07, MW-10, MW-12, MW-13, MW-14, MW-15, and MW-16 indicated a slight upward gradient between the shallow and intermediate wells (between -0.0020 and -0.0369 ft/ft). MW-01 indicated a downward gradient of 0.0270 ft/ft between the intermediate and deep well pair.

Previous hydraulic tests at the site resulted in an average hydraulic conductivity of 215 feet per day (ft/day). Using this result, the horizontal groundwater gradients calculated for May 2009 and an approximate average porosivity of 30 percent for sand and gravel, groundwater flow velocities were calculated using the following equation:

$$v = Ki/n_e$$

where

v	Groundwater flow velocity (ft/day)
K	Hydraulic conductivity (ft/day)
i	Horizontal hydraulic gradient (ft/ft)
n_e	Effective porosivity

Groundwater flow velocities were calculated to be 4.085 ft/day in the shallow hydrostratigraphic zone and 1.218 ft/day in the intermediate zone.

3.0 ANNUAL GROUNDWATER SAMPLING ACTIVITIES

SulTRAC conducted annual groundwater sampling activities on May 18 through 21, 2009. The following sections summarize field procedures, groundwater sampling, investigation-derived waste (IDW), issues and developments that arose during the annual groundwater sampling activities, and future activities to be performed at the Douglas Road site.

3.1 FIELD PROCEDURES

Groundwater samples were collected from 31 monitoring wells and 5 extraction wells located within and surrounding the Douglas Road site (see figure in the attachment).

Prior to sampling, the depth-to-water and the total depth of each well, were measured using a water level indicator (Photograph No. 1 in Appendix A-A). Each well was purged using a QED Micropurge (MP10) controller combined with a dedicated bladder pump system. At each well location, SulTRAC connected (1) the compressor cable to the QED MP10 controller, (2) the QED MP10 controller cable to the pump air supply fitting on the well cap for the dedicated bladder pump installed in the wells, (3) a flexible tubing to the dedicated bladder pump and the Horiba multiparameter meter, and (4) the Horiba multiparameter meter to the discharge tubing. Table 1 summarizes the water level measurements recorded at the Douglas Road site.

During well purging, water quality parameters were measured using a Horiba multi parameter meter. The water quality parameters measured included temperature, specific conductivity, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity. The well water was considered stabilized when three successive field parameter measurements were within the following ranges: ±0.5 °C (Celsius) for temperature, ±3 percent for specific conductivity, ±0.1 standard unit for pH, ±10 percent for DO, ±10 millivolts for ORP, and ±10 percent for turbidity. Depths to water measurements were taken regularly to confirm that the water level did not lower drastically during purging, thus indicating water recharge.

All field parameters were recorded at 3- to 5-minute intervals at each monitoring well (Photograph No. 3 in Appendix A-A) and documented in the monitoring well sampling sheets (Appendix A-C). After purging, SulTRAC removed the Horiba multi parameter meter, and samples were collected directly from the flexible discharge tubing connected to the dedicated bladder pump.

3.2 GROUNDWATER SAMPLING

Groundwater samples were collected from the monitoring wells using low-flow sampling procedure. Low-flow, also known as micropurging, provides a method of minimizing colloid mobilization by removing water from the well at the screened interval at a rate that preserves or minimally disrupts steady-state flow conditions in the aquifer.

Samples for volatile organic compound (VOC) analysis were collected at each well location first, followed by the collection of samples for filtered metals (arsenic and lead) analyses. VOC samples were directly poured into three 40-milliliter vials preserved with hydrochloric acid (HCl). Filtered metals samples were collected through an in-line field filter attached to the discharge tubing and then directly poured into a 1-liter polyethylene bottle preserved with nitric acid (HNO_3). Four duplicate samples and two matrix spike/matrix spike duplicate (MS/MSD) samples were collected throughout the groundwater sampling activities. All samples were immediately placed in an iced cooler and maintained at a temperature of 4 ± 2 °C without freezing, until they were delivered to the laboratory.

Before extraction well sampling, the sampling lines were purged. Field parameter measurements were not recorded for the extraction wells. The extraction well samples were collected from the well head faucet and were not field-filtered. At each location, groundwater samples were collected for VOC analysis first, followed by sample collection for metals (arsenic and lead) analyses.

After packaging, all groundwater samples were shipped to the assigned Contract Laboratory Program (CLP) laboratory. Groundwater samples were analyzed for VOCs, dissolved arsenic, and dissolved lead.

Table 2 summarizes the groundwater sampling activities at the Douglas Road site.

3.3 INVESTIGATION-DERIVED WASTE

IDW is the waste generated from sampling activities. During groundwater sampling activities, SulTRAC generated purged and decontamination water IDW, which was subsequently contained in 5-gallon buckets. The contents of the buckets were emptied daily into the on-site constructed wetland for treatment. Disposable personal protective equipment (PPE) was placed in a municipal waste container.

3.4 ISSUES AND DEVELOPMENTS

During the week of May 18 to 21, 2009, groundwater samples were collected from 31 of the 33 proposed

monitoring well locations and from 4 of the 5 proposed extraction wells. MW-04S and MW-09S were dry, and EXT-1A had a pump malfunction. Therefore, no samples were collected from these well locations. MW-12I was not functional at first because of a leak at a junction 10 feet below ground surface. The leak was repaired with electrical tape, the airline was unscrewed to drain water in the tubing, and the pump was cleaned (Photograph No. 2 in Appendix A-A). Afterwards, the pump was in working order and a sample was collected.

Additionally, MW-09S, MW-09I, MW-10S, and MW-10I were difficult to find in overgrown underbrush. Therefore, SulTRAC marked the well locations with orange flags for future sampling activities (Photograph No. 4 in Appendix A-A).

3.5 FUTURE ACTIVITIES

As directed by the EPA, SulTRAC will conduct future annual sampling activities at the Douglas Road site and will provide EPA with the associated technical memorandum report

TABLE 1- SUMMARY OF WATER LEVEL MEASUREMENTS

Well Number	Date	Depth to Water (feet)	Depth to Well Bottom (feet)	Volume purged (gallons)
MW-01S	05/18/09	14.89	18.95	2.75
MW-01I	05/18/09	15.03	46.30	2.75
MW-01D	05/18/09	14.85	48.28	2.50
MW-02S	05/18/09	26.17	31.10	3.80
MW-02I	05/18/09	26.54	47.24	6.00
MW-03S	05/18/09	22.70	26.30	6.00
MW-03I	05/18/09	22.38	46.80	4.50
MW-04S	05/18/09	Dry Well	11.27	Dry Well
MW-04I	05/18/09	20.30	47.89	3.20
MW-04D	05/18/09	20.40	47.05	4.25
MW-05S	05/18/09	17.40	22.57	3.25
MW-05I	05/18/09	17.70	43.47	4.00
MW-06SR	05/18/09	16.79	28.51	4.00
MW-07S	05/18/09	17.40	22.13	5.50
MW-07I	05/18/09	17.35	48.67	3.25
MW-09S	05/18/09	Dry Well	19.95	Dry well
MW-09I	05/18/09	21.50	46.90	5.30
MW-10S	05/18/09	9.70	14.81	4.00
MW-10I	05/18/09	9 40	47.05	3.75
MW-11S	05/18/09	27.95	30.17	1.75
MW-11I	05/18/09	28.29	56.30	3.1
MW-12S	05/18/09	27.35	34.29	5.00
MW-12I	05/18/09	26.93	51.12	2.20
MW-13S	05/18/09	11.55	13.37	1.75
MW-13I	05/18/09	11.41	51.02	4.80
MW-14S	05/18/09	12.70	15.98	1.90
MW-14I	05/18/09	11.94	31.92	0.75
MW-15S	05/18/09	1.34	7.74	7.50
MW-15I	05/18/09	1.22	10.23	2.00
MW-16S	05/18/09	1.13	3.96	3.00
MW-16I	05/18/09	1.43	38.89	6.50
MW-17S	05/18/09	21.86	28.68	2.25
MW-17I	05/18/09	22.20	46.22	3.75

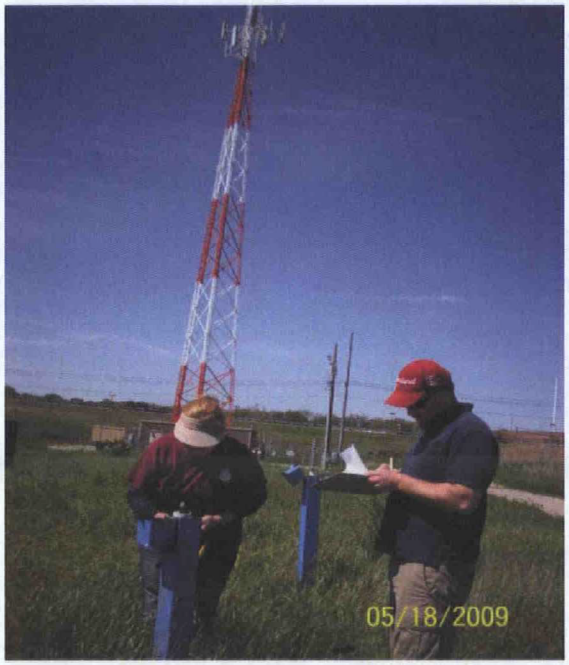
TABLE 2 – SUMMARY OF GROUNDWATER SAMPLING ACTIVITIES

Well Number	Sampled Date	Sampled Time	QC Sample
EXT-1A	Not sampled	Not sampled	
EXT-2	05/21/09	14:05	
EXT-2A	05/21/09	14:10	Duplicate
EXT-3	05/21/09	14:32	
EXT-4	05/21/09	14:50	
EXT-5	05/21/09	15:13	
MW-01S	05/20/09	11:30	
MW-01I	05/20/09	11:05	
MW-01D	05/20/09	11:58	
MW-02S	05/19/09	10:58	
MW-02I	05/19/09	11:05	
MW-20	05/19/09	11:10	Duplicate
MW-03S	05/19/09	10:10	
MW-03I	05/19/09	10:10	
MW-04S	Not Sampled	Not Sampled	
MW-04I	05/19/09	09:08	
MW-04D	05/19/09	09:15	MS/MSD
MW-05S	05/19/09	12:15	
MW-05I	05/19/09	12:12	
MW-06SR	05/19/09	11:44	
MW-07S	05/20/09	15:25	
MW-07I	05/20/09	15:55	
MW-22	05/20/09	16:00	Duplicate
MW-09S	Not sampled	Not sampled	
MW-09I	05/20/09	13:05	
MW-10S	05/20/09	13:59	
MW-10I	05/21/09	11:10	
MW-11S	05/20/09	08:20	
MW-11I	05/20/09	09:22	
MW-12S	05/20/09	08:45	
MW-12I	05/20/09	10:08	
MW-13S	05/20/09	13:30	
MW-13I	05/20/09	14:15	
MW-21	05/20/09	14:20	Duplicate
MW-14S	05/19/09	14:20	
MW-14I	05/19/09	14:26	
MW-15S	05/19/09	15:25	
MW-15I	05/19/09	15:45	
MW-16S	05/19/09	16:59	
MW-16I	05/19/09	16:05	
MW-17S	05/20/09	10:15	
MW-17I	05/20/09	10:55	

APPENDIX A-A

SulTRAC PHOTOGRAPHIC LOG

(Two Pages)



Photograph No. 1
Location: Douglas Road Landfill Superfund Site
Date: May 18, 2009
[redacted]
non-responsive [redacted]

Photograph No. 2
Location: Off Site (along west side of Indiana State Road 23 north of Douglas Road)
Date: May 20, 2009
[redacted]
non-responsive [redacted]

Photograph No. 3
Location: Off Site (along west side of Indiana State Road 23 north of Douglas Road)
Date: May 20, 2009
non-responsive

Photograph No. 4
Location: Off Site (residential area east of Indiana State Road 23 north of Douglas Road)
Date: May 21, 2009
non-responsive

APPENDIX A-B

SulTRAC FIELD NOTES

(Five Sheets)

Douglas Road Landfill Annual GW Sampling 5/18/09

1100 SulTRAC (C Gorman & C Gibson) arrives onsite. Cannot open gate because keys don't work for gate on left. Went to buy supplies for sampling. Talk to Roger Sheilds to open gate

1200 Out to lunch. M Sutherland arrives at the site.

1245 Begin taking water levels on all wells.

1725 last water level measurement

~~1800~~ Meet with Roger Shields at the site

1800 Back to hotel. END OF DAY

DR Landfill Annual GW Sampling 5/19/09

0730 SulTRAC goes to Lowes to get tubing for wells.

0800 SulTRAC arrives onsite PPE D Sunny mid-60's windy Site safety meeting

0815 Set up at well set MW04

0908 Sample collected at MW-04I (northern most well) analyzed for TVOC, As & Pb. Field filtered metals.

0915 Sample collected at MW-04D (southern most well) analyzed for TVOC, As & Pb. Field Filtered metals. MS/MSD

1010 Sample collected at MW-03I for TVOC, As, & Pb. Field Filtered metals.

Sample ~~was~~ also collected at MW-03S for same analysis

1058 Sample collected at MW-02S for same analysis as above.

1105 Sample collected at MW-02I for same analysis as above.

1110 Sample collected at MW-2D, a duplicate of MW-02I for same analysis as above.

DR Landfill Annual GW Sampling 5/19/09

1144 Sample collected at MW-068R for TVOC, As & Pb. Field Filtered Metals. —

1212 Sample collected at MW-05I for same analysis as above. —

1215 Sample collected at MW-05S for same analyses ~~as~~ as above. —

1420 Sample collect at MW-14S for same analysis as above. —

1426 Sample collected at MW-14I for same analysis as above. —

1525 Sample collected at MW-15S for same analyses as above —

1545 Sample collected from MW-15I for same analyses as above. —

1605 Sample collected from MW-16I for same analyses as above —

1659 Sample collected at MW-16S for same analyses as above —

1715 Return to site to drop off equipment at shed. —

1730 SulTRAC leaves site END OF DAY

DR Landfill Annual GW Sampling 5/20/09

0730 SulTRAC arrive at site PPE D. Sunny highs in 70's med. Windy 15-20mph. Personell on site: C Gibson, C Gorman & M. Sutherland. Roger Shield at site to greet us.

0745 Site safety meeting - will sample along Hwy 23 - safety vests needed.

0820 Sample collected from MW-11S for TVOA As, & Pb. Field Filtered Metals. —

0830 Problems at MW-12I - not pumping at all. Pulled up pump and found that small ~~pieces~~ tube broke off of the junction point approximately 10ft bgs. taped with electrical tape and because there was water in the air line, disconnected the air line from the pump and blew out water from line. After reconnecting then was able to pump. —

0845 Sample collected from MW-12S for same analyses as above. —

0922 Sample collected from MW-11I for same analyses as above.

1008 Sample collected at MW-12I for same analysis

DRL Annual GW Sampling 5/20/09

1015 Sample collected at MW-17S for TVOA, As + Pb analysis. Field Filtered Metals. CG

1105 Sample collected at MW-01I for same analysis as above. This well is designated as MS/MSD. CG

1130 Sample collected at MW-01S for same analysis as above. CG

1158 Sample collected at MW-01D for same analysis as above. CG

1305 Sample collected at MW-09I for same analysis as above. CG

1330 Sample collected at MW-13S for same analysis as above. CG

1359 Sample collected at MW-10S for same analysis as above. CG

1415 Sample collected at MW-13I for same analysis as above. CG

1420 Sample collected from MW-21-a duplicate of MW-13I for same analysis as above. CG

1525 Sample collected at MW-07S for same analysis as above. CG

1555 Sample collected at MW-07I for same analysis as above. CG

DRL 5/20/09

1600 Sample collected from MW-22-a duplicate of MW-07I for TVOA As + Pb. Field Filtered Metals.

Backnote: On 5/19/09 well MW-04S was not sampled because it was dry. On 5/20/09, MW-09S was not sampled because it was dry. On 5/20/09 at around 1430, CG returned to the hotel to begin COC paperwork and package samples. At 1700, MS joined CG to continue packaging samples. CG

2000 SubTRAC arrives at FedEx to ship off samples (Metals) in two coolers CG

2030 SubTRAC returns from FedEx

END OF DAY

DR Landfill Annual GW Sampling 5/21/09

0730 SulTRAC (C Gorman & H Sutherland) meet to pack rest of samples and ~~meet~~ get ready to sample last well.

~~0830~~ 0930 William Earle called for update & will be at site at approximately 1200 EST

1015 Arrive at site to get equipped.

1030 Start pumping at MW-10I

1110 Sample collected at MW-10I for TVOA, As & Pb. Field Filtered Metals.

1300 PM arrives on site. SulTRAC out to lunch

1345 SulTRAC return from lunch and out to sample extraction wells with Roger Shields.

1400 Arrive at Ext ~~#~~2

WELL	EXT-~~#~~2	EXT-3(1)	EXT-3(2)	EXT-3(3)
Temp	17.59°C	15.17	14.56	14.36
pH	7.95	7.69	7.49	7.38
ORP	-59	118	80	46
Cond.	1.05	0.892	0.891	0.895
Turb.	1.0	0.0	0.0	0.0
DO	11.13	2.81	2.86	8.85

DRL Annual GW Sampling 5/21/09

1405 Sample collected at Ext-2 for VOC, As & Pb. ~~Field Filtered~~

1410 Sample collected at Ext-2A, a duplicate of Ext-2 for ~~sample~~ same analysis

1415 Arrive at EXT-3.

collect 2 readings 1418 and 1421

3 more 1423, 1425, 1430

WELL	EXT-3(4)	EXT-3(5)	EXT-4(1)
Temp	~~A~~14.33	14.25	16.27
pH	7.38	7.38	7.88
ORP	31	30	79
Cond.	0.894	0.888	0.757
Turb.	0.0	0.0	11.3
DO	8.80	3.32	19.30

1432 Sample collected at EXT-3 for same analysis.

1436 Arrive at EXT-4

Reading at 1444

1450 Sample collected at ~~#~~ EXT-4 for VOC, As, & Pb.

~~1B~~ Arrive at EXT-5.

1525 Sample collected at EXT-5 for VOA, As & Pb.

DRL Annual GW Sampling 5/21/09

Well	EXT-4(2)	EXT-4(3)	EXT-5(1)E
Time	14:47	~~14:49~~ 1449	1516
Temp	15.76	14.99	15.64
pH	7.80	7.63	7.83
ORP	94	82	84
Conduc	0.764	0.767	0.871
Turb	94	4.2	0.0
DO	7.01	5.39	10.15

WELL	EXT-5(2)	EXT-5(3)	EXT-5(4)	EXT-5(5)
Time	~~14.0~~ 1517	1518	1520	1521
Temp	14.06	~~14~~ 13.68	13.73	13.57
pH	7.66	7.57	7.47	7.44
ORP	45	31	32	33
Conduc	0.889	0.894	0.891	0.890
Turb	0.0	0.0	0.0	0.0
DO	10.13	9.51	9.25	6.09

1600 Sul TPAC (M Sutherland + (Gorman)
Leaves site - all sampling done.
W. Earles finish sampling for monthly
Effluent sampling.
1615 Pack samples + CLP paperwork.
1820 Drop off samples at FedEX
and return to Chicago.
END OF DAY

[signature]

APPENDIX A-C

SulTRAC MONITORING WELL SAMPLING SHEETS

(62 Sheets)

Page 1 of 1
Date: 5/20/09
Start Purge Time 1114
End Purge Time 1130

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel nd

Project Number B224

Monitoring/Recovery Well Data

Well Name: MW-01S Well Diameter 2 in Well Depth 18.95 ft Static Water Level 14.89 ft

Feet of Water 4.06 ft Initial Volume of GW 0.66 Gallons PID Readings (background/TOC) -/- ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter Heron PID: - Water Quality Meter Horiba U-50

Pump: QED Bladder Pump Other

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1116	13.81	7.52	141	13.28	1.26	12.6	0.30	0.15
1119	7.99	7.52	131	13.02	1.29	6.3	1.25	0.32
1122	7.57	7.42	125	13.02	1.35	4.8	1.75	0.17
1125	7.40	7.46	127	13.00	1.37	4.6	2.25	0.17
1128	7.23	7.40	124	12.99	1.39	4.5	2.75	0.17
	~~0.99~~	~~7.98~~	~~121~~	~~14.33~~	~~0.542~~	~~0.0~~		
Stabilized Range of Water Quality Parameters								
--	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	--	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 2.75

Additional Comments

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-01S Sample Date/Time 5/20/09 / 1130

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/20/09
Start Purge Time: 1044
End Purge Time: 1104

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MS

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-02I Well Diameter: 2 in Well Depth: 46.30 ft Static Water Level: 15.03 ft

Feet of Water: 31.27 ft Initial Volume of GW 5.00 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba - U50

Pump: QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1044	7.58	7.62	-6	14.46	0.645	0.7	.5	—
1047	7.47	7.59	9	14.29	0.691	0.0	1.30	0.07
1052	1.09	7.48	-33	14.24	0.727	0.0	1.60	0.1
1055	0.89	7.46	-49	14.21	0.767	0.0	2.0	0.13
1058	0.790	7.51	-56	14.21	0.784	0.0	2.5	0.17
1101	[redacted]	7.45	-58	14.56	0.790	0.0	2.75	0.08
	0.617							
1104	0.56	7.46	-59	14.47	0.795	0.0		
Stabilized Range of Water Quality Parameters								
±	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 2.75

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-02I Sample Date/Time 5/20/09 / 1105

Sample parameter	Number of Bottles/Size	Preservative
VOCs	9 3/40mL	HCl
As, Pb	3 1/2 L Poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equipment Blank ☐ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min: 0.65 gal/5 min

Page 1 of 1
Date 5/20/09
Start Purge Time 1135
End Purge Time: 1157

Dup 7I & 13I (6 viles) (2 polys)

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MJ

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-01D Well Diameter: 2 in Well Depth: 48.28 ft Static Water Level: ~~15.03~~ 14.85 ft

Feet of Water: 33.43 ft Initial Volume of GW: 5.45 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U-50

Pump: QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1137	2.19	8.06	126	14.26	0.542	0.0	0.5	0.25
1141	1.18	7.98	126	14.37	0.543	0.0	1.0	0.125
1145	1.03	7.99	122	14.31	0.542	0.0	1.50	0.125
1148	0.91	8.02	119	14.32	0.542	0.0	1.75	0.08
1151	0.78	8.02	116	14.33	0.542	0.0	2.00	0.08
1154	0.70	7.99	116	14.33	0.543	0.0	2.25	↓
1157	0.69	7.98	115	14.35	0.542	0.0	2.50	

(1.25)

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 2.5

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-01D Sample Date/Time: 5/20/09 / 1158

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/19/09
Start Purge Time 1030
End Purge Time: 1056

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MJ

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-02S Well Diameter: 2 in Well Depth: 31.10 ft Static Water Level: 26.17 ft

Feet of Water 4.93 ft Initial Volume of GW: 0.80 Gallons PID Readings (background/TOC): – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field-Equipment

Water Level Meter Heron PID – Water Quality Meter Horiba U-50

Pump: QED ~~Bladder~~ Pump Other

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity* (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1033	4.91	8.02	76	14.59	0.633	7.2	1.0	0.33
1036	4.70	7.82	95	14.50	0.642	11.6	1.5	0.17
1039	4.51	7.67	74	14.52	0.602	11.6	2.25	0.25
1042	4.30	7.42	-14	14.58	0.721	10.0	2.75	0.17
1045	4.01	7.34	-57	14.62	0.491	5.5	3.50	0.25
1050	3.25	7.39	-72	15.87	0.793	3.8	3.60	0.02
1053	3.09	7.39	-75	16.21	0.797	3.8	3.70	0.03
1056	3.03	7.34	-77	16.44	0.799	4.0	3.80	0.03
								0.03
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged 3.8 gallons

Additional Comments: * Specific conductivity readings are actually the readings for g/L TDS. But everything else stabilized as needed for sampling.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-02S Sample Date/Time: 5/19/09 / 1058

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐Duplicate ☐Matrix Spike ☐Equipment Blank ☒No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/09
Start Purge Time: 0825
End Purge Time: 1102

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: CG

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-02I Well Diameter: 2 in Well Depth: 47.24 ft Static Water Level: 26.54 ft

Feet of Water: 20.70 ft Initial Volume of GW: 3.37 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U-50

Pump: QED Bladder pump Other:

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1031	11.86	7.12	92	14.09	0.963	11.6	0.75	0.15
1036	9.73	7.01	100	14.07	0.970	7.0	1.5	0.15
1041	9.11	7.06	84	14.00	1.03	9.3	2.5	0.20
1044	9.49	7.23	74	14.03	1.09	11.2	3.0	0.17
1047	8.48	7.32	75	14.00	1.10	11.3	3.6	0.20
1050	8.82	7.34	75	13.96	1.11	10.2	4.25	0.22
1053	8.74	7.37	75	13.96	1.12	8.6	4.6	0.08
1056	7.65	7.36	77	14.04	1.12	6.0	5.25	0.25
1059	7.46	7.36	78	13.98	1.13	5.1	5.75	0.25
1102	7.83	7.36	79	14.03	1.13	4.5	6.0	~~0.25~~ 0.08
Stabilized Range of Water Quality Parameters								
--	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	--	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 6.0 gallons

Additional Comments: stabilized

Notes (1) Purge rate should not exceed 'well capacity'
(2) 'well capacity' = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-02I Sample Date/Time: 5/19/09 @ 1105
MW-20 5/19/09 @ 1110

Sample parameter	Number of Bottles/Size	Preservative
TVOA	6 - 40mL	HCl
As + Pb	2 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☐ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/09
Start Purge Time: 0940
End Purge Time: 1006

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: [illegible]

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-03S Well Diameter: 2 in Well Depth: 26.30 ft Static Water Level: 22.70 ft

Feet of Water: 3.6 ft Initial Volume of GW: 0.59 Gallons PID Readings (background/TOC) -/- ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID: — Water Quality Meter: Horiba-050

Pump: QED ~~[illegible]~~ Pump Other

Bladder

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
~~0948~~		~~7.51~~	~~[illegible]~~	~~14.85~~				
0948	[illegible] 2.30	7.47	-91	14.86	1.06	0.1	—	
0951	1.14	7.51	-109	14.87	1.19	0.1	1.75	0.19
0954	0.81	7.54	-117	14.86	~~[illegible]~~ 1.04	0.1	2.75	0.33
0957	0.70	7.54	-123	14.85	1.03	0.1	3.50	0.25
1000	0.59	7.54	-133	14.83	1.04	0.0	4.25	0.25
1003	0.52	7.58	-136	14.88	1.03	0.0	5.50 ← [illegible]	0.42
1006	0.51	7.61	-135	14.83	1.03	0.0	6.00	0.17
Stabilized Range of Water Quality Parameters								
—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	—	Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 6.0 gallons

Additional Comments: Horiba seal broken twice during beginning purge.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-03S Sample Date/Time: 5/19/09 / 1010

Sample parameter	Number of Bottles/Size	Preservative
VOC	3/40 mL	HCl
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	**+/- 0.1**	**+/- 10 mV**	**+/- 0.5 °C**	**+/- 3%**	**+/- 10%**		**Typical = 0.13 gal/min; 0.65 gal/5 min**

Page 1 of 1
Date 5/19/09
Start Purge Time 0938
End Purge Time 1010

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-03I Well Diameter 2 in Well Depth: 46.80 ft Static Water Level 22.38 ft

Feet of Water 24.42 ft Initial Volume of GW 3.98 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID — Water Quality Meter Horiba U-50

Pump QED Bladder Other

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0948	6.06	7.62	119	13.98	0.616	0.0	1.25	0.125
0953	5.24	7.41	126	13.87	0.735	0.0	1.8	0.11
0958	4.65	7.29	60	13.79	0.942	5.1	2.5	0.14
~~0959~~ 1000	4.72	7.33	68	13.80	0.958	6.2	3.0	~~0.18 gal~~ 0.17
1004	4.03	7.34	75	13.78	0.976	7.5	3.5	~~0.18 gal~~
1007	4.62	7.35	79	13.77	0.984	8.0	4.0	~~0.18 gal~~
1010	4.64	7.37	80	13.76	0.992	8.0	4.5	~~0.18 gal~~ ✓
				Stabilized				

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 4.5 gallons

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-03I Sample Date/Time 5/19/09 ~~0910~~ 1010

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40 mL	HCl
As + Pb	1-1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/09
Start Purge Time: 0844
End Purge Time 0906

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-04I Well Diameter 2 in Well Depth: 47.89 ft Static Water Level 20.3 ft

Feet of Water 27.59 ft Initial Volume of GW: 4.50 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information.

Field Equipment

Water Level Meter Heron water level PID — Water Quality Meter: Horiba U-50

Pump QED Bladder pump - dedicated Other:

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0847	6.12	7.90	122	15.33	0.447	0.0	0.5	0.17
0852	2.73	7.76	120	15.24	0.592	0.0	1.75	0.25
0857	1.91	7.11	130	15.17	0.919	0.0	2.5	0.15
0900	1.66	7.18	122	15.30	0.936	0.0	2.75	0.08
0903	1.62	7.20	120	15.17	0.946	0.0	3.00	0.08
0906	1.61	7.22	119	15.19	0.947	0.0	3.2	0.08
			Stabilized					
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 3.2 gallons

Additional Comments slowed pump at 0900 because it was pumping too fast

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-04I Sample Date/Time: 5/19/09 @ 0908

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3 - 40mL vials	HCl
As + Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5°C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

well / time / date

* multiply by .163 x ht of water column = volume of H2O to purge

Page 1 of 2
Date: 5/19/09
Start Purge Time: 0832
End Purge Time: 0911

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MZ

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-04D Well Diameter: 2 in Well Depth: 47.25 ft Static Water Level 20.40 ft (depth to water)

Feet of Water: 26.65 ft Initial Volume of GW: 4.34 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba-U50

Pump: QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0835	3.16	7.37	144	16.42	.980	0.5	.5	0.17
0838	2.44	7.52	140	16.42	.988	0.3	.75	0.08
0841	2.04	7.59	134	16.41	.990	0.2	1.25	0.17
0844	1.79	7.65	131	16.39	.988	0.1	1.5	0.08
0847	1.49	7.64	129	16.35	.975	0.1	1.75	0.08
0850	1.30	7.63	126	16.33	.961	0.1	2.15	0.13
0853	1.12	7.65	125	16.32	.954	0.1	2.30	0.05
0856	0.94	7.63	124	16.32	.969	0.1	2.75	0.15
0859	0.83	7.60	—	16.34	.976	0.0	3.0	0.08
0902	0.92	7.60	120	16.33	0.976	0.0	3.50	0.17
Stabilized Range of Water Quality Parameters								
—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	—	Typical = 0.13 gal/min; 0.65 gal/5 min. Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 3.5 gallons

Additional Comments: 4.25 gallons

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling.
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-04D Sample Date/Time: 5/19/09 / 0915

Sample parameter	Number of Bottles/Size	Preservative
VOCs	4 / 40 mL	HCL
As, Pb	3 / 1 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☒ Matrix Spike ☐ Equipment Blank ☐ No QA/QC Sample

MW-04D

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0905	0.74	7.62	115	16.34	0.976	0.0	3.75	0.08
0908	0.69	7.64	114	16.34	0.976	0.0	4.00	0.08
0911	0.64	7.63	114	16.36	0.976	0.0	4.25	0.08
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/19/09
Start Purge Time. 1158
End Purge Time. 1216

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel MS

Project Number B224

Monitoring/Recovery Well Data

Well Name. MW-05S Well Diameter: 2 in Well Depth: 22.57 ft Static Water Level: 17.40 ft

Feet of Water 5.17 ft Initial Volume of GW: 0.84 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U-50

Pump: Q.E.D. ~~Bladder~~ Pump Other:

Bladder

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1201	2.60	7.35	92	13.50	0.601	4.6	0.75	0.25
1204	1.86	7.37	91	13.36	0.944	4.4	1.50	0.25
1207	1.55	7.30	97	13.52	0.944	2.9	2.0	0.17
1210	1.55	7.38	100	13.36	0.943	1.8	2.5	0.17
1213	1.70	7.32	100	13.38	0.934	1.6	3.0	0.17
1216	1.83	7.36	105	13.42	0.932	1.4	3.25	0.17
				Stabilized				

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min. Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 3.25 gallons

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-05S Sample Date/Time: 05/19/09 / 1215

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40mL	HCl
As, Pb	1/2 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (μmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical ≈ 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/19/09
Start Purge Time: 1141
End Purge Time 1212

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-05I Well Diameter 2 in Well Depth 43.47 ft Static Water Level 17.70 ft

Feet of Water 25.77 ft Initial Volume of GW 4.20 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID — Water Quality Meter Horiba U50

Pump QED Bladder Pump Other

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (mmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1146	0.89	6.62	-83	13.76	0.052	800	0.75	0.15
turned off pump to clean Horiba - turbidity too high begin purging again at 1156				~~13.69~~			~~1.75~~	
1156	0.55	5.59	-26	13.69	0.143	0.0	1.75	0.2
1159	0.58	6.54	-72	13.71	0.592	0.0	2.20	0.15
1202	0.51	6.95	-110	13.71	0.741	0.0	2.75	0.18
1205	0.47	7.11	-124	13.88	0.760	0.0	3.0	0.08
1208	0.47	7.17	-130	13.82	0.770	0.0	3.5	0.17
1211	0.48	7.21	-134	13.77	0.779	0.0	4.0	0.17
				Stabilized				
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Discharged in wetland Total Volume Purged 4.0 Gallons

Additional Comments:

Notes (1) Purge rate should not exceed 'well capacity'
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-05I Sample Date/Time 5/19/09 @ 1212

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40mL vials	HCl
As & Pb	1-1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/09
Start Purge Time 1111
End Purge Time 1141

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MS

Project Number: B224

Monitoring/Recovery Well Data

Well Name MW-06SR Well Diameter: 2 in Well Depth 28.51 ft Static Water Level: 16.79 ft

Feet of Water 11.72 ft Initial Volume of GW: 1.91 Gallons PID Readings (background/TOC) – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

No Product GW

Field Equipment

Water Level Meter: Heron PID: – Water Quality Meter: Horiba - U-50

Pump: QED ~~Bladder~~ Pump Other:

Bladder

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity* (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1111	5.24	7.88	-115	14.82	.387	413	0.2	–
1120	0.91	7.72	-128	14.62	.387	22.3	1.4	0.13
1123	0.64	7.76	-133	14.58	0.398	18.7	1.6	0.07
1126	0.56	7.72	-137	14.55	0.409	8.0	2.25	0.22
1129	0.51	7.70	-140	14.57	0.408	9.6	2.50	0.08
1132	0.47	7.70	-143	14.66	0.268	5.1	2.90	0.13
1135	0.45	7.71	-145	14.60	0.414	3.7	–	–
1138	0.42	7.72	-144	14.60	0.415	2.2	3.60	0.12
1141	0.42	7.70	-144	14.68	0.417	2.2	4.00	0.13
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged: 4.00 gallons

Additional Comments After first few purges a red brown algae started to come up with the water. Continued to purge until no more algae present and rust colored water became more clear. * Note: Specific ~~[illegible]~~ conductivity readings are actually g/L TDS but everything else stabilized.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-06SR Sample Date/Time 5/19/09 / 1144

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3 / 40 mL	HCl
As, Pb	1 / 1 L poly	HNO3

QA/QC Sample Collected Here? ☐Duplicate ☐Matrix Spike ☐Equipment Blank ☒No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp. (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/20/09
Start Purge Time 1452
End Purge Time: 1522

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel MS

Project Number B224

22.13

Monitoring/Recovery Well Data

Well Name MW-07S Well Diameter 2 in Well Depth 22.13 ft Static Water Level 17.40 ft

Feet of Water 4.73 ft Initial Volume of GW. 0.77 Gallons PID Readings (background/TOC). – / – ppm

Immiscible Phases Present ☒ Yes ☐ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID – Water Quality Meter Horiba U-50

Pump QED Bladder Pump Other.

(43.5)

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1455	8.97	7.30	161	12.55	0.861	101	0.5	0.17
1458	3.26	7.30	155	12.49	0.865	68.3	1.25	0.08
1501	2.69	7.21	148	12.47	0.851	27.3	1.75	0.17
1504	2.16	7.29	114	11.91	0.863	11.4	2.50	0.25
1507	2.05	7.20	102	12.02	0.858	11.8	3.00	0.17
1510	1.95	7.23	95	11.99	0.859	5.9	3.50	0.17
1513	1.87	7.25	86	12.05	0.857	7.1	4.00	↓
1516	1.81	7.27	92	11.94	0.859	5.2	4.50	↓
1519	1.79	7.25	81	12.02	0.858	6.9	5.00	↓
1522	1.77	7.29	77	12.11	08.59	11.9	5.50	✓
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged 5.5 gallons

Additional Comments: Red-brown algae came up with initial pumping. Turbidity not stabilized through over 5.50 gallons pumped out of well, but everything else is stable

Notes (1) Purge rate should not exceed well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-07S Sample Date/Time 5/20/09 / 1525

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	2/1 L Poly	HNO3

QA/QC Sample Collected Here? ☐Duplicate ☐Matrix Spike ☐Equipment Blank ☒No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/20/09
Start Purge Time: 1532
End Purge Time: 1553

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MS

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-07I Well Diameter: 8 in Well Depth: 48.67 ft Static Water Level: 17.35 ft

Feet of Water: 31.32 ft Initial Volume of GW: 5.11 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☒ Yes ☐ No Source of Well Construction Information:

Not product

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba-U-50

Pump: QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

	Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1535	~~1555~~	5.13	7.66	98	14.87	0.756	1.3	0.50	0.17
1538	~~1558~~	1.87	7.63	90	14.59	0.767	0.2	0.80	0.1
1541	—	1.49	7.63	63	14.46	0.773	0.0	1.10	0.1
1544	—	1.31	7.65	23	14.42	0.777	0.0	1.40	0.1
	1547	1.19	7.70	-8	14.51	0.782	0.0	1.75	0.12
	1550	1.15	7.71	-13	14.53	0.784	0.0	3.00	0.08
	1553	1.11	7.71	-10	14.51	0.785	0.0	3.25	0.08

Stabilized Range of Water Quality Parameters

—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☐ No Total Volume Purged: 3.25

Additional Comments: On first pump a section of 1 mm sized black particles came out of the tube, but the water itself was pretty clear.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-07I Sample Date/Time: 5/20/09 | 1555

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1L Poly	HNOC

QA/QC Sample Collected Here? ☒ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☐ No QA/QC Sample

Duplicate ID = MW-22 | ~~1558~~ 1600 CA

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/20/09
Start Purge Time: 1204
End Purge Time 1304

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel UG

Project Number. B224

Monitoring/Recovery Well Data

Well Name MW-09I Well Diameter 2 in Well Depth 46.90 ft Static Water Level 21.50 ft

Feet of Water 25.40 ft Initial Volume of GW 4.14 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter. Heron PID. — Water Quality Meter: Horiba U50

Pump: QED Bladder Pump Other Battery

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1209	11.33	7.63	125	12.96	0.668	76.6	0.75	0.15
1214	10.41	7.45	19	12.87	0.687	800	1.3	0.11
	Stop pump to check Horiba - need to clean because it's reading 800							
Started pumping again at 1237								
1242	1.14	7.44	-40	15.31	0.655	0.0	2.3	0.2
1247	0.77	7.40	-53	15.19	0.666	0.0	3.0	0.14
1252	0.65	7.40	-42	15.48	0.661	0.0	3.6	0.12
1255	0.65	7.40	-62	15.20	0.663	0.0	~~3.9~~ 4.0	0.08
1258	0.56	7.40	-63	15.44	0.663	0.0	4.4	0.13
1301	0.55	7.40	-64	15.08	0.663	0.0	4.85	0.15
~~1304~~				Stabilized Range of Water Quality Parameters				0.15
1304	0.54	7.40	-64	15.46	0.663	0.0	5.3	Typical = 0.13 gal/min; 0.65 gal/5 min
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 5.3 gallons

Additional Comments Stabilized

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-09I Sample Date/Time 5/20/09 @ ~~15~~ 1305

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3 - 40mL vials	HCl
AS & Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
-	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	-	Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date. 5/20/09
Start Purge Time. 1332
End Purge Time: 1358

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: CG

Project Number. B224

Monitoring/Recovery Well Data

Well Name: MW-10S Well Diameter 2 in Well Depth: 14.61 ft Static Water Level 9.70 ft

Feet of Water 5.11 ft Initial Volume of GW. 0.83 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information.

Field Equipment

Water Level Meter: Heron PID. — Water Quality Meter Horiba U50

Pump: QED Bladder Pump Other

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1342 ~~1337~~	1.21	7.24	-34	10.20	0.758	113	1.5	0.15
1347	1.65	7.18	-30	10.10	0.735	23.3	2.3	0.16
1352	2.10	7.16	-24	10.03	0.718	22.5	3.0	0.19
1355	2.24	7.12	-16	10.05	0.712	23.3	3.5	0.17
1358	2.25	7.09	-13	10.03	0.708	22.8	4.0	0.17
				Stabilized.				
Stabilized Range of Water Quality Parameters								
—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	—	Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 4.0 gallons

Additional Comments.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID. MW-10S Sample Date/Time 5/20/09 @ 1359

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40mL	HCl
As & Pb	1-1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/21/09
Start Purge Time 1034
End Purge Time 1110

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel CG & MS

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-10I Well Diameter 2 in Well Depth _____ ft Static Water Level 9.40 ft

Feet of Water _____ ft Initial Volume of GW _____ Gallons PID Readings (background/TOC) – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information _____

Field Equipment

Water Level Meter _____ PID _____ Water Quality Meter Horiba U-50

Pump QED Bladder Pump Other _____

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1039	2.63	7.60	142	13.21	0.848	6.8	0.75	
1044	1.96	7.62	-32	13.14	0.886	3.4	1.25	
1049	1.66	7.61	-82	13.07	0.894	2.0	1.75	
1054	1.38	7.62	-80	13.07	0.892	1.0	2.25	
1057	1.21	7.63	-83	12.95	0.893	0.9	2.3	
1100	1.06	7.64	-84	12.97	0.893	0.7	2.8	
1103	0.95	7.63	-80	12.95	0.894	0.6	3.25	
1106	0.88	7.60	-83	12.95	0.894	0.4	3.50	
1109	0.95	7.65	-80	13.00	0.894	0.3	3.75	
		Stabilized						
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 3.75

Additional Comments _____

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-10I Sample Date/Time 5/21/09 @ 1110

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40mL glass vial	HCl
As & Pb	1-1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	**+/- 0.1**	**+/- 10 mV**	**+/- 0.5 °C**	**+/- 3%**	**+/- 10%**		**Typical = 0.13 gal/min; 0.65 gal/5 min**

Page 1 of 1
Date 5/20/09
Start Purge Time 0751
End Purge Time 0817

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-11S Well Diameter 2 in Well Depth 30.17 ft Static Water Level 27.95 ft

Feet of Water 2.22 ft Initial Volume of GW 0.36 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID — Water Quality Meter Horiba U50

Pump QED Bladder Pump Other

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0802	11.35	7.05	109	13.09	1.71	5.0	0.5	0.17
0808	10.19	7.04	106	13.28	1.72	0.0	1.0	0.125
0811	9.42	7.02	107	13.31	1.71	0.0	1.25	0.08
0814	8.99	7.01	108	13.32	1.70	0.0	1.5	0.08
0817	8.70	6.99	109	13.36	1.70	0.0	1.75	0.08
				Stabilized				
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 1.75

Additional Comments

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-11S Sample Date/Time 5/20/09 @ 0820

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40mL vials	HCl
As + Pb	1-1L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
—	**+/- 10%**	**+/- 0.1**	**+/- 10 mV**	**+/- 0.5 °C**	**+/- 3%**	**+/- 10%**		**Typical = 0.13 gal/min; 0.65 gal/5 min**

Page 1 of 1
Date 5/20/09
Start Purge Time: 0849
End Purge Time 0920

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel CG

Project Number. B224

Monitoring/Recovery Well Data

Well Name: MW-11F Well Diameter 2 in Well Depth 56.30 ft Static Water Level: 28.29 ft

Feet of Water 28.01 ft Initial Volume of GW. 4.57 Gallons PID Readings (background/TOC) – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter Heron PID: – Water Quality Meter Horiba U50

Pump: QED Bladder pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0859	1.82	7.28	95	13.69	0.871	16.0	1.0	0.1
0904	1.08	7.28	80	13.69	0.860	7.4	1.5	0.1
0909	0.80	7.27	72	13.71	0.859	5.0	2.0	0.1
0914	0.70	7.27	66	13.75	0.850	2.8	2.5	0.1
0917	0.69	7.27	63	13.75	0.848	2.1	2.8	0.1
0920	0.66	7.27	61	13.78	0.844	1.5	3.1	0.1
				Stabilized.				
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

.5
5

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 3.1

Additional Comments

Notes (1) Purge rate should not exceed ' well capacity '
(2) "well capacity " = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met. a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP. and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-~~11S~~ 11I Sample Date/Time. 5/20/09 @ 0922

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3 - 40 mL vials	HCl
As + Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (μmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/20/09
Start Purge Time: 0817
End Purge Time: 0846

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MB

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-12S Well Diameter: 2 in Well Depth 34.29 ft Static Water Level: 27.35 ft

Feet of Water: 6.99 ft Initial Volume of GW 1.13 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☒ Yes ☐ No Source of Well Construction Information:

NOT PRESENT

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U-50

Pump: QED ~~[illegible]~~ Pump Other

Bladder

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0820	8.36	7.11	34	14.45	1.35	399	0.3	0.1
0825 ~~[illegible]~~	4.47	7.46	33	14.29	1.57	89.1	—	—
0828 ~~[illegible]~~	4.40	7.44	26	14.21	1.32	8.23	1.5	0.13
0831	4.71	7.46	32	14.32	1.37	35.0	2.15	0.22
0834	4.46	7.55	27	14.23	1.37	24.5	1.37	?
0837	4.32	7.56	37	14.25	1.37	18.8	3.45	0.22
0840	4.26	7.50	44	14.23	1.38	14.3	4.00	0.18
0843 ~~[illegible]~~	4.25	7.52	45	14.22	1.37	12.4	4.50	0.17
~~0846~~ 0846	4.22	7.50	47	14.22	1.38	10.6	5.00	0.17
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged

Additional Comments: Some reddish brown ~~[illegible]~~ colored water came up w/ pumping along w/ auto.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-12S Sample Date/Time 5/20/09 / 0845

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐Duplicate ☐Matrix Spike ☐Equipment Blank ☒No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min) 0.65 gal/5 min

Page 1 of 2
Date: 5/20/09
Start Purge Time: 0930
End Purge Time: 1004

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: [illegible]

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-12I Well Diameter: 2 in Well Depth: 51.12 ft Static Water Level: 26.93 ft

Feet of Water: 24.19 ft Initial Volume of GW: 3.94 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Bladder Heron PID: — Water Quality Meter: Horiba-U50

Pump: QED [illegible] Pump Other:

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0933	11.29	7.50	48	17.44	1.40	728	0.25	0.08
0936	2.68	7.44	-25	15.90	1.54	146	0.50	0.08
0940	1.38	7.44	-52	15.24	1.59	32.8	0.75	0.08
0943	1.07	7.44	-59	15.08	1.60	16.3	1.0	0.08
0946	0.86	7.46	-66	14.98	1.61	9.2	1.25	0.08
0949	0.76	7.46	-68	14.94	1.61	8.8	1.30	0.02
0952	0.69	7.47	-70	14.91	1.61	5.8	1.60	0.1
0955	0.63	7.48	-72	14.85	1.61	3.5	1.80	0.07
0958	0.58	7.49	-73	14.84	1.61	2.8	2.00	0.07
1001	0.54	7.49	-73	14.85	1.61	2.60	2.20	0.07
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 2.2

Additional Comments: Brownish red colored water came up with pumping at beginning.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-12I Sample Date/Time: 5/20/09 / 1008

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As, Pb	1/1 L poly	HNOC

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

* Note: had to repair water line w/ electrical tape as there was a leak at junction about 10' down. Also had to pull up well, unscrew ~~[illegible]~~ air tube to get access water at Kenneth [illegible]

well MW-12I
pg 2 of 2

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1004	0.49	7.49	-61	14.83	1.61	5.9		
Stabilized Range of Water Quality Parameters								
—	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical ≤ 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/20/09
Start Purge Time: 1305
End Purge Time: 1328

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MS

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-135 Well Diameter: 2 in Well Depth: 13.37 ft Static Water Level: 11.55 ft

Feet of Water: 1.82 ft Initial Volume of GW: 0.30 Gallons PID Readings (background/TOC): – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: – Water Quality Meter: Horiba U-50

Pump: GED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1310	4.64	7.13	26	12.32	0.579	25.1	0.5	0.1
1313	2.14	7.01	59	13.00	0.599	11.9	0.65	0.05
1316	2.28	6.90	58	13.17	0.613	10.4	0.75	0.03
1319	1.73	6.91	62	13.15	0.640	9.6	1.00	0.08
1322	1.49	6.97	61	13.08	0.650	9.2	1.25	↓
1325	1.40	7.01	58	13.02	0.653	8.8	1.50	↓
1328	1.29	7.05	55	13.11	0.657	7.9	1.75?	↓

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged: 1.75?

Additional Comments: at beginning of purging, water reddish brown color,

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-135 Sample Date/Time: 5/20/09 / 1330

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCl
As Pb	1/1L poly	HNO3

QA/QC Sample Collected Here? ☐Duplicate ☐Matrix Spike ☐Equipment Blank ☒No QA/QC Sample

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min / 0.65 gal/5 min

Page 1 of 1
Date 5/20/09
Start Purge Time: 1343
End Purge Time: 1413

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: [illegible]

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-13I Well Diameter: 2 in Well Depth: 51.02 ft Static Water Level: 11.41 ft

Feet of Water: 39.61 ft Initial Volume of GW: 6.46 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present: ☒ Yes ☐ No Source of Well Construction Information: Not Product

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U-50

Pump: QED Bladder Pump Other:

Purge

(1.75)
(+2)

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1346	21.93	7.62	117	13.40	0.685	98.2	.80	0.27
1352	8.23	7.68	79	13.46	0.693	11.6	1.60	0.2
1355	7.65	7.70	59	13.46	0.692	7.2	2.00	0.13
1358	7.10	7.69	40	13.51	0.691	4.1	2.25	0.08
1401	6.64	7.71	26	13.52	0.690	2.5	2.60	0.12
1404	5.93	7.67	14	13.58	0.693	1.1	3.20	0.23
1407	5.51	7.72	5	13.61	0.693	0.6	3.40	0.2
1410	5.12	7.69	-1	13.60	0.694	0.5	4.40	0.17
1413	4.73	7.70	-4	13.59	0.694	0.4	4.80	0.13

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐Yes ☐No Total Volume Purged: ~~[illegible]~~ 4.8 gallons

Additional Comments: Water initially purged up at beginning was red-brown in color. It also had small particles of red-brown algae.

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-13I Sample Date/Time: 5/20/09 / 1415

Sample parameter	Number of Bottles/Size	Preservative
VOCs	6/40mL	HCl
As, Pb	2/1L poly	HNO3

QA/QC Sample Collected Here? ☒Duplicate ☐Matrix Spike ☐Equipment Blank ☐No QA/QC Sample

Duplicate ID = MW-21 @ 1420

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	**+/- 0.1**	**+/- 10 mV**	**+/- 0.5 °C**	**+/- 3%**	**+/- 10%**		**Typical = 0.13 gal/min; 0.65 gal/5 min**

Page 1 of 1
Date 5/19/09
Start Purge Time 1400
End Purge Time 1419

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-14S Well Diameter 2 in Well Depth 15.98 ft Static Water Level 12.70 ft

Feet of Water 3.28 ft Initial Volume of GW 0.53 Gallons PID Readings (background/TOC) – / – ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID – Water Quality Meter Horiba U50

Pump: QED Bladder Pump Other: Dedicated pumps

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1405	3.96	7.17	99	13.56	0.440	117	0.75	0.15
1410	3.26	7.09	94	13.24	0.991	169	1.20	0.09
1413	2.93	7.08	87	13.26	1.01	155	1.40	0.07
1416	3.00	7.06	84	13.23	1.01	165	1.70	0.1
1419	2.84	7.06	82	13.26	1.02	167	1.90	0.07
			Stabilized					
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 1.9

Additional Comments:

Notes (1) Purge rate should not exceed 'well capacity'
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-14S Sample Date/Time 5/19/09 @ 1420

Sample parameter	Number of Bottles/Size	Preservative
TVOC	3 - 40mL	HCl
As & Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		**Typical = 0.13 gal/min; 0.65 gal/5 min**

Page 1 of 1
Date: 5/19/09
Start Purge Time: 1405
End Purge Time: 1425

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: MS

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-14I Well Diameter: 2 in Well Depth: 31.92 ft Static Water Level: 11.94 ft

Feet of Water: 19.98 ft Initial Volume of GW 3.26 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID — Water Quality Meter Horiba -U-50

Pump QED ~~Bladder~~ Bladder pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1407	5.80	7.82	118	16.97	0.792	2.9	0.25	0.05
1410	3.57	7.77	116	16.67	0.796	10.1	0.30	0.02
1413	3.08	7.75	105	16.43	0.809	11.4	0.50	0.07
1416	~~2.44~~ 2.44	7.72	91	16.25	0.820	8.0	0.60	0.03
1419	2.16	7.71	81	16.34	0.832	6.6	0.70	0.03
1422	1.96	7.68	74	16.34	0.835	5.3	—	—
1425	1.85	7.69	68	16.25	0.837	4.4	0.75	0.02

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 0.75

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-14I Sample Date/Time 5/19/09 / 1426

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCL
As, Pb	1/1 L poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (μmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/19/09
Start Purge Time 1450
End Purge Time 1521

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel MJ

Project Number: B224

Monitoring/Recovery Well Data

Well Name MW-15S Well Diameter 2 in Well Depth: 7.74 ft Static Water Level 1.34 ft

Feet of Water 6.40 ft Initial Volume of GW 1.04 Gallons PID Readings (background/TOC) – / – ppm

Immiscible Phases Present ☒ Yes ☐ No Source of Well Construction Information:

Not product

Field Equipment

Water Level Meter Heron PID – Water Quality Meter Horiba – U-50

Pump QED ~~[illegible]~~ pump Other

Bladder

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1452	4.19	6.81	34	11.67	0.516	713	1.5	0.75 ??
1455	4.58	6.79	21	11.80	0.509	800	3.0	0.5
1512	0.89	7.12	35	12.84	0.507	433	5.5	0.83
1515	0.56	7.07	28	12.60	0.503	800	6.0	0.33
1518	0.46	7.07	26	12.73	0.503	800	6.3	0.10
1521	0.58	7.03	29	12.65	0.505	255	7.5	0.40

Stabilized Range of Water Quality Parameters

–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 7.5 gallons

Additional Comments: At beginning of purge and for 15 minutes after a red known vehicle came up with the water emptied one 5 gallon bucket and replaced it w/ a new one and started taking additional readings

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-15S Sample Date/Time: 5/19/09 / 1525

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3 40 mL	HCl
* As, Pb	1/1 L Poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/07
Start Purge Time: 1527
End Purge Time: 1542

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: NO

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-15I Well Diameter: 2 in Well Depth: 10.23 ft Static Water Level: 1.22 ft

Feet of Water: 9.01 ft Initial Volume of GW: 1.47 Gallons PID Readings (background/TOC): — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter: Heron PID: — Water Quality Meter: Horiba U50

Pump: QE ~~Bladder~~ Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1528	5.04	8.15	80	13.33	0.598	6.8	.2	—
1531	0.77	7.80	4	13.00	1.08	0.5	1.0	0.27
1534	0.54	7.74	6	13.32	1.10	0.2	1.5	0.18
1539	0.48	7.73	6	13.17	1.09	0.2	1.75	0.08
1542	0.51	7.73	7	13.17	1.08	0.2	2.00	0.08
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 2.00

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-15I Sample Date/Time 5/19/07 / 1545

Sample parameter	Number of Bottles/Size	Preservative
VOCs	3/40 mL	HCL
As, Pb	1/1 L Poly	HNO3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date: 5/19/09
Start Purge Time 1629
End Purge Time 1657

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel: CG

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-16S Well Diameter 2 in Well Depth 3.96 ft Static Water Level 1.13 ft

Feet of Water 2.83 ft Initial Volume of GW 0.46 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information:

Field Equipment

Water Level Meter Heron PID: — Water Quality Meter Horiba U50

Pump QED Bladder pump Other:

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1634	0.70	6.94	116	11.29	0.874	90.5	0.75	0.15
1639	0.59	6.91	114	11.13	0.884	43.0	1.25	~~0.07~~ 0.1
1642	0.54	6.89	115	11.00	0.894	32.5	1.70	~~0.07~~ 0.1
1645	0.55	6.84	116	11.07	0.897	19.1	1.90	0.07
1648	0.51	6.82	115	10.96	0.902	10.8	2.25	0.12
1651	0.50	6.81	114	10.97	0.904	8.8	2.50	0.08
1654	0.49	6.80	113	10.96	0.908	7.9	2.75	0.08
1657	0.49	6.79	113	11.00	0.911	8.6	3.00	0.08
				Stabilized				
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 3.00

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-16S Sample Date/Time 5/19/09 @ 1659

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3 - 40mL	HCl
As & Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0 13 gal/min; 0.65 gal/5 min

Page 1 of 2
Date 5/19/09
Start Purge Time: 15:14
End Purge Time: 1600

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name Douglas Road Landfill Sampling Personnel: CG

Project Number B224

Monitoring/Recovery Well Data

Well Name MW16I Well Diameter 2 in Well Depth 38.89 ft Static Water Level 1.43 ft

Feet of Water 37.46 ft Initial Volume of GW 6.11 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter Heron PID — Water Quality Meter Horiba U52

Pump: QED Bladder Pump Other

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative/ Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1519	2.55	7.35	62	12.80	0.687	39.3	0.75	0.15
1524	1.35	7.31	22	12.16	0.696	8.4	1.3	0.11
1529	0.89	7.24	-6	11.95	0.700	6.5	2.25	0.19
1534	0.76	7.22	-18	11.88	0.703	4.7	2.75	0.10
1539	0.68	7.20	-31	11.84	0.706	2.0	3.5	0.15 +175
1542	0.64	7.19	-37	11.81	0.709	1.6	3.75	0.08
1545	0.53	7.17	-41	11.78	0.709	0.5	4.20	0.15
1548	0.47	7.16	-45	11.80	0.710	0.0	4.70	0.17
1551	0.61	7.16	-50	11.78	0.711	0.0	5.25	0.18
1554	0.52	7.17	-53	11.84	0.711	0.0	5.75	0.17
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 6.5

Additional Comments: See next page

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID MW-16I Sample Date/Time: 5/19/09 @ 1605

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3 - 40 mL vials	HCl
As & Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

MW-16I

pg 2 of 2

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
1557	0.49	7.18	-55	11.81	0.711	0.0	6.25	0.17
1600	0.50	7.20	-57	11.81	0.711	0.0	6.50	0.08
			Stabilized					
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

Page 1 of 1
Date 5/20/09
Start Purge Time 0944
End Purge Time 1011

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel: Clg

Project Number B224

Monitoring/Recovery Well Data

Well Name MW-17S Well Diameter: 2 in Well Depth: 28.68 ft Static Water Level: 21.86 ft

Feet of Water: 6.82 ft Initial Volume of GW 1.11 Gallons PID Readings (background/TOC): - / - ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter: Heron PID — Water Quality Meter Horiba U50

Pump QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
0949	5.20	7.08	22	12.72	0.917	22.2	0.5	0.1
0954	5.72	7.04	45	12.43	0.935	10.8	0.8	0.06
0959	5.77	7.03	50	12.40	0.936	15.0	1.25	0.09
1002	5.75	7.03	52	12.31	0.939	8.7	1.50	0.08
1005	5.76	7.03	53	12.26	0.938	11.9	1.75	0.08
1008	5.69	7.02	54	12.30	0.940	12.7	2.00	0.08
1011	5.70	7.02	55	12.24	0.940	10.2	2.25	0.08
				Stabilized				
Stabilized Range of Water Quality Parameters								
--	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	--	Typical = 0.13 gal/min; 0.65 gal/5 min; Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged: 2.25

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0.3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged. This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP, and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID. MW-17S Sample Date/Time. 5/20/09 @ 1015

Sample parameter	Number of Bottles/Size	Preservative
TVOA	3-40mL vials	HCl
As 9Pb	1-1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS

Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min: 0.65 gal/5 min

Page 1 of 1
Date 5/20/09
Start Purge Time 1025
End Purge Time 1052

MICROPURGING GROUNDWATER SAMPLING DATA SHEET

Project Information

Project Name: Douglas Road Landfill Sampling Personnel CG

Project Number: B224

Monitoring/Recovery Well Data

Well Name: MW-17I Well Diameter: 2 in Well Depth: 46.22 ft Static Water Level: 22.20 ft

Feet of Water: 24.02 ft Initial Volume of GW: 3.92 Gallons PID Readings (background/TOC) — / — ppm

Immiscible Phases Present ☐ Yes ☒ No Source of Well Construction Information

Field Equipment

Water Level Meter: Heron PID: ~ Water Quality Meter: Horiba U50

Pump: QED Bladder Pump Other:

Purge

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
~~1030~~			~~12.47~~	~~12.47~~			0.5	
1030	10.08	7.22	10	12.47	0.871	13.4	0.5	0.1
1035	9.40	7.16	17	12.53	0.892	6.2	1.2	0.14
1040	8.03	7.13	23	12.55	0.895	1.2	1.75	0.11
1043	7.29	7.12	25	12.52	0.895	0.7	2.25	0.17
1046	6.00	7.10	28	12.50	0.895	0.0	2.75	0.17
1049	5.98	7.08	30	12.51	0.896	0.0	3.25	0.17
1052	5.42	7.07	30	12.47	0.896	0.0	3.75	0.17
				Stabilized				
Stabilized Range of Water Quality Parameters								
–	+/- 10%	+/- 0.1	+/-10 mV	+/- 0.5 °C	+/- 3%	+/- 10%	–	Typical = 0.13 gal/min; 0.65 gal/5 min Max = 0.27 gal/min; 1.3 gal/5 min

Discharge Water Containerized ☐ Yes ☒ No Total Volume Purged 3.75

Additional Comments:

Notes (1) Purge rate should not exceed "well capacity"
(2) "well capacity" = maximum discharge rate that can be obtained with less than 0 3 feet of drawdown during sampling
(3) If 3 casing volumes of water have been purged and the stabilization criteria have not been met, a comment should be made on the data sheet that sample collection began after 3 well casing volumes were purged This should be done with approval of the project manager
(4) The project manager must be consulted if field conditions (a) do not permit following the SOP and (b) insufficient volume is available to fill all scheduled sample containers

Sample Collection

Sample ID: MW-17I Sample Date/Time: 5/20/09 @ 1055

Sample parameter	Number of Bottles/Size	Preservative
~~3~~ TVOA	3 - 40mL vials	HCl
As & Pb	1 - 1L poly	HNO_3

QA/QC Sample Collected Here? ☐ Duplicate ☐ Matrix Spike ☐ Equipment Blank ☒ No QA/QC Sample

WATER QUALITY PARAMETERS								
Time	Dissolved Oxygen (mg/L)	pH	Eh/ORP (mV)	Temp (°C)	Specific Conductivity (µmhos/cm at C)	Turbidity (NTU)	Cumulative / Individual Volume of Water Removed (Gallons Purged)	Purge Rate (gal/min)
Stabilized Range of Water Quality Parameters								
	+/- 10%	+/- 0.1	+/- 10 mV	+/- 0.5 °C	+/- 3%	+/- 10%		Typical = 0.13 gal/min; 0.65 gal/5 min

ATTACHMENT

SITE AND MONITORING WELL LOCATIONS FIGURE

(One Sheet)

non-responsive

APPENDIX B

ANNUAL GROUNDWATER ANALYTICAL RESULTS
DOUGLAS ROAD LANDFILL SUPERFUND SITE
MISHAWAKA, ST JOSEPH COUNTY, INDIANA

(10 Sheets)

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		EXT-2	EXT-3	EXT-4	EXT-5	MW-01D	MW-01I
Date		5/21/2009	5/21/2009	5/21/2009	5/21/2009	5/20/2009	5/20/2009
Chemical Name	**Remedial Goal**						
Arsenic	5	**1.3 J-**	1 UJ	1 UJ	1 UJ	1 U	**0.82 J**
Lead	none	**0.48 J**	**0.59 J**	**2.7**	**0.48 J**	1 U	1 U
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	**0.2 J**	0.5 U	0.5 U	0.5 U
Chloroform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	**0.74**	0.5 U	**0.71**	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	**0.39 J**	0.5 U	**0.43 J**	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown.
4) Concentrations which exceed a remedial goal are in bold and shaded.

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		MW-01S	MW-02I	MW-02S	MW-03I	MW-03S	MW-04D
Date		5/20/2009	5/19/2009	5/19/2009	5/19/2009	5/19/2009	5/19/2009
Chemical Name	**Remedial Goal**						
Arsenic	5	1 U	1 U	1 U	1 U	**8.7**	1 UJ
Lead	none	1 U	1 U	1 U	1 U	1 U	**0.065 J**
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	0.5 U	0.5 U	**0.3 J**	0.5 U
Chloroform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown.
4) Concentrations which exceed a remedial goal are in bold and shaded.

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		MW-04I	MW-05I	MW-05S	MW-06SR	MW-07I	MW-07S
Date		5/19/2009	5/19/2009	5/19/2009	5/19/2009	5/20/2009	5/20/2009
Chemical Name	**Remedial Goal**						
Arsenic	5	1 U	1 U	1 U	**13.4**	1 UJ	1 UJ
Lead	none	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	0.5 U	**1.9**	0.5 U	0.5 U
Chloroform	none	0.5 U	0.5 U	**0.36 J**	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown.
4) Concentrations which exceed a remedial goal are in bold and shaded.

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		MS-09I	MW-10I	MW-10S	MW-11I	MW-11S	MW-12I
Date		5/20/2009	5/21/2009	5/20/2009	5/20/2009	5/20/2009	5/20/2009
Chemical Name	**Remedial Goal**						
Arsenic	5	1 U	1 UJ	1 UJ	1 UJ	1 UJ	1 U
Lead	none	1 U	1 U	**0.017 J**	1 U	**0.038 J**	1 U
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	**11**	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown
4) Concentrations which exceed a remedial goal are in bold and shaded.

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		MW-12S	MW-13I	MW-13S	MW-14I	MW-14S	MW-15I
Date		5/20/2009	5/20/2009	5/20/2009	5/19/2009	5/19/2009	5/19/2009
Chemical Name	**Remedial Goal**						
Arsenic	5	1 U	1 U	1 U	1 U	1 U	1 U
Lead	none	1 U	1 U	1 U	**0.02 J**	1 U	**0.033 J**
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown.
4) Concentrations which exceed a remedial goal are in bold and shaded.

Douglas Road Landfill
Annual Groundwater Sampling Results
May 2009

Location		MW-15S	MW-16I	MW-16S	MW-17I	MW-17S
Date		5/19/2009	5/19/2009	5/19/2009	5/20/2009	5/20/2009
Chemical Name	**Remedial Goal**					
Arsenic	5	1 U	1 UJ	1 UJ	1 UJ	1 UJ
Lead	none	**0.047 J**	**0.012 J**	**0.036 J**	1 U	1 U
1,1-Dichloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Methylene chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Tetrachloroethene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	5	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Vinyl chloride	none	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U

Notes:

1) All concentrations are in micrograms per liter (ug/l).
2) All detected values are in **bold**.
3) Only chemicals which were detected during the 2009 annual sampling are shown.
4) Concentrations which exceed a remedial goal are in bold and shaded.

APPENDIX C

TECHNICAL MEMORANDUM
STATISTICAL TREND ANALYSIS
DOUGLAS ROAD LANDFILL SUPERFUND SITE
MISHAWAKA, ST JOSEPH COUNTY, INDIANA

(Six Pages)

1.0 INTRODUCTION

Under the U.S. Environmental Protection Agency (EPA) Remedial Action Contract (RAC) II for Region 5, Contract No. EP-S5-06-02, Work Assignment No. 002-LRLR-052H, SulTRAC prepared this technical memorandum to discuss the procedures used for statistical trend analyses of the groundwater analytical results for the Douglas Road Landfill Superfund (Douglas Road) site in Mishawaka, St. Joseph County, Indiana.

This technical memorandum discusses the project background and SulTRAC's groundwater analytical result trend analyses, and provides a summary of the trend analyses and a list of references used to prepare this report.

2.0 BACKGROUND

The Douglas Road site is located at the northwest corner of Douglas and Grape Roads in Mishawaka, St. Joseph County, Indiana. Uniroyal Plastics Inc. used the site as a waste repository from 1954 to 1979. The waste at the site included solvents, fly ash, paper, wood stock, and rubber and plastic scrap. Remedial investigation (RI) sampling in 1994 indicated on- and off-site groundwater contamination. In 1995, the EPA issued two Records of Decision (ROD), one to construct a landfill cap over the landfill and the other to construct an on-site wetland to treat contaminated groundwater pumped from beneath the site (EPA 1999). After the completion of the landfill cap and on-site wetland, annual groundwater sampling has been conducted to monitor the wetland system to ensure that groundwater contamination levels continuously decrease.

A total of 36 monitoring wells were initially installed at 17 locations at the site and in surrounding areas to monitor groundwater contaminant concentrations. Property access to well locations MW-06 and MW-08 have been problematic in the past. Therefore, the two well nests were abandoned in December 2001. A replacement well for MW-06S (MW-06SR) was installed on site in April 2003 because of historical contamination concentrations and the need to gather data there. Thirty-three monitoring wells comprise the current monitoring network. For the purposes of the trend analyses, analytical results from MW-06S and MW-06SR are considered as coming from the same monitoring well.

3.0 TREND ANALYSIS

Statistical trend analyses were completed for the following four monitoring wells with a history of detections and exceedances: MW-03S, MW-06SR, MW-11S, and MW-13S. The analytical results for the following contaminants were used for the analyses: 1,2-dichloroethane (1,2-DCA); arsenic; benzene; total volatile organic compounds (VOCs); and vinyl chloride. Statistical trends were analyzed for the time periods of November 2000 through May 2009, and May 2005 through May 2009. Appendix C-A provides analytical trend summaries.

SulTRAC used the Monitoring and Remediation Optimization System (MAROS) software to conduct the trend analyses using the Mann Kendall and linear regression methods. MAROS is a software program based on statistical methods applied to site-specific data in order to provide long-term groundwater monitoring analyses (GSI Environmental 2009).

As stated above, MAROS works with site-specific data in order to complete the chosen analyses. For Mann Kendall and linear regression trend analysis methods, the only site-specific information needed for statistical calculations are the names of the monitoring wells, sampling dates, sample results for each constituent, and detection limits. Other site-specific factors, such as seepage velocity, discharge points and property boundaries, do not affect the outcome of these analyses because these factors are not considered in the statistical calculations.

To complete the Mann Kendall and linear regression trend analysis methods using MAROS, the data sets to be analyzed were imported, including: monitoring well names, sampling dates, sample results for each constituent, and detection limits. SulTRAC has managed the site since August 2006 and has full laboratory results available for sampling events in 2007, 2008, and 2009. Older results were taken from a 2006 long-term remedial action annual report prepared by the previous contractor managing the site. The 2006 report does not include full laboratory results, only summaries. Therefore, SulTRAC used the available summary information to set up the data file. The results were taken as listed in the 2006 report table, non-detect results were assumed to have a detection limit of 0.5 microgram per liter (µg/L), and the dates were assumed to be the middle of the month indicated. MAROS requires that site-specific data be input, such as seepage velocity, discharge points, and property boundaries. However, these data were not used for the selected methods for these trend analyses.

Two time periods were used for trend analysis: one to show long-term trends (November 2000 through

May 2009) and the other to show recent trends (May 2005 through May 2009). The long-term trend covers the entire period of operation for the groundwater treatment system from September 2000 to the present. The recent trend analysis provides insight regarding more recent trends. At least four sets of data are required for a trend analysis, thus the recent trend analysis has the minimum number of data points. The resulting Mann Kendall and linear regression method trend analyses, were run to produce individual well graphs and well summary reports (Appendix C-A).

The statistical trends for the Douglas Road site analytical results were slightly different for each time period analyzed. For the long-term trend analyses (November 2000 through May 2009), when sufficient data sets were available for a trend analysis, at least one of the methods identified a decreasing trend or potentially decreasing trend. For the recent trend analyses period (May 2005 through May 2009), the contaminant concentrations were either stable or decreasing except for MW-06SR, which had a stable trend for arsenic using both procedures and no trend (Mann-Kendall) and a potentially increasing (Linear Regression) for total VOCs. Additionally, for arsenic, MW-06SR showed a stable trend.

4.0 SUMMARY

This report discusses the statistical trend analyses for groundwater analytical results collected at the Douglas Road site from November 2000 through May 2009 and May 2005 through May 2009. SulTRAC used the MAROS software to conduct the trend analyses using the Mann Kendall and linear regression methods. For the long-term trend analyses (November 2000 through May 2009), when sufficient data sets were available, at least one of the methods identified decreasing trends except for total VOCs at MW-06SR; no trend was identified. Trend analysis was not possible for several well/chemical combinations due to lack of detections for specific chemicals. For the recent trend analyses period (May 2005 through May 2009), the contaminant concentrations were either stable or decreasing, with the exception of MW-06SR, which had a potentially increasing trend.

5.0 REFERENCES

GSI Environmental. 2009. "Monitoring and Remediation Optimization Systems (MAROS)." On-line Address: http://www.gsi-net.com/software/free-software/maros.html

U.S. Environmental Protection Agency (EPA). 1999. "Cleanup Work Set to Begin at the Douglas Road Superfund Site, Mishawaka, Indiana."

APPENDIX C-A

SulTRAC ANALYTICAL TREND SUMMARIES

(162 Sheets)

MAROS Statistical Trend Analysis Summary

Project: Douglas Road
Location: Mishawaka

User Name:
State: Indiana

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value

Well	Source/ Tail	Number of Samples	Number of Detects	Average Conc. (mg/L)	Median Conc. (mg/L)	All Samples "ND" ?	Mann-Kendall Trend	Linear Regression Trend
1,2-DICHLOROETHANE								
MW-03S	T	4	1	6 4E-04	2.5E-04	No	NT	D
MW-06SR	T	8	3	2.1E-03	2.5E-04	No	NT	PD
MW-11S	T	2	0	2.5E-04	2 5E-04	Yes	N/A	N/A
MW-13S	S	3	0	2.5E-04	2 5E-04	Yes	N/A	N/A
ARSENIC								
MW-03S	T	10	10	1 6E-02	1 5E-02	No	D	D
MW-06SR	T	8	8	2 6E-02	2 3E-02	No	PD	D
MW-11S	T	2	1	2 0E-03	2 0E-03	No	N/A	N/A
MW-13S	S	3	2	1 9E-03	5 3E-04	No	N/A	N/A
BENZENE								
MW-03S	T	8	6	8 2E-03	2 3E-03	No	D	D
MW-06SR	T	8	6	5 8E-03	1 5E-03	No	PD	D
MW-11S	T	2	0	2 5E-04	2.5E-04	Yes	N/A	N/A
MW-13S	S	3	0	2 5E-04	2 5E-04	Yes	N/A	N/A
Total Volatile Organics								
MW-03S	T	9	9	1 8E-01	4.2E-03	No	D	D
MW-06SR	T	7	3	2 4E-02	2 5E-04	No	NT	NT
MW-11S	T	12	11	3 7E-02	3 0E-02	No	D	D
MW-13S	S	12	9	7.2E-03	3.5E-03	No	D	PD
VINYL CHLORIDE								
MW-03S	T	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-06SR	T	3	0	2.5E-04	2 5E-04	Yes	N/A	N/A
MW-11S	T	2	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-13S	S	5	2	4 5E-04	2.5E-04	No	NT	NT

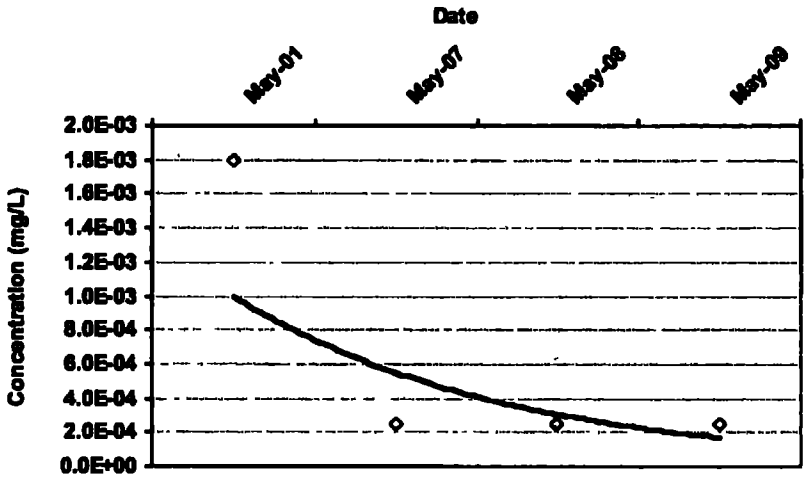
Note Increasing (I); Probably Increasing (PI), Stable (S), Probably Decreasing (PD); Decreasing (D), No Trend (NT); Not Applicable (N/A); Not Applicable (N/A) - Due to Insufficient Data (< 4 sampling events), No Detectable Concentration (NDC)

The Number of Samples and Number of Detects shown above are post-consolidation values.

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.22

Confidence in Trend: 98.7%

Ln Slope: -7.3E-04

LR Concentration Trend: D

Consolidation Data Table:

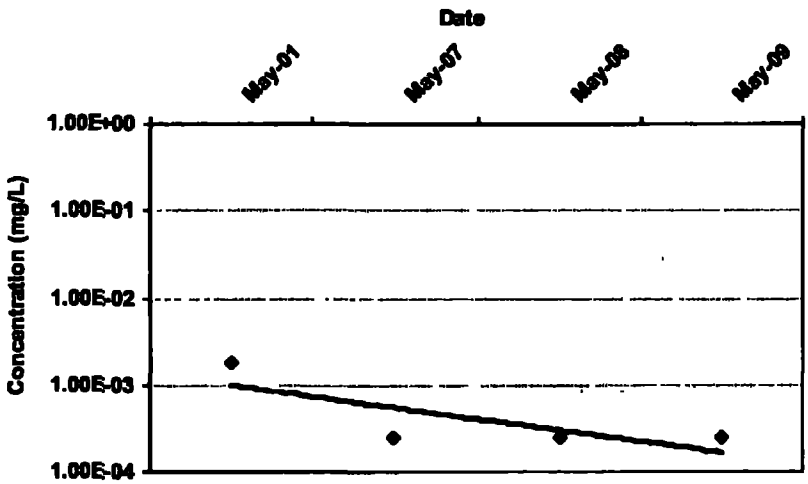
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2001	1,2-DICHLOROETHANE	1 8E-03		1	1
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2 5E-04	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.22

Confidence in Trend: 98.7%

Ln Slope: -7.3E-04

LR Concentration Trend: D

Consolidation Data Table:

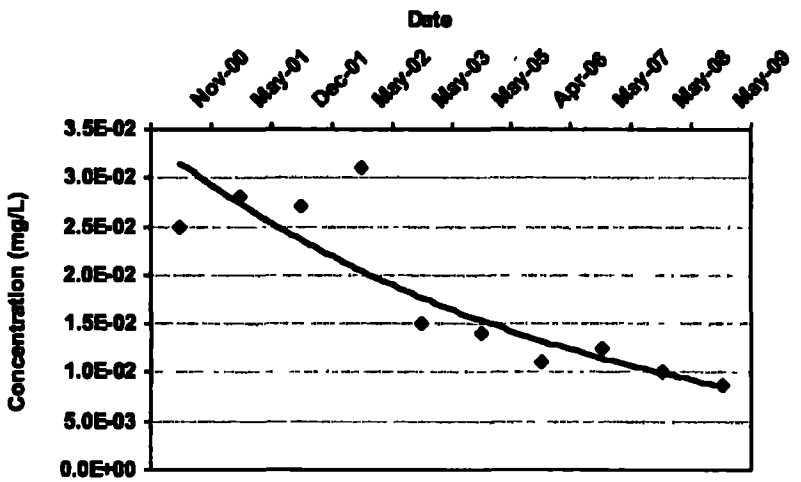
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2001	1,2-DICHLOROETHANE	1.8E-03		1	1
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2.5E-04	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.47

Confidence In Trend: 100.0%

Ln Slope: -3.9E-04

LR Concentration Trend: D

Consolidation Data Table:

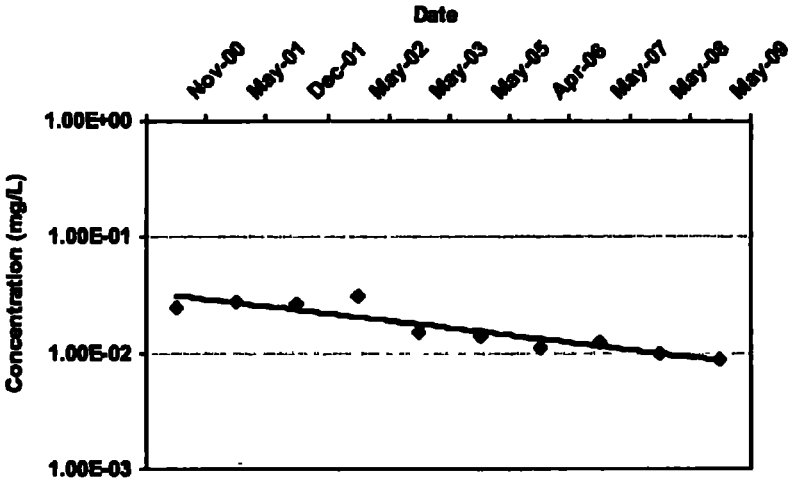
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	ARSENIC	2.5E-02		1	1
MW-03S	T	5/15/2001	ARSENIC	2.8E-02		1	1
MW-03S	T	12/15/2001	ARSENIC	2.7E-02		1	1
MW-03S	T	5/15/2002	ARSENIC	3.1E-02		1	1
MW-03S	T	5/15/2003	ARSENIC	1.5E-02		1	1
MW-03S	T	5/15/2005	ARSENIC	1.4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1.1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1.2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1.0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8.7E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.47

Confidence in Trend: 100.0%

Ln Slope: -3.9E-04

LR Concentration Trend: D

Consolidation Data Table:

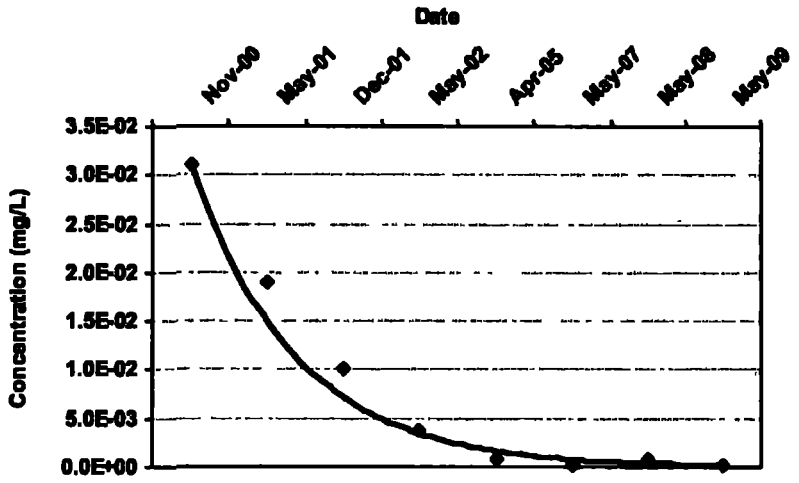
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	ARSENIC	2.5E-02		1	1
MW-03S	T	5/15/2001	ARSENIC	2.8E-02		1	1
MW-03S	T	12/15/2001	ARSENIC	2.7E-02		1	1
MW-03S	T	5/15/2002	ARSENIC	3.1E-02		1	1
MW-03S	T	5/15/2003	ARSENIC	1.5E-02		1	1
MW-03S	T	5/15/2005	ARSENIC	1.4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1.1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1.2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1.0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8.7E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.37

Confidence in Trend: 100.0%

Ln Slope: -1.4E-03

LR Concentration Trend: D

Consolidation Data Table:

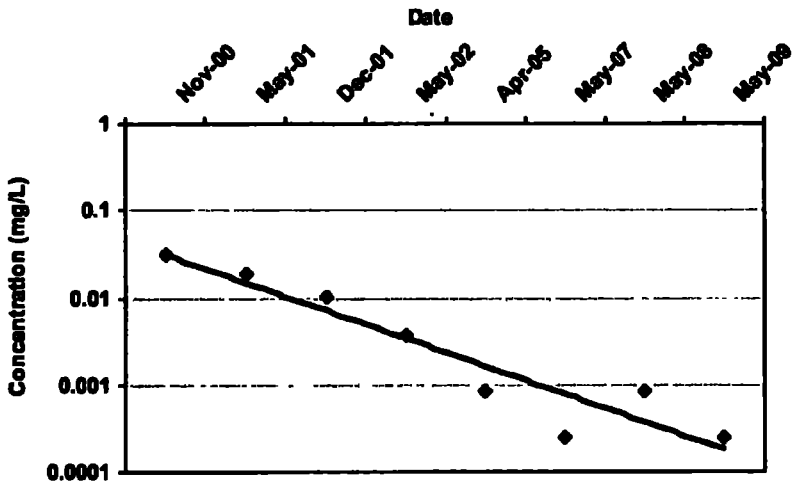
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	BENZENE	3 1E-02		1	1
MW-03S	T	5/15/2001	BENZENE	1.9E-02		1	1
MW-03S	T	12/15/2001	BENZENE	1 0E-02		1	1
MW-03S	T	5/15/2002	BENZENE	3.7E-03		1	1
MW-03S	T	4/15/2005	BENZENE	8.5E-04		1	1
MW-03S	T	5/21/2007	BENZENE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8 5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.37

Confidence In Trend: 100.0%

Ln Slope: -1.4E-03

LR Concentration Trend: D

Consolidation Data Table:

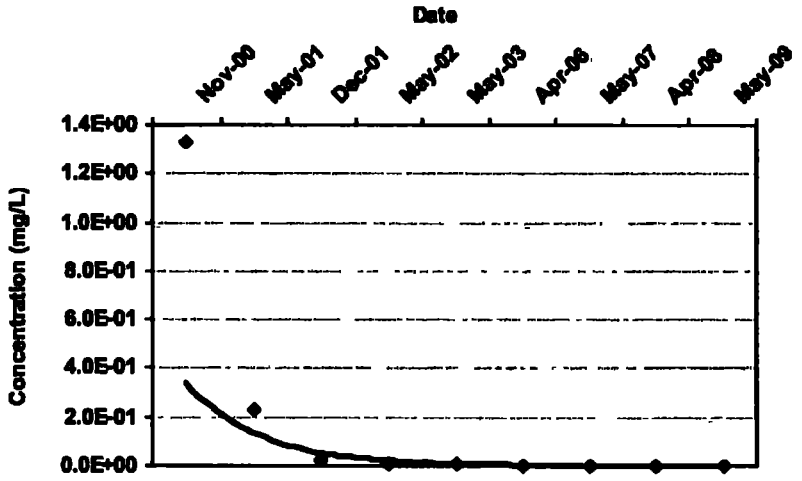
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	BENZENE	3 1E-02		1	1
MW-03S	T	5/15/2001	BENZENE	1 9E-02		1	1
MW-03S	T	12/15/2001	BENZENE	1 0E-02		1	1
MW-03S	T	5/15/2002	BENZENE	3.7E-03		1	1
MW-03S	T	4/15/2005	BENZENE	8 5E-04		1	1
MW-03S	T	5/21/2007	BENZENE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8.5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 2.46

Confidence In Trend: 99.8%

Ln Slope: -2.0E-03

LR Concentration Trend: D

Consolidation Data Table:

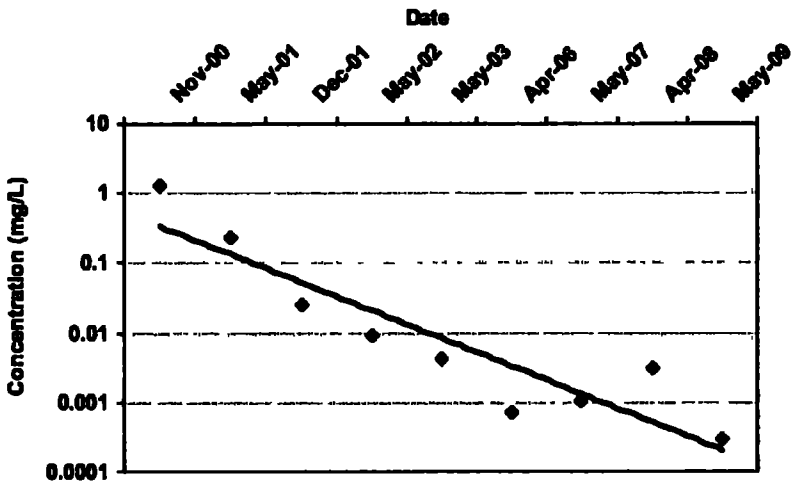
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	Total Volatile Organics	1 3E+00		1	1
MW-03S	T	5/15/2001	Total Volatile Organics	2 3E-01		1	1
MW-03S	T	12/15/2001	Total Volatile Organics	2.5E-02		1	1
MW-03S	T	5/15/2002	Total Volatile Organics	9 2E-03		1	1
MW-03S	T	5/15/2003	Total Volatile Organics	4.2E-03		1	1
MW-03S	T	4/15/2006	Total Volatile Organics	7.4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1.0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3 1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3 0E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 2.46

Confidence In Trend: 99.8%

Ln Slope: -2.0E-03

LR Concentration Trend: D

Consolidation Data Table:

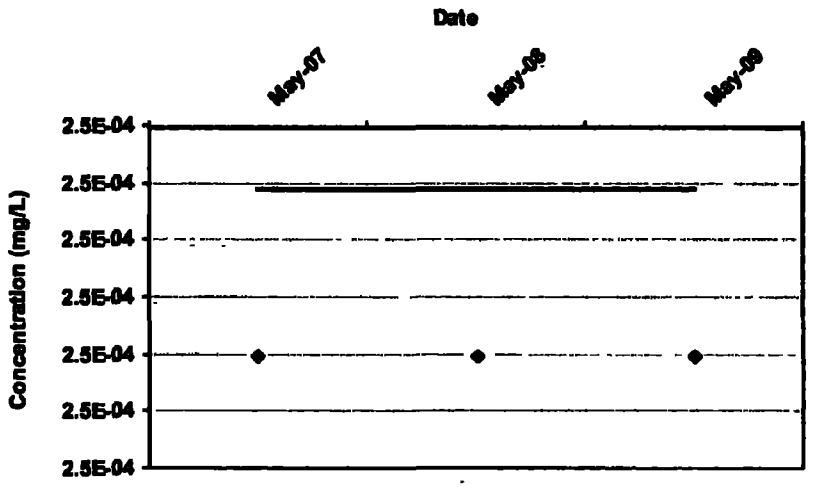
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	Total Volatile Organics	1.3E+00		1	1
MW-03S	T	5/15/2001	Total Volatile Organics	2.3E-01		1	1
MW-03S	T	12/15/2001	Total Volatile Organics	2.5E-02		1	1
MW-03S	T	5/15/2002	Total Volatile Organics	9.2E-03		1	1
MW-03S	T	5/15/2003	Total Volatile Organics	4.2E-03		1	1
MW-03S	T	4/15/2006	Total Volatile Organics	7.4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1.0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3.1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3.0E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

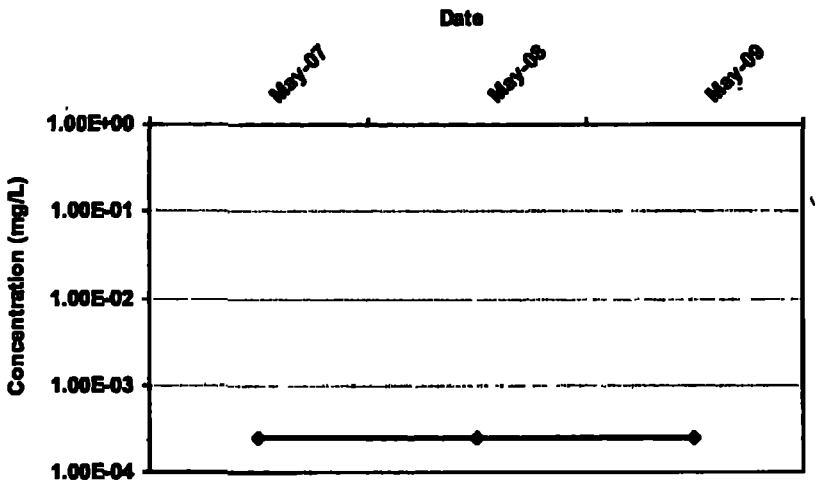
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

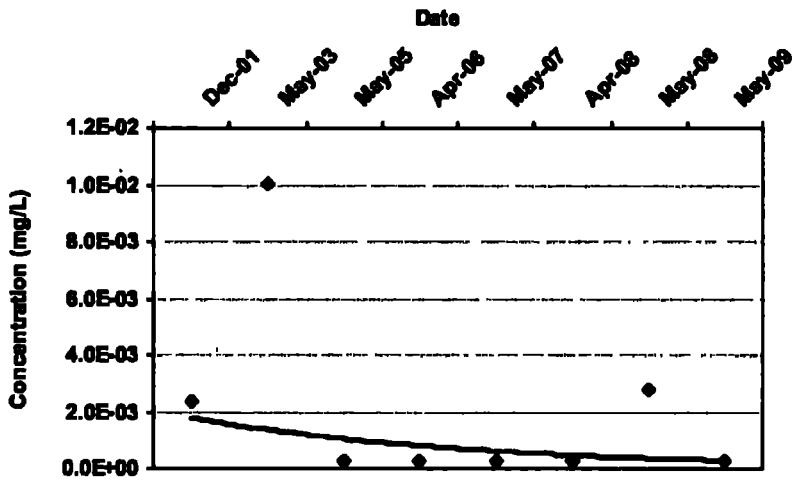
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.64

Confidence in Trend: 93.0%

Ln Slope: -9.0E-04

LR Concentration Trend: PD

Consolidation Data Table:

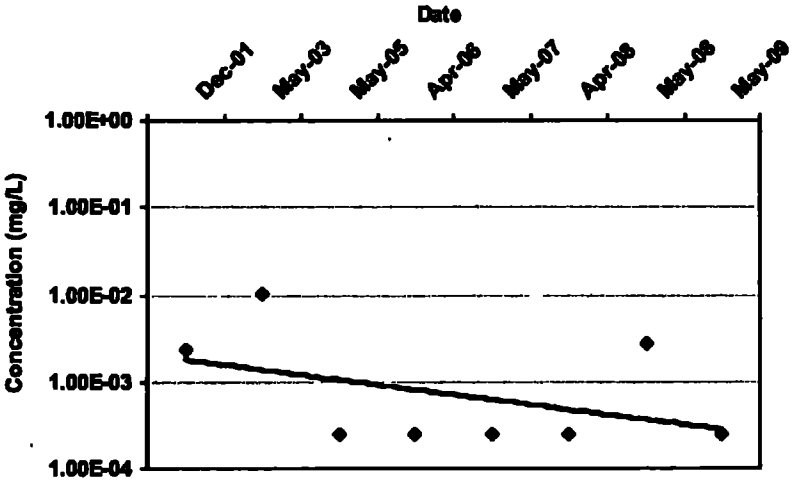
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	1,2-DICHLOROETHANE	2.4E-03		1	1
MW-06SR	T	5/15/2003	1,2-DICHLOROETHANE	1.0E-02		1	1
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.64

Confidence In Trend: 93.0%

Ln Slope: -9.0E-04

LR Concentration Trend: PD

Consolidation Data Table:

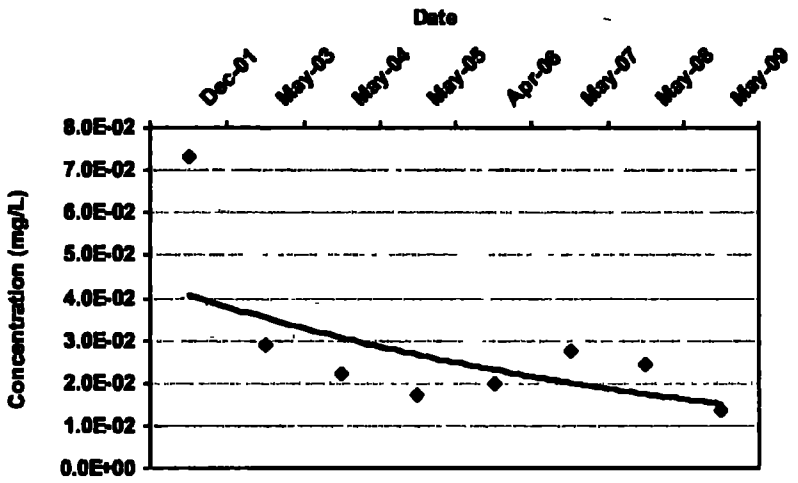
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	1,2-DICHLOROETHANE	2.4E-03		1	1
MW-06SR	T	5/15/2003	1,2-DICHLOROETHANE	1.0E-02		1	1
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.66

Confidence In Trend: 97.5%

Ln Slope: -3.8E-04

LR Concentration Trend: D

Consolidation Data Table:

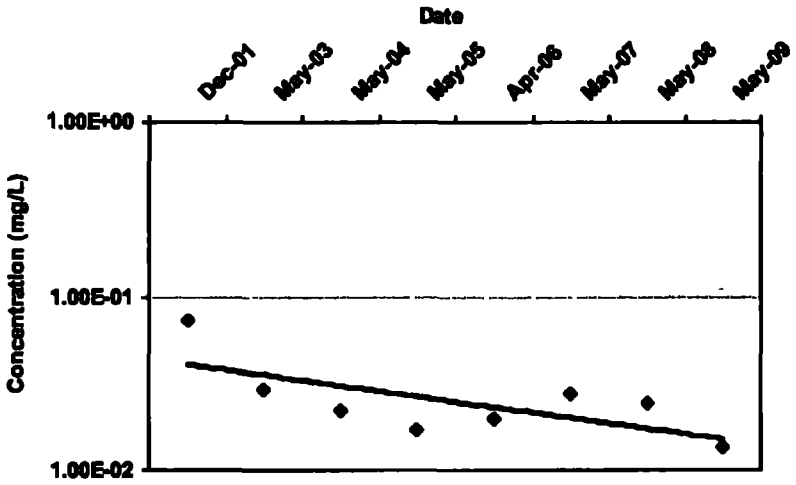
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	ARSENIC	7 3E-02		1	1
MW-06SR	T	5/15/2003	ARSENIC	2 9E-02		1	1
MW-06SR	T	5/15/2004	ARSENIC	2.2E-02		1	1
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2 0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2 8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2 5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.66

Confidence in Trend: 97.5%

Ln Slope: -3.8E-04

LR Concentration Trend: D

Consolidation Data Table:

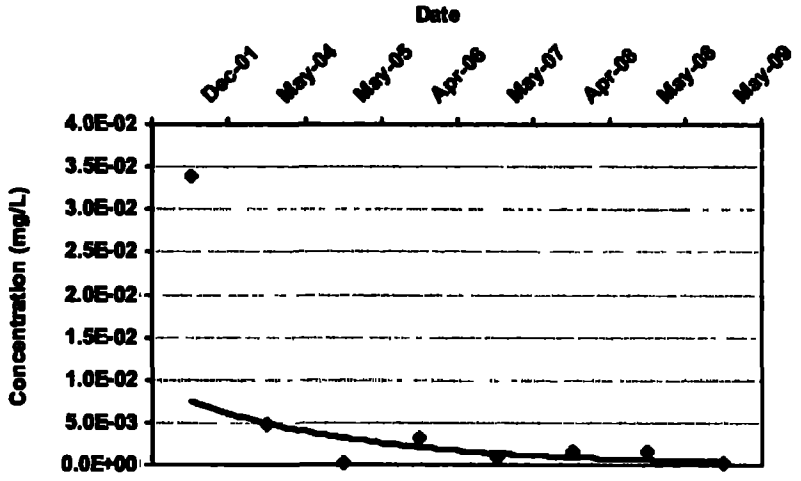
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	ARSENIC	7.3E-02		1	1
MW-06SR	T	5/15/2003	ARSENIC	2.9E-02		1	1
MW-06SR	T	5/15/2004	ARSENIC	2.2E-02		1	1
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2.0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2.8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.99

Confidence in Trend: 98.0%

Ln Slope: -1.3E-03

LR Concentration Trend: D

Consolidation Data Table:

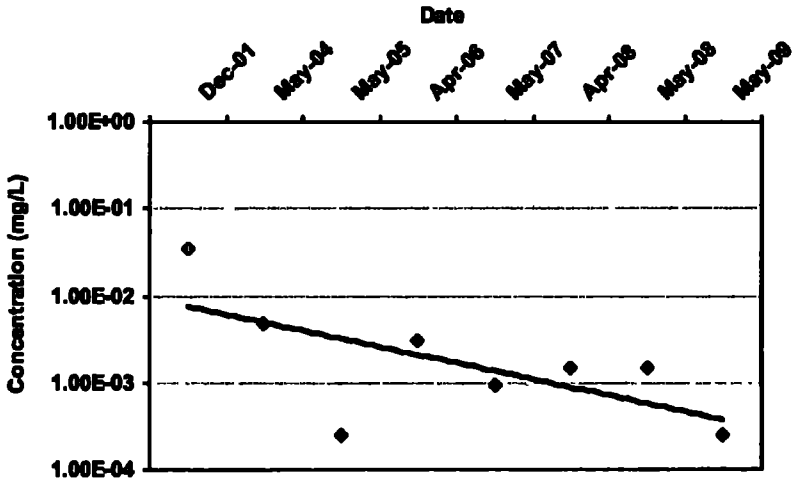
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	BENZENE	3 4E-02		1	1
MW-06SR	T	5/15/2004	BENZENE	4.7E-03		1	1
MW-06SR	T	5/15/2005	BENZENE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3.1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9 5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.99

Confidence in Trend: 98.0%

Ln Slope: -1.3E-03

LR Concentration Trend: D

Consolidation Data Table:

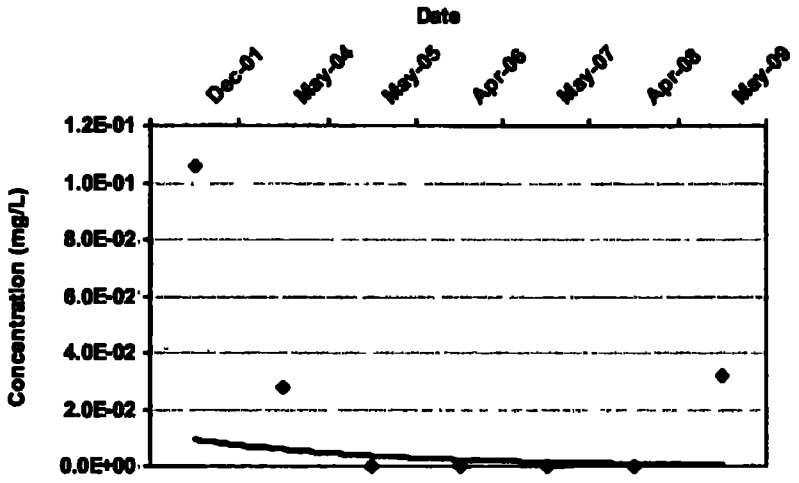
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	BENZENE	3.4E-02		1	1
MW-06SR	T	5/15/2004	BENZENE	4.7E-03		1	1
MW-06SR	T	5/15/2005	BENZENE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3.1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9.5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.63

Confidence in Trend: 83.0%

Ln Slope: -1.3E-03

LR Concentration Trend: NT

Consolidation Data Table:

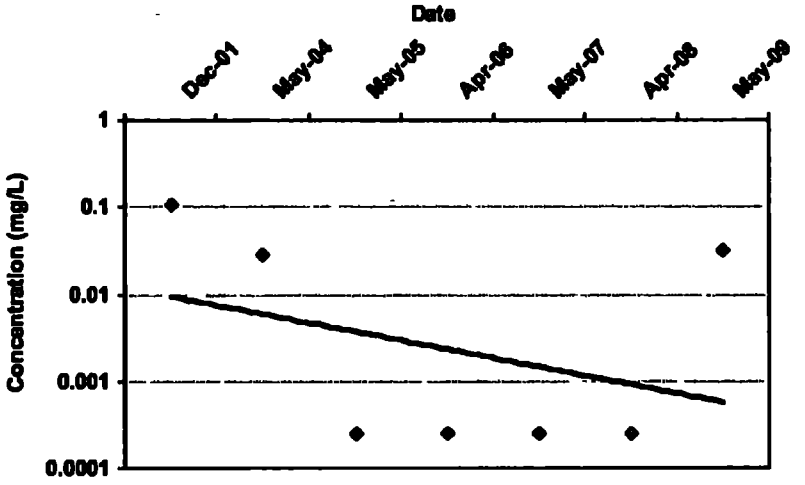
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	Total Volatile Organics	1 1E-01		1	1
MW-06SR	T	5/15/2004	Total Volatile Organics	2.8E-02		1	1
MW-06SR	T	5/15/2005	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3.2E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.63

Confidence in Trend: 83.0%

Ln Slope: -1.3E-03

LR Concentration Trend: NT

Consolidation Data Table:

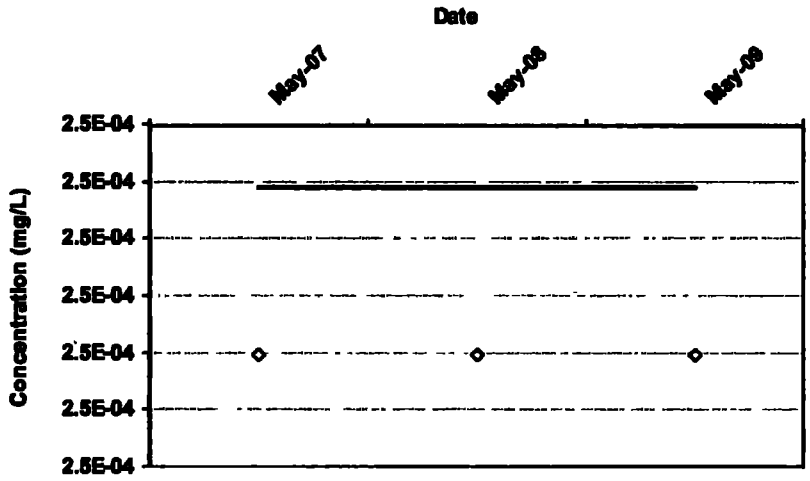
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	Total Volatile Organics	1 1E-01		1	1
MW-06SR	T	5/15/2004	Total Volatile Organics	2 8E-02		1	1
MW-06SR	T	5/15/2005	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3 2E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

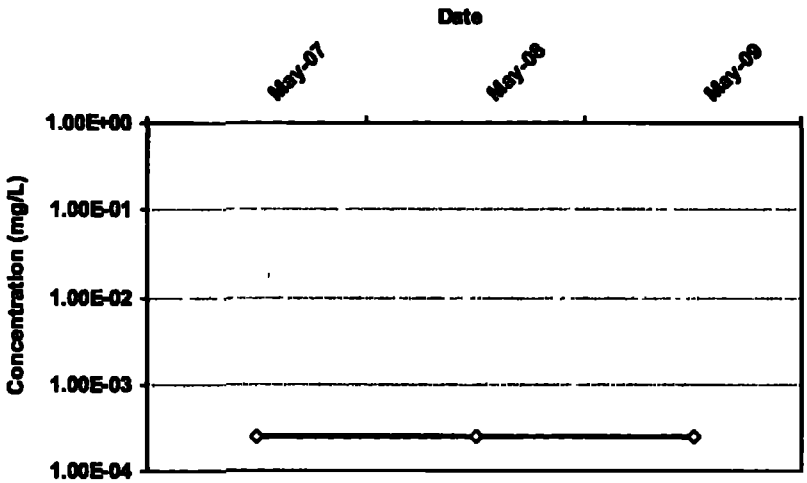
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

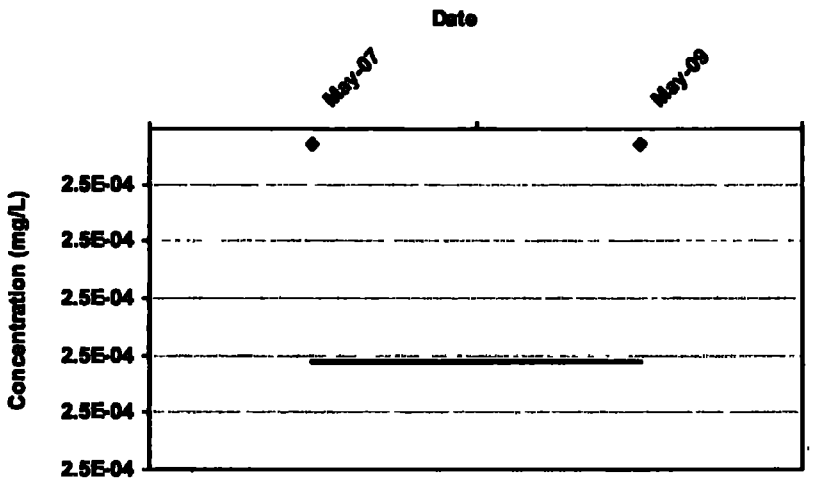
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

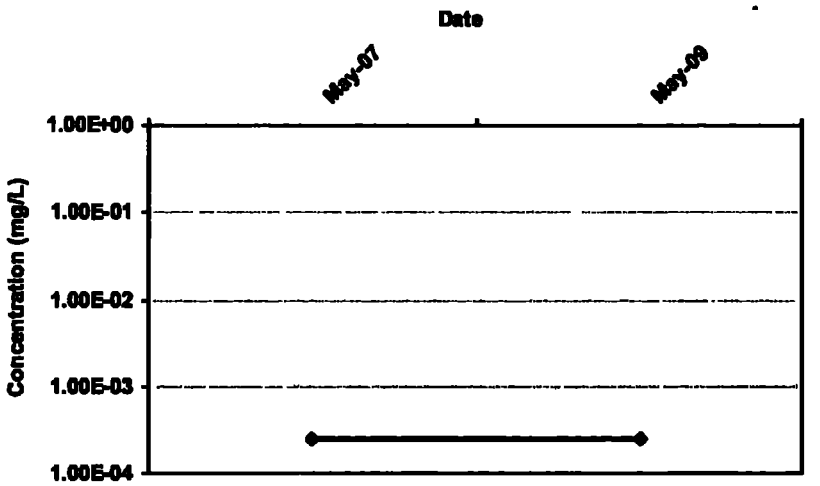
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

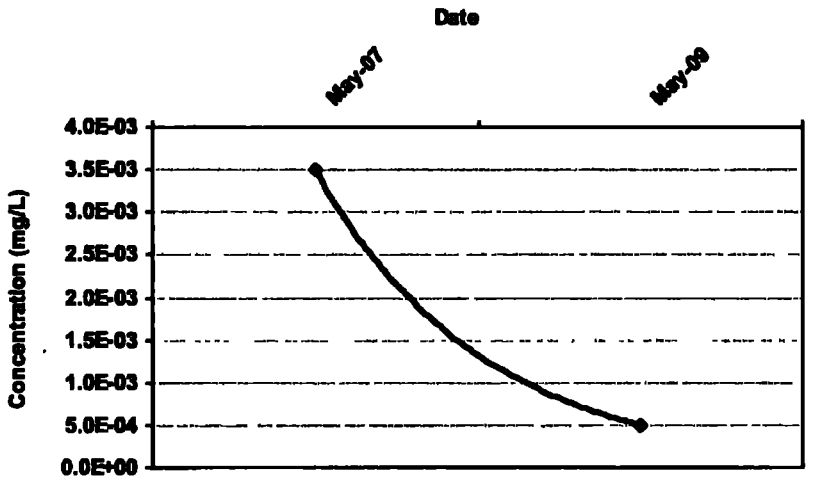
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

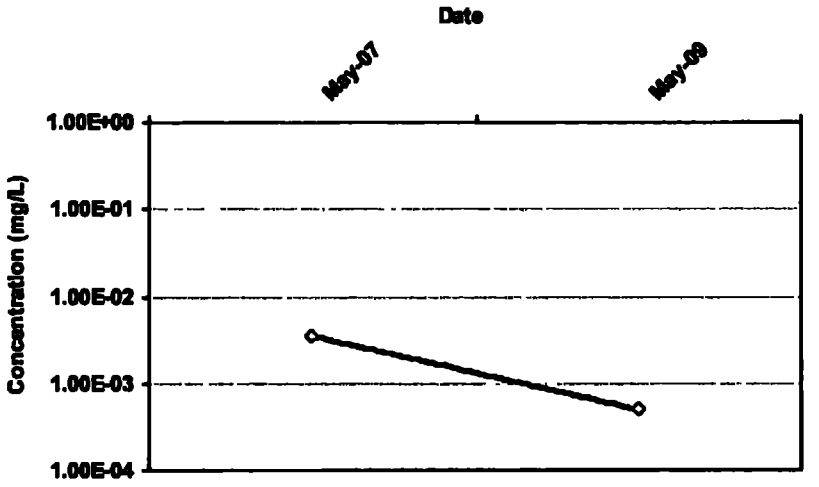
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3 5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

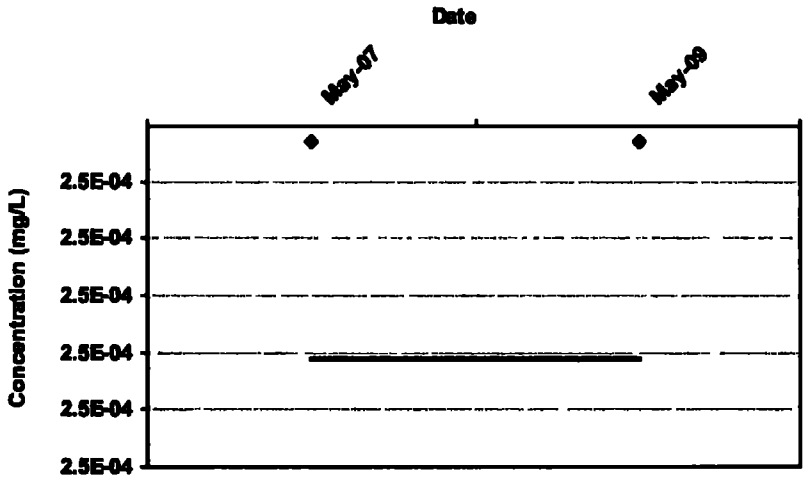
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

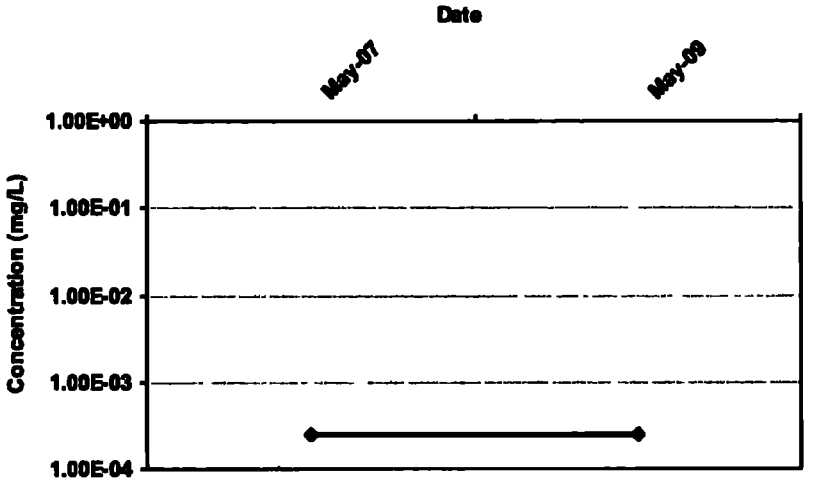
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

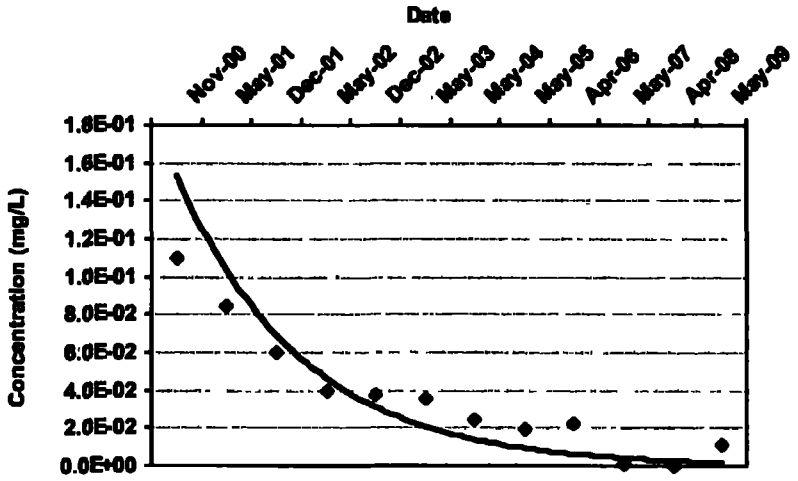
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.89

Confidence in Trend: 99.9%

Ln Slope: -1.4E-03

LR Concentration Trend: D

Consolidation Data Table:

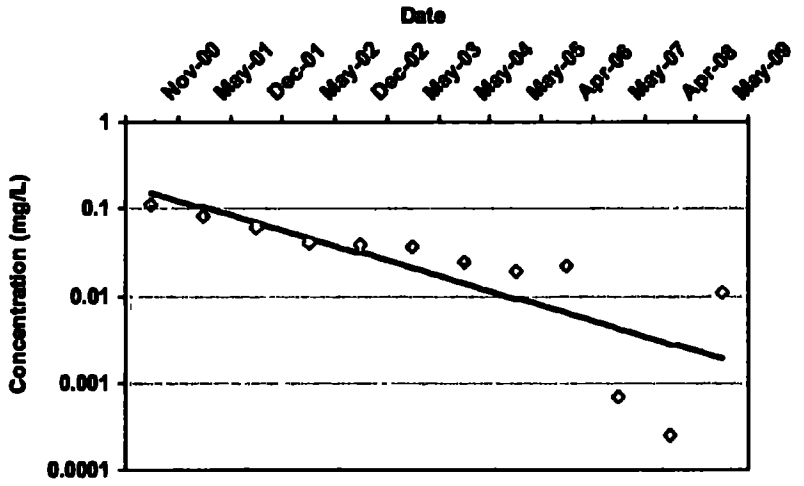
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	11/15/2000	Total Volatile Organics	1 1E-01		1	1
MW-11S	T	5/15/2001	Total Volatile Organics	8 4E-02		1	1
MW-11S	T	12/15/2001	Total Volatile Organics	6 0E-02		1	1
MW-11S	T	5/15/2002	Total Volatile Organics	4.0E-02		1	1
MW-11S	T	12/15/2002	Total Volatile Organics	3 8E-02		1	1
MW-11S	T	5/15/2003	Total Volatile Organics	3 6E-02		1	1
MW-11S	T	5/15/2004	Total Volatile Organics	2.5E-02		1	1
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2 5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1 1E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.89

Confidence in Trend: 99.9%

Ln Slope: -1.4E-03

LR Concentration Trend: D

Consolidation Data Table:

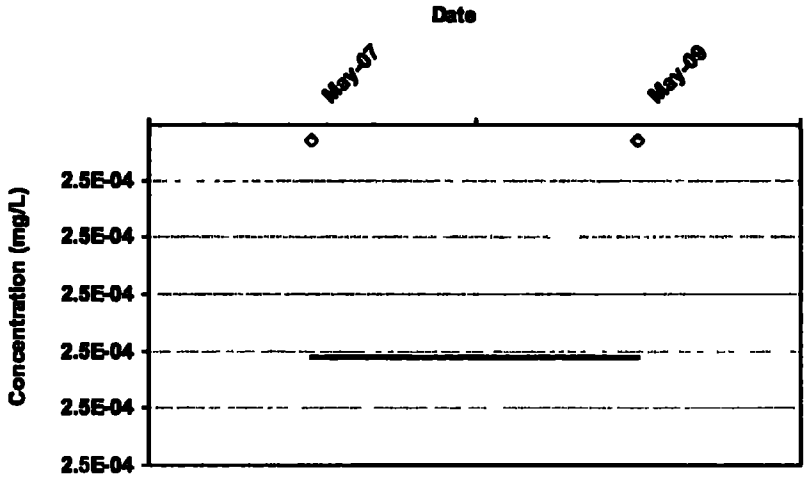
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	11/15/2000	Total Volatile Organics	1.1E-01		1	1
MW-11S	T	5/15/2001	Total Volatile Organics	8.4E-02		1	1
MW-11S	T	12/15/2001	Total Volatile Organics	6.0E-02		1	1
MW-11S	T	5/15/2002	Total Volatile Organics	4.0E-02		1	1
MW-11S	T	12/15/2002	Total Volatile Organics	3.8E-02		1	1
MW-11S	T	5/15/2003	Total Volatile Organics	3.6E-02		1	1
MW-11S	T	5/15/2004	Total Volatile Organics	2.5E-02		1	1
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

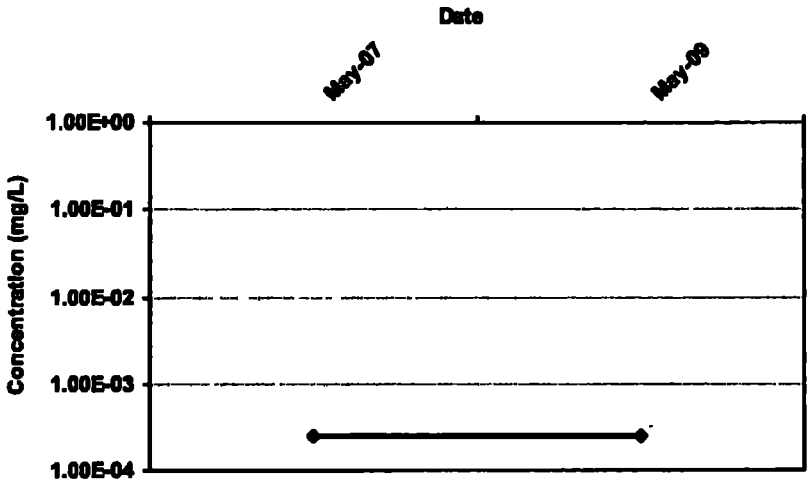
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0 00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

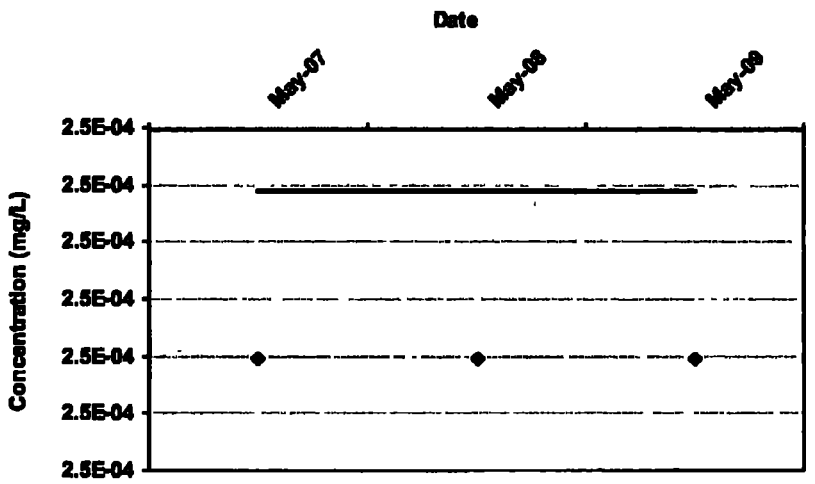
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

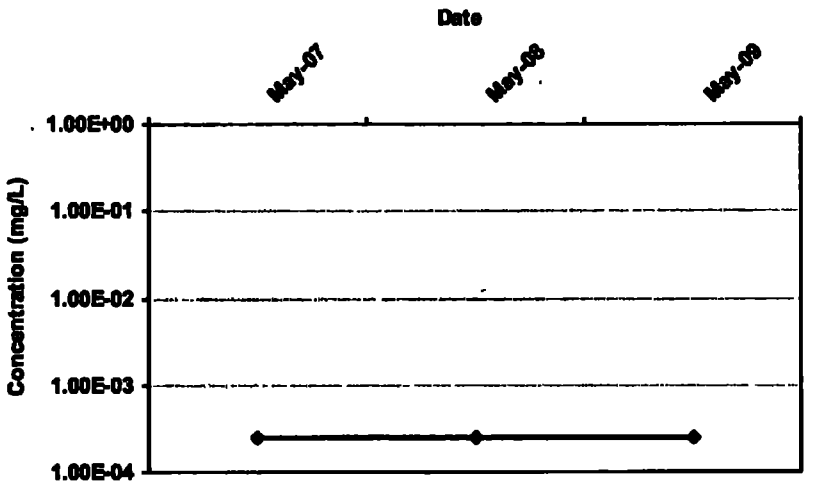
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

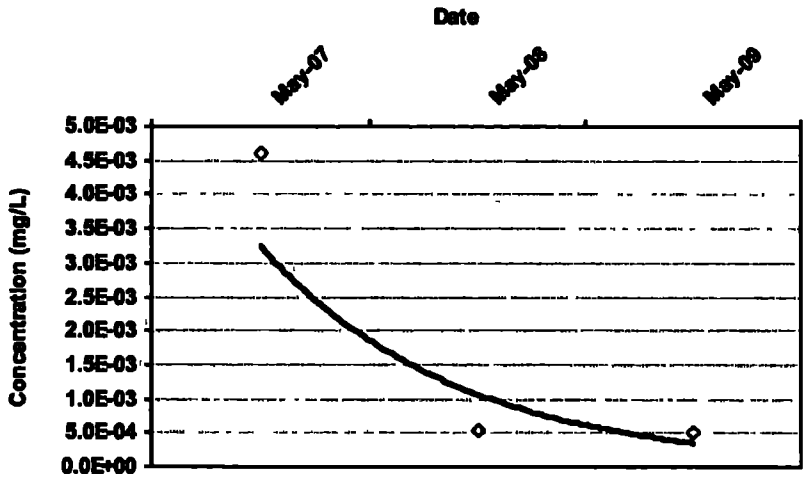
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

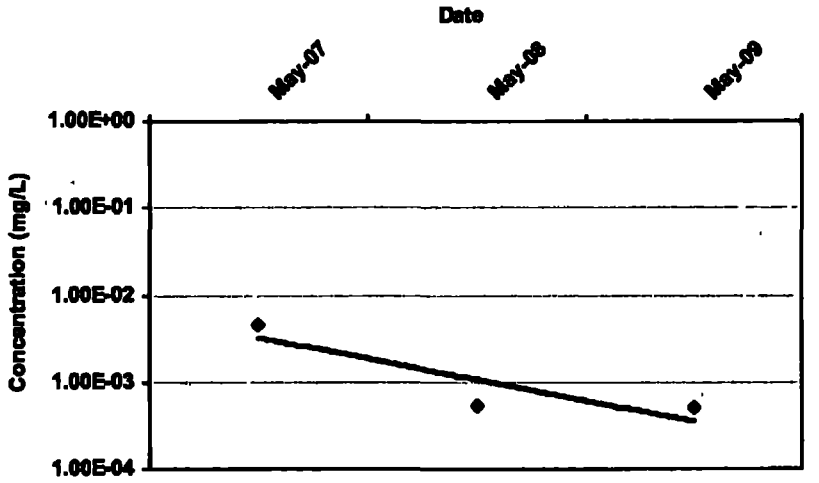
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4.6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5.3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

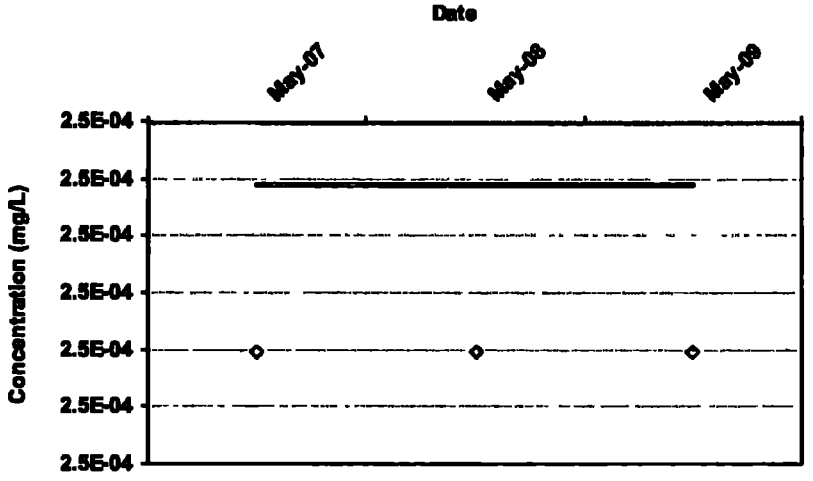
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4.6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5.3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

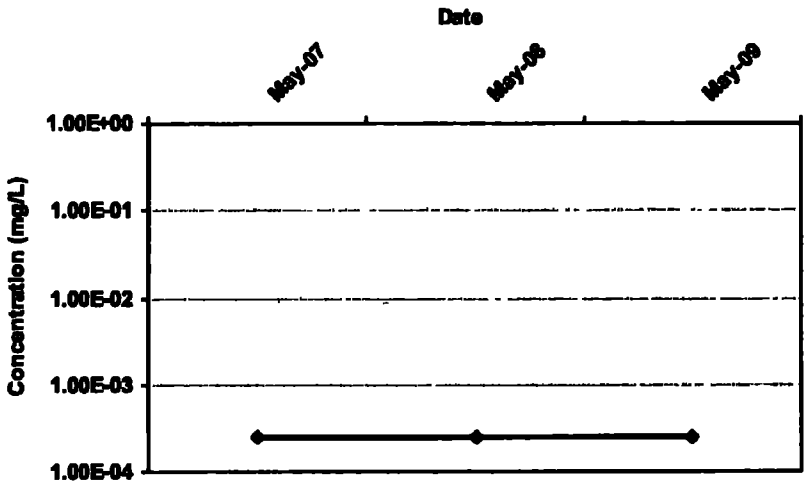
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

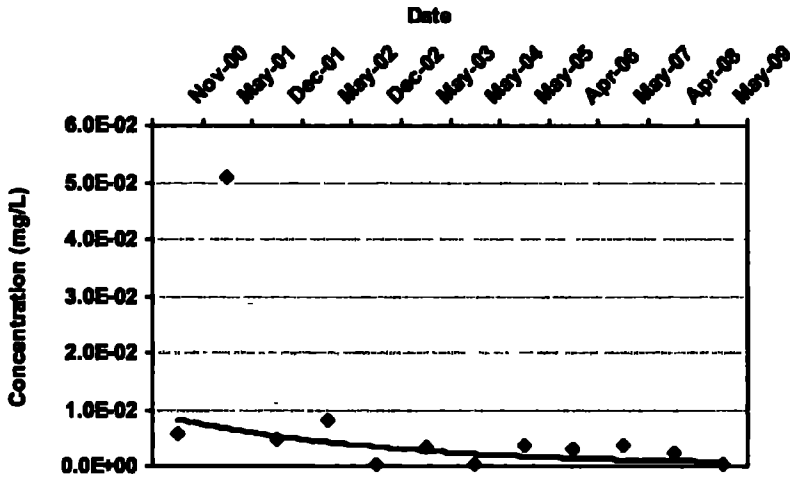
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.95

Confidence in Trend: 93 1%

Ln Slope: -7.0E-04

LR Concentration Trend: PD

Consolidation Data Table:

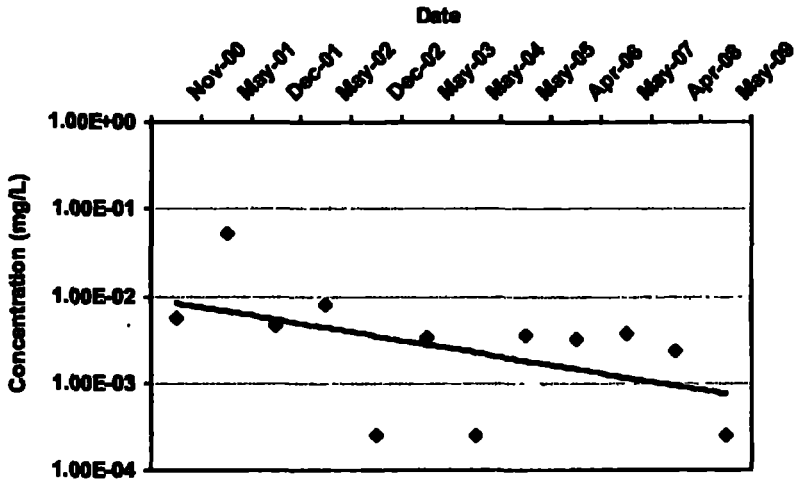
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2000	Total Volatile Organics	5.6E-03		1	1
MW-13S	S	5/15/2001	Total Volatile Organics	5 1E-02		1	1
MW-13S	S	12/15/2001	Total Volatile Organics	4.6E-03		1	1
MW-13S	S	5/15/2002	Total Volatile Organics	8.0E-03		1	1
MW-13S	S	12/15/2002	Total Volatile Organics	2 5E-04	ND	1	0
MW-13S	S	5/15/2003	Total Volatile Organics	3 4E-03		1	1
MW-13S	S	5/15/2004	Total Volatile Organics	2 5E-04	ND	1	0
MW-13S	S	5/15/2005	Total Volatile Organics	3 6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3 2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.95

Confidence In Trend: 93.1%

Ln Slope: -7.0E-04

LR Concentration Trend: PD

Consolidation Data Table:

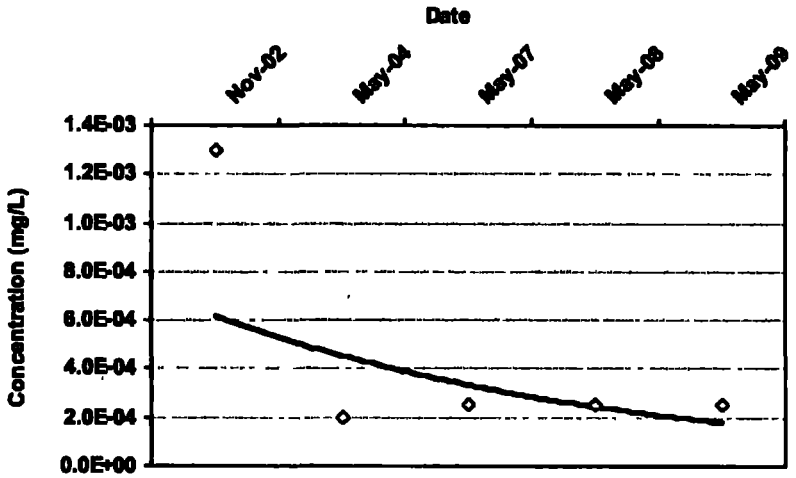
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2000	Total Volatile Organics	5.6E-03		1	1
MW-13S	S	5/15/2001	Total Volatile Organics	5.1E-02		1	1
MW-13S	S	12/15/2001	Total Volatile Organics	4.8E-03		1	1
MW-13S	S	5/15/2002	Total Volatile Organics	8.0E-03		1	1
MW-13S	S	12/15/2002	Total Volatile Organics	2.5E-04	ND	1	0
MW-13S	S	5/15/2003	Total Volatile Organics	3.4E-03		1	1
MW-13S	S	5/15/2004	Total Volatile Organics	2.5E-04	ND	1	0
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3.2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.06

Confidence in Trend: 88 1%

Ln Slope: -4.9E-04

LR Concentration Trend: NT

Consolidation Data Table:

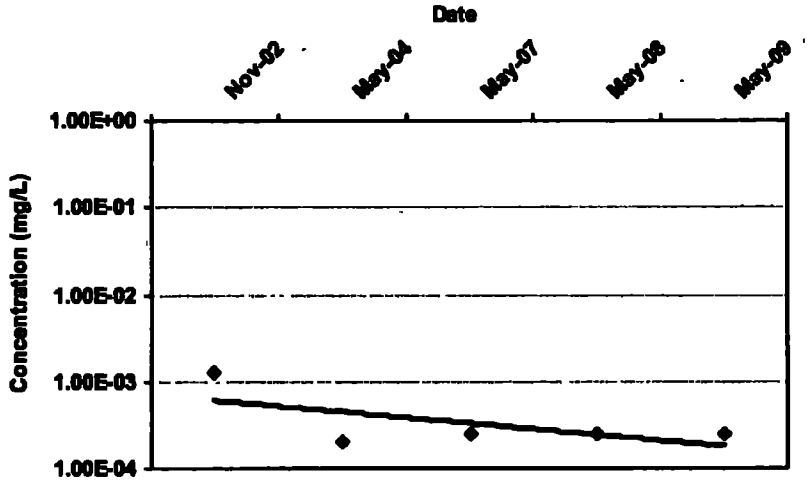
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2002	VINYL CHLORIDE	1 3E-03		1	1
MW-13S	S	5/15/2004	VINYL CHLORIDE	2.0E-04		1	1
MW-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.06

Confidence in Trend: 88.1%

Ln Slope: -4.9E-04

LR Concentration Trend: NT

Consolidation Data Table:

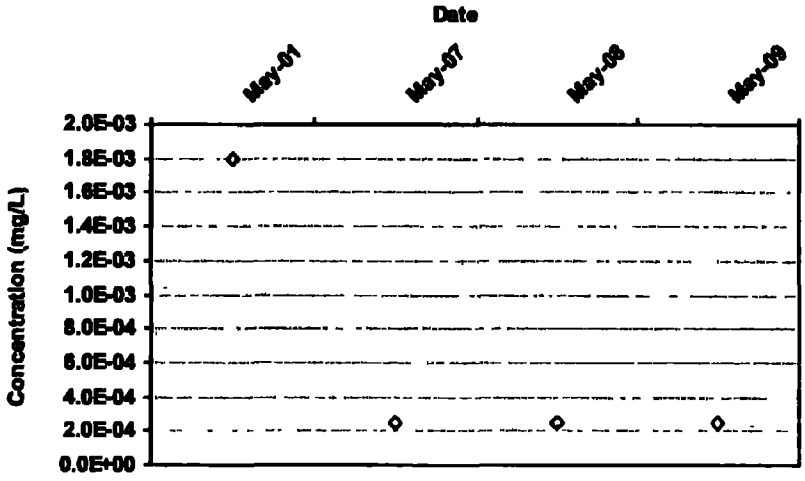
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2002	VINYL CHLORIDE	1 3E-03		1	1
MW-13S	S	5/15/2004	VINYL CHLORIDE	2 0E-04		1	1
MW-13S	S	5/23/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	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 = All Samples are Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
72.9%

Coefficient of Variation:
1.22

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

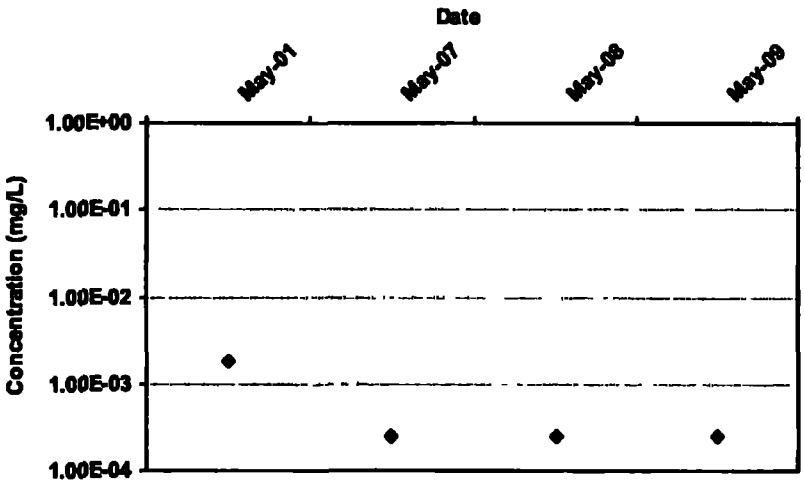
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2001	1,2-DICHLOROETHANE	1.8E-03		1	1
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2.5E-04	ND	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-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-3

Confidence in Trend:
72.9%

Coefficient of Variation:
1.22

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

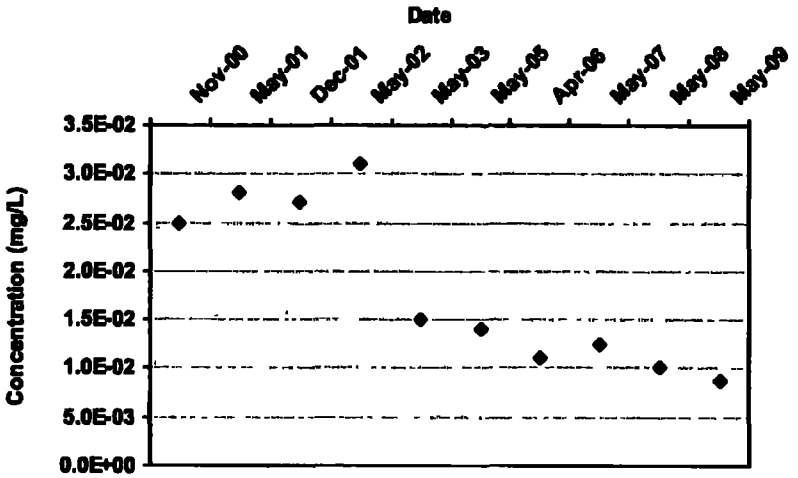
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2001	1,2-DICHLOROETHANE	1.8E-03		1	1
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2.5E-04	ND	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-03S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-33

Confidence in Trend:
99.9%

Coefficient of Variation:
0.47

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

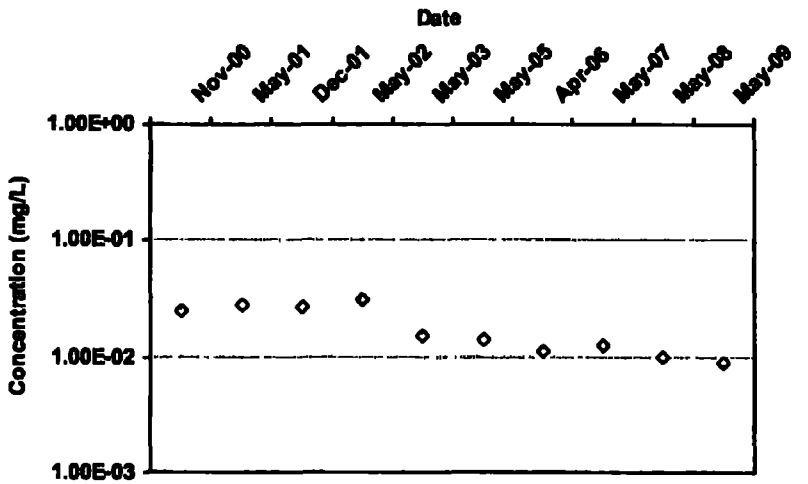
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	ARSENIC	2 5E-02		1	1
MW-03S	T	5/15/2001	ARSENIC	2 8E-02		1	1
MW-03S	T	12/15/2001	ARSENIC	2 7E-02		1	1
MW-03S	T	5/15/2002	ARSENIC	3 1E-02		1	1
MW-03S	T	5/15/2003	ARSENIC	1 5E-02		1	1
MW-03S	T	5/15/2005	ARSENIC	1 4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1 1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1.2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1 0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8 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-03S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-33

Confidence in Trend:
99.9%

Coefficient of Variation:
0.47

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

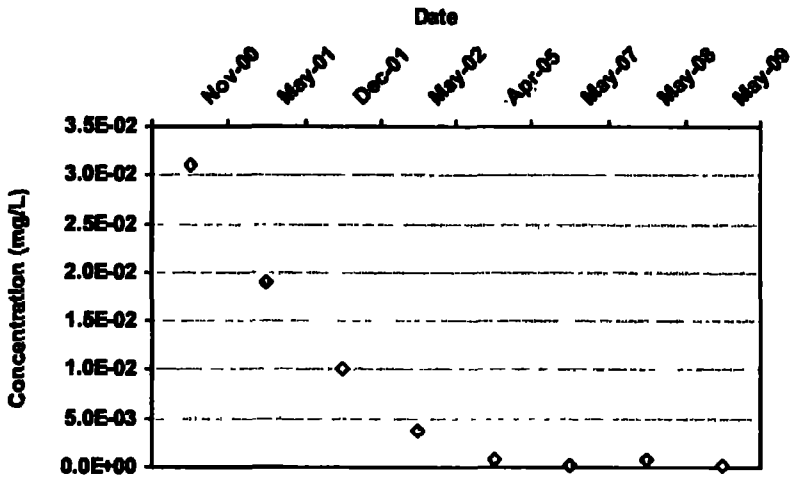
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	ARSENIC	2.5E-02		1	1
MW-03S	T	5/15/2001	ARSENIC	2 8E-02		1	1
MW-03S	T	12/15/2001	ARSENIC	2 7E-02		1	1
MW-03S	T	5/15/2002	ARSENIC	3.1E-02		1	1
MW-03S	T	5/15/2003	ARSENIC	1 5E-02		1	1
MW-03S	T	5/15/2005	ARSENIC	1 4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1 1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1.2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1 0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8 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-03S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-24

Confidence In Trend:
99.9%

Coefficient of Variation:
1.37

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

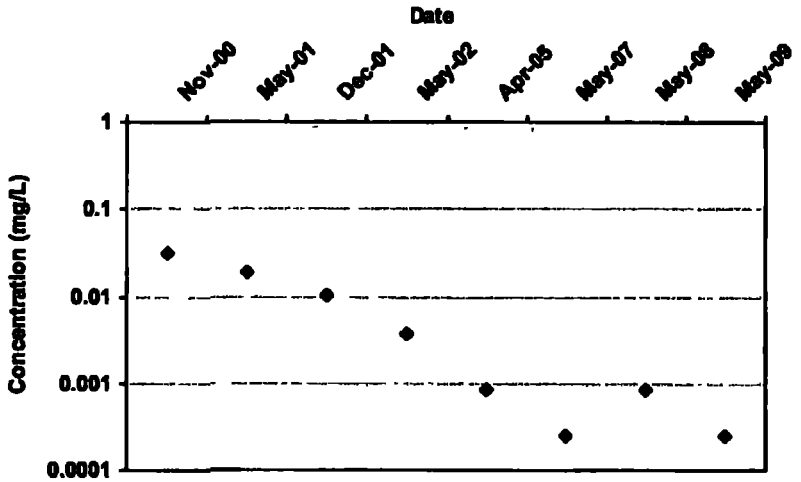
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	BENZENE	3 1E-02		1	1
MW-03S	T	5/15/2001	BENZENE	1 9E-02		1	1
MW-03S	T	12/15/2001	BENZENE	1.0E-02		1	1
MW-03S	T	5/15/2002	BENZENE	3.7E-03		1	1
MW-03S	T	4/15/2005	BENZENE	8.5E-04		1	1
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8 5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	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-03S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-24

Confidence in Trend:
99.9%

Coefficient of Variation:
1.37

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

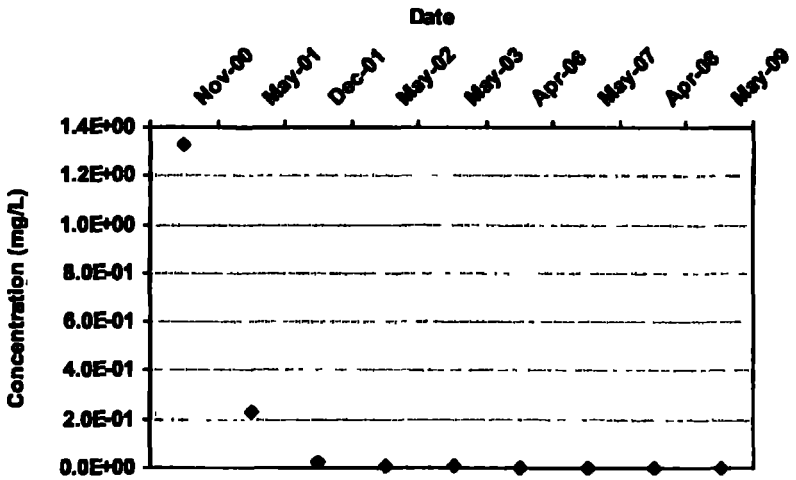
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	BENZENE	3.1E-02		1	1
MW-03S	T	5/15/2001	BENZENE	1.9E-02		1	1
MW-03S	T	12/15/2001	BENZENE	1.0E-02		1	1
MW-03S	T	5/15/2002	BENZENE	3.7E-03		1	1
MW-03S	T	4/15/2005	BENZENE	8 5E-04		1	1
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8 5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	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-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-30

Confidence in Trend:
100.0%

Coefficient of Variation:
2.46

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

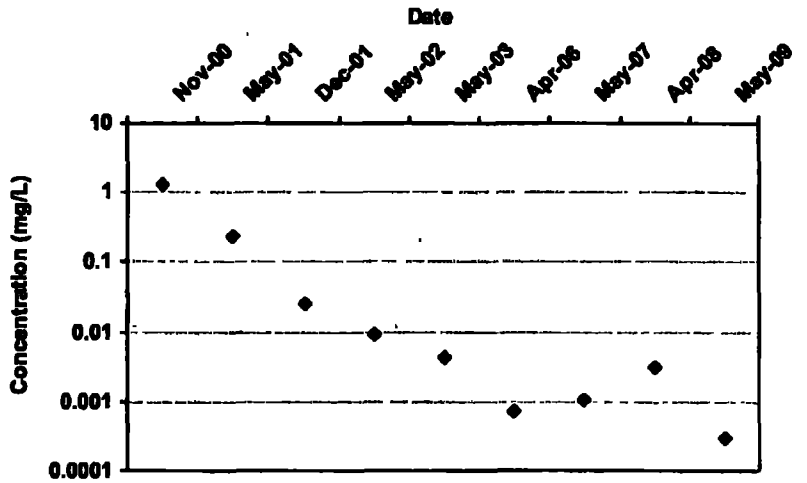
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	Total Volatile Organics	1 3E+00		1	1
MW-03S	T	5/15/2001	Total Volatile Organics	2 3E-01		1	1
MW-03S	T	12/15/2001	Total Volatile Organics	2.5E-02		1	1
MW-03S	T	5/15/2002	Total Volatile Organics	9.2E-03		1	1
MW-03S	T	5/15/2003	Total Volatile Organics	4 2E-03		1	1
MW-03S	T	4/15/2006	Total Volatile Organics	7 4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1 0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3 1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3 0E-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-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-30

Confidence in Trend:
100.0%

Coefficient of Variation:
2.46

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

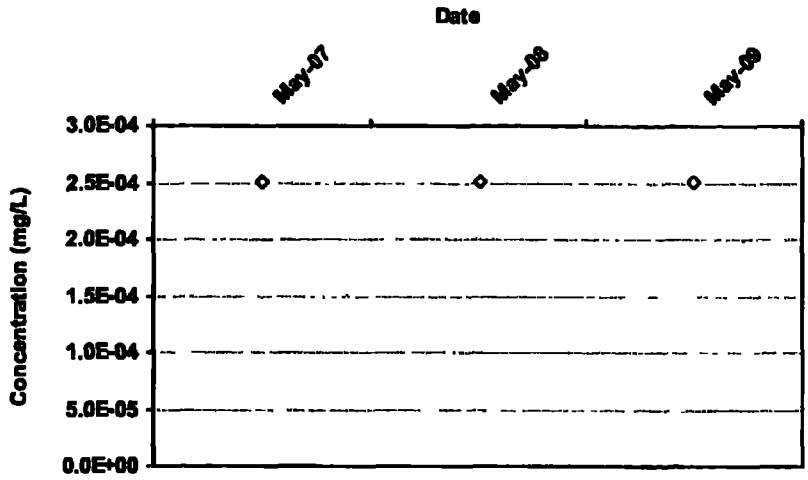
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	11/15/2000	Total Volatile Organics	1.3E+00		1	1
MW-03S	T	5/15/2001	Total Volatile Organics	2.3E-01		1	1
MW-03S	T	12/15/2001	Total Volatile Organics	2.5E-02		1	1
MW-03S	T	5/15/2002	Total Volatile Organics	9.2E-03		1	1
MW-03S	T	5/15/2003	Total Volatile Organics	4.2E-03		1	1
MW-03S	T	4/15/2006	Total Volatile Organics	7.4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1.0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3.1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3.0E-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-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

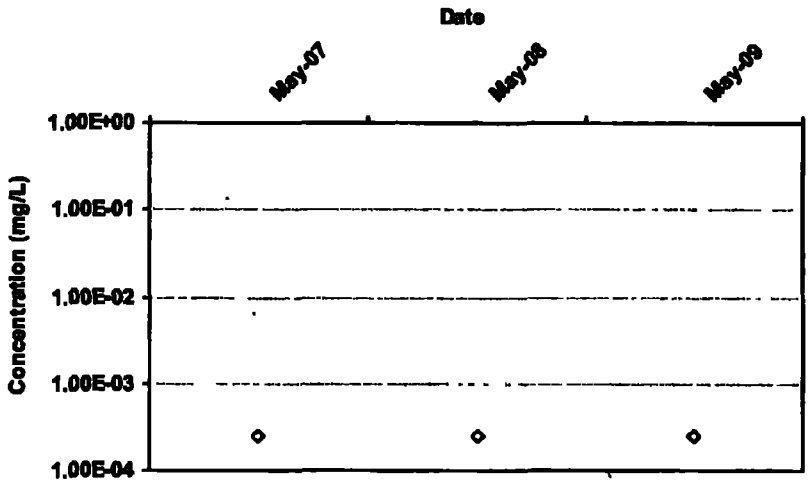
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

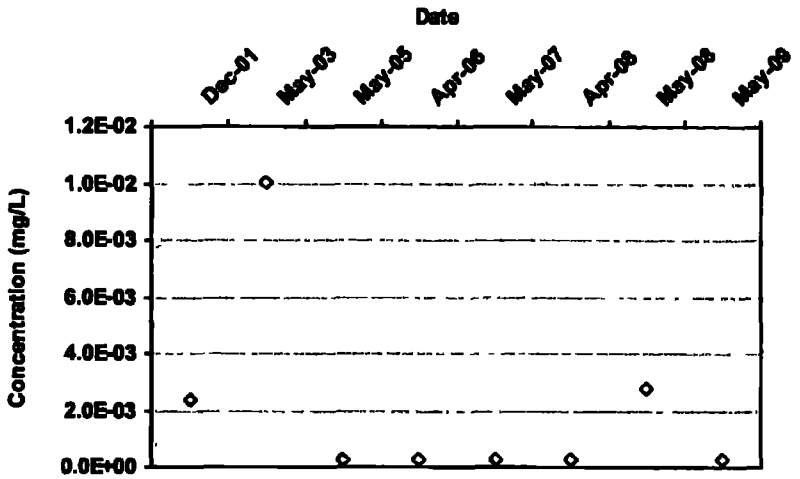
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
72.6%

Coefficient of Variation:
1.64

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

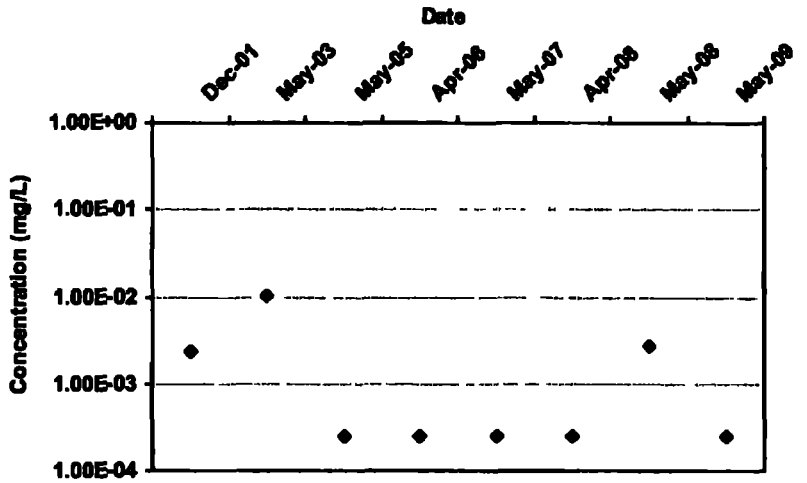
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	1,2-DICHLOROETHANE	2.4E-03		1	1
MW-06SR	T	5/15/2003	1,2-DICHLOROETHANE	1.0E-02		1	1
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
72 6%

Coefficient of Variation:
1.84

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

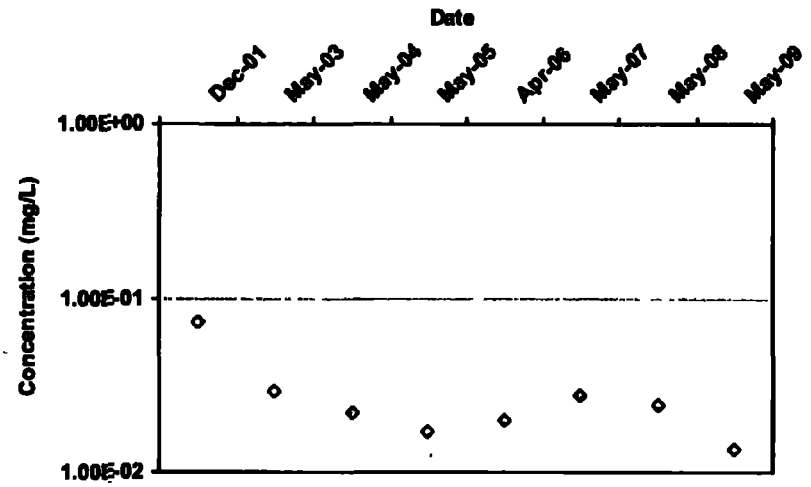
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	1,2-DICHLOROETHANE	2.4E-03		1	1
MW-06SR	T	5/15/2003	1,2-DICHLOROETHANE	1 0E-02		1	1
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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-06SR
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-14

Confidence in Trend:
94.6%

Coefficient of Variation:
0.66

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

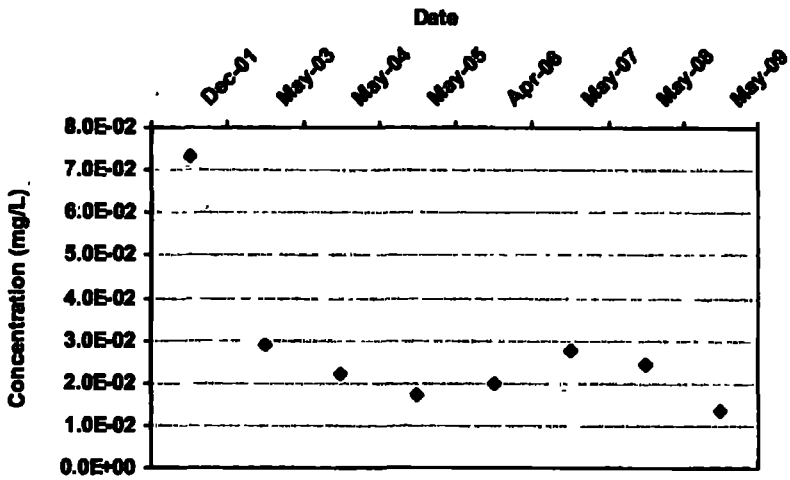
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	ARSENIC	7.3E-02		1	1
MW-06SR	T	5/15/2003	ARSENIC	2.9E-02		1	1
MW-06SR	T	5/15/2004	ARSENIC	2.2E-02		1	1
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2.0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2.8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.6E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	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-06SR
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-14

Confidence in Trend:
94.6%

Coefficient of Variation:
0.66

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

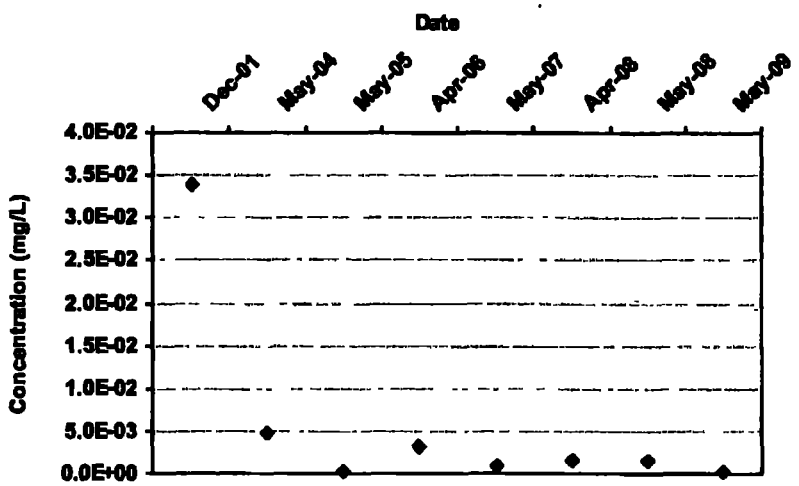
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	ARSENIC	7 3E-02		1	1
MW-06SR	T	5/15/2003	ARSENIC	2.9E-02		1	1
MW-06SR	T	5/15/2004	ARSENIC	2 2E-02		1	1
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2 0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2 8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	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-06SR
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-14

Confidence in Trend:
94.6%

Coefficient of Variation:
1.99

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

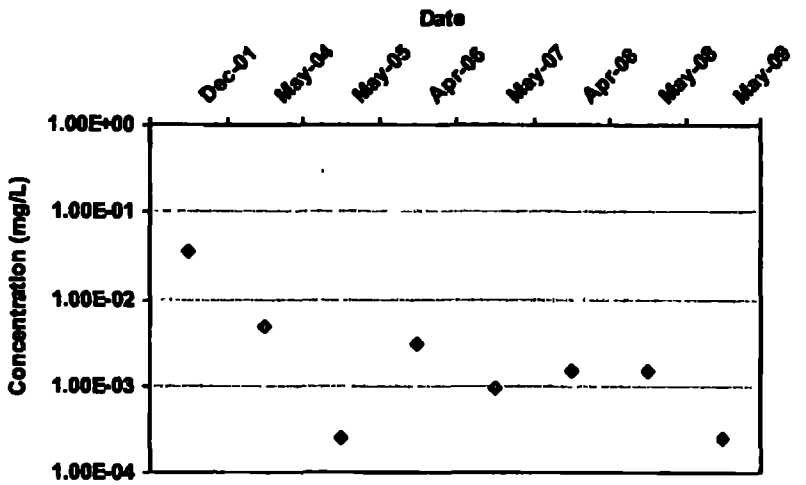
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	BENZENE	3 4E-02		1	1
MW-06SR	T	5/15/2004	BENZENE	4 7E-03		1	1
MW-06SR	T	5/15/2005	BENZENE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3 1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9 5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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-06SR
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-14

Confidence in Trend:
94.6%

Coefficient of Variation:
1.99

Mann Kendall Concentration Trend: (See Note)
PD

Data Table:

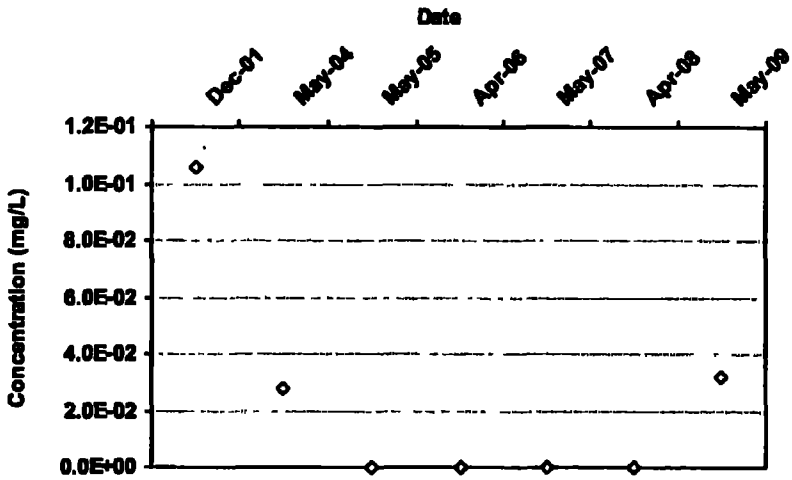
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	BENZENE	3 4E-02		1	1
MW-06SR	T	5/15/2004	BENZENE	4 7E-03		1	1
MW-06SR	T	5/15/2005	BENZENE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3 1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9.5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -5

Confidence in Trend: 71.9%

Coefficient of Variation: 1.63

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

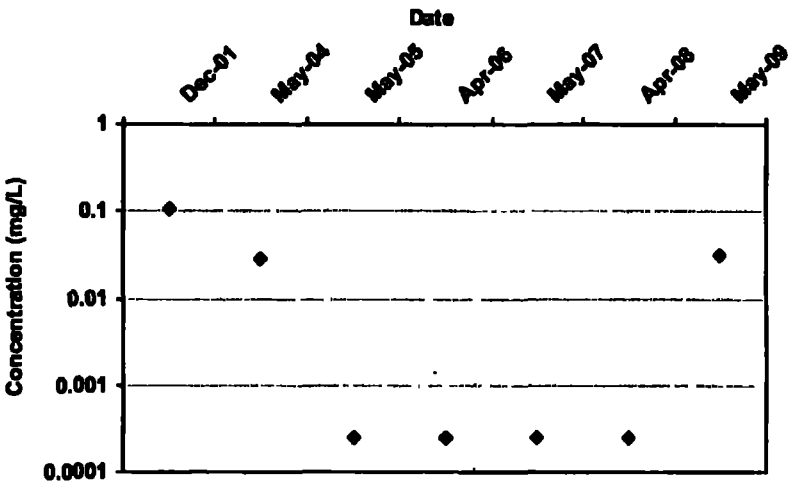
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	Total Volatile Organics	1.1E-01		1	1
MW-06SR	T	5/15/2004	Total Volatile Organics	2.8E-02		1	1
MW-06SR	T	5/15/2005	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3.2E-02		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-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-5

Confidence In Trend:
71.9%

Coefficient of Variation:
1 63

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

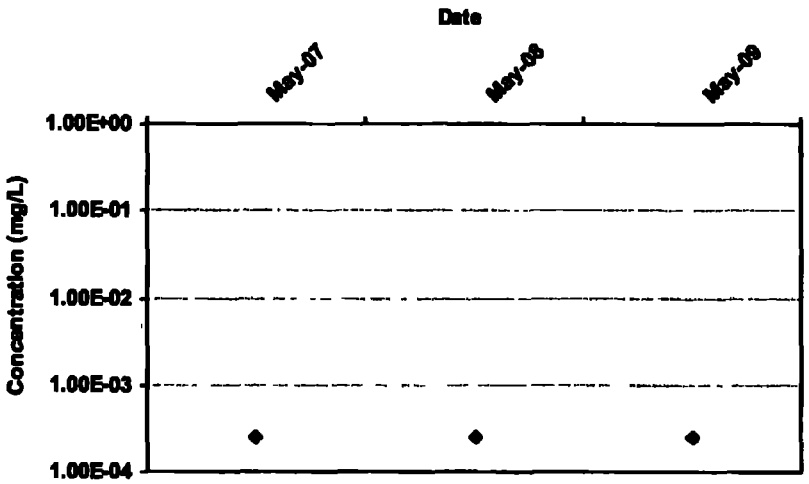
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	12/15/2001	Total Volatile Organics	1 1E-01		1	1
MW-06SR	T	5/15/2004	Total Volatile Organics	2 8E-02		1	1
MW-06SR	T	5/15/2005	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3.2E-02		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-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

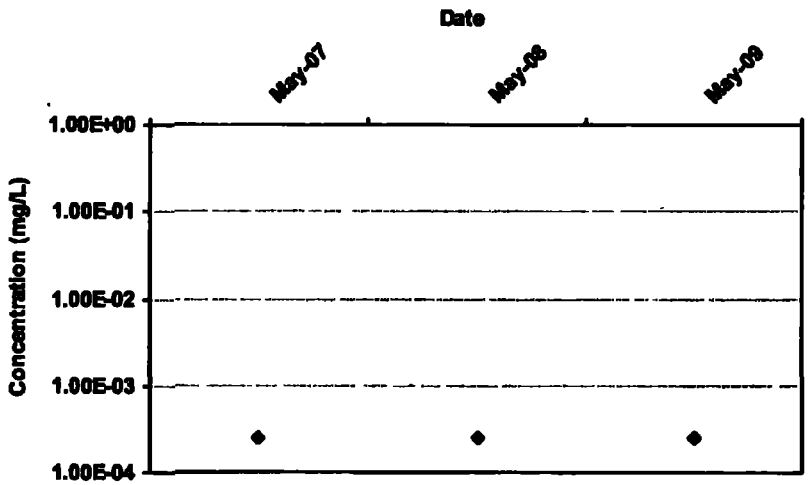
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

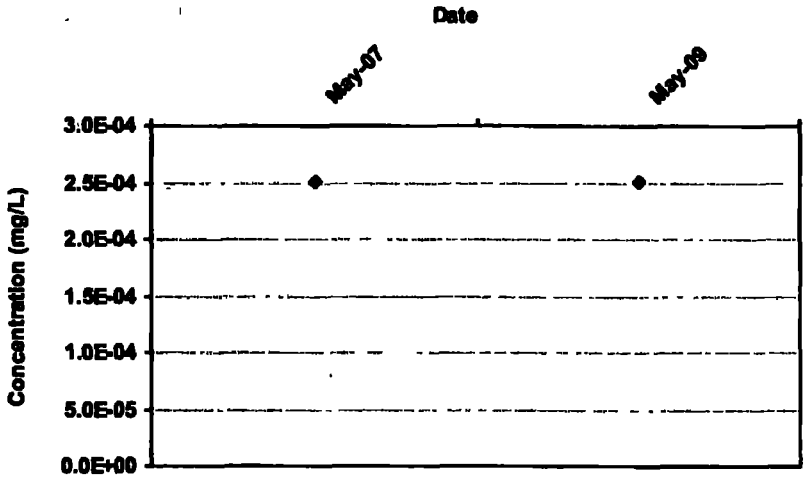
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

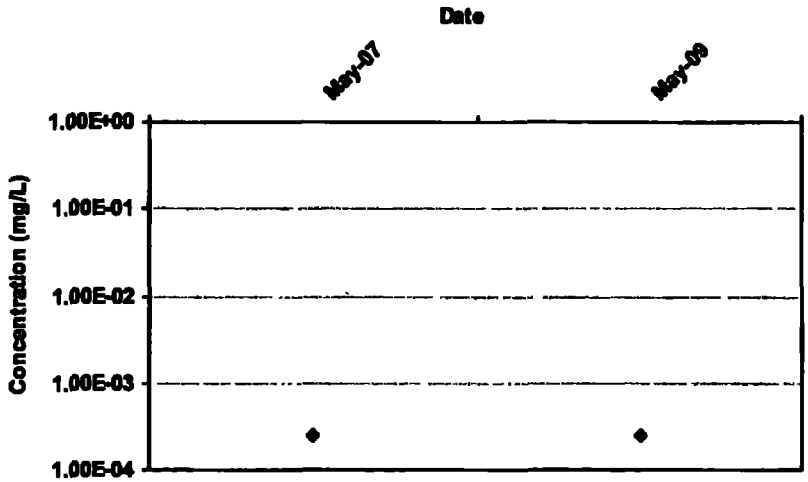
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

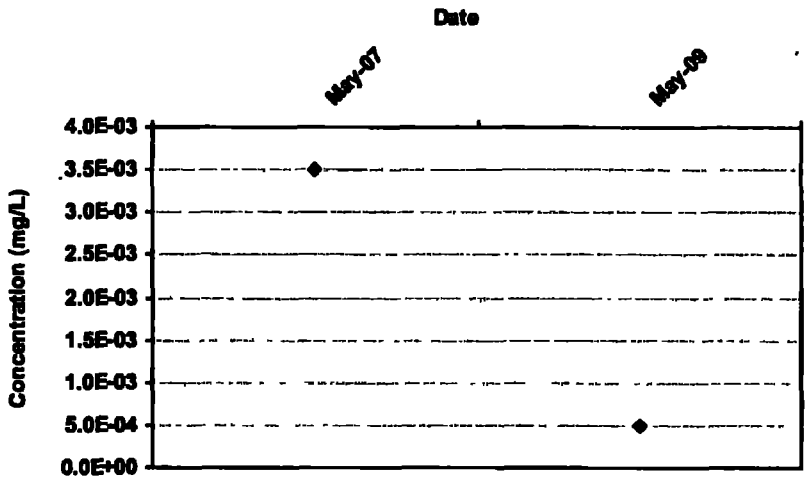
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

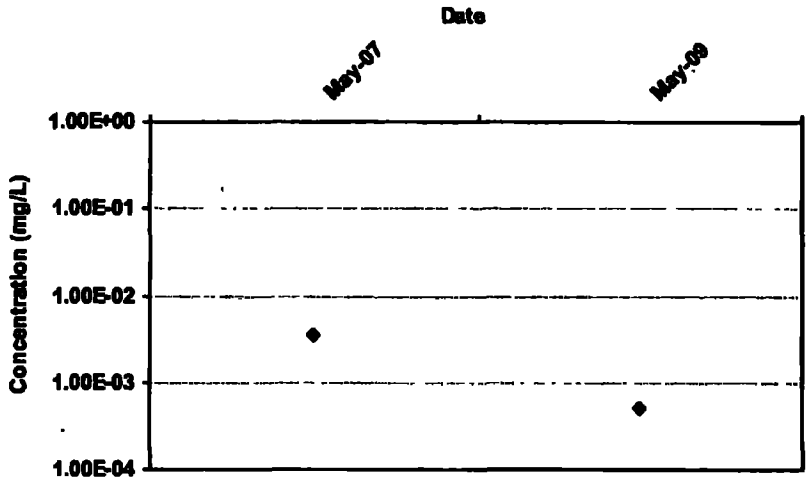
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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-11S
Well Type: T
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

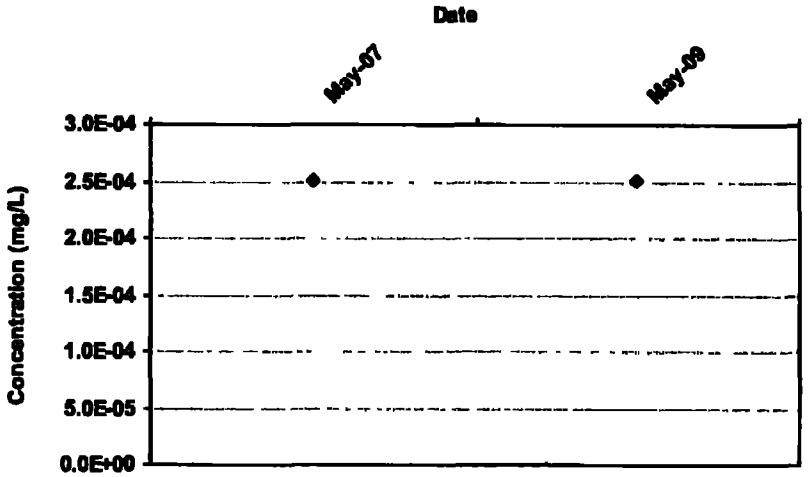
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3 5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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-11S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

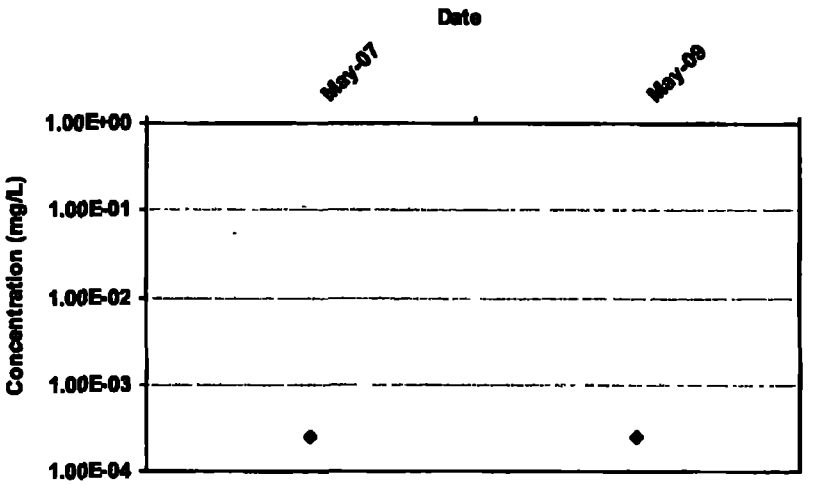
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2 5E-04	ND	1	0

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-11S
Well Type: T
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

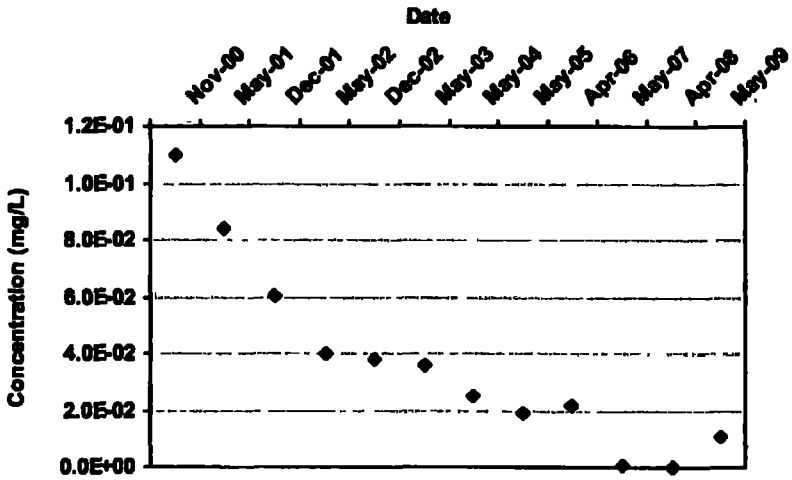
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-60

Confidence in Trend:
100.0%

Coefficient of Variation:
0.89

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

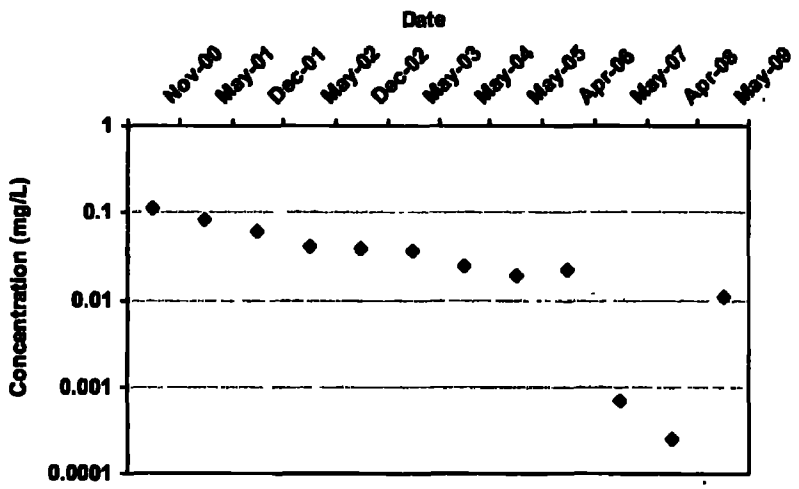
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	11/15/2000	Total Volatile Organics	1.1E-01		1	1
MW-11S	T	5/15/2001	Total Volatile Organics	8.4E-02		1	1
MW-11S	T	12/15/2001	Total Volatile Organics	6.0E-02		1	1
MW-11S	T	5/15/2002	Total Volatile Organics	4.0E-02		1	1
MW-11S	T	12/15/2002	Total Volatile Organics	3.8E-02		1	1
MW-11S	T	5/15/2003	Total Volatile Organics	3.6E-02		1	1
MW-11S	T	5/15/2004	Total Volatile Organics	2.5E-02		1	1
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-60

Confidence in Trend:
100.0%

Coefficient of Variation:
0.89

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

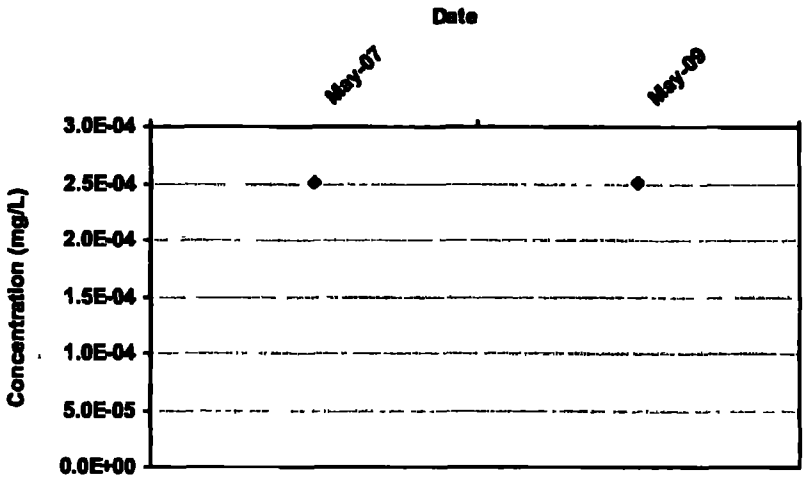
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	11/15/2000	Total Volatile Organics	1 1E-01		1	1
MW-11S	T	5/15/2001	Total Volatile Organics	8.4E-02		1	1
MW-11S	T	12/15/2001	Total Volatile Organics	6 0E-02		1	1
MW-11S	T	5/15/2002	Total Volatile Organics	4 0E-02		1	1
MW-11S	T	12/15/2002	Total Volatile Organics	3 6E-02		1	1
MW-11S	T	5/15/2003	Total Volatile Organics	3 6E-02		1	1
MW-11S	T	5/15/2004	Total Volatile Organics	2.5E-02		1	1
MW-11S	T	5/15/2005	Total Volatile Organics	1 9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7 0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1 1E-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-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

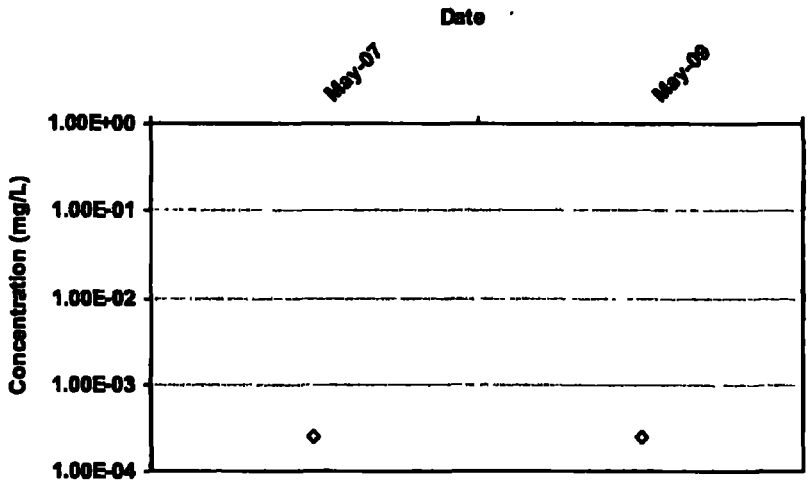
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

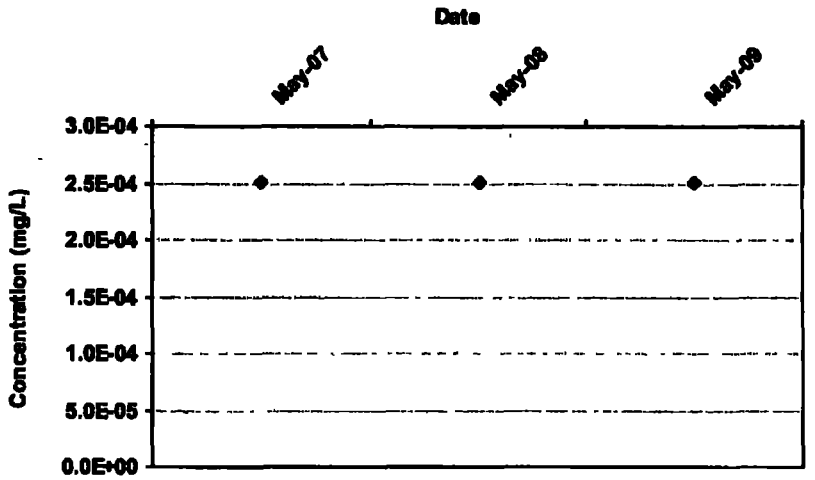
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

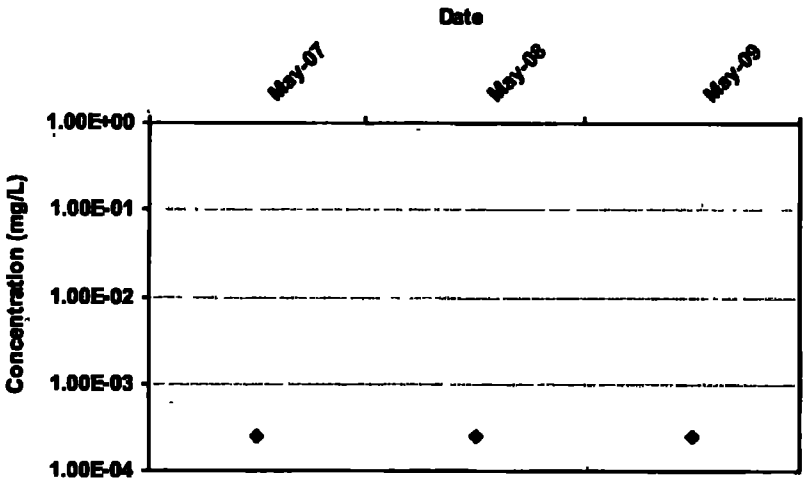
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

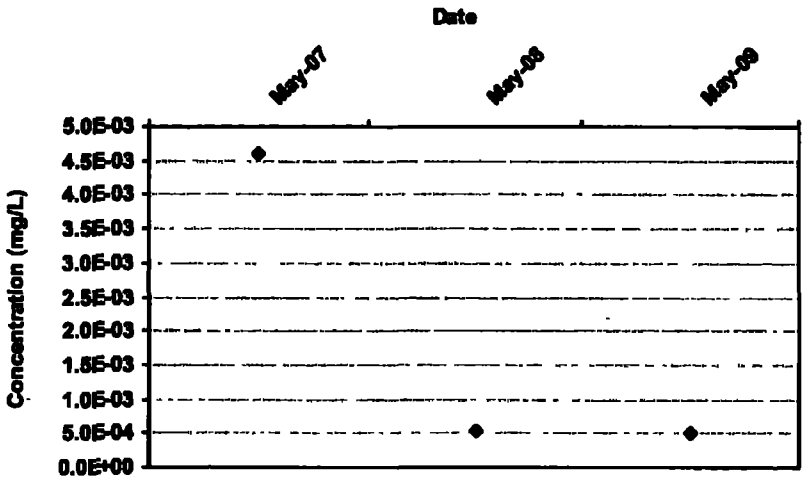
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

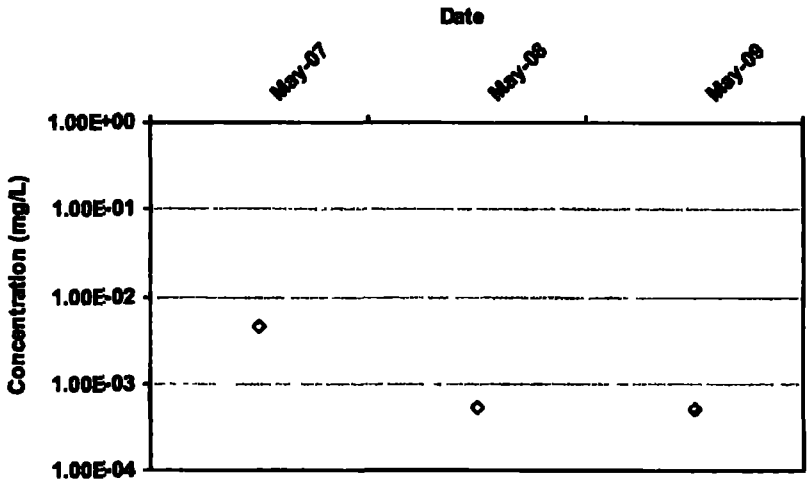
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4.6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5.3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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-13S
Well Type: S
COC: ARSENIC

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

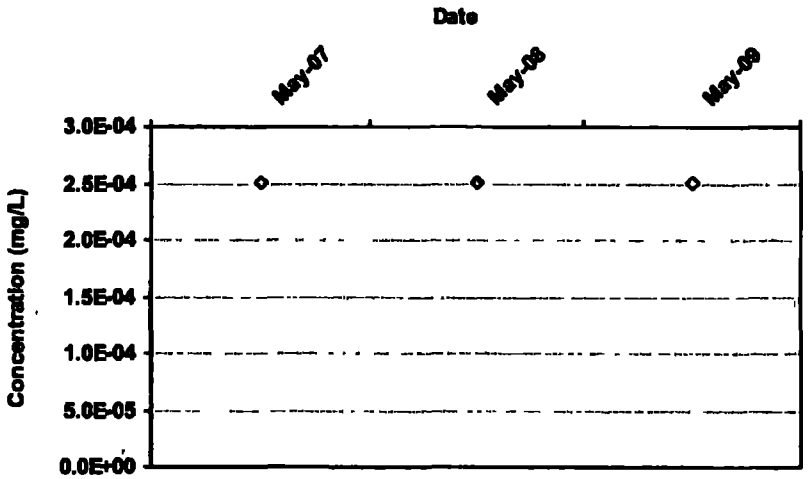
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4.6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5 3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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-13S
Well Type: S
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

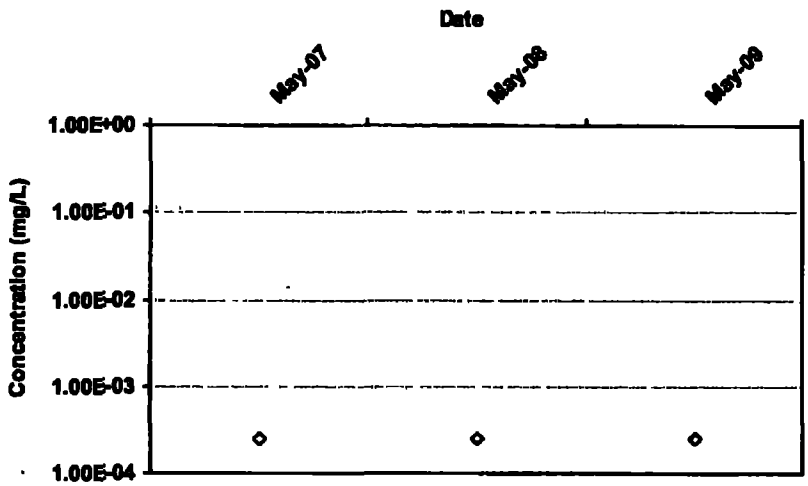
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: BENZENE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

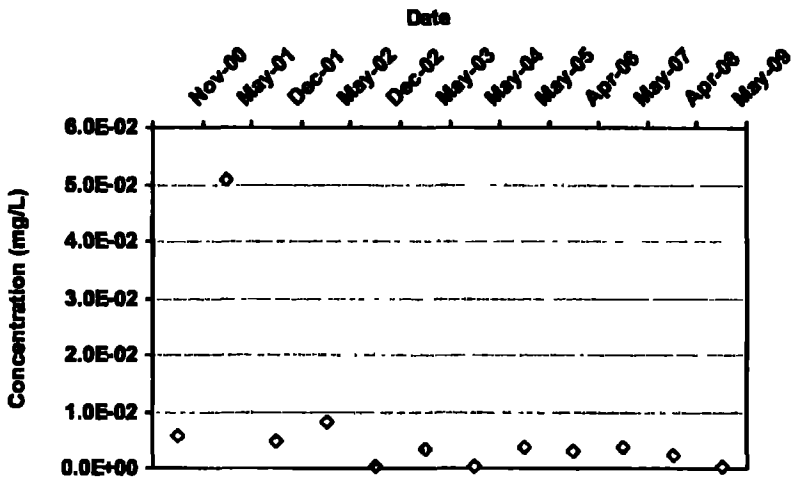
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-31

Confidence In Trend:
98.1%

Coefficient of Variation:
1.95

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

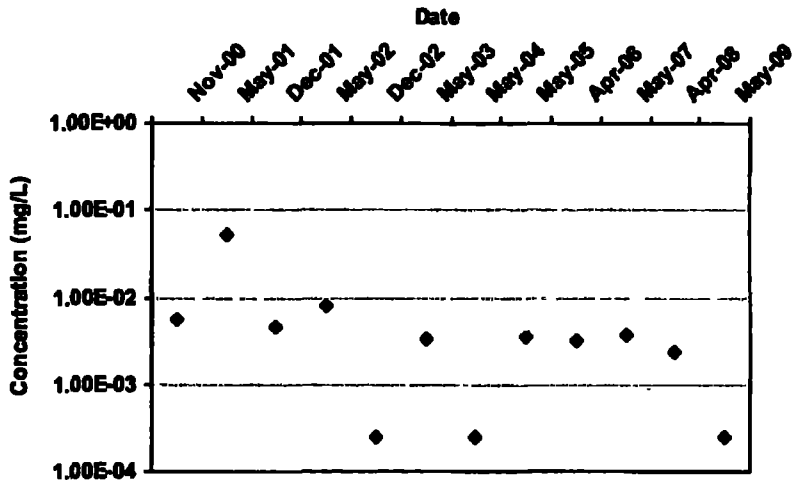
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2000	Total Volatile Organics	5 6E-03		1	1
MW-13S	S	5/15/2001	Total Volatile Organics	5.1E-02		1	1
MW-13S	S	12/15/2001	Total Volatile Organics	4.6E-03		1	1
MW-13S	S	5/15/2002	Total Volatile Organics	8.0E-03		1	1
MW-13S	S	12/15/2002	Total Volatile Organics	2.5E-04	ND	1	0
MW-13S	S	5/15/2003	Total Volatile Organics	3.4E-03		1	1
MW-13S	S	5/15/2004	Total Volatile Organics	2 5E-04	ND	1	0
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3 2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-31

Confidence in Trend:
98.1%

Coefficient of Variation:
1.95

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

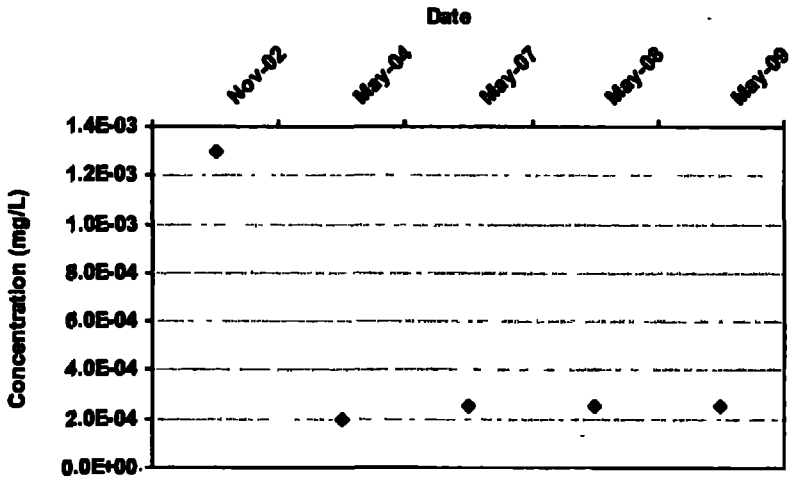
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2000	Total Volatile Organics	5.6E-03		1	1
MW-13S	S	5/15/2001	Total Volatile Organics	5.1E-02		1	1
MW-13S	S	12/15/2001	Total Volatile Organics	4.6E-03		1	1
MW-13S	S	5/15/2002	Total Volatile Organics	8.0E-03		1	1
MW-13S	S	12/15/2002	Total Volatile Organics	2.5E-04	ND	1	0
MW-13S	S	5/15/2003	Total Volatile Organics	3.4E-03		1	1
MW-13S	S	5/15/2004	Total Volatile Organics	2.6E-04	ND	1	0
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3.2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -1

Confidence in Trend: 50.0%

Coefficient of Variation: 1.06

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

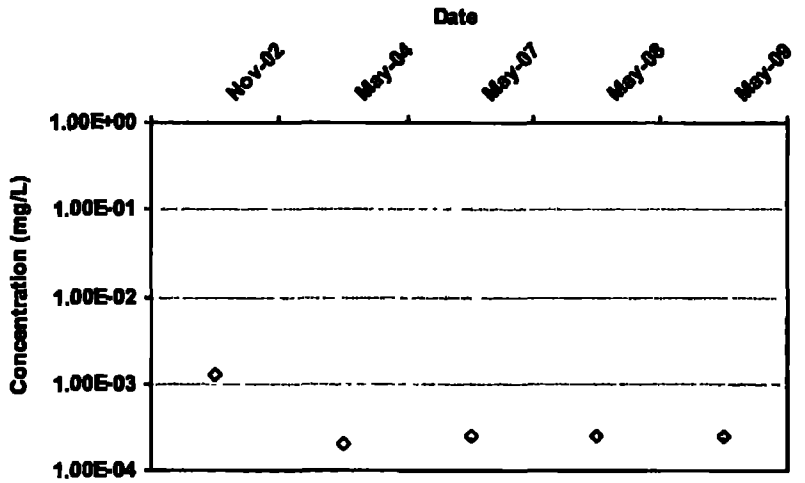
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	11/15/2002	VINYL CHLORIDE	1 3E-03		1	1
MW-13S	S	5/15/2004	VINYL CHLORIDE	2 0E-04		1	1
MW-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	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-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 11/15/2000 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-1

Confidence In Trend:
50.0%

Coefficient of Variation:
1.06

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-13S	S	11/15/2002	VINYL CHLORIDE	1.3E-03		1	1
MW-13S	S	5/15/2004	VINYL CHLORIDE	2.0E-04		1	1
MW-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	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 Statistical Trend Analysis Summary

Project: Douglas Road

Location: Mishawaka

User Name:

State: Indiana

Time Period: 5/1/2005 to 5/20/2009

Consolidation Period: No Time Consolidation

Consolidation Type: Median

Duplicate Consolidation: Average

ND Values: 1/2 Detection Limit

J Flag Values : Actual Value

Well	Source/ Tail	Number of Samples	Number of Detects	Average Conc. (mg/L)	Median Conc. (mg/L)	All Samples "ND" ?	Mann-Kendall Trend	Linear Regression Trend
1,2-DICHLOROETHANE								
MW-03S	T	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-06SR	T	6	1	6.8E-04	2.5E-04	No	NT	NT
MW-11S	T	2	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-13S	S	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
ARSENIC								
MW-03S	T	5	5	1.1E-02	1.1E-02	No	D	D
MW-06SR	T	5	5	2.1E-02	2.0E-02	No	S	S
MW-11S	T	2	1	2.0E-03	2.0E-03	No	N/A	N/A
MW-13S	S	3	2	1.9E-03	5.3E-04	No	N/A	N/A
BENZENE								
MW-03S	T	3	1	4.5E-04	2.5E-04	No	N/A	N/A
MW-06SR	T	6	4	1.3E-03	1.2E-03	No	S	S
MW-11S	T	2	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-13S	S	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
Total Volatile Organics								
MW-03S	T	4	4	1.3E-03	6.8E-04	No	S	S
MW-06SR	T	5	1	6.5E-03	2.5E-04	No	NT	PI
MW-11S	T	5	4	1.1E-02	1.1E-02	No	S	S
MW-13S	S	5	4	2.6E-03	3.2E-03	No	S	PD
VINYL CHLORIDE								
MW-03S	T	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-06SR	T	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-11S	T	2	0	2.5E-04	2.5E-04	Yes	N/A	N/A
MW-13S	S	3	0	2.5E-04	2.5E-04	Yes	N/A	N/A

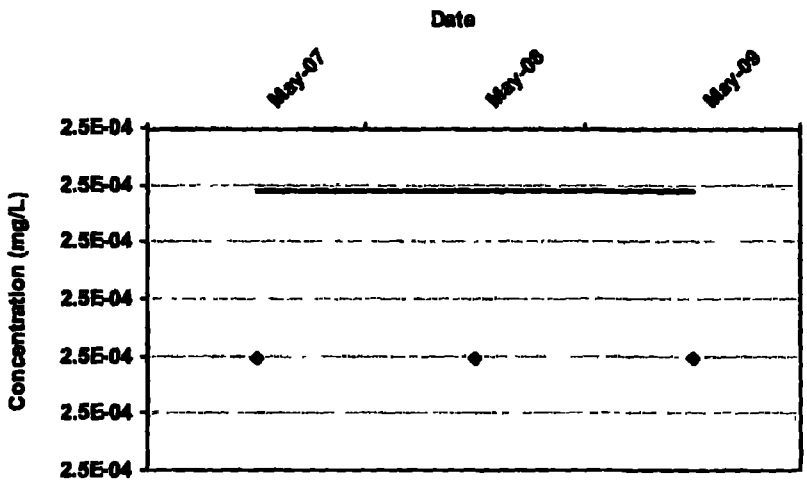
Note: Increasing (I), Probably Increasing (PI), Stable (S), Probably Decreasing (PD); Decreasing (D), No Trend (NT); Not Applicable (N/A), Not Applicable (N/A) - Due to Insufficient Data (< 4 sampling events); No Detectable Concentration (NDC)

The Number of Samples and Number of Detects shown above are post-consolidation values.

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

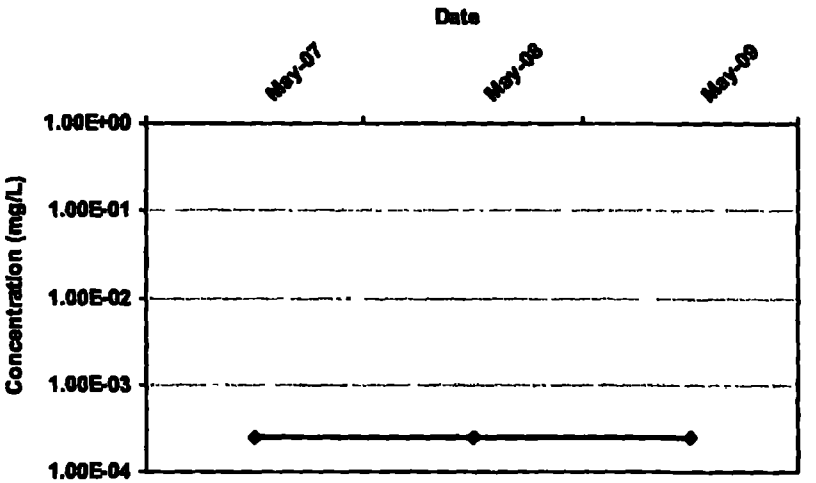
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

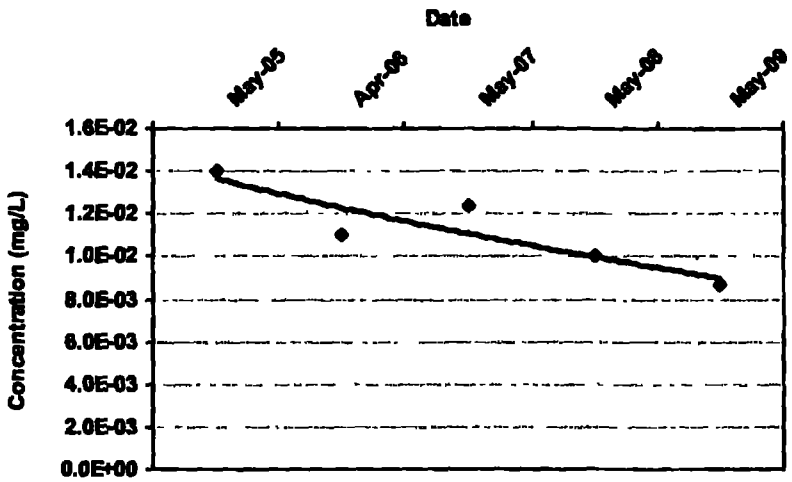
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.18

Confidence in Trend: 97.8%

Ln Slope: -2.8E-04

LR Concentration Trend: D

Consolidation Data Table:

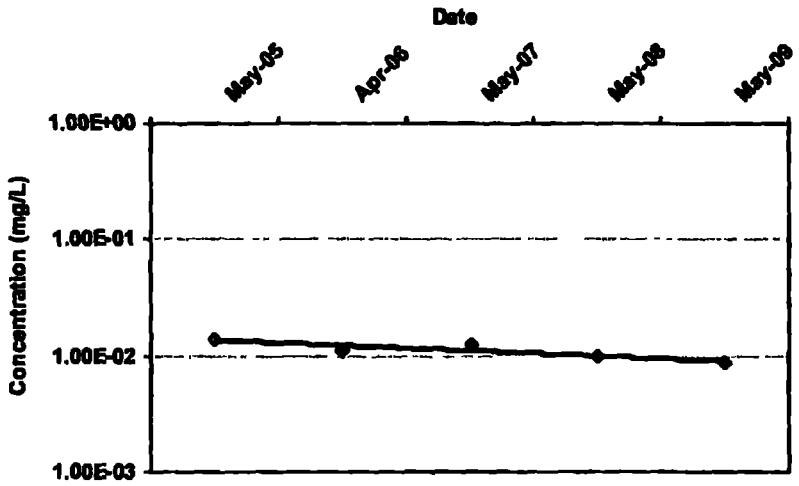
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2005	ARSENIC	1 4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1 1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1 2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1 0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8 7E-03		1	1

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.18

Confidence in Trend: 97 8%

Ln Slope: -2.8E-04

LR Concentration Trend: D

Consolidation Data Table:

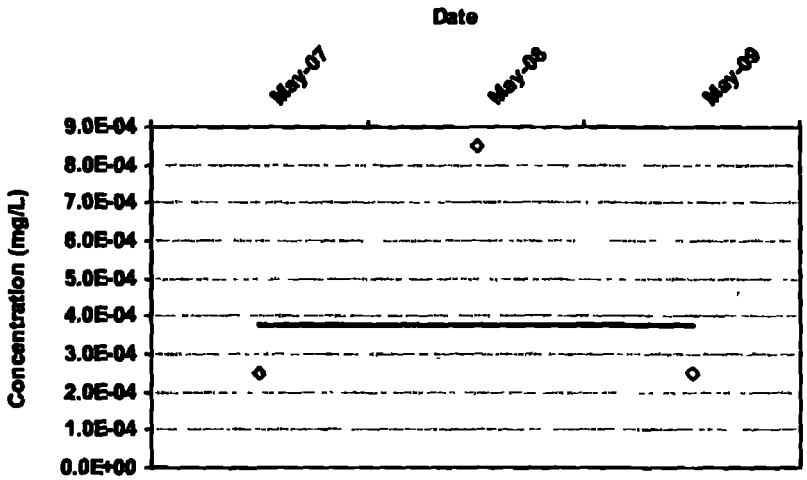
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2005	ARSENIC	1:4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1.1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1 2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1.0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8.7E-03		1	1

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

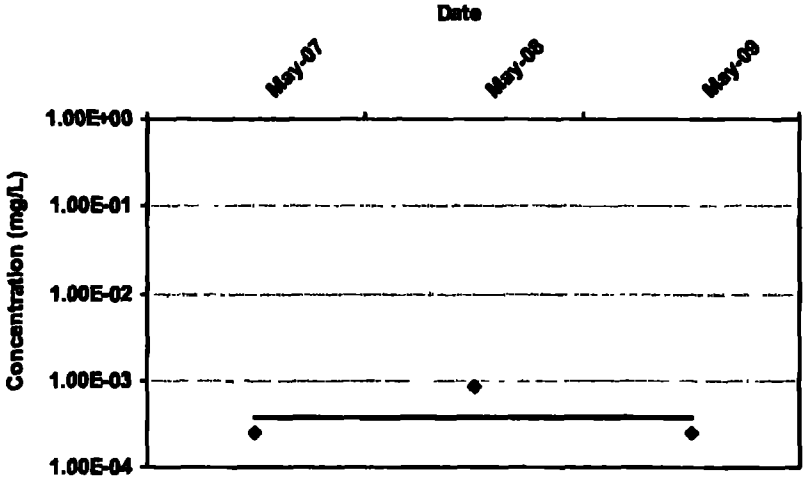
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8.5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

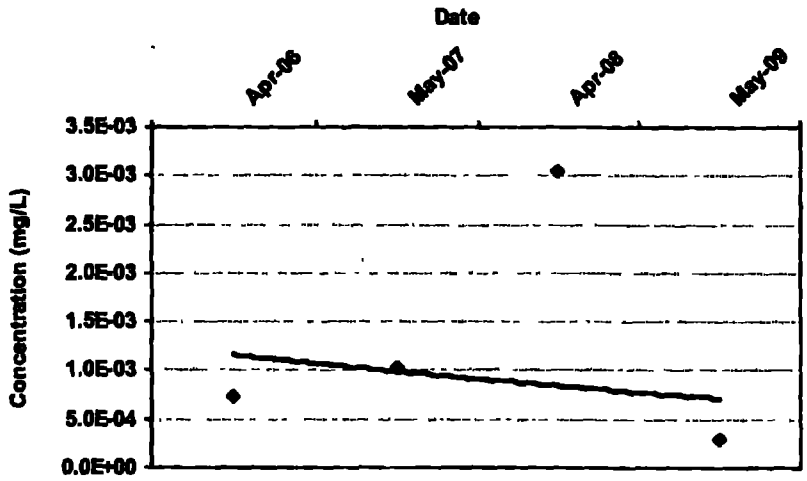
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8.5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.95

Confidence in Trend: 61.8%

Ln Slope: -4.7E-04

LR Concentration Trend: S

Consolidation Data Table:

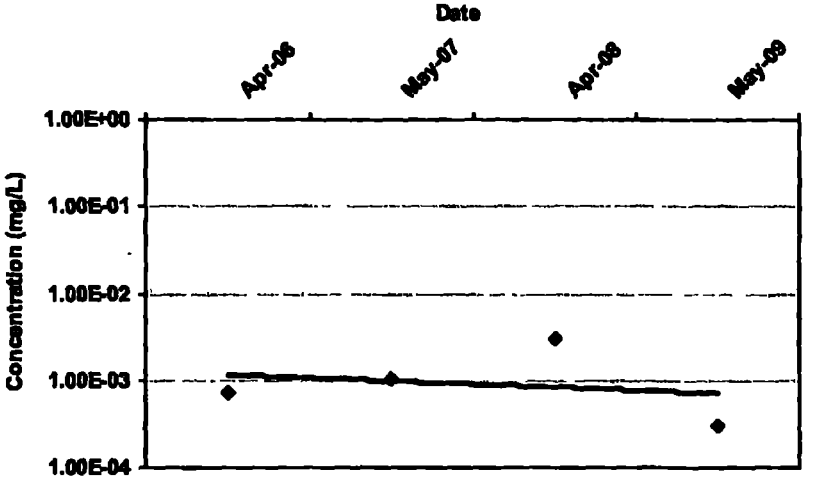
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	4/15/2006	Total Volatile Organics	7 4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1 0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3.1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3 0E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.95

Confidence in Trend: 61.8%

Ln Slope: -4.7E-04

LR Concentration Trend: S

Consolidation Data Table:

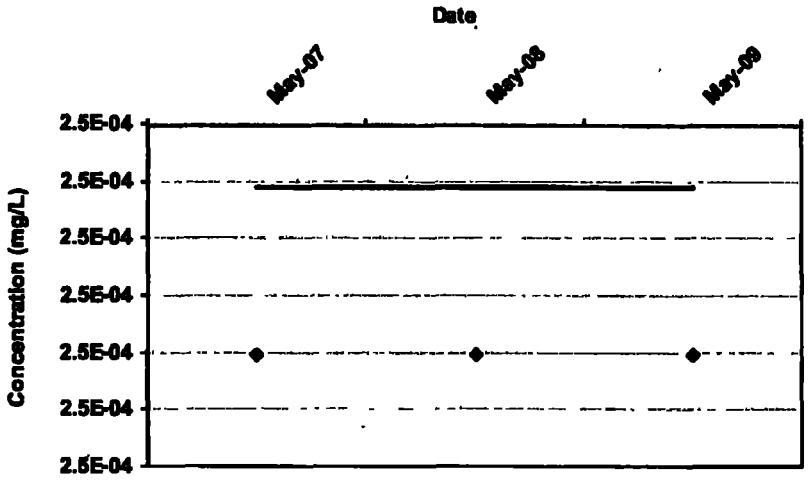
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	4/15/2006	Total Volatile Organics	7.4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1.0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3.1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3.0E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0 0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

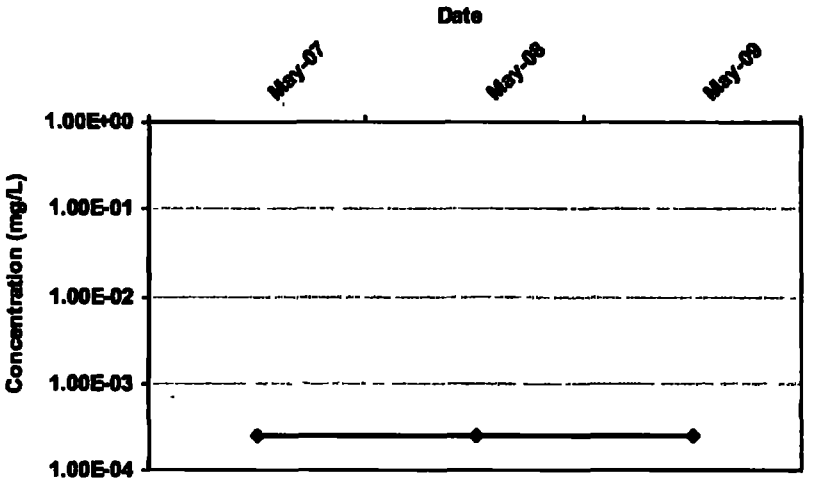
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

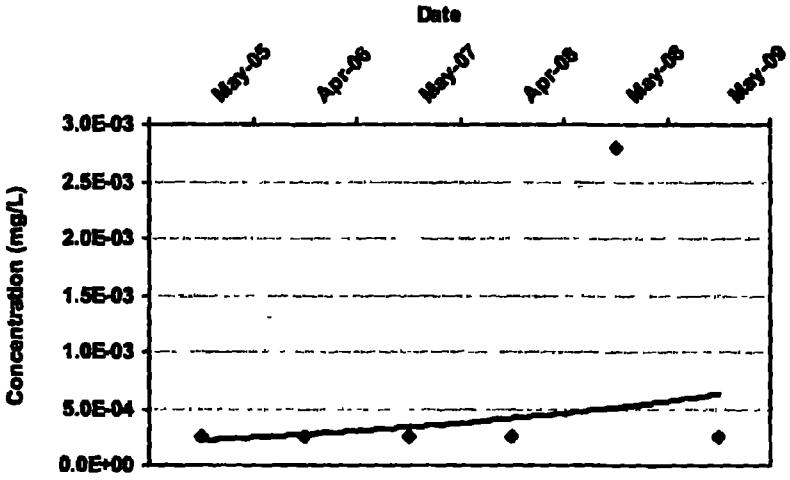
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1.54

Confidence in Trend: 71.0%

Ln Slope: 5.3E-04

LR Concentration Trend: NT

Consolidation Data Table:

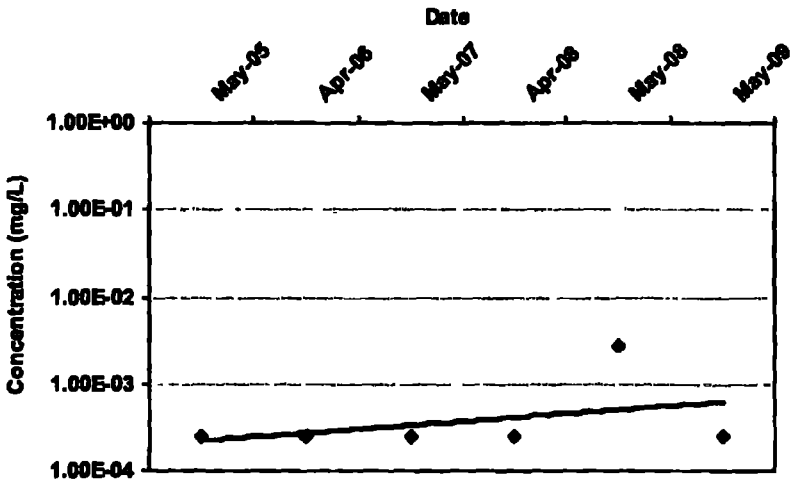
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2 8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-08SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 1 54

Confidence in Trend: 71.0%

Ln Slope: 5.3E-04

LR Concentration Trend: NT

Consolidation Data Table:

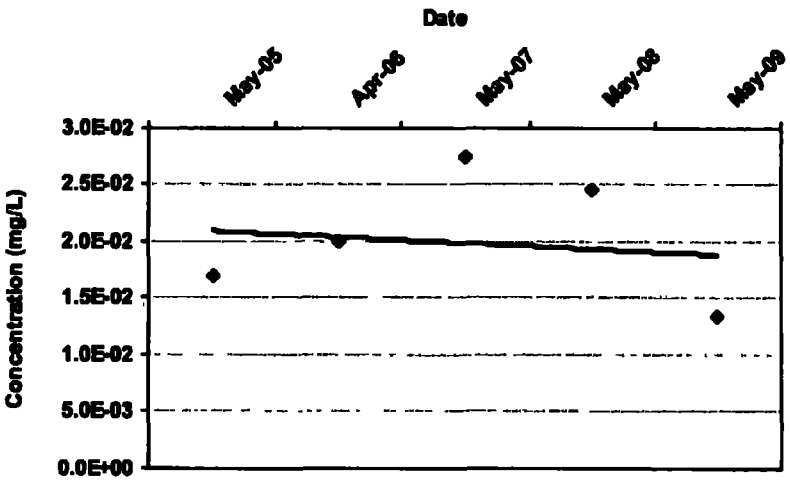
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-08SR	T	5/15/2005	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-08SR	T	4/15/2006	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-08SR	T	5/31/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-08SR	T	4/15/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-08SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-08SR	T	5/19/2009	1,2-DICHLOROETHANE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.28

Confidence in Trend: 58.8%

Ln Slope: -6.8E-05

LR Concentration Trend: S

Consolidation Data Table:

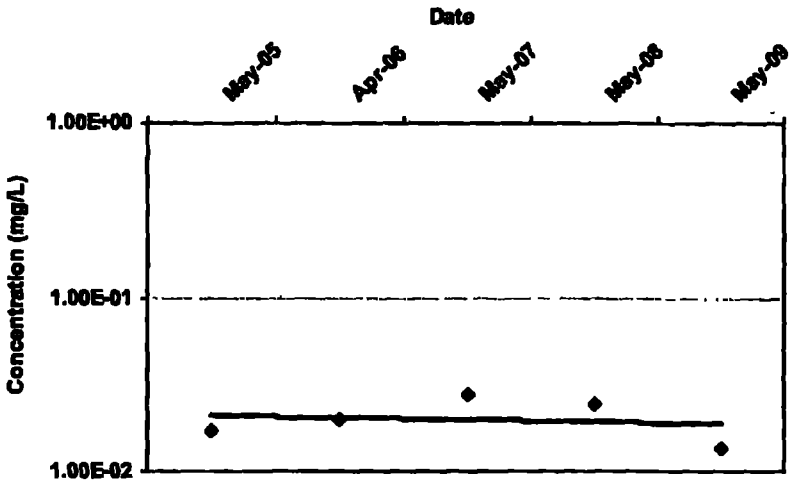
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2.0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2.8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	1.3E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.28

Confidence in Trend: 58.8%

Ln Slope: -6.8E-05

LR Concentration Trend: S

Consolidation Data Table:

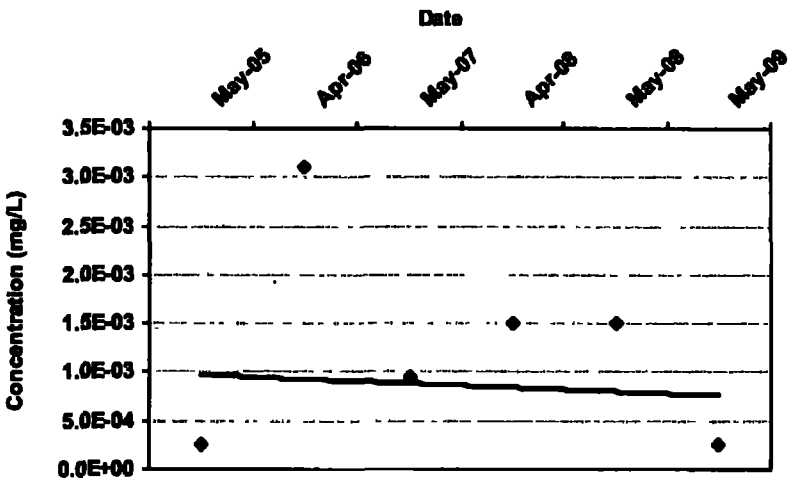
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	ARSENIC	1 7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2 0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2 8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2 5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	1 3E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.84

Confidence In Trend: 53.1%

Ln Slope: -8.0E-05

LR Concentration Trend: S

Consolidation Data Table:

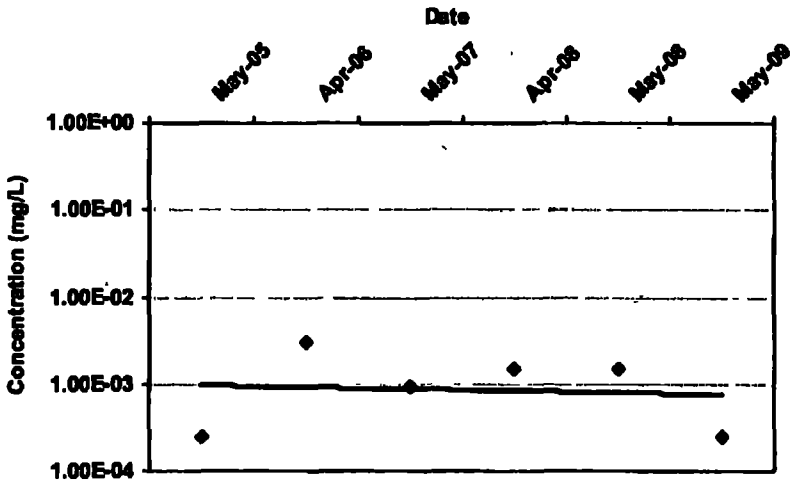
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	BENZENE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3.1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9.5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.84

Confidence in Trend: 53.1%

Ln Slope: -8.0E-05

LR Concentration Trend: S

Consolidation Data Table:

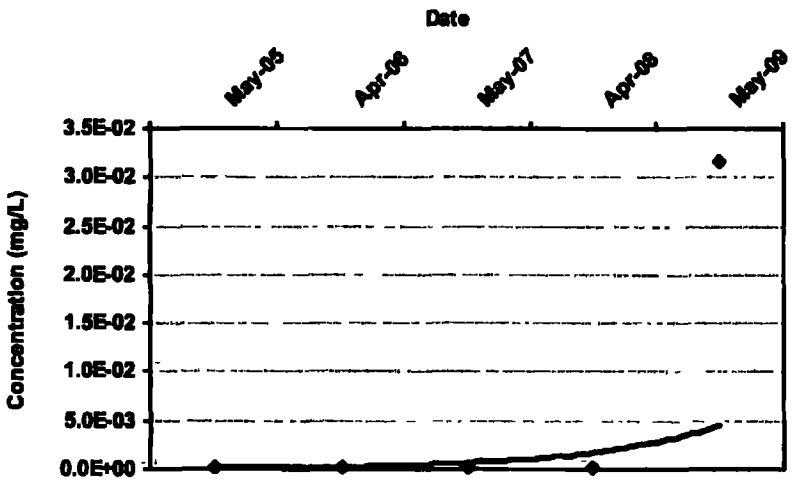
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	BENZENE	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3 1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9 5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 2.15

Confidence in Trend: 91.4%

Ln Slope: 2.7E-03

LR Concentration Trend: PI

Consolidation Data Table:

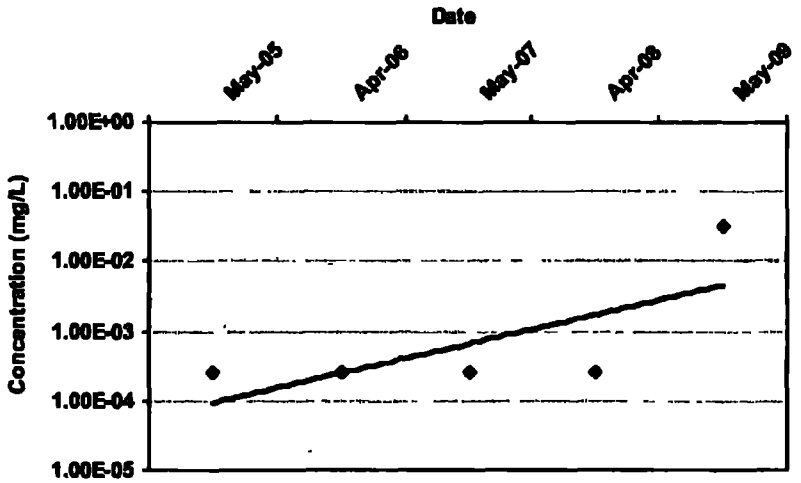
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3 2E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 2.15

Confidence in Trend: 91.4%

Ln Slope: 2.7E-03

LR Concentration Trend: PI

Consolidation Data Table:

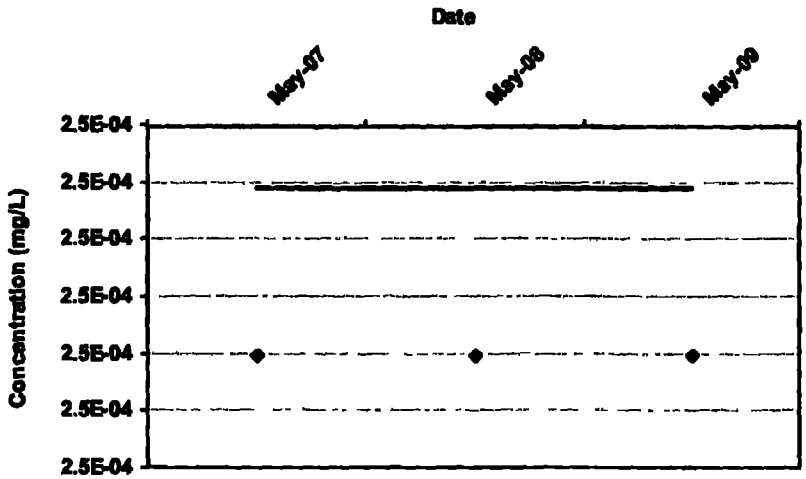
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3 2E-02		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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

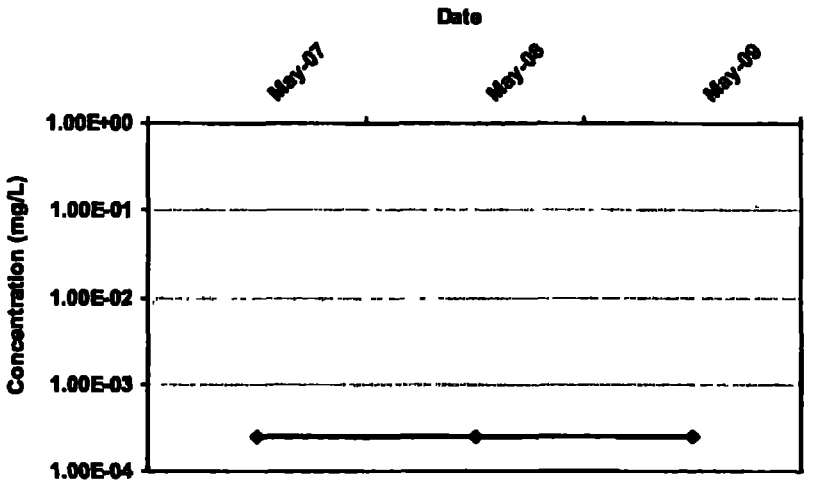
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

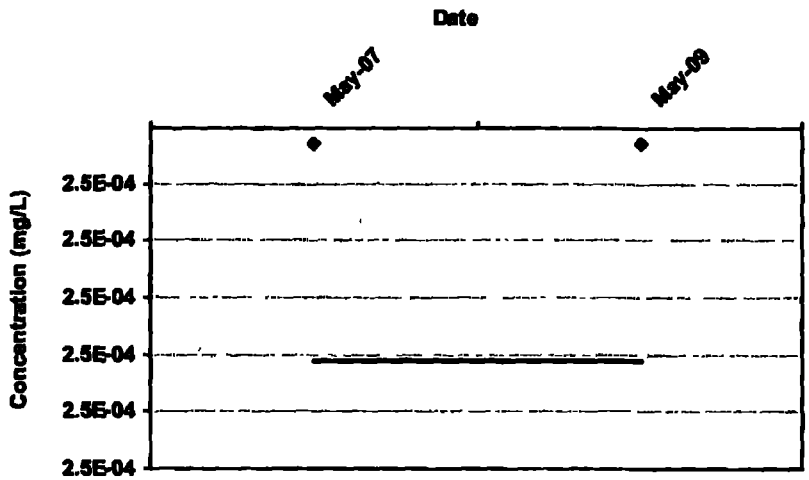
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

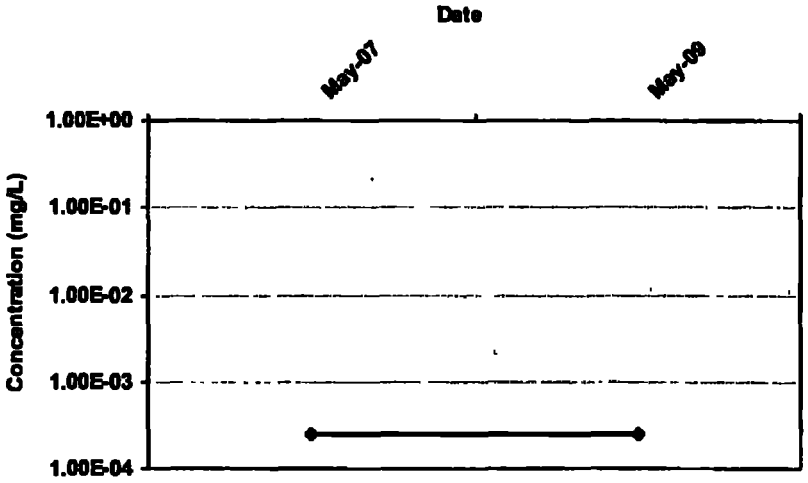
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0 0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

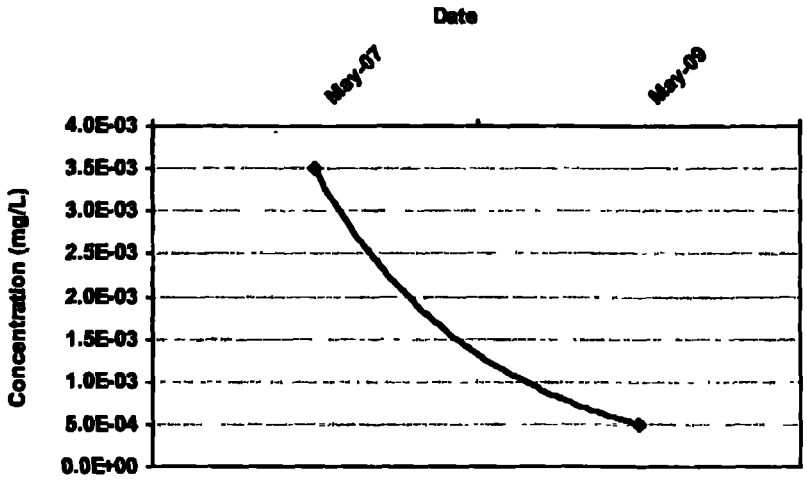
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0 0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

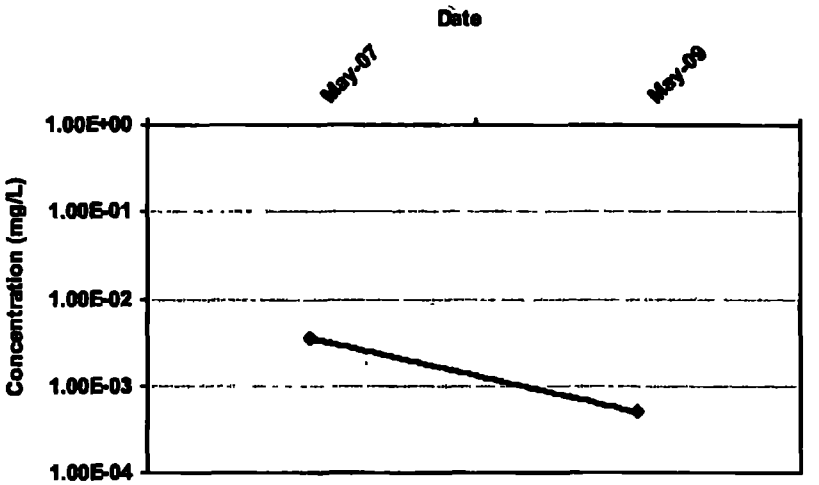
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0 00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

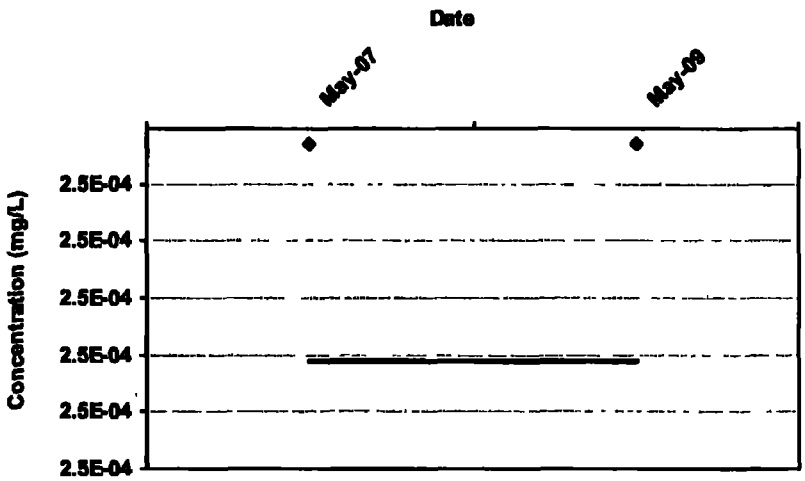
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

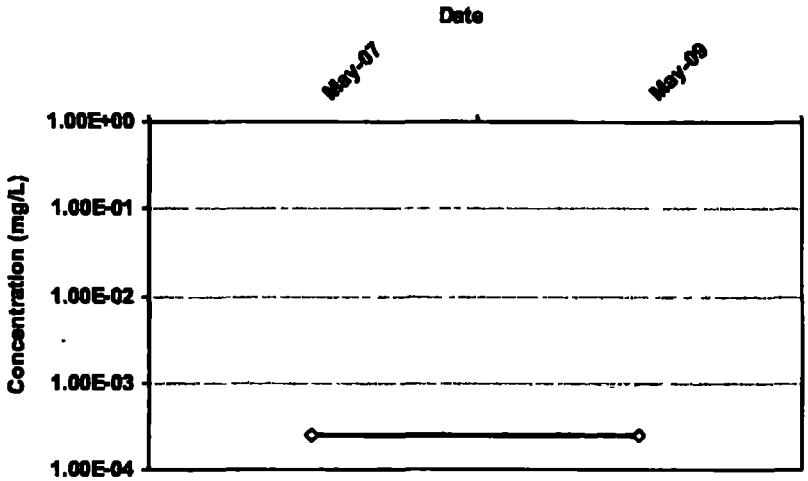
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

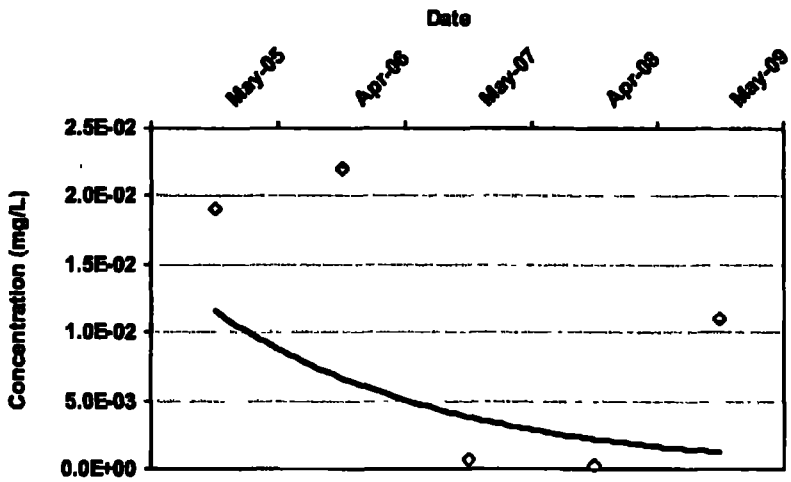
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.95

Confidence in Trend: 75.9%

Ln Slope: -1.5E-03

LR Concentration Trend: S

Consolidation Data Table:

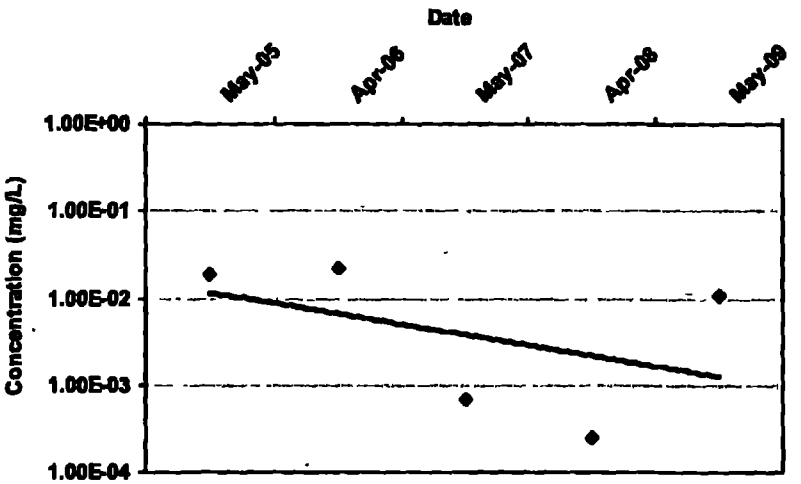
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/15/2005	Total Volatile Organics	1 9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2 2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2 5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.95

Confidence In Trend: 75.9%

Ln Slope: -1.5E-03

LR Concentration Trend: S

Consolidation Data Table:

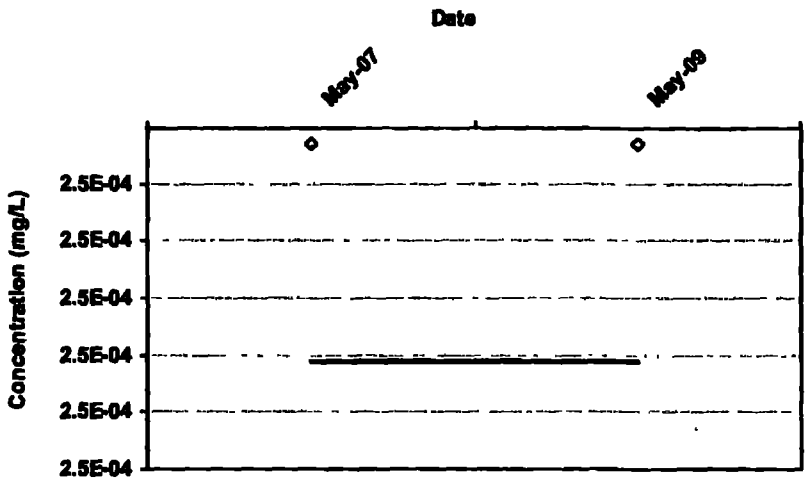
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

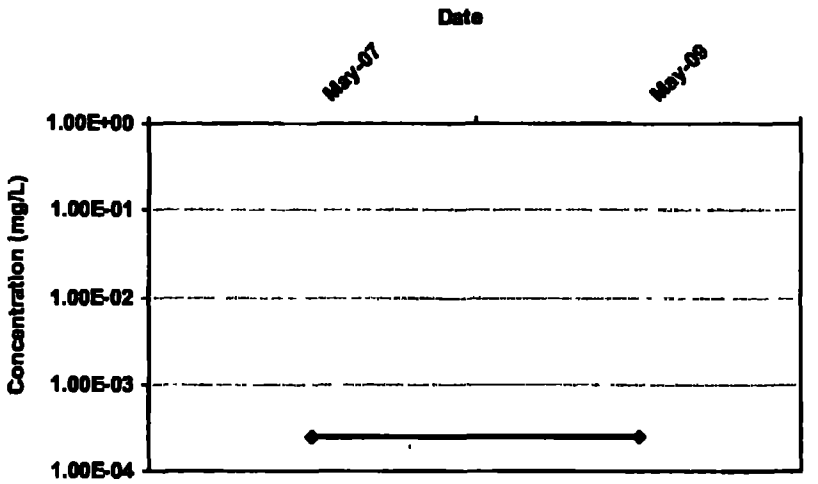
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

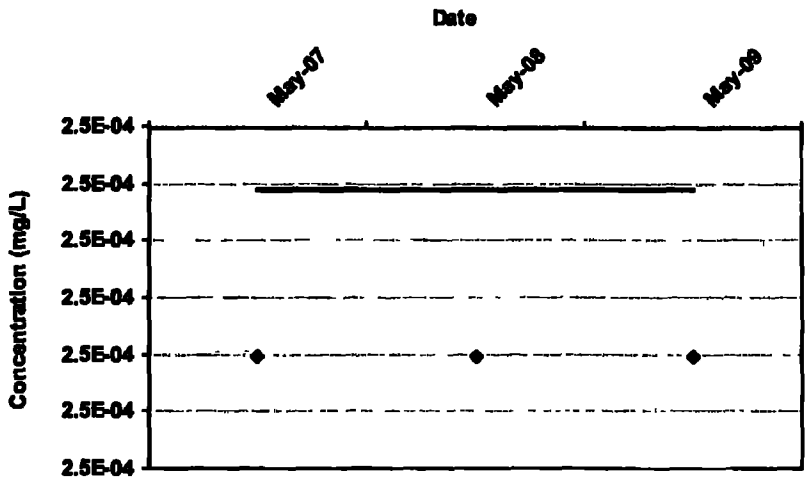
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

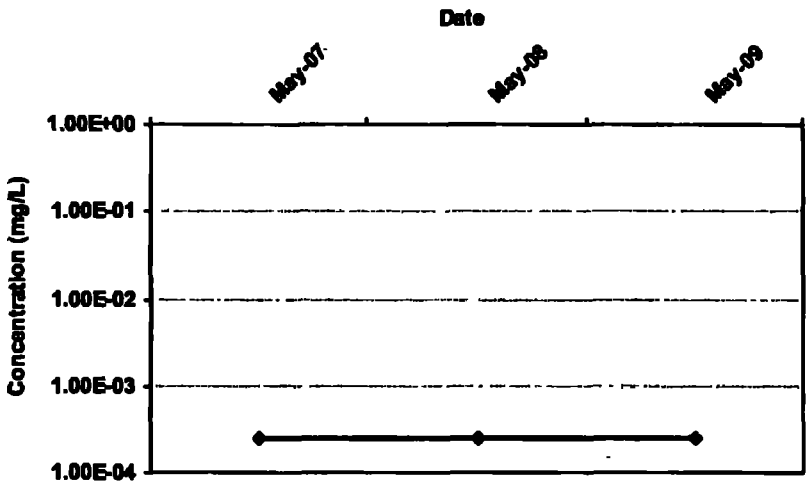
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

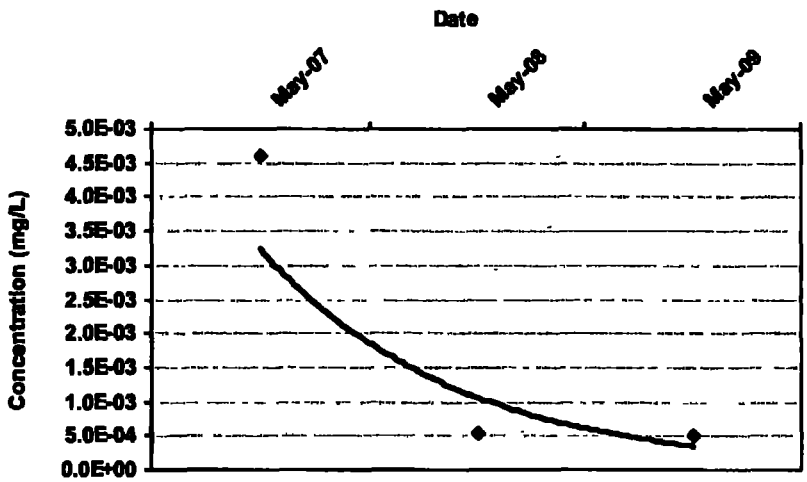
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

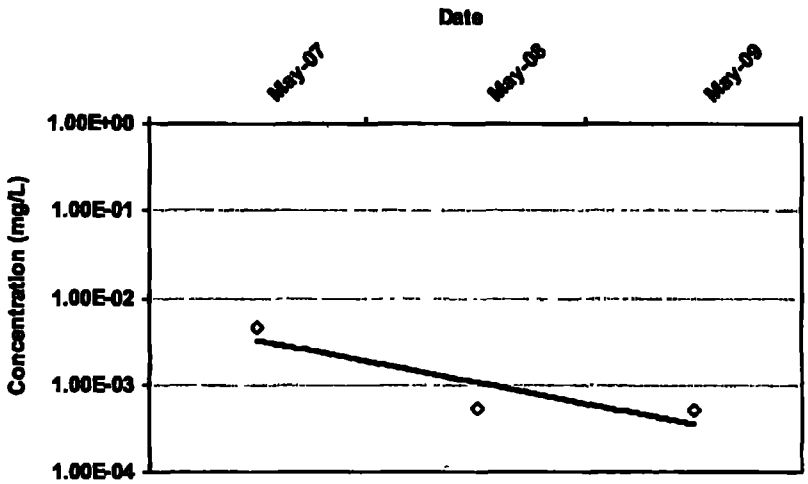
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4.6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5.3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

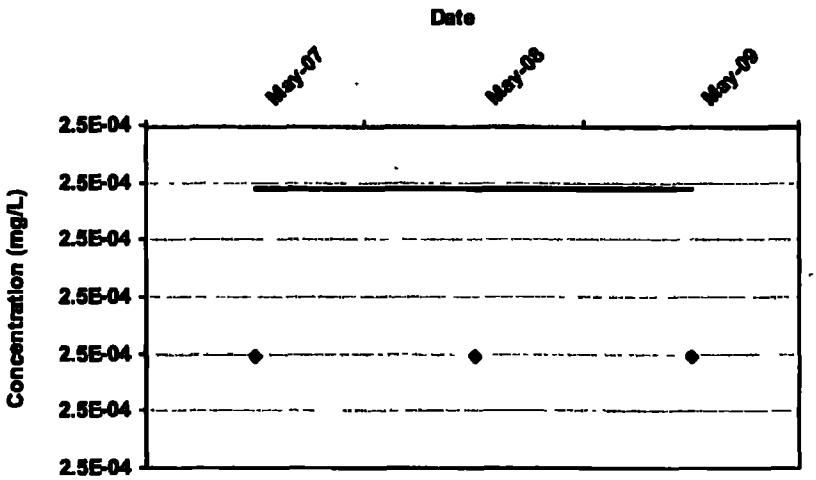
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4 6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5 3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values: Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0 0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

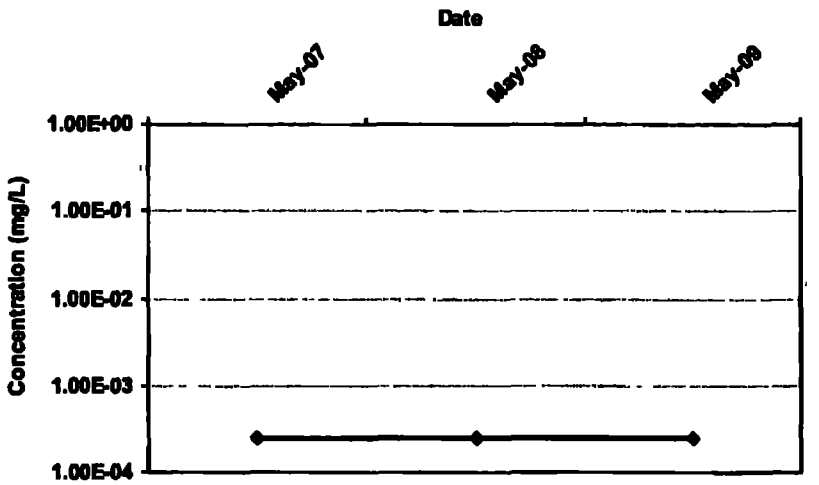
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0 0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

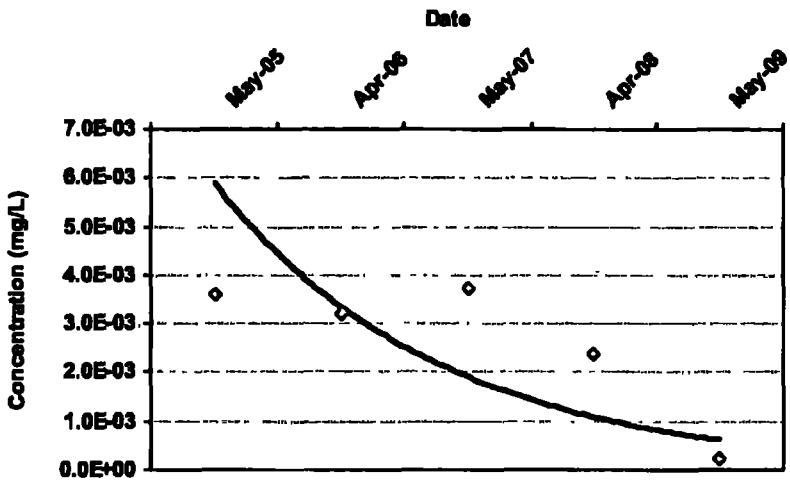
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0 54

Confidence in Trend: 94.2%

Ln Slope: -1.6E-03

LR Concentration Trend: PD

Consolidation Data Table:

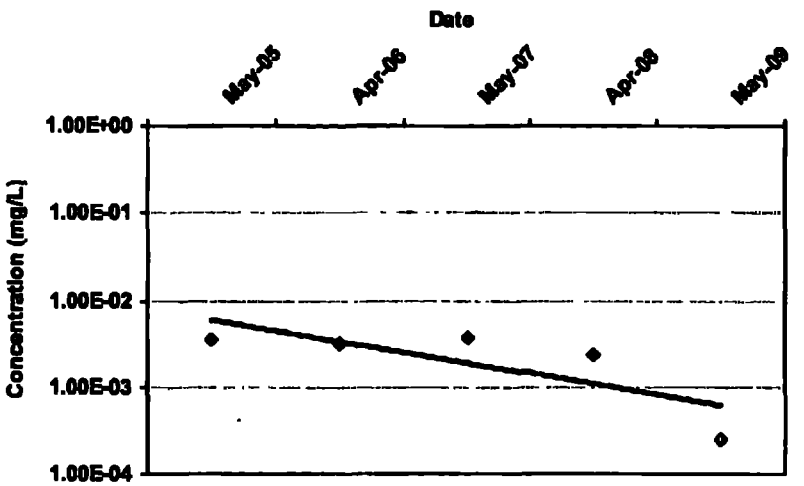
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/15/2005	Total Volatile Organics	3 6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3 2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3 7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.54

Confidence in Trend: 94.2%

Ln Slope: -1.6E-03

LR Concentration Trend: PD

Consolidation Data Table:

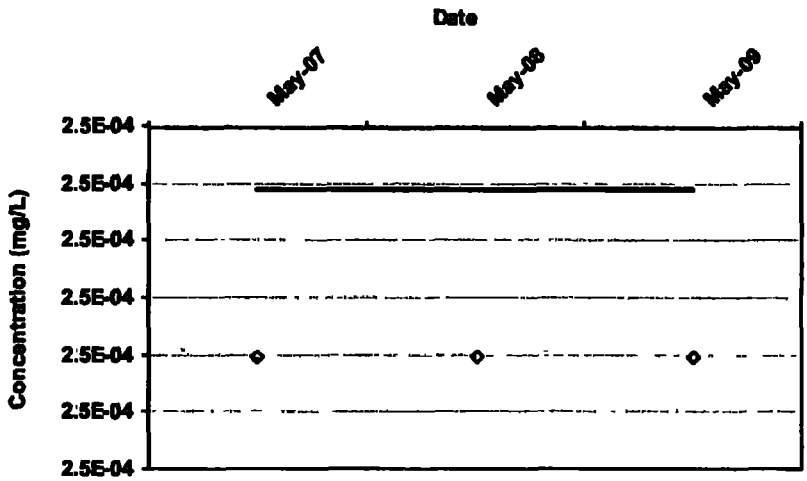
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3.2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence In Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

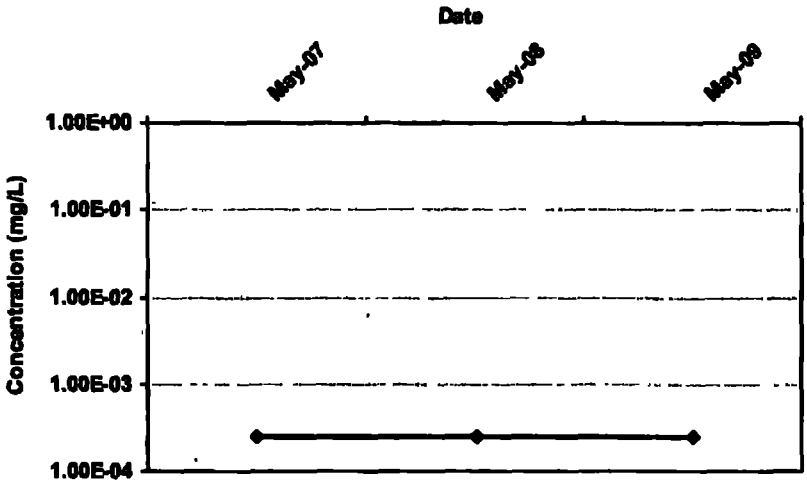
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Linear Regression Statistics

Well: MW-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



COV: 0.00

Confidence in Trend: 0.0%

Ln Slope: 0.0E+00

LR Concentration Trend: N/A

Consolidation Data Table:

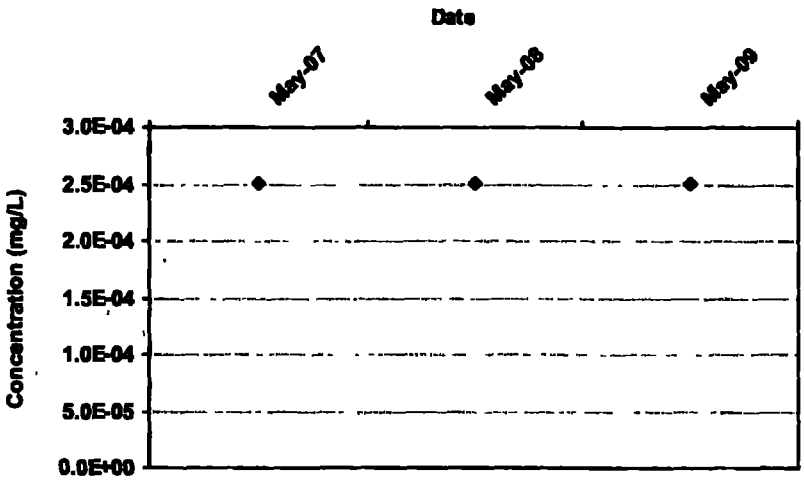
Well	Well Type	Consolidation Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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 = All Samples are Non-detect

MAROS Mann-Kendall Statistics Summary

Well: MW-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

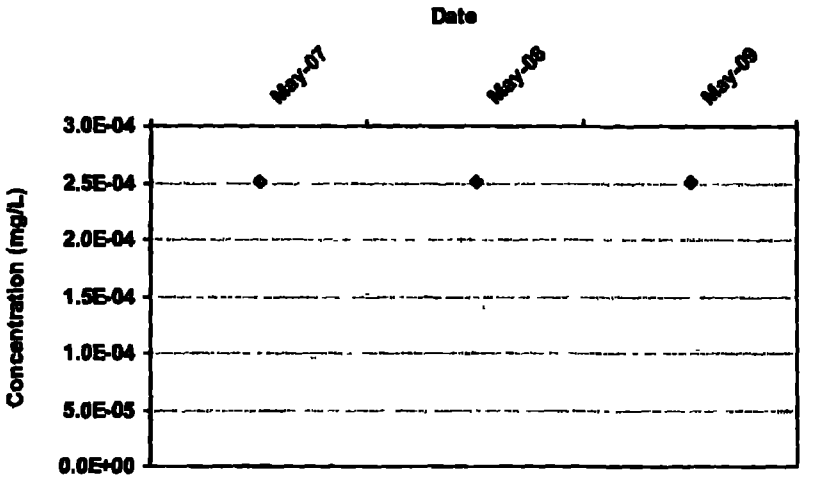
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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-03S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

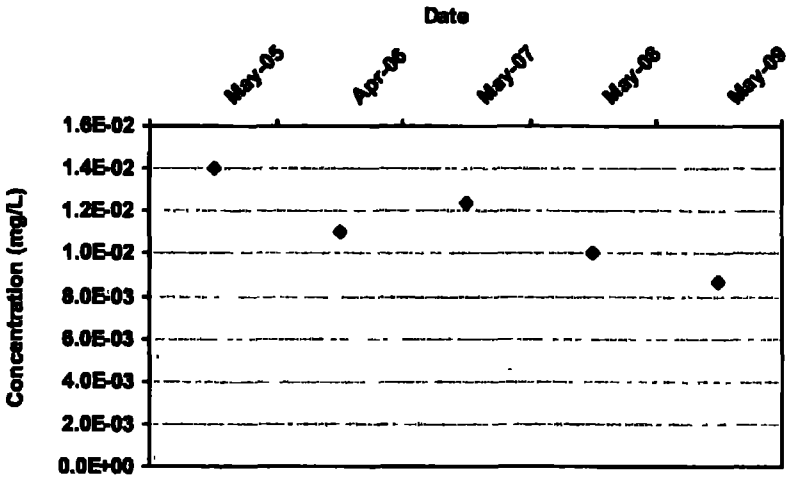
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-03S	T	5/19/2009	1,2-DICHLOROETHANE	2 5E-04	ND	1	0

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-03S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-8

Confidence in Trend:
95.8%

Coefficient of Variation:
0.18

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

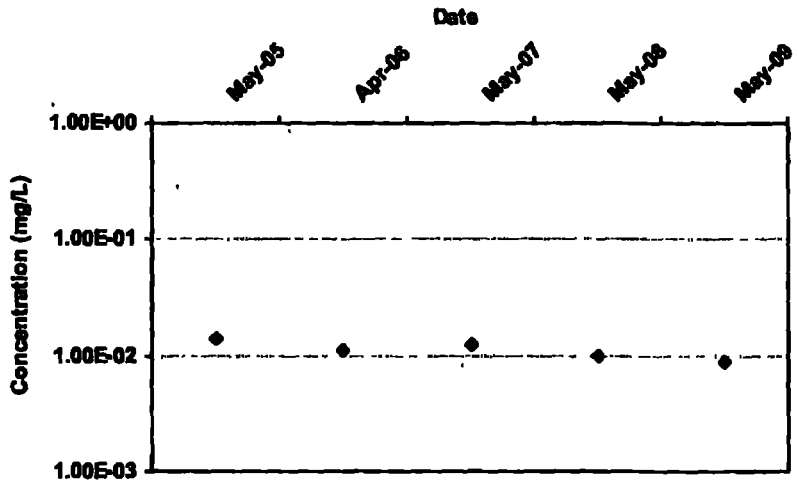
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2005	ARSENIC	1 4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1 1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1 2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1 0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8.7E-03		1	1

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-03S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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 18

Mann Kendall Concentration Trend: (See Note)
D

Data Table:

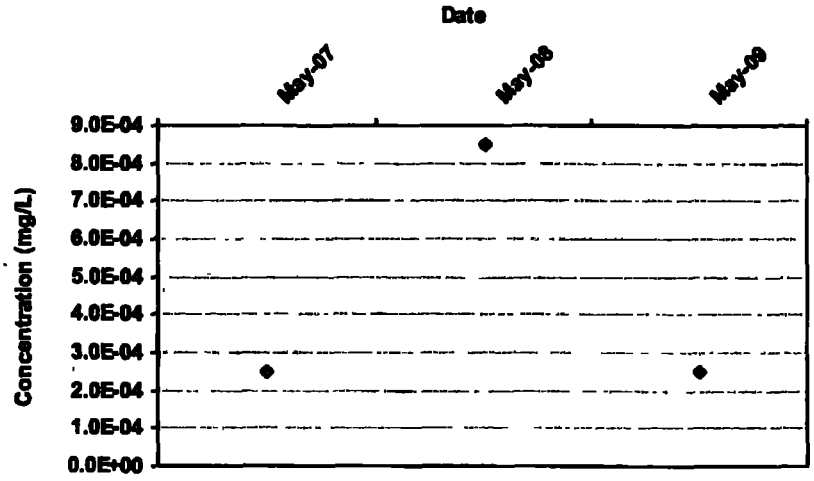
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/15/2005	ARSENIC	1.4E-02		1	1
MW-03S	T	4/15/2006	ARSENIC	1.1E-02		1	1
MW-03S	T	5/21/2007	ARSENIC	1.2E-02		1	1
MW-03S	T	5/24/2008	ARSENIC	1.0E-02		1	1
MW-03S	T	5/19/2009	ARSENIC	8 7E-03		1	1

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-03S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

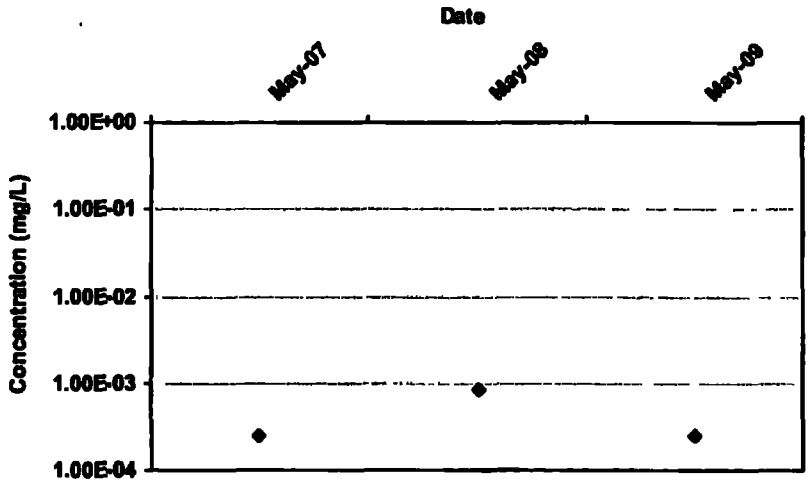
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8.5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	2.5E-04	ND	1	0

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-03S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

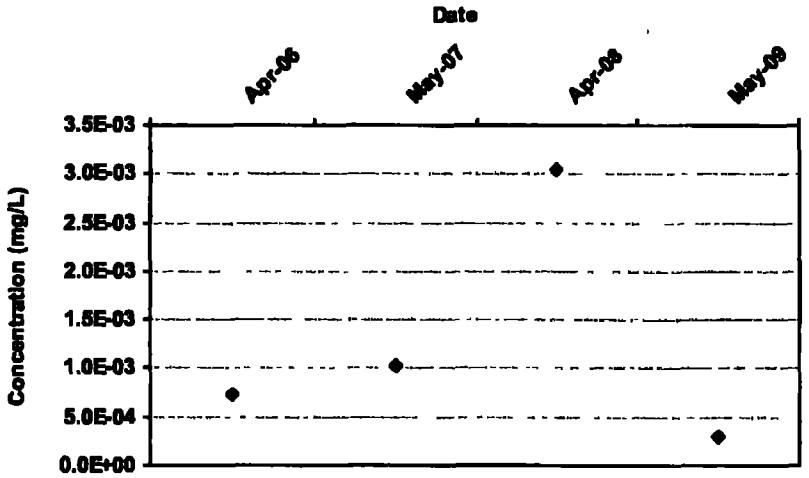
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	BENZENE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	BENZENE	8.5E-04		1	1
MW-03S	T	5/19/2009	BENZENE	2.5E-04	ND	1	0

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-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 37.5%

Coefficient of Variation: 0.95

Mann Kendall Concentration Trend: (See Note) S

Data Table:

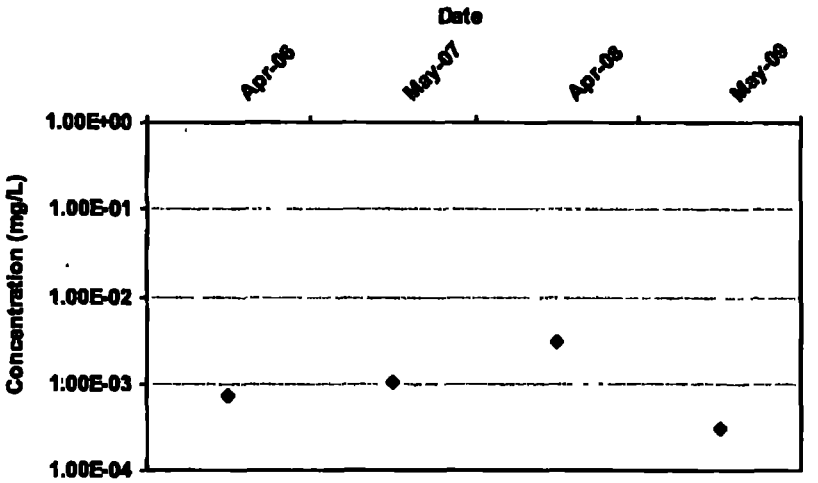
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	4/15/2006	Total Volatile Organics	7 4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1 0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3 1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3 0E-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-03S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
0

Confidence in Trend:
37.5%

Coefficient of Variation:
0.95

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

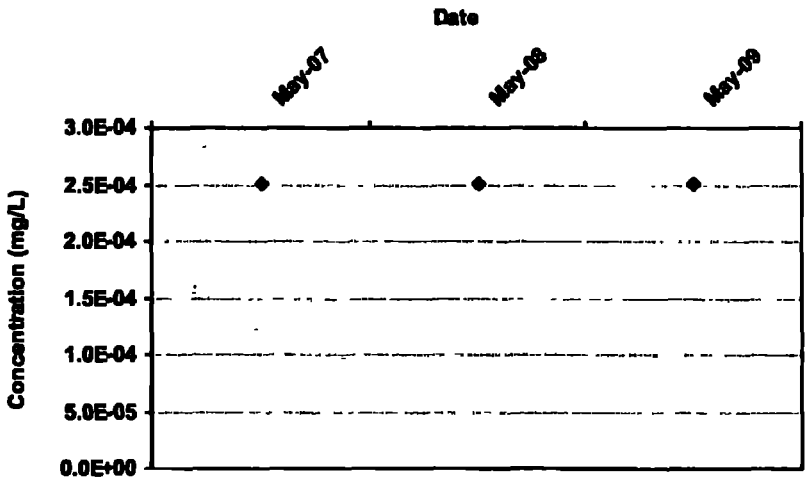
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	4/15/2006	Total Volatile Organics	7 4E-04		1	1
MW-03S	T	5/15/2007	Total Volatile Organics	1 0E-03		1	1
MW-03S	T	4/15/2008	Total Volatile Organics	3.1E-03		1	1
MW-03S	T	5/15/2009	Total Volatile Organics	3 0E-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-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

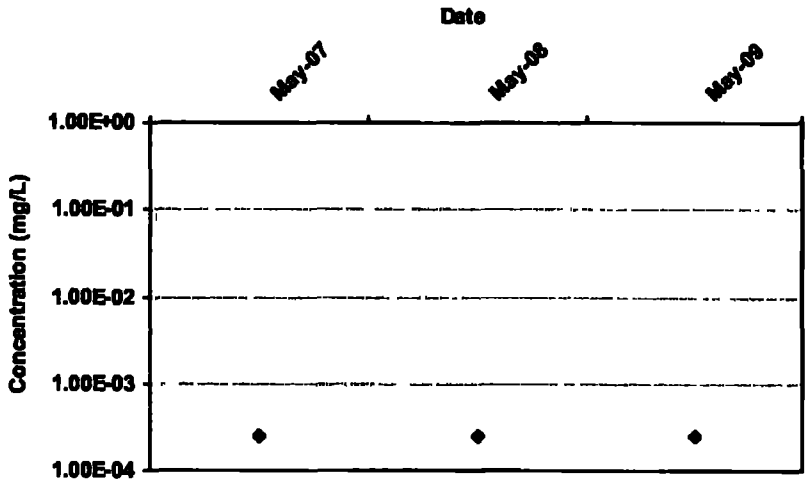
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-03S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

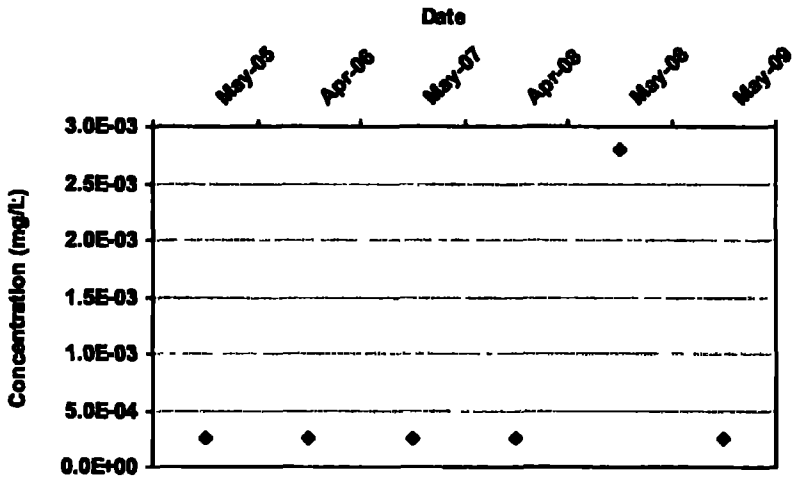
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-03S	T	5/21/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-03S	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-06SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 3

Confidence in Trend: 64.0%

Coefficient of Variation: 1.54

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

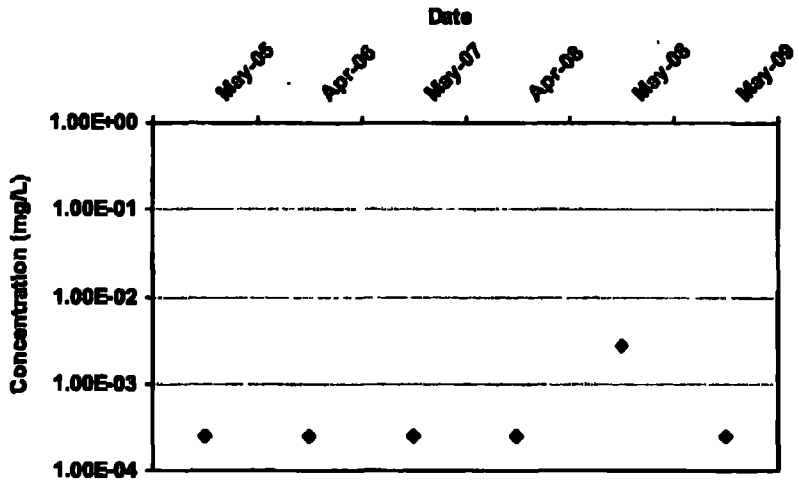
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/31/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-06SR	T	5/19/2009	1,2-DICHLOROETHANE	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-08SR
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
3

Confidence in Trend:
64.0%

Coefficient of Variation:
1.54

Mann Kendall Concentration Trend: (See Note)
NT

Data Table:

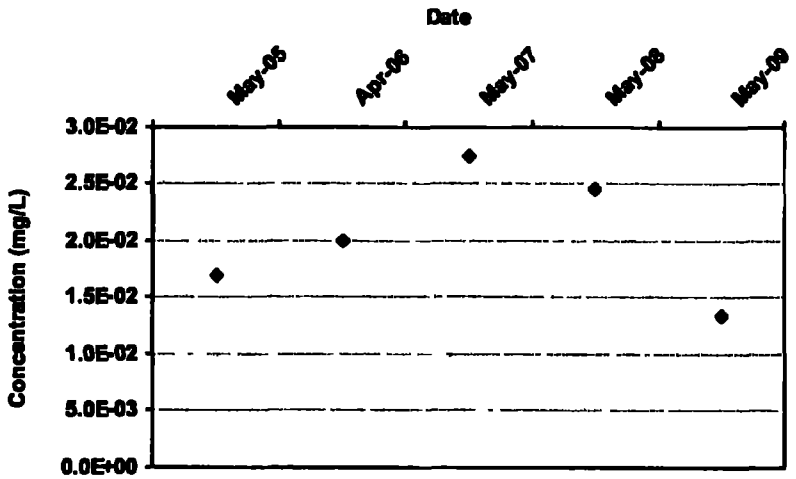
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-08SR	T	5/15/2005	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-08SR	T	4/15/2006	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-08SR	T	5/31/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-08SR	T	4/15/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-08SR	T	5/24/2008	1,2-DICHLOROETHANE	2.8E-03		1	1
MW-08SR	T	5/19/2009	1,2-DICHLOROETHANE	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-06SR
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 40.8%

Coefficient of Variation: 0.28

Mann Kendall Concentration Trend: (See Note) S

Data Table:

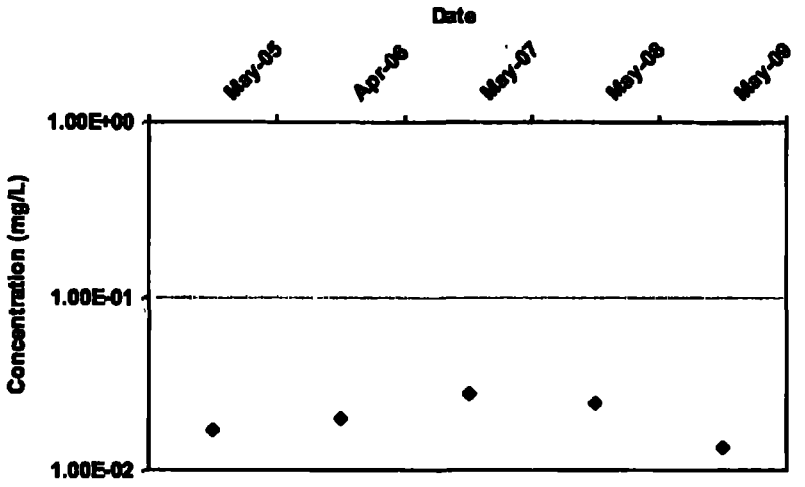
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	ARSENIC	1.7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2.0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2 8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	1 3E-02		1	1

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-06SR
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 0

Confidence in Trend: 40.8%

Coefficient of Variation: 0.28

Mann Kendall Concentration Trend: (See Note) S

Data Table:

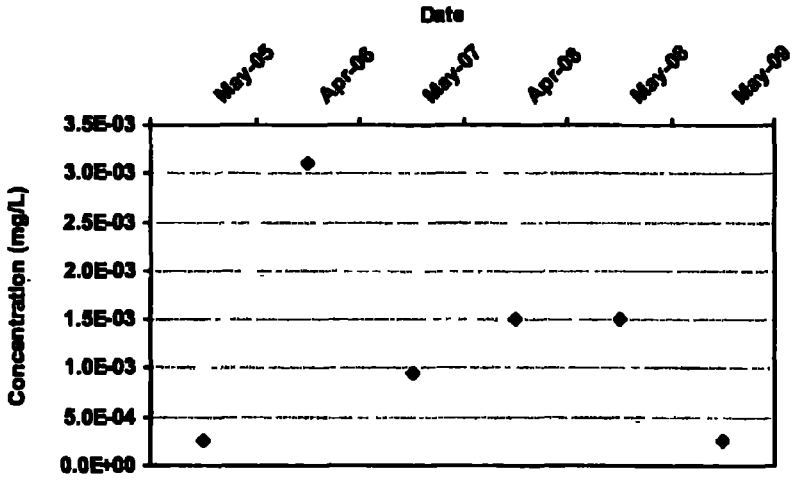
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	ARSENIC	1 7E-02		1	1
MW-06SR	T	4/15/2006	ARSENIC	2 0E-02		1	1
MW-06SR	T	5/31/2007	ARSENIC	2.8E-02		1	1
MW-06SR	T	5/24/2008	ARSENIC	2.5E-02		1	1
MW-06SR	T	5/19/2009	ARSENIC	1 3E-02		1	1

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-06SR
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -1

Confidence in Trend: 50.0%

Coefficient of Variation: 0.84

Mann Kendall Concentration Trend: (See Note) S

Data Table:

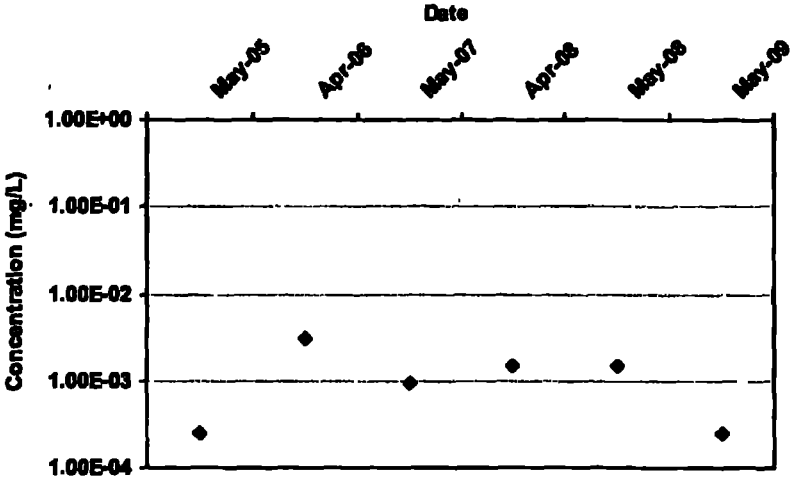
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	BENZENE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3.1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9 5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1 5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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-06SR
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-1

Confidence in Trend:
50.0%

Coefficient of Variation:
0.84

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

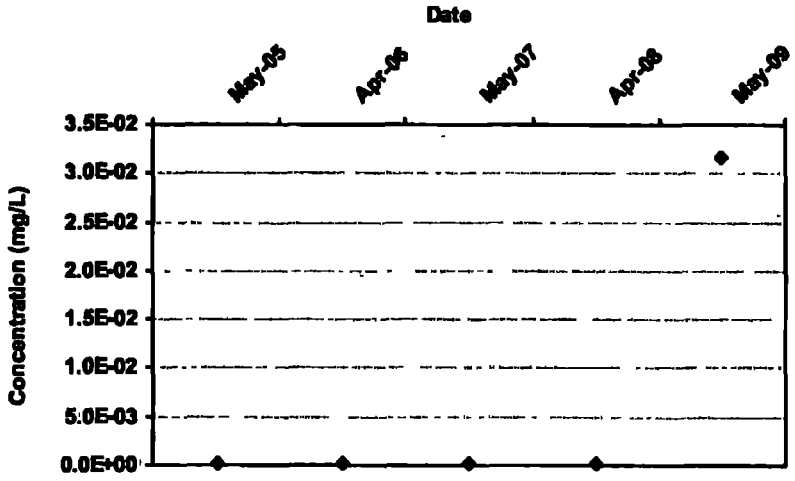
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	BENZENE	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	BENZENE	3.1E-03		1	1
MW-06SR	T	5/31/2007	BENZENE	9.5E-04		1	1
MW-06SR	T	4/15/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/24/2008	BENZENE	1.5E-03		1	1
MW-06SR	T	5/19/2009	BENZENE	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-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 4

Confidence in Trend: 75.8%

Coefficient of Variation: 2.15

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

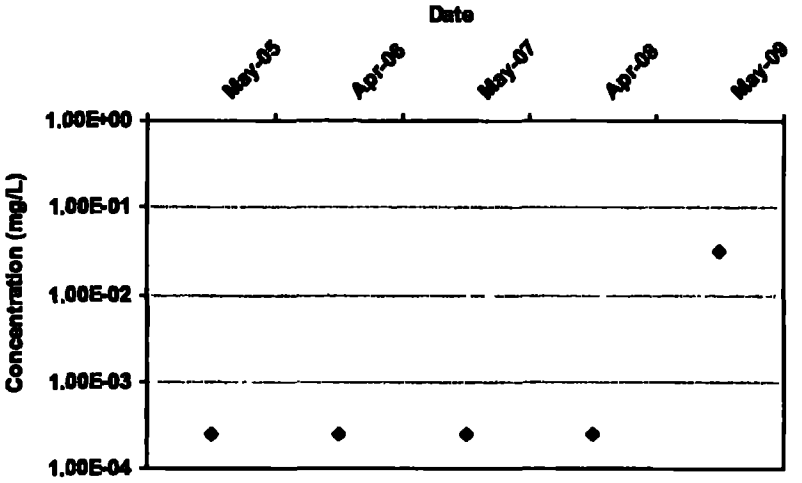
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3.2E-02		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-06SR
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: 4

Confidence in Trend: 75.8%

Coefficient of Variation: 2.15

Mann Kendall Concentration Trend: (See Note) NT

Data Table:

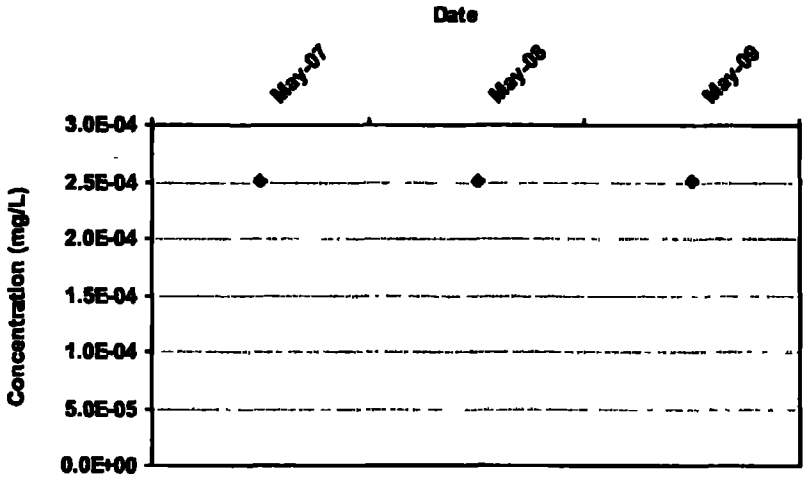
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/15/2005	Total Volatile Organics	2 5E-04	ND	1	0
MW-06SR	T	4/15/2006	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2007	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-06SR	T	5/15/2009	Total Volatile Organics	3 2E-02		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-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

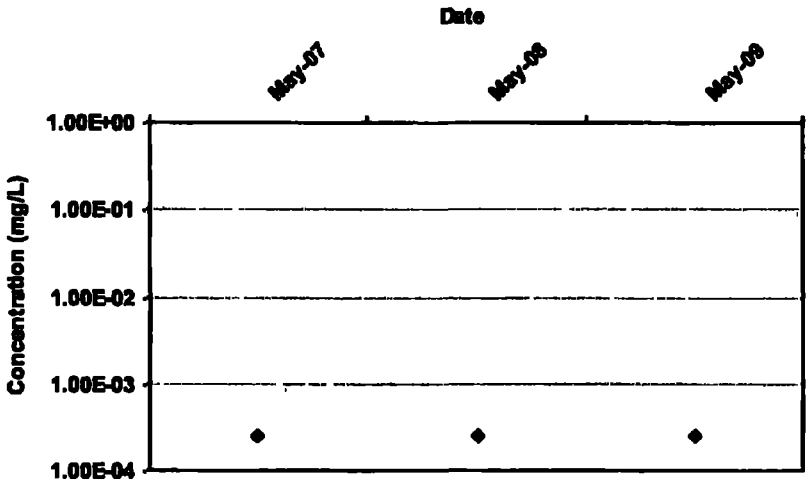
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2 5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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-06SR
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

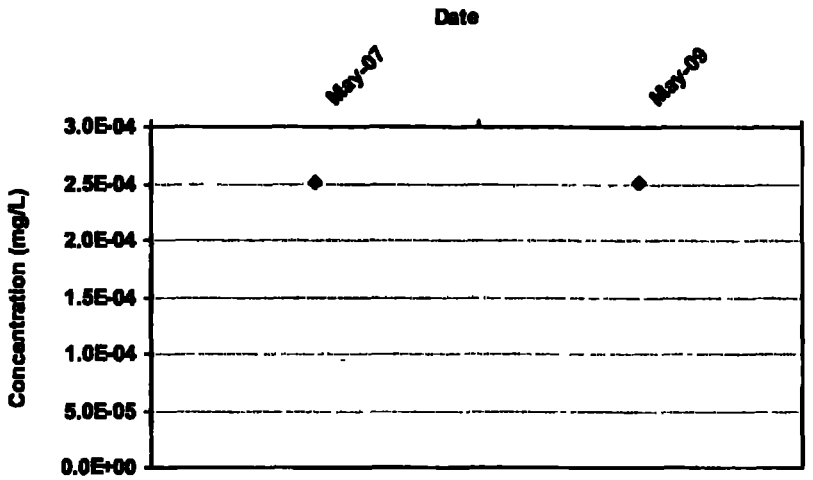
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-06SR	T	5/31/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-06SR	T	5/19/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

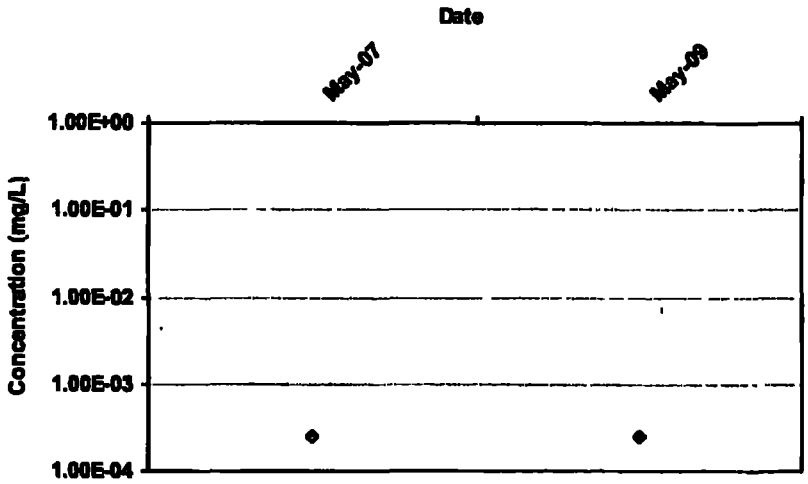
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

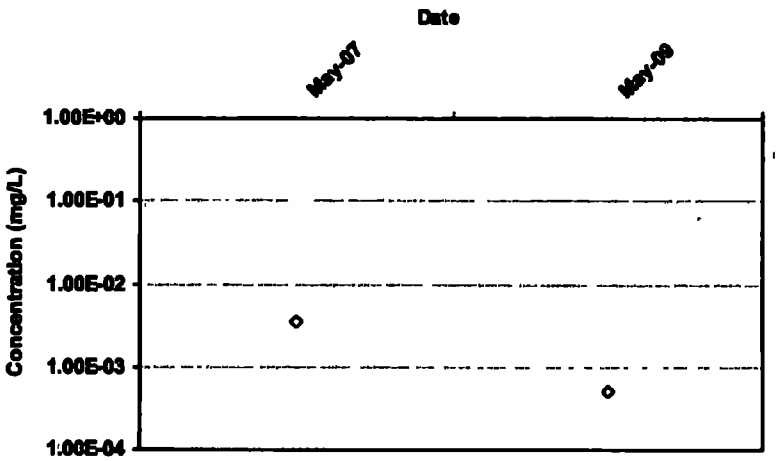
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

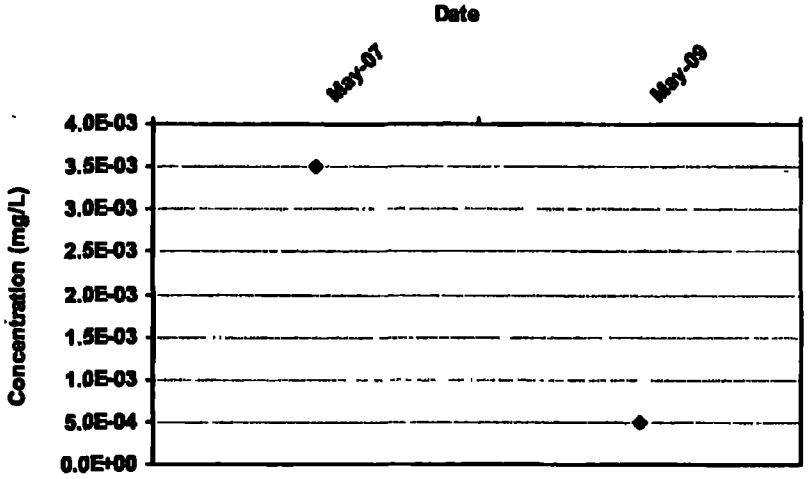
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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-11S
Well Type: T
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

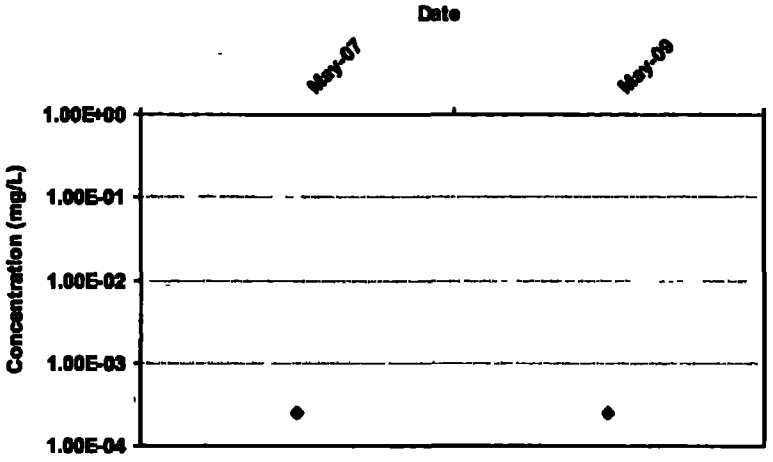
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	ARSENIC	3.5E-03		1	1
MW-11S	T	5/20/2009	ARSENIC	5.0E-04	ND	1	0

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-11S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

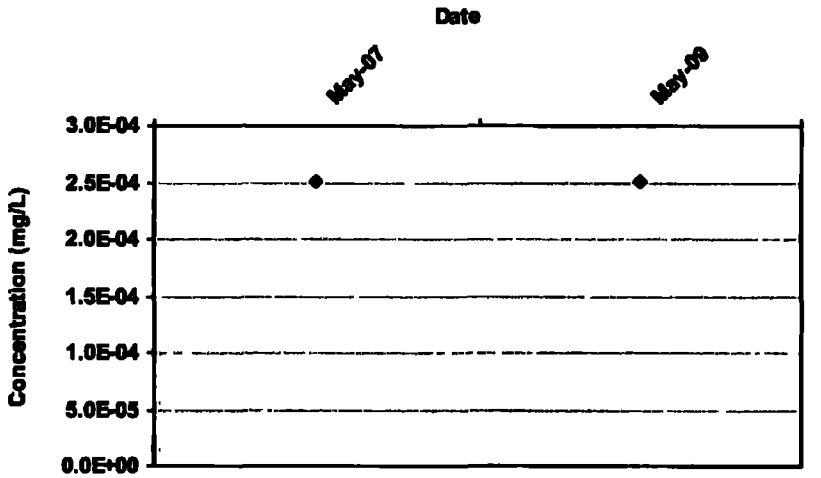
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2 5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2 5E-04	ND	1	0

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-11S
Well Type: T
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

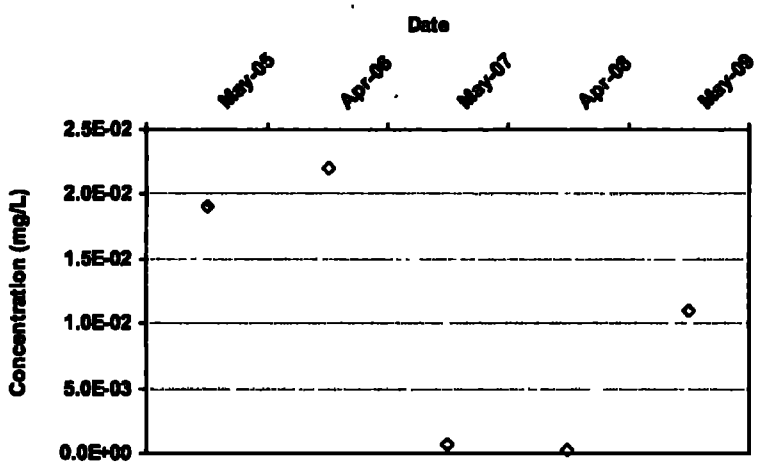
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	BENZENE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -4

Confidence in Trend: 75.8%

Coefficient of Variation: 0.95

Mann Kendall Concentration Trend: (See Note) S

Data Table:

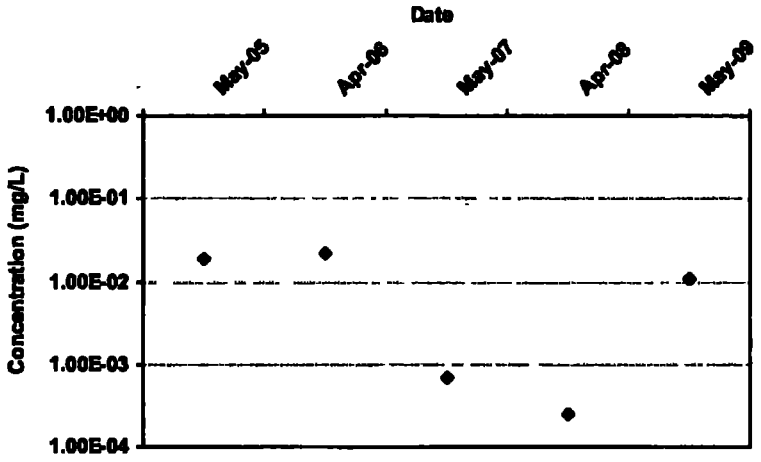
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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-11S
Well Type: T
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-4

Confidence in Trend:
75.8%

Coefficient of Variation:
0.95

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

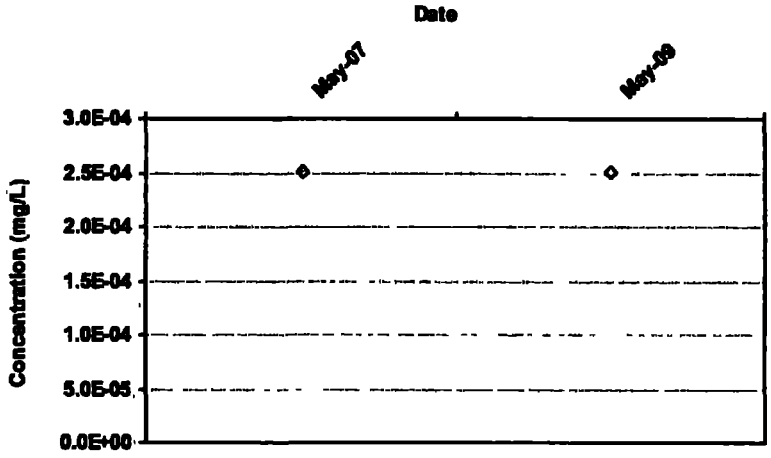
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/15/2005	Total Volatile Organics	1.9E-02		1	1
MW-11S	T	4/15/2006	Total Volatile Organics	2.2E-02		1	1
MW-11S	T	5/15/2007	Total Volatile Organics	7.0E-04		1	1
MW-11S	T	4/15/2008	Total Volatile Organics	2.5E-04	ND	1	0
MW-11S	T	5/15/2009	Total Volatile Organics	1.1E-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-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

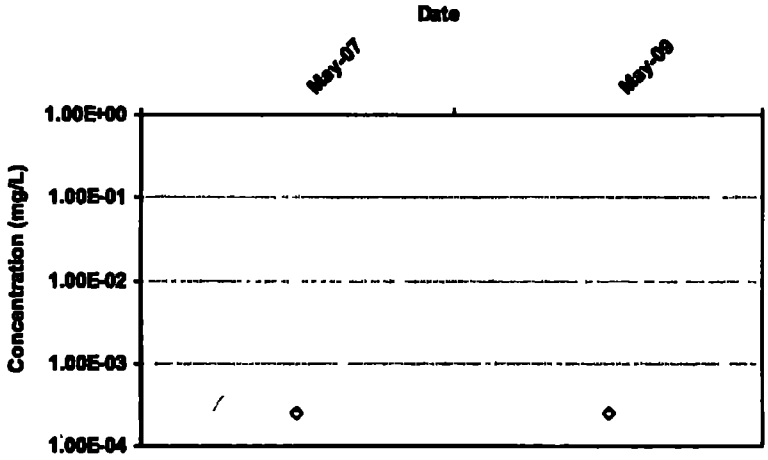
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-11S
Well Type: T
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

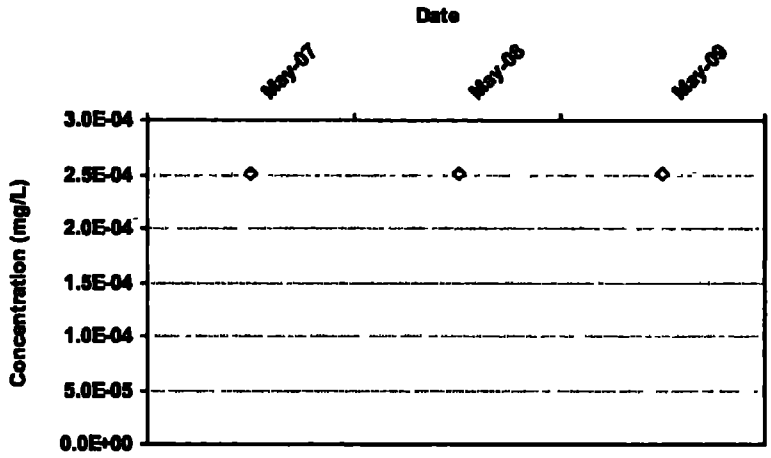
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-11S	T	5/22/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-11S	T	5/20/2009	VINYL CHLORIDE	2 5E-04	ND	1	0

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-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

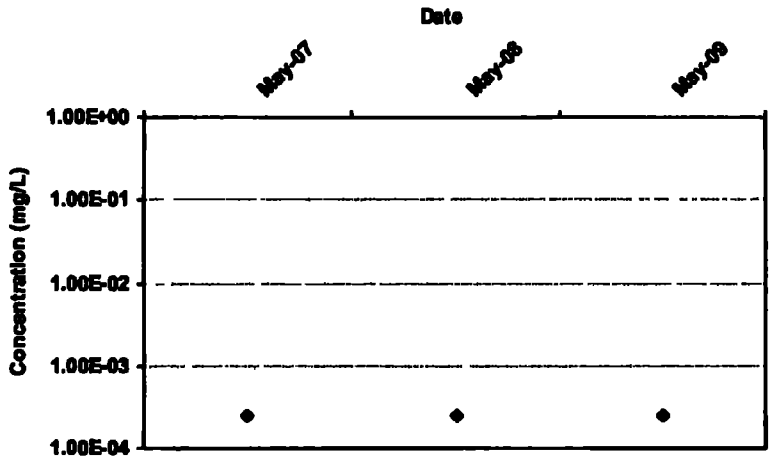
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: 1,2-DICHLOROETHANE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

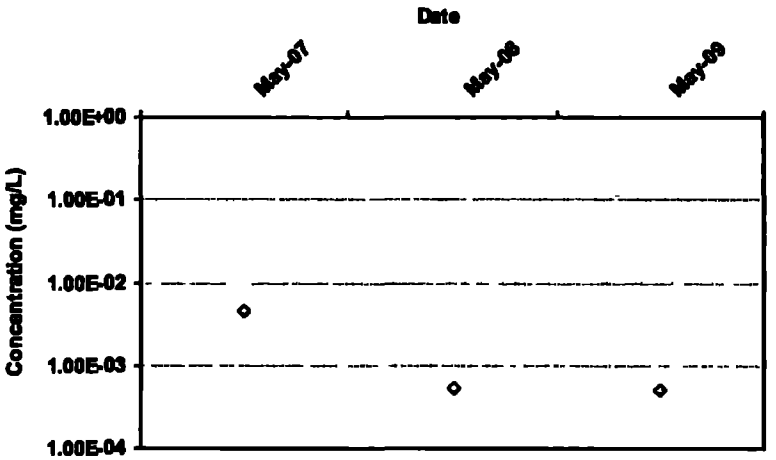
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	1,2-DICHLOROETHANE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	1,2-DICHLOROETHANE	2 5E-04	ND	1	0
MW-13S	S	5/20/2009	1,2-DICHLOROETHANE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

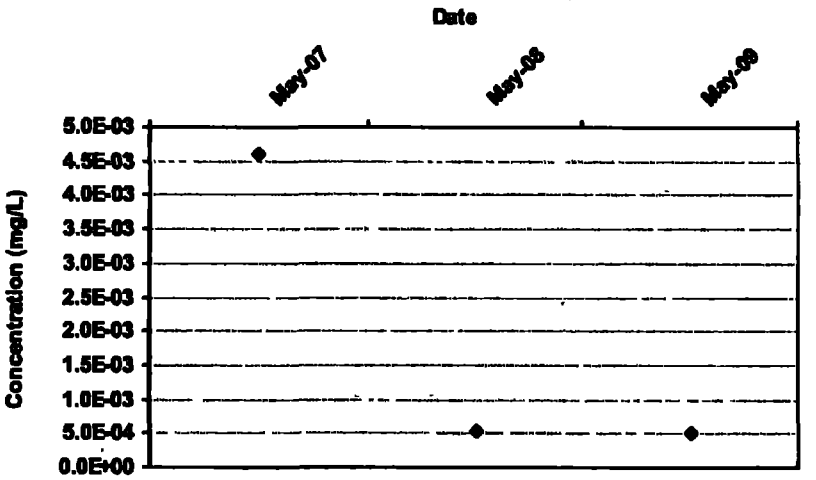
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4 6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5 3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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-13S
Well Type: S
COC: ARSENIC

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

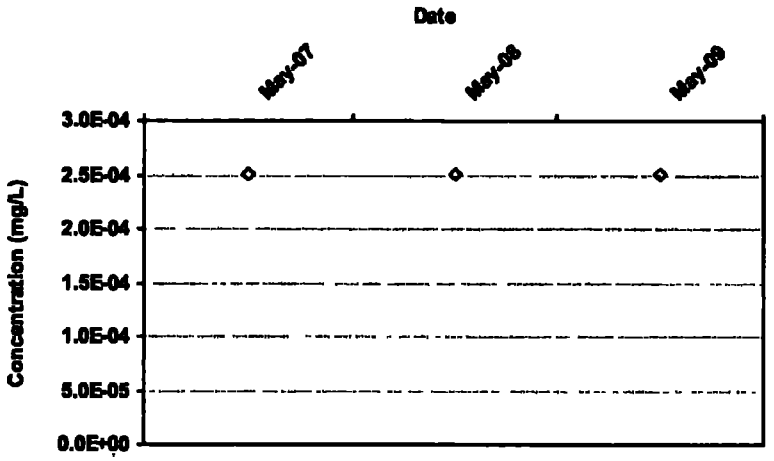
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	ARSENIC	4 6E-03		1	1
MW-13S	S	5/24/2008	ARSENIC	5.3E-04		1	1
MW-13S	S	5/20/2009	ARSENIC	5 0E-04	ND	1	0

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-13S
Well Type: S
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

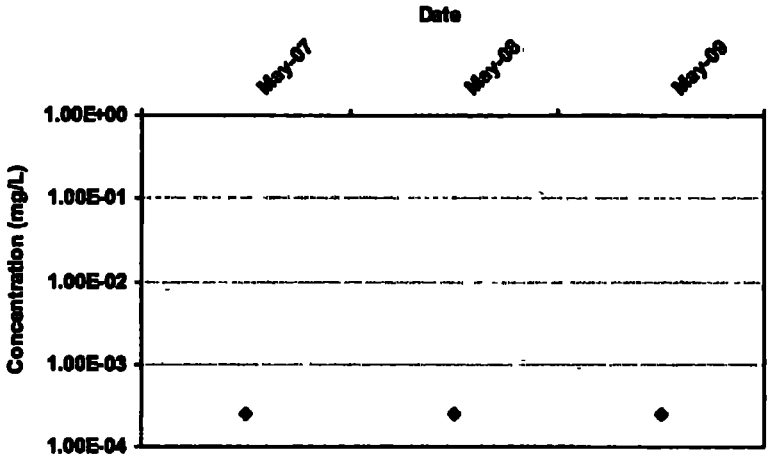
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: BENZENE

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

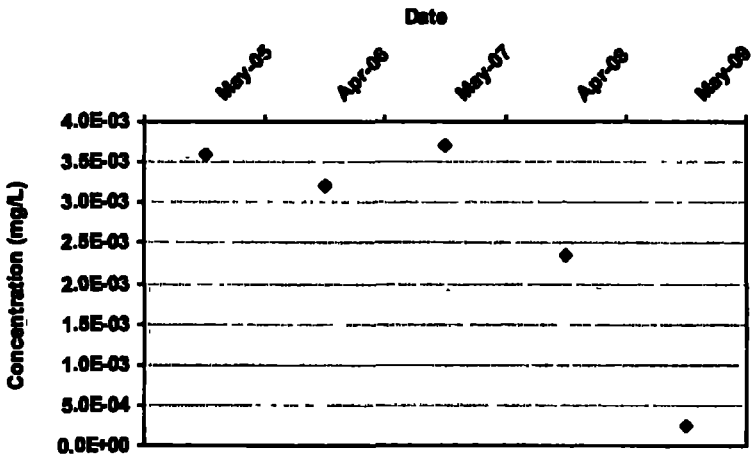
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	BENZENE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	BENZENE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic: -6

Confidence in Trend: 88.3%

Coefficient of Variation: 0.54

Mann Kendall Concentration Trend: (See Note) S

Data Table:

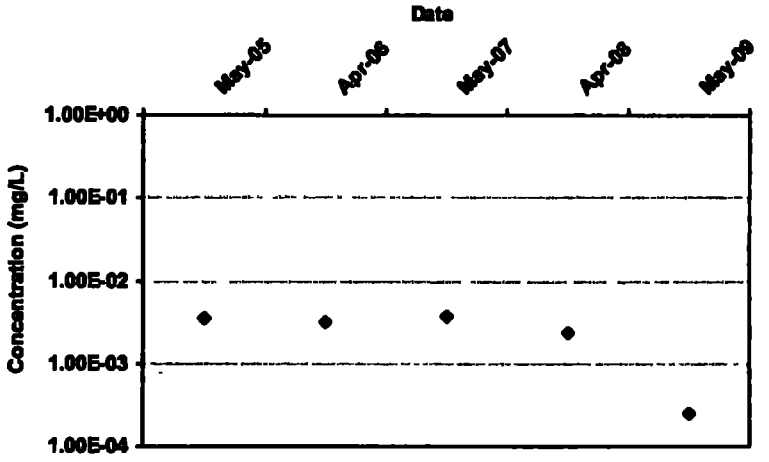
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3.2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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-13S
Well Type: S
COC: Total Volatile Organics

Time Period: 5/15/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
ND Values: 1/2 Detection Limit
J Flag Values : Actual Value



Mann Kendall S Statistic:
-6

Confidence in Trend:
88 3%

Coefficient of Variation:
0 54

Mann Kendall Concentration Trend: (See Note)
S

Data Table:

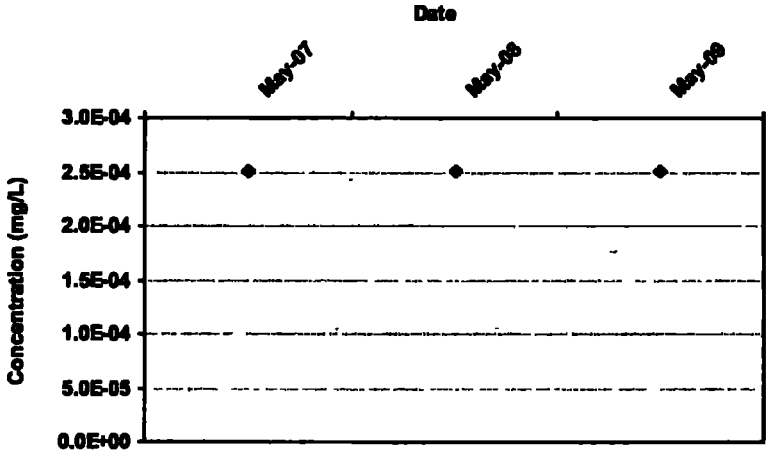
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/15/2005	Total Volatile Organics	3.6E-03		1	1
MW-13S	S	4/15/2006	Total Volatile Organics	3 2E-03		1	1
MW-13S	S	5/15/2007	Total Volatile Organics	3.7E-03		1	1
MW-13S	S	4/15/2008	Total Volatile Organics	2.4E-03		1	1
MW-13S	S	5/15/2009	Total Volatile Organics	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-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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:

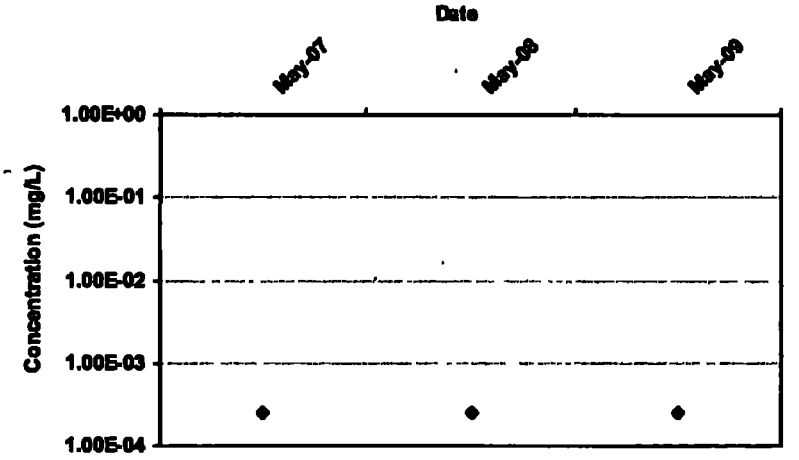
Well	Well Type	Effective Date	Constituent	Result (mg/L)	Flag	Number of Samples	Number of Detects
MW-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	2.5E-04	ND	1	0

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-13S
Well Type: S
COC: VINYL CHLORIDE

Time Period: 5/1/2005 to 5/20/2009
Consolidation Period: No Time Consolidation
Consolidation Type: Median
Duplicate Consolidation: Average
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-13S	S	5/23/2007	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/24/2008	VINYL CHLORIDE	2.5E-04	ND	1	0
MW-13S	S	5/20/2009	VINYL CHLORIDE	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