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2006 ANNUAL REMEDIAL ACTION GROUND-WATER MONITORING REPORT ORMET CORPORATION SUPERFUND SITE

MARCH 31, 2007

Prepared for:

Ormet Primary Aluminum Corporation
Hannibal, Ohio

Prepared by:

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PRIMARY ALUMINUM CORPORATION

April 3, 2007

Mr. Bernie Schorle
Remedial Project Manager
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Dear Mr. Schorle:

Enclosed are two copies of the 2006 Annual Ground-Water Monitoring Report for the Ormet Superfund site. The report has been prepared in accordance with the Remedial Action Ground-Water Monitoring Plan (Revision 1 – April 28, 1997), which was submitted to the USEPA during Remedial Design.

Respectfully,

John Reggi
Director Corporate Env. Services

Enclosures

cc: Tommy Temple
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2006 ANNUAL REMEDIAL ACTION GROUND-WATER MONITORING REPORT ORMET CORPORATION SUPERFUND SITE HANNIBAL, OHIO

BACKGROUND

Under the terms of a Consent Decree entered on December 18, 1995 between the United States Environmental Protection Agency (USEPA) and the Ormet Primary Aluminum Corporation for the Ormet Corporation Superfund Site, Ormet has undertaken Remedial Action (RA) at the site consisting of the following:

- Containment of the plume in the alluvial aquifer through continued pumping of the interceptor wells and Ormet Ranney well and treatment of ground water pumped by the interceptor wells using ferrous salt precipitation;

- Installation and operation of a soil-flushing system in the Former Spent Potliner Storage Area (FSPSA);

- Capping of the former construction material scrap dump (CMSD) with a multi-layer cap, including construction of a TSCA-compliant cell within the CMSD for disposal of backwater area sediment containing PCBs;

- Installation of a drain system around the toe of the former CMSD to collect seeps, with treatment of the collected seep water using activated carbon followed by treatment at the ground-water treatment plant;

- Excavation of carbon material from the former carbon runoff and deposition area and disposal of the material in the former CMSD;

- Excavation of sediment from the former Outfall 004 backwater area and disposal of the sediment in the CMSD; and

- Relocation of the Outfall 004 channel.

Areas of the site that were subject to remedial action are shown on Figure 1.

Remedial construction was initiated in April 1997 and was certified as being complete in August 1998. During the period from August 1998 through October 1998, the FSPSA soil-flushing system was operated on a trial basis, with flushing for a period of approximately three hours per day. Beginning in April 1999, the soil-flushing system began full operation (i.e., flushing for eight hours per day). To reduce ponding of water that occurred over a portion of the FSPSA, the flushing schedule was modified during 2001. Under the modified schedule, the flushing system is on for 1 ½ hours and off for ¾ of an hour for a total of about 14 hours per day. The flushing system is not operated during that period when freezing of the lines could occur and the ground may be frozen, typically from November through March.

As specified in the Statement of Work (SOW) attached to the Consent Decree, Ormet began a program of routine ground-water monitoring in conjunction with the completion of remedial construction. The purpose of ground-water monitoring is to document and evaluate changes in the ground-water condition beneath the site associated with the remedial actions. To provide a baseline characterization of ground-water conditions immediately prior to remedial activities, a sitewide ground-water monitoring event was conducted during May 5 to 9, 1997. Routine ground-water monitoring was initiated in May 1998. Ground-water monitoring activities have been conducted in accordance with the Remedial Action Ground-Water Monitoring Plan (Revision 1 - April 28, 1997) that was submitted to the USEPA during Remedial Design.

SUMMARY OF GROUND-WATER MONITORING PROGRAM

The current system of ground-water monitoring wells and piezometers at the Ormet site is shown on Figure 1. Under the RA Ground-Water Monitoring Plan, monitoring is conducted three times per year (approximately once every four months). During 2006, ground-water monitoring events were conducted during January 17 and 18, May 15 to 18, and September 13 and 18.

Each monitoring event included measurement of water-level elevations at all MW- and TH-series monitoring wells, PPB-series piezometers monitoring the alluvial aquifer, and at Ohio River pool measuring points RP-1 and RP-2. Water-level elevation data collected in conjunction with the 2006 monitoring events are provided in Tables 1, 2, and 3, respectively, and a ground-water contour map based on May 2006 data is provided as Figure 2.

During each monitoring event, ground-water samples were collected from the following wells located within and downgradient of the FSPSA, and immediately downgradient of the CMSD (the latter wells are denoted by "*"):

MW - 2	MW - 31
MW - 5	MW - 32
MW - 12*	MW - 35
MW - 16	MW - 36
MW - 18	MW - 37
MW - 28	MW - 44S*
	MW - 44D*

These wells were identified in the RA Ground-Water Monitoring Plan as Points of Compliance, as required under Section II.6. of the Consent Decree SOW.

The RA Ground-Water Monitoring Plan specifies that one monitoring event each year is to be an expanded monitoring event that includes sampling of selected wells not hydraulically downgradient from the potential source areas at the site (i.e., background wells) and additional wells located within the plume. These wells include the following:

MW-1	MW-19 (background)
MW-7 (background)	MW-29S & D
MW-8	MW-30
MW-10	MW-34S & D
MW-11	MW-39S & D
MW-14	MW-40S & D
MW-15	MW-41 (background)
MW-17	MW-42S & D

Water Sampling Log forms for each of the three monitoring events conducted during 2006 are provided in Appendix A.

The primary purpose of the annual expanded monitoring event is to collect data to prepare plume isopleth maps. The isopleth maps are then used to estimate contaminant mass-in-place and the total area of the aquifer having fluoride concentrations greater than 4.0 mg/L and total cyanide concentrations greater than 0.2 mg/L. These estimates are then compared to previous year's estimates to document changes in ground-water quality during the remediation program. The expanded monitoring event to document baseline conditions at the start of remedial construction in 1997 was conducted in May, and subsequent expanded monitoring events have also been conducted in May.

Ground-water samples from all monitoring wells except MW-44S and MW-44D are analyzed for constituents for which cleanup goals were specified in the Record of Decision (ROD) for the site; i.e., arsenic, beryllium, cyanide, manganese, vanadium, and fluoride. Samples are also analyzed for pH, specific conductance, and sodium, which are additional indicators of the plume in the alluvial aquifer. Tetrachloroethene (PCE) was analyzed in samples from the MW-2, MW-5, MW-18, MW-30, and MW-31 monitoring wells, in which PCE was detected during the Remedial Investigation (RI). Samples from wells MW-44S and MW-44D are analyzed for PCBs only. Ground-water analyses for samples collected during the 2006 monitoring events were performed by Pace Analytical Services, Inc. (Pace) of Export, PA. Methods used by Pace to analyze ground-water samples from the 2006 RA monitoring events are shown below.

Analytical Parameter	Analytical Method	Ground-Water Clean-Up Goal (ug/L)	Reporting Limit (ug/L)
Arsenic	SW846/6010B	10*	4
Beryllium	SW846/6010B	4	0.5
Manganese	SW846/6010B	230*	10
Vanadium	SW846/6010B	260	10
Cyanide (total)	EPA 335.2	N/A	10
Cyanide (amenable)	EPA 335.1	200	10
Fluoride	EPA 340.2	4000	100
PCBs	SW846/8082	N/A	0.5
Tetrachloroethene	SW846/8260B	5	5
pH	EPA 150.1	N/A	N/A
Specific Conductance	EPA 120.1	N/A	N/A
Sodium	SW846/6010B	N/A	500

N/A - Not Applicable

* - Final determination of cleanup goals for arsenic and manganese are pending. The USEPA and Ormet negotiated a Consent Decree and associated Statement of Work for implementation of the ROD. Because arsenic and manganese are common ground-water constituents in the Ohio River Valley and can occur naturally at concentrations above the cleanup goals presented in the ROD, the SOW specified that as part of the Remedial Design process, Ormet would conduct a statistical evaluation to determine background levels of arsenic and manganese in the alluvial aquifer. The resulting background levels would then be considered for use as cleanup goals in place of the levels presented in the ROD. The results of the statistical analyses, which were presented to USEPA in the August 28, 1996 HydroSystems Management, Inc. report titled, "Statistical Analyses of Background Levels of Manganese and Arsenic in Ground Water", indicated background levels of 40 ug/L for arsenic and 9,780 ug/L for manganese.

Laboratory analytical reports for the 2006 monitoring events are provided in Appendix B. The analytical results are summarized in Table 4 and Table 5 (PCBs). For purposes of comparison, Table 4 also includes historical results for the parameters and wells being monitored. Analytical results for the 2006 monitoring events were validated by applying principles and concepts of the USEPA National Functional Guidelines. A data validation summary report is provided in Appendix C.

RESULTS OF 2006 REMEDIAL ACTION GROUND-WATER MONITORING

GROUND-WATER FLOW

Water-level elevation data collected during the May 2006 monitoring event (Table 2) were used to construct the ground-water contour map presented as Figure 2. The ground-water elevation contours and associated ground-water flow patterns shown in Figure 2 are consistent with those previously mapped. As shown, the ground-water pumping component of the site remedy is effective in containing the plume in the alluvial aquifer beneath the Ormet Reduction Mill property. Ground-water flow in the alluvial aquifer is generally from northeast to southwest, toward the Ormet Reduction Mill Ranney well and interceptor wells. 2006 pumping maintained the water table at an elevation below the pool of the Ohio River, and the hydraulic potential along the river/plant boundary indicates recharge of the alluvial aquifer from the Ohio River. The ground-water elevation contour map shows no discernable effect by the FSPSA soil flushing system on ground-water flow patterns beneath that area of the site; i.e., soil flushing has not caused mounding of water or a reversal of hydraulic gradients, such that ground water would discharge from the alluvial aquifer to the Ohio River.

Pumping by the Ormet Reduction Mill Ranney well during 2006 created a large cone of influence around this pumping center. Pumping of the Ormet Rolling Mill Ranney well (located about 2000 feet west of the Reduction Mill Ranney well) was discontinued in late 2005. By this change, the ground-water divide that in previous years existed roughly parallel to and west of the fenceline separating the two plants, was not present in 2006. Ground-water flow beneath the Rolling Mill property during 2006 was toward the Reduction Mill Ranney well (see Figure 2), and a hydraulic potential did not exist for ground water beneath the Reduction Mill to flow toward the Rolling Mill.

GROUND-WATER QUALITY

Time vs. Concentration Trends

To evaluate changes in plume concentrations within the alluvial aquifer beneath the Ormet site, recent and historical results were used to prepare concentration versus time graphs for each monitoring parameter for which a cleanup goal was established in the ROD, with each parameter being graphed separately for each of the compliance point wells identified in the RA Ground-Water Monitoring Plan (see Appendix D). Analytical results for sodium are also graphed, because it is an additional indicator of the plume.

Discussions in the following text regarding concentration versus time trends focus mainly on the period since pre-remediation baseline data were collected at the site (i.e., since 1997). If one compares historical (1983 to 1985) and recent (2006) ground-water data for wells defining the portion of the plume extending downgradient from the source areas toward the Ranney well and interceptor wells (i.e., MW-2, MW-5, MW-8, MW-11, MW-16), substantial improvements in ground-water quality are indicated at most of the wells, as shown on the following table.

Date	MW-2	MW-5	MW-8	MW-11	MW-16
			Total Cyanide		
12/83	56	18.8	0.32	0.52	7.35
02/84	48	14.5	0.14	0.25	5.5
09/84	41	4.9	0.35	0.2	2.1
05/85	95	25	0.11	0.3	10
10/85	140	22			3.9
01/06	12	1.3			2.8
05/06	6.5/11	5.2	0.094	0.013	4.9/5.9
09/06	19	5.4			6.6
			Fluoride		
12/83	400	130	18	33	110
02/84	420	120	18	27	98
09/84	480	140	22	22	80
05/85	400	91	7.9	13	72
10/85	390	70			30
01/06	58	17			62
05/06	46/52	16	1.9	0.99	49/44
09/06	48	17			41
			Sodium		
12/83	1,950	880	202	238	530
02/84	2,290	1,030	199	232	570
09/84	2,460	850	216	213	475
05/85	2,150	710	151	181	443
10/85	2,060	650			186
01/06	350	250			220
05/06	370/380	250	140	29	250/250
09/06	350	240			240

Note: All results given in mg/L.

The decreases in downgradient concentrations of indicator parameters in ground water are attributed to an overall decrease in the concentrations and amounts of leachate introduced to the ground-water system beneath the source areas (primarily the FSPSA). They are credited to the passage of time and leaching/depletion of source materials by infiltrating precipitation, and operational procedures/changes effected by Ormet prior to initiation of RA activities (e.g., pumping of the Ranney well and interceptor wells, discontinued use of disposal ponds, discontinued storage of spent potliner at the FSPSA). Soil flushing within the FSPSA, which became fully operational in 1999, is designed to accelerate the leaching/depletion process.

With regard to the cleanup goals specified in the ROD and, in the case of arsenic and manganese, the background values calculated by HMI, the latest reported concentrations for

samples collected from the compliance wells are compared with the cleanup goals on the following table.

COMPARISON OF LATEST REPORTED CONCENTRATION TO CLEANUP GOALS/BACKGROUND[1]

	Amenable Cyanide	Arsenic	Beryllium	Manganese	Vanadium	Fluoride
Cleanup Goal/Background (mg/L)	0.2	0.01/ 0.04(1)	0.0004	0.23/ 9.8(1)	0.26	4.0
Wells within FSPSA						
MW - 32	+	x	*	o	*	+
MW - 35	+	o	*	o	*	+
MW - 36	+	*	*	*	*	+
MW - 37	+	*	*	o	*	+
Downgradient Edge of FSPSA						
MW - 16	+	x	*	o	*	+
MW - 18	+	x	*	o	*	+
MW - 28	+	*	*	*	*	*
MW - 31	+	x	*	o	*	+
Mid-Plant Area						
MW - 2	+	x	*	o	*	+
MW - 5	+	*	*	o	*	+
Downgradient of CMSD						
MW - 12	*	*	*	o	*	*

* - Latest result at or below ROD Cleanup Goal.

0 - Latest result is above cleanup goal, but below calculated background (arsenic and manganese only).

+ - Latest result is above cleanup goal.

X – Latest result is above calculated background (arsenic and manganese only).

(1) Background values calculated by HMI (August, 1996). Arsenic background = 0.04 mg/L; manganese background = 9.78 mg/L.

Discussions of the time versus concentrations trends for each parameter for which a cleanup goal has been established are provided in the following sections. As noted earlier, this evaluation focuses mainly on data collected since the pre-remediation monitoring event performed in 1997.

Cyanide

The cleanup goal for cyanide established in the ROD (0.2 mg/L) is the Safe Drinking Water Act Maximum Contaminant Level (MCL) for cyanide amenable to chlorination. Cyanide amenable to chlorination is that portion of total cyanide which is weakly bound in cyanide complexes or is in the form of free (non-complexed) cyanide. Cyanide amenable to chlorination is a more reactive form of cyanide than the more strongly bound metal-cyanide complexes (e.g., iron cyanide). The form of cyanide occurring in the ground water beneath the Ormet site appears to be predominantly cyanide complexes. This interpretation is supported by the relative concentrations of total versus amenable or free cyanide typically reported for ground-water samples collected at the site; i.e., for a given sample, the concentration of amenable or free cyanide is typically much lower than the total cyanide concentration. Also, the area of the alluvial aquifer containing concentrations of amenable cyanide above its 0.2 mg/L cleanup goal is substantially smaller than the area of aquifer containing total cyanide above 0.2 mg/L (see Figure 6).

Concentration versus time graphs for total cyanide and amenable cyanide are presented in Appendix D-1 and D-2, respectively. Concentrations reported for amenable cyanide at a given well exhibit a higher degree of analytical variability (i.e., fluctuations in reported concentrations from one monitoring event to the next) than for other plume indicators, (e.g., total cyanide, fluoride, sodium). Consequently, concentration versus time graphs for amenable cyanide tend to be erratic, thus limiting the usefulness of this indicator parameter for identifying time-related trends. The cleanup goal for amenable cyanide of 0.2 mg/L has consistently been achieved at MW-12, commonly achieved at MW-28, and typically exceeded at the remaining nine compliance point wells.

For total cyanide, the concentration versus time graphs show either a downward trend or no clear trend at most of the compliance point wells. At several of the wells (e.g., MW-2, MW-16, MW-18, MW-28, MW-31), concentration increases during or shortly following 1999 (when soil flushing began) have been followed by decreases. The latter four of these wells are located immediately downgradient of the FSPSA, and MW-2 is further downgradient (see Figure 2). At MW-5 and, to a lesser extent MW-32, increases in total cyanide concentrations following the start of soil flushing continue to be observed. Overall, the total cyanide concentration data indicate that soil flushing within the FSPSA initially caused increases in leachate generation and ground-water concentrations, but, at most of the wells exhibiting these effects, there has been a subsequent decline.

Fluoride

Of the main plume indicators, fluoride is less prone to analytical variability than cyanide, and is potentially a more reliable/consistent indicator of changes in plume quality. Concentration versus time graphs for fluoride for each of the compliance wells are provided in Appendix D-3.

Fluoride concentrations were below the cleanup goal of 4 mg/L at two of the eleven compliance wells, MW-12 and MW-28, and a general downward concentration trend was observed at six of the compliance wells (MW-2, MW-18, MW-31, MW-35, MW-36, and MW-37). At MW-5, analyses of samples collected since 1997 have reported relatively consistent concentrations (i.e., neither increasing nor decreasing). At compliance wells MW-16 and MW-32, reported concentrations of fluoride increased following the start of soil flushing, but appear to have leveled off and showed decreases during 2006.

Arsenic

Concentration versus time graphs for arsenic for each of the compliance point wells are provided in Appendix D-4. At three of the eleven wells, MW-5, MW-12, and MW-28, concentrations of arsenic reported since 1997 have consistently been below the clean-up goal of

0.01 mg/L specified in the ROD, and at MW-36 and MW-37 recently reported concentrations (i.e., the last two monitoring events of 2006) were also below the 0.01 mg/L clean-up goal. At MW-35, reported arsenic concentrations, though sporadically exceeding the ROD-specified cleanup goal, have consistently been below the calculated background value (i.e., ≤ 0.04 mg/L) during recent years. Data for MW-2, MW-5, MW-35, MW-36, and MW-37 wells show a general trend of decreasing concentrations, and data for MW-18 and MW-31 exhibit no consistent trend. For MW-16 and MW-32, more recently reported concentrations have been higher than in the past, but not with sufficient consistency or duration to establish an increasing trend.

As discussed earlier, the final cleanup goal for arsenic is pending. In the ROD, the cleanup goal for arsenic was set at 0.01 mg/L. However, because arsenic is a common constituent of ground water in the Ohio River Valley for which naturally-occurring concentrations can exceed the cleanup goal presented in the ROD, the SOW specified that as part of the Remedial Design process, Ormet would conduct a statistical evaluation to determine the background level of arsenic in the alluvial aquifer. The resulting background level would then be considered for use as the cleanup goal in place of the level presented in the ROD. The results of the statistical analyses, which were presented to USEPA in the August 28, 1996 HydroSystems Management, Inc. report titled, "Statistical Analyses of Background Levels of Manganese and Arsenic in Ground Water", indicated a background level of 0.04 mg/L for arsenic. At six of the eleven compliance wells (MW-5, MW-12, MW-28, MW-35, MW-36, and MW-37), the recent results are below the 0.04 mg/L background level determined for arsenic.

Beryllium

Concentration versus time graphs for beryllium are provided in Appendix D-5. The cleanup goal for beryllium established in the ROD was the MCL, 0.004 mg/L. In all but three of the compliance wells (MW-18, MW-32, MW-37), there has never been a reported detection of beryllium that exceeded the cleanup goal; in some of the earlier samples, the analytical detection limit was higher than 0.004 mg/L. At MW-18, MW-32, and MW-37, detections of beryllium exceeding the cleanup goal have been few and isolated, giving no indication of substantive

water-quality impacts by this constituent. Beryllium concentrations were consistently below the cleanup goal in all samples from all of the compliance point monitoring wells analyzed during each of the 2006 monitoring events.

Manganese

Concentration versus time graphs for manganese are provided in Appendix D-6. Manganese results for MW-28 have consistently been below the ROD-specified clean-up goal of 0.23 mg/L. At MW-36, data collected since 1997 show an overall decrease in manganese concentrations, and at MW-2 and MW-12 give no clear indication of either increasing or decreasing concentrations. At MW-5, MW-16, MW-18, MW-31, MW-32, MW-35, and MW-37, increased manganese concentrations that appear to have roughly coincided with soil flushing appear to have peaked and, in the case of MW-37, have steadily decreased in recent years.

The final cleanup goal for manganese is pending. In the ROD, the cleanup goal for manganese was set at 0.230 mg/L. Because manganese is a common constituent of ground-water in the Ohio River Valley for which naturally-occurring concentrations can be well above the cleanup goal presented in the ROD, the SOW specified that as part of the Remedial Design process, Ormet would conduct a statistical evaluation to determine the background level of manganese in the alluvial aquifer. The resulting background level would then be considered for use as the cleanup goal in place of the level presented in the ROD. The results of the statistical analyses, which were presented to USEPA in the August 28, 1996 HydroSystems Management, Inc. report titled, "Statistical Analyses of Background Levels of Manganese and Arsenic in Ground Water", indicated a background level of 9.78 mg/L for manganese. With the exception of MW-18 and MW-37, manganese concentrations were below the background level at all of the compliance wells during all recent and historical monitoring events. At MW-18 and MW-37, results from all 2006 monitoring events were also below the background level.

Vanadium

Concentration versus time graphs for vanadium are provided in Appendix D-7. The cleanup goal for vanadium established in the ROD was 0.26 mg/L. With the exception of MW-18 and MW-37, vanadium concentrations have been below the cleanup goal at all compliance wells during all recent and historical monitoring events. For MW-37, only a single reported value (in 1988) exceeded the cleanup goal, and for MW-18, only two reported values (January 2002 and September 2004) exceeded the cleanup goal.

Tetrachloroethene (PCE)

Under the RA Ground-Water Monitoring Plan, analyses for tetrachloroethene (PCE) were performed on samples from the five compliance wells where PCE was detected during the RI; MW-2, MW-5, MW-18, MW-30, and MW-31. Concentration versus time graphs for PCE for these five wells are provided in Appendix D-8. Since the Phase I RI, PCE concentrations have been predominantly below detection at MW-5. PCE levels have shown increases followed by decreases at MW-2, MW-18, and MW-30. At MW-31, PCE concentrations have fluctuated, showing no clear indication of either an increasing or decreasing trend. The cleanup goal for PCE is the MCL of 0.005 mg/L. In the most recent samples from the five wells, the reported concentrations of PCE consistently met the cleanup goal at MW-5. For the September 2006 monitoring event, the PCE concentration reported for MW-18 also met the clean-up goal.

Sodium

Sodium is not a constituent for which a cleanup goal was specified in the ROD, but has been graphed (Appendix D-9) and is discussed because it is a good indicator of changes in the overall condition of the plume. At compliance wells MW-2, MW-18, MW-28, MW-31, MW-35, MW-36, and MW-37, data collected since 1997 show decreases in sodium concentrations, and at MW-5 and MW-12 show relatively unchanging concentrations. At MW-16 and MW-32, sodium concentrations appreciably increased in 2001 and 2004, respectively, and have been stable since.

Contaminant Mass-in-Place

In accordance with Section II.3.C. of the Consent Decree SOW, data from the May 2006 expanded routine monitoring event were used to estimate the masses of fluoride and total cyanide (primary plume indicators) in the alluvial aquifer as a means of documenting changes in ground-water quality during the remediation. The procedure used for estimating the mass-in-place was as described in the RD Work Plan and the HydroSystems Management, Inc. (HMI) report titled, "Estimation of Dissolved Contaminant Mass in the Alluvial Aquifer, Ormet Primary Aluminum Corporation Superfund Site, Hannibal, Ohio" (August 28, 1996) that was submitted to the USEPA in conjunction with the 30% RD submittal. The approach used for estimation of contaminant mass-in-place is based on methods described in "Methods for Monitoring Pump-and-Treat Performance" (USEPA, July 1994). Results of the mass-in-place estimates for fluoride and cyanide are summarized in Table 6. For comparison, Table 6 also includes fluoride and cyanide mass-in-place estimates based on previous monitoring events. The mass-in-place estimates are based on the fluoride and total cyanide isopleth maps presented as Figures 3 and 4, respectively. Data and supporting calculations for the May 2006 mass-in-place estimates are provided in Appendix E. Data and supporting calculations for the previous mass-in-place estimates were submitted to the USEPA in prior reports.

Based on the estimates presented in Table 6, the mass of fluoride in the alluvial aquifer calculated for 1999 (about 30,416 pounds), after the start of full-time soil flushing in the FSPSA, increased by about 6,528 pounds relative to the 1998 value of 23,888 pounds. Between May 1999 and May 2001, the fluoride mass-in-place declined to an estimated 21,741 pounds. From May 2001 to May 2004, the estimated fluoride mass-in-place increased to 38,836 pounds. In 2005 the estimated fluoride mass-in-place decreased slightly to about 37,656 pounds, and in 2006 decreased further to about 32,735 pounds.

Similar to fluoride, the estimated total cyanide mass-in-place calculated for 1999, following the start of full-time soil flushing, increased by about 2,969 pounds relative to 1998 estimates (i.e., 2,597 pounds in 1998 vs. 5,566 pounds in 1999). Between 1999 and 2003, the estimated cyanide mass-in-place showed an overall decreasing trend, to a low of about 2,773

pounds. In 2004, the estimated cyanide mass-in-place increased to about 3,062 pounds, and continued to increase in 2005 (about 4,681 pounds) and 2006 (about 6,615 pounds).

As discussed in the ROD and the remedial design (RD) documents for the Ormet site, the purpose of soil flushing in the FSPSA is to accelerate the rate at which contaminants are leached from the source area soils and subsequently removed from the aquifer by ground-water pumping. Overall, the mass-in-place estimates suggest that soil flushing has had a discernable effect, though it is unclear why the initial increases observed in 1999 were followed by several years of decreased values, which were then followed by several years of increased values.

To assess the removal of cyanide and fluoride from the alluvial aquifer by pumping of the interceptor wells and Ranney well, the mass removals achieved during the period between the two most recent expanded monitoring events (i.e., May 2005 through May 2006) were calculated and compared to changes in the estimated masses in the aquifer over the same period (see Table 7). The masses of cyanide and fluoride removed by pumping of the interceptor wells were calculated using analytical and flow data for the influent to Ormet's ground-water treatment plant, which receives the water pumped by the interceptor wells, and the masses removed by pumping of the Reduction Mill Ranney well were calculated using analytical data and flow data collected by Ormet for NPDES reporting purposes.

During the period from June 1, 2005 to May 31, 2006, approximately 8,607 pounds of fluoride and approximately 1,392 pounds of cyanide (total) were removed from the alluvial aquifer by the interceptor wells and the Ranney well. During the same period, the estimated mass of fluoride in the aquifer decreased by approximately 4,921 pounds and the estimated mass of cyanide increased by approximately 1,934 pounds. That changes (typically decreases) in each year's mass removal by ground-water pumping are not mirrored by similar changes in the calculated mass-in-place may be due to one or more of the following types of factors:

- Localized differences in the alluvial aquifer matrix (affecting hydraulic conductivity) and/or differences in hydraulic gradients from one location to the next result in range flow velocities (and travel times), that potentially allow certain parts of the plume to

travel to the pumping centers more quickly than other parts of the plume (i.e., the aquifer is not being uniformly flushed).

- Certain areas of the plume that are accounted for in the mass-in-place estimates may be subject to relatively limited mobility (for the reasons given above), and do not contribute proportionally to the flux of ground water moving toward the pumping centers.

- Concentration contour area estimates made from the isopleth maps and used in the mass-in-place calculations are strongly influenced by the placement of the contour lines, which is interpretative and will vary from year to year depending on the individual preparing the isopleth maps, analytical variability in the data, and the selection of contour intervals used to map a given data set.

- Natural attenuation of plume constituents within the aquifer matrix, which is likely variable and would be difficult to accurately quantify, may immobilize a portion of the constituent mass accounted for in the mass-in-place calculations.

- Variations in the soil flushing operation (e.g., duration of flushing, volumes of water applied, extent/duration frozen ground), variations in natural precipitation patterns, and differences in infiltration rates from one location to the next may result in relatively complex, non-uniform contaminant distributions that have more effect on the preparation of isopleth maps and calculation of mass-in-place, than on the actual flux of contaminants toward the pumping centers (for all of the reasons listed above).

For these reasons, long-term trends in the calculated mass-in-place and mass removals are more meaningful than year to year variations. Figure 7 presents graphs of the estimated masses of fluoride and cyanide in the alluvial aquifer versus time.

Effected Aquifer Areas

As a further check on changes in ground-water quality during the remediation, the approximate areas of the aquifer containing fluoride and total cyanide at concentrations above 4.0 mg/L and 0.2 mg/L, respectively, were estimated using analytical results from the May 2006 sampling event. The results are summarized in Table 6. The estimates of aquifer areas are based on the fluoride and total cyanide isopleth maps shown in Figures 3 and 4, respectively. For comparison, Table 6 also includes previous year's estimates of the aquifer areas containing fluoride and total cyanide concentrations above 4.0 mg/L and 0.2 mg/L, respectively.

As shown in Table 6, the area of the alluvial aquifer containing fluoride above 4.0 mg/L has been relatively consistent since 1997, ranging from 36.9 acres to 48.4 acres. For 2006, the aquifer area with fluoride concentrations above 4.0 mg/L was about 45.4 acres.

The area of the aquifer with concentrations of total cyanide above 0.2 mg/L has also been relatively consistent since 1997, ranging from 36.5 acres to 44.8 acres. For 2006, the estimated area of aquifer with total cyanide above 0.2 mg/L was 44.8 acres.

As discussed previously, analytical results for total cyanide and cyanide amenable to chlorination indicate that the form of cyanide occurring in the ground water beneath the Ormet site is predominantly the relatively stable cyanide complexes. This interpretation is supported by a comparison of the area of the alluvial aquifer with total cyanide concentrations above 0.2 mg/L to the area of the aquifer with amenable cyanide concentrations above 0.2 mg/L. As shown in Figure 6, the area of the aquifer with amenable cyanide above 0.2 mg/L is substantially smaller than the area with total cyanide above 0.2 mg/L.

Analytical Results for PCBs

During each of the 2006 sampling events, ground-water samples from monitoring wells MW-12, MW-44S and MW-44D were analyzed for PCBs. Analytical results for these samples report no detections of PCBs (see Table 5).

SUMMARY/CONCLUSIONS

- Pumping of the Ranney well and interceptor wells continues to provide containment of the plume beneath the Ormet property and removes contaminant mass from the alluvial aquifer.

- Operation of the soil-flushing system has no discernable effect on ground-water flow patterns beneath the FSPSA. Along the river/plant boundary, the flow of ground water continues to be from the river to the aquifer.

- Pumping of the interceptor wells and Ranney well removed approximately 8,607 pounds of fluoride and approximately 1,392 pounds of cyanide from the alluvial aquifer during the period May 2005 to May 2006. During the same period, the estimated mass of fluoride in the aquifer decreased by about 4,921 pounds and the estimated mass of cyanide in the aquifer increased by about 1,934 pounds. These results indicate continued leaching of residual spent potliner materials in the soil of the FSPSA.

- Over time, as the leachable material in the soils in the FSPSA is depleted, the removal of fluoride and cyanide mass from the aquifer by pumping of the interceptor wells and the Ranney well is expected to result in sustained decreases in the contaminant mass-in-place.

- The estimated area of the alluvial aquifer with fluoride concentrations above 4.0 mg/L increased by about 14.9% between 2005 and 2006, and the estimated area of the aquifer with total cyanide concentrations above the 0.2 mg/L increased about 2.5% between 2005 and 2006.

- Reductions in contaminant mass-in-place were occurring prior to the completion of Remedial Construction and full-time operation of the FSPSA soil-flushing system. These decreases are attributed to the passage of time and natural flushing by infiltrating precipitation, and to operational changes and remedial activities undertaken by Ormet

prior to the Superfund project, including pumping of wells that intercept the plume, which has been ongoing since 1972, and discontinued use of the disposal ponds and the spent potliner storage area.

- Ground-water samples analyzed during 2006 for PCBs were reported as non-detect.

TABLES

TABLE 1
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: JANUARY 17, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-1	668.07	51.50	616.57
MW-2	668.12	52.34	615.78
MW-3	645.17	25.34	619.83
MW-4	661.07	49.94	611.13
MW-5	668.16	56.46	611.70
MW-7	667.94	54.80	613.14
MW-8	667.71	59.35	608.36
MW-9	666.59	57.61	608.98
MW-10	667.16	58.88	608.28
MW-11	667.31	55.98	611.33
MW-12	636.73	18.62	618.11
MW-13	661.44	39.30	622.14
MW-14	653.59	33.98	619.61
MW-15	657.31	35.22	622.09
MW-16	662.72	44.22	618.50
MW-17	655.03	34.17	620.86
MW-18	660.91	39.34	621.57
MW-19	662.03	39.34	622.69
MW-20	632.33	10.29	622.04
MW-21s	664.02	NM	--
MW-21d	663.60	54.36	609.24
MW-22s	667.47	58.49	608.98
MW-22d	667.21	58.25	608.96
MW-23s	663.18	54.05	609.13
MW-23d	663.41	54.28	609.13
MW-24s	667.88	59.30	608.58
MW-24d	667.75	59.19	608.56
MW-25	667.73	58.30	609.43
MW-26s	665.54	56.79	608.75
MW-26d	665.59	56.89	608.70
MW-27	667.86	57.90	609.96
MW-28	663.27	22.48	640.79
MW-29s	653.40	35.27	618.13
MW-29d	653.07	34.92	618.15
MW-30	667.58	47.73	619.85
MW-31	661.59	42.42	619.17
MW-32	656.66	36.29	620.37
MW-34s	655.67	34.92	620.75
MW-34d	654.67	32.96	621.71
MW-35	661.90	35.87	626.03
MW-36	655.14	35.39	619.75
MW-37	661.14	22.94	638.20
MW-38	666.64	20.75	645.89
MW-39s	657.30	37.22	620.08
MW-39d	657.18	36.99	620.19
MW-40s	662.22	46.26	615.96
MW-40d	661.95	NM	--
MW-41	637.67	NM	--
MW-42s	654.37	35.70	618.67
MW-42d	654.34	35.80	618.54
MW-44s	662.01	46.14	615.87
MW-44d	661.76	46.63	615.13

TABLE 1 (CONT.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: JANUARY 17, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
PPB-01*	663.24	19.62	643.62
PPB-02s*	663.14	17.74	645.40
PPB-02d+	662.78	40.86	621.92
PPB-04+	661.57	41.73	619.84
PPB-05*	661.62	19.93	641.69
PPB-06+	663.04	NM	--
PPB-07*	661.71	NM	--
PPB-09+	664.30	41.62	622.68
PPB-10*	663.45	14.86	648.59
PPB-14*	660.64	NM	--
TH-3	667.81	52.79	615.02
TH-10	658.17	35.65	622.52
TH-11	659.08	36.40	622.68
TH-15	663.62	54.83	608.79
TH-16	664.62	55.33	609.29
TH-17	663.93	54.72	609.21
RP-1	643.17	19.10	624.07
RP-2	643.05	18.92	624.13

NOTE:

All MW-series wells are measured from the top of the PVC casing.

All TH-series wells are measured from the top of steel casing.

River pool measuring point RP-2 is located on the walkway below the dry scrubbers and RP-1 is located on the walkway at the barge unloading dock.

* - Designates a perched zone piezometer

+ - Designates an alluvial aquifer piezometer.

NM = Not measured.

01-17-06WLE.XLS

TABLE 2
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: MAY 15, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-1	668.07	49.71	618.36
MW-2	668.12	50.44	617.68
MW-3	645.17	24.01	621.16
MW-4	661.07	47.71	613.36
MW-5	668.16	54.17	613.99
MW-7	667.94	52.74	615.20
MW-8	667.71	56.87	610.84
MW-9	666.59	55.08	611.51
MW-10	667.16	56.35	610.81
MW-11	667.31	53.70	613.61
MW-12	636.73	16.93	619.80
MW-13	661.44	38.49	622.95
MW-14	653.59	32.41	621.18
MW-15	657.31	33.32	623.99
MW-16	662.72	42.40	620.32
MW-17	655.03	32.34	622.69
MW-18	660.91	37.93	622.98
MW-19	662.03	38.25	623.78
MW-20	632.33	9.72	622.61
MW-21s	664.02	NM	--
MW-21d	663.60	51.90	611.70
MW-22s	667.47	55.92	611.55
MW-22d	667.21	55.69	611.52
MW-23s	663.18	51.39	611.79
MW-23d	663.41	51.70	611.71
MW-24s	667.88	56.73	611.15
MW-24d	667.75	56.62	611.13
MW-25	667.73	55.40	612.33
MW-26s	665.54	54.22	611.32
MW-26d	665.59	54.31	611.28
MW-27	667.86	55.16	612.70
MW-28	663.27	21.44	641.83
MW-29s	653.40	33.52	619.88
MW-29d	653.07	33.17	619.90
MW-30	667.58	46.39	621.19
MW-31	661.59	40.45	621.14
MW-32	656.66	33.92	622.74
MW-34s	655.67	32.94	622.73
MW-34d	654.67	31.21	623.46
MW-35	661.90	35.40	626.50
MW-36	655.14	32.79	622.35
MW-37	661.14	19.16	641.98
MW-38	666.64	20.23	646.41
MW-39s	657.30	35.43	621.87
MW-39d	657.18	35.31	621.87
MW-40s	662.22	44.40	617.82
MW-40d	661.95	44.12	617.83
MW-41	637.67	NM	--
MW-42s	654.37	34.01	620.36
MW-42d	654.34	33.93	620.41
MW-44s	662.01	44.31	617.70
MW-44d	661.76	44.81	616.95

TABLE 2 (CONT.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: MAY 15, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
PPB-01*	663.24	19.25	643.99
PPB-02s*	663.14	17.79	645.35
PPB-02d+	662.78	39.53	623.25
PPB-04+	661.57	39.94	621.63
PPB-05*	661.62	19.52	642.10
PPB-06+	663.04	NM	--
PPB-07*	661.71	NM	--
PPB-09+	664.30	40.96	623.34
PPB-10*	663.45	14.53	648.92
PPB-14*	660.64	NM	--
TH-3	667.81	50.83	616.98
TH-10	658.17	34.13	624.04
TH-11	659.08	35.28	623.80
TH-15	663.62	52.20	611.42
TH-16	664.62	52.82	611.80
TH-17	663.93	52.19	611.74
RP-1	643.17	19.26	623.91
RP-2	643.05	19.05	624.00

NOTE:

All MW-series wells are measured from the top of the PVC casing.

All TH-series wells are measured from the top of steel casing.

River pool measuring point RP-2 is located on the walkway below the dry scrubbers and RP-1 is located on the walkway at the barge unloading dock.

* - Designates a perched zone piezometer

+ - Designates an alluvial aquifer piezometer.

NM = Not measured.

05-15-06WLE.XLS

TABLE 3
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: SEPTEMBER 13, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-1	668.07	46.51	621.56
MW-2	668.12	46.83	621.29
MW-3	645.17	22.45	622.72
MW-4	661.07	42.06	619.01
MW-5	668.16	48.88	619.28
MW-7	667.94	48.10	619.84
MW-8	667.71	50.17	617.54
MW-9	666.59	48.30	618.29
MW-10	667.16	49.52	617.64
MW-11	667.31	48.28	619.03
MW-12	636.73	14.27	622.46
MW-13	661.44	37.36	624.08
MW-14	653.59	30.42	623.17
MW-15	657.31	32.79	624.52
MW-16	662.72	39.99	622.73
MW-17	655.03		655.03
MW-18	660.91	36.23	624.68
MW-19	662.03	37.69	624.34
MW-20	632.33	8.70	623.63
MW-21s	664.02	45.41	--
MW-21d	663.60	45.00	618.60
MW-22s	667.47	49.09	618.38
MW-22d	667.21	48.85	618.36
MW-23s	663.18	44.05	619.13
MW-23d	663.41	44.58	618.83
MW-24s	667.88	49.95	617.93
MW-24d	667.75	49.85	617.90
MW-25	667.73	49.14	618.59
MW-26s	665.54	47.42	618.12
MW-26d	665.59	47.52	618.07
MW-27	667.86	49.17	618.69
MW-28	663.27	19.75	643.52
MW-29s	653.40	30.57	622.83
MW-29d	653.07	30.89	622.18
MW-30	667.58	43.80	623.78
MW-31	661.59	38.35	623.24
MW-32	656.66	32.61	624.05
MW-34s	655.67	32.16	623.51
MW-34d	654.67	30.42	624.25
MW-35	661.90	34.30	627.60
MW-36	655.14	32.20	622.94
MW-37	661.14	18.87	642.27
MW-38	666.64	19.53	647.11
MW-39s	657.30	33.75	623.55
MW-39d	657.18	33.63	623.55
MW-40s	662.22	40.89	621.33
MW-40d	661.95	40.61	--
MW-41	637.67		--
MW-42s	654.37	31.81	622.56
MW-42d	654.34	31.73	622.61
MW-44s	662.01	40.63	621.38
MW-44d	661.76	41.17	620.59

TABLE 3 (CONT.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: SEPTEMBER 13, 2006

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
PPB-01*	663.24	19.63	643.61
PPB-02s*	663.14	17.45	645.69
PPB-02d+	662.78	38.88	623.90
PPB-04+	661.57	38.29	623.28
PPB-05*	661.62	19.39	642.23
PPB-06+	663.04		--
PPB-07*	661.71		--
PPB-09+	664.30	40.18	624.12
PPB-10*	663.45		663.45
PPB-14*	660.64		--
TH-3	667.81	46.93	620.88
TH-10	658.17	33.56	624.61
TH-11	659.08	33.70	625.38
TH-15	663.62	45.55	618.07
TH-16	664.62	46.10	618.52
TH-17	663.93	45.23	618.70
RP-1	643.17	19.15	624.02
RP-2	643.05	18.85	624.20

NOTE:

All MW-series wells are measured from the top of the PVC casing.

All TH-series wells are measured from the top of steel casing.

River pool measuring point RP-2 is located on the walkway below the dry scrubbers and RP-1 is located on the walkway at the barge unloading dock.

* - Designates a perched zone piezometer

+ - Designates an alluvial aquifer piezometer.

NM = Not measured.

09-13-06WLE.XLS

TABLE 4
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-1															
12/83	6.4	6.0	270	210	0.018	0.014		0.1			0.04	0.65	14.2		
2/84	6.1	6.1	270	215	0.04			0.1			0.01	0.54	14.9		
9/84	6.1	5.7	195	210	<0.01	<0.01		<0.2			0.02	0.33	13.8		
5/85	6.4	6.0	200	210	0.13	0.13		<0.2			0.04	0.15	16.2		
6/88	6.2	6.4	670	540	<0.01		<0.01	0.2	0.0024	<0.0015	6.21	0.379	20.3	0.006	
1/95	6.2	4.7	370	550	0.02		<0.01	0.1	<0.004	<0.01	<0.04	0.39	21	<0.01	
5/97	5.9	6.32	470	365	<0.01			0.1	<0.004	<0.0005		0.13	19	<0.01	
5/98	6.01	5.65	480	505	<0.01			0.20	<0.004	<0.0005		0.10	20	<0.01	
5/01	5.95	6.35	450	392	<0.01			0.13	<0.004	<0.0005		0.098	19	<0.01	
5/02	6.62	6.76	470	343	<0.01			0.67	<0.004	<0.0005		0.0298	24.6	<0.01	
5/03	6.32	6.39	570	416	<0.01			0.25	<0.004	<0.0005		0.048	24	<0.01	
5/04	6.66	6.45	690	701	<0.01			2.1	<0.004	<0.0005		0.47	50	<0.01	
5/05	6.66	6.48	660	591	<0.01			1.8 J	<0.004	<0.0005		0.40	47	<0.01	
5/06	6.87	6.75	800	650	<0.01			<2.0B	<0.004	<0.0005		0.43	46	<0.01	
MW-2															
12/83	10.3	10.3	6,000	6,000	56.0	0.27		400			55.2	1.98	1,950		
2/84	10.3	10.3	7,752	2,750	48.0			420			58	2.46	2,290		
9/84	10.5	9.9	6,308	6,900	40.8	0.095		480			59.3	2.1	2,460		
5/85	10.4	10.4	13,200	5,800	95	0.10		400			54.0	1.74	2150		
10/85	10.5		7,100		140	12		390		<0.01	54.0	1.82	2,060		
7/88	10.4	10.4	6,200	6,000	22		12	330	0.394	<0.0015	34.2	1.00	1,450	0.251	0.011
2/90	10.34	10.2	4,800	3,900	36.2		29.6	200			31.0		1,200		
1/95	10.0	9.6	2,400	>2,000	7.1		<0.01	93	0.085	<0.01	8.6	0.82	520	0.09	
5/97	10.1	10.07	2,100	1,865	17		<1.0	63	0.092	0.001		1	470	0.06	0.008
5/98	9.98	10.24	1,900	1,880	13		<0.01	68	0.082	0.001		0.93	450	0.06	0.0053
9/98	9.96	9.96	1,900	1,991	21		0.30	69	0.086	0.00089		0.90	440	0.051	<0.005
1/99	9.96	10.27	2,000	2,000	21		5.3	65	0.085	0.00064		1.1	440	0.054	<0.005
1/99 (Dup.)	9.98	10.27	1,900	2,000	22		<0.1	66	0.087	0.00064		1.0	440	0.053	<0.005
5/99	10.1	9.94	1,900	1,940	25		3.5	67	0.095	0.00088		0.96	400	0.046	<0.005
9/99	9.88	10.60	1,600	1,830	22		2.6	59	0.077	<0.0005		0.85	430	0.032	<0.005
9/99 (Dup.)	9.88	10.60	1,900	1,830	22		2.5	60	0.079	<0.0005		0.95	460	0.039	<0.005
1/00	9.88	9.65	2,000	1,825	23		2.4	66	0.086	0.0006		0.99	360	0.041	<0.005
5/00	9.92	9.84	2,000	1,863	18		<0.5	66	0.0809	0.00075	13	1.0	430	0.045	<0.005
5/00 (Dup.)	9.97	9.84	1,900	1,863	18		11	67	0.081	0.00076	13	1.1	410	0.045	<0.005
10/00	9.92	9.95	1,800	1,518	17		0.73	61	0.077	0.00051		1.0	270	0.039	<0.005
1/01	9.91	11.34	1,900	1,708	18		3.4	68	0.082	0.00073		1.1	450	0.045	<0.005
5/01	9.88	10.66	1,900	1,621	15		13	67	0.087	0.00078		0.96	360	0.048	<0.005
5/01 (Dup.)	9.87	10.66	1,800	1,621	15		15	68	0.076	0.00071		0.89	360	0.045	<0.005
9/01	9.80	10.14	1,800	1,635	17		2.5	63	0.089	0.00088		1.1	400	0.056	<0.005
1/02	9.90	10.10	2,000	1,767	16		2.7	58	0.0858	0.000866		0.998	354	0.0531	<0.005
5/02	9.91	9.99	1,700	1,458	15		2.1	63	0.103	0.000873		0.845	347	0.0489	<0.005
5/02 (Dup.)	9.90	9.99	1,800	1,458	15		<0.50	66	0.107	0.000980		0.870	368	0.0531	<0.005
9/02	9.73	10.04	1,740	1,637	14.8		1.5	55.4	0.0989	0.000717		0.845	298	0.0474	0.00684
1/03	9.99	9.97	1,680	1,748	14.6		1.05	56.8	0.123	0.001140		0.978	324	0.0575	0.00644
5/03	9.80	10.08	1,700	1,246	14.0		5.1	74	0.088	<0.0005		0.94	310	0.057	0.009
5/03 (Dup.)	9.76	10.08	1,700	1,246	14.0		0.76	82	0.089	0.000850		0.95	310	0.058	0.0075
9/03	9.77	9.90	1,700	1,428	16		0.93	76	0.089	<0.0005		0.73	330	0.048	0.012
1/04	9.67	9.97	1,600	1,354	14		3.4	50	0.080	<0.0005		0.89	310	0.053	0.014
5/04	9.72	9.82	1,500	1,148	14		1.2	47	0.071	0.00088		0.91	490	0.056	0.017
5/04 (Dup.)	9.72	9.82	1,500	1,148	12		1.4	59	0.067	0.0008		0.85	490	0.053	0.018
9/04	9.55	9.79	1,600	1,099	13		4.6	54	0.069	0.00081		0.88	350	0.049	0.02
1/05	9.74	9.74	1,500	1,340	10		4.0	73	0.066	0.0011		1.1	330	0.053	0.023
5/05	6.66	9.64	1,500	1,387	14		7.1	44 J	0.066	0.00081		0.96	360	0.05	0.024
5/05 (Dup.)	9.61	9.64	1,500	1,387	15		2.1	35 J	0.066	0.00093		0.98	370	0.051	0.024
10/05	9.57	9.63	1,500	1,414	16		<0.01	43	0.067	0.00061		0.95	370	0.046	0.026
1/06	9.63	7.62	1,000	1,401	12		0.43	58J	0.064	0.00099		1.1	350	0.052	0.024
5/06	9.70	9.80	1,700	1,390	6.5		<0.01	46J	0.066	0.00084		1.0	370	0.05	0.024
5/06 (Dup.)	9.69	9.80	1,700	1,390	11		<0.01	52J	0.064	0.00083		1.0	380	0.049	0.024
9/06	9.75	9.81	1,700	1,356	19		5.70	48	0.061	<0.00050		0.63	350	0.032	0.021
MW-5															
12/83	9.7	9.5	3,058	2,825	18.8	0.064		130			17.5	1.61	880		
2/84	9.6	9.6	3,636	2,700	14.5			120			18.0	1.39	1,030		
9/84	9.8	9.3	2,278	3,100	4.94	0.032		140			19.4	1.7	850		
5/85	9.8	9.9	4,800	2,400	25.0	0.037		91			15.8	1.01	710		
10/85	9.8		2,550		22.0	2.0		70		<0.01	13.0	0.93	650		
7/88	9.5	9.6	2,000	2,050	5.5		0.10	90	0.076	<0.0015	7.05	0.514	449	0.025	0.012
1/95	8.6	8.5	1,500	1,250	3.1		<0.01	32	0.008	<0.01	1.3	0.27	270	<0.01	
5/97	9.0	9.2	1,500	1,318	3.5		<0.25	16	0.015	<0.0005		0.4	310	<0.01	<0.005
5/98	8.83	8.84	1,400	1,340	2.1		<0.01	18	0.007	<0.0005		0.17	300	<0.01	<0.005
5/98 (Dup.)	8.83	8.84	1,400	1,340	1.3		<0.01	18	0.007	<0.0005		0.18	300	<0.01	<0.005

Note All results in mg/L unless otherwise noted.

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-5 (Cont.)															
9/98	8.92	8.66	1,200	1,219	2.0		0.02	18	0.0089	<0.0005		0.16	240	<0.01	<0.005
1/99	8.95	8.93	1,100	1,175	1.8		0.14	17	0.0086	<0.0005		0.18	240	<0.01	<0.005
5/99	8.97	8.60	1,200	1,260	1.9		<0.01	16	0.0094	<0.0005		0.27	250	<0.01	<0.005
5/99 (Dup.)	8.97	8.80	1,200	1,260	2.2		2.2	16	0.0097	<0.0005		0.25	240	<0.01	<0.005
9/99	8.78	9.10	1,100	1,030	2.4		0.10	17	0.0074	<0.0005		0.23	230	<0.01	<0.005
1/00	8.76	8.30	1,200	1,040	2.0		2.0	15	0.0063	<0.0005		0.24	180	<0.01	<0.005
1/00 (Dup.)	8.77	8.30	1,100	1,040	1.9		1.9	16	0.008	<0.005		0.23	180	<0.01	<0.005
5/00	8.81	8.59	1,100	1,020	2.3		2.3	16	0.0082	<0.0005	1.8	0.37	110	<0.01	<0.005
10/00	8.71	8.59	1,000	817	2.6		2.6	11	0.006	<0.0005		0.35	120	<0.01	<0.005
10/00 (Dup.)	8.71	9	1,000	817	2.5		2.5	11	0.0061	<0.0005		0.35	110	<0.01	<0.005
1/01	8.65	9.27	1,000	863	2.7		0.13	13	<0.004	<0.0005		0.72	190	<0.01	<0.005
1/01 (Dup.)	8.65	9.27	1,000	863	2.8		0.33	14	<0.004	<0.0005		0.58	210	<0.01	<0.005
5/01	8.51	8.99	980	791	2.9		2.9	13	<0.004	<0.0005		0.66	170	<0.01	<0.005
9/01	8.42	8.89	708	970	3.6		0.34	11	<0.004	<0.0005		0.80	160	<0.01	<0.005
9/01 (Dup.)	8.46	8.89	708	950	3.6		0.22	13	<0.004	<0.0005		0.80	170	<0.01	<0.005
1/02	8.53	8.75	908	793	3.1		3.1	13	0.00445	<0.0005		0.59	162	<0.01	<0.005
5/02	7.80	8.51	930	600	2.9		<0.20	14	<0.004	<0.0005		0.67	171	<0.01	<0.005
10/02	8.28	8.59	1,090	1,013	4.13		0.66	15.3	<0.004	<0.0005		0.708	165	<0.01	<0.005
1/03	7.61	7.39	1,190	1,208	1.83		0.17	18.4	<0.004	<0.0005		0.303	246	<0.01	<0.005
5/03	8.35	8.55	1,100	797	3.8		0.093	25	<0.004	<0.0005		0.66	160	<0.01	<0.005
9/03	7.76	7.53	1,300	1,045	4.8		0.15	33	0.0073	<0.0005		0.61	210	<0.01	0.006
9/03 (Dup.)	7.74	7.53	1,300	1,045	4.8		0.34	37	0.0065	<0.0005		0.60	210	<0.01	0.0055
1/04	7.94	8.00	1,200	854	3.9		3.80	23	<0.004	<0.0005		0.41	190	<0.01	
5/04	8.00	8.03	1,200	907	3.6		0.59	25	<0.004	<0.0005		0.42	310	<0.01	<0.005
9/04	7.88	7.94	1,300	838	3.7		0.34	19	0.0046	<0.0005		0.52	210	<0.01	<0.005
1/05	8.19	8.13	1,200	1,093	3.6		0.87	18	0.0046	<0.0005		0.82	220	<0.01	<0.005
5/05	7.87	7.79	1,200	1,070	4.7		0.55	20 J	<0.004	<0.0005		0.57	250	<0.01	<0.005
10/05	7.83	7.79	1,400	1,211	6.4		0.51	17	<0.004	<0.0005		0.61	250	<0.01	<0.005
1/06	8.10	7.28	1,400	1,206	1.3		<0.01	17J	0.0048	<0.0005		0.80	250	<0.01	<0.005
5/06	8.05	8.04	1,400	1,150	5.2		0.38	16J	<0.004	<0.0005		0.70	250	<0.01	<0.005
9/06	7.97	7.98	1,400	1,075	5.4		1.60	17	<0.004	<0.0005		0.44	240	,0.010	<0.005
MW-7															
12/83	6.6	6.2	613	700	0.019	0.020		0.1			1.01	7.88	49.0		
2/84	5.9	5.9	581	750	<0.01			0.1			9.0	4.72	49.2		
9/84	5.8	5.7	410	680	<0.01	<0.01		<0.2			11.6	4.65	58.0		
5/85	6.1	5.6	720	890	0.023	0.021		<0.2			24.7	3.70	61.0		
6/88	5.7	5.8	740	760	0.02		0.01	0.2	0.012	<0.0015	17.6	3.05	64.2	0.0032	
1/95	5.5	5.3	850	1,500	<0.01		<0.01	0.2	0.040	<0.01	22	2.3	72	<0.01	
5/97	5.6	6.04	790	670	<0.01			0.10	0.038	<0.0005		2.2	89	<0.01	
5/97 (Dup.)	5.7		800	670	<0.01			0.20	0.038	<0.0005		2.2	84	<0.01	
5/98	5.71	5.69	770	900	<0.01			0.20	0.051	<0.0005		2.2	78	<0.01	
5/99	5.81	6.00	780	700	<0.01			0.16	0.042	<0.0005		2.0	78	<0.01	
5/00	5.74	5.96	810	777	<0.01			0.14	0.041	<0.0005	18	2.0	93	<0.01	
5/01	5.69	5.27	770	771	<0.01			0.13	0.033	<0.0005		2.0	75	<0.01	
5/02	5.73	5.79	750	515	<0.01			0.16	0.0343	<0.0005		2.01	75.9	<0.01	
5/03	5.70	5.65	810	627	0.098		0.09	<0.10	0.025	<0.0005		2.3	64	<0.01	
5/04	6.12	5.81	840	631	<0.01			2.7	0.041	<0.0005		2.3	120	<0.01	
5/05	5.87	5.64	770	718	<0.01			1.6 J	0.051	<0.0005		2.4	86	<0.01	
5/06	5.99	5.86	790	672	0.019		0.019	<2.0B	0.044	<0.0005		2.1	79	<0.01	
MW-8															
12/83	9.5	9.2	820	700	0.32	0.017		18			0.20	0.01	202		
2/84	9.5	9.5	820	700	0.14			18			0.23	0.04	199		
9/84	9.5	9.0	661	800	0.35	0.013		22			1.00	0.04	216		
5/85	9.2	9.2	830	550	0.11	0.024		7.9			0.21	0.01	151		
5/86	8.8		550		0.04						<0.01	<0.01	111		
6/88	8.4	8.3	560	550	0.06		<0.01	2.8	0.0018	<0.0015	0.044	0.023	67.8	<0.0026	<0.005
1/95	7.8	7.8	610	930	0.09		<0.01	3.1	<0.004	<0.01	<0.04	0.08	50	<0.01	
5/97	7.8	8.02	560	442	0.040		<0.01	2.2	<0.004	<0.0005		0.12	44	<0.01	
5/98	7.81	7.60	490	514	0.02		<0.01	2.3	<0.004	<0.0005		0.14	30	<0.01	
5/99	8.00	8.10	530	455	0.028		0.028	2.4	<0.004	<0.0005		0.15	34	<0.01	
5/00	7.91	8.01	600	533	0.026		0.026	2.2	<0.004	<0.0005	0.054	0.24	36	<0.01	
5/01	8.24	7.48	560	482	0.024		0.024	1.9	<0.004	<0.0005		0.26	34	<0.01	
5/02	7.81	7.76	530	374	0.019		<0.01	1.9	<0.004	<0.0005		0.268	33.9	<0.01	
5/03	7.74	7.90	580	440	0.023		<0.01	2.4	<0.004	<0.0005		0.36	42	<0.01	
5/04	7.79	7.80	670	487	0.068		<0.01	3.2	<0.004	<0.0005		0.46	77	<0.01	
5/05	7.40	7.28	680	607	0.034		<0.01	2.5 J	<0.004	<0.0005		0.16	61	<0.01	
5/06	7.80	7.71	1000	856	0.094		<0.01	<2.0B	<0.004	<0.0005		0.57	140	<0.01	

Note: *All results in mg/L unless otherwise noted.*

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-10															
12/83	7.7	7.8	1,205	1,280	1.36	0.083		6.9			0.60	0.26	195		
2/84	7.6	7.5	820	800	0.79			5.5			0.30	0.26	108		
9/84	7.6	6.5	547	675	0.22	0.14		4.3			0.13	0.34	88		
5/85	7.7	7.0	800	710	0.33	0.060		2.9			0.07	0.05	53		
6/88	7.3	7.2	770	750	<0.01		<0.01	2.1	0.0038	<0.0015	0.081	<0.001	28.7	<0.0026	
1/95	7.0	6.8	800	560	0.02		0.02	0.5	<0.004	<0.01	<0.04	<0.01	26	<0.01	
5/97	7.2	7.4	870	510	<0.01			0.70	<0.004	<0.0005		<0.01	25	<0.01	
5/98	7.22	7.23	970	1,110	0.15		0.01	0.60	<0.008	<0.0005		<0.01	120	<0.01	
5/99	7.40	7.32	750	545	<0.01			0.41	<0.004	<0.0005		0.012	30	<0.01	
5/00	7.45	7.51	650	549	<0.01			0.48	<0.004	<0.0005	0.079	<0.01	21	<0.01	
5/01	8.19	7.21	610	502	0.013		0.013	0.47	<0.004	<0.0005		<0.01	27	<0.01	
5/02	7.27	7.13	990	605	0.19		<0.01	0.77	<0.004	<0.0005		0.0499	117	<0.01	
5/03	7.17	7.23	1200	897	0.13		0.019	1.0	<0.004	<0.0005		<0.01	120	<0.01	
5/04	7.81	7.25	740	542	<0.01			0.46	<0.004	<0.0005		0.011	31	<0.01	
5/05	7.27	7.28	520	607	<0.01			0.51 J	<0.004	<0.0005		0.011	24	<0.01	
5/06	7.36	7.21	820	669	<0.01			<2.0B	<0.004	<0.0005		<0.01	27	<0.01	
MW-11															
12/83	9.8	9.4	980	825	0.52	0.021		33			0.48	0.06	238		
2/84	9.6	9.5	962	775	0.25			27			7.9	0.37	232		
9/84	9.7	9.1	856	800	0.20	0.015		22			4.90	0.21	213		
5/85	9.4	9.5	750	650	0.30	0.026		13			2.68	0.13	181		
6/88	8.5	8.4	570	565	0.12		<0.01	4.9	0.0043	<0.0015	0.071	0.227	78.5	<0.0026	<0.005
1/95	7.6	7.9	540	680	0.02		<0.01	2.3	<0.004	<0.01	<0.04	0.40	30	<0.01	
5/97	7.8	7.64	530	404	0.09		<0.01	1.8	<0.004	<0.0005		0.42	33	<0.01	
5/98	7.84	7.57	490	507	0.02		<0.01	1.7	<0.004	<0.0005		0.45	31	<0.01	
5/98 (Dup.)	7.85	7.57	500	507	0.02		<0.01	1.7	<0.004	<0.0005		0.43	29	<0.01	
5/99	8.07	8.39	490	425	0.024		0.011	1.7	<0.004	<0.0005		0.45	28	<0.01	
5/00	7.96	7.58	580	500	0.013		0.013	1.4	<0.004	<0.0005	0.046	0.54	32	<0.01	
5/01	7.84	7.26	550	458	<0.01			1.6	<0.004	<0.0005		0.52	35	<0.01	
5/02	8.42	7.87	510	352	0.017		0.017	1.8	<0.004	<0.0005		0.488	34	<0.01	
5/03	7.87	7.99	540	405	0.016		<0.01	2.1	<0.004	<0.0005		0.57	37	<0.01	
5/04	7.83	7.86	530	394	<0.01		<0.01	1.9	<0.004	<0.0005		0.53	47	<0.01	
5/05	7.79	7.64	480	439	<0.01			1.7 J	<0.004	<0.0005		0.52	36	<0.01	
5/06	7.85	7.84	620	518	0.013		<0.01	<2.0B	<0.004	<0.0005		0.59	29	<0.01	
MW-12															
12/83	7.5	7.3	476	400	0.074	0.021		2.1			<0.01	0.94	24.3		
2/84	7.5	7.2	478	385	0.02			2.0			0.02	0.71	23.8		
9/84	7.7	6.3	366	375	<0.01	<0.01		2.2			<0.01	0.61	29.0		
5/85	7.7	7.4	540	390	0.024	0.022		1.6			<0.01	1.00	27.7		
5/86	7.5		494		<0.01						<0.01	1.23	27		
6/88	7.2	7.5	510	515	<0.01		<0.01	1.3	<0.0015	<0.0015	0.066	1.09	24.4	<0.0026	<0.005
1/95	7.4	7.6	530	350	<0.01		<0.01	1.1	<0.004	<0.01	<0.04	1.5	23	<0.01	
5/97	7.5	7.7	540	422	<0.01			0.90	<0.004	<0.0005		1.7	19	<0.01	
5/98	7.43	7.43	470	550	<0.01			0.80	<0.008	<0.0005		1.9	23	<0.01	
9/98	7.57	7.38	470	481	<0.01			0.92	<0.004	<0.0005		1.6	20	<0.01	
1/99	7.53	7.04	470	440	<0.01			0.89	<0.004	<0.0005		1.8	22	<0.01	
5/99	7.42	7.39	630	515	0.026		0.026	0.73	<0.004	<0.0005		2.5	29	<0.01	
9/99	7.54	7.25	530	565	0.017		0.012	0.88	<0.004	<0.0005		1.9	27	<0.01	
1/00	7.44	6.65	570	495	<0.01			0.74	<0.004	<0.0005		1.8	22	<0.01	
5/00	7.53	7.57	600	558	<0.01			0.73	<0.004	<0.0005	0.043	2.0	29	<0.01	
10/00	7.64	7.33	530	429	<0.01			0.83	<0.004	<0.0005		1.6	22	<0.01	
1/01	7.56	7.69	530	484	<0.01			0.92	<0.004	<0.0005		1.8	28	<0.01	
5/01	7.48	7.13	530	442	<0.01			0.82	<0.004	<0.0005		1.6	23	<0.01	
9/01	7.46	7.96	520	460	<0.01			0.83	<0.004	<0.0005		1.8	28	<0.01	
1/02	7.43	7.66	560	436	<0.01			1.1	<0.004	<0.0005		1.75	27	<0.01	
5/02	7.58	7.6	540	322	<0.01			1.1	<0.004	<0.0005		1.82	27.5	<0.01	
9/02	7.48	7.65	572	540	<0.01			0.629	<0.004	<0.0005		1.72	27.1	<0.01	
1/03	7.70	7.48	536	564	<0.01			0.884	<0.004	<0.0005		1.80	32.2	<0.01	
5/03	7.55	7.21	560	421	<0.01			0.76	<0.004	<0.0005		2.0	31	<0.01	
9/03	7.57	7.44	560	477	<0.01		<0.01	<3.2 B	<0.004	<0.0005		2.0	32	<0.01	
9/03 (Dup.)	7.60	7.44	560	477	<0.01		<0.01	<3.2 B	<0.004	<0.0005		2.0	33	<0.01	
1/04	7.58	7.66	510	400	<0.01			0.69	<0.004	<0.0005		1.9	28	<0.01	
1/04 (Dup.)	7.58	7.66	510	400	<0.01			0.60	<0.004	<0.0005		1.9	28	<0.01	
5/04	7.65	7.55	520	596	<0.01			0.61	<0.004	<0.0005		1.9	31	<0.01	
9/04	7.52	7.55	540	361	<0.01			<1.25 B	<0.004	<0.0005		1.9	30	<0.01	
9/04 (Dup.)	7.53	7.55	540	361	<0.01			<1.25 B	<0.004	<0.0005		1.9	30	<0.01	
1/05	7.67	7.40	520	466	<0.01			0.51	0.0042	<0.0005		1.9	29	<0.01	

Note: All results in mg/L unless otherwise noted.

B - Fluoride reported in field blank. Sample result less than 5x concentration in field blank.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-12 (Cont.)															
1/05 (Dup.)	7.60	7.40	520	466	<0.01			0.50	<0.004	<0.0005		2.0	29	<0.01	
5/05	7.71	7.30	520	443	<0.01			0.87 J	<0.004	<0.0005		2.0	32	<0.01	
10/05	7.55	7.49	520	491	<0.01			2.3	<0.004	<0.0005		1.9	27	<0.01	
10/05 (Dup.)	7.59	7.49	540	491	<0.01			1.4	<0.004	<0.0005		1.9	27	<0.01	
1/06	7.67	7.14	550	480	<0.01			0.61J	<0.004	<0.0005		1.8	25	<0.01	
1/06 (Dup.)	7.65	7.14	550	480	<0.01			0.48J	<0.004	<0.0005		1.8	25	<0.01	
5/06	7.55	7.57	510	473	<0.01			<2.0B	<0.004	<0.0005		1.9	23	<0.01	
9/06	7.61	7.57	610	508	<0.01			0.57	<0.004	<0.0005		2.2	26	<0.01	
9/06 (Dup.)	7.60		610		<0.01			0.62	<0.004	<0.0005		2.2	26	<0.01	
MW-14															
5/02	7.64	7.61	500	309	0.018		<0.01	1.9	<0.004	<0.0005		1.05	29.5	<0.01	
5/03	7.59	7.20	530	398	0.014		<0.01	2.1	<0.004	<0.0005		1.2	34	<0.01	
5/04	7.67	7.64	560	633	0.022		<0.01	2.0	<0.004	<0.0005		1.2	51	<0.01	
5/05	7.75	7.50	520	489	0.025		<0.01	2.5	<0.004	<0.0005		1.2	44	<0.01	
5/06	7.80	7.70	530	503	0.014		<0.01	2.2J	<0.004	<0.0005		1.2	38	<0.01	
MW-15															
12/83	6.9	6.7	568	435	0.44	0.018		0.1			0.14	0.03	28.8		
2/84	6.9	6.7	550	435	0.51			0.1			0.13	<0.01	29.4		
5/85	7.4	6.8	590	445	0.44	0.034		0.3			0.18	<0.01	32.5		
5/86	7.1		550		0.39						0.15	<0.01	34		
7/88	7.0/7.1	7.1/7.1	610/630	600/600	0.43/0.32		0.10/<0.01	0.2/0.2	0.0045	0.0025	10.8	0.117	34.4	0.0059	<0.005
1/95	7.0	7.1	720	420	0.49		0.12	1.4	<0.004	<0.01	0.26	<0.01	45	<0.01	
7/96	6.8	7.07	570	613	1.0	<0.020		2.1	<0.004	<0.0005		<0.01		<0.01	
5/97	7.4	7.44	800	731	2.8		0.20	11	<0.004	<0.0005		0.02	140	<0.01	
5/97 (Dup.)	7.4	7.44	800	731	3.3		0.40	8.9	<0.004	<0.0005		0.05	140	<0.01	
5/98	6.99	6.78	610	625	0.49		0.02	0.40	<0.004	<0.0005		<0.01	40	<0.01	
5/99	7.49	7.70	980	785	8.5		<0.01	15	<0.004	<0.0005		0.017	150	<0.01	
5/00	7.53	7.56	1,200	1,169	12		<0.01	25	<0.004	<0.0005	10	0.17	120	<0.01	
5/01	7.03	6.83	600	501	0.49		0.32	2.0	<0.004	<0.0005		0.017	51	<0.01	
5/02	7.29	7.21	590	333	1.1		<0.10	2.5	0.0222	<0.0005		0.0896	56.8	<0.01	
5/03	7.23	7.47	610	489	0.80		0.11	1.6	<0.004	<0.0005		<0.010	49	<0.01	
5/04	7.53	7.54	1,300	982	4.60		<0.01	13	<0.004	<0.0005		0.024	360	<0.01	
5/05	8.17	8.01	1,200	1,105	8.2		6.6	49 J	0.023	0.0024		0.69	290	0.074	
5/06	8.22	8.34	1,300	1,100	16.0		5.9	35J	0.020	0.0024		0.75	280	0.069	
MW-16															
12/83	9.8	9.9	2,092	1,800	7.35	0.034		110			12.4	0.91	530		
2/84	9.7	9.7	2,049	1,550	5.5			98			13.9	1.41	570		
9/84	9.8	9.2	1,390	10,500	2.11	<0.01		80			9.5	0.5	475		
5/85	9.4	9.0	2,300	1,400	10.0	0.11		72			10.3	1.09	443		
10/85	8.4		1,540		3.9	0.0		30		<0.01	2.10	0.41	186		
7/88	9.4	9.7	1,400	1,410	4.6		<0.01	61	0.063	<0.0015	6.57	0.22	300	0.018	0.006
1/95	7.7	9.0	850	930	1.4		0.13	7.9	<0.004	<0.01	0.52	1.1	81	<0.01	
7/96	7.3	7.75	990	941	1.6	<0.020		7.9	<0.004	<0.0005		1		<0.01	
5/97	7.6	7.6	980	801	1.3		0.3	11	<0.004	<0.0005		0.43	130	<0.01	
5/98	7.72	7.70	750	780	2.0		0.40	11	<0.004	<0.0005		1.2	80	<0.01	
9/98	7.70	7.50	860	790	1.4		1.4	9.5	<0.004	<0.0005		1.3	75	<0.01	
1/99	7.70	7.12	740	665	1.4		<0.04	9.8	<0.004	<0.0005		1.5	85	<0.01	
5/99	7.88	7.90	750	600	2.8		0.16	9.0	<0.004	<0.0005		1.5	82	<0.01	
9/99	7.62	8.15	730	745	2.9		0.88	8.2	<0.004	<0.0005		1.7	78	<0.01	
1/00	7.76	6.95	950	810	5.5		5.5	7.6	<0.004	<0.0005		2.2	68	<0.01	
1/00 (Dup.)	7.77	6.95	940	810	5.8		5.8	7.8	<0.004	<0.005		2.2	70	<0.01	
5/00	7.69	7.53	1,100	945	12		12	7.9	<0.004	<0.0005	4.3	2.3	91	<0.01	
5/00 (Dup.)	7.72	7.53	1,000	945	12		12	8.1	<0.004	<0.0005	4.4	2.4	91	<0.01	
10/00	7.74	7.67	1,000	774	16		<0.01	13	<0.004	<0.0005		1.6	130	<0.01	
10/00 (Dup.)	7.77	7.67	1,000	774	15		<0.01	13	<0.004	<0.0005		1.7	130	<0.01	
1/01	7.84	7.42	1,200	939	16		3.2	24	<0.004	<0.0005		1.6	250	<0.01	
1/01 (Dup.)	7.85	7.42	1,200	939	17		2.5	24	<0.004	<0.0005		1.6	250	<0.01	
5/01	7.89	8.04	1,100	920	12		12	39	<0.004	<0.0005		1.2	200	<0.01	
5/01 (Dup.)	7.90	8.04	1,100	920	11		11	40	<0.004	<0.0005		1.2	210	<0.01	
9/01	7.91	7.86	1,300	754	9.7		0.85	43	<0.004	0.00058		0.89	270	0.013	
9/01 (Dup.)	7.90	7.86	1,200	754	9.0		0.65	43	0.019	0.00096		1.1	260	0.021	
1/02	8.03	8.11	1,300	913	9.5		<0.5	57	0.0102	0.00211		1.46	237	0.055	
1/02 (Dup.)	8.05	8.11	1,300	913	10		0.58	59	0.00816	0.00171		1.33	211	0.0422	
5/02	7.92	7.92	1,300	695	7.9		<0.20	57	0.0332	0.0015		1.12	254	0.0469	
5/02 (Dup.)	8.06	7.92	1,300	695	7.4		<0.20	59	0.0269	0.0016		1.10	242	0.0500	
9/02	8.17	8.33	1,280	1176	9.75		0.56	50.1	0.0263	0.00155		1.12	208	0.0426	
9/02 (Dup.)	8.16	8.33	1,260	1176	10.9		1.56	49	0.0222	0.00198		1.4	211	0.0535	
1/03	8.31	7.78	1,310	1,299	7.03		0.77	27.5	0.0449	0.00136		0.792	235	0.0308	
1/03 (Dup.)	8.28	7.78	1,290	1,299	6.48		1.20	54	0.0381	0.00175		1.0	242	0.0441	

Note: All results in mg/L unless otherwise noted. B - Fluoride reported in field blank. Sample result less than 5x concentration in field blank. J = One or more quality control criteria not met. Value considered estimated

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-16 (Cont.)															
5/03	8.00	8.17	1,300	933	5.5		<0.01	58	0.012	0.0012		1.1	220	0.052	
5/03 (Dup.)	8.05	8.17	1,300	933	5.9		<0.01	52	0.0099	0.00093		1.0	220	0.044	
9/03	8.21	8.17	1,200	1,036	3.9		0.062	74	0.011	<0.0005		0.61	240	0.023	
1/04	7.89	8.07	1,300	883	6.0		1.5	52	<0.004	<0.0005		0.83	220	0.017	
5/04	8.18	8.22	1,300	1,410	5.3		0.35	71	0.0071	0.0014		1.1	390	0.037	
5/04 (Dup.)	8.15	8.22	1,300	1,410	5.9		0.35	71	0.016	0.0014		1.1	390	0.04	
9/04	8.10	8.15	1,400	914	12		3.1	56	0.0053	0.0011		1.2	270	0.027	
1/05	8.46	8.38	1,200	1,048	5.2		0.67	65	0.0085	0.00089		0.86	250	0.021	
5/05	8.46	8.57	1,200	998	6.7		0.14	64 J	0.023	0.0018		1.7	260	0.061	
5/05 (Dup.)	8.61	8.57	1,200	998	7.3		0.14	55 J	0.025	0.0018		1.7	280	0.064	
10/05	9.05	9.18	1,200	1,095	12		0.88	29	0.057	0.0029		2.7	280	0.12	
1/06	9.17	7.51	1,100	972	2.8		<0.01	62J	0.087	0.0021J		2.1	220	0.10	
5/06	9.34	9.45	1,200	963	4.9		<0.01	49J	0.082	0.0019		1.4	250	0.12	
5/06 (Dup.)	9.35	9.45	1,200	963	5.9		<0.01	44J	0.078	0.0019		1.5	250	0.12	
9/06	9.39	9.44	1,200	1002	6.6		2.4	41	0.058	<0.0005		0.48	240	0.051	
MW-17															
12/83	7.9	7.6	613	475	0.99	0.021		5.6			0.44	1.38	78		
2/84	7.6	7.4	581	470	1.03			4.4			0.39	1.77	52		
9/84	8.0	6.7	485	550	0.17	<0.01		9.1			0.28	1.27	99		
5/85	7.9	7.9	610	470	0.76	0.045		4.1			0.28	1.80	45.3		
10/85	7.9		564		0.56	0.43		4.2		<0.01	6.80	1.93	43.4		
6/88	7.7	7.5	590	475	1.3		0.46	5.2	0.0054	<0.0015	0.973	1.72	39.7	<0.0026	<0.005
2/90	7.7	7.55	680	640	0.582		<0.005	4.1			18		40		
1/95	7.5	7.7	710	420	0.64		<0.01	3.9	<0.004	<0.01	0.26	1.9	36	<0.01	
5/97	7.5	7.67	870	488	0.54		<0.01	3.1	<0.004	<0.0005		1.9	30	<0.01	
5/98	7.6	7.40	570	580	0.72		0.09	3.4	<0.004	<0.0005		1.8	34	<0.01	
5/99	7.50	7.40	550	470	0.46		0.46	3.2	<0.004	<0.0005		1.8	31	<0.01	
5/99 (Dup.)	7.37	7.40	550	470	0.49		0.49	3.2	<0.004	<0.0005		1.8	30	<0.01	
5/00	7.57	7.61	610	523	0.53		0.31	2.9	<0.004	<0.0005	0.34	1.8	24	<0.01	
5/01	7.87	7.38	570	460	0.50		0.50	3.0	<0.004	<0.0005		1.7	28	<0.01	
5/02	7.64	7.62	550	328	0.35		0.35	5.4	<0.004	<0.0005		1.42	40.3	<0.01	
5/03	7.65	7.80	580	435	0.41		0.096	9.8	<0.004	<0.0005		1.6	44	<0.01	
5/04	7.71	7.83	670	511	0.41		<0.01	23	0.0044	<0.0005		1.1	130	<0.01	
5/05	7.66	7.55	910	819	6.2		3.1	17 J	0.0044	<0.0005		1.1	170	<0.01	
5/06	7.73	7.76	910	759	4.2		2.1	13J	<0.004	<0.0005		1.4	130	<0.01	
5/06 (Dup.)	7.85	7.76	910	759	3.5		0.64	22J	<0.004	<0.0005		1.4	130	<0.01	
MW-18															
12/83	9.9	10.0	10,526	8,750	110.0	0.45		460			58.7	0.26	3,150		
2/84	9.8	9.8	9,615	7,500	52.0			350			61	0.50	2,750		
9/84	10.1	9.5	9,111	10,000	194	0.19		690			103	0.3	4,130		
5/85	9.8	9.9		7,000	35.2	0.091		410			64.2	0.35	2,540		
10/85	9.9		6,300		120	12		350		<0.01	71.4	1.06	1,940		
7/88	10.0	10.1	9,700	10,000	29		25	820	0.159	0.0071	144	1.75	2,840	0.191	0.022
2/90	10.0	10.1	8,000	11,400	67.0		10.5	710			110		3,500		
1/95	9.6	11.1	5,900	>2,000	15		6.6	290	0.062	<0.01	56	0.22	1,500	0.02	
7/96	9.1	8.67	4,300	4,200	7.2	<0.020		180	0.065	0.0006	56	0.19	1,500	0.01	0.006
5/97	9.7	9.58	4,000	4,110	8.7		<0.50	200	0.078	0.0009		0.29	1,100	0.02	
5/98	9.76	10.06	4200	4,300	9.8		0.40	260	0.094	0.0014		0.49	1100	0.05	0.024
9/98	9.70	9.88	3,600	3,590	5.9		<0.01	210	0.085	0.00084		0.29	800	0.022	0.014
1/99	9.67	10.04	3,600	3,450	79		3.0	210	0.088	0.00063		0.29	830	0.028	0.0219
5/99	9.72	9.80	3,000	3,000	95		81	370	0.088	0.0014		0.92	650	0.045	0.017
9/99	9.62	10.26	3,000	2,870	90		14	170	0.074	<0.0005		0.24	700	0.011	0.016
1/00	9.56	9.15	3,000	2,700	27		19	180	0.078	0.00059		0.26	680	0.017	0.020
5/00	9.59	9.73	2,600	2,270	84		75	160	0.075	0.00089	25	0.56	620	0.035	0.019
5/00 (Dup.)	9.60	9.73	2,800	2,270	64		50	160	0.073	0.00062	20	0.33	620	0.023	0.016
10/00	9.54	9.87	2,400	1,948	29		<0.01	130	0.074	0.0024		2.1	400	0.08	0.012
1/01	9.62	10.82	2,500	1,980	53		9.2	170	0.067	0.0006		0.3	580	0.019	0.043
5/01	9.52	10.38	2,100	1,780	15		<0.50	100	0.065	0.0014		0.97	360	0.042	0.040
5/01 (Dup.)	9.52	10.36	2,000	1,780	49		49	110	0.079	0.0037		3.1	380	0.140	0.046
9/01	9.61	9.75	2,100	1,668	91		11	180	0.12	0.00099		0.3	520	0.024	0.027
1/02	9.44	9.65	2,400	1,680	36		<0.01	150	0.15	0.0125		16.8	438	0.360	0.024
5/02	9.48	9.55	2,300	1,693	110		40	150	0.0716	0.00105		0.432	517	0.0269	0.020
5/02 (Dup.)	9.49	9.55	2,300	1,693	72		8.3	150	0.0703	0.00104		0.401	510	0.0248	0.052
9/02	9.49	9.77	1,720	1,599	74		<0.01	108	0.0906	0.00141		0.927	303	0.0525	0.0172
1/03	9.48	9.57	2,010	2,160	62.1		<2.5	163	0.0932	0.00133		0.285	452	0.0220	0.058
5/03	9.34	9.58	1,400	1,257	15		3.0	88	0.061	<0.0005		0.20	240	0.021	0.027
5/03 (Dup.)	9.39	9.58	1,400	1,257	20		<0.01	83	0.066	0.00068		0.30	230	0.034	0.047
9/03	9.42	9.61	1,800	1,424	4		<0.01	97	0.12	0.0044		5.60	380	0.17	0.018
1/04	9.33	9.62	2,400	1,237	17		5.5	77	0.061	0.00066		0.43	290	0.028	0.012
5/04	9.51	9.66	2,300	1,546	1.8		0.33	150	0.081	0.00095		0.35	680	0.037	0.012
5/04 (Dup.)	9.49	9.66	2,200	1,546	2		<0.01	140	0.079	0.00092		0.35	680	0.035	0.014

Note: All results in mg/L unless otherwise noted.

B - Fluoride reported in field blank. Sample result less than 5x concentration in field blank.

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-18 (Cont.)															
9/04	9.30	9.48	1,800	1,145	35		22	42	0.17	0.012		13	380	0.43	0.0097
1/05	9.40	9.45	3,000	2,920	81		4.7	130	0.056	0.0014		0.55	570	0.021	0.0071
5/05	9.44	9.45	1,700	1,056	13		0.34	97 J	0.07	0.0014		0.78	430	0.049	0.0057
5/05 (Dup.)	9.49	9.45	1,600	1,056	8.2		0.14	94 J	0.073	0.0012		0.75	440	0.037	0.0056
10/05	9.35	9.47	2,300	1,937	6.6		0.24	52	0.05	0.0015		0.68	510	0.033	0.0071
1/06	9.55	7.60	2,900	2,990	4.6		<0.01	210J	0.049	0.0022J		0.78	650	0.034	0.0088
5/06	9.77	10.07	3,400	2,830	7.7		<0.01	380J	0.13	0.0013		0.54	700	0.043	0.0078
9/06	9.61	9.79	1,900	1,720	36.0		36	100	0.11	0.0026		1.60	380	0.099	<0.005
MW-19															
12/83	7.2	7.1	581	435	0.068	0.013		0.3			<0.01	0.54	22.9		
2/84	7.1	6.8	575	405	0.04			0.5			0.05	0.26	20.2		
9/84	7.2	6.3	451	460	0.01	<0.01		0.4			0.02	0.04	23.5		
5/85	7.6	7.0	640	460	0.019	0.014		0.5			0.12	0.02	23.6		
7/88	7.3	7.3	630	600	<0.01		<0.01	0.5	0.0067	<0.0015	17.6	0.23	32.2	0.015	<0.005
2/90	7.3	7.27	520	560	0.2		<0.005	0.7					21.0		
1/95	7.3	7.2	630	410	<0.01		<0.01	1.0	<0.004	<0.01	0.09	<0.01	24	<0.01	
5/97	7.4	7.5	520	431	<0.01		<0.01	2.0	<0.004	<0.0005		<0.01	18	<0.01	
5/98	7.23	6.95	560	575	<0.01			1.4	<0.008	<0.0005		<0.01	23	<0.01	
5/99	7.47	7.40	570	460	<0.01			1.3	<0.004	<0.0005		<0.01	22	<0.01	
5/00	7.33	7.20	580	538	<0.01			1.2	<0.004	<0.0005	0.13	<0.01	16	<0.01	
5/01	7.18	6.96	580	494	<0.01			1.1	<0.004	<0.0005		<0.01	20	<0.01	
5/02	7.39	7.38	530	324	<0.01			1.2	<0.004	<0.0005		<0.005	23.4	<0.01	
5/03	7.53	7.38	550	420	<0.01			2.2	<0.004	<0.0005		<0.01	20	<0.01	
5/04	7.87	7.59	460	342	<0.01			3.6	<0.004	<0.0005		<0.01	16	<0.01	
5/05	7.27	7.10	780	700	0.012		<0.01	2.8 J	<0.004	<0.0005		<0.01	38	<0.01	
5/06	7.48	7.48	590	541	<0.01			3.5J	<0.004	<0.0005		0.014	15	<0.01	
MW-28															
5/86	5.5		382		0.89	0.08		<0.1			0.36	0.02	41		
6/88	5.7	5.8	640	665	7.4		0.6	<0.1	<0.0015	<0.0015	2.41	0.035	83.3	<0.0026	<0.005
1/95	6.2	7.4	500	700	0.74		0.26	2.7	<0.004	<0.01	0.38	0.02	79	<0.01	
7/96	5.7	5.92	440	429	0.26	<0.020		0.50	<0.004	<0.0005		0.01		<0.01	
5/97	5.8	6.4	590	453	0.11		<0.02	0.2	<0.004	<0.0005		0.01	62	<0.01	
5/98	5.74	5.32	500	550	0.12		<0.01	0.20	<0.004	<0.0005		0.01	65	<0.01	
9/98	5.81	5.28	540	527	0.11		0.11	0.27	<0.004	<0.0005		0.011	64	<0.01	
9/98 (Dup.)	5.83	5.28	540	527	0.11		0.11	0.24	<0.004	<0.0005		0.01	65	<0.01	
1/99	5.72	5.17	470	450	0.087		0.027	0.38	<0.004	<0.0005		0.013	67	<0.01	
5/99	5.72	5.43	460	405	0.13		0.13	0.35	<0.004	<0.0005		0.011	70	<0.01	
9/99	5.95	6.15	480	480	0.12		0.016	0.26	<0.004	<0.0005		<0.01	57	<0.01	
1/00	6.04	5.25	460	410	0.23		0.22	0.35	<0.004	<0.0005		<0.01	58	<0.01	
5/00	5.89	5.90	470	464	1.0		1.0	0.30	<0.004	<0.0005	0.69	0.014	77	<0.01	
10/00	5.85	5.47	460	384	0.96		0.28	0.27	<0.004	<0.0005		0.014	52	<0.01	
1/01	5.75	5.45	460	412	0.9		0.9	0.32	<0.004	<0.0005		0.015	64	<0.01	
5/01	5.65	5.20	420	391	1.1		0.36	0.22	<0.004	<0.0005		0.014	54	<0.01	
9/01	5.70	6.01	430	415	1.3		<0.1	0.56	<0.004	<0.0005		0.015	64	<0.01	
1/02	5.73	5.77	450	396	0.9		0.9	0.37	<0.004	<0.0005		0.0196	60.5	<0.01	
5/02	5.63	5.71	400	311	0.60		<0.04	0.22	<0.004	<0.0005		0.0146	62.1	<0.01	
9/02	5.65	6.00	449	443	0.975		0.13	0.164	<0.004	<0.0005		0.0265	59.1	<0.01	
1/03	5.72	5.99	412	462	0.65		<0.02	0.305	<0.004	<0.0005		0.0192	70.4	<0.01	
5/03	5.73	6.09	390	305	0.38		0.068	0.13	<0.004	<0.0005		0.017	47	<0.01	
9/03	5.93	6.25	440	377	0.35		0.016	<3.2 B	0.0068	<0.0005		0.018	61	<0.01	
1/04	6.01	7.24	400	341	0.40		0.40	0.53	<0.004	<0.0005		0.021	54	<0.01	
5/04	6.48	5.77	410	306	0.15		0.01	0.21	<0.004	<0.0005		0.024	81	<0.01	
9/04	5.84	5.65	410	276	0.25		0.12	<1.25 B	<0.004	<0.0005		0.03	53	<0.01	
1/05	6.23	5.47	360	293	0.29		0.01	0.19	<0.004	<0.0005		0.018	51	<0.01	
5/05	6.06	5.54	380	336	0.15		0.14	0.27 J	<0.004	<0.0005		0.023	56	<0.01	
10/05	6.08	5.58	380	289	0.54		0.017	2.1	<0.004	<0.0005		0.024	47	<0.01	
1/06	6.03	5.69	420	372	0.38		<0.01	1.5J	<0.004	<0.0005		<0.10B	72	<0.01	
5/06	6.12	5.70	380	316	0.48		<0.01	<2.0B	<0.004	<0.0005		0.032	51	<0.01	
9/06	6.06	5.77	380	345	0.23		0.230	<0.55B	<0.004	<0.0005		<0.01	52	<0.01	

Note: All results in mg/L unless otherwise noted.

B - Fluoride reported in field blank. Sample result less than 5x concentration in field blank.

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-29S															
5/86	8.4		2,350		1.5	0.02		28			0.64	0.08	590		
6/88	9.0	9.0	1,100	1,090	0.99		0.37	44	0.0052	<0.0015	1.52	0.094	224	0.0044	<0.005
1/95	8.3	10.0	2,900	1,750	0.79		0.07	56	<0.004	<0.01	0.37	0.12	590	<0.01	
5/97	8.3	8.43	2,200	1,735	0.6		<0.1	44	<0.004	<0.0005		0.14	410	<0.01	
5/98	8.64	8.70	1,700	1,665	0.18		<0.01	26	<0.004	<0.0005		0.09	370	<0.01	
5/99	8.35	8.37	1,300	1,090	0.22		0.021	16	<0.004	<0.0005		0.30	230	<0.01	
5/00	8.11	8.11	1,200	1,023	0.17		0.17	16	0.0057	<0.0005	0.14	0.41	130	<0.01	
5/01	7.89	7.54	1,000	828	0.16		0.16	16	<0.004	<0.0005		0.42	160	<0.01	
5/02	7.73	7.71	700	408	0.08		<0.01	10	<0.004	<0.0005		0.563	79.6	<0.01	
5/03	7.68	7.81	1,000	759	0.21		0.049	9.1	<0.004	<0.0005		0.78	110	<0.01	
5/04	7.48	7.56	1,700	1,760	0.93		0.93	8.7	<0.004	<0.0005		1.2	380	<0.01	
5/05	7.82	7.37	1,200	950	1.3		<0.01	9.7 J	<0.004	<0.0005		0.78	170	<0.01	
5/06	7.47	7.32	2,000	1,510	1.7		<0.01	15J	<0.004	<0.0005		1.7	300	<0.01	
MW-29D															
5/86	8.6		648		0.31	0.01		9.7			0.18	0.26	139		
6/88	8.1	8.0	590	570	0.25		<0.01	4.2	0.002	<0.0015	0.082	1.16	60.4	<0.0026	<0.005
1/95	7.5	8.9	650	770	0.22		0.03	3.7	<0.004	<0.01	0.09	2.0	33	<0.01	
5/97	7.7	7.9	600	479	0.18		<0.02	3.3	<0.004	<0.0005		2	31	<0.01	
5/98	7.85	7.53	550	560	0.17		<0.01	3.5	<0.004	<0.0005		1.8	28	<0.01	
5/99	7.82	7.60	550	465	0.19		0.19	3.4	<0.004	<0.0005		1.8	28	<0.01	
5/00	7.75	7.66	590	503	0.15		0.15	3.1	<0.004	<0.0005	0.12	1.9	24	<0.01	
5/01	7.55	6.82	570	489	0.15		0.15	3.1	<0.004	<0.0005		1.8	27	<0.01	
5/02	7.56	7.42	540	342	0.13		<0.01	3.6	<0.004	<0.0005		1.7	30.3	<0.01	
5/03	7.64	7.74	590	449	0.13		<0.01	3.6	<0.004	<0.0005		2.0	32	<0.01	
5/04	8.03	7.68	610	682	0.16		0.16	2.4	<0.004	<0.0005		2.0	33	<0.01	
5/05	7.77	7.47	600	530	0.15		0.14	3.9 J	<0.004	<0.0005		2.1	38	<0.01	
5/06	7.78	7.55	680	560	0.23		<0.01	2.4J	<0.004	<0.0005		2.1	39	<0.01	
MW-30															
5/86	6.6		342		0.01	<0.01		0.5			<0.01	2.10	20		
6/88	6.3	6.3	340	400	0.01		<0.01	<0.1	0.0018	<0.0015	4.42	0.753	18.7	0.0044	0.005
1/95	6.2	6.0	430	570	0.01		<0.01	<0.1	<0.004	<0.01	0.78	0.60	19	<0.01	
5/97	6.2	6.47	420	334	<0.01			<0.1	<0.004	<0.005		0.6	18	<0.01	0.012
5/98	6.19	5.70	390	418	<0.01			0.10	<0.004	<0.0005		0.68	21	<0.01	0.013
5/99	6.43	6.10	400	390	0.016		0.013	0.19	<0.004	<0.0005		0.71	21	<0.01	0.02
5/00	6.34	5.91	430	380	0.026		0.026	0.12	<0.004	<0.0005	1.5	0.70	21	<0.01	0.017
5/01	6.14	6.21	420	409	0.79		0.79	0.17	<0.004	<0.0005		0.54	19	<0.01	0.015
5/02	6.27	6.27	430	282	0.051		0.05	0.18	<0.004	<0.0005		0.434	31.2	<0.01	0.024
5/03	6.27	6.70	440	342	0.019		<0.01	0.16	<0.004	<0.0005		0.81	23	<0.01	0.028
5/04	6.61	6.27	450	512	<0.01			2.1	<0.004	<0.0005		0.50	25	<0.01	0.0065
5/05	7.16	6.18	470	427	4.5		0.96	3.1 J	<0.004	<0.0005		0.90	37	<0.01	0.012
5/06	6.66	6.13	500	428	<0.01			<2.0B	<0.004	<0.0005		0.51	26	<0.01	0.009
MW-31															
5/86	9.1		1,250		12	1.5		46			84.5	3.67	380		
6/88	10.2	10.5	3,400	3,500	39		<0.01	140	0.046	<0.0015	20.3	1.93	703	0.184	0.040
2/90	10.0	9.95	2,300	2,700	4.80		3.94	110			49		660		
1/95	9.6	10.4	1,900	1,600	7.1		<0.01	89	0.027	<0.01	4.6	0.66	420	<0.02	
7/96	9.5	9.52	2,300	2,100	12	<0.020		91	0.042	0.0007		0.62		0.04	0.041
5/97	9.9	9.69	2,500	2,100	12		<0.50	110	0.04	0.0007		0.68	480	0.05	0.028
5/97 (Dup.)	9.9	9.69	2,500	2,100	6.2			93	0.038	0.0008		0.74	480	0.05	0.029
5/98	9.63	9.80	2,400	2,350	9.3		<0.01	100	0.036	0.0013		1.1	490	0.04	0.022
9/98	9.67	9.86	2,600	2,520	9.8		<0.01	120	0.044	0.0014		1.1	620	0.045	0.017
9/98 (Dup.)	9.67	9.86	2,700	2,520	9.5		<0.01	130	0.045	0.0013		1.1	600	0.043	0.020
1/99	9.72	9.97	2,500	2,240	22		0.63	120	0.047	0.0012		1.3	620	0.065	0.019
5/99	9.91	10.02	2,600	2,510	29		6.5	130	0.06	0.0014		1.2	600	0.07	0.034
9/99	9.83	10.03	2,600	2,810	30		4.3	150	0.063	0.0011		1.6	750	0.088	<0.005
1/00	9.98	9.80	2,900	2,600	24		6.3	150	0.072	0.001		1.4	650	0.120	0.028
5/00	10.1	10.10	2,900	2,400	21		1.7	140	0.096	0.0011	13	1.6	820	0.12	0.020
10/00	9.99	10.18	2,800	2,550	20		0.54	140	0.056	0.00076		1.1	480	0.079	0.043
1/01	10.1	11.21	2,100	1,900	13		1.5	110	0.056	0.001		1.3	560	0.11	0.020
5/01	9.93	10.85	2,100	1,866	12		12	77	0.046	0.0012		1.4	430	0.081	0.027
9/01	9.95	9.98	2,300	1,877	16		1.2	110	0.054	0.0014		1.4	590	0.09	0.032

Note All results in mg/L unless otherwise noted. *J = One or more quality control criteria not met. Value considered estimated.*

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-31 (Cont.)															
1/02	9.96	10.17	2,400	1,720	13		1.6	110	0.0493	0.00116		1.46	406	0.0968	0.017
1/02 (Dup.)	9.97	10.17	2,400	1,720	13		2.8	110	0.0519	0.00148		1.98	400	0.106	0.020
5/02	9.91	9.95	1,900	1,651	14		<0.50	91	0.0628	0.00105		1.0	395	0.0691	0.017
9/02	9.80	10.02	1,520	1,991	11.3		3.55	91	0.056	0.000982		1.21	357	0.0698	0.0234
9/02 (Dup.)	9.79	10.02	2,150	1,991	14.7		2.70	92.6	0.0592	0.00106		1.30	356	0.0694	0.0232
1/03	9.87	9.93	2,090	2,270	13.6		<0.5	99.5	0.0745	0.00181		1.47	472	0.0797	0.0323
1/03 (Dup.)	9.88	9.93	2,140	2,270	14		1.41	102	0.0706	0.00146		1.16	438	0.0864	0.029
5/03	9.69	10.00	1,800	1,310	15		4.1	80	0.038	0.001		0.99	330	0.064	0.022
9/03	9.69	9.81	1,800	1,648	12		7.7	91	0.046	0.001		1.3	410	0.074	0.032
1/04	9.55	9.83	2,300	1,375	12		1.3	85	0.033	0.00084		1.2	380	0.062	0.045
1/04 (Dup.)	9.55	9.83	2,300	1,375	13		1.3	82	0.027	0.00097		1.2	380	0.063	0.043
5/04	9.72	9.85	1,700	1,281	15		1.6	71	0.044	0.0015		1.5	570	0.078	0.025
9/04	9.50	9.81	1,800	1,215	15		<0.01	81	0.044	0.0018		1.6	400	0.087	0.041
9/04 (Dup.)	9.52	9.81	1,800	1,215	15		<0.01	95	0.044	0.0019		1.7	410	0.093	0.043
1/05	9.73	9.79	1,600	1,383	12		1.7	88	0.054	0.0018		1.8	350	0.099	0.034
1/05 (Dup.)	9.76	9.79	1,600	1,383	13		1.8	82	0.054	0.0017		1.8	340	0.096	0.029
5/05	9.65	9.68	1,700	1,519	16		0.21	86 J	0.057	0.0024		2.3	430	0.12	0.036
10/05	9.68	9.78	2,100	1,674	22		3.9	86	0.07	0.0031		3.1	440	0.18	0.038
10/05 (Dup.)	9.68	9.78	1,900	1,674	23		8.6	90	0.066	0.003		3.0	440	0.16	0.039
1/06	9.77	7.64	1,700	1,427	8.3		1.2	70J	0.06	0.0022J		2.3	370	0.12	0.030
1/06 (Dup.)	9.81	7.64	1,700	1,427	7.8		2.5	66J	0.061	0.0038J		2.2	360	0.12	0.028
5/06	9.82	9.98	1,600	1,291	9.7		<0.01	84J	0.05	0.0018		2.2	350	0.1	0.025
9/06	9.82	9.91	1,700	1,417	12		3.4	63	0.045	0.0006		0.6	360	0.048	0.026
9/06 (Dup.)	9.82	9.91	1,700	1,417	12		12	55	0.05	0.0013		1	390	0.071	0.027
MW-32															
5/86	10.5		6430		97	18		369			27.4	0.69	2120		
7/88	9.2	9.3	890	1,040	7.2		0.30	39	0.014	<0.0015	4.05	0.513	234	0.024	<0.005
1/95	9.4	9.4	1,300	630	12		3.6	47	0.014	<0.01	2.7	0.37	230	0.03	
7/96	8.6	8.69	1,000	1,038	6.9	<0.020		29	0.011	<0.0005		0.84		0.01	
5/97	8.7	8.71	930	697	4.4		1.3	19	0.008	<0.0005		1.1	110	<0.01	
5/98	8.03	8.10	630	697	2.5		0.34	7.7	<0.004	<0.0005		1.9	61	<0.01	
5/98 (Dup.)	8.05	8.10	690	697	2.5		0.09	8.0	<0.004	<0.0005		2.0	68	<0.01	
9/98	8.30	8.26	760	760	4.5		1.0	13	<0.004	<0.0005		1.8	78	<0.01	
1/99	8.39	8.00	710	650	3.1		<0.02	13	<0.004	<0.0005		1.7	77	<0.01	
1/99 (Dup.)	8.39	8.00	720	650	3.7		<0.02	13	<0.004	<0.0005		1.7	76	<0.01	
5/99	8.38	8.50	690	555	4.4		0.59	12	<0.004	<0.0005		2.0	78	<0.01	
9/99	9.84	10.01	2,200	2,300	18		1.8	120	0.057	0.0014		2.2	520	0.093	
1/00	8.93	8.28	950	770	4.8		0.57	27	0.017	<0.0005		1.9	97	0.024	
5/00	8.80	8.95	830	858	3.9		<0.01	19	0.013	<0.0005	3.1	1.6	70	<0.01	
10/00	9.75	9.98	1,500	1,227	8.3		0.76	70	0.051	0.00099		1.6	290	0.058	
1/01	8.46	9.24	740	875	4.3		0.82	13	0.004	<0.0005		2.0	95	<0.01	
5/01	8.51	8.84	790	624	4.9		4.9	17	0.0054	<0.0005		2.1	94	0.012	
9/01	8.69	8.74	720	606	4.9		0.53	99	0.0088	<0.0005		1.9	110	0.011	
1/02	8.45	8.69	770	627	4.3		2.4	14	0.0047	<0.0005		1.68	98.1	<0.01	
5/02	8.75	8.72	850	543	6.9		<0.25	28	0.0293	<0.0005		1.83	134	0.0107	
9/02	8.73	9.02	940	889	6.13		0.55	25.4	0.0299	<0.0005		1.60	101	0.0122	
1/03	8.35	7.70	747	788	4.41		0.11	13	0.00403	<0.0005		1.91	93.1	<0.01	
5/03	8.31	8.47	820	618	3.8		<0.01	21	0.010	<0.0005		2.2	82	<0.01	
9/03	8.67	8.88	920	745	5.9		1.4	32	0.013	<0.0005		1.7	130	0.011	
1/04	8.54	8.77	790	588	5.2		2.0	21	0.0082	<0.0005		1.7	99	<0.01	
5/04	9.43	9.76	1,200	872	5.2		0.38	49	0.034	0.00084		1.1	360	0.054	
9/04	9.72	10.03	1,600	1,100	13		<0.01	90	0.091	0.0026		2.6	360	0.16	
1/05	9.96	9.96	1,600	1,372	17		2.1	70	0.1	0.0028		3.8	330	0.17	
5/05	9.98	9.76	1,600	1,474	15		1.0	95 J	0.11	0.0027		4.3	370	0.19	
10/05	9.99	10.05	1,600	1,444	14		1.1	83	0.1	0.0042		4.9	380	0.24	
1/06	9.97	7.68	1,600	1,332	9.4		1.1	52J	0.065	0.003J		3.2	330	0.14	
5/06	9.93	10.16	1,500	1,300	16		1.4	50J	0.049	0.0021		3.3	350	0.11	
9/06	10.03	10.08	1,700	1,395	12		12.0	60	0.059	0.0012		1.5	350	0.1	
MW-34S															
5/86	7.4		668		0.13	<0.01		9.4			0.07	0.42	64		
7/88	7.2	7.2	690	670	40		38	7.3	0.0087	<0.0015	14.6	0.416	33.1	0.018	<0.005
2/90	7.4	6.93	690	740	0.113		0.26	6.5			21		49		
1/95	7.2	7.1	700	430	0.03		<0.01	7.3	<0.004	<0.01	0.18	0.01	35	<0.01	
5/97	7.4	7.43	710	579	0.18		0.04	8.1	<0.004	<0.0005		0.04	69	<0.01	
5/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
5/99	7.34	7.55	650	505	0.19		<0.01	6.8	<0.004	<0.0005		0.014	46	<0.01	
5/00	7.60	7.46	740	607	1.1		1.1	11	<0.004	<0.0005	1.2	0.044	83	<0.01	
5/01	7.71	7.34	670	537	0.12		0.12	8.6	0.025	0.0019		2.9	50	0.054	
5/02	7.90	7.98	920	457	0.064		<0.01	49	0.0367	0.00246		2.12	172	0.072	

Note: All results in mg/L unless otherwise noted

NS = Not sampled. Well damaged during remedial construction.

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-34S (Cont.)															
5/03	7.36	7.63	700	520	0.14		0.012	13	<0.004	<0.0005		0.055	52	<0.01	
5/04	8.08	8.21	950	729	0.38		0.26	41	0.0043	<0.0005		0.068	270	0.01	
5/05	8.63	8.51	1,700	1,673	9.1		0.21	130 J	0.028	0.0038		0.8	520	0.074	
5/06	8.59	8.75	1,600	1,358	6.4		0.47	68J	0.012	0.0021		0.51	380	0.036	
MW-34D															
5/86	7.3		602		0.05	<0.01		10.2			0.02	0.55	42		
7/88	7.4	7.4	560	580	0.07		<0.01	4.4	0.0031	<0.0015	0.538	0.762	32.4	<0.0026	<0.005
1/95	7.3	7.4	640	400	0.07		0.07	4.2	<0.004	<0.01	<0.04	0.82	34	<0.01	
5/97	7.4	7.43	630	492	0.05		<0.01	3.6	<0.004	<0.0005		0.79	31	<0.01	
5/98	7.37	7.23	590	595	0.09		0.01	3.9	<0.004	<0.0005		0.68	35	<0.01	
5/99	7.40	7.52	470	475	0.062		<0.01	3.6	<0.004	<0.0005		0.72	29	<0.01	
5/00	7.55	7.37	620	519	0.063		0.063	4.2	<0.004	<0.0005	0.14	0.76	28	<0.01	
5/01	8.00	7.16	600	453	0.13		0.13	3.9	<0.004	<0.0005		0.70	30	<0.01	
5/02	7.38	7.37	560	298	0.059		0.022	4.6	<0.004	<0.0005		0.68	32.9	<0.01	
5/03	7.38	7.52	630	470	0.047		<0.01	4.4	0.0041	<0.0005		0.58	31	<0.01	
5/04	7.44	7.35	660	505	0.45		0.37	6.0	<0.004	<0.0005		<0.01	83	<0.01	
5/05	7.83	7.38	1000	853	10		0.14	24 J	<0.004	<0.0005		0.12	190	<0.01	
5/06	7.80	7.77	910	780	7.5		1.8	23J	<0.004	<0.0005		0.26	170	<0.01	
MW-35															
5/86	10.2		6,430		240	38		358			125	1.76	2,070		
7/88	10.2	10.4	6,100	6,150	43		41	400	0.147	0.002	56.5	0.337	1,630	0.053	<0.005
2/90	9.6	9.7	1,500	1,540	8.0		<0.005	71			20		350		
1/95	9.5	9.7	1,200	562	16		<0.01	35	0.018	<0.01	11	0.43	220	<0.01	
7/96	9.5	9.5	1,700	1,851	6.0	0.040		71	0.028	0.0006		0.5		0.03	
5/97	9.4	9.47	1,000	900	16		<1.0	40	0.02	0.0006		0.68	220	0.02	
5/98	8.93	9.10	710	766	15		2.9	27	0.012	<0.0005		0.92	140	0.01	
9/98	8.97	8.90	550	778	16		0.99	26	0.01	<0.0005		0.88	130	<0.01	
1/99	9.28	9.15	820	925	23		2.9	40	0.019	<0.0005		0.81	190	0.016	
5/99	9.35	9.70	830	870	28		10	38	0.013	<0.0005		0.86	160	0.015	
9/99	9.18	9.60	790	930	18		2.0	34	0.012	<0.0005		0.53	170	0.05	
1/00	8.91	8.15	610	500	13		3.3	21	0.0077	<0.0005		0.47	94	0.068	
5/00	9.07	9.24	690	693	27		20	28	0.081	<0.0005	5.2	0.48	69	0.077	
10/00	8.76	8.84	520	470	7.3		0.59	17	0.0076	<0.0005		0.57	81	0.11	
1/01	8.86	9.59	530	549	10		3.1	19	0.008	<0.0005		0.50	89	0.075	
5/01	9.17	9.43	800	790	17		2.6	35	0.013	<0.0005		0.48	130	0.04	
9/01	9.26	9.03	820	749	15		<0.5	41	0.0097	<0.0005		0.46	120	0.062	
1/02	9.24	9.44	850	662	14		2.1	41	0.0106	<0.0005		0.511	129	0.0659	
5/02	9.03	9.21	600	528	24		7.4	27	0.0347	0.000537		0.576	172	0.0365	
9/02	8.60	9.33	542	733	8.96		1.21	17.5	0.0254	<0.0005		0.435	70.3	0.0259	
1/03	8.85	8.94	579	621	10.8		<0.5	23.6	0.00733	<0.0005		0.449	72.4	0.0255	
5/03	8.87	9.05	660	466	6.6		<0.01	31	0.0099	<0.0005		0.52	76	0.025	
9/03	8.46	8.57	540	437	6.4		1.1	23	0.0098	<0.0005		0.52	53	0.016	
1/04	8.12	8.32	480	335	5.5		2.4	15	0.0046	<0.0005		0.68	49	0.015	
5/04	8.50	8.60	550	401	6.6		<0.01	22	0.011	<0.0005		0.63	120	0.017	
9/04	8.04	8.20	430	305	5.5		2.9	7.5	0.0096	<0.0005		0.61	48	<0.01	
1/05	8.66	8.65	540	529	12		2.3	18	0.011	<0.0005		0.72	76	0.011	
5/05	8.45	8.08	480	467	7.9		4.1	15 J	0.012	<0.0005		0.86	75	0.014	
10/05	8.54	8.62	610	514	15		2.4	33	0.011	<0.0005		0.88	81	0.015	
1/06	8.18	7.25	530	453	7.9		1.6	12J	0.0096	<0.0005		0.92	62	0.01	
5/06	9.51	9.78	1,300	1,222	16		<0.01	90J	0.028	0.0008		0.71	230	0.028	
9/06	9.16	8.78	860	568	32		32.00	27	0.013	<0.0005		0.82	100	0.015	
MW-36															
5/86	9.7		2,700		25	1.4		97			39.5	1.13	760		
7/88	8.9	9.6	940	1,255	8.6		1.3	18	0.0078	<0.0015	3.52	0.332	161	0.0063	<0.005
1/95	9.8	9.7	3,500	1,350	18		<0.01	160	0.034	<0.01	8.7	0.83	770	0.07	
7/96	9.6	9.55	3,300	3,280	8.1	<0.020		160	0.058	0.0021		0.67		0.07	
5/97	9.8	9.64	3,600	3,290	9.2		3.5	180	0.084	0.0035		1.7	850	0.1	
5/98	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
9/98	9.90	10.10	4,500	4,380	6.5		0.03	230	0.11	0.0036		1.4	990	0.074	
1/99	9.76	10.20	3,500	3,300	41		1.2	190	0.076	0.0036		1.5	820	0.072	
5/99	10.10	10.40	2,500	2,260	19		4.4	150	0.12	0.0019		1.3	600	0.12	
9/99	10.10	10.10	1,800	1,790	6.2		0.69	93	0.059	0.00055		1.2	420	0.067	
9/99 (Dup.)	10.10	10.10	1,800	1,790	6.3		<0.5	96	0.061	0.00062		1.2	450	0.07	
1/00	10.2	9.80	1,600	1,450	3.9		0.51	80	0.072	<0.0005		0.70	290	0.082	
5/00	10.2	10.42	1,200	1,272	1.6		<0.01	50	0.03	<0.0005	4.0	0.54	150	0.03	
10/00	9.84	10.05	1,200	1,043	4.9		<0.01	41	0.024	0.00061		1.6	210	0.033	
1/01	9.79	11.00	1,700	1,567	12		2.0	89	0.027	0.0018		1.4	450	0.049	
5/01	9.87	10.28	1,100	1,109	3.0		3.0	49	0.029	0.00054		0.68	220	0.045	
9/01	9.80	9.75	1,100	960	2.7		<0.25	44	0.018	0.00053		0.59	210	0.026	
1/02	9.57	9.83	1,800	1,691	14		<0.01	120	0.0209	0.00205		1.0	310	0.0413	

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-36 (Cont.)															
5/02	9.61	9.61	1,800	1,286	16		4.6	96	0.0336	0.0018		1.15	381	0.0216	
9/02	9.55	9.80	1,400	1,304	4.14		<0.01	52	0.0217	0.000709		1.07	219	<0.01	
1/03	9.65	9.65	2,120	2,130	23.7		1.35	119	0.0711	0.0033		1.37	446	0.0791	
5/03	9.51	9.80	2,000	1,422	9.3		<0.01	120	0.049	0.0027		1.7	380	0.091	
9/03	9.50	9.56	1,500	1,252	6.2		0.74	110	0.046	<0.0005		0.75	290	0.038	
1/04	9.54	9.79	2,000	1,350	9.5		2.7	93	0.048	0.0013		0.81	350	0.077	
5/04	9.39	9.64	2,000	1,393	13		<0.01	120	0.043	0.0022		0.96	610	0.05	
9/04	9.63	9.82	1,000	701	4.9		2.3	52	0.047	0.00077		0.56	220	0.05	
1/05	9.69	9.61	880	750	3.4		0.69	33	0.026	0.00066		0.44	170	0.03	
5/05	9.66	9.44	800	774	1.8		0.53	30 J	0.02	0.0007		0.41	180	0.029	
10/05	9.44	9.50	1,000	764	12		2.3	28	0.02	<0.0005		0.28	180	0.02	
1/06	9.32	7.52	1,100	970	12		4.4	36J	0.02	0.0018		0.81	230	0.058	
5/06	9.17	9.31	1,000	878	3.8		0.15	38J	0.0068	<0.0005		0.41	220	0.016	
9/06	9.32	9.25	870	737	9.7		9.6	22	0.0059	<0.0005		0.026	170	<0.010	
MW-37															
5/86	10.1		7,340		97	8.2		890			498	46.3	1,800		
7/88	9.9	9.8	5,600	5,500	0.30		<0.01	1000	0.169	0.035	115	15.4	1,470	0.369	<0.005
2/90	9.6	9.65	2,700	3,100	4.6		22.7	360			1000		970		
1/95	9.1	9.2	1,200	970	18		<0.01	87	0.033	<0.01	8.5	0.58	280	0.01	
7/96	9.1	8.89	570	832	14	<0.020		45	0.042	0.0005		0.51		0.03	
5/97	9.2	9.07	1,100	846	13		1.7	53	0.027	<0.0005		0.56	210	0.02	
5/98	8.57	8.30	530	505	6.4		<0.01	6.8	0.018	<0.0005		0.28	120	0.02	
9/98	8.90	8.26	670	682	15		5.5	52	0.020	<0.0005		0.53	140	0.017	
1/99	9.02	9.25	660	750	19		<0.10	25	0.02	<0.0005		0.68	140	0.029	
5/99	9.39	9.45	610	540	11		3.6	22	0.023	<0.0005		0.23	130	0.016	
9/99	8.78	8.91	760	753	7.9		0.91	31	0.01	<0.0005		0.33	170	<0.01	
1/00	8.83	8.40	880	822	10		2.2	32	0.011	<0.0005		0.49	110	<0.01	
5/00	8.51	8.89	770	765	5.2		0.93	32	0.015	<0.0005	9.0	0.72	92	<0.01	
10/00	8.39	8.46	750	630	6.6		<0.01	17	0.0089	<0.0005		0.61	79	<0.01	
1/01	8.42	8.99	780	678	8.8		2.7	29	0.02	0.00088		1.5	160	0.035	
5/01	7.89	7.97	650	528	7.9		<0.01	10	0.018	0.00075		2.0	110	0.026	
9/01	7.84	7.54	680	590	5.6		<0.5	21	0.0042	<0.0005		3.0	110	0.011	
1/02	7.83	8.06	700	570	5.9		0.58	20	0.014	0.00113		3.12	129	0.0355	
5/02	8.15	8.05	610	406	5.0		<0.20	18	0.139	0.0169		14.8	141	0.273	
9/02	7.87	7.59	679	601	5.09		0.65	16.7	<0.004	<0.0005		<0.005	0.975	<0.01	
1/03	7.63	7.89	569	608	5.52		0.63	14.4	<0.004	<0.0005		2.48	107	<0.01	
5/03	7.25	7.50	440	342	6.3		0.093	9.8	0.0061	<0.0005		4.2	53	0.014	
9/03	6.89	7.31	520	444	2.4		0.093	14	0.01	0.0005		4.8	83	0.028	
1/04	7.06	7.34	570	422	1.7		0.72	17	<0.004	<0.0005		3.2	82	0.012	
5/04	7.34	7.01	460	365	2.5		0.66	14	0.0055	<0.0005		2.8	110	0.012	
9/04	6.58	6.60	520	367	4.1		2.0	8.8	0.0055	<0.0005		2.1	85	<0.01	
1/05	6.90	6.39	420	370	2.6		1.0	8.7	<0.004	<0.0005		1.9	59	<0.01	
5/05	6.92	6.51	420	374	3.0		0.068	9.5 J	0.012	0.0016		1.7	72	0.045	
10/05	6.82	6.60	630	512	5.8		0.58	17	0.013	0.0014		0.88	100	0.042	
1/06	7.96	7.14	550	463	7.7		2.8	6.3J	0.016	0.0015J		1.6	80	0.043	
5/06	7.00	6.56	570	476	4.0		0.9	8.4J	0.0088	0.00081		0.56	94	0.025	
9/06	6.91	6.53	490	414	2.4		2.4	7.3	<0.004	0.0005		0.60	74	<0.010	
MW-39S															
5/86	9.5		8,360		11	2.9		244			25.0	1.35	2780		
6/88	9.3	9.1	3,500	2,550	3.8		0.10	110	0.016	<0.0015	36.6	1.63	826	0.053	<0.005
1/95	8.9	8.7	2,700	900	0.64		<0.01	59	<0.004	<0.01	0.36	0.22	520	<0.01	
5/97	8.9	9.2	5,500	5,500	3.6		<0.2	150	0.009	<0.0005		0.15	1300	<0.01	
5/98	9.04	9.09	4,000	4,000	2.3		<0.01	98	0.009	<0.0005		0.11	700	<0.01	
5/99	9.05	9.30	4,300	3,620	3.4		0.24	120	0.0098	<0.0005		0.12	950	<0.01	
5/99 (Dup.)	9.05	9.30	4,200	3,620	3.6		0.89	120	0.009	<0.0005		0.11	1,100	<0.01	
5/00	9.18	9.19	4,500	3,870	3.5		3.5	110	0.013	<0.0005	2.3	0.097	1,100	<0.01	
5/01	8.91	9.38	3,700	2,820	2.0		0.86	97	0.011	<0.005		0.22	880	0.015	
5/02	9.06	9.01	4,200	2,420	4.8		0.55	130	0.0311	0.000659		0.269	1,070	0.0244	
5/03	8.95	9.20	3,800	4,120	3.1		<0.01	140	0.012	<0.0005		0.15	800	0.013	
5/04	9.28	9.46	3,400	5,040	8.5		0.76	150	0.016	<0.0005		0.19	2,000	0.015	
5/05	9.24	9.14	4,800	4,440	7.9		0.025	190 J	0.014	<0.0005		0.15	1,200	<0.01	
5/06	8.96	9.24	4,400	3,530	7.2		2.4	130J	0.011	<0.0005		0.21	940	0.017	
MW-39D															
5/86	8.1		627		0.21	0.02		7.4			0.14	0.54	103		
6/88	7.9	7.8	590	595	0.17		0.03	6.1	0.0021	<0.0015	0.36	0.681	53.9	<0.0026	<0.005
1/95	7.5	7.6	630	410	0.07		<0.01	3.9	<0.004	<0.01	0.06	0.87	36	<0.01	
5/97	7.5	7.66	630	457	0.06		0.06	3.8	<0.004	<0.0005		0.87	32	<0.01	
5/98	7.52	7.35	590	560	0.04		<0.01	3.6	<0.004	<0.0005		0.77	34	<0.01	
5/99	7.59	7.64	540	447	0.037		<0.01	3.4	<0.004	<0.0005		0.87	33	<0.01	
5/00	7.68	7.60	580	503	0.027		0.027	3.2	<0.004	<0.0005	0.13	0.90	29	<0.01	

Note: All results in mg/l, unless otherwise noted.

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT.)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-39D (Cont.)															
5/01	7.50	7.83	550	423	0.024		0.024	3.1	<0.004	<0.0005		0.78	32	<0.01	
5/02	7.61	7.56	510	301	0.026		<0.01	3.7	<0.004	<0.0005		0.785	32.3	<0.01	
5/03	7.60	7.78	580	430	0.033		<0.01	4.0	<0.004	<0.0005		0.93	33	<0.01	
5/04	7.57	7.66	590	649	0.024		0.024	4.2	<0.004	<0.0005		1.0	33	<0.01	
5/05	7.63	7.25	2,600	2,510	4.2		0.017	15 J	<0.004	<0.0005		2.6	650	<0.01	
5/06	7.63	7.62	860	720	0.32		<0.01	9.0J	<0.004	<0.0005		0.94	110	<0.01	
MW-40S															
5/86	8.9		2,550		1.7	0.03		28			12.8	0.49	650		
6/88	9.2	9.2	2,100	2,200	1.5		<0.01	5.9	0.018	<0.0015	1.89	0.139	445	0.0056	<0.005
1/95	7.9	7.9	2,500	1,600	0.87		<0.01	40	<0.004	<0.01	0.36	0.33	470	<0.01	
5/97	7.9	8.07	1,900	1,417	0.72		0.40	21	<0.004	<0.0005		0.66	380	<0.01	
5/98	8.2	8.18	1,400	1,335	0.36		<0.01	39	<0.004	<0.0005		0.13	270	<0.01	
5/99	8.50	8.83	1,300	1,100	0.32		<0.01	30	<0.004	<0.0005		0.11	250	<0.01	
5/00	8.08	8.04	1,100	900	0.25		0.25	14	<0.004	<0.0005	0.19	0.42	110	<0.01	
5/01	8.10	7.61	950	693	0.25		0.25	13	<0.004	<0.0005		0.57	140	<0.01	
5/02	7.89	7.91	720	543	0.20		0.17	14	<0.004	<0.0005		0.0577	147	<0.01	
5/03	7.85	7.98	1,400	1,042	0.58		0.02	21	<0.004	<0.0005		0.64	200	<0.01	
5/04	7.86	7.83	1,200	855	0.61		0.017	9.2	<0.004	<0.0005		0.84	220	<0.01	
5/05	7.76	7.51	960	804	0.24		<0.01	7.3 J	<0.004	<0.0005		1.1	160	<0.01	
5/06	7.95	7.82	1,000	831	10		2.9	21J	<0.004	<0.0005		0.4	170	<0.01	
MW-40D															
5/86	9.4		1,120		7.4	0.06		20			11.7	0.82	280		
6/88	9.4	9.4	1,200	1,290	7.0		<0.01	36	0.018	<0.0015	7.81	0.454	258	0.012	<0.005
1/95	7.6	7.7	2,000	1,375	0.70		<0.01	16	<0.004	<0.01	0.29	0.74	340	<0.01	
5/97	7.6	7.9	1,800	1,350	0.59		<0.1	7.6	<0.004	<0.0005		1.3	340	<0.01	
5/98	7.85	7.73	1,300	1,250	0.49		0.47	19	<0.004	<0.0005		0.36	250	<0.01	
5/99	7.99	8.25	920	745	0.16		0.16	12	<0.004	<0.0005		0.42	150	<0.01	
5/00	7.88	7.84	960	810	0.25		0.25	11	<0.004	<0.0005	0.16	0.69	97	<0.01	
5/01	8.01	7.45	790	611	0.15		0.15	8.6	<0.004	<0.0005		0.90	78	<0.01	
5/02	7.68	7.73	600	450	0.10		<0.01	7.7	<0.004	<0.0005		1.14	79.4	<0.01	
5/03	7.65	7.9	1,000	739	0.13		<0.01	9.6	<0.004	<0.0005		1.2	86	<0.01	
5/04	7.69	7.79	820	595	0.11		0.012	11	<0.004	<0.0005		0.9	120	<0.01	
5/05	7.89	7.56	1,000	849	0.68		0.034	4.9 J	<0.004	<0.0005		0.73	140	<0.01	
5/06	7.91	7.82	1,100	915	6.6		0.15	11J	<0.004	<0.0005		0.98	180	<0.01	
MW-41															
1/95	6.6	8.2	490	600	0.04		0.02	0.2	0.017	<0.01	8.9	1.3	22	<0.01	
5/97	6.8	6.98	490	357	<0.01			0.20	0.022	<0.0005		1.6	21	<0.01	
5/98	6.67	6.74	420	449	<0.01			0.30	0.016	<0.0005		1.3	21	<0.01	
5/99	6.79	6.80	420	370	<0.01			0.33	0.014	<0.0005		1.1	20	<0.01	
5/00	6.79	6.98	430	424	<0.01			0.25	0.016	<0.0005	9.2	1.1	17	<0.01	
5/01	6.70	7.00	450	421	<0.01			0.34	0.015	<0.0005		1.0	19	<0.01	
5/02	7.01	7.10	430	377	<0.01			0.24	0.0135	<0.0005		0.938	22.9	<0.01	
5/03	6.87	6.83	460	372	<0.01			0.28	0.016	<0.0005		1.1	23	<0.01	
5/04	6.85	6.85	450	361	<0.01			0.45	0.017	<0.0005		1.1	26	<0.01	
MW-42S															
6/88	8.0	8.4	930	870	0.70		0.25	14.0	0.002	<0.0015	0.232	0.237	143	0.0027	<0.005
2/90	8.4	8.25	2,100	2,400	0.266		0.079	35.0			0.88		520		
1/95	8.2	8.4	1,600	785	0.45		<0.01	22	<0.004	<0.01	0.2	0.35	280	<0.01	
5/97	8.2	8.57	1,700	1,350	0.58		<0.02	29	<0.004	<0.0005		0.33	300	<0.01	
5/98	8.28	8.46	1,400	1,460	0.52		<0.01	27	<0.004	<0.0005		0.37	270	<0.01	
5/99	8.19	8.54	1,500	1,100	0.54		0.033	26	<0.004	<0.0005		0.49	260	<0.01	
5/00	8.19	8.18	1,900	1,530	0.66		0.66	28	<0.004	<0.0005	0.39	0.65	280	<0.01	
5/01	8.03	8.03	1,700	1,208	0.51		0.062	23	<0.004	<0.0005		0.84	300	<0.01	
5/02	8.20	8.15	1,900	859	0.52		<0.02	37	<0.004	<0.0005		0.603	475	<0.01	
5/03	8.25	7.32	2,300	1,721	0.94		0.14	51	<0.004	<0.0005		0.41	430	<0.01	
5/04	8.29	8.37	4,500	4,040	3.1		<0.01	74	0.0068	<0.0005		0.38	1,500	<0.01	
5/05	8.30	8.10	2,700	3,110	4.0		0.068	69 J	<0.004	<0.0005		1.2	580	<0.01	
5/06	8.58	7.80	4,400	1,737	3.8		0.13	100J	0.0065	<0.0005		0.23	930	<0.01	

Note: All results in mg/L unless otherwise noted

J = One or more quality control criteria not met. Value considered estimated.

TABLE 4 (CONT)
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUND-WATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Conductance (lab)	Specific Conductance (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	Tetrachloroethene
MW-42D															
6/88	7.9	8.1	550	800	0.16		<0.01	8.0	0.0028	<0.0015	1.11	0.636	68.6	0.0028	<0.005
1/95	7.5	7.7	840	410	0.04		<0.01	3.8	<0.004	<0.01	0.08	1.5	31	<0.01	
5/97	7.6	7.99	580	468	0.04		<0.01	3.2	<0.004	<0.0005		1.3	27	<0.01	
5/98	7.54	7.64	550	535	0.07		0.01	3.3	<0.008	<0.0005		1.2	26	<0.01	
5/99	7.56	7.83	530	435	0.03		<0.01	3.4	<0.004	<0.0005		1.3	26	<0.01	
5/00	7.73	7.74	580	490	0.027		0.027	3.0	<0.004	<0.0005	0.053	1.3	24	<0.01	
5/01	7.53	7.68	550	462	0.023		0.023	3.1	<0.004	<0.0005		1.3	32	<0.01	
5/02	7.57	7.60	530	316	0.021		<0.01	3.0	<0.004	<0.0005		1.17	29.5	<0.01	
5/03	7.57	7.21	600	461	0.017		0.017	4.0	<0.004	<0.0005		1.4	34	<0.01	
5/04	7.66	7.70	1,700	1,899	0.65		0.65	9.8	<0.004	<0.0005		1.6	430	<0.01	
5/05	7.87	7.53	2,100	1,844	1.8		0.017	11 J	0.0073	<0.0005		0.35	810	<0.01	
5/06	7.73	7.80	2,000	1,737	2.7		0.92	10.0J	<0.004	<0.0005		1.2	450	<0.01	

Note: All results in mg/L unless otherwise noted

J = One or more quality control criteria not met. Value considered estimated.

TABLE 5

SUMMARY OF ANALYTICAL RESULTS FOR PCBS

ORMET CORPORATION

HANNIBAL, OHIO

	MV-12													
	5/15/02	10/01/02	1/15/03	5/22/03	9/11/03	1/13/04	5/11/04	9/28/04	1/18/05	5/19/05	10/6/05	1/18/06	5/18/06	9/18/06
Aroclor-1016	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1221	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1232	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1242	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1248	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1254	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---
Aroclor-1260	<0.52	<0.521	<0.5	<0.5	<0.5/<0.5	<0.52/<0.52	<0.5	<0.51/<0.53	<0.51/<0.5	<0.5	<0.5/<0.5	<0.5/<0.5	<0.5	---

	MW-44S													
	5/15/02	10/01/02	1/15/03	5/22/03	9/11/03	1/14/04	5/14/04	9/28/04	1/18/05	5/18/05	10/5/05	1/17/06	5/16/06	9/18/06
Aroclor-1016	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1221	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1232	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1242	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1248	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1254	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52
Aroclor-1260	<0.52	<0.5	<0.5	<0.5	<0.5	<0.52	<0.5	<0.52	<0.51	<0.5	<0.5	<0.5	<0.5	<0.52

	MW-44D													
	5/15/02	10/01/02	1/15/03	5/22/03	9/11/03	1/14/04	5/14/04	9/28/04	1/18/05	5/18/05	10/5/05	1/17/06	5/16/06	9/18/06
Aroclor-1016	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1221	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1232	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1242	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1248	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1254	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53
Aroclor-1260	<0.5	<0.51	<0.5	<0.5	<0.5	<0.51	<0.5	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5	<0.53

All results in ug/L. --- Not Analyzed

TABLE 6
SUMMARY OF ESTIMATED AQUIFER AREAS AND
CONTAMINANT MASS-IN-PLACE

ORMET CORPORATION
HANNIBAL REDUCTION DIVISION
HANNIBAL, OHIO

Sampling Date	Estimated Area of Aquifer Above 4 mg/L Fluoride	% Change	Estimated Area of Aquifer Above 0.2 mg/L Total CN	% Change
5/97	43.7 a.		37.5* a.	
5/98	36.9 a.	-15.6	37.8* a.	+0.8
5/99	43.7*a.	+18.4	40.0* a.	+5.8
5/00	41.6 a.	-4.8	36.5 a.	-8.8
5/01	41.4 a.	-0.5	36.7 a.	+0.5
5/02	37.9 a.	-8.5	37.2 a.	+1.4
5/03	38.8 a.	+2.4	37.2 a.	0.0
5/04	42.1 a.	+8.5	38.1 a.	+2.4
5/05	39.5 a.	-6.2	43.7 a.	+14.7
5/06	45.4 a.	+14.9	44.8 a.	+2.5

Sampling Date	Estimated Fluoride Mass-in-Place	% Change	Estimated Total CN Mass-in-Place	% Change
5/97	29,033 lbs.		2,943 lbs.	
5/98	23,888 lbs.	-17.7	2,597 lbs.	-11.8
5/99	30,416* lbs.	+27.3	5,566 lbs.	+114
5/00	27,071 lbs.	-11.0	4,679 lbs.	-15.9
5/01	21,741 lbs.	-19.7	4,300 lbs.	-8.1
5/02	28,789 lbs.	+32.4	4,530 lbs.	+5.3
5/03	32,127 lbs.	+11.6	2,773 lbs.	-38.8
5/04	38,836 lbs.	+20.9	3,062 lbs.	+10.4
5/05	37,656 lbs.	-3.0	4,681 lbs.	+52.9
5/06	32,735 lbs.	-13.1	6,615 lbs.	+41.3

* - Value corrected due to omission in previous calculations.

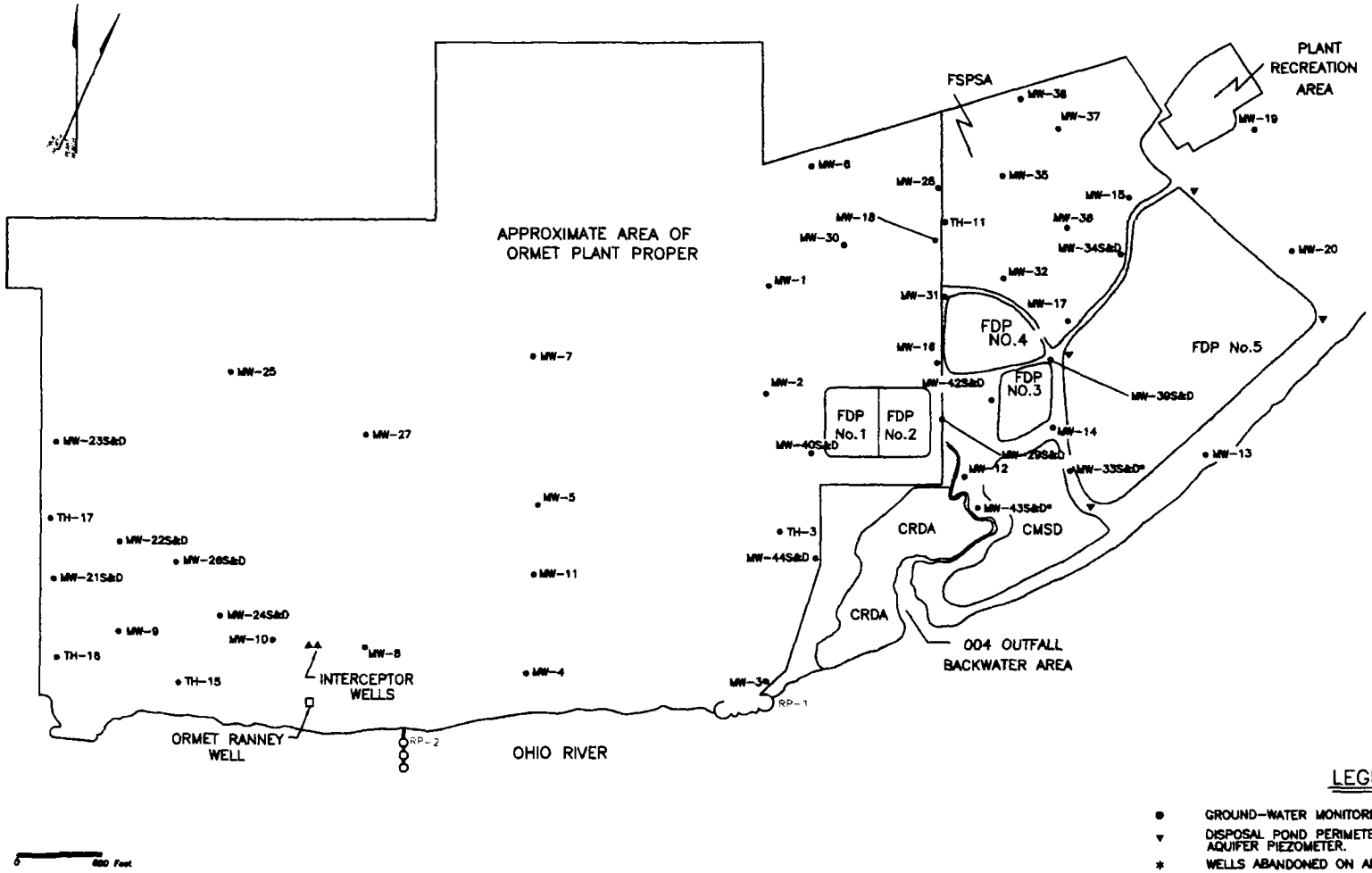
0319-ANN-T6.XLS

TABLE 7
COMPARISON OF CALCULATED MASS REMOVAL TO CHANGES IN ESTIMATED MASS-IN-PLACE

	FLUORIDE			TOTAL CYANIDE		
SAMPLE DATE	ESTIMATED MASS-IN-PLACE	POUNDS CHANGE	MASS REMOVED	ESTIMATED MASS-IN-PLACE	POUNDS CHANGE	MASS REMOVED
5/97	29,033			2,943		
5/98	23,888	-5,145	26,383	2,597	-346	3,462
5/99	30,416	+6,528	29,516	5,566	+2,969	3,248
5/00	27,071	-3,345	18,934	4,679	-887	2,884
5/01	21,741	-5,330	19,653	4,300	-379	2,897
5/02	28,789	+7,048	16,470	4,530	+230	2,321
5/03	32,127	+3,338	12,042	2,773	-1,757	1,726
5/04	38,836	+6,709	9,845	3,062	+289	1,597
5/05	37,656	-1,180	8,802	4,681	+1,619	1,075
5/06	32,735	-4,921	8,607	6,615	+1,934	1,392
	TOTAL MASS REMOVED		150,252	TOTAL MASS REMOVED		20,602

All values given in pounds.

FIGURES



LEGEND

- ● GROUND-WATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER.
- * WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997.
- AMENABLE CYANIDE CONCENTRATION CONTOUR (mg/L)

HMI Environmental Consulting Services

HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

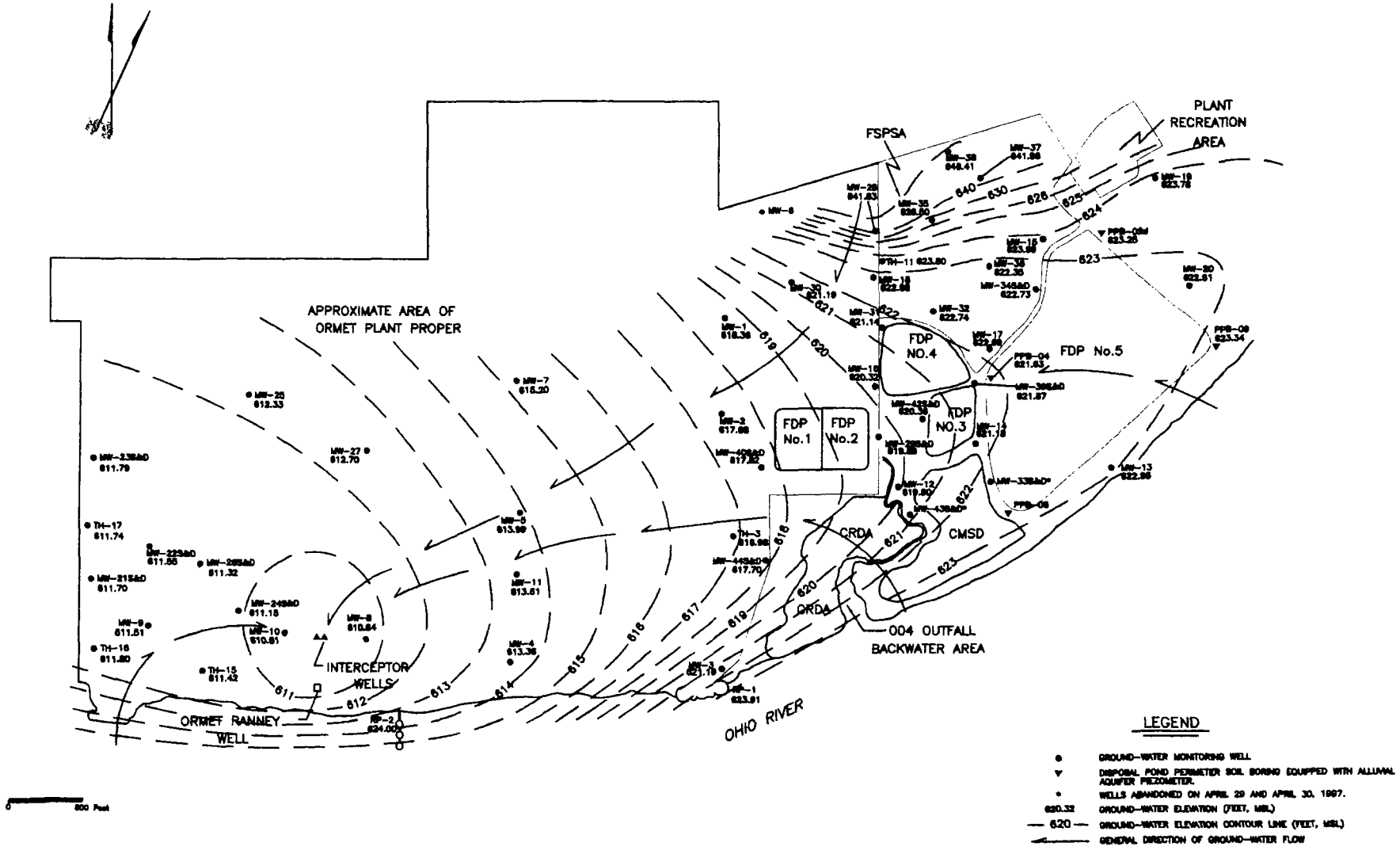
PROJECT NO: HM00319	FILE NO:
DRAWING: 012507CL	PLOT SIZE=1"=800'
DRAWN BY: CL	DATE: 01/24/2007
CHECKED BY: CPS	DATE: 02/08/2007
APPROVED BY: CPS	DATE: 02/16/2007
REVISION NO:	DATE:

LOCATION OF GROUND-WATER MONITORING WELLS

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 1



HMI Environmental Consulting Services

HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO: HM00319	FILE NO:
DRAWING: 012507CL	PLOT SIZE=1"=500'
DRAFTED BY: CL	DATE: 02/20/2007
CHECKED BY: CPS	DATE: 02/20/2007
APPROVED BY: CPS	DATE: 02/20/2007
REVISION NO:	DATE:

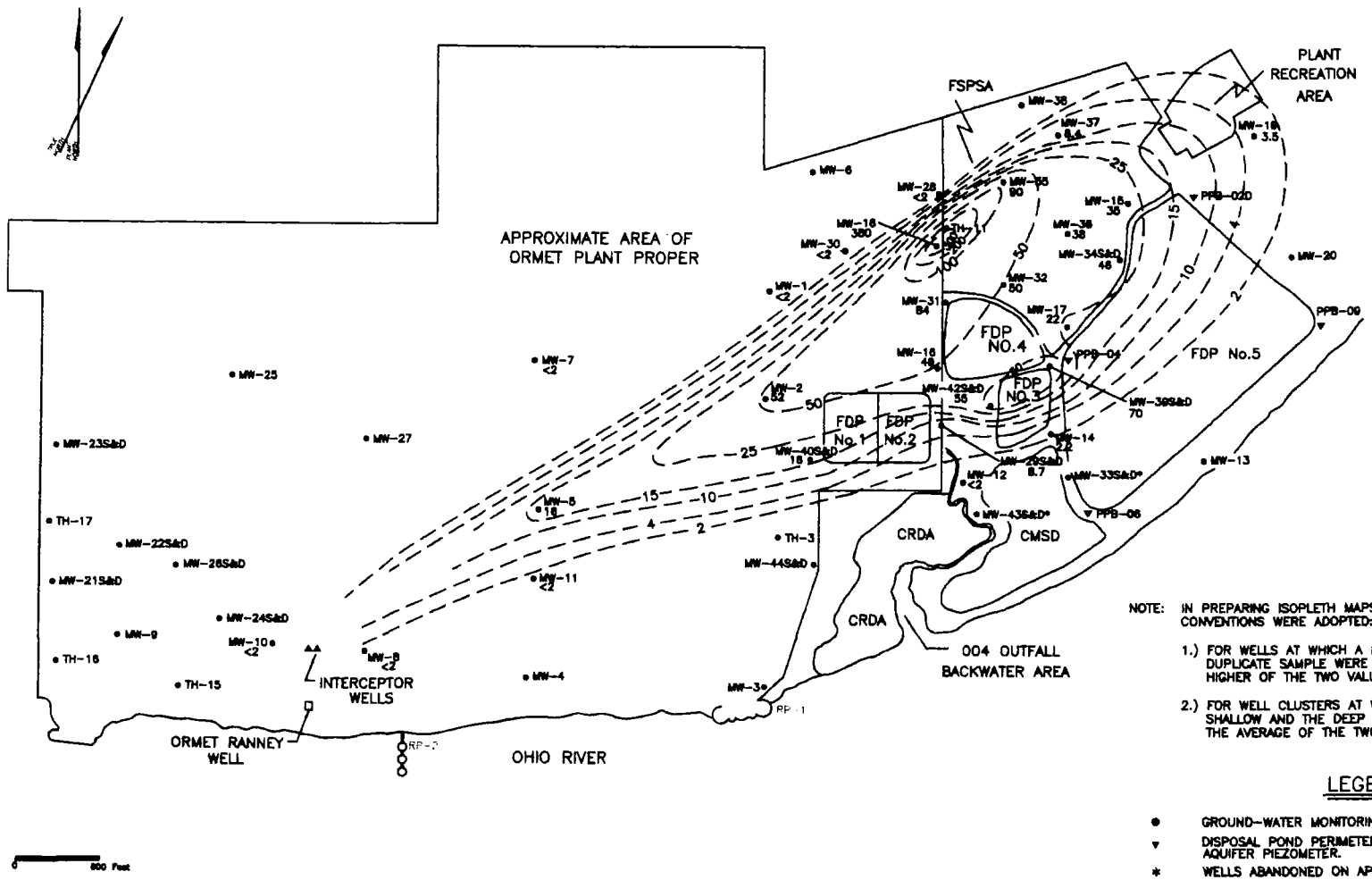
GROUND-WATER ELEVATION CONTOUR MAP

(BASED ON MAY 2006 WATER-LEVEL MEASUREMENTS)

ORMET CORPORATION

HANNIBAL OHIO

2



NOTE: IN PREPARING ISOPLETH MAPS, THE FOLLOWING CONVENTIONS WERE ADOPTED:

1.) FOR WELLS AT WHICH A PRIMARY SAMPLE AND A DUPLICATE SAMPLE WERE COLLECTED, THE HIGHER OF THE TWO VALUES WAS USED.

2.) FOR WELL CLUSTERS AT WHICH BOTH THE SHALLOW AND THE DEEP WELL WERE SAMPLED, THE AVERAGE OF THE TWO VALUES WAS USED.

LEGEND

- ● GROUND-WATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER.
- * WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997.
- -- 2 -- AMENABLE CYANIDE CONCENTRATION CONTOUR (mg/L)
- 10 CONCENTRATION REPORTED FOR THE "D" WELL OF A GIVEN CLUSTER
- GROUND-WATER ELEVATION CONTOUR (FEET, MSL)

HMI Environmental Consulting Services

HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO: HM00319	FILE NO:
DRAWING: 012907CL	PLOT SIZE=1"=600'
DRAFTED BY: CL	DATE: 01/24/2007
CHECKED BY: CPS	DATE: 02/09/2007
APPROVED BY: CPS	DATE: 02/16/2007
REVISION NO:	DATE:

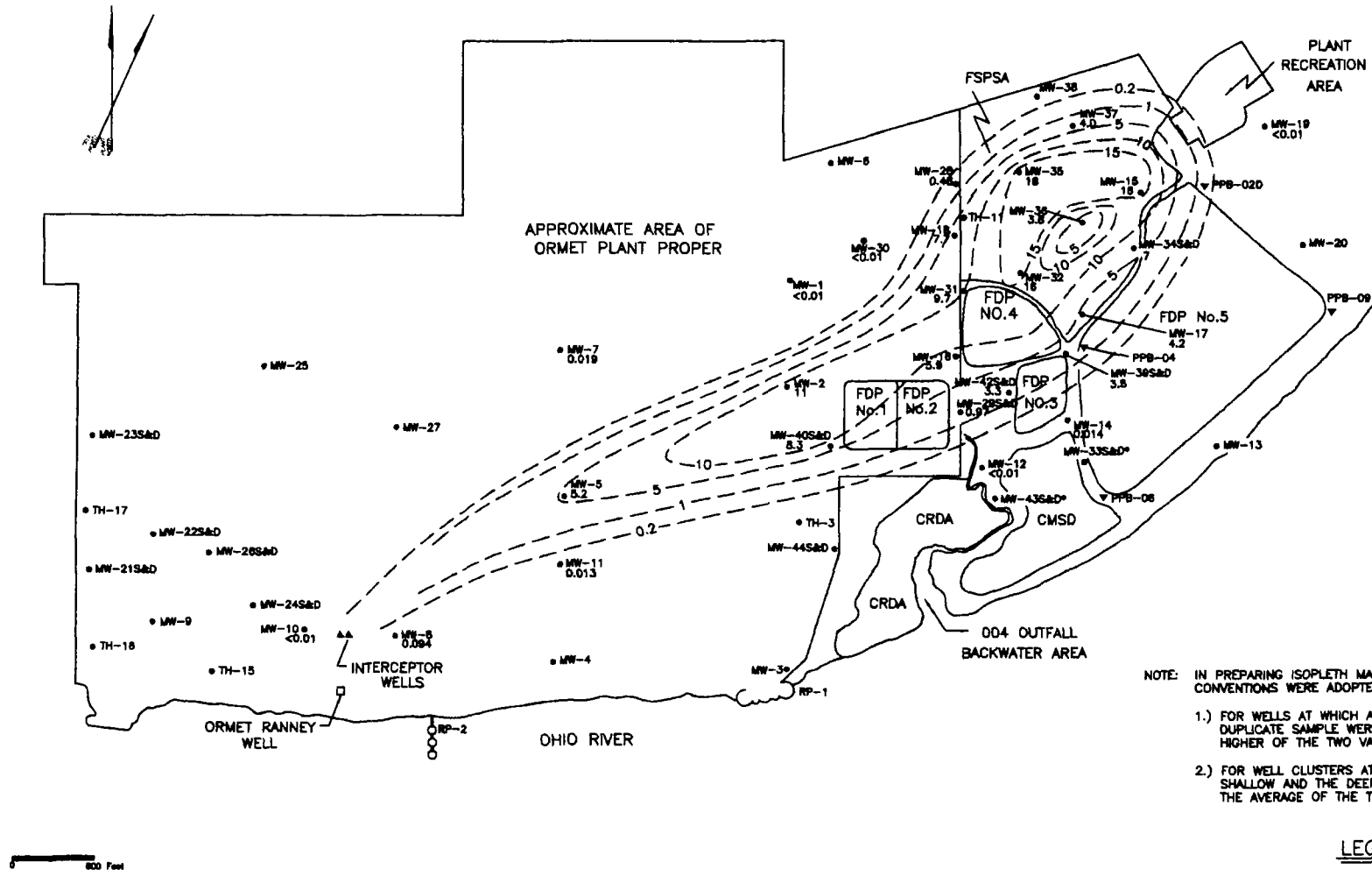
FLUORIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER

(BASED ON SAMPLES COLLECTED IN MAY 2006)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 3



NOTE: IN PREPARING ISOPLETH MAPS, THE FOLLOWING CONVENTIONS WERE ADOPTED:

1.) FOR WELLS AT WHICH A PRIMARY SAMPLE AND A DUPLICATE SAMPLE WERE COLLECTED, THE HIGHER OF THE TWO VALUES WAS USED.

2.) FOR WELL CLUSTERS AT WHICH BOTH THE SHALLOW AND THE DEEP WELL WERE SAMPLED, THE AVERAGE OF THE TWO VALUES WAS USED.

LEGEND

- ● GROUND-WATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER.
- * WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997.
- – – 0.2 – – AMENABLE CYANIDE CONCENTRATION CONTOUR (mg/L)
- GROUND-WATER ELEVATION CONTOUR (FEET, MSL)

HMI Environmental Consulting Services
HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO: HM00319	FILE NO:
DRAWING: 012507CL	PLOT SIZE=1"=800'
DRAFTED BY: CL	DATE: 01/24/2007
CHECKED BY: CPS	DATE: 02/08/2007
APPROVED BY: CPS	DATE: 02/16/2007
REVISION NO:	DATE:

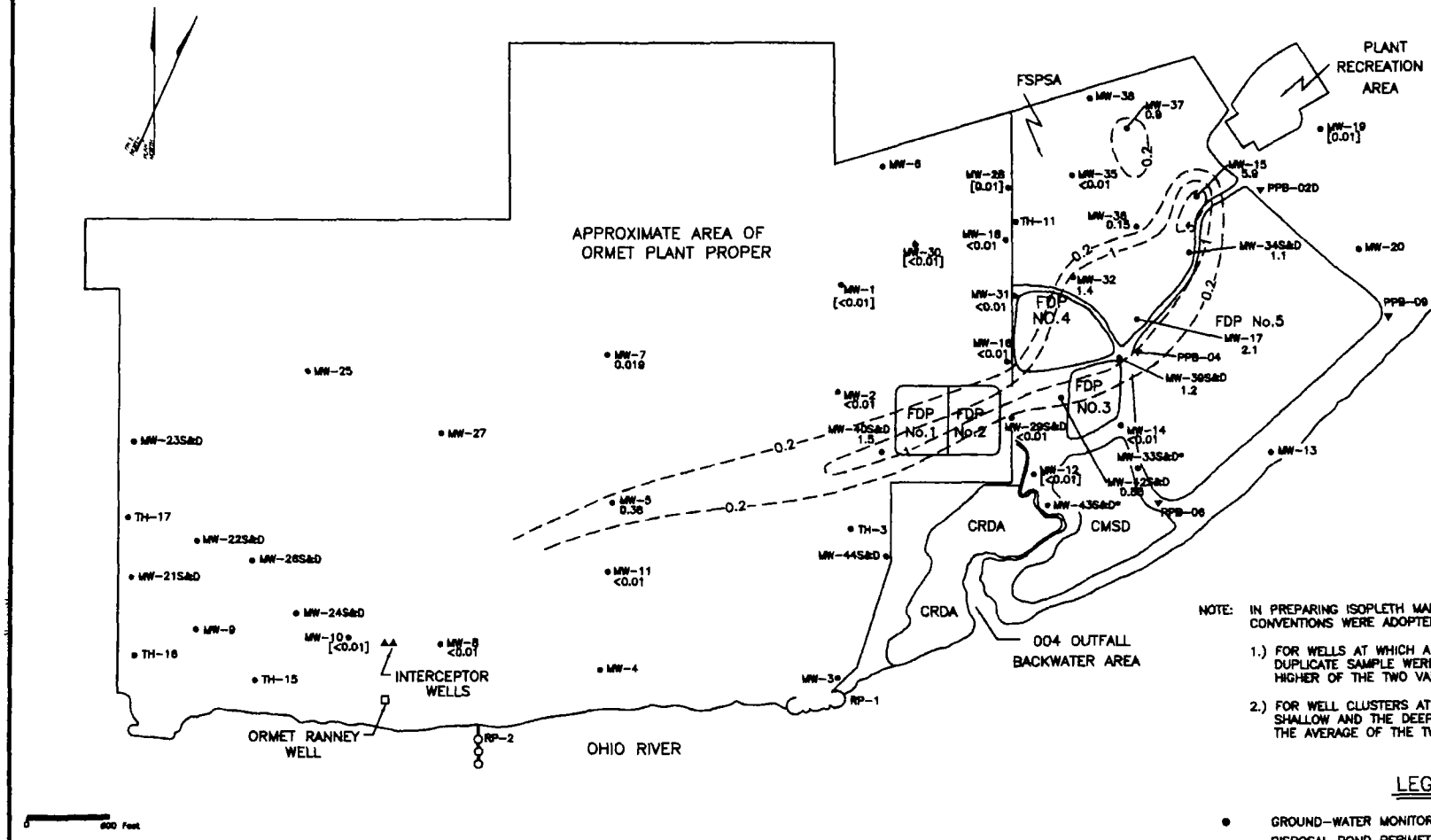
TOTAL CYANIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER

(BASED ON SAMPLES COLLECTED IN MAY 2006)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 4



NOTE: IN PREPARING ISOPLETH MAPS, THE FOLLOWING CONVENTIONS WERE ADOPTED:

1.) FOR WELLS AT WHICH A PRIMARY SAMPLE AND A DUPLICATE SAMPLE WERE COLLECTED, THE HIGHER OF THE TWO VALUES WAS USED.

2.) FOR WELL CLUSTERS AT WHICH BOTH THE SHALLOW AND THE DEEP WELL WERE SAMPLED, THE AVERAGE OF THE TWO VALUES WAS USED.

LEGEND

- ● GROUND-WATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER.
- * WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997.
- — 0.2 — AMENABLE CYANIDE CONCENTRATION CONTOUR (mg/L)
- [<0.01] VALUE INFERRED BY NON-DETECTABLE TOTAL CYANIDE RESULT
- GROUND-WATER ELEVATION CONTOUR (FEET, MSL)

HMI Environmental Consulting Services

HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

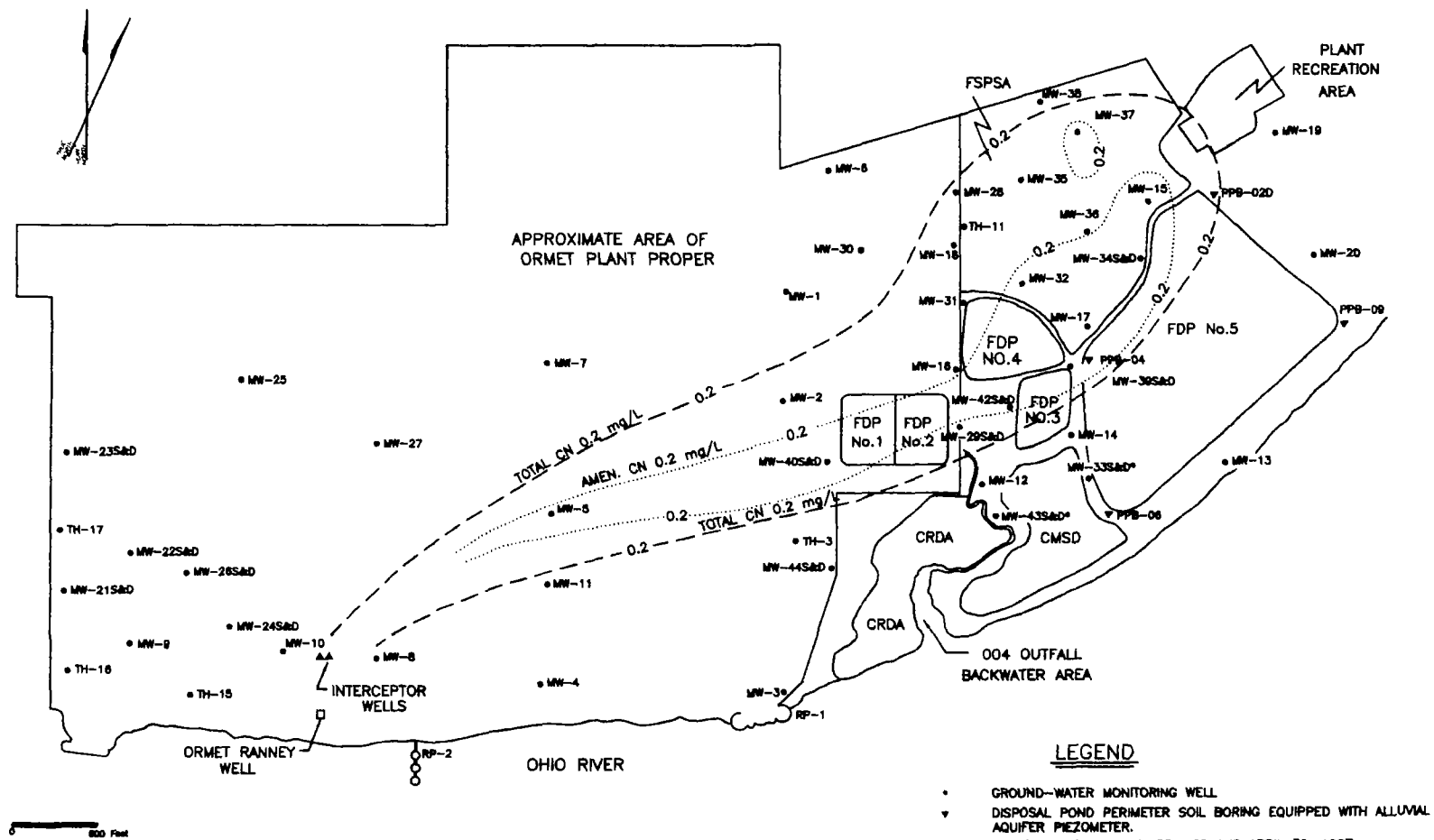
PROJECT NO: HM003319	FILE NO:
DRAWING: 012507CL	PLOT SIZE=1"=600'
DRAFTED BY: CL	DATE: 01/24/2007
CHECKED BY: CPS	DATE: 02/08/2007
APPROVED BY: CPS	DATE: 02/16/2007
REVISION NO:	DATE:

AMENABLE CYANIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER (BASED ON SAMPLES COLLECTED IN MAY 2006)

ORMET CORPORATION

HANNIBAL OHIO

FIGURE 5



HMI Environmental Consulting Services

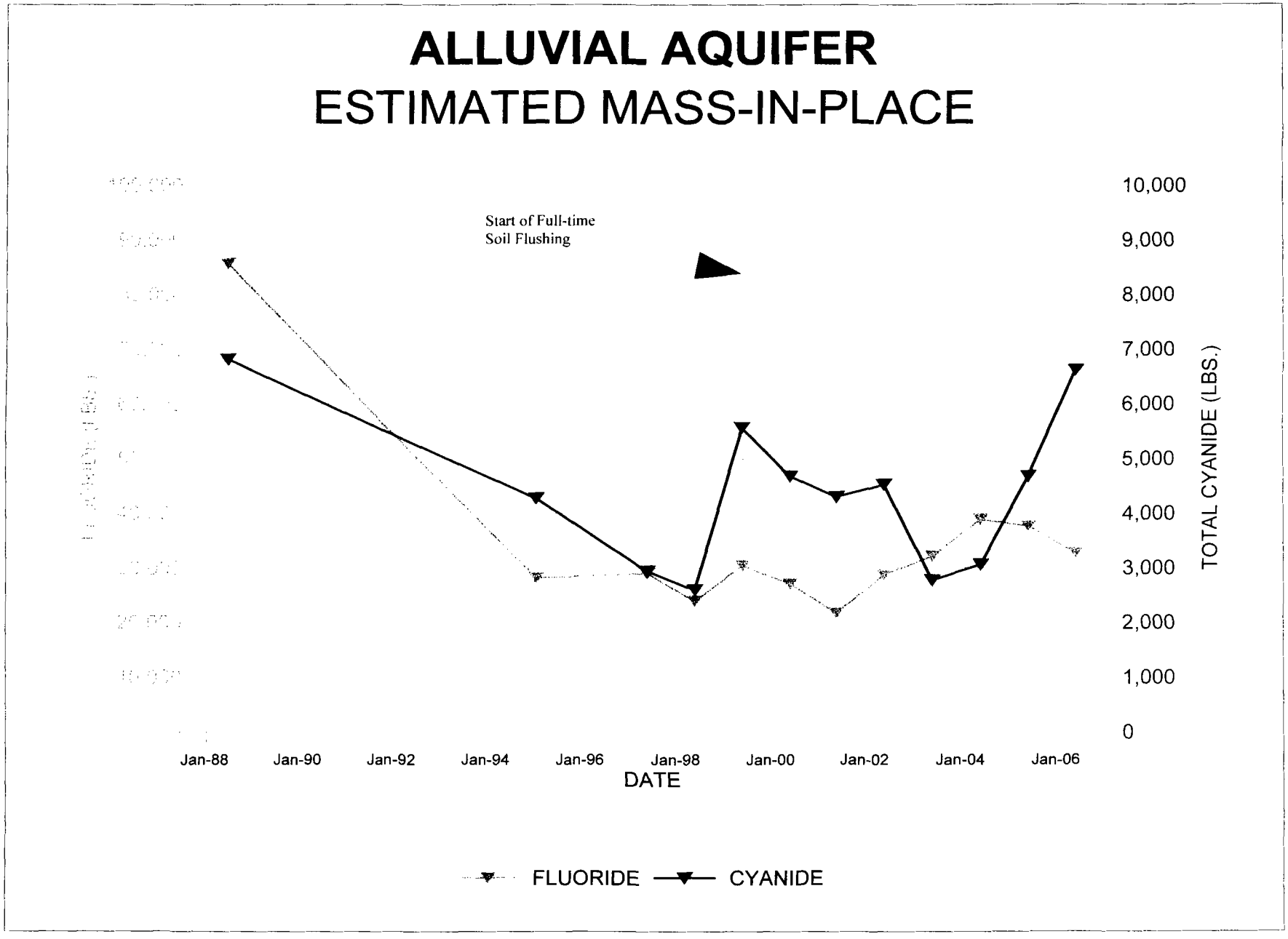
HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO: HM0031B	FILE NO:
DRAWING: 012307CL	PLOT SIZE=1"=800'
DRAWN BY: CL	DATE: 01/24/2007
CHECKED BY: CPS	DATE: 02/08/2007
APPROVED BY: CPS	DATE: 02/16/2007
REVISION NO:	DATE:

2006 COMPARISON OF TOTAL VS. AMENABLE CYANIDE DISTRIBUTION IN GROUND WATER
(BASED ON 0.2 mg/L CONCENTRATION CONTOURS)
ORMET CORPORATION
HANNIBAL OHIO

FIGURE 6

FIGURE 7


ALLUVIAL AQUIFER
ESTIMATED MASS-IN-PLACE
Start of Full-time
Soil Flushing
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
TOTAL CYANIDE (LBS.)
Jan-88
Jan-90
Jan-92
Jan-94
Jan-96
Jan-98
Jan-00
Jan-02
Jan-04
Jan-06
DATE
FLUORIDE
CYANIDE

APPENDIX A

APPENDIX A

WATER SAMPLING LOG FORMS

Appendix A-1	Water Sampling Log Forms for January 2006 Monitoring Event
Appendix A-2	Water Sampling Log Forms for May 2006 Monitoring Event
Appendix A-3	Water Sampling Log Forms for September 2006 Monitoring Event

APPENDIX A-1

WATER SAMPLING LOG FORMS FOR JANUARY 2006 MONITORING EVENT

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 35°

Sample ID: MW-2
Replicate ID: ~
Time Sampling Began: 9:30
Time Sampling Completed: 10:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 82.25
Depth to Water Below MP (DTW): 52.34
Water Column (WC) in Well [TD-DTW]: 29.91
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.786 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 14.357
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DR. BROWN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	4.786	9.572	14.357	FINAL				
pH (s.u.):	7.63	7.62	7.62	7.62				
Sp. Cond. (µmhos/cm):	1449	1433	1405	1401				
Temperature (°C):	14.2	14.3	14.4	13.4				
Turbidity (N.T.U):	STAINED	STAINED	STAINED	STAINED				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. AS, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH
PCE	3 x 40 ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 37°

Sample ID: MW-5
Replicate ID: ~
Time Sampling Began: 8:40
Time Sampling Completed: 9:15

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 92.00
Depth to Water Below MP (DTW): 56.46
Water Column (WC) in Well [TD-DTW]: 35.54
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 5.686 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 17.059
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: TINT/ LT. BROWN Odor: NONE Turbidity: TINT/NONE

Well Volumes (gal.):	5.686	11.372	17.059	FINAL				
pH (s.u.):	7.28	7.27	7.27	7.28				
Sp. Cond. (µmhos/cm):	1208	1200	1194	1206				
Temperature (°C):	14.2	14.2	14.4	13.7				
Turbidity (N.T.U):	TINT	TINT	TINT	TINT				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH
PCE	3 x 40 ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 35°

Sample ID: MW-12
Replicate ID: MW-12D
Time Sampling Began: 1:35
Time Sampling Completed: 2:15

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 68.42
Depth to Water Below MP (DTW): 18.62
Water Column (WC) in Well [TD-DTW]: 49.80
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.968

Diameter of Well Casing: 2.0"
Gallons to be Purged: 23.904
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	7.968	15.936	23.904	FINAL				
pH (s.u.):	7.09	7.14	7.14	7.14				
Sp. Cond. (µmhos/cm):	482	478	477	480				
Temperature (°C):	13.9	14.5	14.5	14.0				
Turbidity (N.T.U):	CLEAR	CLEAR	CLEAR	CLEAR				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH
PCBs	1 LITER AMBER GLASS	4°C

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 35°

Sample ID: MW-16
Replicate ID: ~
Time Sampling Began: 10:25
Time Sampling Completed: 11:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 83.12
Depth to Water Below MP (DTW): 44.22
Water Column (WC) in Well [TD-DTW]: 38.90
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.224 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 18.672
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	6.224	12.448	18.672	FINAL				
pH (s.u.):	7.52	7.50	7.50	7.51				
Sp. Cond. (µmhos/cm):	1003	970	970	972				
Temperature (°C):	14.5	14.6	14.6	13.0				
Turbidity (N.T.U):	STAINED	STAINED	STAINED	STAINED				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: CLOUDY

Sample ID: MW-18
Replicate ID: ~
Time Sampling Began: 11:40
Time Sampling Completed: 12:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 61.16
Depth to Water Below MP (DTW): 39.34
Water Column (WC) in Well [TD-DTW]: 21.82
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.491

Diameter of Well Casing: 2.0"
Gallons to be Purged: 10.474
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DR. BROWN Odor: NONE Turbidity: TURBID/STAINED

Well Volumes (gal.):	3.491	6.982	10.474	FINAL				
pH (s.u.):	7.61	7.60	7.59	7.60				
Sp. Cond. (µmhos/cm):	3230	3050	2940	2990				
Temperature (°C):	14.0	14.2	13.9	13.1				
Turbidity (N.T.U):	TURBID	TURBID	TURBID	TURBID				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH
PCE	3x 40ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, C. STANDARD
Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 35°

Sample ID: MW-28
Replicate ID: ~
Time Sampling Began: 11:10
Time Sampling Completed: 11:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.20
Depth to Water Below MP (DTW): 22.48
Water Column (WC) in Well (TD-DTW): 23.72
Gallons per foot (GPF); from chart: 0.16
Gallons in Well (WC x GPF): 3.795 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.386
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN / TAN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	3.795	7.590	11.386	FINAL				
pH (s.u.):	5.70	5.64	5.63	5.69				
Sp. Cond. (µmhos/cm):	389	374	387	372				
Temperature (°C):	14.7	14.9	14.7	14.0				
Turbidity (N.T.U):	CLOUDY	CLOUDY	CLOUDY	CLOUDY				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: CLOUDY 35°

Sample ID: MW-31
Replicate ID: MW-31D
Time Sampling Began: 2:30
Time Sampling Completed: 3:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 67.58
Depth to Water Below MP (DTW): 42.42
Water Column (WC) in Well [TD-DTW]: 25.16
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.026 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 12.078
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: SILTY/STAINED

Well Volumes (gal.):	4.026	8.052	12.078	FINAL				
pH (s.u.):	7.64	7.64	7.64	7.64				
Sp. Cond. (µmhos/cm):	1394	1426	1427	1427				
Temperature (°C):	14.2	14.4	14.7	14.0				
Turbidity (N.T.U):	STAINED	STAINED	STAINED	STAINED				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. AS, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH
PCE	3x 40ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SNOW 30°

Sample ID: MW-32
Replicate ID: ~
Time Sampling Began: 4:30
Time Sampling Completed: 5:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 57.36
Depth to Water Below MP (DTW): 36.29
Water Column (WC) in Well [TD-DTW]: 21.07
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.371

Diameter of Well Casing: 2.0"
Gallons to be Purged: 10.114
(3 WCVs) 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: STAINED/BROWN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	3.371	6.742	10.114	FINAL				
pH (s.u.):	7.68	7.80	7.67	7.68				
Sp. Cond. (µmhos/cm):	1362	1344	1333	1332				
Temperature (°C):	16.2	15.9	15.9	15.5				
Turbidity (N.T.U):	STAINED	STAINED	STAINED	STAINED				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. AS, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: SUNNY 35°

Sample ID: MW-35
Replicate ID: ~
Time Sampling Began: 3:15
Time Sampling Completed: 3:40

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.94
Depth to Water Below MP (DTW): 35.87
Water Column (WC) in Well [TD-DTW]: 11.07
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 1.77 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 5.314
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN/STAINED Odor: NONE Turbidity: SILTY/STAINED

Well Volumes (gal.):	1.77	3.54	5.314	FINAL				
pH (s.u.):	7.21	–	–	7.25				
Sp. Cond. (µmhos/cm):	384	–	–	453				
Temperature (°C):	14.9	–	–	13.9				
Turbidity (N.T.U):	SILTY	–	–	SILTY				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD
Comments: WELL WENT DRY AT 3.5 GALLONS.

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: CLOUDY 30°

Sample ID: MW-36
Replicate ID: ~
Time Sampling Began: 4:05
Time Sampling Completed: 4:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 52.08
Depth to Water Below MP (DTW): 35.39
Water Column (WC) in Well [TD-DTW]: 16.69
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.670 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 8.011
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: STAINED/BROWN Odor: NONE Turbidity: STAINED/SL.SILTY

Well Volumes (gal.):	2.670	5.341	8.011	FINAL				
pH (s.u.):	7.52	7.53	7.51	7.52				
Sp. Cond. (µmhos/cm):	913	963	965	970				
Temperature (°C):	17.9	17.8	17.4	17.3				
Turbidity (N.T.U):	STAINED	STAINED	STAINED	STAINED				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/18/06 Weather: CLOUDY 35°

Sample ID: MW-37
Replicate ID: ~
Time Sampling Began: 3:35
Time Sampling Completed: 4:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 36.90
Depth to Water Below MP (DTW): 22.94
Water Column (WC) in Well [TD-DTW]: 13.96
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.234 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 6.701
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: VERY TURBID

Well Volumes (gal.):	2.234	4.468	6.701	FINAL				
pH (s.u.):	6.44	6.71	7.19	7.14				
Sp. Cond. (µmhos/cm):	425	422	468	463				
Temperature (°C):	14.8	14.8	14.9	14.0				
Turbidity (N.T.U):	SILTY	SILTY	SILTY	SILTY				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
pH, Spec. Cond., F	500 ml. PLASTIC	4°C
DISS. As, BE, MN, NA, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL + AMENABLE CN	250 ml. PLASTIC	NAOH

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/17/06 Weather: RAIN 45°

Sample ID: MW-44S
Replicate ID: ~
Time Sampling Began: 1:45
Time Sampling Completed: 2:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 46.14
Water Column (WC) in Well [TD-DTW]: 22.91
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.6666 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 10.997
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	3.6666	7.332	10.997	FINAL				
pH (s.u.):	6.54	6.54	6.55	6.54				
Sp. Cond. (µmhos/cm):	423	422	423	423				
Temperature (°C):	14.8	14.9	15.0	15.0				
Turbidity (N.T.U):	CLEAR	SL. CLOUD	CLEAR	CLEAR				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
PCBs	1 LITER AMBER GLASS	4°C

Sampling Personnel: S. MENOSKY, C. STANDARD
Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 1/17/06 Weather: RAIN 45°

Sample ID: MW-44D
Replicate ID: ~
Time Sampling Began: 1:45
Time Sampling Completed: 2:40

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 93.97
Depth to Water Below MP (DTW): 46.63
Water Column (WC) in Well [TD-DTW]: 47.34
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.574 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 22.723
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	7.574	15.148	22.723	FINAL				
pH (s.u.):	7.31	7.33	7.32	7.34				
Sp. Cond. (µmhos/cm):	417	419	420	420				
Temperature (°C):	14.7	14.6	14.6	14.5				
Turbidity (N.T.U):	CLEAR	CLEAR	CLEAR	CLEAR				

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
PCBs	1 LITER AMBER GLASS	4°C

Sampling Personnel: S. MENOSKY, C. STANDARD

Comments:

APPENDIX A-2

WATER SAMPLING LOG FORMS FOR MAY 2006 MONITORING EVENT

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: OVERCAST 50°

Sample ID: MW-1
Replicate ID: ~
Time Sampling Began: 5:00
Time Sampling Completed: 5:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 71.11
Depth to Water Below MP (DTW): 49.71
Water Column (WC) in Well [TD-DTW]: 21.40
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.424 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 10.272
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: TAN Odor: NONE Turbidity: SILTY

Well Volumes (gal.):	10.272							
pH (s.u.):	6.75							
Sp. Cond. (µmhos/cm):	650							
Temperature (°C):	14.6							
Turbidity (N.T.U):	SILTY							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,
Comments:

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Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 50s

Sample ID: MW-2
Replicate ID: MW-2D
Time Sampling Began: 8:20
Time Sampling Completed: 9:15

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 85.23
Depth to Water Below MP (DTW): 50.44
Water Column (WC) in Well [TD-DTW]: 34.79
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 5.566 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 16.699
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: SL. TURBID

Well Volumes (gal.):	17 gal.							
pH (s.u.):	9.80							
Sp. Cond. (µmhos/cm):	1390							
Temperature (°C):	14.7							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
TETRACHLOROETHENE	3 x 40ml. GLASS	HCL

Sampling Personnel: S. MENOSKY,

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: RAIN 45°

Sample ID: MW-5
Replicate ID: ~
Time Sampling Began: 10:00 am
Time Sampling Completed: 11:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 91.88
Depth to Water Below MP (DTW): 54.17
Water Column (WC) in Well [TD-DTW]: 37.71
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.034 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 18.101
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: STAINED/TAN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	18.101							
pH (s.u.):	8.04							
Sp. Cond. (µmhos/cm):	1150							
Temperature (°C):	14.7							
Turbidity (N.T.U):	STAINED							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
TETRACHLOROETHENE	3x 40 ml. GLASS	HCL

Sampling Personnel: S. MENOSKY,
Comments:

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Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: RAIN 50°

Sample ID: MW-7
Replicate ID: ~
Time Sampling Began: 12:45
Time Sampling Completed: 1:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 79.70
Depth to Water Below MP (DTW): 52.74
Water Column (WC) in Well [TD-DTW]: 26.96
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.313 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 12.941
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: TURBID

Well Volumes (gal.):	13							
pH (s.u.):	5.86							
Sp. Cond. (µmhos/cm):	672							
Temperature (°C):	35.5							
Turbidity (N.T.U):	SILTY							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: RAIN 50°

Sample ID: MW-8
Replicate ID: ~
Time Sampling Began: 1:30
Time Sampling Completed: 2:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 99.78
Depth to Water Below MP (DTW): 56.87
Water Column (WC) in Well [TD-DTW]: 42.91
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.865 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 20.597
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	20.597							
pH (s.u.):	7.71							
Sp. Cond. (µmhos/cm):	856							
Temperature (°C):	15.0							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: CLOUDY 50°

Sample ID: MW-10
Replicate ID: ~
Time Sampling Began: 3:00
Time Sampling Completed: 3:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 100.72
Depth to Water Below MP (DTW): 56.35
Water Column (WC) in Well [TD-DTW]: 44.37
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.099 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 21.297
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: SL. TAN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	21.297							
pH (s.u.):	7.21							
Sp. Cond. (µmhos/cm):	669							
Temperature (°C):	16.2							
Turbidity (N.T.U):	CLOUDY							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: RAIN 50°

Sample ID: MW-11
Replicate ID: ~
Time Sampling Began: 11:45
Time Sampling Completed: 12:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 97.35
Depth to Water Below MP (DTW): 53.70
Water Column (WC) in Well [TD-DTW]: 43.65
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.984 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 20.952
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	20.952							
pH (s.u.):	7.84							
Sp. Cond. (µmhos/cm):	518							
Temperature (°C):	14.7							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY ~60°

Sample ID: MW-12
Replicate ID: ~
Time Sampling Began: 1:20
Time Sampling Completed: 2:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 68.24
Depth to Water Below MP (DTW): 16.93
Water Column (WC) in Well [TD-DTW]: 51.31
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 8.209 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 24.628
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	24.628							
pH (s.u.):	7.57							
Sp. Cond. (µmhos/cm):	473							
Temperature (°C):	15							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
PCB'S	1 LITER GLASS	4°C

Sampling Personnel: S. MENOSKY,
Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: SUNNY ~60°

Sample ID: MW-14
Replicate ID: ~
Time Sampling Began: 2:00
Time Sampling Completed: 2:50

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 86.90
Depth to Water Below MP (DTW): 32.41
Water Column (WC) in Well [TD-DTW]: 54.49
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 8.718

Diameter of Well Casing: 2.0"
Gallons to be Purged: 26.155
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: ~~MD~~ CLEAR

Well Volumes (gal.):	26.155							
pH (s.u.):	7.70							
Sp. Cond. (µmhos/cm):	503							
Temperature (°C):	15.8							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: STORM 55°

Sample ID: MW-15
Replicate ID: ~
Time Sampling Began: 6:00 pm
Time Sampling Completed: 8:25 AM 5/18/06

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 57.86
Depth to Water Below MP (DTW): 33.32
Water Column (WC) in Well [TD-DTW]: 24.54
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.926

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.779
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: TURBID

Well Volumes (gal.):	12 gal.							
pH (s.u.):	8.34							
Sp. Cond. (µmhos/cm):	1110							
Temperature (°C):	14.8							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,
Comments: PURGE WELL ON 5/17/06; SAMPLE WELL ON 5/18/06.

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: OVERCAST 50's

Sample ID: MW-16
Replicate ID: MW-16D
Time Sampling Began: 9:30
Time Sampling Completed: 10:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 83.11
Depth to Water Below MP (DTW): 42.40
Water Column (WC) in Well [TD-DTW]: 40.71
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.513 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 19.541
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: SLIGHT TURBID

Well Volumes (gal.):	19.5 g.							
pH (s.u.):	9.45							
Sp. Cond. (µmhos/cm):	963							
Temperature (°C):	15.2							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY 50s

Sample ID: MW-17
Replicate ID: MW-18d
Time Sampling Began: 9:25
Time Sampling Completed: 10:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 77.91
Depth to Water Below MP (DTW): 32.34
Water Column (WC) in Well [TD-DTW]: 45.57
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.291 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 21.873
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: TURBID

Well Volumes (gal.):	22 gal.							
pH (s.u.):	7.76							
Sp. Cond. (µmhos/cm):	759							
Temperature (°C):	15.8							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60

Sample ID: MW-18
Replicate ID: ~~MW-19~~
Time Sampling Began: 12:35
Time Sampling Completed: 1:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 57.00
Depth to Water Below MP (DTW): 37.93
Water Column (WC) in Well [TD-DTW]: 19.07
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.051 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 9.153
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN/GREEN Odor: NONE Turbidity: SILTY

Well Volumes (gal.):	9 gal.							
pH (s.u.):	10.07							
Sp. Cond. (µmhos/cm):	2830							
Temperature (°C):	15.1							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
TETRACHLOROETHENE	3x40 ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY ~60°

Sample ID: MW-19
Replicate ID: ~
Time Sampling Began: 4:15
Time Sampling Completed: 4:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 65.20
Depth to Water Below MP (DTW): 38.25
Water Column (WC) in Well [TD-DTW]: 26.95
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.312 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 12.936
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: TAN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	12.936							
pH (s.u.):	7.46							
Sp. Cond. (µmhos/cm):	541							
Temperature (°C):	13.5							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,
Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60

Sample ID: MW-28
Replicate ID: ~
Time Sampling Began: 12:10
Time Sampling Completed: 12:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.06
Depth to Water Below MP (DTW): 21.44
Water Column (WC) in Well [TD-DTW]: 24.62
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.939 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.817
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	12g.							
pH (s.u.):	5.70							
Sp. Cond. (µmhos/cm):	316							
Temperature (°C):	14.0							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60

Sample ID: MW-29S
Replicate ID: ~
Time Sampling Began: 10:15
Time Sampling Completed: 10:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 61.35
Depth to Water Below MP (DTW): 33.52
Water Column (WC) in Well [TD-DTW]: 27.83
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.452 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 13.358
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: SLIGHT

Well Volumes (gal.):	13.59							
pH (s.u.):	7.32							
Sp. Cond. (µmhos/cm):	1510							
Temperature (°C):	14.7							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60

Sample ID: MW-29D
Replicate ID: ~
Time Sampling Began: 10:55
Time Sampling Completed: 11:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Diameter of Well Casing: 2.0"
Total Sounded Depth of Well Below MP (TD): 81.98
Gallons to be Purged: 23.428
Depth to Water Below MP (DTW): 33.17
(3 WCVs, 5 WCVs, etc.)
Water Column (WC) in Well [TD-DTW]: 48.81
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.809 = Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	24 g.							
pH (s.u.):	7.55							
Sp. Cond. (µmhos/cm):	560							
Temperature (°C):	14.3							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO
Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60°

Sample ID: MW-30
Replicate ID: ~
Time Sampling Began: 11:30
Time Sampling Completed: 12:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 60.41
Depth to Water Below MP (DTW): 46.39
Water Column (WC) in Well [TD-DTW]: 14.02
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.243 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 6.729
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: TURBID

Well Volumes (gal.):	7 gal.							
pH (s.u.):	6.13							
Sp. Cond. (µmhos/cm):	428							
Temperature (°C):	15.0							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
TETRACHLORDETHENE	3x 40 ml. GLASS	HCL

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 60°

Sample ID: MW-31
Replicate ID: ~
Time Sampling Began: 4:05
Time Sampling Completed: 4:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 67.51
Depth to Water Below MP (DTW): 40.45
Water Column (WC) in Well [TD-DTW]: 27.06
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.329 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 12.988
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: Dr. BROWN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	12.988							
pH (s.u.):	9.98							
Sp. Cond. (µmhos/cm):	1291							
Temperature (°C):	16.5							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description From Lab ✓ or HMI ___	Preservative preserved by: Lab ✓ or HMI ___
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C
TETRACHLOROETHENE	3x40ml. GLASS	HCL

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather:

Sample ID: MW-32
Replicate ID: ~
Time Sampling Began: 10:15
Time Sampling Completed: 10:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 57.18
Depth to Water Below MP (DTW): 33.92
Water Column (WC) in Well [TD-DTW]: 23.26
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.721 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.164
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	11.5gal.							
pH (s.u.):	10.16							
Sp. Cond. (µmhos/cm):	1300							
Temperature (°C):	16.3							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY 55

Sample ID: MW-34S
Replicate ID: ~
Time Sampling Began: 9:00
Time Sampling Completed: 9:20

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 49.35
Depth to Water Below MP (DTW): 32.94
Water Column (WC) in Well [TD-DTW]: 16.41
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.625 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 7.876
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NOIE Turbidity: TURBID

Well Volumes (gal.):	8							
pH (s.u.):	6.75							
Sp. Cond. (µmhos/cm):	1358							
Temperature (°C):	14.0							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY 55

Sample ID: MW-34D
Replicate ID: ~
Time Sampling Began: 8:30
Time Sampling Completed: 9:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 68.24
Depth to Water Below MP (DTW): 31.21
Water Column (WC) in Well [TD-DTW]: 37.03
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 5.924 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 17.774
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	18 gal.							
pH (s.u.):	7.77							
Sp. Cond. (µmhos/cm):	760							
Temperature (°C):	14.4							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY ~60°

Sample ID: MW-35
Replicate ID: ~
Time Sampling Began: 5:00 pm
Time Sampling Completed: 5:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.70
Depth to Water Below MP (DTW): 35.40
Water Column (WC) in Well [TD-DTW]: 11.30
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 1.808 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 5.424
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DR. BROWN Odor: NONE Turbidity: STAINED

Well Volumes (gal.):	~5.0							
pH (s.u.):	9.78							
Sp. Cond. (µmhos/cm):	1222							
Temperature (°C):	15.9							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather:

Sample ID: MW-36
Replicate ID: ~
Time Sampling Began: 10:40
Time Sampling Completed: 11:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 52.08
Depth to Water Below MP (DTW): 32.79
Water Column (WC) in Well [TD-DTW]: 19.29
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.086 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 9.259
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	9+gal.							
pH (s.u.):	9.31							
Sp. Cond. (µmhos/cm):	878							
Temperature (°C):	17.8							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY ~60°

Sample ID: MW-37
Replicate ID: ~
Time Sampling Began: 5:35
Time Sampling Completed: 6:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 36.98
Depth to Water Below MP (DTW): 19.16
Water Column (WC) in Well [TD-DTW]: 17.82
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.851 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 8.553
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	8.553							
pH (s.u.):	6.56							
Sp. Cond. (µmhos/cm):	476							
Temperature (°C):	14.7							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: P. CLOUDY 60

Sample ID: MW-39S
Replicate ID: ~
Time Sampling Began: 11:30
Time Sampling Completed: 11:50

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 60.23
Depth to Water Below MP (DTW): 35.43
Water Column (WC) in Well [TD-DTW]: 24.8
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.968 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.904
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN/AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	10 g.							
pH (s.u.):	9.24							
Sp. Cond. (µmhos/cm):	3530							
Temperature (°C):	15.1							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY 50s

Sample ID: MW-39D
Replicate ID: ~
Time Sampling Began: 11:00
Time Sampling Completed: 11:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 80.21
Depth to Water Below MP (DTW): 35.31
Water Column (WC) in Well [TD-DTW]: 44.90
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.184 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 21.552
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: TURBID

Well Volumes (gal.):	22 gal.							
pH (s.u.):	7.62							
Sp. Cond. (µmhos/cm):	720							
Temperature (°C):	14.5							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: P. SUNNY, 60s

Sample ID: MW-405
Replicate ID: ~
Time Sampling Began: 2:40
Time Sampling Completed: 3:05

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 70.40
Depth to Water Below MP (DTW): 44.40
Water Column (WC) in Well [TD-DTW]: 26.00
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.16 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 12.48
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. GREEN-BROWN Odor: NONE Turbidity: SLIGHT CLOUDY

Well Volumes (gal.):	12.5 gal.							
pH (s.u.):	7.82							
Sp. Cond. (µmhos/cm):	831							
Temperature (°C):	15.3							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY, B. FARGO

Comments:

HMI
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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather: CLOUDY 50°S

Sample ID: MW-40D
Replicate ID: ~
Time Sampling Began: 3:10
Time Sampling Completed: 3:55

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 90.40
Depth to Water Below MP (DTW): 44.12
Water Column (WC) in Well [TD-DTW]: 46.28
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.404

Diameter of Well Casing: 2.0"
Gallons to be Purged: 22.214
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: TINT / CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	22.214							
pH (s.u.):	7.82							
Sp. Cond. (µmhos/cm):	915							
Temperature (°C):	15.0							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/17/06 Weather:

Sample ID: MW-41
Replicate ID: ~
Time Sampling Began:
Time Sampling Completed:

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 62.26
Depth to Water Below MP (DTW):
Water Column (WC) in Well [TD-DTW]:
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]:

Diameter of Well Casing: 2.0"
Gallons to be Purged:
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color:			Odor:			Turbidity:		
Well Volumes (gal.):								
pH (s.u.):								
Sp. Cond. (µmhos/cm):								
Temperature (°C):								
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,
Comments: DID NOT SAMPLE

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WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: CLOUDY

Sample ID: MW-42S
Replicate ID: ~
Time Sampling Began: 3:40
Time Sampling Completed: 4:05

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 52.30
Depth to Water Below MP (DTW): 34.01
Water Column (WC) in Well [TD-DTW]: 18.29
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.926

Diameter of Well Casing: 2.0"
Gallons to be Purged: 8.779
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: TAN Odor: NONE Turbidity: CLOUDY

Well Volumes (gal.):	8.779							
pH (s.u.):	8.87							
Sp. Cond. (µmhos/cm):	~~8~~ X3520							
Temperature (°C):	14.5							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/18/06 Weather: RAIN ~60°

Sample ID: MW-42D
Replicate ID: ~
Time Sampling Began: 3:00
Time Sampling Completed: 3:50

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 85.10
Depth to Water Below MP (DTW): 33.93
Water Column (WC) in Well [TD-DTW]: 51.17
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 8.187 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 24.56
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	24.56							
pH (s.u.):	7.80							
Sp. Cond. (µmhos/cm):	1737							
Temperature (°C):	14.3							
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OHIO
Sampling Date: 5/16/06 Weather: OVERCAST 50°

Sample ID: MW-44S
Replicate ID: ~
Time Sampling Began: 4:45
Time Sampling Completed: 5:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 44.31
Water Column (WC) in Well [TD-DTW]: 24.74
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.958 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 11.875
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	11.875							
pH (s.u.):	6.97							
Sp. Cond. (µmhos/cm):	539							
Temperature (°C):	15.1							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
PCB'S	1 LITER GLASS	4°C

Sampling Personnel: S. MENOSKY,

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL

Project Number: HM00321

Site Location: HANNIBAL, OHIO

Sampling Date: 5/16/06 Weather: RAIN 50°

Sample ID: MW-44D

Replicate ID: ~

Time Sampling Began: 4:00

Time Sampling Completed: 4:45

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation:

Total Sounded Depth of Well Below MP (TD): 93.97

Depth to Water Below MP (DTW): 44.81

Water Column (WC) in Well [TD-DTW]: 49.16

Gallons per foot (GPF); from chart: 0.16

Gallons in Well [WC x GPF]: 7.865 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"

Gallons to be Purged: 23.596

(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: NONE Turbidity: CLEAR

Well Volumes (gal.):	23.596							
pH (s.u.):	7.79							
Sp. Cond. (µmhos/cm):	442							
Temperature (°C):	15.7							
Turbidity (N.T.U):	CLEAR							

Sampling Method and Material(s): DISPOSABLE BAILER WITH POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab ✓ or HMI ___)	Preservative (preserved by: Lab ✓ or HMI ___)
PCB'S	1 LITER GLASS	4°C

Sampling Personnel: S. MENOSKY,

Comments:

APPENDIX A-3

WATER SAMPLING LOG FORMS FOR SEPTEMBER 2006
MONITORING EVENT

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-2
Replicate ID:
Time Sampling Began: 10:35
Time Sampling Completed: 11:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 82.25
Depth to Water Below MP (DTW): 46.83
Water Column (WC) in Well [TD-DTW]: 35.42
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 5.7 = Well Casing Volume (WCV)

Diameter of Well Casing: 2.0"
Gallons to be Purged: 17.1
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/ POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: N/A Turbidity: TURBID

Well Volumes (gal.):	6	12	17					
pH (s.u.):	9.87	9.84	9.81					
Sp. Cond. (µmhos/cm):	1399	1403	1356					
Temperature (°C):	16.1	16.1	17.0					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/ POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, Na, V	250 mL Plastic	HNO_3-Field Filtered (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH
PCE	3x40 mL Glass	HCl

Sampling Personnel: R. Fargo / C. Smith
Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather: 65° Foggy

Sample ID: MW-5
Replicate ID:
Time Sampling Began: 8:30
Time Sampling Completed: 9:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 92.00
Depth to Water Below MP (DTW): 48.88
Water Column (WC) in Well [TD-DTW]: 44.12
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 7.06 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 21
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: Lt. Brown Odor: N/A Turbidity: Clear

Well Volumes (gal.):	7	14	21					
pH (s.u.):	8.05	8.11	7.98					
Sp. Cond. (µmhos/cm):	1099	1081	1075					
Temperature (°C):	15.4	15.3	15.2					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3-Field Filtered (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH
PCE	3x40 mL Glass	HCl

Sampling Personnel: R. Fargo/C. Smith
Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-12
Replicate ID: MW-12D
Time Sampling Began: 5:20
Time Sampling Completed: 6:00

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 68.42
Depth to Water Below MP (DTW): 14.27
Water Column (WC) in Well [TD-DTW]: 54.15
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 8.7

Diameter of Well Casing: 2"
Gallons to be Purged: 26.1
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/ POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: N/A Turbidity: CLEAR

Well Volumes (gal.):	9	18	26					
pH (s.u.):	7.63	7.65	7.57					
Sp. Cond. (µmhos/cm):	517	512	508					
Temperature (°C):	16.1	15.7	15.7					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/ POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3-Field Filtered (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH
~~PCBs~~	~~1L Amber Glass~~	~~4°C~~

Sampling Personnel: R. Fargo / C. Smith

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-16
Replicate ID:
Time Sampling Began: 11:30
Time Sampling Completed: 12:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 83.12
Depth to Water Below MP (DTW): 39.99
Water Column (WC) in Well [TD-DTW]: 43.13
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 6.9 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 20.7
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: N/A Turbidity: TURBID

Well Volumes (gal.):	7	14	21					
pH (s.u.):	9.41	9.42	9.44					
Sp. Cond. (µmhos/cm):	1010	1012	1002					
Temperature (°C):		16.2						
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3-Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. Fargo / C. Smith
Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-18
Replicate ID:
Time Sampling Began: 2:30
Time Sampling Completed: 3:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 61.16
Depth to Water Below MP (DTW): 36.23
Water Column (WC) in Well [TD-DTW]: 24.93
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.0 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 12.0
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: N/A Turbidity: SILTY

Well Volumes (gal.):	4	4	4					
pH (s.u.):	9.89	9.91	9.79					
Sp. Cond. (µmhos/cm):	1491	1509	1720					
Temperature (°C):	15.8	15.4	15.4					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3-Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH
PCE	3x40 mL Glass	HCl

Sampling Personnel: R. FARGO/C. SMITH

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-28
Replicate ID:
Time Sampling Began: 2:00
Time Sampling Completed: 2:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.20
Depth to Water Below MP (DTW): 19.75
Water Column (WC) in Well [TD-DTW]: 26.45
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.2

Diameter of Well Casing: 2"
Gallons to be Purged: 12.6
(3 WCVs) 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.08	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: N/A Turbidity: CLOUDY

Well Volumes (gal.):	4	4	5					
pH (s.u.):	5.86	5.85	5.77					
Sp. Cond. (µmhos/cm):	354	342	345					
Temperature (°C):	15.9	15.4	15.3					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3 - Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. FARGO/C. SMITH

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-31
Replicate ID: MW-31D
Time Sampling Began: 1:00
Time Sampling Completed: 1:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 67.58
Depth to Water Below MP (DTW): 38.35
Water Column (WC) in Well [TD-DTW]: 29.23
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.7 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 14.1
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. Brown Odor: N/A Turbidity: Turbid

Well Volumes (gal.):	5	5	4					
pH (s.u.):	9.80	9.91	9.91					
Sp. Cond. (µmhos/cm):	1350	1418	1417					
Temperature (°C):	1	15.9	16.1					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3-Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH
PCE	3x40 mL Glass	HCl

Sampling Personnel: R. FARGO / C. SMITH

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-32
Replicate ID:
Time Sampling Began: 4:45
Time Sampling Completed: 5:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 57.36
Depth to Water Below MP (DTW): 32.61
Water Column (WC) in Well [TD-DTW]: 24.75
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.0 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 12
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: N/A Turbidity: SL. TURBID

Well Volumes (gal.):	4	8	12					
pH (s.u.):	10.08	10.08	10.08					
Sp. Cond. (µmhos/cm):	1437	1415	1395					
Temperature (°C):	18.5	18.2	18.1					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3 Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. FARGO, C. Smith

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-35
Replicate ID:
Time Sampling Began: 3:12
Time Sampling Completed: 3:30

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 46.94
Depth to Water Below MP (DTW): 34.30
Water Column (WC) in Well [TD-DTW]: 12.64
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 2.0 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 6.0
(3 WCVs, 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. Brown Odor: N/A Turbidity: Sl. Turbid

Well Volumes (gal.):	2	4	6					
pH (s.u.):	4.27	8.78						
Sp. Cond. (µmhos/cm):	744	568						
Temperature (°C):	16.8	16.5						
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3 Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. FARGO / C. SMITH

Comments:

HMI
Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-36
Replicate ID:
Time Sampling Began: 4:10
Time Sampling Completed: 4:40

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 52.08
Depth to Water Below MP (DTW): 32.20
Water Column (WC) in Well [TD-DTW]: 19.88
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.2

Diameter of Well Casing: 2"
Gallons to be Purged: 9.6
(3 WCVs) 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN (TEA) Odor: N/A Turbidity: CLEAR → SL. TURBID

Well Volumes (gal.):	3	6	10					
pH (s.u.):	9.21	9.25						
Sp. Cond. (µmhos/cm):	725	737						
Temperature (°C):	19.5	19.5						
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3 Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. FARGO / C. SMITH

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-37
Replicate ID:
Time Sampling Began: 3:40
Time Sampling Completed: 4:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 36.90
Depth to Water Below MP (DTW): 18.87
Water Column (WC) in Well [TD-DTW]: 18.03
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 3.0 = Well Casing Volume (WCV)

Diameter of Well Casing: 2"
Gallons to be Purged: 9
(3 WCVs) 5 WCVs, etc.)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: N/A Turbidity: SILTY

Well Volumes (gal.):	3	6	9				
pH (s.u.):	6.85	6.62	6.53				
Sp. Cond. (µmhos/cm):	420	416	414				
Temperature (°C):	16.8	16.7	16.7				
Turbidity (N.T.U):							

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
pH, Spec. Cond., F	500 mL Plastic	4°C
Diss. As, Be, Mn, V	250 mL Plastic	HNO_3 Field Filter (1 micron)
Total/Amen. CN	250 mL Plastic	NaOH

Sampling Personnel: R. FARGO / C. SMITH

Comments:

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET-REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-44S
Replicate ID:
Time Sampling Began: 9:30
Time Sampling Completed: 10:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 40.63
Water Column (WC) in Well [TD-DTW]: 28.42
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 4.5

Diameter of Well Casing: 2"
Gallons to be Purged: 13.5
(3 WCVs, 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: CLEAR Odor: N/A Turbidity: CLEAR

Well Volumes (gal.):	4.5	9	13.5					
pH (s.u.):	7.00	6.97	7.04					
Sp. Cond. (µmhos/cm):	516	518	512					
Temperature (°C):	16.2	16.2	16.5					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
PCBs	1L AMBER GLASS	4°C

Sampling Personnel: R. FARGO / C. SMITH

Comments:

HM87-07WS-LOG WK3

HMI Environmental Consulting Services

WATER SAMPLING LOG

Project Name: ORMET - REDUCTION MILL
Project Number: HM00321
Site Location: HANNIBAL, OH
Sampling Date: 9/18/06 Weather:

Sample ID: MW-44D
Replicate ID:
Time Sampling Began: 9:30
Time Sampling Completed: 10:10

EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation:
Total Sounded Depth of Well Below MP (TD): 93.97
Depth to Water Below MP (DTW): 41.17
Water Column (WC) in Well [TD-DTW]: 52.80
Gallons per foot (GPF); from chart: 0.16
Gallons in Well [WC x GPF]: 8.50

Diameter of Well Casing: 2"
Gallons to be Purged: 25.5
(3 WCVs) 5 WCVs, etc.)
= Well Casing Volume (WCV)

GALLONS PER FOOT (gpf)			
1¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1½" = 0.09	2½" = 0.26	3½" = 0.50	6" = 1.47

Evacuation Method and Material: DISPOSABLE BAILER W/POLYPROPYLENE ROPE

SAMPLING DATA AND FIELD PARAMETERS

Color: Clear Odor: N/A Turbidity: Clear

Well Volumes (gal.):	8.5	17	25.5					
pH (s.u.):	7.78	7.68	7.74					
Sp. Cond. (µmhos/cm):	427	420	419					
Temperature (°C):	16.5	16.5	16.7					
Turbidity (N.T.U):								

Sampling Method and Material(s): DISPOSABLE BAILER W/POLYPROPYLENE ROPE

Parameters to be Analyzed	Container Description (From Lab X or HMI ___)	Preservative (preserved by: Lab X or HMI ___)
PCBs	1 L AMBER GLASS	4°C

Sampling Personnel: R. FARGO / C. SMITH

Comments:

Appendix B

APPENDIX B

LABORATORY ANALYTICAL REPORTS

Appendix B-1 Laboratory Analytical Report for January 2006 Monitoring Event

Appendix B-2 Laboratory Analytical Report for May 2006 Monitoring Event

Appendix B-3 Laboratory Analytical Report for September 2006 Monitoring Event

APPENDIX B-1

LABORATORY ANALYTICAL REPORT FOR JANUARY 2006 MONITORING EVENT

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February 28, 2006

Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Dear Mr. Fargo:

Enclosed are analytical results for samples submitted to Pace Analytical by Hydro Systems Management, Inc.. The samples were received on January 19, 2006. The results reported in this project meet the requirements as specified in Chapter 5 of the NELAC Standards. Any deviations or discrepancies from the NELAC standards are documented in the case narrative(s) of this report. Please reference Pace project number 06-0473 when inquiring about this report.

Client Site: Reduction Mill
Client Ref.: HM00321

Pace Sample Identification	Client Sample Identification
0601-1798	MW-2
0601-1799	MW-5
0601-1800	MW-12
0601-1801	MW-12D
0601-1802	MW-16
0601-1803	MW-18
0601-1804	MW-28
0601-1805	MW-31
0601-1806	MW-31D

Pace Sample Identification	Client Sample Identification
0601-1807	MW-32
0601-1808	MW-35
0601-1809	MW-36
0601-1810	MW-37
0601-1811	MW-44S
0601-1812	MW-44D
0601-1813	Field Blank
0601-1814	Trip Blank

General Comments: The recommended holding time for pH requires immediate analysis. The samples were received past the recommended holding time for pH. Cooler temperature 5 ° C upon receipt. Ice was present. Insufficient sample volume has been provided for the performance of a sample matrix spike/matrix spike duplicate, therefore extraction of a blank (reagent water) spike and spike duplicate have been performed.

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Please call me if you have any questions regarding the information contained within this report.

Sincerely,

Rachel D. Christner
Project Manager

RDC: jld

Enclosures

Page 1 of 98

cc: John Reggi, Ormet Primary Aluminum Corporation

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1798**
Client Sample ID: MW-2
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	0.43	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	12	1.3	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	58	0.25	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.63	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1600	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.064	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.00099	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	1.1	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	350	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.052	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	0.024	0.0050	mg/l	MAK	01/26/2006	0046513-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1799**
Client Sample ID: MW-5
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	1.3	0.050	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	17	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	8.10	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1400	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.0048	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.80	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	250	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	<0.0050	0.0050	mg/l	EAC	01/24/2006	0046428-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1800**
Client Sample ID: MW-12
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	0.61	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	7.67	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	550	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	1.8	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	25	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1221	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1232	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1242	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1248	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1254	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1260	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
PCB Total-TCL	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1801**
Client Sample ID: MW-12D
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	0.48	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	7.65	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	550	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	1.8	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	25	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1221	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1232	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1242	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1248	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1254	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1260	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
PCB Total-TCL	8082(2)	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1802**
Client Sample ID: MW-16
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	2.8	0.050	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	62	0.25	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.17	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1100	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.067	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.0021	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	2.1	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	220	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.10	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1803**
Client Sample ID: MW-18
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	4.6	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	210	0.50	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.55	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	2900	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.049	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.0022	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.78	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	650	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.034	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	0.0088	0.0050	mg/l	MAK	01/26/2006	0046513-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1804**
Client Sample ID: MW-28
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	0.38	0.050	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	1.5	0.20	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	6.03	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	420	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.064	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	72	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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331 South Main St.
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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1805**
Client Sample ID: MW-31
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	1.2	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	8.3	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	70	0.20	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.77	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1700	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.060	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.0022	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	2.3	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	370	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.12	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	0.030	0.0050	mg/l	MAK	01/26/2006	0046513-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1806**
Client Sample ID: MW-31D
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	2.5	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	7.8	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	66	0.20	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.81	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1700	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.061	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.0038	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	2.2	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	360	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.12	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	0.028	0.0050	mg/l	MAK	01/27/2006	0046545-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1807**
Client Sample ID: MW-32
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	1.1	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2[1]	9.4	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2[1]	52	0.50	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1[1]	9.97	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1[1]	1600	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.065	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B[2]	0.0030	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B[2]	3.2	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B[2]	330	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B[2]	0.14	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1808**
Client Sample ID: MW-35
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	1.6	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	7.9	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	12	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	8.18	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	530	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.0096	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.92	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	62	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1809**
Client Sample ID: MW-36
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	4.4	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2(1)	12	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	36	0.50	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	9.32	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	1100	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.020	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	0.0018	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.81	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	230	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	0.058	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1810**
Client Sample ID: MW-37
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	2.8	0.010	mg/l	BLC	01/27/2006	0046520-1	<0.010
Cyanide (Total)	335.2[1]	7.7	0.25	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2[1]	6.3	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1[1]	7.96	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1[1]	550	1.0	umhos/cm	BAB	01/23/2006	0046400-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.016	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B[2]	0.0015	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B[2]	1.6	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B[2]	80	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B[2]	0.043	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1811**
Client Sample ID: MW-44S
Sample Matrix: Aqueous

Date Sampled: 01/17/2006
Date Received: 01/19/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1221	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1232	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1242	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1248	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1254	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1260	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
PCB Total-TCL	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1812**
Client Sample ID: MW-44D
Sample Matrix: Aqueous

Date Sampled: 01/17/2006
Date Received: 01/19/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1221	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1232	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1242	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1248	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1254	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
Aroclor-1260	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50
PCB Total-TCL	8082[1]	<0.50	0.50	ug/l	RDJ	01/25/2006	0046418-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1813**
Client Sample ID: Field Blank
Sample Matrix: Aqueous

Date Sampled: 01/18/2006
Date Received: 01/19/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	01/20/2006	0046452-1	<0.010
Fluoride	340.2(1)	<0.10	0.10	mg/l	CK0	02/01/2006	0046614-1	<0.10
pH	150.1(1)	6.87	1.00	pH	TAT	01/19/2006	0046373-1	5.83
Specific Conductance	120.1(1)	5.0	1.0	umhos/cm	BAB	01/25/2006	0046464-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	01/24/2006	0046360-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	01/24/2006	0046360-1	<0.00050
Manganese	6010B(2)	0.020	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010
Sodium	6010B(2)	2.3	0.50	mg/l	CS0	01/24/2006	0046360-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	01/24/2006	0046360-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	<0.0050	0.0050	mg/l	MAK	01/26/2006	0046513-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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REPORT OF LABORATORY ANALYSIS
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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-0473**
Lab Sample ID: **0601-1814**
Client Sample ID: Trip Blank
Sample Matrix: Aqueous

Date Sampled: 01/17/2006
Date Received: 01/19/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[1]	<0.0050	0.0050	mg/l	MAK	01/27/2006	0046545-1	<0.0050

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Project Number 06-0473

Metals Analysis - ICP

Parameter	Chemical Symbol	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Arsenic	As	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Beryllium	Be	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Manganese	Mn	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Sodium	Na	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Vanadium	V	200.7	6010	6 Months	250ml Plastic	Nitric Acid

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1798	Client Sample ID	MW-2	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.064		1.0	ICP	01/24/2006	10:21
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00099		1.0	ICP	01/24/2006	10:21
Manganese (Dissolved)	257.61	0.00020	0.010	1.1		1.0	ICP	01/24/2006	10:21
Sodium (Dissolved)	330.23	0.17	0.50	348		1.0	ICP	01/24/2006	10:21
Vanadium (Dissolved)	292.40	0.00040	0.010	0.052		1.0	ICP	01/24/2006	10:21

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1799	Client Sample ID	MW-5	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0048		1.0	ICP	01/24/2006	10:24
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00013	B	1.0	ICP	01/24/2006	10:24
Manganese (Dissolved)	257.61	0.00020	0.010	0.80		1.0	ICP	01/24/2006	10:24
Sodium (Dissolved)	330.23	0.17	0.50	254		1.0	ICP	01/24/2006	10:24
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0027	B	1.0	ICP	01/24/2006	10:24

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1800	Client Sample ID	MW-12	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	01/24/2006	10:53
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00011	B	1.0	ICP	01/24/2006	10:53
Manganese (Dissolved)	257.61	0.00020	0.010	1.8		1.0	ICP	01/24/2006	10:53
Sodium (Dissolved)	330.23	0.17	0.50	24.7		1.0	ICP	01/24/2006	10:53
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00051	B	1.0	ICP	01/24/2006	10:53

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1801	Client Sample ID	MW-12D	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0018	B	1.0	ICP	01/24/2006	10:57
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000090	B	1.0	ICP	01/24/2006	10:57
Manganese (Dissolved)	257.61	0.00020	0.010	1.8		1.0	ICP	01/24/2006	10:57
Sodium (Dissolved)	330.23	0.17	0.50	24.6		1.0	ICP	01/24/2006	10:57
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	01/24/2006	10:57

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1802	Client Sample ID	MW-16	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.067		1.0	ICP	01/24/2006	11:00
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0021		1.0	ICP	01/24/2006	11:00
Manganese (Dissolved)	257.61	0.00020	0.010	2.1		1.0	ICP	01/24/2006	11:00
Sodium (Dissolved)	330.23	0.17	0.50	219		1.0	ICP	01/24/2006	11:00
Vanadium (Dissolved)	292.40	0.00040	0.010	0.10		1.0	ICP	01/24/2006	11:00

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1803	Client Sample ID	MW-18	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.049		1.0	ICP	01/24/2006	11:07
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0022		1.0	ICP	01/24/2006	11:07
Manganese (Dissolved)	257.61	0.00020	0.010	0.78		1.0	ICP	01/24/2006	11:07
Sodium (Dissolved)	330.23	0.17	0.50	653		1.0	ICP	01/24/2006	11:07
Vanadium (Dissolved)	292.40	0.00040	0.010	0.034		1.0	ICP	01/24/2006	11:07

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1804	Client Sample ID	MW-28	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0031	B	1.0	ICP	01/24/2006	11:11
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00028	B	1.0	ICP	01/24/2006	11:11
Manganese (Dissolved)	257.61	0.00020	0.010	0.064		1.0	ICP	01/24/2006	11:11
Sodium (Dissolved)	330.23	0.17	0.50	72.0		1.0	ICP	01/24/2006	11:11
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0046	B	1.0	ICP	01/24/2006	11:11

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1805	Client Sample ID	MW-31	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.060		1.0	ICP	01/24/2006	11:14
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0022		1.0	ICP	01/24/2006	11:14
Manganese (Dissolved)	257.61	0.00020	0.010	2.3		1.0	ICP	01/24/2006	11:14
Sodium (Dissolved)	330.23	0.17	0.50	366		1.0	ICP	01/24/2006	11:14
Vanadium (Dissolved)	292.40	0.00040	0.010	0.12		1.0	ICP	01/24/2006	11:14

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1806	Client Sample ID	MW-31D	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.061		1.0	ICP	01/24/2006	11:26
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0038		1.0	ICP	01/24/2006	11:26
Manganese (Dissolved)	257.61	0.00020	0.010	2.2		1.0	ICP	01/24/2006	11:26
Sodium (Dissolved)	330.23	0.17	0.50	357		1.0	ICP	01/24/2006	11:26
Vanadium (Dissolved)	292.40	0.00040	0.010	0.12		1.0	ICP	01/24/2006	11:26

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1807	Client Sample ID	MW-32	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.065		1.0	ICP	01/24/2006	11:30
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0030		1.0	ICP	01/24/2006	11:30
Manganese (Dissolved)	257.61	0.00020	0.010	3.2		1.0	ICP	01/24/2006	11:30
Sodium (Dissolved)	330.23	0.17	0.50	334		1.0	ICP	01/24/2006	11:30
Vanadium (Dissolved)	292.40	0.00040	0.010	0.14		1.0	ICP	01/24/2006	11:30

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1808	Client Sample ID	MW-35	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0096		1.0	ICP	01/24/2006	11:58
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00027	B	1.0	ICP	01/24/2006	11:58
Manganese (Dissolved)	257.61	0.00020	0.010	0.92		1.0	ICP	01/24/2006	11:58
Sodium (Dissolved)	330.23	0.17	0.50	61.7		1.0	ICP	01/24/2006	11:58
Vanadium (Dissolved)	292.40	0.00040	0.010	0.010		1.0	ICP	01/24/2006	11:58

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1809	Client Sample ID	MW-36	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.020		1.0	ICP	01/24/2006	12:01
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0018		1.0	ICP	01/24/2006	12:01
Manganese (Dissolved)	257.61	0.00020	0.010	0.81		1.0	ICP	01/24/2006	12:01
Sodium (Dissolved)	330.23	0.17	0.50	234		1.0	ICP	01/24/2006	12:01
Vanadium (Dissolved)	292.40	0.00040	0.010	0.058		1.0	ICP	01/24/2006	12:01

U Result is less the the MDL
B Result is between the MDL and RL

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Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1810	Client Sample ID	MW-37	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.016		1.0	ICP	01/24/2006	12:04
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0015		1.0	ICP	01/24/2006	12:04
Manganese (Dissolved)	257.61	0.00020	0.010	1.6		1.0	ICP	01/24/2006	12:04
Sodium (Dissolved)	330.23	0.17	0.50	79.6		1.0	ICP	01/24/2006	12:04
Vanadium (Dissolved)	292.40	0.00040	0.010	0.043		1.0	ICP	01/24/2006	12:04

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	060473-0601-1813	Client Sample ID	Field Blank	Matrix	Aqueous
Units	mg/L	Prep Date	01/20/2006	Prep Batch	46360
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	01/24/2006	12:08
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00013	B	1.0	ICP	01/24/2006	12:08
Manganese (Dissolved)	257.61	0.00020	0.010	0.020		1.0	ICP	01/24/2006	12:08
Sodium (Dissolved)	330.23	0.17	0.50	2.3		1.0	ICP	01/24/2006	12:08
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00088	B	1.0	ICP	01/24/2006	12:08

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: 0473-0601-1805 MS D

Original Sample ID: 0473-0601-1805 D **Client ID:** MW-31

Matrix: Water **Units:** ug/L **Prep Date:** 1/20/2006 **Prep Batch:** 46360

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	59.6		566		500	101.3	1	1	ICP	1/24/2006	11:14	1/24/2006	11:20
Beryllium	313.0	2.2		489		500	97.3	1	1	ICP	1/24/2006	11:14	1/24/2006	11:20
Manganese	257.6	2260		2710	NC	500		1	1	ICP	1/24/2006	11:14	1/24/2006	11:20
Sodium	330.2	366000		363000	NC	5000		1	1	ICP	1/24/2006	11:14	1/24/2006	11:20
Vanadium	292.4	122		598		500	95.3	1	1	ICP	1/24/2006	11:14	1/24/2006	11:20

Comments: An MSD was not analyzed on this sample.

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: QC46360MS D

Original Sample ID: 0447-0601-1696 D **Client ID:** Batch

Matrix: Water **Units:** ug/L **Prep Date:** 1/20/2006 **Prep Batch:** 46360

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	5.6		530		500	104.9	1	1	ICP	1/24/2006	9:58	1/24/2006	10:04
Beryllium	313.0	0.59		532		500	106.2	1	1	ICP	1/24/2006	9:58	1/24/2006	10:04
Manganese	257.6	19.7		551		500	106.2	1	1	ICP	1/24/2006	9:58	1/24/2006	10:04
Sodium	330.2	15200		22000	N	5000	134.6	1	1	ICP	1/24/2006	9:58	1/24/2006	10:04
Vanadium	292.4	1.6	B	524		500	104.6	1	1	ICP	1/24/2006	9:58	1/24/2006	10:04

Comments:

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: QC46360MS D

Original Sample ID: 0447-0601-1696 D **Client ID:** Batch

Matrix: Water **Units:** ug/L **Prep Date:** 1/20/2006 **Prep Batch:** 46360

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	5.6		526		500	104.2	1	1	ICP	1/24/2006	9:58	1/24/2006	10:08
Beryllium	313.0	0.59		527		500	105.2	1	1	ICP	1/24/2006	9:58	1/24/2006	10:08
Manganese	257.6	19.7		545		500	105.0	1	1	ICP	1/24/2006	9:58	1/24/2006	10:08
Sodium	330.2	15200	N	21300		5000	120.4	1	1	ICP	1/24/2006	9:58	1/24/2006	10:08
Vanadium	292.4	1.6	B	520		500	103.6	1	1	ICP	1/24/2006	9:58	1/24/2006	10:08

Comments:

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Sample Duplicate RPD Report

Duplicate Sample ID:	0473-0601-1805 MD D	**Client ID:**	MW-31
Original Sample ID:	0473-0601-1805 D	**Acceptable Range:**	+/- 20%

Matrix:	Water	**Units:**	ug/L	**Prep Date:**	1/20/2006	**Prep Batch:**	46360
Weight:	NA	**Volume:**	50	**Percent Moisture:**	NA		

Element	WL/ Mass	OS Conc	Q	Dupe Conc	Q	% RPD	OS DF	Dupe DF	Instr	OS Anal Date	OS Anal Time	Dupe Anal Date	Dupe Anal Time
Arsenic	189.042	60		60		0.0%	1	1	ICP	1/24/2006	11:14	1/24/2006	11:17
Beryllium	313.042	0.0002	B	0.0002	B	0.0%	1	1	ICP	1/24/2006	11:14	1/24/2006	11:17
Manganese	257.61	2.3	B	2.3	B	0.0%	1	1	ICP	1/24/2006	11:14	1/24/2006	11:17
Sodium	330.232	370	B	370	B	0.0%	1	1	ICP	1/24/2006	11:14	1/24/2006	11:17
Vanadium	292.402	0.12	B	0.12	B	0.0%	1	1	ICP	1/24/2006	11:14	1/24/2006	11:17

B Result is between MDL and RL

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID: QC46360MS D

Matrix Spike Sample ID: QC46360MS D **Client ID:** Batch

Matrix: Water **Units:** ug/L **Prep Date:** 1/20/2006 **Prep Batch:** 46360

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	530		526		0.7	1	1	ICP	1/24/2006	10:04	1/24/2006	10:08
Beryllium	313.042	532		527		1.0	1	1	ICP	1/24/2006	10:04	1/24/2006	10:08
Manganese	257.61	551		545		1.2	1	1	ICP	1/24/2006	10:04	1/24/2006	10:08
Sodium	330.232	22000	N	21300		3.3	1	1	ICP	1/24/2006	10:04	1/24/2006	10:08
Vanadium	292.402	524		520		0.9	1	1	ICP	1/24/2006	10:04	1/24/2006	10:08

Comments:

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 6 Equivalent

Pace Analytical

Metals Data Reporting Form

Sample Duplicate RPD Report

Duplicate Sample ID:	QC46360DUP	**Client ID:**	Batch
Original Sample ID:	0447-0601-1696 D	**Acceptable Range:**	+/- 20%

Matrix:	Water	**Units:**	ug/L	**Prep Date:**	1/20/2006	**Prep Batch:**	46360
Weight:	50	**Volume:**	50	**Percent Moisture:**	NA		

Element	WL/ Mass	OS Conc	Q	Dupe Conc	Q	% RPD	OS DF	Dupe DF	Instr	OS Anal Date	OS Anal Time	Dupe Anal Date	Dupe Anal Time
Arsenic	189.042	5.6		5.4		-3.6%	1	1	ICP	1/24/2006	9:58	1/24/2006	10:01
Beryllium	313.042	0.59		0.16	B	-114.7%	1	1	ICP	1/24/2006	9:58	1/24/2006	10:01
Manganese	257.61	19.7		19.5		-1.0%	1	1	ICP	1/24/2006	9:58	1/24/2006	10:01
Sodium	330.232	15200	N	15500		2.0%	1	1	ICP	1/24/2006	9:58	1/24/2006	10:01
Vanadium	292.402	1.6	B	1.8	B	11.8%	1	1	ICP	1/24/2006	9:58	1/24/2006	10:01

B Result is between MDL and RL

Pace Analytical

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: QC46360LCS

Matrix: Water **Units:** ug/L **Prep Date:** 1/20/2006 **Prep Batch:** 46360

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	500	503	100.7		80-120	1	ICP	1/24/2006	9:52
Beryllium	313.042	500	513	102.7		80-120	1	ICP	1/24/2006	9:52
Manganese	257.61	500	515	103.1		80-120	1	ICP	1/24/2006	9:52
Sodium	330.232	5000	4730	94.6		80-120	1	ICP	1/24/2006	9:52
Vanadium	292.402	500	506	101.1		80-120	1	ICP	1/24/2006	9:52

Comments:

U Result is less than the MDL

B Result is between MDL and RL

Project Number 06-0473

Volatiles Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Tetrachloroethene	624	8260	14 Days	3/ 40ml Vials	Hydrochloric Acid

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Analytical Contract :
Project : 06-0473 Site : Location : Group :
Lab File ID (Standard): 20126019.D Date Analyzed : 26 Jan 2006
Instrument ID : GC/MS Ins Time Analyzed : 14:28
GC Column : Rtx-VMS ID : .18 Heated Purge (Y:N) : N
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
20126021	LCS[20]	87	86	97	0	0	0	0
20126025	VBLK	86	96	82	0	0	0	0
20126051	Field Blank	92	89	100	0	0	0	0
20126053	MW-2	95	88	89	0	0	0	0
20126055	MW-18	90	92	81	0	0	0	0
20126057	MW-31	93	90	83	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Analytical Contract :
Project : 06-0473 Site : Location : Group :
Lab File ID (Standard): 20124004.D Date Analyzed : 24 Jan 2006
Instrument ID : GC/MS Ins Time Analyzed : 11:26
GC Column : Rtx-VMS ID : .18 Heated Purge (Y:N) : N
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
20124008	VBLK	97	89	95	0	0	0	0
20124016	LCS[20]	92	87	92	0	0	0	0
20124038	MW-5	86	86	91	0	0	0	0
20124040	MW-5MS	87	88	93	0	0	0	0
20124042	MW-5MSD	87	87	93	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Analytical Contract :
Project : 06-0473 Site : Location : Group :
Lab File ID (Standard): 20127004.D Date Analyzed : 27 Jan 2006
Instrument ID : GC/MS Ins Time Analyzed : 14:02
GC Column : Rtx-VMS ID : .18 Heated Purge (Y:N) : N
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
20127006	LCS[20]	102	93	94	0	0	0	0
20127008	VBLK	104	91	95	0	0	0	0
20127038	Trip Blank	124	89	98	0	0	0	0
20127040	MW-31D	130	89	98	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

VOA LCS Blank Summary Report

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Single (D:\DATA\2060124\2\20124004.D 24 Jan 2006 11:26)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
42)	S	1,2-Dichloroethane-d	27.54	30.00	91.80	70 to 130%	[ ]
58)	S	Toluene-d8	26.12	30.00	87.07	70 to 130%	[ ]
83)	S	Bromofluorobenzene	27.68	30.00	92.26	70 to 130%	[ ]
2)	T	Dichlorodifluorometh	23.01	20.00	115.06	70 to 130%	[ ]
3)	T	Chloromethane	17.82	20.00	89.08	70 to 130%	[ ]
4)	T	Vinyl Chloride	20.77	20.00	103.86	70 to 130%	[ ]
5)	T	Bromomethane	17.08	20.00	85.38	70 to 130%	[ ]
6)	M	Chloroethane	12.22	20.00	61.08	70 to 130%	[*]
7)	T	Trichlorofluorometha	18.82	20.00	94.11	70 to 130%	[ ]
8)	T	Ethyl Ether	17.58	20.00	87.90	70 to 130%	[ ]
9)	T	Acrolein	60.02	20.00	300.10	70 to 130%	[*]
10)	T	1,1-Dichloroethene	15.62	20.00	78.12	70 to 130%	[ ]
11)	T	112Trichloro122trifl	15.96	20.00	79.82	70 to 130%	[ ]
12)	T	Acetone	17.88	20.00	89.41	70 to 130%	[ ]
13)	M	Iodomethane	93.16	100.00	93.16	70 to 130%	[ ]
14)	T	Carbon Disulfide	12.10	20.00	60.51	70 to 130%	[*]
15)	M	Acetonitrile	100.54	100.00	100.54	70 to 130%	[ ]
16)	T	Methyl acetate	9.27	20.00	46.33	70 to 130%	[*]
17)	T	Methylene Chloride	17.07	20.00	85.37	70 to 130%	[ ]
18)	T	TBA, tertButylalcoho	90.94	100.00	90.94	70 to 130%	[ ]
19)	T	Acrylonitrile	17.97	20.00	89.86	70 to 130%	[ ]
20)	T	trans-1,2-Dichloroet	18.06	20.00	90.28	70 to 130%	[ ]
21)	T	Allyl chloride	89.13	100.00	89.13	70 to 130%	[ ]
22)	T	tert-butyl Methyleth	19.10	20.00	95.52	70 to 130%	[ ]
23)	T	Vinyl acetate	0.12	20.00	0.60	70 to 130%	[*]
24)	T	Hexane	16.83	20.00	84.14	70 to 130%	[ ]
25)	T	1,1-Dichloroethane	18.56	20.00	92.79	70 to 130%	[ ]
26)	M	Chloroprene	19.16	20.00	95.78	70 to 130%	[ ]
27)	M	t-Butyl ethyl ether	18.46	20.00	92.31	70 to 130%	[ ]
28)	M	2,2-Dichloropropane	19.28	20.00	96.41	70 to 130%	[ ]
29)	T	cis-1,2-Dichloroethe	18.87	20.00	94.36	70 to 130%	[ ]
30)	T	2-Butanone	18.44	20.00	92.21	70 to 130%	[ ]
31)	T	Propionitrile	16.88	20.00	84.41	70 to 130%	[ ]
32)	T	Ethyl acetate	16.43	20.00	82.15	70 to 130%	[ ]
33)	T	Diisopropylether	17.13	20.00	85.67	70 to 130%	[ ]
34)	T	Bromochloromethane	20.85	20.00	104.24	70 to 130%	[ ]
35)	M	Methacrylonitrile	18.63	20.00	93.16	70 to 130%	[ ]
36)	T	Tetrahydrofuran	17.69	20.00	88.44	70 to 130%	[ ]
37)	T	Chloroform	19.24	20.00	96.22	70 to 130%	[ ]
38)	T	1,1,1-Trichloroethan	18.70	20.00	93.48	70 to 130%	[ ]
39)	T	Cyclohexane	21.39	20.00	106.96	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Single (D:\DATA\2060124\2\20124004.D 24 Jan 2006 11:26)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
40)	T	Carbon Tetrachloride	18.23	20.00	91.13	70 to 130%	[ ]
41)	T	1,1-Dichloropropene	17.58	20.00	87.89	70 to 130%	[ ]
43)	T	Benzene	17.85	20.00	89.23	70 to 130%	[ ]
44)	T	1,2-Dichloroethane	19.45	20.00	97.23	70 to 130%	[ ]
45)	M	Isobutanol	64.90	100.00	64.90	70 to 130%	[*]
46)	M	t-Amyl methyl ether	16.41	20.00	82.04	70 to 130%	[ ]
47)	T	Trichloroethene	18.95	20.00	94.73	70 to 130%	[ ]
48)	T	Methylcyclohexane	19.07	20.00	95.37	70 to 130%	[ ]
49)	T	1,2-Dichloropropane	19.27	20.00	96.37	70 to 130%	[ ]
50)	T	Dibromomethane	20.22	20.00	101.12	70 to 130%	[ ]
51)	M	Methyl methacrylate	19.97	20.00	99.84	70 to 130%	[ ]
52)	T	Bromodichloromethane	19.08	20.00	95.41	70 to 130%	[ ]
53)	M	2-Nitropropane	76.79	100.00	76.79	70 to 130%	[ ]
54)	T	2-Chloroethylvinylet	26.72	20.00	133.61	70 to 130%	[*]
55)	T	cis-1,3-Dichloroprop	18.58	20.00	92.91	70 to 130%	[ ]
56)	T	4-Methyl-2-Pentanone	18.23	20.00	91.17	70 to 130%	[ ]
59)		1,4-Dioxane	79.37	200.00	39.69	70 to 130%	[*]
60)	T	Toluene	18.53	20.00	92.65	70 to 130%	[ ]
61)	T	trans-1,3-Dichloropr	19.80	20.00	99.01	70 to 130%	[ ]
62)	M	Ethyl methacrylate	17.82	20.00	89.08	70 to 130%	[ ]
63)	T	1,1,2-Trichloroethan	19.72	20.00	98.58	70 to 130%	[ ]
64)	T	Tetrachloroethene	18.42	20.00	92.08	70 to 130%	[ ]
65)	T	1,3-Dichloropropane	19.63	20.00	98.14	70 to 130%	[ ]
66)	T	2-Hexanone	18.49	20.00	92.46	70 to 130%	[ ]
67)	T	Dibromochloromethane	18.63	20.00	93.15	70 to 130%	[ ]
68)	T	1,2-Dibromoethane,ED	19.22	20.00	96.10	70 to 130%	[ ]
69)	T	Chlorobenzene	19.19	20.00	95.97	70 to 130%	[ ]
70)	T	1,1,1,2-Tetrachloroe	19.14	20.00	95.72	70 to 130%	[ ]
71)	T	Ethylbenzene	18.92	20.00	94.59	70 to 130%	[ ]
72)	T	m,p-Xylene	38.21	40.00	95.52	70 to 130%	[ ]
73)	T	o-Xylene	18.17	20.00	90.87	70 to 130%	[ ]
74)	MG	Xylenes (Total)	56.40	60.00	94.00	70 to 130%	[ ]
75)	T	Styrene	19.85	20.00	99.26	70 to 130%	[ ]
77)	T	Bromoform	18.99	20.00	94.95	70 to 130%	[ ]
78)	M	Cyclohexanone	96.05	100.00	96.05	70 to 130%	[ ]
79)	T	n-Propylbenzene	19.34	20.00	96.69	70 to 130%	[ ]
80)	M	2-Chlorotoluene	19.73	20.00	98.64	70 to 130%	[ ]
81)	T	1,3,5-Trimethylbenze	19.32	20.00	96.61	70 to 130%	[ ]
82)	T	Isopropylbenzene,Cum	19.47	20.00	97.33	70 to 130%	[ ]
84)	M	Bromobenzene	20.28	20.00	101.39	70 to 130%	[ ]
85)	T	1,1,2,2-Tetrachloroe	20.04	20.00	100.21	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Single (D:\DATA\2060124\2\20124004.D 24 Jan 2006 11:26)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
86)	T	1,2,3-Trichloropropa	19.62	20.00	98.08	70 to 130%	[ ]
87)	M	trans-1,4-Dichloro-2	21.97	20.00	109.86	70 to 130%	[ ]
88)	M	4-Chlorotoluene	20.32	20.00	101.62	70 to 130%	[ ]
89)	M	tert-Butyl benzene	19.28	20.00	96.41	70 to 130%	[ ]
90)	T	1,2,4-Trimethylbenze	18.73	20.00	93.65	70 to 130%	[ ]
91)	M	sec-Butyl benzene	19.07	20.00	95.37	70 to 130%	[ ]
92)	T	1,3-Dichlorobenzene	21.57	20.00	107.87	70 to 130%	[ ]
93)	M	4-Isopropyl toluene	18.88	20.00	94.38	70 to 130%	[ ]
94)	T	1,4-Dichlorobenzene	19.11	20.00	95.54	70 to 130%	[ ]
95)	T	1,2-Dichlorobenzene	20.28	20.00	101.41	70 to 130%	[ ]
96)	M	n-Butyl benzene	19.52	20.00	97.62	70 to 130%	[ ]
97)	M	bis(2-Chloro-1-methy	20.09	20.00	100.45	70 to 130%	[ ]
98)	T	1,2-Dibromo-3-chloro	20.05	20.00	100.23	70 to 130%	[ ]
99)	T	1,2,4-Trichlorobenze	20.96	20.00	104.78	70 to 130%	[ ]
100)	M	Hexachlorobutadiene	18.90	20.00	94.48	70 to 130%	[ ]
101)	T	Naphthalene	19.91	20.00	99.53	70 to 130%	[ ]
102)	M	1,2,3-Trichlorobenze	19.98	20.00	99.88	70 to 130%	[ ]

* = out of control limits

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 24 15:31 19106

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01192.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060124\2\20124004.D (24 Jan 2006 11:26)

EJ 1/24/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.30	96	213205	30.00 ug/l	0.00 102.44%
57) Chlorobenzene-d5	6.76	117	171508	30.00 ug/l	0.00 102.74%
76) 1,4-Dichlorobenzene-d4	7.95	152	94880	30.00 ug/l	0.00 102.05%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.97	65	86691	27.54 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 91.80%		
58) Toluene-d8	5.72	98	261915	26.12 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 87.07%		
83) Bromofluorobenzene	7.42	95	108375	27.68 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 92.27%		

Target Compounds

					Qvalue
2) Dichlorodifluoromethane	0.93	85	62853	23.01 ug/l	98
3) Chloromethane	1.05	50	93045	17.82 ug/l #	34
4) Vinyl Chloride	1.06	62	64638	20.77 ug/l	97
5) Bromomethane	1.21	94	16994	17.08 ug/l	97
6) Chloroethane	1.26	64	14030	12.22 ug/l #	60
7) Trichlorofluoromethane	1.33	101	65869	18.82 ug/l	99
8) Ethyl Ether	1.49	59	36739	17.58 ug/l	96
9) Acrolein	1.78	56	5381	60.02 ug/l #	1
10) 1,1-Dichloroethene	1.59	96	35436	15.62 ug/l	89
11) 112Trichloro122trifluoroet	1.60	101	39932	15.96 ug/l	98
12) Acetone	1.96	43	22999	17.88 ug/l #	88
13) Iodomethane	1.67	142	297560	93.16 ug/l	96
14) Carbon Disulfide	1.61	76	72424	12.10 ug/l	98
15) Acetonitrile	2.26	41	42398	100.54 ug/l	98
16) Methyl acetate	2.03	43	35698	9.27 ug/l	96
17) Methylene Chloride	1.91	84	41456	17.07 ug/l #	82
18) TBA, tertButylalcohol	2.17	59	30200	90.94 ug/l	94
19) Acrylonitrile	2.50	53	24759	17.97 ug/l	98
20) trans-1,2-Dichloroethene	2.01	96	41510	18.06 ug/l	91
21) Allyl chloride	1.85	41	316425	89.13 ug/l	94
22) tert-butyl Methylether,MtB	2.09	73	116427	19.10 ug/l #	75
24) Hexane	2.05	57	70956	16.83 ug/l	93
25) 1,1-Dichloroethane	2.44	63	81843	18.56 ug/l	98
26) Chloroprene	2.42	88	31397	19.16 ug/l	97
27) t-Butyl ethyl ether	2.64	59	140076	18.46 ug/l	95
28) 2,2-Dichloropropane	2.98	77	61802	19.28 ug/l #	99
29) cis-1,2-Dichloroethene	2.88	96	46494	18.87 ug/l	95
30) 2-Butanone	3.53	43	39640	18.44 ug/l	96
31) Propionitrile	3.88	54	11161	16.88 ug/l	99
32) Ethyl acetate	3.32	43	73242	16.43 ug/l	97
33) Diisopropylether	2.35	45	155814	17.13 ug/l	97
34) Bromochloromethane	3.07	128	29331	20.85 ug/l #	81

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 24 15:31 19106

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 2AL01192.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35)	Methacrylonitrile	3.89	41	45027	18.63 ug/l		93
36)	Tetrahydrofuran	3.34	42	27704	17.69 ug/l		80
37)	Chloroform	3.15	83	89001	19.24 ug/l		99
38)	1,1,1-Trichloroethane	3.34	97	78863	18.70 ug/l		95
39)	Cyclohexane	3.04	56	118738	21.39 ug/l		87
40)	Carbon Tetrachloride	3.26	117	65964	18.23 ug/l		99
41)	1,1-Dichloropropene	3.48	75	62938	17.58 ug/l		99
43)	Benzene	3.78	78	176423	17.85 ug/l		100
44)	1,2-Dichloroethane	4.06	62	75296	19.45 ug/l		99
45)	Isobutanol	4.24	41	5827	64.90 ug/l		96
46)	t-Amyl methyl ether	4.00	73	115589	16.41 ug/l		94
47)	Trichloroethene	4.47	95	51783	18.95 ug/l		97
48)	Methylcyclohexane	4.44	83	72283	19.07 ug/l		94
49)	1,2-Dichloropropane	4.97	63	51470	19.27 ug/l		99
50)	Dibromomethane	4.87	93	29244	20.22 ug/l		99
51)	Methyl methacrylate	5.24	41	63476	19.97 ug/l	#	87
52)	Bromodichloromethane	5.04	83	61057	19.08 ug/l		100
53)	2-Nitropropane	5.95	43	63232	76.79 ug/l	#	98
54)	2-Chloroethylvinylether	5.56	63	2931	26.72 ug/l	#	93
55)	cis-1,3-Dichloropropene	5.58	75	70390	18.58 ug/l		100
56)	4-Methyl-2-Pentanone	6.08	43	70049	18.23 ug/l		98
59)	1,4-Dioxane	5.26	88	2640	79.37 ug/l	#	43
60)	Toluene	5.76	91	205468	18.53 ug/l		99
61)	trans-1,3-Dichloropropene	6.08	75	70101	19.80 ug/l		99
62)	Ethyl methacrylate	6.23	69	61390	17.82 ug/l		93
63)	1,1,2-Trichloroethane	6.19	97	42982	19.72 ug/l		99
64)	Tetrachloroethene	6.04	164	47635	18.42 ug/l		97
65)	1,3-Dichloropropane	6.37	76	72135	19.63 ug/l		95
66)	2-Hexanone	6.63	43	50989	18.49 ug/l		99
67)	Dibromochloromethane	6.30	129	51413	18.63 ug/l		99
68)	1,2-Dibromoethane,EDB	6.44	107	47324	19.22 ug/l		100
69)	Chlorobenzene	6.77	112	141029	19.19 ug/l		90
70)	1,1,1,2-Tetrachloroethane	6.81	131	51920	19.14 ug/l		93
71)	Ethylbenzene	6.80	106	77209	18.92 ug/l		95
72)	m,p-Xylene	6.88	106	187406	38.21 ug/l		96
73)	o-Xylene	7.11	106	87614	18.17 ug/l		99
74)	Xylenes (Total)	6.88	106	275040m	56.40 ug/l		94
75)	Styrene	7.14	104	151188	19.85 ug/l		95
77)	Bromoform	7.14	173	32624	18.99 ug/l		98
78)	Cyclohexanone	7.61	55	62693	96.05 ug/l		95
79)	n-Propylbenzene	7.48	91	256032	19.34 ug/l		99
80)	2-Chlorotoluene	7.56	126	58114	19.73 ug/l		98
81)	1,3,5-Trimethylbenzene	7.58	105	190858	19.32 ug/l		100
82)	Isopropylbenzene,Cumene	7.28	105	226858	19.47 ug/l		99
84)	Bromobenzene	7.46	158	60752	20.28 ug/l	#	89
85)	1,1,2,2-Tetrachloroethane	7.53	83	55488	20.04 ug/l		94
86)	1,2,3-Trichloropropane	7.58	75	53122	19.62 ug/l		98
87)	trans-1,4-Dichloro-2-buten	7.61	53	17696	21.97 ug/l		95
88)	4-Chlorotoluene	7.64	91	167066	20.32 ug/l		100
89)	tert-Butyl benzene	7.73	91	105211	19.28 ug/l		94

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 24 15:31 19106

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01192.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
90)	1,2,4-Trimethylbenzene	7.76	105	186946	18.73 ug/l		99
91)	sec-Butyl benzene	7.81	105	218805	19.07 ug/l		97
92)	1,3-Dichlorobenzene	7.91	146	116989	21.57 ug/l		98
93)	4-Isopropyl toluene	7.88	119	195769	18.88 ug/l		97
94)	1,4-Dichlorobenzene	7.95	146	109015	19.11 ug/l		99
95)	1,2-Dichlorobenzene	8.14	146	101651	20.28 ug/l		100
96)	n-Butyl benzene	8.07	91	153902	19.52 ug/l		100
97)	bis(2-Chloro-1-methyl ethy	8.32	45	39516	20.09 ug/l	#	92
98)	1,2-Dibromo-3-chloropropan	8.49	75	13032	20.05 ug/l		97
99)	1,2,4-Trichlorobenzene	8.79	180	56899	20.96 ug/l		100
100)	Hexachlorobutadiene	8.77	225	27408	18.90 ug/l		96
101)	Naphthalene	8.93	128	181875	19.91 ug/l		100
102)	1,2,3-Trichlorobenzene	9.01	180	51057	19.98 ug/l		98

(#) = qualifier out of range (m) = manual integration

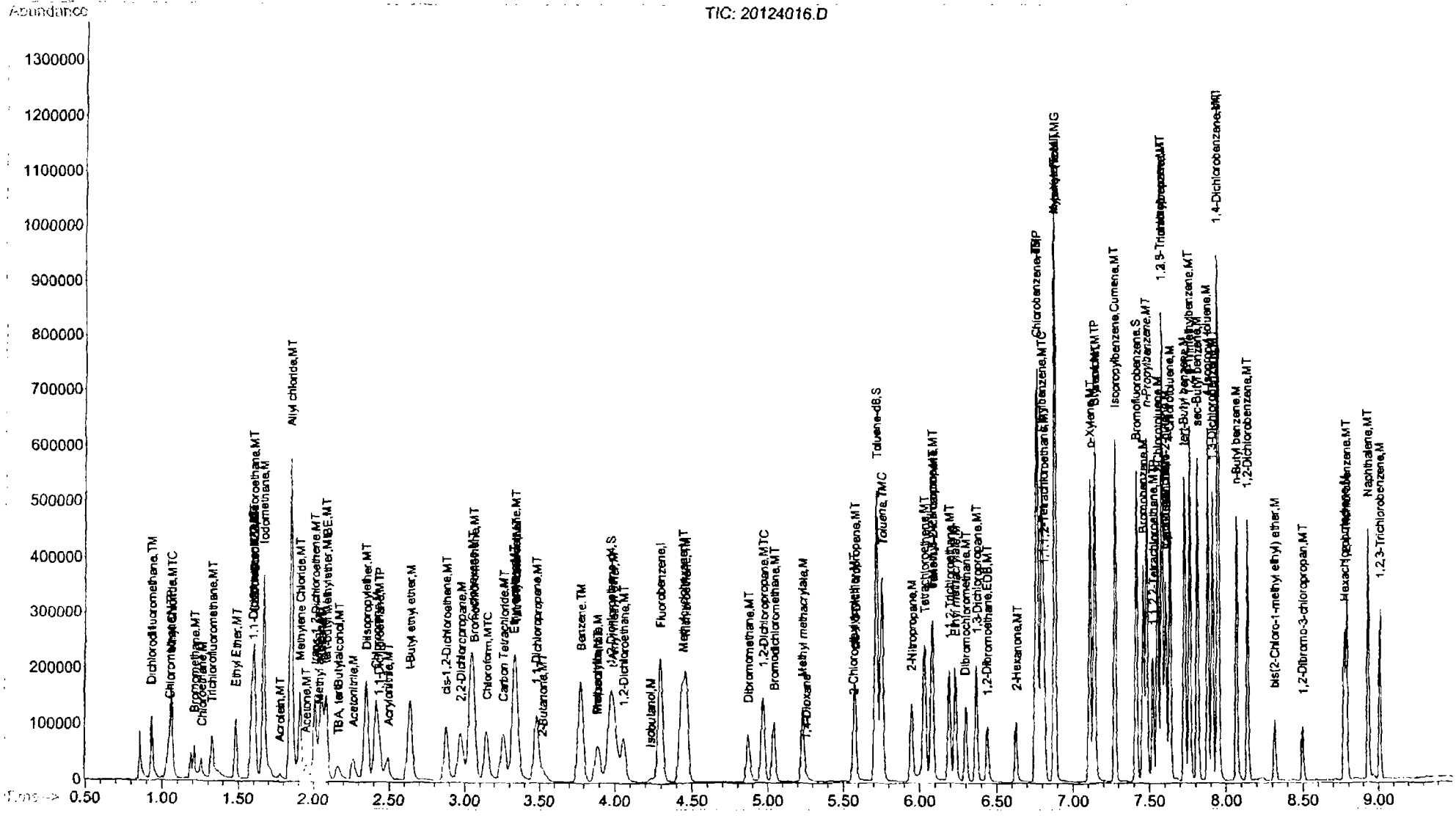
Quantitation Report

Data File : D:\DATA\2060124\2\20124016.D
Acq On : 24 Jan 2006 14:09
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.p
Quant Time: Jan 24 15:31 19106

Vial: 16
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01192.RES

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 15:29:50 2006
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060124\2\20124008.D
Acq On : 24 Jan 2006 12:19
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jan 24 12:46 19106

Vial: 8
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01192.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 12:29:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060124\2\20124004.D (24 Jan 2006 11:26)

EA 1/24/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.30	96	205414	30.00 ug/l	0.00 98.70%
57) Chlorobenzene-d5	6.76	117	162189	30.00 ug/l	0.00 97.15%
76) 1,4-Dichlorobenzene-d4	7.95	152	90058	30.00 ug/l	0.00 96.86%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.97	65	88284	29.11 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 97.03%		
58) Toluene-d8	5.72	98	253775	26.76 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 89.20%		
83) Bromofluorobenzene	7.42	95	106026	28.53 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 95.10%		

Target Compounds

					Qvalue
9) Acrolein	1.78	56	368	4.26 ug/l #	85
12) Acetone	1.96	43	2202	1.78 ug/l	94
15) Acetonitrile	2.27	41	1303	3.21 ug/l #	59
17) Methylene Chloride	1.91	84	1595	0.68 ug/l	85
18) TBA, tertButylalcohol	2.16	59	556	1.74 ug/l #	80
45) Isobutanol	4.25	41	115	1.33 ug/l #	35
53) 2-Nitropropane	5.95	43	221	18.21 ug/l #	82
59) 1,4-Dioxane	5.25	88	24	0.76 ug/l #	68
78) Cyclohexanone	7.61	55	493	0.80 ug/l #	59

(#) = qualifier out of range (m) = manual integration

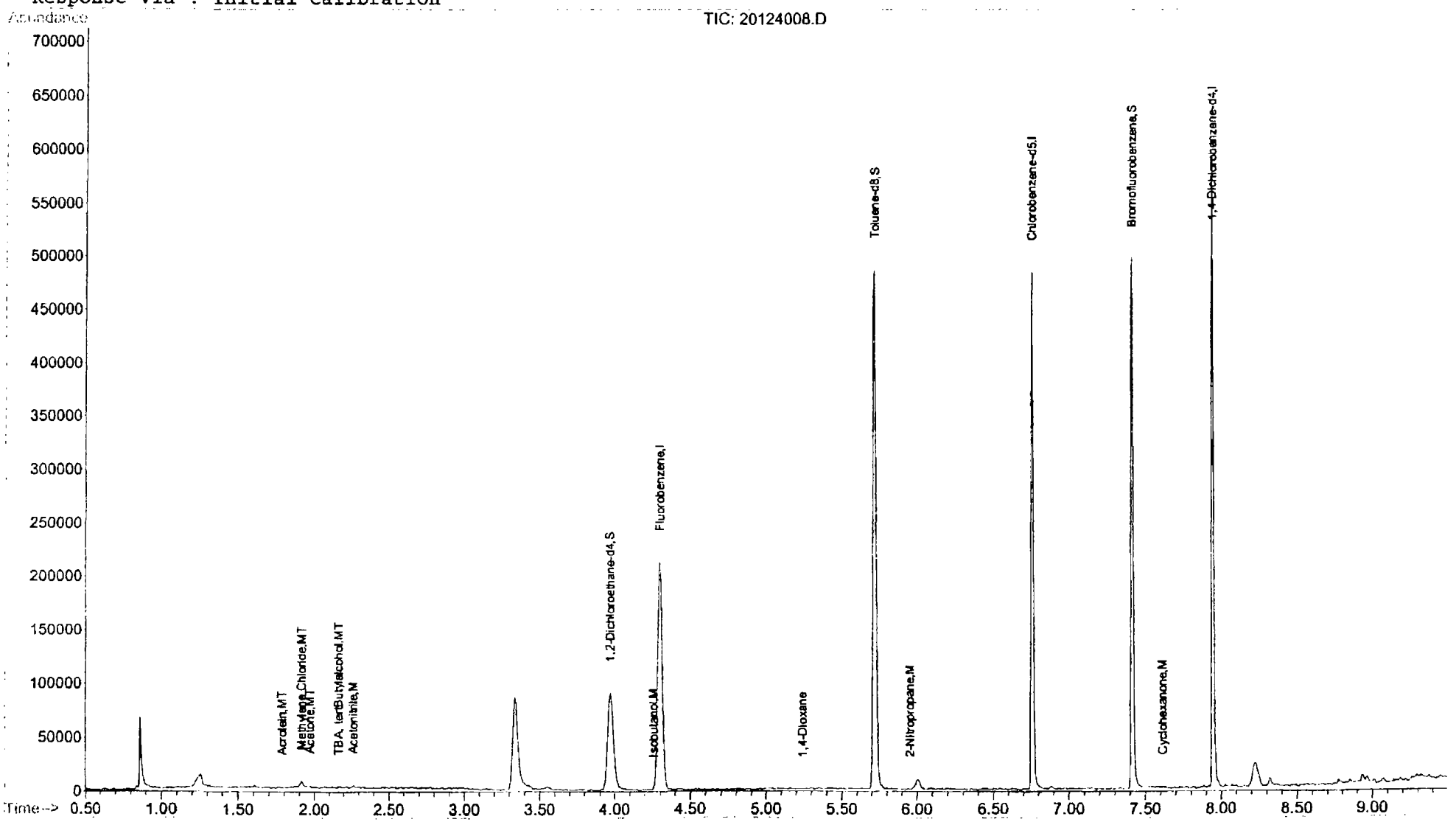
Quantitation Report

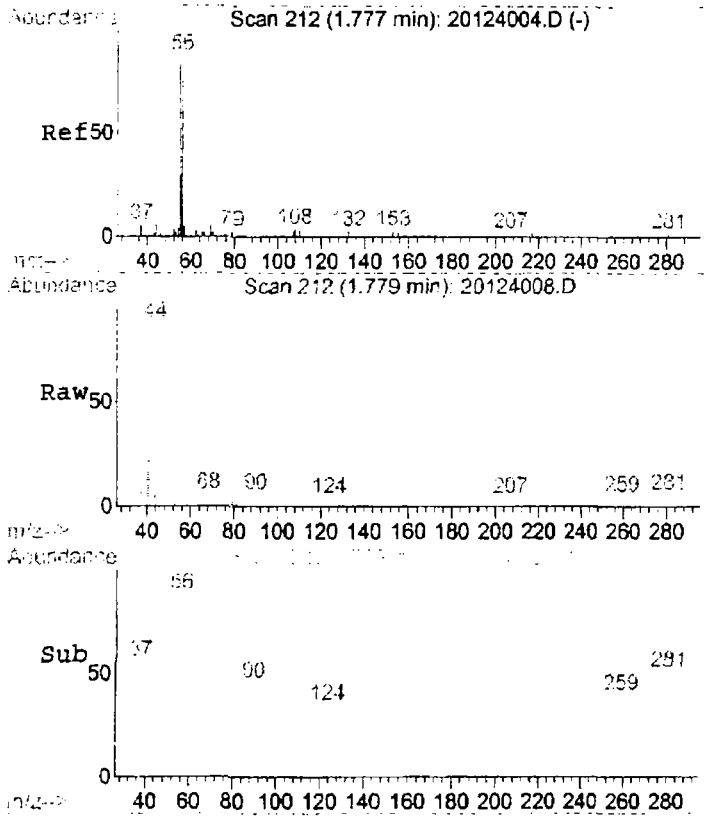
Data File : D:\DATA\2060124\2\20124008.D
Acq On : 24 Jan 2006 12:19
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jan 24 12:46 19106

Vial: 8
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01192.RES

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Tue Jan 24 12:29:50 2006
Response via : Initial Calibration

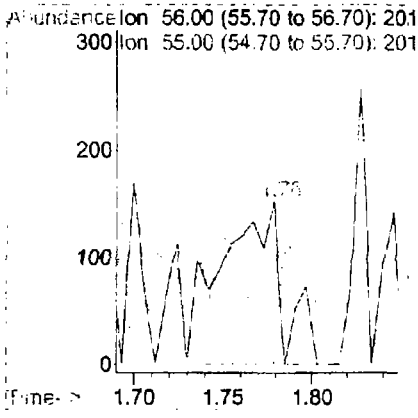


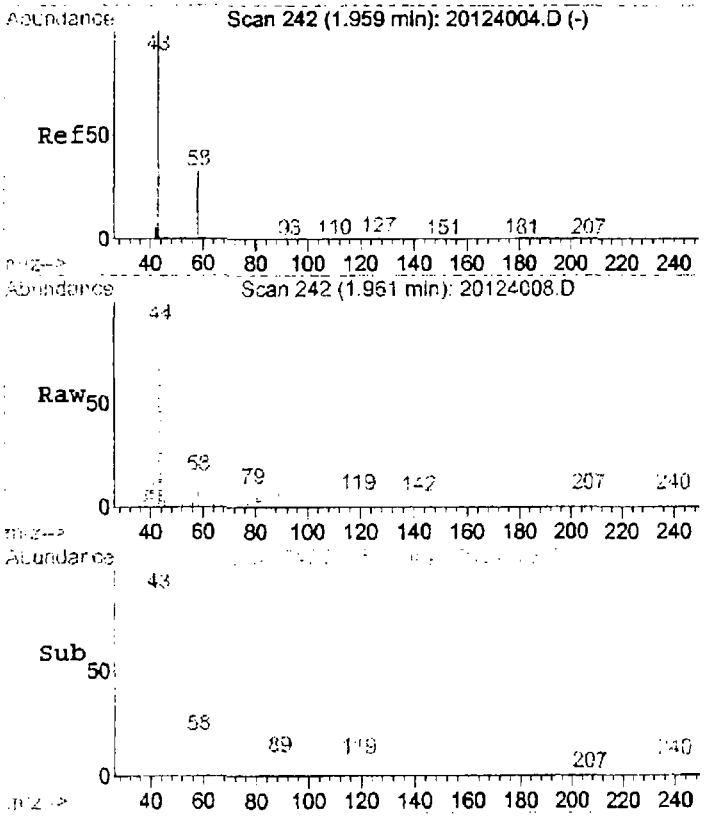


#9
Acrolein
Concen: 4.26 ug/l
RT: 1.78 min Scan# 212
Delta R.T. 0.00 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 56 Resp: 368

Ion	Ratio	Lower	Upper
56	100		
55	21.7	12.2	18.4#

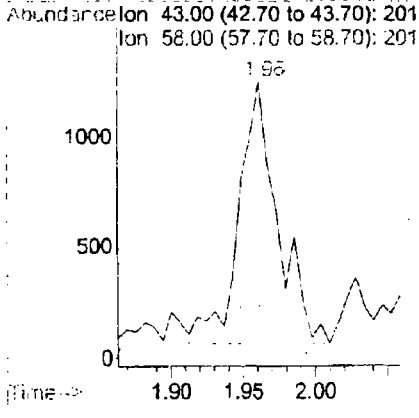


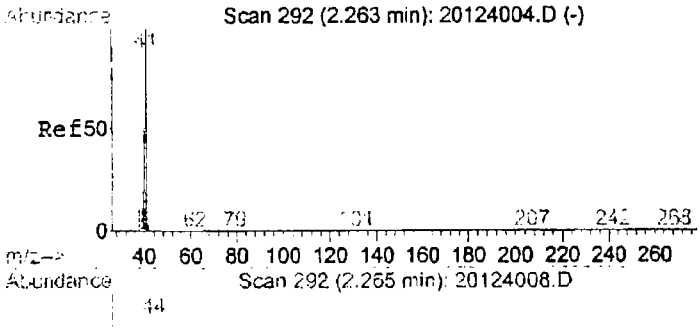


#12
Acetone
Concen: 1.78 ug/l
RT: 1.96 min Scan# 242
Delta R.T. 0.00 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 43 Resp: 2202

Ion	Ratio	Lower	Upper
43	100		
58	30.2	21.7	32.5

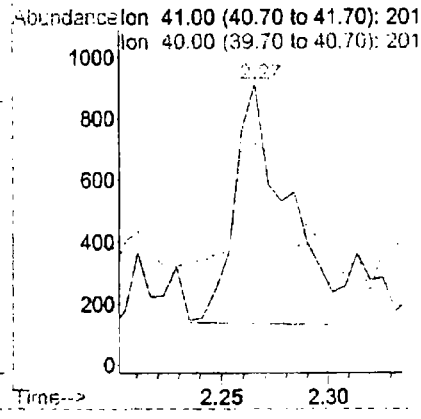


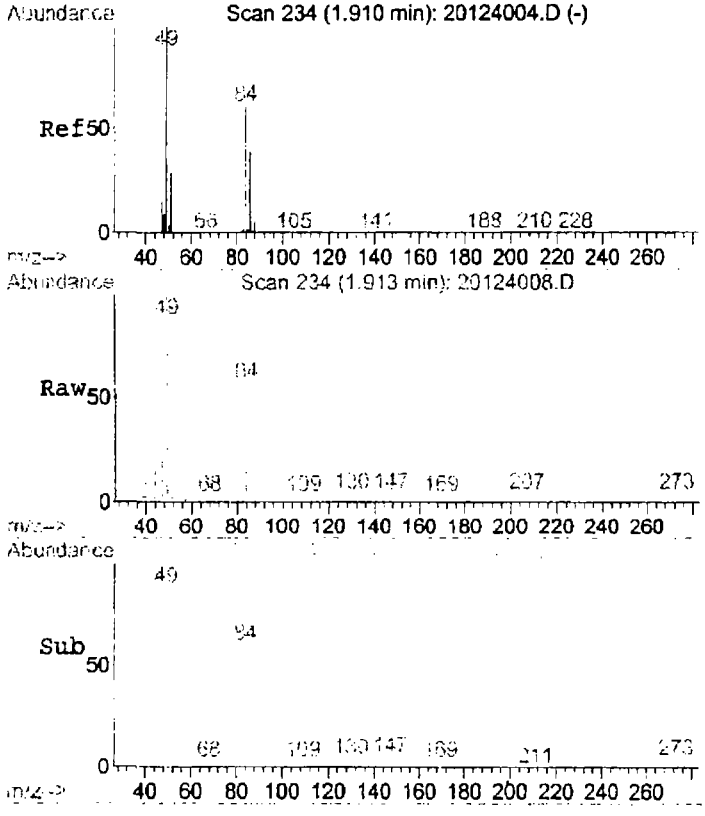


#15
Acetonitrile
Concen: 3.21 ug/l
RT: 2.27 min Scan# 292
Delta R.T. 0.00 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 41 Resp: 1303

Ion	Ratio	Lower	Upper
41	100		
40	84.1	43.6	65.4#

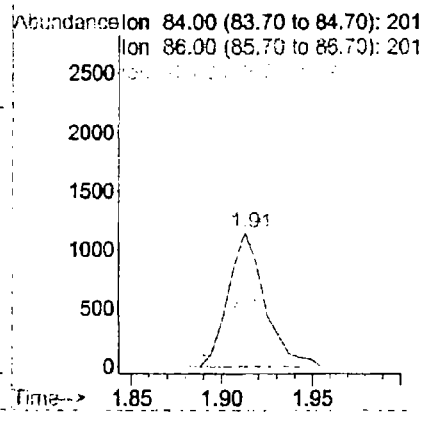


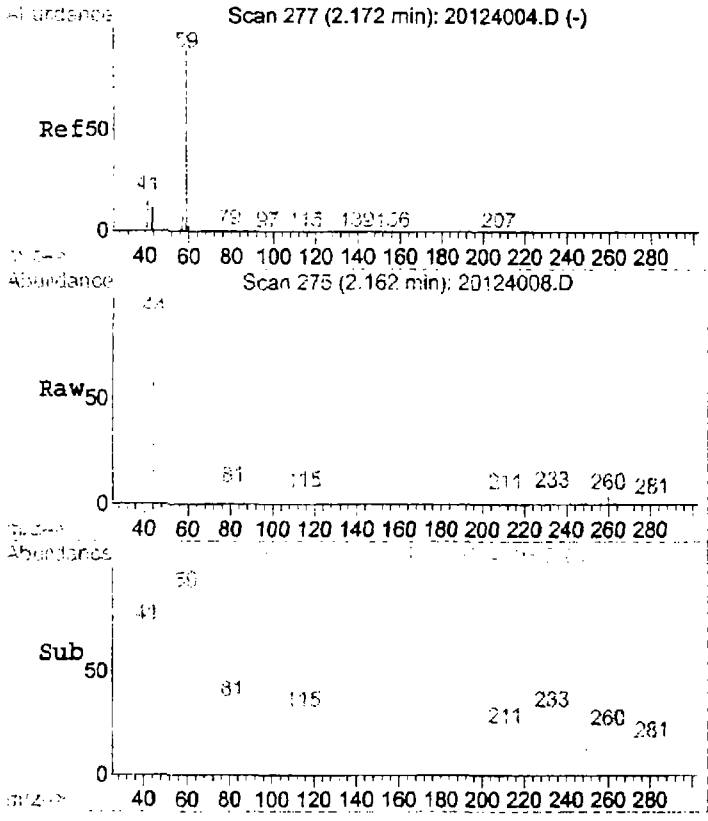


#17
Methylene Chloride
Concen: 0.68 ug/l
RT: 1.91 min Scan# 234
Delta R.T. 0.00 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 84 Resp: 1595

Ion	Ratio	Lower	Upper
84	100		
86	59.4	53.3	79.9
49	167.2	115.8	173.8

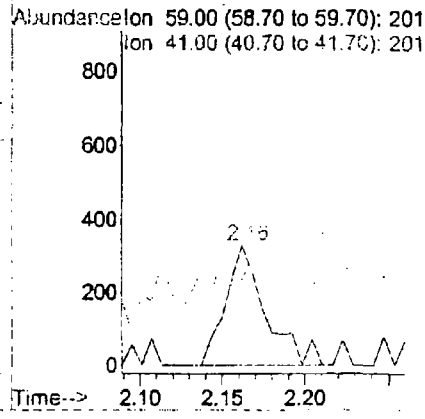


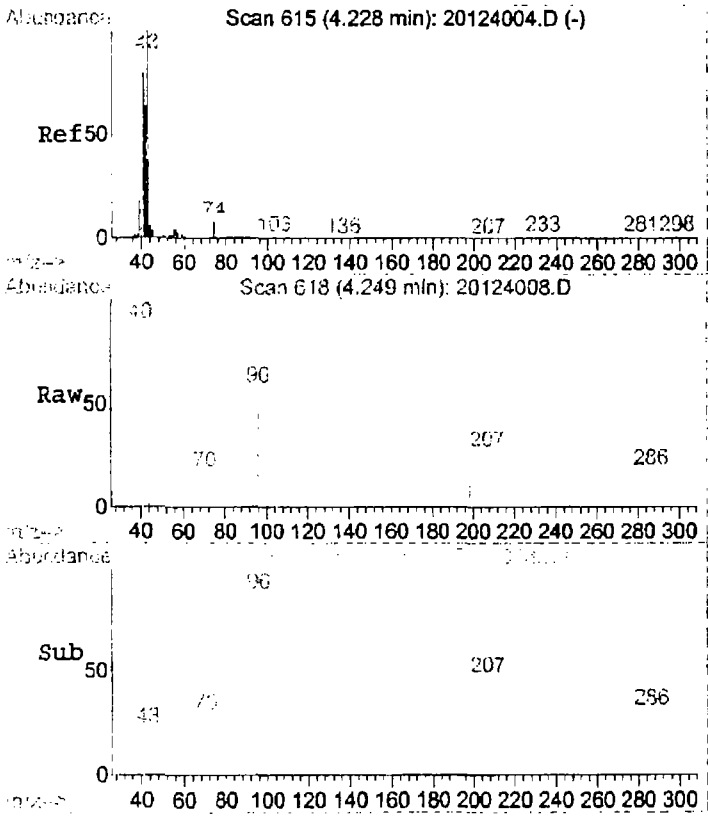


#18
TBA, tertButylalcohol
Concen: 1.74 ug/l
RT: 2.16 min Scan# 275
Delta R.T. -0.01 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 59 Resp: 556

Ion	Ratio	Lower	Upper
59	100		
41	26.3	13.9	20.9#

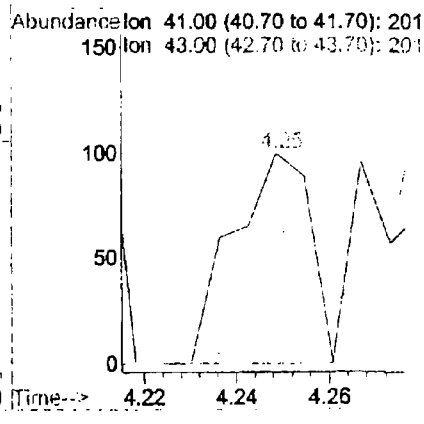


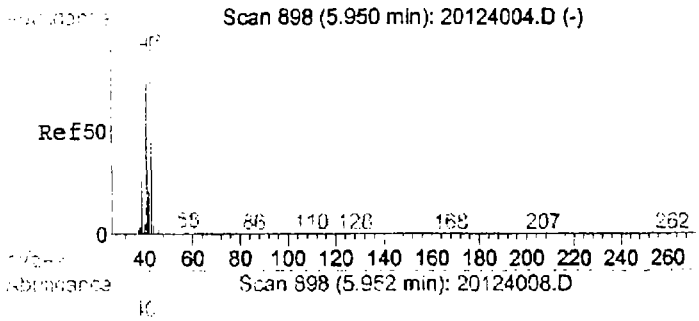


#45
Isobutanol
Concen: 1.33 ug/l
RT: 4.25 min Scan# 618
Delta R.T. 0.02 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 41 Resp: 115

Ion	Ratio	Lower	Upper
41	100		
43	63.5	115.0	172.6#

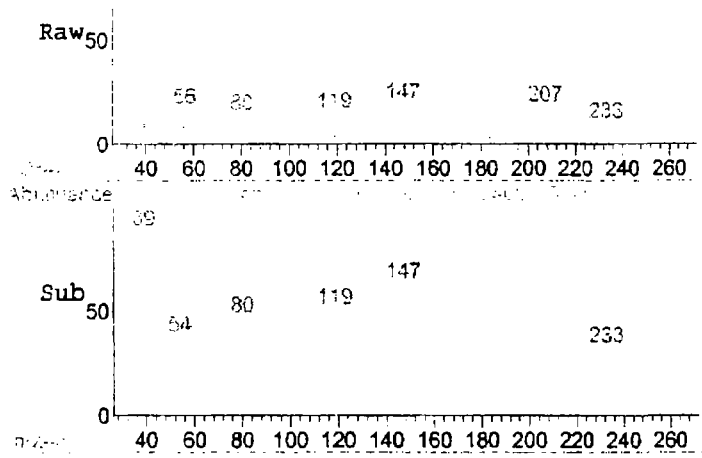


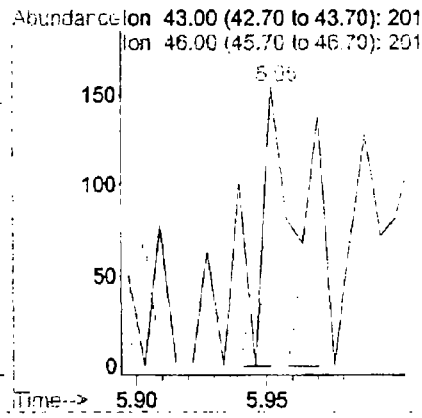


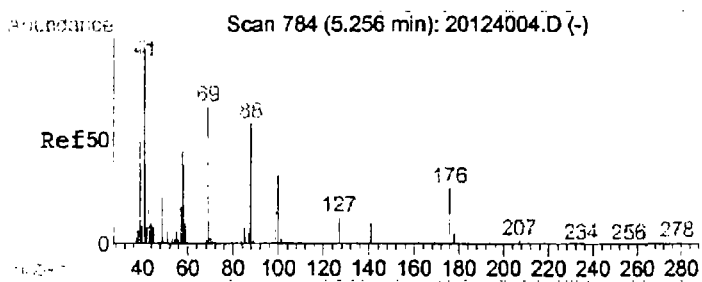
#53
2-Nitropropane
Concen: 18.21 ug/l
RT: 5.95 min Scan# 898
Delta R.T. 0.00 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 43 Resp: 221

Ion	Ratio	Lower	Upper
43	100		
46	8.6	2.1	3.1#



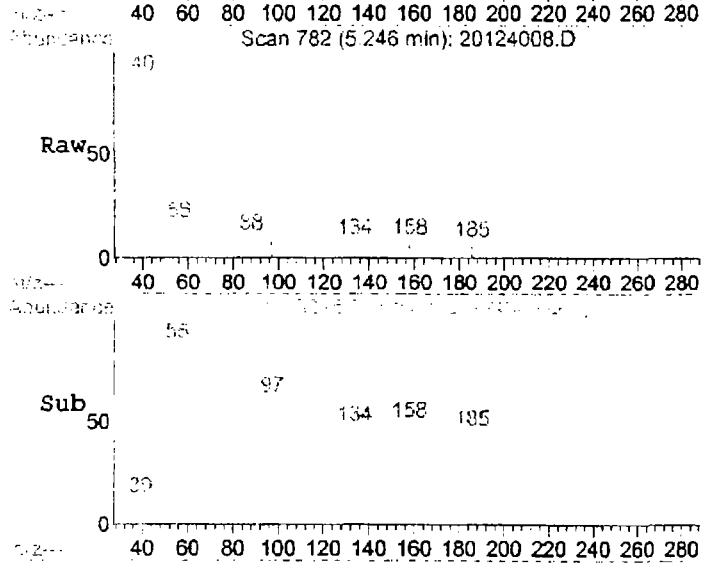


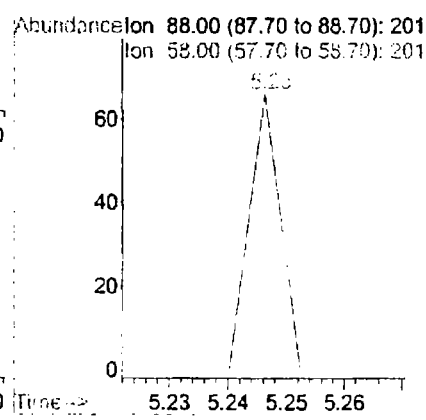


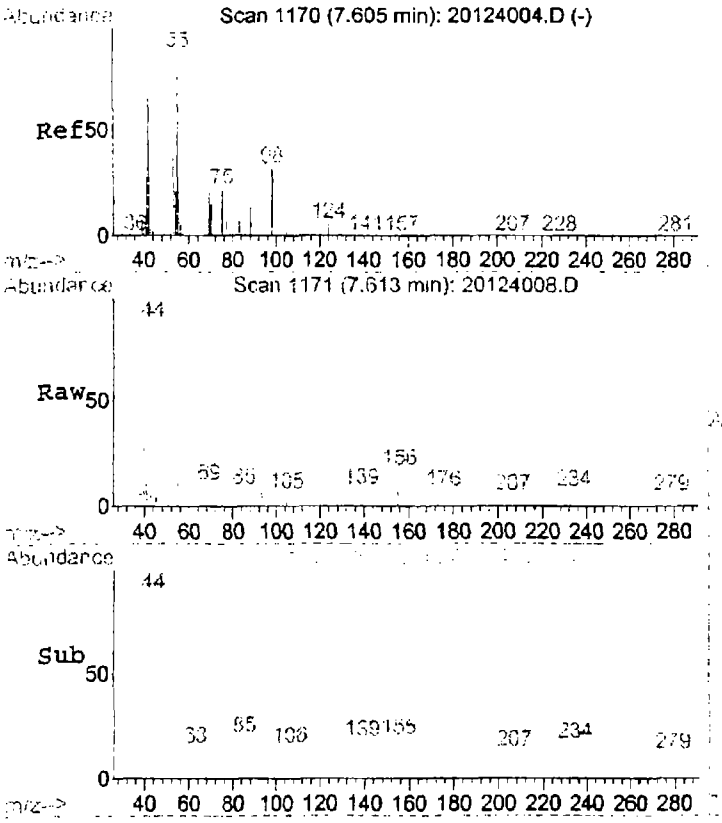
#59
1,4-Dioxane
Concen: 0.76 ug/l
RT: 5.25 min Scan# 782
Delta R.T. -0.01 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 88 Resp: 24

Ion	Ratio	Lower	Upper
88	100		
58	108.3	64.1	96.1#



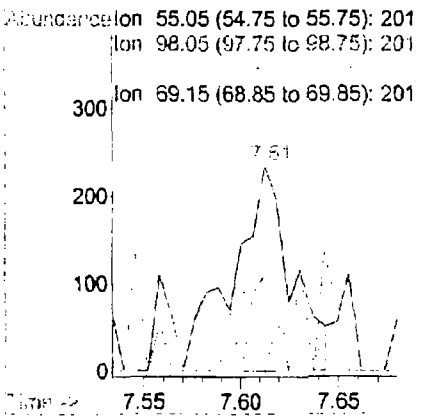




#78
Cyclohexanone
Concen: 0.80 ug/l
RT: 7.61 min Scan# 1171
Delta R.T. 0.01 min
Lab File: 20124008.D
Acq: 24 Jan 2006 12:19

Tgt Ion: 55 Resp: 493

Ion	Ratio	Lower	Upper
55	100		
98	17.6	34.1	51.1#
42	28.6	57.1	85.7#
69	26.6	18.1	27.1



Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\2AL01192.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Wed Jan 25 13:42:09 2006
Response via : Initial Calibration

Non-Spiked Sample: 20124038.D

	Spike Sample	Spike Duplicate Sample
File ID :	20124040.D	20124042.D
Sample :	06-0473 01-1799MS	06-0473 01-1799MSD
Acq Time:	24 Jan 2006 19:33	24 Jan 2006 20:00

Surrogate	Sample Conc	Amnt Added	Sampl %Rec	Spike Conc	Spike %Rec	Dup Conc	Dup %Rec	QC Limits % Rec
1,2-Dichloroethane-d	25.7	30	86	26.0	87	26.2	87	70-130
Toluene-d8	25.7	30	86	26.3	88	26.2	87	70-130
Bromofluorobenzene	27.3	30	91	27.9	93	28.0	93	70-130

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Dichlorodiflu	0.0	20	23	25	116.7	122.5	4.8	30	70-130
Chloromethane	0.1	20	17	18	85.5	91.4	6.6	30	70-130
Vinyl Chlorid	0.1	20	22	23	109.9	116.9	6.2	30	70-130
Bromomethane	0.0	20	14	17	72.4	85.8	17.0	30	70-130
Chloroethane	0.3	20	16	16	77.2	76.5	0.9	30	70-130
Trichlorofluo	0.0	20	20	21	98.0	103.1	5.0	30	70-130
Ethyl Ether	0.0	20	14	15	69.2#	73.0	5.4	30	70-130
Acrolein	0.0	20	54	55	269.0#	277.3#	3.1	30	70-130
1,1-Dichloroe	0.0	20	14	14	68.2#	71.7	5.0	30	70-130
112Trichlorol	0.0	20	13	14	64.0#	69.7#	8.5	30	70-130
Acetone	0.0	20	13	13	63.1#	63.8#	1.2	30	70-130
Iodomethane	0.0	100	67	77	67.1#	76.8	13.5	30	70-130
Carbon Disulf	0.1	20	10	11	49.3#	53.9#	8.9	30	70-130
Acetonitrile	0.0	100	79	77	78.5	76.7	2.3	30	70-130
Methyl acetat	0.1	20	8	8	39.4#	37.6#	4.7	30	70-130
Methylene Chl	0.2	20	14	14	67.2#	70.0	4.2	30	70-130
TBA, tertButy	115.1	100	91	83	-24.3#	-32.3#	99.0#	30	70-130
Acrylonitrile	0.1	20	15	14	73.4	71.8	2.1	30	70-130
trans-1,2-Dic	0.1	20	15	16	76.5	79.8	4.2	30	70-130
Allyl chlorid	0.1	100	71	76	70.8	76.2	7.2	30	70-130
tert-butyl Me	5.4	20	17	18	60.1#	61.1#	1.7	30	70-130
Vinyl acetate	0.0	20	0	0	1.0#	0.6#	46.5#	30	70-130
Hexane	0.0	20	14	20	68.2#	100.3	38.2#	30	70-130
1,1-Dichloroe	0.4	20	16	17	77.3	81.3	5.0	30	70-130
Chloroprene	0.0	20	16	17	79.8	85.7	7.1	30	70-130
t-Butyl ethyl	0.0	20	15	15	73.0	75.6	3.5	30	70-130
2,2-Dichlorop	0.0	20	16	17	78.6	82.9	5.4	30	70-130
cis-1,2-Dichl	1.0	20	16	16	75.2	76.3	1.4	30	70-130
2-Butanone	0.2	20	14	14	67.5#	69.8#	3.3	30	70-130
Propionitrile	0.1	20	14	14	71.7	66.9#	6.9	30	70-130
Ethyl acetate	0.1	20	13	13	64.0#	64.8#	1.2	30	70-130
Diisopropylet	0.1	20	14	14	67.7#	70.3	3.7	30	70-130
Bromochlorome	0.0	20	17	18	85.6	91.7	6.8	30	70-130
Methacrylonit	0.1	20	16	15	78.6	75.2	4.4	30	70-130
Tetrahydrofur	0.3	20	14	15	69.3#	71.9	3.7	30	70-130
Chloroform	0.0	20	16	16	79.1	80.1	1.3	30	70-130
1,1,1-Trichlo	0.4	20	16	17	79.2	83.1	4.8	30	70-130
Cyclohexane	0.0	20	17	19	86.4	94.0	8.5	30	70-130
Carbon Tetrac	0.0	20	15	17	76.1	82.5	8.0	30	70-130
1,1-Dichlorop	0.0	20	15	16	74.6	81.4	8.8	30	70-130
Benzene	0.1	20	15	16	76.4	80.6	5.4	30	70-130
1,2-Dichloroe	0.0	20	16	16	77.6	80.0	3.0	30	70-130
Isobutanol	0.5	100	50	25	49.1#	24.5#	66.7#	30	70-130
t-Amyl methyl	0.1	20	14	14	67.6#	70.0	3.5	30	70-130

Trichloroethe	0.5	20	16	17	79.6	84.0	5.4	30	70-130
Methylcyclohe	0.0	20	16	17	78.3	85.3	8.6	30	70-130
1,2-Dichlorop	0.0	20	16	17	79.6	84.4	5.8	30	70-130
Dibromomethan	0.0	20	17	18	83.9	87.6	4.3	30	70-130
Methyl methac	0.0	20	16	16	77.6	80.3	3.3	30	70-130
Bromodichloro	0.0	20	15	16	74.6	79.5	6.3	30	70-130
2-Nitropropan	0.0	100	64	66	63.9#	66.2#	3.5	30	70-130
2-Chloroethyl	0.4	20	4	3	15.7#	12.9#	19.8	30	70-130
cis-1,3-Dichl	0.0	20	15	16	74.5	78.0	4.7	30	70-130
4-Methyl-2-Pe	0.0	20	15	15	73.3	73.1	0.2	30	70-130
Toluene	0.1	20	16	16	77.0	81.7	5.8	30	70-130
trans-1,3-Dic	0.0	20	16	17	80.8	84.5	4.5	30	70-130
Ethyl methacr	0.0	20	15	16	77.2	79.5	2.9	30	70-130
1,1,2-Trichlo	0.0	20	17	17	86.0	82.8	3.7	30	70-130
Tetrachloroet	2.2	20	18	19	79.3	82.9	4.4	30	70-130
1,3-Dichlorop	0.0	20	17	17	86.1	85.9	0.3	30	70-130
2-Hexanone	0.0	20	16	16	78.1	80.0	2.4	30	70-130
Dibromochloro	0.0	20	15	16	74.5	80.3	7.5	30	70-130
1,2-Dibromoet	0.0	20	16	17	79.7	84.0	5.3	30	70-130
Chlorobenzene	0.5	20	17	18	81.3	85.3	4.7	30	70-130
1,1,1,2-Tetra	0.0	20	16	17	79.8	83.5	4.5	30	70-130
Ethylbenzene	0.2	20	16	17	78.0	83.1	6.2	30	70-130
m,p-Xylene	0.3	40	33	34	81.0	84.1	3.7	30	70-130
o-Xylene	0.2	20	16	16	78.9	80.6	2.1	30	70-130
Xylenes (Tota	0.5	60	49	50	80.3	82.9	3.2	30	70-130
Styrene	0.0	20	17	17	82.7	86.0	3.8	30	70-130
Bromoform	0.0	20	15	16	76.2	77.6	1.8	30	70-130
Cyclohexanone	0.1	100	15	16	15.2#	16.0#	5.0	30	70-130
n-Propylbenze	0.0	20	17	18	83.3	87.4	4.8	30	70-130
2-Chlorotolue	0.0	20	17	18	83.6	88.9	6.2	30	70-130
1,3,5-Trimeth	0.2	20	16	17	80.8	83.7	3.5	30	70-130
Isopropylbenz	0.0	20	17	17	83.1	86.5	4.0	30	70-130
Bromobenzene	0.0	20	17	17	82.9	85.7	3.3	30	70-130
1,1,2,2-Tetra	0.0	20	18	18	89.4	89.8	0.4	30	70-130
1,2,3-Trichlo	0.0	20	17	17	83.6	85.7	2.5	30	70-130
trans-1,4-Dic	0.0	20	16	16	80.4	81.1	0.9	30	70-130
4-Chlorotolue	0.0	20	16	17	81.2	86.2	5.9	30	70-130
tert-Butyl be	0.0	20	16	17	79.7	83.7	4.9	30	70-130
1,2,4-Trimeth	0.6	20	16	16	75.6	79.3	4.8	30	70-130
sec-Butyl ben	0.0	20	17	17	83.0	86.6	4.2	30	70-130
1,3-Dichlorob	0.0	20	17	18	87.2	91.5	4.8	30	70-130
4-Isopropyl t	0.0	20	16	17	78.7	82.6	4.8	30	70-130
1,4-Dichlorob	0.0	20	16	17	77.9	82.8	6.0	30	70-130
1,2-Dichlorob	0.2	20	17	18	84.5	86.3	2.2	30	70-130
n-Butyl benze	0.1	20	17	17	82.4	83.5	1.3	30	70-130
bis(2-Chloro-	0.0	20	17	17	85.7	87.0	1.5	30	70-130
1,2-Dibromo-3	0.0	20	15	15	75.1	75.8	0.9	30	70-130
1,2,4-Trichlo	0.0	20	17	17	82.9	87.2	5.0	30	70-130
Hexachlorobut	0.0	20	15	17	77.1	83.9	8.5	30	70-130
Naphthalene	1.1	20	17	17	78.2	79.9	2.2	30	70-130
1,2,3-Trichlo	0.0	20	17	17	84.7	86.4	2.0	30	70-130

- Fails Limit Check

2AL01192.M Wed Jan 25 14:02:12 2006 HP2

VOA LCS Blank Summary Report

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:54 2006
Response via : Single (D:\DATA\2060126\1\20126019.D 26 Jan 2006 14:28)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
42)	S	1,2-Dichloroethane-d	26.02	30.00	86.75	70 to 130%	[ ]
58)	S	Toluene-d8	25.89	30.00	86.29	70 to 130%	[ ]
83)	S	Bromofluorobenzene	28.95	30.00	96.50	70 to 130%	[ ]
2)	T	Dichlorodifluorometh	24.32	20.00	121.61	70 to 130%	[ ]
3)	T	Chloromethane	25.76	20.00	128.80	70 to 130%	[ ]
4)	T	Vinyl Chloride	20.61	20.00	103.04	70 to 130%	[ ]
5)	T	Bromomethane	17.78	20.00	88.92	70 to 130%	[ ]
6)	M	Chloroethane	13.50	20.00	67.48	70 to 130%	[*]
7)	T	Trichlorofluorometha	19.35	20.00	96.76	70 to 130%	[ ]
8)	T	Ethyl Ether	19.14	20.00	95.70	70 to 130%	[ ]
9)	T	Acrolein	70.20	20.00	351.01	70 to 130%	[*]
10)	T	1,1-Dichloroethene	15.57	20.00	77.83	70 to 130%	[ ]
11)	T	112Trichloro122trifl	19.06	20.00	95.31	70 to 130%	[ ]
12)	T	Acetone	18.35	20.00	91.74	70 to 130%	[ ]
13)	M	Iodomethane	116.97	100.00	116.97	70 to 130%	[ ]
14)	T	Carbon Disulfide	17.77	20.00	88.87	70 to 130%	[ ]
15)	M	Acetonitrile	94.18	100.00	94.18	70 to 130%	[ ]
16)	T	Methyl acetate	24.45	20.00	122.25	70 to 130%	[ ]
17)	T	Methylene Chloride	15.94	20.00	79.72	70 to 130%	[ ]
18)	T	TBA, tertButylalcoho	87.23	100.00	87.23	70 to 130%	[ ]
19)	T	Acrylonitrile	18.61	20.00	93.04	70 to 130%	[ ]
20)	T	trans-1,2-Dichloroet	18.88	20.00	94.38	70 to 130%	[ ]
21)	T	Allyl chloride	98.21	100.00	98.21	70 to 130%	[ ]
22)	T	tert-butyl Methyleth	20.45	20.00	102.23	70 to 130%	[ ]
23)	T	Vinyl acetate	0.09	20.00	0.45	70 to 130%	[*]
24)	T	Hexane	23.48	20.00	117.39	70 to 130%	[ ]
25)	T	1,1-Dichloroethane	20.37	20.00	101.87	70 to 130%	[ ]
26)	M	Chloroprene	24.03	20.00	120.14	70 to 130%	[ ]
27)	M	t-Butyl ethyl ether	20.63	20.00	103.13	70 to 130%	[ ]
28)	M	2,2-Dichloropropane	18.35	20.00	91.77	70 to 130%	[ ]
29)	T	cis-1,2-Dichloroethe	19.59	20.00	97.95	70 to 130%	[ ]
30)	T	2-Butanone	18.60	20.00	93.01	70 to 130%	[ ]
31)	T	Propionitrile	17.77	20.00	88.84	70 to 130%	[ ]
32)	T	Ethyl acetate	17.94	20.00	89.72	70 to 130%	[ ]
33)	T	Diisopropylether	19.03	20.00	95.13	70 to 130%	[ ]
34)	T	Bromochloromethane	18.58	20.00	92.92	70 to 130%	[ ]
35)	M	Methacrylonitrile	20.15	20.00	100.74	70 to 130%	[ ]
36)	T	Tetrahydrofuran	18.41	20.00	92.05	70 to 130%	[ ]
37)	T	Chloroform	20.66	20.00	103.30	70 to 130%	[ ]
38)	T	1,1,1-Trichloroethan	20.57	20.00	102.85	70 to 130%	[ ]
39)	T	Cyclohexane	25.65	20.00	128.24	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:54 2006
Response via : Single (D:\DATA\2060126\1\20126019.D 26 Jan 2006 14:28)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
40)	T	Carbon Tetrachloride	20.18	20.00	100.91	70 to 130%	[ ]
41)	T	1,1-Dichloropropene	19.35	20.00	96.74	70 to 130%	[ ]
43)	T	Benzene	20.28	20.00	101.41	70 to 130%	[ ]
44)	T	1,2-Dichloroethane	19.58	20.00	97.91	70 to 130%	[ ]
45)	M	Isobutanol	82.61	100.00	82.61	70 to 130%	[ ]
46)	M	t-Amyl methyl ether	19.07	20.00	95.34	70 to 130%	[ ]
47)	T	Trichloroethene	21.69	20.00	108.45	70 to 130%	[ ]
48)	T	Methylcyclohexane	21.44	20.00	107.19	70 to 130%	[ ]
49)	T	1,2-Dichloropropane	21.46	20.00	107.28	70 to 130%	[ ]
50)	T	Dibromomethane	20.56	20.00	102.80	70 to 130%	[ ]
51)	M	Methyl methacrylate	21.62	20.00	108.10	70 to 130%	[ ]
52)	T	Bromodichloromethane	21.00	20.00	104.99	70 to 130%	[ ]
53)	M	2-Nitropropane	84.44	100.00	84.44	70 to 130%	[ ]
54)	T	2-Chloroethylvinylet	40.33	20.00	201.67	70 to 130%	[*]
55)	T	cis-1,3-Dichloroprop	21.58	20.00	107.91	70 to 130%	[ ]
56)	T	4-Methyl-2-Pentanone	20.39	20.00	101.96	70 to 130%	[ ]
60)	T	Toluene	19.68	20.00	98.41	70 to 130%	[ ]
61)	T	trans-1,3-Dichloropr	23.38	20.00	116.91	70 to 130%	[ ]
62)	M	Ethyl methacrylate	20.72	20.00	103.61	70 to 130%	[ ]
63)	T	1,1,2-Trichloroethan	22.17	20.00	110.87	70 to 130%	[ ]
64)	T	Tetrachloroethene	20.58	20.00	102.91	70 to 130%	[ ]
65)	T	1,3-Dichloropropane	22.79	20.00	113.96	70 to 130%	[ ]
66)	T	2-Hexanone	22.04	20.00	110.22	70 to 130%	[ ]
67)	T	Dibromochloromethane	23.39	20.00	116.94	70 to 130%	[ ]
68)	T	1,2-Dibromoethane,ED	21.84	20.00	109.18	70 to 130%	[ ]
69)	T	Chlorobenzene	21.36	20.00	106.80	70 to 130%	[ ]
70)	T	1,1,1,2-Tetrachloroe	22.64	20.00	113.19	70 to 130%	[ ]
71)	T	Ethylbenzene	20.81	20.00	104.03	70 to 130%	[ ]
72)	T	m,p-Xylene	39.89	40.00	99.72	70 to 130%	[ ]
73)	T	o-Xylene	18.59	20.00	92.93	70 to 130%	[ ]
74)	MG	Xylenes (Total)	58.51	60.00	97.51	70 to 130%	[ ]
75)	T	Styrene	19.61	20.00	98.03	70 to 130%	[ ]
77)	T	Bromoform	25.40	20.00	127.01	70 to 130%	[ ]
78)	M	Cyclohexanone	110.63	100.00	110.63	70 to 130%	[ ]
79)	T	n-Propylbenzene	21.42	20.00	107.11	70 to 130%	[ ]
80)	M	2-Chlorotoluene	22.07	20.00	110.33	70 to 130%	[ ]
81)	T	1,3,5-Trimethylbenze	22.69	20.00	113.44	70 to 130%	[ ]
82)	T	Isopropylbenzene,Cum	23.21	20.00	116.04	70 to 130%	[ ]
84)	M	Bromobenzene	23.05	20.00	115.23	70 to 130%	[ ]
85)	T	1,1,2,2-Tetrachloroe	22.60	20.00	113.02	70 to 130%	[ ]
86)	T	1,2,3-Trichloropropa	25.82	20.00	129.12	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:54 2006
Response via : Single (D:\DATA\2060126\1\20126019.D 26 Jan 2006 14:28)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
87)	M	trans-1,4-Dichloro-2	26.41	20.00	132.05	70 to 130%	[*]
88)	M	4-Chlorotoluene	21.72	20.00	108.58	70 to 130%	[ ]
89)	M	tert-Butyl benzene	20.65	20.00	103.25	70 to 130%	[ ]
90)	T	1,2,4-Trimethylbenze	22.21	20.00	111.07	70 to 130%	[ ]
91)	M	sec-Butyl benzene	21.27	20.00	106.37	70 to 130%	[ ]
92)	T	1,3-Dichlorobenzene	23.07	20.00	115.36	70 to 130%	[ ]
93)	M	4-Isopropyl toluene	21.57	20.00	107.85	70 to 130%	[ ]
94)	T	1,4-Dichlorobenzene	20.79	20.00	103.93	70 to 130%	[ ]
95)	T	1,2-Dichlorobenzene	21.70	20.00	108.50	70 to 130%	[ ]
96)	M	n-Butyl benzene	22.18	20.00	110.91	70 to 130%	[ ]
97)	M	bis(2-Chloro-1-methy	21.42	20.00	107.10	70 to 130%	[ ]
98)	T	1,2-Dibromo-3-chloro	21.84	20.00	109.22	70 to 130%	[ ]
99)	T	1,2,4-Trichlorobenze	21.13	20.00	105.63	70 to 130%	[ ]
100)	M	Hexachlorobutadiene	21.22	20.00	106.08	70 to 130%	[ ]
101)	T	Naphthalene	21.34	20.00	106.72	70 to 130%	[ ]
102)	M	1,2,3-Trichlorobenze	20.63	20.00	103.17	70 to 130%	[ ]

* = out of control limits

Quantitation Report (QT Reviewed)

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:24 19106

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01261.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060126\1\20126019.D (26 Jan 2006 14:28)

HWA 1/27/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.26	96	497069	30.00 ug/l	0.00 104.18%
57) Chlorobenzene-d5	6.76	117	300606	30.00 ug/l	0.00 103.62%
76) 1,4-Dichlorobenzene-d4	7.94	152	91846	30.00 ug/l	0.00 89.24%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.91	65	257669	26.02 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 86.73%		
58) Toluene-d8	5.70	98	555271	25.89 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 86.30%		
83) Bromofluorobenzene	7.41	95	153638	28.95 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 96.50%		

Target Compounds

					Qvalue
2) Dichlorodifluoromethane	0.88	85	115127	24.32 ug/l	99
3) Chloromethane	0.97	50	113762	25.76 ug/l #	65
4) Vinyl Chloride	1.01	62	108565	20.61 ug/l	99
5) Bromomethane	1.15	94	30217	17.78 ug/l	96
6) Chloroethane	1.21	64	28711	13.50 ug/l #	91
7) Trichlorofluoromethane	1.27	101	101194	19.35 ug/l	99
8) Ethyl Ether	1.43	59	120948	19.14 ug/l	100
9) Acrolein	1.72	56	11909	70.20 ug/l	97
10) 1,1-Dichloroethene	1.54	96	67622	15.57 ug/l	99
11) 112Trichloro122trifluoroet	1.55	101	141265	19.06 ug/l	99
12) Acetone	1.91	43	64052	18.35 ug/l	99
13) Iodomethane	1.61	142	574980	116.97 ug/l	99
14) Carbon Disulfide	1.55	76	173613	17.77 ug/l	99
15) Acetonitrile	2.21	41	75016	94.18 ug/l	100
16) Methyl acetate	1.99	43	349874	24.45 ug/l	89
17) Methylene Chloride	1.86	84	84730	15.94 ug/l	98
18) TBA, tertButylalcohol	2.12	59	79145	87.23 ug/l	100
19) Acrylonitrile	2.44	53	66147	18.61 ug/l	99
20) trans-1,2-Dichloroethene	1.96	96	137771	18.88 ug/l	99
21) Allyl chloride	1.80	41	607715	98.21 ug/l	99
22) tert-butyl Methylether,MtB	2.03	73	440968	20.45 ug/l	94
24) Hexane	2.00	57	218797	23.48 ug/l	99
25) 1,1-Dichloroethane	2.38	63	232358	20.37 ug/l	99
26) Chloroprene	2.36	88	110547	24.03 ug/l	98
27) t-Butyl ethyl ether	2.58	59	468534	20.63 ug/l	100
28) 2,2-Dichloropropane	2.92	77	218716	18.35 ug/l #	99
29) cis-1,2-Dichloroethene	2.83	96	134020	19.59 ug/l	98
30) 2-Butanone	3.47	43	105613	18.60 ug/l #	90
31) Propionitrile	3.82	54	19557	17.77 ug/l #	100
32) Ethyl acetate	3.27	43	227071	17.94 ug/l	92
33) Diisopropylether	2.30	45	494108	19.03 ug/l	100
34) Bromochloromethane	3.01	128	48883	18.58 ug/l	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:24 19106

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 2AL01261.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35)	Methacrylonitrile	3.84	41	130919	20.15 ug/l		98
36)	Tetrahydrofuran	3.28	42	78311	18.41 ug/l		98
37)	Chloroform	3.09	83	296214	20.66 ug/l		99
38)	1,1,1-Trichloroethane	3.29	97	270810	20.57 ug/l		99
39)	Cyclohexane	2.99	56	312386	25.65 ug/l		100
40)	Carbon Tetrachloride	3.21	117	231946	20.18 ug/l		100
41)	1,1-Dichloropropene	3.43	75	201793	19.35 ug/l		99
43)	Benzene	3.73	78	490618	20.28 ug/l		100
44)	1,2-Dichloroethane	4.01	62	232650	19.58 ug/l		99
45)	Isobutanol	4.20	41	16259	82.61 ug/l		87
46)	t-Amyl methyl ether	3.94	73	397916	19.07 ug/l		99
47)	Trichloroethene	4.43	95	156101	21.69 ug/l		99
48)	Methylcyclohexane	4.40	83	213593	21.44 ug/l		100
49)	1,2-Dichloropropane	4.94	63	137572	21.46 ug/l		100
50)	Dibromomethane	4.85	93	89684	20.56 ug/l		98
51)	Methyl methacrylate	5.22	41	189644	21.62 ug/l		99
52)	Bromodichloromethane	5.02	83	193492	21.00 ug/l		99
53)	2-Nitropropane	5.93	43	210960	84.44 ug/l		100
54)	2-Chloroethylvinylether	5.54	63	65410	40.33 ug/l		99
55)	cis-1,3-Dichloropropene	5.56	75	210658	21.58 ug/l		100
56)	4-Methyl-2-Pentanone	6.07	43	188943	20.39 ug/l		100
59)	1,4-Dioxane	5.23	88	3858	77.49 ug/l	#	74
60)	Toluene	5.74	91	477989	19.68 ug/l		100
61)	trans-1,3-Dichloropropene	6.07	75	199554	23.38 ug/l		99
62)	Ethyl methacrylate	6.22	69	174110	20.72 ug/l		99
63)	1,1,2-Trichloroethane	6.18	97	118547	22.17 ug/l		99
64)	Tetrachloroethene	6.02	164	124610	20.58 ug/l		99
65)	1,3-Dichloropropane	6.36	76	195258	22.79 ug/l		98
66)	2-Hexanone	6.62	43	118674	22.04 ug/l		98
67)	Dibromochloromethane	6.29	129	148865	23.39 ug/l		98
68)	1,2-Dibromoethane,EDB	6.43	107	117973	21.84 ug/l		100
69)	Chlorobenzene	6.76	112	294293	21.36 ug/l		88
70)	1,1,1,2-Tetrachloroethane	6.80	131	149004	22.64 ug/l		99
71)	Ethylbenzene	6.79	106	150680	20.81 ug/l		98
72)	m,p-Xylene	6.88	106	299383	39.89 ug/l		98
73)	o-Xylene	7.11	106	135465	18.59 ug/l		97
74)	Xylenes (Total)	6.88	106	434848m	58.51 ug/l		95
75)	Styrene	7.14	104	220075	19.61 ug/l		100
77)	Bromoform	7.14	173	89401	25.40 ug/l		99
78)	Cyclohexanone	7.60	55	64580	110.63 ug/l		96
79)	n-Propylbenzene	7.48	91	345571	21.42 ug/l		100
80)	2-Chlorotoluene	7.55	126	80634	22.07 ug/l		100
81)	1,3,5-Trimethylbenzene	7.58	105	268723	22.69 ug/l		100
82)	Isopropylbenzene,Cumene	7.27	105	388954	23.21 ug/l		100
84)	Bromobenzene	7.46	158	97388	23.05 ug/l	#	87
85)	1,1,2,2-Tetrachloroethane	7.52	83	131422	22.60 ug/l		98
86)	1,2,3-Trichloropropane	7.58	75	149771	25.82 ug/l		98
87)	trans-1,4-Dichloro-2-buten	7.61	53	29722	26.41 ug/l		93
88)	4-Chlorotoluene	7.63	91	217145	21.72 ug/l		99
89)	tert-Butyl benzene	7.73	91	145472	20.65 ug/l		100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:24 19106

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 2AL01261.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:50 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
90)	1,2,4-Trimethylbenzene	7.77	105	252113	22.21 ug/l	100
91)	sec-Butyl benzene	7.81	105	280782	21.27 ug/l	100
92)	1,3-Dichlorobenzene	7.91	146	135764	23.07 ug/l	99
93)	4-Isopropyl toluene	7.88	119	244326	21.57 ug/l	100
94)	1,4-Dichlorobenzene	7.95	146	123046	20.79 ug/l	99
95)	1,2-Dichlorobenzene	8.14	146	116482	21.70 ug/l	99
96)	n-Butyl benzene	8.07	91	182501	22.18 ug/l	99
97)	bis(2-Chloro-1-methyl ethy	8.31	45	44611	21.42 ug/l	99
98)	1,2-Dibromo-3-chloropropan	8.50	75	16510	21.84 ug/l	98
99)	1,2,4-Trichlorobenzene	8.79	180	61476	21.13 ug/l	98
100)	Hexachlorobutadiene	8.77	225	32595	21.22 ug/l	99
101)	Naphthalene	8.93	128	212647	21.34 ug/l	100
102)	1,2,3-Trichlorobenzene	9.01	180	59137	20.63 ug/l	98

(#) = qualifier out of range (m) = manual integration

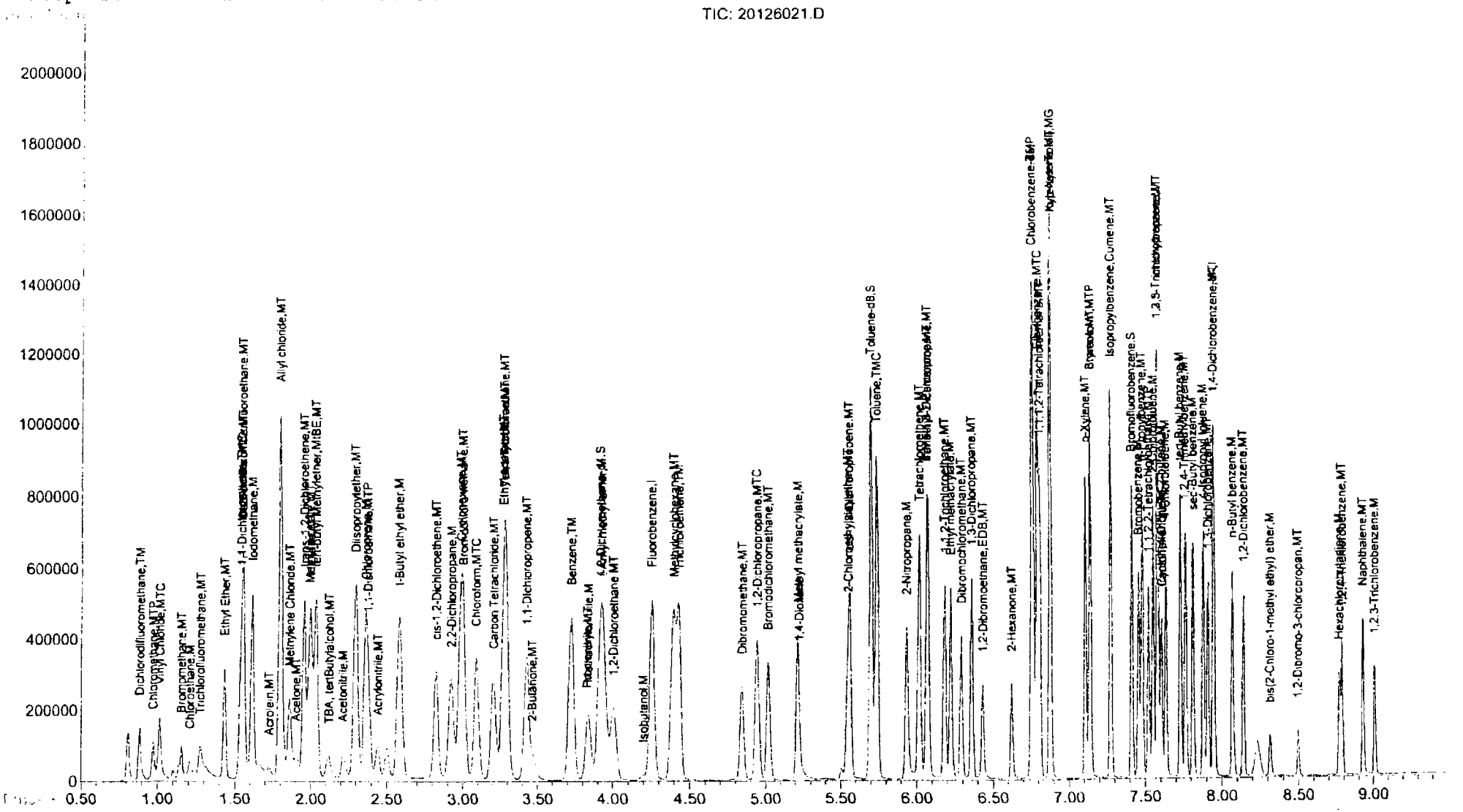
Data File : D:\DATA\2060126\1\20126021.D
Acq On : 26 Jan 2006 14:55
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:24 19106

Vial: 19
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01261.RES

Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:00 2006
Response via : Initial Calibration

TIC: 20126021.D



Quantitation Report (QT Reviewed)

Data File : D:\DATA\2060126\1\20126025.D
Acq On : 26 Jan 2006 15:49
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:32 19106

Vial: 23
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01261.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:54 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060126\1\20126019.D (26 Jan 2006 14:28)

MAK 1.27.06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.26	96	506880	30.00 ug/l	0.00 106.24%
57) Chlorobenzene-d5	6.76	117	266547	30.00 ug/l	0.00 91.88%
76) 1,4-Dichlorobenzene-d4	7.94	152	78636	30.00 ug/l	0.00 76.40%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.92	65	260146	25.77 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 85.90%		
58) Toluene-d8	5.70	98	546626	28.74 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 95.80%		
83) Bromofluorobenzene	7.41	95	111709	24.59 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 81.97%		

Target Compounds

					Qvalue
15) Acetonitrile	2.21	41	3239	3.99 ug/l	92
17) Methylene Chloride	1.86	84	3437	Below Cal	96

(#) = qualifier out of range (m) = manual integration

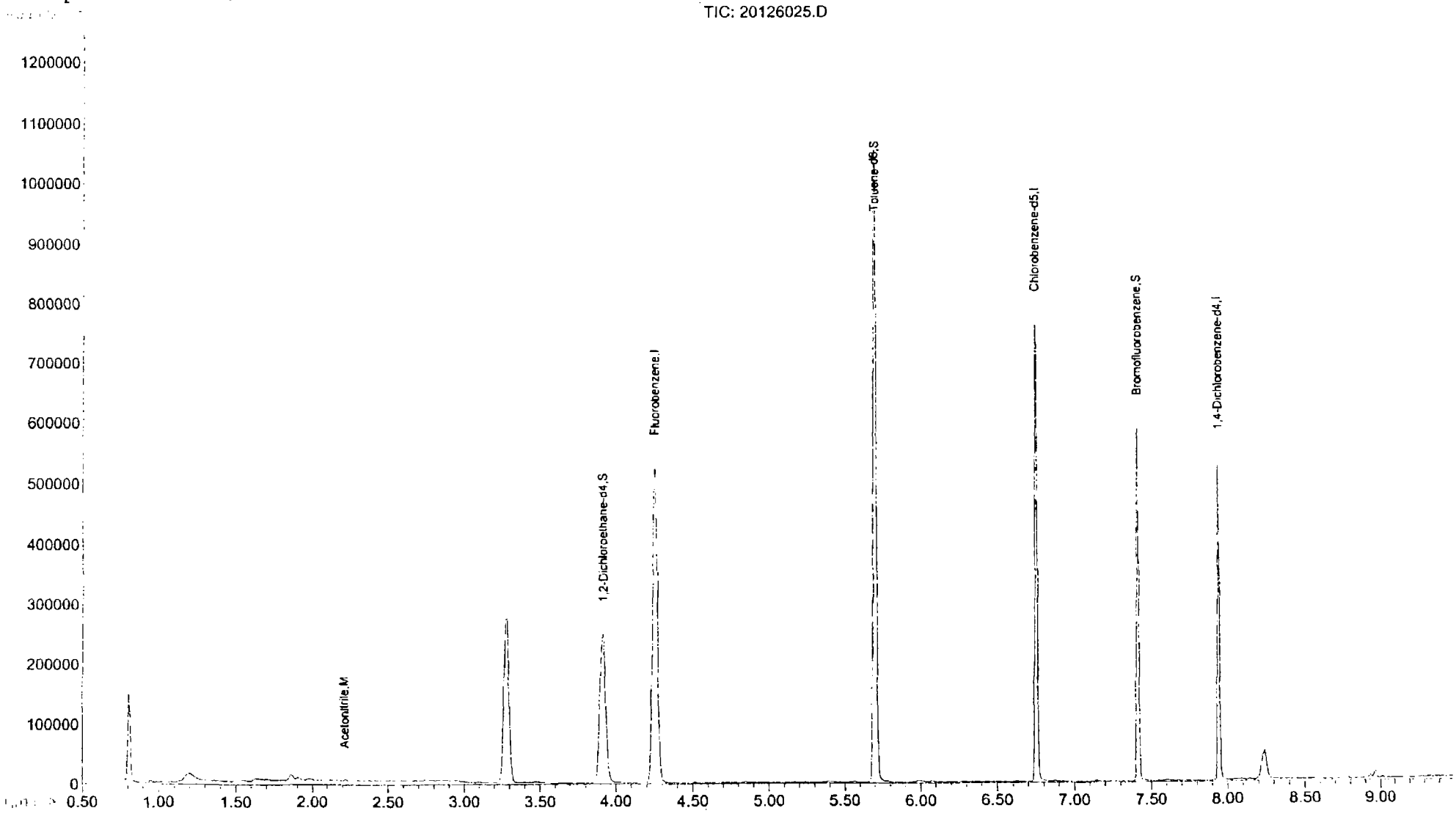
Quantitation Report

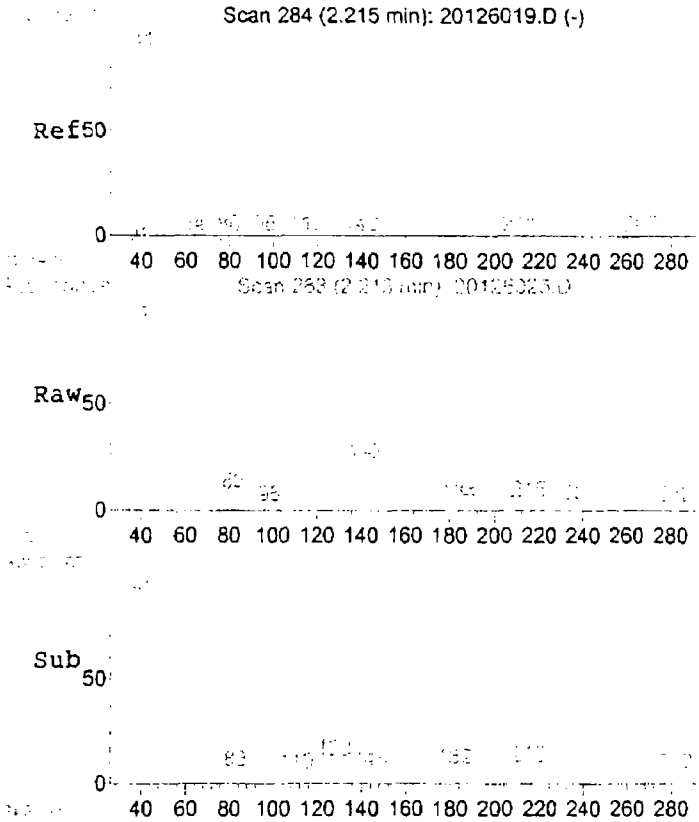
Data File : D:\DATA\2060126\1\20126025.D
Acq On : 26 Jan 2006 15:49
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jan 27 7:32 19106

Vial: 23
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01261.RES

Method : C:\HPCHEM\1\METHODS\2AL01261.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Fri Jan 27 07:23:00 2006
Response via : Initial Calibration

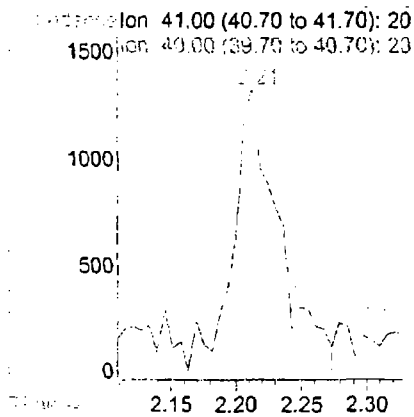


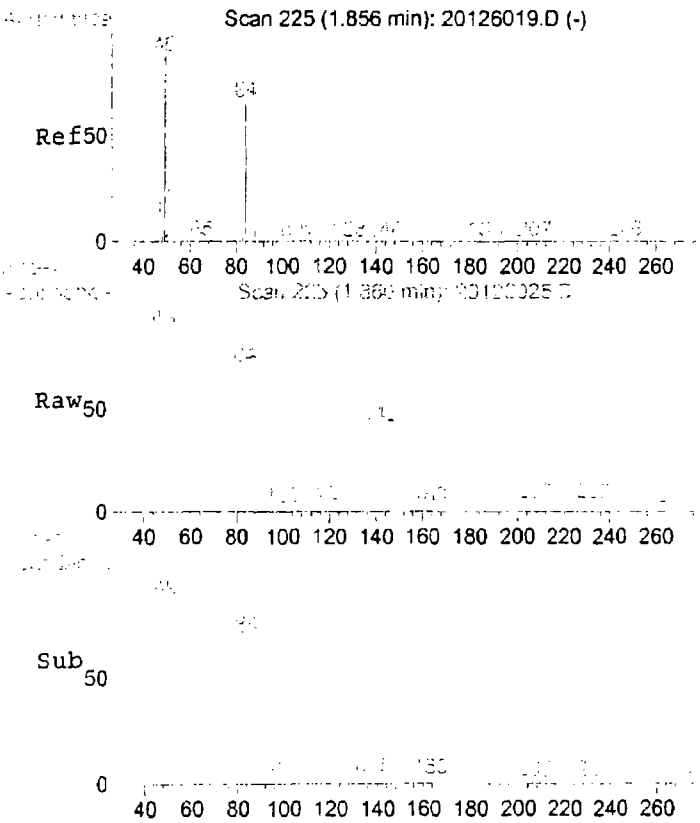


#15
Acetonitrile
Concen: 3.99 ug/l
RT: 2.21 min Scan# 283
Delta R.T. -0.00 min
Lab File: 20126025.D
Acq: 26 Jan 2006 15:49

Tgt Ion: 41 Resp: 3239

Ion	Ratio	Lower	Upper
41	100		
40	62.2	45.1	67.7

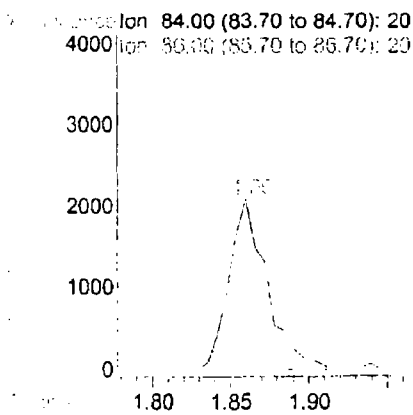




#17
Methylene Chloride
Concen: Below Cal
RT: 1.86 min Scan# 225
Delta R.T. 0.00 min
Lab File: 20126025.D
Acq: 26 Jan 2006 15:49

Tgt Ion: 84 Resp: 3437

Ion	Ratio	Lower	Upper
84	100		
86	61.9	51.3	76.9
49	164.2	126.5	189.7



VOA LCS Blank Summary Report

Data File : D:\DATA\2060127\2A\20127006.D
Acq On : 27 Jan 2006 14:28
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 6
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 10:55:54 2006
Response via : Single (D:\DATA\2060127\2A\20127004.D 27 Jan 2006 14:02)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
42)	S	1,2-Dichloroethane-d	30.55	30.00	101.85	70 to 130%	[ ]
58)	S	Toluene-d8	27.96	30.00	93.19	70 to 130%	[ ]
83)	S	Bromofluorobenzene	28.33	30.00	94.43	70 to 130%	[ ]
2)	T	Dichlorodifluorometh	28.22	20.00	141.12	70 to 130%	[*]
3)	T	Chloromethane	20.98	20.00	104.91	70 to 130%	[ ]
4)	T	Vinyl Chloride	24.99	20.00	124.93	70 to 130%	[ ]
5)	T	Bromomethane	21.43	20.00	107.15	70 to 130%	[ ]
6)	M	Chloroethane	16.50	20.00	82.51	70 to 130%	[ ]
7)	T	Trichlorofluorometha	23.67	20.00	118.36	70 to 130%	[ ]
8)	T	Ethyl Ether	20.36	20.00	101.81	70 to 130%	[ ]
9)	T	Acrolein	71.62	20.00	358.08	70 to 130%	[*]
10)	T	1,1-Dichloroethene	14.84	20.00	74.21	70 to 130%	[ ]
11)	T	112Trichloro122trifl	20.43	20.00	102.13	70 to 130%	[ ]
12)	T	Acetone	18.99	20.00	94.93	70 to 130%	[ ]
13)	M	Iodomethane	130.22	100.00	130.22	70 to 130%	[*]
14)	T	Carbon Disulfide	18.38	20.00	91.92	70 to 130%	[ ]
15)	M	Acetonitrile	106.92	100.00	106.92	70 to 130%	[ ]
16)	T	Methyl acetate	12.59	20.00	62.96	70 to 130%	[*]
17)	T	Methylene Chloride	18.04	20.00	90.20	70 to 130%	[ ]
18)	T	TBA, tertButylalcoho	99.41	100.00	99.41	70 to 130%	[ ]
19)	T	Acrylonitrile	19.85	20.00	99.26	70 to 130%	[ ]
20)	T	trans-1,2-Dichloroet	17.85	20.00	89.25	70 to 130%	[ ]
21)	T	Allyl chloride	108.70	100.00	108.70	70 to 130%	[ ]
22)	T	tert-butyl Methyleth	21.60	20.00	108.00	70 to 130%	[ ]
23)	T	Vinyl acetate	0.11	20.00	0.53	70 to 130%	[*]
24)	T	Hexane	21.26	20.00	106.30	70 to 130%	[ ]
25)	T	1,1-Dichloroethane	18.83	20.00	94.14	70 to 130%	[ ]
26)	M	Chloroprene	22.40	20.00	112.01	70 to 130%	[ ]
27)	M	t-Butyl ethyl ether	20.92	20.00	104.61	70 to 130%	[ ]
28)	M	2,2-Dichloropropane	18.32	20.00	91.61	70 to 130%	[ ]
29)	T	cis-1,2-Dichloroethe	18.93	20.00	94.64	70 to 130%	[ ]
30)	T	2-Butanone	18.46	20.00	92.30	70 to 130%	[ ]
31)	T	Propionitrile	18.13	20.00	90.66	70 to 130%	[ ]
32)	T	Ethyl acetate	17.68	20.00	88.41	70 to 130%	[ ]
33)	T	Diisopropylether	19.32	20.00	96.59	70 to 130%	[ ]
34)	T	Bromochloromethane	19.76	20.00	98.79	70 to 130%	[ ]
35)	M	Methacrylonitrile	20.94	20.00	104.69	70 to 130%	[ ]
36)	T	Tetrahydrofuran	17.61	20.00	88.03	70 to 130%	[ ]
37)	T	Chloroform	19.63	20.00	98.14	70 to 130%	[ ]
38)	T	1,1,1-Trichloroethan	19.59	20.00	97.96	70 to 130%	[ ]
39)	T	Cyclohexane	24.70	20.00	123.49	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060127\2A\20127006.D
Acq On : 27 Jan 2006 14:28
Sample : LCS[20]
Misc : V1-185-3
Matrix : WATERrams: RTEINT.P

Vial: 6
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 10:55:54 2006
Response via : Single (D:\DATA\2060127\2A\20127004.D 27 Jan 2006 14:02)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
40)	T	Carbon Tetrachloride	19.26	20.00	96.32	70 to 130%	[ ]
41)	T	1,1-Dichloropropene	17.88	20.00	89.39	70 to 130%	[ ]
43)	T	Benzene	18.28	20.00	91.41	70 to 130%	[ ]
44)	T	1,2-Dichloroethane	19.58	20.00	97.91	70 to 130%	[ ]
45)	M	Isobutanol	25.92	100.00	25.92	70 to 130%	[*]
46)	M	t-Amyl methyl ether	18.19	20.00	90.97	70 to 130%	[ ]
47)	T	Trichloroethene	19.58	20.00	97.91	70 to 130%	[ ]
48)	T	Methylcyclohexane	20.61	20.00	103.06	70 to 130%	[ ]
49)	T	1,2-Dichloropropane	19.21	20.00	96.07	70 to 130%	[ ]
50)	T	Dibromomethane	20.84	20.00	104.21	70 to 130%	[ ]
51)	M	Methyl methacrylate	21.06	20.00	105.31	70 to 130%	[ ]
52)	T	Bromodichloromethane	19.55	20.00	97.75	70 to 130%	[ ]
53)	M	2-Nitropropane	90.10	100.00	90.10	70 to 130%	[ ]
54)	T	2-Chloroethylvinylet	21.23	20.00	106.16	70 to 130%	[ ]
55)	T	cis-1,3-Dichloroprop	18.54	20.00	92.72	70 to 130%	[ ]
56)	T	4-Methyl-2-Pentanone	19.48	20.00	97.39	70 to 130%	[ ]
59)		1,4-Dioxane	98.19	200.00	49.10	70 to 130%	[*]
60)	T	Toluene	18.72	20.00	93.59	70 to 130%	[ ]
61)	T	trans-1,3-Dichloropr	20.93	20.00	104.65	70 to 130%	[ ]
62)	M	Ethyl methacrylate	18.65	20.00	93.27	70 to 130%	[ ]
63)	T	1,1,2-Trichloroethan	19.92	20.00	99.61	70 to 130%	[ ]
64)	T	Tetrachloroethene	21.29	20.00	106.45	70 to 130%	[ ]
65)	T	1,3-Dichloropropane	20.36	20.00	101.81	70 to 130%	[ ]
66)	T	2-Hexanone	19.18	20.00	95.89	70 to 130%	[ ]
67)	T	Dibromochloromethane	19.04	20.00	95.21	70 to 130%	[ ]
68)	T	1,2-Dibromoethane,ED	18.83	20.00	94.17	70 to 130%	[ ]
69)	T	Chlorobenzene	20.23	20.00	101.14	70 to 130%	[ ]
70)	T	1,1,1,2-Tetrachloroe	20.19	20.00	100.95	70 to 130%	[ ]
71)	T	Ethylbenzene	19.06	20.00	95.28	70 to 130%	[ ]
72)	T	m,p-Xylene	40.76	40.00	101.90	70 to 130%	[ ]
73)	T	o-Xylene	18.98	20.00	94.90	70 to 130%	[ ]
74)	MG	Xylenes (Total)	59.70	60.00	99.51	70 to 130%	[ ]
75)	T	Styrene	20.27	20.00	101.33	70 to 130%	[ ]
77)	T	Bromoform	18.81	20.00	94.05	70 to 130%	[ ]
78)	M	Cyclohexanone	81.58	100.00	81.58	70 to 130%	[ ]
79)	T	n-Propylbenzene	19.94	20.00	99.69	70 to 130%	[ ]
80)	M	2-Chlorotoluene	20.14	20.00	100.68	70 to 130%	[ ]
81)	T	1,3,5-Trimethylbenze	19.88	20.00	99.40	70 to 130%	[ ]
82)	T	Isopropylbenzene,Cum	20.12	20.00	100.60	70 to 130%	[ ]
84)	M	Bromobenzene	20.03	20.00	100.13	70 to 130%	[ ]
85)	T	1,1,2,2-Tetrachloroe	19.89	20.00	99.43	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060127\2A\20127006.D Vial: 6
Acq On : 27 Jan 2006 14:28 Operator: MAK
Sample : LCS[20] Inst : GC/MS Ins
Misc : V1-185-3 Multiplr: 1.00
Matrix : WATERrams: RTEINT.P

Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 10:55:54 2006
Response via : Single (D:\DATA\2060127\2A\20127004.D 27 Jan 2006 14:02)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
86)	T	1,2,3-Trichloropropa	18.83	20.00	94.15	70 to 130%	[ ]
87)	M	trans-1,4-Dichloro-2	21.09	20.00	105.47	70 to 130%	[ ]
88)	M	4-Chlorotoluene	19.91	20.00	99.54	70 to 130%	[ ]
89)	M	tert-Butyl benzene	19.92	20.00	99.58	70 to 130%	[ ]
90)	T	1,2,4-Trimethylbenze	19.55	20.00	97.75	70 to 130%	[ ]
91)	M	sec-Butyl benzene	20.05	20.00	100.25	70 to 130%	[ ]
92)	T	1,3-Dichlorobenzene	21.65	20.00	108.23	70 to 130%	[ ]
93)	M	4-Isopropyl toluene	19.36	20.00	96.82	70 to 130%	[ ]
94)	T	1,4-Dichlorobenzene	19.35	20.00	96.75	70 to 130%	[ ]
95)	T	1,2-Dichlorobenzene	20.29	20.00	101.46	70 to 130%	[ ]
96)	M	n-Butyl benzene	19.99	20.00	99.97	70 to 130%	[ ]
97)	M	bis(2-Chloro-1-methy	20.00	20.00	100.02	70 to 130%	[ ]
98)	T	1,2-Dibromo-3-chloro	19.99	20.00	99.95	70 to 130%	[ ]
99)	T	1,2,4-Trichlorobenze	19.96	20.00	99.79	70 to 130%	[ ]
100)	M	Hexachlorobutadiene	20.70	20.00	103.49	70 to 130%	[ ]
101)	T	Naphthalene	19.83	20.00	99.17	70 to 130%	[ ]
102)	M	1,2,3-Trichlorobenze	20.14	20.00	100.70	70 to 130%	[ ]

* = out of control limits

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060127\2A\20127006.D Vial: 6
Acq On : 27 Jan 2006 14:28 Operator: MAK
Sample : LCS[20] Inst : GC/MS Ins
Misc : V1-185-3 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:44 19106 Quant Results File: 2AL01262.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 09:42:45 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060127\2A\20127004.D (27 Jan 2006 14:02)

1/30/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.30	96	188129	30.00 ug/l	0.00 96.27%
57) Chlorobenzene-d5	6.76	117	150393	30.00 ug/l	0.00 97.72%
76) 1,4-Dichlorobenzene-d4	7.95	152	88573	30.00 ug/l	0.00 100.77%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.97	65	92139	30.55 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 101.83%		
58) Toluene-d8	5.72	98	246361	27.96 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 93.20%		
83) Bromofluorobenzene	7.42	95	106154	28.33 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 94.43%		

Target Compounds

					Qvalue
2) Dichlorodifluoromethane	0.93	85	63766	28.22 ug/l	98
3) Chloromethane	1.05	50	81529	20.98 ug/l	99
4) Vinyl Chloride	1.06	62	61964	24.99 ug/l	99
5) Bromomethane	1.21	94	24982	21.43 ug/l	94
6) Chloroethane	1.26	64	18554	16.50 ug/l #	70
7) Trichlorofluoromethane	1.33	101	84904	23.67 ug/l	98
8) Ethyl Ether	1.49	59	38033	20.36 ug/l	100
9) Acrolein	1.78	56	5060	71.62 ug/l	86
10) 1,1-Dichloroethene	1.59	96	32775	14.84 ug/l	95
11) 112Trichloro122trifluoroet	1.60	101	45039	20.43 ug/l	98
12) Acetone	1.96	43	24195	18.99 ug/l	98
13) Iodomethane	1.67	142	345652	130.22 ug/l	100
14) Carbon Disulfide	1.61	76	86154	18.38 ug/l	99
15) Acetonitrile	2.26	41	41990	106.92 ug/l	98
16) Methyl acetate	2.03	43	41725	12.59 ug/l	93
17) Methylene Chloride	1.91	84	41672	18.04 ug/l	97
18) TBA, tertButylalcohol	2.17	59	33343	99.41 ug/l	98
19) Acrylonitrile	2.49	53	25387	19.85 ug/l	93
20) trans-1,2-Dichloroethene	2.01	96	40906	17.85 ug/l	99
21) Allyl chloride	1.85	41	343960	108.70 ug/l	99
22) tert-butyl Methylether,MtB	2.08	73	136445	21.60 ug/l	96
24) Hexane	2.05	57	71420	21.26 ug/l #	77
25) 1,1-Dichloroethane	2.43	63	83219	18.83 ug/l	99
26) Chloroprene	2.41	88	35528	22.40 ug/l	99
27) t-Butyl ethyl ether	2.64	59	154082	20.92 ug/l	99
28) 2,2-Dichloropropane	2.98	77	67988	18.32 ug/l #	97
29) cis-1,2-Dichloroethene	2.88	96	47054	18.93 ug/l	99
30) 2-Butanone	3.52	43	34022	18.46 ug/l	96
31) Propionitrile	3.88	54	9480	18.13 ug/l	99
32) Ethyl acetate	3.32	43	65056	17.68 ug/l	94
33) Diisopropylether	2.35	45	166298	19.32 ug/l	97
34) Bromochloromethane	3.06	128	26118	19.76 ug/l	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060127\2A\20127006.D Vial: 6
Acq On : 27 Jan 2006 14:28 Operator: MAK
Sample : LCS[20] Inst : GC/MS Ins
Misc : V1-185-3 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:44 19106 Quant Results File: 2AL01262.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 09:42:45 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
35)	Methacrylonitrile	3.89	41	42421	20.94 ug/l		96
36)	Tetrahydrofuran	3.33	42	23198	17.61 ug/l		98
37)	Chloroform	3.15	83	89737	19.63 ug/l		98
38)	1,1,1-Trichloroethane	3.33	97	82413	19.59 ug/l		98
39)	Cyclohexane	3.04	56	99701	24.70 ug/l		98
40)	Carbon Tetrachloride	3.26	117	68051	19.26 ug/l		99
41)	1,1-Dichloropropene	3.48	75	61553	17.88 ug/l		100
43)	Benzene	3.77	78	164244	18.28 ug/l		100
44)	1,2-Dichloroethane	4.05	62	75140	19.58 ug/l		98
45)	Isobutanol	4.23	41	1955	25.92 ug/l	#	1
46)	t-Amyl methyl ether	3.99	73	120521	18.19 ug/l		98
47)	Trichloroethene	4.47	95	50331	19.58 ug/l		99
48)	Methylcyclohexane	4.43	83	66722	20.61 ug/l		96
49)	1,2-Dichloropropane	4.97	63	45159	19.21 ug/l		98
50)	Dibromomethane	4.87	93	28170	20.84 ug/l		96
51)	Methyl methacrylate	5.23	41	58526	21.06 ug/l		99
52)	Bromodichloromethane	5.04	83	60510	19.55 ug/l		97
53)	2-Nitropropane	5.94	43	59165	90.10 ug/l		100
54)	2-Chloroethylvinylether	5.57	63	2899	21.23 ug/l	#	92
55)	cis-1,3-Dichloropropene	5.57	75	66564	18.54 ug/l		99
56)	4-Methyl-2-Pentanone	6.08	43	61336	19.48 ug/l		99
59)	1,4-Dioxane	5.27	88	3019	98.19 ug/l		87
60)	Toluene	5.76	91	188406	18.72 ug/l		99
61)	trans-1,3-Dichloropropene	6.08	75	70829	20.93 ug/l		97
62)	Ethyl methacrylate	6.23	69	61512	18.65 ug/l		95
63)	1,1,2-Trichloroethane	6.19	97	40235	19.92 ug/l		99
64)	Tetrachloroethene	6.03	164	48290	21.29 ug/l		98
65)	1,3-Dichloropropane	6.36	76	71496	20.36 ug/l		98
66)	2-Hexanone	6.63	43	44786	19.18 ug/l		100
67)	Dibromochloromethane	6.30	129	50228	19.04 ug/l		98
68)	1,2-Dibromoethane,EDB	6.44	107	42918	18.83 ug/l		98
69)	Chlorobenzene	6.77	112	135364	20.23 ug/l		99
70)	1,1,1,2-Tetrachloroethane	6.81	131	51628	20.19 ug/l		98
71)	Ethylbenzene	6.80	106	70605	19.06 ug/l		100
72)	m,p-Xylene	6.88	106	177197	40.76 ug/l		100
73)	o-Xylene	7.11	106	81806	18.98 ug/l		97
74)	Xylenes (Total)	6.88	106	259003m	59.70 ug/l		99
75)	Styrene	7.14	104	144037	20.27 ug/l		98
77)	Bromoform	7.14	173	32963	18.81 ug/l		99
78)	Cyclohexanone	7.61	55	46819	81.58 ug/l		98
79)	n-Propylbenzene	7.48	91	254699	19.94 ug/l		99
80)	2-Chlorotoluene	7.56	126	56585	20.14 ug/l		99
81)	1,3,5-Trimethylbenzene	7.58	105	191443	19.88 ug/l		100
82)	Isopropylbenzene,Cumene	7.28	105	223453	20.12 ug/l		100
84)	Bromobenzene	7.46	158	59119	20.03 ug/l	#	92
85)	1,1,2,2-Tetrachloroethane	7.52	83	54200	19.89 ug/l		100
86)	1,2,3-Trichloropropane	7.58	75	51119	18.83 ug/l		98
87)	trans-1,4-Dichloro-2-buten	7.61	53	17186	21.09 ug/l		98
88)	4-Chlorotoluene	7.64	91	164713	19.91 ug/l		99
89)	tert-Butyl benzene	7.73	91	109982	19.92 ug/l		99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060127\2A\20127006.D
Acq On : 27 Jan 2006 14:28
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:44 19106

Vial: 6
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 2AL01262.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 09:42:45 2006
Response via : Initial Calibration
DataAcq Meth : 28260

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
90)	1,2,4-Trimethylbenzene	7.76	105	187633	19.55 ug/l	100
91)	sec-Butyl benzene	7.81	105	217981	20.05 ug/l	100
92)	1,3-Dichlorobenzene	7.91	146	114022	21.65 ug/l	99
93)	4-Isopropyl toluene	7.88	119	191966	19.36 ug/l	99
94)	1,4-Dichlorobenzene	7.95	146	106653	19.35 ug/l	98
95)	1,2-Dichlorobenzene	8.14	146	100304	20.29 ug/l	98
96)	n-Butyl benzene	8.07	91	152237	19.99 ug/l	99
97)	bis(2-Chloro-1-methyl ethy	8.32	45	33763	20.00 ug/l	99
98)	1,2-Dibromo-3-chloropropan	8.49	75	13131	19.99 ug/l	98
99)	1,2,4-Trichlorobenzene	8.79	180	56860	19.96 ug/l	95
100)	Hexachlorobutadiene	8.77	225	31478	20.70 ug/l	97
101)	Naphthalene	8.93	128	177037	19.83 ug/l	100
102)	1,2,3-Trichlorobenzene	9.01	180	53232	20.14 ug/l	99

(#) = qualifier out of range (m) = manual integration

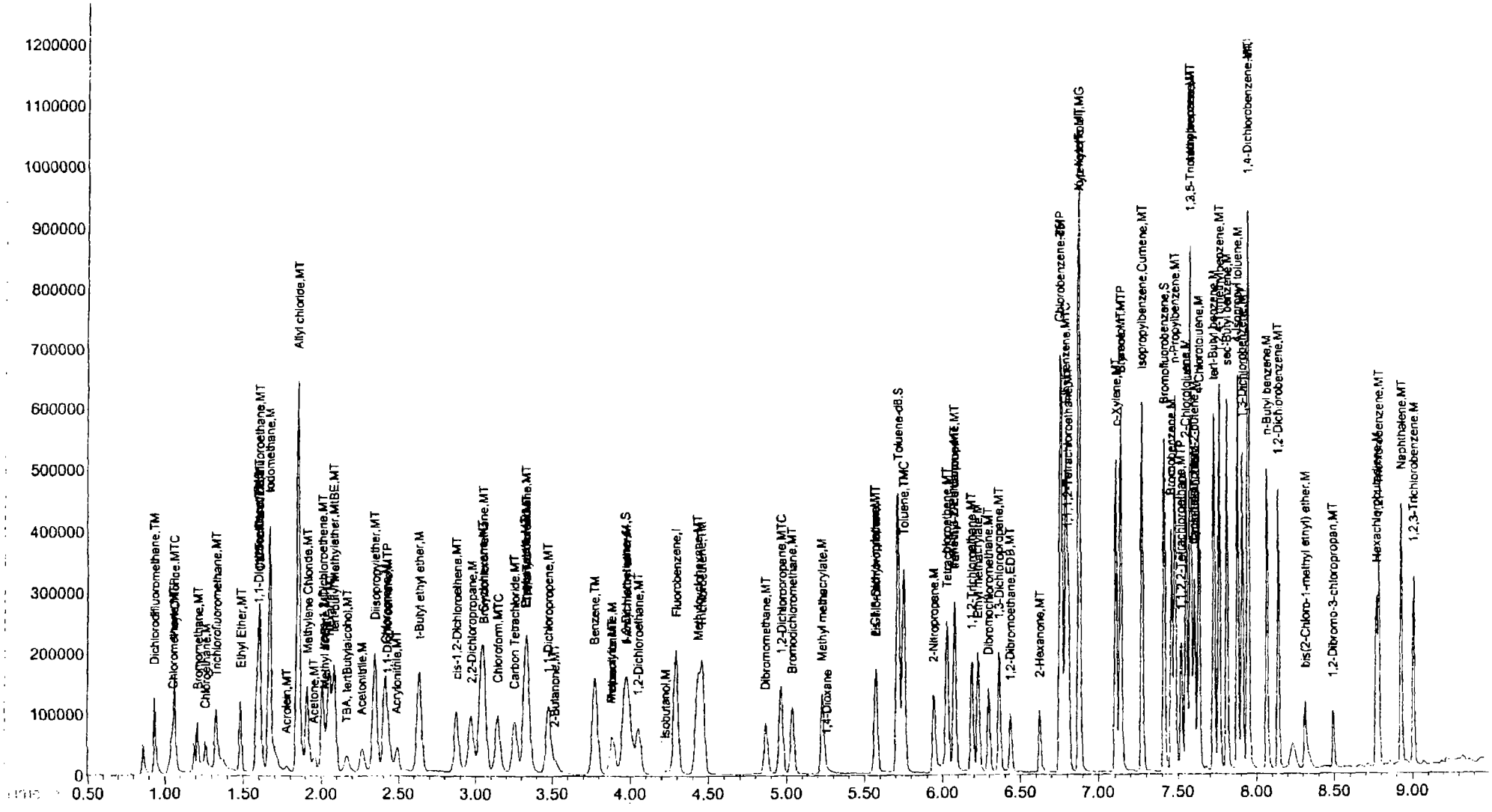
Data File : D:\DATA\2060127\2A\20127006.D
Acq On : 27 Jan 2006 14:28
Sample : LCS[20]
Misc : V1-185-3
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:44 19106

Vial: 6
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01262.RES

Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 10:55:54 2006
Response via : Initial Calibration

TIC: 20127006.D



Quantitation Report (Not Reviewed)

Data File : D:\DATA\2060127\2A\20127008.D Vial: 8
Acq On : 27 Jan 2006 14:55 Operator: MAK
Sample : VBLK Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:45 19106 Quant Results File: 2AL01262.RES

Quant Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 09:42:49 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060127\2A\20127004.D (27 Jan 2006 14:02)

ESC 1/30/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.30	96	181707	30.00 ug/l	0.00 92.99%
57) Chlorobenzene-d5	6.76	117	144386	30.00 ug/l	0.00 93.82%
76) 1,4-Dichlorobenzene-d4	7.95	152	83221	30.00 ug/l	0.00 94.68%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	3.97	65	90720	31.15 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 103.83%		
58) Toluene-d8	5.72	98	231344	27.34 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 91.13%		
83) Bromofluorobenzene	7.42	95	100689	28.60 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 95.33%		

Target Compounds

					Qvalue
9) Acrolein	1.77	56	218	3.19 ug/l	95
12) Acetone	1.96	43	2001	1.63 ug/l	91
15) Acetonitrile	2.27	41	1933	5.10 ug/l #	82
17) Methylene Chloride	1.91	84	1250	0.56 ug/l #	85
30) 2-Butanone	3.54	43	2303	1.29 ug/l #	80
53) 2-Nitropropane	5.96	43	232	23.38 ug/l #	3
59) 1,4-Dioxane	5.31	88	23	0.78 ug/l	94
78) Cyclohexanone	7.60	55	630	1.17 ug/l #	31

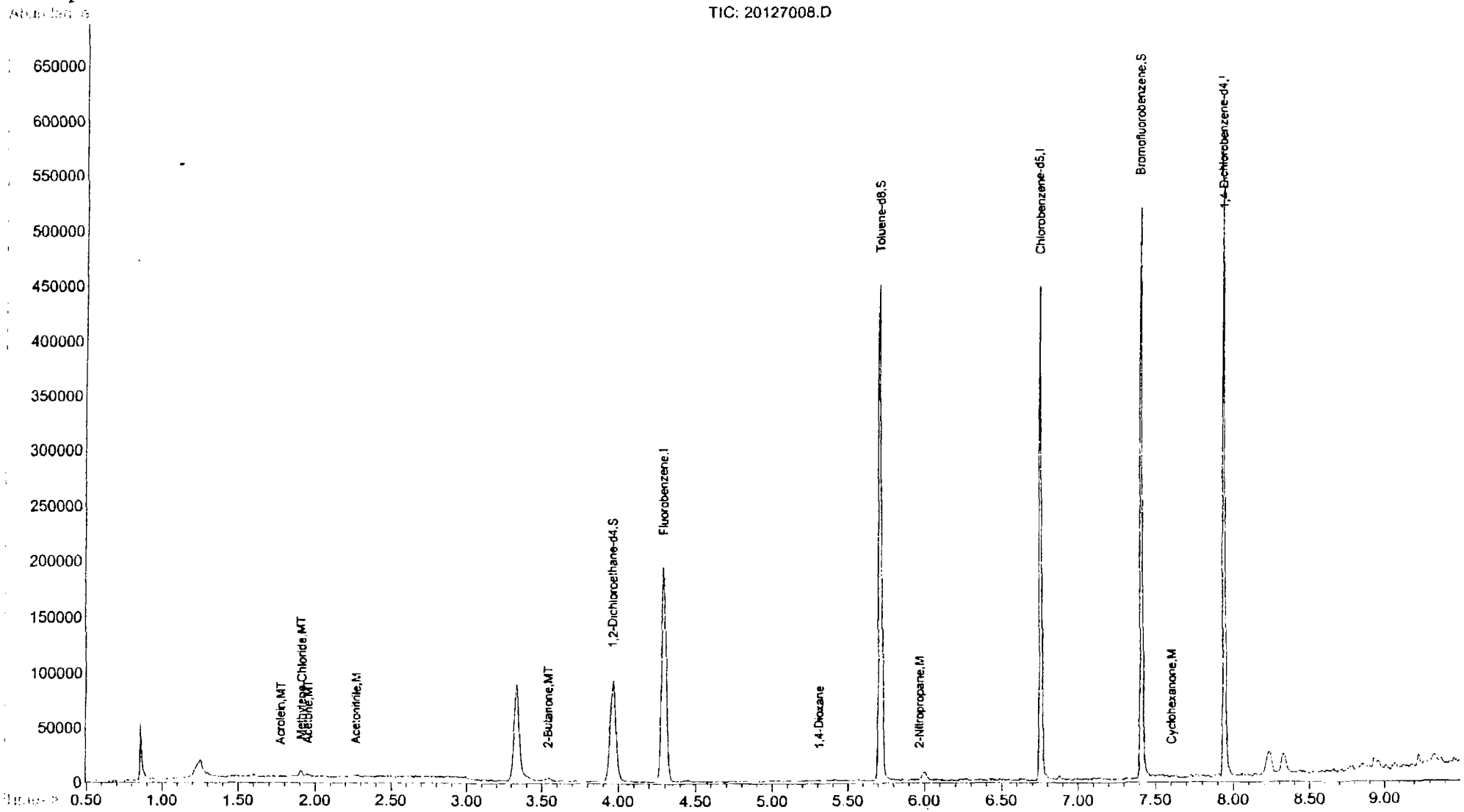
(#) = qualifier out of range (m) = manual integration

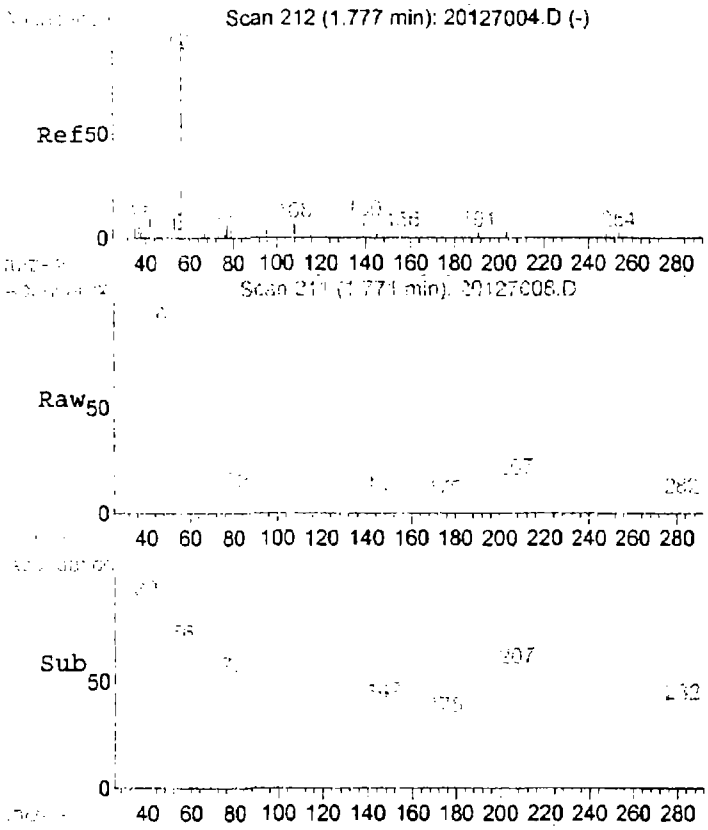
Data File : D:\DATA\2060127\2A\20127008.D
Acq On : 27 Jan 2006 14:55
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: Jan 30 9:45 19106

Vial: 8
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL01262.RES

Method : C:\HPCHEM\1\METHODS\2AL01262.M (RTE Integrator)
Title : 8260 Water Concentrator #2
Last Update : Mon Jan 30 10:55:54 2006
Response via : Initial Calibration

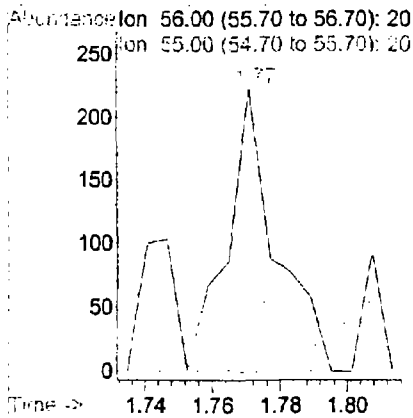


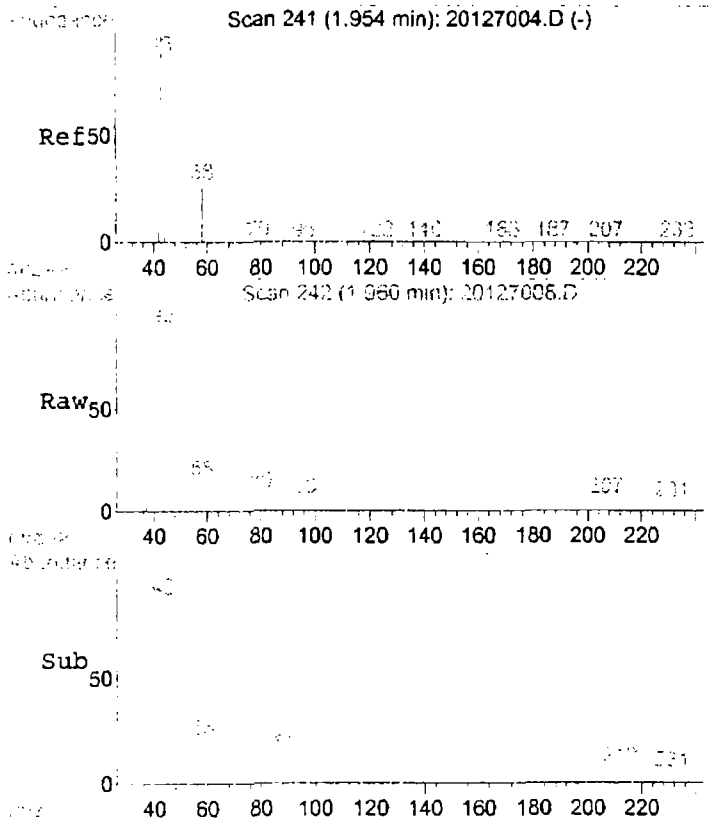


#9
Acrolein
Concen: 3.19 ug/l
RT: 1.77 min Scan# 211
Delta R.T. -0.01 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 56 Resp: 218

Ion	Ratio	Lower	Upper
56	100		
55	87.6	66.4	99.6

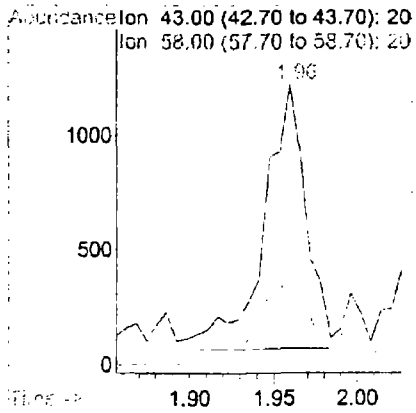


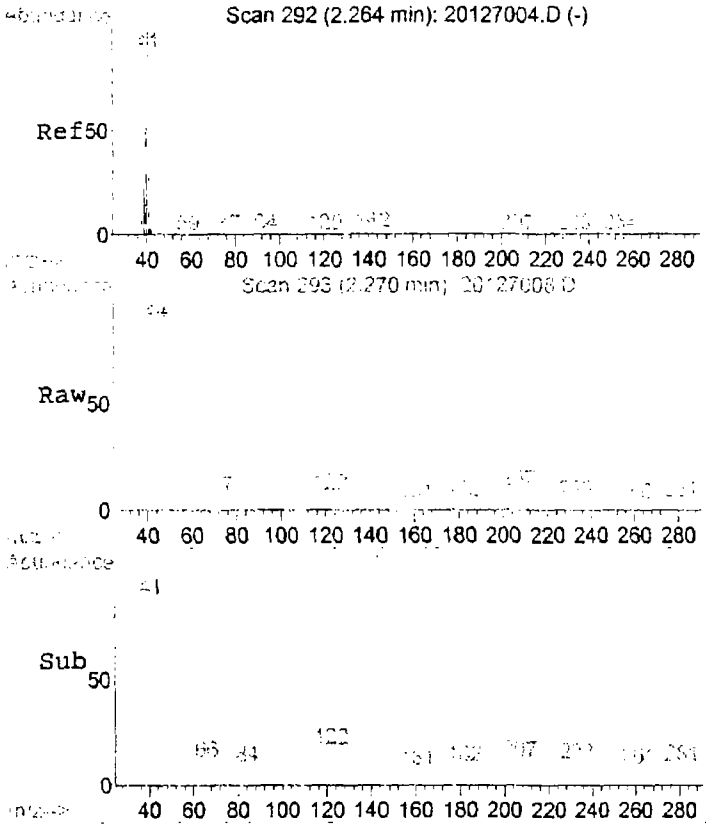


#12
Acetone
Concen: 1.63 ug/l
RT: 1.96 min Scan# 242
Delta R.T. 0.01 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 43 Resp: 2001

Ion	Ratio	Lower	Upper
43	100		
58	32.9	22.3	33.5

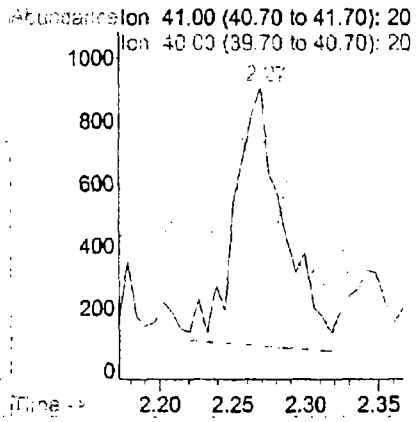


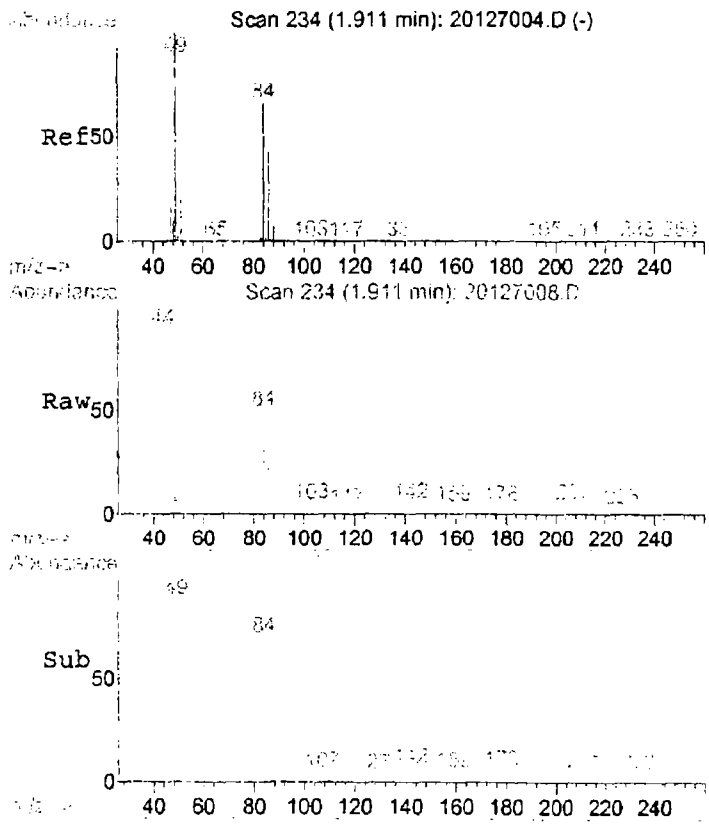


#15
Acetonitrile
Concen: 5.10 ug/l
RT: 2.27 min Scan# 293
Delta R.T. 0.01 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 41 Resp: 1933

Ion	Ratio	Lower	Upper
41	100		
40	69.4	45.2	67.8#

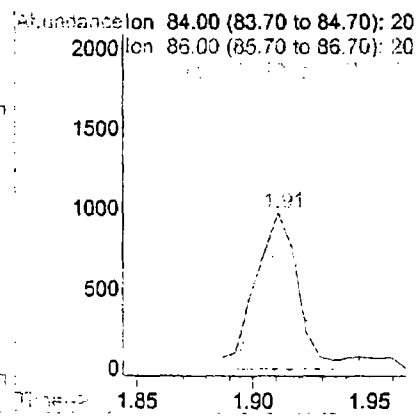


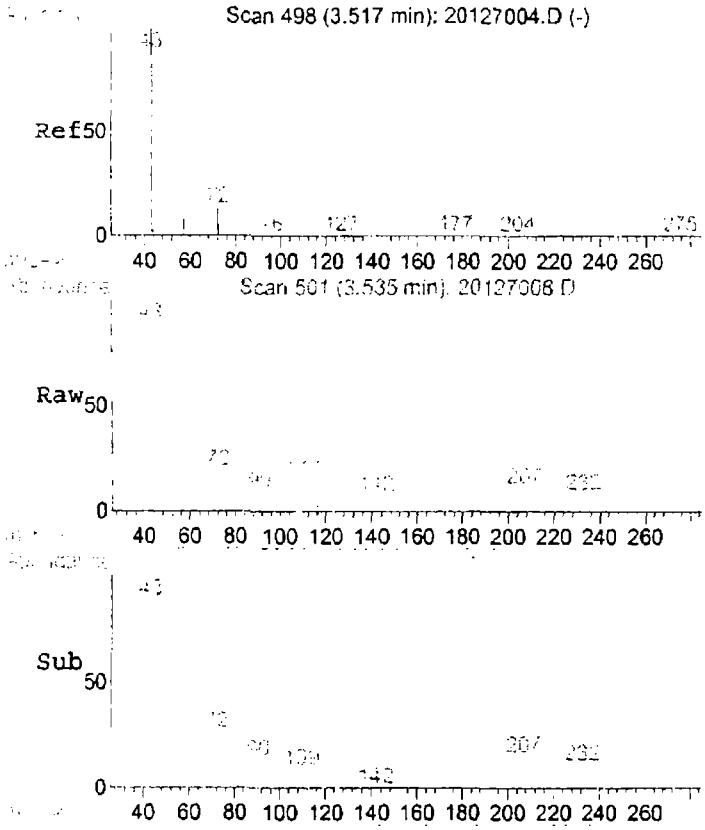


#17
Methylene Chloride
Concen: 0.56 ug/l
RT: 1.91 min Scan# 234
Delta R.T. -0.00 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 84 Resp: 1250

Ion	Ratio	Lower	Upper
84	100		
86	79.2	52.6	78.8#
49	182.2	130.0	195.0

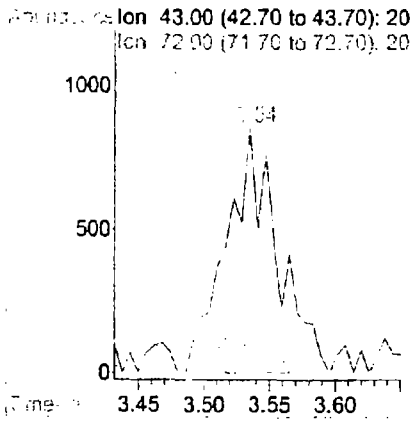


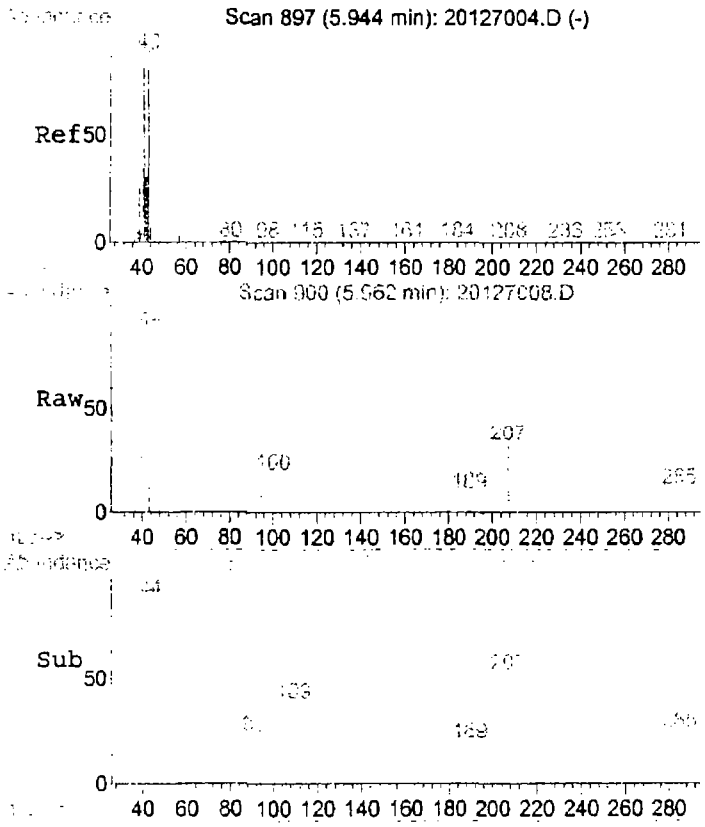


#30
2-Butanone
Concen: 1.29 ug/l
RT: 3.54 min Scan# 501
Delta R.T. 0.02 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 43 Resp: 2303

Ion	Ratio	Lower	Upper
43	100		
72	7.6	14.3	21.5#
57	3.0	6.2	9.2#

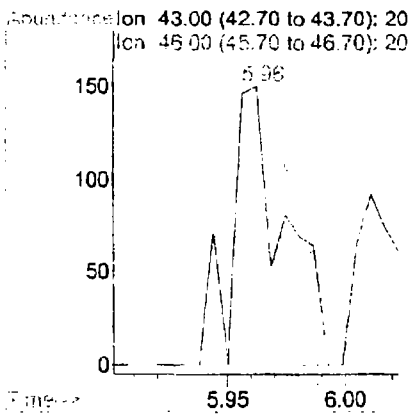


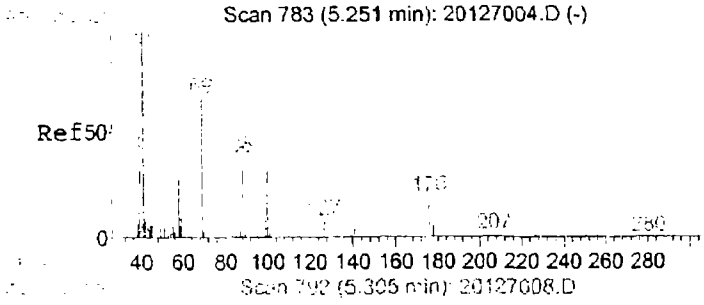


#53
2-Nitropropane
Concen: 23.38 ug/l
RT: 5.96 min Scan# 900
Delta R.T. 0.02 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 43 Resp: 232

Ion	Ratio	Lower	Upper
43	100		
46	35.3	2.4	3.6#

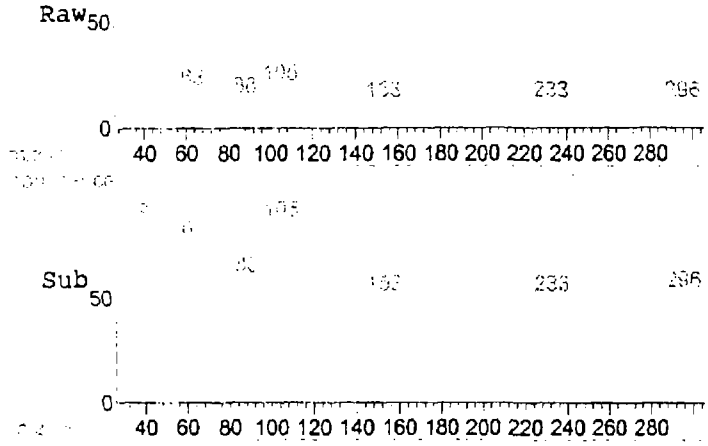


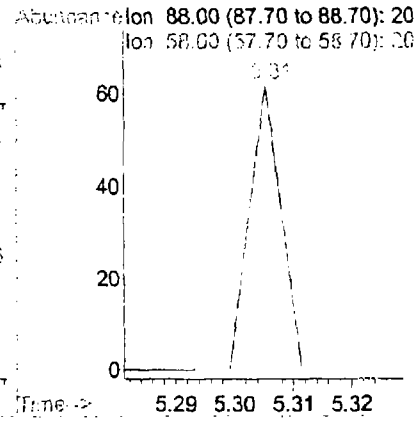


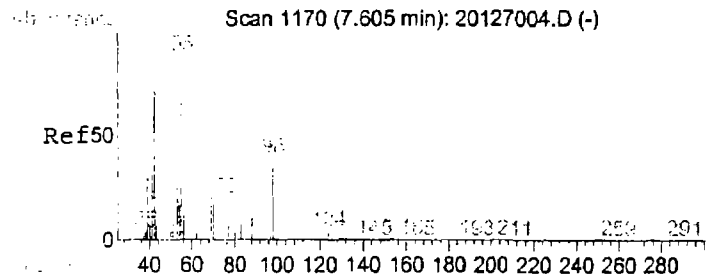
#59
1,4-Dioxane
Concen: 0.78 ug/l
RT: 5.31 min Scan# 792
Delta R.T. 0.05 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 88 Resp: 23

Ion	Ratio	Lower	Upper
88	100		
58	95.7	72.1	108.1



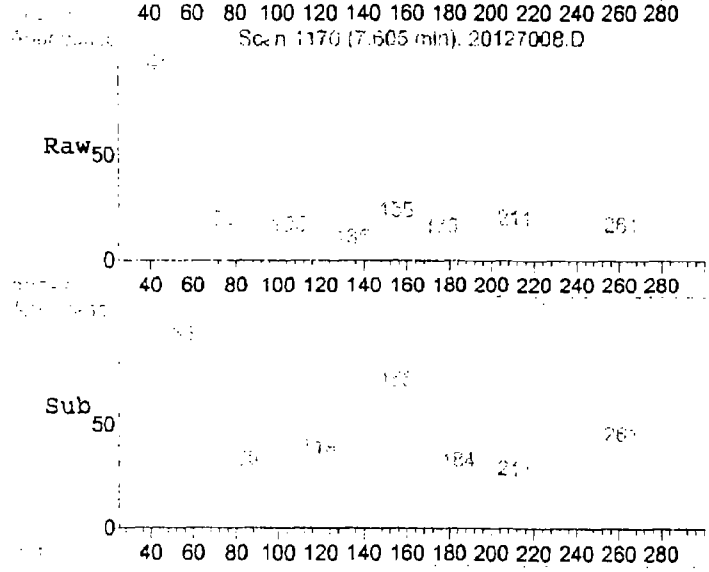


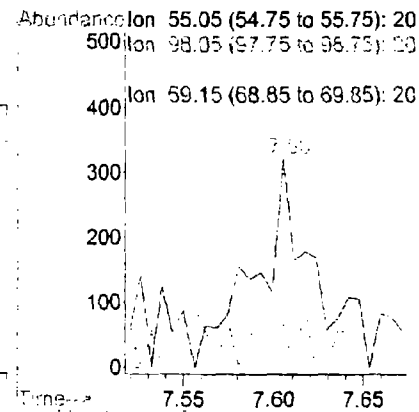


#78
Cyclohexanone
Concen: 1.17 ug/l
RT: 7.60 min Scan# 1170
Delta R.T. -0.00 min
Lab File: 20127008.D
Acq: 27 Jan 2006 14:55

Tgt Ion: 55 Resp: 630

Ion	Ratio	Lower	Upper
55	100		
98	0.0	32.4	48.6#
42	0.0	58.3	87.5#
69	12.9	18.4	27.6#





Matrix: H_2O

LIMS QC Batch #: 46418

Analytical Method: 8082

Extraction Method: 3510

Solvent	Lot #	Na2SO4: X704-02	Diazomethane:	Silicic Acid:
CHCL2	X202-04L	H2SO4:	Methanol:	KOH:
Hexane	X203-018	NaOH:	Iso-octane:	
Acetone		Surrogate: X194-07, 1.0 ppm, ~~1.0 ml~~ 0.5 ml		
Ether		Matrix Spike: X189-02, 2.5 ppm, ~~1.0 ml~~ 0.5 ml		

SM 01/24/06

Date	Project #	Sample ID	Analyst	Initial Volume	Final Volume	GPC	pH 5-9	Comments
01/24/06	0489	BLK	SM	1L	5 ml	NA	✓	
		LCS		1L		✓		
		LCSD		1L				
		1894 B		465 ml				
	0473	1811 A		950 ml				
		1812 A		995 ml				
		1800 B		985 ml				
		1801 B		985 ml				

SM 01/25/06

Project Number 06-0473

PCB Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Aroclor-1016	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1221	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1232	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1242	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1248	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1254	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1260	608	8082	7/30 days*	Liter Glass Amber	None
PCB Total-TCL	608	8082	7/30 days*	Liter Glass Amber	None

*7/30 days = 7 days for extraction, 30 days for analysis on extract

HMI
Environmental Consulting Services

CHAIN – OF – CUSTODY RECORD

Project Number	Project Name/Location	Laboratory	Sampling Personnel
HM00321	ORMET/HANNIBAL OHIO	PACE ANALYTICAL	S. MENOSKY / C. STANDARD

Sample ID	Date/Time	Sample Code	500 ml. PLASTIC pH, Spec. Cond, F (4°C)	250 ml. PLASTIC DISS. As, Be, Mn, Na, V FIELD FILTERED (HNO3)	250 ml. PLASTIC TOTAL/AMENABLE CYANIDE* (NaOH)	40 ml. GLASS TETRACHLOROETHENE (HCL)						TOTAL
FIELD BLANK	1/18/06 5:10	L	1	1	1	3					01-1813	6
TRIP BLANK	1/17/06 —	L				3					14	3

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 9

Relinquished by: Stephanie C. Menosky	Organization: HMI	Date: 1/18/06	Time: 7:00PM	Seal Intact?		
Received by: [illegible]	Organization: PACE ANALYTICAL	Date: 1/19/06	Time: [illegible]	Yes	No	NA
Relinquished by: [illegible]	Organization: PACE ANALYTICAL	Date: 1/19/06	Time: 1600	Seal Intact?		
Received by: [illegible]	Organization: PACE Analytical	Date: 1/19/06	Time: 1600	Yes	No	NA

REMARKS: SEE PAGE 1 OF 2.

5°C To Plant

DELIVERY METHOD: In Person [ ] Common Carrier [ ] Lab Courier [PACE] Other [ ]

APPENDIX B-2

LABORATORY ANALYTICAL REPORT FOR MAY 2006 MONITORING EVENT

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2448**
Client Sample ID: MW-11
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	0.013	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	0.99	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.35	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	620	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.59	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	29	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2449**
Client Sample ID: MW-7
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.019	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	0.019	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	1.0	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	5.99	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	790	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.044	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	2.1	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	79	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2450**
Client Sample ID: MW-8
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	0.094	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	1.9	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.80	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1000	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.57	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	140	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Steve Menosky
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331 South Main St.
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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2451**
Client Sample ID: MW-10
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	1.1	0.20	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.36	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	820	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	27	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis. Spike recovery for Fluoride was outside QC limit due to sample matrix interference

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331 South Main St.
Suite 109
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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2452**
Client Sample ID: MW-4D (H)
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1221	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1232	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1242	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1248	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1254	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1260	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
PCB Total-TCL	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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331 South Main St.
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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2453**
Client Sample ID: MW-44S
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1221	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1232	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1242	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1248	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1254	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
Aroclor-1260	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50
PCB Total-TCL	8082[1]	<0.50	0.50	ug/l	RDJ	05/23/2006	0049647-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2454**
Client Sample ID: MW-1
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	1.5	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	6.87	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	800	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.43	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	46	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2455**
Client Sample ID: Trip Blank
Sample Matrix: Aqueous

Date Sampled: 05/16/2006
Date Received: 05/18/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[1]	<0.0050	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2456**
Client Sample ID: MW-2
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2(1)	6.5	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2(1)	46	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1(1)	9.70	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1(1)	1700	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.066	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B(2)	0.00084	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B(2)	1.0	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B(2)	370	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B(2)	0.050	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	0.024	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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331 South Main St.
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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2457**
Client Sample ID: MW-2D
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	11	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	52	0.30	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	9.69	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1700	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.064	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.00083	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	1.0	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	380	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.049	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.024	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2458**
Client Sample ID: MW-16
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	4.9	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	49	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	9.34	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1200	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.082	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.0019	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	1.4	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	250	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.12	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2459**
Client Sample ID: MW-16D
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2(1)	5.9	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2(1)	44	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1(1)	9.35	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1(1)	1200	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.078	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B(2)	0.0019	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B(2)	1.5	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B(2)	250	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B(2)	0.12	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2460**
Client Sample ID: MW-29S
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	1.7	0.050	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	15	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.47	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	2000	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	1.7	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	300	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846. 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2461**
Client Sample ID: MW-29D
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/26/2006	0049782-1	<0.010
Cyanide (Total)	335.2[1]	0.23	0.050	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	2.4	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.78	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	680	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	2.1	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	39	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2462**
Client Sample ID: MW-30
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	1.6	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	6.66	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	500	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.51	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	26	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.0090	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2463**
Client Sample ID: MW-28
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049797-1	<0.010
Cyanide (Total)	335.2[1]	0.48	0.050	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	0.27	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	6.12	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	380	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.032	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	51	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2464**
Client Sample ID: MW-18
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049797-1	<0.010
Cyanide (Total)	335.2[1]	7.7	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	380	1.0	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	9.77	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	3400	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.13	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.0013	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.54	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	700	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.043	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.0078	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis. Result for sample 06-2967-05-2464 for Specific Conductivity is biased high due to QC % recovery above acceptable range.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2465**
Client Sample ID: MW-40S
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	2.9	0.010	mg/l	BLC	05/30/2006	0049797-1	<0.010
Cyanide (Total)	335.2(1)	10.0	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2(1)	21	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1(1)	7.95	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1(1)	1000	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B(2)	0.40	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B(2)	170	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste. SW-846. 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2466**
Client Sample ID: MW-40D
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.15	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	6.6	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	11	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.91	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1100	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.98	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	180	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2467**
Client Sample ID: MW-31
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	9.7	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	84	0.50	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	9.82	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1600	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.050	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.0018	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	2.2	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	350	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.10	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.025	0.0050	mg/l	MAK	05/23/2006	0049684-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2468**
Client Sample ID: MW-35
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	16	0.50	mg/l	BLC	05/22/2006	0049676-1	<0.010
Fluoride	340.2[1]	90	0.50	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	9.51	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	1300	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.028	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.00080	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.71	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	230	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.028	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-2967**
Lab Sample ID: **0605-2469**
Client Sample ID: MW-37
Sample Matrix: Aqueous

Date Sampled: 05/17/2006
Date Received: 05/18/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.90	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	4.0	0.25	mg/l	BLC	05/23/2006	0049709-1	<0.010
Fluoride	340.2[1]	8.4	0.10	mg/l	CK0	05/24/2006	0049912-1	<0.10
pH	150.1[1]	7.00	1.00	pH	JMT	05/18/2006	0049574-1	6.15
Specific Conductance	120.1[1]	570	1.0	umhos/cm	BAB	05/24/2006	0049720-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0088	0.0040	mg/l	CS0	05/22/2006	0049562-1	<0.0040
Beryllium	6010B[2]	0.00081	0.00050	mg/l	CS0	05/22/2006	0049562-1	<0.00050
Manganese	6010B[2]	0.56	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010
Sodium	6010B[2]	94	0.50	mg/l	CS0	05/22/2006	0049562-1	<0.50
Vanadium	6010B[2]	0.025	0.010	mg/l	CS0	05/22/2006	0049562-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Project Number [illegible]

Metals Analysis - ICP

Parameter	Chemical Symbol	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Arsenic	As	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Beryllium	Be	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Manganese	Mn	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Sodium	Na	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Vanadium	V	200.7	6010	6 Months	250ml Plastic	Nitric Acid

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2447	Client Sample ID	MW-5	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0035	B	1.0	ICP	05/22/2006	10:48
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	10:48
Manganese (Dissolved)	257.61	0.00020	0.010	0.70		1.0	ICP	05/22/2006	10:48
Sodium (Dissolved)	330.23	0.17	0.50	253		1.0	ICP	05/22/2006	10:48
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0025	B	1.0	ICP	05/22/2006	10:48

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2448	Client Sample ID	MW-11	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0035	B	1.0	ICP	05/22/2006	11:04
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:04
Manganese (Dissolved)	257.61	0.00020	0.010	0.59		1.0	ICP	05/22/2006	11:04
Sodium (Dissolved)	330.23	0.17	0.50	29.2		1.0	ICP	05/22/2006	11:04
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:04

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2449	Client Sample ID	MW-7	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.044		1.0	ICP	05/22/2006	11:07
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:07
Manganese (Dissolved)	257.61	0.00020	0.010	2.1		1.0	ICP	05/22/2006	11:07
Sodium (Dissolved)	330.23	0.17	0.50	78.6		1.0	ICP	05/22/2006	11:07
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0021	B	1.0	ICP	05/22/2006	11:07

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2450	Client Sample ID	MW-8	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0025	B	1.0	ICP	05/22/2006	11:11
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:11
Manganese (Dissolved)	257.61	0.00020	0.010	0.57		1.0	ICP	05/22/2006	11:11
Sodium (Dissolved)	330.23	0.17	0.50	136		1.0	ICP	05/22/2006	11:11
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:11

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2451	Client Sample ID	MW-10	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0023	B	1.0	ICP	05/22/2006	11:14
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:14
Manganese (Dissolved)	257.61	0.00020	0.010	0.0075	B	1.0	ICP	05/22/2006	11:14
Sodium (Dissolved)	330.23	0.17	0.50	26.5		1.0	ICP	05/22/2006	11:14
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:14

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2454	Client Sample ID	MW-1	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	05/22/2006	11:28
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:28
Manganese (Dissolved)	257.61	0.00020	0.010	0.43		1.0	ICP	05/22/2006	11:28
Sodium (Dissolved)	330.23	0.17	0.50	45.6		1.0	ICP	05/22/2006	11:28
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:28

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2456	Client Sample ID	MW-2	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.066		1.0	ICP	05/22/2006	11:31
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00084		1.0	ICP	05/22/2006	11:31
Manganese (Dissolved)	257.61	0.00020	0.010	1.0		1.0	ICP	05/22/2006	11:31
Sodium (Dissolved)	330.23	0.17	0.50	373		1.0	ICP	05/22/2006	11:31
Vanadium (Dissolved)	292.40	0.00040	0.010	0.050		1.0	ICP	05/22/2006	11:31

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	062967-0605-2457	Client Sample ID	MW-2D	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.064		1.0	ICP	05/22/2006	11:35
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00083		1.0	ICP	05/22/2006	11:35
Manganese (Dissolved)	257.61	0.00020	0.010	1.0		1.0	ICP	05/22/2006	11:35
Sodium (Dissolved)	330.23	0.17	0.50	376		1.0	ICP	05/22/2006	11:35
Vanadium (Dissolved)	292.40	0.00040	0.010	0.049		1.0	ICP	05/22/2006	11:35

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2458	Client Sample ID	MW-16	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.082		1.0	ICP	05/22/2006	11:38
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0019		1.0	ICP	05/22/2006	11:38
Manganese (Dissolved)	257.61	0.00020	0.010	1.4		1.0	ICP	05/22/2006	11:38
Sodium (Dissolved)	330.23	0.17	0.50	250		1.0	ICP	05/22/2006	11:38
Vanadium (Dissolved)	292.40	0.00040	0.010	0.12		1.0	ICP	05/22/2006	11:38

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	062967-0605-2459	Client Sample ID	MW-16D	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.078		1.0	ICP	05/22/2006	11:41
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0019		1.0	ICP	05/22/2006	11:41
Manganese (Dissolved)	257.61	0.00020	0.010	1.5		1.0	ICP	05/22/2006	11:41
Sodium (Dissolved)	330.23	0.17	0.50	251		1.0	ICP	05/22/2006	11:41
Vanadium (Dissolved)	292.40	0.00040	0.010	0.12		1.0	ICP	05/22/2006	11:41

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2460	Client Sample ID	MW-29S	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0028	B	1.0	ICP	05/22/2006	11:45
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:45
Manganese (Dissolved)	257.61	0.00020	0.010	1.7		1.0	ICP	05/22/2006	11:45
Sodium (Dissolved)	330.23	0.17	0.50	298		1.0	ICP	05/22/2006	11:45
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:45

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	062967-0605-2461	Client Sample ID	MW-29D	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0021	B	1.0	ICP	05/22/2006	11:56
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:56
Manganese (Dissolved)	257.61	0.00020	0.010	2.1		1.0	ICP	05/22/2006	11:56
Sodium (Dissolved)	330.23	0.17	0.50	38.8		1.0	ICP	05/22/2006	11:56
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	11:56

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2462	Client Sample ID	MW-30	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0020	B	1.0	ICP	05/22/2006	11:59
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	11:59
Manganese (Dissolved)	257.61	0.00020	0.010	0.51		1.0	ICP	05/22/2006	11:59
Sodium (Dissolved)	330.23	0.17	0.50	26.4		1.0	ICP	05/22/2006	11:59
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0010	B	1.0	ICP	05/22/2006	11:59

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2463	Client Sample ID	MW-28	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0022	B	1.0	ICP	05/22/2006	12:15
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00017	B	1.0	ICP	05/22/2006	12:15
Manganese (Dissolved)	257.61	0.00020	0.010	0.032		1.0	ICP	05/22/2006	12:15
Sodium (Dissolved)	330.23	0.17	0.50	50.5		1.0	ICP	05/22/2006	12:15
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0036	B	1.0	ICP	05/22/2006	12:15

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2464	Client Sample ID	MW-18	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.13		1.0	ICP	05/22/2006	12:18
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0013		1.0	ICP	05/22/2006	12:18
Manganese (Dissolved)	257.61	0.00020	0.010	0.54		1.0	ICP	05/22/2006	12:18
Sodium (Dissolved)	330.23	0.17	0.50	699		1.0	ICP	05/22/2006	12:18
Vanadium (Dissolved)	292.40	0.00040	0.010	0.043		1.0	ICP	05/22/2006	12:18

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2465	Client Sample ID	MW-40S	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0025	B	1.0	ICP	05/22/2006	12:21
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	12:21
Manganese (Dissolved)	257.61	0.00020	0.010	0.40		1.0	ICP	05/22/2006	12:21
Sodium (Dissolved)	330.23	0.17	0.50	172		1.0	ICP	05/22/2006	12:21
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/22/2006	12:21

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	062967-0605-2466	Client Sample ID	MW-40D	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	05/22/2006	12:24
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.000070	U	1.0	ICP	05/22/2006	12:24
Manganese (Dissolved)	257.61	0.00020	0.010	0.98		1.0	ICP	05/22/2006	12:24
Sodium (Dissolved)	330.23	0.17	0.50	183		1.0	ICP	05/22/2006	12:24
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0012	B	1.0	ICP	05/22/2006	12:24

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2467	Client Sample ID	MW-31	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.050		1.0	ICP	05/22/2006	12:28
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.0018		1.0	ICP	05/22/2006	12:28
Manganese (Dissolved)	257.61	0.00020	0.010	2.2		1.0	ICP	05/22/2006	12:28
Sodium (Dissolved)	330.23	0.17	0.50	353		1.0	ICP	05/22/2006	12:28
Vanadium (Dissolved)	292.40	0.00040	0.010	0.10		1.0	ICP	05/22/2006	12:28

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2468	Client Sample ID	MW-35	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.028		1.0	ICP	05/22/2006	12:31
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00080		1.0	ICP	05/22/2006	12:31
Manganese (Dissolved)	257.61	0.00020	0.010	0.71		1.0	ICP	05/22/2006	12:31
Sodium (Dissolved)	330.23	0.17	0.50	231		1.0	ICP	05/22/2006	12:31
Vanadium (Dissolved)	292.40	0.00040	0.010	0.028		1.0	ICP	05/22/2006	12:31

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	062967-0605-2469	Client Sample ID	MW-37	Matrix	Aqueous
Units	mg/L	Prep Date	05/19/2006	Prep Batch	49562
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0088		1.0	ICP	05/22/2006	12:34
Beryllium (Dissolved)	313.04	0.000070	0.00050	0.00081		1.0	ICP	05/22/2006	12:34
Manganese (Dissolved)	257.61	0.00020	0.010	0.56		1.0	ICP	05/22/2006	12:34
Sodium (Dissolved)	330.23	0.17	0.50	93.6		1.0	ICP	05/22/2006	12:34
Vanadium (Dissolved)	292.40	0.00040	0.010	0.025		1.0	ICP	05/22/2006	12:34

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: QC49562MB

Matrix: Water **Units:** ug/L **Prep Date:** 5/19/2006 **Prep Batch:** 49562

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	1.7	4.0	1.7	U	1	ICP	5/22/2006	10:40
Beryllium	313.042	0.070	0.50	0.070	U	1	ICP	5/22/2006	10:40
Manganese	257.61	0.20	10.0	0.20	U	1	ICP	5/22/2006	10:40
Sodium	330.232	170	500	170	U	1	ICP	5/22/2006	10:40
Vanadium	292.402	0.40	10.0	0.40	U	1	ICP	5/22/2006	10:40

Comments:

U Result is less than the MDL

B Result is between MDL and RL

Pace Analytical

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: QC49562MS D

Original Sample ID: 2967-0605-2447 D **Client ID:** MW-5

Matrix: Water **Units:** ug/L **Prep Date:** 5/19/2006 **Prep Batch:** 49562

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	3.5	B	525		500	104.3	1	1	ICP	5/22/2006	10:48	5/22/2006	10:55
Beryllium	313.0	0.070	U	512		500	102.3	1	1	ICP	5/22/2006	10:48	5/22/2006	10:55
Manganese	257.6	703		1210		500	101.4	1	1	ICP	5/22/2006	10:48	5/22/2006	10:55
Sodium	330.2	253000		262000	NC	5000		1	1	ICP	5/22/2006	10:48	5/22/2006	10:55
Vanadium	292.4	2.5	B	507		500	100.8	1	1	ICP	5/22/2006	10:48	5/22/2006	10:55

Comments: Acceptable Range 80 - 120%

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: QC49562MSD D

Original Sample ID: 2967-0605-2447 D **Client ID:** MW-5

Matrix: Water **Units:** ug/L **Prep Date:** 5/19/2006 **Prep Batch:** 49562

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	3.5	B	531		500	105.4	1	1	ICP	5/22/2006	10:48	5/22/2006	10:58
Beryllium	313.0	0.070	U	516		500	103.2	1	1	ICP	5/22/2006	10:48	5/22/2006	10:58
Manganese	257.6	703		1220		500	~~102.6~~ 104.4	1	1	ICP	5/22/2006	10:48	5/22/2006	10:58
Sodium	330.2	253000		261000	NC	5000		1	1	ICP	5/22/2006	10:48	5/22/2006	10:58
Vanadium	292.4	2.5	B	509		500	101.4	1	1	ICP	5/22/2006	10:48	5/22/2006	10:58

Comments: Acceptable Range 80 - 120%

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID:	QC49562MSD D	**Client ID:**	MW-5
Matrix Spike Sample ID:	QC49562MS D	**Acceptable Range:**	+/- 20%

Matrix:	Water	**Units:**	ug/L	**Prep Date:**	5/19/2006	**Prep Batch:**	49562
Weight:	50	**Volume:**	50	**Percent Moisture:**	NA		

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	525		531		1.1%	1	1	ICP	5/22/2006	10:55	5/22/2006	10:58
Beryllium	313.042	512		516		0.8%	1	1	ICP	5/22/2006	10:55	5/22/2006	10:58
Manganese	257.61	1210		1220		0.8%	1	1	ICP	5/22/2006	10:55	5/22/2006	10:58
Sodium	330.232	262000	NC	261000	NC	-0.4%	1	1	ICP	5/22/2006	10:55	5/22/2006	10:58
Vanadium	292.402	507		509		0.4%	1	1	ICP	5/22/2006	10:55	5/22/2006	10:58

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Pace Analytical

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: QC49562LCS

Matrix: Water **Units:** ug/L **Prep Date:** 5/19/2006 **Prep Batch:** 49562

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	500	508	101.6		80-120	1	ICP	5/22/2006	10:43
Beryllium	313.042	500	511	102.2		80-120	1	ICP	5/22/2006	10:43
Manganese	257.61	500	511	102.1		80-120	1	ICP	5/22/2006	10:43
Sodium	330.232	5000	4840	96.8		80-120	1	ICP	5/22/2006	10:43
Vanadium	292.402	500	497	99.3		80-120	1	ICP	5/22/2006	10:43

Comments:

U Result is less than the MDL

B Result is between MDL and RL

Project Number [illegible]

Volatiles

Project Number _____

Volatiles Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Tetrachloroethene	624	8260	14 Days	3/ 40ml Vials	Hydrochloric Acid

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Anlytical Contract :
Project : 06-2967 Site : Location : Group :
Lab File ID (Standard): 20523019.D Date Analyzed : 23 May 2006
Instrument ID : GC/MS Ins Time Analyzed : 12:27
GC Column : Rtx-VMS ID : 0.18 Heated Purge (Y:N) : N
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
20523023	LCS[20]	91	90	99	0	0	0	0
20523025	VBLK	90	94	102	0	0	0	0
20523045	06-2967 05-2447	88	92	100	0	0	0	0
20523047	06-2967 05-2455	91	92	103	0	0	0	0
20523049	06-2967 05-2456	89	89	99	0	0	0	0
20523051	06-2967 05-2457	95	92	107	0	0	0	0
20523053	06-2967 05-2462	94	92	102	0	0	0	0
20523055	06-2967 05-2464	95	92	102	0	0	0	0
20523057	06-2967 05-2467	98	91	100	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Pace Anlytical Contract :
Project : 06-2967 Site : Location : Group :
Lab File ID (Standard): 20523019.D Date Analyzed : 23 May 2006
Instrument ID : GC/MS Ins Time Analyzed : 12:27
GC Column : Rtx-VMS ID : 0.18 Heated Purge (Y:N) : N

	IS1 (FB)		IS2 (CBZ)		IS3 (DCB)	
	Area #	RT #	Area #	RT #	Area #	RT #
12 HOUR STD	396291	4.38	261443	6.82	112345	8.01
UPPER LIMIT	792582	4.88	522886	7.32	224690	8.51
LOWER LIMIT	198146	3.88	130722	6.32	56173	7.51
File ID Sample						
20523023 LCS[20]	387659	4.38	250651	6.82	104504	8.01
20523025 VBLK	369682	4.38	230603	6.82	87358	8.00
20523045 06-2967 05-2447	362979	4.38	230274	6.82	90271	8.01
20523047 06-2967 05-2455	346914	4.38	222382	6.83	86309	8.01
20523049 06-2967 05-2456	351386	4.38	225257	6.82	86893	8.00
20523051 06-2967 05-2457	336079	4.38	218529	6.83	83447	8.01
20523053 06-2967 05-2462	339451	4.38	220497	6.83	84488	8.01
20523055 06-2967 05-2464	323405	4.38	207763	6.82	81266	8.01
20523057 06-2967 05-2467	314592	4.38	207073	6.83	80003	8.01

IS1 (FB) = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

Spike Recovery and RPD Summary Report - WATER

Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Wed May 24 07:15:32 2006
Response via : Initial Calibration

Non-Spiked Sample: 20523029.D

	Spike Sample	Spike Duplicate Sample
File ID :	20523067.D	20523069.D
Sample :	06-2987 05-2577MS	06-2987 05-2577MSD
Acq Time:	23 May 2006 23:10	23 May 2006 23:37

Surrogate	Sample Conc	Amnt Added	Sampl %Rec	Spike Conc	Spike %Rec	Dup Conc	Dup %Rec	QC Limits % Rec
1,2-Dichloroethane-d	26.2	30	87	29.5	98	27.0	90	70-130
Toluene-d8	26.6	30	89	26.6	89	26.9	90	70-130
Bromofluorobenzene	31.1	30	104	30.7	102	30.8	103	70-130

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Dichlorodiflu	0.0	20	12	12	62.5#	58.0#	7.3	30	70-130
Chloromethane	0.0	20	12	11	58.1#	55.3#	5.0	30	70-130
Vinyl Chlorid	0.0	20	17	16	82.8	81.6	1.5	30	70-130
Bromomethane	0.0	20	20	18	98.4	89.0	10.1	30	70-130
Chloroethane	0.0	20	20	19	99.9	94.5	5.5	30	70-130
Trichlorofluo	0.0	20	21	19	106.4	92.7	13.7	30	70-130
Ethyl Ether	0.0	20	17	16	83.2	82.4	0.9	30	70-130
Acrolein	0.0	20	13	14	66.8#	68.5#	2.4	30	70-130
1,1-Dichloroe	0.6	20	32	31	155.7#	150.1#	3.7	30	70-130
112Trichloro1	0.0	20	23	22	116.2	111.2	4.4	30	70-130
Acetone	24.1	20	39	37	74.8	62.9#	17.3	30	70-130
Iodomethane	0.0	100	114	119	113.7	118.9	4.4	30	70-130
Carbon Disulf	0.0	20	18	18	88.3	88.9	0.7	30	70-130
Acetonitrile	0.0	100	78	75	77.6	74.8	3.7	30	70-130
Methyl acetat	0.0	20	13	12	67.3#	58.6#	13.8	30	70-130
Methylene Chl	1.8	20	25	24	114.3	113.0	1.1	30	70-130
TBA, tertButy	6.0	100	93	89	87.0	83.4	4.3	30	70-130
Acrylonitrile	0.0	20	17	17	84.8	83.6	1.4	30	70-130
trans-1,2-Dic	0.0	20	22	22	110.2	109.9	0.3	30	70-130
Allyl chlorid	0.0	100	104	100	103.7	100.3	3.3	30	70-130
tert-butyl Me	0.0	20	18	18	90.5	88.1	2.6	30	70-130
Vinyl acetate	0.0	20	0	0	0.0#	0.0#	99.0#	30	70-130
Hexane	0.0	20	22	17	112.1	85.1	27.4	30	70-130
1,1-Dichloroe	0.0	20	22	21	109.1	106.1	2.8	30	70-130
Chloroprene	0.0	20	20	21	101.4	105.3	3.8	30	70-130
t-Butyl ethyl	0.0	20	18	18	91.6	91.7	0.1	30	70-130
2,2-Dichlorop	0.0	20	21	19	105.4	96.7	8.6	30	70-130
cis-1,2-Dichl	0.0	20	20	19	98.8	96.6	2.3	30	70-130
2-Butanone	7.3	20	20	19	65.7#	59.6#	9.7	30	70-130
Propionitrile	0.0	20	16	16	81.1	81.6	0.7	30	70-130
Ethyl acetate	0.0	20	13	12	66.0#	60.8#	8.2	30	70-130
Diisopropylet	0.0	20	19	19	95.5	93.7	1.9	30	70-130
Bromochlorome	0.0	20	24	24	121.6	120.0	1.3	30	70-130
Methacrylonit	0.0	20	19	19	92.7	93.0	0.3	30	70-130
Tetrahydrofur	0.0	20	16	16	78.9	79.7	1.1	30	70-130
Chloroform	0.0	20	20	19	99.5	93.2	6.5	30	70-130
1,1,1-Trichlo	48.1	20	73	71	126.2	116.7	7.8	30	70-130
Cyclohexane	1.0	20	25	24	118.0	117.4	0.6	30	70-130
Carbon Tetrac	0.0	20	23	22	115.7	108.1	6.7	30	70-130
1,1-Dichlorop	0.0	20	21	20	105.2	101.9	3.2	30	70-130
Benzene	0.0	20	20	20	102.5	99.9	2.6	30	70-130
1,2-Dichloroe	0.0	20	21	19	104.7	93.3	11.5	30	70-130
Isobutanol	0.0	100	64	70	64.3#	70.3	8.9	30	70-130
t-Amyl methyl	0.0	20	18	18	87.8	87.6	0.2	30	70-130

Trichloroethe	0.0	20	20	20	101.9	100.0	1.9	30	70-130
Methylcyclohe	3.5	20	18	18	74.2	74.9	1.0	30	70-130
1,2-Dichlorop	0.0	20	20	19	98.1	96.1	2.1	30	70-130
Dibromomethan	0.0	20	20	19	99.8	93.0	7.1	30	70-130
Methyl methac	0.0	20	21	21	106.6	105.3	1.2	30	70-130
Bromodichloro	0.0	20	20	19	100.3	94.9	5.5	30	70-130
2-Nitropropan	0.0	100	74	67	73.9	67.0#	9.8	30	70-130
2-Chloroethyl	0.0	20	0	0	0.0#	0.0#	99.0#	30	70-130
cis-1,3-Dichl	0.0	20	18	18	89.6	88.7	1.1	30	70-130
4-Methyl-2-Pe	0.0	20	20	20	101.5	98.2	3.4	30	70-130
1,4-Dioxane	0.0	0	76	88	0.0	0.0	99.0#	0	0- 0
Toluene	1.3	20	20	19	91.5	89.6	2.1	30	70-130
trans-1,3-Dic	0.0	20	17	17	86.9	83.9	3.5	30	70-130
Ethyl methacr	0.0	20	19	18	92.8	91.7	1.1	30	70-130
1,1,2-Trichlo	0.0	20	17	17	85.5	84.4	1.3	30	70-130
Tetrachloroet	0.0	20	18	17	88.0	84.6	3.9	30	70-130
1,3-Dichlorop	0.0	20	18	17	88.2	83.7	5.2	30	70-130
2-Hexanone	0.0	20	15	14	72.6	69.7#	4.1	30	70-130
Dibromochloro	0.0	20	17	16	82.7	79.7	3.7	30	70-130
1,2-Dibromoet	0.0	20	17	17	86.9	82.9	4.7	30	70-130
Chlorobenzene	0.0	20	19	18	94.8	92.0	3.0	30	70-130
1,1,1,2-Tetra	0.0	20	17	16	85.3	80.6	5.7	30	70-130
Ethylbenzene	6.8	20	24	24	83.6	86.7	3.7	30	70-130
m,p-Xylene	11.8	40	48	48	89.4	91.4	2.2	30	70-130
o-Xylene	52.9	20	66	69	63.2#	80.5	24.0	30	70-130
Xylenes (Tota	64.0	60	112	117	80.8	87.7	8.3	30	70-130
Styrene	0.0	20	19	18	93.5	92.2	1.4	30	70-130
Bromoform	0.0	20	17	16	83.5	82.1	1.7	30	70-130
Cyclohexanone	0.0	100	22	21	21.5#	21.1#	2.1	30	70-130
n-Propylbenze	3.6	20	20	20	82.1	83.2	1.3	30	70-130
2-Chlorotolue	0.0	20	18	18	90.5	89.6	1.0	30	70-130
1,3,5-Trimeth	52.3	20	63	65	52.1#	62.4#	17.9	30	70-130
Isopropylbenz	3.4	20	21	21	87.6	87.1	0.6	30	70-130
Bromobenzene	0.0	20	19	18	94.2	91.8	2.5	30	70-130
1,1,2,2-Tetra	0.0	20	17	17	85.8	84.3	1.8	30	70-130
1,2,3-Trichlo	0.0	20	18	18	91.4	92.0	0.6	30	70-130
trans-1,4-Dic	0.0	20	17	17	85.4	83.2	2.6	30	70-130
4-Chlorotolue	0.0	20	17	17	86.4	83.2	3.8	30	70-130
tert-Butyl be	1.1	20	17	16	80.6	76.0	5.9	30	70-130
1,2,4-Trimeth	44.6	20	55	58	51.7#	67.7#	26.8	30	70-130
sec-Butyl ben	2.5	20	17	17	73.5	71.6	2.5	30	70-130
1,3-Dichlorob	0.0	20	18	17	87.9	86.6	1.5	30	70-130
4-Isopropyl t	14.8	20	28	27	63.6#	63.0#	1.0	30	70-130
1,4-Dichlorob	0.0	20	15	15	76.3	74.6	2.3	30	70-130
1,2-Dichlorob	0.0	20	17	16	83.9	82.4	1.7	30	70-130
n-Butyl benze	9.3	20	21	21	58.4#	58.8#	0.8	30	70-130
bis(2-Chloro-	0.0	20	22	22	107.7	108.2	0.4	30	70-130
1,2-Dibromo-3	0.0	20	22	21	111.5	105.2	5.8	30	70-130
1,2,4-Trichlo	0.0	20	14	13	69.6#	66.0#	5.2	30	70-130
Hexachlorobut	0.0	20	9	9	47.3#	43.9#	7.3	30	70-130
Naphthalene	8.3	20	22	23	70.5	71.6	1.7	30	70-130
1,2,3-Trichlo	0.0	20	14	13	68.1#	63.4#	7.2	30	70-130

- Fails Limit Check

Quantitation Report (QT Reviewed)

Data File : D:\DATA\2060523\1\20523025.D
Acq On : 23 May 2006 13:47
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: May 23 14:11 19106

Vial: 25
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 2AL05231.RES

Quant Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Tue May 23 13:53:00 2006
Response via : Initial Calibration
DataAcq Meth : 28260
IS QA File : D:\DATA\2060523\1\20523019.D (23 May 2006 12:27)

MAK 5/24/06

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	4.38	96	369682	30.00 ug/l	0.00 93.29%
57) Chlorobenzene-d5	6.82	117	230603	30.00 ug/l	0.00 88.20%
76) 1,4-Dichlorobenzene-d4	8.00	152	87358	30.00 ug/l	0.00 77.76%

System Monitoring Compounds

42) 1,2-Dichloroethane-d4	4.06	65	209837	26.93 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 89.77%		
58) Toluene-d8	5.79	98	446469	28.32 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 94.40%		
83) Bromofluorobenzene	7.48	95	128074	30.71 ug/l	0.00
Spiked Amount 30.000	Range 70 - 130		Recovery = 102.37%		

Target Compounds

						Qvalue
8) Ethyl Ether	1.48	59	3260	0.61 ug/l		94
12) Acetone	1.97	43	19827	6.82 ug/l		95
16) Methyl acetate	2.05	43	2816	Below Cal		94
17) Methylene Chloride	1.93	84	3449	2.60 ug/l		90
18) TBA, tertButylalcohol	2.18	59	4720	8.32 ug/l		92
30) 2-Butanone	3.60	43	6784	5.02 ug/l	#	90
34) Bromochloromethane	3.11	128	265	Below Cal	#	59
45) Isobutanol	4.31	41	163	Below Cal		96
66) 2-Hexanone	6.70	43	476	Below Cal	#	44
101) Naphthalene	9.00	128	4625	0.66 ug/l		100
102) 1,2,3-Trichlorobenzene	9.08	180	1272	0.54 ug/l	#	85

(#) = qualifier out of range (m) = manual integration

Quantitation Report

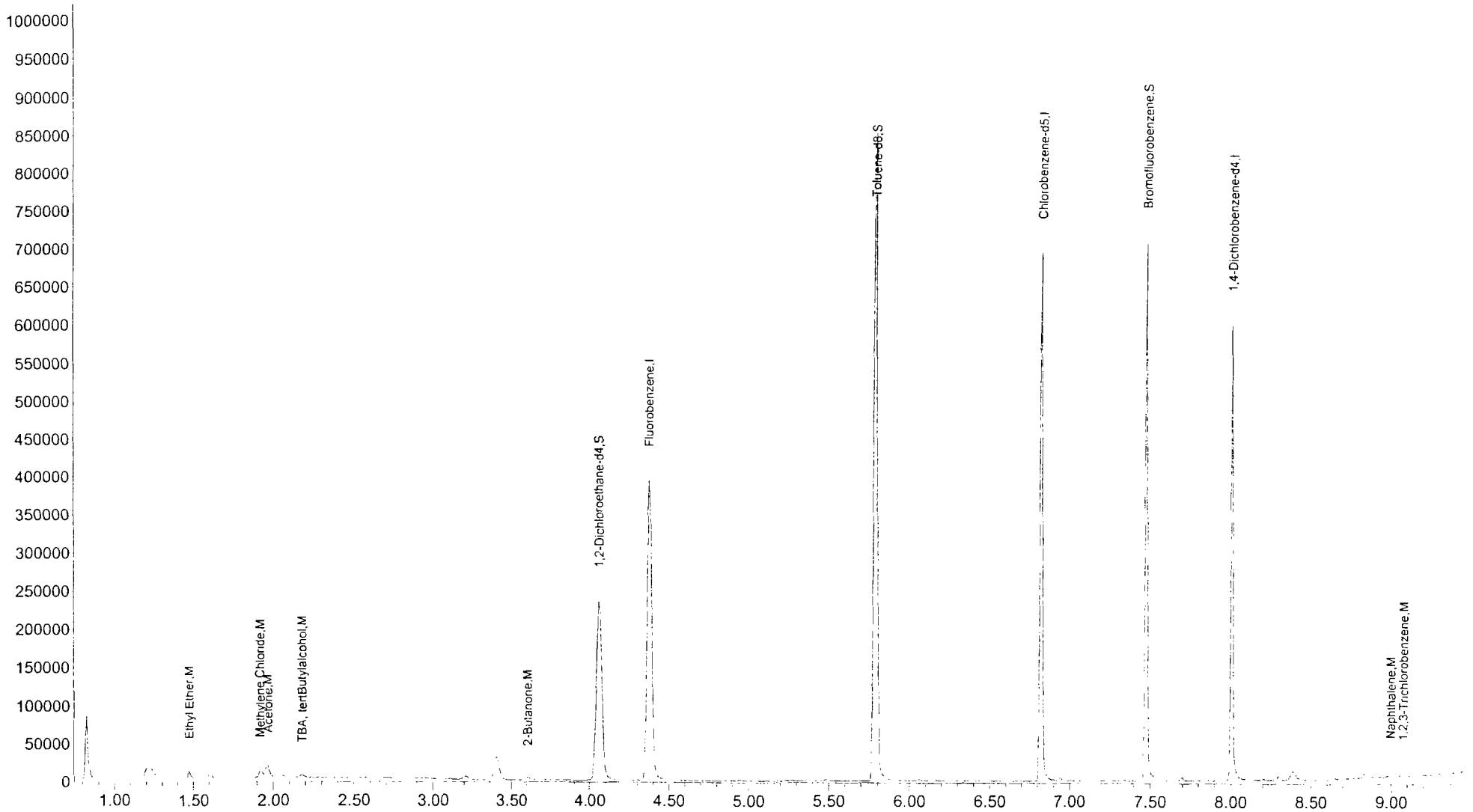
Data File : D:\DATA\2060523\1\20523025.D
Acq On : 23 May 2006 13:47
Sample : VBLK
Misc :
MS Integration Params: RTEINT.P
Quant Time: May 23 14:11 19106

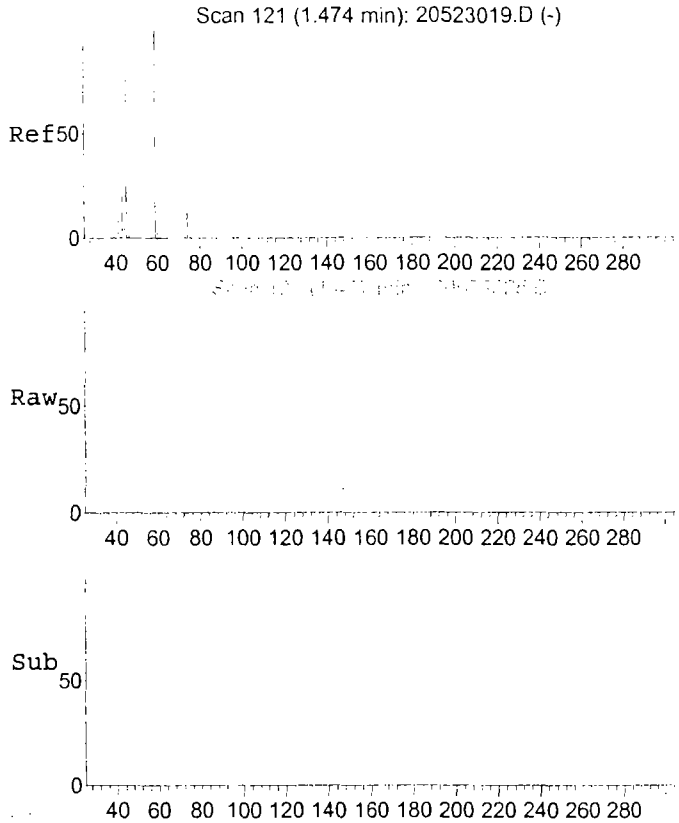
Vial: 25
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 2AL05231.RES

Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Wed May 24 07:15:32 2006
Response via : Initial Calibration

TIC: 20523025.D

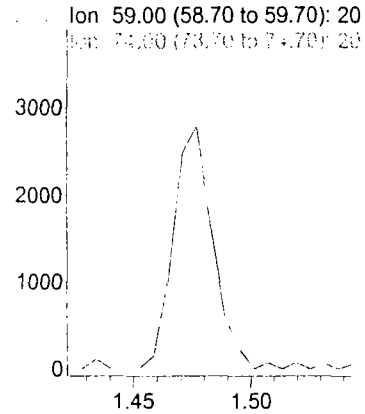


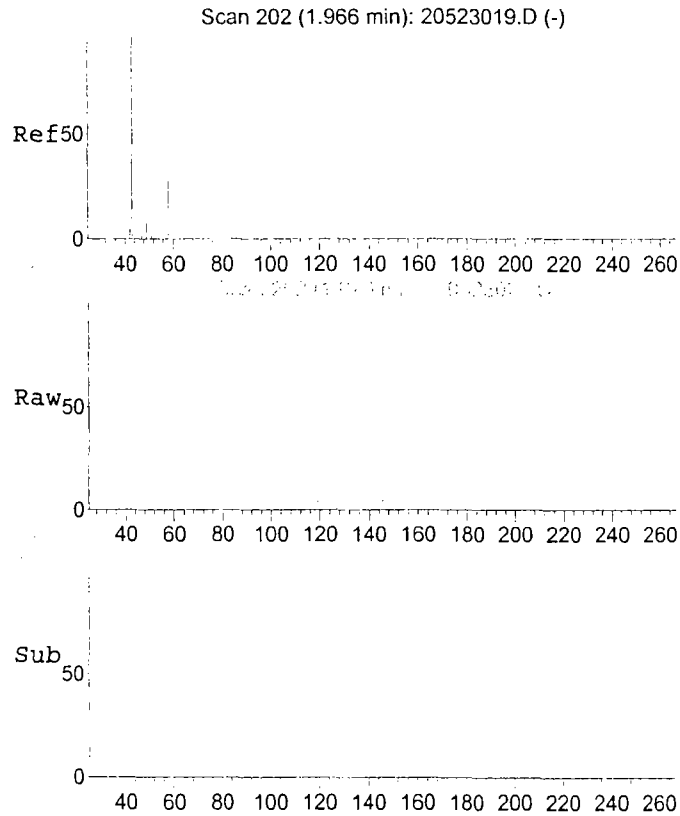


#8
Ethyl Ether
Concen: 0.61 ug/l
RT: 1.48 min Scan# 121
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 59 Resp: 3260

Ion	Ratio	Lower	Upper
59	100		
74	65.7	47.9	71.9
45	83.3	63.0	94.6

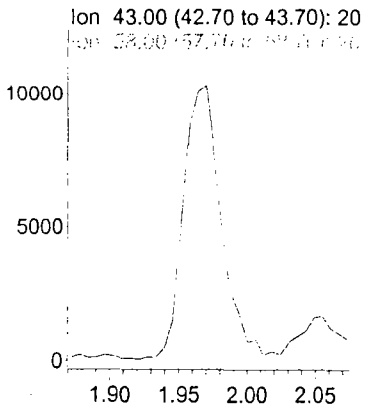


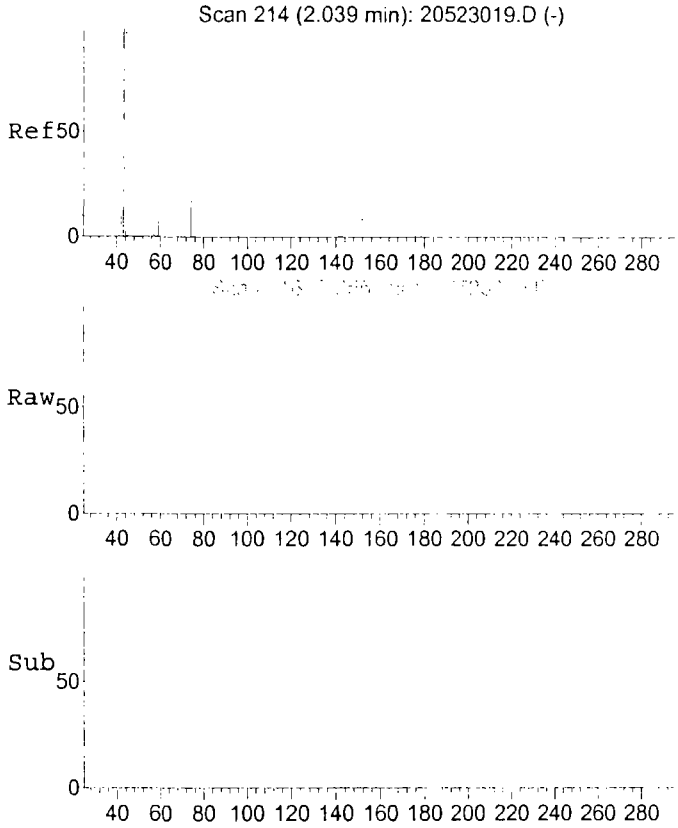


#12
Acetone
Concen: 6.82 ug/l
RT: 1.97 min Scan# 202
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 43 Resp: 19827

Ion	Ratio	Lower	Upper
43	100		
58	30.0	21.8	32.8

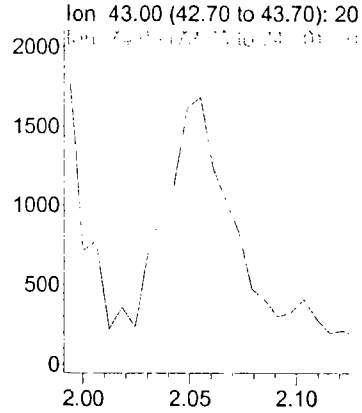


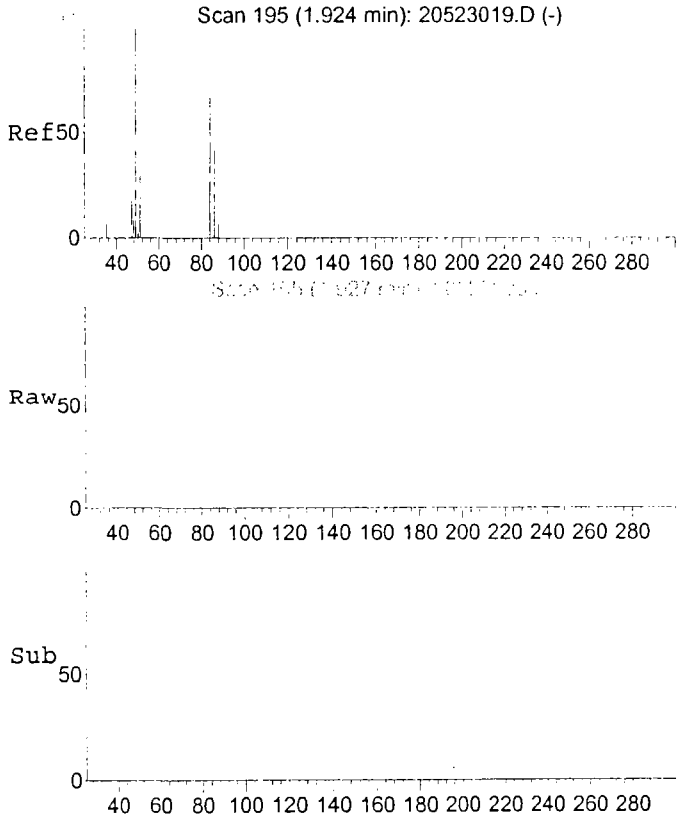


#16
Methyl acetate
Concen: Below Cal
RT: 2.05 min Scan# 216
Delta R.T. 0.02 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 43 Resp: 2816

Ion	Ratio	Lower	Upper
43	100		
74	18.9	9.7	22.7

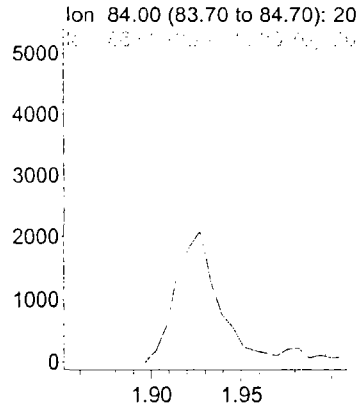


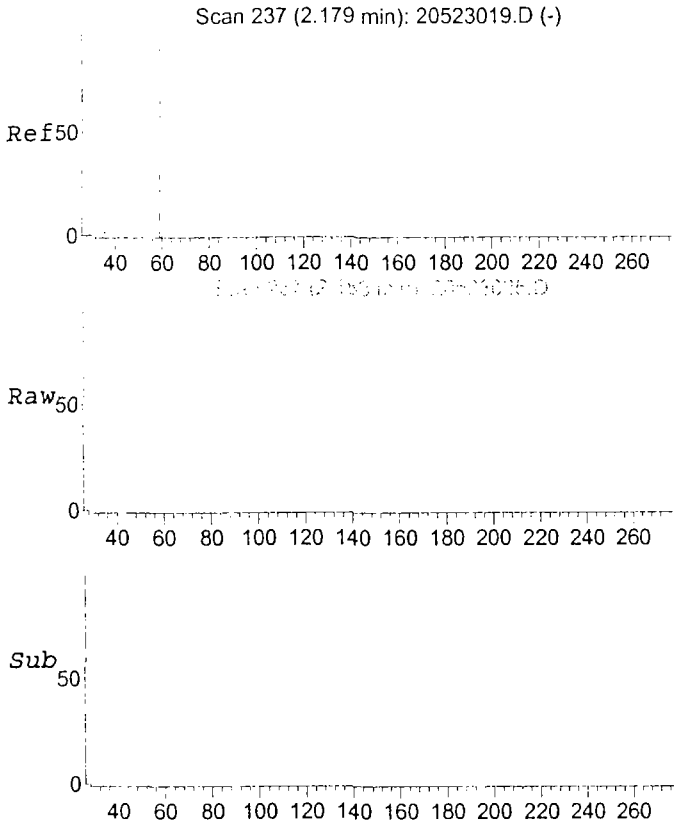


#17
Methylene Chloride
Concen: 2.60 ug/l
RT: 1.93 min Scan# 195
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 84 Resp: 3449

Ion	Ratio	Lower	Upper
84	100		
86	68.9	51.5	77.3
49	181.4	133.1	199.7

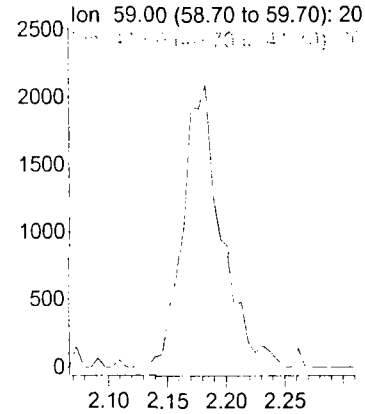


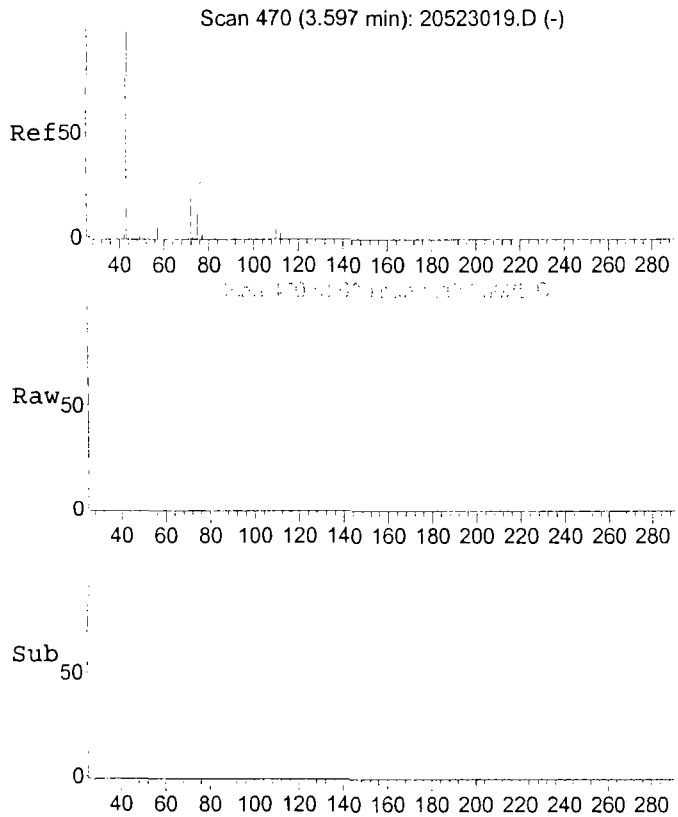


#18
TBA, tertButylalcohol
Concen: 8.32 ug/l
RT: 2.18 min Scan# 237
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 59 Resp: 4720

Ion	Ratio	Lower	Upper
59	100		
41	24.3	16.3	24.5

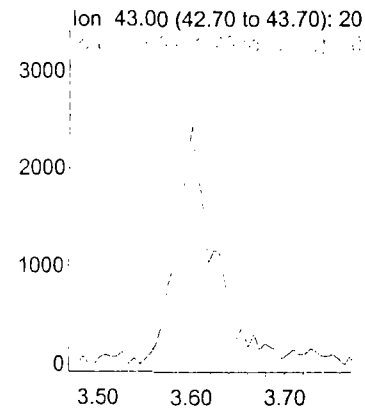


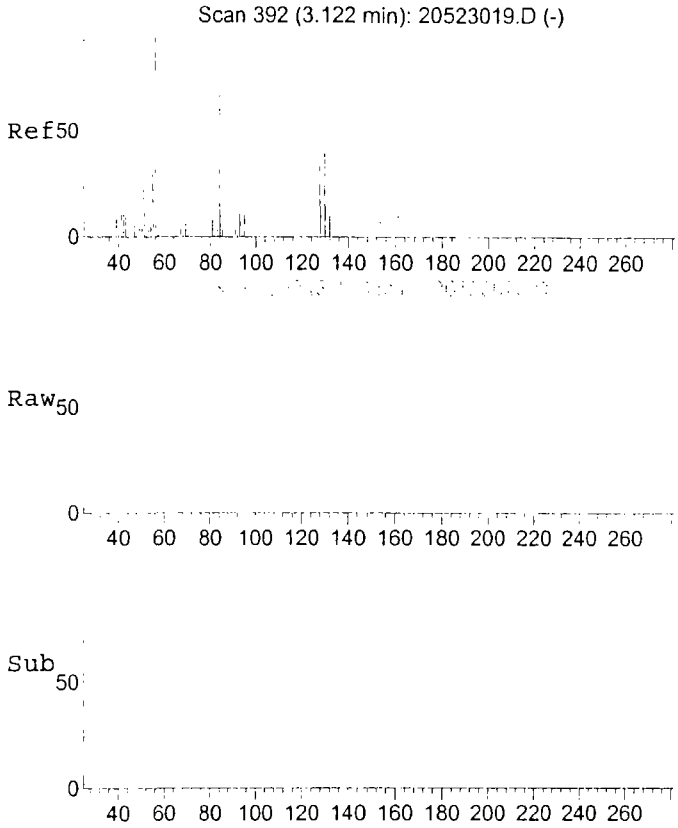


#30
2-Butanone
Concen: 5.02 ug/l
RT: 3.60 min Scan# 470
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 43 Resp: 6784

Ion	Ratio	Lower	Upper
43	100		
72	18.8	19.3	28.9#
57	5.3	6.0	9.0#

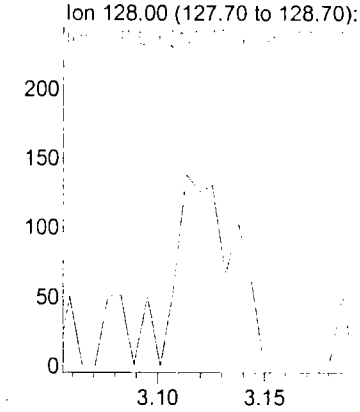


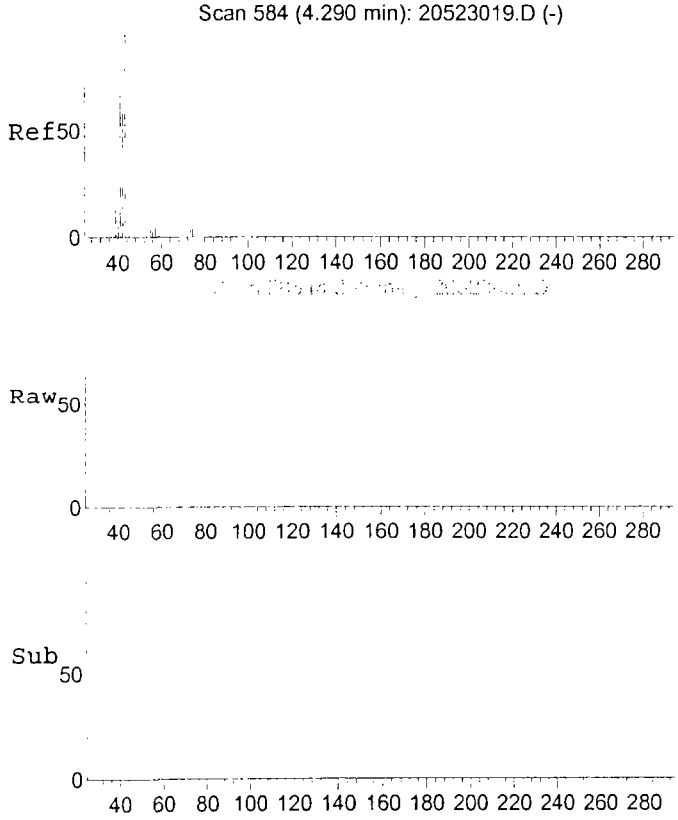


#34
Bromochloromethane
Concen: Below Cal
RT: 3.11 min Scan# 390
Delta R.T. -0.01 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion:128 Resp: 265

Ion	Ratio	Lower	Upper
128	100		
49	148.7	167.0	250.6#
130	78.9	103.8	155.6#

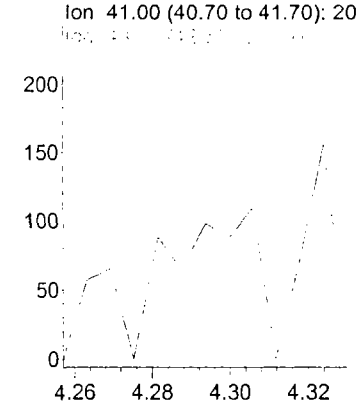




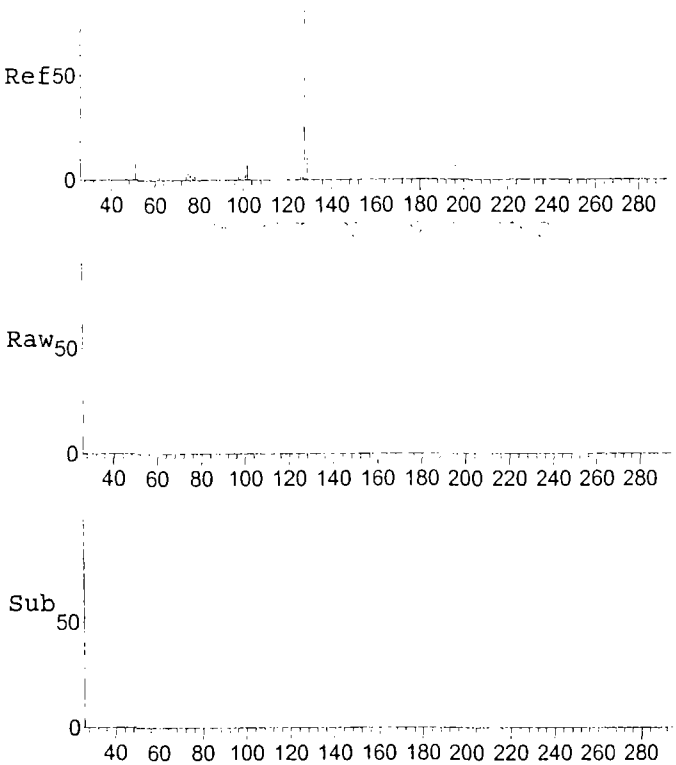
#45
Isobutanol
Concen: Below Cal
RT: 4.31 min Scan# 586
Delta R.T. 0.02 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion: 41 Resp: 163

Ion	Ratio	Lower	Upper
41	100		
43	128.2	106.7	160.1



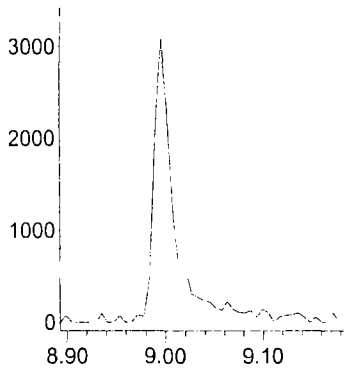
Scan 1357 (8.993 min): 20523019.D (-)



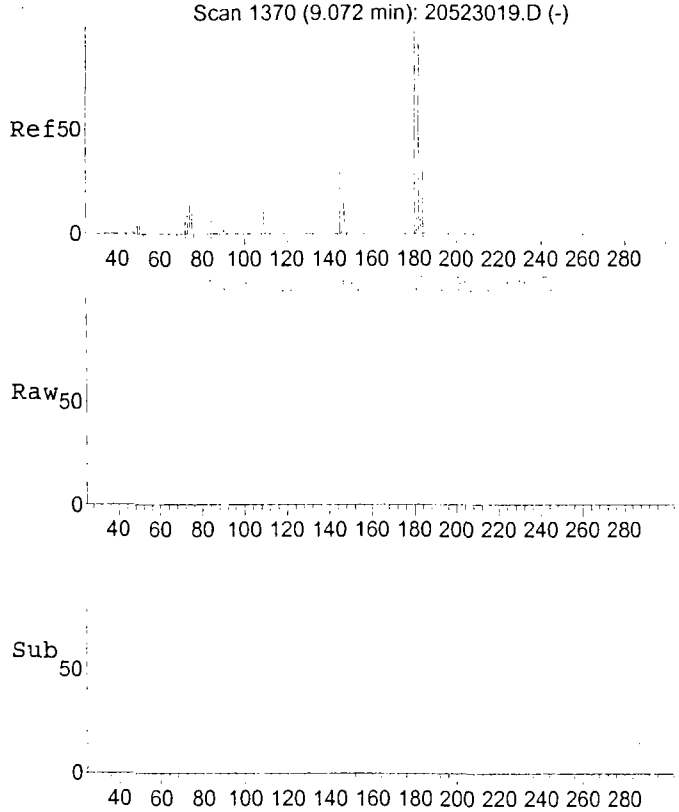
#101
Naphthalene
Concen: 0.66 ug/l
RT: 9.00 min Scan# 1357
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion:128 Resp: 4625

Ion 128.00 (127.70 to 128.70):



Scan 1370 (9.072 min): 20523019.D (-)

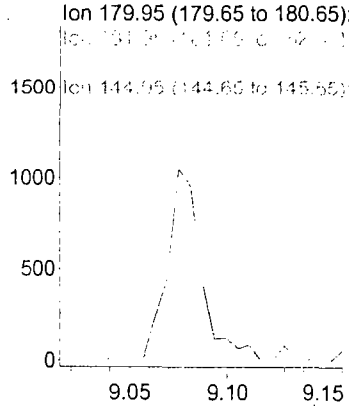


#102
1,2,3-Trichlorobenzene
Concen: 0.54 ug/l
RT: 9.08 min Scan# 1370
Delta R.T. 0.00 min
Lab File: 20523025.D
Acq: 23 May 2006 13:47

Tgt Ion:180 Resp: 1272

Ion	Ratio	Lower	Upper
180	100		
182	119.1	77.7	116.5#
184	33.5	24.6	37.0
145	34.3	26.7	40.1

Ion 179.95 (179.65 to 180.65):



VOA LCS Blank Summary Report

Data File : D:\DATA\2060523\1\20523023.D
Acq On : 23 May 2006 13:20
Sample : LCS[20]
Misc :
Matrix : WATERrams: RTEINT.P

Vial: 23
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Wed May 24 07:15:32 2006
Response via : Single (D:\DATA\2060523\1\20523019.D 23 May 2006 12:27)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
42)	S	1,2-Dichloroethane-d	27.17	30.00	90.56	70 to 130%	[ ]
58)	S	Toluene-d8	27.08	30.00	90.28	70 to 130%	[ ]
83)	S	Bromofluorobenzene	29.66	30.00	98.88	70 to 130%	[ ]
2)	M	Dichlorodifluorometh	10.20	20.00	50.99	70 to 130%	[*]
3)	MP	Chloromethane	10.89	20.00	54.44	70 to 130%	[*]
4)	MC	Vinyl Chloride	15.03	20.00	75.17	70 to 130%	[ ]
5)	M	Bromomethane	13.81	20.00	69.05	70 to 130%	[*]
6)	M	Chloroethane	14.29	20.00	71.47	70 to 130%	[ ]
7)	M	Trichlorofluorometha	17.06	20.00	85.32	70 to 130%	[ ]
8)	M	Ethyl Ether	15.52	20.00	77.61	70 to 130%	[ ]
9)	M	Acrolein	15.55	20.00	77.73	70 to 130%	[ ]
10)	MC	1,1-Dichloroethene	27.82	20.00	139.10	70 to 130%	[*]
11)	M	112Trichloro122trifl	21.50	20.00	107.52	70 to 130%	[ ]
12)	M	Acetone	14.59	20.00	72.97	70 to 130%	[ ]
13)	M	Iodomethane	91.43	100.00	91.43	70 to 130%	[ ]
14)	M	Carbon Disulfide	14.75	20.00	73.73	70 to 130%	[ ]
15)	M	Acetonitrile	79.72	100.00	79.72	70 to 130%	[ ]
16)	M	Methyl acetate	13.65	20.00	68.25	70 to 130%	[*]
17)	M	Methylene Chloride	21.21	20.00	106.07	70 to 130%	[ ]
18)	M	TBA, tertButylalcoho	76.26	100.00	76.26	70 to 130%	[ ]
19)	M	Acrylonitrile	15.79	20.00	78.96	70 to 130%	[ ]
20)	M	trans-1,2-Dichloroet	19.90	20.00	99.51	70 to 130%	[ ]
21)	M	Allyl chloride	88.19	100.00	88.19	70 to 130%	[ ]
22)	M	tert-butyl Methyleth	15.96	20.00	79.80	70 to 130%	[ ]
23)	M	Vinyl acetate	0.11	20.00	0.55	70 to 130%	[*]
24)	M	Hexane	25.35	20.00	126.74	70 to 130%	[ ]
25)	MP	1,1-Dichloroethane	18.88	20.00	94.38	70 to 130%	[ ]
26)	M	Chloroprene	19.42	20.00	97.11	70 to 130%	[ ]
27)	M	t-Butyl ethyl ether	16.24	20.00	81.18	70 to 130%	[ ]
28)	M	2,2-Dichloropropane	19.48	20.00	97.38	70 to 130%	[ ]
29)	M	cis-1,2-Dichloroethe	17.99	20.00	89.96	70 to 130%	[ ]
30)	M	2-Butanone	16.16	20.00	80.80	70 to 130%	[ ]
31)	M	Propionitrile	15.83	20.00	79.14	70 to 130%	[ ]
32)	M	Ethyl acetate	13.82	20.00	69.12	70 to 130%	[*]
33)	M	Diisopropylether	16.31	20.00	81.55	70 to 130%	[ ]
34)	M	Bromochloromethane	19.18	20.00	95.88	70 to 130%	[ ]
35)	M	Methacrylonitrile	17.23	20.00	86.14	70 to 130%	[ ]
36)	M	Tetrahydrofuran	15.81	20.00	79.04	70 to 130%	[ ]
37)	MC	Chloroform	17.87	20.00	89.36	70 to 130%	[ ]
38)	M	1,1,1-Trichloroethan	19.39	20.00	96.95	70 to 130%	[ ]
39)	M	Cyclohexane	25.78	20.00	128.88	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060523\1\20523023.D
Acq On : 23 May 2006 13:20
Sample : LCS[20]
Misc :
Matrix : WATERrams: RTEINT.P

Vial: 23
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Wed May 24 07:15:32 2006
Response via : Single (D:\DATA\2060523\1\20523019.D 23 May 2006 12:27)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
40)	M	Carbon Tetrachloride	19.99	20.00	99.93	70 to 130%	[ ]
41)	M	1,1-Dichloropropene	19.63	20.00	98.13	70 to 130%	[ ]
43)	M	Benzene	18.54	20.00	92.72	70 to 130%	[ ]
44)	M	1,2-Dichloroethane	16.73	20.00	83.67	70 to 130%	[ ]
45)	M	Isobutanol	51.95	100.00	51.95	70 to 130%	[*]
46)	M	t-Amyl methyl ether	16.89	20.00	84.47	70 to 130%	[ ]
47)	M	Trichloroethene	18.95	20.00	94.75	70 to 130%	[ ]
48)	M	Methylcyclohexane	20.28	20.00	101.39	70 to 130%	[ ]
49)	MC	1,2-Dichloropropane	18.10	20.00	90.48	70 to 130%	[ ]
50)	M	Dibromomethane	17.95	20.00	89.77	70 to 130%	[ ]
51)	M	Methyl methacrylate	18.91	20.00	94.54	70 to 130%	[ ]
52)	M	Bromodichloromethane	17.81	20.00	89.05	70 to 130%	[ ]
53)	M	2-Nitropropane	65.99	100.00	65.99	70 to 130%	[*]
54)	M	2-Chloroethylvinylet	19.91	20.00	99.57	70 to 130%	[ ]
55)	M	cis-1,3-Dichloroprop	17.76	20.00	88.81	70 to 130%	[ ]
56)	M	4-Methyl-2-Pentanone	17.47	20.00	87.35	70 to 130%	[ ]
60)	MC	Toluene	17.43	20.00	87.15	70 to 130%	[ ]
61)	M	trans-1,3-Dichloropr	17.98	20.00	89.92	70 to 130%	[ ]
62)	M	Ethyl methacrylate	18.01	20.00	90.05	70 to 130%	[ ]
63)	M	1,1,2-Trichloroethan	17.90	20.00	89.52	70 to 130%	[ ]
64)	M	Tetrachloroethene	18.77	20.00	93.84	70 to 130%	[ ]
65)	M	1,3-Dichloropropane	17.79	20.00	88.95	70 to 130%	[ ]
66)	M	2-Hexanone	12.67	20.00	63.36	70 to 130%	[*]
67)	M	Dibromochloromethane	17.44	20.00	87.20	70 to 130%	[ ]
68)	M	1,2-Dibromoethane,ED	17.47	20.00	87.34	70 to 130%	[ ]
69)	MP	Chlorobenzene	17.68	20.00	88.38	70 to 130%	[ ]
70)	M	1,1,1,2-Tetrachloroe	17.25	20.00	86.23	70 to 130%	[ ]
71)	MC	Ethylbenzene	16.73	20.00	83.63	70 to 130%	[ ]
72)	M	m,p-Xylene	35.12	40.00	87.81	70 to 130%	[ ]
73)	M	o-Xylene	16.68	20.00	83.41	70 to 130%	[ ]
74)	MG	Xylenes (Total)	51.81	60.00	86.36	70 to 130%	[ ]
75)	M	Styrene	16.73	20.00	83.67	70 to 130%	[ ]
77)	MP	Bromoform	18.19	20.00	90.97	70 to 130%	[ ]
78)	M	Cyclohexanone	90.92	100.00	90.92	70 to 130%	[ ]
79)	M	n-Propylbenzene	18.36	20.00	91.80	70 to 130%	[ ]
80)	M	2-Chlorotoluene	18.08	20.00	90.40	70 to 130%	[ ]
81)	M	1,3,5-Trimethylbenze	17.74	20.00	88.68	70 to 130%	[ ]
82)	M	Isopropylbenzene,Cum	18.95	20.00	94.76	70 to 130%	[ ]
84)	M	Bromobenzene	17.67	20.00	88.33	70 to 130%	[ ]
85)	MP	1,1,2,2-Tetrachloroe	18.33	20.00	91.65	70 to 130%	[ ]
86)	M	1,2,3-Trichloropropa	18.10	20.00	90.49	70 to 130%	[ ]

* = out of control limits

VOA LCS Blank Summary Report

Data File : D:\DATA\2060523\1\20523023.D Vial: 23
Acq On : 23 May 2006 13:20 Operator: MAK
Sample : LCS[20] Inst : GC/MS Ins
Misc : Multiplr: 1.00
Matrix : WATERrams: RTEINT.P

Method : D:\METHODS\2AL05231.M (RTE Integrator)
Title : 8260 Water Concentrator #1
Last Update : Wed May 24 07:15:32 2006
Response via : Single (D:\DATA\2060523\1\20523019.D 23 May 2006 12:27)

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
87)	M	trans-1,4-Dichloro-2	19.83	20.00	99.16	70 to 130%	[ ]
88)	M	4-Chlorotoluene	17.57	20.00	87.86	70 to 130%	[ ]
89)	M	tert-Butyl benzene	17.72	20.00	88.58	70 to 130%	[ ]
90)	M	1,2,4-Trimethylbenze	17.83	20.00	89.17	70 to 130%	[ ]
91)	M	sec-Butyl benzene	18.55	20.00	92.75	70 to 130%	[ ]
92)	M	1,3-Dichlorobenzene	18.65	20.00	93.23	70 to 130%	[ ]
93)	M	4-Isopropyl toluene	17.85	20.00	89.23	70 to 130%	[ ]
94)	M	1,4-Dichlorobenzene	16.49	20.00	82.47	70 to 130%	[ ]
95)	M	1,2-Dichlorobenzene	16.61	20.00	83.06	70 to 130%	[ ]
96)	M	n-Butyl benzene	17.48	20.00	87.42	70 to 130%	[ ]
97)	M	bis(2-Chloro-1-methy	19.81	20.00	99.06	70 to 130%	[ ]
98)	M	1,2-Dibromo-3-chloro	16.42	20.00	82.10	70 to 130%	[ ]
99)	M	1,2,4-Trichlorobenze	17.58	20.00	87.92	70 to 130%	[ ]
100)	M	Hexachlorobutadiene	18.91	20.00	94.57	70 to 130%	[ ]
101)	M	Naphthalene	15.98	20.00	79.89	70 to 130%	[ ]
102)	M	1,2,3-Trichlorobenze	16.50	20.00	82.49	70 to 130%	[ ]

* = out of control limits

Matrix: H2O

LIMS QC Batch #: 49644/49647

Analytical Method: 8081/8082

Extraction Method: 3510

Solvent	Lot #			
CHCL2	X235 02A	Na2SO4: X236-05		
CHCL2		H2SO4:		
Hexane	X230 02C	NaOH:		
Hexane		Surrogate: X236-04, 1.0 ppm, 0.5 ml.		
		Matrix Spike: PEST X211-05, 0.4 ppm, 1.0 ml.		
		Matrix Spike: PCB X231-05, 2.5 ppm, 1.0 ml.		

Date	Project #	Sample ID	Analyst	Initial Volume	Final Volume	pH 5-9	Comments
05/22/06	9710	BLK	FPA	1L	5.0 ml	✓	PEST/PCB
		CCS PEST		1L			PEST
		CCS PCB		1L			PCB
		9005		980 ml			PEST/PCB
		9006		960 ml			
	9711	9007		990 ml			
		9008 D		990 ml			
	9714	9020 F		1000 ml			
		9021 F		1000 ml			
		9022 F		1000 ml			
		9023 MS PEST E		1000 ml			PEST
		9023 9024 MSD PEST D		1000 ml			PEST
		9023 MS PCB G		1000 ml			PCB
		9024 MSD PCB E		1000 ml			PCB
	2967	2452 A		1000 ml			PCB
		2453 A		985 ml			PCB
	2904	2221 B		970 ml			PEST
		2222 B		970 ml			
		2223 B		980 ml			
	2905	2225 A		980 ml			
		2226 A		900 ml			

ESC 5/23/06

ESA
5/23/06
0821

Project Number [illegible]

PCB Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Aroclor-1016	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1221	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1232	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1242	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1248	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1254	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1260	608	8082	7/30 days*	Liter Glass Amber	None
PCB Total-TCL	608	8082	7/30 days*	Liter Glass Amber	None

*7/30 days = 7 days for extraction, 30 days for analysis on extract

2E
WATER AROCLOR SURROGATE RECOVERY

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-2967 SAS No.: SDG No.: 06-2967

GC Column(1): RTX-5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX %REC #	DCB %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	MW-42D	73	71					0
02	MW-44S	59	47					0
03	LCS	73	83					0
04	BLK	69	83					0
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150)
S2 (DCB) = Decachlorobiphenyl (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER AROCLOR LAB CONTROL SAMPLE

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-2967 SAS No.: SDG No.: 06-2967

Matrix Spike - Sample No.: LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aroclor-1248	2.50		1.78	71	55-145

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits

COMMENTS: Project 06-2967 is associated with the QC from 06-9710.

FORM 3
WATER AROCLOR MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-2967 SAS No.: SDG No.: 06-2967

Matrix Spike - Sample No.: SAMPLE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Aroclor-1248	2.50		1.88	75	55-145

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1248	2.50	1.56	62	19	25	55-145

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: Project 06-2967 is associated with the QC from 06-9714.

Project Numbe

General Chemistry

Project Number _____

General Chemistry

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Cyanide (Amenable)	335.1		14 days	250ml Plastic*	Sodium Hydroxide
Cyanide (Total)	335.2	4500-CN	14 days	250ml Plastic*	Sodium Hydroxide
Fluoride	340.1	4500-Fl	28 days	500ml Plastic**	None
pH	150.1	9040/9045	Immediate	500ml Plastic**	None
Specific Conductance	120.1	9050	28 days	500ml Plastic**	None

*Cyanide Total and Amenable are analyzed from the same bottle.
**Fluoride, pH, and Specific Conductance are analyzed from the same bottle.

Pace Analytical
Laboratory Control Sample

Pace Project Number 06-2967
Pace Sample Number

				QC Limits	
Analysis	True Value	QC Concentration mg/L	% Recovery %	Recovery %	
Fluoride, Batch 49912	1.92	2	96%	85-115	Matrix Interference
Cyanide, total, Batch 49676	0.1015	0.1	102%	85-115	
Cyanide, amenable	NA	NA	NA	NA	
pH, Batch 49574	7	7.01	100%	85-115	
Specific Conductance, Batch 49720	1548	1428	108%	85-115	

Pace Analytical
Matrix Spike/Matrix Spike Duplicate Summary

Pace Project Number 06-2967
Pace Sample Number

Compound	Sample ID	Spike Added mg/L	Sample Concentration mg/L	Matrix Spike Concentration mg/L	Matrix Spike % Recovery %	Spike Added mg/L	Matrix Spike Duplicate Concentration mg/L	Matrix Spike Duplicate % Recovery %	% RPD %	QC Limits RPD %	QC Limits Recovery %
Fluoride, Batch 49912	05-2451	8	1.13	6.06	61.6	NA	NA	NA	NA	20	85-115
Cyanide, total, Batch 49676	05-2451	0.1	0	0.1037	103.7	NA	NA	NA	NA	20	85-115
Cyanide, amenable	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
pH	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
Specific Conductance	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
										20	85-115

Fluoride Sample had matrix interference

Project Number 06-2467

Chain of Custody

HMI
Environmental Consulting Services

06-2967

CHAIN-OF-CUSTODY RECORD

Project Number: 11M00321
Project Name/Location: ORMET / REDUCTION MILL
Laboratory: PACE ANALYTICAL
Sampling Personnel: S. MENOSKY / B. FARGO

Sample ID	Date/Time		Sample Code	DISSOLVED As, Be MN, NA, V 250ml. PLASTIC FIELD FILTERED	CYANIDE (TOTAL/AMENABLE) 250ml. PLASTIC (NAOH)	pH, Sp. Cond., F 500ml. PLASTIC (4°C)	PCB'S 1 LITER GLASS (4°C)	PCE 40ml glass VIAL HCl				TOTAL
MW-5	5/16/06	10:45	L	1	1	1		3		05-2447		6
MW-11		12:30		1	1	1				48		3
MW-7		1:30		1	1	1				49		3
MW-8		2:15		1	1	1				50		3
MW-10		3:45		1	1	1				51		3
MW-44D		4:45					1			52		1
MW-44S		5:00					1			53		1
MW-1		5:30		1	1	1				54		3
TRIP BLANK		—						3		55		3
MW-2	5/17/06	8:30		1	1	1		3		56		6
MW-2D		9:00		1	1	1		3		57		6
MW-16		10:00		1	1	1				58		3
MW-16D		9:45		1	1	1				59		3
MW-29S		10:40		1	1	1				60		3
MW-29D		11:30		1	1	1				61		3

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 50

Relinquished by: Stephen Menosky	Organization: HMI	Date: 5-18-06	Time: 6:45 Am	Seal Intact?	
Received by: [illegible]	Organization: PACE ANALYTICAL	Date: 5.18.6	Time: 1510	Yes No (NA)	
Relinquished by: [illegible]	Organization: PACE ANALYTICAL	Date: 5.18.6	Time: 1700	Seal Intact?	
Received by: C Crowley	Organization: Pace Analytical	Date: 5.18.06	Time: 1700	Yes No (NA)	

REMARKS: SAMPLES ARE IN 2 COOLERS.

6°

DELIVERY METHOD: In Person ☐ Common Carrier ☐ Lab Courier PACE Other ☐

HMI
Environmental Consulting Services

06-2967

CHAIN – OF – CUSTODY RECORD

Project Number: HM00321

Project Name/Location: ORMET / REDUCTION MILL

Laboratory: PACE ANALYTICAL

Sampling Personnel: S. MENOSKY / Bob FARGO

Sample ID	Date/Time	Sample Code	DISSOLVED As, Be Mn, NA, V 250ml. PLASTIC FIELD FILTERED (HNO3)	CYANIDE (TOTAL/AMENABLE) 250ml. PLASTIC (NAOH)	pH, Sp. Cond., F 500ml. PLASTIC (4°C)	PCB's 1 LITER GLASS (4°C)	PCE 40ml GLASS VIAL (HCL)				TOTAL
MW-30	5/17/06 12:00	L	1	1	1		3		05-2462		6
MW-28	12:30		1	1	1					63	3
MW-18	1:10		1	1	1		3			64	6
MW-40S	3:15		1	1	1					65	3
MW-40D	3:45		1	1	1					66	3
MW-31	4:30		1	1	1		3			67	6
MW-35	5:20		1	1	1					68	3
MW-37	6:00		1	1	1					69	3

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 33

Relinquished by: Stephen C. Menosky	Organization: HMI	Date: 5/18/06	Time: 6:45AM	Seal Intact?		
Received by: [illegible]	Organization: Pace Analytical	Date: 5.18.6	Time: 1510	Yes	No	NA
Relinquished by: [illegible]	Organization: Pace Analytical	Date: 5.18.6	Time: 1700	Seal Intact?		
Received by: C Arbourty	Organization: Pace Analytical	Date: 5-18-06	Time: 1700	Yes	No	NA

REMARKS: SAMPLES ARE IN 2 COOLERS.

6°

DELIVERY METHOD: In Person [ ] Common Carrier [ ] Lab Courier [PACE] Other [ ]

HMI
Environmental Consulting Services

LABORATORY TASK ORDER

DATE: MAY 8, 2006

FROM:	HydroSystems Management, Inc. Glass Works Center - Suite 109 331 South Main Street Washington, PA 15301 (724) 228-4310 (724) 228-4343 FAX	TO:	PACE ANALYTICAL SERVICES, INC. 5203 TRIANGLE LANE EXPORT PA 15632 (724) 733-1161 / (724) 327-7793
CONTACT:	STEVE MENOSKY	ATTENTION:	RACHEL CHRISTNER /
Project Number:	HM00321	Estimated Sample Delivery Date	MAY 19, 2006
Date Bottles Required	5-10-06	Laboratory Report Due Date	STANDARD TURNAROUND
Shipping Address	SAME AS ABOVE	Send Reports To:	Bob FARGO @ HMI

ANALYTICAL AND CONTAINER INFORMATION

Parameter	Analytical Method	Detection Limits	Matrix	Number of Bottles/Sets	Bottle Size	Bottle Type	Preservative
DISSOLVED ARSENIC	SW 846/6010 TRACE	0.004 mg/L	WATER	41			
" BERYLLIUM	SW 846/6010 TRACE	0.0005 mg/L					
" MANGANESE	SW 846/6010	0.01 mg/L					
" SODIUM	SW 846/6010	0.5 mg/L					
" VANADIUM	SW 846/6010	0.01 mg/L					
* PLEASE SEND UNPRESERVED EMPTY PLASTIC BOTTLES TO FILTER FROM *						TO BE DETERMINED BY LAB	
CYANIDE ~ TOTAL	SW 846/9010 A	0.01 mg/L					
CYANIDE ~ AMENABLE	SW 846/9010 A	0.01 mg/L					
FLUORIDE	EPA 340.2	0.1 mg/L					
pH	EPA 150.1	S.U.					
Specific Conductance	EPA 120.1	1 µmhos/cm					
TETRACHLOROETHENE	SW 846/8260	0.005 mg/L		10			
PCB'S	SW 846/8082	0.5 µg/L		6			
TRIP BLANKS	SW 846/8260	0.005 mg/L		2			

June 13, 2006

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Dear Mr. Menosky:

Enclosed are analytical results for samples submitted to Pace Analytical by Hydro Systems Management, Inc.. The samples were received on May 20, 2006. The results reported in this project meet the requirements as specified in Chapter 5 of the NELAC Standards. Any deviations or discrepancies from the NELAC standards are documented in the case narrative(s) of this report. Parameters printed in italics represent Non-NELAC accredited parameters. Please reference Pace project number 06-3008 when inquiring about this report.

Client Site: Reduction Mill
Client Ref.: HM00321

Pace Sample Identification	Client Sample Identification
0605-2705	MW-15
0605-2706	MW-34D
0605-2707	MW-34S
0605-2708	MW-17
0605-2709	MW-18D
0605-2710	MW-32
0605-2711	MW-36
0605-2712	MW-39D

Pace Sample Identification	Client Sample Identification
0605-2713	MW-39S
0605-2714	MW-12
0605-2715	MW-14
0605-2716	MW-42D
0605-2717	MW-42S
0605-2718	MW-19
0605-2719	Field Blank

General Comments: Some results shown on this report have not yet been verified. These values are indicated with an asterix (*) immediately after the result value. The recommended holding time for pH requires immediate analysis. The samples were received past the recommended holding time for pH. Cooler temperature 1 ° C upon receipt. Ice was present.

Please call me if you have any questions regarding the information contained within this report.

Sincerely,

Rachel D. Christner
Project Manager

RDC: rdc

Enclosures

Page 1 of ____

cc: John Reggi, Ormet Primary Aluminum Corporation

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2705**
Client Sample ID: MW-15
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	5.9	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	16	0.50	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	35	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	8.22	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1300	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.020	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	0.0024	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.75	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	280	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.069	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2706**
Client Sample ID: MW-34D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	1.8	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	7.5	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	23	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	7.80	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.26	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	170	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2707**
Client Sample ID: MW-34S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.47	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	6.4	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	68	0.50	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	8.59	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1600	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.012	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	0.0021	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.51	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	380	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.036	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2708**
Client Sample ID: MW-17
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	2.1	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	4.2	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	13	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	7.73	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	1.4	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	130	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2709**
Client Sample ID: MW-18D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.64	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	3.5	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	22	0.20	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.85	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	1.4	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	130	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2710**
Client Sample ID: MW-32
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	1.4	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	16	0.50	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	50	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	9.93	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1500	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.049	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	0.0021	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	3.3	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	350	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.11	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2711**
Client Sample ID: MW-36
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.15	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	3.8	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	38	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	9.17	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1000	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0068	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.41	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	220	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.016	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2712**
Client Sample ID: MW-39D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	0.32	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	9.0	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.63	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	860	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.94	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	110	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2713**
Client Sample ID: MW-39S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	2.4	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	7.2	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	130	0.50	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	8.96	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	4400	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.011	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.21	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	940	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.017	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2714**
Client Sample ID: MW-12
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	0.92	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.55	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	510	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	1.9	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	23	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1221	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1232	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1242	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1248	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1254	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1260	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
PCB Total-TCL	8082[2]	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2715**
Client Sample ID: MW-14
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	0.014	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	2.2	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.80	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	530	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	1.2	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	38	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2716**
Client Sample ID: MW-42D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.92	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	2.7	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	10	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.73	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	2000	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	1.2	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	450	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2717**
Client Sample ID: MW-42S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.13	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	3.8	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	100	0.50	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	8.58	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	4400	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0065	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.23	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	930	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

Mr. Steve Menosky
Hydro Systems Management, Inc.
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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2718**
Client Sample ID: MW-19
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	3.5	0.20	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.48	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	590	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.014	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	15	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis. The spike recovery for Fluoride is outside the QC limit due to sample matrix interference

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2719**
Client Sample ID: Field Blank
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	BLC	05/31/2006	0049872-1	<0.010
Fluoride	340.2[1]	0.40	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	8.17	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	4.6	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	1.2	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	<0.0050	0.0050	mg/l	EAC	06/01/2006	0049911-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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June 13, 2006

Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Dear Mr. Menosky:

Enclosed are analytical results for samples submitted to Pace Analytical by Hydro Systems Management, Inc.. The samples were received on May 20, 2006. The results reported in this project meet the requirements as specified in Chapter 5 of the NELAC Standards. Any deviations or discrepancies from the NELAC standards are documented in the case narrative(s) of this report. Parameters printed in italics represent Non-NELAC accredited parameters. Please reference Pace project number 06-3008 when inquiring about this report.

Client Site: Reduction Mill
Client Ref.: HM00321

Pace Sample Identification	Client Sample Identification
0605-2705	MW-15
0605-2706	MW-34D
0605-2707	MW-34S
0605-2708	MW-17
0605-2709	MW-18D
0605-2710	MW-32
0605-2711	MW-36
0605-2712	MW-39D

Pace Sample Identification	Client Sample Identification
0605-2713	MW-39S
0605-2714	MW-12
0605-2715	MW-14
0605-2716	MW-42D
0605-2717	MW-42S
0605-2718	MW-19
0605-2719	Field Blank

General Comments: The recommended holding time for pH requires immediate analysis. The samples were received past the recommended holding time for pH. Cooler temperature 1 ° C upon receipt. Ice was present.

REPORT OF LABORATORY ANALYSIS

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Please call me if you have any questions regarding the information contained within this report.

Sincerely,

Rachel D. Christner
Project Manager

RDC: jld

Enclosures

Page 1 of 59

cc: John Reggi, Ormet Primary Aluminum Corporation

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2705**
Client Sample ID: MW-15
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	5.9	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	16	0.50	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	35	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	8.22	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1300	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.020	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	0.0024	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.75	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	280	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.069	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

REPORT OF LABORATORY ANALYSIS

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2706**
Client Sample ID: MW-34D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	1.8	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	7.5	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2[1]	23	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1[1]	7.80	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.26	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	170	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Steve Menosky
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331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2707**
Client Sample ID: MW-34S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	0.47	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	6.4	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2(1)	68	0.50	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1(1)	8.59	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	1600	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.012	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	0.0021	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	0.51	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	380	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	0.036	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2708**
Client Sample ID: MW-17
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	2.1	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	4.2	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2(1)	13	0.10	mg/l	CK0	05/24/2006	0049923-1	<0.10
pH	150.1(1)	7.73	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	1.4	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	130	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2709**
Client Sample ID: MW-18D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	0.64	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	3.5	0.25	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2(1)	22	0.20	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	7.85	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	910	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	1.4	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	130	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2710**
Client Sample ID: MW-32
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	1.4	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	16	0.50	mg/l	BLC	05/24/2006	0049754-1	<0.010
Fluoride	340.2(1)	50	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	9.93	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	1500	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.049	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	0.0021	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	3.3	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	350	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	0.11	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2711**
Client Sample ID: MW-36
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.15	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	3.8	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	38	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	9.17	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	1000	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0068	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.41	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	220	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	0.016	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2712**
Client Sample ID: MW-39D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	0.32	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	9.0	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	7.63	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	860	1.0	umhos/cm	BAB	05/26/2006	0049786-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.94	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	110	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2713**
Client Sample ID: MW-39S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	2.4	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	7.2	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2(1)	130	0.50	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	8.96	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	4400	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	0.011	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	0.21	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	940	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	0.017	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2714**
Client Sample ID: MW-12
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2(1)	0.92	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	7.55	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	510	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	1.9	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	23	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1221	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1232	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1242	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1248	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1254	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
Aroclor-1260	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50
PCB Total-TCL	8082(2)	<0.50	0.50	ug/l	RDJ	05/26/2006	0049764-1	<0.50

(1) U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2715**
Client Sample ID: MW-14
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	<0.010	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	0.014	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2(1)	2.2	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	7.80	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	530	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	1.2	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	38	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2716**
Client Sample ID: MW-42D
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1(1)	0.92	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2(1)	2.7	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2(1)	10	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	7.73	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	2000	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	1.2	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	450	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2717**
Client Sample ID: MW-42S
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.13	0.010	mg/l	BLC	05/30/2006	0049808-1	<0.010
Cyanide (Total)	335.2[1]	3.8	0.25	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2[1]	100	0.50	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1[1]	8.58	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1[1]	4400	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0065	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B[2]	0.23	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B[2]	930	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

[1] U.S. Environmental Protection Agency, 1983. Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2718**
Client Sample ID: MW-19
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	05/25/2006	0049775-1	<0.010
Fluoride	340.2(1)	3.5	0.20	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	7.48	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	590	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	0.014	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	15	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis. The spike recovery for Fluoride is outside the QC limit due to sample matrix interference

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Mr. Steve Menosky
Hydro Systems Management, Inc.
331 South Main St.
Suite 109
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-3008**
Lab Sample ID: **0605-2719**
Client Sample ID: Field Blank
Sample Matrix: Aqueous

Date Sampled: 05/18/2006
Date Received: 05/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	BLC	05/31/2006	0049872-1	<0.010
Fluoride	340.2(1)	0.40	0.10	mg/l	CK0	06/01/2006	0049993-1	0.10
pH	150.1(1)	8.17	1.00	pH	JMT	05/22/2006	0049640-1	6.02
Specific Conductance	120.1(1)	4.6	1.0	umhos/cm	BAB	06/02/2006	0049977-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	05/24/2006	0049646-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	05/24/2006	0049646-1	<0.00050
Manganese	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010
Sodium	6010B(2)	1.2	0.50	mg/l	CS0	05/24/2006	0049646-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	05/24/2006	0049646-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	<0.0050	0.0050	mg/l	EAC	06/01/2006	0049911-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Project Number 06-3005

Metals

Project Number _____

Metals Analysis - ICP

Parameter	Chemical Symbol	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Arsenic	As	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Beryllium	Be	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Manganese	Mn	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Sodium	Na	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Vanadium	V	200.7	6010	6 Months	250ml Plastic	Nitric Acid

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2705	Client Sample ID	MW-15	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.020		1.0	ICP	05/24/2006	08:44
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.0024		1.0	ICP	05/24/2006	08:44
Manganese (Dissolved)	257.61	0.00020	0.010	0.75		1.0	ICP	05/24/2006	08:44
Sodium (Dissolved)	330.23	0.17	0.50	284		1.0	ICP	05/24/2006	08:44
Vanadium (Dissolved)	292.40	0.00040	0.010	0.069		1.0	ICP	05/24/2006	08:44

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	063008-0605-2706	Client Sample ID	MW-34D	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	08:59
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00025	B	1.0	ICP	05/24/2006	08:59
Manganese (Dissolved)	257.61	0.00020	0.010	0.26		1.0	ICP	05/24/2006	08:59
Sodium (Dissolved)	330.23	0.17	0.50	170		1.0	ICP	05/24/2006	08:59
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0098	B	1.0	ICP	05/24/2006	08:59

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2707	Client Sample ID	MW-34S	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.012		1.0	ICP	05/24/2006	09:03
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.0021		1.0	ICP	05/24/2006	09:03
Manganese (Dissolved)	257.61	0.00020	0.010	0.51		1.0	ICP	05/24/2006	09:03
Sodium (Dissolved)	330.23	0.17	0.50	385		1.0	ICP	05/24/2006	09:03
Vanadium (Dissolved)	292.40	0.00040	0.010	0.036		1.0	ICP	05/24/2006	09:03

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2708	Client Sample ID	MW-17	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:06
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00010	B	1.0	ICP	05/24/2006	09:06
Manganese (Dissolved)	257.61	0.00020	0.010	1.4		1.0	ICP	05/24/2006	09:06
Sodium (Dissolved)	330.23	0.17	0.50	129		1.0	ICP	05/24/2006	09:06
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0048	B	1.0	ICP	05/24/2006	09:06

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	063008-0605-2709	Client Sample ID	MW-18D	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:09
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00014	B	1.0	ICP	05/24/2006	09:09
Manganese (Dissolved)	257.61	0.00020	0.010	1.4		1.0	ICP	05/24/2006	09:09
Sodium (Dissolved)	330.23	0.17	0.50	130		1.0	ICP	05/24/2006	09:09
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0078	B	1.0	ICP	05/24/2006	09:09

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2710	Client Sample ID	MW-32	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.049		1.0	ICP	05/24/2006	09:31
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.0021		1.0	ICP	05/24/2006	09:31
Manganese (Dissolved)	257.61	0.00020	0.010	3.3		1.0	ICP	05/24/2006	09:31
Sodium (Dissolved)	330.23	0.17	0.50	350		1.0	ICP	05/24/2006	09:31
Vanadium (Dissolved)	292.40	0.00040	0.010	0.11		1.0	ICP	05/24/2006	09:31

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2711	Client Sample ID	MW-36	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0068		1.0	ICP	05/24/2006	09:34
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00046	B	1.0	ICP	05/24/2006	09:34
Manganese (Dissolved)	257.61	0.00020	0.010	0.41		1.0	ICP	05/24/2006	09:34
Sodium (Dissolved)	330.23	0.17	0.50	222		1.0	ICP	05/24/2006	09:34
Vanadium (Dissolved)	292.40	0.00040	0.010	0.016		1.0	ICP	05/24/2006	09:34

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	063008-0605-2712	Client Sample ID	MW-39D	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:37
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00016	B	1.0	ICP	05/24/2006	09:37
Manganese (Dissolved)	257.61	0.00020	0.010	0.94		1.0	ICP	05/24/2006	09:37
Sodium (Dissolved)	330.23	0.17	0.50	110		1.0	ICP	05/24/2006	09:37
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0063	B	1.0	ICP	05/24/2006	09:37

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2713	Client Sample ID	MW-39S	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.011		1.0	ICP	05/24/2006	09:41
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00021	B	1.0	ICP	05/24/2006	09:41
Manganese (Dissolved)	257.61	0.00020	0.010	0.21		1.0	ICP	05/24/2006	09:41
Sodium (Dissolved)	330.23	0.17	0.50	937		1.0	ICP	05/24/2006	09:41
Vanadium (Dissolved)	292.40	0.00040	0.010	0.017		1.0	ICP	05/24/2006	09:41

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2714	Client Sample ID	MW-12	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:44
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.000070	U	1.0	ICP	05/24/2006	09:44
Manganese (Dissolved)	257.61	0.00020	0.010	1.9		1.0	ICP	05/24/2006	09:44
Sodium (Dissolved)	330.23	0.17	0.50	23.4		1.0	ICP	05/24/2006	09:44
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/24/2006	09:44

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2715	Client Sample ID	MW-14	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:47
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.000070	U	1.0	ICP	05/24/2006	09:47
Manganese (Dissolved)	257.61	0.00020	0.010	1.2		1.0	ICP	05/24/2006	09:47
Sodium (Dissolved)	330.23	0.17	0.50	38.2		1.0	ICP	05/24/2006	09:47
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00046	B	1.0	ICP	05/24/2006	09:47

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	063008-0605-2716	Client Sample ID	MW-42D	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	09:59
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.000070	U	1.0	ICP	05/24/2006	09:59
Manganese (Dissolved)	257.61	0.00020	0.010	1.2		1.0	ICP	05/24/2006	09:59
Sodium (Dissolved)	330.23	0.17	0.50	453		1.0	ICP	05/24/2006	09:59
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00093	B	1.0	ICP	05/24/2006	09:59

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2717	Client Sample ID	MW-42S	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0065		1.0	ICP	05/24/2006	10:02
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.00019	B	1.0	ICP	05/24/2006	10:02
Manganese (Dissolved)	257.61	0.00020	0.010	0.23		1.0	ICP	05/24/2006	10:02
Sodium (Dissolved)	330.23	0.17	0.50	934		1.0	ICP	05/24/2006	10:02
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0091	B	1.0	ICP	05/24/2006	10:02

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	063008-0605-2718	Client Sample ID	MW-19	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	10:16
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.000070	U	1.0	ICP	05/24/2006	10:16
Manganese (Dissolved)	257.61	0.00020	0.010	0.014		1.0	ICP	05/24/2006	10:16
Sodium (Dissolved)	330.23	0.17	0.50	15.3		1.0	ICP	05/24/2006	10:16
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0029	B	1.0	ICP	05/24/2006	10:16

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Sample Results

Lab Sample ID	063008-0605-2719	Client Sample ID	Field Blank	Matrix	Aqueous
Units	mg/L	Prep Date	05/23/2006	Prep Batch	49646
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0050	0.0017	U	1.0	ICP	05/24/2006	10:20
Beryllium (Dissolved)	313.04	0.000070	0.0010	0.000070	U	1.0	ICP	05/24/2006	10:20
Manganese (Dissolved)	257.61	0.00020	0.010	0.00099	B	1.0	ICP	05/24/2006	10:20
Sodium (Dissolved)	330.23	0.17	0.50	1.2		1.0	ICP	05/24/2006	10:20
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	05/24/2006	10:20

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical

Metals Data Reporting Form

Preparation Blank Results

Lab Sample ID: QC49646MB

Matrix: Water **Units:** ug/L **Prep Date:** 5/23/2006 **Prep Batch:** 49646

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	IDL	Report Limit	Conc	Q	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	1.7	5.0	1.7	U	1	ICP	5/24/2006	8:35
Beryllium	313.042	0.070	1.0	0.070	U	1	ICP	5/24/2006	8:35
Manganese	257.61	0.20	10.0	0.20	U	1	ICP	5/24/2006	8:35
Sodium	**330.232**	**170**	**500**	**252**	**B**	**1**	**ICP**	**5/24/2006**	**8:35**
Vanadium	292.402	0.40	10.0	0.40	U	1	ICP	5/24/2006	8:35

Comments:

U Result is less than the MDL

B Result is between MDL and RL

Pace Analytical

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: QC49646MS D

Original Sample ID: 3008-0605-2705 D **Client ID:** MW-15

Matrix: Water **Units:** ug/L **Prep Date:** 5/23/2006 **Prep Batch:** 49646

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	20.4		511		500	98.1	1	1	ICP	5/24/2006	8:44	5/24/2006	8:50
Beryllium	313.0	2.4		490		500	97.6	1	1	ICP	5/24/2006	8:44	5/24/2006	8:50
Manganese	257.6	747		1220		500	~~95.4~~	1	1	ICP	5/24/2006	8:44	5/24/2006	8:50
Sodium	330.2	285000		284000	NC	5000		1	1	ICP	5/24/2006	8:44	5/24/2006	8:50
Vanadium	292.4	68.9		555		500	97.1	1	1	ICP	5/24/2006	8:44	5/24/2006	8:50

Comments: Acceptable Range 80 - 120%

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: QC49646MSD D

Original Sample ID: 3008-0605-2705 D **Client ID:** MW-15

Matrix: Water **Units:** ug/L **Prep Date:** 5/23/2006 **Prep Batch:** 49646

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	20.4		518		500	99.5	1	1	ICP	5/24/2006	8:44	5/24/2006	8:53
Beryllium	313.0	2.4		491		500	97.8	1	1	ICP	5/24/2006	8:44	5/24/2006	8:53
Manganese	257.6	747		1230		500	~~97.5~~	1	1	ICP	5/24/2006	8:44	5/24/2006	8:53
Sodium	330.2	285000		288000	NC	5000		1	1	ICP	5/24/2006	8:44	5/24/2006	8:53
Vanadium	292.4	68.9		556		500	97.3	1	1	ICP	5/24/2006	8:44	5/24/2006	8:53

Comments: Acceptable Range 80 - 120%

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID:	QC49646MSD D	**Client ID:**	MW-15
Matrix Spike Sample ID:	QC49646MS D	**Acceptable Range:**	+/- 20%
Matrix: Water	**Units:** ug/L	**Prep Date:** 5/23/2006	**Prep Batch:** 49646
Weight: 50	**Volume:** 50	**Percent Moisture:** NA	

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	511		518		1.4%	1	1	ICP	5/24/2006	8:50	5/24/2006	8:53
Beryllium	313.042	490		491		0.2%	1	1	ICP	5/24/2006	8:50	5/24/2006	8:53
Manganese	257.61	1220		1230		0.8%	1	1	ICP	5/24/2006	8:50	5/24/2006	8:53
Sodium	330.232	284000	NC	288000	NC	1.4%	1	1	ICP	5/24/2006	8:50	5/24/2006	8:53
Vanadium	292.402	555		556		0.2%	1	1	ICP	5/24/2006	8:50	5/24/2006	8:53

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Pace Analytical

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: QC49646LCS

Matrix: Water **Units:** ug/L **Prep Date:** 5/23/2006 **Prep Batch:** 49646

Weight: 50 **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	500	501	100.2		80-120	1	ICP	5/24/2006	8:38
Beryllium	313.042	500	504	100.8		80-120	1	ICP	5/24/2006	8:38
Manganese	257.61	500	511	102.2		80-120	1	ICP	5/24/2006	8:38
Sodium	330.232	5000	4810	96.2		80-120	1	ICP	5/24/2006	8:38
Vanadium	292.402	500	495	99.0		80-120	1	ICP	5/24/2006	8:38

Comments:

U Result is less than the MDL

B Result is between MDL and RL

Project Number [illegible]

Volatiles

Project Number _____

Volatiles Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Tetrachloroethene	624	8260	14 Days	3/ 40ml Vials	Hydrochloric Acid

2A
WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Analytical Services Contract :
Project : 06-3008 Site : Location : Group :
Lab File ID (Standard): 30601002.D Date Analyzed : 1 Jun 2006
Instrument ID : GC/MS Ins Time Analyzed : 9:53
GC Column : DB624 ID : 0.20 Heated Purge (Y:N) : N
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
30601003	LCS[20]	92	94	91	0	0	0	0
30601004	VBLK	96	96	93	0	0	0	0
30601005	FIELD BLANK	96	93	92	0	0	0	0
30601006	06-3120 05-3279	97	94	91	0	0	0	0
30601007	06-3120 05-3279MS	93	94	89	0	0	0	0
30601008	06-3120 05-3279MSD	92	95	88	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : Pace Analytical Services Contract :
Project : 06-3008 Site : Location : Group :
Lab File ID (Standard): 30601002.D Date Analyzed : 1 Jun 2006
Instrument ID : GC/MS Ins Time Analyzed : 9:53
GC Column : DB624 ID : 0.20 Heated Purge (Y:N) : N

	IS1 (FBZ)				IS2 (CBZ)				IS3 (DCB)			
	Area	#	RT	#	Area	#	RT	#	Area	#	RT	#
12 HOUR STD	496235		2.73		362812		4.26		187158		5.50	
UPPER LIMIT	992470		3.23		725624		4.76		374316		6.00	
LOWER LIMIT	248118		2.23		181406		3.76		93579		5.00	
File ID Sample												
30601003 LCS[20]	573870		2.73		416941		4.25		196150		5.50	
30601004 VBLK	477281		2.73		330405		4.25		140021		5.50	
30601005 FIELD BLANK	484714		2.73		340942		4.25		140763		5.50	
30601006 06-3120	470807		2.73		331848		4.26		139361		5.50	
30601007 06-3120 MS	499195		2.73		372205		4.26		186809		5.50	
30601008 06-3120 MSD	511039		2.73		374578		4.25		186553		5.50	

IS1 (FBZ) = Fluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,4-Dichlorobenzene-d4
AREA UPPER LIMIT = 200% of internal standard area
AREA LOWER LIMIT = 50% of internal standard area
RT UPPER LIMIT = 0.5 minutes of internal standard RT
RT LOWER LIMIT = -0.5 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk
* Values outside of contract required QC limits

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\STR0519W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Tue Jun 06 13:00:45 2006
Response via : Initial Calibration

Non-Spiked Sample: 30601006.D

	Spike Sample	Spike Duplicate Sample
File ID :	30601007.D	30601008.D
Sample :	06-3120 05-3279MS	06-3120 05-3279MSD
Acq Time:	1 Jun 2006 11:30	1 Jun 2006 11:48

Surrogate	Sample Conc	Amnt Added	Sampl %Rec	Spike Conc	Spike %Rec	Dup Conc	Dup %Rec	QC Limits % Rec
1,2-Dichloroethane-d	48.4	50	97	46.6	93	46.0	92	70-130
Toluene-d8	46.8	50	94	47.0	94	47.7	95	70-130
Bromofluorobenzene	45.4	50	91	44.3	89	43.8	88	70-130

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
tert-butyl Me	0.3	20	21	23	102.0	114.4	11.4	30	70-130
1,1,1-Trichlo	0.0	20	27	24	135.5#	120.4	11.8	30	70-130
Benzene	0.1	20	20	18	100.7	88.8	12.6	30	70-130
1,2-Dichloroe	0.0	20	19	17	97.4	86.1	12.3	30	70-130
Trichloroethe	0.0	20	20	18	101.8	90.2	12.1	30	70-130
Toluene	0.0	20	19	17	94.3	84.8	10.6	30	70-130
Tetrachloroet	0.0	20	21	20	106.9	97.7	9.0	30	70-130
1,2-Dibromoet	0.0	20	19	18	96.7	87.6	9.8	30	70-130
Ethylbenzene	0.0	20	18	16	89.3	78.8	12.4	30	70-130
m,p-Xylene	0.0	40	38	34	95.8	86.0	10.8	30	70-130
o-Xylene	0.0	20	17	15	86.1	75.5	13.0	30	70-130
1,3,5-Trimeth	0.0	20	17	15	84.8	75.1	12.1	30	70-130
Isopropylbenz	0.0	20	16	15	82.4	72.8	12.4	30	70-130
n-Propylbenze	0.0	20	16	14	81.5	72.5	11.7	30	70-130
tert-Butyl be	0.0	20	15	13	77.3	66.6#	14.8	30	70-130
1,2,4-Trimeth	0.0	20	15	13	72.6	64.1#	12.3	30	70-130
sec-Butyl ben	0.0	20	17	15	85.6	75.3	12.8	30	70-130
4-Isopropyl t	0.0	20	16	15	81.7	72.9	11.4	30	70-130
n-Butyl benze	0.0	20	16	14	77.7	67.9#	13.4	30	70-130
1,2,4-Trichlo	0.0	20	14	13	70.4	64.4#	8.9	30	70-130
Naphthalene	0.0	20	13	12	66.8#	60.3#	10.3	30	70-130
1,2,3-Trichlo	0.0	20	17	15	82.5	74.3	10.5	30	70-130

- Fails Limit Check

Quantitation Report (Not Reviewed)

Data File : D:\DATA\3060601\30601003.D
Acq On : 1 Jun 2006 10:20
Sample : LCS[20]
Misc : VI-188-6/V2-8-1
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:29 2006

Vial: 3
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: STR0519W.RES

Quant Method : C:\HPCHEM\1\METHODS\STR0519W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Thu Jun 01 10:02:32 2006
Response via : Initial Calibration
DataAcq Meth : STR0519W
IS QA File : D:\DATA\3060601\30601002.D (1 Jun 2006 9:53)

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min) Rcv(Ar)
1) Fluorobenzene	2.73	96	573870	50.00 ug/l	0.00 115.64%
8) Chlorobenzene-d5	4.25	117	416941	50.00 ug/l	0.00 114.92%
17) 1,4-Dichlorobenzene-d4	5.50	152	196150	50.00 ug/l	0.00 104.80%

System Monitoring Compounds

4) 1,2-Dichloroethane-d4	2.58	65	164296	46.03 ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 92.06%		
9) Toluene-d8	3.50	98	451174	47.20 ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 94.40%		
20) Bromofluorobenzene	4.87	95	155310	45.54 ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 91.08%		

Target Compounds

					Qvalue
2) tert-butyl Methylether,MtB	1.84	73	55673	21.20 ug/l	96
3) 1,1,1-Trichloroethane	2.45	97	69924	24.40 ug/l	97
5) Benzene	2.62	78	219348	19.59 ug/l	100
6) 1,2-Dichloroethane	2.61	62	84128	18.16 ug/l	99
7) Trichloroethene	2.90	95	56085	19.52 ug/l	93
10) Toluene	3.53	91	208258	18.08 ug/l	98
11) Tetrachloroethene	3.83	164	51011	20.88 ug/l	98
12) 1,2-Dibromoethane,EDB	4.01	107	54919	19.12 ug/l	99
13) Ethylbenzene	4.32	106	69007	16.55 ug/l	93
14) m,p-Xylene	4.37	106	163671	35.46 ug/l	96
15) o-Xylene	4.59	106	75489	16.41 ug/l #	84
16) Xylenes (Total)	4.37	106	239160m	51.86 ug/l	90
18) 1,3,5-Trimethylbenzene	5.09	105	147192	16.28 ug/l	98
19) Isopropylbenzene,Cumene	4.79	105	182409	16.13 ug/l	97
21) n-Propylbenzene	5.01	91	205927	15.96 ug/l	93
22) tert-Butyl benzene	5.27	134	32502	15.26 ug/l	89
23) 1,2,4-Trimethylbenzene	5.30	105	147723	14.23 ug/l	98
24) sec-Butyl benzene	5.40	105	172355	16.58 ug/l	98
25) 4-Isopropyl toluene	5.46	119	138128	15.90 ug/l	96
26) n-Butyl benzene	5.69	91	103190	14.99 ug/l	97
27) 1,2,4-Trichlorobenzene	6.57	180	41342	14.38 ug/l	99
28) Naphthalene	6.70	128	140349	14.35 ug/l	100
29) 1,2,3-Trichlorobenzene	6.83	180	43853	16.55 ug/l	97

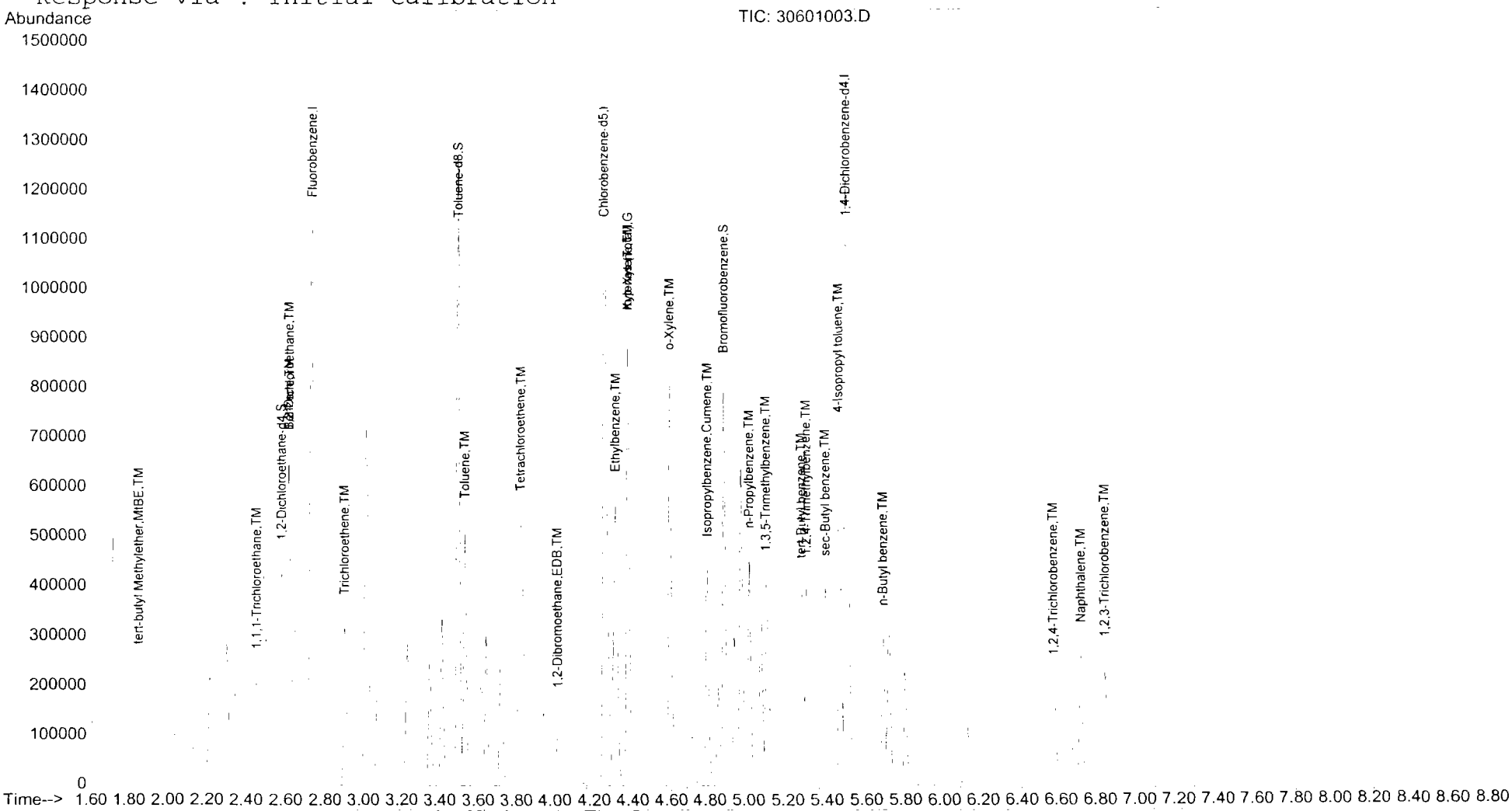
(#) = qualifier out of range (m) = manual integration

Data File : D:\DATA\3060601\30601003.D
Acq On : 1 Jun 2006 10:20
Sample : LCS[20]
Misc : VI-188-6/V2-8-1
MS Integration Params: RTEINT.P
Quant Time: Jun 1 10:29 2006

Vial: 3
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: STR0519W.RES

Method : C:\HPCHEM\1\METHODS\STR0519W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Tue Jun 06 13:00:45 2006
Response via : Initial Calibration



LCS Spike Summary Report

Data File : D:\DATA\3060601\30601003.D
Acq On : 1 Jun 2006 10:20
Sample : LCS[20]
Misc : VI-188-6/V2-8-1
MS Integration Params: RTEINT.P

Vial: 3
Operator: EAC
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\STR0519W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Tue Jun 06 13:00:45 2006
Response via : Multiple Level Calibration

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
2)	T	tert-butyl Methyleth	21.20	20.00	105.98	70 to 130%	[ ]
3)	T	1,1,1-Trichloroethan	24.40	20.00	122.02	70 to 130%	[ ]
5)	T	Benzene	19.59	20.00	97.93	70 to 130%	[ ]
6)	T	1,2-Dichloroethane	18.16	20.00	90.80	70 to 130%	[ ]
7)	T	Trichloroethene	19.52	20.00	97.60	70 to 130%	[ ]
10)	T	Toluene	18.08	20.00	90.38	70 to 130%	[ ]
11)	T	Tetrachloroethene	20.88	20.00	104.39	70 to 130%	[ ]
12)	T	1,2-Dibromoethane,ED	19.12	20.00	95.59	70 to 130%	[ ]
13)	T	Ethylbenzene	16.55	20.00	82.73	70 to 130%	[ ]
14)	T	m,p-Xylene	35.46	40.00	88.64	70 to 130%	[ ]
15)	T	o-Xylene	16.41	20.00	82.06	70 to 130%	[ ]
16)	G	Xylenes (Total)	51.86	60.00	86.43	70 to 130%	[ ]
18)	T	1,3,5-Trimethylbenze	16.28	20.00	81.42	70 to 130%	[ ]
19)	T	Isopropylbenzene,Cum	16.13	20.00	80.66	70 to 130%	[ ]
21)	T	n-Propylbenzene	15.96	20.00	79.80	70 to 130%	[ ]
22)	T	tert-Butyl benzene	15.26	20.00	76.32	70 to 130%	[ ]
23)	T	1,2,4-Trimethylbenze	14.23	20.00	71.14	70 to 130%	[ ]
24)	T	sec-Butyl benzene	16.58	20.00	82.90	70 to 130%	[ ]
25)	T	4-Isopropyl toluene	15.90	20.00	79.51	70 to 130%	[ ]
26)	T	n-Butyl benzene	14.99	20.00	74.95	70 to 130%	[ ]
27)	T	1,2,4-Trichlorobenze	14.38	20.00	71.92	70 to 130%	[ ]
28)	T	Naphthalene	14.35	20.00	71.75	70 to 130%	[ ]
29)	T	1,2,3-Trichlorobenze	16.55	20.00	82.73	70 to 130%	[ ]

* = out of control limits

Project Number _____

Organic Prep

Matrix: H_2O

LIMS QC Batch #: 49763/49764

Analytical Method: 8081/8082

Extraction Method: 3510

Solvent	Lot #			
CHCL2	X235-02A	Na2SO4: X236-05		
CHCL2		H2SO4:		
Hexane	X230-07B	NaOH:		
Hexane		Surrogate: X236-04, 1.0 ppm, 0.5 ml.		
		Matrix Spike: PEST X 211-05, 0.4 ppm, 1.0 ml.		
5-period	EK	Matrix Spike: PCB X 231-05, 2.5 ppm, 1.0 ml.		

Date	Project #	Sample ID	Analyst	Initial Volume	Final Volume	pH 5-9	Comments
05/25/06	9716	BLK	AC	1L	5 ml	✓	
		CCS PEST 1000		1L			
		CCSD PEST 2		1L			insufficient sample provided for MS/MSD.
		CCS PCB 1		1L			
		CCSD PCB 2		1L			
		9029 E		970 ml			PEST/PCB
		9030 E		990 ml			
	3008	2714 B		990 ml			PCB only
	3058	2951 B		960 ml			PEST only
		2952 B		970 ml			
		2953 B		960 ml			
	3060	2960 A		970 ml			
		2961 A		980 ml			

TPA
5/26/06
8:45

Project Number [illegible]

Polychlorinated Biphenyls

Project Number [illegible]

PCB Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Aroclor-1016	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1221	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1232	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1242	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1248	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1254	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1260	608	8082	7/30 days*	Liter Glass Amber	None
PCB Total-TCL	608	8082	7/30 days*	Liter Glass Amber	None

*7/30 days = 7 days for extraction, 30 days for analysis on extract

2E
WATER AROCLOR SURROGATE RECOVERY

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-3008 SAS No.: SDG No.: 06-3008

GC Column(1): RTX-5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX %REC #	DCB %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	MW-12	57	72					0
02	LCS	61	63					0
03	LCSD	64	62					0
04	BLK	60	54					0
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150)
S2 (DCB) = Decachlorobiphenyl (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3
WATER AROCLOR LAB CONTROL SAMPLE

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-3008 SAS No.: SDG No.: 06-3008

Matrix Spike - Sample No.: LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aroclor-1248	2.50		1.56	62	55-145

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1248	2.50	1.66	66	6	25	55-145

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: Project 06-3008 is associated with the QC from 06-9716.

Project Number

General Chemistry

Project Number _____

General Chemistry

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Cyanide (Amenable)	335.1		14 days	250ml Plastic*	Sodium Hydroxide
Cyanide (Total)	335.2	4500-CN	14 days	250ml Plastic*	Sodium Hydroxide
Fluoride	340.1	4500-Fl	28 days	500ml Plastic**	None
pH	150.1	9040/9045	Immediate	500ml Plastic**	None
Specific Conductance	120.1	9050	28 days	500ml Plastic**	None

*Cyanide Total and Amenable are analyzed from the same bottle.
**Fluoride, pH, and Specific Conductance are analyzed from the same bottle.

Pace Analytical
Laboratory Control Sample

Pace Project Number 06-3008
Pace Sample Number

				QC Limits	
Analysis	True Value	QC Concentration mg/L	% Recovery %	Recovery %	
Fluoride, Batch 49923	1.7	2	85%	85-115	Matrix Interference
Cyanide, total, Batch 49754	0.1	0.1052	95%	85-115	
Cyanide, total, Batch 49775	0.1	0.1052	95%	85-115	
Cyanide, amenable	NA	NA	NA	NA	
pH, Batch 49574	7.01	7.01	100%	85-115	
Specific Conductance, Batch 49720	1428	1501	95%	85-115	

Pace Analytical
Matrix Spike/Matrix Spike Duplicate Summary

Pace Project Number 06-3008
Pace Sample Number

Compound	Sample ID	Spike Added mg/L	Sample Concentration mg/L	Matrix Spike Concentration mg/L	Matrix Spike % Recovery %	Spike Added mg/L	Matrix Spike Duplicate Concentration mg/L	Matrix Spike Duplicate % Recovery %	% RPD %	QC Limits RPD %	QC Limits Recovery %
Fluoride, Batch 49923	*	8	6.31	16.2	123.6	NA	NA	NA	NA	20	85-115
Cyanide, total, Batch 49754	*	0.1	0.0792	0.1511	71.9	NA	NA	NA	NA	20	85-115
Cyanide, total, Batch 49775	05-2714	0.1	0	0.1015	101.5	NA	NA	NA	NA	20	85-115
Cyanide, amenable	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
pH	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
Specific Conductance	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
										20	85-115

Fluoride Sample had matrix interference
***Spiked sample was from another project**

Project Number

Chain of Custody

HMI
Environmental Consulting Services

CHAIN-OF-CUSTODY RECORD

06-3008

Project Number	Project Name/Location	Laboratory	Sampling Personnel
HM00321	ORMET / REDUCTION MILL	PACE ANALYTICAL	S. MENOSKY / R. FARGO

Container Description/ Number of Containers

Sample ID	Date/Time		Sample Code	As, Be (Plastic Preserved 33)	Cyanide (Plastic Preserved)	D.F (Plastic 50C)	S (Glass 1L)	Pest (Glass 40)				TOTAL
MW-15	5/18/06	8:15	L	1	1	1				05-27	05	3
MW-34D		8:45		1	1	1					06	3
MW-34S		9:20		1	1	1					07	3
MW-17		9:45		1	1	1					08	3
MW-18D		10:00		1	1	1					09	3
MW-32		10:35		1	1	1					10	3
MW-36		10:55		1	1	1					11	3
MW-39D		11:30		1	1	1					12	3
MW-39S		11:50		1	1	1					13	3
MW-12		1:50		1	1	1	1				14	4
MW-14		2:40		1	1	1					15	3
MW-42D		3:45		1	1	1					16	3
MW-42S		4:00		1	1	1					17	3
MW-19		4:40		1	1	1					18	3
FIELD BLANK		4:50		1	1	1		3			19	6

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 49

Relinquished by:	Steve C. Menosky	Organization:	HMI	Date: 5-19-06	Time: 8:00 AM	Seal Intact?
Received by:		Organization:		Date:	Time:	(Yes) No NA
Relinquished by:	Fed Ex	Organization:		Date:	Time:	Seal Intact?
Received by:	[illegible]	Organization:	PACE	Date: 5/20/06	Time: 11:15	(Yes) No NA

REMARKS: 1°C Ice Present

DELIVERY METHOD: In Person [ ] Common Carrier [FED EX] Lab Courier [ ] Other [ ]

APPENDIX B-3

LABORATORY ANALYTICAL REPORT FOR
SEPTEMBER 2006 MONITORING EVENT

Pace Analytical®
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Pace Analytical Services, Inc.
5203 Triangle Lane
Export, PA 15632
Phone: 724.733.1161
Fax: 724.327.7793

October 10, 2006

Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Dear Mr. Fargo:

Enclosed are analytical results for samples submitted to Pace Analytical by Hydro Systems Management, Inc.. The samples were received on September 20, 2006. The results reported in this project meet the requirements as specified in Chapter 5 of the NELAC Standards. Any deviations or discrepancies from the NELAC standards are documented in the case narrative(s) of this report. Parameters printed in italics represent Non-NELAC accredited parameters. Please reference Pace project number 06-5688 when inquiring about this report.

Client Site: Reduction Mill
Client Ref.: HM00321

Pace Sample Identification	Client Sample Identification
0609-2605	MW-2
0609-2606	MW-5
0609-2607	MW-12
0609-2608	MW-12D
0609-2609	MW-16
0609-2610	MW-18
0609-2611	MW-28
0609-2612	MW-31
0609-2613	MW-31D

Pace Sample Identification	Client Sample Identification
0609-2614	MW-32
0609-2615	MW-35
0609-2616	MW-36
0609-2617	MW-37
0609-2618	MW-44S
0609-2619	MW-44D
0609-2620	Field Blank
0609-2621	Trip Blank

General Comments: The recommended holding time for pH requires immediate analysis. The samples were received past the recommended holding time for pH. Cooler temperature 4 ° C upon receipt. Ice was present. Insufficient sample volume has been provided for the performance of a sample matrix spike/matrix spike duplicate, therefore extraction of a blank (reagent water) spike and spike duplicate have been performed.

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Please call me if you have any questions regarding the information contained within this report.

Sincerely,

Rachel D. Christner
Project Manager

RDC: jld

Enclosures

Page 1 of 58

cc: John Reggi, Ormet Primary Aluminum Corporation

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2605**
Client Sample ID: MW-2
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	5.7	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	19	0.25	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	48	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.75	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1700	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.061	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.63	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	350	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.032	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.021	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2606**
Client Sample ID: MW-5
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	1.6	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	5.4	0.13	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	17	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	7.97	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1400	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.44	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	240	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	<0.0050	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2607**
Client Sample ID: MW-12
Sample Matrix: Aqueous

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	0.57	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	7.61	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	610	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	2.2	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	26	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2608**
Client Sample ID: MW-12D
Sample Matrix: Aqueous

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2[1]	<0.010	0.010	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	0.62	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	7.60	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	610	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	2.2	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	26	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2609**
Client Sample ID: MW-16
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	2.4	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	6.6	0.13	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	41	0.25	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.39	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1200	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.058	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.48	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	240	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.051	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2610**
Client Sample ID: MW-18
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	36	1.0	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	36	0.50	mg/l	BKH	09/28/2006	0053316-1	<0.010
Fluoride	340.2[1]	100	0.25	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.61	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1900	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.11	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	0.0026	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	1.8	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	380	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.099	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	<0.0050	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2611**
Client Sample ID: MW-28
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	0.23	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	0.23	0.010	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	0.23	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	6.06	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	380	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	52	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2612**
Client Sample ID: MW-31
Sample Matrix: Aqueous

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	3.4	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	12	0.25	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	63	0.25	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.82	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1700	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.045	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	0.00060	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.60	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	360	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.048	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.026	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Mr. Robert L. Fargo (Principal/Senior Consultant)
Hydro Systems Management, Inc.
P.O. Box 789
Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2613**
Client Sample ID: MW-31D
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	12	1.0	mg/l	BKH	09/28/2006	0053328-1	<0.010
Cyanide (Total)	335.2[1]	12	0.25	mg/l	DAH	09/22/2006	0053233-1	<0.010
Fluoride	340.2[1]	55	0.25	mg/l	CKO	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.82	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1700	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.050	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	0.0013	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	1.0	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	390	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.071	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[2]	0.027	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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P.O. Box 789
Washington, PA 15301

Client Site: Reduction Mill
Client Ref.: HM00321

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2614**
Client Sample ID: MW-32
Sample Matrix: Aqueous

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	12	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	12	0.25	mg/l	JMT	09/21/2006	0053140-1	<0.010
Fluoride	340.2[1]	60	0.25	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	10.03	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	1700	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.059	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	0.0012	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	1.5	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	350	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.10	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2615**
Client Sample ID: MW-35
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	32	1.3	mg/l	BKH	09/28/2006	0053328-1	<0.010
Cyanide (Total)	335.2[1]	32	0.63	mg/l	DAH	09/22/2006	0053233-1	<0.010
Fluoride	340.2[1]	27	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.16	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	860	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.013	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.82	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	100	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	0.015	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

Sample Comments: Results reported on an as received basis.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2616**
Client Sample ID: MW-36
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	9.6	0.010	mg/l	BKH	09/27/2006	0053286-1	<0.010
Cyanide (Total)	335.2[1]	9.7	0.25	mg/l	DAH	09/22/2006	0053233-1	<0.010
Fluoride	340.2[1]	22	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	9.32	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	870	1.0	umhos/cm	BAB	09/27/2006	0053291-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	0.0059	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.026	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	170	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2617**
Client Sample ID: MW-37
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Amenable)	335.1[1]	2.4	0.50	mg/l	BKH	09/28/2006	0053328-1	<0.010
Cyanide (Total)	335.2[1]	2.4	0.25	mg/l	DAH	09/22/2006	0053233-1	<0.010
Fluoride	340.2[1]	7.3	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1[1]	6.91	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1[1]	490	1.0	umhos/cm	BAB	10/03/2006	0053467-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B[2]	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B[2]	0.00059	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B[2]	0.60	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B[2]	74	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B[2]	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

[1] U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
[2] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Washington, PA 15301

Lab Project ID: **06-5688**
Lab Sample ID: **0609-2618**
Client Sample ID: MW-44S
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1221	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1232	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1242	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1248	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1254	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1260	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50
PCB Total-TCL	8082[1]	<0.52	0.52	ug/l	RDJ	09/26/2006	0053183-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2619**
Client Sample ID: MW-44D
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

Pesticides/PCB

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Polychlorinated Biphenyls, ECD								
Aroclor-1016	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1221	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1232	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1242	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1248	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1254	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
Aroclor-1260	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50
PCB Total-TCL	8082[1]	<0.53	0.53	ug/l	RDJ	09/26/2006	0053183-1	<0.50

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2620**
Client Sample ID: Field Blank
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

General Chemistry

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Cyanide (Total)	335.2(1)	<0.010	0.010	mg/l	DAH	09/22/2006	0053233-1	<0.010
Fluoride	340.2(1)	0.11	0.10	mg/l	CK0	09/26/2006	0053471-1	<0.10
pH	150.1(1)	8.24	1.00	pH	APD	09/20/2006	0053107-1	8.12
Specific Conductance	120.1(1)	6.1	1.0	umhos/cm	BAB	10/03/2006	0053467-1	<1.0

Metals

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Trace Metals, Dissolved, ICP								
Arsenic	6010B(2)	<0.0040	0.0040	mg/l	CS0	09/25/2006	0053104-1	<0.0040
Beryllium	6010B(2)	<0.00050	0.00050	mg/l	CS0	09/25/2006	0053104-1	<0.00050
Manganese	6010B(2)	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010
Sodium	6010B(2)	1.2	0.50	mg/l	CS0	09/25/2006	0053104-1	<0.50
Vanadium	6010B(2)	<0.010	0.010	mg/l	CS0	09/25/2006	0053104-1	<0.010

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B(2)	<0.0050	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

(1) U.S. Environmental Protection Agency, 1983, Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio.
(2) U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Lab Project ID: **06-5688**
Lab Sample ID: **0609-2621**
Client Sample ID: Trip Blank
Sample Matrix: Aqueous

Client Site: Reduction Mill
Client Ref.: HM00321

Date Sampled: 09/18/2006
Date Received: 09/20/2006

Volatiles

Test	Method	Result	Reporting Limit	Units	Analyst	Analysis Date	Method Blank ID	Blank Result
Volatile Organic Compounds, MS								
Tetrachloroethene	8260B[1]	<0.0050	0.0050	mg/l	EAC	10/02/2006	0053450-1	<0.0050

[1] U.S. Environmental Protection Agency, 1996, Test Methods for Evaluating Solid Waste, SW-846, 3rd ed., Office of Solid Waste and Emergency Response, Washington, DC.

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Project Number 06-5038

Metals Analysis - ICP

Parameter	Chemical Symbol	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Arsenic	As	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Beryllium	Be	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Manganese	Mn	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Sodium	Na	200.7	6010	6 Months	250ml Plastic	Nitric Acid
Vanadium	V	200.7	6010	6 Months	250ml Plastic	Nitric Acid

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2605	Client Sample ID	MW-2	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.061		1.0	ICP	09/25/2006	12:19
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00043	B	1.0	ICP	09/25/2006	12:19
Manganese (Dissolved)	257.61	0.00020	0.010	0.63		1.0	ICP	09/25/2006	12:19
Sodium (Dissolved)	330.23	0.17	0.50	354		1.0	ICP	09/25/2006	12:19
Vanadium (Dissolved)	292.40	0.00040	0.010	0.032		1.0	ICP	09/25/2006	12:19

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2606	Client Sample ID	MW-5	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0024	B	1.0	ICP	09/25/2006	12:46
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.000070	U	1.0	ICP	09/25/2006	12:46
Manganese (Dissolved)	257.61	0.00020	0.010	0.44		1.0	ICP	09/25/2006	12:46
Sodium (Dissolved)	330.23	0.17	0.50	238		1.0	ICP	09/25/2006	12:46
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0015	B	1.0	ICP	09/25/2006	12:46

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2607	Client Sample ID	MW-12	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	09/25/2006	12:50
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.000070	U	1.0	ICP	09/25/2006	12:50
Manganese (Dissolved)	257.61	0.00020	0.010	2.2		1.0	ICP	09/25/2006	12:50
Sodium (Dissolved)	330.23	0.17	0.50	25.8		1.0	ICP	09/25/2006	12:50
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00046	B	1.0	ICP	09/25/2006	12:50

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	065688-0609-2608	Client Sample ID	MW-12D	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	09/25/2006	12:53
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.000070	U	1.0	ICP	09/25/2006	12:53
Manganese (Dissolved)	257.61	0.00020	0.010	2.2		1.0	ICP	09/25/2006	12:53
Sodium (Dissolved)	330.23	0.17	0.50	25.7		1.0	ICP	09/25/2006	12:53
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0010	B	1.0	ICP	09/25/2006	12:53

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2609	Client Sample ID	MW-16	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.058		1.0	ICP	09/25/2006	12:56
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00031	B	1.0	ICP	09/25/2006	12:56
Manganese (Dissolved)	257.61	0.00020	0.010	0.48		1.0	ICP	09/25/2006	12:56
Sodium (Dissolved)	330.23	0.17	0.50	245		1.0	ICP	09/25/2006	12:56
Vanadium (Dissolved)	292.40	0.00040	0.010	0.051		1.0	ICP	09/25/2006	12:56

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2610	Client Sample ID	MW-18	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.11		1.0	ICP	09/25/2006	12:59
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.0026	B	1.0	ICP	09/25/2006	12:59
Manganese (Dissolved)	257.61	0.00020	0.010	1.8		1.0	ICP	09/25/2006	12:59
Sodium (Dissolved)	330.23	0.17	0.50	384		1.0	ICP	09/25/2006	12:59
Vanadium (Dissolved)	292.40	0.00040	0.010	0.099		1.0	ICP	09/25/2006	12:59

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2611	Client Sample ID	MW-28	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	09/25/2006	13:03
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.000070	U	1.0	ICP	09/25/2006	13:03
Manganese (Dissolved)	257.61	0.00020	0.010	0.0087	B	1.0	ICP	09/25/2006	13:03
Sodium (Dissolved)	330.23	0.17	0.50	51.9		1.0	ICP	09/25/2006	13:03
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	09/25/2006	13:03

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2612	Client Sample ID	MW-31	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.045		1.0	ICP	09/25/2006	13:06
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00060	B	1.0	ICP	09/25/2006	13:06
Manganese (Dissolved)	257.61	0.00020	0.010	0.60		1.0	ICP	09/25/2006	13:06
Sodium (Dissolved)	330.23	0.17	0.50	364		1.0	ICP	09/25/2006	13:06
Vanadium (Dissolved)	292.40	0.00040	0.010	0.048		1.0	ICP	09/25/2006	13:06

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Duplicate Sample Results

Lab Sample ID	065688-0609-2613	Client Sample ID	MW-31D	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.050		1.0	ICP	09/25/2006	13:09
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.0013	B	1.0	ICP	09/25/2006	13:09
Manganese (Dissolved)	257.61	0.00020	0.010	1.0		1.0	ICP	09/25/2006	13:09
Sodium (Dissolved)	330.23	0.17	0.50	385		1.0	ICP	09/25/2006	13:09
Vanadium (Dissolved)	292.40	0.00040	0.010	0.071		1.0	ICP	09/25/2006	13:09

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2614	Client Sample ID	MW-32	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.059		1.0	ICP	09/25/2006	13:13
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.0012	B	1.0	ICP	09/25/2006	13:13
Manganese (Dissolved)	257.61	0.00020	0.010	1.5		1.0	ICP	09/25/2006	13:13
Sodium (Dissolved)	330.23	0.17	0.50	346		1.0	ICP	09/25/2006	13:13
Vanadium (Dissolved)	292.40	0.00040	0.010	0.10		1.0	ICP	09/25/2006	13:13

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2615	Client Sample ID	MW-35	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.013		1.0	ICP	09/25/2006	13:29
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00049	B	1.0	ICP	09/25/2006	13:29
Manganese (Dissolved)	257.61	0.00020	0.010	0.82		1.0	ICP	09/25/2006	13:29
Sodium (Dissolved)	330.23	0.17	0.50	105		1.0	ICP	09/25/2006	13:29
Vanadium (Dissolved)	292.40	0.00040	0.010	0.015		1.0	ICP	09/25/2006	13:29

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2616	Client Sample ID	MW-36	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0059		1.0	ICP	09/25/2006	13:40
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00019	B	1.0	ICP	09/25/2006	13:40
Manganese (Dissolved)	257.61	0.00020	0.010	0.026		1.0	ICP	09/25/2006	13:40
Sodium (Dissolved)	330.23	0.17	0.50	173		1.0	ICP	09/25/2006	13:40
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0075	B	1.0	ICP	09/25/2006	13:40

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Results

Lab Sample ID	065688-0609-2617	Client Sample ID	MW-37	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0032	B	1.0	ICP	09/25/2006	13:44
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00059	B	1.0	ICP	09/25/2006	13:44
Manganese (Dissolved)	257.61	0.00020	0.010	0.60		1.0	ICP	09/25/2006	13:44
Sodium (Dissolved)	330.23	0.17	0.50	74.0		1.0	ICP	09/25/2006	13:44
Vanadium (Dissolved)	292.40	0.00040	0.010	0.0085	B	1.0	ICP	09/25/2006	13:44

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical Services, Inc.
Metals Data Reporting Form

Sample Sample Results

Lab Sample ID	065688-0609-2620	Client Sample ID	Field Blank	Matrix	Aqueous
Units	mg/L	Prep Date	09/21/2006	Prep Batch	53104
Weight	50.00	Volume	50.00	Percent Moisture	NA

Element	WL/Mass	IDL	Report Limit	Conc	Q	DF	Instr	Analysis Date	Analysis Time
Arsenic (Dissolved)	189.04	0.0017	0.0040	0.0017	U	1.0	ICP	09/25/2006	13:47
Beryllium (Dissolved)	313.04	0.000070	0.0050	0.00027	B	1.0	ICP	09/25/2006	13:47
Manganese (Dissolved)	257.61	0.00020	0.010	0.00038	B	1.0	ICP	09/25/2006	13:47
Sodium (Dissolved)	330.23	0.17	0.50	1.2		1.0	ICP	09/25/2006	13:47
Vanadium (Dissolved)	292.40	0.00040	0.010	0.00040	U	1.0	ICP	09/25/2006	13:47

U Result is less the the MDL
B Result is between the MDL and RL

Pace Analytical

Metals Data Reporting Form

Matrix Spike Sample Results

Spike Sample ID: QC53104MS

Original Sample ID: 5688-0609-2605 D **Client ID:** MW-2

Matrix: Water **Units:** ug/L **Prep Date:** 9/21/2006 **Prep Batch:** 53104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MS Conc	Q	Spike Level	% Rec	OS DF	MS DF	Instr	OS Anal Date	OS Anal Time	MS Anal Date	MS Anal Time
Arsenic	189.0	60.7		595		500	106.8	1	1	ICP	9/25/2006	12:19	9/25/2006	12:25
Beryllium	313.0	0.43	B	525		500	105.0	1	1	ICP	9/25/2006	12:19	9/25/2006	12:25
Manganese	257.6	630		1160		500	105.7	1	1	ICP	9/25/2006	12:19	9/25/2006	12:25
Sodium	330.2	354000		362000	NC	5000		1	1	ICP	9/25/2006	12:19	9/25/2006	12:25
Vanadium	292.4	31.8		548		500	103.3	1	1	ICP	9/25/2006	12:19	9/25/2006	12:25

Comments: QC Contol Limits 75-125 % Recovery

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate Sample Results

Spike Sample ID: QC53104MSD

Original Sample ID: 5688-0609-2605 D **Client ID:** MW-2

Matrix: Water **Units:** ug/L **Prep Date:** 9/21/2006 **Prep Batch:** 53104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	OS Conc	Q	MSD Conc	Q	Spike Level	% Rec	OS DF	MSD DF	Instr	OS Anal Date	OS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.0	60.7		595		500	106.8	1	1	ICP	9/25/2006	12:19	9/25/2006	12:41
Beryllium	313.0	0.43	B	531		500	106.0	1	1	ICP	9/25/2006	12:19	9/25/2006	12:41
Manganese	257.6	630		1170		500	106.9	1	1	ICP	9/25/2006	12:19	9/25/2006	12:41
Sodium	330.2	354000		368000	NC	5000		1	1	ICP	9/25/2006	12:19	9/25/2006	12:41
Vanadium	292.4	31.8		554		500	104.4	1	1	ICP	9/25/2006	12:19	9/25/2006	12:41

Comments: QC Control Limits 75-125% Recover.

Version 4.80.0

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Form 5A Equivalent

Pace Analytical

Metals Data Reporting Form

Sample Duplicate RPD Report

Duplicate Sample ID:	QC53104DUP		**Client ID:**	MW-2	
Original Sample ID:	5688-0609-2605 D		**Acceptable Range:**	+/- 20%	
Matrix: Water	**Units:** ug/L		**Prep Date:** 9/21/2006		**Prep Batch:** 53104
Weight: NA	**Volume:** 50		**Percent Moisture:** NA		

Element	WL/ Mass	OS Conc	Q	Dupe Conc	Q	% RPD	OS DF	Dupe DF	Instr	OS Anal Date	OS Anal Time	Dupe Anal Date	Dupe Anal Time
Arsenic	189.042	60.7		61.1		0.7%	1	1	ICP	9/25/2006	12:19	9/25/2006	12:22
Beryllium	313.042	0.43	B	0.33	B	-26.3%	1	1	ICP	9/25/2006	12:19	9/25/2006	12:22
Manganese	257.61	630		624		-1.0%	1	1	ICP	9/25/2006	12:19	9/25/2006	12:22
Sodium	330.232	354000		350000		-1.1%	1	1	ICP	9/25/2006	12:19	9/25/2006	12:22
Vanadium	292.402	31.8		31.9		0.3%	1	1	ICP	9/25/2006	12:19	9/25/2006	12:22

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Pace Analytical

Metals Data Reporting Form

Matrix Spike Duplicate RPD Report

Matrix Spike Duplicate Sample ID:	QC53104MSD	**Client ID:**	MW-2
Matrix Spike Sample ID:	QC53104MS	**Acceptable Range:**	+/- 20%

Matrix:	Water	**Units:**	ug/L	**Prep Date:**	9/21/2006	**Prep Batch:**	53104
Weight:	NA	**Volume:**	50	**Percent Moisture:**	NA		

Element	WL/ Mass	MS Conc	Q	MSD Conc	Q	% RPD	MS DF	MSD DF	Instr	MS Anal Date	MS Anal Time	MSD Anal Date	MSD Anal Time
Arsenic	189.042	595		595		0.0%	1	1	ICP	9/25/2006	12:25	9/25/2006	12:41
Beryllium	313.042	525		531		1.1%	1	1	ICP	9/25/2006	12:25	9/25/2006	12:41
Manganese	257.61	1160		1170		0.9%	1	1	ICP	9/25/2006	12:25	9/25/2006	12:41
Sodium	330.232	362000	NC	368000	NC	1.6%	1	1	ICP	9/25/2006	12:25	9/25/2006	12:41
Vanadium	292.402	548		554		1.1%	1	1	ICP	9/25/2006	12:25	9/25/2006	12:41

U Result is less than the MDL
B Result is between MDL and RL
N Spike recovery failed
NC Percent recovery was not calculated
R Duplicate analysis RPD was not within limits

Pace Analytical

Metals Data Reporting Form

Laboratory Control Sample Results

Lab Sample ID: QC53104LCS

Matrix: Water **Units:** ug/L **Prep Date:** 9/21/2006 **Prep Batch:** 53104

Weight: NA **Volume:** 50 **Percent Moisture:** NA

Element	WL/ Mass	Spike Level	Conc	Percent Recovery	Q	Range	DF	Instr	Anal Date	Anal Time
Arsenic	189.042	500	520	103.9		80-120	1	ICP	9/25/2006	12:14
Beryllium	313.042	500	525	105.1		80-120	1	ICP	9/25/2006	12:14
Manganese	257.61	500	522	104.4		80-120	1	ICP	9/25/2006	12:14
Sodium	330.232	5000	4500	90.0		80-120	1	ICP	9/25/2006	12:14
Vanadium	292.402	500	513	102.5		80-120	1	ICP	9/25/2006	12:14

Comments: Project 06-5688

U Result is less than the MDL

B Result is between MDL and RL

Project Number 06-5638

Volatiles

Project Number 00-5088

Volatiles Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Tetrachloroethene	624	8260	14 Days	3/ 40ml Vials	Hydrochloric Acid

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name : Pace Analytical Services Contract :
Project : 06-5688 Site : Location : Group :
Lab File ID (Standard): 31002002.D Date Analyzed : 2 Oct 2006
Instrument ID : GC/MS Ins Time Analyzed : 8:10
GC Column : DB624 ID : 0.20 Heated Purge (Y:N) : Y
Level :

File	Sample	SMC1 (DCE) #	SMC2 (TOL) #	SMC3 (BFB) #	SMC4 #	SMC5 #	SMC6 #	TOTAL OUT
31002003	LCS[20]	90	99	95	0	0	0	0
31002004	VBLK	91	100	93	0	0	0	0
31002005	06-5688 09-2605	90	99	96	0	0	0	0
31002006	06-5688 09-2606	91	100	97	0	0	0	0
31002007	06-5688 09-2610	92	100	93	0	0	0	0
31002008	06-5688 09-2612	92	102	95	0	0	0	0
31002009	06-5688 09-2613	92	99	97	0	0	0	0
31002010	06-5688 09-2620	90	100	97	0	0	0	0
31002011	06-5688 09-2621	90	98	96	0	0	0	0

		QC Limits
SMC1 (DCE)	= 1,2-Dichloroethane-d4	(70 -130)
SMC2 (TOL)	= Toluene-d8	(70 -130)
SMC3 (BFB)	= Bromofluorobenzene	(70 -130)
SMC4	=	(0 -0)
SMC5	=	(0 -0)
SMC6	=	(0 -0)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

LCS Spike Summary Report

Data File : D:\DATA\3061002\31002003.D
Acq On : 2 Oct 2006 8:29
Sample : LCS[20]
Misc : V2-8-1/V2-16-4
Matrix : WATER
Integration Params: RTEINT.P

Vial: 3
Operator: MAK
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\STR0928W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Tue Oct 03 01:30:33 2006
Response via : Multiple Level Calibration

		Compound Name	Conc	Added	Recv(%)	QC Range	Q
2)	T	tert-butyl Methyleth	19.72	20.00	98.58	70 to 130%	[ ]
3)	T	1,1,1-Trichloroethan	48.51	20.00	242.54	70 to 130%	[*]
5)	T	Benzene	21.73	20.00	108.66	70 to 130%	[ ]
6)	T	1,2-Dichloroethane	18.46	20.00	92.31	70 to 130%	[ ]
7)	T	Trichloroethene	21.51	20.00	107.57	70 to 130%	[ ]
10)	T	Toluene	21.24	20.00	106.19	70 to 130%	[ ]
11)	T	Tetrachloroethene	21.21	20.00	106.03	70 to 130%	[ ]
12)	T	1,2-Dibromoethane,ED	19.95	20.00	99.74	70 to 130%	[ ]
13)	T	Ethylbenzene	20.44	20.00	102.22	70 to 130%	[ ]
14)	T	m,p-Xylene	43.34	40.00	108.34	70 to 130%	[ ]
15)	T	o-Xylene	20.35	20.00	101.73	70 to 130%	[ ]
16)	G	Xylenes (Total)	64.01	60.00	106.68	70 to 130%	[ ]
18)	T	1,3,5-Trimethylbenze	20.53	20.00	102.65	70 to 130%	[ ]
19)	T	Isopropylbenzene,Cum	19.13	20.00	95.67	70 to 130%	[ ]
21)	T	n-Propylbenzene	19.99	20.00	99.97	70 to 130%	[ ]
22)	T	tert-Butyl benzene	18.73	20.00	93.65	70 to 130%	[ ]
23)	T	1,2,4-Trimethylbenze	19.59	20.00	97.96	70 to 130%	[ ]
24)	T	sec-Butyl benzene	20.01	20.00	100.04	70 to 130%	[ ]
25)	T	4-Isopropyl toluene	19.94	20.00	99.72	70 to 130%	[ ]
26)	T	n-Butyl benzene	20.54	20.00	102.71	70 to 130%	[ ]
27)	T	1,2,4-Trichlorobenze	19.43	20.00	97.14	70 to 130%	[ ]
28)	T	Naphthalene	19.44	20.00	97.22	70 to 130%	[ ]
29)	T	1,2,3-Trichlorobenze	21.35	20.00	106.75	70 to 130%	[ ]

* = out of control limits

Spike Recovery and RPD Summary Report - WATER

Method : C:\HPCHEM\1\METHODS\STR0928W.M (RTE Integrator)
Title : 8260 WATER
Last Update : Tue Oct 03 01:30:33 2006
Response via : Initial Calibration

Non-Spiked Sample: 31002012.D

	Spike Sample	Spike Duplicate Sample
File ID :	31002025.D	31002026.D
Sample :	06-5921 09-2775MS	06-5921 09-2775MSD
Acq Time:	2 Oct 2006 14:59	2 Oct 2006 15:16

Surrogate	Sample Conc	Amnt Added	Sampl %Rec	Spike Conc	Spike %Rec	Dup Conc	Dup %Rec	QC Limits % Rec
1,2-Dichloroethane-d	45.8	50	92	43.2	86	42.1	84	70-130
Toluene-d8	49.7	50	99	51.5	103	50.4	101	70-130
Bromofluorobenzene	48.2	50	96	47.7	95	46.3	93	70-130

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
tert-butyl Me	31.5	20	46	44	71.1	63.1#	11.8	30	70-130
1,1,1-Trichlo	0.0	20	45	43	225.0#	214.6#	4.7	30	70-130
Benzene	0.2	20	22	20	107.5	99.8	7.4	30	70-130
1,2-Dichloroe	0.0	20	17	16	86.4	79.9	7.9	30	70-130
Trichloroethe	0.4	20	21	20	101.0	96.3	4.8	30	70-130
Toluene	0.1	20	22	20	108.9	100.3	8.2	30	70-130
Tetrachloroet	0.0	20	22	20	107.7	100.7	6.8	30	70-130
1,2-Dibromoet	0.0	20	20	19	99.0	93.1	6.1	30	70-130
Ethylbenzene	0.2	20	20	19	101.2	93.4	8.0	30	70-130
m,p-Xylene	0.3	40	42	39	104.4	96.8	7.5	30	70-130
o-Xylene	0.0	20	20	18	101.1	91.9	9.5	30	70-130
1,3,5-Trimeth	0.1	20	19	18	95.6	88.6	7.7	30	70-130
Isopropylbenz	0.1	20	19	18	93.2	87.5	6.4	30	70-130
n-Propylbenze	0.0	20	19	18	95.7	88.4	7.9	30	70-130
tert-Butyl be	0.0	20	18	17	88.0	85.6	2.8	30	70-130
1,2,4-Trimeth	0.2	20	18	17	91.1	83.4	8.7	30	70-130
sec-Butyl ben	0.2	20	19	18	93.1	88.9	4.7	30	70-130
4-Isopropyl t	0.2	20	18	17	90.9	83.3	8.7	30	70-130
n-Butyl benze	0.3	20	19	17	91.5	83.4	9.2	30	70-130
1,2,4-Trichlo	0.0	20	16	16	82.2	80.4	2.3	30	70-130
Naphthalene	0.1	20	19	18	93.9	89.3	5.0	30	70-130
1,2,3-Trichlo	0.0	20	18	18	90.2	88.2	2.3	30	70-130

- Fails Limit Check

Matrix: H_2O

LIMS QC Batch #: 53183

Analytical Method: PCB 8082

Extraction Method: 3510

Solvent	Lot #	Na2SO4: X264-07	Diazomethane:	Silicic Acid:
CHCL2	X264-02	H2SO4:	Methanol:	KOH:
Hexane	X260-03A	NaOH:	Iso-octane:	
Acetone		Surrogate: X262-01, 1.0 ppm, 1.0 ml		
Ether		Matrix Spike: X249-04, 2.5 ppm, 1.0 ml		

Date	Project #	Sample ID	Analyst	Initial Volume	Final Volume	~~GPC~~	Comments
9/25/06	5688	BLK	xSC	1L	10 ml	✓	
↓	↓	LCS	↓	1L	↓	↓	
		LCSD		1L			no sample provided for MS/MSD
		2618 A		955 ml			
		2619 A		940 ml			

xsc 9/25/06

xc 9/26/06

Project Number 06-5088

PCB Analysis

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Aroclor-1016	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1221	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1232	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1242	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1248	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1254	608	8082	7/30 days*	Liter Glass Amber	None
Aroclor-1260	608	8082	7/30 days*	Liter Glass Amber	None
PCB Total-TCL	608	8082	7/30 days*	Liter Glass Amber	None

*7/30 days = 7 days for extraction, 30 days for analysis on extract

2E
WATER AROCLOR SURROGATE RECOVERY

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-5688 SAS No.: SDG No.: 06-5688

GC Column(1): RTX-5 ID: 0.53 (mm)

	EPA SAMPLE NO.	TCX %REC #	DCB %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	MW-44S	73	81					0
02	MW-44D	67	84					0
03	LCS	69	71					0
04	LCSD	73	82					0
05	PBLK	64	75					0
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 (TCX) = Tetrachloro-m-xylene (30-150)
S2 (DCB) = Decachlorobiphenyl (30-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

FORM 3E
WATER AROCLOR LAB CONTROL SAMPLE

Lab Name: PACE ANALYTICAL SERVICES, Contract:

Lab Code: Case No.: 06-5688 SAS No.: SDG No.: 06-5688

Matrix Spike - Sample No.: LCS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Aroclor-1248	2.50		1.64	66	55-145

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Aroclor-1248	2.50	1.81	72	9	25	55-145

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS:

Project Number 00-5088

General Chemistry

Parameter	EPA or Standard Method	SW846 Method	Holding Time	Bottle Type and Volume	Preservative
Cyanide (Amenable)	335.1		14 days	250ml Plastic*	Sodium Hydroxide
Cyanide (Total)	335.2	4500-CN	14 days	250ml Plastic*	Sodium Hydroxide
Fluoride	340.1	4500-Fl	28 days	500ml Plastic**	None
pH	150.1	9040/9045	Immediate	500ml Plastic**	None
Specific Conductance	120.1	9050	28 days	500ml Plastic**	None

*Cyanide Total and Amenable are analyzed from the same bottle.
**Fluoride, pH, and Specific Conductance are analyzed from the same bottle.

Pace Analytical
Laboratory Control Sample

Pace Project Number 06-5688
Pace Sample Number

				QC Limits	
Analysis	True Value	QC Concentration mg/L	% Recovery %	Recovery %	
Fluoride, Batch 53471	1.79	2	90%	85-115	Matrix Interference
Cyanide, total, Batch 53140	0.0875	0.1	88%	85-115	
Cyanide, amenable, Batch 53286	0.0883	0.1	88%	85-115	
pH, Batch 53107	7.04	7.0	101%	85-115	
Specific Conductance, Batch 53291	104.8	100	105%	85-115	

Pace Analytical
Matrix Spike/Matrix Spike Duplicate Summary

Pace Project Number 06-5688
Pace Sample Number

Compound	Sample ID	Spike Added mg/L	Sample Concentration mg/L	Matrix Spike Concentration mg/L	Matrix Spike % Recovery %	Spike Added mg/L	Matrix Spike Duplicate Concentration mg/L	Matrix Spike Duplicate % Recovery %	% RPD %	QC Limits RPD %	QC Limits Recovery %
Fluoride, Batch 53471	NA	1	0	4.13	413	NA	NA	NA	NA	20	85-115
Cyanide, total, Batch 53140	NA	0.1	0	0.0928	92.8	NA	NA	NA	NA	20	85-115
Cyanide, amenable, Batch 53286	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
pH, Batch 53107	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
Specific Conductance, Batch 53291	NA	NA	NA	NA	NA	NA	NA	NA	NA	20	85-115
										20	85-115

Note: Spiked sample was a project other than 06-5688
Fluoride Sample had matrix interference

HMI
Environmental Consulting Services

CHAIN – OF – CUSTODY RECORD

Project Number: HM00321
Project Name/Location: ORMET-HANNIBAL, O.
Laboratory: PACE
Sampling Personnel: R. FARGO / C. SMITH

Sample ID	Date/Time 9-18-06	Sample Code	500 mL Plastic pH, Spec. Cond. Fluoride	250 mL Plastic Total/Amen. CN	250 mL Plastic Diss. As, Be, Mn, Na, V	1L Amber Glass PCBs	40 mL Glass Vials PCE				06-5688	TOTAL
MW-2	11:10	L	1	1	1		3				01-2605	6
MW-5	9:00		1	1	1		3				06	6
MW-12	6:00PM		1	1	1						07	3
MW-12D			1	1	1						08	3
MW-16	12:30		1	1	1						09	3
MW-18	3:10		1	1	1		3				10	6
MW-28	2:30		1	1	1						11	3
MW-31	1:30		1	1	1		3				12	6
MW-31D	1:40		1	1	1		3				13	6
MW-32	5:10		1	1	1						14	3
MW-35	3:30		1	1	1						15	3
MW-36	4:40		1	1	1						16	3
MW-37	4:10		1	1	1						17	3
MW-44S	10:10					2					18	2
MW-44D	10:10					2					19	2

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 58

Relinquished by: R. Fargo	Organization: HMI	Date: 9/20/06	Time: 13:00	Seal Intact?		
Received by: [illegible]	Organization: Pace	Date: 9/20/06	Time: 13:00	Yes	No	NA
Relinquished by:	Organization:	Date:	Time:	Seal Intact?		
Received by:	Organization:	Date:	Time:	Yes	No	NA

REMARKS:

DELIVERY METHOD: In Person [ ] Common Carrier [ ] Lab Courier [X] Other [ ]

HMI
Environmental Consulting Services

CHAIN-OF-CUSTODY RECORD

Project Number: HM003321
Project Name/Location: ORMET-HANNIBAL, O.
Laboratory: PACE
Sampling Personnel: R. FARGO / C. SMITH

Sample ID	Date/Time	Sample Code	500 mL PLASTIC PH, SPEC. COND.	FLUORIDE	250 mL PLASTIC TOTAL/AMEN. CN	250 mL PLASTIC Diss. As, Be, Mn, Na, V	40 mL GLASS VIALS PCE					TOTAL
											06-5683	
FIELD BLANK	5:30	L	1		1	1	3				20	6
TRIP BLANK	—	L					3				21	3

Sample Code: L = Liquid; S = Solid; A = Air

Total Number of Containers: 9

Relinquished by: R. Fargo	Organization: HMI	Date: 9/20/06	Time: 13:00	Seal Intact? Yes No NA
Received by: [illegible]	Organization: Pace	Date:	Time: 13:00	
Relinquished by:	Organization:	Date:	Time:	Seal Intact? Yes No NA
Received by:	Organization:	Date:	Time:	

REMARKS:

DELIVERY METHOD: In Person [ ] Common Carrier [ ] Lab Courier [X] Other [ ]

APPENDIX C

DATA VALIDATION SUMMARY REPORT FOR 2006 MONITORING EVENTS

APPENDIX C

2006 DATA VALIDATION SUMMARY
ORMET CORPORATION SUPERFUND SITE
HANNIBAL, OHIO

JANUARY 2006 SAMPLING EVENT
PACE ANALYTICAL SERVICES, INC. PROJECT #06-0473

General

Holding Time
All sample holding times met, except pH. pH also measured in field at time of sample collection.

Field Blank
Manganese reported at 0.020 mg/L. By 5x rule, results below 0.1 mg/L considered below detection. Result for MW-28 (0.064 mg/L) changed to <0.10 mg/L.

Sodium reported at 2.3 mg/L. By 5x rule, results less than 11.5 mg/L considered below detection. No results affected.

Trip Blank
All results below detection.

Field Duplicate RPD
RPD values for all field duplicate results within +/- 20%, except fluoride (23.9%).
No data qualification considered warranted.

Metals

MS/MSD
All MS and MSD results and RPD values within limits.

LCS
All LCS recovery values within limits.

Laboratory Sample Duplicate
Beryllium RPD = -114.7% Acceptance Range = +/- 20%
All positive sample results for beryllium flagged with 'J' as estimated.

Volatiles

Surrogates
All recovery values within limits.

LCS
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.
Quantitation Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

Spike Recovery & RPD Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

LCS Blank Summary Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

PCBs

Extraction and analysis holding times met.

Surrogate Recovery
All recovery values within control limits.

LCS
Spike recovery and RPD values within control limits.

General Chemistry

LCS
Fluoride recovery = 121% Control Limits 85 – 115%. Matrix interference noted by lab.

MS
Fluoride MS recovery value = 48.7% Control Limits 85 – 115%. Matrix interference noted by lab.

Based on LCS and MS results, all positive fluoride results flagged with 'J' as estimated.

MAY 2006 SAMPLING EVENT
PACE ANALYTICAL SERVICES, INC. PROJECT #06-2967 AND #06-3008

General

Holding Time
All sample holding times met, except pH. pH also measured in field at time of sample collection.

Field Blank
Fluoride reported at 0.4 mg/L. By 5x rule, results below 2.0 mg/L considered below detection. Results for MW-1 (1.5 mg/L), MW-7 (1.0 mg/L), MW-8 (1.9 mg/L), MW-10 (1.1 mg/L), MW-11 (0.99 mg/L), MW-12 (0.92 mg/L), MW-28 (0.27 mg/L), MW-30 (1.6 mg/L) changed to <2.0B.

Sodium reported at 1.2 mg/L. By 5x rule, results below 6.0 mg/L considered below detection. No results affected.

Trip Blank
All results below detection.

Field Duplicate RPD
RPD values for all field duplicate results within +/- 20%, except:
Manganese MW-2/MW-2D: RPD = 45.4%
Vanadium MW-2/MW-2D: RPD = 41.98%
Cyanide (total) MW-2/MW-2D: RPD = 25.71%
Cyanide (amenable) MW-17/MW-18D: RPD = 106.57%

Cyanide (amenable) analysis commonly prone to variability.
No data qualification considered warranted.

Metals

MS/MSD
All MS and MSD results and RPD values within limits.

LCS
All LCS recovery values within limits.

Volatiles

Surrogates
All recovery values within limits.

LCS
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

Quantitation Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

Spike Recovery & RPD Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

LCS Blank Summary Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

PCBs

Extraction and analysis holding times met.

Surrogate Recovery
All recovery values within control limits.

LCS
Spike recovery and RPD values within control limits.

General Chemistry

LCS
All results within control limits.

MS
Project #06-2967 (Batch 49912) fluoride MS recovery value = 61.6% Control Limits 85 – 115%. Matrix interference noted by lab.

Project #06-3008 (Batch 49923) fluoride MS recovery value = 123.6% Control Limits 85 – 115%. Matrix interference noted by lab.

Based on LCS and MS results, all positive fluoride results flagged with 'J' as estimated.

Project #06-3008 (Batch 49754) cyanide (total) MS recovery value = 71.9% Control Limits 85 – 115%. Matrix interference noted by lab.

Cyanide analysis commonly prone to variability.
No data qualification considered warranted.

SEPTEMBER 2006 SAMPLING EVENT
PACE ANALYTICAL SERVICES, INC. PROJECT #06-5688

General

Holding Time
All sample holding times met, except pH. pH also measured in field at time of sample collection.

Field Blank
Fluoride reported at 0.11 mg/L. By 5x rule, results below 0.55 mg/L considered below detection.

Result for mw-28 (0.23 mg/L) changed to <0.55B.

Sodium reported at 1.2 mg/L. By 5x rule, results below 6.0 mg/L considered below detection. No results affected.

Trip Blank
All results below detection.

Field Duplicate RPD
RPD values for all field duplicate results within +/- 20%, except:
Manganese MW-31/MW-31D: RPD = 50%
Vanadium MW-31/MW-31D: RPD = 38.66%
Cyanide (amenable) MW-31/MW-31D: RPD = 41.71%

No data qualification considered warranted.

Metals

MS/MSD
All MS and MSD results and RPD values within limits.

Lab Duplicate Sample RPD
Beryllium RPD = -26.3% Control Limits +/-20%

No data qualification considered warranted.

LCS
All LCS recovery values within limits.

Volatiles

Surrogates
All recovery values within limits.

LCS
1,1,1-Trichloroethane result not within control limits. PCE recovery within control limits. No data qualification warranted.

Spike Recovery & RPD Report
Certain compounds not within control limits. PCE recovery within control limits. No data qualification warranted.

PCBs

Extraction and analysis holding times met.

Surrogate Recovery
All recovery values within control limits.

LCS
Spike recovery and RPD values within control limits.

General Chemistry

LCS
All results within control limits.

MS
MS recovery for fluoride = 413% Control Limits 85-115%. Matrix interference noted by lab. Spiked sample was not from the Ormet samples. No data qualification applied.

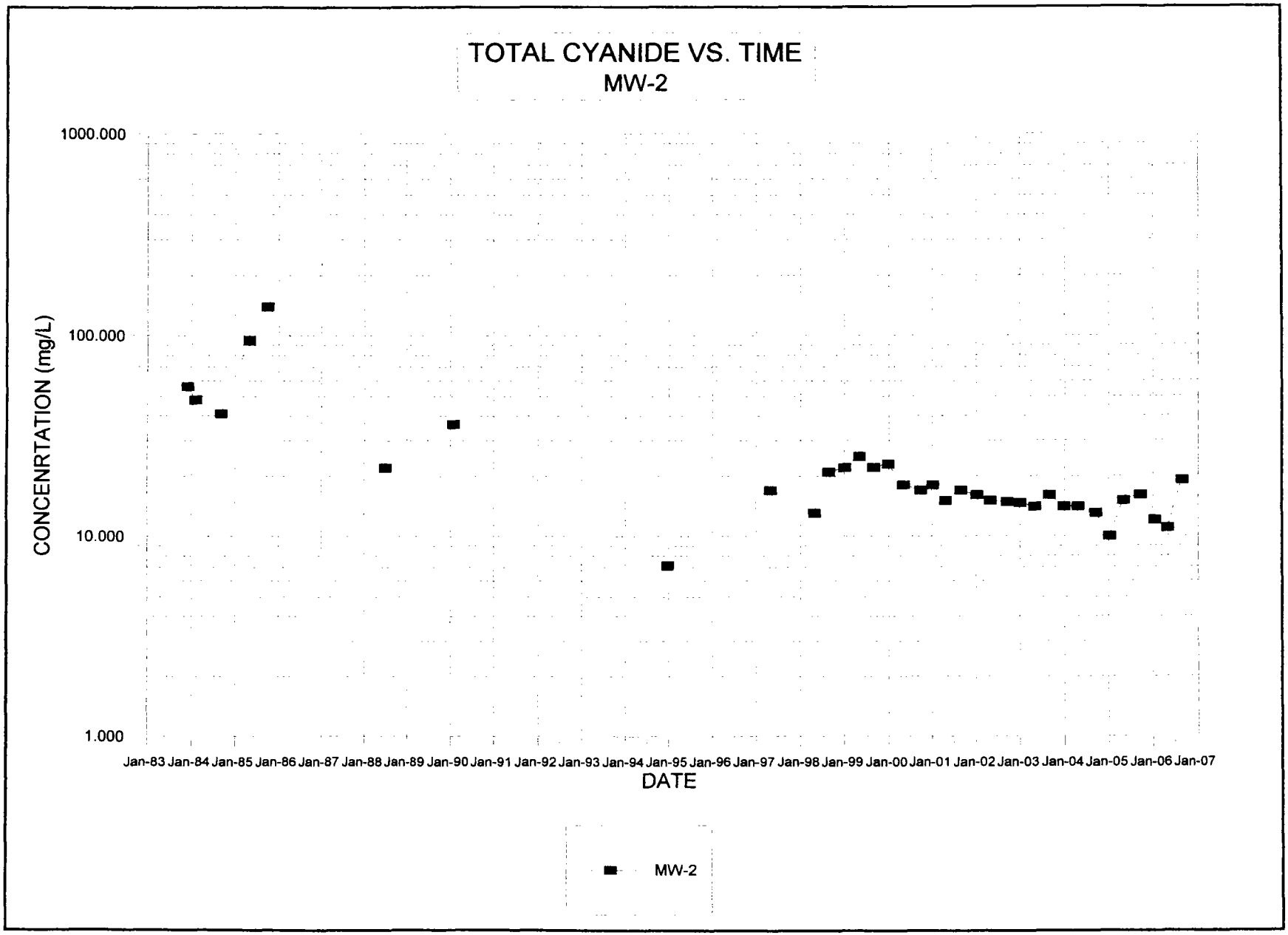
APPENDIX D

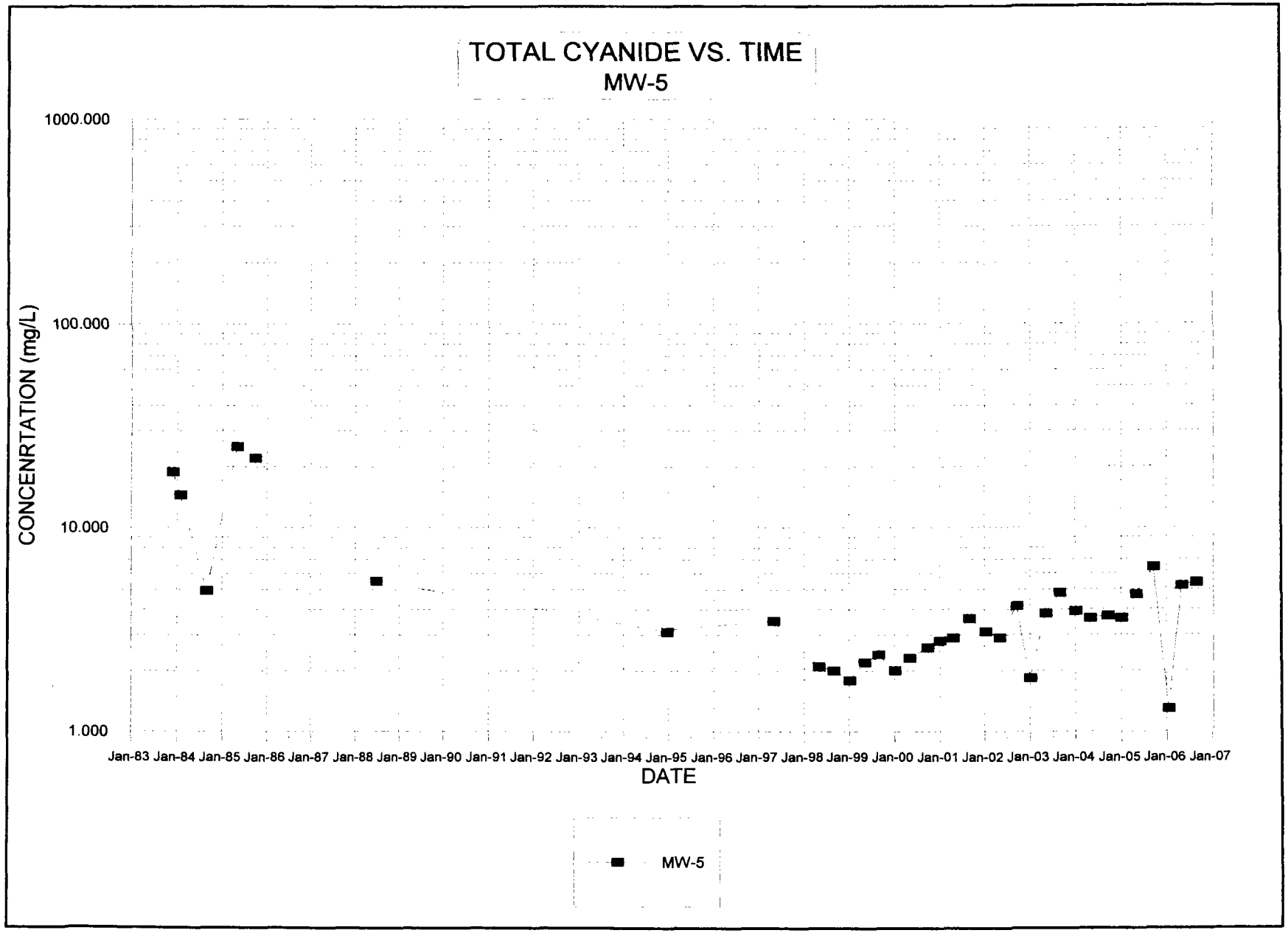
CONCENTRATION VS. TIME GRAPHS FOR REMEDIAL ACTION MONITORING PARAMETERS

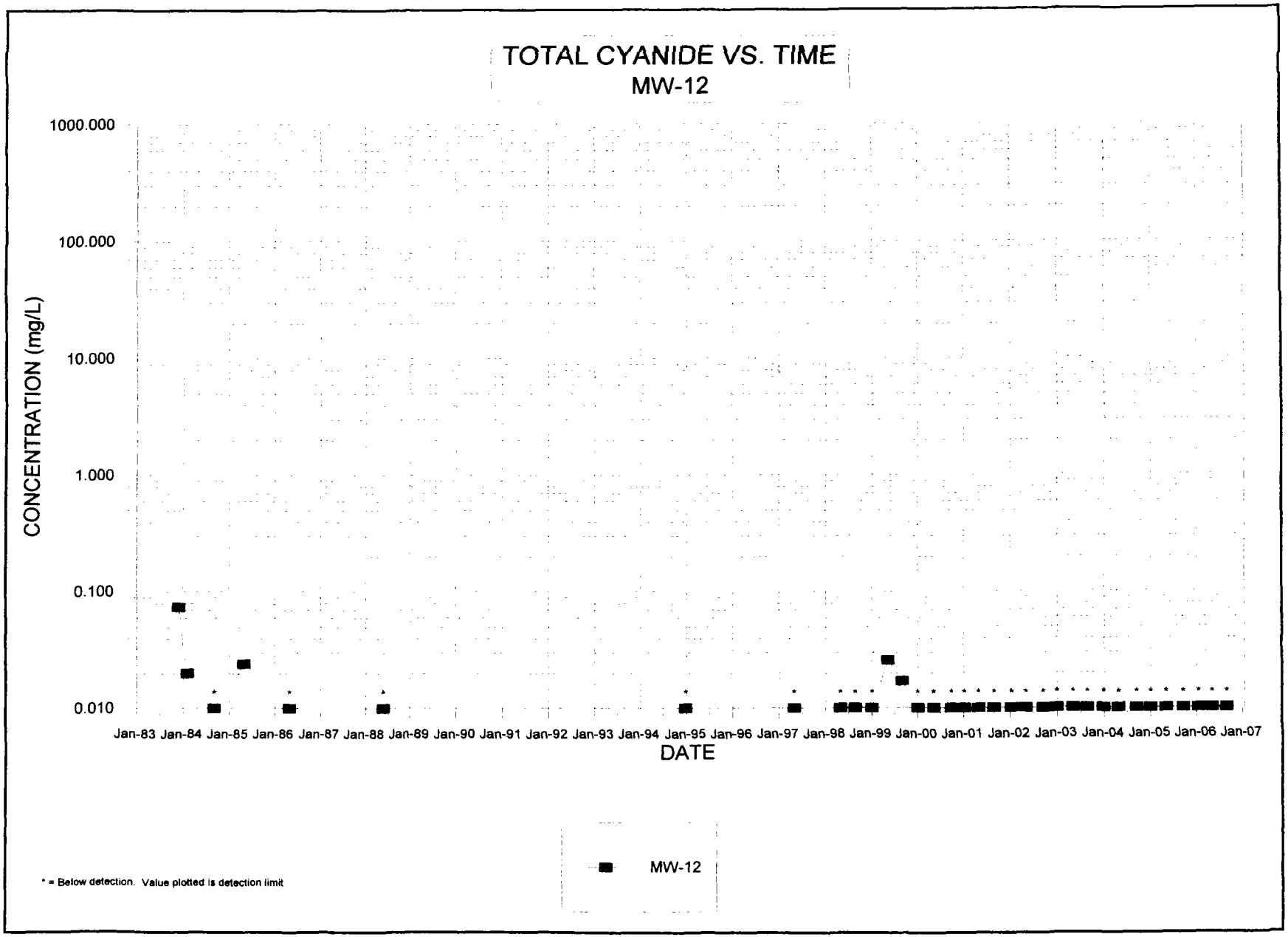
Appendix D-1	Total Cyanide
Appendix D-2	Cyanide Amenable to Chlorination
Appendix D-3	Fluoride
Appendix D-4	Arsenic
Appendix D-5	Beryllium
Appendix D-6	Manganese
Appendix D-7	Vanadium
Appendix D-8	Tetrachloroethene
Appendix D-9	Sodium

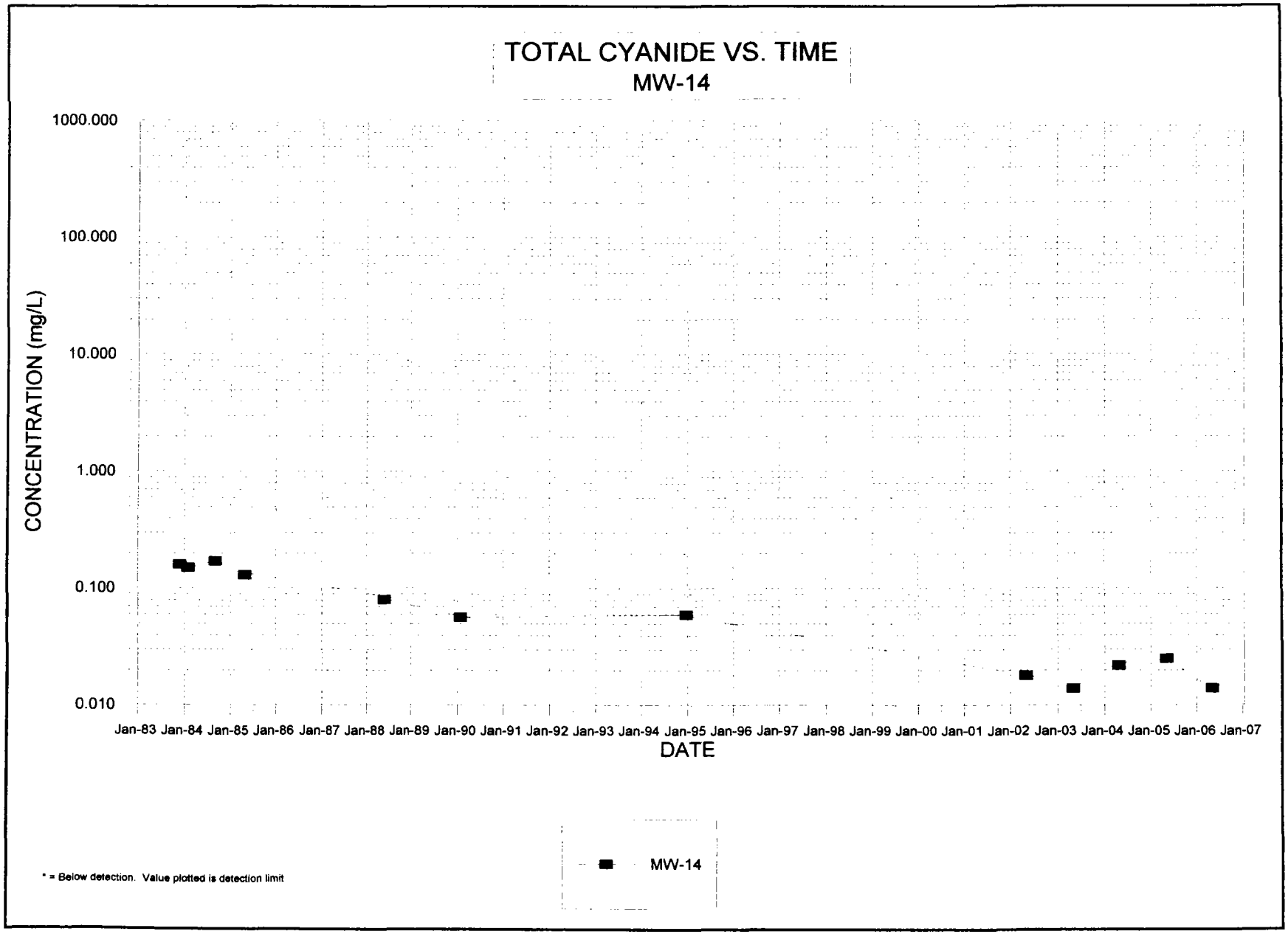
APPENDIX D-1

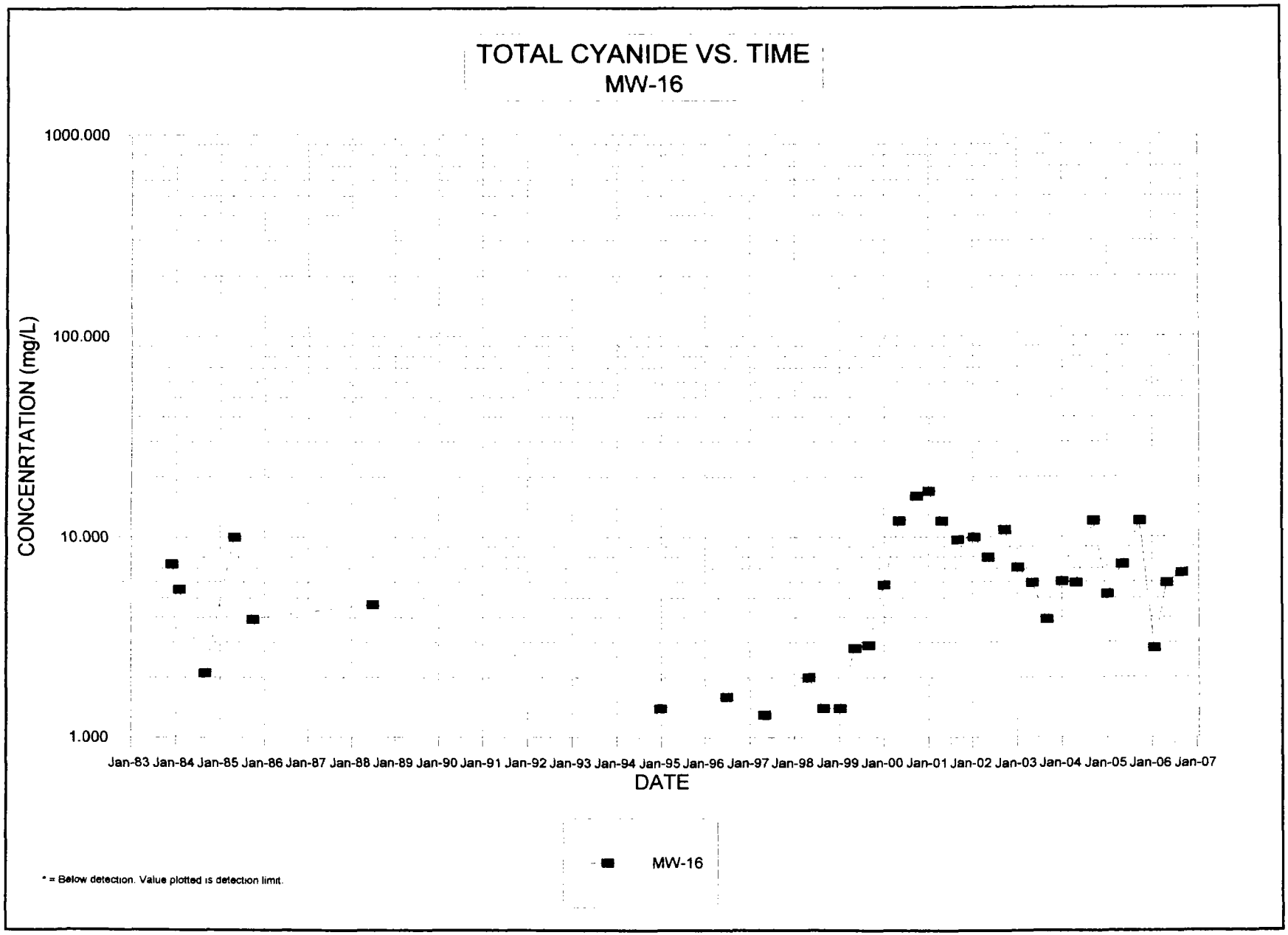
TOTAL CYANIDE

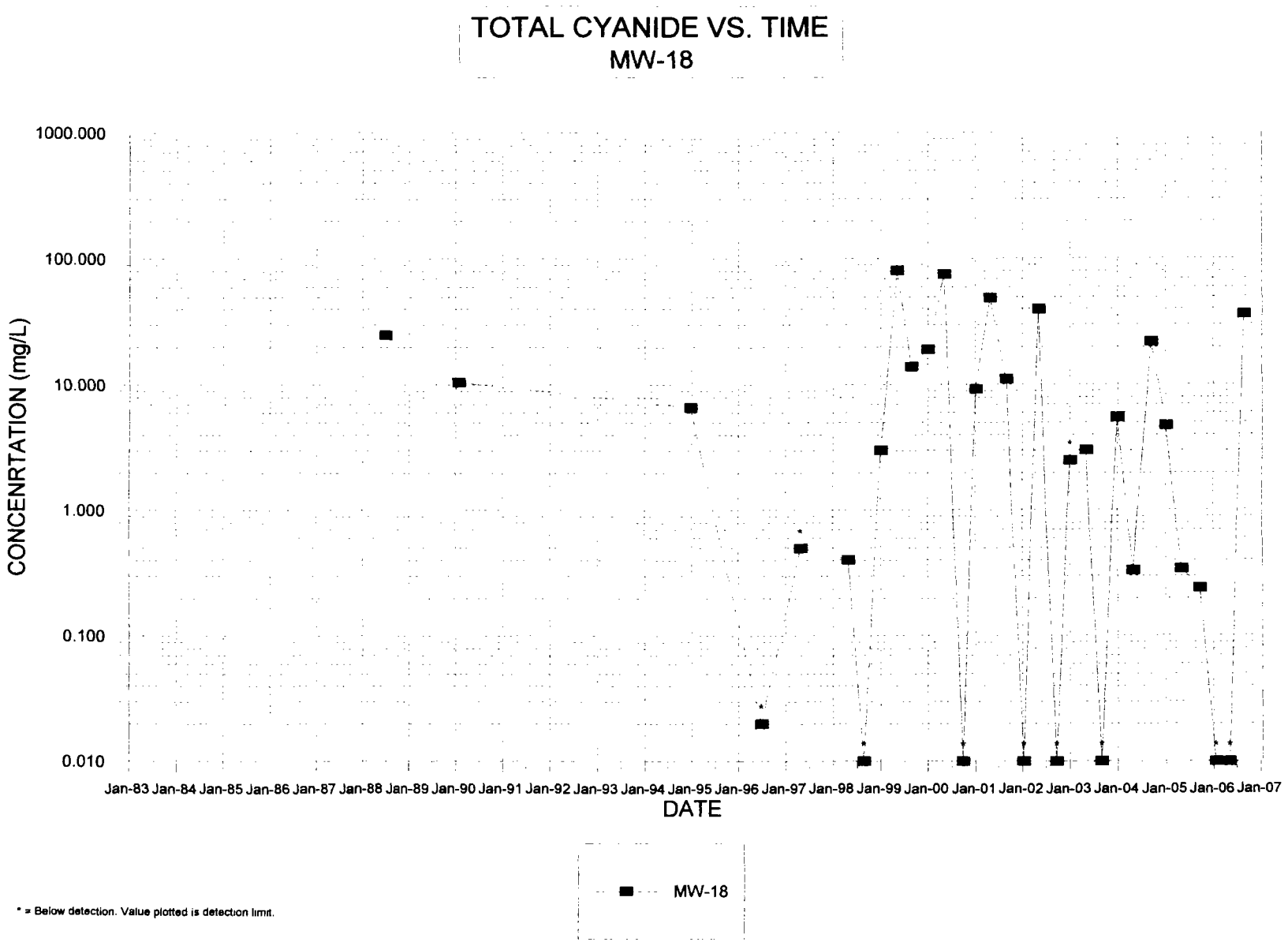

TOTAL CYANIDE VS. TIME
MW-2
1000.000
100.000
10.000
1.000
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

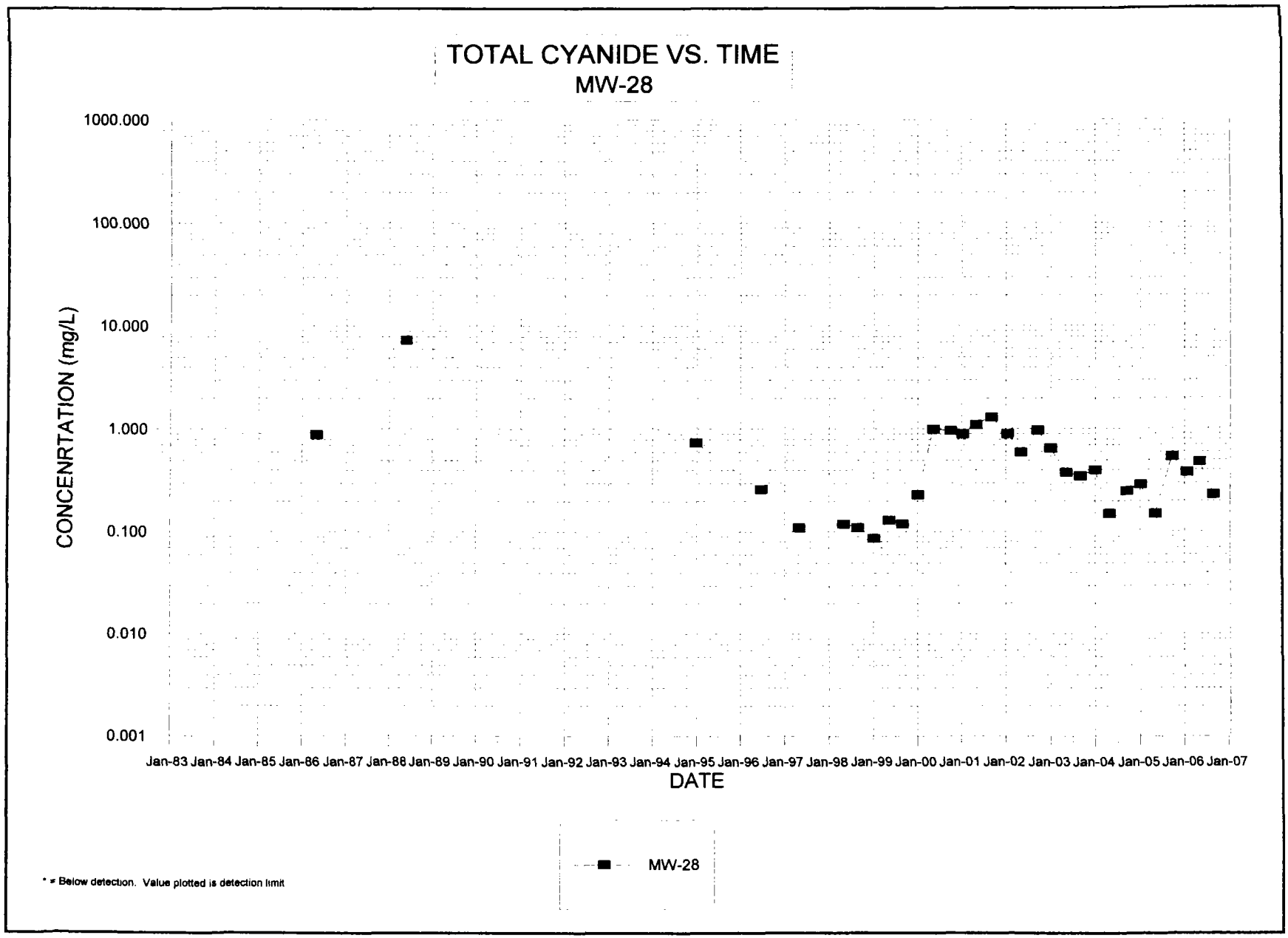

TOTAL CYANIDE VS. TIME
MW-5
1000.000
100.000
10.000
1.000
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5

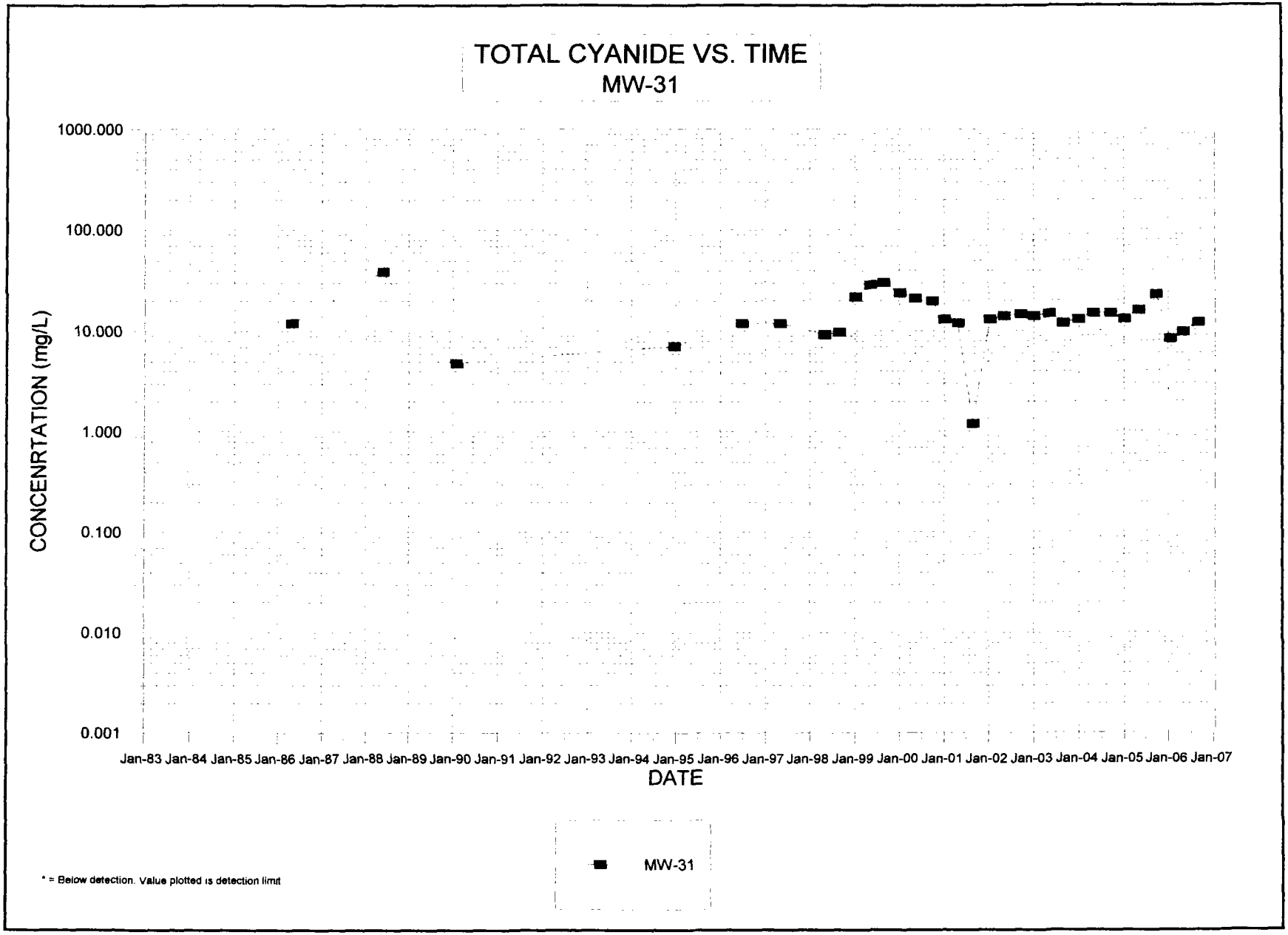

TOTAL CYANIDE VS. TIME
MW-12
1000.000
100.000
10.000
1.000
0.100
0.010
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12
* = Below detection. Value plotted is detection limit

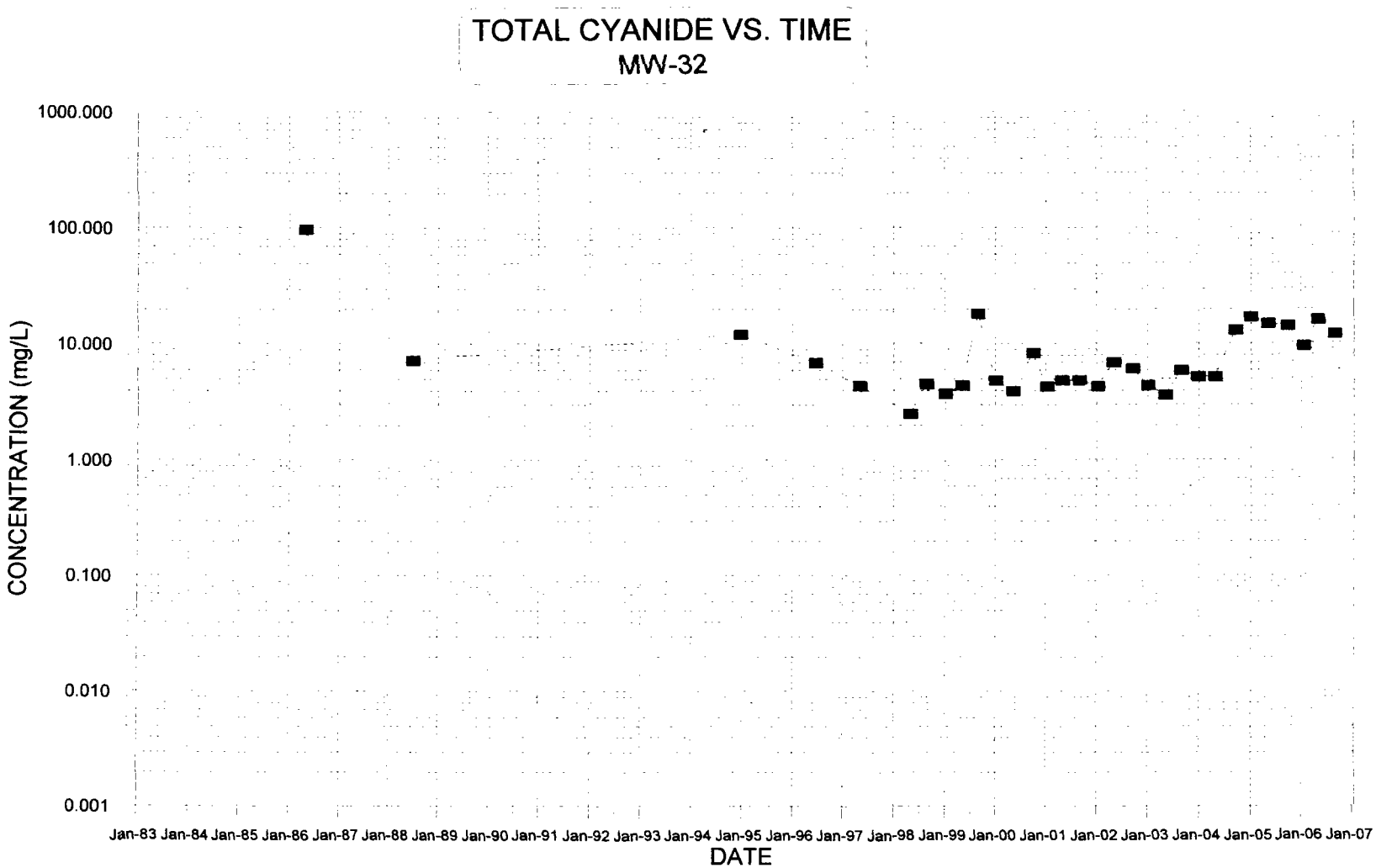

TOTAL CYANIDE VS. TIME
MW-14
CONCENTRATION (mg/L)
1000.000
100.000
10.000
1.000
0.100
0.010
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14
* = Below detection. Value plotted is detection limit


TOTAL CYANIDE VS. TIME
MW-16
CONCENRTATION (mg/L)
1000.000
100.000
10.000
1.000
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16
* = Below detection. Value plotted is detection limit.

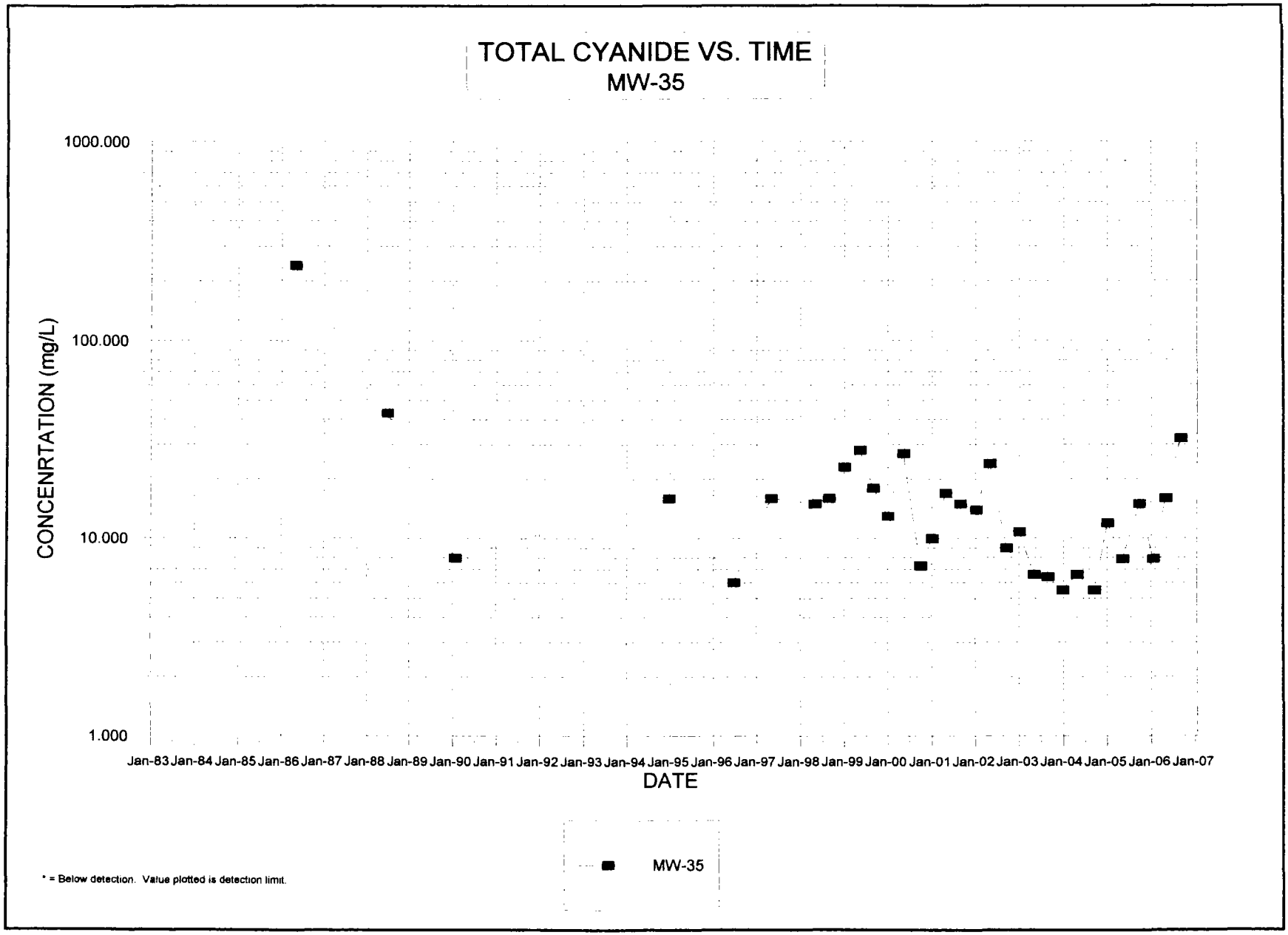

TOTAL CYANIDE VS. TIME
MW-18
1000.000
100.000
10.000
1.000
0.100
0.010
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18
* = Below detection. Value plotted is detection limit.

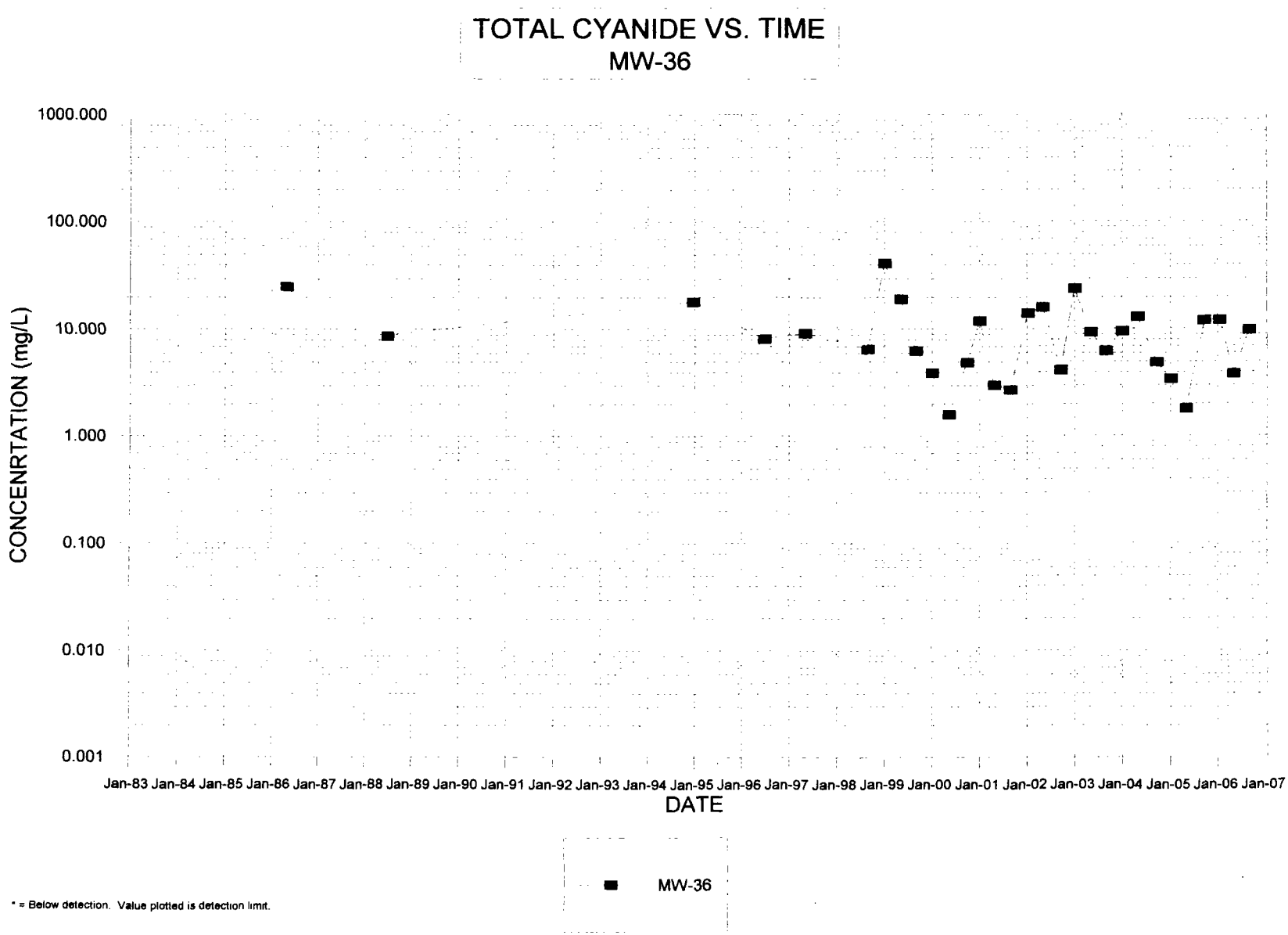

TOTAL CYANIDE VS. TIME
MW-28
1000.000
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection. Value plotted is detection limit


TOTAL CYANIDE VS. TIME
MW-31
1000.000
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31
* = Below detection. Value plotted is detection limit

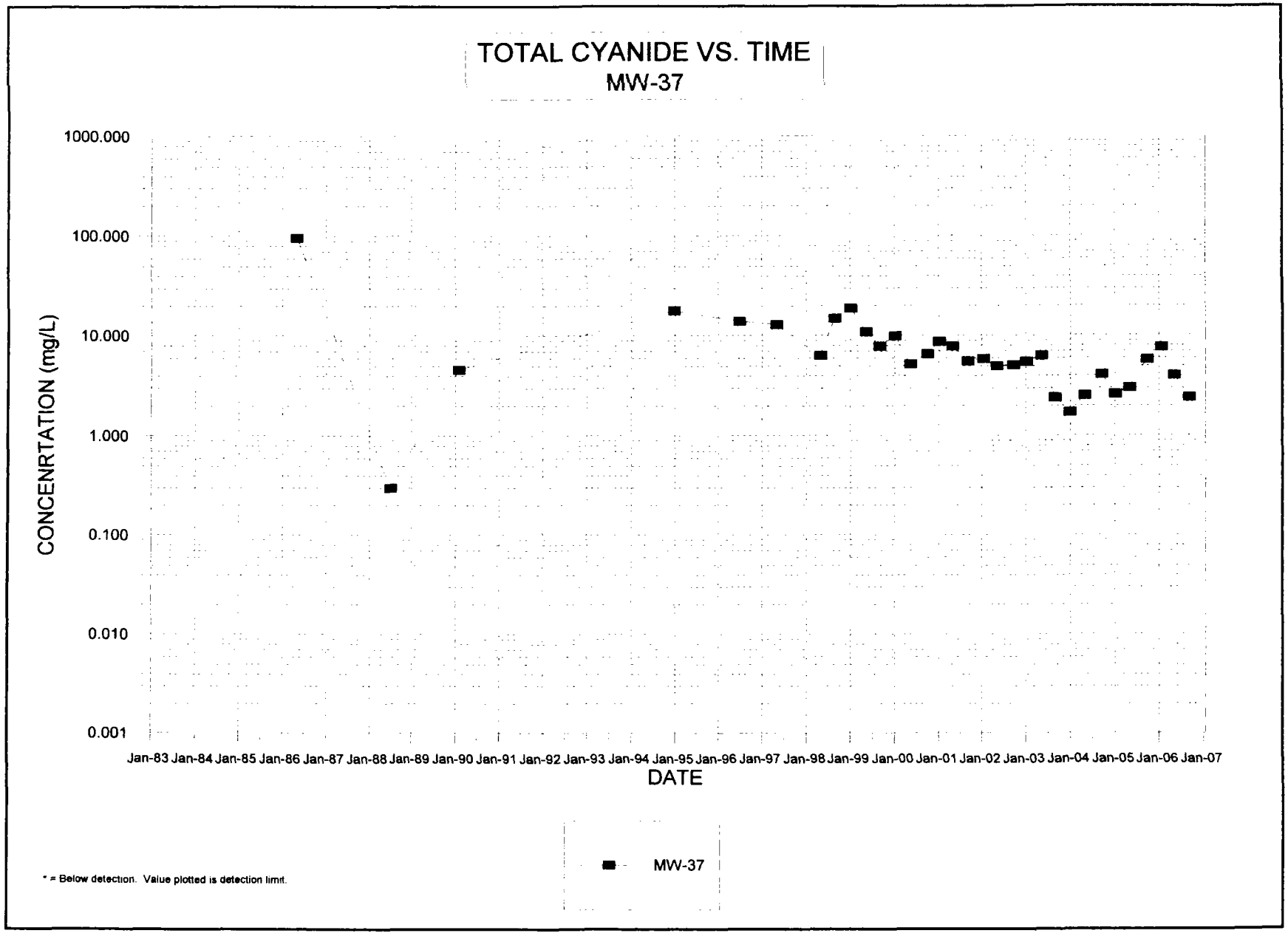


* = Below detection. Value plotted is detection limit.


TOTAL CYANIDE VS. TIME
MW-35
1000.000
100.000
10.000
1.000
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35
* = Below detection. Value plotted is detection limit.

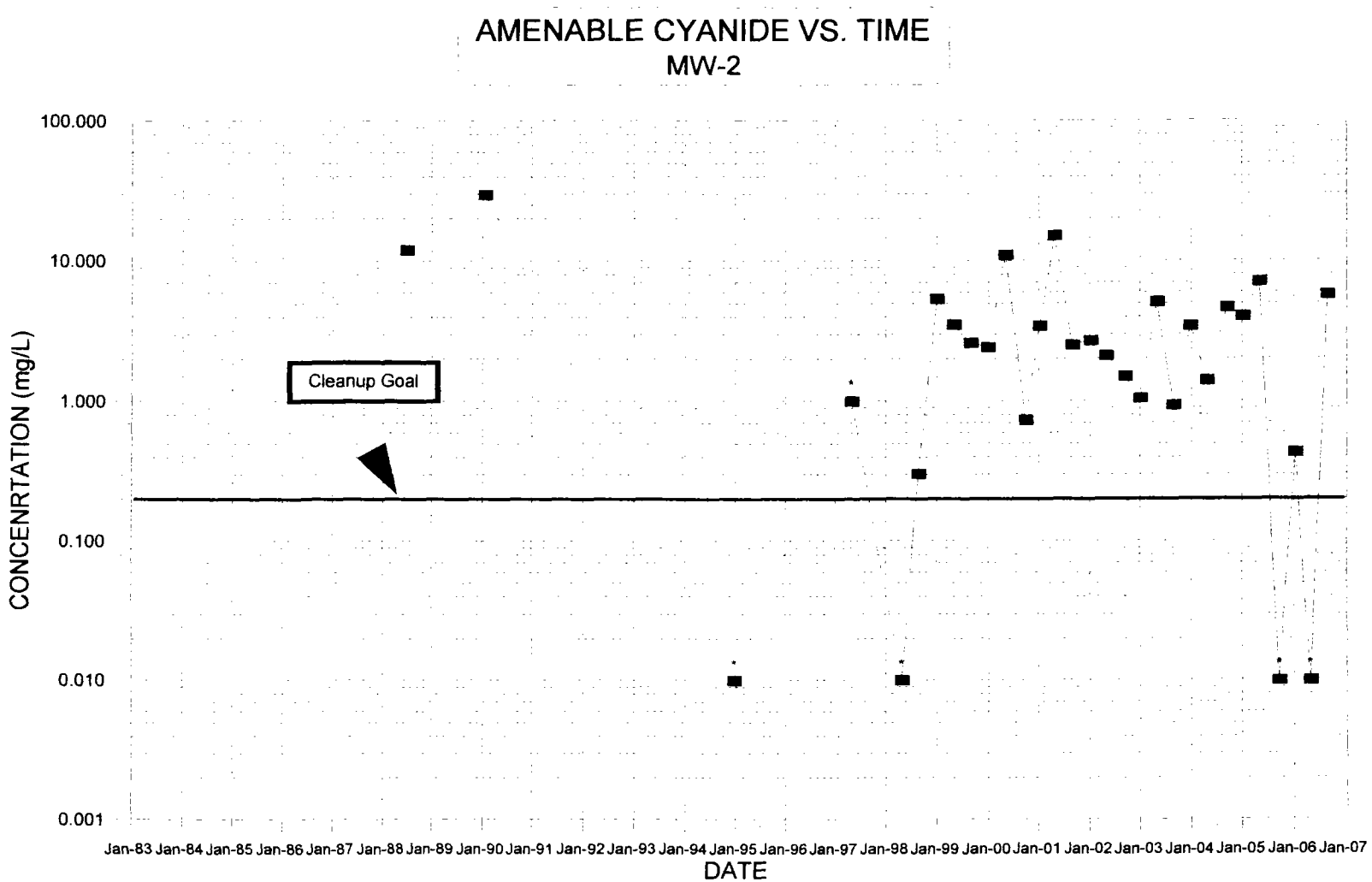


* = Below detection. Value plotted is detection limit.

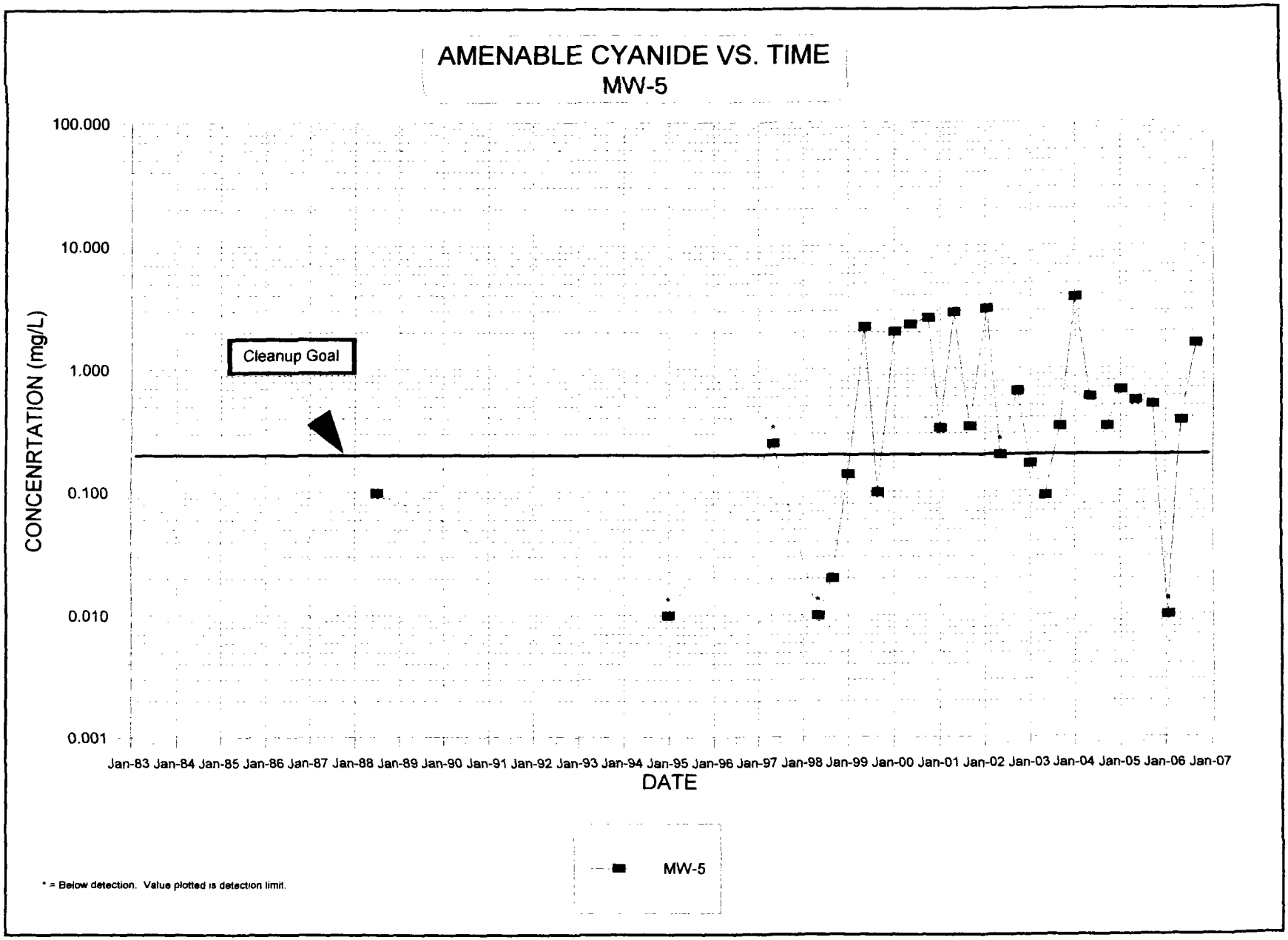

TOTAL CYANIDE VS. TIME
MW-37
1000.000
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37
* = Below detection. Value plotted is detection limit.

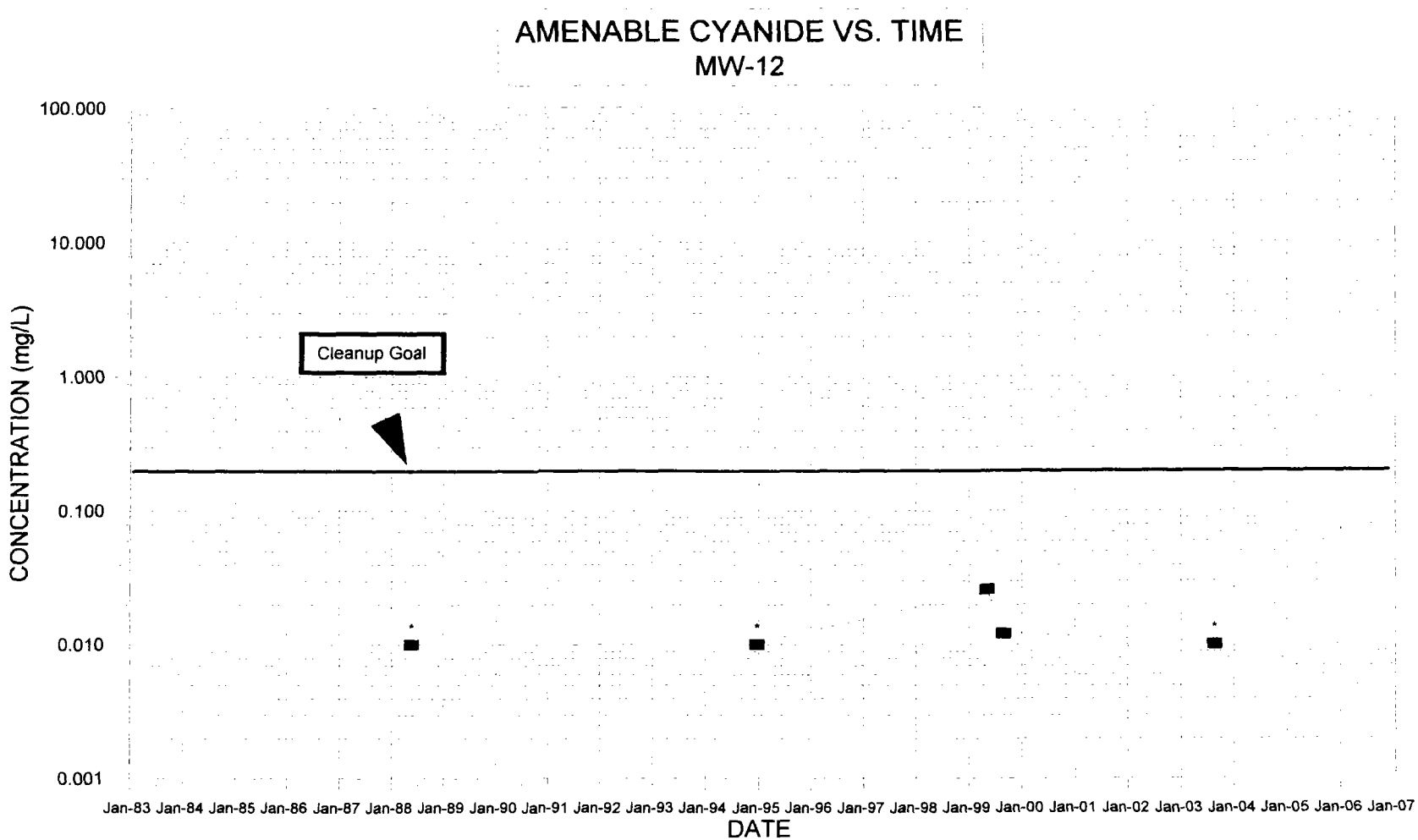
APPENDIX D-2

CYANIDE AMENABLE TO CHLORINATION

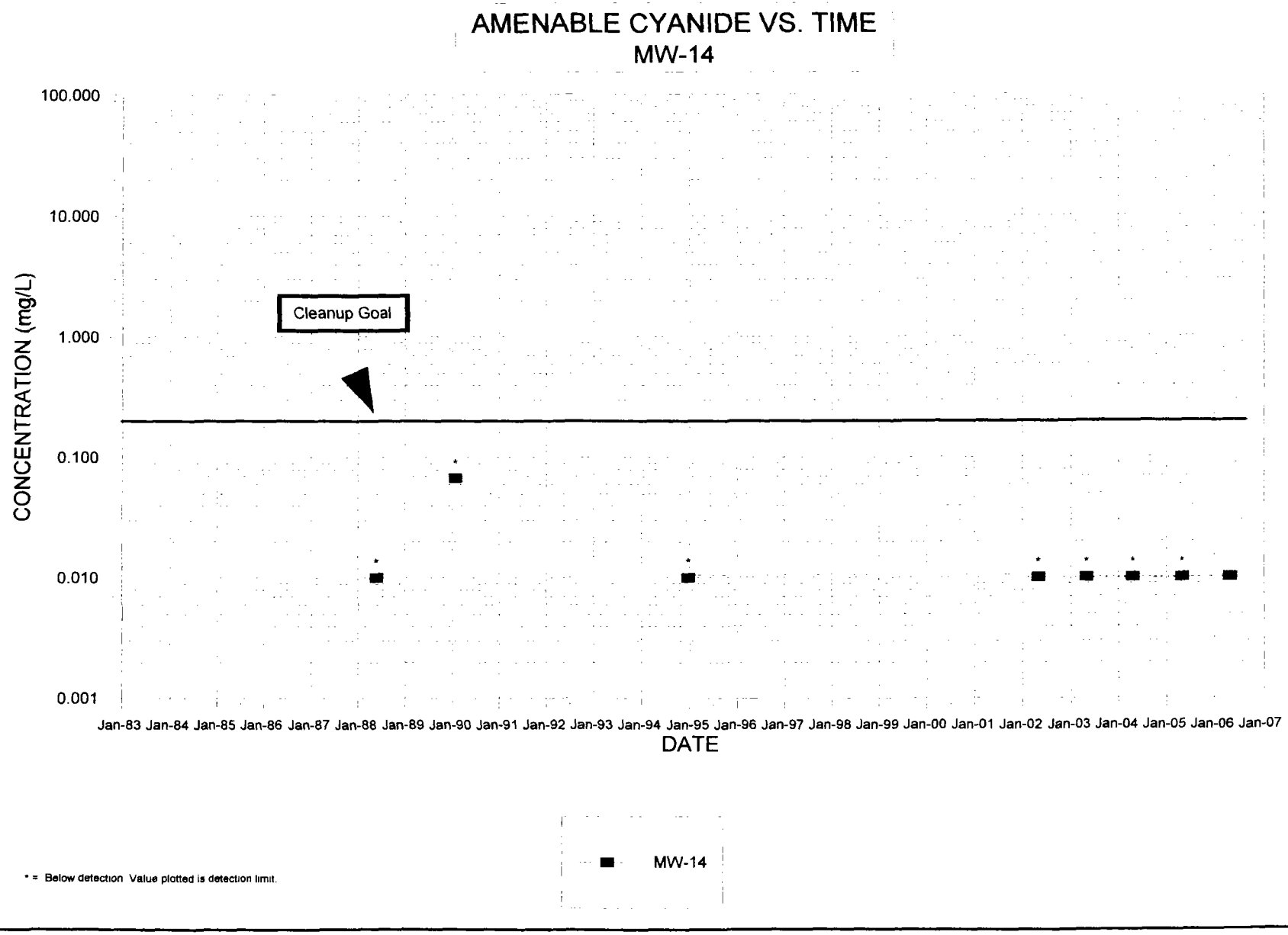


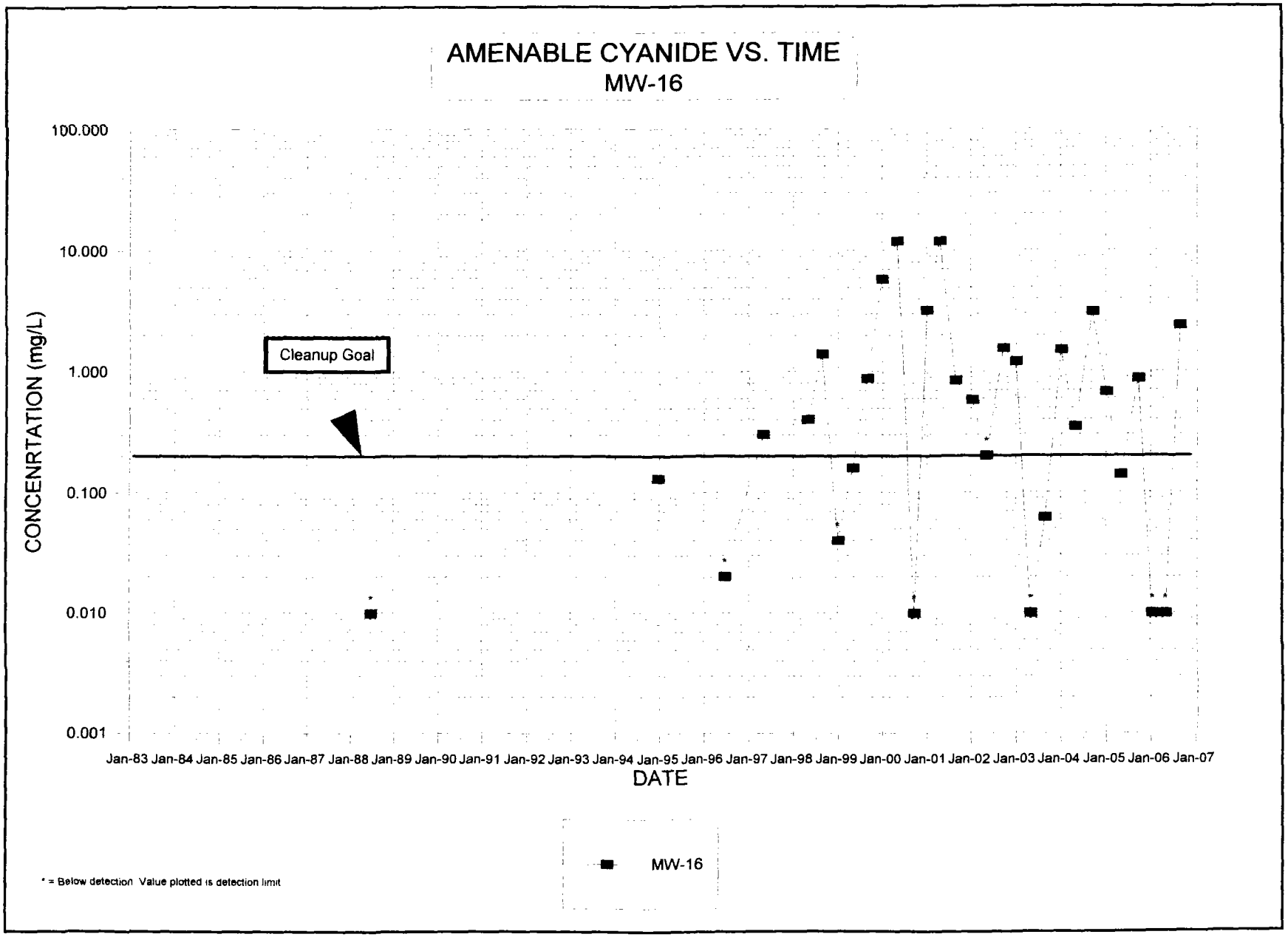
* = Below detection. Value plotted is detection limit.

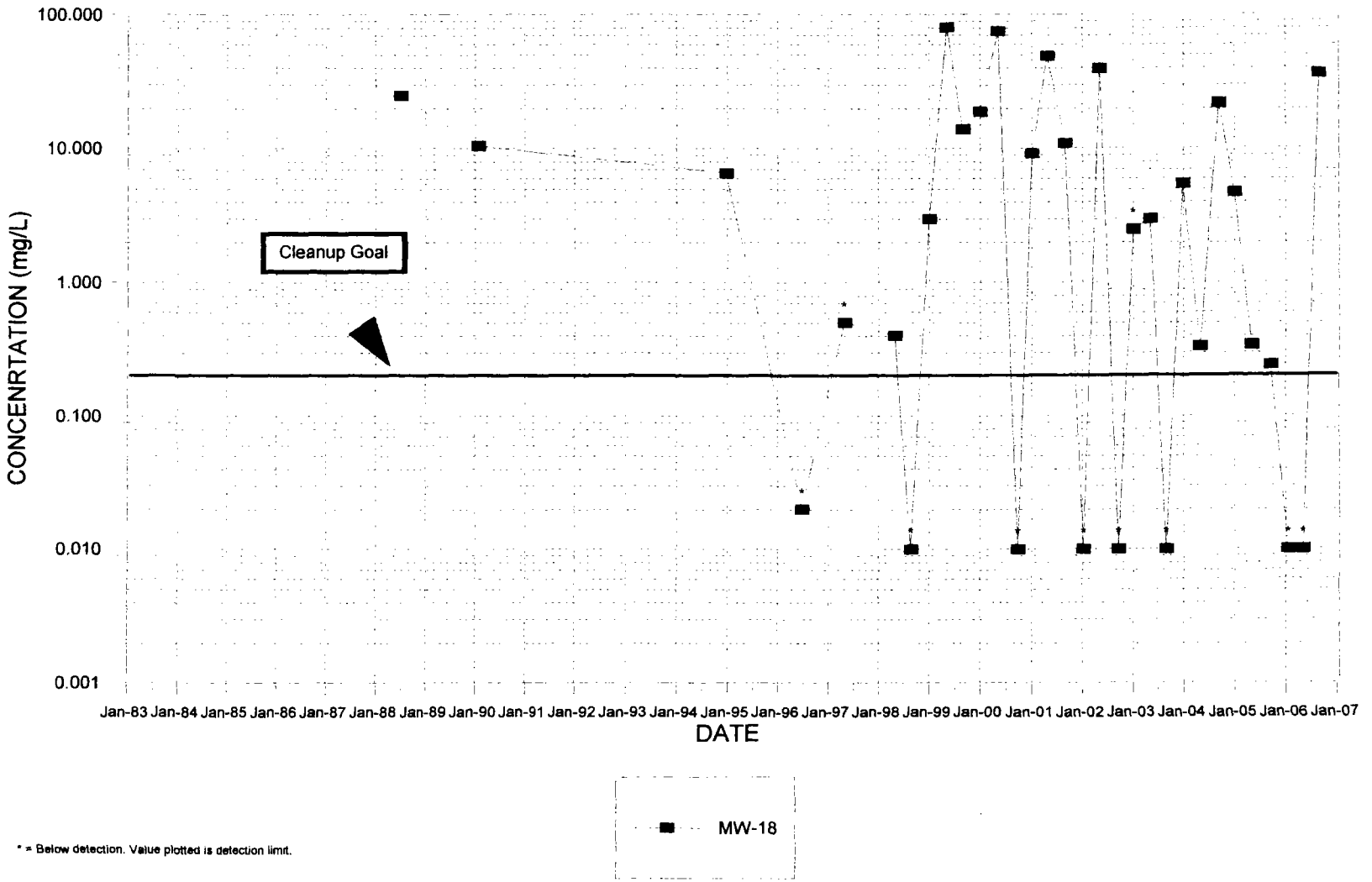

AMENABLE CYANIDE VS. TIME
MW-5
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5
* = Below detection. Value plotted is detection limit.

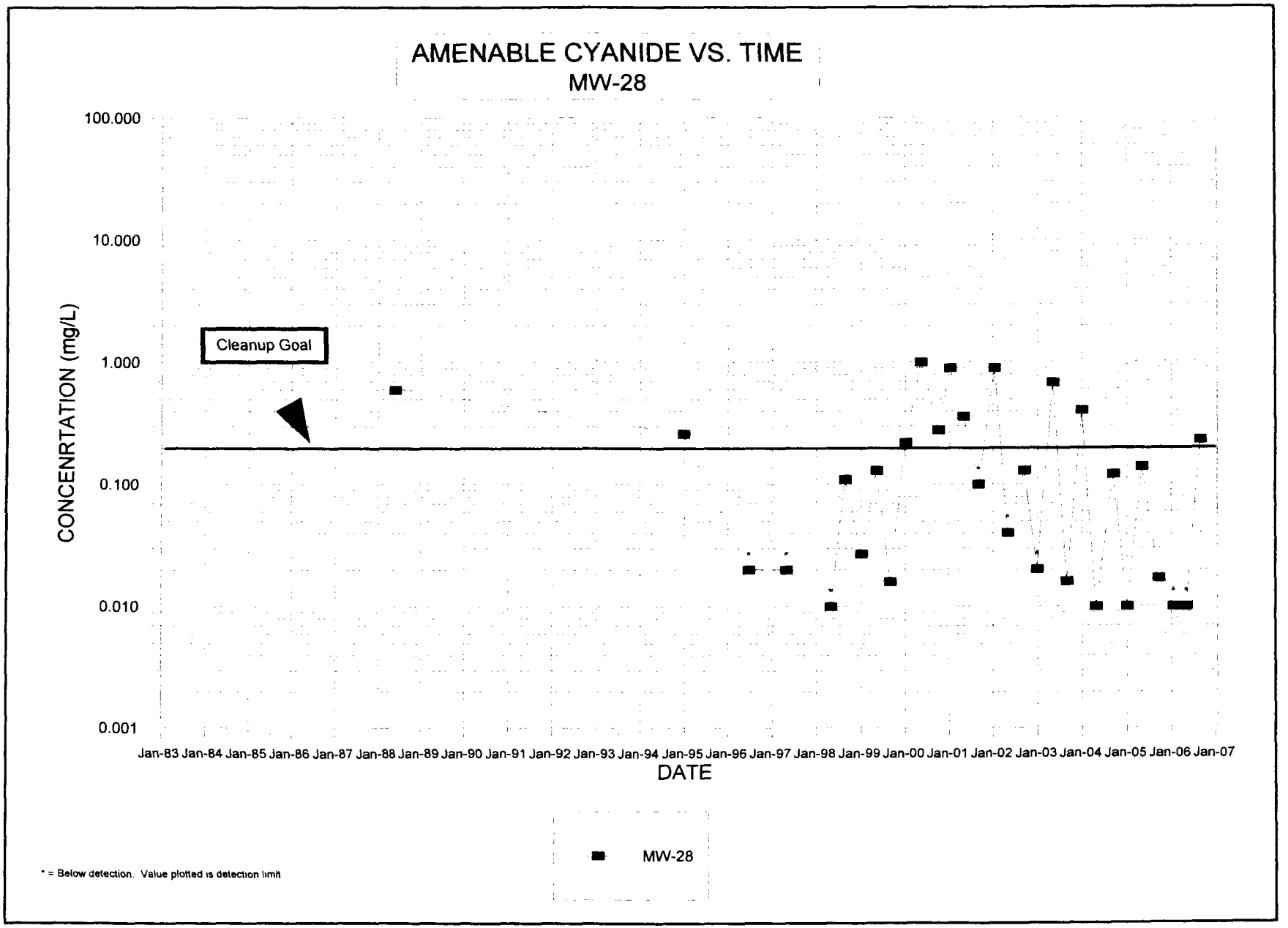


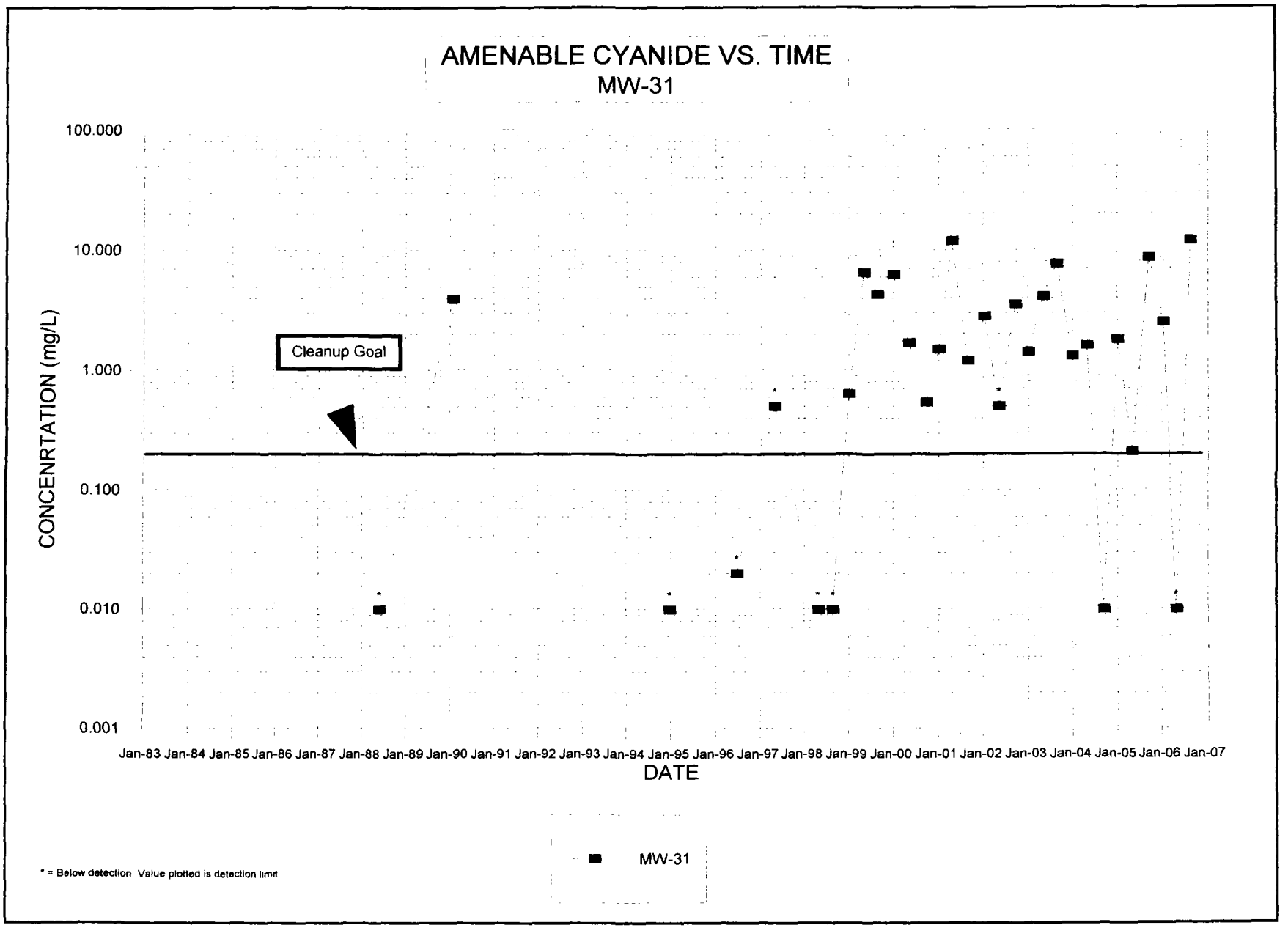
* = Below detection Value plotted is detection limit.

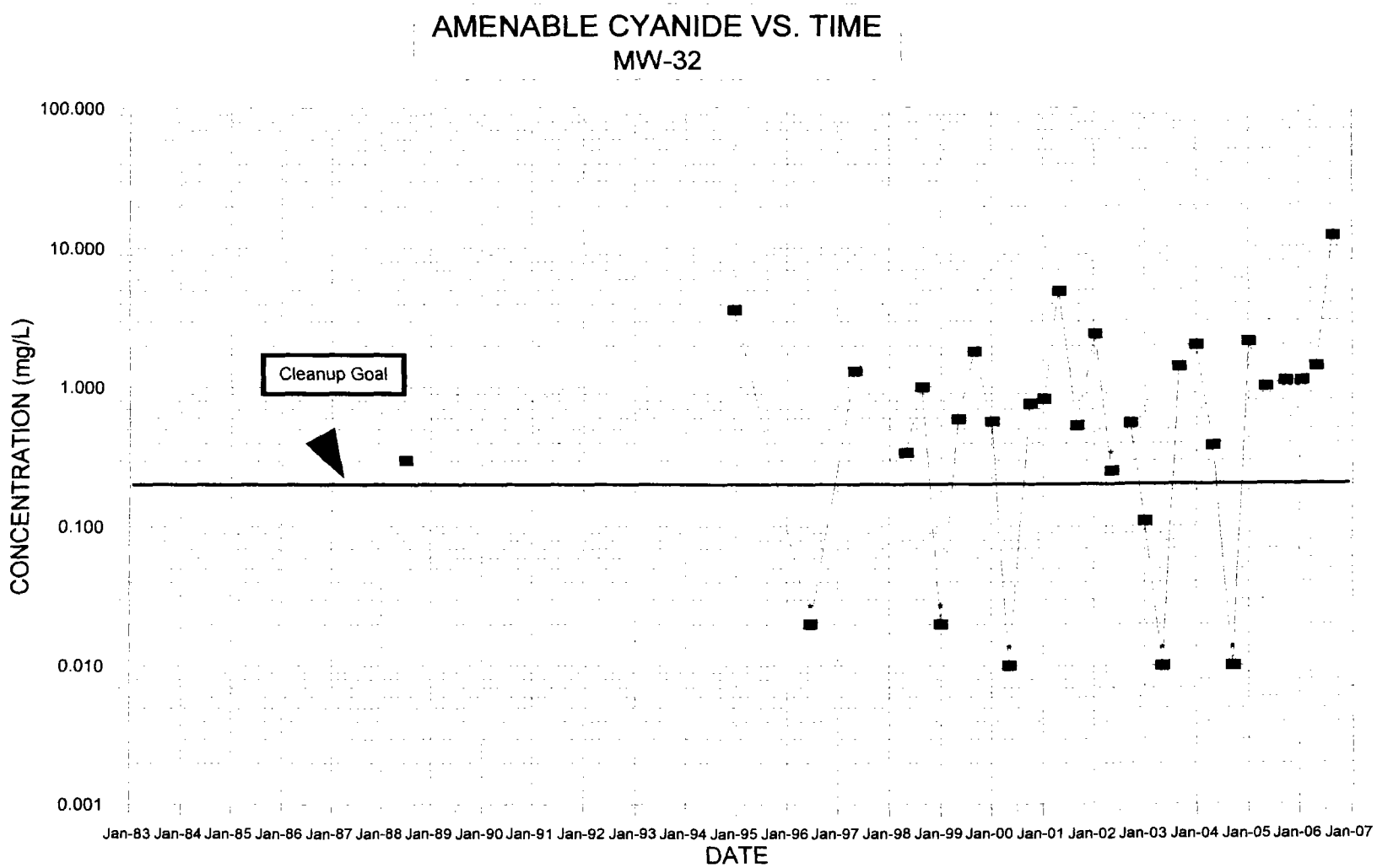

AMENABLE CYANIDE VS. TIME
MW-14
100.000
10.000
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14
* = Below detection Value plotted is detection limit.


AMENABLE CYANIDE VS. TIME
MW-16
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16
* = Below detection Value plotted is detection limit

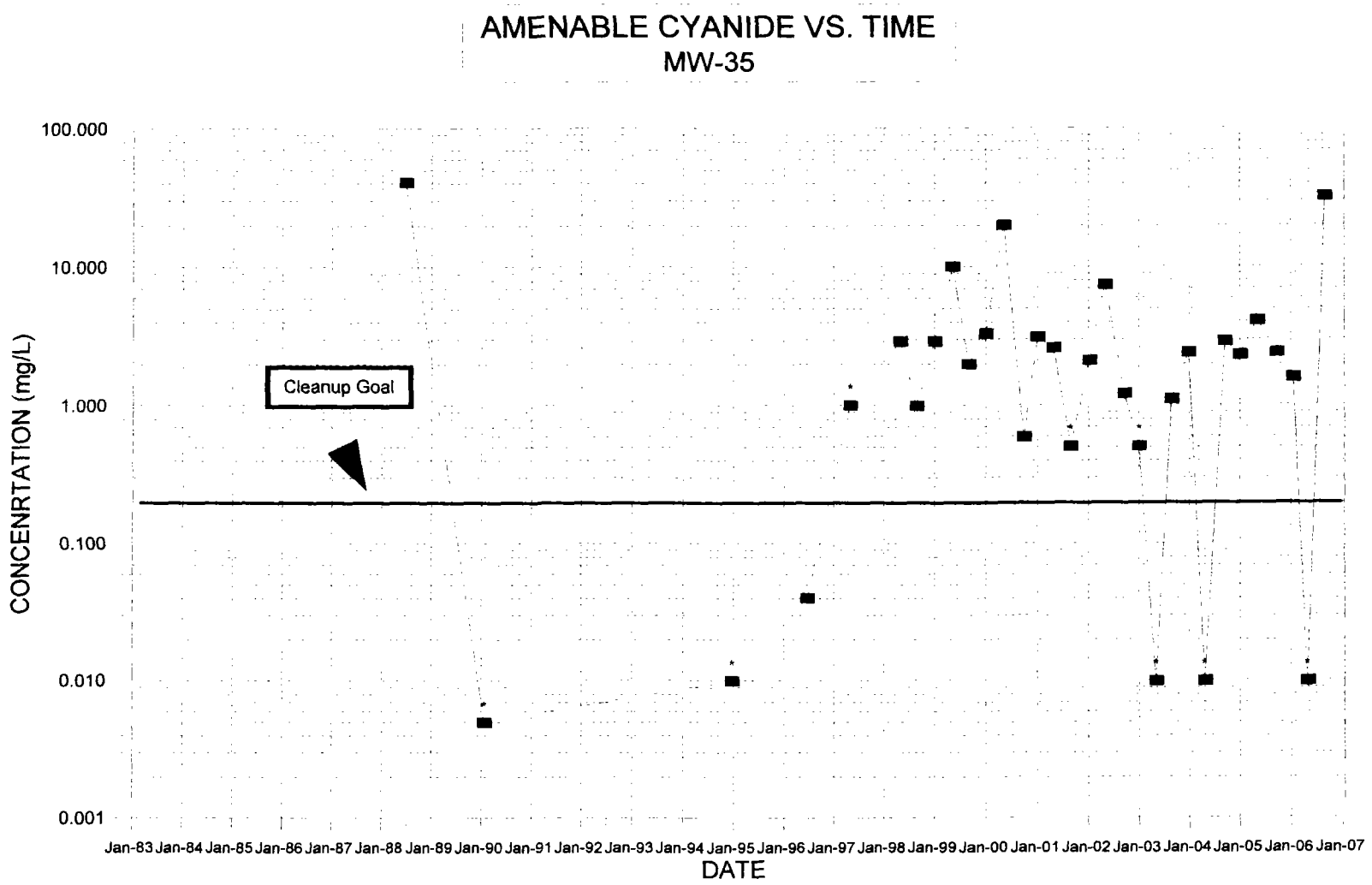

AMENABLE CYANIDE VS. TIME
MW-18
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18
* = Below detection. Value plotted is detection limit.

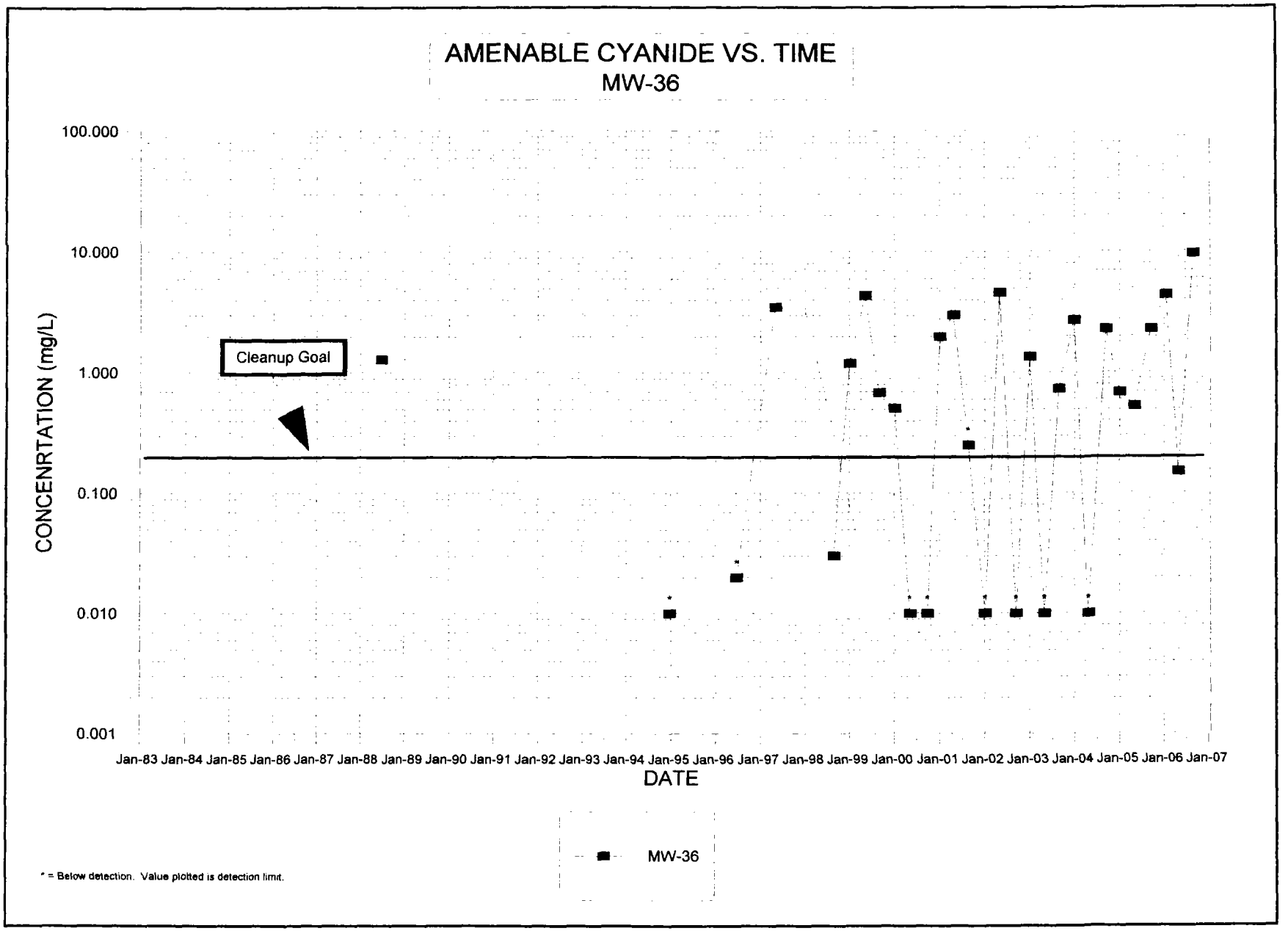

AMENABLE CYANIDE VS. TIME
MW-28
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection. Value plotted is detection limit

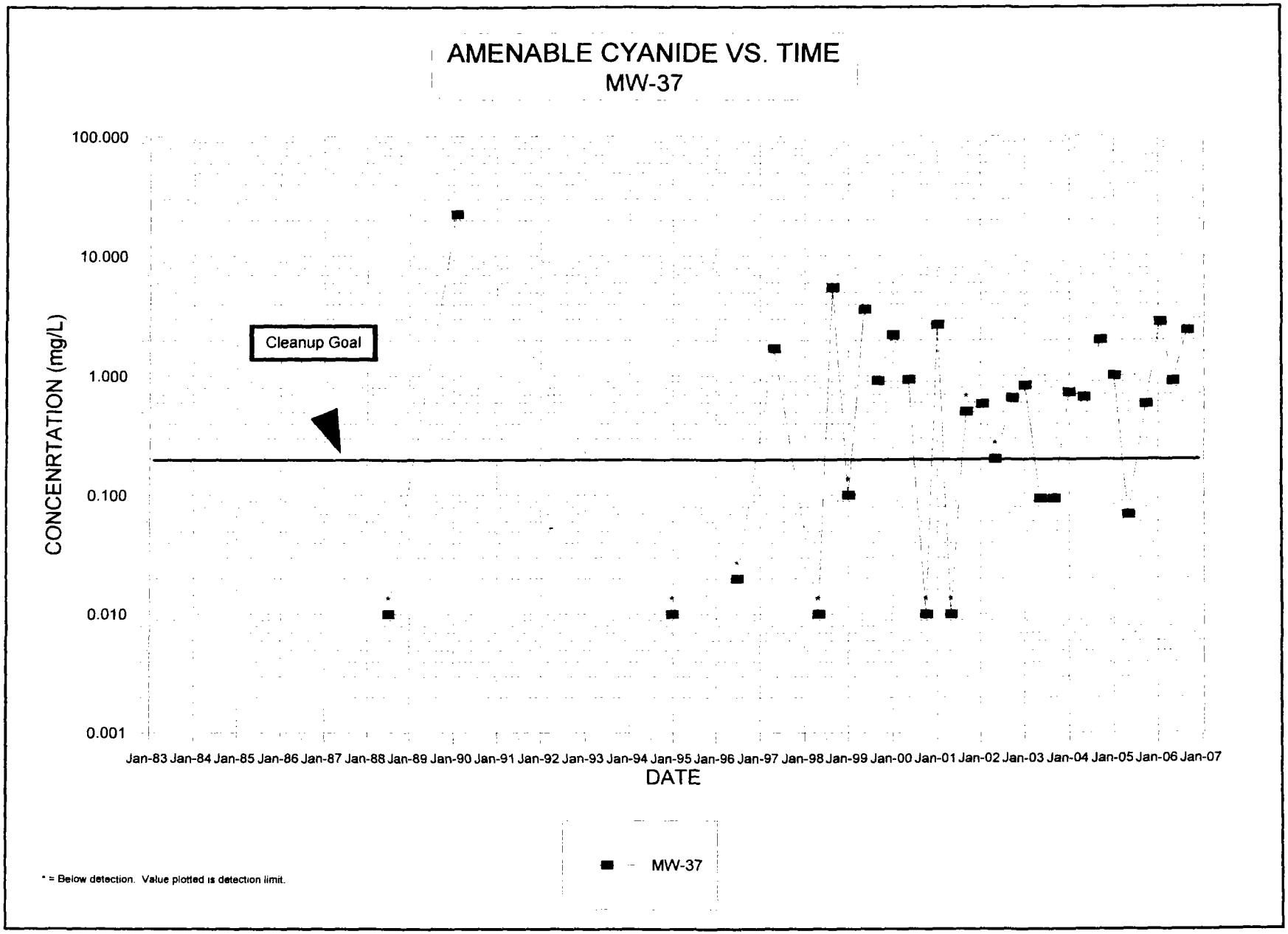

AMENABLE CYANIDE VS. TIME
MW-31
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31
* = Below detection Value plotted is detection limit



* = Below detection. Value plotted is detection limit

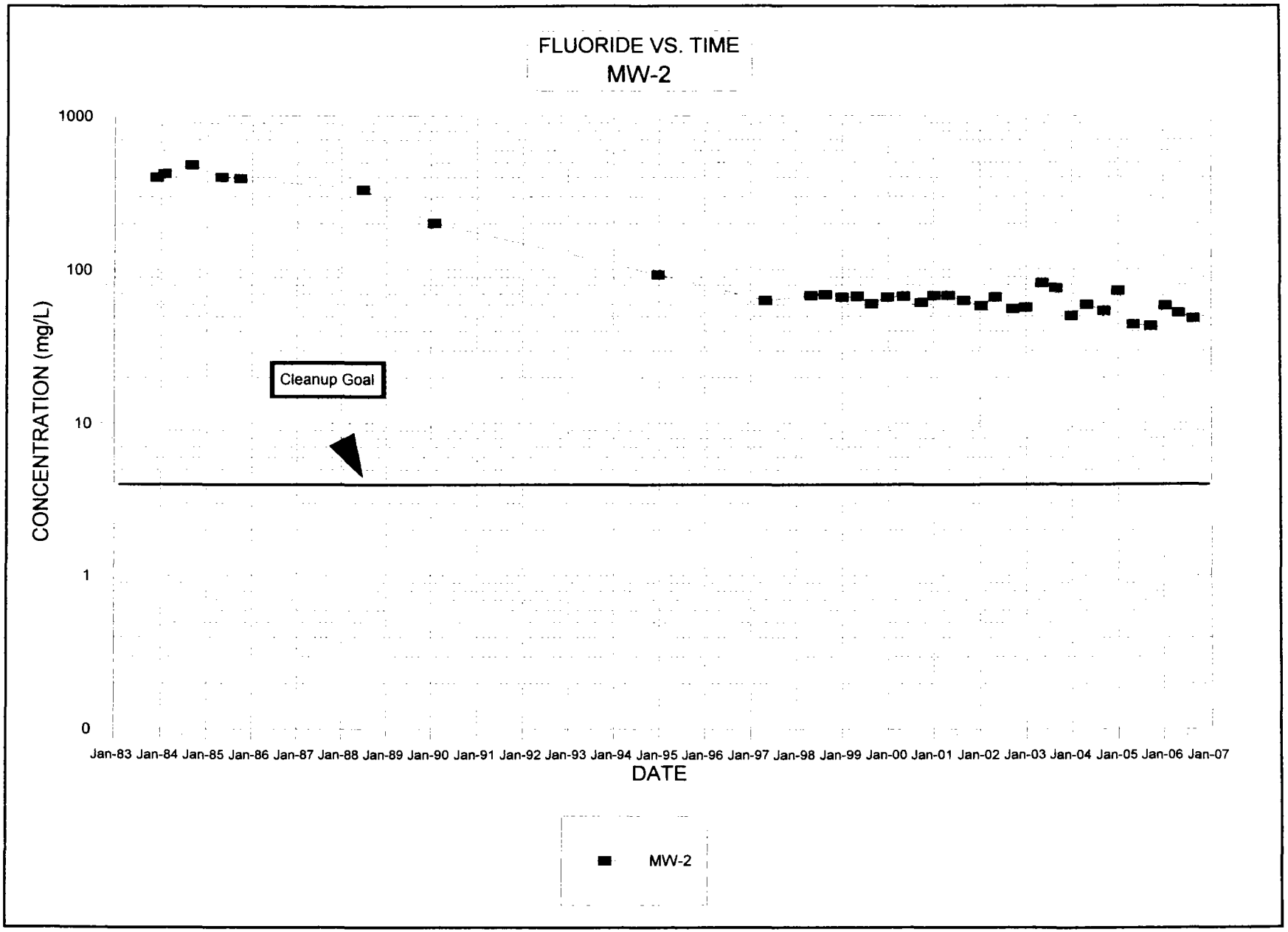

AMENABLE CYANIDE VS. TIME
MW-35
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35
* = Below detection. Value plotted is detection limit.

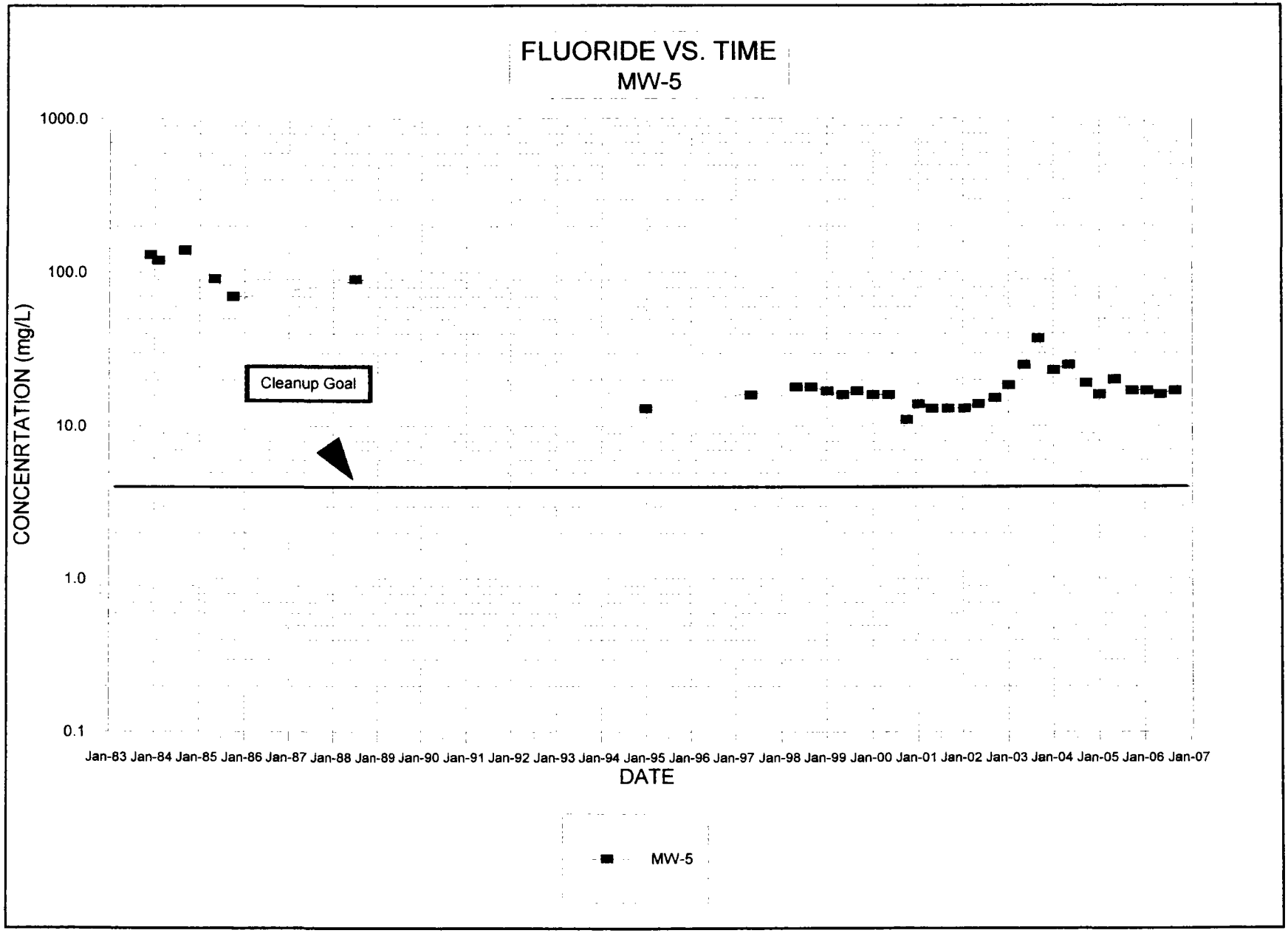

AMENABLE CYANIDE VS. TIME
MW-36
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36
* = Below detection. Value plotted is detection limit.

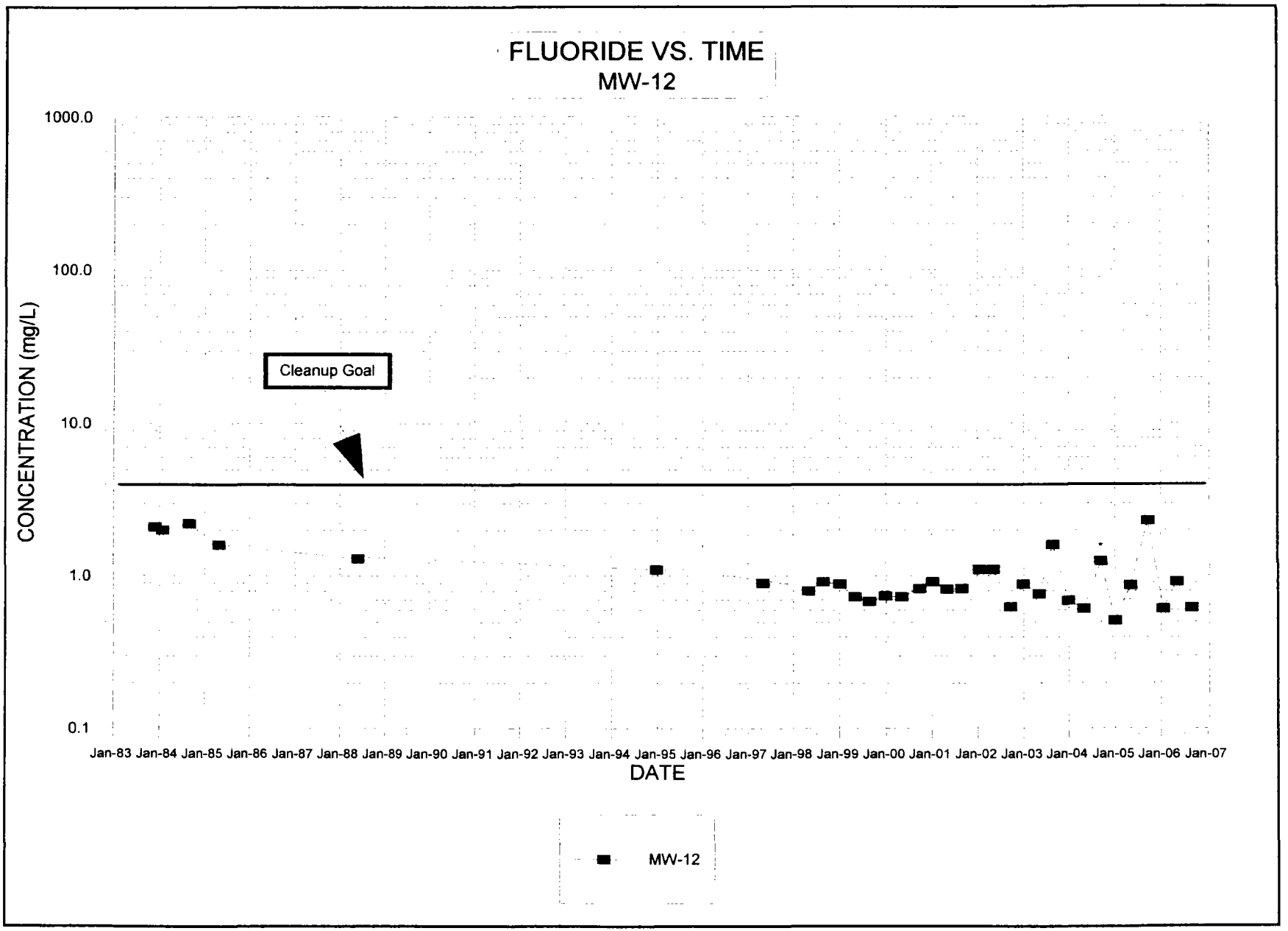

AMENABLE CYANIDE VS. TIME
MW-37
100.000
10.000
1.000
0.100
0.010
0.001
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37
* = Below detection. Value plotted is detection limit.

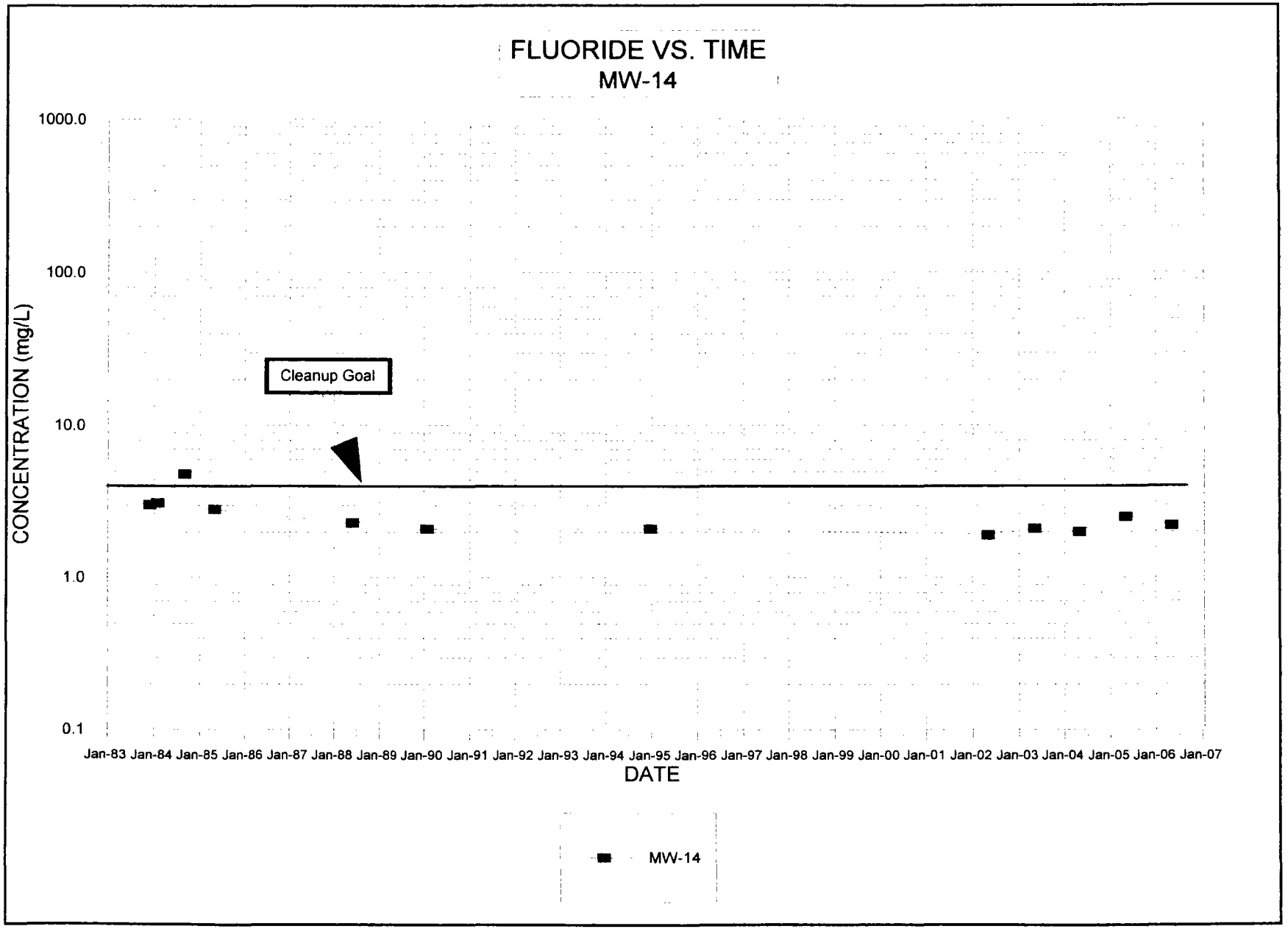
APPENDIX D-3

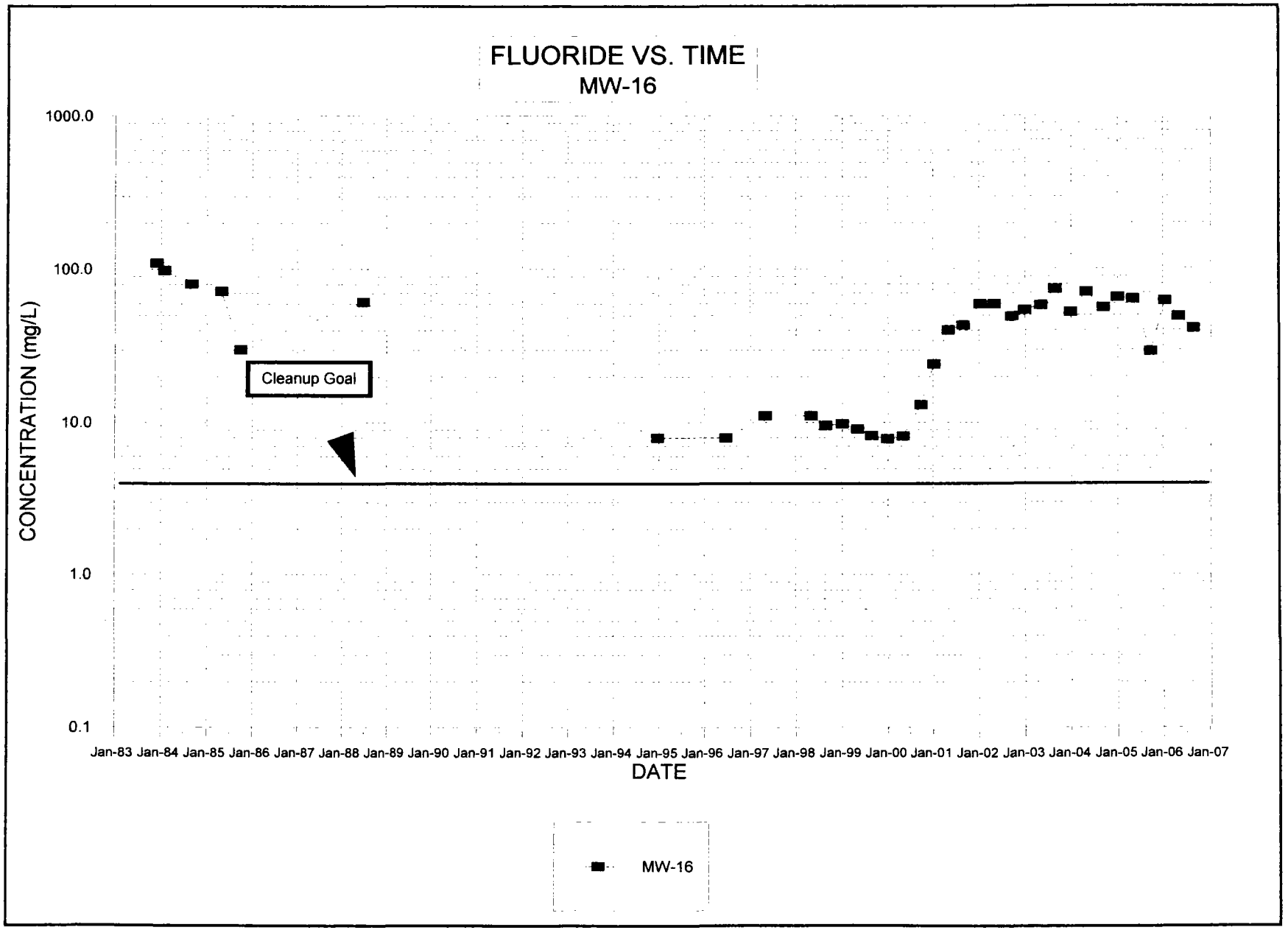
FLUORIDE

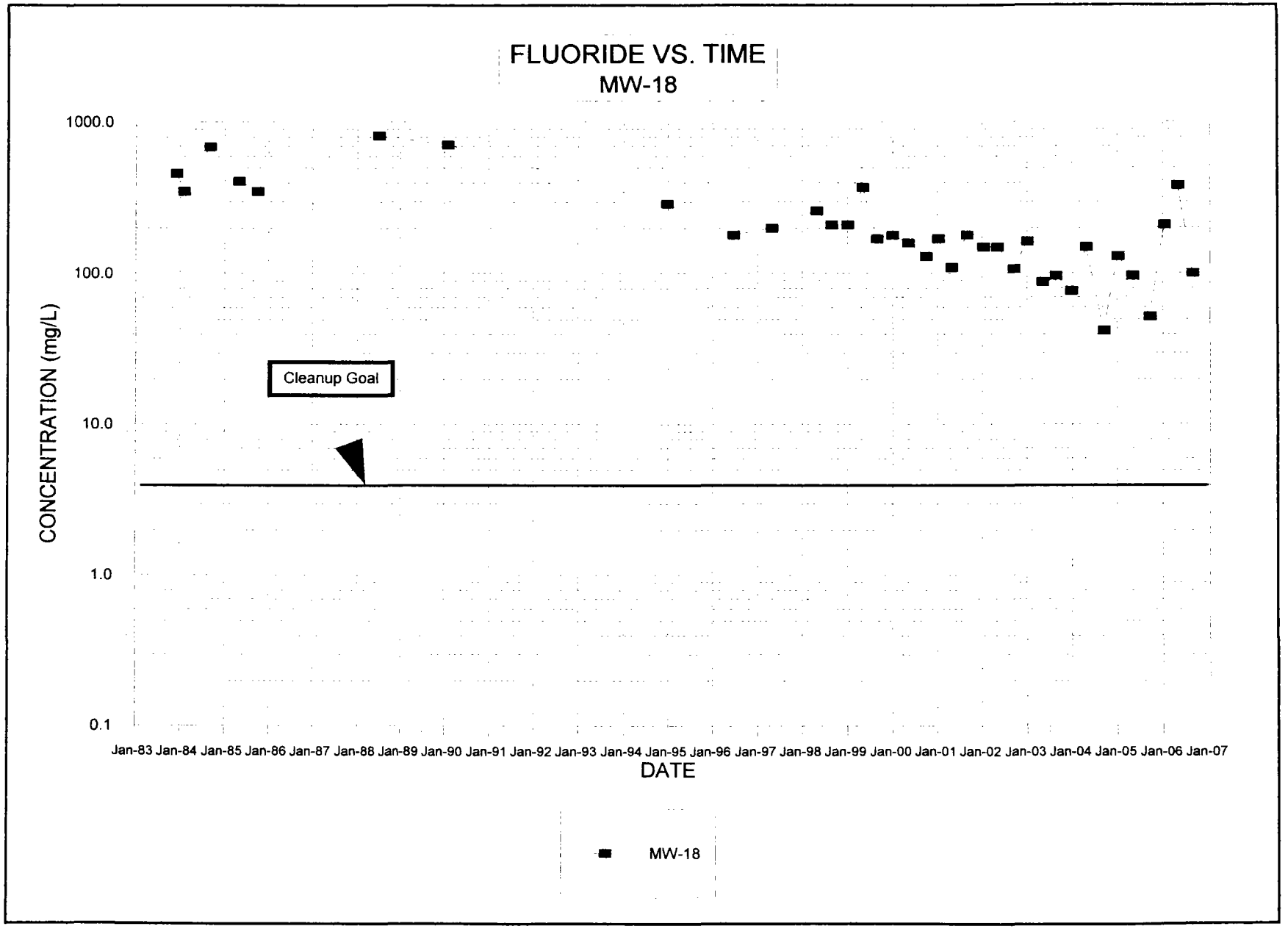

FLUORIDE VS. TIME
MW-2
1000
100
10
1
0
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

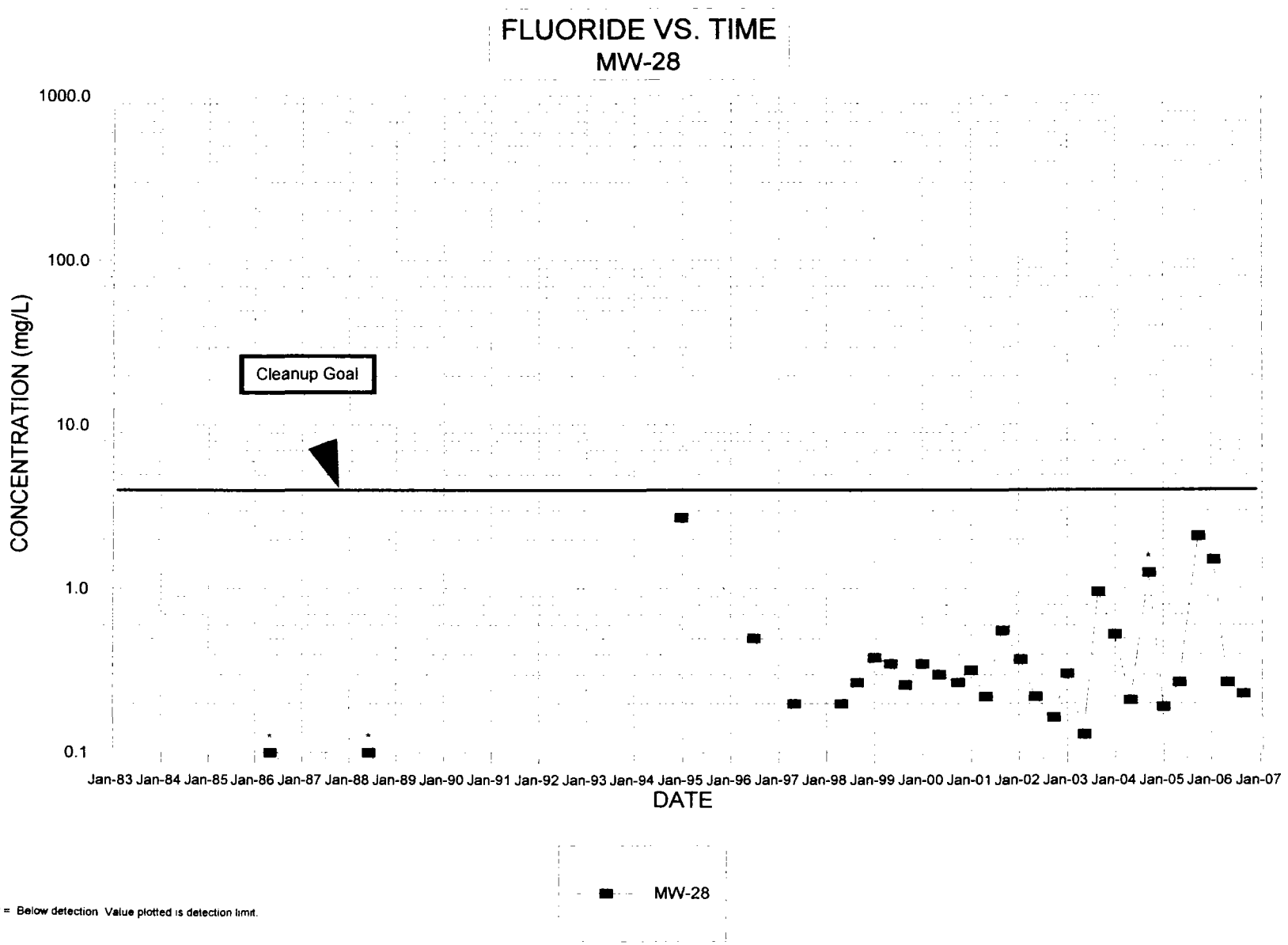

FLUORIDE VS. TIME
MW-5
1000.0
100.0
10.0
1.0
0.1
CONCENRTATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5

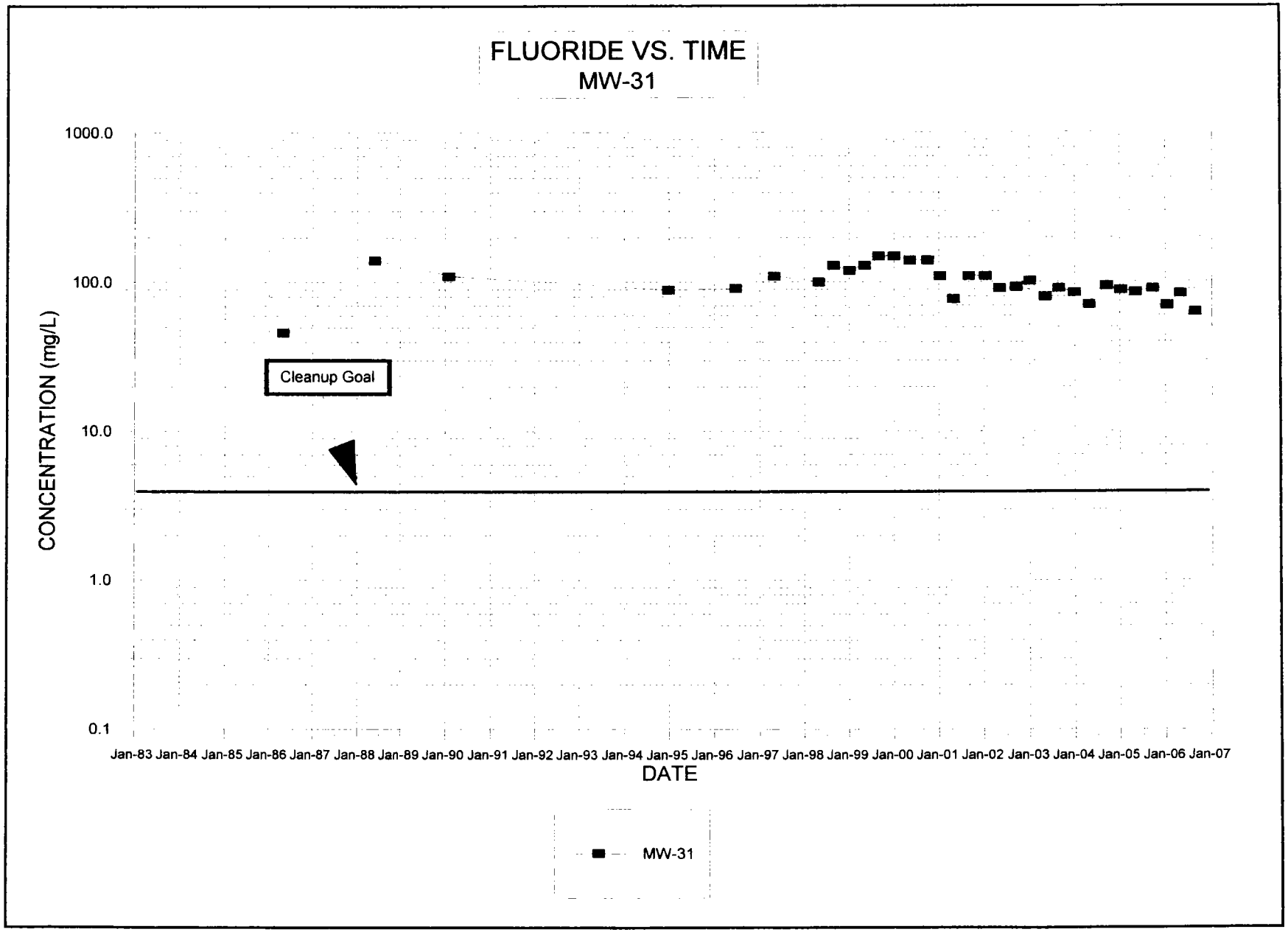

FLUORIDE VS. TIME
MW-12
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12

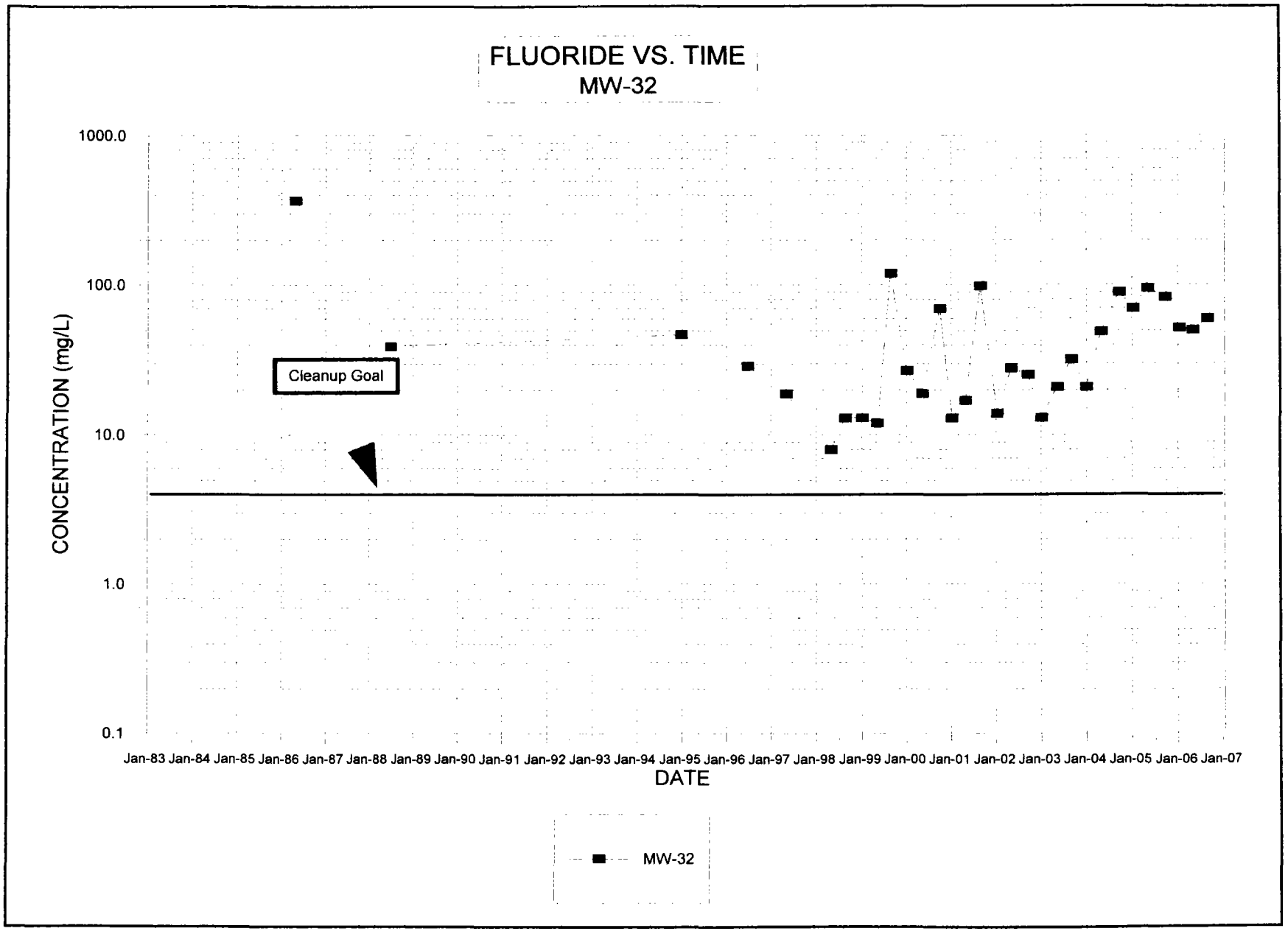

FLUORIDE VS. TIME
MW-14
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14

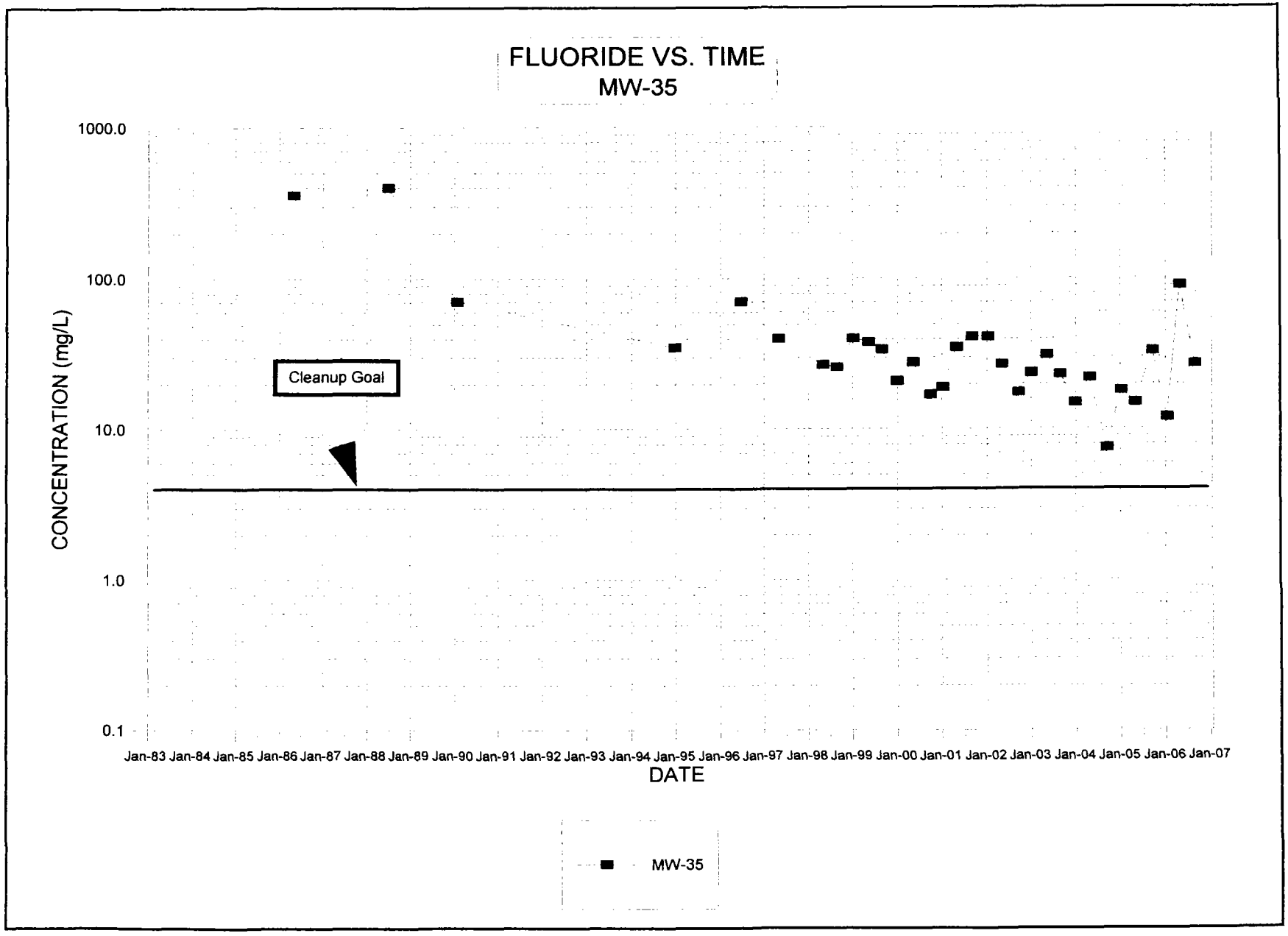

FLUORIDE VS. TIME
MW-16
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16

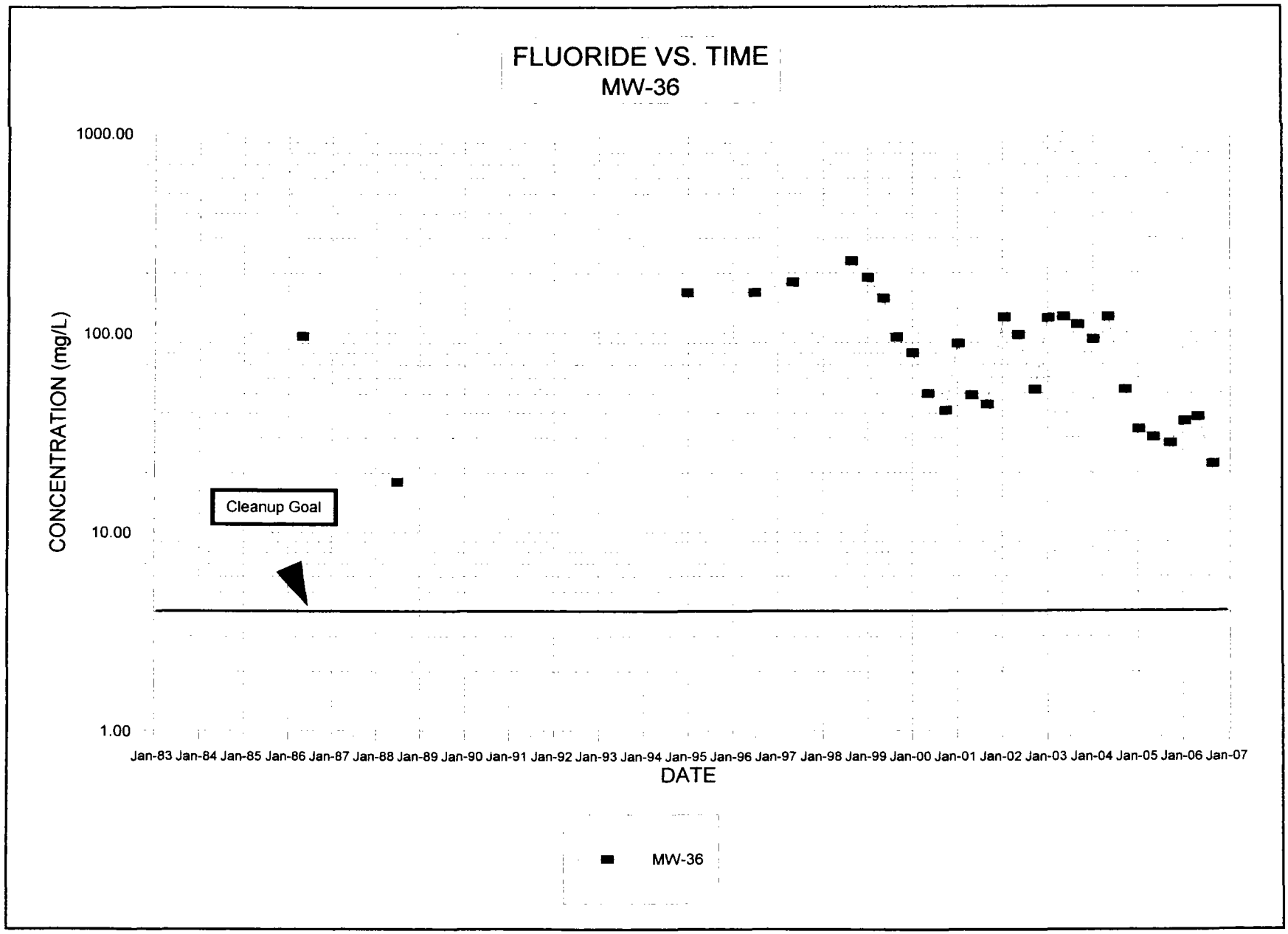

FLUORIDE VS. TIME
MW-18
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18

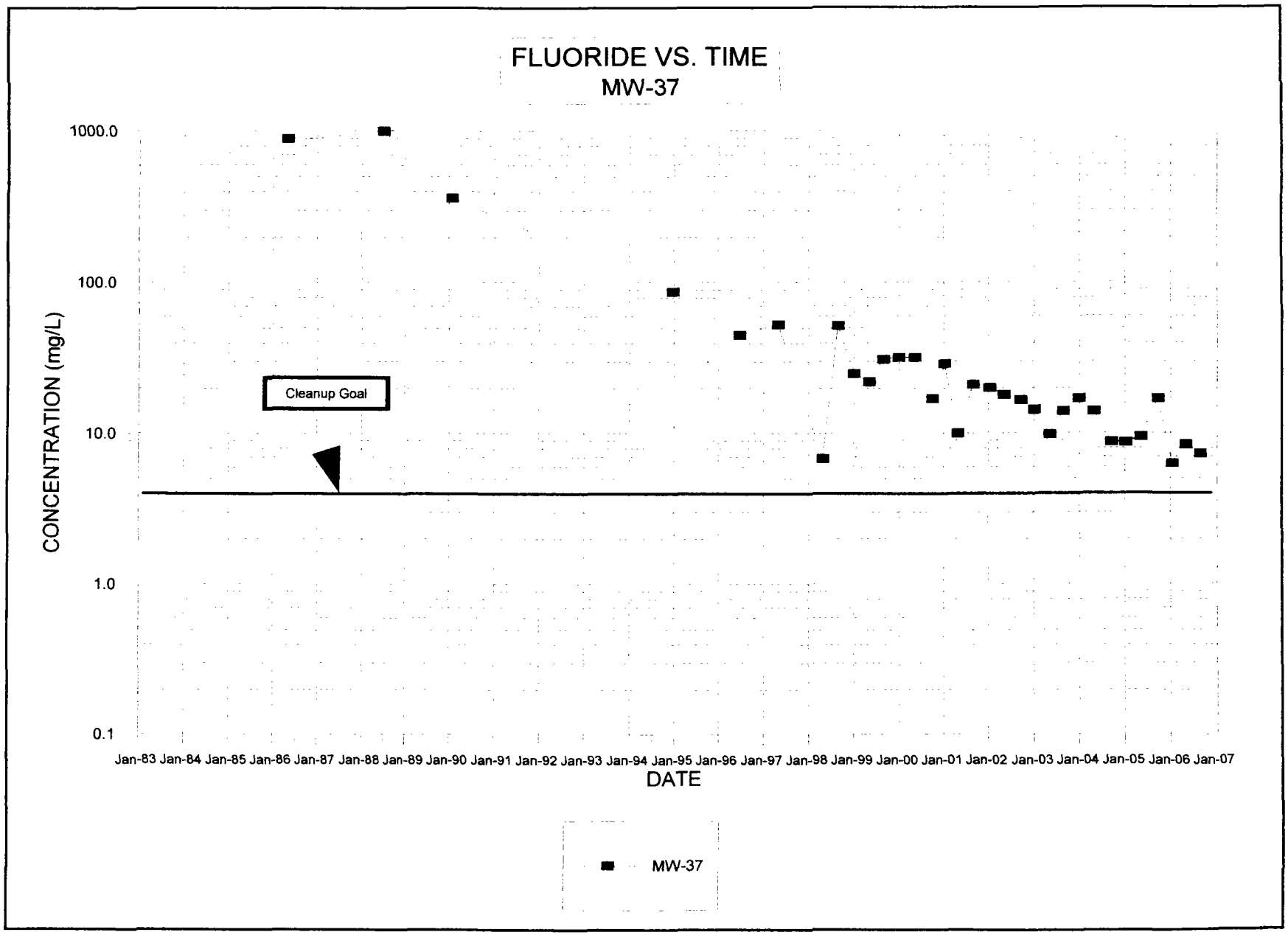

FLUORIDE VS. TIME
MW-28
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection Value plotted is detection limit.


FLUORIDE VS. TIME
MW-31
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31


FLUORIDE VS. TIME
MW-32
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32

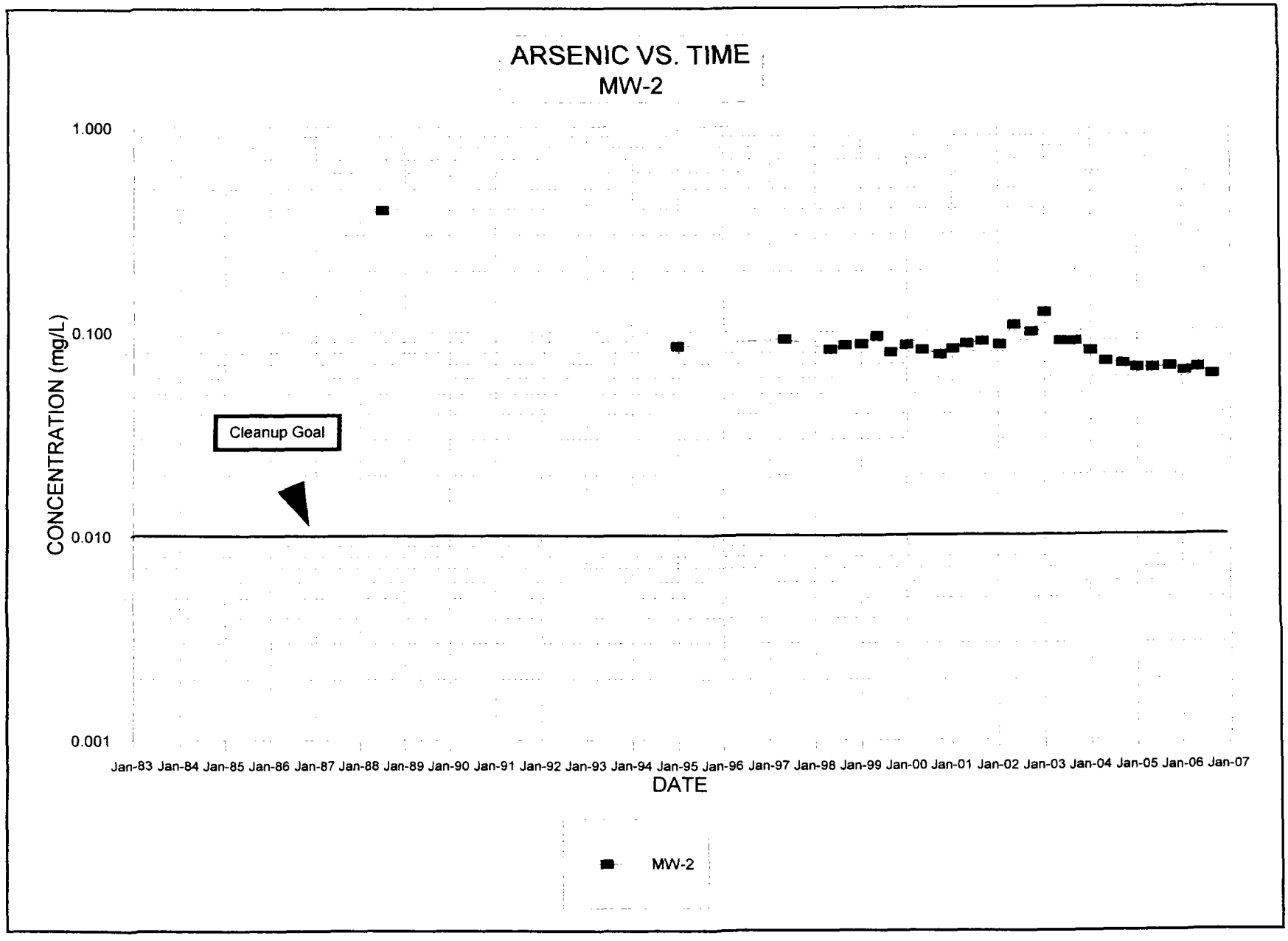

FLUORIDE VS. TIME
MW-35
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35

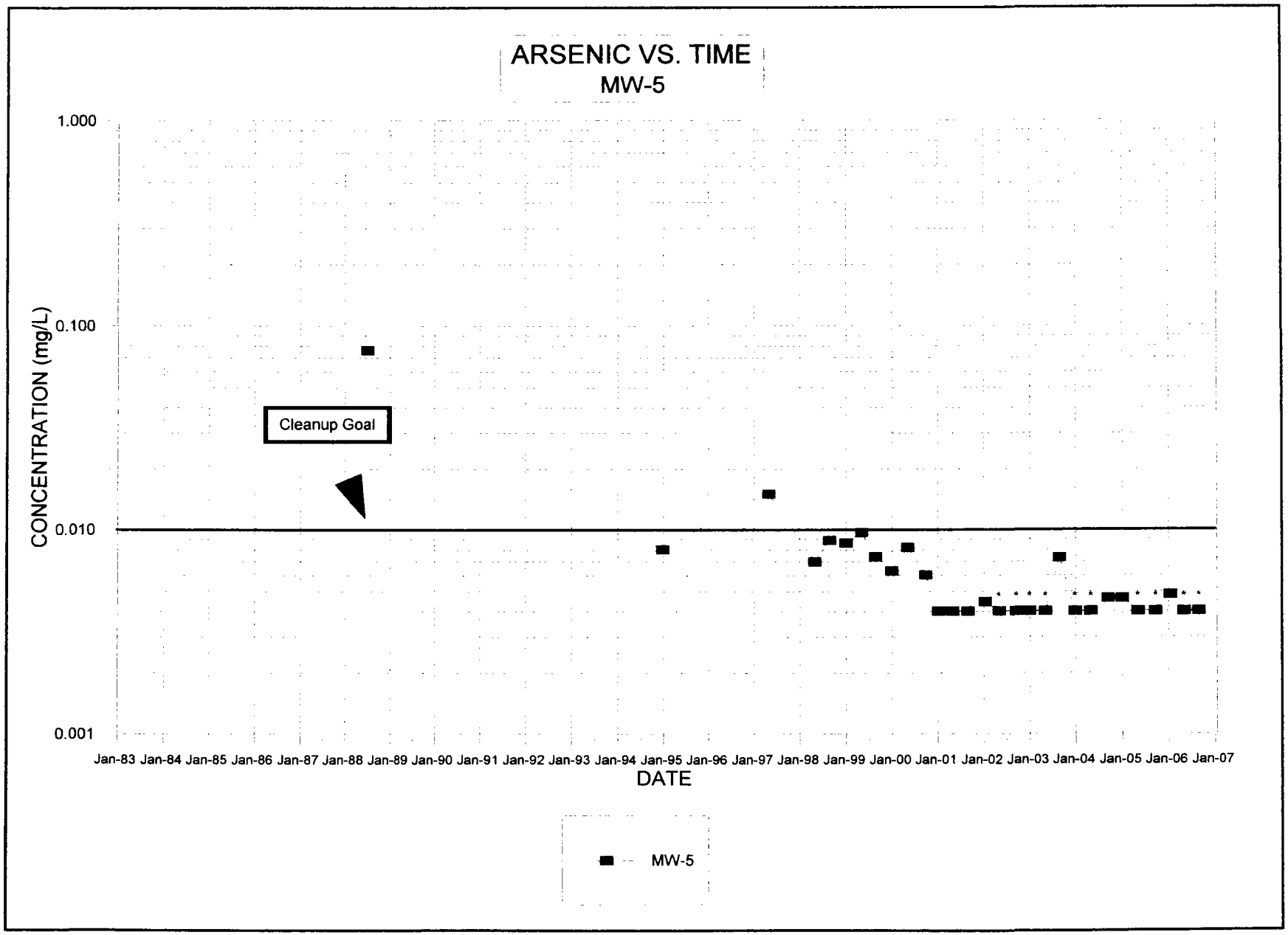

FLUORIDE VS. TIME
MW-36
1000.00
100.00
10.00
1.00
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36

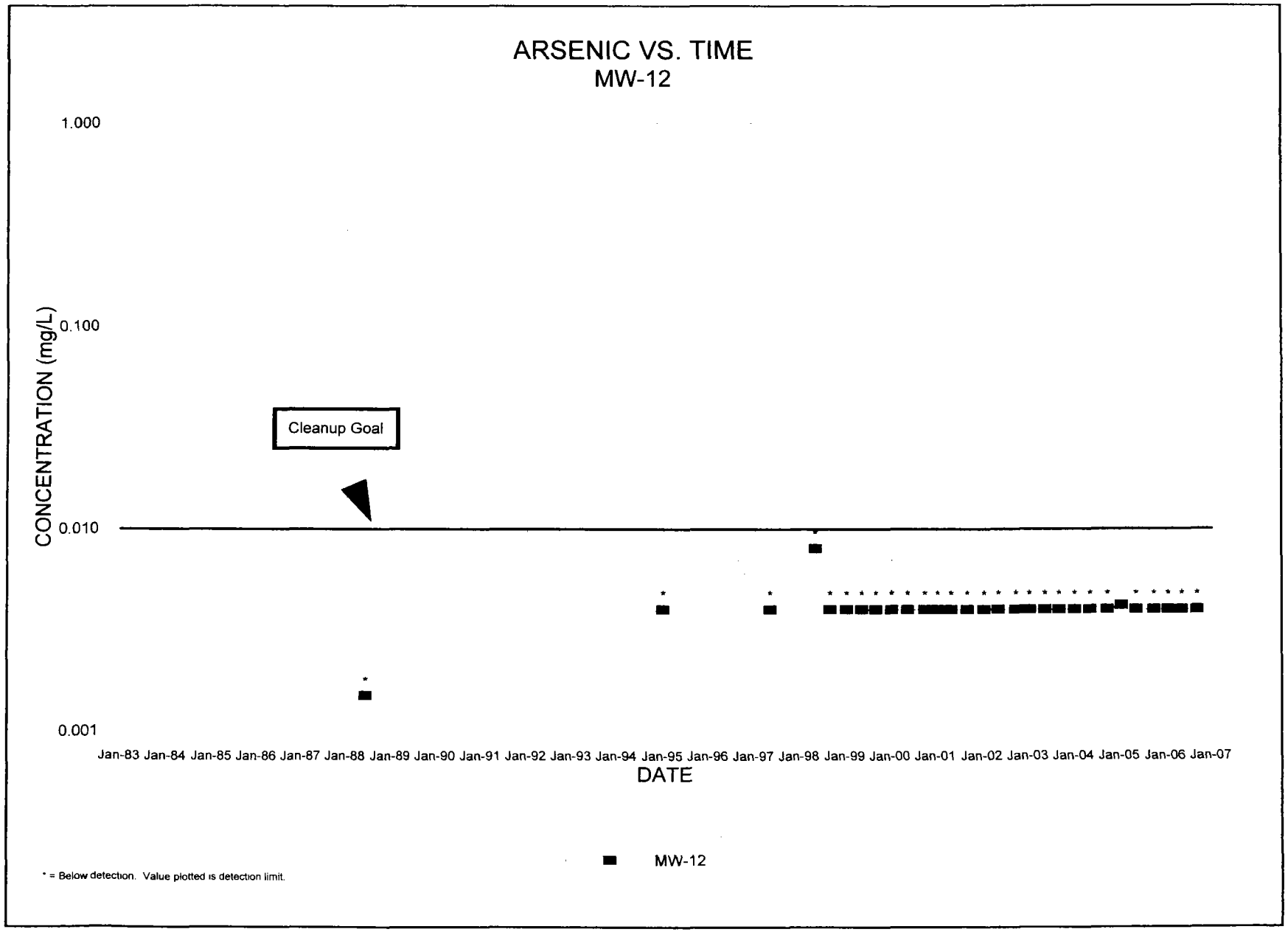

FLUORIDE VS. TIME
MW-37
1000.0
100.0
10.0
1.0
0.1
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37

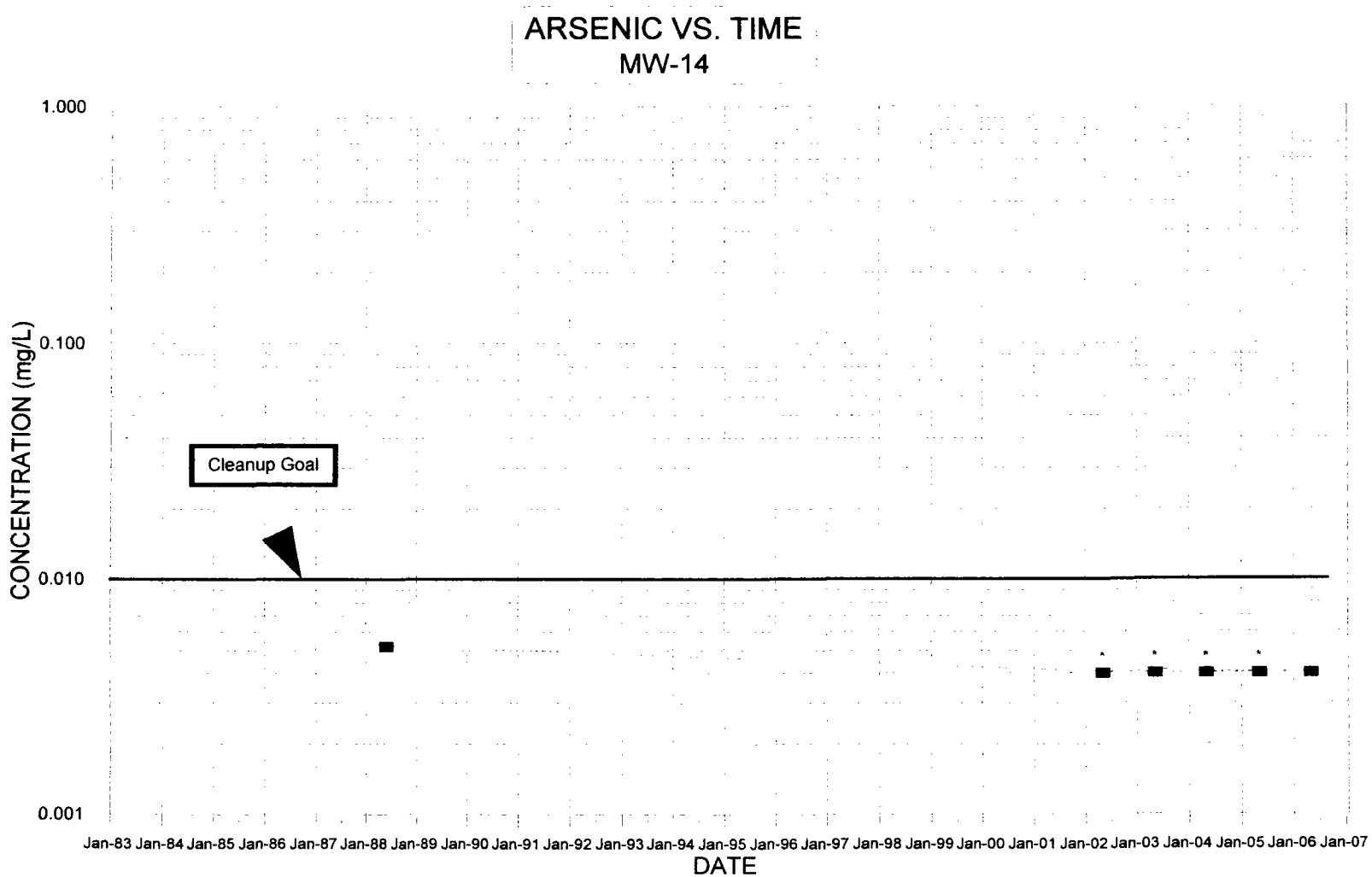
APPENDIX D-4

ARSENIC

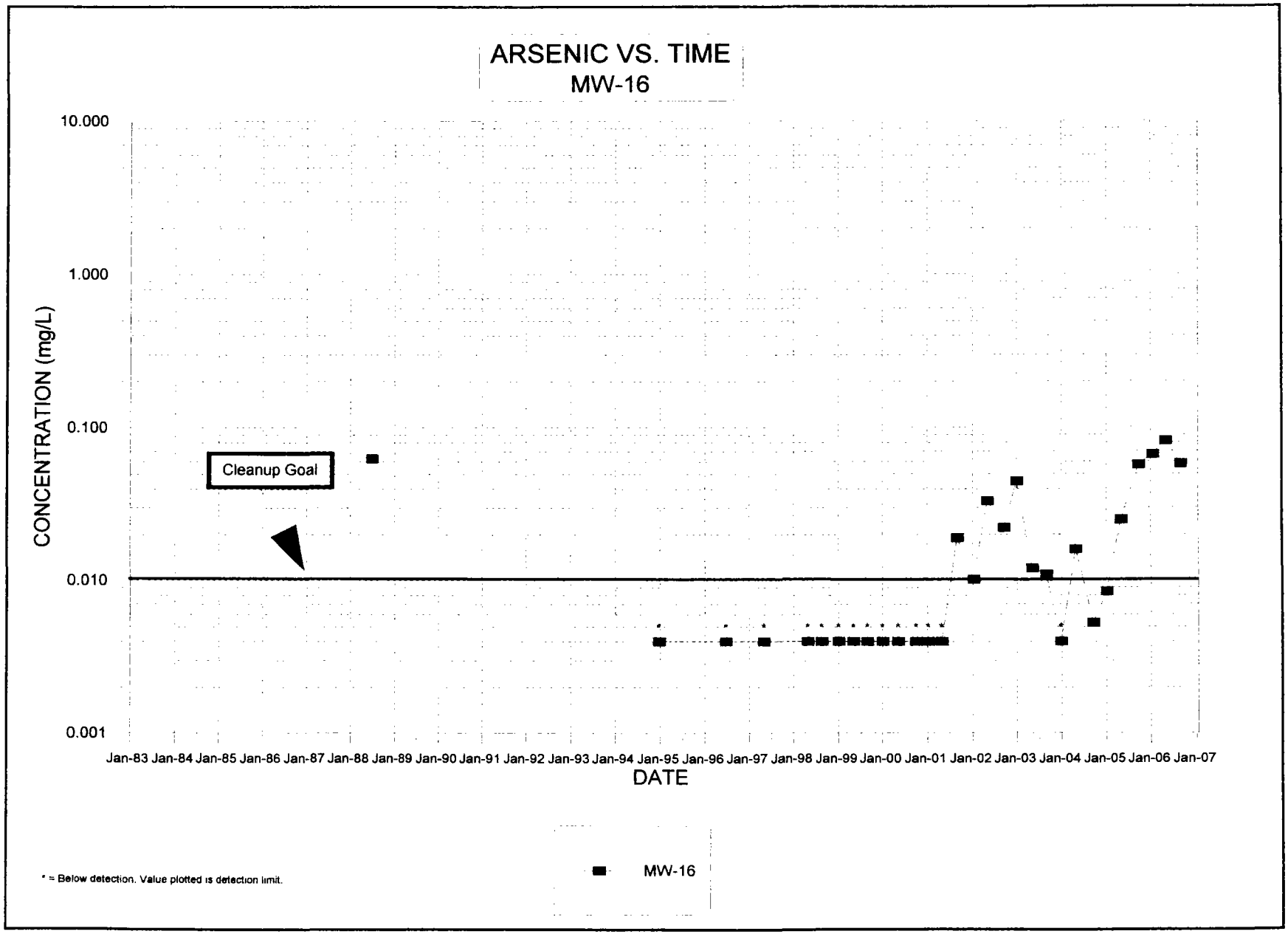

ARSENIC VS. TIME
MW-2
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

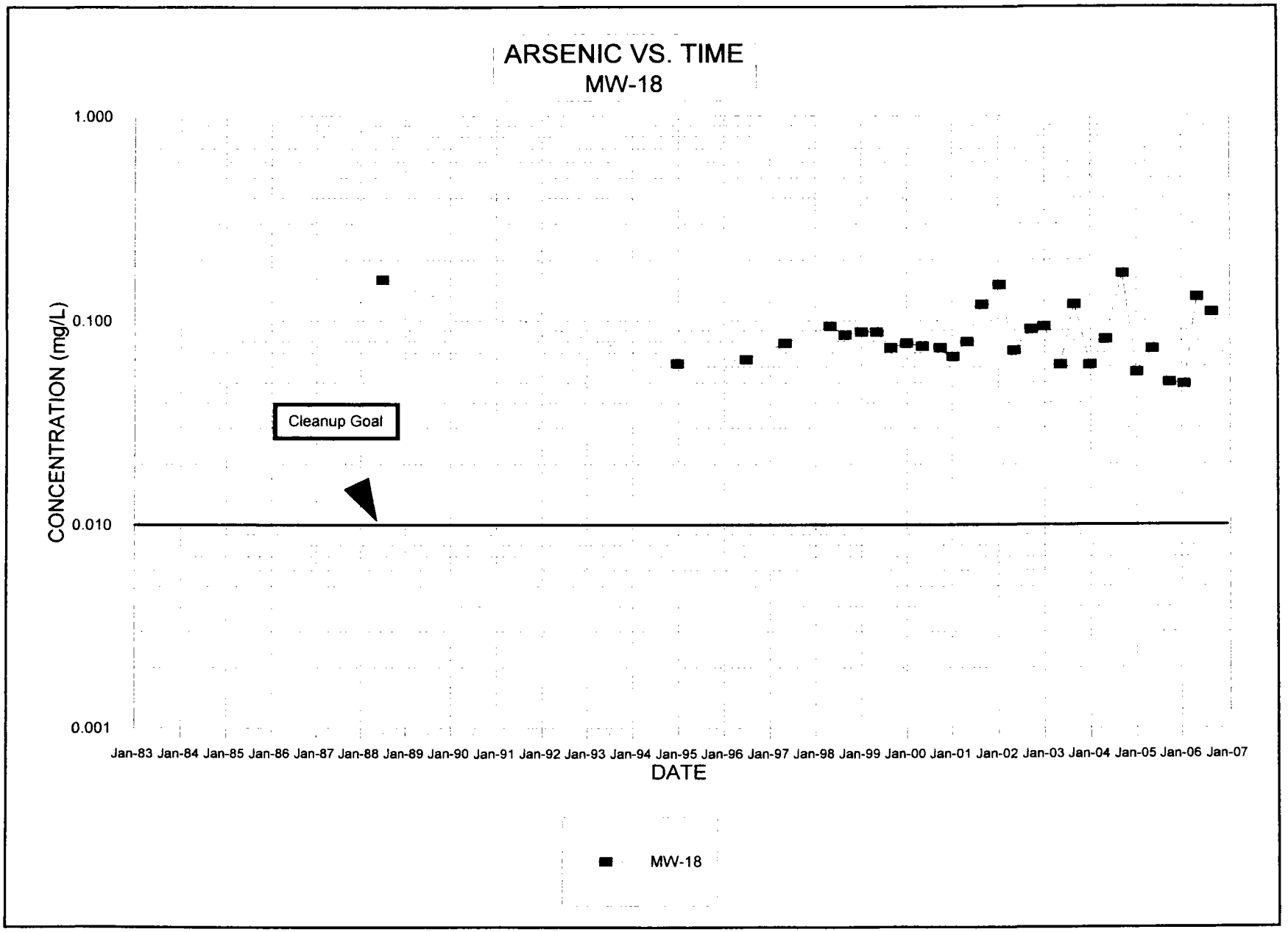

ARSENIC VS. TIME
MW-5
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5

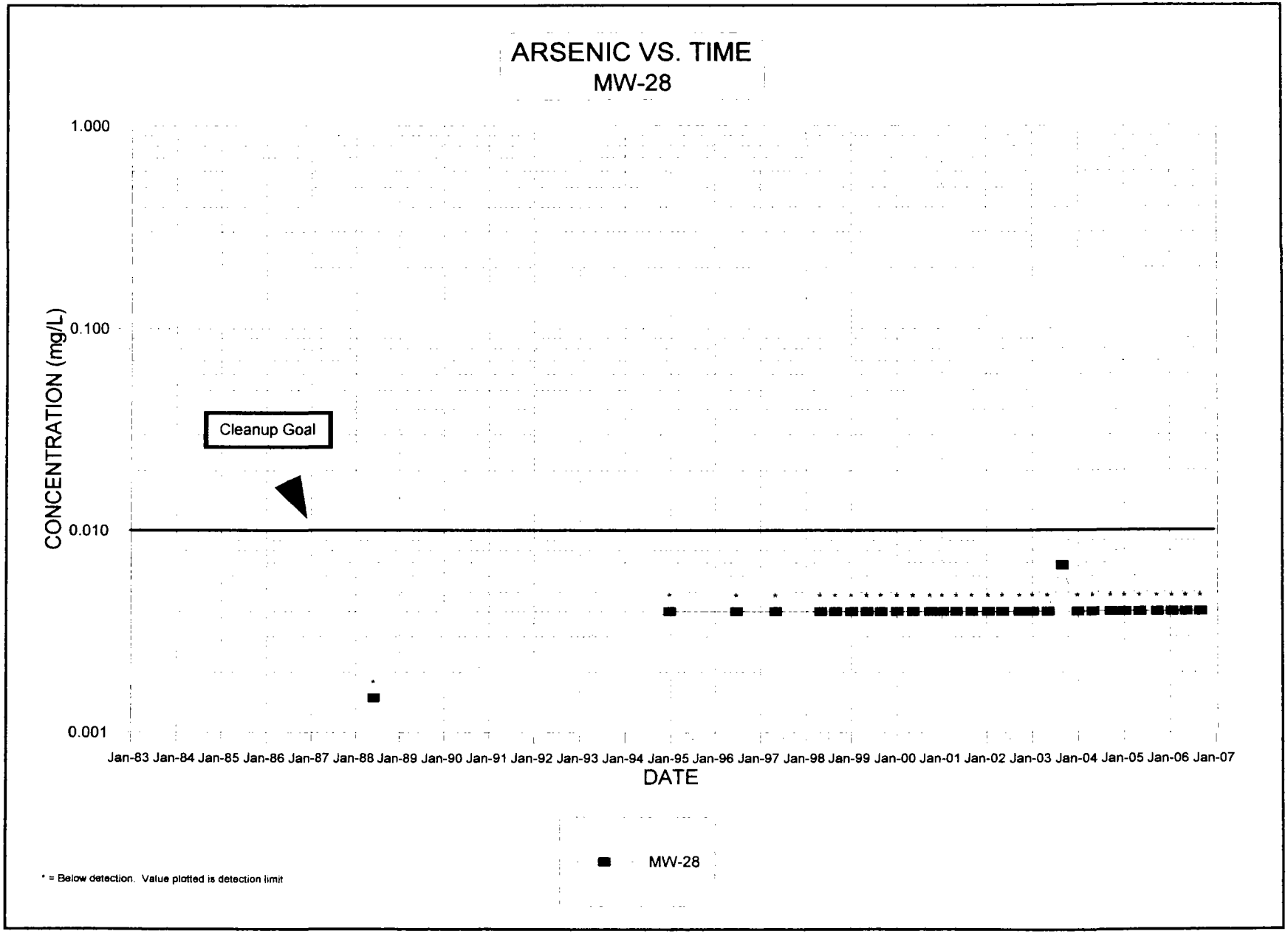

ARSENIC VS. TIME
MW-12
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12
* = Below detection. Value plotted is detection limit.

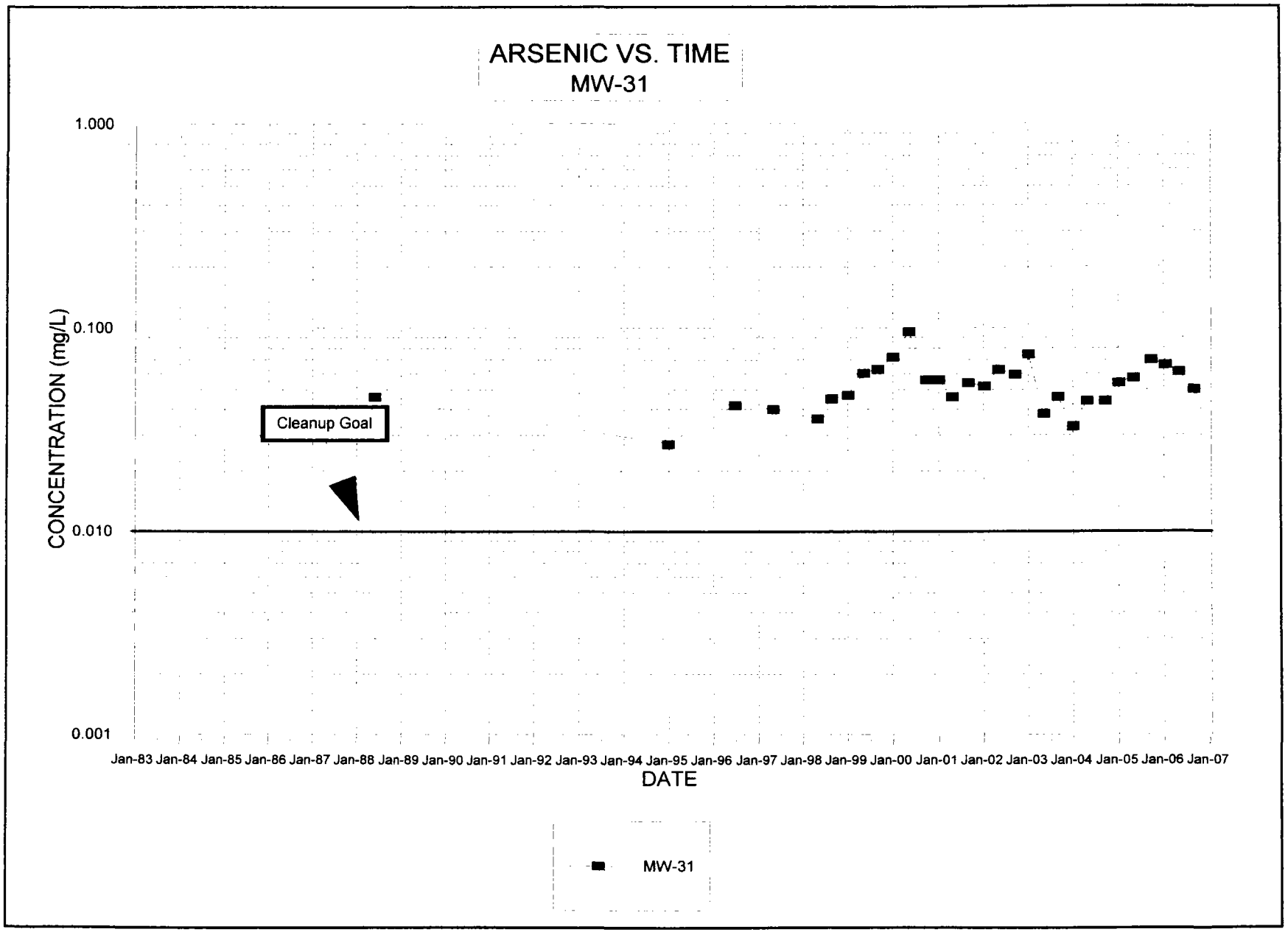


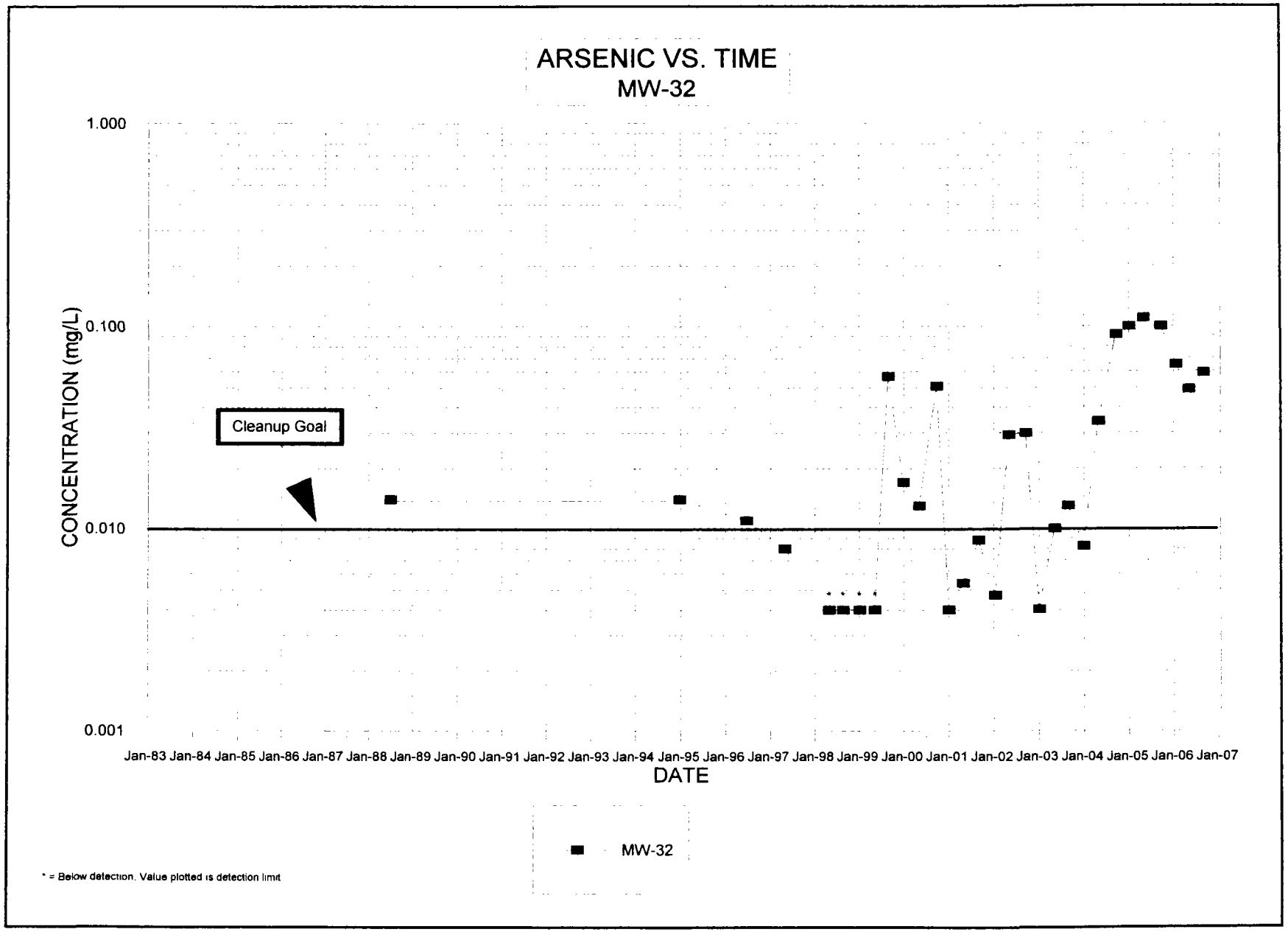
* = Below detection. Value plotted is detection limit.

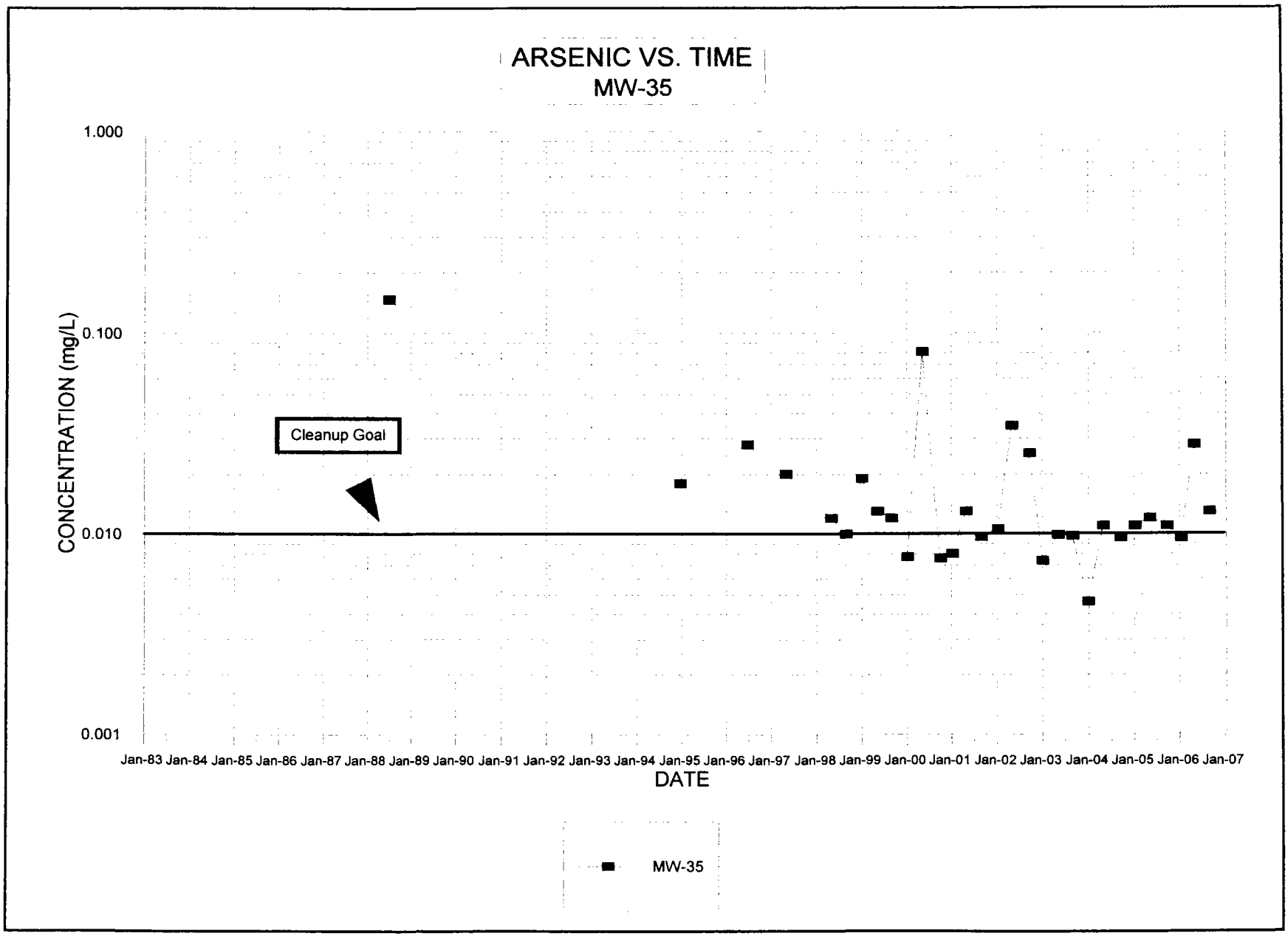

ARSENIC VS. TIME
MW-16
10.000
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16
* = Below detection. Value plotted is detection limit.

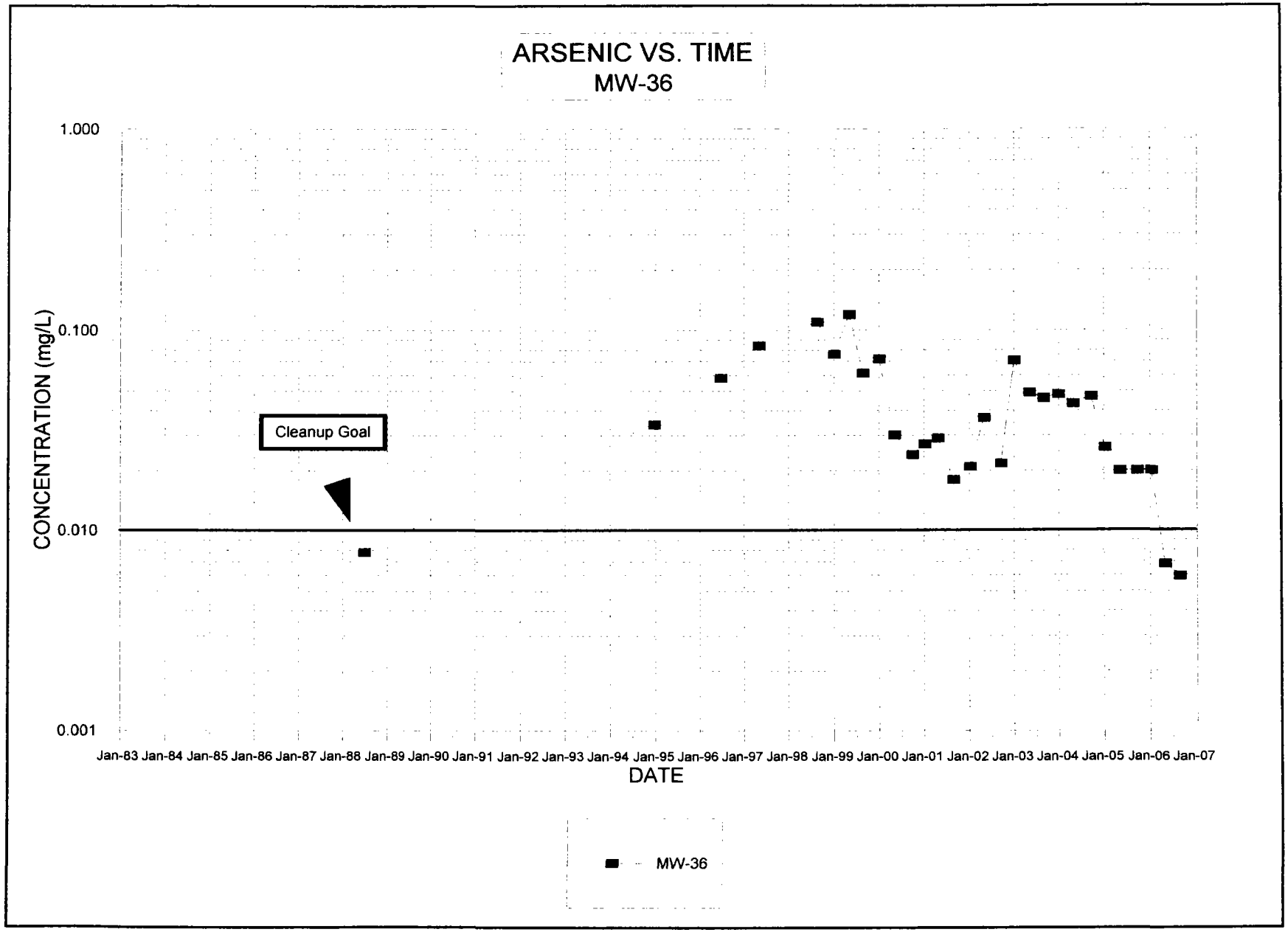

ARSENIC VS. TIME
MW-18
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18

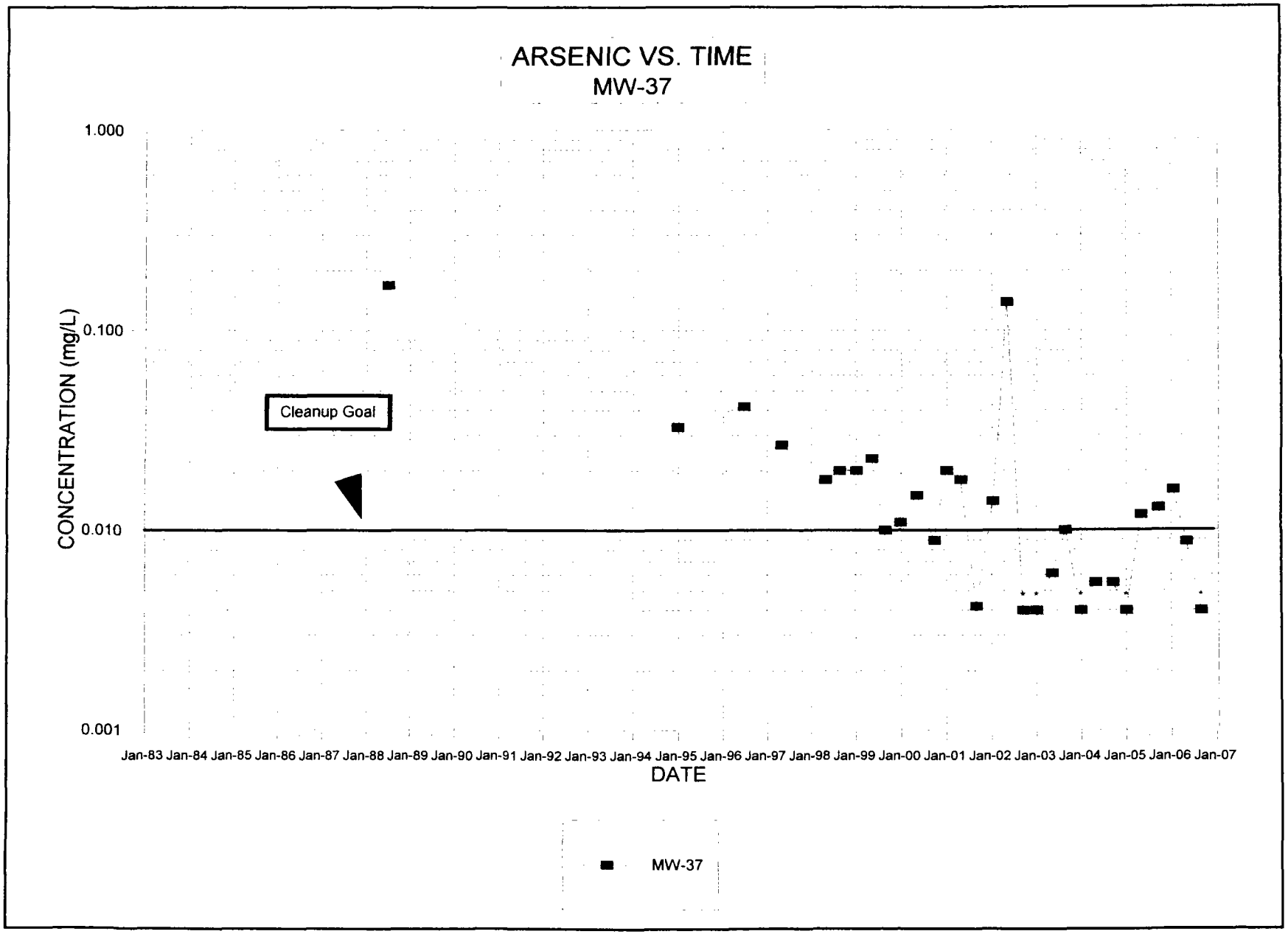

ARSENIC VS. TIME
MW-28
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection. Value plotted is detection limit


ARSENIC VS. TIME
MW-31
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31


ARSENIC VS. TIME
MW-32
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32
* = Below detection. Value plotted is detection limit

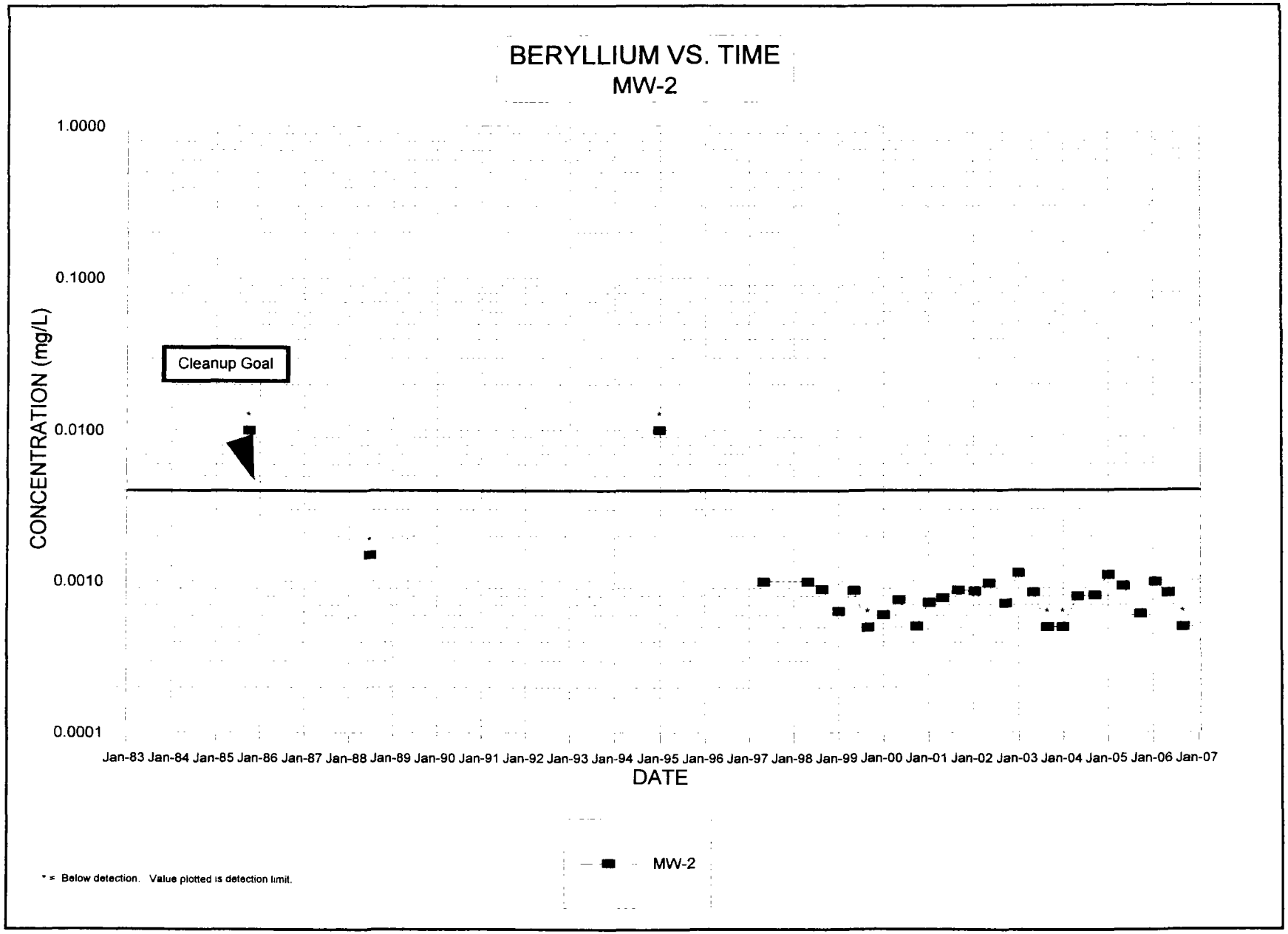

ARSENIC VS. TIME
MW-35
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35

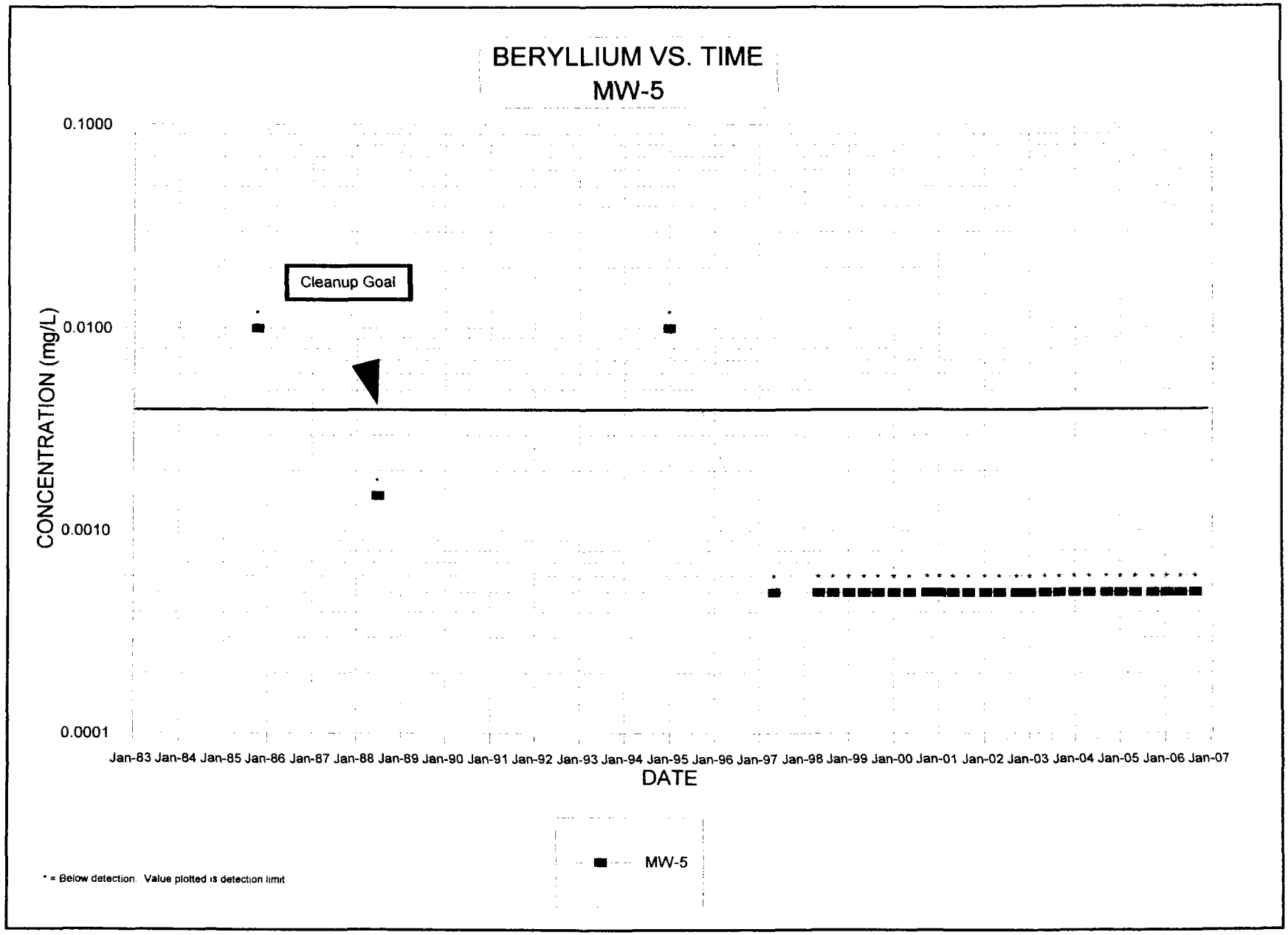

ARSENIC VS. TIME
MW-36
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36

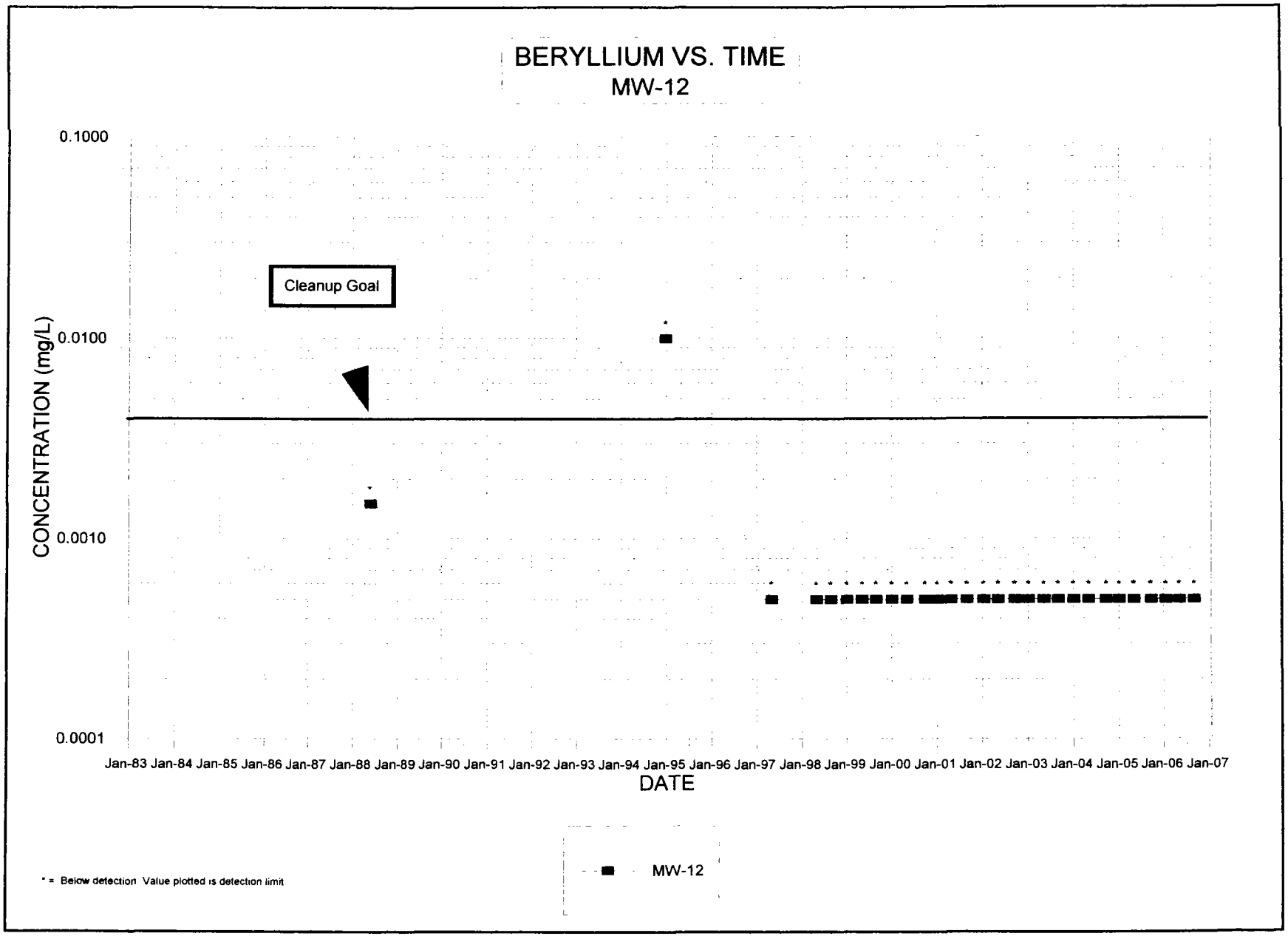

ARSENIC VS. TIME
MW-37
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37

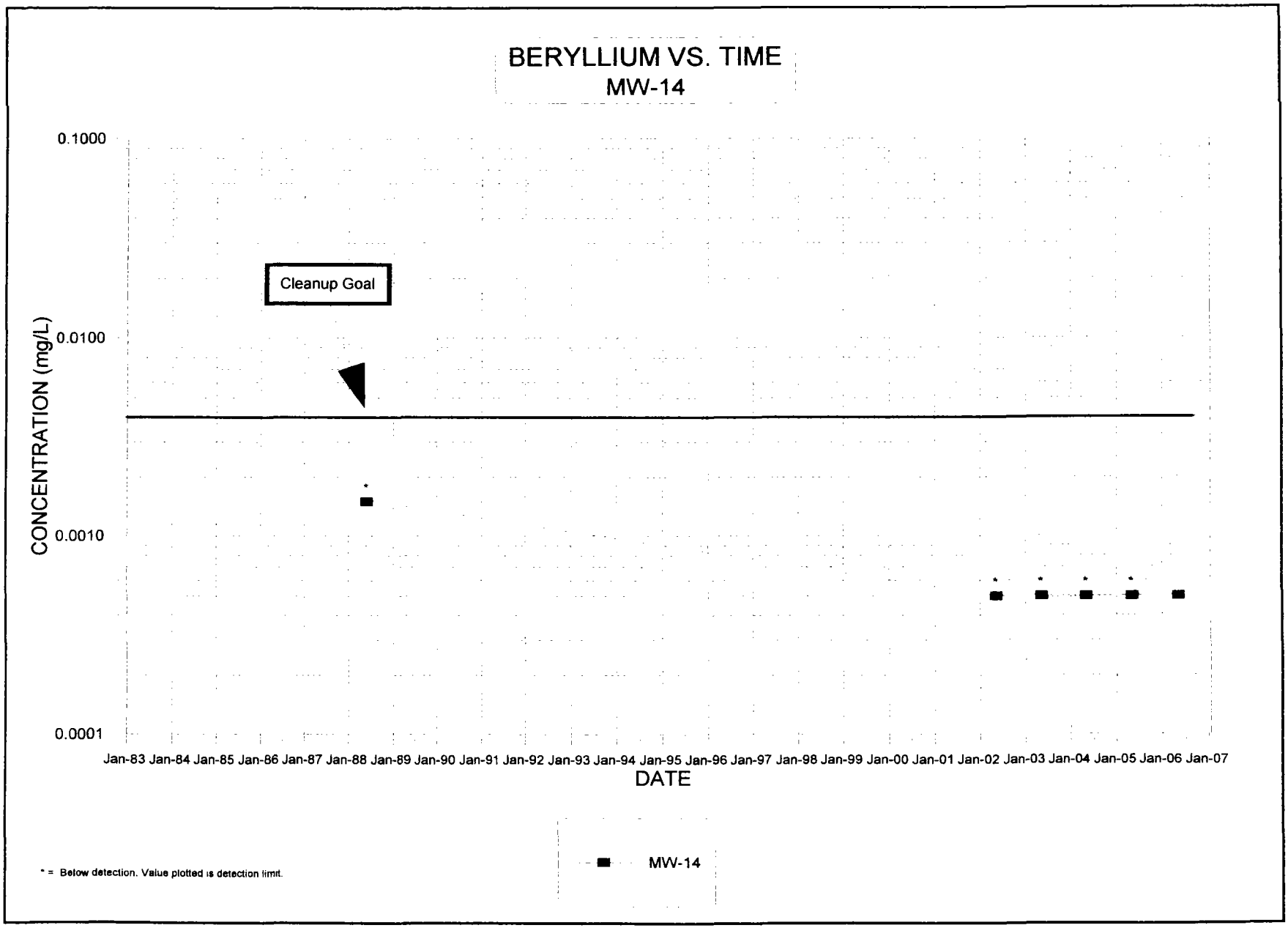
APPENDIX D-5

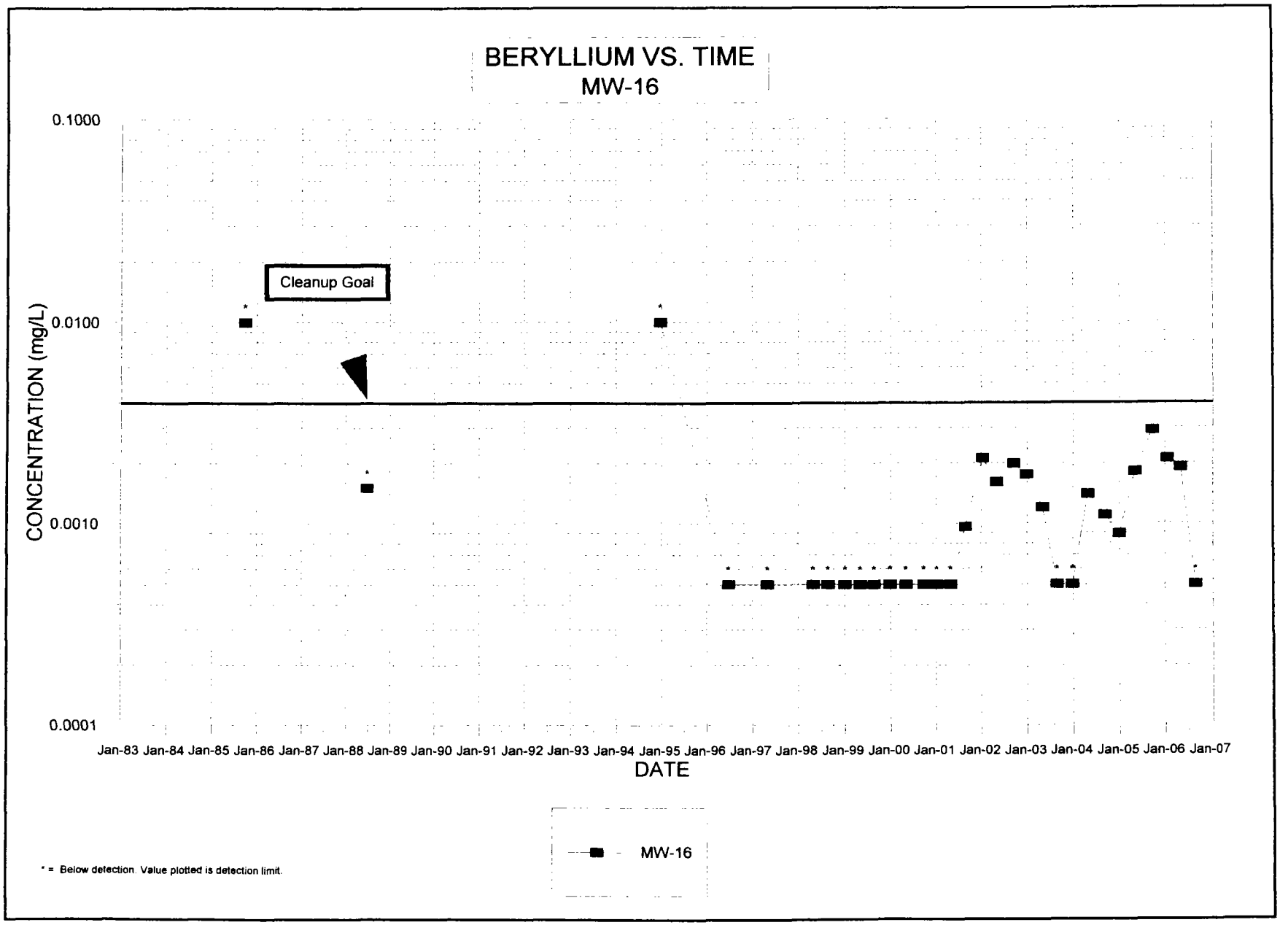
BERYLLIUM

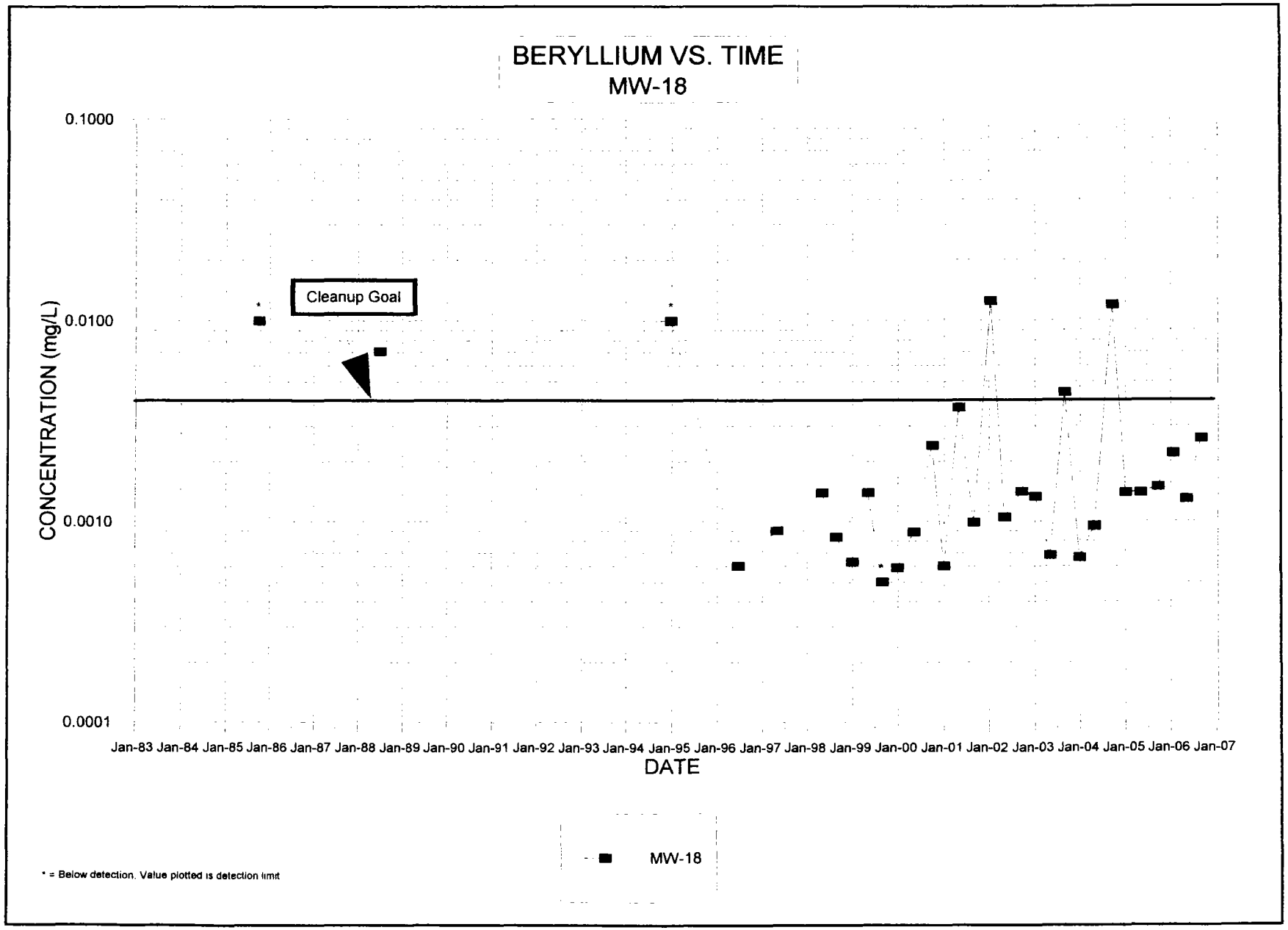

BERYLLIUM VS. TIME
MW-2
1.0000
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2
* = Below detection. Value plotted is detection limit.

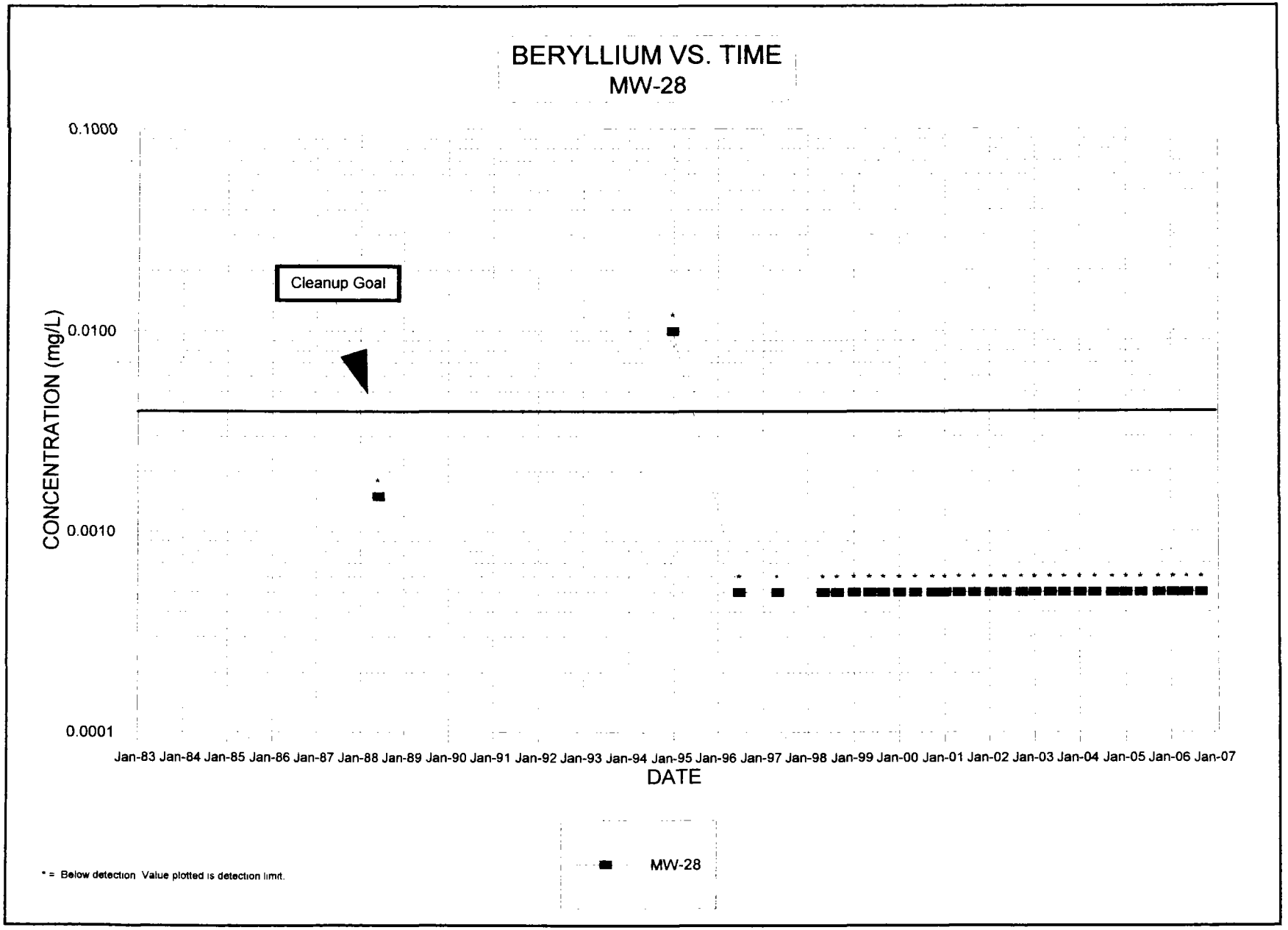

BERYLLIUM VS. TIME
MW-5
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5
* = Below detection. Value plotted is detection limit

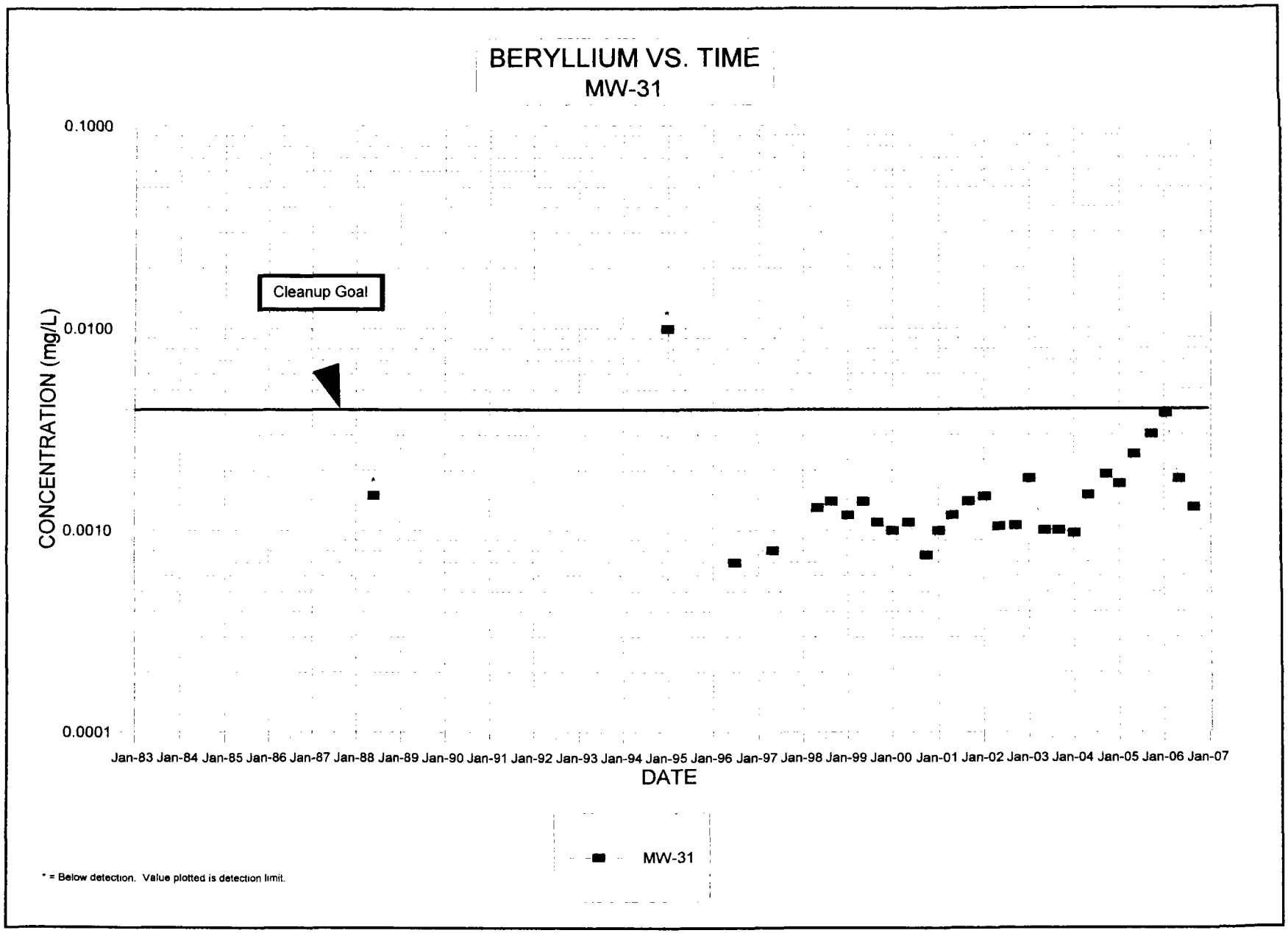

BERYLLIUM VS. TIME
MW-12
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12
* = Below detection Value plotted is detection limit

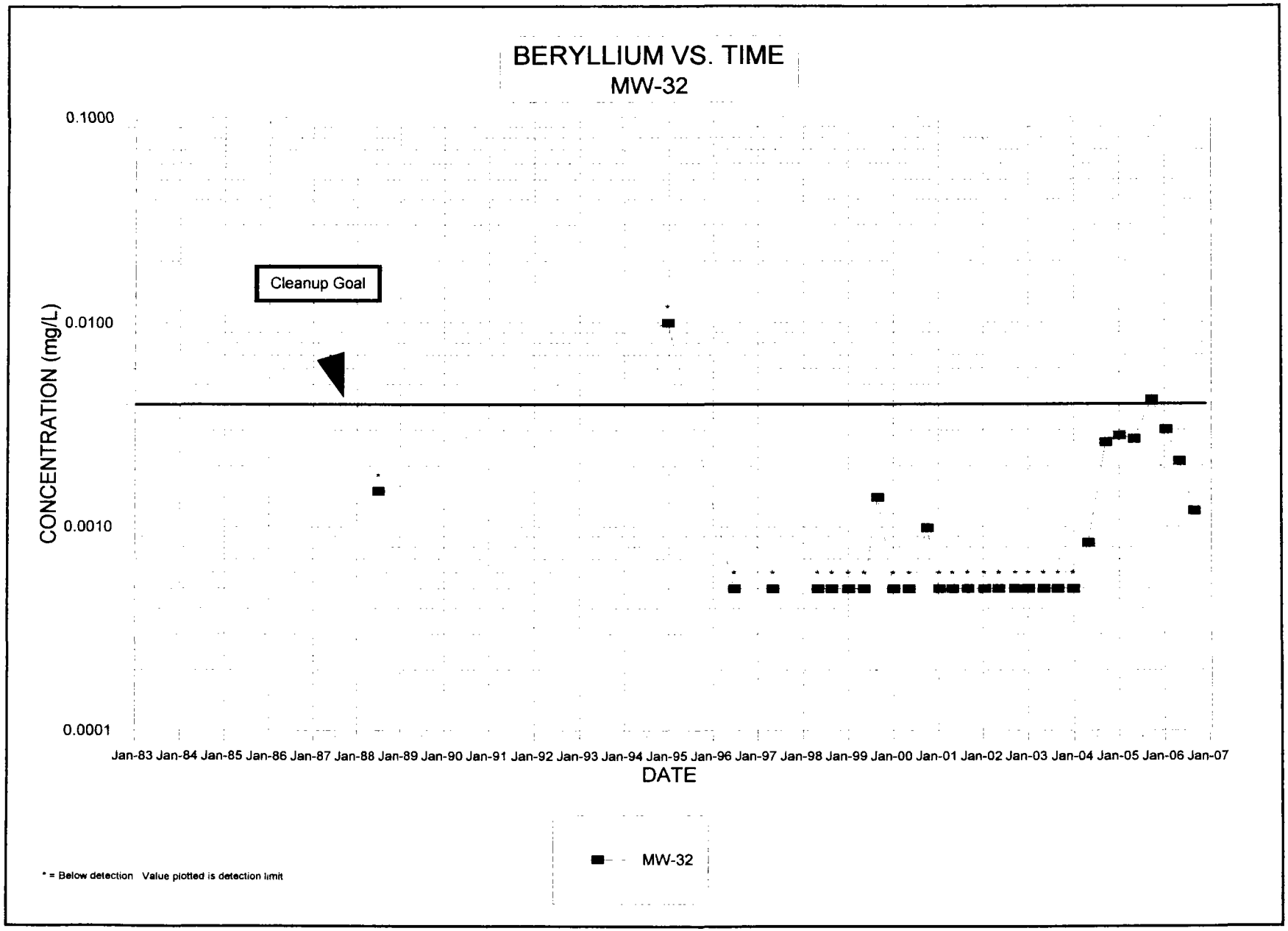

BERYLLIUM VS. TIME
MW-14
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14
* = Below detection. Value plotted is detection limit.

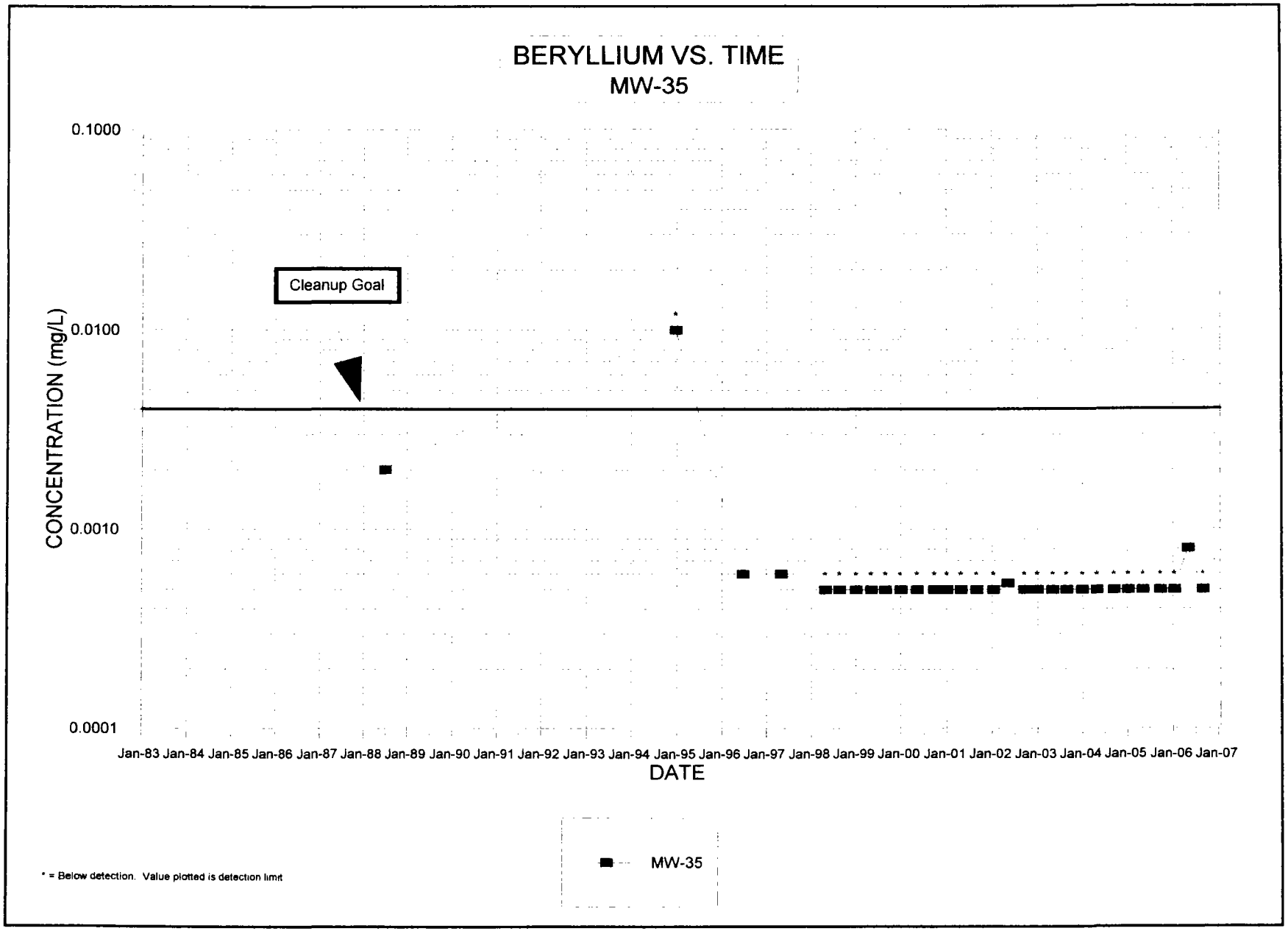

BERYLLIUM VS. TIME
MW-16
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16
* = Below detection. Value plotted is detection limit.

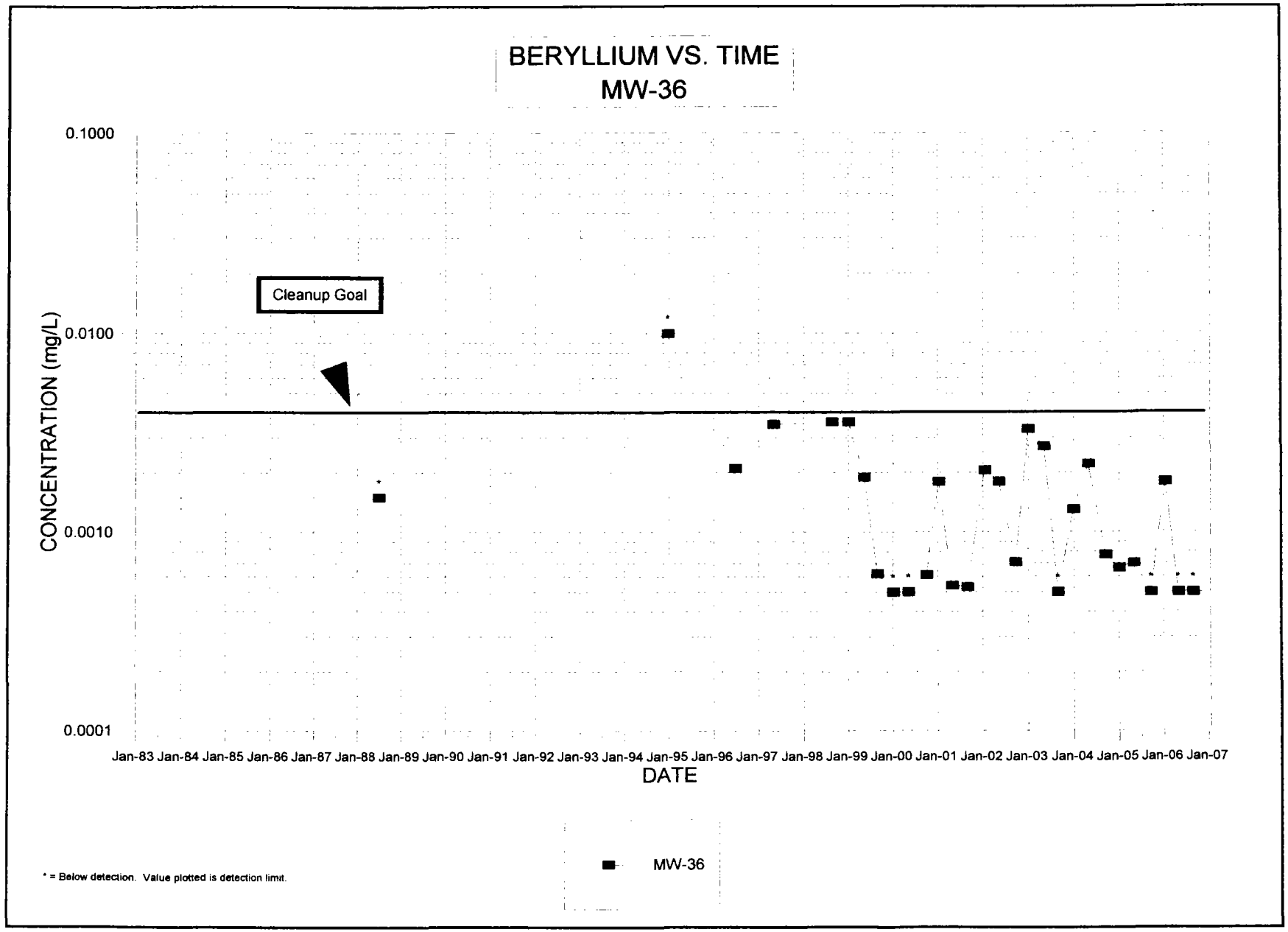

BERYLLIUM VS. TIME
MW-18
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18
* = Below detection. Value plotted is detection limit

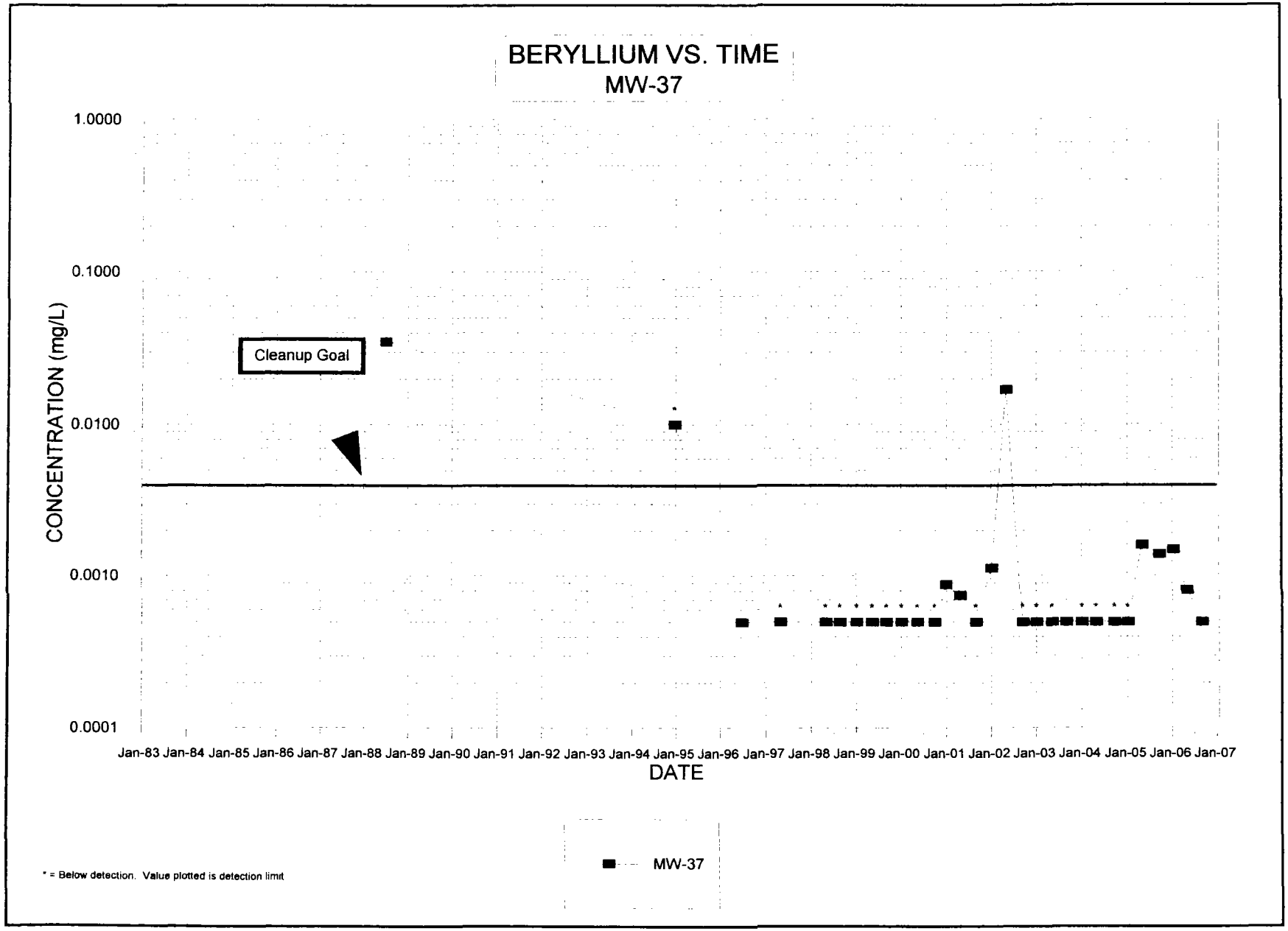

BERYLLIUM VS. TIME
MW-28
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection Value plotted is detection limit.


BERYLLIUM VS. TIME
MW-31
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31
* = Below detection. Value plotted is detection limit.


BERYLLIUM VS. TIME
MW-32
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32
* = Below detection Value plotted is detection limit

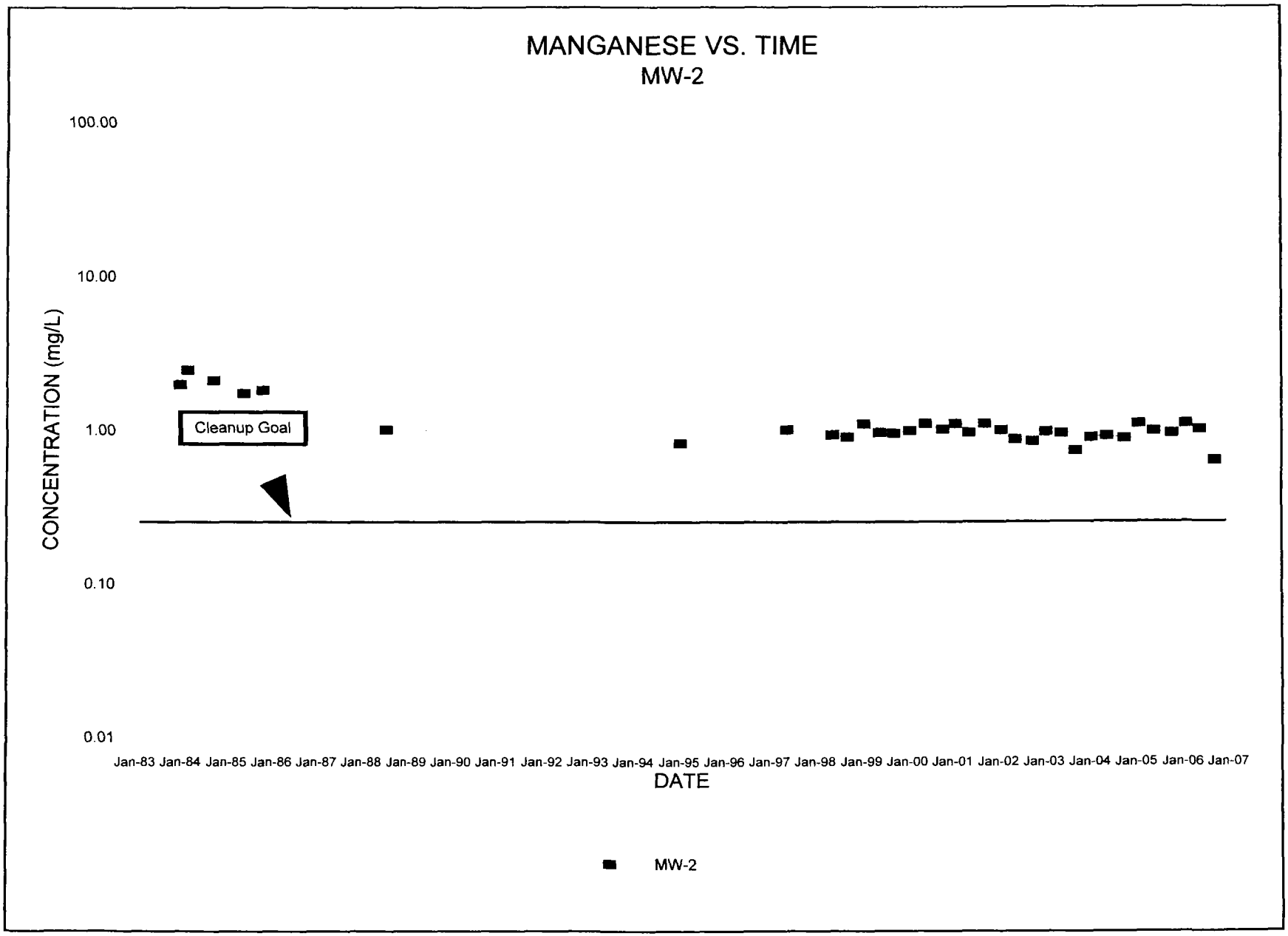

BERYLLIUM VS. TIME
MW-35
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35
* = Below detection. Value plotted is detection limit

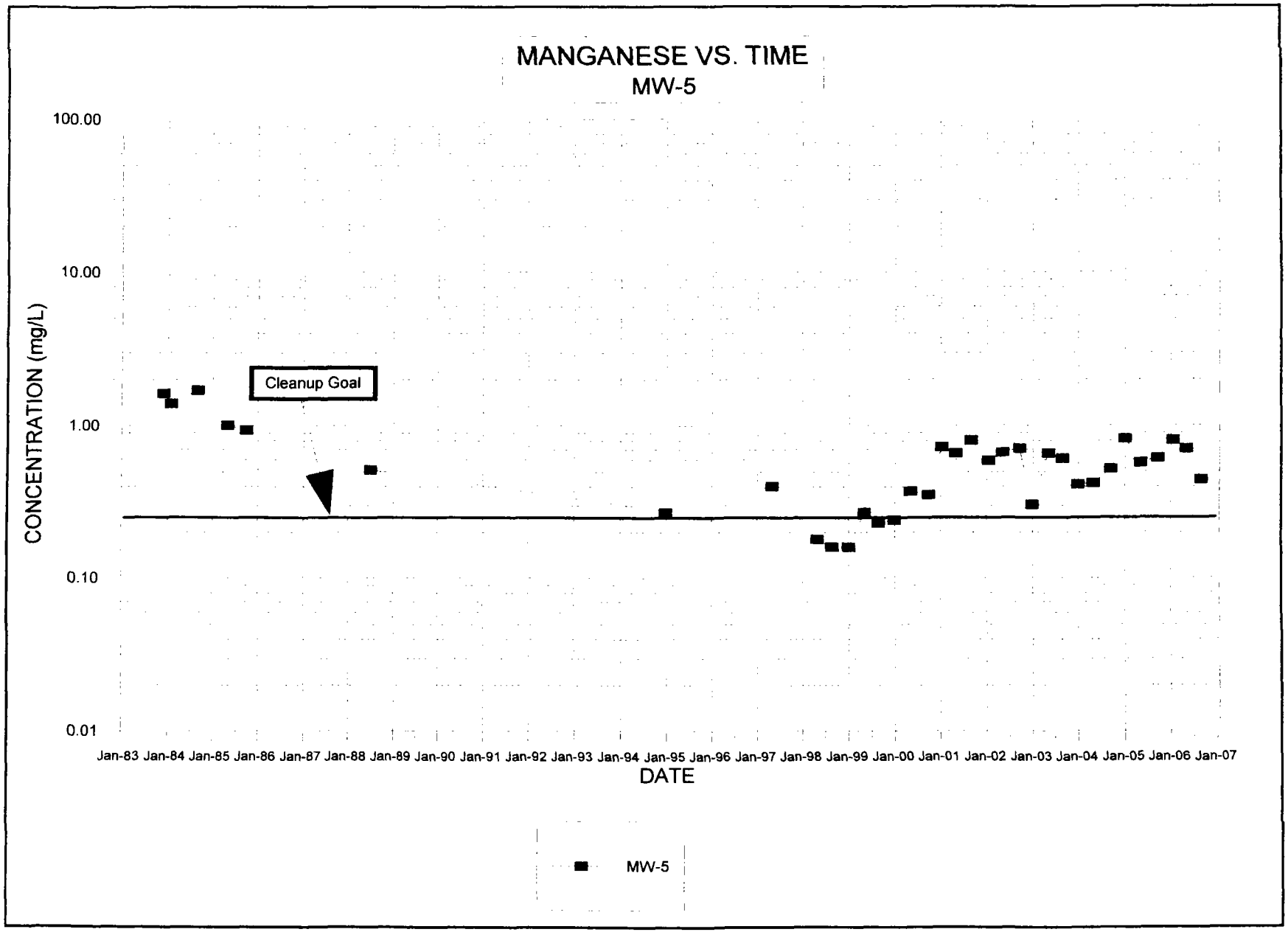

BERYLLIUM VS. TIME
MW-36
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36
* = Below detection. Value plotted is detection limit.

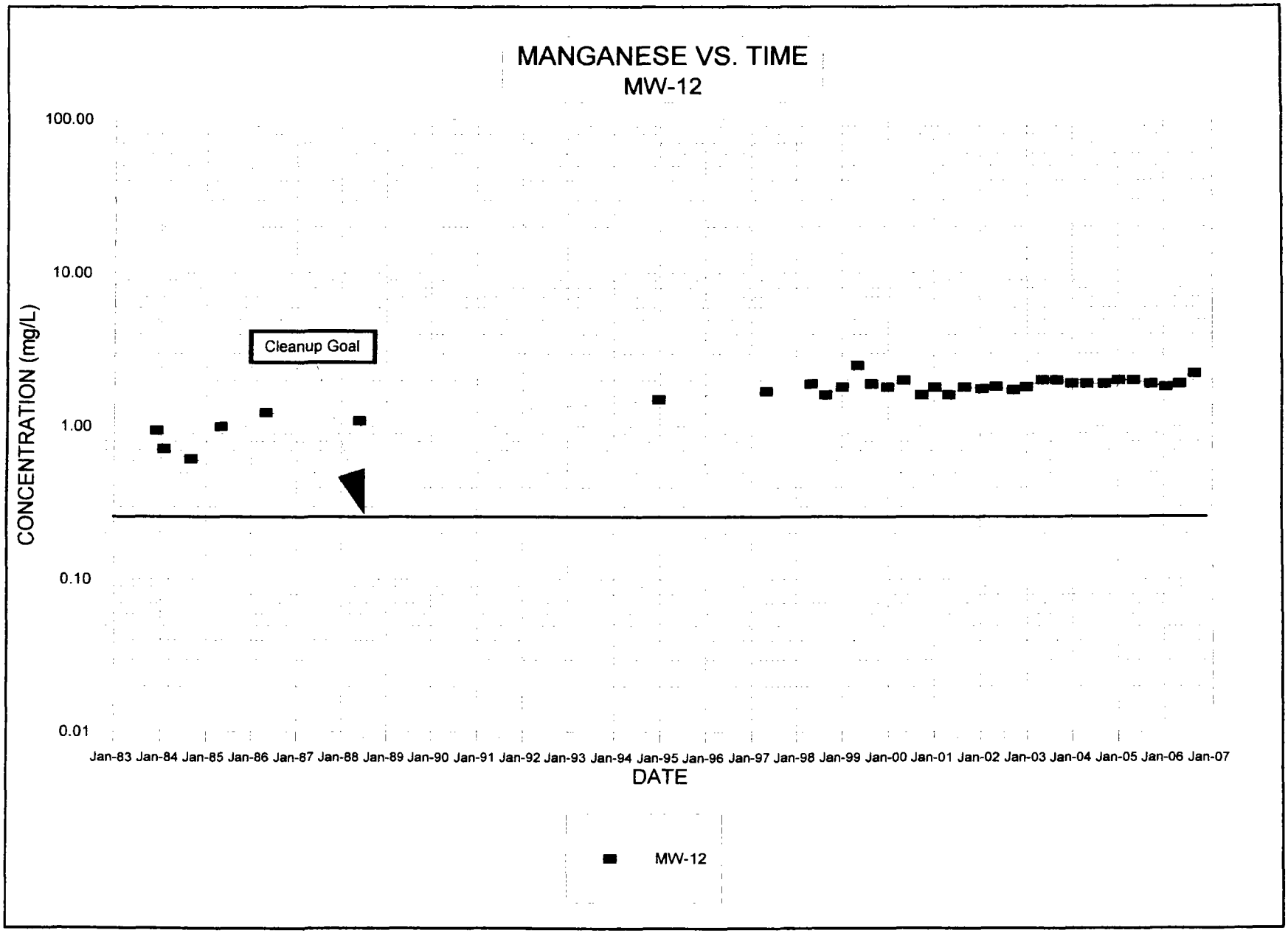

BERYLLIUM VS. TIME
MW-37
1.0000
0.1000
0.0100
0.0010
0.0001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37
* = Below detection. Value plotted is detection limit

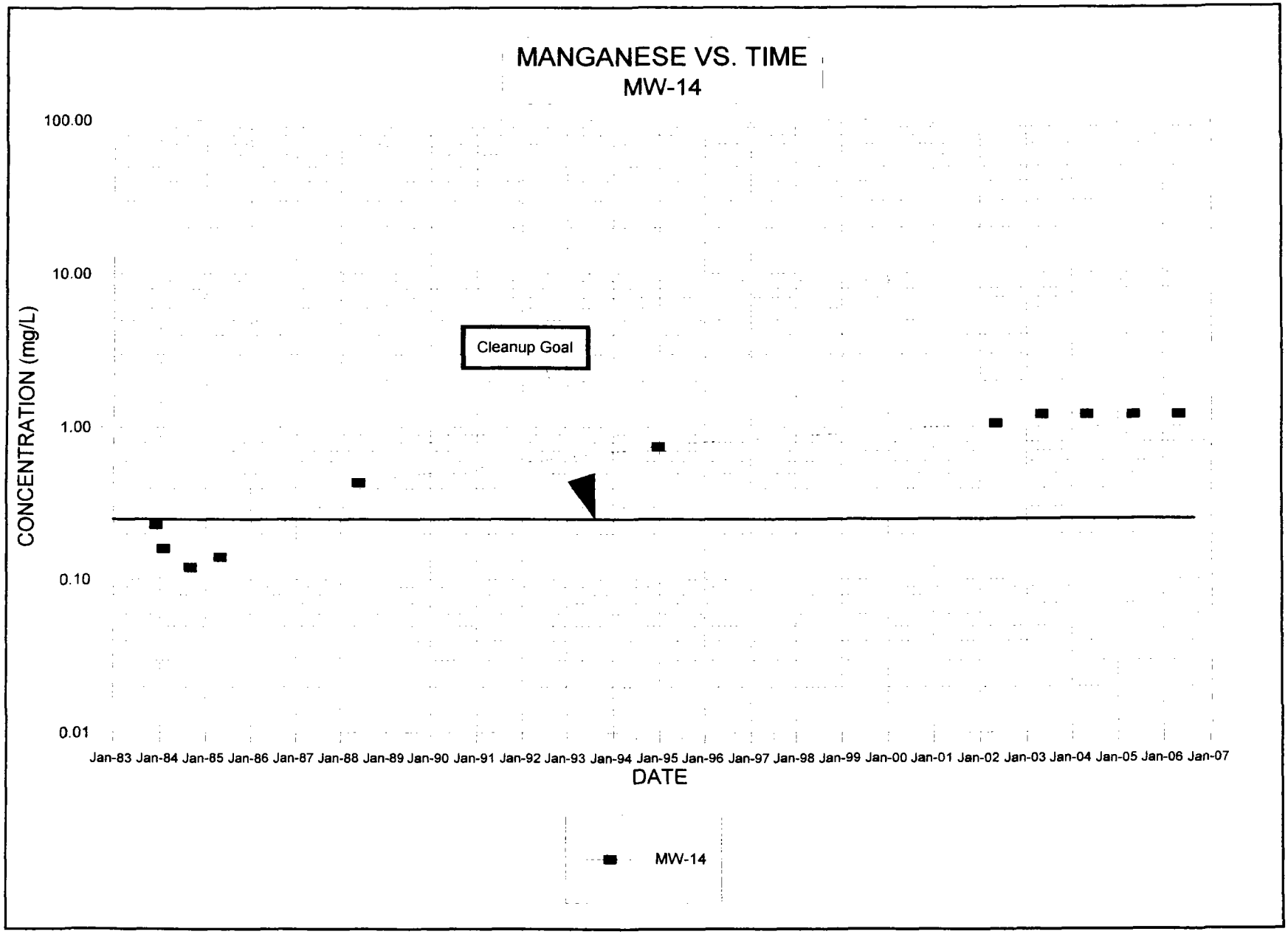
APPENDIX D-6

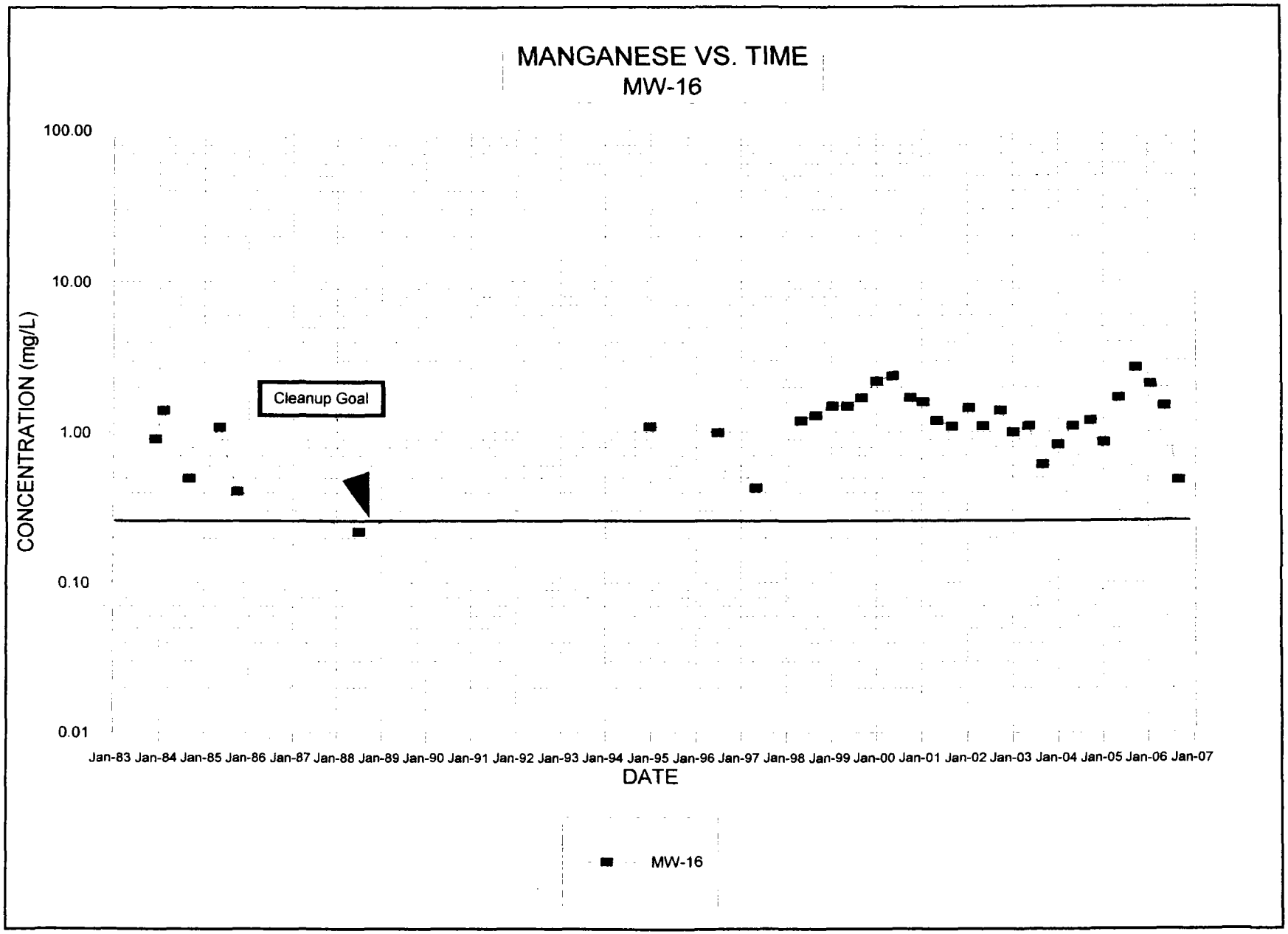
MANGANESE

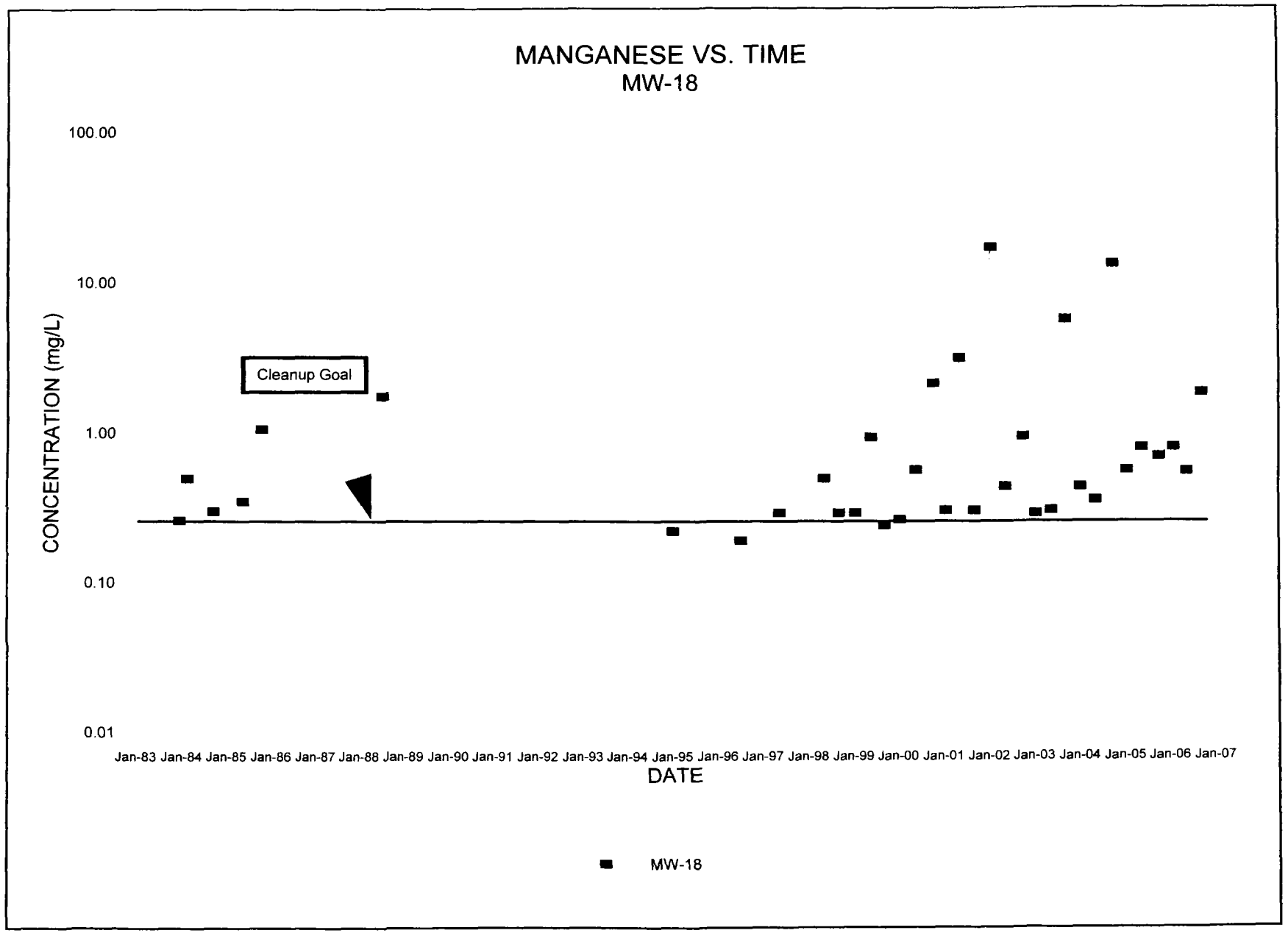

MANGANESE VS. TIME
MW-2
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

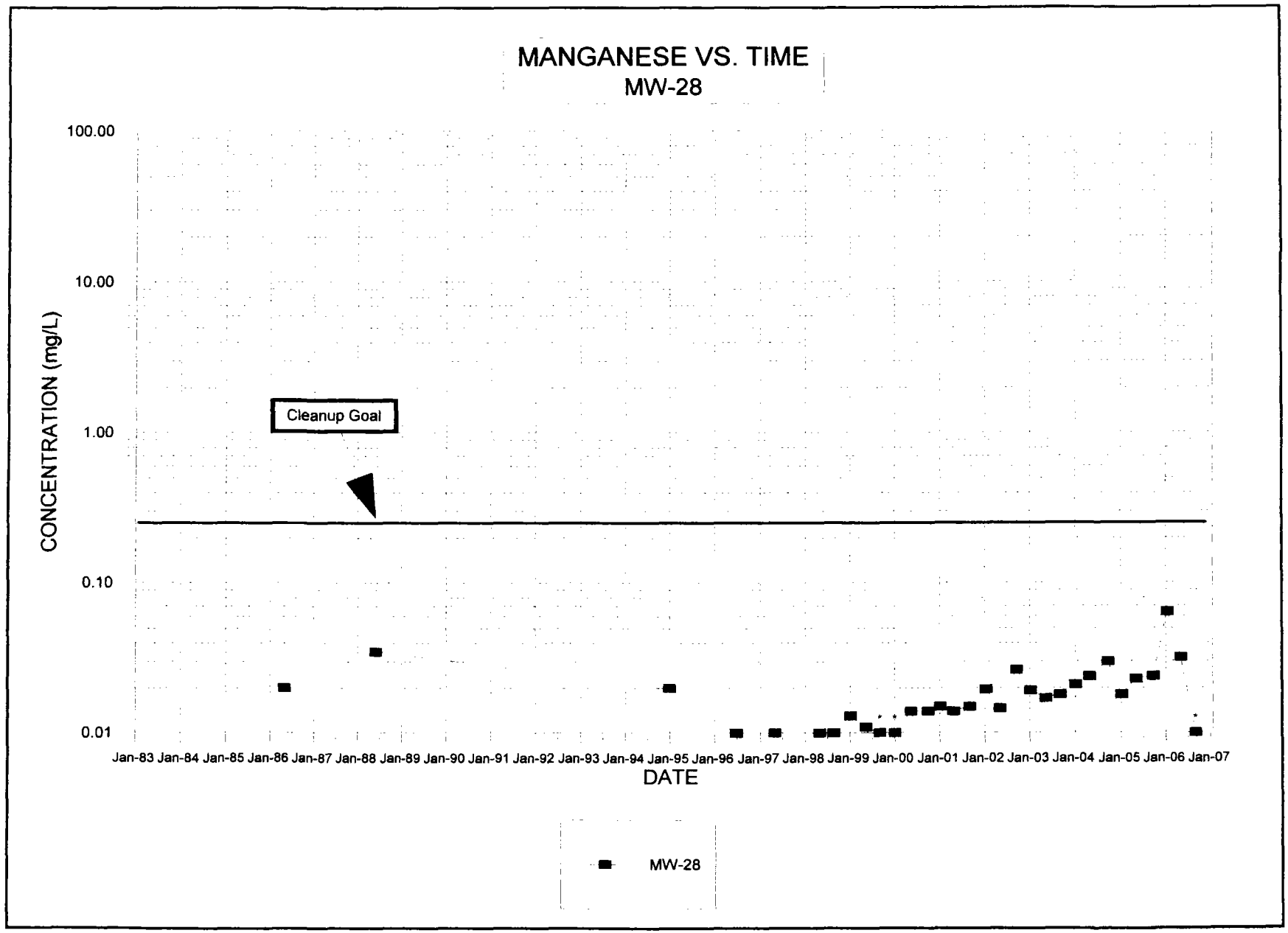

MANGANESE VS. TIME
MW-5
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5

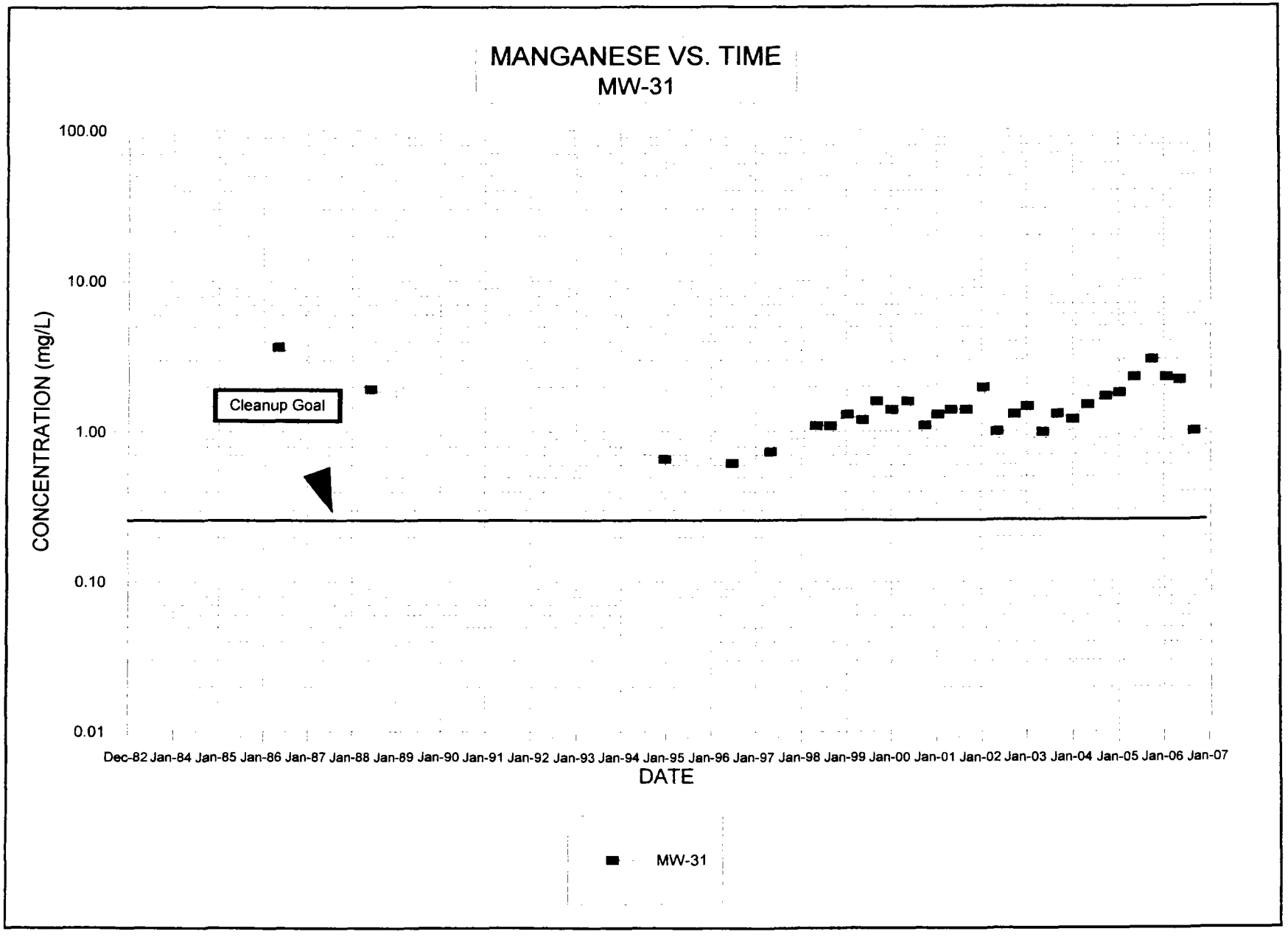

MANGANESE VS. TIME
MW-12
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12

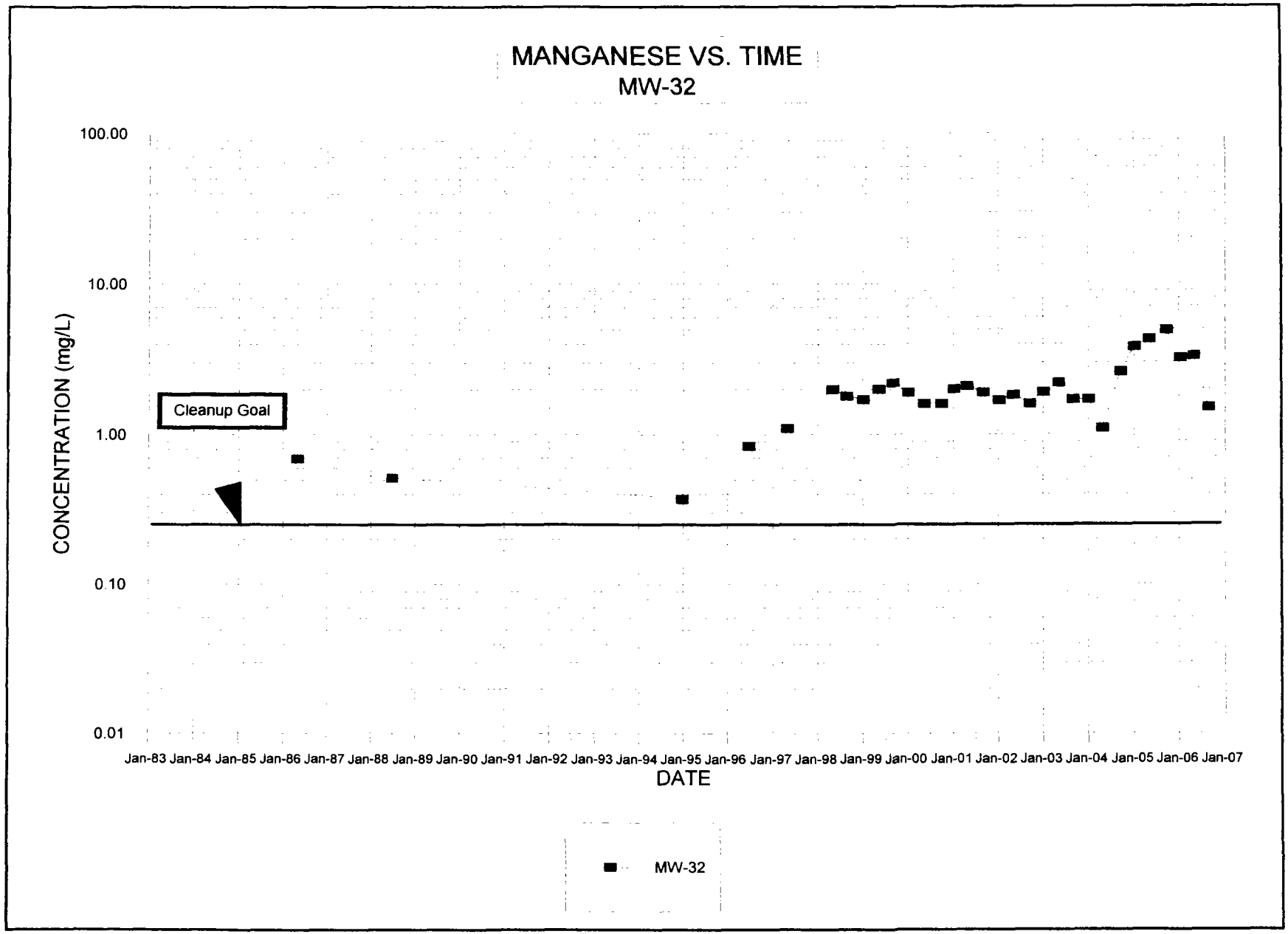

MANGANESE VS. TIME
MW-14
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14

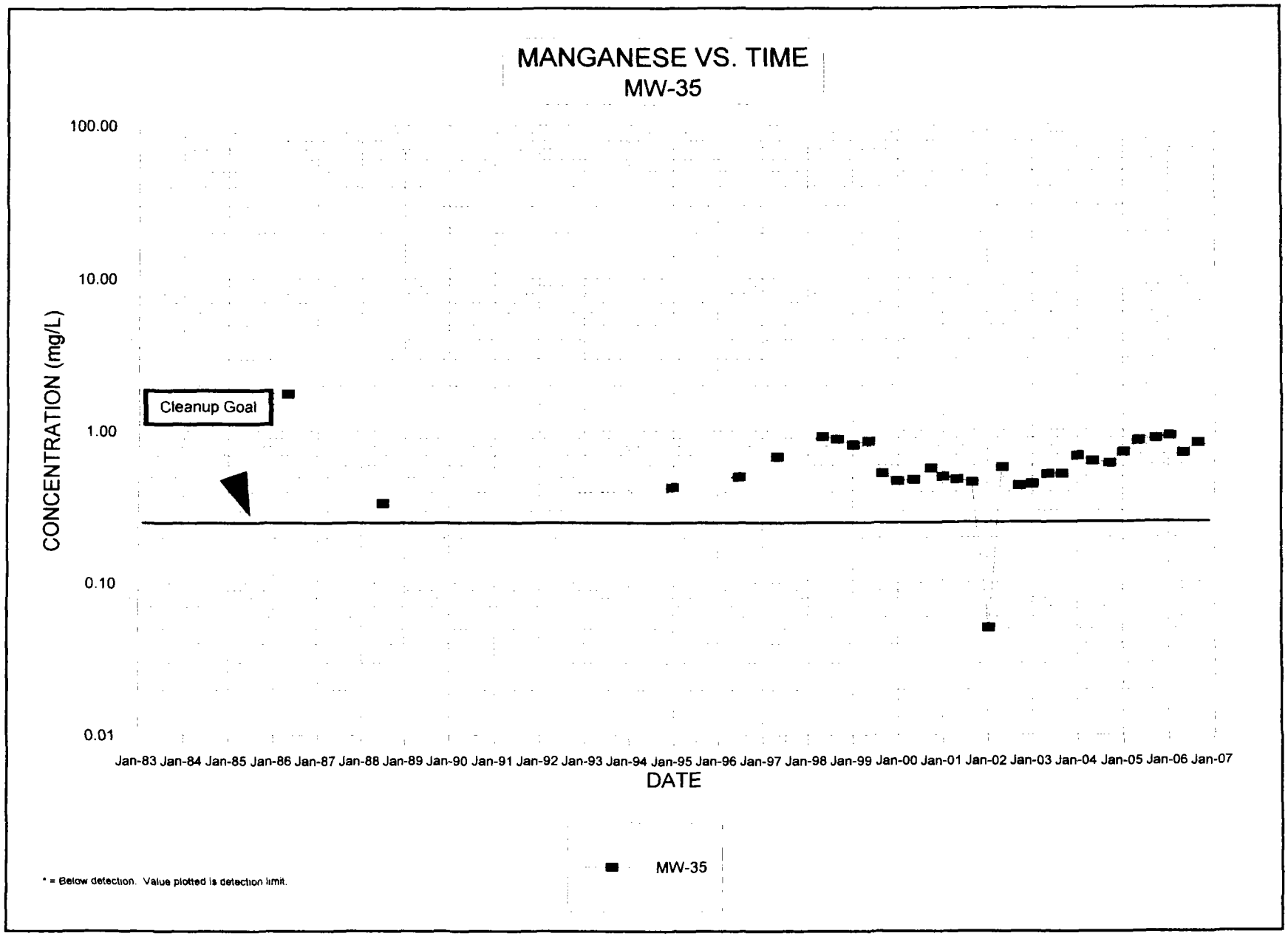

MANGANESE VS. TIME
MW-16
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16

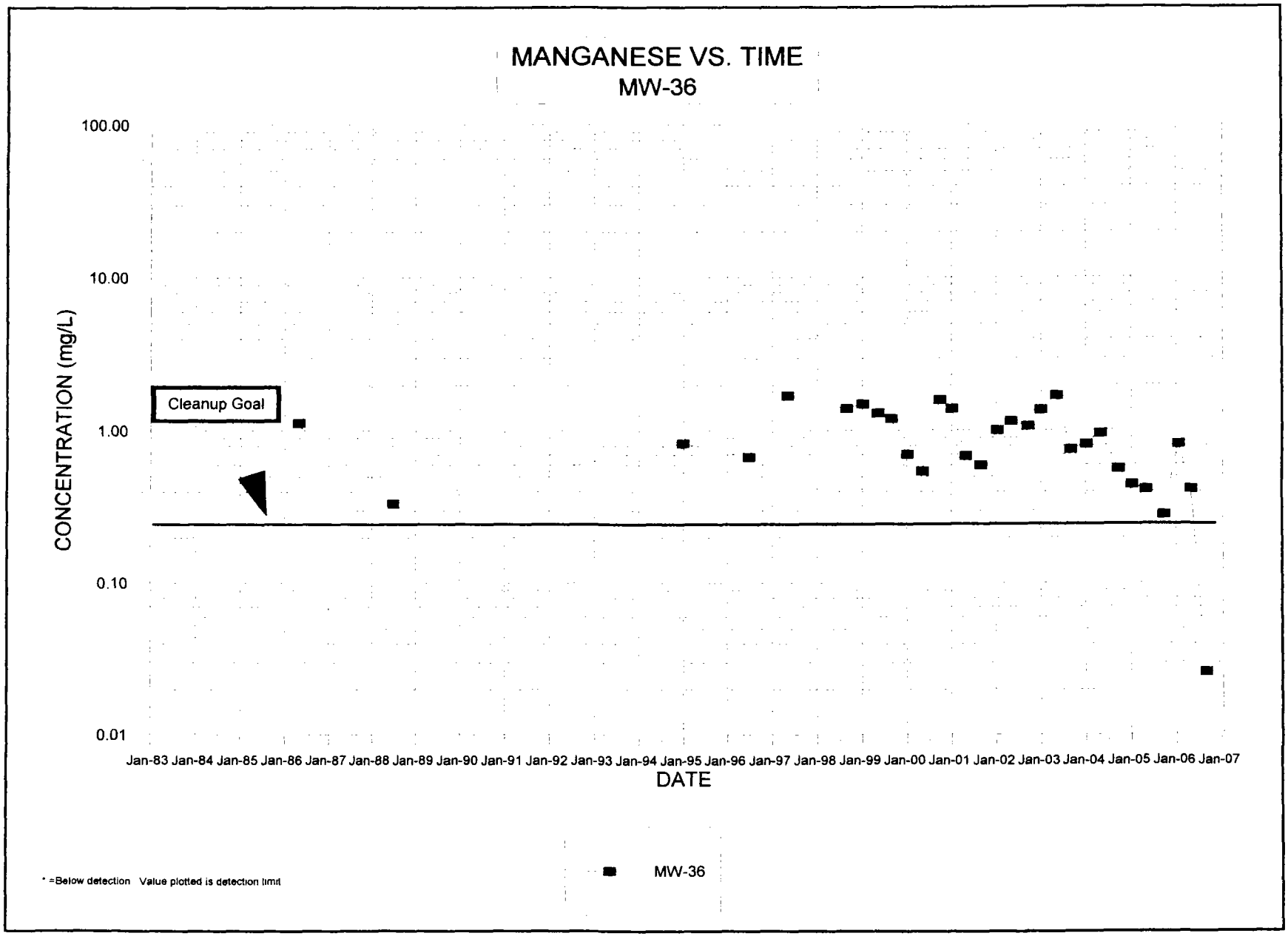

MANGANESE VS. TIME
MW-18
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18

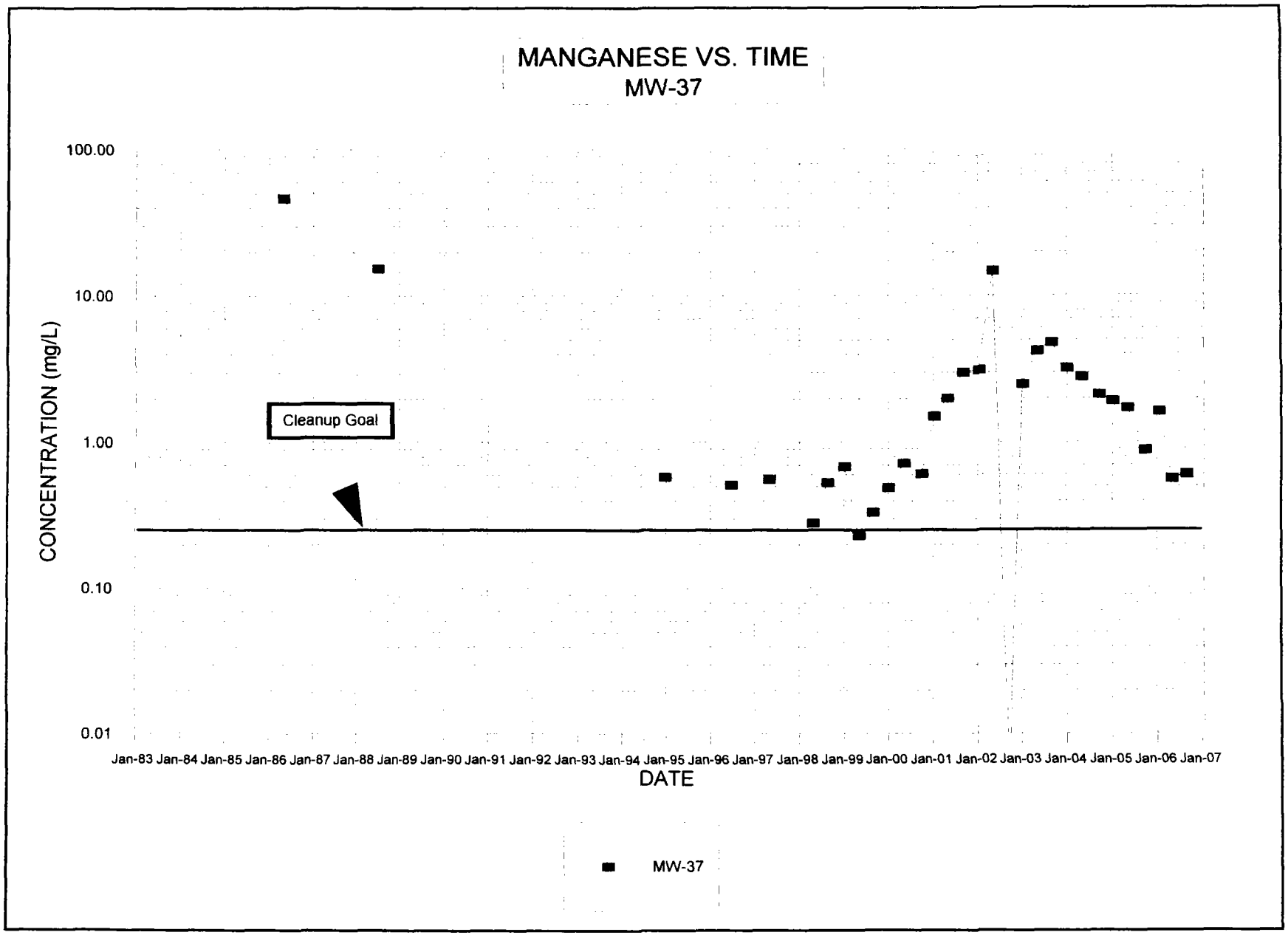

MANGANESE VS. TIME
MW-28
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28


MANGANESE VS. TIME
MW-31
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Dec-82 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31


MANGANESE VS. TIME
MW-32
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32

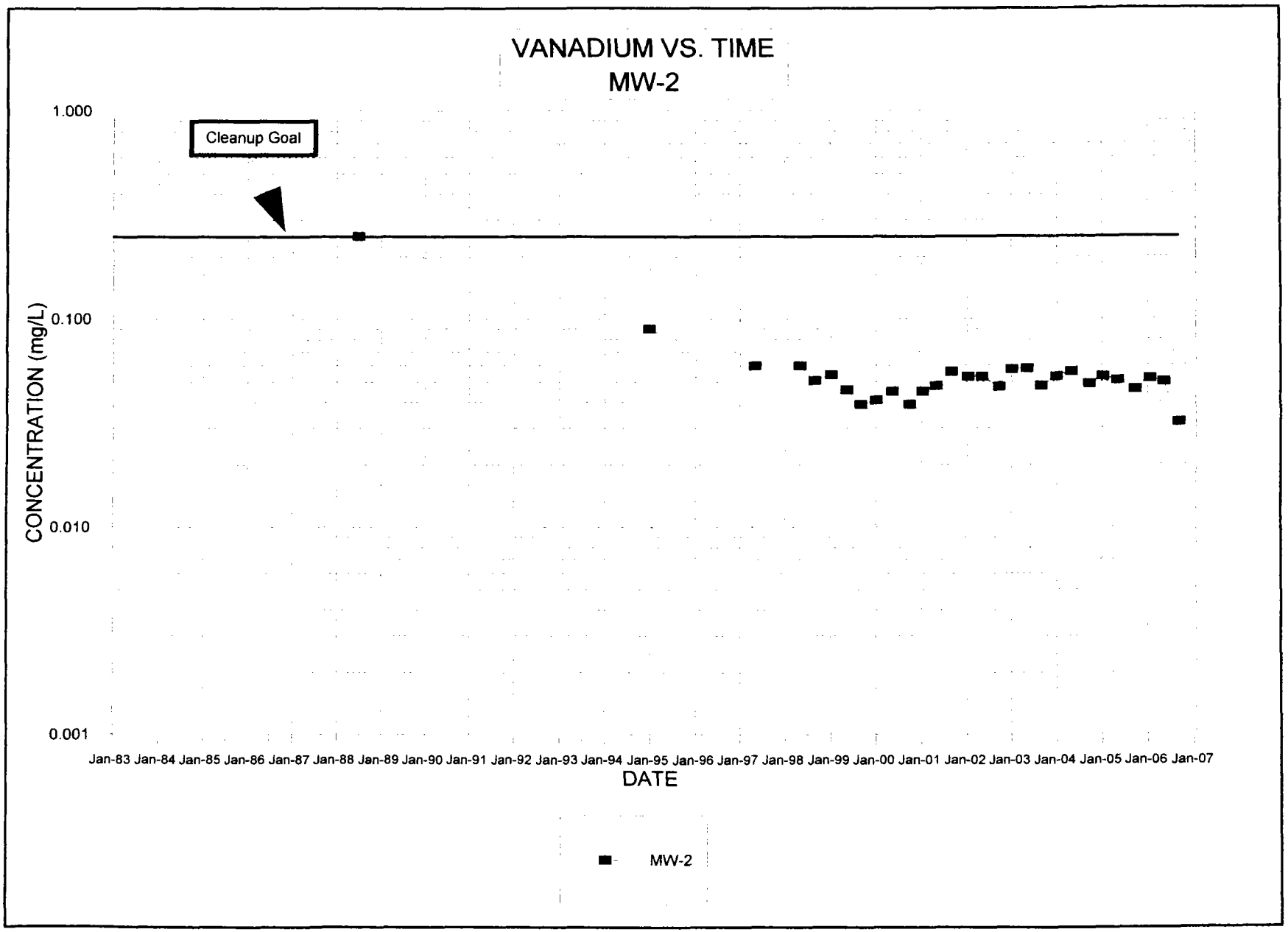

MANGANESE VS. TIME
MW-35
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35
* = Below detection. Value plotted is detection limit.

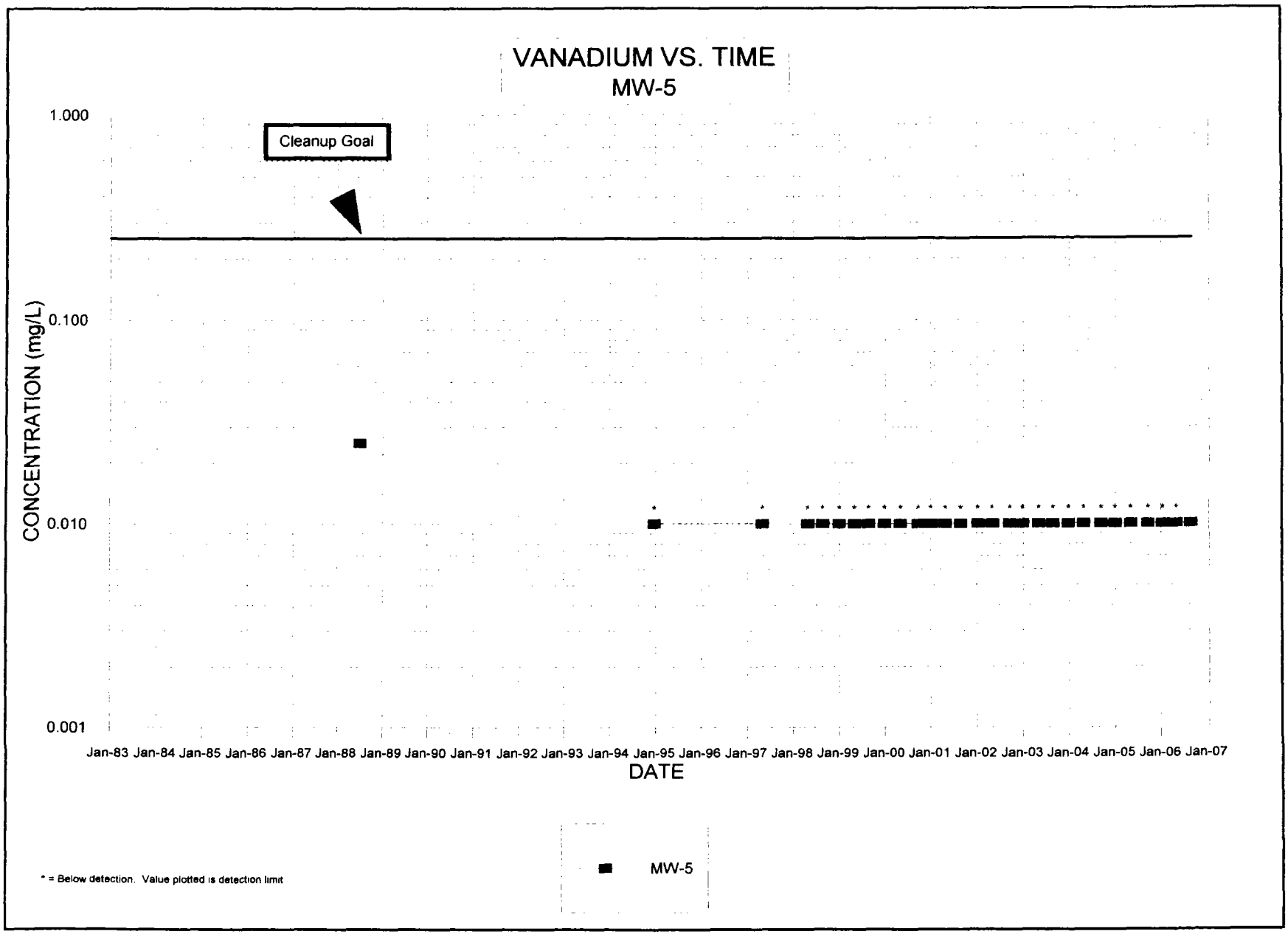

MANGANESE VS. TIME
MW-36
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36
* =Below detection Value plotted is detection limit

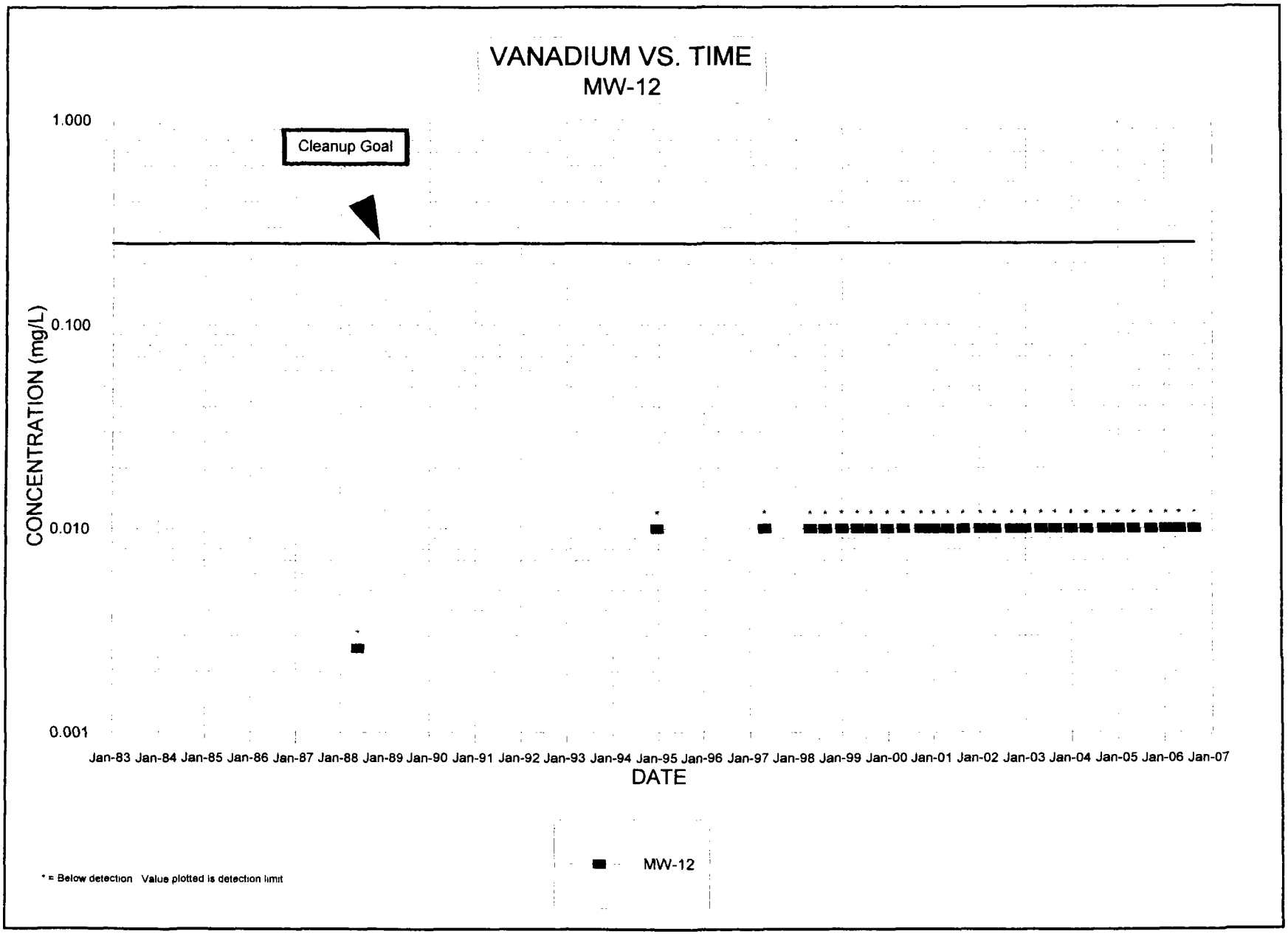

MANGANESE VS. TIME
MW-37
100.00
10.00
1.00
0.10
0.01
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37

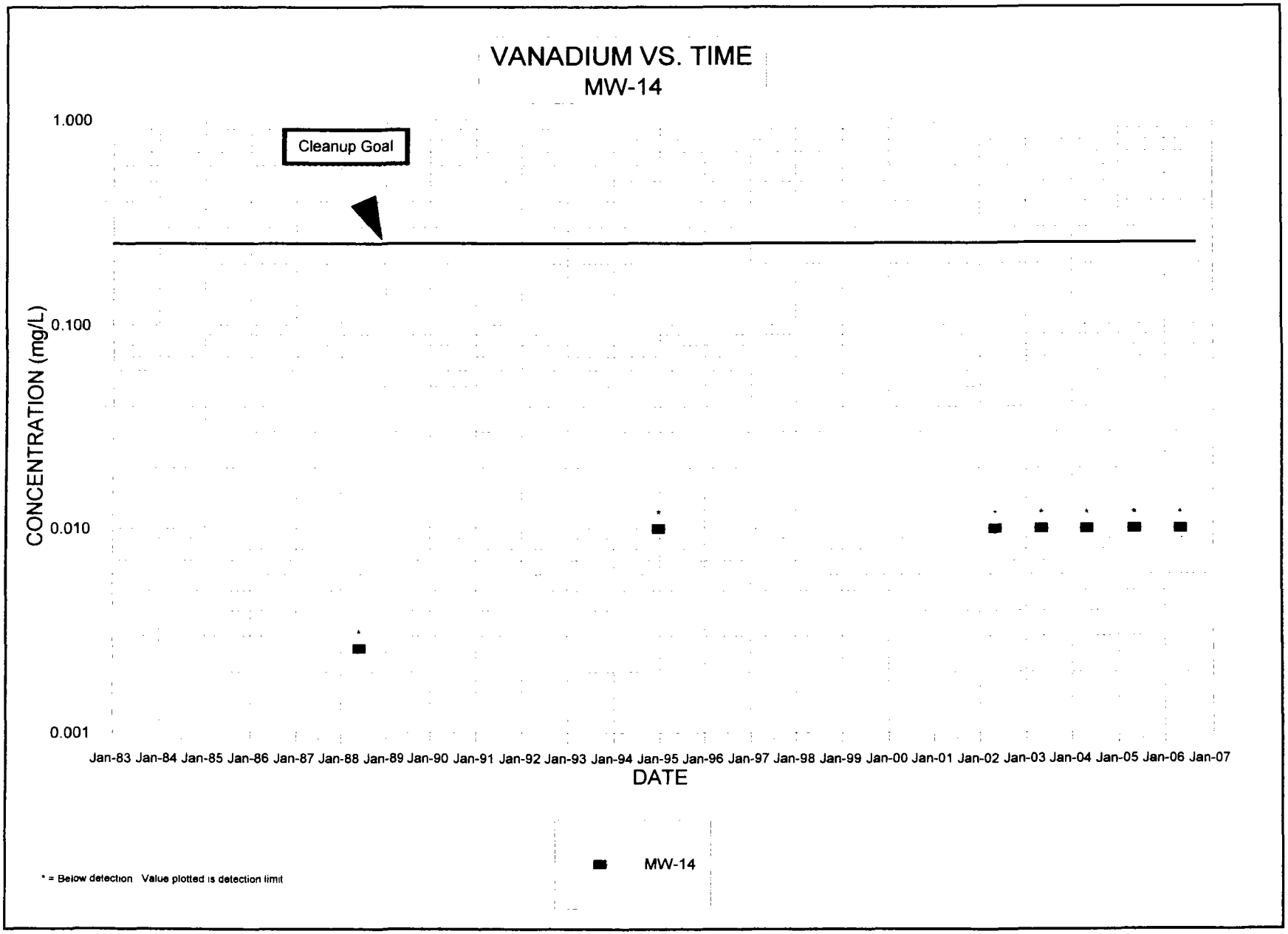
APPENDIX D-7

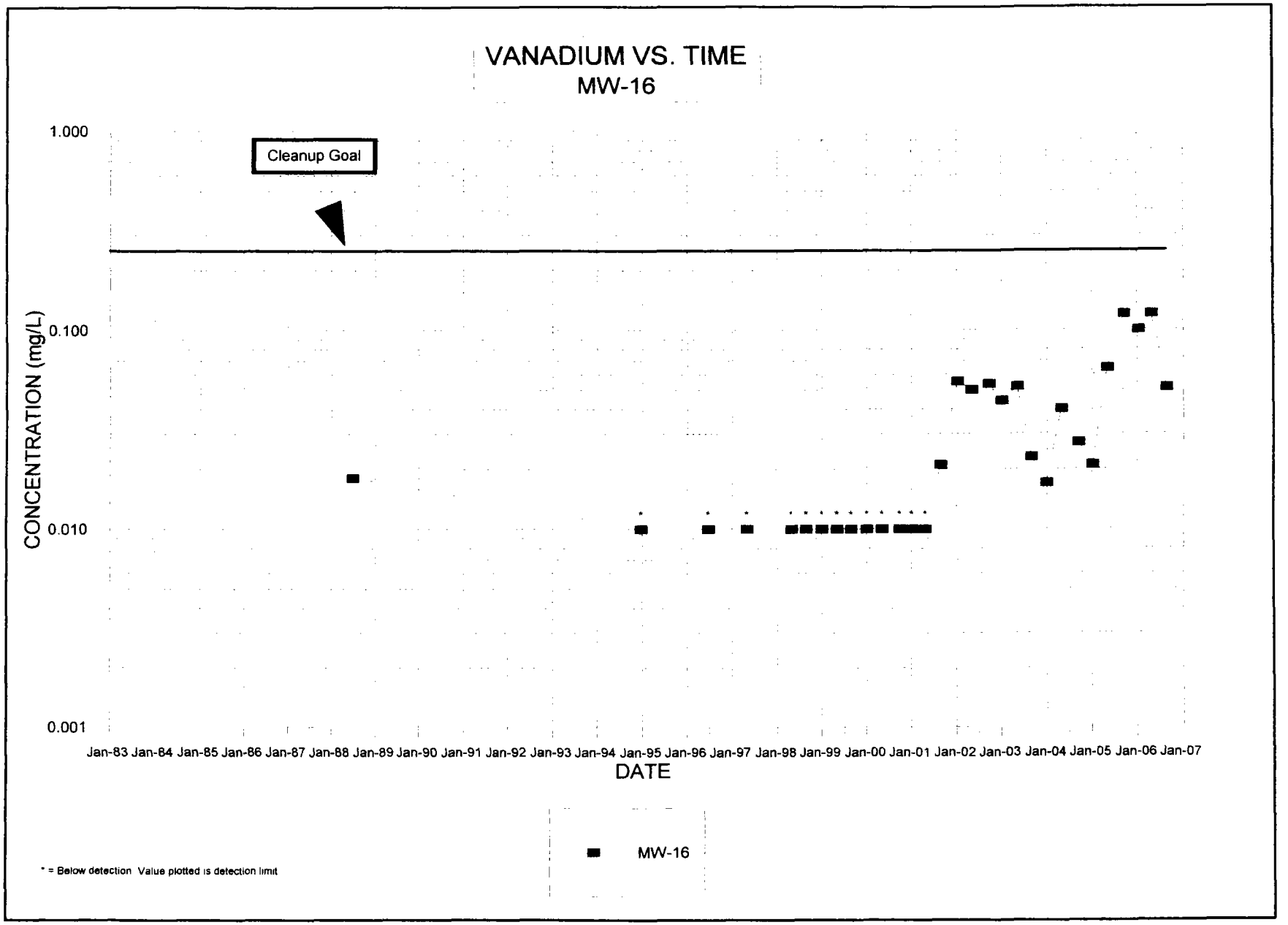
VANADIUM

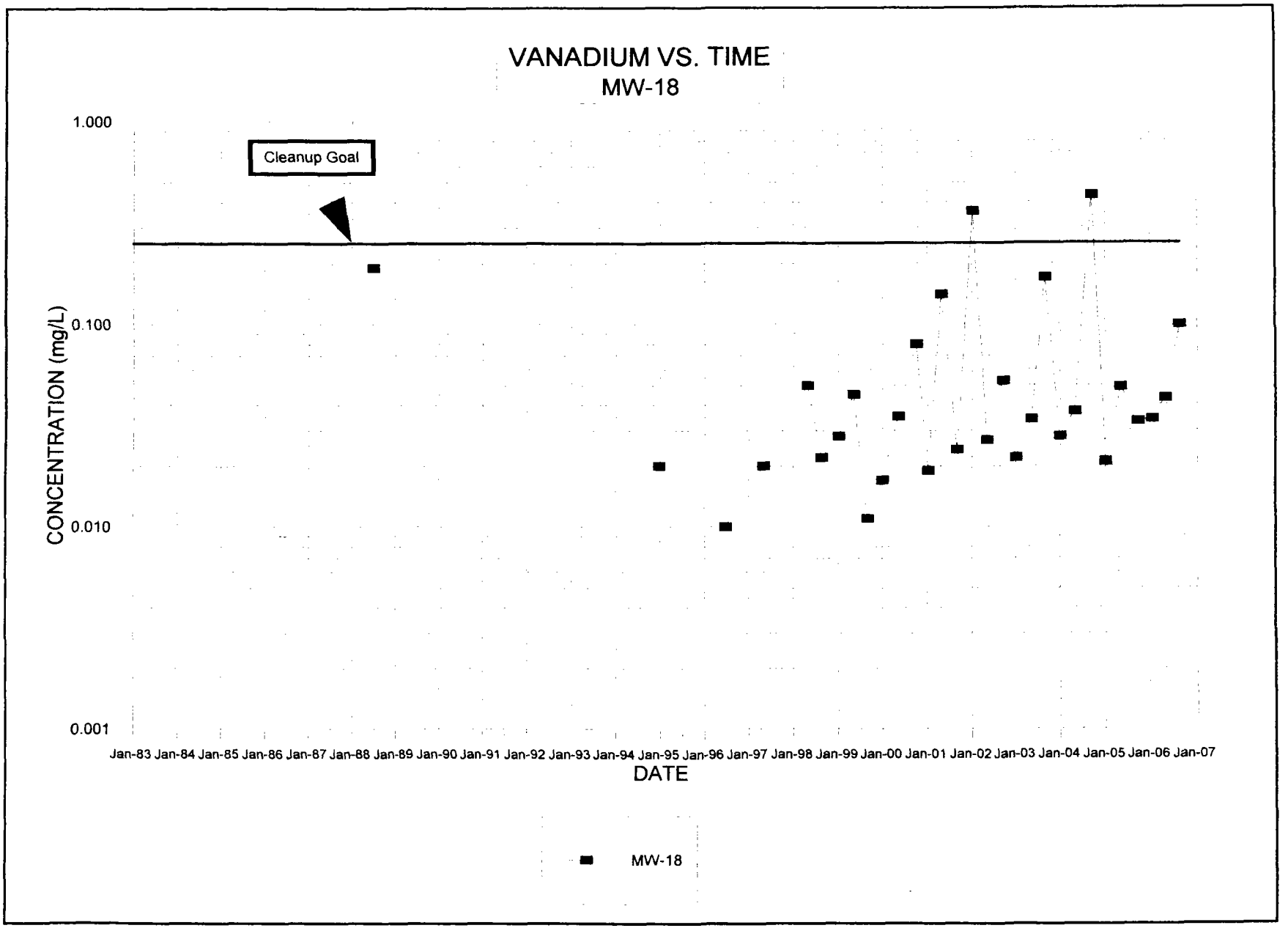

VANADIUM VS. TIME
MW-2
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

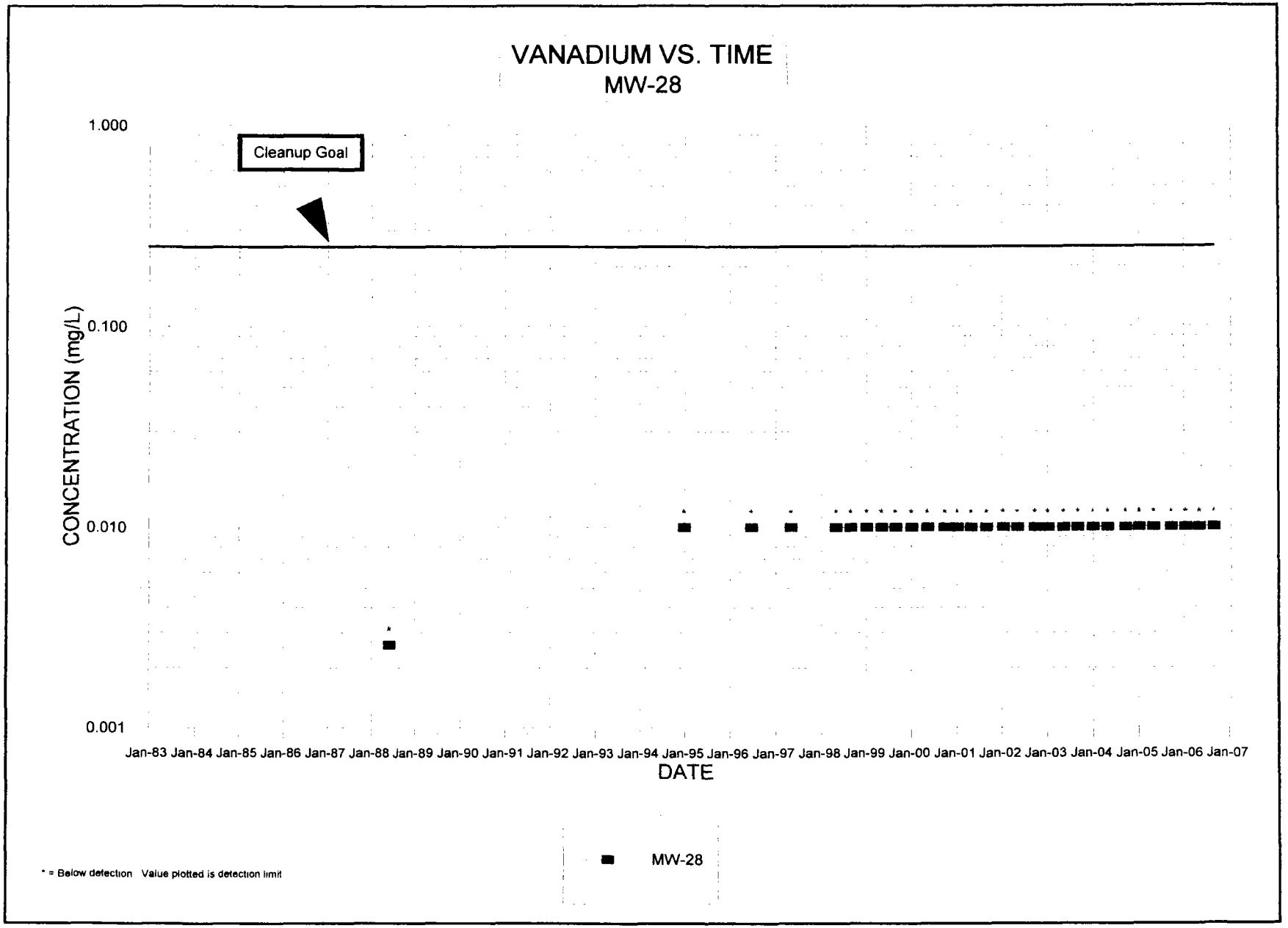

VANADIUM VS. TIME
MW-5
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5
* = Below detection. Value plotted is detection limit

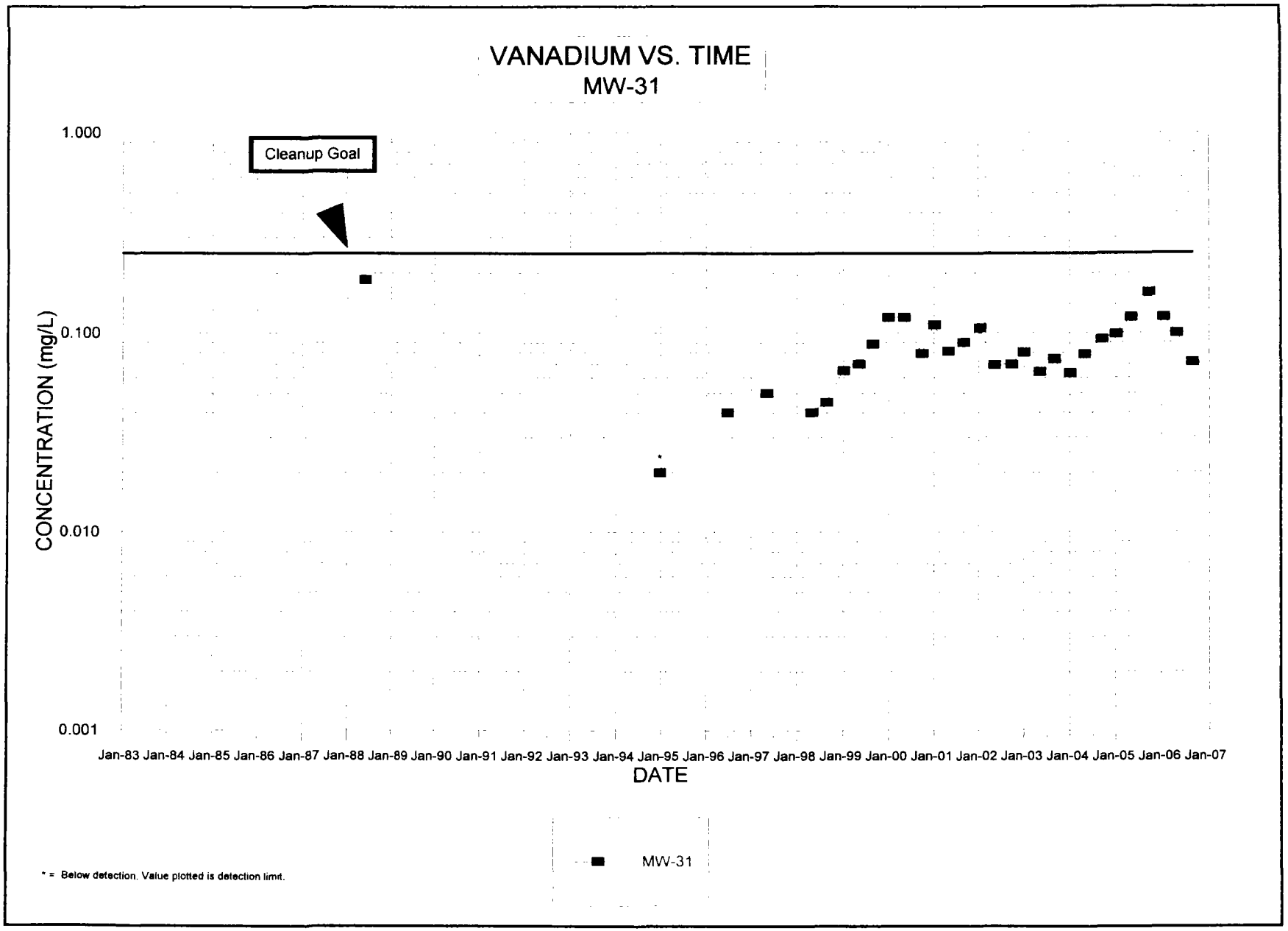

VANADIUM VS. TIME
MW-12
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12
* = Below detection Value plotted is detection limit

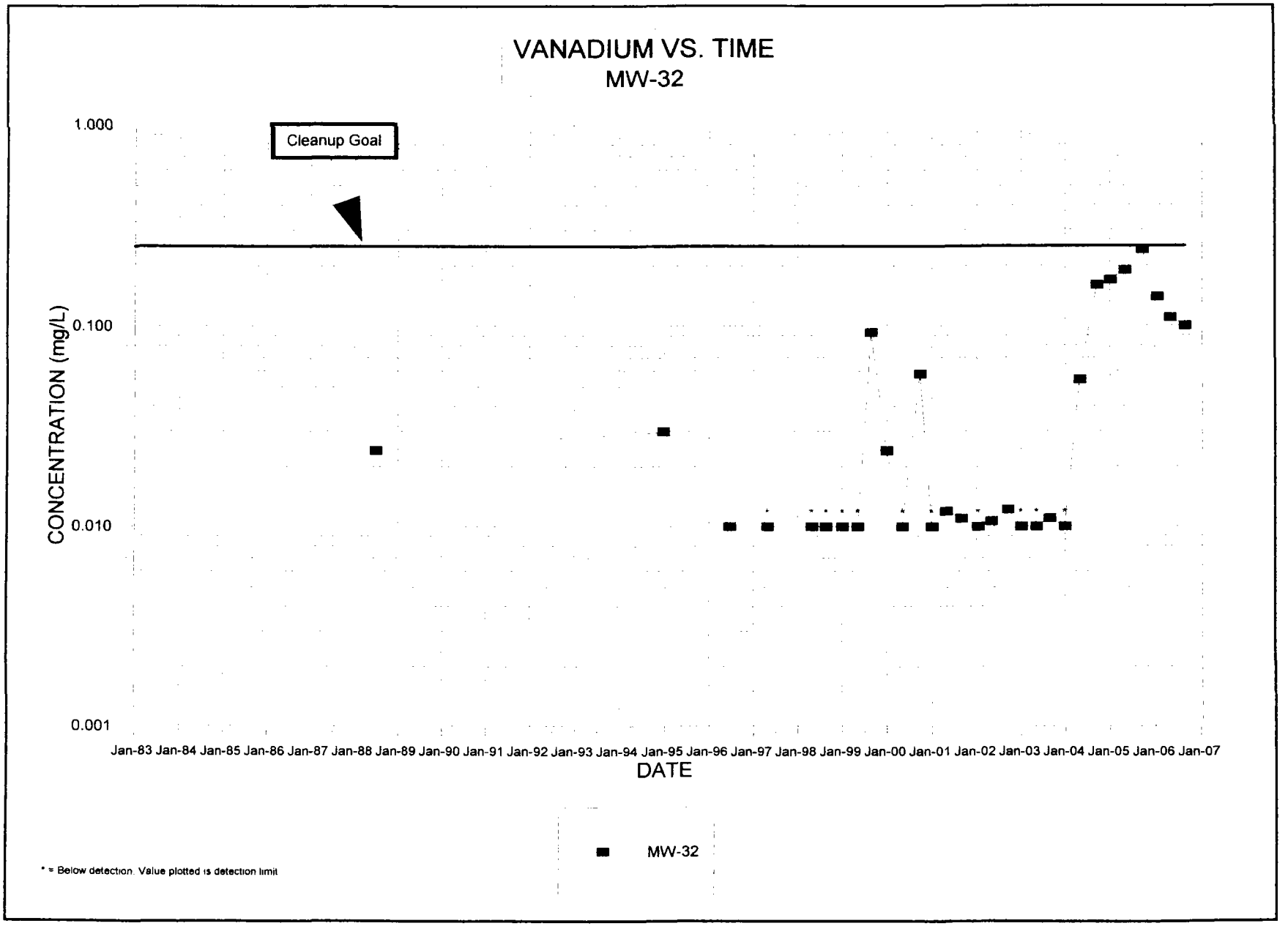

VANADIUM VS. TIME
MW-14
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14
* = Below detection Value plotted is detection limit

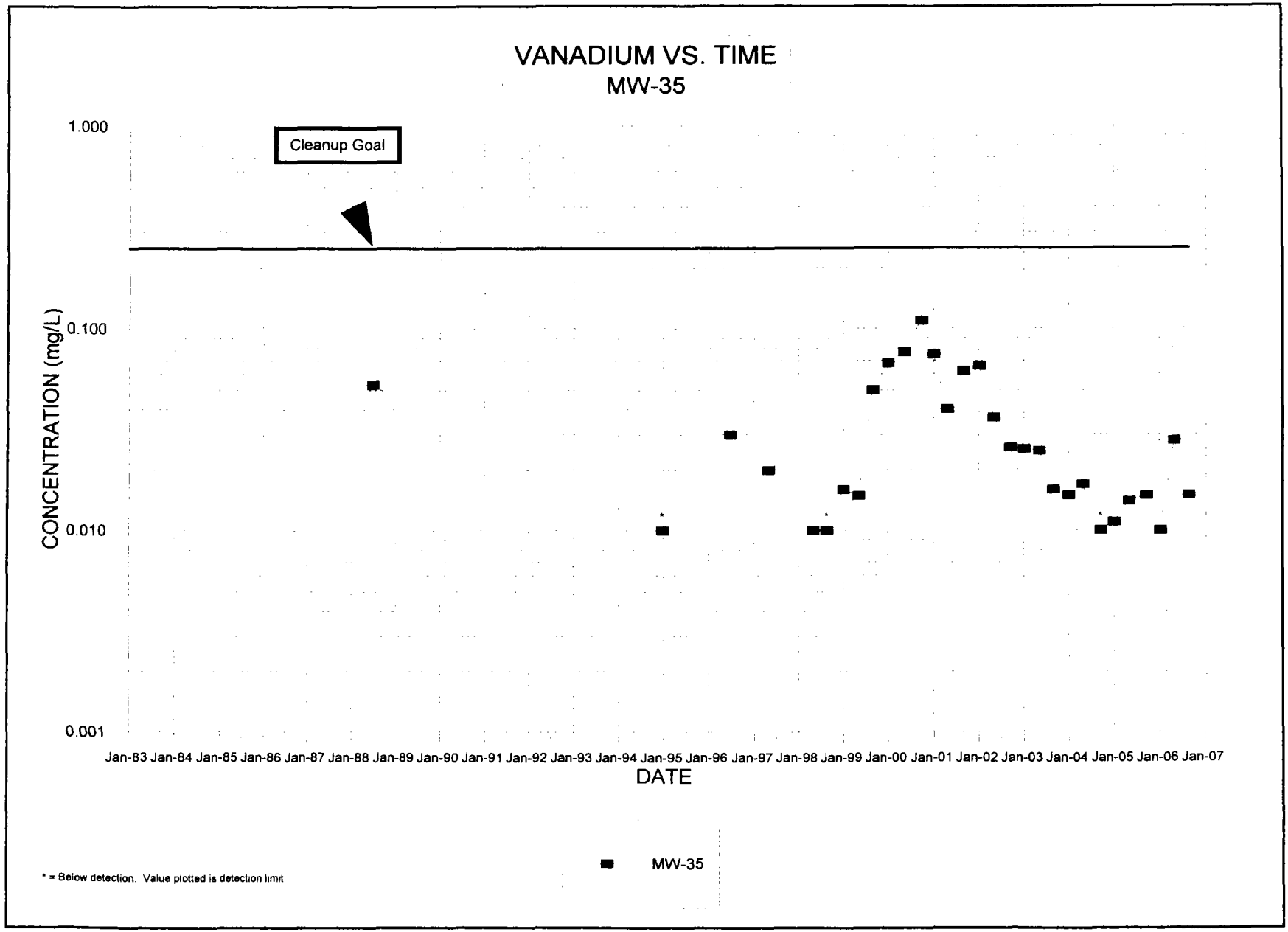

VANADIUM VS. TIME
MW-16
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16
* = Below detection Value plotted is detection limit

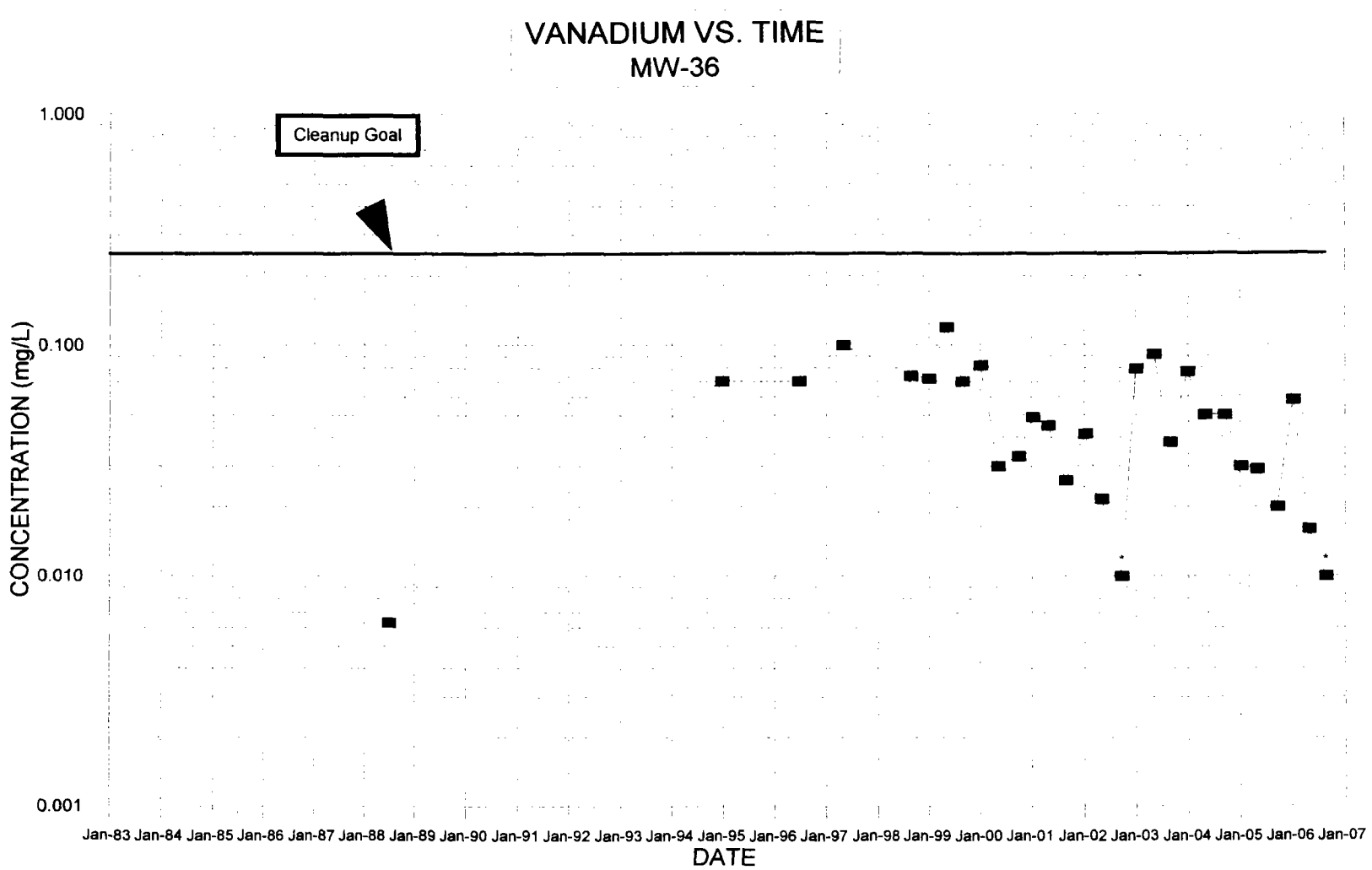

VANADIUM VS. TIME
MW-18
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18


VANADIUM VS. TIME
MW-28
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28
* = Below detection Value plotted is detection limit

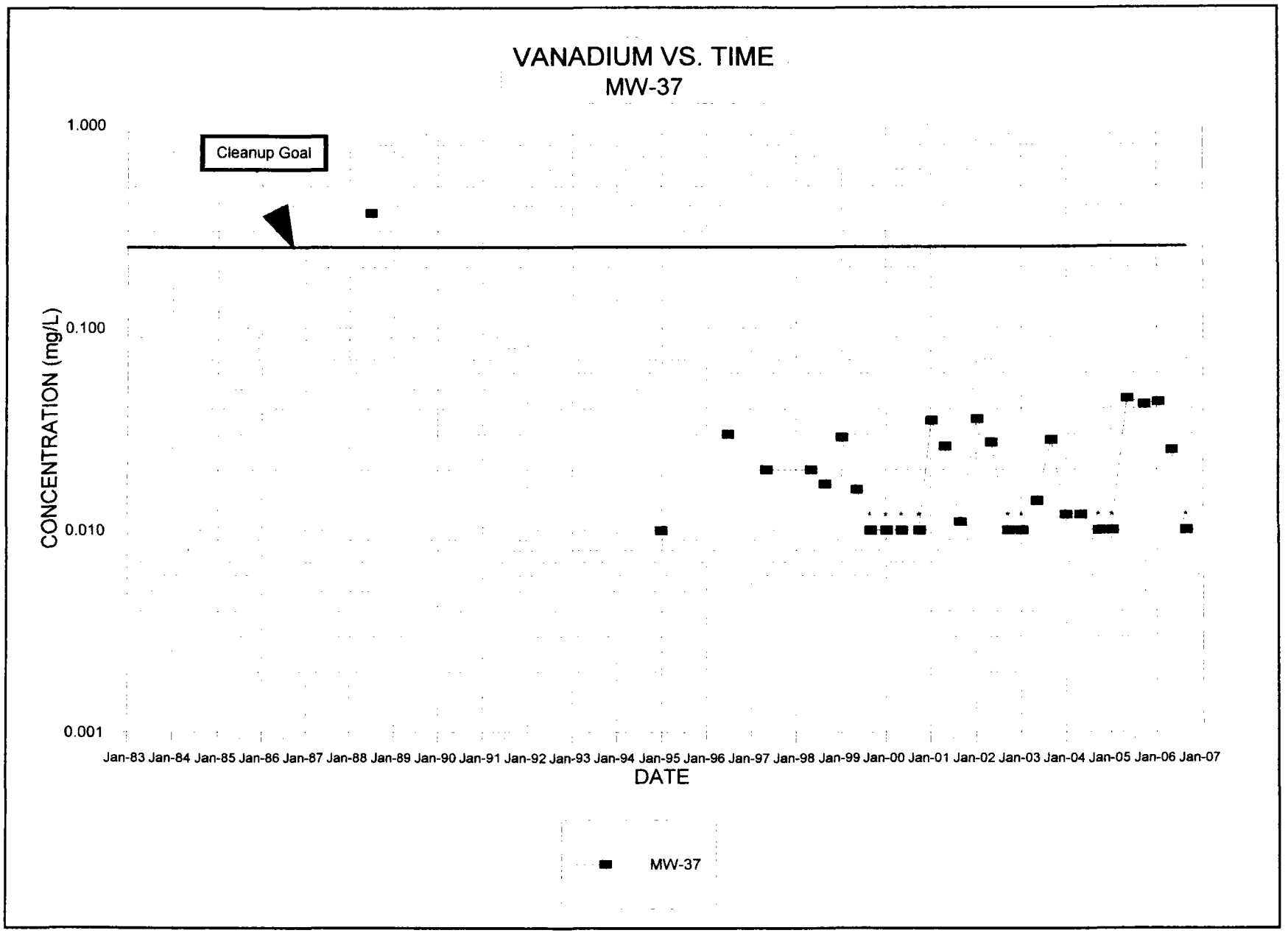

VANADIUM VS. TIME
MW-31
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31
* = Below detection. Value plotted is detection limit.


VANADIUM VS. TIME
MW-32
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32
* = Below detection. Value plotted is detection limit


VANADIUM VS. TIME
MW-35
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35
* = Below detection. Value plotted is detection limit

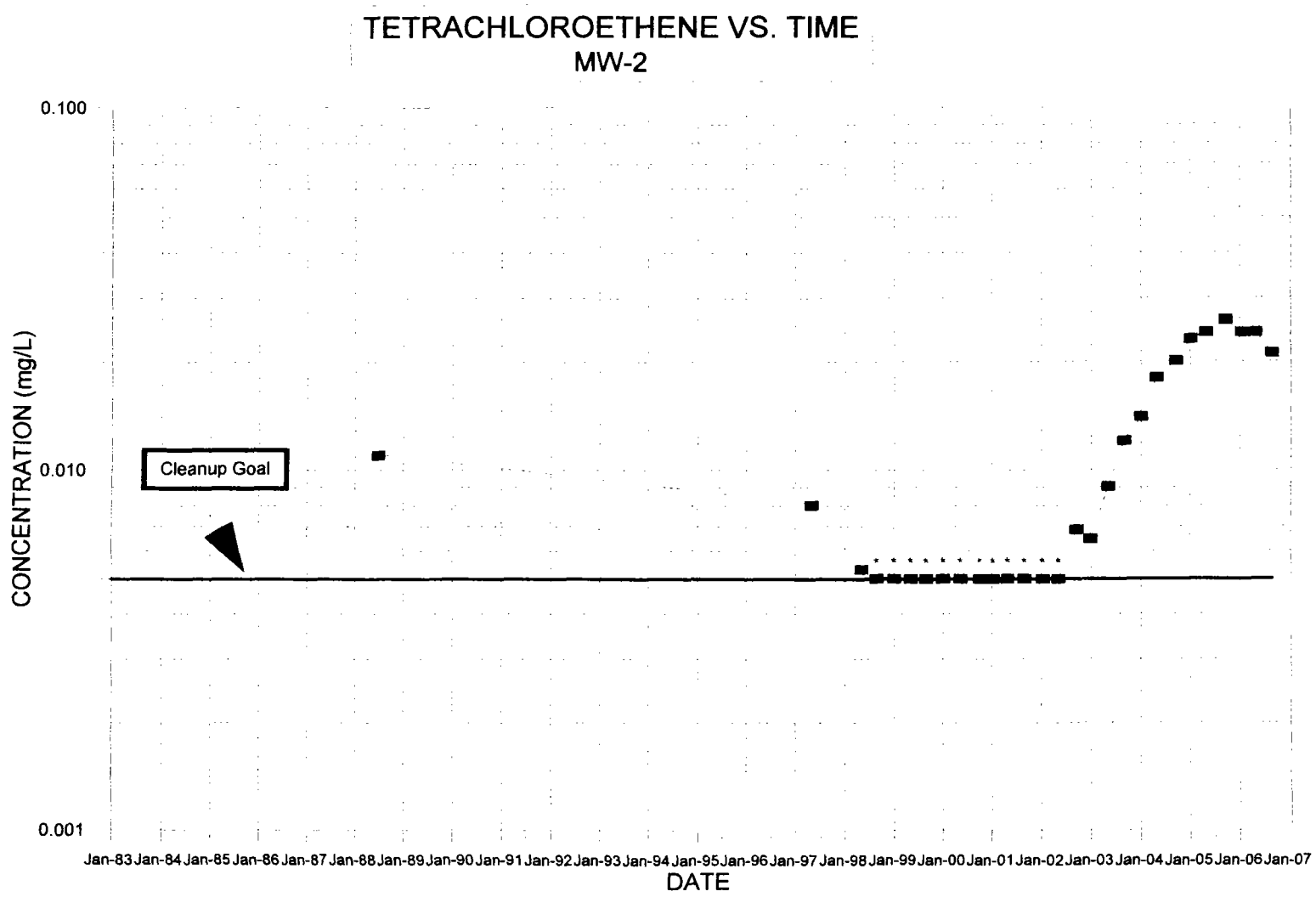


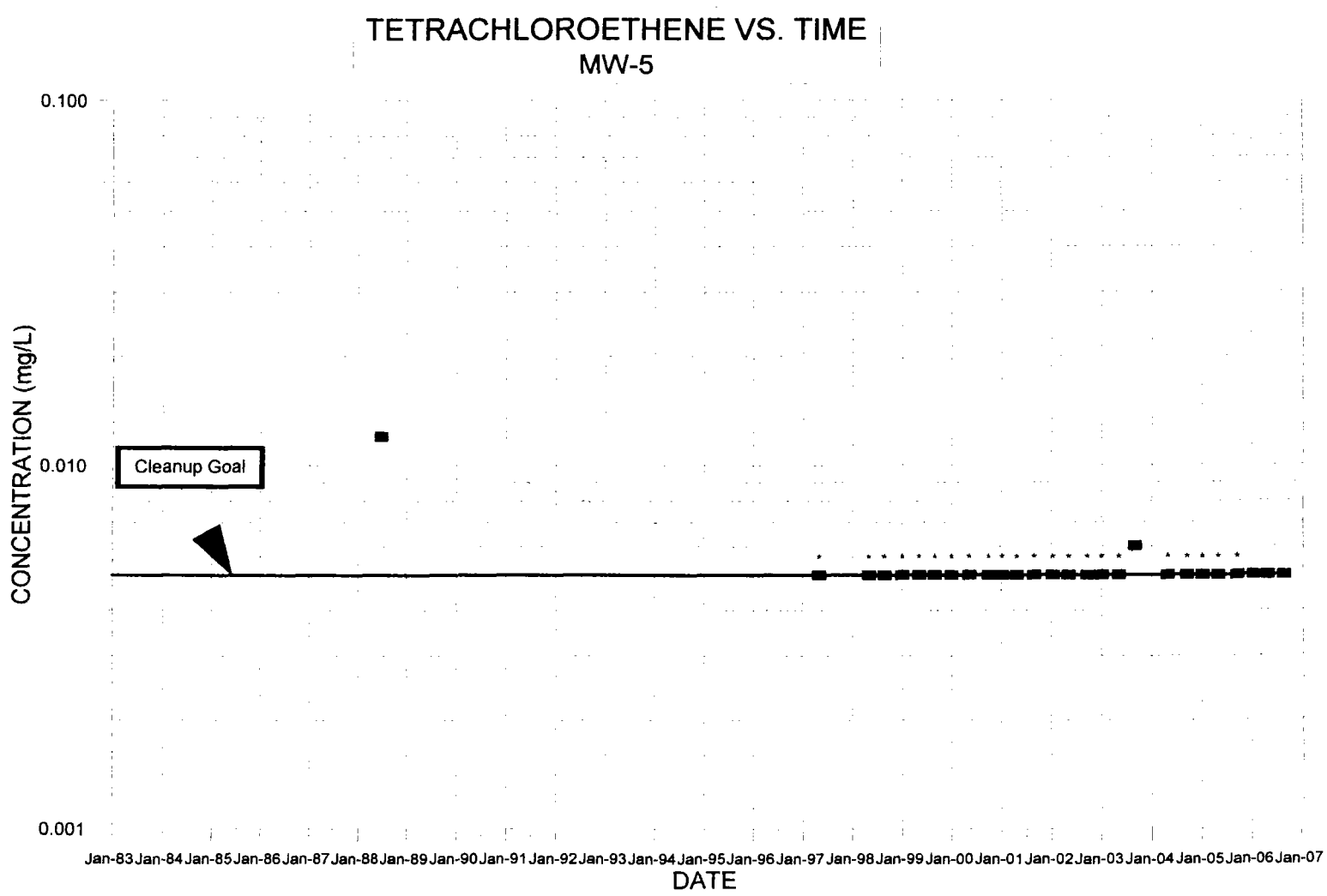
* = Below detection. Value plotted is detection limit

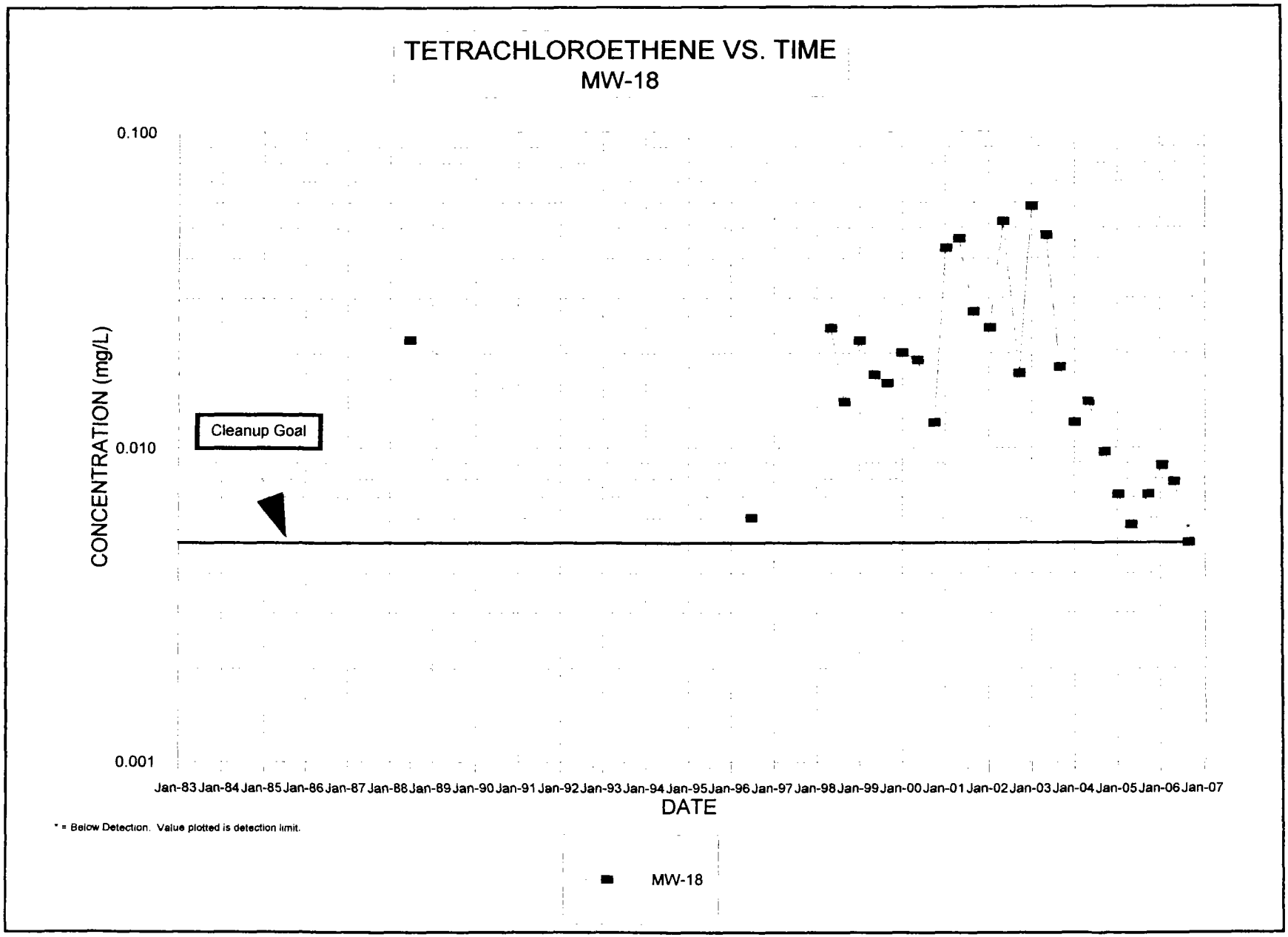

VANADIUM VS. TIME
MW-37
Cleanup Goal
1.000
0.100
0.010
0.001
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37

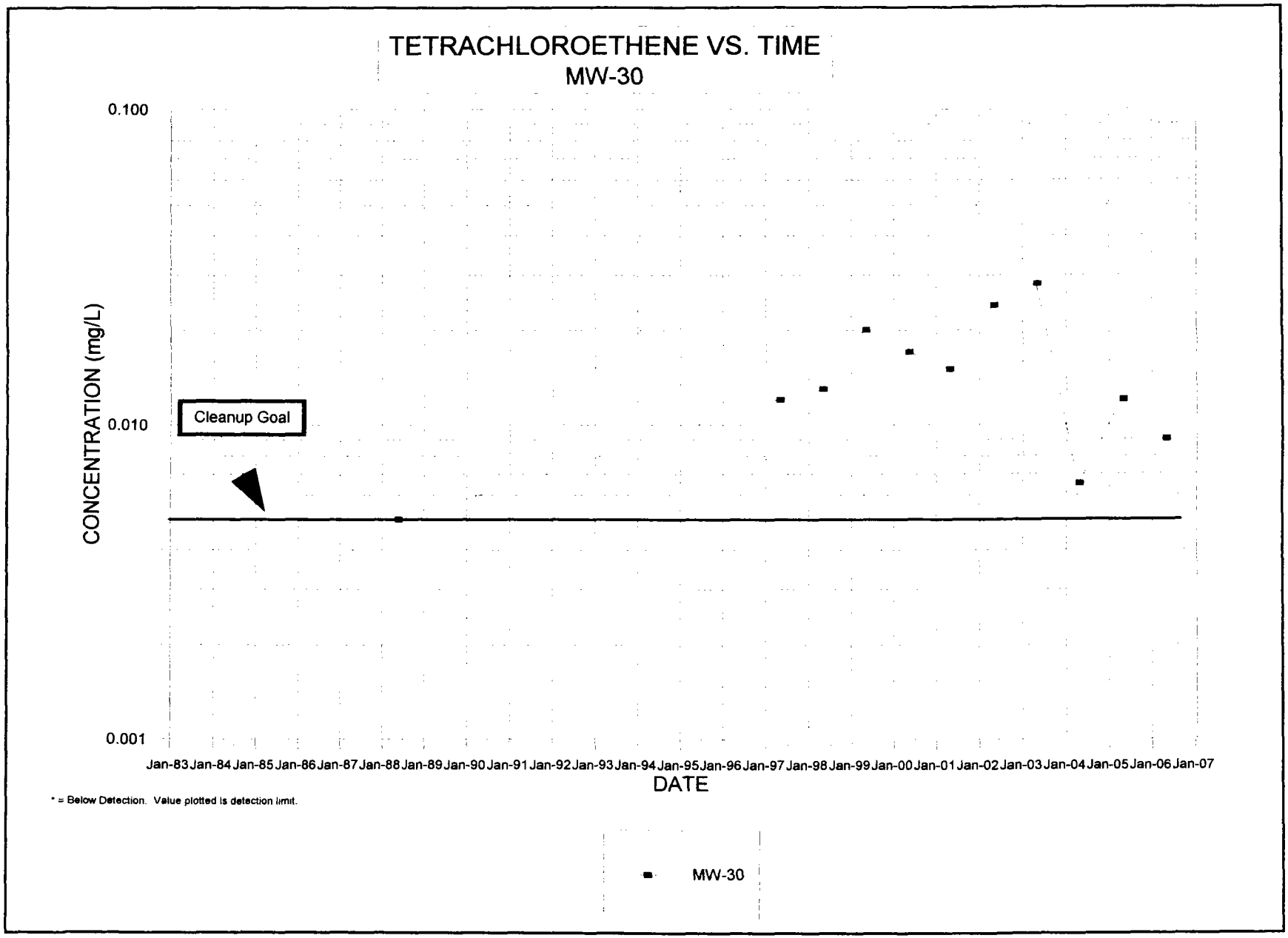
APPENDIX D-8

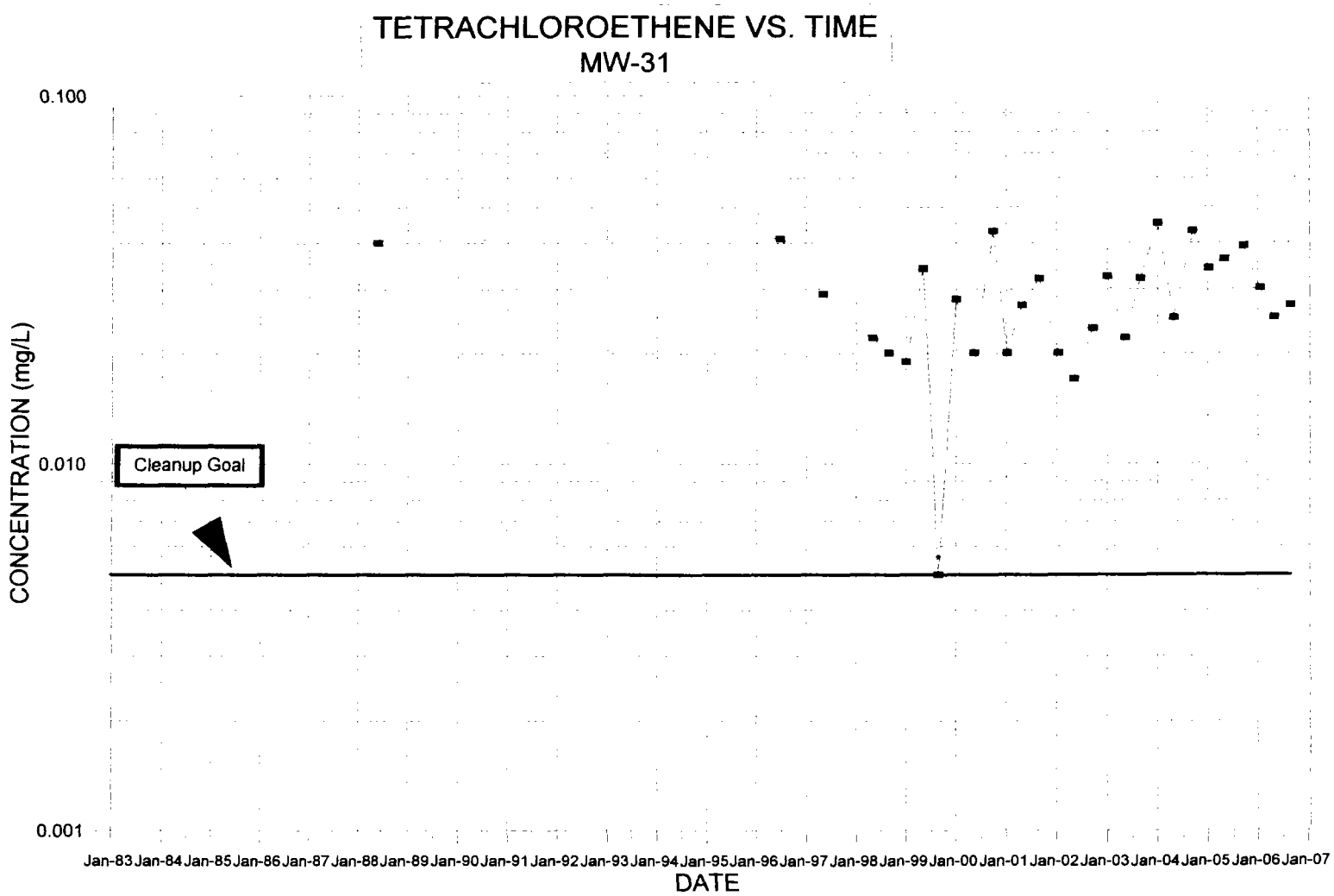
TETRACHLOROETHENE


TETRACHLOROETHENE VS. TIME
MW-2
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
* = Below Detection. Value plotted is detection limit.
MW-2


TETRACHLOROETHENE VS. TIME
MW-5
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
* = Below Detection Value plotted is detection limit
MW-5

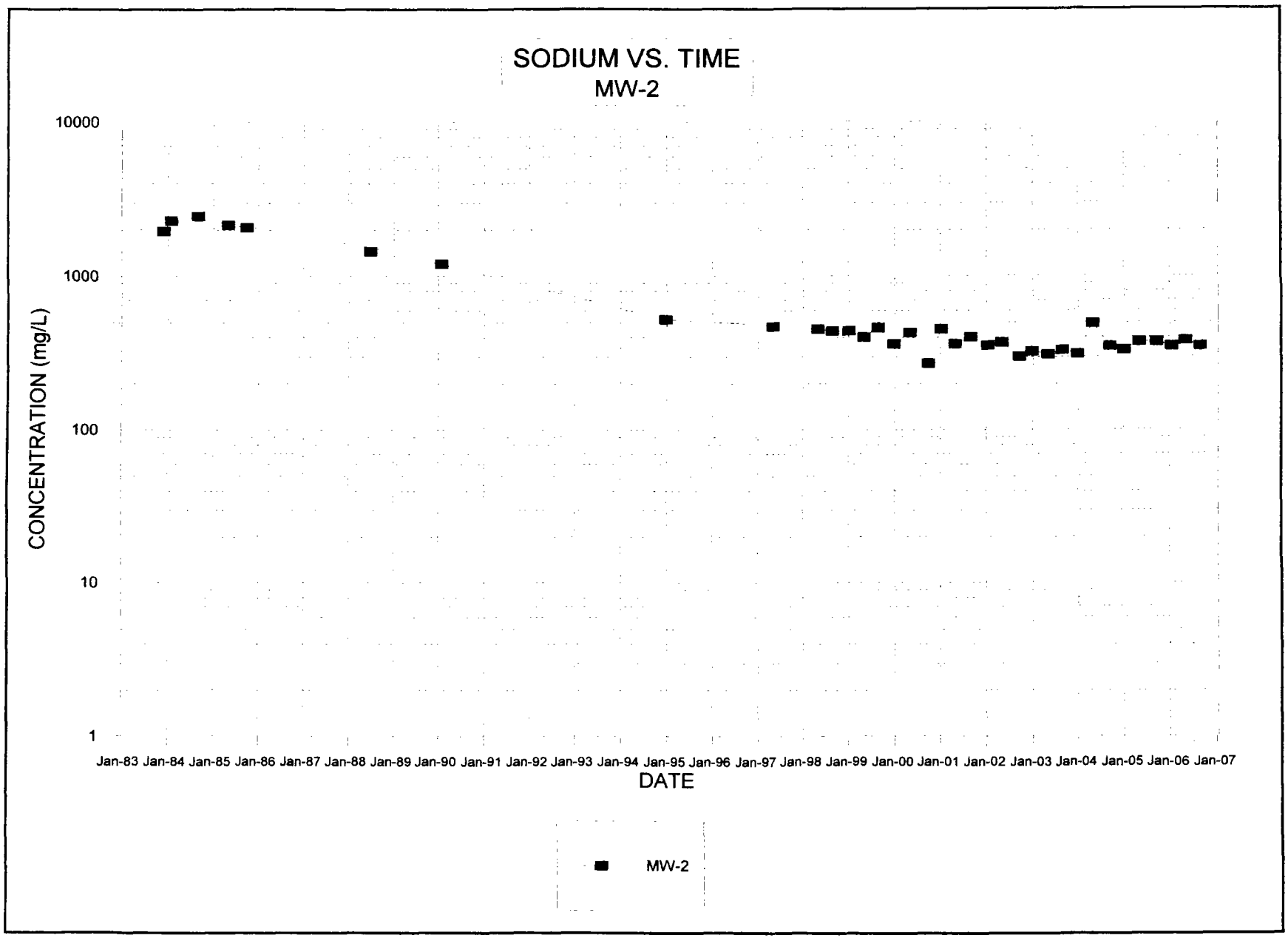

TETRACHLOROETHENE VS. TIME
MW-18
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
* = Below Detection. Value plotted is detection limit.
MW-18

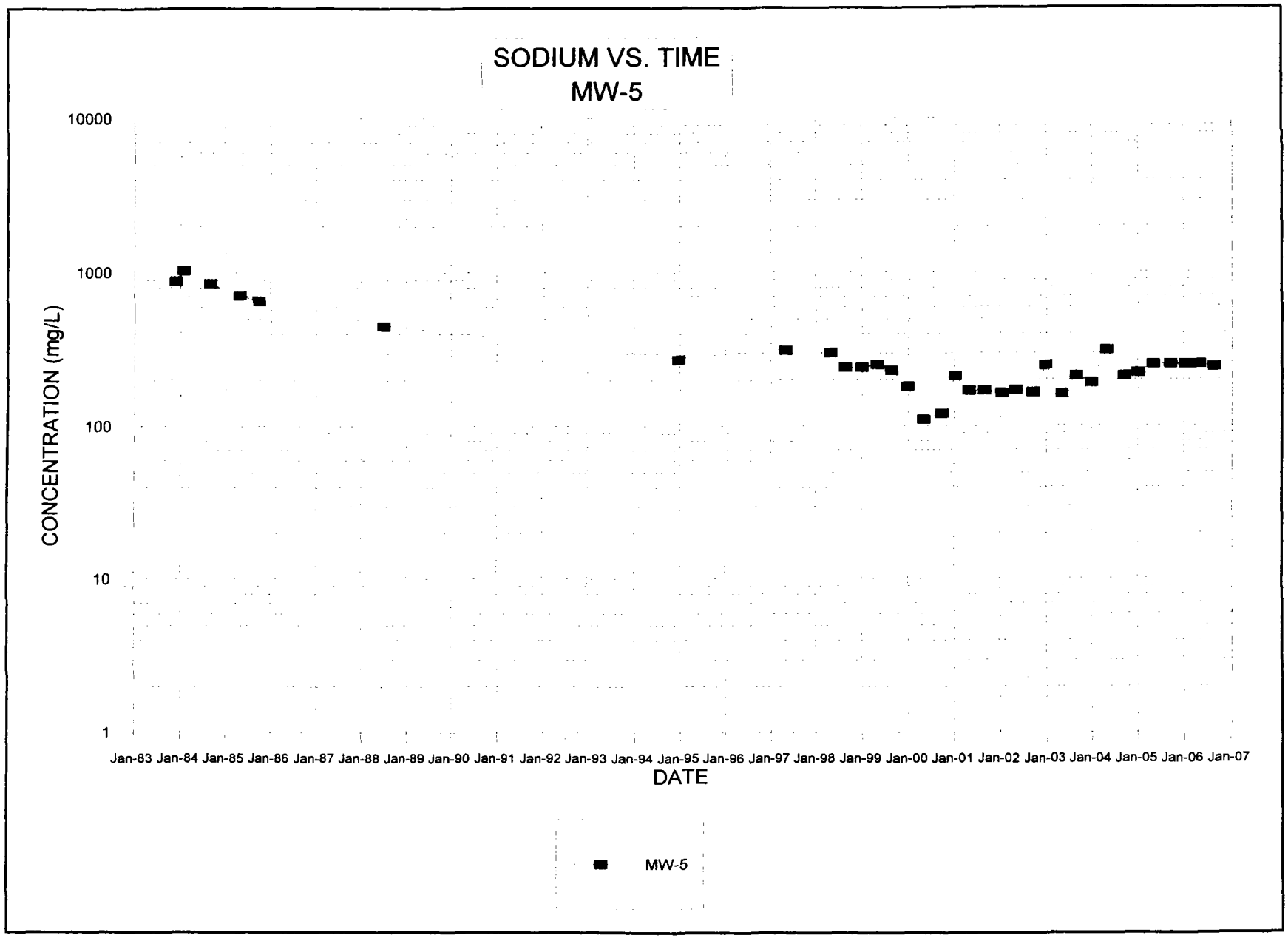

TETRACHLOROETHENE VS. TIME
MW-30
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
* = Below Detection. Value plotted is detection limit.
MW-30

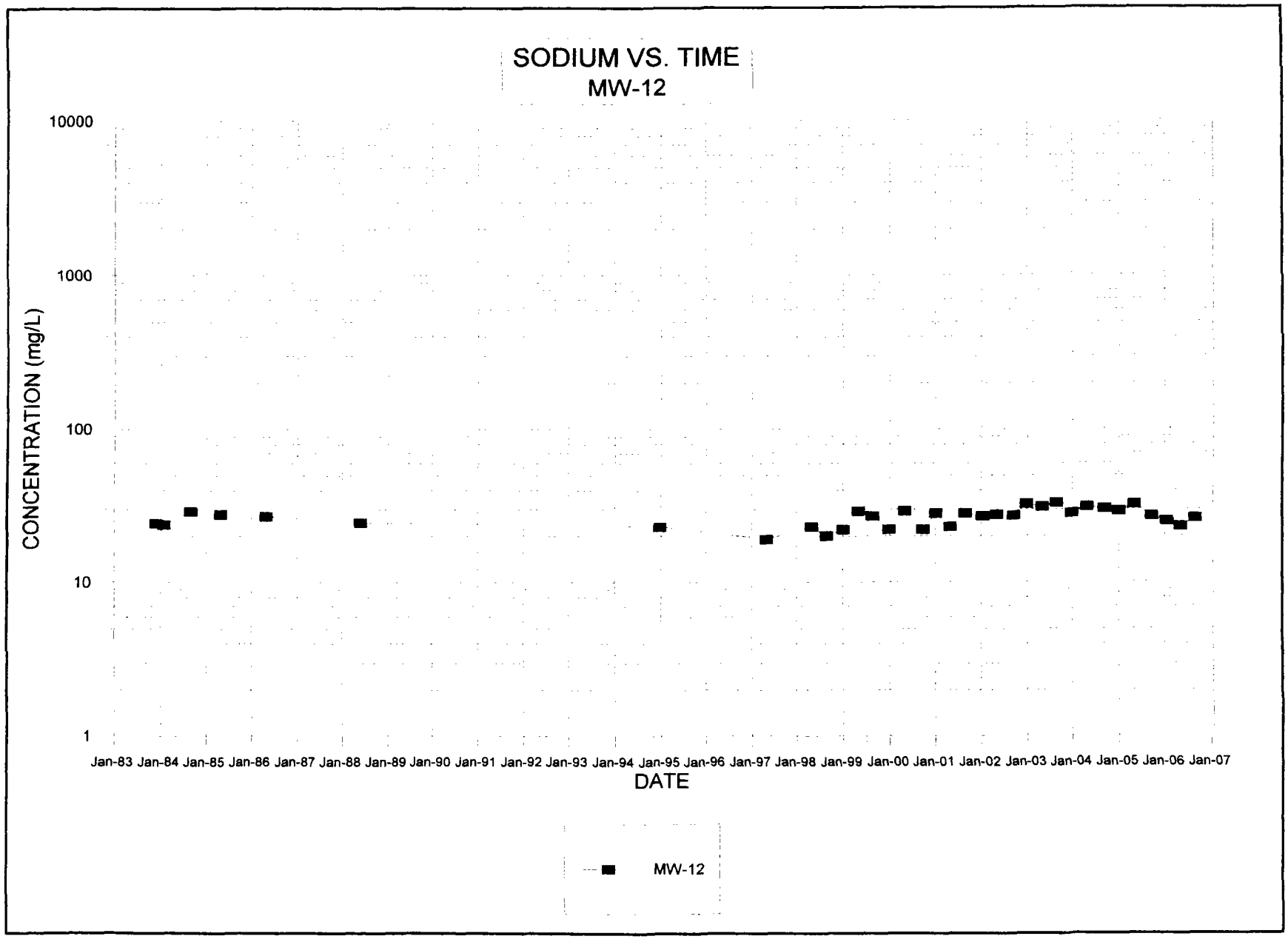

TETRACHLOROETHENE VS. TIME
MW-31
0.100
0.010
0.001
CONCENTRATION (mg/L)
Cleanup Goal
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
* = Below Detection. Value plotted is detection limit
MW-31

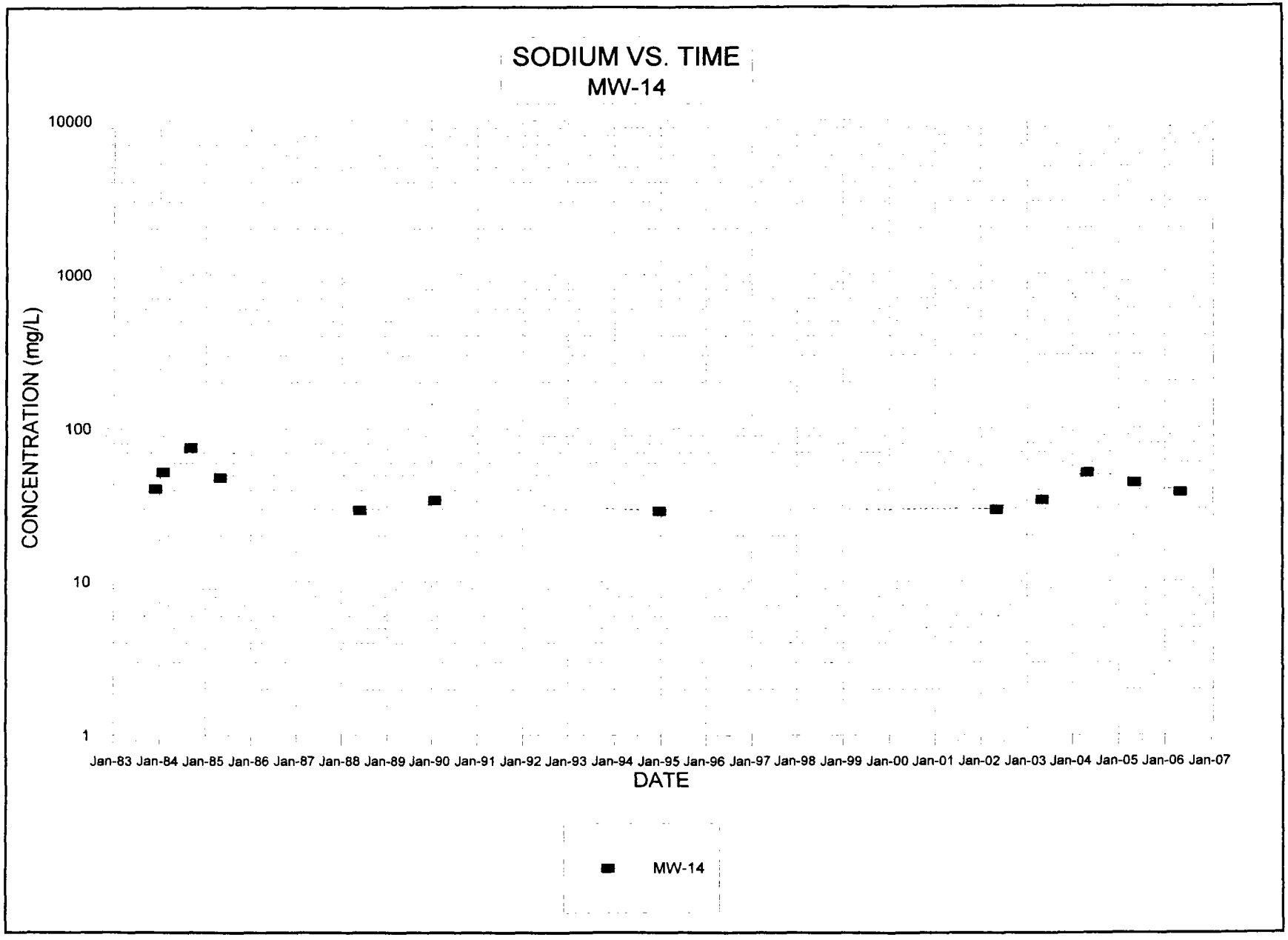
APPENDIX D-9

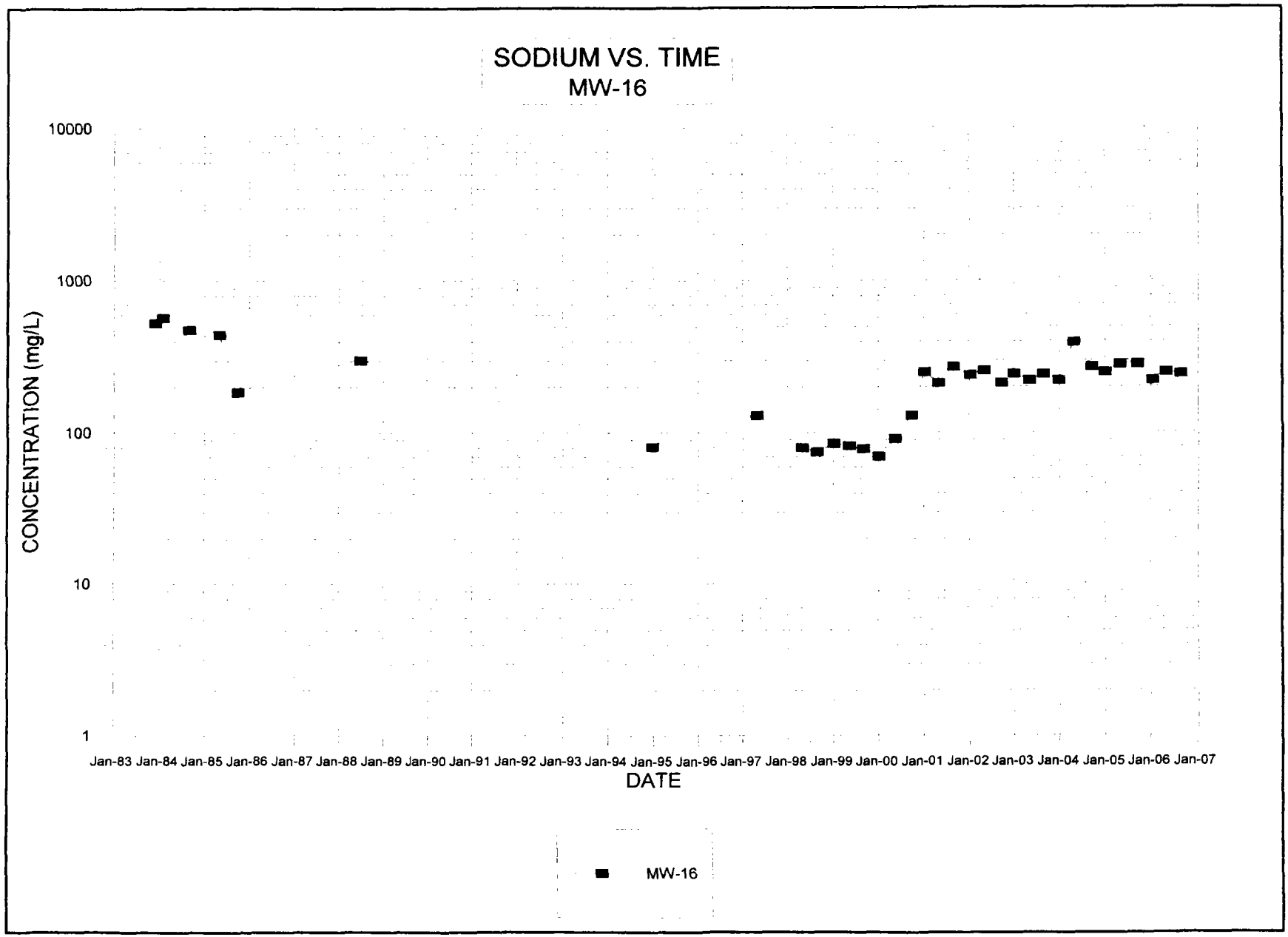
SODIUM

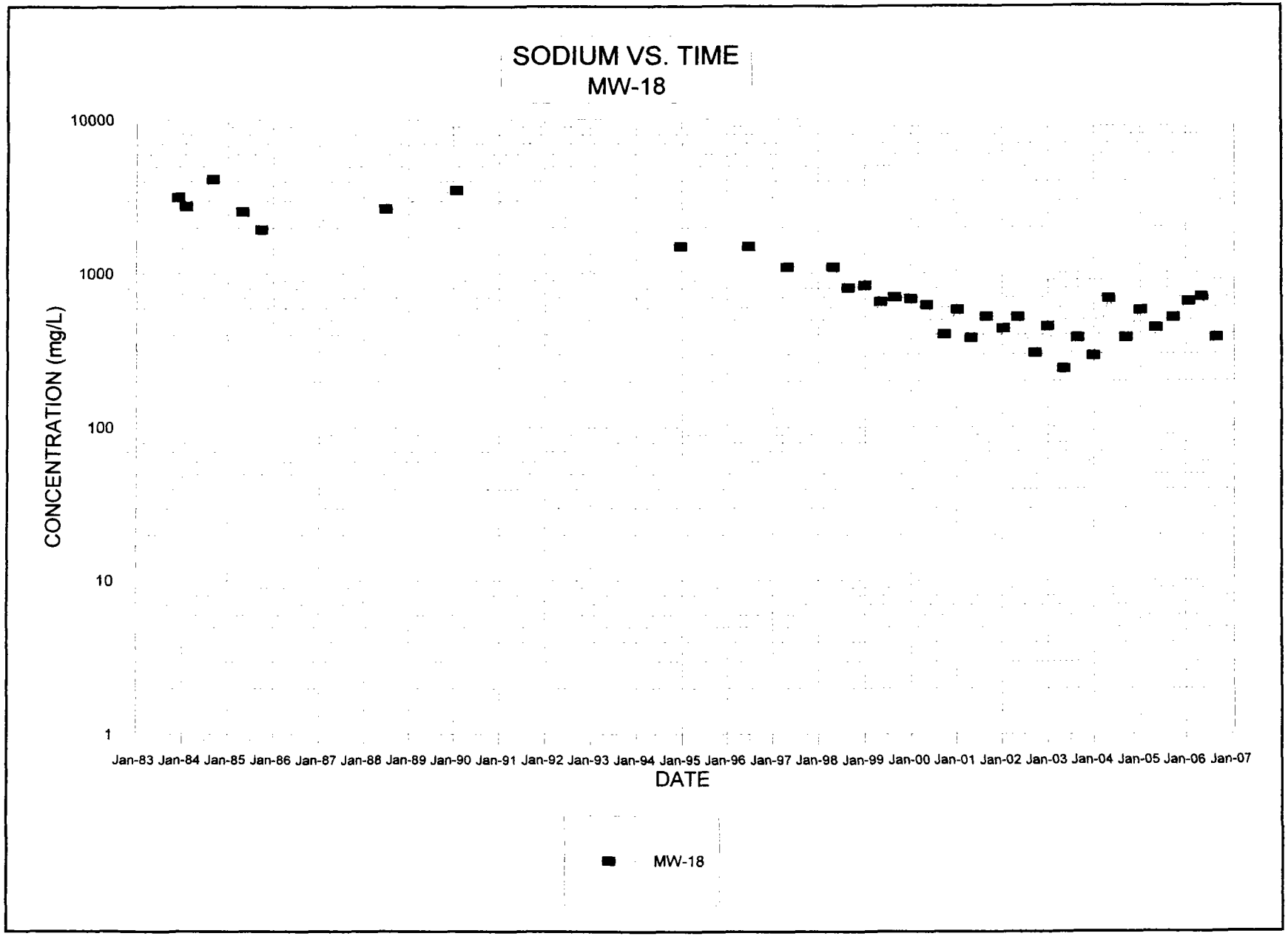

SODIUM VS. TIME
MW-2
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-2

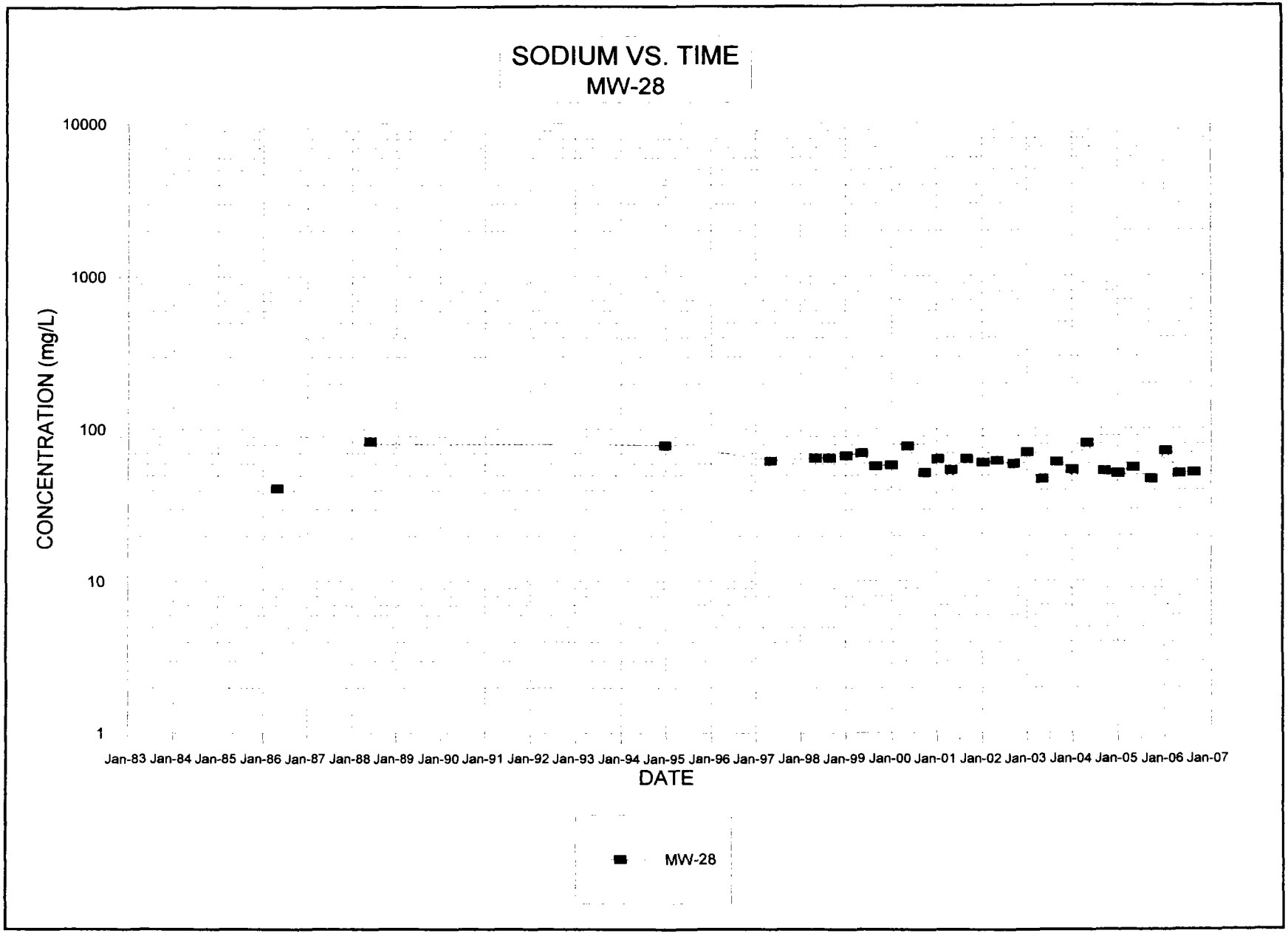

SODIUM VS. TIME
MW-5
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-5

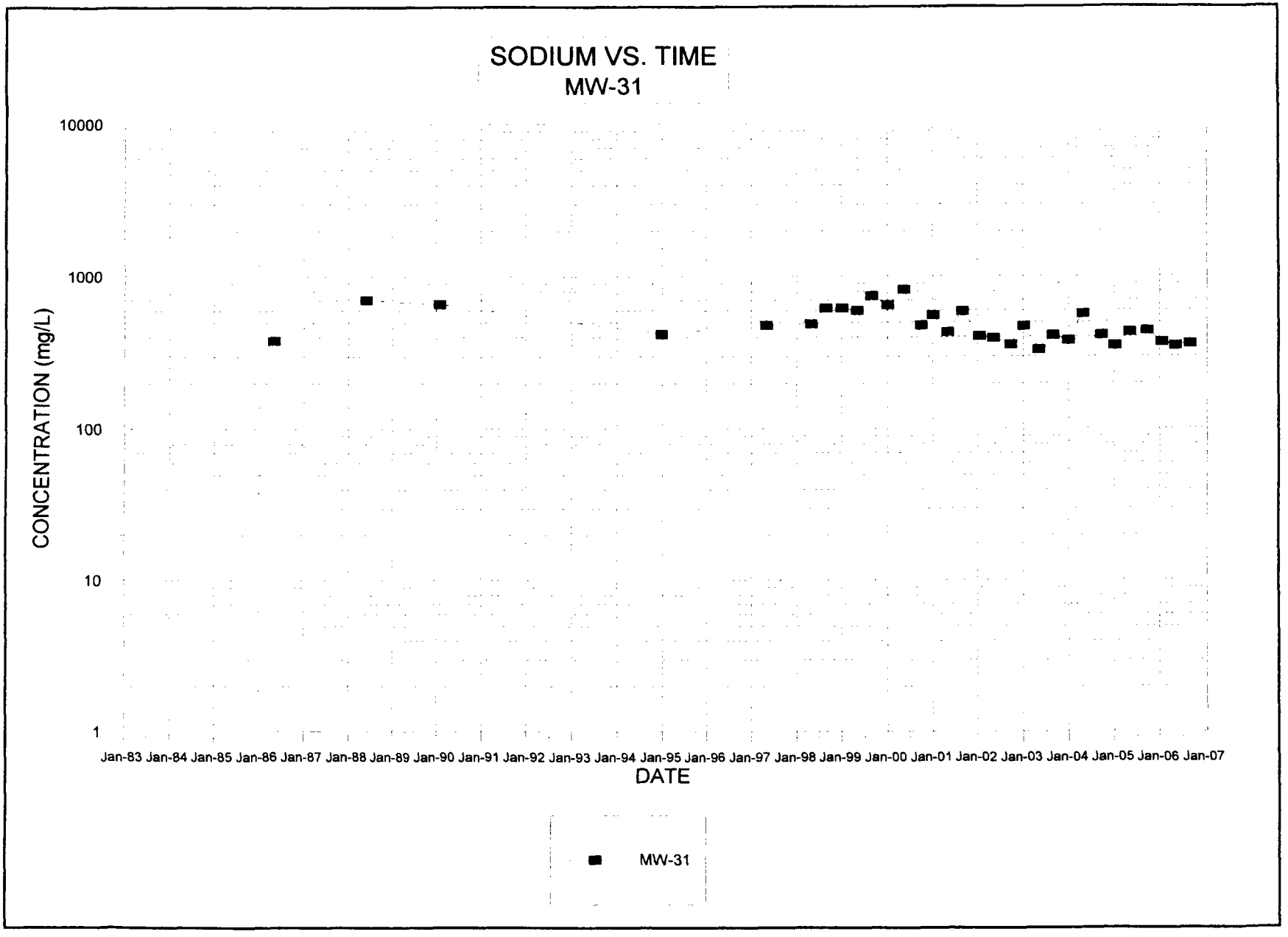

SODIUM VS. TIME
MW-12
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-12

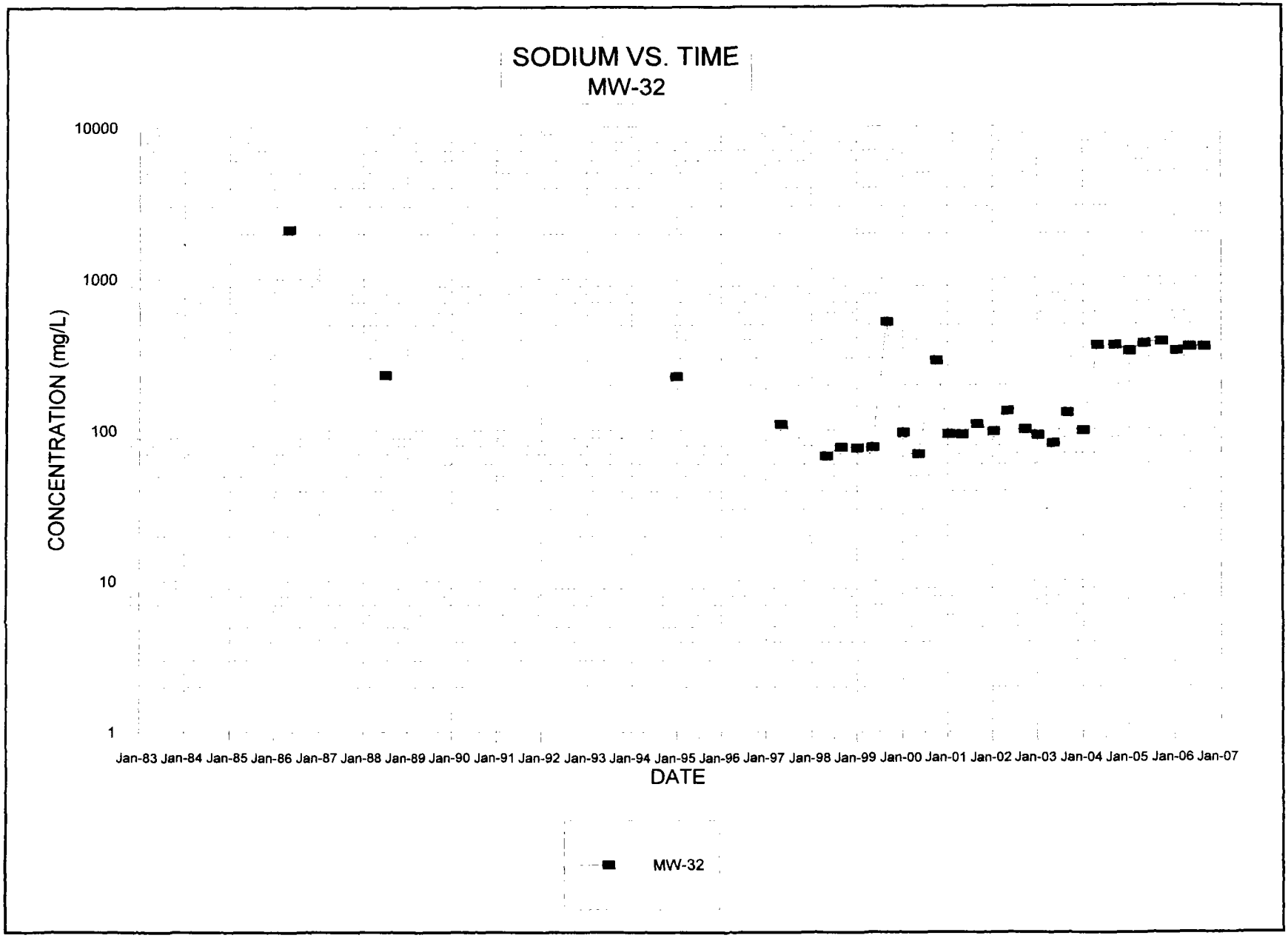

SODIUM VS. TIME
MW-14
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-14

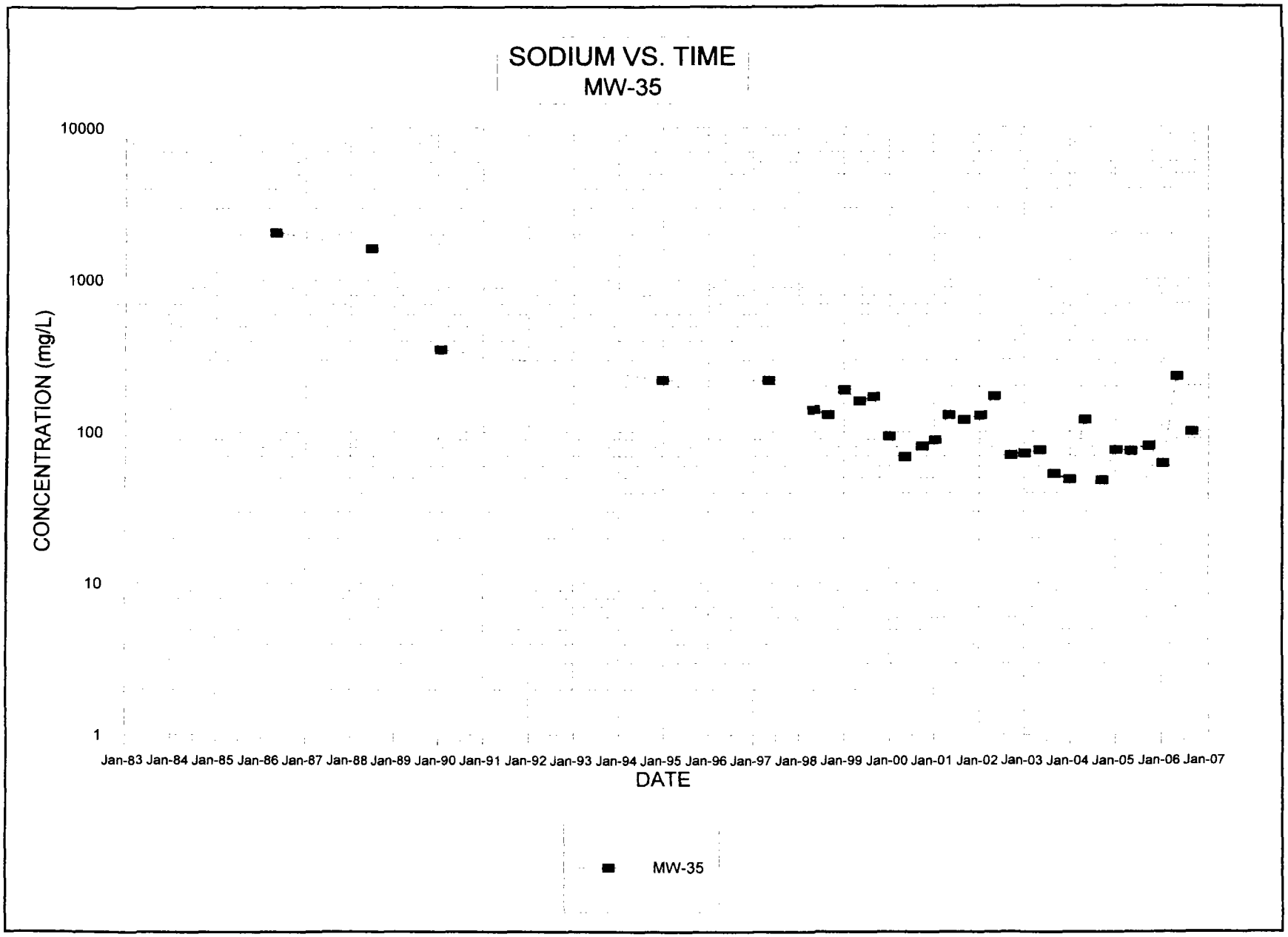

SODIUM VS. TIME
MW-16
CONCENTRATION (mg/L)
10000
1000
100
10
1
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-16

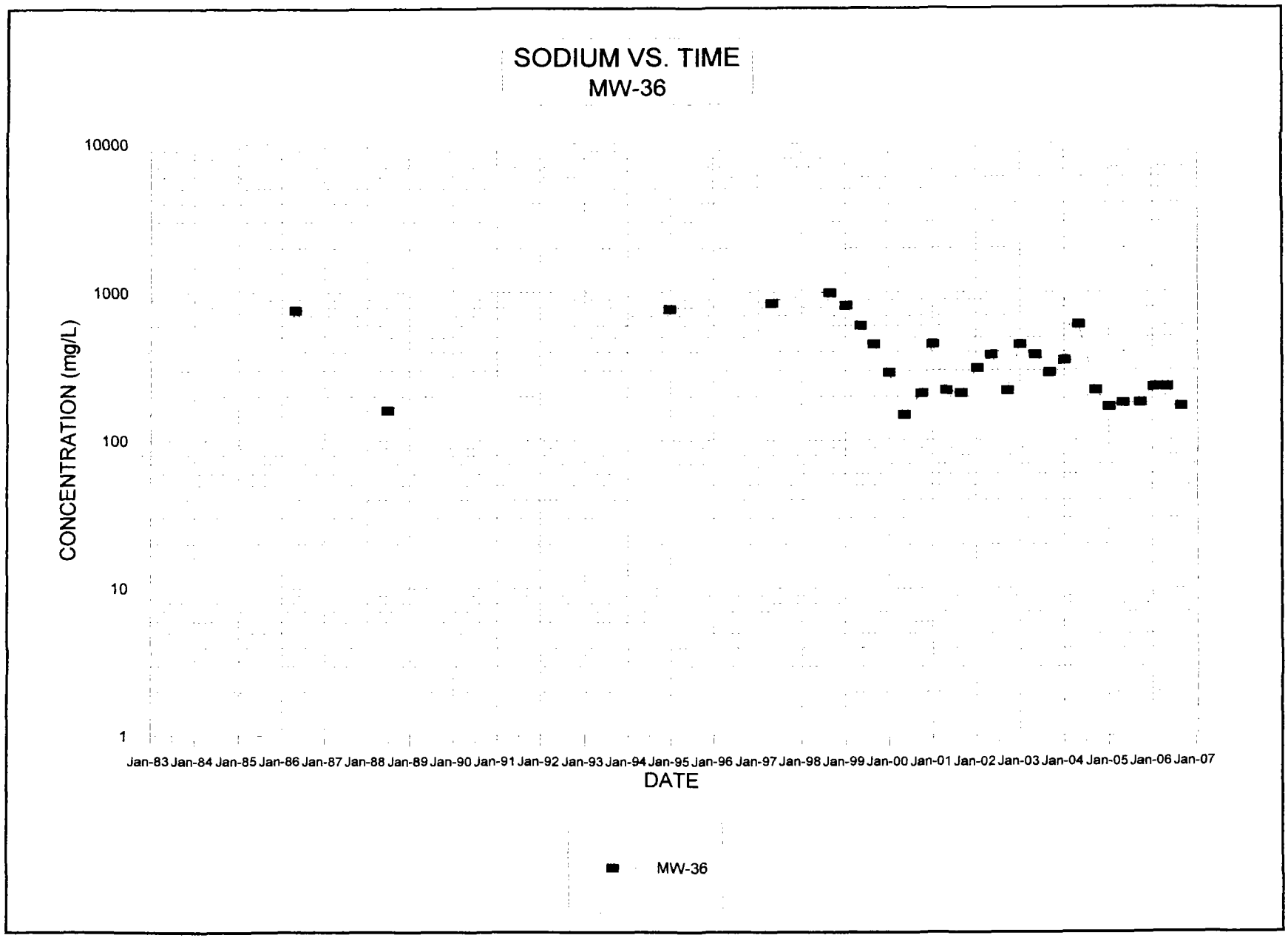

SODIUM VS. TIME
MW-18
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-18

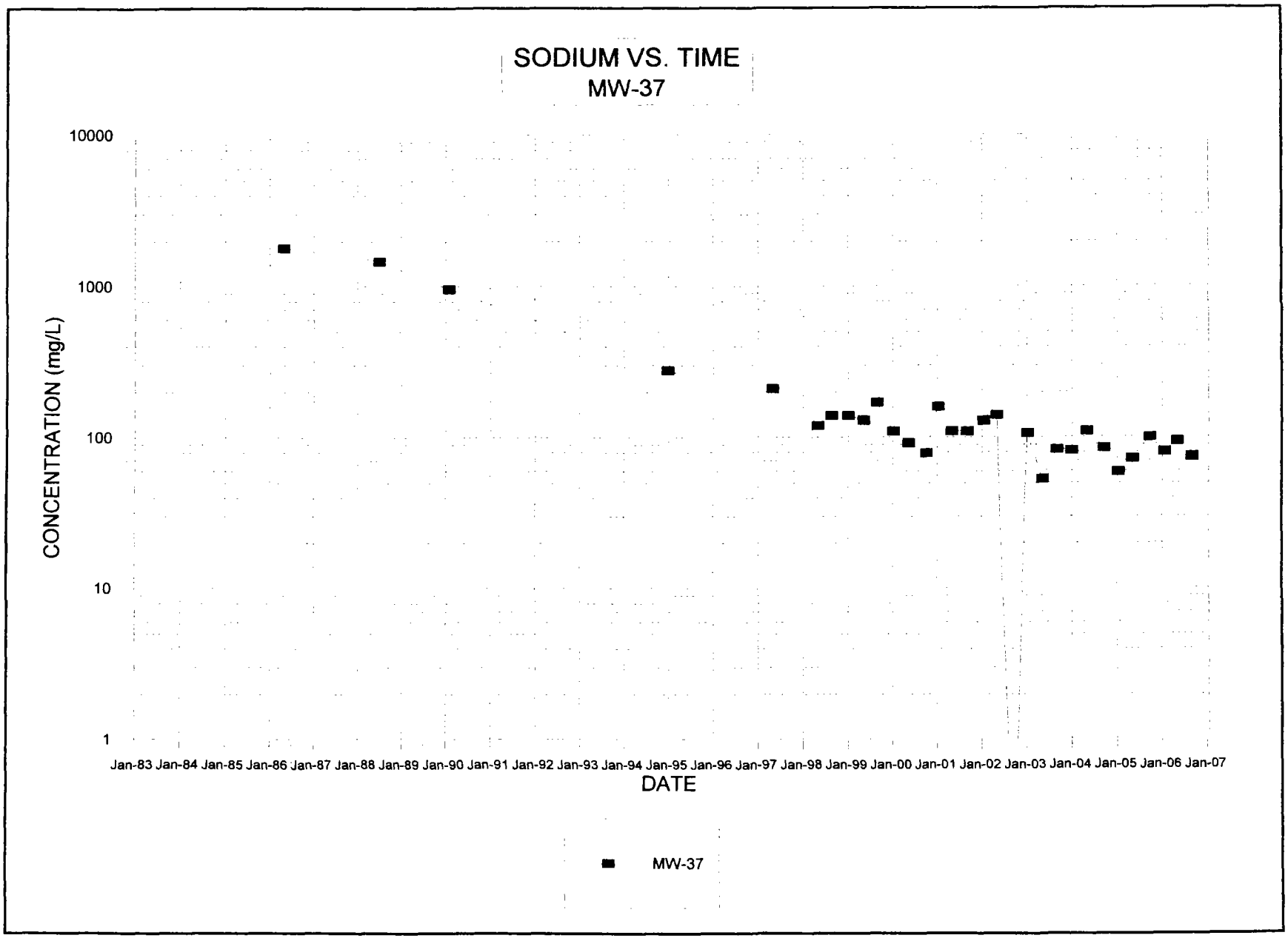

SODIUM VS. TIME
MW-28
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-28


SODIUM VS. TIME
MW-31
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-31


SODIUM VS. TIME
MW-32
CONCENTRATION (mg/L)
10000
1000
100
10
1
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-32


SODIUM VS. TIME
MW-35
CONCENTRATION (mg/L)
10000
1000
100
10
1
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-35


SODIUM VS. TIME
MW-36
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-36


SODIUM VS. TIME
MW-37
10000
1000
100
10
1
CONCENTRATION (mg/L)
Jan-83 Jan-84 Jan-85 Jan-86 Jan-87 Jan-88 Jan-89 Jan-90 Jan-91 Jan-92 Jan-93 Jan-94 Jan-95 Jan-96 Jan-97 Jan-98 Jan-99 Jan-00 Jan-01 Jan-02 Jan-03 Jan-04 Jan-05 Jan-06 Jan-07
DATE
MW-37

APPENDIX E

CONTAMINANT MASS-IN-PLACE ESTIMATION SUPPORTING DATA

MAY 2006 MONITORING EVENT

APPENDIX E-1
ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES
COLLECTED MAY 2006

ORMET CORPORATION
HANNIBAL, OHIO

SAMPLE I.D.:	MW-1	MW-2	MW-5	MW-7	MW-8	MW-10	MW-11	MW-12	MW-14	MW-15	MW-16	MW-17
Cyanide, Total	<0.01	6.5/11	5.2	0.019	0.094	<0.01	0.013	<0.01	0.014	16	4.9/5.9	4.2/3.5
Fluoride	1.5	46/52	16	1.0	1.9	1.1	0.99	0.92	2.2	35	49/44	13/22

SAMPLE I.D.:	MW-18	MW-19	MW-28	MW-29S	MW-29D	MW-30	MW-31	MW-32	MW-34S	MW-34D	MW-35	MW-36
Cyanide, Total	7.7	<0.01	0.48	1.7	0.23	<0.01	9.7	16	6.4	7.5	16	3.8
Fluoride	380	3.5	0.27	15	2.4	1.6	84	50	68	23	90	38

SAMPLE I.D:	MW-37	MW-39S	MW-39D	MW-40S	MW-40D	MW-41	MW-42S	MW-42D
Cyanide, Total	4.0	7.2	0.32	10	6.6	NS	3.8	2.7
Fluoride	8.4	130	9.0	21	11	NS	100	10

NOTE: All results in mg/L.
NS = Not Sampled

APPENDIX E-1 (CONT.)
PLUME CONTOUR AREA CALCULATIONS
FOR TOTAL CYANIDE AND FLUORIDE
BASED ON RESULTS OF SAMPLING CONDUCTED MAY 2006

ORMET CORPORATION
HANNIBAL, OHIO

Total Cyanide	Contour Interval (From Figure 4)	Contour Area in square feet (estimated using CAD* software)
	0.2 - 1 mg/L	437,610
	1 - 5 mg/L	541,229
	5 mg/L	15,151
	5 - 10 mg/L	407,540
	10 - 15 mg/L	418,705
	15 mg/L	130,983
Fluoride	**Contour Interval (From Figure 3)**	**Contour Area in square feet (estimated using CAD* software)**
	4 - 10 mg/L	433,177
	10 - 15 mg/L	299,749
	15 - 25 mg/L	333,722
	25 - 50 mg/L	514,201
	50 mg/L	31,837
	50 - 100 mg/L	313,717
	100 - 200 mg/L	29,412
	200 - 300 mg/L	15,105
	300 mg/L	5,185

*CAD - Computer Aided Drafting

APPENDIX E-1 (CONT.)
AVERAGE AQUIFER THICKNESS CALCULATIONS
WITHIN EACH PLUME CONTOUR INTERVAL
BASED ON RESULTS OF SAMPLING CONDUCTED MAY 2006

ORMET CORPORATION
HANNIBAL, OHIO

TOTAL CYANIDE

Contour Interval (From Figure 4)	Monitoring Well ID	Reported Concentration (mg/L)	Aquifer Thickness (feet)	Average Aquifer Thickness (b, feet)
0.2 - 1 mg/L	MW-28	0.48	27	39
	[MW-29S&D]	NA	50	
1 - 5 mg/L	MW-17	4.2	47	43
	MW-29S&D	0.97*	50	
	MW-37	4.0	18	
	MW-39S&D	3.8*	48	
	MW-42S&D	3.3*	53	
5 mg/L	MW-36	3.8	20	20
5 - 10 mg/L	MW-5	5.2	42	37
	MW-16	5.9	43	
	MW-18	7.7	25	
	MW-31	9.7	28	
	MW-34S&D	7.0*	37	
	MW-40S&D	8.3*	49	
10 - 15 mg/L	MW-2	11	39	33
	[MW-15]	NA	25	
	[MW-16]	NA	43	
	[MW-32]	NA	24	
15 mg/L	MW-15	16	25	20
	MW-32	16	24	
	MW-35	16	12	

NOTE: In preparing the above-referenced isopleth map (i.e., Figure 4), the higher of the values reported for a primary and a duplicate sample, and the average of values reported for the shallow well and the deep well of a monitoring well cluster were used to draw contour lines.

* - Denotes average of the values reported for the shallow well and the deep well of a monitoring well cluster.

[ ] - Denotes use of a surrogate well for determination of a representative aquifer thickness.

NA - Not Applicable

APPENDIX E-1 (CONT.)
AVERAGE AQUIFER THICKNESS CALCULATIONS
WITHIN EACH PLUME CONTOUR INTERVAL
BASED ON RESULTS OF SAMPLING CONDUCTED MAY 2006

ORMET CORPORATION
HANNIBAL, OHIO

FLUORIDE

Contour Interval (From Figure 3)	Monitoring Well ID	Reported Concentration (mg/L)	Aquifer Thickness (feet)	Average Aquifer Thickness (b, feet)
4 - 10 mg/L	MW-37	8.4	18	34
	MW-29S&D	8.7*	50	
10 - 15 mg/L	[MW-5]	NA	42	34
	[MW-15]	NA	25	
	[MW-37]	NA	18	
	[MW-40S&D]	NA	49	
15 - 25 mg/L	MW-5	16	42	46
	MW-17	22	47	
	MW-40S&D	16*	49	
25 - 50 mg/L	MW-15	35	25	30
	MW-16	49	43	
	MW-32	50	24	
	MW-34S&D	46*	37	
	MW-36	38	20	
50 mg/L	MW-39S&D	70*	48	51
	MW-42S&D	55*	53	
50 - 100 mg/L	MW-2	52	39	26
	MW-31	84	28	
	MW-35	90	12	
100 - 200 mg/L	[MW-18]	NA	25	25
200 - 300 mg/L	[MW-18]	NA	25	25
300 mg/L	MW-18	380	25	25

NOTE: In preparing the above-referenced isopleth map (i.e., Figure 3), the higher of the values reported for a primary and a duplicate sample, and the average of values reported for the shallow well and the deep well of a monitoring well cluster were used to draw contour lines.

* - Denotes average of the values reported for the shallow well and the deep well of a monitoring well cluster.

[ ] - Denotes use of a surrogate well for determination of a representative aquifer thickness.

NA - Not Applicable

APPENDIX E-1 (CONT.)
TOTAL CYANIDE AND FLUORIDE MASS-IN-PLACE
CALCULATION WORKSHEET
BASED ON RESULTS OF SAMPLING CONDUCTED MAY 2006

ORMET CORPORATION
HANNIBAL, OHIO

	Contour Interval (From Figure 4)	Contour Interval Area (in square feet) A	Average Aquifer Thickness (in feet) b	1. Aquifer Volume (in cubic feet) VA	Aquifer Porosity n	2. Volume of Ground Water (in cubic feet) Vgw	3. Volume of Ground Water (in Liters) Vgw	Average Concentration (mg/L) Cwi	4. Mass-in-Place for each interval (in mg) Mi	5. Mass-in-Place for each interval (in lbs) Mi
TOTAL CYANIDE	15 mg/L	130,983	20	2,619,660	0.25	654,915	18,547,193	16	296,755,085	654
	10 - 15 mg/L	418,705	33	13,817,265	0.25	3,454,316	97,826,236	13	1,271,741,071	2,804
	5 - 10 mg/L	407,540	37	15,078,980	0.25	3,769,745	106,759,178	8	854,073,427	1,883
	5 mg/L	15,151	20	303,020	0.25	75,755	2,145,382	5	10,726,908	24
	1 - 5 mg/L	541,229	43	23,272,847	0.25	5,818,212	164,771,757	3	494,315,270	1,090
	0.2 - 1 mg/L	437,610	39	17,066,790	0.25	4,266,698	120,832,873	0.6	72,499,724	160
									Total Cyanide Mw:	6,615
	(From Figure 3)									
FLUORIDE	300 mg/L	5,185	25	129,625	0.25	32,406	917,745	380	348,743,100	769
	200 - 300 mg/L	15,105	25	377,625	0.25	94,406	2,673,585	250	668,396,250	1,474
	100 - 200 mg/L	29,412	25	735,300	0.25	183,825	5,205,924	150	780,888,600	1,722
	50 - 100 mg/L	313,737	26	8,157,162	0.25	2,039,291	57,752,707	75	4,331,453,022	9,551
	50 mg/L	31,837	51	1,623,687	0.25	405,922	11,495,704	63	724,229,349	1,597
	25 - 50 mg/L	514,201	30	15,426,030	0.25	3,856,508	109,216,292	38	4,150,219,111	9,151
	15 - 25 mg/L	333,722	46	15,351,212	0.25	3,837,803	108,686,581	20	2,173,731,619	4,793
	10 - 15 mg/L	299,749	34	10,191,466	0.25	2,547,867	72,155,579	13	938,022,531	2,068
	4 - 10 mg/L	433,177	34	14,728,018	0.25	3,682,005	104,274,367	7	729,920,572	1,609
									Total Fluoride Mw:	32,735

1 VA = A x b
2. Vgw = VA x n
3. Vgw in ft^3 multiplied by 28.32 L/ft^3 = Vgw in Liters
4. Mi = Vgw x Cwi
5. Mi in mg divided by 1000 mg/g multiplied by 2.205×10^{-3} lb/g = Mi in pounds