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2011 ANNUAL REMEDIAL ACTION GROUNDWATER MONITORING REPORT ORMET CORPORATION SUPERFUND SITE

March 22, 2012

Prepared for:

Ormet Primary Aluminum Corporation
Hannibal, Ohio

Prepared by:

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ORMET
PRIMARY ALUMINUM CORPORATION

April 27, 2012

Mr. Bernie Schorle
Remedial Project Manager
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USEPA Region V
77 West Jackson Blvd.
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Dear Mr. Schorle:

Enclosed are two copies of the 2011 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. Please note the Laboratory Report with QA/QC is included as a CD in Appendix B inside each report book.

Respectfully,

John Reggi
Director Corporate Env. Services

Enclosures

cc:	Mike Griffin	Ormet Primary Aluminum Corporation
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- Laboratory Analytical Report for April 2011 Monitoring Event
- Laboratory Analytical Report for July 2011 Monitoring Event
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2011 ANNUAL REMEDIAL ACTION GROUNDWATER MONITORING REPORT ORMET CORPORATION SUPERFUND SITE HANNIBAL, OHIO

BACKGROUND

Under the terms of a Consent Decree entered on December 18, 1995, and modified on March 11, 2009, between the United States Environmental Protection Agency (USEPA) and the Ormet Primary Aluminum Corporation (Ormet), Ormet has undertaken Remedial Action (RA) at their Hannibal, Ohio Superfund site consisting of the following:

- Containment of the plume in the alluvial aquifer by pumping of groundwater at the Reduction Plant;
- 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 along the toe of the former CMSD to collect seeps, with treatment of the collected seep water using activated carbon followed by treatment at the groundwater 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 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 occurs over a portion of the FSPSA, the flushing schedule is modified annually based on storm events. Under the typical schedule, the flushing system is on for two hours and off for one hour for about 12 to 14 hours each day. The flushing system is not operated during winter months when the ground may be frozen and freezing of the lines could occur, typically from November through March.

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

SUMMARY OF GROUNDWATER MONITORING PROGRAM

The current system of groundwater monitoring wells and piezometers at the Ormet site is shown on Figure 1. Under the RA Groundwater Monitoring Plan, monitoring is conducted three times per year (approximately once every four months). During 2011, the first monitoring event was performed on April 4 and 5, the second from July 11 through 13, and the third on November 15 and 16.

Each monitoring event included measurement of water-level elevations at MW- and TH-series monitoring wells, PPB-series piezometers monitoring the alluvial aquifer, and Ohio River pool measuring points RP-1 and RP-2. Water-level elevation data collected in conjunction with the 2011 monitoring events are provided in Tables 1, 2, and 3, respectively, and a groundwater contour map based on July 2011 data is provided as Figure 2.

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

MW - 2	MW - 32
MW - 5	MW - 35
MW - 12*	MW - 36
MW - 16	MW - 37
MW - 18	MW - 39S
MW - 28	MW - 44S*
MW - 31	MW - 44D*

With the exception of MW-39S, these wells were identified in the RA Groundwater Monitoring Plan as Points of Compliance, as required under Section II.6. of the Consent Decree SOW. MW-39S was later added at the request of USEPA.

The RA Groundwater 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 and proximate to 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-39D
MW-14	MW-40S & D
MW-15	MW-42S & D
MW-17	

Water Sampling Log forms for each of the three monitoring events conducted during 2011 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 groundwater quality during the remediation program.

Groundwater 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. Samples from MW-12 are also analyzed for PCBs, and samples from wells MW-44S and MW-44D are analyzed for PCBs only. Tetrachloroethene (PCE) is 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).

Analyses of groundwater samples collected during the 2011 monitoring events were performed by Microbac Laboratories, Inc. of Marietta, Ohio. The parameters analyzed and their corresponding groundwater clean-up goals are listed below.

Analytical Parameter	Groundwater Clean-Up Goal (mg/L)
Arsenic	0.01*
Beryllium	0.004
Manganese	0.23*
Vanadium	0.26
Cyanide (total)	N/A
Cyanide (amenable)	0.2
Fluoride	4
PCBs	N/A
Tetrachloroethene	0.005
pH	N/A
Specific Conductance	N/A
Sodium	N/A

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 groundwater 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 data reports for the 2011 groundwater analyses are provided in Appendix B, and the analytical results are summarized in Table 4 and Table 6 (PCBs). For purposes of comparison, Table 4 also includes historical results for the parameters and wells being monitored. The data validation summary report for the 2011 analyses is provided in Appendix C.

RESULTS OF 2011 REMEDIAL ACTION GROUNDWATER MONITORING

GROUNDWATER FLOW

Water-level elevation data collected during the July 2011 monitoring event (Table 2) were used to construct the groundwater contour map presented as Figure 2. The groundwater elevation contours and associated groundwater flow patterns shown in Figure 2 are consistent with those previously mapped. As shown, the groundwater pumping component of the site remedy is effective in containing the plume in the alluvial aquifer beneath the Ormet Reduction Plant property. Groundwater flow in the alluvial aquifer is generally from northeast to southwest, toward the Ormet Reduction Plant Ranney well. Under the pumping conditions that exist at the Reduction Plant, a primary source of recharge to the alluvial aquifer is by inflow from the Ohio River.

Pumping of the former Ormet Rolling Mill Ranney well (located about 2000 feet west of the Reduction Plant Ranney well) was discontinued in late 2005 and the well was abandoned by Reynolds, Inc. of Middletown, Ohio in June 2009. By this change, the groundwater divide that in previous years existed roughly parallel to and west of the fenceline separating the two plants is no longer present, and groundwater beneath the former Rolling Mill property is now drawn toward the Reduction Plant Ranney well (see Figure 2).

GROUNDWATER QUALITY

Cleanup Goals

The following table compares the cleanup goals specified in the ROD and, in the case of arsenic and manganese, the background values calculated by HMI, with the most recent (i.e., November 2011) concentrations reported for samples collected from the compliance wells.

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)	0 004	0.23/ 9.8(1)	0.26	4 0
Wells within FSPSA						
MW - 32	+	o	*	o	*	+
MW - 35	+	*	*	o	*	*
MW - 36	+	*	*	*	*	+
MW - 37	*	*	*	*	*	+
Downgradient Edge of FSPSA						
MW - 16	+	o	*	o	*	+
MW - 18	+	x	*	o	*	+
MW - 28	*	*	*	*	*	*
MW - 31	+	o	*	o	*	+
Mid-Plant Area						
MW - 2	+	o	*	o	*	+
MW - 5	+	*	*	o	*	+
Downgradient of CMSD						
MW - 12	*	*	*	o	*	*

* - Latest result at or below ROD cleanup goal.

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

+ - Latest result is above ROD 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.

Concentration vs. Time Trends

To evaluate changes in plume concentrations within the alluvial aquifer beneath the Ormet site, recent and historical results are 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 Groundwater Monitoring Plan (see Appendix D). Analytical results for sodium are also graphed, because it is an additional indicator of the plume.

Discussions of the concentration versus time trends for each parameter focus mainly on data collected since the pre-remediation monitoring event performed in 1997. In viewing the concentration versus time graphs, it should be noted that the construction and operation of the soil flushing system in the FSPSA altered site water-quality conditions for certain parameters (e.g., cyanide, fluoride) at certain wells. Construction activities (1997 to 1998) involved grading to establish desired surface slopes and trenching to install underground piping to route water to spray birds, both of which loosened the upper soil profile and predictably made constituents present in the soil matrix more available to leaching. Operation of soil flushing (pilot tested in 1998 and fully operational in 1999) was specifically designed to accelerate the rate at which constituents were leached from the soil to the ground water. The net result observed for certain wells was an initial increase in concentrations roughly corresponding to construction and operation of soil flushing, generally followed by a gradual decrease.

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 free cyanide. Cyanide amenable to chlorination, which has been used as a surrogate for free cyanide, is that portion of total cyanide existing as free cyanide, cyanide salts, and weakly bound cyanide complexes apt to contribute to free cyanide. Beginning in November 2010 Ormet initiated routine analyses for weak-acid dissociable cyanide (WAD cyanide), as it also quantifies concentrations of free cyanide, cyanide

salts and weak cyanide complexes apt to contribute to free cyanide, and is regarded to be a more reliable and consistent surrogate for free cyanide. A comparison of 2011 results for total cyanide, amenable cyanide and WAD cyanide is provided in Table 5. Based on historical sampling results (Table 4) and the data summarized in Table 5, the predominant form of cyanide occurring in the groundwater beneath the Ormet site is the more stable cyanide complexes, as the concentrations of amenable or free cyanide historically reported, and the concentrations of WAD cyanide more recently reported, are typically much lower than the total cyanide concentration.

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 exhibit a substantial degree of analytical variability, in some cases several orders of magnitude difference in concentration from one monitoring event to the next and, in certain sample sets, amenable cyanide concentrations reported to equal total cyanide concentrations (Table 4). This variability is credited to the analytical method for determining cyanide amenable to chlorination (e.g., chlorination/oxidation of the sample followed by dechlorination, sample matrix interferences, lab failure to fully dechlorinate), and is not regarded to reflect actual changes in groundwater quality. The results of analyses for WAD cyanide (Table 5) have shown much less analytical variability.

For total cyanide concentration versus time trends (Appendix D-1), following increased concentrations in response to soil flushing, a trend of decreasing concentrations is apparent at compliance wells MW-2, MW-16, MW-18, MW-28, MW-31 and MW-37. At wells MW-5 and to a lesser extent MW-32, a trend of increasing total cyanide concentrations was observed but, at both wells, concentrations appear to have stabilized and begun a decreasing trend. At MW-35 and MW-36 concentrations show a decreasing trend in recent years. At MW-12 concentrations have typically been below detection limits. Overall, the total cyanide concentration data indicate that soil flushing within the FSPSA, and/or the excavation/rearrangement of shallow soil during installation of the soil-flushing system, caused initial increases in leachate generation and groundwater 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 have consistently been below the cleanup goal of 4 mg/L at compliance wells MW-12 and MW-28. Recently, fluoride concentrations have also typically been below the cleanup goal at MW-35 and MW-37. Following increases in fluoride concentrations attributed to soil flushing, a general decreasing concentration trend is observed at compliance wells MW-2, MW-16, MW-18, MW-31, MW-35, MW-36 and MW-37. At MW-5 and MW-32 increased concentrations of fluoride following soil flushing persisted longer than at other wells, and in recent years have stabilized.

Arsenic

Concentration versus time graphs for arsenic for each of the compliance point wells are provided in Appendix D-4. At 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 listed in the ROD, and at MW-36 and MW-37 concentrations reported since mid 2006 have typically been below the 0.01 mg/L clean-up goal. At MW-35, reported arsenic concentrations, though commonly exceeding the ROD-specified cleanup goal, have typically been below the calculated background value (i.e., $\leq$ 0.04 mg/L) during recent years. Data for wells MW-2, MW-18, MW-31, MW-36 and MW-37 show a general trend of decreasing concentrations, and data for MW-35 exhibit no consistent trend. At MW-16 and MW-32, arsenic concentrations increased relative to historical values, possibly as a result of soil flushing, but in recent years have shown a downward 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 groundwater 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 ten of the eleven compliance wells (all except MW-18), the most recent results were below the 0.04 mg/L background level determined for arsenic, and at six of these wells also below the ROD-specified cleanup goal.

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 groundwater quality impacts by this constituent. Beryllium concentrations were consistently below the cleanup goal in all samples from all of the compliance monitoring wells analyzed during each of the 2011 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 cleanup goal of 0.23 mg/L and, in recent samples, also typically below the cleanup goal at MW-36 and MW-37. At MW-2, MW-5, MW-16, MW-18, MW-31, MW-32, MW-35, MW-36, and MW-37, increased

manganese concentrations that roughly coincided with soil flushing activities appear to have peaked and have since shown a general decreasing trend.

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 groundwater 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. Except for a few isolated detections, manganese concentrations have been below the background level at all of the compliance wells during recent and historical monitoring events.

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 both MW-18 and MW-37, only two of the historically reported vanadium values exceeded the cleanup goal. These data do not indicate any substantive groundwater quality impacts by vanadium.

Tetrachloroethene (PCE)

Under the RA Groundwater Monitoring Plan, analyses for tetrachloroethene (PCE) are performed on samples from four the compliance wells (MW-2, MW-5, MW-18 and MW-31) plus MW-30, at which PCE was detected during the RI. PCE concentration versus time graphs for the four compliance wells are provided in Appendix D-8. Since the Phase I RI, PCE concentrations have typically been below detection and the ROD-specified cleanup goal of 0.005 mg/L at MW-5 and, in recent samples, also at MW-18. PCE concentrations have shown increases at MW-2 and, to a lesser degree, at MW-31. At both of these wells the increases appear to have stabilized, and at MW-2 subsequent decreases are apparent.

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 an indicator of changes in the overall condition of the plume. At compliance wells MW-2, MW-18, MW-31, MW-35, MW-36 and MW-37, data collected since 1997 show decreases in sodium concentrations, and at MW-5, MW-12 and MW-28 no clear trend of increasing or decreasing concentrations. At MW-16 and MW-32, sodium concentrations 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 July 2011 expanded 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 overall groundwater 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. Results of the mass-in-place estimates for fluoride and cyanide are summarized in Table 7. For comparison, Table 7 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 July 2011 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 annual reports.

Based on the estimates presented in Table 7, 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 about 21,741 pounds, and from May 2001 to May 2004 increased to 38,836 pounds. In 2005 fluoride mass-in-place decreased slightly to about 37,656 pounds, and in 2006 decreased further to about 32,725 pounds. For 2007 the fluoride mass-in-place increased to about 35,219 pounds, and for 2008 and 2009 decreased to about 33,638 pounds and 29,510 pounds, respectively. For 2010 the fluoride mass-in-place increased to about 37,466 pounds, and for 2011 decreased to about 33, 772 pounds.

Similar to fluoride, the 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 cyanide mass-in-place showed an overall decreasing trend, to a low of about 2,773 pounds. In 2004 the 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). For 2007 the total cyanide mass-in-place decreased slightly to about 6,438 pounds, and for 2008 and 2009 continued to decrease to about 5,997 pounds and 5,422 pounds, respectively. For 2010 the total cyanide mass-in-place further decreased to about 3,441 pounds, and for 2011 remained roughly the same at about 3,499 pounds.

To assess the removal of cyanide and fluoride from the alluvial aquifer by pumping of groundwater at the Reduction Plant, the mass removals achieved from January through

December 2011 were calculated and compared to changes in the estimated masses in the aquifer over the same period (see Table 8). The masses of cyanide and fluoride removed during 2011 were calculated using analytical data and flow data routinely collected by Ormet for the Reduction Plant pumping centers (i.e., the Ranney well and the interceptor well).

During the period from January through December 2011, approximately 7,234 pounds of fluoride and approximately 760 pounds of cyanide were removed from the alluvial aquifer by groundwater pumping. The mass removal of fluoride was about 3,202 pounds lower and of cyanide was about 496 pounds lower than mass removals achieved during 2010 (see Figure 8). During 2011, the estimated mass of fluoride in the aquifer decreased by approximately 3,694 pounds relative to 2010, and the estimated mass of cyanide increased by approximately 58 pounds. Figure 7 shows estimated masses of fluoride and total cyanide in the alluvial aquifer versus time, and Figure 8 shows fluoride and total cyanide mass removal versus time.

Effected Aquifer Areas

As a further check on changes in groundwater quality during the remediation, the approximate areas of the aquifer containing fluoride and total cyanide at concentrations greater than 4.0 mg/L and 0.2 mg/L, respectively, were estimated using analytical results from the July 2011 sampling event. The results are summarized in Table 7. The estimates of aquifer areas are based on the fluoride and total cyanide isopleth maps shown as Figures 3 and 4, respectively. For comparison, Table 7 also includes previous year's estimates of the aquifer areas having fluoride and total cyanide concentrations greater than 4.0 mg/L and 0.2 mg/L, respectively.

As shown in Table 7, the area of the alluvial aquifer containing fluoride concentrations greater than 4.0 mg/L has been relatively consistent, ranging from 36.9 acres to 48.4 acres. For both 2010 and 2011, the aquifer area with fluoride concentrations greater than 4.0 mg/L was about 47.5 acres.

A gradual increase in the area of the aquifer with concentrations of total cyanide greater than 0.2 mg/L has been apparent since 1999, increasing from 27.5 acres in 1999 to 51.5

acres in 2010. Soil flushing in the FSPSA is the probable cause of the progressive increases. For 2011 the aquifer area containing total cyanide concentrations greater that 0.2 mg/L was 45.6 acres.

Analytical Results for PCBs

During each of the three 2011 sampling events, groundwater samples from monitoring wells MW-12, MW-44S, and MW-44D were analyzed for PCBs. Analytical results for these samples, and all previous samples (i.e., since 2002) reported no detections of PCBs (see Table 6). These data give no indication of groundwater quality impacts by PCBs.

SUMMARY/CONCLUSIONS

- Pumping of groundwater at the Ormet Reduction Plant continues to provide containment of the plume beneath the Ormet property and removes contaminant mass from the alluvial aquifer. Along the river/plant boundary, the flow of groundwater continues to be from the river to the aquifer.

- Pumping of groundwater removed approximately 7,234 pounds of fluoride and approximately 760 pounds of cyanide from the alluvial aquifer during the period from January through December 2011. During the same period, the estimated mass of fluoride in the aquifer decreased by about 3,694 pounds relative to 2010, and the estimated mass of cyanide in the aquifer increased by about 58 pounds.

- Between 2010 and 2011, the estimated area of the alluvial aquifer with fluoride concentrations greater than 4.0 mg/L showed no change (47.5 acres in both years) and the estimated area of the aquifer with total cyanide concentrations greater than 0.2 mg/L decreased by about 11.5 % (from 51.5 acres to 45.6 acres).

- 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 snow melt, and to operations and changes in waste management practices undertaken by Ormet prior to the Superfund project, including pumping of groundwater that removes contaminant mass and discontinued use of the disposal ponds and the spent potliner storage area. Increases in the fluoride and cyanide mass-in-place since initiation of soil flushing are attributed to the flushing itself, and also the excavation/ rearrangement of shallow soil during the installation of the flushing system.

- Analyses of groundwater samples for PCBs during 2011 and previous monitoring events reported no detections of PCBs. These data give no indication of groundwater quality impacts by PCBs.

- Analyses of weak-acid dissociable cyanide (WAD cyanide) during the November 2010 monitoring event and the three 2011 monitoring events indicate that WAD cyanide is less subject to analytical variability than analyses for cyanide amenable to chlorination and, therefore, is regarded to be a more reliable surrogate for free cyanide on which the ROD-specified cleanup goal is based.

TABLE 1
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE· APRIL 4, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-1	667.80	47 80	620 00
MW-2	667 52	48.53	618.99
MW-3	645.17	23.51	621.66
MW-4	661 07	44.70	616 37
MW-5	668 16	51 41	616.75
MW-7	667.94	50.25	617.69
MW-8	667.71	53.20	614.51
MW-9	666 59	50 91	615.68
MW-10	667.16	52.40	614 76
MW-11	667.31	50.87	616 44
MW-12	635.82	15.23	620.59
MW-13	661.44	38 09	623 35
MW-14	653.59	31.50	622.09
MW-15	657.31	33.71	623.60
MW-16	662.72	41.23	621 49
MW-17	655.03	32.10	622.93
MW-18	660.91	37.57	623.34
MW-19	662 03	38.14	623.89
MW-20	632 79	9.53	623 26
MW-21s	663 47	47.90	615.57
MW-21d	663 60	47 51	616 09
MW-22s	667 47	51 70	615 77
MW-22d	667 21	51.46	615.75
MW-23s	663 18	46.97	616.21
MW-23d	663 41	47.25	616.16
MW-24s	667.88	52.71	615.17
MW-24d	667.75	52.61	615.14
MW-25	667 30		
MW-26s	665.54		
MW-26d	665.59		
MW-27	667 31		
MW-28	663 27	22.62	640 65
MW-29s	653.40	32.14	621.26
MW-29d	653.07	31 84	621 23
MW-30	667.58	44 82	622.76
MW-31	661.59	39 56	622 03
MW-32	656.12	33.93	622.19
MW-34s	655.67	33 20	622.47
MW-34d	654.67	31.30	623.37
MW-35	661.90	35.61	626.29
MW-36	655.14	33.54	621.60
MW-37	661.14	22.29	638.85
MW-38	666 64	20.19	646 45
MW-39s	657 30	34.81	622 49
MW-39d	657 18	34.67	622 51
MW-40s	663.90	44.78	619.12
MW-40d	663 75	44.66	619.09

TABLE 1 (cont.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: APRIL 4, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-41	637.67		
MW-42s	654 37	32 97	621 40
MW-42d	654.34	32.90	621.44
MW-44s	662.01	42.43	619.58
MW-44d	661.76	42 92	618.84
PPB-01*	663 24		
PPB-02s*	663 14		
PPB-02d+	662 78	39.50	623 28
PPB-04+	661.57		
PPB-05*	661.62		
PPB-06+	663 04		
PPB-07*	661 71		
PPB-09+	664.30	40 84	623 46
PPB-10*	663.45		
PPB-14*	660.64		
TH-3	667.81	48.82	618.99
TH-10	658.17	33.97	624.20
TH-11	659 08	35 08	624 00
TH-15	663.62	48 31	615.31
TH-16	664.62	48 60	616 02
TH-17	663.93		
RP-1	643.17	19.45	623 72
RP-2	643 05	19 21	623 84

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.

TABLE 2
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: JULY 11, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-1	667 80	46 66	621.14
MW-2	667 52	47 31	620 21
MW-3	645.17	22.82	622.35
MW-4	661 07	43 08	617.99
MW-5	668 16	49 85	618.31
MW-7	667.94	48 85	619.09
MW-8	667 71	51.40	616.31
MW-9	666 59	48 99	617.60
MW-10	667 16	50.54	616.62
MW-11	667 31	49.28	618.03
MW-12	635 82	14 20	621.62
MW-13	661 44	37 55	623.89
MW-14	653 59	30.63	622.96
MW-15	657 31	32.74	624.57
MW-16	662.72	40 22	622.50
MW-17	655 03	31.26	623.77
MW-18	660.91	36 60	624.31
MW-19	662.03	37.66	624 37
MW-20	632.79	**8.65**	624.14
MW-21s	663.47	46 00	617 47
MW-21d	663 60	45 60	618 00
MW-22s	667.47	49 80	617 67
MW-22d	667.21	49.56	617 65
MW-23s	663.18	44.99	618.19
MW-23d	663 41	45.30	618.11
MW-24s	667 88	50.85	617.03
MW-24d	667 75	50.75	617.00
MW-25	667 30		
MW-26s	665.54		
MW-26d	665.59		
MW-27	667 31		
MW-28	663 27	20 26	643 01
MW-29s	653.40	31.08	622 32
MW-29d	653.07	30.79	622.28
MW-30	667 58	43.90	623 68
MW-31	661.59	38.60	622 99
MW-32	656.12	32.85	623 27
MW-34s	655.67	32.25	623.42
MW-34d	654.67	30.59	624.08
MW-35	661.90	34.46	627.44
MW-36	655.14	32.33	622.81
MW-37	661.14	20.62	640.52
MW-38	666.64	19.80	646.84
MW-39s	657.30	33 94	623.36
MW-39d	657.18	33.83	623 35
MW-40s	663.90	43 52	620 38
MW-40d	663.75	43.41	620.34

TABLE 2 (cont)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE. JULY 11, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-41	637.67		
MW-42s	654.37	32 01	622.36
MW-42d	654.34	31.95	622.39
MW-44s	662 01	41 15	620 86
MW-44d	661 76	41.65	620.11
PPB-01*	663.24		
PPB-02s*	663.14		
PPB-02d+	662.78	38.90	623.88
PPB-04+	661.57		
PPB-05*	661.62		
PPB-06+	663.04		
PPB-07*	661 71		
PPB-09+	664.30	40.40	623.90
PPB-10*	663.45		
PPB-14*	660.64		
TH-3	667.81	47.51	620.30
TH-10	658.17	33.36	624.81
TH-11	659.08	34.05	625.03
TH-15	663.62	46.35	617.27
TH-16	664.62	46.69	617.93
TH-17	663.93	45.82	618.11
RP-1	643.17	19.20	623.97
RP-2	643.05	19.03	624.02

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.

TABLE 3
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE· NOVEMBER 15, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft MSL)
MW-1	667.80	46 58	621 22
MW-2	667 52	47.43	620 09
MW-3	645 17	23.08	622.09
MW-4	661.07	43.27	617 80
MW-5	668 16	49.95	618 21
MW-7	667.94	48.90	619 04
MW-8	667 71	51.48	616 23
MW-9	666 59	49.25	617 34
MW-10	667.16	50.66	616.50
MW-11	667.31	49.42	617.89
MW-12	635.82	14 45	621.37
MW-13	661.44	37 70	623 74
MW-14	653.59	30.85	622.74
MW-15	657.31	33 23	624 08
MW-16	662.72	40 42	622 30
MW-17	655.03	31 56	623.47
MW-18	660.91	36.68	624.23
MW-19	662.03	37.87	624 16
MW-20	632.79	9.26	623 53
MW-21s	663.47	46.25	617.22
MW-21d	663.60	45.85	617.75
MW-22s	667.47	50 00	617.47
MW-22d	667.21	49.79	617 42
MW-23s	663.18	45.19	617.99
MW-23d	663.41	45 52	617 89
MW-24s	667.88	50.98	616.90
MW-24d	667.75	50.92	616 83
MW-25	667 30		667.30
MW-26s	665.54		
MW-26d	665.59		
MW-27	667.31		667 31
MW-28	663.27	20 92	642 35
MW-29s	653.40	31.30	622.10
MW-29d	653.07	31.03	622.04
MW-30	667 58	43.66	623 92
MW-31	661.59	38.76	622.83
MW-32	656.12	33.27	622.85
MW-34s	655.67	32 70	622 97
MW-34d	654.67	30 83	623 84
MW-35	661.90	35.15	626.75
MW-36	655.14	32.95	622.19
MW-37	661.14	21.27	639.87
MW-38	666.64	19.70	646 94
MW-39s	657.30	34.19	623.11
MW-39d	657 18	34 08	623 10
MW-40s	663.90	43.74	620.16
MW-40d	663.75	43.63	620.12

TABLE 3 (cont.)
WATER-LEVEL ELEVATION DATA
ORMET CORPORATION
HANNIBAL, OHIO
DATE: NOVEMBER 15, 2011

WATER-LEVEL MEASURING POINT	MEASURING POINT ELEVATION (ft. MSL)	DEPTH TO WATER (feet)	GROUND-WATER ELEVATION (ft. MSL)
MW-41	637 67		
MW-42s	654.37	32.25	622 12
MW-42d	654.34	32.17	622 17
MW-44s	662.01	41.39	620 62
MW-44d	661 76	41.90	619 86
PPB-01*	663.24		
PPB-02s*	663.14		
PPB-02d+	662 78	39.19	623.59
PPB-04+	661 57		
PPB-05*	661.62		
PPB-06+	663.04		
PPB-07*	661.71		
PPB-09+	664.30	40.50	623.80
PPB-10*	663.45		
PPB-14*	660 64		
TH-3	667.81	47.75	620.06
TH-10	658 17	33.25	624.92
TH-11	659 08	34 20	624.88
TH-15	663 62	46.61	617.01
TH-16	664.62	46 97	617.65
TH-17	663 93	46.08	617.85
RP-1	643.17	19 11	624 06
RP-2	643.05	18.77	624 28

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

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	6.46	690	701	<0.01			2.1	<0 004	<0.0005		0 47	50	<0 01	
5/05	6 66	6.46	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	
5/07	6.61	6.52	660	516	<0.01			1.1	<0 004	<0 0005		0 66	49	<0 01	
6/08	6 29		590	360	<0 01			0 5	<0 004	<0 0005		0 43	40	<0 01	
5/09	6.0	6 16	562	551	0 09		0 087	0 26	<0 0050	<0 0010		0 47	51 2	<0 0050	
7/10	5.94	6 42	603	506	<0 0050		<0 0050	0 116	<0 0005	<0 0005		0 759	38 6	<0 0050	
7/11	5 90	6 60	557	298	0 00595		<0 0050	0 136	<0 0005	<0 0010		0 709	36 7	<0 0050	

Note All results in mg/L unless otherwise noted

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	9.98	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 96	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

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

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-2 (cont.)															
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
2/07	9 54		1,600		15	0.046	2 50	32	0 046	< 0005		0.49	330	0 028	0 037
5/07	9 50	9 55	1,300	1,183	11		<0 01	47	0 050	0 00050		0 56	330	0.032	0 036
9/07	9.49	9 89	1,400	1,103	12		0 56	45	0 049	<0 00050		0.59	310	0 034	0 054
3/08	9 52	9 33	1,400	842	9		<0 01	42	0 046	<0 0005		0.52	310	0.03	0 041
6/08	9 48		1,400	910	12(J)		0 75	37	0 046	0 00063		0 52	280	0 032	0 062
6/08 (Dup)	9 49		1,400	910	12		0 93	41	0.045	0 00060		0.52	290	0.031	0 065
9/08	9.43	9 58	1,200	1,318	7		<0.01	36	0 044	<0 0005		0.51	290	0 027	0.042
1/09	9 30	9 55	1,270	1,283	9.5		9 50	33 5	0 043	<0 0010		0 39	174	0.022	0.048
5/09	9 20	9 58	1,180	1,212	8 8		<0 0050	33 6	0.038	<0 0010		0 53	359	0 027	0.056
9/09	9 40	9 79	1,310	1,243	11 1		0 40	43.7	0 045	<0 0010		0 59	332	0 026	0 037
1/10	9 50	9 64	1,680	1,088	7 2		<0 0050	35 9	0 033	<0 0010		0 36	277	0.018	0 042
7/10	9 40	9 74	1,230	1,142	6 43		6 43	36 3	0 177	<0 0005		0 370	192	0 02	0 034
11/10	9 13	9 65	1,150	735	7 31		4 25	25 5	0 028	<0 0005		0 288	175	0 0122	0 037
4/11	9 44	9.79	1,130	739	2.99		1 33	32 5	0 036	<0.001		0 507	253	0 0243	0 0452
7/11	9.34	9 77	1,240	555	6 40		6 40	44 3	0.032	<0 001		0 512	220	0 0177	0 0346
11/11	9 39	9 40	1,300	1,280	5 46		1 86	38.7	0 036	<0 001		0 391	257	0 0234	0 0318

Note All results in mg/L unless otherwise noted

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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
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 16	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 60	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	0 006	<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	960	791	2.9		2 9	13	<0 004	<0 0005		0 66	170	<0 01	<0 005
9/01	8 42	8 69	708	970	3.6		0 34	11	<0.004	<0 0005		0 80	160	<0 01	<0 005
9/01 (Dup)	8 46	8 69	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 67	16	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
2/07	8.27		1,400		6 2		0 90	21	< 004	< 0005		0 36	230	< 01	<0 005
5/07	8 00	7 92	1,200	857	5 9		<0 010	23	<0 004	<0 0005		0 40	230	<0 010	<0 005
5/07 (Dup)	7 87	7 92	1,200	857	6 2		<0.01	23	<0 004	<0 0005		0 38	230	<0 01	<0.005
9/07	8.03	8 50	1,300	856	5.8		0 15	26	0 0046	<0 0005		0 45	240	<0.010	<0 0050
3/08	8 08	7 90	1,300	618	4 5		4 50	27	<0 0040	<0 0005		0 39	250	<0 010	<0 005
6/08	8 08		1,300	730	4 9(J)		0 40	27	0 0054	<0 0005		0 48	230	<0 01	<0 005
9/08	8 11	8 17	1,100	1,178	4 7		0 74	24	<0 004	<0.0005		0 44	240	<0 01	<0 005
1/09	7 90	8.13	1,230	1,210	4 3		4 30	30 2	<0 0050	<0 0010		0 40	153	<0 0050	<0 0050
5/09	7 90	8 22	1,170	1,220	6 0		<0 0050	26.2	<0 0050	<0 0010		0 52	332	<0.0050	<0 0050
9/09	8 00	8 26	1,340	1,153	4 6		0 51	23 7	0 0076	<0 0010		0 46	307	<0 0050	<0 0050

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-5 (cont.)															
1/10	8.20	8.43	1,270	1,134	3 5		<0 0050	25.4	<0 0050	<0.0010		0 44	309	<0.0050	<0.0050
7/10	7 89	8 36	1,130	834	1 38		1 38	18 2	0.00281	<0 0005		0 368	218	<0 0050	0 00135
11/10	7 71	8 24	1,200	701	2 86		2 86	23.7	0.00257	<0.0005		0 264	240	<0.0050	0 00179
4/11	8 22	8.61	1,140	633	3 60		1 78	31.2	0.00328	<0.001		0.505	267	<0 0050	0 00196
7/11	8.00	8 66	1,240	499	3 38		3 37	34.2	0 00371	<0.001		0 478	268	<0.0050	0.00160
11/11	7 93	8 2	1,230	1,230	3 58		1 91	26 8	0 00299	<0.001		0 382	267	0 00785	0 00105

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-7															
12/83	6 8	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 85	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	
5/07	6 04	5 68	660	509	<0 010			0 1	0 038	<0 0005		2 4	69	<0.010	
6/08	6 1	6.8	640	403	0 011		<0.01	0 17	0 031	<0 0005		2 3	63	<0 01	
5/09	5 70	6.01	728	614	<0 0050		<0 0050	0 10	0 03	<0 0010		2 2	82 4	<0 0050	
7/10	5 96	6 39	586	489	0 00693		0 00693	0.10	0 0259	<0 0005		2 28	63 1	<0.0050	
7/11	5 79	6 60	575	317	<0 0050		<0 0050	0 0961	0 0262	<0 0010		2 30	59 6	<0 0050	

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TABLE 4
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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	218		
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	
5/07	7 56	7.51	890	622	0 59		<0.01	3 1	<0 004	<0 0005		0.19	120	<0 01	
6/08	7.53		1000	546	0.73		0 64	6.1	<0 004	<0.0005		0.19	140	<0.01	
5/09	7.40	7 67	1100	1035	0 83		<0.0050	7 0	<0 0050	<0.0010		0 16	198	<0.0050	
7/10	7.42	7 87	918	668	0 173		0 173	5 77	0 000762	<0 0005		0 151	143	<0 0050	
7/11	7.35	7 82	1030	469	0 210		0 207	6 22	0.000715	<0 0010		0 129	160	<0 0050	

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SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-10															
12/83	7.7	7 6	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	106		
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	580	0 02		0 02	0 5	<0.004	<0 01	<0.04	<0.01	26	<0.01	
5/97	7 2	7 4	670	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	
5/07	7.17	7 18	750	521	<0.01			0 2	<0.004	<0 0005		<0 01	20	<0.01	
6/08	7 19		740	400	<0 01			0.4	<0 004	<0 0005		<0 01	23	<0 01	
5/09	7 00	7 29	721	696	<0 0050		<0 0050	0 23	<0 0050	<0 0010		<0 0050	19 7	<0 0050	
7/10	7 03	7.54	731	514	<0 0050		<0.0050	0 205	<0.0005	<0 0005		<0 0050	19 6	<0 0050	
7/11	7 05	7 67	657	330	<0 0050		<0 0050	0 232	<0 0005	<0 0010		<0 0050	17 7	<0 0050	

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-11															
12/83	9.6	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	656	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	
5/07	7 8	7.8	700	527	0 066		<0 010	1 0	<0 004	<0 0005		0 62	69	<0 01	
6/08	7 84		900	509	0 19(J)		<0 01	1 1	0.0042	<0 0005		0 63	100	<0.01	
5/09	7 6	7 8	1130	1168	0 74		<0 0050	0 99	<0 0050	<0 0010		0 83	238	<0 0050	
7/10	7 67	8.12	1180	845	0 365		0 365	2.68	0 00118	<0.0005		0.592	205	<0 0050	
7/11	7 75	8 36	989	444	0 540		0 532	5 55	0 00108	<0 0010		0 542	180	<0 0050	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	476	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 68	<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	
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	
2/07	7 68		620		< 01			0 63	<.004	< 0005		2 0	25	< 01	
5/07	7 61	7 50	560	413	<0.01			1 40	<0 004	<0.0005		2.1	26	<0 01	
3/08	7.52	7 25	540	356	<0.01			0 74	<0.004	<0 0005		2 0	29	<0 01	
6/08	7 76		480	369	<0.01			0 58	<0 004	0 0019		2 0	28	<0.01	
9/08	7.63	7 67	470	545	<0 01			0.60	0.004	<0.0005		1.9	27	<0.01	
1/09	7.40	7.54	558	567	<0 0050			0 68	<0.0050	<0 0010		2.2	29.8	<0 0050	
5/09	7 40	7 61	579	559	[7 1]		[0 052]	0 57	<0.0050	<0 0010		2 2	27.5	<0 0050	
7/09		7.73		541	<0 005		<0 005								
7/09 (Dup.)					<0.005		<0 005								
9/09	7.50	7 66	590	531	<0 0050		<0.0050	0 71	0 0051	<0 0010		2.1	26 2	<0 0050	
1/10	7 50	7.56	539	485	<0 0050		<0 0050	0 62	<0.0050	<0 0010		2 1	27.1	<0.0050	
7/10	7 38	7.89	565	437	0 0107		0 0107	0 616	<0 0005	<0 0005		2 24	32	<0.0050	
11/10	7 46	7.79	550	372	0 0192		0 0192	0 816	<0 005	<0.0005		1 87	34.6	<0 0050	
4/11	7 72	8 07	494	334	0 0294		0 0201	0 709	<0 0005	<0 001		2.21	28 7	<0 0050	
7/11	7 38	7.99	539	115	<0 0050		<0 0050	0 628	<0 0005	<0 0010		2 03	28 0	<0 0050	
11/11	7 36	7 60	549	520	0 00527		<0.0050	0 769	<0 0005	<0 0010		2 00	28 4	<0 0050	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	469	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	
5/07	7 55	7.33	520	423	0 031		<0.01	2 5	<0 004	<0 0005		1 1	44	<0 01	
6/08	7 60		520	365	0 029		<0.01	2 5	<0.004	<0 0005		1 1	39	<0 01	
5/09	7.40	7 59	581	559	5.6		0 087	2 3	<0.0050	<0.0010		1.2	56.3	<0.0050	
7/09		7.89		544	0 025		<0 005								
7/09 (Dup)					0 026		<0 005								
7/10	7 60	8 07	556	436	0 0157		0 0157	3 73	<0 0005	<0 0005		0 953	49 7	<0 0050	
7/11	7 61	8 09	513	134	0 0204		0.0147	3 00	0 000509	<0 0010		0 887	46 3	<0 0050	

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 0696	56 8	<0 01	
5/03	7.23	7.47	610	469	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	
5/07	8.07	7.91	930	727	6.7		0 8	23	0 007	<0 0005		0 14	210	0 014	
5/07 (Dup.)	8.04	7 91	930	727	6 5		0 8	23	0.009	<0 0005		0.14	210	0 015	
6/08	7 91		790		7 2		1 4(J)	20	0 0046	<0 0005		0.1	180	<0 01	
6/08 (Dup)	7 93		790	554	8 1		0 79(J)	20	<0 004	<0 0005		0 096	170	<0.01	
5/09	7.7	7 91	946	918	5 6		0.012	17 1	<0.0050	<0 0010		0.072	232	<0 0050	
7/10	7 97	8 24	1060	767	3.39		2 14	22 2	0 1	<0 0005		0 182	155	0 0143	
7/10 Dup)	7 97	8.24	1060	767	2.54		1.46	24.2	0.132	<0 0005		0 177	158	0 0141	
7/11	7 61	8 21	943	197	2 24		2 23	15.8	0 00293	<0 0010		0.146	196	<0 0050	

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	760	2 0		0 40	11	<0 004	<0 0005		1 2	80	<0.01	
9/98	7.70	7 50	880	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	1,280	1,299	6 48		1.20	54	0 0381	0 00175		1 0	242	0.0441	
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	0 067	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	

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-16 (cont.)															
2/07	9 3		1,300		7.4		< 01	38	0 045	< 0005		0.62	240	0.045	
5/07	9 19	9.22	1,100	854	59		<0 01	59	0 042	0 00083		1	240	0 056	
9/07	9 24	9 62	1,100	816	8 4		0 83	52	0 047	0 00076		1 3	240	0.058	
3/08	9.05	8 97	1,100	633	3 4		0 098	39	0 037	0 00056		1	220	0.046	
6/08	9 14		1,000	613	3.3		0 13	33	0 039	0 00071		0 89	200	0 041	
9/08	9.14	9 22	880	991	3 5		<0 01	26	0 033	<0 0005		0.79	210	0 038	
1/09	8.8	9.07	921	908	3 7		3 7	107	0 02	<0 0010		0.54	118	0.02	
5/09	9 0	9.28	1,040	986	<0 0050		<0 0050	35.8	0 045	<0 0010		0 85	286	0 049	
5/09 (Dup)	9.0	9.28	1,040	986	1 2		0.077	35 7	0 048	<0.0010		0.85	268	0.049	
9/09	9.0	9 35	1,040	899	5 0		0.38	31 9	0.028	<0.0010		0.67	232	0.028	
1/10	9 1	9.24	883	836	3.2		<0.0050	32.1	0.023	<0.0010		0 69	219	0.025	
1/10 (Dup)	9 1		972		3.4		<0 0050	33 6	0.025	<0 0005		0.65	219	0.026	
7/10	9.07	9 39	971	733	1 87		1 87	37 6	0 127	<0 0005		0.578	155	0 0293	
11/10	9.13	9.48	1,020	680	4 61		3 03	30 7	0 0236	<0 0005		0.458	149	0 0193	
4/11	9 28	9 54	910	583	2.70		1.46	37 1	0.0364	<0 0010		0.709	198	0.041	
7/11	9 20	9 66	952	432	0 978		0 975	30 5	0 0393	<0.0010		0 740	188	0 0402	
11/11	9 16	9 17	965	944	3 130		1 08	29 7	0 0288	<0 0010		0 473	203	0 0344	
11/11 (Dup)	9 16		955		3 560		1.37	29 0	0.0284	<0 0010		0 520	196	0 0355	

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	7.36	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	
5/07	7 58	7 56	740	544	2 2		<0.01	11	<0 004	<0 0005		1 6	87	<0.01	
6/08	7 72		770	505	2 9		0.32	17	<0 004	<0 0005		1 4	120	<0.01	
5/09	7.5	7 71	712	679	2 0		0.19	6 4	<0.0050	<0 0010		1 6	93 2	<0 0050	
5/09 (Dup)	7.4		650		2 0		0 19	6 2	<0 0050	<0 0010		1 6	92 9	<0 0050	
7/10	7 89	8 10	849	626	2 69		1 89	18.4	0 101	<0 0005		0 752	107	0.00796	
7/10 (Dup)	7.89	8 10	850	626	3 01		2 40	16 2	0 0975	<0 0005		0 85	117	0 00899	
7/11	7 63	8 13	736	144	2 98		1 11	11 2	0 00194	<0 0010		1 40	101	<0 0050	
7/11 (Dup.)	7 54		710		3.25		7 42	11.6	0 00173	<0.0010		1 38	110	<0.0050	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	2,640	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 58	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	2,800	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	9.67	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 36	2,100	1,780	15		<0 50	100	0 065	0 0014		0 97	380	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	436	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
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		1.80	380	0.099	<0 005
2/07	9 47		2,000		2 2		< 01	84	0 058	0.0012		1.20	300	0.056	< 005
5/07	9 39	9 45	1,700	1,471	3 0		<0.01	140	0 065	0 00091		0.43	350	0 039	<0 005
9/07	9.53	9 83	1,300	1,087	9 0		<0 010	75	0 067	0.00067		0 32	300	0.037	<0.0050
3/08	9 42	9 35	1,700	981	12 0		<0.01	92	0 069	<0 0005		0 24	370	0.021	<0.005
6/08	9.43		1,500	1,118	3 9		<0 01	88	0 066	0 00088		0 40	310	0 038	<0 005
9/08	9 40	9.48	1,100	1,260	5 4		<0.01	59	0 049	<0.0005		0 18	270	0 017	<0 005
1/09	9 30	9.47	1,710	1,704	36.7		36.6	117	0 05	0 0014		0 78	242	0 034	<0 0050
5/09	9 50	9.76	3,580	2,580	[0 88]		0 033	206	0 06	0 0014		0 56	805	0 021	<0 0050
7/09		9 94		1,750	7 40		<0.005								
9/09	9 60	9 90	1,480	1,439	26 5		10.7	98 6	0 065	<0 0010		0 13	384	0 016	<0 0050

Note All results in mg/L unless otherwise noted

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-18 (cont.)															
1/10	9 60	9 74	1,460	1,451	18 9		<0 005	83.7	0 05	<0 0010		0 51	434	0.026	<0 0050
7/10	9.67	9.94	1,480	1,307	4 35		4 35	110	0.187	<0 0005		0 122	272	0.014	0.00167
7/10 (Dup)	9 67	9.94	1,600	1,307	3 96		3 96	125	0 168	<0 0005		0 112	259	0 013	0 00167
11/10	9 58	9.93	1,320	1,099	8 20		<0 25	76	0 0451	<0 0005		0 133	211	0.007	0 00146
4/11	9 81	10.08	2,040	1,209	8 53		1 99	178	0 102	<0 0010		0.354	419	0.029	0 00303
4/11 (Dup)	9.83		2,050		8 07		2.02	152	0.114	<0 0010		0 335	447	0.028	0.00333
7/11	9 66	10 10	1,440	743	30.60		30.6	80	0.0845	<0 0010		0 194	296	0 0245	0 00205
11/11	9 65	9 62	1,110	1,110	9 98		3 78	49.6	0 0647	<0.0010		0.653	250	0.0372	0 00285

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SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	8.95	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 46	590	541	<0.01			3 5J	<0.004	<0 0005		0 014	15	<0 01	
5/07	7 33	7.03	810	583	<0 01			1.1	0.0042	<0 0005		<0 01	49	<0 01	
6/08	7 27		680	432	<0.01			1.1	<0.004	<0 0005		<0 01	28	<0 01	
6/08 (Dup)	7 28		680	432	<0.01			1 1	<0.004	<0 0005		<0 01	30	<0 01	
5/09	7 1	7.32	695	602	<0 0050		<0.0050	1 4	<0.0050	<0 0010		<0.0050	13.4	<0.0050	
7/10	7 39	7 57	827	605	<0 0050		<0 0050	0.671	<0.0050	<0 0005		<0.0050	46 5	<0.0050	
7/11	7 08	7.84	792	150	<0 0050		<0.0050	0 681	<0 0005	<0 0010		<0 0050	32 2	<0 0050	
7/11 (Dup)	7 01		810		<0 0050		<0 0050	0.651	<0.0005	<0 0010		<0 0050	32 6	<0 0050	

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	5.6	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	
2/07	6 24		470		0 47		0 020	0 78	< 004	< 0005		< 01	65	< 01	
5/07	6 04	5.68	380	341	0 26		<0 01	0 14	<0 004	<0 0005		0 018	61	<0 01	
5/07 (Dup.)	6.13	5.68	380	341	0 26		<0.01	<0.1	0.0044	<0 0005		0.010	61	<0.01	
9/07	6 69	6.59	360	295	0 26		<0 010	0.17	<0 0040	<0 00050		0 120	59	<0.010	
3/08	6.01	5 67	360	275	0 20		<0.01	0 15	<0.004	<0.0005		<0.010	56	<0.010	
6/08	6 07		380	276	0 24		<0.01	0 27	<0.004	<0.0005		0 069	63	<0.01	
9/08	6.39	6 23	310	354	0.17		<0 01	0 16	<0.004	<0 0005		<0.01	58	<0.01	
1/09	6.00	6 21	339	348	<0 0050			0 15	<0.0050	<0 0010		0 090	53	<0 0050	
5/09	5.90	6.17	383	385	4 10		0 062	0 15	<0 0050	<0 0010		0 018	74 0	<0.0050	
9/09	6 30	6.33	400	372	0 14		0.021	0 24	<0 0050	<0 0010		0 0079	74 9	<0.0050	
9/09 (Dup)	6.20		448		0 13		<0.0050	0 21	<0 0050	<0 0010		0 020	76.0	<0.0050	
1/10	6.10	6 24	333	341	0 013		<0.0050	0 20	<0 0050	<0.0010		0.061	64 1	<0.0050	
7/10	5 97	6 43	404	359	0 0933		0 0933	0 321	0 112	<0 0005		0 0534	48 5	0.00746	
11/10	6 25	6.28	375	313	0.2480		0 2480	0 248	<0.0025	<0 0005		<0 005	61 1	<0 0050	
11/10 (Dup)	5 90		367		0 0997		0 0997	0 236	<0 0025	<0 0005		0.0073	61 1	<0.0050	
4/11	6 58	6.53	289	247	0 3760		0 0400	0 389	<0 0005	<0 0010		0 0248	46 2	<0 0050	
7/11	5 84	6 56	377	153	0.0384		0 0360	0 387	<0.0005	<0 0010		0.0127	57.3	<0 0050	
11/11	5.83	6 29	375	366	0 0708		0 0640	0.366	<0 0005	<0 0010		<0 005	55 6	<0 0050	

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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			26	<0 004	<0 0005		0 09	370	<0 01	
5/99	8.35	8.37	1,300	1,090	0 22			16	<0 004	<0 0005		0 30	230	<0 01	
5/00	8 11	8 11	1,200	1,023	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			16	<0.004	<0 0005		0.42	160	<0.01	
5/02	7 73	7.71	700	408	0 08			10	<0 004	<0 0005		0 563	79.6	<0 01	
5/03	7 68	7 81	1,000	759	0 21			9 1	<0 004	<0 0005		0.78	110	<0.01	
5/04	7 48	7.56	1,700	1,760	0 93			8 7	<0 004	<0 0005		1 2	380	<0 01	
5/05	7 82	7 37	1,200	950	1 3			9 7 J	<0 004	<0 0005		0 78	170	<0 01	
5/06	7.47	7.32	2,000	1,510	1 7			15J	<0 004	<0 0005		1.7	300	<0 01	
5/07	7.56	7 63	1,000	769	6 2			20	<0 004	<0 0005		0 5	180	<0 01	
6/08	7.73		1,100	621	4 8(J)			31	<0 004	<0 0005		0 4	200	<0 01	
5/09	7.6	7.73	1,230	1,188	<0 0050			22.8	<0 0050	<0 0010		0 50	300	<0 0050	
7/10	7 58	7.93	1,120	818	1 12		1 12	29.0	0 164	<0.0005		0 287	165	0 0121	
7/11	7 10	8 07	1,120	396	1 58		1 58	30.6	<0 0025	<0 0010		0 106	218	<0 0050	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 65	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	
5/07	7 54	7.58	660	509	0 23		<0 01	3 1	<0 004	<0 0005		2 0	45	<0 01	
6/08	7 56		670	393	0 3		0 086	3 9	<0 004	<0 0005		1.8	51	<0 01	
5/09	7 7	7.51	1010	970	0.21		<0.0050	3 9	<0 0050	<0 0010		2 4	153	<0.0050	
7/10	7 64	8 01	738	553	1 63		1 63	11 4	<0 0005	<0 0005		1 08	123	<0 0050	
7/11	7 47	8 20	647	167	0 483		0 475	4 13	<0 0005	<0 0010		1 90	54	<0 0050	

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	6.16	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
5/07	6.56	6.22	540	435	2.7		<0.01	7 6	0 0057	<0 0005		0 74	53	<0.01	0 016
6/08	6 49		600	339	6.8		1 8	11 0	0.0061	<0 0005		0 76	61	<0.01	0 017
5/09	6 4	6 49	593	518	4.2		<0 0050	12.6	<0 0050	<0.0010		0 62	81 9	<0.0050	0 0096
7/10	6 48	6 97	560	447	1.62		1.62	18 0	0 131	<0 0005		0 332	65 2	0 00758	0 0697
7/11	6 35	7 00	511	146	2 36		2 36	7 72	0 00314	<0 0010		0 847	50 8	<0 0050	0 0627
7/11 (Dup)	6 32		497		1 30		1 29	8.87	0 00313	<0 0010		0 904	46 4	<0 0050	0 0584

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Berylium	Iron	Manganese	Sodium	Vanadium	PCE
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
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 00108		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 0664	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	0.16	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

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-31 (cont.)															
9/06 (Dup)	9 82	9.91	1,700	1,417	12		12	55	0 05	0 0013		1	390	0 071	0 027
2/07	9.72		1,600		8 8		1.5	42	0 034	< 0005		0.59	330	0 036	0 046
5/07	9.59	9.56	1,400	1,120	11		0 066	81	0 049	0 0016		1 5	320	0.082	0 083
9/07	9.62	9.93	1,300	1,104	8 6		0.16	62	0 043	0 00089		1 2	310	0.063	0 090
9/07 (Dup)	9 62		1,400		8.1		<0 010	61	0 044	0 00086		1 2	310	0 064	0 089
3/08	9 52	9 26	1,500	1,022	6 9		<0 010	63	0 047	0 0014		1 6	330	0 077	0 036
6/08	9 61		1,400	999	8 4		<0.01	62	0 05	0 0013		1 8	310	0.082	0 067
9/08	9 57	9.68	1,100	1,299	4.4		<0.01	52	0 041	0 0012		1 2	300	0 069	0.042
1/09	9.5	9 64	1,350	1,341	7 4		7 3	63 4	0 039	<0 0010		0.74	195	0 043	0 038
5/09	9 5	9.74	1,350	1,314	5.1		0 016	50	0 045	<0 0010		1 4	406	0.065	0.030
5/09 (Dup)	9 5	9.74	1,360	1,314	0 13		<0 0050	49.7	0 043	<0 0010		1 4	407	0.065	0 029
9/09	9.6	9.93	1,430	1,335	7 4		0 10	56 5	0 039	0.0013		0.89	393	0 056	0 040
9/09 (Dup)	9.6		1,480		7.6		0.85	53 6	0 038	0 0013		0 92	409	0.058	0.047
1/10	9 7	9 74	1,280	1,305	5 9		<0 0050	56 3	0 031	<0 0010		1 1	386	0 049	0 032
7/10	9 54	9 83	1,400	1,230	5 8		5 8	48 5	0 147	0 000718		0 909	203	0 0437	0 021
11/10	9 51	9 84	1,340	917	2 08		0 967	41 9	0 0256	<0 0005		0 427	187	0.0222	0 025
11/10 (Dup)	9 49		1,350		4 82		4 82	39 7	0 0222	<0 0005		0 465	215	0 0246	0 026
4/11	9 64	10 06	1,110	924	3 46		1 99	45.9	0 0428	<0 0010		1.23	263	0 0580	0 041
7/11	9 61	10.03	1,330	578	4 36		4 36	47 5	0 0378	<0 0010		1 01	274	0 0509	0 020
11/11	9 54	9 34	1,330	1,290	3.86		1 46	41.4	0 0283	<0 0010		0 359	290	0 0337	0 036
11/11 (Dup)	9 53		1,170		2 77		0 715	41 6	0 0277	<0 0010		0 387	297	0 0354	0 029

Note All results in mg/L unless otherwise noted

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 89	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	830	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	675	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	768	4.41		0 11	13	0 00403	<0 0005		1 91	93 1	<0.01	
5/03	8 31	8 47	820	616	3 6		<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	
2/07	10 03		1,700		9.7		0.3	69	0 059	0 00078		1.8	340	0 095	
5/07	9 93	9 96	1,400	1,211	11		11 0	69	0.063	0 0018		3.1	340	0.12	
9/07	10.00		1,500		6 5		0.0	64	0.060	0 00096		1 9	341	0 1	
9/07 (Dup)	10 01		1,500		7		0.3	63	0 053	0 00095		1.8	330	0 1	
3/08	9 88	9 75	1,500	973	6.1		<0.01	60	0 054	0 0012		2 4	330	0 1	
3/08 (Dup)	9.88		1,500	1,041	7 3		0 7	55	0 058	0 0013		2 4	330	0.11	
6/08	9.90		1,400	1,041	12		1 6	55	0 047	0 0016		2 6	340	0.097	
9/08	9.86	9.97	1,400	1,514	9.2		<0 01	65	0 048	0 001		1 7	350	0 085	
1/09	9.80	9 94	1,380	1,392	5 9		5 9	70	0 051	0 001		1.7	198	0.085	
5/09	9.70	9.97	1,330	1,305	5 8		0 16	43 6	0 047	<0 0010		1 5	398	0 075	
9/09	9 80	10.15	1,600	1,433	8.0		0 28	66 2	0 045	0.0016		1 7	443	0 085	
1/10	10.00	9 97	1,230	1,290	4 7		<0 0050	61 4	0 037	<0 0010		1 4	358	0.07	
1/10 (Dup.)	9 90		1,420		6.1		<0 0050	62 8	0 036	<0 0005		1.3	360	0 062	
7/10	9.83	10 14	1,260	1,174	6 31		6 31	30 7	0 131	0 000919		1 12	216	0.0561	
11/10	9 90	10 17	1,400	945	3 76		3 24	51 8	0.035	0 000837		1 18	212	0.0533	
4/11	9.91	10 26	1,100	849	3 16		1 34	40.6	0 033	<0 001		1 11	244	0.0564	
7/11	9.88	10 26	1,210	593	2 74		2 73	44 5	0 032	0 00108		1 40	252	0.0599	
11/11	9 88	9 78	1,330	1,310	4 00		1 73	49 9	0 028	<0 001		1 30	276	0 0642	

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	
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	
5/07	8 26	8 14	1,100	831	5 8		0 37	32	0 011	0 0007		0 38	250	0 02	
6/08	8 62		1,200	824	2 2		0 18	42	0 012	0.00091		0 24	300	0 018	
5/09	8 00	8.25	982	911	3 1		0 12	21.1	0 011	<0 0010		0 29	269	0 014	
7/10	7 95	8 94	1,390	1,070	3 47		2 19	45 2	0 150	0 00148		0 422	211	0 0185	
7/11	8 24	8 77	943	423	2 10		2 09	23 9	0 0112	<0 0010		0 409	198	0 0189	

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	7.36	1000	853	10		0 14	24 J	<0.004	<0 0005		0.12	190	<0.01	
5/06	7 80	7.77	910	760	7.5		1.8	23J	<0 004	<0 0005		0 26	170	<0 01	
5/07	8 10	7 95	1,000	799	2 6		<0 01	31	0 0066	0 00055		0.34	230	0 018	
6/08	8.13		800	572	4 8		0 64	26	0 012	0 0013		0 52	190	0 038	
5/09	7.70	7 99	829	767	1 4		0 29	17 0	0.0056	<0 0010		0.20	198	<0 0050	
7/10	8 67	8.59	832	656	2 26		1.29	39 9	0 141	0 000829		0 316	123	0 0219	
7/11	8 06	8 61	833	417	9 30		9 30	20 4	0 00715	<0.0010		0 336	172	0 0145	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 98		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 0048	<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	
2/07	9 49		1,200		22		< 01	45	0 014	< 0005		0 61	120	< 01	
5/07	8 81	7.79	700	369	22		0 86	22	0 027	0 00059		0 74	180	0 023	
9/07	9 18	9 39	800	592	14		<0 010	32	0 016	<0 00050		0 79	150	<0 010	
3/08	8 97	8.74	760	485	21		0 56	23	0 017	<0 0005		1 10	130	0 021	
6/08	8 37		540	381	15		0 45	15	0 013	0 00061		1 20	86	0.013	
9/08	8 54	8 56	530	589	17		1 50	15	0 013	<0 0005		0 86	92	<0 01	
1/09	8.70	8 76	635	615	19 3		19 30	24	0 016	<0 0010		1 10	72 1	0 012	
5/09	7 80	7 89	520	481	12.25		<0 0050	10 7	0 011	<0 0010		1 10	88 4	0 0076	
9/09	7 60	7.67	402	354	3.9		0.13	3 3	0 0092	<0 0010		0 93	52 0	0 0052	
1/10	7 70	7 68	409	392	5.6		<0 0050	7.0	0 012	<0 0010		0 99	79 5	0 0097	
7/10	7 55	7.36	368	276	2 12		1 34	2 95	0 108	<0 0005		0 70	26.8	0 00866	
11/10	7.33	7 84	372	286	2 56		2 56	3 45	0 0114	<0 0005		0 56	36 2	<0 005	
4/11	7.86	8 46	420	350	4 89		3.04	8 65	0 0073	<0 001		0 84	58 9	0 00581	
7/11	7 27	7 90	317	129	0 908		0 904	1 14	0 00417	<0 0010		0 79	21 0	<0 0050	
11/11	7 39	7 60	382	340	3 16		1 070	3.83	0 00492	<0 0010		0 87	37 8	0 00634	

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	
5/02	9 61	9.61	1,800	1,286	16		4 6	98	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	860	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	
2/07	9 07		940		12		< 01	22	< 004	< 0005		0 082	180	< 01	
5/07	8.9	8 8	790	666	10		0.86	32	0 0071	<0 0005		0 18	180	<0 01	
9/07	9 07		560		0 55		<0 010	20	0 0085	<0 00050		0 16	120	0 013	
3/08	8 63	8.4	850	543	7 8		<0 01	18	<0 004	<0 0005		0 2	170	<0 01	
6/08	8.56		710	516	2.1		<0 01	33	0.0057	<0 0005		0 22	160	<0 01	
9/08	8.69		640		4.6		0 14(J)	17	0 0044	<0 0005		0 094	120	<0.01	
9/08 (Dup)	8 58	8 68	640	724	4.4		2 1(J)	19	0 0072	<0.0005		0 1	150	<0.01	
1/09	8.4		625		3 3		3 3	19	0 0059	<0 0010		0 16	75 8	<0 0050	
1/09 (Dup.)	8.4	8 44	629	622	<0 0050			20 4	0 0053	<0 0010		0 15	75 5	<0.0050	
5/09	8.3	8 57	699	677	13.5		0 10	26 2	<0 0050	<0 0010		0 20	163	<0.0050	
9/09	8.6	8 81	908	792	1.2		0 021	21 8	0 0057	<0 0010		0.18	199	0 0064	
1/10	8 5	8.69	877	761	10 8		1 6	28.9	0 0064	<0 0010		0 21	181	<0 0050	
7/10	8 75	8 98	597	487	1 04		0 486	17	0 107	<0 0005		0 0962	92 4	0 0085	
7/10 (Dup)	8 77	8 98	600	487	1 05		0 434	19	0.114	<0 0005		0 0900	88 6	0.00737	
11/10	8 43	8.7	741	507	1 21		1 210	14 3	0 00454	<0 0005		0 1590	140	<0 005	
4/11	8 60	8.91	446	334	0 986		0 337	18.8	0 00224	<0 0010		0.1770	88 7	0 00522	
4/11 (Dup)	8 55		446		0 871		0 330	18.0	0 00263	<0 0010		0 1850	89 9	<0 0050	
7/11	8 49	9 04	560	162	0.863		0 858	16.4	0.00319	<0 0010		0.1570	104	<0 0050	
11/11	8 37	8.32	650	644	0 657		0 217	15 4	<0 00250	<0 0010		0 1580	121	0 00790	

Note All results in mg/L unless otherwise noted

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

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

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond. (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 83	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	
2/07	7.22		500		2 1		< 01	12	0 0090	0 00085		1 70	54	0 03	
5/07	6 85	6.24	310	275	0 9		0 0	3 9	0 0087	<0 0005		0.19	40	0 011	
9/07	7 09	6 88	310	267	1 6		0 2	3 9	<0 0040	<0 00050		0.22	46	0 012	
3/08	6 46	5 93	310	237	<0 05			3 6	<0 004	<0 0005		0 08	47	<0 01	
6/08	6 34		260	183	0 9		0.2	3 4	0 0085	0 00073		0 20	37	0 015	
9/08	6 45	6 60	240	275	0 7		<0 01	3 5	<0 004	<0 0005		0 05	33	<0 01	
1/09	6 30	6 47	332	343	0 7		0 7	4 1	<0 0050	<0 0010		0 05	43 8	<0 0050	
5/09	6 30	6 46	337	327	7 1		0 27	3 3	<0 0050	<0 0010		0 21	53 8	0 0084	
9/09	6.40	6 54	361	307	0.37		0.31	2.8	<0 0050	<0 0010		0 11	55.3	0 012	
1/10	6 60	7 16	396	365	0 096		<0 0050	5 0	0 015	0 0012		0 66	62 3	0 040	
7/10	6 43	6 73	271	235	0 114		0 112	2 75	0 128	0 000595		0 166	24 9	0 0162	
11/10	6.22	7 47	279	185	0 257		0 257	2 83	0 00559	0 000584		0 127	22.9	0 0131	
4/11	6 86	7 26	309	185	0 369		0 122	3 87	0 00444	0 00105		0 282	39 2	0 0229	
7/11	6 32	7.12	252	100	1 84		1 84	3 07	0 0112	0 00144		0 410	31 7	0 0403	
11/11	6 15	6 76	294	280	0 22		0 0797	4.19	<0 00250	<0 0010		0 097	34 3	0 0097	

Note All results in mg/L unless otherwise noted

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 0096	<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	4.6		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	
5/07	9 08	9.22	4,000	3,380	5 7		0 069	180	0 012	<0 0005		0 11	950	<0 01	
9/07	9 12	9 55	3,300	2,810	3.2		<0 010	120	0 015	<0 00050		0.16	750	0 01	
3/08	9.03	8 93	3,300	1,881	3 1		<0 01	93	0 013	<0 0005		0.14	830	0.01	
3/08 (Dup)	9 03		3,400		3 9		<0.01	100	0 013	<0 0005		0 15	830	0 01	
6/08	9 06		3,700	1,211	5.7		0 820	140	0 013	<0 0005		0 11	860	<0 01	
9/08	9 08	9 19	3,400	4,120	5 4		<0.01	150	0.014	<0 0005		0 094	960	<0.01	
1/09	8.9	9 04	3,300	3,510	4.0		4	162	0 014	<0 0010		0.083	585	0 0051	
5/09	8 9	9.13	2,980	3,840	3 6		0 11	115	0 016	<0 0010		0 12	1,200	0 0094	
9/09	9.0	9 38	3,050	3,030	3 5		<0 0050	109	0 011	<0 0010		0.13	982	0 013	
1/10	9 1	9.22	3,440	3,050	3 6		0 99	127	0 015	<0 0010		0 14	918	0.011	
7/10	9 0	9.38	3,160	3,460	3 18		3.18	106	0.00873	<0 0005		0 0795	641	0.0117	
11/10	9.06	9 38	3,160	1,675	3 09		3 09	153	0 00922	<0 0005		0 0748	540	<0 005	
4/11	9 02	9 49	2,670	1,650	1 74		0.801	98	0 0114	<0 001		0 196	751	0 0188	
7/11	8.96	9.48	3,680	1,062	6 670		0 284	123	0 0106	<0 0010		0 107	912	0 00898	
7/11 (Dup)	8 96		3,680		7 580		8 31	105	0 0111	<0 0010		0 106	873	0 00921	
11/11	9 13	9.10	3,610	4,010	3 930		0 477	142	0 0116	<0 0010		0 0807	950	0 0183	

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	
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	
5/07	7.42	7 27	1,200	829	0 74		0 012	4 3	<0 004	<0 0005		1 90	150	<0 01	
6/08	7 42		2,400	338	3 7		0 28	12	<0 004	<0 0005		2	520	<0.01	
5/09	7 4	7 65	1,350	1,120	1 1		<0.0050	6 5	<0 0050	<0 0010		1 1	230	<0 0050	
7/10	7 45	7 92	1,410	1,033	1.06		1 06	14	0 000605	<0 0005		0.886	282	<0 0050	
7/11	7 44	8.07	1,970	472	1 19		1 19	14	<0.00250	<0 0010		1 35	440	<0 0050	

Note All results in mg/L unless otherwise noted

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GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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 38		<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	
5/07	7 95	8.01	1,100	823	7		<0.01	44	0 0074	0.00066		0 57	230	0.016	
6/08	8.15		1,100	655	7.1		1	58	0 0072	0 00097		0.64	220	0.026	
5/09	8 0	8 26	1,020	1002	8.9		0 019	37 5	<0 0050	0 0012		0 65	280	0 029	
7/10	8 16	8 42	993	781	2 27		2 27	38 4	0 133	0 000766		0 495	175	0 0234	
7/11	8 06	8.53	1,000	537	2 68		2 68	33..1	0 00447	<0.0010		0 482	215	0.0175	

Note All results in mg/L unless otherwise noted

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-40D															
5/86	9.4		1,120		7 4	0 06		20			11 7	0 62	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	
5/07	7.76	7.76	1,000	738	4.1		<0.01	17	<0 004	<0 0005		0 94	180	<0 01	
6/08	7 88		990	579	6 8(J)		0.47	29	0 0045	<0 0005		0 77	180	<0 01	
5/09	7 70	8 00	975	964	7 8		<0 0050	19.8	<0 0050	<0 0010		0 82	225	0 0061	
7/10	8 00	8 34	954	753	5 38		5 38	36.2	0.117	0 000581		0 467	158	0 0158	
7/11	7 99	8 41	907	497	3 47		3.47	24 1	0 003	<0 0010		0 516	178	0 00841	

Note All results in mg/L unless otherwise noted

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	0.018	<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	6.96	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	
5/07	6 79	6 89	430	339	<0 01			0 23	0.015	<0 0005		1 3	22	<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
SUMMARY OF ANALYTICAL RESULTS FOR REMEDIAL ACTION
GROUNDWATER MONITORING WELLS AND PARAMETERS
ORMET CORPORATION
HANNIBAL, OHIO

	pH (lab)	pH (field)	Specific Cond. (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
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	765	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 56		<0 02	29	<0 004	<0 0005		0 33	300	<0.01	
5/98	8.26	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	
5/07	8 36	8 49	2,600	1,601	1 8		<0 01	39	<0 004	<0.0005		0 2	560	<0 01	
6/08	7 97		2,900	1,224	2.3		0 22	37	<0 004	<0 0005		0 37	570	<0.01	
5/09	7 90	8.10	3,280	3,380	[7 9]		[0 033]	60 1	0 0053	<0 0010		0 25	1,010	<0 0050	
7/09		8 45		2,630	3 1		<0 005								
7/10	8 06	8.07	2,520	1,446	1.39		0 701	36.4	0 115	<0 0005		0 215	391	<0 0050	
7/11	8 01	8.62	2,100	522	1 51		1 51	34 1	0.00309	<0 0010		0 334	454	<0 0050	

Note All results in mg/L unless otherwise noted

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

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

	pH (lab)	pH (field)	Specific Cond (lab)	Specific Cond (field)	Cyanide Total	Cyanide Free	Cyanide Amenable	Fluoride	Arsenic	Beryllium	Iron	Manganese	Sodium	Vanadium	PCE
MW-42D															
6/88	7 9	8.1	550	600	0 16		<0.01	6 0	0 0028	<0 0015	1 11	0 636	68 6	0 0028	<0 005
1/95	7 5	7.7	640	410	0 04		<0.01	3.6	<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 6	<0 004	<0 0005		1 6	430	<0 01	
5/05	7 87	7 53	2,100	1,844	1.6		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	
5/07	7 81	7.88	1,200	832	0.63		<0.01	9 2	<0 004	<0 0005		0 9	220	<0.01	
6/08	7 64		2,900	1,320	4 6		0 81	14 0	<0 004	<0 0005		1 1	650	<0 01	
5/09	7 7	7.87	2,660	2,260	[5.8]		<0 0050	24 1	0 0058	<0 0010		0 84	877	<0 0050	
7/09		8.10		3,320	4.7		<0 005								
7/10	8 04	8 11	2,510	1,867	1 69		1 17	27 4	0 00108	<0.0005		0 697	634	<0.0050	
7/11	7.87	8.35	2,040	529	1.53		1 53	31.1	<0 00250	<0 0010		0 839	466	<0 0050	

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

TABLE 5a
TOTAL, AMENABLE, and WAD
CYANIDE COMPARISON
APRIL 2011 DATA
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO

	Total Cyanide	Amenable Cyanide	WAD Cyanide
MW-2	2.99	1.33	0.0942
MW-5	3.6	1.78	0.0893
MW-12	0.0294	0.0201	0.0191
MW-16	2.7	1.46	0.0711
MW-18	8.53	1.99	0.287
MW-18 (D)	8.07	2.02	0.353
MW-28	0.376	0.04	0.0159
MW-31	3.46	1.99	0.0675
MW-32	3.16	1.34	0.0826
MW-35	4.89	3.04	0.0923
MW-36	0.986	0.337	0.0358
MW-36 (D)	0.871	0.33	0.101
MW-37	0.369	0.122	0.00577
MW-39S	1.74	0.801	0.0687
FB-1	<0.0050	<0.0050	<0.0050

Amenable Cyanide = Cyanide Amenable to Chlorination

WAD Cyanide = Weak Acid Dissociable Cyanide

TABLE 5b
TOTAL, AMENABLE, and WAD
CYANIDE COMPARISON
JULY 2011 DATA
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO

	Total Cyanide	Amenable Cyanide	WAD Cyanide
MW-1	0.00595	<0.0050	<0.0050
MW-2	6.4	6.4	0.0618
MW-5	3.38	3.37	0.0605
MW-7	<0.0050	<0.0050	<0.0050
MW-8	0.21	0.207	0.0246
MW-10	<0.0050	<0.0050	<0.0050
MW-11	0.54	0.532	0.0204
MW-12	<0.0050	<0.0050	<0.0050
MW-14	0.0204	0.0147	0.0165
MW-15	2.24	2.23	0.0281
MW-16	0.978	0.975	0.0352
MW-17	2.98	1.11	0.0257
MW-17 (D)	3.25	7.42	0.029
MW-18	30.6	30.6	0.0751
MW-19	<0.0050	<0.0050	0.00913
MW-19 (D)	<0.0050	<0.0050	<0.0050
MW-28	0.0384	0.036	0.0121
MW-29S	1.58	1.58	0.0273
MW-29D	0.483	0.475	0.0282

Amenable Cyanide = Cyanide Amenable to Chlorination

WAD Cyanide = Weak Acid Dissociable Cyanide

TABLE 5b
TOTAL, AMENABLE, and WAD
CYANIDE COMPARISON
JULY 2011 DATA
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO

	Total Cyanide	Amenable Cyanide	WAD Cyanide
MW-30	2.36	2.36	0.0184
MW-30 (D)	1.3	1.29	0.0146
MW-31	4.36	4 36	0.0343
MW-32	2.74	2.73	0.0841
MW-34S	2.1	2.09	0.0611
MW-34D	9.3	9.3	0.0802
MW-35	0.908	0.904	0.01
MW-36	0 863	0.858	0.0152
MW-37	1.84	1.84	0.0121
MW-39S	6.67	0.284	0 0866
MW-39S (D)	7.58	8.31	0.0618
MW-39D	1.19	1.19	0.0379
MW-40S	2.68	2.68	0.0286
MW-40D	3.47	3.47	0.0372
MW-42S	1.51	1.51	0.0309
MW-42D	1.53	1.53	0.0356
FB-1	<0.005	<0 005	<0.005

Amenable Cyanide = Cyanide Amenable to Chlorination

WAD Cyanide = Weak Acid Dissociable Cyanide

TABLE 5c
TOTAL, AMENABLE, and WAD
CYANIDE COMPARISON
NOVEMBER 2011 DATA
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO

	Total Cyanide	Amenable Cyanide	WAD Cyanide
MW-2	5.46	1.86	0.0688
MW-5	3.58	1.91	0.0469
MW-12	0 00527	<0.0050	<0.0050
MW-16	3.13	1.08	0.0373
MW-16 (D)	3.56	1.37	0.0355
MW-18	9.98	3.78	0.0606
MW-28	0.0708	0.0640	0.0114
MW-31	3.86	1.46	0.0511
MW-31 (D)	2.77	0.715	0.0428
MW-32	4.00	1.73	0.0545
MW-35	3.16	1.07	0.0123
MW-36	0.657	0.217	0.0182
MW-37	0.22	0.0797	0.0105
MW-39S	3.93	0.477	0.0518

Amenable Cyanide = Cyanide Amenable to Chlorination

WAD Cyanide = Weak Acid Dissociable Cyanide

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR PCBS

ORMET CORPORATION

HANNIBAL, OHIO

	MW-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-12													
	2/26/07	5/17/07	9/6/07	3/12/08	6/12/08	9/11/08	1/28/09	5/20/09	9/24/09	1/27/10	7/21/10	11/17/10	4/5/11	7/13/11
Aroclor-1016	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.52	<0 51/<0.52	<0.52	<0.52	<0.50	<0.50	<0.5	<0.5
Aroclor-1221	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.52	<0 51/<0.52	<0.52	<0.52	<0.50	<0.50	<0.5	<0.5
Aroclor-1232	<0 5	<0.5	---	<0.5	<0.5	<0.5	<0.52	<0 51/<0.52	<0.52	<0.52	<0.50	<0.50	<0 5	<0 5
Aroclor-1242	<0.5	<0.5	---	<0.5	<0.5	<0.5	<0.52	<0 51/<0.52	<0.52	<0.52	<0.50	<0.50	<0.5	<0 5
Aroclor-1248	<0.5	<0 5	---	<0 5	<0.5	<0.5	<0.52	<0.51/<0.52	<0.52	<0.52	<0.50	<0 50	<0 5	<0 5
Aroclor-1254	<0.5	<0.5	---	<0.5	<0 5	<0 5	<0 52	<0 51/<0.52	<0.52	<0.52	<0 50	<0 50	<0.5	<0.5
Aroclor-1260	<0.5	<0.5	---	<0 5	<0.5	<0.5	<0.52	<0.51/<0.52	<0 52	<0.52	<0 50	<0.50	<0 5	<0 5

	MW-12
	11/16/11
Aroclor-1016	<0.5
Aroclor-1221	<0.5
Aroclor-1232	<0 5
Aroclor-1242	<0.5
Aroclor-1248	<0 5
Aroclor-1254	<0 5
Aroclor-1260	<0 5

All results in ug/L

Not Analyzed

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR PCBS

ORMET CORPORATION

HANNIBAL, OHIO

	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-44S													
	2/26/07	5/17/07	9/6/07	3/12/08	6/11/08	9/11/08	1/28/09	5/19/09	9/23/09	1/26/10	7/21/10	11/18/10	4/5/11	7/12/11
Aroclor-1016	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.53	<0 52	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5
Aroclor-1221	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.53	<0 52	<0.51	<0.51	<0.5	<0.5	<0.5	<0 5
Aroclor-1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.53	<0.52	<0.51	<0.51	<0.5	<0.5	<0 5	<0.5
Aroclor-1242	<0.5	<0.5	<0.5	<0.5	<0.5	<0 5	<0.53	<0.52	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5
Aroclor-1248	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.53	<0.52	<0.51	<0.51	<0.5	<0.5	<0.5	<0.5
Aroclor-1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.53	<0 52	<0.51	<0.51	<0 5	<0 5	<0 5	<0 5
Aroclor-1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.53	<0 52	<0 51	<0 51	<0 5	<0.5	<0 5	<0 5

	MW-44S
	11/15/11
Aroclor-1016	<0.5
Aroclor-1221	<0.5
Aroclor-1232	<0.5
Aroclor-1242	<0 5
Aroclor-1248	<0 5
Aroclor-1254	<0.5
Aroclor-1260	<0.5

All results in ug/L

Not Analyzed

TABLE 6

SUMMARY OF ANALYTICAL RESULTS FOR PCBS

ORMET CORPORATION

HANNIBAL, OHIO

	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

	MW-44D													
	2/26/07	5/17/07	9/6/07	3/12/08	6/11/08	9/11/08	1/28/09	5/19/09	9/23/09	1/26/10	7/21/10	11/18/10	4/5/11	7/12/11
Aroclor-1016	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.52	<0.51	<0.52	<0.52	<0.5	<0.5	<0.5	<0.5
Aroclor-1221	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.52	<0 51	<0.52	<0.52	<0.5	<0.5	<0 5	<0.5
Aroclor-1232	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.52	<0.51	<0.52	<0.52	<0.5	<0.5	<0 5	<0.5
Aroclor-1242	<0.5	<0.5	<0.5	<0 5	<0 5	<0 5	<0.52	<0.51	<0.52	<0.52	<0.5	<0.5	<0.5	<0 5
Aroclor-1248	<0.5	<0 5	<0.5	<0.5	<0.5	<0.5	<0.52	<0.51	<0.52	<0.52	<0.5	<0.5	<0.5	<0.5
Aroclor-1254	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.52	<0.51	<0.52	<0.52	<0.5	<0 5	<0 5	<0.5
Aroclor-1260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0 52	<0.51	<0.52	<0.52	<0 5	<0 5	<0 5	<0.5

	MW-44D
	11/16/11
Aroclor-1016	<0.5
Aroclor-1221	<0.5
Aroclor-1232	<0.5
Aroclor-1242	<0.5
Aroclor-1248	<0.5
Aroclor-1254	<0 5
Aroclor-1260	<0.5

All results in ug/L

Not Analyzed

TABLE 7
SUMMARY OF ESTIMATED AQUIFER AREAS ABOVE CLEANUP GOALS
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
6/88	43.3 a.		24.5 a.	
1/95	48.4 a.	+11.6	5.9 a.	-75.8
5/97	43.7 a.	-9.7	21.3 a.	+259
5/98	36.9 a.	-15.6	10.5 a.	-50.6
5/99	43.7 a.*	+18.4	27.5 a.	+161
5/00	41.6 a.	-4.8	36.5 a.	+32.7
5/01	41.4 a.	-0.5	36.7 a.	+0.5
5/02	37.9 a.	-8.5	37.2 a.	+1.3
5/03	38.8 a.	+2.3	37.2 a.	0.0
5/04	42.1 a.	+7.8	38.1 a.	+2.4
5/05	39.5 a.	-6.2	43.7 a.	+12.8
5/06	45.4 a.	+14.9	44.8 a.	+2.5
5/07	42.1 a.	-7.3	46.6 a.	+4.0
6/08	44.0 a.	+4.5	49.9 a.	+7.1
5/09	41.7 a.	-5.2	50.0 a.	+0.2
7/10	47.5 a.	+13.9	51.5 a.	+3.0
7/11	47.5 a.	0.0	45.6 a.	-11.5

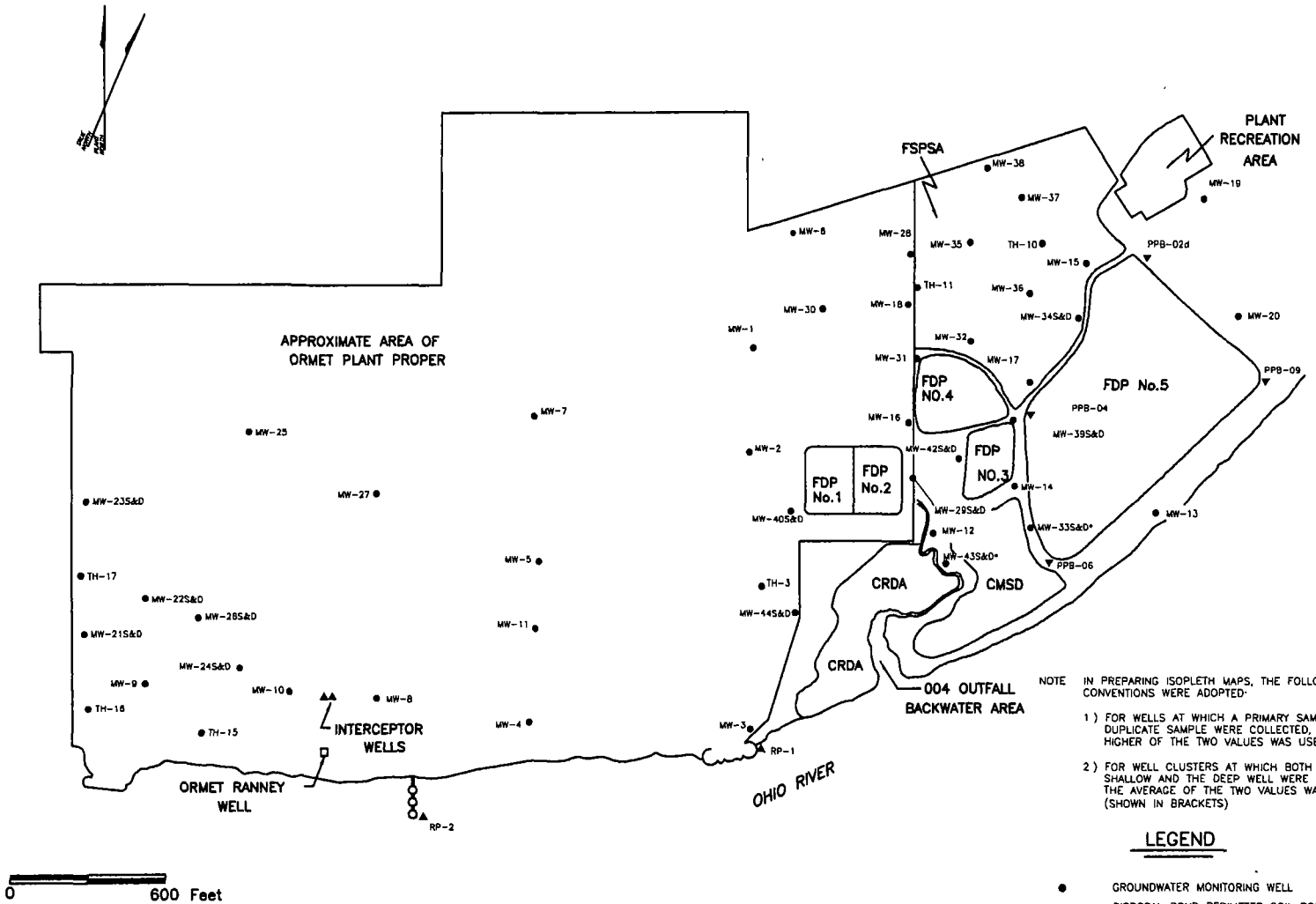
Sampling Date	Estimated Fluoride Mass-in-Place	% Change	Estimated Total CN Mass-in-Place	% Change
6/88	85,702 lbs.		6,821 lbs.	
1/95	28,168 lbs.	-67.1	4,271 lbs.	-37.4
5/97	29,033 lbs.	+3.1	2,943 lbs.	-31.1
5/98	23,888 lbs.	-17.7	2,597 lbs.	-11.8
5/99	30,416 lbs.*	+27.3	5,566 lbs.	+114
5/00	27,071 lbs.	-11.0	4,679 lbs.	-15.9
5/01	21,741 lbs.	-19.7	4,300 lbs.	-8.1
5/02	28,789 lbs.	+24.5	4,530 lbs.	+5.1
5/03	32,127 lbs.	+10.4	2,773 lbs.	-38.8
5/04	38,836 lbs.	+17.3	3,062 lbs.	+9.4
5/05	37,656 lbs.	-3.0	4,681 lbs.	+34.6
5/06	32,725 lbs.	-13.1	6,615 lbs.	+41.3
5/07	35,219 lbs.	+7.6	6,438 lbs.	-2.7
6/08	33,638 lbs.	-4.5	5,997 lbs.	-6.8
5/09	29,510 lbs.	-12.3	5,422 lbs.	-9.6
7/10	37,466 lbs.	+27.0	3,441 lbs.	-36.5
7/11	33,772 lbs.	-9.9	3,499 lbs.	+1.7

* - Value corrected due to omission during 1999 calculation.

TABLE 8
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
5/07	35,219	+2,484	6,085	6,438	-177	1,151
6/08	33,638	-1,581	6,320	5,997	-441	1,000
5/09	29,510	-4,128	6,964	5,422	-575	936
7/10	37,466	+7,956	10,436	3,441	-1,981	1,256
7/11	33,772	-3,694	7,234	3,499	+58	760
	TOTAL MASS REMOVED		187,291	TOTAL MASS REMOVED		25,705

All values given in pounds.



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 (SHOWN IN BRACKETS)

LEGEND

- ● GROUNDWATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER
- ▲ RIVER LEVEL MEASURING LOCATION
- * WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997

HMI Environmental Consulting Services

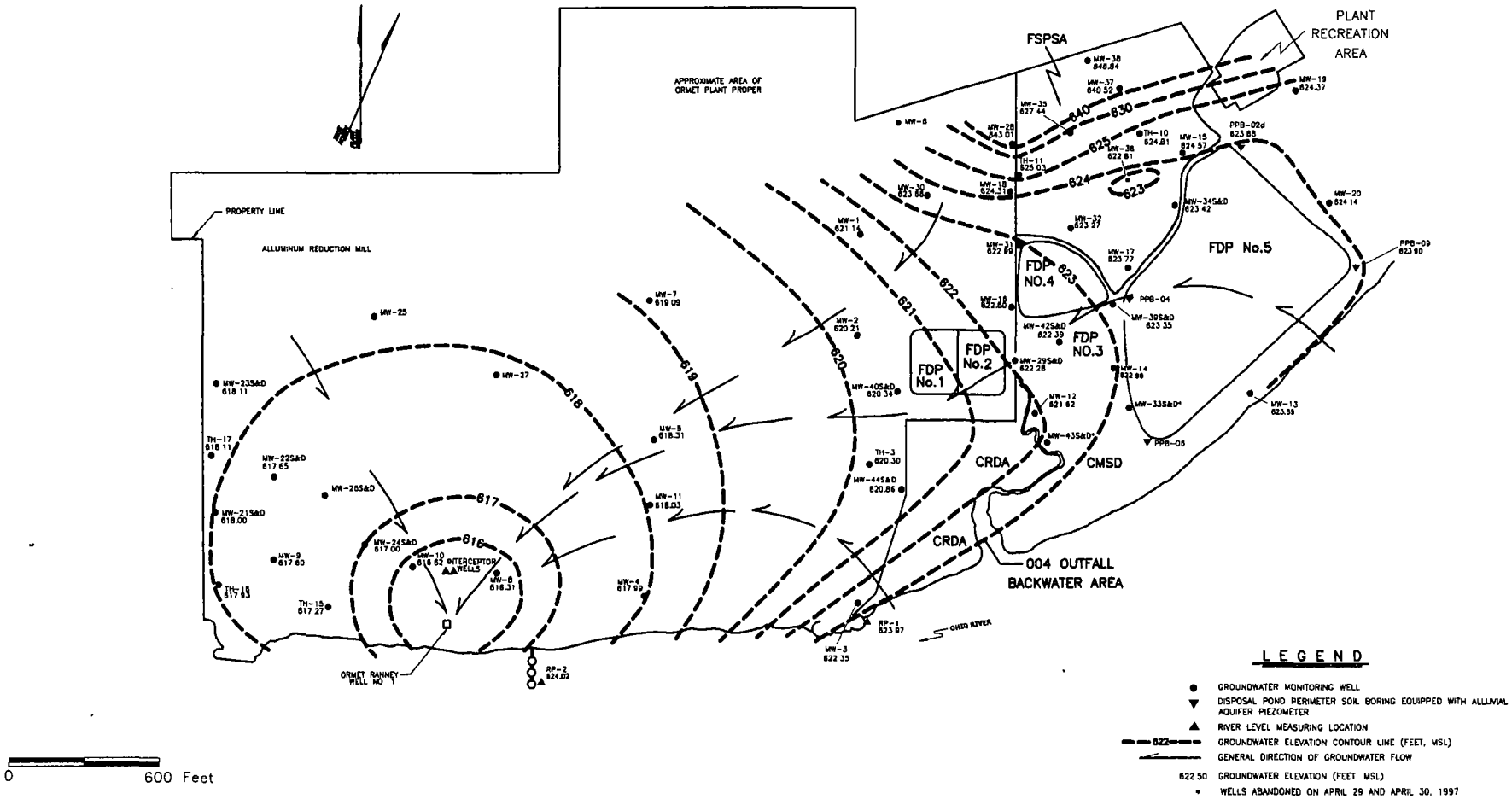
HydroSystems Management, Inc.
89 West Main Street
West Middletown, Pennsylvania 15379

PROJECT NO HM00319	FILE NO.
DRAWING 031212A	PLOT SIZE=1"=600'
DRAFTED BY CL	DATE 03/12/2012
CHECKED BY CPS	DATE 03/12/2012
APPROVED BY CPS	DATE 03/14/2012
REVISION NO	DATE

LOCATION OF MONITORING WELLS AND OTHER SITE FEATURES

ORMET PRIMARY ALUMINUM CORPORATION — HANNIBAL, OHIO

FIGURE 1



HMI Environmental Consulting Services

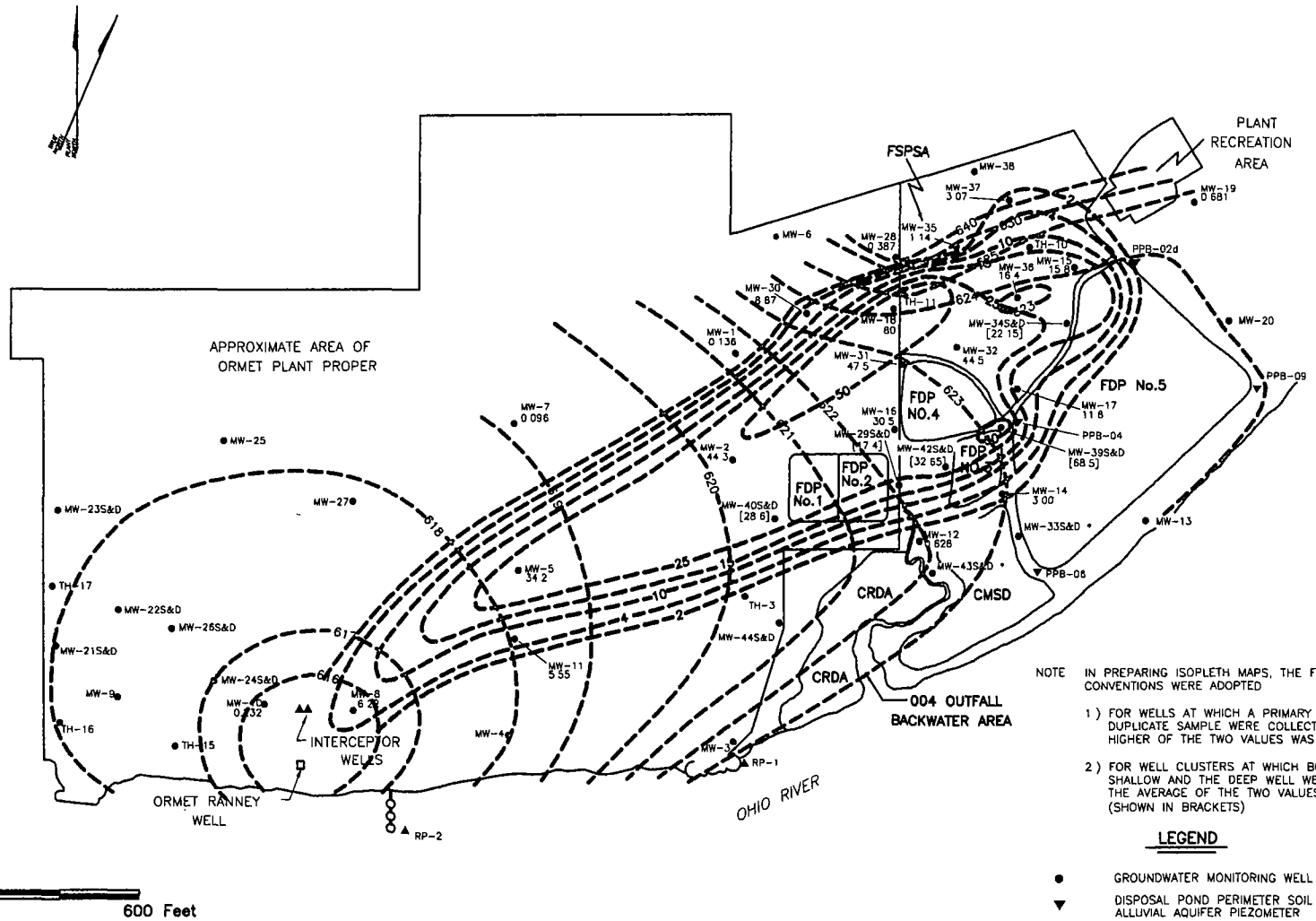
HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO: HM00319	FILE NO:
DRAWING: 031212A	PLOT SIZE=1"=800'
DRAFTED BY: CL	DATE: 03/12/2012
CHECKED BY: CPS	DATE: 03/12/2012
APPROVED BY: CPS	DATE: 03/14/2012
REVISION NO:	DATE:

GROUNDWATER ELEVATIONS AND FLOW PATTERNS WITHIN THE ALLUVIAL AQUIFER BASED ON JULY 11, 2011 WATER-LEVEL DATA

ORMET PRIMARY ALUMINUM CORPORATION **HANNIBAL, OHIO**

FIGURE 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 (SHOWN IN BRACKETS)

LEGEND

- ● GROUNDWATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER
- ▲ RIVER LEVEL MEASURING LOCATION
- 622 GROUNDWATER ELEVATION CONTOUR LINE (FEET, MSL)
- 4 FLUORIDE CONCENTRATION CONTOUR (mg/L)
- • WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997

0 600 Feet

HMI Environmental Consulting Services

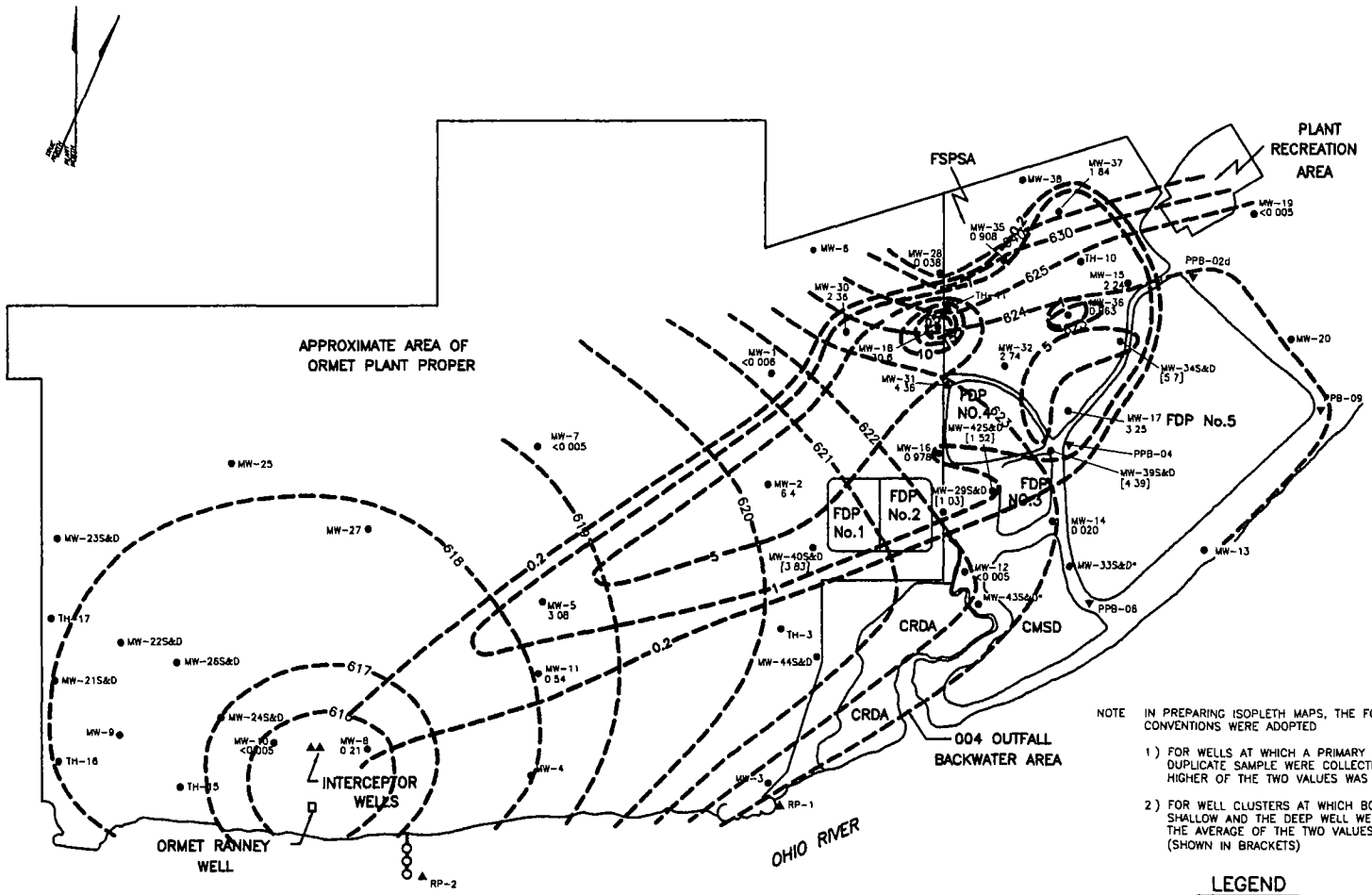
HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO HM00319	FILE NO
DRAWING 031212A	PLOT SIZE=1"=600'
DRAFTED BY CL	DATE 03/12/2012
CHECKED BY CPS	DATE 03/12/2012
APPROVED BY CPS	DATE 03/14/2012
REVISION NO	DATE

FLUORIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER (BASED ON SAMPLES COLLECTED IN JULY 2011)

ORMET PRIMARY ALUMINUM 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 (SHOWN IN BRACKETS)

LEGEND

- ● GROUNDWATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER
- ▲ RIVER LEVEL MEASURING LOCATION
- 622 GROUNDWATER ELEVATION CONTOUR LINE (FEET MSL)
- 0.2 TOTAL CYANIDE CONCENTRATION CONTOUR (mg/L)
- • WELLS ABANDONED ON APRIL 29 AND APRIL 30, 1997

HMI Environmental Consulting Services

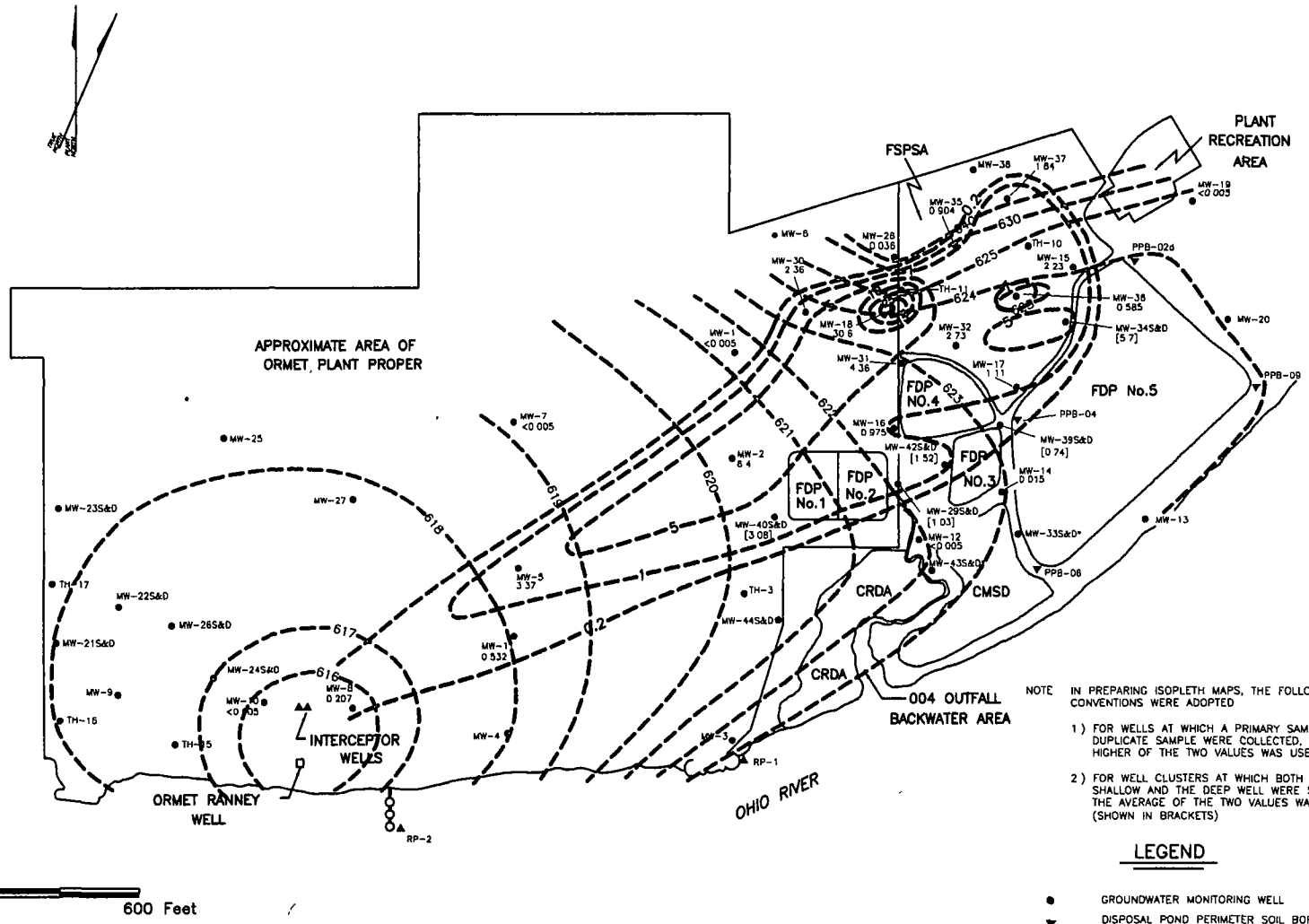
HydroSystems Management, Inc.
P.O. Box 789
Washington, Pennsylvania 15301

PROJECT NO HM00319	FILE NO
DRAWING 031212A	PLOT SIZE=1"=300'
DRAFTED BY CL	DATE 03/12/2012
CHECKED BY CPS	DATE 03/12/2012
APPROVED BY CPS	DATE 03/14/2012
REVISION NO	DATE

TOTAL CYANIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER (BASED ON SAMPLES COLLECTED IN JULY 2011)

ORMET PRIMARY ALUMINUM 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 (SHOWN IN BRACKETS)

LEGEND

- ● GROUNDWATER MONITORING WELL
- ▼ DISPOSAL POND PERIMETER SOIL BORING EQUIPPED WITH ALLUVIAL AQUIFER PIEZOMETER
- ▲ RIVER LEVEL MEASURING LOCATION
- 622 GROUNDWATER ELEVATION CONTOUR LINE (FEET, MSL)
- 0.2 AMENABLE CYANIDE CONCENTRATION CONTOUR (mg/L)
- • WELLS ABANDONED ON APRIL 29 AND APRIL 30 1997

HMI Environmental Consulting Services

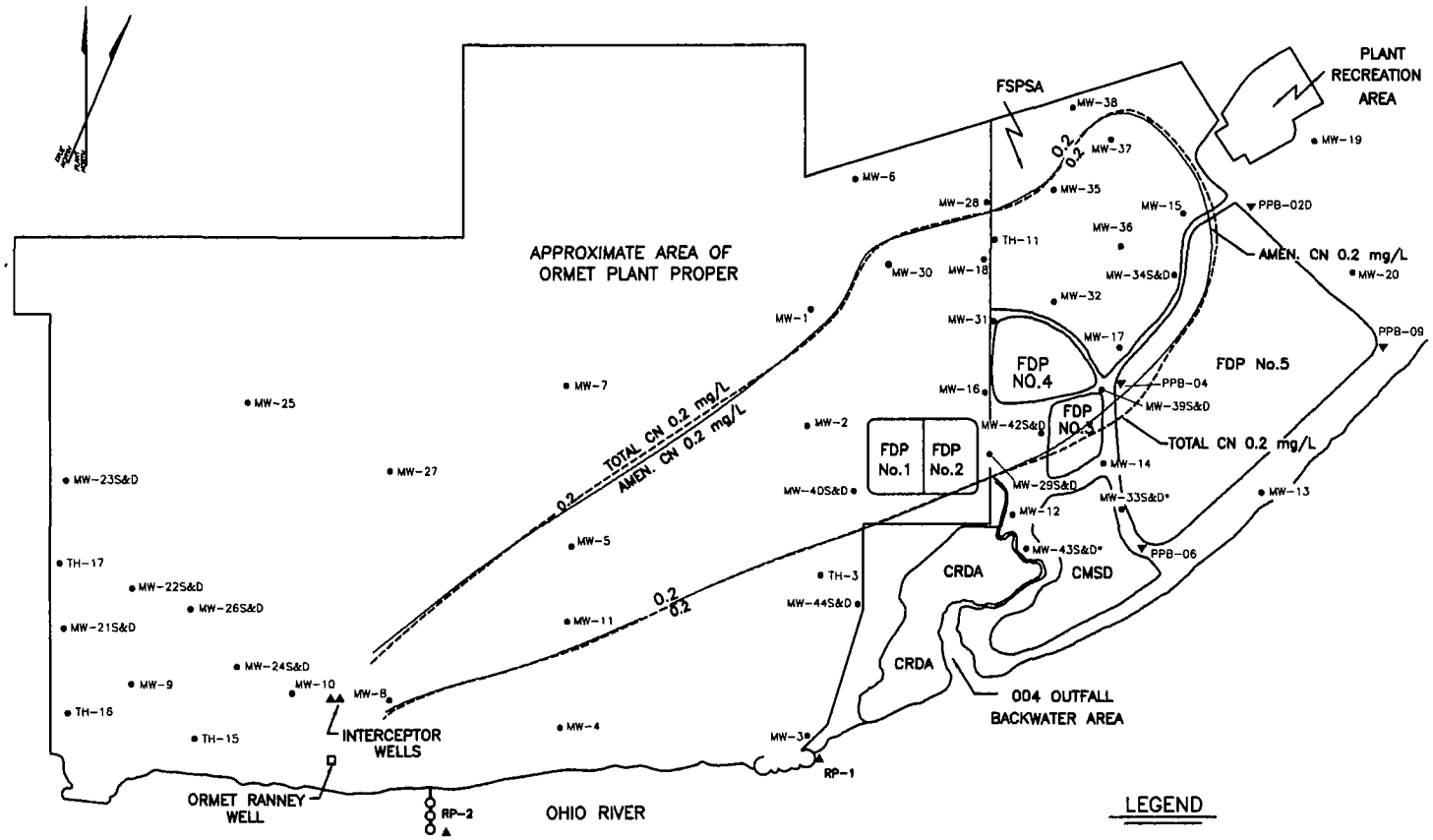
HydroSystems Management, Inc.
89 West Main Street
West Middletown, Pennsylvania 15379

PROJECT NO HM00319	FILE NO
DRAWING 031212A	PLOT SIZE=1"=600'
DRAFTED BY CL	DATE 03/12/2012
CHECKED BY CPS	DATE 03/12/2012
APPROVED BY CPS	DATE 03/14/2012
REVISION NO	DATE

AMENABLE CYANIDE ISOPLETH MAP FOR THE ALLUVIAL AQUIFER (BASED ON SAMPLES COLLECTED IN JULY 2011)

ORMET PRIMARY ALUMINUM CORPORATION HANNIBAL, OHIO

FIGURE 5



HMI Environmental Consulting Services

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

PROJECT NO HM00319	FILE NO
DRAWING 031212A	PLOT SIZE=1"=600
DRAFTED BY CL	DATE 03/12/2012
CHECKED BY CPS	DATE 03/12/2012
APPROVED BY CPS	DATE 03/14/2012
REVISION NO	DATE

2011 COMPARISON OF TOTAL VS. AMENABLE CYANIDE DISTRIBUTION IN GROUND WATER
(BASED ON 0.2 mg/L CONCENTRATION CONTOURS)

ORMET PRIMARY ALUMINUM CORPORATION — HANNIBAL, OHIO

FIGURE 6

FIGURE 7
FLUORIDE AND TOTAL CYANIDE MASS-IN-PLACE VS. TIME
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO

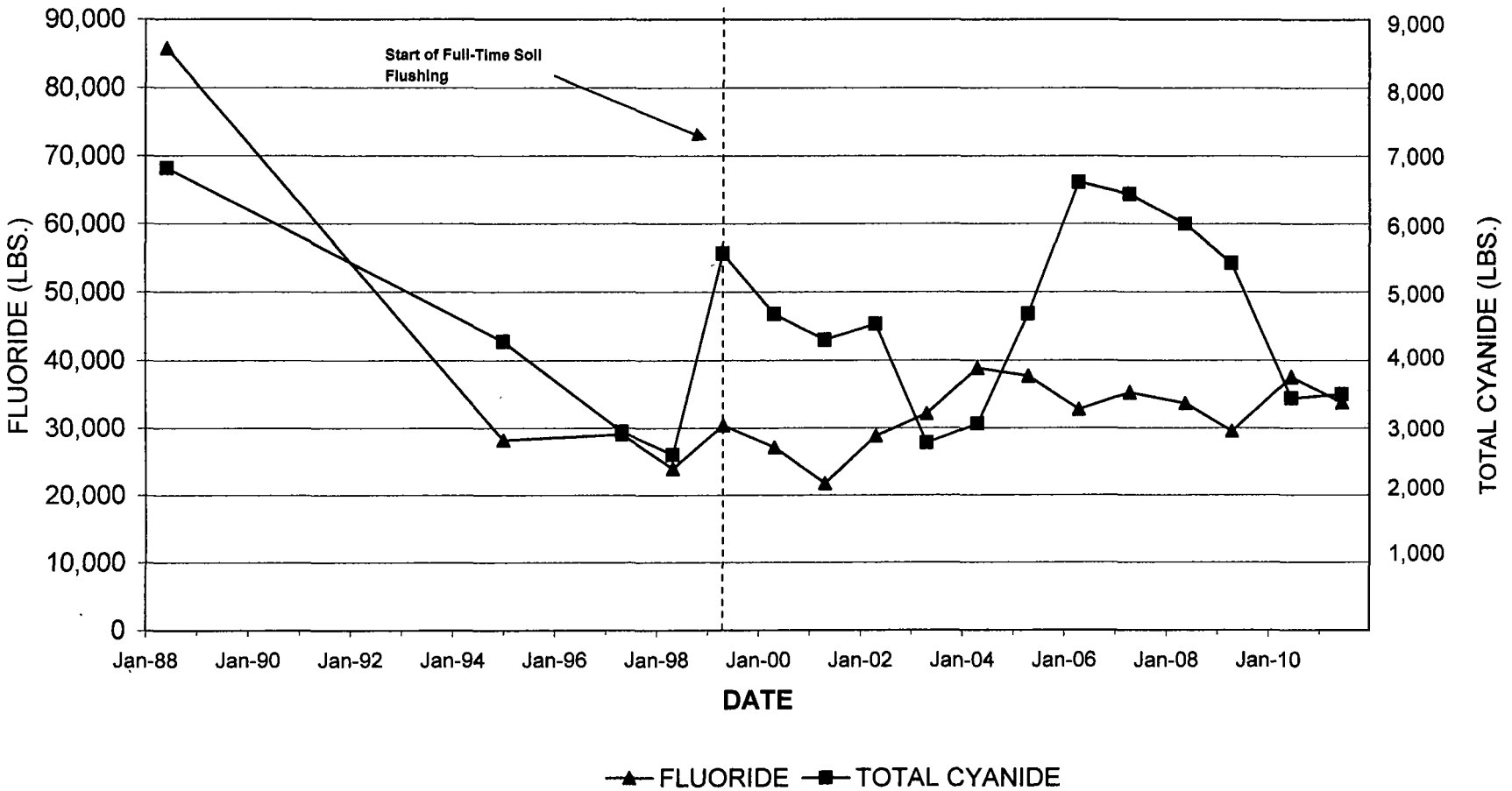
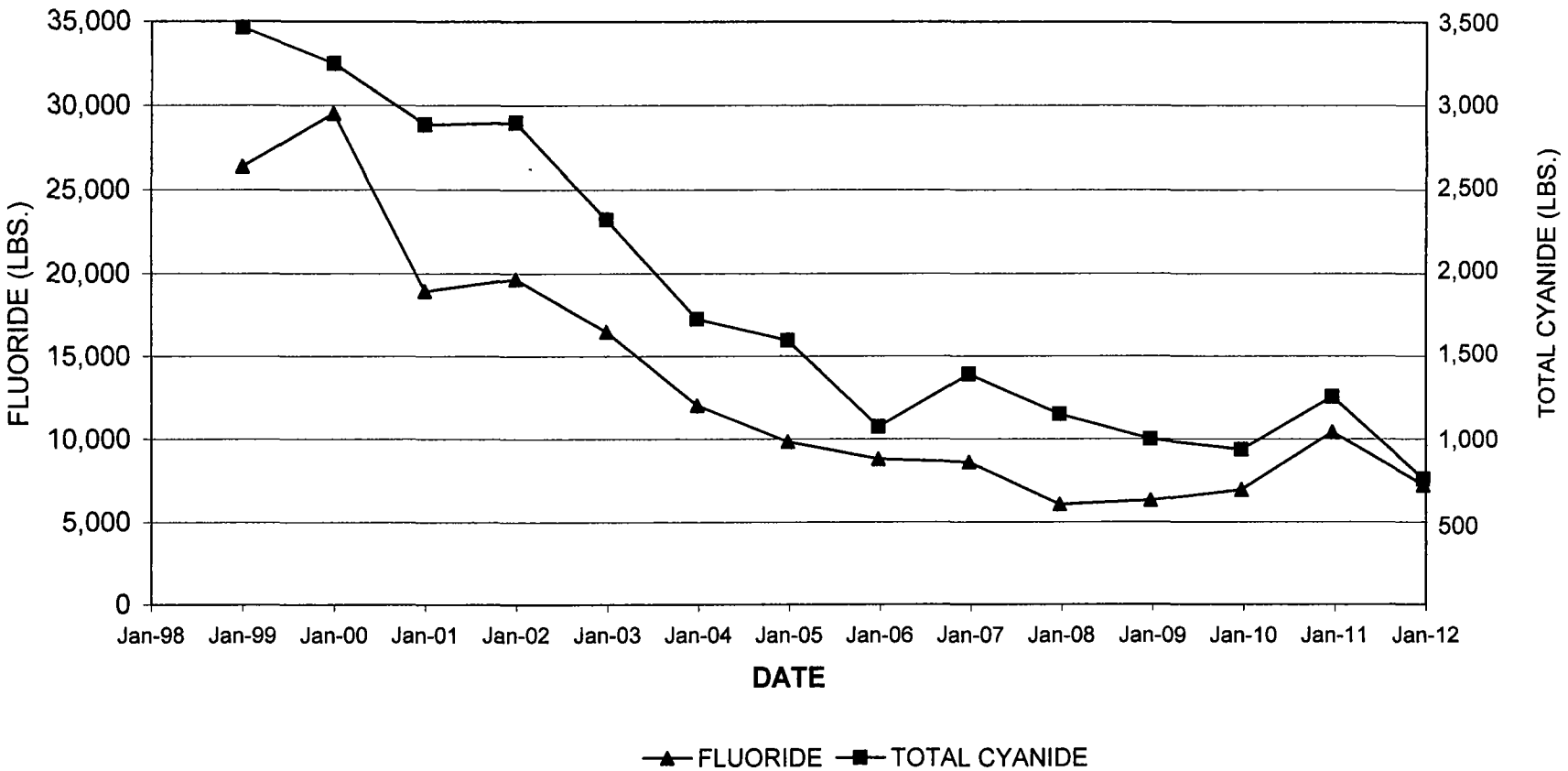


FIGURE 8
FLUORIDE AND TOTAL CYANIDE MASS REMOVAL VS. TIME
ORMET PRIMARY ALUMINUM CORPORATION
HANNIBAL, OHIO



APPENDIX A

WATER SAMPLING LOG FORMS

Appendix A-1	Water Sampling Log Forms for April 2011 Monitoring Event
Appendix A-2	Water Sampling Log Forms for July 2011 Monitoring Event
Appendix A-3	Water Sampling Log Forms for November 2011 Monitoring Event

APPENDIX A-1

WATER SAMPLING LOG FORMS FOR APRIL 2011 MONITORING EVENT

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-2
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1550
Date:	4.4.11	Time Sampling Complete:	1620

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 667.52

Depth of Well Below MP (TD): 82.25

Depth to Water Below MP (DTW): 48.53

Water Column (WC) in Well (TD - DTW): 33.72

Casing Diameter: 2"

Gallons in Well (WC x GPF): 5.4

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 16+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN (COFFEE) Odor: NONE Turbidity: CLOUDY

Well Volumes:	5 GAL	12 GAL.	15 GAL.	18 GAL.		
pH:	9.85	9.84	9.81	9.79		
Spec. Cond.:	848	785	755	739		
Diss. Oxygen:						
Turbidity:						
Redox:	-					
Temp.:	15.3	15.3	15.4	15.4		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	250 ~~500~~ ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	500 ~~250~~ ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL ~~AMENABLE~~ CN	250 ml. ~~PLASTIC~~ AMBER GLASS	NaOH
PCE	2 ~~3~~ x 40 ml. GLASS	HCl
AMENABLE CN	250 ml AMBER GLASS	NaOH
WAD CN	250 ml AMBER GLASS	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

34
.16
.204
2.4

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-4-11

Sample I.D.: MW-5
Duplicate I.D.:
Time Sampling Began: 1625
Time Sampling Complete: 1700

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 668.16
Depth of Well Below MP (TD): 92.00
Depth to Water Below MP (DTW): 51.41
Water Column (WC) in Well (TD - DTW): 40.59
Casing Diameter: 2"
Gallons in Well (WC x GPF): 6.6

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 20

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN (TEA) Odor: NONE Turbidity: CLEAR

Well Volumes:	5 GAL	12 GAL.	18 GAL.			
pH:	8.87	8.68	8.61			
Spec. Cond.:	678	644	633			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.4	15.3	15.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO
Comments:

H1
.16
246
410
656

PURGE #1 - 80
4-4-11 1715
CN
CN-A
CN-WD

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-12
Project #:	HM00326	Duplicate I.D.:	~~MW-12D~~
Location:	HANNIBAL, OHIO	Time Sampling Began:	1100
Date:	4-5-11	Time Sampling Complete:	1130

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 635.82

Depth of Well Below MP (TD): 68.42

Depth to Water Below MP (DTW): 15.23

Water Column (WC) in Well (TD - DTW): 53.19

Casing Diameter: 2"

Gallons in Well (WC x GPF): 8.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 25+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	9 GAL	15 GAL.	22 gal.			
pH:	7.88	8.03	8.07			
Spec. Cond.:	333	334	334			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.3	14.4	14.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO

Comments:

53
.16
318
530
848

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-16
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	~~1325~~ 1400
Date:	4-4-11	Time Sampling Complete:	~~1345~~ 1445

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 662.72

Depth of Well Below MP (TD): 83.12

Depth to Water Below MP (DTW): 41.23

Water Column (WC) in Well (TD - DTW): 42.89

Casing Diameter: 2"

Gallons in Well (WC x GPF): 7

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 21

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN (COFFEE) Odor: NONE Turbidity: CLOUDY

Well Volumes:	3 GAL.	8 GAL.	14 GAL.	21 GAL.		
pH:	9.06	9.53	9.54	9.54		
Spec. Cond.:	611	593	591	583		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.7	15.7	16.0	16.0		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

42.89
.16
25734
42890
6.8624

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-18
Project #:	HM00326	Duplicate I.D.:	MW-48 (1515)
Location:	HANNIBAL, OHIO	Time Sampling Began:	1435
Date:	4.4.11	Time Sampling Complete:	1510

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 660.91

Depth of Well Below MP (TD): 61.16

Depth to Water Below MP (DTW): 37.57

Water Column (WC) in Well (TD - DTW): 23.59

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: CLOUDY TO SILTY

Well Volumes:	4 GAL.	8 GAL.	16 GAL.			
pH:	10.12	10.17	10.08			
Spec. Cond.:	1032	1179	1209			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.5	15.2	15.3			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO

Comments:

24
.16
144
240
3.84

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4.4.11

Sample I.D.: MW-28
Duplicate I.D.:
Time Sampling Began: 1520
Time Sampling Complete: 1550

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 663.27
Depth of Well Below MP (TD): 46.20
Depth to Water Below MP (DTW): 22.62
Water Column (WC) in Well (TD - DTW): 23.58
Casing Diameter: 2"
Gallons in Well (WC x GPF): 3.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: CLOUDY TO SILTY

Well Volumes:	4 GAL.	12 GAL.	15 GAL.	18 GAL.		
pH:	7.08	6.77	6.59	6.53		
Spec. Cond.:	264	248	~~[illegible]~~	247		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.1	14.3	14.3	14.4		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-31
Project #:	HM00326	Duplicate I.D.:	~~MW-31D~~
Location:	HANNIBAL, OHIO	Time Sampling Began:	1155
Date:	4-5-11	Time Sampling Complete:	1230

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 661.59

Depth of Well Below MP (TD): 67.58

Depth to Water Below MP (DTW): 39.56

Water Column (WC) in Well (TD - DTW): 28.02

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 14

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN (COFFEE) Odor: NONE Turbidity: CLOUDY

Well Volumes:	6 GAL.	10 GAL.	14 GAL.			
pH:	10.01	10.04	10.06			
Spec. Cond.:	950	928	924			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.1	15.3	15.0			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO

Comments:

28
.16
168
280
448

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-32
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1425
Date:	4-5-11	Time Sampling Complete:	1445

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 656.12

Depth of Well Below MP (TD): 57.36

Depth to Water Below MP (DTW): 33.93

Water Column (WC) in Well (TD - DTW): 23.43

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROW (COFFEE) Odor: NONE Turbidity: CLOUDY

Well Volumes:	6 GAL.	10 GAL.	16 GAL.			
pH:	10.22	10.26	10.26			
Spec. Cond.:	770	827	849			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.8	17.5	17.6			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

24
.16
144
240

PURGE #2 - 145
4-5-11 1500
CN
CN-A
CN-WD

FB-1
4-5-11
1510

VAULT-PRIMARY
4-5-11 1545

VAULT-SECONDARY
4-5-11

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-35
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1220
Date:	4-5-11	Time Sampling Complete:	1250

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 661.90

Depth of Well Below MP (TD): 46.94

Depth to Water Below MP (DTW): 35.61

Water Column (WC) in Well (TD - DTW): 11.33

Casing Diameter: 2"

Gallons in Well (WC x GPF): 2

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 6

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes:	2 GAL.	4 GAL.	4+			
pH:	8.13	8.30	8.46			
Spec. Cond.:	190	361	350			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.4	15.5	15.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

11
.16
66
110
176

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-5-11

Sample I.D.: MW-36
Duplicate I.D.: MW-46 (1440)
Time Sampling Began: 1405
Time Sampling Complete: 1430

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 655.14
Depth of Well Below MP (TD): 52.08
Depth to Water Below MP (DTW): 33.54
Water Column (WC) in Well (TD - DTW): 18.54
Casing Diameter: 2"
Gallons in Well (WC x GPF): 3.0

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9.0

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes:	3 GAL.	8 GAL.	14 GAL.			
pH:	8.32	8.81	8.91			
Spec. Cond.:	325	329	334			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.9	18.3	18.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

19
.16
114
190

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-5-11

Sample I.D.: MW-37
Duplicate I.D.:
Time Sampling Began: 1340
Time Sampling Complete: 1400

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.14
Depth of Well Below MP (TD): 36.90
Depth to Water Below MP (DTW): 22.29
Water Column (WC) in Well (TD - DTW): 14.61
Casing Diameter: 2"
Gallons in Well (WC x GPF): 2.4

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 7+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: SILTY

Well Volumes:	2 GAL.	3 GAL	3+ Gal.			
pH:	7.75	7.39	7.26			
Spec. Cond.:	184	183	185			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	13.3	13.5	13.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

15
.16
90
50
1
2.40

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-5-11

Sample I.D.: MW-44s
Duplicate I.D.:
Time Sampling Began: 1030
Time Sampling Complete: 1045

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 662.01
Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 42.43
Water Column (WC) in Well (TD - DTW): 26.62
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	5 GAL.	9 GAL.	14 GAL.			
pH:	7.66	7.52	7.50			
Spec. Cond.:	352	356	357			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.1	14.2	14.3			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO
Comments:

27
.16
162
27
4.32

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-5-11

Sample I.D.: MW-44D
Duplicate I.D.:
Time Sampling Began: 1000
Time Sampling Complete: 1030

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.76
Depth of Well Below MP (TD): 93.97
Depth to Water Below MP (DTW): 42.92
Water Column (WC) in Well (TD - DTW): 51.05
Casing Diameter: 2"
Gallons in Well (WC x GPF): 8.1

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 24+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 GAL.	18 GAL.	26 GAL.			
pH:	7.12	8.02	8.14			
Spec. Cond.:	312	307	308			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.2	14.3	14.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO
Comments:

51
.16
306
310

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 4-5-11

Sample I.D.: MW-39S
Duplicate I.D.:
Time Sampling Began: 1130
Time Sampling Complete: 1150

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 657.30
Depth of Well Below MP (TD): 60.23
Depth to Water Below MP (DTW): 34.81
Water Column (WC) in Well (TD - DTW): 25.42
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.1

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN (TEA) Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 GAL.	12 GAL	14 GAL			
pH:	9.54	9.50	9.49			
Spec. Cond.:	1835	1654	1650			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	13.9	14.4	14.2			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

26
.16
156
260
416
4

COC No. A 23517

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MGMT. INC.

Project Contact: CLEASON SMITH

Contact Phone #: 724-587-5680

Turn Around Requirements: STD.

Location: HANNIBAL, OH

Project ID: ORMET-CERCLA

Sampler (print): C.SMITH

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	CONTAINERS	FILTERED	Mo NO3	L	N	D	PCBS	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW-16		X	4-4-11	1445									
MW-18			4-4-11	1510									
MW-48			4-4-11	1515									
MW-28			4-4-11	1550									
MW-2			4-4-11	1620									
MW-5			4-4-11	1700									
MW-44D			4-5-11	1030							X		
MW-44S			4-5-11	1045							X		
MW-12			4-5-11	1130							X		
MW-39S			4-5-11	1150									
MW-31			4-5-11	1230	7		X	X	X	X	X		
MW-35			4-5-11	1250	5		X	X	X	X	X		
MW-37			4-5-11	1400	5		X	X	X	X	X		
MW-36			4-5-11	1430	5		X	X	X	X	X		
MW-46			4-5-11	1440	5		X	X	X	X	X		
MW-32			4-5-11	1445	5		X	X	X	X	X		
FB-1			4-5-11	1510	7		X	X	X	X	X	X	
PURGE #1-80			4-4-11	1715	3				X	X	X		
PURGE #2-145		✓	4-5-11	1500	3				X	X	X		

Ormet Hannibal on April 5, 2011
~ 40 gallons pumped from Vault Primary (eventually Primary was dewatered and ~ 440 gallons pumped from Vault Secondary (did not pump dry))

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	4/5/11	5:20pm					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 23518

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MGMT. INC.

Project Contact: C. SMITH

Contact Phone #: 724-587-5680

Turn Around Requirements: STD.

Location: HANNIBAL, OH

Project ID: ORMET - CERCLA

Sampler (print): C. SMITH

Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	CN - TOTAL	CN - AMENABLE	CN - WAD												TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
VAULT - PRIMARY	X		4-5-11	1545	W	3		X	X	X													
VAULT - SECONDARY	X		4-5-11	1630	W	3		X	X	X													

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
	4/5/11	5:20p					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

APPENDIX A-2

WATER SAMPLING LOG FORMS FOR JULY 2011 MONITORING EVENT

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-7
Duplicate I.D.:
Time Sampling Began: 1610
Time Sampling Complete: 1630

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: ~~667.80~~ 667.94
Depth of Well Below MP (TD): ~~71.11~~ 79.70
Depth to Water Below MP (DTW): 48.85
ater Column (WC) in Well (TD - DTW): ~~22.26~~ 30.85
Casing Diameter: 2"
Gallons in Well (WC x GPF): ~~3.5~~ 5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 15

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: TURBID

Well Volumes:	10 gal.	14 gal.	16 gal.			
pH:	6.91	6.60	6.60			
Spec. Cond.:	319	318	317			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	27.4	27.5	27.6			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

22
.16
132
220
2/3.52

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-2
Duplicate I.D.:
Time Sampling Began: 1050
Time Sampling Complete: 1120

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 667.52
Depth of Well Below MP (TD): 85.23
Depth to Water Below MP (DTW): 47.31
ater Column (WC) in Well (TD - DTW): 37.92
Casing Diameter: 2"
Gallons in Well (WC x GPF): 6+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 18+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	6 gal.	12 gal.	18 gal.	20 gal.		
pH:	9.89	9.88	9.86	9.77		
Spec. Cond.:	610	586	577	555		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.4	15.5	15.5	15.5		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
TETRACHLOROETHENE	3 x 40ml. GLASS	HCL

Sampline Personnel: C. SMITH, R. FARGO
Comments:

38
.16
228
380
608

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-5
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1020
Date:	7-12-11	Time Sampling Complete:	1045

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 668.16

Depth of Well Below MP (TD): 91.88

Depth to Water Below MP (DTW): 49.85

ater Column (WC) in Well (TD - DTW): 42.03

Casing Diameter: 2"

Gallons in Well (WC x GPF): 6.7

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 20+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: PALE AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	4 gal.	8 gal.	18 gal.			
pH:	8.65	8.71	8.66			
Spec. Cond.:	476	498	499			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.8	15.6	15.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
TETRACHLOROETHENE	3 x 40ml. GLASS	HCL

Sampline Personnel: C. SMITH, R. FARGO

Comments:

42
.16
252
400
6.72

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-~~3~~1
Duplicate I.D.:
Time Sampling Began: 915
Time Sampling Complete: 945

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: ~~667.04~~ 667.80
Depth of Well Below MP (TD): ~~79.7~~ 71.14
Depth to Water Below MP (DTW): 46.66
ater Column (WC) in Well (TD - DTW): 24.48
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.0

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12.0

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	12 gal.	14 gal.			
pH:	6.47	6.65	6.60			
Spec. Cond.:	320	303	298			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.8	15.5	15.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

25
.16
4.00

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-8
Duplicate I.D.:
Time Sampling Began: 1450
Time Sampling Complete: 1500

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 667.71
Depth of Well Below MP (TD): 99.78
Depth to Water Below MP (DTW): 51.40
ater Column (WC) in Well (TD - DTW): 48.38
Casing Diameter: 2"
Gallons in Well (WC x GPF): 7.7

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 23+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	8 gal.	16 gal.	22 gal			
pH:	7.88	7.87	7.82			
Spec. Cond.:	447	467	469			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.9	17.1	17.0			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

48.38
.16
29028
48380
7.7408

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-10
Duplicate I.D.:
Time Sampling Began: 1515
Time Sampling Complete: 1545

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC.
MP Elevation: 667.16
Depth of Well Below MP (TD): 100.72
Depth to Water Below MP (DTW): 50.54
ater Column (WC) in Well (TD - DTW): 50.18
Casing Diameter: 2"
Gallons in Well (WC x GPF): 8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 24+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	20 gal.	30 gal.			
pH:	7.80	7.67	7.67			
Spec. Cond.:	351	340	330			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.0	16.7	16.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	500 ~~250~~ ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, ~~AMENABLE CN~~	250 ml. ~~PLASTIC~~ Amber Glass	NAOH
pH, SPEC. COND., F	250 ~~500~~ ml. PLASTIC	4 degrees celsius
CN-A	250ml Amber Glass	NaOH
CN-WAD	250ml Amber Glass	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

50
.16
300
500
8.00

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-11
Duplicate I.D.:
Time Sampling Began: 1550
Time Sampling Complete: 1620

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 667.31
Depth of Well Below MP (TD): 97.35
Depth to Water Below MP (DTW): 49.28
ater Column (WC) in Well (TD - DTW): 48.07
Casing Diameter: 2"
Gallons in Well (WC x GPF): 7.7

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 23+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	16 gal.	22 gal.			
pH:	8.16	8.34	8.36			
Spec. Cond.:	448	446	444			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.0	15.7	15.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

48
.16
288
280
48
7.68

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7·13·11

Sample I.D.: MW-12
Duplicate I.D.:
Time Sampling Began: 930
Time Sampling Complete: 1000

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 635.82
Depth of Well Below MP (TD): 68.24
Depth to Water Below MP (DTW): 14.20
ater Column (WC) in Well (TD - DTW): 54.04
Casing Diameter: 2"
Gallons in Well (WC x GPF): 9

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 27

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	4 gal.	10 gal.	18 gal.	24 gal.		
pH:	8.84	8.00	7.99	7.99		
Spec. Cond.:	122	118	117	115		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.1	15.0	14.9	14.9		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
PCB's	1 LITER GLASS	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

54
.16
327
540
864

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-13-11

Sample I.D.: MW-14
Duplicate I.D.:
Time Sampling Began: 900
Time Sampling Complete: 930

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 653.59
Depth of Well Below MP (TD): 86.9
Depth to Water Below MP (DTW): 30.63
ater Column (WC) in Well (TD - DTW): 56.27
Casing Diameter: 2"
Gallons in Well (WC x GPF): 9

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 27

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	18 gal.	26 gal.			
pH:	7.29	7.98	8.09			
Spec. Cond.:	169	140	134			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.6	14.9	14.8			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

56
.16
336
560
896

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-~~18~~31
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1030
Date:	7-13-11	Time Sampling Complete:	1100

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: ~~657.31~~ 661.59

Depth of Well Below MP (TD): ~~57.86~~ 67.51

Depth to Water Below MP (DTW): 38.60

ater Column (WC) in Well (TD - DTW): ~~19.26~~ 28.91

Casing Diameter: 2"

Gallons in Well (WC x GPF): ~~3~~ 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: ~~10~~ 13+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	6 gal.	10 gal.	12 gal.			
pH:	9.98	10.02	10.03			
Spec. Cond.:	500	561	578			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.0	15.8	15.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
PCE	40 ml Glass x 2	HCl

Sampline Personnel: C. SMITH, R. FARGO

Comments:

19.34
.16
11604
19340
3.0944

29
.16
174
290

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-16
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1200
Date:	7-12-11	Time Sampling Complete:	1230

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 662.72

Depth of Well Below MP (TD): 83.11

Depth to Water Below MP (DTW): 40.22

ater Column (WC) in Well (TD - DTW): 42.89

Casing Diameter: 2"

Gallons in Well (WC x GPF): 7

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 21

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	2 gal.	16 gal.	22 gal.			
pH:	9.60	9.66	9.66			
Spec. Cond.:	425	439	432			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.0	16.2	16.0			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

43
.16
258
430
688
6.

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-13-11

Sample I.D.: MW-17
Duplicate I.D.: MW-57 (1030)
Time Sampling Began: 1000
Time Sampling Complete: 1020

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 655.03
Depth of Well Below MP (TD): 77.91
Depth to Water Below MP (DTW): 31.26
ater Column (WC) in Well (TD - DTW): 46.65
Casing Diameter: 2"
Gallons in Well (WC x GPF): 7.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 23

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	10 gal.	18 gal.	22 gal.			
pH:	7.91	8.10	8.13			
Spec. Cond.:	156	147	144			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.7	16.2	15.6			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

46
.16
276
460
736

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-18
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1320
Date:	7-12-11	Time Sampling Complete:	1400

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 660.91

Depth of Well Below MP (TD): 57.00

Depth to Water Below MP (DTW): 36.60

ater Column (WC) in Well (TD - DTW): 20.40

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: VERY SILTY

Well Volumes:	5 gal.	7 gal.	8 gal.			
pH:	10.23	10.08	10.1			
Spec. Cond.:	738	790	743			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.6	16.7	16.0			

Pumped to dry.

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
TETRACHLOROETHENE	3 x 40ml. GLASS	HCL

Sampline Personnel: C. SMITH, R. FARGO

Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-19
Project #:	HM00324	Duplicate I.D.:	MW-60 (1315)
Location:	HANNIBAL, OHIO	Time Sampling Began:	1230
Date:	7·13·11	Time Sampling Complete:	1300

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 662.03

Depth of Well Below MP (TD): 65.2 D

Depth to Water Below MP (DTW): 37.66

ater Column (WC) in Well (TD - DTW): 27.54

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	10 gal.	14 gal.			
pH:	7.88	7.77	7.84			
Spec. Cond.:	175	158	150			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.8	14.1	14.3			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

28 .16 Q
168
280
4.48

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-28
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1300
Date:	7-12-11	Time Sampling Complete:	1320

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 663.27

Depth of Well Below MP (TD): 46.06

Depth to Water Below MP (DTW): 20.26

ater Column (WC) in Well (TD - DTW): 25.80

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: VERY SLIGHT BROWN Odor: NONE Turbidity: SLIGHTLY CLOUDY

Well Volumes:	4 gal.	10 gal.	15 gal.			
pH:	6.68	6.56	6.56			
Spec. Cond.:	145	155	153			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.1	14.0	14.0			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

26
.16
1560
26
4 16

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-29S
Duplicate I.D.:
Time Sampling Began: 1145
Time Sampling Complete: 1200

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 653.4
Depth of Well Below MP (TD): 61.35
Depth to Water Below MP (DTW): 31.08
ater Column (WC) in Well (TD - DTW): 30.27
Casing Diameter: 2"
Gallons in Well (WC x GPF): 5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 15

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: SLIGHTLY CLOUDY

Well Volumes:	8 gal.	15 gal.				
pH:	8.03	8.07				
Spec. Cond.:	387	396				
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.2	15.3				

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-29D
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1120
Date:	7-12-11	Time Sampling Complete:	1145

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 653.07

Depth of Well Below MP (TD): 81.98

Depth to Water Below MP (DTW): 30.79

ater Column (WC) in Well (TD - DTW): 51.19

Casing Diameter: 2"

Gallons in Well (WC x GPF): 8+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 24+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:		20 gal.	30 gal.			
pH:	8.62	8.30	8.20			
Spec. Cond.:		178	167			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.7	15.3	15.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

51
.16
306
510
8.16

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-30
Project #:	HM00324	Duplicate I.D.:	MW-50 (1300)
Location:	HANNIBAL, OHIO	Time Sampling Began:	1225
Date:	7-12-11	Time Sampling Complete:	1250

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 667.58

Depth of Well Below MP (TD): 60.41

Depth to Water Below MP (DTW): 43.90

ater Column (WC) in Well (TD - DTW): 16.51

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: BROWN Odor: NONE Turbidity: SILTY

Well Volumes:	4 gal.	10 gal.	16 gal.			
pH:	7.98	7.10	7.00			
Spec. Cond.:	157	148	146			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.0	15.2	15.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
TETRACHLOROETHENE	3 x 40ml. GLASS	HCL

Sampline Personnel: C. SMITH, R. FARGO

Comments:

16
.16
96
16
2.56

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7·13·11

Sample I.D.: MW-~~31~~15
Duplicate I.D.:
Time Sampling Began: 1130
Time Sampling Complete: 1150

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: ~~661.50~~ 657.31
Depth of Well Below MP (TD): ~~67.51~~ 57.86
Depth to Water Below MP (DTW): 32.74
ater Column (WC) in Well (TD - DTW): 25.12
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	8 gal.	14 gal.			
pH:	7.94	8.14	8.21			
Spec. Cond.:	190	197	197			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.4	15.3	15.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
~~TETRACHLOROETHENE~~	~~3 X 40ml. GLASS~~	~~HCL~~

Sampline Personnel: C. SMITH, R. FARGO
Comments:

75
.16

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-32
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1210
Date:	7·13·11	Time Sampling Complete:	1230

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 656.12

Depth of Well Below MP (TD): 57.18

Depth to Water Below MP (DTW): 32.85

ater Column (WC) in Well (TD - DTW): ~~25.33~~ 24.33

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: SLIGHTLY CLOUDY

Well Volumes:	2 gal.	8 gal.	12 gal.			
pH:	10.24	10.26	10.26			
Spec. Cond.:	535	574	593			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	17.5	17.1	17.1			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-34S
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1745
Date:	7-12-11	Time Sampling Complete:	1800

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 655.67

Depth of Well Below MP (TD): 49.35

Depth to Water Below MP (DTW): 32.25

ater Column (WC) in Well (TD - DTW): 17.10

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: ~~[illegible]~~ AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	2 gal.	6 gal.	10 gal.			
pH:	8.72	8.77	8.77			
Spec. Cond.:	416	417	423			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.1	14.8	14.8			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

17
.16
102
170
2.72

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-34D
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1725
Date:	7-12-11	Time Sampling Complete:	1750

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 654.67

Depth of Well Below MP (TD): 68.24

Depth to Water Below MP (DTW): 30.59

ater Column (WC) in Well (TD - DTW): 37.65

Casing Diameter: 2"

Gallons in Well (WC x GPF): 6

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 18

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 gal.	12 gal.	14 gal.	18 gal.		
pH:	8.88	8.65	8.62	8.61		
Spec. Cond.:	481	439	428	417		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.4	15.0	15.0	15.1		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

38
.16
228
380
608

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7·13·11

Sample I.D.: MW-35
Duplicate I.D.:
Time Sampling Began: 1050
Time Sampling Complete: 1115

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.9
Depth of Well Below MP (TD): 46.70
Depth to Water Below MP (DTW): 34.46
ater Column (WC) in Well (TD - DTW): 12·24
Casing Diameter: 2"
Gallons in Well (WC x GPF): 2

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 6

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	2 gal.	3 gal.				
pH:	8.53	7.90				
Spec. Cond.:	157	129				
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.5	16.6				

Purged to dry.

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

12
.16/20
12
1

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-36
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1150
Date:	7·13·11	Time Sampling Complete:	1215

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 655.14

Depth of Well Below MP (TD): 52.08

Depth to Water Below MP (DTW): 32.33

ater Column (WC) in Well (TD - DTW): 19.75

Casing Diameter: 2"

Gallons in Well (WC x GPF): 3+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	4 gal.	8 gal.	10 gal.			
pH:	8.86	9.02	9.04			
Spec. Cond.:	166	163	162			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.5	14.1	14.2			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7·13·11

Sample I.D.: MW-37
Duplicate I.D.:
Time Sampling Began: 1115
Time Sampling Complete: 1130

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.14
Depth of Well Below MP (TD): 36.98
Depth to Water Below MP (DTW): 20.62
ater Column (WC) in Well (TD - DTW): 16.36
Casing Diameter: 2"
Gallons in Well (WC x GPF): 3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: VERY CLOUDY

Well Volumes:	2 gal.	3 gal.	4 gal.			
pH:	7.30	7.10	7.12			
Spec. Cond.:	100	100	100			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.6	15.1	14.7			

PURGED TO DRY. (x3)

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-39S
Project #:	HM00324	Duplicate I.D.:	MW-59 (1745)
Location:	HANNIBAL, OHIO	Time Sampling Began:	1715
Date:	7-12-11	Time Sampling Complete:	1730

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 657.3

Depth of Well Below MP (TD): 60.23

Depth to Water Below MP (DTW): 33.94

ater Column (WC) in Well (TD - DTW): 26.29

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	3gal.	6gal.	10 gal.	14 gal.		
pH:	9.67	9.62	9.55	9.48		
Spec. Cond.:	945	1008	1045	1062		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.4	14.4	14.3	14.4		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO

Comments:

26
.16
156
260
4.16

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-39D
Project #:	HM00324	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1650
Date:	7-12-11	Time Sampling Complete:	1715

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 657.18

Depth of Well Below MP (TD): 80.21

Depth to Water Below MP (DTW): 33.83

ater Column (WC) in Well (TD - DTW): 46.38

Casing Diameter: 2"

Gallons in Well (WC x GPF): 7.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 23

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	12 gal.	24 gal.			
pH:	8.10	8.05	8.07			
Spec. Cond.:	508	498	472			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.4	14.2	14.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius
	3 X 40ml. GLASS	

Sampline Personnel: C. SMITH, R. FARGO

Comments:

46
.16
276
46
7.36

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-40S
Duplicate I.D.:
Time Sampling Began: 1430
Time Sampling Complete: 1445

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 663.9
Depth of Well Below MP (TD): 70.40
Depth to Water Below MP (DTW): 43.52
ater Column (WC) in Well (TD - DTW): 26.88
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes:	8 gal.	10 gal.	12+ gal.			
pH:	8.45	8.51	8.53			
Spec. Cond.:	535	540	537			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.0	15.7	15.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

26.88
.16
16128
26880
4308

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-11-11

Sample I.D.: MW-40D
Duplicate I.D.:
Time Sampling Began: 1410
Time Sampling Complete: 1440

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 663.75
Depth of Well Below MP (TD): 90.40
Depth to Water Below MP (DTW): 41.65
ater Column (WC) in Well (TD - DTW): 48.75
Casing Diameter: 2"
Gallons in Well (WC x GPF): 7.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 24

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. BROWN Odor: NONE Turbidity: SLIGHTLY CLOUDY

Well Volumes:	3 gal.	12 gal.	16 gal.	22 gal.		
pH:	7.50	8.23	8.38	8.45		
Spec. Cond.:	474	490	495	497		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.8	16.5	15.7	15.8		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

48.75
.16
2925
4875
7.80

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

up-river well

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date:

Sample I.D.: MW-41
Duplicate I.D.:
Time Sampling Began:
Time Sampling Complete:

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 637.67
Depth of Well Below MP (TD): 62.26
Depth to Water Below MP (DTW):
ater Column (WC) in Well (TD - DTW):
Casing Diameter: 2"
Gallons in Well (WC x GPF):

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged:

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: Odor: Turbidity:

Well Volumes:						
pH:						
Spec. Cond.:						
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:						

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-42S
Duplicate I.D.:
Time Sampling Began: 1640
Time Sampling Complete: 1700

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 654.37
Depth of Well Below MP (TD): 52.3
Depth to Water Below MP (DTW): 32.01
ater Column (WC) in Well (TD - DTW): 20.29
Casing Diameter: 2"
Gallons in Well (WC x GPF): 3+

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 10

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	2 gal.	6 gal.	10 gal.			
pH:	8.76	8.70	8.62			
Spec. Cond.:	535	535	522			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.3	14.3	14.2			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-42D
Duplicate I.D.:
Time Sampling Began: 1615
Time Sampling Complete: 1640

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 654.34
Depth of Well Below MP (TD): 85.10
Depth to Water Below MP (DTW): 31.95
ater Column (WC) in Well (TD - DTW): 53.15
Casing Diameter: 2"
Gallons in Well (WC x GPF): 8.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 25+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	10 gal.	14 gal.	18 gal.	24 gal.		
pH:	7.72	8.26	8.32	8.35		
Spec. Cond.:	537	534	528	529		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.1	14.5	14.5	14.4		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

6

53
.16
318
530
848

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-44S
Duplicate I.D.:
Time Sampling Began: 1000
Time Sampling Complete: 1030

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 662.01
Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 41.15
ater Column (WC) in Well (TD - DTW): 27.90
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	2 gal.	6 gal	14 gal.			
pH:	7.60	7.48	7.45			
Spec. Cond.:	174	173	173			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.3	15.2	15.0			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCB's	1 LITER GLASS	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

28
.16
168
280
4.48

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00324
Location: HANNIBAL, OHIO
Date: 7-12-11

Sample I.D.: MW-44D
Duplicate I.D.:
Time Sampling Began: 945
Time Sampling Complete: 1015

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.76
Depth of Well Below MP (TD): 93.97
Depth to Water Below MP (DTW): 41.65
ater Column (WC) in Well (TD - DTW): 52.32
Casing Diameter: 2"
Gallons in Well (WC x GPF): 8.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 25+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	10 gal.	14 gal.	20 gal.			
pH:	7.85	7.98	8.04			
Spec. Cond.:	176	175	170			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.7	15.5	15.2			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCB's	1 LITER GLASS	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

52
.16
312
320
832

uu

COC No. A 25432

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MANAGEMENT, INC.

Project Contact: CLEASON SMITH

Contact Phone #: 724-587-5690

Turn Around Requirements: STD.

Location: HANNIBAL, O.

Project ID: ORMET CERCLA

Sampler (print): CLEASON SMITH

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs (PCE) (G-40-S)	Cyanide-Total (A-250-B)	Cyanide-WAD (A-250B)	Cyanide-Amenable (A-250B)	Dissolved Metals (P-500-W)	General Chemistry (P-250-W)	PCBs (A-1006-W)								TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW-7		X	7-11-11	1630	W				1	1	1	1	1										
MW-2			7-12-11	1120				2	1	1	1	1	1										
MW-5			7-12-11	1045				2	1	1	1	1	1										
MW-1			7-12-11	945					1	1	1	1	1										
MW-8			7-11-11	1500					1	1	1	1	1										
MW-10			7-11-11	1545					1	1	1	1	1										
MW-11			7-11-11	1620					1	1	1	1	1										
MW-12			7-13-11	1000					1	1	1	1	1	2									
MW-14			7-13-11	930					1	1	1	1	1										
MW-31			7-13-11	1100				2	1	1	1	1	1										
MW-16			7-12-11	1230					1	1	1	1	1										
MW-17			7-13-11	1020					1	1	1	1	1										
MW-18			7-12-11	1400				2	1	1	1	1	1										
MW-19			7-13-11	1300					1	1	1	1	1										
MW-28			7-12-11	1320					1	1	1	1	1										
MW-29S			7-12-11	1200					1	1	1	1	1										
MW-29D			7-12-11	1145					1	1	1	1	1										
MW-30			7-12-11	1250				2	1	1	1	1	1										
MW-15			7-13-11	1150					1	1	1	1	1										
MW-32		V	7-13-11	1230	V				1	1	1	1	1										

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	7-13-11	3:00pm					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

COC No. A 25434

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Hydrogeosystems Management, Inc.

Project Contact: Cleason Smith

Contact Phone #: 724-587-5690

Turn Around Requirements: Standard

Location: Hannibal, Ohio

Project ID: Ormet CERCLA

Sampler (print): Cleason Smith

Signature: Cleason Smith

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs (PCE) (G-40-S)	Cyanide-total (A-250-B)	Cyanide-WAD (A-250-B)	Cyanide-Amenable (A-250-B)	Dissolved Metals (P-500 W)	General Chemistry (P-250 W)	PCBs (A-1000 W)									TOTAL # (LAB USE)
MW-34S		X	7-12-11	1800	W				1	1	1	1	1										
MW-34D		↓	7-12-11	1750	W				1	1	1	1	1										
MW-35		↓	7-13-11	1115	↓				1	1	1	1	1										
MW-36		↓	7-13-11	1215	↓				1	1	1	1	1										
MW-37		↓	7-13-11	1130	↓				1	1	1	1	1										
MW-39S		↓	7-12-11	1730	↓				1	1	1	1	1										
MW-39D		↓	7-12-11	1715	↓				1	1	1	1	1										
MW-40S		↓	7-11-11	1445	↓				1	1	1	1	1										
MW-40D		↓	7-11-11	1440	↓				1	1	1	1	1										
MW-42S		↓	7-12-11	1700	↓				1	1	1	1	1										
MW-42D		↓	7-12-11	1640	↓				1	1	1	1	1										
MW-44S		↓	7-12-11	1030	↓									2									
MW-44D		↓	7-12-11	1015	↓									2									
MW-50		↓	7-12-11	1300	↓			2	1	1	1	1	1										
MW-57		↓	7-13-11	1030	↓				1	1	1	1	1										
MW-59		↓	7-12-11	1745	↓				1	1	1	1	1										
MW-60		↓	7-13-11	1315	↓				1	1	1	1	1										

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Cleason Smith	7-13-11	3:00pm					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

APPENDIX A-3

WATER SAMPLING LOG FORMS FOR NOVEMBER 2011 MONITORING EVENT

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11-15-11

Sample I.D.: ~~MW-2~~ MW-5
Duplicate I.D.:
Time Sampling Began: 1430
Time Sampling Complete: 1500

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: ~~667.52~~ 668.16
Depth of Well Below MP (TD): ~~82.25~~ 92.00
Depth to Water Below MP (DTW): 47.43
Water Column (WC) in Well (TD - DTW): ~~34.82~~ 42.57
Casing Diameter: 2"
Gallons in Well (WC x GPF): ~~5.6~~ 6.9

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: ~~#~~ 20

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	5 gal.	14 gal.	18 gal.			
pH:	8.34	8.24	8.20			
Spec. Cond.:	1280	1240	1230			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.2	15.4	15.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO
Comments:

35
.16
210
250

43
.16
258

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	~~MW-3~~ MW-2
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1500
Date:	11·15·11	Time Sampling Complete:	1530

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: ~~668.16~~ 667.52

Depth of Well Below MP (TD): ~~92.80~~ 82.25

Depth to Water Below MP (DTW): 47.43

Water Column (WC) in Well (TD - DTW): 35.82

Casing Diameter: 2"

Gallons in Well (WC x GPF): 5.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 18

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. AMBER Odor: NONE Turbidity: ~~TURBID~~ CLOUDY

Well Volumes:	6 gal.	10+	16+			
pH:	9.33	9.40	9.40			
Spec. Cond.:	1380	1310	1280			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.9	15.3	15.3			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO

Comments:

36
·16
216
360
576

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-12
Project #:	HM00326	Duplicate I.D.:	~~MW-12D~~
Location:	HANNIBAL, OHIO	Time Sampling Began:	940
Date:	11·16·11	Time Sampling Complete:	1000

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 635.82

Depth of Well Below MP (TD): 68.42

Depth to Water Below MP (DTW): 14.45

Water Column (WC) in Well (TD - DTW): 53.97

Casing Diameter: 2"

Gallons in Well (WC x GPF): 8.6

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 26

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	12 gal.	18 gal.	24 gal.		
pH:	7.70	7.66	7.70	7.60		
Spec. Cond.:	525	520	522	520		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.8	15.0	15.0	15.0		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO

Comments:

54
·16
324
540
864

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-16
Project #:	HM00326	Duplicate I.D.:	MW-56
Location:	HANNIBAL, OHIO	Time Sampling Began:	1530
Date:	11·15·11	Time Sampling Complete:	1600 (1615)

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 662.72

Depth of Well Below MP (TD): 83.12

Depth to Water Below MP (DTW): 40.42

Water Column (WC) in Well (TD - DTW): 42.70

Casing Diameter: 2"

Gallons in Well (WC x GPF): 6.9

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 21

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 gal.	12 gal.	18 gal.			
pH:	9.82	9.17	9.17			
Spec. Cond.:	970	941	944			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.2	15.6	15.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

43
.16
258
43
688

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11·15·11

Sample I.D.: MW-18
Duplicate I.D.:
Time Sampling Began: 1615
Time Sampling Complete: 1645

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 660.91
Depth of Well Below MP (TD): 61.16
Depth to Water Below MP (DTW): 36.68
Water Column (WC) in Well (TD - DTW): 24.48
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.0

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12.0

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 gal.	12 gal.	16 gal.	20 gal.		
pH:	9.50	9.69	9.64	9.62		
Spec. Cond.:	1550	1140	1120	1110		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.4	14.6	14.7	14.7		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO
Comments:

25
.16
4.0

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-28
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1600
Date:	11·15·11	Time Sampling Complete:	1620

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 663.27

Depth of Well Below MP (TD): 46.20

Depth to Water Below MP (DTW): 20.92

Water Column (WC) in Well (TD - DTW): 25.28

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4.0

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 12

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: Odor: Turbidity: CLOUDY

Well Volumes:	6 gal.	10 gal.	16 gal.			
pH:	6.34	6.20	6.29			
Spec. Cond.:	300	355	366			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.4	15.7	15.7			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

25
·16
150
250
4.00

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-31
Project #:	HM00326	Duplicate I.D.:	~~MW-31D~~ MW-51
Location:	HANNIBAL, OHIO	Time Sampling Began:	905
Date:	11·16·11	Time Sampling Complete:	945 (1000)

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 661.59

Depth of Well Below MP (TD): 67.58

Depth to Water Below MP (DTW): 38.76

Water Column (WC) in Well (TD - DTW): 28.82

Casing Diameter: 2"

Gallons in Well (WC x GPF): 4.6

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 14

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 gal.	10 gal.	14 gal.			
pH:	9.24	9.44	9.34			
Spec. Cond.:	1320	1290	1290			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.0	15.2	15.4			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees 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

Sampline Personnel: C. SMITH, R. FARGO

Comments:

29
.16
174
290
464

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11-16-11

Sample I.D.: MW-32
Duplicate I.D.:
Time Sampling Began: 1120
Time Sampling Complete: 1145

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 656.12
Depth of Well Below MP (TD): 57.36
Depth to Water Below MP (DTW): 33.27
Water Column (WC) in Well (TD - DTW): 24.09
Casing Diameter: 2"
Gallons in Well (WC x GPF): 2.8

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: DK. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:	6 gal.	8 gal.	10+ gal.			
pH:	9.62	9.74	9.78			
Spec. Cond.:	1320	1320	1310			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	16.2	16.5	16.8			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 v. submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

24
.16
144
24
0

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: ~~1030~~ 11·16·11

Sample I.D.: MW-35
Duplicate I.D.:
Time Sampling Began: 1030
Time Sampling Complete: 1050

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 661.90
Depth of Well Below MP (TD): 46.94
Depth to Water Below MP (DTW): 35.15
Water Column (WC) in Well (TD - DTW): 11.79
Casing Diameter: 2"
Gallons in Well (WC x GPF): 1.9

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 6

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. AMBER Odor: NONE Turbidity: CLOUDY

Well Volumes:						
pH:	7.32	7.60	7.60			
Spec. Cond.:	325	325	340			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.5	15.8	16.2			

PUMPED DRY INITIALLY.

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

12
·16
72
120

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11·16·11

Sample I.D.: MW-36
Duplicate I.D.:
Time Sampling Began: 1100
Time Sampling Complete: 1120

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 655.14
Depth of Well Below MP (TD): 52.08
Depth to Water Below MP (DTW): 32.95
Water Column (WC) in Well (TD - DTW): 19.13
Casing Diameter: 2"
Gallons in Well (WC x GPF): 3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 9

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: CLOUDY

Well Volumes:	4 Gal.	10 gal.	12 gal.			
pH:	8.30	8.32	8.32			
Spec. Cond.:	670	644	6.44			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	18.0	19.2	19.3			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO
Comments:

19
.16
114
190
304

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-37
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1040
Date:	11.16.11	Time Sampling Complete:	1100

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 661.14

Depth of Well Below MP (TD): 36.90

Depth to Water Below MP (DTW): 21.27

Water Column (WC) in Well (TD - DTW): 15.63

Casing Diameter: 2"

Gallons in Well (WC x GPF): 2.6

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 8

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: LT. BROWN Odor: NONE Turbidity: TURBID

Well Volumes:						
pH:	6.90	6.88	6.76			
Spec. Cond.:	290	280	280			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	15.7	15.8	15.8			

PUMPED DRY. CONTINUED TO PUMP SLUGS AFTER RECOVERY TURBIDITY REMOVED BY FILTER.

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
pH, Spec. Cond., F	500 ml. PLASTIC	4 degrees C
DISS. As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (1 MICRON)
TOTAL & AMENABLE CN	250 ml. PLASTIC	NaOH

Sampline Personnel: C. SMITH, R. FARGO

Comments:

16
.16
96
160
2.56

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11.15.11

Sample I.D.: MW-44s
Duplicate I.D.:
Time Sampling Began: 1410
Time Sampling Complete: 1430

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 662.01
Depth of Well Below MP (TD): 69.05
Depth to Water Below MP (DTW): 41.39
Water Column (WC) in Well (TD - DTW): 27.66
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.5

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13+

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR.

Well Volumes:	4 gal.	8 gal.	14 gal.			
pH:	7.15	7.16	7.17			
Spec. Cond.:	593	593	592			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.8	14.8	14.8			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO
Comments:

28
.16
168
280
4.48

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name:	ORMET-REDUCTION MILL	Sample I.D.:	MW-44D
Project #:	HM00326	Duplicate I.D.:	
Location:	HANNIBAL, OHIO	Time Sampling Began:	1350
Date:	11·15·11	Time Sampling Complete:	1410

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC

MP Elevation: 661.76

Depth of Well Below MP (TD): 93.97

Depth to Water Below MP (DTW): 41.90

Water Column (WC) in Well (TD - DTW): 52.07

Casing Diameter: 2"

Gallons in Well (WC x GPF): 8.3

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 25

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: NONE Odor: NONE Turbidity: CLEAR.

Well Volumes:	3 gal.	8 gal.	12 gal.	20+		
pH:	7.96	7.96	8.05	8.00		
Spec. Cond.:	337	495	498	497		
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.5	15.6	15.3	15.2		

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
PCBs	1 LITER AMBER GLASS	4 degrees C

Sampline Personnel: C. SMITH, R. FARGO

Comments:

52
.16
312
320
8.32

HYDROSYSTEMS MANAGEMENT, INC.
WATER SAMPLING LOG FORM

Project Name: ORMET-REDUCTION MILL
Project #: HM00326
Location: HANNIBAL, OHIO
Date: 11-16-11

Sample I.D.: MW-39S
Duplicate I.D.:
Time Sampling Began: 1005
Time Sampling Complete: 1030

WELL EVACUATION DATA

Description of Measuring Point (MP): TOP OF PVC
MP Elevation: 657.30
Depth of Well Below MP (TD): 60.23
Depth to Water Below MP (DTW): 34.19
Water Column (WC) in Well (TD - DTW): 26.04
Casing Diameter: 2"
Gallons in Well (WC x GPF): 4.2

GALLONS PER FOOT (GPF)				
1"=0.04	2"=0.16	3"=0.37	4"=0.65	6"=1.47

Gallons to be Purged: 13

Evacuation Method: 12 Volt submersible purge pump

SAMPLING DATA AND FIELD PARAMETERS

Color: AMBER Odor: NONE Turbidity: CLEAR

Well Volumes:	6 gal.	9 gal.	16 gal.			
pH:	9.07	9.10	9.10			
Spec. Cond.:	4440	4210	4010			
Diss. Oxygen:						
Turbidity:						
Redox:						
Temp.:	14.4	14.5	14.5			

Sampling Method and Materials: VOCs-disposable polypropylene bailer and rope; All others 12 volt submersible pump

Parameters to be Analyzed	Container Description	Preservative
DISSOLVED As, Be, Mn, Na, V	250 ml. PLASTIC	HNO_3 - FIELD FILTERED (IMICRON)
TOTAL CN, AMENABLE CN	250 ml. PLASTIC	NAOH
pH, SPEC. COND., F	500 ml. PLASTIC	4 degrees celsius

Sampline Personnel: C. SMITH, R. FARGO
Comments:

26
.16
156
260
416

COC No. A 27899

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Ormet Primary Aluminum Corporation

Project Contact: Cleason Smith

Contact Phone #: 724-587-5690

Turn Around Requirements: Standard

Location: Hannibal, Ohio

Project ID: HM00327

Sampler (print): Cleason Smith

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☒ Other CERCLA

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	PCBs - 1L Amber Glass	Gen. Chem - 250 ML Plastic	Cyanides - 250 ML Amber Glass	Diss. Metals - 500 ml Plastic	PCE - 40 ML Glass										TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
~~MW-7~~		~~X~~	~~11/15/11~~	~~[illegible]~~	~~Water~~																		
~~MW-5~~			~~11/15/11~~	~~[illegible]~~																			
~~MW-12~~			~~11/16/11~~	~~940~~																			
~~MW-16~~			~~11/15/11~~																				
MW-7		X	11/15/11	1530	Water	5			1	1	1	2											Call if any questions - 724-587-5690
MW-5			11/15/11	1500		5			1	1	1	2											
MW-12			11/16/11	1000		5		2	1	1	1												
MW-16			11/15/11	1600		3			1	1	1												
MW-56			11/15/11	1615		3			1	1	1												
MW-18			11/15/11	1645		5			1	1	1	2											
MW-28			11/15/11	1620		3			1	1	1												
MW-31			11/16/11	945		5			1	1	1	2											
MW-51			11/16/11	1000		5			1	1	1	2											
MW-32			11/16/11	1145		3			1	1	1												
MW-35			11/16/11	1050		3			1	1	1												
MW-36			11/16/11	1120		3			1	1	1												
MW-37			11/16/11	1100		3			1	1	1												
MW-39S			11/16/11	1030		3			1	1	1												
MW-44S			11/15/11	1430		2		2															
MW-44D			11/15/11	1410		2		2															

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	11/16/11	1:00pm					

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

APPENDIX B

LABORATORY ANALYTICAL REPORTS
(provided on disc including the following:)

Laboratory Analytical Report for April 2011 Monitoring Event

Laboratory Analytical Report for July 2011 Monitoring Event

Laboratory Analytical Report for November 2011 Monitoring Event

158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • http://www.microbac.com

Laboratory Report Number: L11040220

Client: John Reggi, PO Box 176, Hannibal, OH, 43931

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Kathy Albertson	*Team Chemist/Data Specialist*	Kathy.Albertson@microbac.com
Stephanie Mossburg	*Team Chemist/Data Specialist*	Stephanie.Mossburg@microbac.com
Tony Long	*Team Chemist/Data Specialist*	Tony.Long@microbac.com
Amanda Fickiesen	*Client Services Specialist*	Amanda.Fickiesen@microbac.com
Annie Brown	*Client Services Specialist*	Annie.Brown@microbac.com

This report was reviewed on May 19, 2011.

Amanda Fickiesen

Amanda Fickiesen - Client Services Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on May 19, 2011.

David E. Vandenberg

David Vandenberg - Managing Director

State of origin: Ohio
Accrediting authority: N/A ID:N/A
QAPP: Microbac OVD
This report contains a total of 106 pages.

Look closer. Go further. Do more.

LABORATORY REPORT

L11040220

05/19/11 15:33

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Ormet Corporation
PO Box 176

Hannibal, OH 43931
Attention: John Reggi

Project Number: 2173.013
Project:
Site: REDUCTION PLANT

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
MW-16	L11040220-01	04/04/2011 14:45	04/06/2011
MW-16	L11040220-02	04/04/2011 14:45	04/06/2011
MW-18	L11040220-03	04/04/2011 15:10	04/06/2011
MW-18	L11040220-04	04/04/2011 15:10	04/06/2011
MW-48	L11040220-05	04/04/2011 15:15	04/06/2011
MW-48	L11040220-06	04/04/2011 15:15	04/06/2011
MW-28	L11040220-07	04/04/2011 15:50	04/06/2011
MW-28	L11040220-08	04/04/2011 15:50	04/06/2011
MW-2	L11040220-09	04/04/2011 16:20	04/06/2011
MW-2	L11040220-10	04/04/2011 16:20	04/06/2011
MW-5	L11040220-11	04/04/2011 17:00	04/06/2011
MW-5	L11040220-12	04/04/2011 17:00	04/06/2011
MW-44D	L11040220-13	04/05/2011 10:30	04/06/2011
MW-44S	L11040220-14	04/05/2011 10:45	04/06/2011
MW-12	L11040220-15	04/05/2011 11:30	04/06/2011
MW-12	L11040220-16	04/05/2011 11:30	04/06/2011
MW-39S	L11040220-17	04/05/2011 11:50	04/06/2011
MW-39S	L11040220-18	04/05/2011 11:50	04/06/2011
MW-31	L11040220-19	04/05/2011 12:30	04/06/2011
MW-31	L11040220-20	04/05/2011 12:30	04/06/2011
MW-35	L11040220-21	04/05/2011 12:50	04/06/2011
MW-35	L11040220-22	04/05/2011 12:50	04/06/2011
MW-37	L11040220-23	04/05/2011 14:00	04/06/2011
MW-37	L11040220-24	04/05/2011 14:00	04/06/2011
MW-36	L11040220-25	04/05/2011 14:30	04/06/2011
MW-36	L11040220-26	04/05/2011 14:30	04/06/2011
MW-46	L11040220-27	04/05/2011 14:40	04/06/2011

L1_A_PROD_COVER - Modified 02/06/2008
PDF File ID: 1989998
Report generated: 05/19/2011 15:33

LABORATORY REPORT

L11040220

05/19/11 15:33

Sample Summary

Client ID	Lab ID	Date Collected	Date Received
MW-46	L11040220-28	04/05/2011 14:40	04/06/2011
MW-32	L11040220-29	04/05/2011 14:45	04/06/2011
MW-32	L11040220-30	04/05/2011 14:45	04/06/2011
FB-1	L11040220-31	04/05/2011 15:10	04/06/2011
FB-1	L11040220-32	04/05/2011 15:10	04/06/2011
PURGE #1-80	L11040220-33	04/04/2011 17:15	04/06/2011
PURGE #2-145	L11040220-34	04/05/2011 15:00	04/06/2011

Login Number: L11040220

Department: Login

Chain of Custody:

Shipment Conditions

COC #	Cooler #	Temperature
COC23517	0015134	3.0
	0014681	3.0
	0013052	3.0
	0013041	3.0

Sample Management: All samples were received intact.

Sample Identification

Lab ID	Client ID
L11040220-01	MW-16
L11040220-02	MW-16
L11040220-03	MW-18
L11040220-04	MW-18
L11040220-05	MW-48
L11040220-06	MW-48
L11040220-07	MW-28
L11040220-08	MW-28
L11040220-09	MW-2
L11040220-10	MW-2
L11040220-11	MW-5
L11040220-12	MW-5
L11040220-13	MW-44D
L11040220-14	MW-44S
L11040220-15	MW-12
L11040220-16	MW-12
L11040220-17	MW-39S
L11040220-18	MW-39S
L11040220-19	MW-31
L11040220-20	MW-31
L11040220-21	MW-35
L11040220-22	MW-35
L11040220-23	MW-37
L11040220-24	MW-37

L11040220-25	MW-36
L11040220-26	MW-36
L11040220-27	MW-46
L11040220-28	MW-46
L11040220-29	MW-32
L11040220-30	MW-32
L11040220-31	FB-1
L11040220-32	FB-1
L11040220-33	PURGE #1-80
L11040220-34	PURGE #2-145

Narrative ID: 25158
Approved By: Amanda Fickiesen
Amanda Fickiesen

Login Number: L11040220

Department: Volatiles

Analyst: Tiffany Bailey

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

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Narrative ID: 25650
Approved By: Michael Albertson

Login Number: L11040220

Department: Conventionals

Analyst: Holly Reed

METHOD

Analysis SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 25969
Approved By: Deanna Hesson

Login Number: L11040220

Department: General Chromatography

Analyst: Eric Lawson

METHOD

Analysis SW-846 8082A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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Narrative ID: 26193
Approved By: Mike Cochran

Login Number: L11040220

Department: Metals

Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: WG361560 - Due to continuing calibration verification failure for beryllium on 12-APR-2011 at 21:05, all batch QA/QC and client samples 02, 04, 06, 08, 10, 12, 16, 18, 20, 22, 24, 26, 28, 30 and 32 were reanalyzed for berylllium on a later calibration.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG361560 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG361560 - Client samples 02, 04, 06, 10, 12, 18, 20, and 30 required dilution analyses in order to obtain results for sodium within the linear range.

Narrative ID: 25640
Approved By: Sheri Pfalzgraf

Login Number: L11040220

Department: Metals

Analyst: Erin Long

METHOD

Preparation: SW-846 30153015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG361365 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG361365 - Due to the dark color of the digestate and high levels of nontarget analytes which can contribute to undercorrected interferences and instrument malfunctions, client samples 02, 04, 06, 10, 12, 18, 20, and 30 were analyzed initially at dilutions for all analytes. Client sample 12 yielded a result for arsenic that was below the reporting detection limit. The sample was reanalyzed at a lesser dilution for arsenic on a later calibration.

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Narrative ID: 25495
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Login Number: L11040220

Department: Conventionals

Analyst: Jeremy Kinney

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 25970
Approved By: Deanna Hesson

Login Number: L11040220

Department: Conventionals

Analyst: Tammy Morris

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 25968
Approved By: Deanna Hesson

Login Number: L11040220

Department: Conventionals

Analyst: Tammy Morris

METHOD

Analysis SM4500-F-C (Fluoride)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 25971
Approved By: Deanna Hesson

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316410601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.28			

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		910		1.00	0.500

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.70		0.250	0.125

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 14:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.46		0.100	0.0500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511330701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	37.1		0.500	0.250

Sample Number: **L11040220-01**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 14:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0711		0.0100	0.00500

Sample Number: **L11040220-02**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 14:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:20**
File ID: **P2.041211.212035**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.709		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0410		0.0100	0.00500

Sample Number: **L11040220-02**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 21:51**
File ID: **P2.041811.215119**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	198		50.0	25.0

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-02**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 14:45**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:58**
File ID: **P2.041811.225840**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-02**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 19:34**
File ID: **EL.041111.193440**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0364		0.00500	0.00250

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/04/2011 15:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 21:56**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 21:56**
File ID: **10M86848**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	3.03		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	91.8	80	120	
4-Bromofluorobenzene	90.5	86	115	
Dibromofluoromethane	97.4	86	118	
Toluene-d8	99.8	88	110	

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316411501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.81			

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		2040		1.00	0.500

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	8.53		0.500	0.250

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 15:10**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.99		0.250	0.125

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **20**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511331701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	178		2.00	1.00

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-03**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 15:10**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.287		0.0200	0.0100

Sample Number: **L11040220-04**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:27**
File ID: **P2.041211.212720**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.354		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0290		0.0100	0.00500

Sample Number: **L11040220-04**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:10**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 21:58**
File ID: **P2.041811.215800**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	419		50.0	25.0

Sample Number: **L11040220-04**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:10**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:05**
File ID: **P2.041811.230524**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-04**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 15:10**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 19:41**
File ID: **EL.041111.194148**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.102		0.00500	0.00250

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/04/2011 15:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 22:28**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 22:28**
File ID: **10M86849**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	3.33		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	94.1	80	120	
4-Bromofluorobenzene	92.5	86	115	
Dibromofluoromethane	97.0	86	118	
Toluene-d8	101	88	110	

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 15:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316412101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.83			

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 15:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		2050		1.00	0.500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 15:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	8.07		0.500	0.250

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 15:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.02		0.250	0.125

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 15:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **25**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511332801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	152		2.50	1.25

Sample Number: **L11040220-05**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 15:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.353		0.0200	0.0100

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-06**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:34**
File ID: **P2.041211.213405**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.335		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0278		0.0100	0.00500

Sample Number: **L11040220-06**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:04**
File ID: **P2.041811.220439**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	447		50.0	25.0

Sample Number: **L11040220-06**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:15**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:12**
File ID: **P2.041811.231210**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-06**
Client ID: **MW-48**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 15:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 19:48**
File ID: **EL.041111.194856**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.114		0.00500	0.00250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 15:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316412701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.58			

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 15:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		289		1.00	0.500

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 15:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.376		0.0200	0.0100

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 15:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0400		0.0200	0.0100

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 15:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511333501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.389		0.100	0.0500

Sample Number: **L11040220-07**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 15:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0159		0.0100	0.00500

Sample Number: **L11040220-08**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:40**
File ID: **P2.041211.214050**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.0248		0.0100	0.00500
Sodium, Dissolved	7440-23-5	46.2		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-08**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 15:50**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/15/2011 11:20**
Run Date: **04/15/2011 14:04**
File ID: **P2.041511.140408**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-08**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 15:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 19:56**
File ID: **EL.041111.195605**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/04/2011 16:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 21:25**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 21:25**
File ID: **10M86847**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	45.2		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	94.8	80	120	
4-Bromofluorobenzene	94.3	86	115	
Dibromofluoromethane	98.4	86	118	
Toluene-d8	100	88	110	

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316413301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.44			

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1130		1.00	0.500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.99		0.250	0.125

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 16:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.33		0.100	0.0500

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511334201**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	32.5		0.500	0.250

Sample Number: **L11040220-09**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 16:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0942		0.0100	0.00500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-10**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 16:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:47**
File ID: **P2.041211.214734**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.507		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0243		0.0100	0.00500

Sample Number: **L11040220-10**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 16:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:11**
File ID: **P2.041811.221119**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	253		50.0	25.0

Sample Number: **L11040220-10**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 16:20**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:18**
File ID: **P2.041811.231855**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-10**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 16:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 20:31**
File ID: **EL.041111.203143**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0361		0.00500	0.00250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/04/2011 17:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 20:53**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 20:53**
File ID: **10M86846**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	1.96		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	93.5	80	120	
4-Bromofluorobenzene	93.6	86	115	
Dibromofluoromethane	96.5	86	118	
Toluene-d8	102	88	110	

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/04/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316413801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.22			

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/04/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1140		1.00	0.500

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.60		0.250	0.125

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 17:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.78		0.100	0.0500

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/04/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **4**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511335001**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	31.2		0.400	0.200

Sample Number: **L11040220-11**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 17:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0893		0.0100	0.00500

Sample Number: **L11040220-12**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 17:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 21:54**
File ID: **P2.041211.215419**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.505		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-12**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 17:00**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:25**
File ID: **P2.041811.232540**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-12**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/04/2011 17:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:17**
File ID: **P2.041811.221759**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	267		50.0	25.0

Sample Number: **L11040220-12**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/04/2011 17:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **2**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/20/2011 12:53**
Run Date: **04/20/2011 14:09**
File ID: **EL.042011.140949**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00328		0.00200	0.00100

Sample Number: **L11040220-13**
Client ID: **MW-44D**
Matrix: **Water**
Workgroup Number: **WG361640**
Collect Date: **04/05/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **04/12/2011 08:31**
Cal Date: **12/20/2010 17:50**
Run Date: **04/13/2011 15:04**
File ID: **9GF60858.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-13**
Client ID: **MW-44D**
Matrix: **Water**
Workgroup Number: **WG361640**
Collect Date: **04/05/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **04/12/2011 08:31**
Cal Date: **12/20/2010 17:50**
Run Date: **04/13/2011 15:04**
File ID: **9GF60858.F**

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	71.8	30	132	
Decachlorobiphenyl	79.4	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-14**
Client ID: **MW-44S**
Matrix: **Water**
Workgroup Number: **WG361640**
Collect Date: **04/05/2011 10:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **04/12/2011 08:31**
Cal Date: **12/20/2010 17:50**
Run Date: **04/13/2011 15:21**
File ID: **9GF60859.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	65.5	30	132	
Decachlorobiphenyl	76.2	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361640**
Collect Date: **04/05/2011 11:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **04/12/2011 08:31**
Cal Date: **12/20/2010 17:50**
Run Date: **04/13/2011 15:38**
File ID: **9GF60860.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.510	0.255
Aroclor-1221	11104-28-2		U	0.510	0.255
Aroclor-1232	11141-16-5		U	0.510	0.255
Aroclor-1242	53469-21-9		U	0.510	0.255
Aroclor-1248	12672-29-6		U	0.510	0.255
Aroclor-1254	11097-69-1		U	0.510	0.255
Aroclor-1260	11096-82-5		U	0.510	0.255

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	64.9	30	132	
Decachlorobiphenyl	70.8	36	144	

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316414401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.72			

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		494		1.00	0.500

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.0294		0.0100	0.00500

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 11:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0201		0.0100	0.00500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511335601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.709		0.100	0.0500

Sample Number: **L11040220-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 11:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0191		0.0100	0.00500

Sample Number: **L11040220-16**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 11:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 22:01**
File ID: **P2.041211.220103**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	2.21		0.0100	0.00500
Sodium, Dissolved	7440-23-5	28.7		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-16**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 11:30**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/15/2011 11:20**
Run Date: **04/15/2011 13:31**
File ID: **P2.041511.133137**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-16**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 11:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 20:45**
File ID: **EL.041111.204555**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316415001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.02			

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		2670		1.00	0.500

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.74		0.100	0.0500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 11:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.801		0.0500	0.0250

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **25**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511340301**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	98.0		2.50	1.25

Sample Number: **L11040220-17**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 11:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0687		0.0100	0.00500

Sample Number: **L11040220-18**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 11:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 22:21**
File ID: **P2.041211.222118**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.196		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0188		0.0100	0.00500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-18**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 11:50**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:32**
File ID: **P2.041811.233224**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-18**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 11:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:24**
File ID: **P2.041811.222439**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	751		50.0	25.0

Sample Number: **L11040220-18**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 11:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:07**
File ID: **EL.041111.210716**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0114		0.00500	0.00250

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/05/2011 12:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 20:22**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 20:22**
File ID: **10M86845**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	41.4		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	91.7	80	120	
4-Bromofluorobenzene	93.3	86	115	
Dibromofluoromethane	97.8	86	118	
Toluene-d8	101	88	110	

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316415501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.64			

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1110		1.00	0.500

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.46		0.250	0.125

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 12:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.99		0.100	0.0500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361562**
Collect Date: **04/05/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **10**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 15:20**
Cal Date:
Run Date: **04/12/2011 15:20**
File ID: **O111041511210401**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	45.9		1.00	0.500

Sample Number: **L11040220-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 12:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0675		0.0100	0.00500

Sample Number: **L11040220-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 12:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 22:41**
File ID: **P2.041211.224119**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	1.23		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0580		0.0100	0.00500

Sample Number: **L11040220-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 12:30**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:39**
File ID: **P2.041811.233904**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:31**
File ID: **P2.041811.223120**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	263		50.0	25.0

Sample Number: **L11040220-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:14**
File ID: **EL.041111.211424**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0428		0.00500	0.00250

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316415901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.86			

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		420		1.00	0.500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	4.89		0.250	0.125

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 12:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	3.04		0.100	0.0500

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511340901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	8.65		0.100	0.0500

Sample Number: **L11040220-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 12:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0923		0.0100	0.00500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-22**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 12:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 22:48**
File ID: **P2.041211.224804**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.835		0.0100	0.00500
Sodium, Dissolved	7440-23-5	58.9		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.00581	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11040220-22**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 12:50**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:45**
File ID: **P2.041811.234549**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-22**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 12:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:21**
File ID: **EL.041111.212132**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00730		0.00100	0.000500

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316420601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.86			

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		309		1.00	0.500

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.369		0.0200	0.0100

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 14:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.122		0.0200	0.0100

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511341901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	3.87		0.100	0.0500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-23**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 14:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.00577	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11040220-24**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 22:55**
File ID: **P2.041211.225542**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.282		0.0100	0.00500
Sodium, Dissolved	7440-23-5	39.2		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.0229		0.0100	0.00500

Sample Number: **L11040220-24**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:00**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 23:52**
File ID: **P2.041811.235233**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7	0.00105	J	0.00200	0.00100

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11040220-24**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 14:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:28**
File ID: **EL.041111.212841**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00444		0.00100	0.000500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 14:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316421501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.60			

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 14:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		446		1.00	0.500

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 14:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.986		0.0500	0.0250

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 14:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.337		0.0500	0.0250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 14:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511342801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	18.8		0.200	0.100

Sample Number: **L11040220-25**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 14:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0358		0.0100	0.00500

Sample Number: **L11040220-26**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 23:01**
File ID: **P2.041211.230126**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.177		0.0100	0.00500
Sodium, Dissolved	7440-23-5	88.7		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.00522	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11040220-26**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:30**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/19/2011 00:12**
File ID: **P2.041911.001231**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-26**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 14:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:35**
File ID: **EL.041111.213550**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00224		0.00100	0.000500

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316422301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.55			

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		446		1.00	0.500

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.871		0.0500	0.0250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 14:40**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.330		0.0500	0.0250

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511343501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	18.0		0.200	0.100

Sample Number: **L11040220-27**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 14:40**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.101		0.0100	0.00500

Sample Number: **L11040220-28**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 23:08**
File ID: **P2.041211.230811**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	0.185		0.0100	0.00500
Sodium, Dissolved	7440-23-5	89.9		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-28**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:40**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/19/2011 00:19**
File ID: **P2.041911.001916**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-28**
Client ID: **MW-46**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 14:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 21:57**
File ID: **EL.041111.215711**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00263		0.00100	0.000500

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316422901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.91			

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1100		1.00	0.500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.16		0.250	0.125

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 14:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.34		0.100	0.0500

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511344701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	40.6		0.500	0.250

Sample Number: **L11040220-29**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 14:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0826		0.0100	0.00500

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-30**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 23:14**
File ID: **P2.041211.231456**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5	1.11		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0564		0.0100	0.00500

Sample Number: **L11040220-30**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/18/2011 22:38**
File ID: **P2.041811.223844**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	244		50.0	25.0

Sample Number: **L11040220-30**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 14:45**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/19/2011 00:26**
File ID: **P2.041911.002601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-30**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 22:04**
File ID: **EL.041111.220421**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0326		0.00500	0.00250

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361299**
Collect Date: **04/05/2011 15:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **04/09/2011 15:07**
Cal Date: **04/06/2011 14:58**
Run Date: **04/09/2011 15:07**
File ID: **10M86835**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4		U	1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	92.0	80	120	
4-Bromofluorobenzene	95.0	86	115	
Dibromofluoromethane	96.0	86	118	
Toluene-d8	101	88	110	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361009**
Collect Date: **04/05/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **04/06/2011 16:35**
Cal Date:
Run Date: **04/06/2011 16:35**
File ID: **OS11041316423401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.74			

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361415**
Collect Date: **04/05/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **04/11/2011 15:45**
Cal Date:
Run Date: **04/11/2011 15:45**
File ID: **32.1104111545-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1.19		1.00	0.500

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 15:10**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361505**
Collect Date: **04/05/2011 15:10**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **04/12/2011 13:43**
Cal Date:
Run Date: **04/12/2011 13:43**
File ID: **O111041511345501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8		U	0.100	0.0500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-31**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 15:10**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:05**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-32**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 15:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/12/2011 11:18**
Run Date: **04/12/2011 23:21**
File ID: **P2.041211.232141**

Analyte	CAS. Number	Result	Qual	RL	MDL
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5		U	0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-32**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361560**
Collect Date: **04/05/2011 15:10**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **04/11/2011 08:14**
Cal Date: **04/18/2011 17:23**
Run Date: **04/19/2011 00:32**
File ID: **P2.041911.003246**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-32**
Client ID: **FB-1**
Matrix: **Water**
Workgroup Number: **WG361365**
Collect Date: **04/05/2011 15:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **04/11/2011 07:33**
Cal Date: **04/11/2011 09:24**
Run Date: **04/11/2011 22:11**
File ID: **EL.041111.221129**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11040220-33**
Client ID: **PURGE #1-80**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/04/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	8.59		0.500	0.250

Sample Number: **L11040220-33**
Client ID: **PURGE #1-80**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/04/2011 17:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	4.20		0.250	0.125

Report Number: **L11040220**
Report Date : **May 19, 2011**

Sample Number: **L11040220-33**
Client ID: **PURGE #1-80**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/04/2011 17:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.192		0.0100	0.00500

Sample Number: **L11040220-34**
Client ID: **PURGE #2-145**
Matrix: **Water**
Workgroup Number: **WG361437**
Collect Date: **04/05/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 13:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 13:50**
File ID: **1V.1104131350-24**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.42		0.100	0.0500

Sample Number: **L11040220-34**
Client ID: **PURGE #2-145**
Matrix: **Water**
Workgroup Number: **WG361442**
Collect Date: **04/05/2011 15:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:50**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:50**
File ID: **1V.1104131550-24**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.04		0.0200	0.0100

Sample Number: **L11040220-34**
Client ID: **PURGE #2-145**
Matrix: **Water**
Workgroup Number: **WG361440**
Collect Date: **04/05/2011 15:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **04/13/2011 15:35**
Cal Date: **02/22/2011 13:00**
Run Date: **04/13/2011 15:35**
File ID: **1V.1104131535-24**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.109		0.0100	0.00500

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 10M86832
Prep Date: 04/09/11 13:33
Analyzed Date: 04/09/11 13:33
Analyst: TMB

Work Group: WG361299
Blank Sample ID: WG361299-01
Instrument ID: HPMS10
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361299-02	10M86833	04/09/11 14:04	01
LCS2	WG361299-03	10M86834	04/09/11 14:36	01
FB-1	L11040220-31	10M86835	04/09/11 15:07	01
MW-31	L11040220-19	10M86845	04/09/11 20:22	01
MW-5	L11040220-11	10M86846	04/09/11 20:53	01
MW-2	L11040220-09	10M86847	04/09/11 21:25	01
MW-18	L11040220-03	10M86848	04/09/11 21:56	01
MW-48	L11040220-05	10M86849	04/09/11 22:28	01
LCS	WG361299-05	10M86852	04/10/11 00:02	02
LCS2	WG361299-06	10M86853	04/10/11 00:33	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974713
Report generated 04/13/2011 12:40

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 10M86854
Prep Date: 04/10/11 01:05
Analyzed Date: 04/10/11 01:05
Analyst: TMB

Work Group: WG361299
Blank Sample ID: WG361299-04
Instrument ID: HPMS10
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361299-02	10M86833	04/09/11 14:04	01
LCS2	WG361299-03	10M86834	04/09/11 14:36	01
FB-1	L11040220-31	10M86835	04/09/11 15:07	01
MW-31	L11040220-19	10M86845	04/09/11 20:22	01
MW-5	L11040220-11	10M86846	04/09/11 20:53	01
MW-2	L11040220-09	10M86847	04/09/11 21:25	01
MW-18	L11040220-03	10M86848	04/09/11 21:56	01
MW-48	L11040220-05	10M86849	04/09/11 22:28	01
LCS	WG361299-05	10M86852	04/10/11 00:02	02
LCS2	WG361299-06	10M86853	04/10/11 00:33	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974713
Report generated 04/13/2011 12:40

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/09/11 13:33 Sample ID: WG361299-01
Instrument ID: HPMS10 Run Date: 04/09/11 13:33 Prep Method: 5030B/5030C/503
File ID: 10M86832 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG361299 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS10-06-APR-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	93.6	80 - 120	PASS
4-Bromofluorobenzene	94.3	86 - 115	PASS
Dibromofluoromethane	97.1	86 - 118	PASS
Toluene-d8	101	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1974714
13-APR-2011 12:40

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/10/11 01:05 Sample ID: WG361299-04
Instrument ID: HPMS10 Run Date: 04/10/11 01:05 Prep Method: 5030B/5030C/503
File ID: 10M86854 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG361299 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS10-06-APR-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	93.9	80 - 120	PASS
4-Bromofluorobenzene	91.3	86 - 115	PASS
Dibromofluoromethane	96.7	86 - 118	PASS
Toluene-d8	100	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1974714
13-APR-2011 12:40

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Analyst: TMB Prep Method: 5030B/5030C/503
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG361299 Units: ug/L
QC Key: STD Lot #: STD44791

Sample ID: WG361299-02 LCS File ID: 10M86833 Run Date: 04/09/2011 14:04
Sample ID: WG361299-03 LCS2 File ID: 10M86834 Run Date: 04/09/2011 14:36

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Tetrachloroethene	20.0	20.8	104	20.0	20.6	103	0.852	80 - 124	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	92.3	93.7	80 - 120	PASS
Dibromofluoromethane	98.0	101	86 - 118	PASS
4-Bromofluorobenzene	89.6	93.2	86 - 115	PASS
Toluene-d8	100	99.6	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1971990
Report generated: 04/13/2011 12:40

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 9GF60848.F
Prep Date: 04/12/11 08:31
Analyzed Date: 04/13/11 12:08
Analyst: ECL

Work Group: WG361640
Blank Sample ID: WG361425-01
Instrument ID: HP9
Method: 8082

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361425-02	9GF60849.F	04/13/11 12:25	01
LCS2	WG361425-03	9GF60850.F	04/13/11 12:43	01
MW-44D	L11040220-13	9GF60858.F	04/13/11 15:04	01
MW-44S	L11040220-14	9GF60859.F	04/13/11 15:21	01
MW-12	L11040220-15	9GF60860.F	04/13/11 15:38	01

Report Name: BLANK_SUMMARY
PDF File ID: 1975495
Report generated 04/19/2011 11:47

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/12/11 08:31 Sample ID: WG361425-01
Instrument ID: HP9 Run Date: 04/13/11 12:08 Prep Method: 3510C
File ID: 9GF60848.F Analyst: ECL Method: 8082
Workgroup (AAB#): WG361640 Matrix: Water Units: ug/L
Contract #: Cal ID: HP9-20-DEC-10

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	0.250	0.500	0.500	1	U
Aroclor-1221	0.250	0.500	0.500	1	U
Aroclor-1232	0.250	0.500	0.500	1	U
Aroclor-1242	0.250	0.500	0.500	1	U
Aroclor-1248	0.250	0.500	0.500	1	U
Aroclor-1254	0.250	0.500	0.500	1	U
Aroclor-1260	0.250	0.500	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	72.9	30 - 132	PASS
Decachlorobiphenyl	77.0	36 - 144	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1975496
19-APR-2011 11:47

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Water Method: 8082
Workgroup (AAB#): WG361640 Units: ug/L
QC Key: STD Lot #: STD43199

Sample ID: WG361425-02 LCS File ID: 9GF60849.F Run Date: 04/13/2011 12:25
Sample ID: WG361425-03 LCS2 File ID: 9GF60850.F Run Date: 04/13/2011 12:43

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Aroclor-1016	2.50	2.23	89.2	2.50	2.23	89.3	0.0863	40 - 140	40	
Aroclor-1260	2.50	2.30	92.2	2.50	2.28	91.4	0.850	40 - 140	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,5,6-Tetrachloro-m-xylene	70.9	69.1	30 - 132	PASS
Decachlorobiphenyl	90.8	63.9	36 - 144	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1975497
Report generated: 04/19/2011 11:47

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: P2.041211.195912
Prep Date: 04/11/11 08:14
Analyzed Date: 04/12/11 19:59
Analyst: KHR

Work Group: WG361560
Blank Sample ID: WG361324-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361324-03	P2.041211.200552	04/12/11 20:05	01
MW-16	L11040220-02	P2.041211.212035	04/12/11 21:20	01
MW-18	L11040220-04	P2.041211.212720	04/12/11 21:27	01
MW-48	L11040220-06	P2.041211.213405	04/12/11 21:34	01
MW-28	L11040220-08	P2.041211.214050	04/12/11 21:40	01
MW-2	L11040220-10	P2.041211.214734	04/12/11 21:47	01
MW-5	L11040220-12	P2.041211.215419	04/12/11 21:54	01
MW-12	L11040220-16	P2.041211.220103	04/12/11 22:01	01
MW-39S	L11040220-18	P2.041211.222118	04/12/11 22:21	01
MW-31	L11040220-20	P2.041211.224119	04/12/11 22:41	01
MW-35	L11040220-22	P2.041211.224804	04/12/11 22:48	01
MW-37	L11040220-24	P2.041211.225542	04/12/11 22:55	01
MW-36	L11040220-26	P2.041211.230126	04/12/11 23:01	01
MW-46	L11040220-28	P2.041211.230811	04/12/11 23:08	01
MW-32	L11040220-30	P2.041211.231456	04/12/11 23:14	01
FB-1	L11040220-32	P2.041211.232141	04/12/11 23:21	01
LCS	WG361324-03	P2.041511.132454	04/15/11 13:24	02
MW-12	L11040220-16	P2.041511.133137	04/15/11 13:31	02
MW-28	L11040220-08	P2.041511.140408	04/15/11 14:04	02
MW-16	L11040220-02	P2.041811.215119	04/18/11 21:51	DL01
MW-18	L11040220-04	P2.041811.215800	04/18/11 21:58	DL01
MW-48	L11040220-06	P2.041811.220439	04/18/11 22:04	DL01
MW-2	L11040220-10	P2.041811.221119	04/18/11 22:11	DL01
MW-5	L11040220-12	P2.041811.221759	04/18/11 22:17	DL01
MW-39S	L11040220-18	P2.041811.222439	04/18/11 22:24	DL01
MW-31	L11040220-20	P2.041811.223120	04/18/11 22:31	DL01
MW-32	L11040220-30	P2.041811.223844	04/18/11 22:38	DL01
MW-16	L11040220-02	P2.041811.225840	04/18/11 22:58	02
MW-18	L11040220-04	P2.041811.230524	04/18/11 23:05	02
MW-48	L11040220-06	P2.041811.231210	04/18/11 23:12	02
MW-2	L11040220-10	P2.041811.231855	04/18/11 23:18	02
MW-5	L11040220-12	P2.041811.232540	04/18/11 23:25	02
MW-39S	L11040220-18	P2.041811.233224	04/18/11 23:32	02
MW-31	L11040220-20	P2.041811.233904	04/18/11 23:39	02
MW-35	L11040220-22	P2.041811.234549	04/18/11 23:45	02
MW-37	L11040220-24	P2.041811.235233	04/18/11 23:52	02
MW-36	L11040220-26	P2.041911.001231	04/19/11 00:12	02
MW-46	L11040220-28	P2.041911.001916	04/19/11 00:19	02
MW-32	L11040220-30	P2.041911.002601	04/19/11 00:26	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974491
Report generated 04/19/2011 11:05

METHOD BLANK SUMMARY

FB-1	L11040220-32	P2.041911.003246	04/19/11 00:32	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974491
Report generated 04/19/2011 11:05

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: P2.041511.131816
Prep Date: 04/11/11 08:14
Analyzed Date: 04/15/11 13:18
Analyst: KHR

Work Group: WG361560
Blank Sample ID: WG361324-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361324-03	P2.041211.200552	04/12/11 20:05	01
MW-16	L11040220-02	P2.041211.212035	04/12/11 21:20	01
MW-18	L11040220-04	P2.041211.212720	04/12/11 21:27	01
MW-48	L11040220-06	P2.041211.213405	04/12/11 21:34	01
MW-28	L11040220-08	P2.041211.214050	04/12/11 21:40	01
MW-2	L11040220-10	P2.041211.214734	04/12/11 21:47	01
MW-5	L11040220-12	P2.041211.215419	04/12/11 21:54	01
MW-12	L11040220-16	P2.041211.220103	04/12/11 22:01	01
MW-39S	L11040220-18	P2.041211.222118	04/12/11 22:21	01
MW-31	L11040220-20	P2.041211.224119	04/12/11 22:41	01
MW-35	L11040220-22	P2.041211.224804	04/12/11 22:48	01
MW-37	L11040220-24	P2.041211.225542	04/12/11 22:55	01
MW-36	L11040220-26	P2.041211.230126	04/12/11 23:01	01
MW-46	L11040220-28	P2.041211.230811	04/12/11 23:08	01
MW-32	L11040220-30	P2.041211.231456	04/12/11 23:14	01
FB-1	L11040220-32	P2.041211.232141	04/12/11 23:21	01
LCS	WG361324-03	P2.041511.132454	04/15/11 13:24	02
MW-12	L11040220-16	P2.041511.133137	04/15/11 13:31	02
MW-28	L11040220-08	P2.041511.140408	04/15/11 14:04	02
MW-16	L11040220-02	P2.041811.215119	04/18/11 21:51	DL01
MW-18	L11040220-04	P2.041811.215800	04/18/11 21:58	DL01
MW-48	L11040220-06	P2.041811.220439	04/18/11 22:04	DL01
MW-2	L11040220-10	P2.041811.221119	04/18/11 22:11	DL01
MW-5	L11040220-12	P2.041811.221759	04/18/11 22:17	DL01
MW-39S	L11040220-18	P2.041811.222439	04/18/11 22:24	DL01
MW-31	L11040220-20	P2.041811.223120	04/18/11 22:31	DL01
MW-32	L11040220-30	P2.041811.223844	04/18/11 22:38	DL01
MW-16	L11040220-02	P2.041811.225840	04/18/11 22:58	02
MW-18	L11040220-04	P2.041811.230524	04/18/11 23:05	02
MW-48	L11040220-06	P2.041811.231210	04/18/11 23:12	02
MW-2	L11040220-10	P2.041811.231855	04/18/11 23:18	02
MW-5	L11040220-12	P2.041811.232540	04/18/11 23:25	02
MW-39S	L11040220-18	P2.041811.233224	04/18/11 23:32	02
MW-31	L11040220-20	P2.041811.233904	04/18/11 23:39	02
MW-35	L11040220-22	P2.041811.234549	04/18/11 23:45	02
MW-37	L11040220-24	P2.041811.235233	04/18/11 23:52	02
MW-36	L11040220-26	P2.041911.001231	04/19/11 00:12	02
MW-46	L11040220-28	P2.041911.001916	04/19/11 00:19	02
MW-32	L11040220-30	P2.041911.002601	04/19/11 00:26	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974491
Report generated 04/19/2011 11:05

METHOD BLANK SUMMARY

FB-1	L11040220-32	P2.041911.003246	04/19/11 00:32	02

Report Name: BLANK_SUMMARY
PDF File ID: 1974491
Report generated 04/19/2011 11:05

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/11/11 08:14 Sample ID: WG361324-02
Instrument ID: PE-ICP2 Run Date: 04/12/11 19:59 Prep Method: 3005A
File ID: P2.041211.195912 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG361560 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 12-APR-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Manganese, Dissolved	0.00500	0.0100	0.0100	1	U
Sodium, Dissolved	0.250	0.500	0.500	1	U
Vanadium, Dissolved	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1974492
15-APR-2011 15:29

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/11/11 08:14 Sample ID: WG361324-02
Instrument ID: PE-ICP2 Run Date: 04/15/11 13:18 Prep Method: 3005A
File ID: P2.041511.131816 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG361560 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 15-APR-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Beryllium, Dissolved	0.00100	0.00200	0.00200	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1974492
15-APR-2011 15:29

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/12/2011 Sample ID: WG361324-03
Instrument ID: PE-ICP2 Run Time: 20:05 Prep Method: 3005A
File ID: P2.041211.200552 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG361560 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD39933 Cal ID: PE-ICP - 12-APR-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Manganese, Dissolved	0.250	0.274	110	85 - 115	
Sodium, Dissolved	25.0	24.9	99.6	85 - 115	
Vanadium, Dissolved	0.500	0.529	106	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 1974493
Report generated: 04/15/2011 15:29

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/15/2011 Sample ID: WG361324-03
Instrument ID: PE-ICP2 Run Time: 13:24 Prep Method: 3005A
File ID: P2.041511.132454 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG361560 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD39933 Cal ID: PE-ICP - 15-APR-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Dissolved	0.0250	0.0240	96.0	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 1974493
Report generated: 04/15/2011 15:29

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11040220 Cal ID: PE-ICP2- Worknum: WG361560
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG361324-01 File ID: P2.041211.220103 Dil: 1 Matrix: WATER
Sample ID: WG361324-04 MS File ID: P2.041211.220748 Dil: 1 Units: mg/L
Sample ID: WG361324-05 MSD File ID: P2.041211.221433 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Manganese, Dissolved	2.21	0.250	2.49	113	0.250	2.55	135	2.15	80 - 120	20	*
Sodium, Dissolved	28.7	25.0	55.0	105	25.0	54.4	103	1.01	80 - 120	20	
Vanadium, Dissolved	ND	0.500	0.519	104	0.500	0.512	102	1.28	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 03/07/2008
PDF File ID: 1974494
Report generated 04/15/2011 15:29

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11040220 Cal ID: PE-ICP2 - Worknum: WG361560
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG361324-01 File ID: P2.041511.133137 Dil: 1 Matrix: WATER
Sample ID: WG361324-04 MS File ID: P2.041511.133821 Dil: 1 Units: mg/L
Sample ID: WG361324-05 MSD File ID: P2.041511.134503 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Dissolved	ND	0.0250	0.0244	97.6	0.0250	0.0242	96.9	0.725	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 03/07/2008
PDF File ID: 1974494
Report generated 04/15/2011 15:29

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: EL.041111.190613
Prep Date: 04/11/11 07:33
Analyzed Date: 04/11/11 19:06
Analyst: EDL

Work Group: WG361365
Blank Sample ID: WG361305-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361305-03	EL.041111.191319	04/11/11 19:13	01
MW-16	L11040220-02	EL.041111.193440	04/11/11 19:34	DL01
MW-18	L11040220-04	EL.041111.194148	04/11/11 19:41	DL01
MW-48	L11040220-06	EL.041111.194856	04/11/11 19:48	DL01
MW-28	L11040220-08	EL.041111.195605	04/11/11 19:56	01
MW-2	L11040220-10	EL.041111.203143	04/11/11 20:31	DL01
MW-12	L11040220-16	EL.041111.204555	04/11/11 20:45	01
MW-39S	L11040220-18	EL.041111.210716	04/11/11 21:07	DL01
MW-31	L11040220-20	EL.041111.211424	04/11/11 21:14	DL01
MW-35	L11040220-22	EL.041111.212132	04/11/11 21:21	01
MW-37	L11040220-24	EL.041111.212841	04/11/11 21:28	01
MW-36	L11040220-26	EL.041111.213550	04/11/11 21:35	01
MW-46	L11040220-28	EL.041111.215711	04/11/11 21:57	01
MW-32	L11040220-30	EL.041111.220421	04/11/11 22:04	DL01
FB-1	L11040220-32	EL.041111.221129	04/11/11 22:11	01
LCS	WG361305-03	EL.041211.130931	04/12/11 13:09	02
MW-5	L11040220-12	EL.042011.140949	04/20/11 14:09	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1972460
Report generated 04/21/2011 10:11

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: EL.041211.130224
Prep Date: 04/11/11 07:33
Analyzed Date: 04/12/11 13:02
Analyst: EDL

Work Group: WG361365
Blank Sample ID: WG361305-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361305-03	EL.041111.191319	04/11/11 19:13	01
MW-16	L11040220-02	EL.041111.193440	04/11/11 19:34	DL01
MW-18	L11040220-04	EL.041111.194148	04/11/11 19:41	DL01
MW-48	L11040220-06	EL.041111.194856	04/11/11 19:48	DL01
MW-28	L11040220-08	EL.041111.195605	04/11/11 19:56	01
MW-2	L11040220-10	EL.041111.203143	04/11/11 20:31	DL01
MW-12	L11040220-16	EL.041111.204555	04/11/11 20:45	01
MW-39S	L11040220-18	EL.041111.210716	04/11/11 21:07	DL01
MW-31	L11040220-20	EL.041111.211424	04/11/11 21:14	DL01
MW-35	L11040220-22	EL.041111.212132	04/11/11 21:21	01
MW-37	L11040220-24	EL.041111.212841	04/11/11 21:28	01
MW-36	L11040220-26	EL.041111.213550	04/11/11 21:35	01
MW-46	L11040220-28	EL.041111.215711	04/11/11 21:57	01
MW-32	L11040220-30	EL.041111.220421	04/11/11 22:04	DL01
FB-1	L11040220-32	EL.041111.221129	04/11/11 22:11	01
LCS	WG361305-03	EL.041211.130931	04/12/11 13:09	02
MW-5	L11040220-12	EL.042011.140949	04/20/11 14:09	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1972460
Report generated 04/21/2011 10:11

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/11/11 07:33 Sample ID: WG361305-02
Instrument ID: ELAN-ICP Run Date: 04/11/11 19:06 Prep Method: 3015
File ID: EL.041111.190613 Analyst: EDL Method: 6020
Workgroup (AAB#): WG361365 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-11-APR-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Dissolved	0.000500	0.00100	0.00100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1972461
12-APR-2011 08:21

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/11/2011 Sample ID: WG361305-03
Instrument ID: ELAN-ICP Run Time: 19:13 Prep Method: 3015
File ID: EL.041111.191319 Analyst: EDL Method: 6020
Workgroup (AAB#): WG361365 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD41894 Cal ID: ELAN-I-11-APR-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Dissolved	0.0625	0.0546	87.4	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 1972462
Report generated: 04/12/2011 08:21

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11040220 Cal ID: ELAN-ICP- Worknum: WG361365
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG361305-01 File ID: EL.041111.204555 Dil: 1 Matrix: WATER
Sample ID: WG361305-04 MS File ID: EL.041111.205302 Dil: 1 Units: mg/L
Sample ID: WG361305-05 MSD File ID: EL.041111.210009 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Dissolved	ND	0.0625	0.0569	91.1	0.0625	0.0571	91.4	0.326	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 03/07/2008
PDF File ID: 1972463
Report generated 04/12/2011 08:21

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 1V.1104131350-05
Prep Date: 04/13/11 13:50
Analyzed Date: 04/13/11 13:50
Analyst: JBK

Work Group: WG361437
Blank Sample ID: WG361437-01
Instrument ID: UV-120-1V
Method: 9014-9010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361437-02	1V.1104131350-06	04/13/11 13:50	
LCS	WG361437-03	1V.1104131350-07	04/13/11 13:50	
MW-16	L11040220-01	1V.1104131350-08	04/13/11 13:50	
MW-18	L11040220-03	1V.1104131350-09	04/13/11 13:50	
MW-48	L11040220-05	1V.1104131350-10	04/13/11 13:50	
MW-28	L11040220-07	1V.1104131350-11	04/13/11 13:50	
MW-2	L11040220-09	1V.1104131350-12	04/13/11 13:50	
MW-5	L11040220-11	1V.1104131350-13	04/13/11 13:50	
MW-12	L11040220-15	1V.1104131350-14	04/13/11 13:50	
MW-39S	L11040220-17	1V.1104131350-15	04/13/11 13:50	
MW-31	L11040220-19	1V.1104131350-16	04/13/11 13:50	
MW-35	L11040220-21	1V.1104131350-17	04/13/11 13:50	
MW-37	L11040220-23	1V.1104131350-18	04/13/11 13:50	
MW-36	L11040220-25	1V.1104131350-19	04/13/11 13:50	
MW-46	L11040220-27	1V.1104131350-20	04/13/11 13:50	
MW-32	L11040220-29	1V.1104131350-21	04/13/11 13:50	
FB-1	L11040220-31	1V.1104131350-22	04/13/11 13:50	
PURGE #1-80	L11040220-33	1V.1104131350-23	04/13/11 13:50	
PURGE #2-145	L11040220-34	1V.1104131350-24	04/13/11 13:50	
DUP	WG361437-06	1V.1104131350-28	04/13/11 13:50	

Report Name: BLANK_SUMMARY
PDF File ID: 1978840
Report generated 04/15/2011 14:46

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 1V.1104131550-05
Prep Date: 04/13/11 15:50
Analyzed Date: 04/13/11 15:50
Analyst: JBK

Work Group: WG361442
Blank Sample ID: WG361442-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361442-02	1V.1104131550-06	04/13/11 15:50	CN-A
LCS	WG361442-03	1V.1104131550-07	04/13/11 15:50	CN-A
MW-16	L11040220-01	1V.1104131550-08	04/13/11 15:50	CN-A
MW-18	L11040220-03	1V.1104131550-09	04/13/11 15:50	CN-A
MW-48	L11040220-05	1V.1104131550-10	04/13/11 15:50	CN-A
MW-28	L11040220-07	1V.1104131550-11	04/13/11 15:50	CN-A
MW-2	L11040220-09	1V.1104131550-12	04/13/11 15:50	CN-A
MW-5	L11040220-11	1V.1104131550-13	04/13/11 15:50	CN-A
MW-12	L11040220-15	1V.1104131550-14	04/13/11 15:50	CN-A
MW-39S	L11040220-17	1V.1104131550-15	04/13/11 15:50	CN-A
MW-31	L11040220-19	1V.1104131550-16	04/13/11 15:50	CN-A
MW-35	L11040220-21	1V.1104131550-17	04/13/11 15:50	CN-A
MW-37	L11040220-23	1V.1104131550-18	04/13/11 15:50	CN-A
MW-36	L11040220-25	1V.1104131550-19	04/13/11 15:50	CN-A
MW-46	L11040220-27	1V.1104131550-20	04/13/11 15:50	CN-A
MW-32	L11040220-29	1V.1104131550-21	04/13/11 15:50	CN-A
FB-1	L11040220-31	1V.1104131550-22	04/13/11 15:50	CN-A
PURGE #1-80	L11040220-33	1V.1104131550-23	04/13/11 15:50	CN-A
PURGE #2-145	L11040220-34	1V.1104131550-24	04/13/11 15:50	CN-A
DUP	WG361442-05	1V.1104131550-27	04/13/11 15:50	CN-A

Report Name: BLANK_SUMMARY
PDF File ID: 1978799
Report generated 04/15/2011 14:42

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 1V.1104131535-05
Prep Date: 04/13/11 15:35
Analyzed Date: 04/13/11 15:35
Analyst: JBK

Work Group: WG361440
Blank Sample ID: WG361440-01
Instrument ID: UV-120-1V
Method: SM4500-CN-I

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361440-02	1V.1104131535-06	04/13/11 15:35	WD
LCS	WG361440-03	1V.1104131535-07	04/13/11 15:35	WD
MW-16	L11040220-01	1V.1104131535-08	04/13/11 15:35	WD
MW-18	L11040220-03	1V.1104131535-09	04/13/11 15:35	WD
MW-48	L11040220-05	1V.1104131535-10	04/13/11 15:35	WD
MW-28	L11040220-07	1V.1104131535-11	04/13/11 15:35	WD
MW-2	L11040220-09	1V.1104131535-12	04/13/11 15:35	WD
MW-5	L11040220-11	1V.1104131535-13	04/13/11 15:35	WD
MW-12	L11040220-15	1V.1104131535-14	04/13/11 15:35	WD
MW-39S	L11040220-17	1V.1104131535-15	04/13/11 15:35	WD
MW-31	L11040220-19	1V.1104131535-16	04/13/11 15:35	WD
MW-35	L11040220-21	1V.1104131535-17	04/13/11 15:35	WD
MW-37	L11040220-23	1V.1104131535-18	04/13/11 15:35	WD
MW-36	L11040220-25	1V.1104131535-19	04/13/11 15:35	WD
MW-46	L11040220-27	1V.1104131535-20	04/13/11 15:35	WD
MW-32	L11040220-29	1V.1104131535-21	04/13/11 15:35	WD
FB-1	L11040220-31	1V.1104131535-22	04/13/11 15:35	WD
PURGE #1-80	L11040220-33	1V.1104131535-23	04/13/11 15:35	WD
PURGE #2-145	L11040220-34	1V.1104131535-24	04/13/11 15:35	WD
DUP	WG361440-05	1V.1104131535-27	04/13/11 15:35	WD

Report Name: BLANK_SUMMARY
PDF File ID: 1978704
Report generated 04/15/2011 14:38

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/13/11 13:50 Sample ID: WG361437-01
Instrument ID: UV-120-1V Run Date: 04/13/11 13:50 Prep Method: 9014-9010C
File ID: 1V.1104131350-05 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG361437 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 22-FEB-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1978841
15-APR-2011 14:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/13/11 15:50 Sample ID: WG361442-01
Instrument ID: UV-120-1V Run Date: 04/13/11 15:50 Prep Method: SM4500-CN-C,G
File ID: 1V.1104131550-05 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG361442 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 22-FEB-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1978800
15-APR-2011 14:42

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/13/11 15:35 Sample ID: WG361440-01
Instrument ID: UV-120-1V Run Date: 04/13/11 15:35 Prep Method: SM4500-CN-I
File ID: 1V.1104131535-05 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG361440 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 22-FEB-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1978705
15-APR-2011 14:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361437-02
Instrument ID: UV-120-1V Run Time: 13:50 Prep Method: 9014-9010C
File ID: 1V.1104131350-06 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG361437 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.200	0.191	95.3	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 1978842
Report generated: 04/15/2011 14:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361437-03
Instrument ID: UV-120-1V Run Time: 13:50 Prep Method: 9014-9010C
File ID: 1V.1104131350-07 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG361437 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0400	0.0384	96.0	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 1978842
Report generated: 04/15/2011 14:46

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361442-02
Instrument ID: UV-120-1V Run Time: 15:50 Prep Method: SM4500-CN-C,G
File ID: 1V.1104131550-06 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG361442 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.200	0.00116	0.578	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 1978801
Report generated: 04/15/2011 14:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361442-03
Instrument ID: UV-120-1V Run Time: 15:50 Prep Method: SM4500-CN-C,G
File ID: 1V.1104131550-07 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG361442 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.0400	0.00116	2.89	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 1978801
Report generated: 04/15/2011 14:42

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361440-02
Instrument ID: UV-120-1V Run Time: 15:35 Prep Method: SM4500-CN-I
File ID: 1V.1104131535-06 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG361440 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.200	0.191	95.3	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 1978706
Report generated: 04/15/2011 14:38

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Run Date: 04/13/2011 Sample ID: WG361440-03
Instrument ID: UV-120-1V Run Time: 15:35 Prep Method: SM4500-CN-I
File ID: 1V.1104131535-07 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG361440 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44892 Cal ID: UV-120 - 22-FEB-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0400	0.0387	96.6	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 1978706
Report generated: 04/15/2011 14:38

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: 32.1104111545-01
Prep Date: 04/11/11 15:45
Analyzed Date: 04/11/11 15:45
Analyst: TMM

Work Group: WG361415
Blank Sample ID: WG361415-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361415-02	32.1104111545-02	04/11/11 15:45	
LCS2	WG361415-03	32.1104111545-03	04/11/11 15:45	
MW-16	L11040220-01	32.1104111545-04	04/11/11 15:45	
MW-18	L11040220-03	32.1104111545-05	04/11/11 15:45	
MW-48	L11040220-05	32.1104111545-06	04/11/11 15:45	
MW-28	L11040220-07	32.1104111545-07	04/11/11 15:45	
MW-2	L11040220-09	32.1104111545-08	04/11/11 15:45	
MW-5	L11040220-11	32.1104111545-09	04/11/11 15:45	
MW-12	L11040220-15	32.1104111545-10	04/11/11 15:45	
MW-39S	L11040220-17	32.1104111545-11	04/11/11 15:45	
MW-31	L11040220-19	32.1104111545-12	04/11/11 15:45	
MW-35	L11040220-21	32.1104111545-13	04/11/11 15:45	
MW-37	L11040220-23	32.1104111545-14	04/11/11 15:45	
MW-36	L11040220-25	32.1104111545-15	04/11/11 15:45	
MW-46	L11040220-27	32.1104111545-16	04/11/11 15:45	
MW-32	L11040220-29	32.1104111545-17	04/11/11 15:45	
FB-1	L11040220-31	32.1104111545-18	04/11/11 15:45	
DUP	WG361415-05	32.1104111545-19	04/11/11 15:45	
DUP	WG361415-07	32.1104111545-20	04/11/11 15:45	

Report Name: BLANK_SUMMARY
PDF File ID: 1977151
Report generated 04/14/2011 22:16

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/11/11 15:45 Sample ID: WG361415-01
Instrument ID: YSI-32 Run Date: 04/11/11 15:45 Prep Method: 120.1
File ID: 32.1104111545-01 Analyst: TMM Method: 120.1
Workgroup (AAB#): WG361415 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	1.00	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1977152
14-APR-2011 22:16

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Analyst: TMM Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG361415 Units: umhos/cm
QC Key: STD Lot #: STD44930

Sample ID: WG361415-02 LCS File ID: 32.1104111545-02 Run Date: 04/11/2011 15:45
Sample ID: WG361415-03 LCS2 File ID: 32.1104111545-03 Run Date: 04/11/2011 15:45

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1340	95.1	1410	1340	95.2	0.0720	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1977153
Report generated: 04/14/2011 22:16

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: O111041511303801
Prep Date: 04/12/11 13:43
Analyzed Date: 04/12/11 13:43
Analyst: TMM

Work Group: WG361505
Blank Sample ID: WG361505-01
Instrument ID: ORION-710A1
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
MW-2	L11040220-09	O111041511334201	04/12/11 13:43	
MW-32	L11040220-29	O111041511344701	04/12/11 13:43	
LCS2	WG361505-03	O111041511305501	04/12/11 13:43	1
MW-18	L11040220-03	O111041511331701	04/12/11 13:43	
MW-35	L11040220-21	O111041511340901	04/12/11 13:43	
MW-37	L11040220-23	O111041511341901	04/12/11 13:43	
MW-36	L11040220-25	O111041511342801	04/12/11 13:43	
DUP	WG361505-06	O111041511311501	04/12/11 13:43	
MW-28	L11040220-07	O111041511333501	04/12/11 13:43	
MW-46	L11040220-27	O111041511343501	04/12/11 13:43	
LCS	WG361505-02	O111041511304601	04/12/11 13:43	1
LCS	WG361505-04	O111041511310101	04/12/11 13:43	
MW-16	L11040220-01	O111041511330701	04/12/11 13:43	
MW-48	L11040220-05	O111041511332801	04/12/11 13:43	
MW-5	L11040220-11	O111041511335001	04/12/11 13:43	
MW-12	L11040220-15	O111041511335601	04/12/11 13:43	
MW-39S	L11040220-17	O111041511340301	04/12/11 13:43	
FB-1	L11040220-31	O111041511345501	04/12/11 13:43	

Report Name: BLANK_SUMMARY
PDF File ID: 1978987
Report generated 04/15/2011 15:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11040220
Blank File ID: O111041511194601
Prep Date: 04/12/11 15:20
Analyzed Date: 04/12/11 15:20
Analyst: TMM

Work Group: WG361562
Blank Sample ID: WG361562-01
Instrument ID: ORION-710A1
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG361562-02	O111041511195501	04/12/11 15:20	1
LCS	WG361562-04	O111041511201101	04/12/11 15:20	
LCS2	WG361562-03	O111041511200301	04/12/11 15:20	1
MW-31	L11040220-19	O111041511210401	04/12/11 15:20	
DUP	WG361562-06	O111041511203401	04/12/11 15:20	

Report Name: BLANK_SUMMARY
PDF File ID: 1978987
Report generated 04/15/2011 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/12/11 13:43 Sample ID: WG361505-01
Instrument ID: ORION-710A1 Run Date: 04/12/11 13:43 Prep Method: SM4500-F-C
File ID: O111041511303801 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG361505 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION- -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1978988
15-APR-2011 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11040220 Prep Date: 04/12/11 15:20 Sample ID: WG361562-01
Instrument ID: ORION-710A1 Run Date: 04/12/11 15:20 Prep Method: SM4500-F-C
File ID: O111041511194601 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG361562 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION- -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1978988
15-APR-2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A1 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG361505 Units: mg/L
QC Key: STD Lot #: STD43590

Sample ID: WG361505-02 LCS File ID: O111041511304601 Run Date: 04/12/2011 13:43
Sample ID: WG361505-03 LCS2 File ID: O111041511305501 Run Date: 04/12/2011 13:43

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	2.01	101	2.00	2.09	105	3.90	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1978989
Report generated: 04/15/2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11040220 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A1 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG361562 Units: mg/L
QC Key: STD Lot #: STD43590

Sample ID: WG361562-02 LCS File ID: O111041511195501 Run Date: 04/12/2011 15:20
Sample ID: WG361562-03 LCS2 File ID: O111041511200301 Run Date: 04/12/2011 15:20

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	2.01	101	2.00	2.02	101	0.496	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1978989
Report generated: 04/15/2011 15:01

Microbac Laboratories Inc.
Analyst Listing
May 19, 2011

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER	CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER	CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT
DEL - DON E. LIGHTFRITZ	DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER
DIH - DEANNA I. HESSON	DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH	ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JAL - JOHN A. LENT	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKT - JANE K. THOMPSON	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATIE E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT	RAH - ROY A. HALSTEAD	RB - BOB BUCHANAN
REK - BOB E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WJB - WILL J. BEASLEY	WTD - WADE T. DELONG

Microbac Laboratories Inc.
List of Valid Qualifiers
May 19, 2011

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound an are matrix dependent.

COC No. A 23517

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MGMT. INC.

Project Contact: CLEASON SMITH

Contact Phone #: 724-587-5680

Turn Around Requirements: STD.

Location: HANNIBAL, OH

Project ID: ORMET-CERCLA

Sampler (print): C. SMITH

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	pH, Cond., F	Diss. As, Be, Mn, Na, V	CN-Total	CN-Amen.	CN-WAD	TPCE	PCBs	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW-16		X	4-4-11	1445	W	5		X	X	X	X	X				
MW-18			4-4-11	1510		7		X	X	X	X	X	X			
MW-48			4-4-11	1515		7		X	X	X	X	X	X			
MW-28			4-4-11	1550		5		X	X	X	X	X				
MW-2			4-4-11	1620		7		X	X	X	X	X	X			
MW-5			4-4-11	1700		7		X	X	X	X	X	X			
MW-44D			4-5-11	1030		2								X		
MW-44S			4-5-11	1045		2								X		
MW-12			4-5-11	1130		7		X	X	X	X	X		X		
MW-39S			4-5-11	1150		5		X	X	X	X	X				
MW-31			4-5-11	1230		7		X	X	X	X	X	X			
MW-35			4-5-11	1250		5		X	X	X	X	X				
MW-37			4-5-11	1400		5		X	X	X	X	X				
MW-36			4-5-11	1430		5		X	X	X	X	X				
MW-46			4-5-11	1440		5		X	X	X	X	X				
MW-32			4-5-11	1445		5		X	X	X	X	X				
FB-1			4-5-11	1510		7		X	X	X	X	X	X			
PURGE #1-80			4-4-11	1715		3				X	X	X				
PURGE #2-145		✓	4-5-11	1500	✓	3				X	X	X				

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
[signature]	4/5/11	5:20			
Relinquished by: (Signature) [signature]	4-6-11	1318		4/6/11	01:00

Microbac OVD 221000013814
Received: 04/06/2011 13:32
By: DON LIGHTFRITZ
Don E Lightfritz

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 2

COC No. A 23518

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MGMT. INC.

Project Contact: C. SMITH

Contact Phone #: 724-587-5680

Turn Around Requirements: STD.

Location: HANNIBAL, OH

Project ID: ORMET - CERCLA

Sampler (print): C. SMITH

Signature:

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other _____

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	CN - TOTAL	CN - AMENABLE	CN - WAD	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
VAULT - PRIMARY	X		4-5-11	1545	W	3		X	X	X		
VAULT - SECONDARY	X		4-5-11	1630	W	3		X	X	X		

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
	4/5/11	5:20		4-6-11	01:20
	4-6-11	1318			

Remarks:

Microbac OVD
Received: 04/06/2011 13:32
By: DON LIGHTFRITZ
221000013814

Don E Lightfritz

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 2 of 2

1000013814

COOLER INSPECTION

Received: 04/06/2011 13:32
Delivery Method: Courier
Opened By: Don Lightfritz
Comments:

Login(s): L11040220|

Cooler(s)

Cooler #	Temp Gun	Temp	Tracking #	COC #	Comments
0015134	H	3.0		COC23517	
0014681	H	3.0		COC23517	
0013052	H	3.0		COC23517	
0013041	H	3.0		COC23517	

1	Yes	Were shipping coolers sealed?
2	Yes	Were custody seals intact?
3	Yes	Were cooler temperatures in range of 0-6?
4	Yes	Was ice present?
5	Yes	Were COC's received/information complete/signed and dated?
6	Yes	Were sample containers and labels intact and match COC?
7	Yes	Were the correct containers and volumes received?
8	Yes	Were samples received within EPA hold times?
9	Yes	Were correct perservatives used? (water only)
10	Yes	Were pH ranges acceptable? (voa's excluded)
11	Yes	Were VOA samples free of headspace (less than 6mm)?

Discrepancies:

Look closer. Go further. Do more.

Microbac - Ohio Valley Division
158 Starlite Drive
Marietta, OH 45750
Tel: (740)373-4071 Fax: (740)373-4835

L11070369

	MW-17	MW-57		MW-19	MW-60		MW-30	MW-50		MW-39s	MW-59	
	23/24	67/68	Note	27/28	71/72		35/36	65/66		51/52	69/70	Note
PH	7.63	7.54		7.08	7.01		6.35	6.32		8.96	8.96	
COND	736	710		792	810		511	497		3680	3680	
F	12.4	69.1	A	0.681	0.651		7.72	8.87		123	105	
*** F**	**11.2**	**11.6**										
CN	1.12	7.42	B	0	0		2.36	1.3		0.285	8.31	C
*** CN**	**2.98**	**3.25**								**6.67**	**7.58**	
CN-A	1.11	7.42		0	0		2.36	1.29		0.284	8.31	
CN-WD	0.0257	0.025		0.009	0		0.0184	0.0146		0.0866	0.0618	
BE-D	0	0		0	0		0	0		0	0	
MN-D	1.4	1.38		0	0		0.847	0.904		0.107	0.106	
NA-D	101	110		32.2	32.6		50.8	46.4		912	873	
V-D	0	0		0	0		0	0		0.00898	0.00921	
AS-D	0.00194	0.00173		0	0		0.00314	0.0013		0.0106	0.0111	

Re-analysis results are in bold font and shaded.

Notes:

A. Fluoride analysis error (69.1) could be due to incorrect dilution factor on MW-57.

B. Cyanide analysis error (1.12 and 7.42) could be due to sample switching at the bench.

C. Cyanide analysis error (0.285) appears to be due to incorrect dilution factor on MW-39s.

Microbac

Laboratory Report Number: L11070369

John Reggi
Ormet Corporation
PO Box 176
Hannibal, OH 43931
Site: ORMET CERCLA

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

This report was reviewed on July 28 2011

Amanda Fickiesen

Amanda Fickiesen – Client Services Specialist
(740) 373-4071
Amanda.Fickiesen@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed blow. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on July 28 2011

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: OH
Accrediting Authority: N/A ID:N/A
QAPP: Microbac OVD

Microbac

Lab Report #: L11070369
Lab Project #: 2173.013
Project Name:
Lab Contact: Amanda Fickiesen

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0010162	H	5		
0016273	H	1		
0013052	H	4		
0016271	H	4		
0016270	H	4		
0016269	H	5		

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	NA
2	Were custody seals intact?	NA
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L11070369
Lab Project #: 2173.013
Project Name:
Lab Contact: Amanda Fickiesen

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MW-7	L11070369-01	07/11/2011 16:30	07/13/2011 16:41
MW-7	L11070369-02	07/11/2011 16:30	07/13/2011 16:41
MW-2	L11070369-03	07/12/2011 11:20	07/13/2011 16:41
MW-2	L11070369-04	07/12/2011 11:20	07/13/2011 16:41
MW-5	L11070369-05	07/12/2011 10:45	07/13/2011 16:41
MW-5	L11070369-06	07/12/2011 10:45	07/13/2011 16:41
MW-1	L11070369-07	07/12/2011 09:45	07/13/2011 16:41
MW-1	L11070369-08	07/12/2011 09:45	07/13/2011 16:41
MW-8	L11070369-09	07/11/2011 15:00	07/13/2011 16:41
MW-8	L11070369-10	07/11/2011 15:00	07/13/2011 16:41
MW-10	L11070369-11	07/11/2011 15:45	07/13/2011 16:41
MW-10	L11070369-12	07/11/2011 15:45	07/13/2011 16:41
MW-11	L11070369-13	07/11/2011 16:20	07/13/2011 16:41
MW-11	L11070369-14	07/11/2011 16:20	07/13/2011 16:41
MW-12	L11070369-15	07/13/2011 10:00	07/13/2011 16:41
MW-12	L11070369-16	07/13/2011 10:00	07/13/2011 16:41
MW-14	L11070369-17	07/13/2011 09:30	07/13/2011 16:41
MW-14	L11070369-18	07/13/2011 09:30	07/13/2011 16:41
MW-31	L11070369-19	07/13/2011 11:00	07/13/2011 16:41
MW-31	L11070369-20	07/13/2011 11:00	07/13/2011 16:41
MW-16	L11070369-21	07/12/2011 12:30	07/13/2011 16:41
MW-16	L11070369-22	07/12/2011 12:30	07/13/2011 16:41
MW-17	L11070369-23	07/13/2011 10:20	07/13/2011 16:41
MW-17	L11070369-24	07/13/2011 10:20	07/13/2011 16:41
MW-18	L11070369-25	07/12/2011 14:00	07/13/2011 16:41
MW-18	L11070369-26	07/12/2011 14:00	07/13/2011 16:41
MW-19	L11070369-27	07/13/2011 13:00	07/13/2011 16:41
MW-19	L11070369-28	07/13/2011 13:00	07/13/2011 16:41
MW-28	L11070369-29	07/12/2011 13:20	07/13/2011 16:41
MW-28	L11070369-30	07/12/2011 13:20	07/13/2011 16:41
MW-29S	L11070369-31	07/12/2011 12:00	07/13/2011 16:41
MW-29S	L11070369-32	07/12/2011 12:00	07/13/2011 16:41
MW-29D	L11070369-33	07/12/2011 11:45	07/13/2011 16:41
MW-29D	L11070369-34	07/12/2011 11:45	07/13/2011 16:41
MW-30	L11070369-35	07/12/2011 12:50	07/13/2011 16:41
MW-30	L11070369-36	07/12/2011 12:50	07/13/2011 16:41

Microbac Laboratories ● Ohio Valley Division
158 Starlite Drive, Marietta, OH 45750 ● T: (740)373-4071 F: (740)373-4835
www.microbac.com

Client ID	Laboratory ID	Date Collected	Date Received
MW-15	L11070369-37	07/13/2011 11:50	07/13/2011 16:41
MW-15	L11070369-38	07/13/2011 11:50	07/13/2011 16:41
MW-32	L11070369-39	07/13/2011 12:30	07/13/2011 16:41
MW-32	L11070369-40	07/13/2011 12:30	07/13/2011 16:41
MW-34S	L11070369-41	07/12/2011 18:00	07/13/2011 16:41
MW-34S	L11070369-42	07/12/2011 18:00	07/13/2011 16:41
MW-34D	L11070369-43	07/12/2011 17:50	07/13/2011 16:41
MW-34D	L11070369-44	07/12/2011 17:50	07/13/2011 16:41
MW-35	L11070369-45	07/13/2011 11:15	07/13/2011 16:41
MW-35	L11070369-46	07/13/2011 11:15	07/13/2011 16:41
MW-36	L11070369-47	07/13/2011 12:15	07/13/2011 16:41
MW-36	L11070369-48	07/13/2011 12:15	07/13/2011 16:41
MW-37	L11070369-49	07/13/2011 11:30	07/13/2011 16:41
MW-37	L11070369-50	07/13/2011 11:30	07/13/2011 16:41
MW-39S	L11070369-51	07/12/2011 17:30	07/13/2011 16:41
MW-39S	L11070369-52	07/12/2011 17:30	07/13/2011 16:41
MW-39D	L11070369-53	07/12/2011 17:15	07/13/2011 16:41
MW-39D	L11070369-54	07/12/2011 17:15	07/13/2011 16:41
MW-40S	L11070369-55	07/11/2011 14:45	07/13/2011 16:41
MW-40S	L11070369-56	07/11/2011 14:45	07/13/2011 16:41
MW-40D	L11070369-57	07/11/2011 14:40	07/13/2011 16:41
MW-40D	L11070369-58	07/11/2011 14:40	07/13/2011 16:41
MW-42S	L11070369-59	07/12/2011 17:00	07/13/2011 16:41
MW-42S	L11070369-60	07/12/2011 17:00	07/13/2011 16:41
MW-42D	L11070369-61	07/12/2011 16:40	07/13/2011 16:41
MW-42D	L11070369-62	07/12/2011 16:40	07/13/2011 16:41
MW-44S	L11070369-63	07/12/2011 10:30	07/13/2011 16:41
MW-44D	L11070369-64	07/12/2011 10:15	07/13/2011 16:41
MW-50	L11070369-65	07/12/2011 13:00	07/13/2011 16:41
MW-50	L11070369-66	07/12/2011 13:00	07/13/2011 16:41
MW-57	L11070369-67	07/13/2011 10:30	07/13/2011 16:41
MW-57	L11070369-68	07/13/2011 10:30	07/13/2011 16:41
MW-59	L11070369-69	07/12/2011 17:45	07/13/2011 16:41
MW-59	L11070369-70	07/12/2011 17:45	07/13/2011 16:41
MW-60	L11070369-71	07/13/2011 13:15	07/13/2011 16:41
MW-60	L11070369-72	07/13/2011 13:15	07/13/2011 16:41

Login Number: L11070369

Department: Volatiles

Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32193
Approved By: Michael Albertson

Login Number: L11070369

Department: Conventionals

Analyst: Holly Reed

METHOD

Analysis SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32523
Approved By: Deanna Hesson

Login Number: L11070369

Department: General Chromatography

Analyst: Eric Lawson

METHOD

Analysis SW-846 8082A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak

completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32018
Approved By: Mike Cochran

Login Number: L11070369

Department: Metals

Analyst: Kim Rhodes

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: WG370557 - Due to continuing calibration blank failure for sodium on 18-JUL-2011 at 17:52, client samples 28, 30, 32, 34, and 36 were reanalyzed on a later calibration for sodium.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG370557 - All acceptance criteria were met.

WG370965 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG370557 - Client samples 04, 06, 14, post digestion spike, 20, 22, 26, and 32 required dilution analyses in

order to obtain results for sodium within the linear range.

WG370965 - Client samples 38, the post-digestion spike of 38, 40, 42, 44, 52, 54, 56, 58, 60, 62, and 70 required dilution analyses in order to obtain results for sodium within the linear range.

Narrative ID: 32038
Approved By: Sheri Pfalzgraf

Login Number: L11070369

Department: Metals

Analyst: Erin Long

METHOD

Preparation: SW-846 3015

Preparation: 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG370472 - All acceptance criteria were met.

WG370481 - All acceptance criteria were met.

WG370514 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG370472 - Due to suspected high levels of nontarget analytes, all client samples were analyzed initially at dilutions for all analytes. However, client samples 66, 68, and 72 did not contain high levels of minerals. Therefore, these samples were reanalyzed undiluted for all analytes.

WG370481 - Due to suspected high levels of nontarget analytes, all client samples were analyzed initially at dilutions for all analytes. However, client samples 18, 24, 28, 30, 34, 36, 46, and 48 did not contain high levels of minerals. Therefore, these samples were reanalyzed undiluted for all analytes.

WG370514 - Due to the dark color of the digestate and high levels of nontarget analytes which can contribute to undercorrected interferences and instrument malfunctions, client samples 04 and 06 were analyzed initially at dilutions for all analytes.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 31957
Approved By: Sheri Pfalzgraf
Sheri L. Pfalzgraf

Login Number: L11070369

Department: Conventionals

Analyst: Jeremy Kinney

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32524
Approved By: Deanna Hesson

Login Number: L11070369

Department: Conventionals

Analyst: Tammy Morris

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32522
Approved By: Deanna Hesson

Login Number: L11070369

Department: Conventionals

Analyst: Tammy Morris

METHOD

Analysis SM4500-F-C (Fluoride)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 32525
Approved By: Deanna Hesson

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 16:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414000601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.79			

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/11/2011 16:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-03**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		575		1.00	0.500

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/11/2011 16:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214383001**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.0961	J	0.100	0.0500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 16:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 16:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 16:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-30**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-02**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/11/2011 16:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 14:37**
File ID: **P2.071811.143750**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	2.30		0.0100	0.00500
Sodium, Dissolved	7440-23-5	59.6		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-02**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/11/2011 16:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:08**
File ID: **EL.071811.230813**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0262		0.00100	0.000500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370264**
Collect Date: **07/12/2011 11:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/14/2011 19:14**
Cal Date: **06/30/2011 15:24**
Run Date: **07/14/2011 19:14**
File ID: **8M371779**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	34.6		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	103	80	120	
4-Bromofluorobenzene	102	86	115	
Dibromofluoromethane	100	86	118	
Toluene-d8	106	88	110	

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414001301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.34			

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1240		1.00	0.500

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/12/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214383901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	44.3		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/12/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	6.40		0.500	0.250

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 11:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	6.40		0.0100	0.00500

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 11:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0618		0.0100	0.00500

Sample Number: **L11070369-04**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 11:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 14:44**
File ID: **P2.071811.144430**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.512		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0177		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-04**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 11:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 12:36**
File ID: **P2.071911.123615**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	220		50.0	25.0

Sample Number: **L11070369-04**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/12/2011 11:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:15**
File ID: **EL.071811.231530**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0319		0.00500	0.00250

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370264**
Collect Date: **07/12/2011 10:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/14/2011 19:46**
Cal Date: **06/30/2011 15:24**
Run Date: **07/14/2011 19:46**
File ID: **8M371780**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	1.60		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	104	80	120	
4-Bromofluorobenzene	104	86	115	
Dibromofluoromethane	100	86	118	
Toluene-d8	107	88	110	

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 10:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414001601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.00			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 10:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1240		1.00	0.500

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/12/2011 10:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214384801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	34.2		0.500	0.250

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/12/2011 10:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.38		0.250	0.125

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 10:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	3.37	U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 10:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0605		0.0100	0.00500

Sample Number: **L11070369-06**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 10:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 14:51**
File ID: **P2.071811.145112**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.478		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-06**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 10:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 12:42**
File ID: **P2.071911.124253**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	268		50.0	25.0

Sample Number: **L11070369-06**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/12/2011 10:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:37**
File ID: **EL.071811.233722**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00371	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414002001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.90			

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		557		1.00	0.500

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/12/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214385401**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.136		0.100	0.0500

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/12/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.00595	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 09:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-25**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 09:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-32**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-08**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 09:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 15:44**
File ID: **P2.071811.154454**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.709		0.0100	0.00500
Sodium, Dissolved	7440-23-5	36.7		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-08**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/12/2011 09:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:44**
File ID: **EL.071811.234440**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414002701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.35			

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/11/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1030		1.00	0.500

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/11/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214385901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	6.22		0.100	0.0500

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.210		0.0500	0.0250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 15:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.207		0.0100	0.00500

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 15:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0246		0.0100	0.00500

Sample Number: **L11070369-10**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/11/2011 15:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 14:57**
File ID: **P2.071811.145755**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.129		0.0100	0.00500
Sodium, Dissolved	7440-23-5	160		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-10**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/11/2011 15:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:51**
File ID: **EL.071811.235158**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.000715	J	0.00100	0.000500

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 15:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.05			

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/11/2011 15:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		657		1.00	0.500

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/11/2011 15:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214390501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.232		0.100	0.0500

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 15:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 15:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-24**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 15:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-31**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-12**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/11/2011 15:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 15:04**
File ID: **P2.071811.150441**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	17.7		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-12**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/11/2011 15:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/18/2011 23:59**
File ID: **EL.071811.235916**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.75			

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/11/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		989		1.00	0.500

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/11/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214391001**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	5.55		0.100	0.0500

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.540		0.0200	0.0100

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 16:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.532		0.0100	0.00500

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 16:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0204		0.0100	0.00500

Sample Number: **L11070369-14**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/11/2011 16:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 15:11**
File ID: **P2.071811.151129**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.542		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-14**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/11/2011 16:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 12:49**
File ID: **P2.071911.124931**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	180		50.0	25.0

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-14**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370514**
Collect Date: **07/11/2011 16:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 06:46**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 00:06**
File ID: **EL.071911.000632**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00106		0.00100	0.000500

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG370411**
Collect Date: **07/13/2011 10:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **07/14/2011 10:00**
Cal Date: **07/11/2011 13:59**
Run Date: **07/15/2011 20:56**
File ID: **9GR62373.R**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	67.4	30	132	
Decachlorobiphenyl	89.7	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.38			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		539		1.00	0.500

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/13/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214391601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.628		0.100	0.0500

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/13/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/13/2011 10:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-26**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: L11070369
Report Date : July 28, 2011

Sample Number: L11070369-15
Client ID: MW-12
Matrix: Water
Workgroup Number: WG370887
Collect Date: 07/13/2011 10:00
Sample Tag: WD

PrePrep Method: NONE
Prep Method: SM4500-CN-I
Analytical Method: SM4500-CN-I
Analyst: JBK
Dilution: 1
Units: mg/L

Instrument: UV-120-1V
Prep Date: 07/22/2011 14:50
Cal Date: 07/20/2011 15:30
Run Date: 07/22/2011 14:50
File ID: 1V.1107221450-33

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: L11070369-16
Client ID: MW-12
Matrix: Water
Workgroup Number: WG370557
Collect Date: 07/13/2011 10:00
Sample Tag: 01

PrePrep Method: NONE
Prep Method: 3005A
Analytical Method: 6010B
Analyst: KHR
Dilution: 1
Units: mg/L

Instrument: PE-ICP2
Prep Date: 07/15/2011 07:27
Cal Date: 07/18/2011 09:16
Run Date: 07/18/2011 16:05
File ID: P2.071811.160502

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	2.03		0.0100	0.00500
Sodium, Dissolved	7440-23-5	28.0		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: L11070369-16
Client ID: MW-12
Matrix: Water
Workgroup Number: WG370514
Collect Date: 07/13/2011 10:00
Sample Tag: 01

PrePrep Method: NONE
Prep Method: 3015
Analytical Method: 6020
Analyst: EDL
Dilution: 1
Units: mg/L

Instrument: ELAN-ICP
Prep Date: 07/15/2011 06:46
Cal Date: 07/18/2011 16:49
Run Date: 07/19/2011 00:13
File ID: EL.071911.001348

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: L11070369-17
Client ID: MW-14
Matrix: Water
Workgroup Number: WG370286
Collect Date: 07/13/2011 09:30

PrePrep Method: NONE
Prep Method: 9040C
Analytical Method: 9040C
Analyst: HJR
Dilution: 1
Units: UNITS

Instrument: ORION-4STAR
Prep Date: 07/14/2011 12:50
Cal Date:
Run Date: 07/14/2011 12:50
File ID: OS11071414004301

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.61			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 09:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		513		1.00	0.500

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/13/2011 09:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214392201**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	3.00		0.100	0.0500

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/13/2011 09:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:30**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.0204		0.0100	0.00500

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/13/2011 09:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0147		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 09:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0165		0.0100	0.00500

Sample Number: **L11070369-18**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 09:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:11**
File ID: **P2.071811.161145**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.887		0.0100	0.00500
Sodium, Dissolved	7440-23-5	46.3		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-18**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 09:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:04**
File ID: **EL.071911.010446**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.000509	J	0.00100	0.000500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370264**
Collect Date: **07/13/2011 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/14/2011 20:17**
Cal Date: **06/30/2011 15:24**
Run Date: **07/14/2011 20:17**
File ID: **8M371781**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	19.9		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	104	80	120	
4-Bromofluorobenzene	102	86	115	
Dibromofluoromethane	100	86	118	
Toluene-d8	107	88	110	

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414004601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.61			

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1330		1.00	0.500

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/13/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214392801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	47.5		0.500	0.250

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/13/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	4.36		0.250	0.125

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/13/2011 11:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	4.36		0.0100	0.00500

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 11:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0343		0.0100	0.00500

Sample Number: **L11070369-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:18**
File ID: **P2.071811.161827**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.01		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0509		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 11:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:09**
File ID: **P2.071911.130928**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	274		50.0	25.0

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-20**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 11:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 23:38**
File ID: **EL.071511.233838**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0378		0.00500	0.00250

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414005201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.20			

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		952		1.00	0.500

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370523**
Collect Date: **07/12/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 14:40**
Cal Date:
Run Date: **07/18/2011 14:40**
File ID: **O111072214393901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	30.5		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/12/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.978		0.0500	0.0250

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 12:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.975		0.0100	0.00500

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 12:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0352		0.0100	0.00500

Sample Number: **L11070369-22**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:25**
File ID: **P2.071811.162510**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.740		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0402		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-22**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:16**
File ID: **P2.071911.131607**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	188		50.0	25.0

Sample Number: **L11070369-22**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 23:45**
File ID: **EL.071511.234554**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0393		0.00500	0.00250

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 10:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414005801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.63			

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 10:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		736		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 10:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072214511101**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	12.4		0.200	0.100

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/13/2011 10:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.12		0.0500	0.0250

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/13/2011 10:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.11		0.0100	0.00500

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 10:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0257		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-24**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 10:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:31**
File ID: **P2.071811.163153**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.40		0.0100	0.00500
Sodium, Dissolved	7440-23-5	101		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-24**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 10:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:12**
File ID: **EL.071911.011203**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00194		0.00100	0.000500

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370264**
Collect Date: **07/12/2011 14:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/14/2011 20:48**
Cal Date: **06/30/2011 15:24**
Run Date: **07/14/2011 20:48**
File ID: **8M371782**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	2.05		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	101	80	120	
4-Bromofluorobenzene	103	86	115	
Dibromofluoromethane	99.3	86	118	
Toluene-d8	107	88	110	

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.66			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1440		1.00	0.500

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **10**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072214512001**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	80.0		1.00	0.500

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/12/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **100**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	30.6		1.00	0.500

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 14:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	30.6		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 14:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0751		0.0100	0.00500

Sample Number: **L11070369-26**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 14:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:38**
File ID: **P2.071811.163836**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.194		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0245		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-26**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 14:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:22**
File ID: **P2.071911.132245**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	296		50.0	25.0

Sample Number: **L11070369-26**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 14:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 00:00**
File ID: **EL.071611.000026**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0845		0.00500	0.00250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.08			

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		792		1.00	0.500

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072214512801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.681		0.100	0.0500

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/13/2011 13:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 13:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.00913	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-28**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 13:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 16:58**
File ID: **P2.071811.165836**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-28**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/13/2011 13:00**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:42**
File ID: **P2.071911.134239**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	32.2		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-28**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 13:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:19**
File ID: **EL.071911.011921**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 13:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.84			

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 13:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		377		1.00	0.500

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 13:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072214513301**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.387		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 13:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.0384		0.0100	0.00500

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 13:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0360		0.0100	0.00500

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 13:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0121		0.0100	0.00500

Sample Number: **L11070369-30**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 13:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 17:05**
File ID: **P2.071811.170518**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.0127		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-30**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 13:20**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:49**
File ID: **P2.071911.134922**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	57.3		0.500	0.250

Sample Number: **L11070369-30**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 13:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:26**
File ID: **EL.071911.012639**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414011301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.10			

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 12:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1120		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 12:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072214514601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	30.6		0.500	0.250

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 12:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.58		0.100	0.0500

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 12:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.58		0.0100	0.00500

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 12:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0273		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-32**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 17:12**
File ID: **P2.071811.171200**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.106		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-32**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 13:56**
File ID: **P2.071911.135605**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	218		50.0	25.0

Sample Number: **L11070369-32**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 12:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 00:22**
File ID: **EL.071611.002217**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414011901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.47			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		647		1.00	0.500

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215000301**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	4.13		0.100	0.0500

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.483		0.0200	0.0100

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 11:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.475		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 11:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0282		0.0100	0.00500

Sample Number: **L11070369-34**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 11:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 17:18**
File ID: **P2.071811.171843**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.90		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-34**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 11:45**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 14:02**
File ID: **P2.071911.140244**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	54.0		0.500	0.250

Sample Number: **L11070369-34**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 11:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:33**
File ID: **EL.071911.013358**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370264**
Collect Date: **07/12/2011 12:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/14/2011 21:20**
Cal Date: **06/30/2011 15:24**
Run Date: **07/14/2011 21:20**
File ID: **8M371783**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	62.7		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	106	80	120	
4-Bromofluorobenzene	103	86	115	
Dibromofluoromethane	101	86	118	
Toluene-d8	108	88	110	

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414012301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.35			

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/12/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		511		1.00	0.500

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215000901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	7.72		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.36		0.100	0.0500

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/12/2011 12:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.36		0.0100	0.00500

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 12:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0184		0.0100	0.00500

Sample Number: **L11070369-36**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/18/2011 09:16**
Run Date: **07/18/2011 17:25**
File ID: **P2.071811.172526**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.847		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-36**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370557**
Collect Date: **07/12/2011 12:50**
Sample Tag: **02**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:27**
Cal Date: **07/19/2011 08:54**
Run Date: **07/19/2011 14:09**
File ID: **P2.071911.140927**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	50.8		0.500	0.250

Sample Number: **L11070369-36**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 12:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 01:41**
File ID: **EL.071911.014115**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00314		0.00100	0.000500

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414013001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.61			

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		943		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215001701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	15.8		0.200	0.100

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.24		0.100	0.0500

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 11:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.23		0.0100	0.00500

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 11:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0281		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-38**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 11:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/21/2011 23:54**
File ID: **P2.072111.235434**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.148		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-38**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 11:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/26/2011 08:56**
Run Date: **07/26/2011 10:35**
File ID: **P2.072611.103537**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	196		50.0	25.0

Sample Number: **L11070369-38**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 11:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 00:58**
File ID: **EL.071611.005843**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00293	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414013901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.88			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG371217**
Collect Date: **07/13/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 13:10**
Cal Date:
Run Date: **07/25/2011 13:10**
File ID: **32.1107251310-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1210		1.00	0.500

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **10**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215162601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	44.5		1.00	0.500

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.74		0.250	0.125

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 12:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.73		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/13/2011 12:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0841		0.0100	0.00500

Sample Number: **L11070369-40**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 12:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 00:28**
File ID: **P2.072211.002805**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7	0.00108	J	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.40		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0599		0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-40**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:04**
File ID: **P2.072211.160437**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	252		50.0	25.0

Sample Number: **L11070369-40**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 01:06**
File ID: **EL.071611.010602**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0320		0.00500	0.00250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 18:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414042101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.24			

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 18:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-03**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		943		1.00	0.500

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 18:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215163601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	23.9		0.500	0.250

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 18:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.10		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 18:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.09		0.0100	0.00500

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 18:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0611		0.0100	0.00500

Sample Number: **L11070369-42**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 18:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 00:34**
File ID: **P2.072211.003450**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.409		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0189		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-42**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 18:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:11**
File ID: **P2.072211.161115**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	198		50.0	25.0

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-42**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 18:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 01:13**
File ID: **EL.071611.011320**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0112		0.00500	0.00250

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414042401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.06			

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 17:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		833		1.00	0.500

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 17:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215164501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	20.4		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 17:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	9.30		0.500	0.250

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 17:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	9.30		0.0100	0.00500

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/12/2011 17:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0802		0.0100	0.00500

Sample Number: **L11070369-44**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 00:41**
File ID: **P2.072211.004134**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.336		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0145		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-44**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:17**
File ID: **P2.072211.161753**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	172		50.0	25.0

Sample Number: **L11070369-44**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 17:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 01:20**
File ID: **EL.071611.012038**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00715		0.00500	0.00250

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 11:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.27			

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/13/2011 11:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		317		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 11:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215165501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	1.14		0.100	0.0500

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 11:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.908		0.0500	0.0250

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 11:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.904		0.0100	0.00500

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/13/2011 11:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0100		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-46**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 11:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 00:48**
File ID: **P2.072211.004818**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.792		0.0100	0.00500
Sodium, Dissolved	7440-23-5	21.0		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-46**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 11:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 02:03**
File ID: **EL.071911.020306**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00417		0.00100	0.000500

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 12:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.49			

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/13/2011 12:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		560		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 12:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215171601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	16.4		0.200	0.100

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 12:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.863		0.0500	0.0250

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 12:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.858		0.0100	0.00500

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/13/2011 12:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0152		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-48**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 12:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 00:55**
File ID: **P2.072211.005503**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.157		0.0100	0.00500
Sodium, Dissolved	7440-23-5	104		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-48**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 12:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 02:10**
File ID: **EL.071911.021022**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00319		0.00100	0.000500

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.32			

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/13/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		252		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/13/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215172201**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	3.07		0.100	0.0500

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.84		0.100	0.0500

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 11:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.84		0.0100	0.00500

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/13/2011 11:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0121		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-50**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 11:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:01**
File ID: **P2.072211.010147**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7	0.00144	J	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.410		0.0100	0.00500
Sodium, Dissolved	7440-23-5	31.7		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.0403		0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-50**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/13/2011 11:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/16/2011 01:42**
File ID: **EL.071611.014228**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0112		0.00500	0.00250

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414044201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.96			

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 17:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		3680		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 17:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **25**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215173101**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	123		2.50	1.25

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 17:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.285		0.0100	0.00500

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 17:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.284		0.0100	0.00500

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 17:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0866		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-52**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:08**
File ID: **P2.072211.010829**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.107		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.00898	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-52**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:24**
File ID: **P2.072211.162434**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	912		50.0	25.0

Sample Number: **L11070369-52**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370481**
Collect Date: **07/12/2011 17:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 07:41**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 22:33**
File ID: **EL.071511.223300**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0106		0.00500	0.00250

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414044601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.44			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1970		1.00	0.500

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215174001**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	14.0		0.200	0.100

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.19		0.0500	0.0250

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 17:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.19		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 17:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0379		0.0100	0.00500

Sample Number: **L11070369-54**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:15**
File ID: **P2.072211.011509**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.35		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-54**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:31**
File ID: **P2.072211.163113**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	440		50.0	25.0

Sample Number: **L11070369-54**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/12/2011 17:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 18:32**
File ID: **EL.071511.183234**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/11/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414045001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.06			

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/11/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1000		1.00	0.500

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/11/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215174801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	33.1		0.500	0.250

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.68		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 14:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	2.68		0.0100	0.00500

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 14:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0286		0.0100	0.00500

Sample Number: **L11070369-56**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/11/2011 14:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:21**
File ID: **P2.072211.012158**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.482		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0175		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-56**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/11/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:51**
File ID: **P2.072211.165108**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	215		50.0	25.0

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-56**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/11/2011 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 18:39**
File ID: **EL.071511.183951**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00447	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/11/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414045401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.99			

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/11/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		907		1.00	0.500

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/11/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215175601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	24.1		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370771**
Collect Date: **07/11/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/21/2011 09:35**
Cal Date: **07/20/2011 15:25**
Run Date: **07/21/2011 09:35**
File ID: **1V.1107210935-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.47		0.250	0.125

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG371002**
Collect Date: **07/11/2011 14:40**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:45**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:45**
File ID: **1V.1107221545-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	3.47		0.0100	0.00500

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370887**
Collect Date: **07/11/2011 14:40**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:50**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:50**
File ID: **1V.1107221450-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0372		0.0100	0.00500

Sample Number: **L11070369-58**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/11/2011 14:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:42**
File ID: **P2.072211.014200**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.516		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.00841	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-58**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/11/2011 14:40**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 16:57**
File ID: **P2.072211.165747**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	178		50.0	25.0

Sample Number: **L11070369-58**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/11/2011 14:40**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 18:47**
File ID: **EL.071511.184708**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00300	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.01			

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		2100		1.00	0.500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370603**
Collect Date: **07/12/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 15:45**
Cal Date:
Run Date: **07/18/2011 15:45**
File ID: **O111072215180901**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	34.1		0.500	0.250

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.51		0.100	0.0500

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 17:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.51		0.0100	0.00500

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 17:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0309		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-60**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:48**
File ID: **P2.072211.014844**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.334		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-60**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 17:04**
File ID: **P2.072211.170425**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	454		50.0	25.0

Sample Number: **L11070369-60**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/12/2011 17:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 19:09**
File ID: **EL.071511.190900**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00309	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 16:40**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.87			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 16:40**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		2040		1.00	0.500

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370606**
Collect Date: **07/12/2011 16:40**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 17:20**
Cal Date:
Run Date: **07/18/2011 17:20**
File ID: **O111072214482301**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	31.1		0.500	0.250

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 16:40**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-19**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.53		0.100	0.0500

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 16:40**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.53		0.0100	0.00500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 16:40**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0356		0.0100	0.00500

Sample Number: **L11070369-62**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 16:40**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 01:55**
File ID: **P2.072211.015533**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.839		0.0100	0.00500
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-62**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 16:40**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 17:11**
File ID: **P2.072211.171104**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	466		50.0	25.0

Sample Number: **L11070369-62**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/12/2011 16:40**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 19:16**
File ID: **EL.071511.191618**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-63**
Client ID: **MW-44S**
Matrix: **Water**
Workgroup Number: **WG370411**
Collect Date: **07/12/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **07/14/2011 10:00**
Cal Date: **07/11/2011 13:59**
Run Date: **07/15/2011 21:13**
File ID: **9GR62374.R**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	70.4	30	132	
Decachlorobiphenyl	101	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-64**
Client ID: **MW-44D**
Matrix: **Water**
Workgroup Number: **WG370411**
Collect Date: **07/12/2011 10:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **07/14/2011 10:00**
Cal Date: **07/11/2011 13:59**
Run Date: **07/15/2011 21:32**
File ID: **9GR62375.R**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	75.5	30	132	
Decachlorobiphenyl	106	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370428**
Collect Date: **07/12/2011 13:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS8**
Prep Date: **07/15/2011 22:42**
Cal Date: **06/30/2011 15:24**
Run Date: **07/15/2011 22:42**
File ID: **8M371815**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	58.4		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	106	80	120	
4-Bromofluorobenzene	105	86	115	
Dibromofluoromethane	102	86	118	
Toluene-d8	104	88	110	

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.32			

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		497		1.00	0.500

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370606**
Collect Date: **07/12/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 17:20**
Cal Date:
Run Date: **07/18/2011 17:20**
File ID: **O111072214482801**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	8.87		0.100	0.0500

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-20**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	1.30		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 13:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.29		0.0100	0.00500

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 13:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0146		0.0100	0.00500

Sample Number: **L11070369-66**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 13:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 02:02**
File ID: **P2.072211.020218**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.904		0.0100	0.00500
Sodium, Dissolved	7440-23-5	46.4		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-66**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/12/2011 13:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 00:42**
File ID: **EL.071911.004254**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00313		0.00100	0.000500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414051201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.54			

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/13/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		710		1.00	0.500

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370606**
Collect Date: **07/13/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **10**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 17:20**
Cal Date:
Run Date: **07/18/2011 17:20**
File ID: **O111072214483701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	69.1		1.00	0.500

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-21**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	7.42		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 10:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	7.42		0.0100	0.00500

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/13/2011 10:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0290		0.0100	0.00500

Sample Number: **L11070369-68**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 02:09**
File ID: **P2.072211.020903**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.38		0.0100	0.00500
Sodium, Dissolved	7440-23-5	110		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-68**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/13/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 00:50**
File ID: **EL.071911.005011**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00173		0.00100	0.000500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414052001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.96			

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/12/2011 17:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		3680		1.00	0.500

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370606**
Collect Date: **07/12/2011 17:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **25**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 17:20**
Cal Date:
Run Date: **07/18/2011 17:20**
File ID: **O111072214484501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	105		2.50	1.25

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/12/2011 17:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-22**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	8.31		0.500	0.250

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/12/2011 17:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	8.31		0.0100	0.00500

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/12/2011 17:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:25**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0618		0.0100	0.00500

Sample Number: **L11070369-70**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 02:15**
File ID: **P2.072211.021548**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.106		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.00921	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11070369-70**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/12/2011 17:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/22/2011 10:04**
Run Date: **07/22/2011 17:17**
File ID: **P2.072211.171742**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	873		50.0	25.0

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-70**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/12/2011 17:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/15/2011 09:37**
Run Date: **07/15/2011 19:38**
File ID: **EL.071511.193812**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0111		0.00500	0.00250

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 13:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414052301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.01			

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG371221**
Collect Date: **07/13/2011 13:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **TMM**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **07/25/2011 14:50**
Cal Date:
Run Date: **07/25/2011 14:50**
File ID: **32.1107251450-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		810		1.00	0.500

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370606**
Collect Date: **07/13/2011 13:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A1**
Prep Date: **07/18/2011 17:20**
Cal Date:
Run Date: **07/18/2011 17:20**
File ID: **O111072214485401**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.651		0.100	0.0500

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370886**
Collect Date: **07/13/2011 13:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 14:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 14:20**
File ID: **1V.1107221420-23**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG371027**
Collect Date: **07/13/2011 13:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 16:05**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 16:05**
File ID: **1V.1107221605-18**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG371001**
Collect Date: **07/13/2011 13:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **07/22/2011 15:20**
Cal Date: **07/20/2011 15:30**
Run Date: **07/22/2011 15:20**
File ID: **1V.1107221520-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11070369-72**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370965**
Collect Date: **07/13/2011 13:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **07/15/2011 07:37**
Cal Date: **07/21/2011 08:59**
Run Date: **07/22/2011 02:22**
File ID: **P2.072211.022225**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	32.6		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-72**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370472**
Collect Date: **07/13/2011 13:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **EDL**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **07/15/2011 12:25**
Cal Date: **07/18/2011 16:49**
Run Date: **07/19/2011 00:57**
File ID: **EL.071911.005728**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00100	0.000500

U Not detected at or above adjusted sample detection limit

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 8M371765
Prep Date: 07/14/11 11:53
Analyzed Date: 07/14/11 11:53
Analyst: ADC

Work Group: WG370264
Blank Sample ID: WG370264-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370264-02	8M371767	07/14/11 12:57	01
LCS2	WG370264-03	8M371768	07/14/11 13:28	01
MW-2	L11070369-03	8M371779	07/14/11 19:14	01
MW-5	L11070369-05	8M371780	07/14/11 19:46	01
MW-31	L11070369-19	8M371781	07/14/11 20:17	01
MW-18	L11070369-25	8M371782	07/14/11 20:48	01
MW-30	L11070369-35	8M371783	07/14/11 21:20	01

Report Name: BLANK_SUMMARY
PDF File ID: 2085400
Report generated 07/20/2011 13:34

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 8M371785
Prep Date: 07/14/11 22:22
Analyzed Date: 07/14/11 22:22
Analyst: ADC

Work Group: WG370264
Blank Sample ID: WG370264-04
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370264-02	8M371767	07/14/11 12:57	01
LCS2	WG370264-03	8M371768	07/14/11 13:28	01
MW-2	L11070369-03	8M371779	07/14/11 19:14	01
MW-5	L11070369-05	8M371780	07/14/11 19:46	01
MW-31	L11070369-19	8M371781	07/14/11 20:17	01
MW-18	L11070369-25	8M371782	07/14/11 20:48	01
MW-30	L11070369-35	8M371783	07/14/11 21:20	01

Report Name: BLANK_SUMMARY
PDF File ID: 2085400
Report generated 07/20/2011 13:34

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 8M371797
Prep Date: 07/15/11 13:14
Analyzed Date: 07/15/11 13:14
Analyst: ADC

Work Group: WG370428
Blank Sample ID: WG370428-01
Instrument ID: HPMS8
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370428-02	8M371798	07/15/11 13:47	01
LCS2	WG370428-03	8M371799	07/15/11 14:18	01
MW-50	L11070369-65	8M371815	07/15/11 22:42	01

Report Name: BLANK_SUMMARY
PDF File ID: 2085400
Report generated 07/20/2011 13:34

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/14/11 11:53 Sample ID: WG370264-01
Instrument ID: HPMS8 Run Date: 07/14/11 11:53 Prep Method: 5030B/5030C/503
File ID: 8M371765 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG370264 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-30-JUN-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	104	80 - 120	PASS
4-Bromofluorobenzene	102	86 - 115	PASS
Dibromofluoromethane	100	86 - 118	PASS
Toluene-d8	106	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2085401
20-JUL-2011 13:34

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/14/11 22:22 Sample ID: WG370264-04
Instrument ID: HPMS8 Run Date: 07/14/11 22:22 Prep Method: 5030B/5030C/503
File ID: 8M371785 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG370264 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-30-JUN-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	104	80 - 120	PASS
4-Bromofluorobenzene	105	86 - 115	PASS
Dibromofluoromethane	102	86 - 118	PASS
Toluene-d8	107	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2085401
20-JUL-2011 13:34

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 13:14 Sample ID: WG370428-01
Instrument ID: HPMS8 Run Date: 07/15/11 13:14 Prep Method: 5030B/5030C/503
File ID: 8M371797 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG370428 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS8-30-JUN-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	103	80 - 120	PASS
4-Bromofluorobenzene	103	86 - 115	PASS
Dibromofluoromethane	101	86 - 118	PASS
Toluene-d8	108	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2085401
20-JUL-2011 13:34

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG370264 Units: ug/L
QC Key: STD Lot #: STD46476

Sample ID: WG370264-02 LCS File ID: 8M371767 Run Date: 07/14/2011 12:57
Sample ID: WG370264-03 LCS2 File ID: 8M371768 Run Date: 07/14/2011 13:28

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Tetrachloroethene	20.0	20.3	101	20.0	19.0	95.2	6.40	80 - 124	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	102	102	80 - 120	PASS
Dibromofluoromethane	101	99.2	86 - 118	PASS
4-Bromofluorobenzene	104	106	86 - 115	PASS
Toluene-d8	104	105	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2083410
Report generated: 07/20/2011 13:34

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS8 Matrix: Water Method: 8260B
Workgroup (AAB#): WG370428 Units: ug/L
QC Key: STD Lot #: STD46476

Sample ID: WG370428-02 LCS File ID: 8M371798 Run Date: 07/15/2011 13:47
Sample ID: WG370428-03 LCS2 File ID: 8M371799 Run Date: 07/15/2011 14:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Tetrachloroethene	20.0	20.6	103	20.0	19.4	96.8	6.09	80 - 124	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	104	104	80 - 120	PASS
Dibromofluoromethane	101	101	86 - 118	PASS
4-Bromofluorobenzene	105	105	86 - 115	PASS
Toluene-d8	104	104	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2083410
Report generated: 07/20/2011 13:34

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 9GR62366.R
Prep Date: 07/14/11 10:00
Analyzed Date: 07/15/11 18:49
Analyst: ECL

Work Group: WG370411
Blank Sample ID: WG370267-01
Instrument ID: HP9
Method: 8082

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370267-02	9GR62367.R	07/15/11 19:07	01
LCS2	WG370267-03	9GR62368.R	07/15/11 19:25	01
MW-12	L11070369-15	9GR62373.R	07/15/11 20:56	01
MW-44S	L11070369-63	9GR62374.R	07/15/11 21:13	01
MW-44D	L11070369-64	9GR62375.R	07/15/11 21:32	01

Report Name: BLANK_SUMMARY
PDF File ID: 2081197
Report generated 07/18/2011 15:36

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/14/11 10:00 Sample ID: WG370267-01
Instrument ID: HP9 Run Date: 07/15/11 18:49 Prep Method: 3510C
File ID: 9GR62366.R Analyst: ECL Method: 8082
Workgroup (AAB#): WG370411 Matrix: Water Units: ug/L
Contract #: Cal ID: HP9-11-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	0.250	0.500	0.500	1	U
Aroclor-1221	0.250	0.500	0.500	1	U
Aroclor-1232	0.250	0.500	0.500	1	U
Aroclor-1242	0.250	0.500	0.500	1	U
Aroclor-1248	0.250	0.500	0.500	1	U
Aroclor-1254	0.250	0.500	0.500	1	U
Aroclor-1260	0.250	0.500	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	68.9	30 - 132	PASS
Decachlorobiphenyl	111	36 - 144	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2081198
18-JUL-2011 15:36

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Water Method: 8082
Workgroup (AAB#): WG370411 Units: ug/L
QC Key: STD Lot #: STD46049

Sample ID: WG370267-02 LCS File ID: 9GR62367.R Run Date: 07/15/2011 19:07
Sample ID: WG370267-03 LCS2 File ID: 9GR62368.R Run Date: 07/15/2011 19:25

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Aroclor-1016	2.50	2.36	94.4	2.50	2.02	80.6	15.7	40 - 140	40	
Aroclor-1260	2.50	2.62	105	2.50	2.47	98.7	5.93	40 - 140	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,5,6-Tetrachloro-m-xylene	62.7	52.6	30 - 132	PASS
Decachlorobiphenyl	70.6	96.3	36 - 144	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2081199
Report generated: 07/18/2011 15:36

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: P2.071811.142428
Prep Date: 07/15/11 07:27
Analyzed Date: 07/18/11 14:24
Analyst: KHR

Work Group: WG370557
Blank Sample ID: WG370367-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370367-03	P2.071811.143107	07/18/11 14:31	01
MW-7	L11070369-02	P2.071811.143750	07/18/11 14:37	01
MW-2	L11070369-04	P2.071811.144430	07/18/11 14:44	01
MW-5	L11070369-06	P2.071811.145112	07/18/11 14:51	01
MW-8	L11070369-10	P2.071811.145755	07/18/11 14:57	01
MW-10	L11070369-12	P2.071811.150441	07/18/11 15:04	01
MW-11	L11070369-14	P2.071811.151129	07/18/11 15:11	01
MW-1	L11070369-08	P2.071811.154454	07/18/11 15:44	01
MW-12	L11070369-16	P2.071811.160502	07/18/11 16:05	01
MW-14	L11070369-18	P2.071811.161145	07/18/11 16:11	01
MW-31	L11070369-20	P2.071811.161827	07/18/11 16:18	01
MW-16	L11070369-22	P2.071811.162510	07/18/11 16:25	01
MW-17	L11070369-24	P2.071811.163153	07/18/11 16:31	01
MW-18	L11070369-26	P2.071811.163836	07/18/11 16:38	01
MW-19	L11070369-28	P2.071811.165836	07/18/11 16:58	01
MW-28	L11070369-30	P2.071811.170518	07/18/11 17:05	01
MW-29S	L11070369-32	P2.071811.171200	07/18/11 17:12	01
MW-29D	L11070369-34	P2.071811.171843	07/18/11 17:18	01
MW-30	L11070369-36	P2.071811.172526	07/18/11 17:25	01
MW-2	L11070369-04	P2.071911.123615	07/19/11 12:36	DL01
MW-5	L11070369-06	P2.071911.124253	07/19/11 12:42	DL01
MW-11	L11070369-14	P2.071911.124931	07/19/11 12:49	DL01
MW-31	L11070369-20	P2.071911.130928	07/19/11 13:09	DL01
MW-16	L11070369-22	P2.071911.131607	07/19/11 13:16	DL01
MW-18	L11070369-26	P2.071911.132245	07/19/11 13:22	DL01
MW-19	L11070369-28	P2.071911.134239	07/19/11 13:42	02
MW-28	L11070369-30	P2.071911.134922	07/19/11 13:49	02
MW-29S	L11070369-32	P2.071911.135605	07/19/11 13:56	DL01
MW-29D	L11070369-34	P2.071911.140244	07/19/11 14:02	02
MW-30	L11070369-36	P2.071911.140927	07/19/11 14:09	02

Report Name: BLANK_SUMMARY
PDF File ID: 2082531
Report generated 07/26/2011 14:46

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: P2.072111.230730
Prep Date: 07/15/11 07:37
Analyzed Date: 07/21/11 23:07
Analyst: KHR

Work Group: WG370965
Blank Sample ID: WG370369-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370369-03	P2.072111.231410	07/21/11 23:14	01
MW-15	L11070369-38	P2.072111.235434	07/21/11 23:54	01
MW-32	L11070369-40	P2.072211.002805	07/22/11 00:28	01
MW-34S	L11070369-42	P2.072211.003450	07/22/11 00:34	01
MW-34D	L11070369-44	P2.072211.004134	07/22/11 00:41	01
MW-35	L11070369-46	P2.072211.004818	07/22/11 00:48	01
MW-36	L11070369-48	P2.072211.005503	07/22/11 00:55	01
MW-37	L11070369-50	P2.072211.010147	07/22/11 01:01	01
MW-39S	L11070369-52	P2.072211.010829	07/22/11 01:08	01
MW-39D	L11070369-54	P2.072211.011509	07/22/11 01:15	01
MW-40S	L11070369-56	P2.072211.012158	07/22/11 01:21	01
MW-40D	L11070369-58	P2.072211.014200	07/22/11 01:42	01
MW-42S	L11070369-60	P2.072211.014844	07/22/11 01:48	01
MW-42D	L11070369-62	P2.072211.015533	07/22/11 01:55	01
MW-50	L11070369-66	P2.072211.020218	07/22/11 02:02	01
MW-57	L11070369-68	P2.072211.020903	07/22/11 02:09	01
MW-59	L11070369-70	P2.072211.021548	07/22/11 02:15	01
MW-60	L11070369-72	P2.072211.022225	07/22/11 02:22	01
MW-32	L11070369-40	P2.072211.160437	07/22/11 16:04	DL01
MW-34S	L11070369-42	P2.072211.161115	07/22/11 16:11	DL01
MW-34D	L11070369-44	P2.072211.161753	07/22/11 16:17	DL01
MW-39S	L11070369-52	P2.072211.162434	07/22/11 16:24	DL01
MW-39D	L11070369-54	P2.072211.163113	07/22/11 16:31	DL01
MW-40S	L11070369-56	P2.072211.165108	07/22/11 16:51	DL01
MW-40D	L11070369-58	P2.072211.165747	07/22/11 16:57	DL01
MW-42S	L11070369-60	P2.072211.170425	07/22/11 17:04	DL01
MW-42D	L11070369-62	P2.072211.171104	07/22/11 17:11	DL01
MW-59	L11070369-70	P2.072211.171742	07/22/11 17:17	DL01
MW-15	L11070369-38	P2.072611.103537	07/26/11 10:35	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2082531
Report generated 07/26/2011 14:46

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 07:27 Sample ID: WG370367-02
Instrument ID: PE-ICP2 Run Date: 07/18/11 14:24 Prep Method: 3005A
File ID: P2.071811.142428 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG370557 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 18-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Beryllium, Dissolved	0.00100	0.00200	0.00200	1	U
Manganese, Dissolved	0.00500	0.0100	0.0100	1	U
Sodium, Dissolved	0.250	0.500	0.500	1	U
Vanadium, Dissolved	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2082532
22-JUL-2011 10:14

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 07:37 Sample ID: WG370369-02
Instrument ID: PE-ICP2 Run Date: 07/21/11 23:07 Prep Method: 3005A
File ID: P2.072111.230730 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG370965 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP - 21-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Beryllium, Dissolved	0.00100	0.00200	0.00200	1	U
Manganese, Dissolved	0.00500	0.0100	0.0100	1	U
Sodium, Dissolved	0.250	0.500	0.500	1	U
Vanadium, Dissolved	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2082532
22-JUL-2011 10:14

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/18/2011 Sample ID: WG370367-03
Instrument ID: PE-ICP2 Run Time: 14:31 Prep Method: 3005A
File ID: P2.071811.143107 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG370557 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD45923 Cal ID: PE-ICP-18-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Dissolved	0.0250	0.0235	93.8	85 - 115	
Manganese, Dissolved	0.250	0.249	99.7	85 - 115	
Sodium, Dissolved	25.0	24.5	98.1	85 - 115	
Vanadium, Dissolved	0.500	0.484	96.9	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2082533
Report generated: 07/22/2011 10:14

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/21/2011 Sample ID: WG370369-03
Instrument ID: PE-ICP2 Run Time: 23:14 Prep Method: 3005A
File ID: P2.072111.231410 Analyst: KHR Method: 6010B
Workgroup (AAB#): WG370965 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD45923 Cal ID: PE-ICP-21-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Dissolved	0.0250	0.0244	97.6	85 - 115	
Manganese, Dissolved	0.250	0.251	100	85 - 115	
Sodium, Dissolved	25.0	24.3	97.1	85 - 115	
Vanadium, Dissolved	0.500	0.479	95.9	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2082533
Report generated: 07/22/2011 10:14

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: PE-ICP2- Worknum: WG370965
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG370369-01 File ID: P2.072111.232054 Dil: 1 Matrix: WATER
Sample ID: WG370369-04 MS File ID: P2.072111.232738 Dil: 1 Units: mg/L
Sample ID: WG370369-05 MSD File ID: P2.072111.233422 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Dissolved	ND	0.0250	0.0250	100	0.0250	0.0254	101	1.34	80 - 120	20	
Manganese, Dissolved	0.0637	0.250	0.319	102	0.250	0.322	103	0.769	80 - 120	20	
Sodium, Dissolved	27.2	25.0	54.3	108	25.0	51.5	97.2	5.33	80 - 120	20	
Vanadium, Dissolved	ND	0.500	0.488	97.6	0.500	0.496	99.2	1.64	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2082534
Report generated 07/22/2011 10:14

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: PE-ICP2- Worknum: WG370557
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG370367-01 File ID: P2.071811.154454 Dil: 1 Matrix: WATER
Sample ID: WG370367-04 MS File ID: P2.071811.155136 Dil: 1 Units: mg/L
Sample ID: WG370367-05 MSD File ID: P2.071811.155819 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Dissolved	ND	0.0250	0.0240	96.1	0.0250	0.0237	94.9	1.29	80 - 120	20	
Manganese, Dissolved	0.709	0.250	0.964	102	0.250	0.951	96.8	1.27	80 - 120	20	
Sodium, Dissolved	36.7	25.0	62.0	101	25.0	61.2	97.8	1.37	80 - 120	20	
Vanadium, Dissolved	ND	0.500	0.486	97.3	0.500	0.485	97.0	0.286	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2082534
Report generated 07/22/2011 10:14

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: EL.071511.162126
Prep Date: 07/15/11 12:25
Analyzed Date: 07/15/11 16:21
Analyst: EDL

Work Group: WG370472
Blank Sample ID: WG370447-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370447-03	EL.071511.162842	07/15/11 16:28	01
MW-39D	L11070369-54	EL.071511.183234	07/15/11 18:32	DL01
MW-40S	L11070369-56	EL.071511.183951	07/15/11 18:39	DL01
MW-40D	L11070369-58	EL.071511.184708	07/15/11 18:47	DL01
MW-42S	L11070369-60	EL.071511.190900	07/15/11 19:09	DL01
MW-42D	L11070369-62	EL.071511.191618	07/15/11 19:16	DL01
MW-59	L11070369-70	EL.071511.193812	07/15/11 19:38	DL01
MW-50	L11070369-66	EL.071911.004254	07/19/11 00:42	01
MW-57	L11070369-68	EL.071911.005011	07/19/11 00:50	01
MW-60	L11070369-72	EL.071911.005728	07/19/11 00:57	01

Report Name: BLANK_SUMMARY
PDF File ID: 2080795
Report generated 07/19/2011 10:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: EL.071511.221110
Prep Date: 07/15/11 07:41
Analyzed Date: 07/15/11 22:11
Analyst: EDL

Work Group: WG370481
Blank Sample ID: WG370364-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370364-03	EL.071511.221826	07/15/11 22:18	01
MW-39S	L11070369-52	EL.071511.223300	07/15/11 22:33	DL01
MW-31	L11070369-20	EL.071511.233838	07/15/11 23:38	DL01
MW-16	L11070369-22	EL.071511.234554	07/15/11 23:45	DL01
MW-18	L11070369-26	EL.071611.000026	07/16/11 00:00	DL01
MW-29S	L11070369-32	EL.071611.002217	07/16/11 00:22	DL01
MW-15	L11070369-38	EL.071611.005843	07/16/11 00:58	DL01
MW-32	L11070369-40	EL.071611.010602	07/16/11 01:06	DL01
MW-34S	L11070369-42	EL.071611.011320	07/16/11 01:13	DL01
MW-34D	L11070369-44	EL.071611.012038	07/16/11 01:20	DL01
MW-37	L11070369-50	EL.071611.014228	07/16/11 01:42	DL01
MW-14	L11070369-18	EL.071911.010446	07/19/11 01:04	01
MW-17	L11070369-24	EL.071911.011203	07/19/11 01:12	01
MW-19	L11070369-28	EL.071911.011921	07/19/11 01:19	01
MW-28	L11070369-30	EL.071911.012639	07/19/11 01:26	01
MW-29D	L11070369-34	EL.071911.013358	07/19/11 01:33	01
MW-30	L11070369-36	EL.071911.014115	07/19/11 01:41	01
MW-35	L11070369-46	EL.071911.020306	07/19/11 02:03	01
MW-36	L11070369-48	EL.071911.021022	07/19/11 02:10	01

Report Name: BLANK_SUMMARY
PDF File ID: 2080795
Report generated 07/19/2011 10:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: EL.071811.204234
Prep Date: 07/15/11 06:46
Analyzed Date: 07/18/11 20:42
Analyst: EDL

Work Group: WG370514
Blank Sample ID: WG370358-04
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370358-05	EL.071811.204950	07/18/11 20:49	01
DUP	WG370358-10	EL.071811.225338	07/18/11 22:53	01
MW-7	L11070369-02	EL.071811.230813	07/18/11 23:08	01
MW-2	L11070369-04	EL.071811.231530	07/18/11 23:15	DL01
MW-5	L11070369-06	EL.071811.233722	07/18/11 23:37	DL01
MW-1	L11070369-08	EL.071811.234440	07/18/11 23:44	01
MW-8	L11070369-10	EL.071811.235158	07/18/11 23:51	01
MW-10	L11070369-12	EL.071811.235916	07/18/11 23:59	01
MW-11	L11070369-14	EL.071911.000632	07/19/11 00:06	01
MW-12	L11070369-16	EL.071911.001348	07/19/11 00:13	01

Report Name: BLANK_SUMMARY
PDF File ID: 2080795
Report generated 07/19/2011 10:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 12:25 Sample ID: WG370447-02
Instrument ID: ELAN-ICP Run Date: 07/15/11 16:21 Prep Method: 3015
File ID: EL.071511.162126 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370472 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-15-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Dissolved	0.000500	0.00100	0.00100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2080796
19-JUL-2011 10:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 07:41 Sample ID: WG370364-02
Instrument ID: ELAN-ICP Run Date: 07/15/11 22:11 Prep Method: 3015
File ID: EL.071511.221110 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370481 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-15-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Dissolved	0.000500	0.00100	0.00100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2080796
19-JUL-2011 10:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/15/11 06:46 Sample ID: WG370358-04
Instrument ID: ELAN-ICP Run Date: 07/18/11 20:42 Prep Method: 3015
File ID: EL.071811.204234 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370514 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-18-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Dissolved	0.000500	0.00100	0.00100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2080796
19-JUL-2011 10:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/15/2011 Sample ID: WG370447-03
Instrument ID: ELAN-ICP Run Time: 16:28 Prep Method: 3015
File ID: EL.071511.162842 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370472 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44832 Cal ID: ELAN-I-15-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Dissolved	0.0625	0.0607	97.1	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2080797
Report generated: 07/19/2011 10:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/15/2011 Sample ID: WG370364-03
Instrument ID: ELAN-ICP Run Time: 22:18 Prep Method: 3015
File ID: EL.071511.221826 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370481 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44832 Cal ID: ELAN-I-15-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Dissolved	0.0625	0.0605	96.8	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2080797
Report generated: 07/19/2011 10:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/18/2011 Sample ID: WG370358-05
Instrument ID: ELAN-ICP Run Time: 20:49 Prep Method: 3015
File ID: EL.071811.204950 Analyst: EDL Method: 6020
Workgroup (AAB#): WG370514 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD44832 Cal ID: ELAN-I-18-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Dissolved	0.0625	0.0607	97.1	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2080797
Report generated: 07/19/2011 10:01

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: ELAN-ICP- Worknum: WG370472
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG370447-01 File ID: EL.071511.163559 Dil: 5 Matrix: WATER
Sample ID: WG370447-04 MS File ID: EL.071511.164316 Dil: 5 Units: mg/L
Sample ID: WG370447-05 MSD File ID: EL.071511.165033 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Total	0.00671	0.0625	0.0821	121	0.0625	0.0896	133	8.80	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2080798
Report generated 07/19/2011 11:27

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: ELAN-ICP- Worknum: WG370481
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG370364-01 File ID: EL.071511.223300 Dil: 5 Matrix: WATER
Sample ID: WG370364-04 MS File ID: EL.071511.224017 Dil: 5 Units: mg/L
Sample ID: WG370364-05 MSD File ID: EL.071511.224734 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Dissolved	0.0106	0.0625	0.0798	111	0.0625	0.0794	110	0.506	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2080798
Report generated 07/19/2011 11:27

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: ELAN-ICP- Worknum: WG370514
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG370358-01 File ID: EL.071811.205706 Dil: 5 Matrix: WATER
Sample ID: WG370358-06 MS File ID: EL.071811.210423 Dil: 5 Units: mg/L
Sample ID: WG370358-07 MSD File ID: EL.071811.211139 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Total	0.0440	0.0625	0.107	101	0.0625	0.134	143	22.1	75 - 125	20	*#

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2080798
Report generated 07/19/2011 11:27

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11070369 Cal ID: ELAN-ICP- Worknum: WG370514
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG370358-02 File ID: EL.071811.211856 Dil: 1 Matrix: WATER
Sample ID: WG370358-08 MS File ID: EL.071811.212614 Dil: 1 Units: mg/L
Sample ID: WG370358-09 MSD File ID: EL.071811.213331 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Dissolved	0.00595	0.0625	0.0682	99.6	0.0625	0.0649	94.3	5.05	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2080798
Report generated 07/19/2011 11:27

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107210935-01
Prep Date: 07/21/11 09:35
Analyzed Date: 07/21/11 09:35
Analyst: JBK

Work Group: WG370771
Blank Sample ID: WG370771-01
Instrument ID: UV-120-1V
Method: 9014-9010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370771-02	1V.1107210935-02	07/21/11 09:35	
LCS	WG370771-03	1V.1107210935-03	07/21/11 09:35	
MW-7	L11070369-01	1V.1107210935-09	07/21/11 09:35	
MW-8	L11070369-09	1V.1107210935-10	07/21/11 09:35	
MW-10	L11070369-11	1V.1107210935-11	07/21/11 09:35	
MW-11	L11070369-13	1V.1107210935-12	07/21/11 09:35	
MW-40S	L11070369-55	1V.1107210935-13	07/21/11 09:35	
MW-40D	L11070369-57	1V.1107210935-14	07/21/11 09:35	
MW-2	L11070369-03	1V.1107210935-15	07/21/11 09:35	
MW-5	L11070369-05	1V.1107210935-16	07/21/11 09:35	
MW-1	L11070369-07	1V.1107210935-17	07/21/11 09:35	
MW-12	L11070369-15	1V.1107210935-18	07/21/11 09:35	
MW-14	L11070369-17	1V.1107210935-19	07/21/11 09:35	
MW-31	L11070369-19	1V.1107210935-20	07/21/11 09:35	
MW-16	L11070369-21	1V.1107210935-21	07/21/11 09:35	
MW-17	L11070369-23	1V.1107210935-22	07/21/11 09:35	
MW-18	L11070369-25	1V.1107210935-23	07/21/11 09:35	
DUP	WG370771-05	1V.1107210935-24	07/21/11 09:35	

Report Name: BLANK_SUMMARY
PDF File ID: 2089297
Report generated 07/26/2011 15:00

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107221420-01
Prep Date: 07/22/11 14:20
Analyzed Date: 07/22/11 14:20
Analyst: JBK

Work Group: WG370886
Blank Sample ID: WG370886-01
Instrument ID: UV-120-1V
Method: 9014-9010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370886-02	1V.1107221420-02	07/22/11 14:20	
LCS	WG370886-03	1V.1107221420-03	07/22/11 14:20	
MW-19	L11070369-27	1V.1107221420-04	07/22/11 14:20	
MW-28	L11070369-29	1V.1107221420-05	07/22/11 14:20	
MW-29S	L11070369-31	1V.1107221420-06	07/22/11 14:20	
MW-29D	L11070369-33	1V.1107221420-07	07/22/11 14:20	
MW-30	L11070369-35	1V.1107221420-08	07/22/11 14:20	
MW-15	L11070369-37	1V.1107221420-09	07/22/11 14:20	
MW-32	L11070369-39	1V.1107221420-10	07/22/11 14:20	
MW-34S	L11070369-41	1V.1107221420-11	07/22/11 14:20	
MW-34D	L11070369-43	1V.1107221420-12	07/22/11 14:20	
MW-35	L11070369-45	1V.1107221420-13	07/22/11 14:20	
MW-36	L11070369-47	1V.1107221420-14	07/22/11 14:20	
MW-37	L11070369-49	1V.1107221420-15	07/22/11 14:20	
MW-39S	L11070369-51	1V.1107221420-16	07/22/11 14:20	
MW-39D	L11070369-53	1V.1107221420-17	07/22/11 14:20	
MW-42S	L11070369-59	1V.1107221420-18	07/22/11 14:20	
MW-42D	L11070369-61	1V.1107221420-19	07/22/11 14:20	
MW-50	L11070369-65	1V.1107221420-20	07/22/11 14:20	
MW-57	L11070369-67	1V.1107221420-21	07/22/11 14:20	
MW-59	L11070369-69	1V.1107221420-22	07/22/11 14:20	
MW-60	L11070369-71	1V.1107221420-23	07/22/11 14:20	
DUP	WG370886-06	1V.1107221420-24	07/22/11 14:20	

Report Name: BLANK_SUMMARY
PDF File ID: 2089297
Report generated 07/26/2011 15:00

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107221545-01
Prep Date: 07/22/11 15:45
Analyzed Date: 07/22/11 15:45
Analyst: JBK

Work Group: WG371002
Blank Sample ID: WG371002-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG371002-02	1V.1107221545-02	07/22/11 15:45	CN-A
LCS	WG371002-03	1V.1107221545-03	07/22/11 15:45	CN-A
MW-8	L11070369-09	1V.1107221545-04	07/22/11 15:45	CN-A
MW-11	L11070369-13	1V.1107221545-05	07/22/11 15:45	CN-A
MW-40S	L11070369-55	1V.1107221545-06	07/22/11 15:45	CN-A
MW-40D	L11070369-57	1V.1107221545-07	07/22/11 15:45	CN-A
MW-2	L11070369-03	1V.1107221545-08	07/22/11 15:45	CN-A
MW-5	L11070369-05	1V.1107221545-09	07/22/11 15:45	CN-A
MW-14	L11070369-17	1V.1107221545-10	07/22/11 15:45	CN-A
MW-31	L11070369-19	1V.1107221545-11	07/22/11 15:45	CN-A
MW-16	L11070369-21	1V.1107221545-12	07/22/11 15:45	CN-A
MW-17	L11070369-23	1V.1107221545-13	07/22/11 15:45	CN-A
MW-18	L11070369-25	1V.1107221545-14	07/22/11 15:45	CN-A
MW-19	L11070369-27	1V.1107221545-15	07/22/11 15:45	CN-A
MW-28	L11070369-29	1V.1107221545-16	07/22/11 15:45	CN-A
MW-29S	L11070369-31	1V.1107221545-17	07/22/11 15:45	CN-A
MW-29D	L11070369-33	1V.1107221545-18	07/22/11 15:45	CN-A
MW-30	L11070369-35	1V.1107221545-19	07/22/11 15:45	CN-A
DUP	WG371002-05	1V.1107221545-20	07/22/11 15:45	CN-A
MW-7	L11070369-01	1V.1107221545-23	07/22/11 15:45	CN-A
MW-10	L11070369-11	1V.1107221545-24	07/22/11 15:45	CN-A
MW-1	L11070369-07	1V.1107221545-25	07/22/11 15:45	CN-A
MW-12	L11070369-15	1V.1107221545-26	07/22/11 15:45	CN-A

Report Name: BLANK_SUMMARY
PDF File ID: 2092058
Report generated 07/26/2011 15:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107221605-01
Prep Date: 07/22/11 16:05
Analyzed Date: 07/22/11 16:05
Analyst: JBK

Work Group: WG371027
Blank Sample ID: WG371027-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG371027-02	1V.1107221605-02	07/22/11 16:05	CN-A
LCS	WG371027-03	1V.1107221605-03	07/22/11 16:05	CN-A
MW-15	L11070369-37	1V.1107221605-04	07/22/11 16:05	CN-A
MW-32	L11070369-39	1V.1107221605-05	07/22/11 16:05	CN-A
MW-34S	L11070369-41	1V.1107221605-06	07/22/11 16:05	CN-A
MW-34D	L11070369-43	1V.1107221605-07	07/22/11 16:05	CN-A
MW-35	L11070369-45	1V.1107221605-08	07/22/11 16:05	CN-A
MW-36	L11070369-47	1V.1107221605-09	07/22/11 16:05	CN-A
MW-37	L11070369-49	1V.1107221605-10	07/22/11 16:05	CN-A
MW-39S	L11070369-51	1V.1107221605-11	07/22/11 16:05	CN-A
MW-39D	L11070369-53	1V.1107221605-12	07/22/11 16:05	CN-A
MW-42S	L11070369-59	1V.1107221605-13	07/22/11 16:05	CN-A
MW-42D	L11070369-61	1V.1107221605-14	07/22/11 16:05	CN-A
MW-50	L11070369-65	1V.1107221605-15	07/22/11 16:05	CN-A
MW-57	L11070369-67	1V.1107221605-16	07/22/11 16:05	CN-A
MW-59	L11070369-69	1V.1107221605-17	07/22/11 16:05	CN-A
MW-60	L11070369-71	1V.1107221605-18	07/22/11 16:05	CN-A
DUP	WG371027-05	1V.1107221605-19	07/22/11 16:05	CN-A

Report Name: BLANK_SUMMARY
PDF File ID: 2092058
Report generated 07/26/2011 15:01

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107221450-01
Prep Date: 07/22/11 14:50
Analyzed Date: 07/22/11 14:50
Analyst: JBK

Work Group: WG370887
Blank Sample ID: WG370887-01
Instrument ID: UV-120-1V
Method: SM4500-CN-I

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG370887-02	1V.1107221450-02	07/22/11 14:50	WD
LCS	WG370887-03	1V.1107221450-03	07/22/11 14:50	WD
MW-8	L11070369-09	1V.1107221450-04	07/22/11 14:50	WD
MW-11	L11070369-13	1V.1107221450-05	07/22/11 14:50	WD
MW-40S	L11070369-55	1V.1107221450-06	07/22/11 14:50	WD
MW-40D	L11070369-57	1V.1107221450-07	07/22/11 14:50	WD
MW-2	L11070369-03	1V.1107221450-08	07/22/11 14:50	WD
MW-5	L11070369-05	1V.1107221450-09	07/22/11 14:50	WD
MW-14	L11070369-17	1V.1107221450-10	07/22/11 14:50	WD
MW-31	L11070369-19	1V.1107221450-11	07/22/11 14:50	WD
MW-16	L11070369-21	1V.1107221450-12	07/22/11 14:50	WD
MW-17	L11070369-23	1V.1107221450-13	07/22/11 14:50	WD
MW-18	L11070369-25	1V.1107221450-14	07/22/11 14:50	WD
MW-19	L11070369-27	1V.1107221450-15	07/22/11 14:50	WD
MW-28	L11070369-29	1V.1107221450-16	07/22/11 14:50	WD
MW-29S	L11070369-31	1V.1107221450-17	07/22/11 14:50	WD
MW-29D	L11070369-33	1V.1107221450-18	07/22/11 14:50	WD
MW-30	L11070369-35	1V.1107221450-19	07/22/11 14:50	WD
MW-15	L11070369-37	1V.1107221450-20	07/22/11 14:50	WD
MW-32	L11070369-39	1V.1107221450-21	07/22/11 14:50	WD
MW-34S	L11070369-41	1V.1107221450-22	07/22/11 14:50	WD
MW-34D	L11070369-43	1V.1107221450-23	07/22/11 14:50	WD
DUP	WG370887-06	1V.1107221450-24	07/22/11 14:50	WD
MW-7	L11070369-01	1V.1107221450-30	07/22/11 14:50	WD
MW-10	L11070369-11	1V.1107221450-31	07/22/11 14:50	WD
MW-1	L11070369-07	1V.1107221450-32	07/22/11 14:50	WD
MW-12	L11070369-15	1V.1107221450-33	07/22/11 14:50	WD

Report Name: BLANK_SUMMARY
PDF File ID: 2092054
Report generated 07/26/2011 15:00

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 1V.1107221520-01
Prep Date: 07/22/11 15:20
Analyzed Date: 07/22/11 15:20
Analyst: JBK

Work Group: WG371001
Blank Sample ID: WG371001-01
Instrument ID: UV-120-1V
Method: SM4500-CN-I

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG371001-02	1V.1107221520-02	07/22/11 15:20	WD
LCS	WG371001-03	1V.1107221520-03	07/22/11 15:20	WD
MW-35	L11070369-45	1V.1107221520-04	07/22/11 15:20	WD
MW-36	L11070369-47	1V.1107221520-05	07/22/11 15:20	WD
MW-37	L11070369-49	1V.1107221520-06	07/22/11 15:20	WD
MW-39S	L11070369-51	1V.1107221520-07	07/22/11 15:20	WD
MW-39D	L11070369-53	1V.1107221520-08	07/22/11 15:20	WD
MW-42S	L11070369-59	1V.1107221520-09	07/22/11 15:20	WD
MW-42D	L11070369-61	1V.1107221520-10	07/22/11 15:20	WD
MW-50	L11070369-65	1V.1107221520-11	07/22/11 15:20	WD
MW-57	L11070369-67	1V.1107221520-12	07/22/11 15:20	WD
MW-59	L11070369-69	1V.1107221520-13	07/22/11 15:20	WD
MW-60	L11070369-71	1V.1107221520-14	07/22/11 15:20	WD
DUP	WG371001-06	1V.1107221520-15	07/22/11 15:20	WD

Report Name: BLANK_SUMMARY
PDF File ID: 2092054
Report generated 07/26/2011 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/21/11 09:35 Sample ID: WG370771-01
Instrument ID: UV-120-1V Run Date: 07/21/11 09:35 Prep Method: 9014-9010C
File ID: 1V.1107210935-01 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370771 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2089298
26-JUL-2011 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/22/11 14:20 Sample ID: WG370886-01
Instrument ID: UV-120-1V Run Date: 07/22/11 14:20 Prep Method: 9014-9010C
File ID: 1V.1107221420-01 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370886 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2089298
26-JUL-2011 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/22/11 15:45 Sample ID: WG371002-01
Instrument ID: UV-120-1V Run Date: 07/22/11 15:45 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221545-01 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371002 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092059
26-JUL-2011 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/22/11 16:05 Sample ID: WG371027-01
Instrument ID: UV-120-1V Run Date: 07/22/11 16:05 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221605-01 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371027 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092059
26-JUL-2011 15:01

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/22/11 14:50 Sample ID: WG370887-01
Instrument ID: UV-120-1V Run Date: 07/22/11 14:50 Prep Method: SM4500-CN-I
File ID: 1V.1107221450-01 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG370887 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092055
26-JUL-2011 15:00

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/22/11 15:20 Sample ID: WG371001-01
Instrument ID: UV-120-1V Run Date: 07/22/11 15:20 Prep Method: SM4500-CN-I
File ID: 1V.1107221520-01 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG371001 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120-20-JUL-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092055
26-JUL-2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/21/2011 Sample ID: WG370771-02
Instrument ID: UV-120-1V Run Time: 09:35 Prep Method: 9014-9010C
File ID: 1V.1107210935-02 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370771 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0395	0.0391	99.0	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2089299
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/21/2011 Sample ID: WG370771-03
Instrument ID: UV-120-1V Run Time: 09:35 Prep Method: 9014-9010C
File ID: 1V.1107210935-03 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370771 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.198	0.196	99.0	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2089299
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG370886-02
Instrument ID: UV-120-1V Run Time: 14:20 Prep Method: 9014-9010C
File ID: 1V.1107221420-02 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370886 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0395	0.0389	98.4	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2089299
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG370886-03
Instrument ID: UV-120-1V Run Time: 14:20 Prep Method: 9014-9010C
File ID: 1V.1107221420-03 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG370886 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.198	0.192	97.3	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2089299
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371002-02
Instrument ID: UV-120-1V Run Time: 15:45 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221545-02 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371002 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.198	0.00201	1.02	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2092060
Report generated: 07/26/2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371002-03
Instrument ID: UV-120-1V Run Time: 15:45 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221545-03 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371002 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.0395	0.00176	4.45	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2092060
Report generated: 07/26/2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371027-02
Instrument ID: UV-120-1V Run Time: 16:05 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221605-02 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371027 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.198	0.00138	0.696	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2092060
Report generated: 07/26/2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371027-03
Instrument ID: UV-120-1V Run Time: 16:05 Prep Method: SM4500-CN-C,G
File ID: 1V.1107221605-03 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG371027 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	0.0395	0.00163	4.13	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2092060
Report generated: 07/26/2011 15:01

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG370887-02
Instrument ID: UV-120-1V Run Time: 14:50 Prep Method: SM4500-CN-I
File ID: 1V.1107221450-02 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG370887 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0395	0.0396	100	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2092056
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG370887-03
Instrument ID: UV-120-1V Run Time: 14:50 Prep Method: SM4500-CN-I
File ID: 1V.1107221450-03 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG370887 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.198	0.197	99.6	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2092056
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371001-02
Instrument ID: UV-120-1V Run Time: 15:20 Prep Method: SM4500-CN-I
File ID: 1V.1107221520-02 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG371001 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0395	0.0389	98.4	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2092056
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Run Date: 07/22/2011 Sample ID: WG371001-03
Instrument ID: UV-120-1V Run Time: 15:20 Prep Method: SM4500-CN-I
File ID: 1V.1107221520-03 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG371001 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-20-JUL-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.198	0.196	99.0	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2092056
Report generated: 07/26/2011 15:00

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 32.1107251310-01
Prep Date: 07/25/11 13:10
Analyzed Date: 07/25/11 13:10
Analyst: TMM

Work Group: WG371217
Blank Sample ID: WG371217-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG371217-02	32.1107251310-02	07/25/11 13:10	
MW-7	L11070369-01	32.1107251310-03	07/25/11 13:10	
MW-2	L11070369-03	32.1107251310-04	07/25/11 13:10	
MW-5	L11070369-05	32.1107251310-05	07/25/11 13:10	
MW-1	L11070369-07	32.1107251310-06	07/25/11 13:10	
MW-8	L11070369-09	32.1107251310-07	07/25/11 13:10	
MW-10	L11070369-11	32.1107251310-08	07/25/11 13:10	
MW-11	L11070369-13	32.1107251310-09	07/25/11 13:10	
MW-12	L11070369-15	32.1107251310-10	07/25/11 13:10	
MW-14	L11070369-17	32.1107251310-11	07/25/11 13:10	
MW-31	L11070369-19	32.1107251310-12	07/25/11 13:10	
MW-16	L11070369-21	32.1107251310-13	07/25/11 13:10	
MW-17	L11070369-23	32.1107251310-14	07/25/11 13:10	
MW-18	L11070369-25	32.1107251310-15	07/25/11 13:10	
MW-19	L11070369-27	32.1107251310-16	07/25/11 13:10	
MW-28	L11070369-29	32.1107251310-17	07/25/11 13:10	
MW-29S	L11070369-31	32.1107251310-18	07/25/11 13:10	
MW-29D	L11070369-33	32.1107251310-19	07/25/11 13:10	
MW-30	L11070369-35	32.1107251310-20	07/25/11 13:10	
MW-15	L11070369-37	32.1107251310-21	07/25/11 13:10	
MW-32	L11070369-39	32.1107251310-22	07/25/11 13:10	
LCS2	WG371217-03	32.1107251310-23	07/25/11 13:10	
DUP	WG371217-05	32.1107251310-24	07/25/11 13:10	
DUP	WG371217-07	32.1107251310-25	07/25/11 13:10	

Report Name: BLANK_SUMMARY
PDF File ID: 2092067
Report generated 07/26/2011 15:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: 32.1107251450-01
Prep Date: 07/25/11 14:50
Analyzed Date: 07/25/11 14:50
Analyst: TMM

Work Group: WG371221
Blank Sample ID: WG371221-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG371221-02	32.1107251450-02	07/25/11 14:50	
MW-34S	L11070369-41	32.1107251450-03	07/25/11 14:50	
MW-34D	L11070369-43	32.1107251450-04	07/25/11 14:50	
MW-35	L11070369-45	32.1107251450-05	07/25/11 14:50	
MW-36	L11070369-47	32.1107251450-06	07/25/11 14:50	
MW-37	L11070369-49	32.1107251450-07	07/25/11 14:50	
MW-39S	L11070369-51	32.1107251450-08	07/25/11 14:50	
MW-39D	L11070369-53	32.1107251450-09	07/25/11 14:50	
MW-40S	L11070369-55	32.1107251450-10	07/25/11 14:50	
MW-40D	L11070369-57	32.1107251450-11	07/25/11 14:50	
MW-42S	L11070369-59	32.1107251450-12	07/25/11 14:50	
MW-42D	L11070369-61	32.1107251450-13	07/25/11 14:50	
MW-50	L11070369-65	32.1107251450-14	07/25/11 14:50	
MW-57	L11070369-67	32.1107251450-15	07/25/11 14:50	
MW-59	L11070369-69	32.1107251450-16	07/25/11 14:50	
MW-60	L11070369-71	32.1107251450-17	07/25/11 14:50	
DUP	WG371221-05	32.1107251450-18	07/25/11 14:50	
DUP	WG371221-07	32.1107251450-19	07/25/11 14:50	
LCS2	WG371221-03	32.1107251450-20	07/25/11 14:50	

Report Name: BLANK_SUMMARY
PDF File ID: 2092067
Report generated 07/26/2011 15:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/25/11 13:10 Sample ID: WG371217-01
Instrument ID: YSI-32 Run Date: 07/25/11 13:10 Prep Method: 120.1
File ID: 32.1107251310-01 Analyst: TMM Method: 120.1
Workgroup (AAB#): WG371217 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	1.00	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092068
26-JUL-2011 15:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/25/11 14:50 Sample ID: WG371221-01
Instrument ID: YSI-32 Run Date: 07/25/11 14:50 Prep Method: 120.1
File ID: 32.1107251450-01 Analyst: TMM Method: 120.1
Workgroup (AAB#): WG371221 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	1.00	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2092068
26-JUL-2011 15:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: TMM Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG371221 Units: umhos/cm
QC Key: STD Lot #: STD46142

Sample ID: WG371221-02 LCS File ID: 32.1107251450-02 Run Date: 07/25/2011 14:50
Sample ID: WG371221-03 LCS2 File ID: 32.1107251450-20 Run Date: 07/25/2011 14:50

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1440	102	1410	1460	103	1.17	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2092069
Report generated: 07/26/2011 15:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: TMM Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG371217 Units: umhos/cm
QC Key: STD Lot #: STD46142

Sample ID: WG371217-02 LCS File ID: 32.1107251310-02 Run Date: 07/25/2011 13:10
Sample ID: WG371217-03 LCS2 File ID: 32.1107251310-23 Run Date: 07/25/2011 13:10

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1430	101	1410	1430	101	0.148	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2092069
Report generated: 07/26/2011 15:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: O111072214360101
Prep Date: 07/18/11 14:40
Analyzed Date: 07/18/11 14:40
Analyst: TMM

Work Group: WG370523
Blank Sample ID: WG370523-01
Instrument ID: ORION-710A1
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS2	WG370523-03	O111072214361501	07/18/11 14:40	1
MW-2	L11070369-03	O111072214383901	07/18/11 14:40	
MW-12	L11070369-15	O111072214391601	07/18/11 14:40	
MW-16	L11070369-21	O111072214393901	07/18/11 14:40	
LCS	WG370523-04	O111072214362101	07/18/11 14:40	
DUP	WG370523-12	O111072214370901	07/18/11 14:40	
MW-8	L11070369-09	O111072214385901	07/18/11 14:40	
LCS	WG370523-02	O111072214360901	07/18/11 14:40	1
MW-31	L11070369-19	O111072214392801	07/18/11 14:40	
MW-1	L11070369-07	O111072214385401	07/18/11 14:40	
MW-14	L11070369-17	O111072214392201	07/18/11 14:40	
MW-7	L11070369-01	O111072214383001	07/18/11 14:40	
MW-10	L11070369-11	O111072214390501	07/18/11 14:40	
MW-11	L11070369-13	O111072214391001	07/18/11 14:40	
MW-5	L11070369-05	O111072214384801	07/18/11 14:40	

Report Name: BLANK_SUMMARY
PDF File ID: 2088994
Report generated 07/25/2011 14:32

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: O111072214500101
Prep Date: 07/18/11 15:45
Analyzed Date: 07/18/11 15:45
Analyst: TMM

Work Group: WG370603
Blank Sample ID: WG370603-01
Instrument ID: ORION-710A1
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
MW-30	L11070369-35	O111072215000901	07/18/11 15:45	
MW-32	L11070369-39	O111072215162601	07/18/11 15:45	
MW-29D	L11070369-33	O111072215000301	07/18/11 15:45	
MW-40D	L11070369-57	O111072215175601	07/18/11 15:45	
MW-42S	L11070369-59	O111072215180901	07/18/11 15:45	
MW-39S	L11070369-51	O111072215173101	07/18/11 15:45	
MW-15	L11070369-37	O111072215001701	07/18/11 15:45	
MW-39D	L11070369-53	O111072215174001	07/18/11 15:45	
MW-40S	L11070369-55	O111072215174801	07/18/11 15:45	
LCS2	WG370603-03	O111072214501601	07/18/11 15:45	1
MW-17	L11070369-23	O111072214511101	07/18/11 15:45	
MW-18	L11070369-25	O111072214512001	07/18/11 15:45	
MW-29S	L11070369-31	O111072214514601	07/18/11 15:45	
MW-34S	L11070369-41	O111072215163601	07/18/11 15:45	
MW-36	L11070369-47	O111072215171601	07/18/11 15:45	
LCS	WG370603-02	O111072214501001	07/18/11 15:45	1
MW-35	L11070369-45	O111072215165501	07/18/11 15:45	
LCS	WG370603-04	O111072214502201	07/18/11 15:45	
DUP	WG370603-06	O111072214503801	07/18/11 15:45	
MW-34D	L11070369-43	O111072215164501	07/18/11 15:45	
MW-37	L11070369-49	O111072215172201	07/18/11 15:45	
MW-19	L11070369-27	O111072214512801	07/18/11 15:45	
MW-28	L11070369-29	O111072214513301	07/18/11 15:45	

Report Name: BLANK_SUMMARY
PDF File ID: 2088994
Report generated 07/25/2011 14:32

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11070369
Blank File ID: O111072214471601
Prep Date: 07/18/11 17:20
Analyzed Date: 07/18/11 17:20
Analyst: TMM

Work Group: WG370606
Blank Sample ID: WG370606-01
Instrument ID: ORION-710A1
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
MW-57	L11070369-67	O111072214483701	07/18/11 17:20	
LCS	WG370606-02	O111072214472101	07/18/11 17:20	1
LCS2	WG370606-03	O111072214472601	07/18/11 17:20	1
DUP	WG370606-06	O111072214474801	07/18/11 17:20	
MW-60	L11070369-71	O111072214485401	07/18/11 17:20	
MW-59	L11070369-69	O111072214484501	07/18/11 17:20	
LCS	WG370606-04	O111072214473101	07/18/11 17:20	
MW-42D	L11070369-61	O111072214482301	07/18/11 17:20	
MW-50	L11070369-65	O111072214482801	07/18/11 17:20	

Report Name: BLANK_SUMMARY
PDF File ID: 2088994
Report generated 07/25/2011 14:32

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/18/11 14:40 Sample ID: WG370523-01
Instrument ID: ORION-710A1 Run Date: 07/18/11 14:40 Prep Method: SM4500-F-C
File ID: O111072214360101 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG370523 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION--

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2088995
25-JUL-2011 14:32

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/18/11 15:45 Sample ID: WG370603-01
Instrument ID: ORION-710A1 Run Date: 07/18/11 15:45 Prep Method: SM4500-F-C
File ID: O111072214500101 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG370603 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION- -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2088995
25-JUL-2011 14:32

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11070369 Prep Date: 07/18/11 17:20 Sample ID: WG370606-01
Instrument ID: ORION-710A1 Run Date: 07/18/11 17:20 Prep Method: SM4500-F-C
File ID: O111072214471601 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG370606 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION- -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2088995
25-JUL-2011 14:32

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A1 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG370523 Units: mg/L
QC Key: STD Lot #: STD45233

Sample ID: WG370523-02 LCS File ID: O111072214360901 Run Date: 07/18/2011 14:40
Sample ID: WG370523-03 LCS2 File ID: O111072214361501 Run Date: 07/18/2011 14:40

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	2.05	103	2.00	2.00	100	2.47	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2088996
Report generated: 07/25/2011 14:32

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A1 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG370603 Units: mg/L
QC Key: STD Lot #: STD45233

Sample ID: WG370603-02 LCS File ID: O111072214501001 Run Date: 07/18/2011 15:45
Sample ID: WG370603-03 LCS2 File ID: O111072214501601 Run Date: 07/18/2011 15:45

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	1.96	98.0	2.00	1.93	96.5	1.54	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2088996
Report generated: 07/25/2011 14:32

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11070369 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A1 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG370606 Units: mg/L
QC Key: STD Lot #: STD45233

Sample ID: WG370606-02 LCS File ID: O111072214472101 Run Date: 07/18/2011 17:20
Sample ID: WG370606-03 LCS2 File ID: O111072214472601 Run Date: 07/18/2011 17:20

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	2.00	100	2.00	1.98	99.0	1.01	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2088996
Report generated: 07/25/2011 14:32

LABORATORY REPORT

L11070369

07/28/11 10:55

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Ormet Corporation
PO Box 176

Hannibal, OH 43931
Attention: John Reggi

Project Number: 2173.013
Project:
Site: ORMET CERCLA

P.O. Number: HRDS-68283

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-7	L11070369-01	9040C	1	13-JUL-11
MW-2	L11070369-03	9040C	1	13-JUL-11
MW-5	L11070369-05	9040C	1	13-JUL-11
MW-1	L11070369-07	9040C	1	13-JUL-11
MW-8	L11070369-09	9040C	1	13-JUL-11
MW-10	L11070369-11	9040C	1	13-JUL-11
MW-11	L11070369-13	9040C	1	13-JUL-11
MW-12	L11070369-15	9040C	1	13-JUL-11
MW-14	L11070369-17	9040C	1	13-JUL-11
MW-31	L11070369-19	9040C	1	13-JUL-11
MW-16	L11070369-21	9040C	1	13-JUL-11
MW-17	L11070369-23	9040C	1	13-JUL-11
MW-18	L11070369-25	9040C	1	13-JUL-11
MW-19	L11070369-27	9040C	1	13-JUL-11
MW-28	L11070369-29	9040C	1	13-JUL-11
MW-29S	L11070369-31	9040C	1	13-JUL-11
MW-29D	L11070369-33	9040C	1	13-JUL-11
MW-30	L11070369-35	9040C	1	13-JUL-11
MW-15	L11070369-37	9040C	1	13-JUL-11
MW-32	L11070369-39	9040C	1	13-JUL-11
MW-34S	L11070369-41	9040C	1	13-JUL-11
MW-34D	L11070369-43	9040C	1	13-JUL-11
MW-35	L11070369-45	9040C	1	13-JUL-11
MW-36	L11070369-47	9040C	1	13-JUL-11
MW-37	L11070369-49	9040C	1	13-JUL-11
MW-39S	L11070369-51	9040C	1	13-JUL-11
MW-39D	L11070369-53	9040C	1	13-JUL-11
MW-40S	L11070369-55	9040C	1	13-JUL-11

LABORATORY REPORT

L11070369

07/28/11 10:55

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-40D	L11070369-57	9040C	1	13-JUL-11
MW-42S	L11070369-59	9040C	1	13-JUL-11
MW-42D	L11070369-61	9040C	1	13-JUL-11
MW-50	L11070369-65	9040C	1	13-JUL-11
MW-57	L11070369-67	9040C	1	13-JUL-11
MW-59	L11070369-69	9040C	1	13-JUL-11
MW-60	L11070369-71	9040C	1	13-JUL-11

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-01**
Client ID: **MW-7**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 16:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414000601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.79			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-03**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414001301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.34			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-05**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 10:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414001601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.00			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-07**
Client ID: **MW-1**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414002001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.90			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-09**
Client ID: **MW-8**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414002701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.35			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-11**
Client ID: **MW-10**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 15:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.05			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-13**
Client ID: **MW-11**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/11/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.75			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-15**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414003901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.38			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-17**
Client ID: **MW-14**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 09:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414004301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.61			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-19**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414004601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.61			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-21**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414005201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.20			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-23**
Client ID: **MW-17**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 10:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414005801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.63			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-25**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 14:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.66			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-27**
Client ID: **MW-19**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.08			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-29**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 13:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414010901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.84			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-31**
Client ID: **MW-29S**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414011301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.10			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-33**
Client ID: **MW-29D**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414011901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.47			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-35**
Client ID: **MW-30**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/12/2011 12:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414012301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.35			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-37**
Client ID: **MW-15**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 11:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414013001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.61			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-39**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG370286**
Collect Date: **07/13/2011 12:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:50**
Cal Date:
Run Date: **07/14/2011 12:50**
File ID: **OS11071414013901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.88			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-41**
Client ID: **MW-34S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 18:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414042101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.24			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-43**
Client ID: **MW-34D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414042401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.06			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-45**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 11:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.27			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-47**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 12:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.49			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-49**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 11:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414043801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.32			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-51**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414044201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.96			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-53**
Client ID: **MW-39D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414044601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.44			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-55**
Client ID: **MW-40S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/11/2011 14:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414045001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.06			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-57**
Client ID: **MW-40D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/11/2011 14:40**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414045401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.99			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-59**
Client ID: **MW-42S**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.01			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-61**
Client ID: **MW-42D**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 16:40**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.87			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-65**
Client ID: **MW-50**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 13:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414050801**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.32			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-67**
Client ID: **MW-57**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414051201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.54			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-69**
Client ID: **MW-59**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/12/2011 17:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414052001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.96			

Report Number: **L11070369**
Report Date : **July 28, 2011**

Sample Number: **L11070369-71**
Client ID: **MW-60**
Matrix: **Water**
Workgroup Number: **WG370287**
Collect Date: **07/13/2011 13:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **HJR**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **07/14/2011 12:35**
Cal Date:
Run Date: **07/14/2011 12:35**
File ID: **OS11071414052301**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.01			

Microbac Laboratories Inc.
Analyst Listing
July 28, 2011

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE	AML - TONY M. LONG	AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT	BRG - BRENDA R. GREGORY	CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS	CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD
CLW - CHARISSA L. WINTERS	CPD - CHAD P. DAVIS	CS - CODY M. STRAHLER
CSH - CHRIS S. HILL	DDE - DEBRA D. ELLIOTT	DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER	DHG - DEBORAH H. GRIFFITHS	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR	ECL - ERIC C. LAWSON	EDL - ERIN D. LONG
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JAL - JOHN A. LENT	JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON	JKT - JANE K. THOMPSON	JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS	JWS - JACK W. SHEAVES	JYH - JI Y. HU
KEB - KATIE E. BARNES	KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT	RAH - ROY A. HALSTEAD	REK - BOB E. KYER
RLB - BOB BUCHANAN	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SJP - SUZANNE J. PAUGH	SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WJB - WILL J. BEASLEY	WTD - WADE T. DELONG

Microbac Laboratories Inc.
List of Valid Qualifiers
July 28, 2011

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

COC No. A 25432

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: HYDROSYSTEMS MANAGEMENT, INC.

Project Contact: CLEASON SMITH

Contact Phone #: 724-587-5690

Turn Around Requirements: STD.

Location: HANNIBAL, O.

Project ID: ORMET CERCLA

Sampler (print): CLEASON SMITH

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

ADDITIONAL REQUIREMENTS

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs (PCE) (G-40-S)	Cyanide-total (A-250-B)	Cyanide-WAD (A-250B)	Cyanide-Amenable (A-250B)	Dissolved Metals (P-500-W)	General Chemistry (P-250-W)	PCBs (A-1000-W)								TOTAL # (LAB USE)
MW-7		X	7-11-11	1630	W				1	1	1	1	1									
MW-2			7-12-11	1120				2	1	1	1	1	1									
MW-5			7-12-11	1045				2	1	1	1	1	1									
MW-1			7-12-11	945					1	1	1	1	1									
MW-8			7-11-11	1500					1	1	1	1	1									
MW-10			7-11-11	1545					1	1	1	1	1									
MW-11			7-11-11	1620					1	1	1	1	1									
MW-12			7-13-11	1000					1	1	1	1	1	2								
MW-14			7-13-11	930					1	1	1	1	1									
MW-31			7-13-11	1100				2	1	1	1	1	1									
MW-16			7-12-11	1230					1	1	1	1	1									
MW-17			7-13-11	1020					1	1	1	1	1									
MW-18			7-12-11	1400				2	1	1	1	1	1									
MW-19			7-13-11	1300					1	1	1	1	1									
MW-28			7-12-11	1320					1	1	1	1	1									
MW-29S			7-12-11	1200					1	1	1	1	1									
MW-29D			7-12-11	1145					1	1	1	1	1									
MW-30			7-12-11	1250				2	1	1	1	1	1									
MW-15			7-13-11	1150					1	1	1	1	1									
MW-32		V	7-13-11	1230	↓				1	1	1	1	1									

Microbac OVD 221000016561
Received: 07/13/2011 16:41
By: ANTHONY MOSSBURG

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	7-13-11	3:00pm	[signature] 7-13-11 3:30	[signature]	7-13-11	4:45	

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

L110170369 / 207 total pages

COC No. A 25434

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Hydrosystems Management, Inc.

Project Contact: Cleason Smith

Contact Phone #: 724-587-5690

Turn Around Requirements: Standard

Location: Hannibal, Ohio

Project ID: Ormet CERCLA

Sampler (print): Cleason Smith

Signature: Cleason Smith

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☐ Other

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	VOCs (PCE) (6-40-S)	Cyanide - total (A-250-B)	Cyanide - WAD (A-250-B)	Cyanide - Amenable (A-250-B)	Dissolved Metals (P-500-W)	General Chemistry (P-250-W)	PCBs (A-1000-W)									TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
MW-34S		X	7-12-11	1800	W				1	1	1	1	1											
MW-34D		↓	7-12-11	1750	W				1	1	1	1	1											
MW-35			7-13-11	1115	↓				1	1	1	1	1											
MW-36			7-13-11	1215					1	1	1	1	1											
MW-37			7-13-11	1130					1	1	1	1	1											
MW-39S			7-12-11	1730					1	1	1	1	1											
MW-39D			7-12-11	1715					1	1	1	1	1											
MW-40S			7-11-11	1445					1	1	1	1	1											
MW-40D			7-11-11	1440					1	1	1	1	1											
MW-42S			7-12-11	1700					1	1	1	1	1											
MW-42D			7-12-11	1640					1	1	1	1	1											
MW-44S			7-12-11	1030										2										
MW-44D			7-12-11	1015										2										
MW-50			7-12-11	1300				2	1	1	1	1	1											
MW-57			7-13-11	1030					1	1	1	1	1											
MW-59			7-12-11	1745					1	1	1	1	1											
MW-60		↓	7-13-11	1315	↓				1	1	1	1	1											

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Cleason Smith	7-13-11	3:00pm	7-13-11 3:30		7-13-11	4:45	

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: (Signature)	Date	Time	Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 2 of 2

Microbac

Laboratory Report Number: L11110603

John Reggi
Ormet Corporation
PO Box 176
Hannibal, OH 43931

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac's Ohio Valley Division (OVD). If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed below.

This report was reviewed on December 07 2011

Amanda Fickiesen

Amanda Fickiesen – Client Services Specialist
(740) 373-4071
Amanda.Fickiesen@microbac.com

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

This report was certified on December 07 2011

David E. Vandenberg

David Vandenberg – Managing Director

State of Origin: OH
Accrediting Authority: N/A ID:N/A
QAPP: Microbac OVD

Microbac

Lab Report #: L11110603
Lab Project #: 2173.013
Project Name:
Lab Contact: Amanda Fickiesen

Record of Sample Receipt and Inspection

Comments/Discrepancies

This is the record of the shipment conditions and the inspection records for the samples received and reported as a sample delivery group (SDG). All of the samples were inspected and observed to conform to our receipt policies, except as noted below.

There were no discrepancies.

Discrepancy	Resolution

Coolers

Cooler #	Temperature Gun	Temperature	COC #	Airbill #
0016516	H	5.0		
0013496	H	4.0		

Inspection Checklist

#	Question	Result
1	Were shipping coolers sealed?	Yes
2	Were custody seals intact?	Yes
3	Were cooler temperatures in range of 0-6?	Yes
4	Was ice present?	Yes
5	Were COC's received/information complete/signed and dated?	Yes
6	Were sample containers intact and match COC?	Yes
7	Were sample labels intact and match COC?	Yes
8	Were the correct containers and volumes received?	Yes
9	Were samples received within EPA hold times?	Yes
10	Were correct perservatives used? (water only)	Yes
11	Were pH ranges acceptable? (voa's excluded)	Yes
12	Were VOA samples free of headspace (less than 6mm)?	Yes

Microbac

Lab Report #: L11110603
Lab Project #: 2173.013
Project Name:
Lab Contact: Amanda Fickiesen

Samples Received

Client ID	Laboratory ID	Date Collected	Date Received
MW-2	L11110603-01	11/15/2011 15:30	11/16/2011 15:31
MW-2	L11110603-02	11/15/2011 15:30	11/16/2011 15:31
MW-5	L11110603-03	11/15/2011 15:00	11/16/2011 15:31
MW-5	L11110603-04	11/15/2011 15:00	11/16/2011 15:31
MW-12	L11110603-05	11/16/2011 10:00	11/16/2011 15:31
MW-12	L11110603-06	11/16/2011 10:00	11/16/2011 15:31
MW-16	L11110603-07	11/15/2011 16:00	11/16/2011 15:31
MW-16	L11110603-08	11/15/2011 16:00	11/16/2011 15:31
MW-56	L11110603-09	11/15/2011 16:15	11/16/2011 15:31
MW-56	L11110603-10	11/15/2011 16:15	11/16/2011 15:31
MW-18	L11110603-11	11/15/2011 16:45	11/16/2011 15:31
MW-18	L11110603-12	11/15/2011 16:45	11/16/2011 15:31
MW-28	L11110603-13	11/15/2011 16:20	11/16/2011 15:31
MW-28	L11110603-14	11/15/2011 16:20	11/16/2011 15:31
MW-31	L11110603-15	11/16/2011 09:45	11/16/2011 15:31
MW-31	L11110603-16	11/16/2011 09:45	11/16/2011 15:31
MW-51	L11110603-17	11/16/2011 10:00	11/16/2011 15:31
MW-51	L11110603-18	11/16/2011 10:00	11/16/2011 15:31
MW-32	L11110603-19	11/16/2011 11:45	11/16/2011 15:31
MW-32	L11110603-20	11/16/2011 11:45	11/16/2011 15:31
MW-35	L11110603-21	11/16/2011 10:50	11/16/2011 15:31
MW-35	L11110603-22	11/16/2011 10:50	11/16/2011 15:31
MW-36	L11110603-23	11/16/2011 11:20	11/16/2011 15:31
MW-36	L11110603-24	11/16/2011 11:20	11/16/2011 15:31
MW-37	L11110603-25	11/16/2011 11:00	11/16/2011 15:31
MW-37	L11110603-26	11/16/2011 11:00	11/16/2011 15:31
MW-39S	L11110603-27	11/16/2011 10:30	11/16/2011 15:31
MW-39S	L11110603-28	11/16/2011 10:30	11/16/2011 15:31
MW-44S	L11110603-29	11/15/2011 14:30	11/16/2011 15:31
MW-44D	L11110603-30	11/16/2011 14:10	11/16/2011 15:31

Login Number: L11110603
Department: Volatiles
Analyst: Anthony Canter

METHOD

Preparation SW-846 5030C/5035A

Analysis SW-846 8260B

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 15%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: The MS/MSD results were not associated with this sample delivery group (SDG), due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac Laboratories recommends site specific MS/MSD samples to avoid possible data qualifications.

SAMPLES

Internal Standards: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Other: None.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak. In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak. This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline. There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected

via manual procedures.

Reason #5: Miscellaneous. Other situations involving integration errors may require in-depth review and technical judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Managing Director or the QAO will be required.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Narrative ID: 39346
Approved By: Michael Albertson

Login Number: L11110603
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis SW846 9040C,9045D/EPA 150.1/SM4500-H B (pH)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 39109
Approved By: Deanna Hesson

Login Number: L11110603
Department: General Chromatography
Analyst: Eric Lawson

METHOD

Analysis SW-846 8082A

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: For all compounds that yielded a %RSD greater than 20%, linear or higher order equations were applied. All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Continuing Calibration and Tune: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Matrix Spikes: There were no MS/MSD results associated with this sample delivery group, due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD. Microbac recommends site specific MS/MSD samples to avoid possible data qualification.

SAMPLES

Samples: All acceptance criteria were met.

Surrogates: All acceptance criteria were met.

Manual Integration Reason Codes

Reason #1: Data System Fails to Select Correct Peak In some cases the chromatography system selects and integrates the 'wrong peak'. In this case the analyst must correct the selection and force the system to integrate the proper peak. Other times the system may miss the peak
completely.

Reason #2: Data System Splits the Peak Incorrectly or Integrates a False Peak as a Rider Peak This phenomena is common at low concentrations where the signal:noise ratio is low. A single compound (peak) is incorrectly split into multiple peaks or integrated as a main peak with one or more rider peaks resulting in low area
counts for the target compound.

Reason #3: Improperly Integrated Isomers and/or coeluting compounds. This system often fails to distinguish coeluting compounds and or isomers. The integration areas and concentrations are wrong, and they must be corrected by manual integration. Prime examples are benzo(k)fluoranthene and
benzo(b)fluoranthene which are often unresolved and integrated improperly when both are present at low concentrations in standards or samples.

Reason #4: System Establishes Incorrect Baseline There are numerous situations in chromatography where the system establishes the baseline incorrectly. Some baseline errors will be obvious to the analyst and should be corrected via manual procedures.

Reason #5: Miscellaneous Other situations involving integration errors may require in-depth review and technical

judgment. These cases should be brought to the attention of the laboratory management. If the form of manual integration is not clearly covered by these four cases, then review and approval by the Laboratory Director or the QA/QC Supervisor will be required.

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Narrative ID: 38969
Approved By: Mike Cochran

Login Number: L11110603
Department: Metals
Analyst: Sheri Pfalzgraf

METHOD

Preparation: SW-846 3005

Analysis: SW-846 6010

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration Verification: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG382964 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG382964 - Client samples 02, 04, 08, 10, 12, 14, 16, 18, 20, and 28 required dilution analyses in order to obtain results for sodium within the linear range.

Narrative ID: 39216
Approved By: Sheri Pfalzgraf

Login Number: L11110603
Department: Metals
Analyst: Ji Hu

METHOD

Preparation: SW-846 3015

Analysis: SW-846 6020

HOLDING TIMES

Sample Preparation: All holding times were met.

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

CALIBRATION

Initial Calibration: All acceptance criteria were met.

Alternate Source Standards: All acceptance criteria were met.

Interference Check Standards: All acceptance criteria were met.

Continuing Calibration: All acceptance criteria were met.

Continuing Calibration Blank: All acceptance criteria were met.

Low Level Check: All acceptance criteria were met.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Serial Dilution/Post Digestion Spikes: WG383598 - All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: WG383598 - Due to high levels of nontarget analytes, all client samples were analyzed at dilutions for all analytes.

Narrative ID: 39429
Approved By: Sheri Pfalzgraf

Login Number: L11110603
Department: Conventionals
Analyst: Jeremy Kinney

METHOD

Analysis SW846 9014/9010C/SM4500-CN-C,E-20th (Cyanide)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: Cyanide-Ammenable is the difference between the total cyanide and the treated cyanide. The LCS is analyzed to show that all of the cyanide is ammenable (the treated portion is ND). The LCS forms cannot calculate cyanide ammenable. The LCS is acceptable.

Matrix Spikes: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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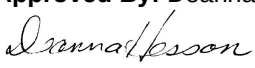
Narrative ID: 39110
Approved By: Deanna Hesson



Login Number: L11110603
Department: Conventionals
Analyst: Dorothy Payne

METHOD

Analysis EPA 120.1/SM2510 B (Conductivity)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 39108
Approved By: Deanna Hesson

Login Number: L11110603
Department: Conventionals
Analyst: Tammy Morris

METHOD

Analysis SM4500-F-C (Fluoride)

HOLDING TIMES

Sample Analysis: All holding times were met.

PREPARATION

Sample preparation proceeded normally.

BATCH QA/QC

Method Blank: All acceptance criteria were met.

Laboratory Control Sample: All acceptance criteria were met.

Duplicates: All acceptance criteria were met.

Matrix Spikes: All acceptance criteria were met.

SAMPLES

Samples: All acceptance criteria were met.

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Narrative ID: 39111
Approved By: Deanna Hesson

Manual Integrations
Microbac Laboratories Inc.

The following report lists the analytes that were manually integrated.
Method: 8082

Sample #	Type	Analyte	File ID	Dilution	Code #

Sample #	Type	Analyte	File ID	Dilution	Code #

Sample #	Type	Analyte	File ID	Dilution	Code #

Method: 8260

Sample #	Type	Analyte	File ID	Dilution	Code #

Sample #	Type	Analyte	File ID	Dilution	Code #

Sample #	Type	Analyte	File ID	Dilution	Code #

Reason Code Descriptions

Code	Description
1	Data system fails to select the correct peak
2	Data system splits the peak incorrectly or integrates a false peak as a rider peak
3	Improperly integrated isomers and/or coeluting compounds
4	System established incorrect baseline
5	Miscellaneous

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG383003**
Collect Date: **11/15/2011 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **11/23/2011 22:40**
Cal Date: **11/08/2011 19:09**
Run Date: **11/23/2011 22:40**
File ID: **6M104177**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	31.8		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	87.0	80	120	
4-Bromofluorobenzene	107	86	115	
Dibromofluoromethane	95.5	86	118	
Toluene-d8	98.4	88	110	

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 15:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811424401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.39			

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 15:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-03**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1300		1.00	0.500

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 15:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113185501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	38.7		0.500	0.250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 15:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	5.46		0.250	0.125

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 15:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-03**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.86		0.250	0.125

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 15:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0688		0.0100	0.00500

Sample Number: **L11110603-02**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 15:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 15:43**
File ID: **P2.112911.154312**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.391		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0234		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-02**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 15:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 17:29**
File ID: **P2.120111.172936**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	257		50.0	25.0

Sample Number: **L11110603-02**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 15:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:15**
File ID: **EL.120511.021543**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0364		0.00500	0.00250

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG383003**
Collect Date: **11/15/2011 15:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **11/23/2011 23:10**
Cal Date: **11/08/2011 19:09**
Run Date: **11/23/2011 23:10**
File ID: **6M104178**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	1.05		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	90.2	80	120	
4-Bromofluorobenzene	106	86	115	
Dibromofluoromethane	94.9	86	118	
Toluene-d8	97.5	88	110	

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811425001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.93			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1230		1.00	0.500

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113190601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	26.8		0.500	0.250

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.58		0.250	0.125

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 15:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-04**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.91		0.100	0.0500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 15:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0469		0.0100	0.00500

Sample Number: **L11110603-04**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 15:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 15:50**
File ID: **P2.112911.155012**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.382		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.00785	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-04**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 15:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 17:36**
File ID: **P2.120111.173626**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	267		50.0	25.0

Sample Number: **L11110603-04**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 15:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:23**
File ID: **EL.120511.022300**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00299	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382602**
Collect Date: **11/16/2011 10:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **11/18/2011 10:00**
Cal Date: **08/26/2011 17:38**
Run Date: **11/21/2011 22:51**
File ID: **9GF66030.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	58.2	30	132	
Decachlorobiphenyl	78.3	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811425601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.36			

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		549		1.00	0.500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113191101**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.769		0.100	0.0500

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:45**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.00527	J	0.0100	0.00500

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 10:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-05**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 10:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-06**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 15:57**
File ID: **P2.112911.155707**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	2.00		0.0100	0.00500
Sodium, Dissolved	7440-23-5	28.4		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-06**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 10:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:30**
File ID: **EL.120511.023017**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811430401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.16			

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 16:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		965		1.00	0.500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 16:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113191701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	29.7		0.500	0.250

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 16:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.13		0.100	0.0500

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 16:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-06**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.08		0.100	0.0500

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 16:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0373		0.0100	0.00500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-08**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:04**
File ID: **P2.112911.160404**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.473		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0344		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-08**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 17:43**
File ID: **P2.120111.174316**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	203		50.0	25.0

Sample Number: **L11110603-08**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 16:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:37**
File ID: **EL.120511.023734**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0288		0.00500	0.00250

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811430901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.16			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 16:15**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		955		1.00	0.500

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 16:15**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113192501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	29.0		0.500	0.250

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 16:15**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.56		0.250	0.125

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 16:15**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-07**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.37		0.100	0.0500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 16:15**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0355		0.0100	0.00500

Sample Number: **L11110603-10**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:11**
File ID: **P2.112911.161100**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.520		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0355		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-10**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 17:50**
File ID: **P2.120111.175007**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	196		50.0	25.0

Sample Number: **L11110603-10**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 16:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:44**
File ID: **EL.120511.024452**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0284		0.00500	0.00250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG383003**
Collect Date: **11/15/2011 16:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **11/23/2011 23:40**
Cal Date: **11/08/2011 19:09**
Run Date: **11/23/2011 23:40**
File ID: **6M104179**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	2.85		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	87.5	80	120	
4-Bromofluorobenzene	105	86	115	
Dibromofluoromethane	94.8	86	118	
Toluene-d8	95.8	88	110	

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811431501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.65			

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 16:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1110		1.00	0.500

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 16:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113193201**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	49.6		0.500	0.250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 16:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **50**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	9.98		0.500	0.250

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 16:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-08**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	3.78		0.250	0.125

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 16:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0606		0.0100	0.00500

Sample Number: **L11110603-12**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:17**
File ID: **P2.112911.161753**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.653		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0372		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-12**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 17:56**
File ID: **P2.120111.175658**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	250		50.0	25.0

Sample Number: **L11110603-12**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 16:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:52**
File ID: **EL.120511.025209**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0647		0.00500	0.00250

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811432101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.83			

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/15/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		375		1.00	0.500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/15/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113193601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	0.366		0.100	0.0500

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/15/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.0708		0.0100	0.00500

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/15/2011 16:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-09**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0640		0.0100	0.00500

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/15/2011 16:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0114		0.0100	0.00500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-14**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/15/2011 16:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:24**
File ID: **P2.112911.162447**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5		U	0.0100	0.00500
Sodium, Dissolved	7440-23-5	55.6		0.500	0.250
Vanadium, Dissolved	7440-62-2		U	0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-14**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/15/2011 16:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 02:59**
File ID: **EL.120511.025926**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG383003**
Collect Date: **11/16/2011 09:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **11/24/2011 00:11**
Cal Date: **11/08/2011 19:09**
Run Date: **11/24/2011 00:11**
File ID: **6M104180**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	36.2		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	86.6	80	120	
4-Bromofluorobenzene	107	86	115	
Dibromofluoromethane	93.7	86	118	
Toluene-d8	97.2	88	110	

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811432601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.54			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1330		1.00	0.500

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113194201**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	41.4		0.500	0.250

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.86		0.250	0.125

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 09:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-10**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.46		0.100	0.0500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 09:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0511		0.0100	0.00500

Sample Number: **L11110603-16**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 09:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:34**
File ID: **P2.112911.163440**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.359		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0337		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-16**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 09:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 18:24**
File ID: **P2.120111.182427**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	290		50.0	25.0

Sample Number: **L11110603-16**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 09:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:06**
File ID: **EL.120511.030644**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0283		0.00500	0.00250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG383003**
Collect Date: **11/16/2011 10:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B/5030C/5035**
Analytical Method: **8260B**
Analyst: **ADC**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS6**
Prep Date: **11/24/2011 00:41**
Cal Date: **11/08/2011 19:09**
Run Date: **11/24/2011 00:41**
File ID: **6M104181**

Analyte	CAS. Number	Result	Qual	RL	MDL
Tetrachloroethene	127-18-4	28.7		1.00	0.250

Surrogate	% Recovery	Lower	Upper	Qual
1,2-Dichloroethane-d4	87.6	80	120	
4-Bromofluorobenzene	104	86	115	
Dibromofluoromethane	94.8	86	118	
Toluene-d8	95.9	88	110	

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811433101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.53			

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1170		1.00	0.500

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113194701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	41.6		0.500	0.250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	2.77		0.100	0.0500

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 10:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-11**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.715		0.100	0.0500

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 10:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0428		0.0100	0.00500

Sample Number: **L11110603-18**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:41**
File ID: **P2.112911.164134**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.387		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0354		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-18**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 18:31**
File ID: **P2.120111.183116**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	297		50.0	25.0

Sample Number: **L11110603-18**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 10:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:14**
File ID: **EL.120511.031402**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0277		0.00500	0.00250

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811433601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.88			

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		1330		1.00	0.500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **5**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113195501**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	49.9		0.500	0.250

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	4.00		0.250	0.125

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 11:45**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-12**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.73		0.100	0.0500

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 11:45**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0545		0.0100	0.00500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-20**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 11:45**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 16:48**
File ID: **P2.112911.164828**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	1.30		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0642		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-20**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 11:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 18:38**
File ID: **P2.120111.183805**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	276		50.0	25.0

Sample Number: **L11110603-20**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 11:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:21**
File ID: **EL.120511.032121**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0280		0.00500	0.00250

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811434101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.39			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 10:50**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		382		1.00	0.500

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 10:50**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113200401**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	3.83		0.100	0.0500

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 10:50**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.16		0.100	0.0500

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 10:50**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **10**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-13**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	1.07		0.100	0.0500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 10:50**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0123		0.0100	0.00500

Sample Number: **L11110603-22**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:50**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 17:25**
File ID: **P2.112911.172519**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.874		0.0100	0.00500
Sodium, Dissolved	7440-23-5	37.8		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.00634	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-22**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 10:50**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:43**
File ID: **EL.120511.034353**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.00492	J	0.00500	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811434701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.37			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		650		1.00	0.500

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **2**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113201101**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	15.4		0.200	0.100

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **5**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.657		0.0500	0.0250

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 11:20**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **2**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-14**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.217		0.0200	0.0100

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 11:20**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0182		0.0100	0.00500

Sample Number: **L11110603-24**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 11:20**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 17:32**
File ID: **P2.112911.173214**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.158		0.0100	0.00500
Sodium, Dissolved	7440-23-5	121		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.00790	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-24**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 11:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:51**
File ID: **EL.120511.035110**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811435201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.15			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		294		1.00	0.500

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **1**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113201701**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	4.19		0.100	0.0500

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	0.217		0.0100	0.00500

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 11:00**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-15**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.0797		0.0100	0.00500

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 11:00**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:45**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0105		0.0100	0.00500

Sample Number: **L11110603-26**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 11:00**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 17:39**
File ID: **P2.112911.173909**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.0971		0.0100	0.00500
Sodium, Dissolved	7440-23-5	34.3		0.500	0.250
Vanadium, Dissolved	7440-62-2	0.00966	J	0.0100	0.00500

U Not detected at or above adjusted sample detection limit
J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L11110603-26**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 11:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 03:58**
File ID: **EL.120511.035827**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2		U	0.00500	0.00250

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811435701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.13			

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382537**
Collect Date: **11/16/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **120.1**
Analytical Method: **120.1**
Analyst: **DLP**
Dilution: **1**
Units: **umhos/cm**

Instrument: **YSI-32**
Prep Date: **11/18/2011 16:00**
Cal Date:
Run Date: **11/18/2011 16:00**
File ID: **32.1111181600-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Conductivity		3610		1.00	0.500

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382516**
Collect Date: **11/16/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **SM4500-F-C**
Analytical Method: **SM4500-F-C**
Analyst: **TMM**
Dilution: **25**
Units: **mg/L**

Instrument: **ORION-710A2**
Prep Date: **11/18/2011 15:52**
Cal Date:
Run Date: **11/18/2011 15:52**
File ID: **O211112113202401**

Analyte	CAS. Number	Result	Qual	RL	MDL
Fluoride	16984-48-8	142		2.50	1.25

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382364**
Collect Date: **11/16/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9014-9010C**
Analytical Method: **9014-9010C**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/17/2011 15:30**
Cal Date: **11/07/2011 14:30**
Run Date: **11/17/2011 15:30**
File ID: **1V.1111171530-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide	57-12-5	3.93		0.250	0.125

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382823**
Collect Date: **11/16/2011 10:30**
Sample Tag: **CN-A**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-C,G**
Analytical Method: **SM4500-CN-C,G**
Analyst: **JBK**
Dilution: **25**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 15:00**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 15:00**
File ID: **1V.1111221500-16**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Amenable to Chlor.	57-12-5	0.477		0.250	0.125

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382589**
Collect Date: **11/16/2011 10:30**
Sample Tag: **WD**

PrePrep Method: **NONE**
Prep Method: **SM4500-CN-I**
Analytical Method: **SM4500-CN-I**
Analyst: **JBK**
Dilution: **1**
Units: **mg/L**

Instrument: **UV-120-1V**
Prep Date: **11/22/2011 14:45**
Cal Date: **11/07/2011 14:30**
Run Date: **11/22/2011 14:45**
File ID: **1V.1111221445-17**

Analyte	CAS. Number	Result	Qual	RL	MDL
Cyanide, Weak/Dissociable	57-12-5	0.0518		0.0100	0.00500

Sample Number: **L11110603-28**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **SLP**
Dilution: **1**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **11/29/2011 09:15**
Run Date: **11/29/2011 17:46**
File ID: **P2.112911.174601**

Analyte	CAS. Number	Result	Qual	RL	MDL
Beryllium, Dissolved	7440-41-7		U	0.00200	0.00100
Manganese, Dissolved	7439-96-5	0.0807		0.0100	0.00500
Vanadium, Dissolved	7440-62-2	0.0183		0.0100	0.00500

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-28**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382964**
Collect Date: **11/16/2011 10:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3005A**
Analytical Method: **6010B**
Analyst: **KHR**
Dilution: **100**
Units: **mg/L**

Instrument: **PE-ICP2**
Prep Date: **11/18/2011 11:28**
Cal Date: **12/01/2011 09:17**
Run Date: **12/01/2011 18:44**
File ID: **P2.120111.184454**

Analyte	CAS. Number	Result	Qual	RL	MDL
Sodium, Dissolved	7440-23-5	950		50.0	25.0

Sample Number: **L11110603-28**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG383598**
Collect Date: **11/16/2011 10:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **11/18/2011 08:38**
Cal Date: **12/04/2011 08:07**
Run Date: **12/05/2011 04:05**
File ID: **EL.120511.040544**

Analyte	CAS. Number	Result	Qual	RL	MDL
Arsenic, Dissolved	7440-38-2	0.0116		0.00500	0.00250

Report Number: **L11110603**
Report Date : **December 7, 2011**

Sample Number: **L11110603-29**
Client ID: **MW-44S**
Matrix: **Water**
Workgroup Number: **WG382602**
Collect Date: **11/15/2011 14:30**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **11/18/2011 10:00**
Cal Date: **08/26/2011 17:38**
Run Date: **11/21/2011 23:09**
File ID: **9GF66031.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.510	0.255
Aroclor-1221	11104-28-2		U	0.510	0.255
Aroclor-1232	11141-16-5		U	0.510	0.255
Aroclor-1242	53469-21-9		U	0.510	0.255
Aroclor-1248	12672-29-6		U	0.510	0.255
Aroclor-1254	11097-69-1		U	0.510	0.255
Aroclor-1260	11096-82-5		U	0.510	0.255

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	61.0	30	132	
Decachlorobiphenyl	82.9	36	144	

U Not detected at or above adjusted sample detection limit

Sample Number: **L11110603-30**
Client ID: **MW-44D**
Matrix: **Water**
Workgroup Number: **WG382602**
Collect Date: **11/16/2011 14:10**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3510C**
Analytical Method: **8082**
Analyst: **ECL**
Dilution: **1**
Units: **ug/L**

Instrument: **HP9**
Prep Date: **11/18/2011 10:00**
Cal Date: **08/26/2011 17:38**
Run Date: **11/21/2011 23:27**
File ID: **9GF66032.F**

Analyte	CAS. Number	Result	Qual	RL	MDL
Aroclor-1016	12674-11-2		U	0.500	0.250
Aroclor-1221	11104-28-2		U	0.500	0.250
Aroclor-1232	11141-16-5		U	0.500	0.250
Aroclor-1242	53469-21-9		U	0.500	0.250
Aroclor-1248	12672-29-6		U	0.500	0.250
Aroclor-1254	11097-69-1		U	0.500	0.250
Aroclor-1260	11096-82-5		U	0.500	0.250

Surrogate	% Recovery	Lower	Upper	Qual
2,4,5,6-Tetrachloro-m-xylene	55.0	30	132	
Decachlorobiphenyl	94.3	36	144	

U Not detected at or above adjusted sample detection limit

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 6M104174
Prep Date: 11/23/11 21:09
Analyzed Date: 11/23/11 21:09
Analyst: ADC

Work Group: WG383003
Blank Sample ID: WG383003-01
Instrument ID: HPMS6
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG383003-02	6M104175	11/23/11 21:39	01
LCS2	WG383003-03	6M104176	11/23/11 22:09	01
MW-2	L11110603-01	6M104177	11/23/11 22:40	01
MW-5	L11110603-03	6M104178	11/23/11 23:10	01
MW-18	L11110603-11	6M104179	11/23/11 23:40	01
MW-31	L11110603-15	6M104180	11/24/11 00:11	01
MW-51	L11110603-17	6M104181	11/24/11 00:41	01

Report Name: BLANK_SUMMARY
PDF File ID: 2241381
Report generated 12/01/2011 15:29

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/23/11 21:09 Sample ID: WG383003-01
Instrument ID: HPMS6 Run Date: 11/23/11 21:09 Prep Method: 5030B/5030C/503
File ID: 6M104174 Analyst: ADC Method: 8260B
Workgroup (AAB#): WG383003 Matrix: Water Units: ug/L
Contract #: Cal ID: HPMS6-08-NOV-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Tetrachloroethene	0.250	1.00	1.00	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
1,2-Dichloroethane-d4	89.6	80 - 120	PASS
4-Bromofluorobenzene	106	86 - 115	PASS
Dibromofluoromethane	95.4	86 - 118	PASS
Toluene-d8	99.6	88 - 110	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name:BLANK
PDF ID: 2241382
01-DEC-2011 15:29

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Analyst: ADC Prep Method: 5030B/5030C/503
Instrument ID: HPMS6 Matrix: Water Method: 8260B
Workgroup (AAB#): WG383003 Units: ug/L
QC Key: STD Lot #: STD48629

Sample ID: WG383003-02 LCS File ID: 6M104175 Run Date: 11/23/2011 21:39
Sample ID: WG383003-03 LCS2 File ID: 6M104176 Run Date: 11/23/2011 22:09

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Tetrachloroethene	20.0	19.2	96.1	20.0	20.1	101	4.63	80 - 124	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	86.2	89.8	80 - 120	PASS
Dibromofluoromethane	93.5	95.5	86 - 118	PASS
4-Bromofluorobenzene	103	105	86 - 115	PASS
Toluene-d8	96.0	99.7	88 - 110	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2239987
Report generated: 12/01/2011 15:29

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 9GF66027.F
Prep Date: 11/18/11 10:00
Analyzed Date: 11/21/11 21:58
Analyst: ECL

Work Group: WG382602
Blank Sample ID: WG382410-01
Instrument ID: HP9
Method: 8082

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382410-02	9GF66028.F	11/21/11 22:16	01
LCS2	WG382410-03	9GF66029.F	11/21/11 22:34	01
MW-12	L11110603-05	9GF66030.F	11/21/11 22:51	01
MW-44S	L11110603-29	9GF66031.F	11/21/11 23:09	01
MW-44D	L11110603-30	9GF66032.F	11/21/11 23:27	01

Report Name: BLANK_SUMMARY
PDF File ID: 2233977
Report generated 11/23/2011 13:52

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/18/11 10:00 Sample ID: WG382410-01
Instrument ID: HP9 Run Date: 11/21/11 21:58 Prep Method: 3510C
File ID: 9GF66027.F Analyst: ECL Method: 8082
Workgroup (AAB#): WG382602 Matrix: Water Units: ug/L
Contract #: Cal ID: HP9-26-AUG-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Aroclor-1016	0.250	0.500	0.500	1	U
Aroclor-1221	0.250	0.500	0.500	1	U
Aroclor-1232	0.250	0.500	0.500	1	U
Aroclor-1242	0.250	0.500	0.500	1	U
Aroclor-1248	0.250	0.500	0.500	1	U
Aroclor-1254	0.250	0.500	0.500	1	U
Aroclor-1260	0.250	0.500	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
2,4,5,6-Tetrachloro-m-xylene	50.7	30 - 132	PASS
Decachlorobiphenyl	68.3	36 - 144	PASS

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2233978
23-NOV-2011 13:52

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Analyst: ECL Prep Method: 3510C
Instrument ID: HP9 Matrix: Water Method: 8082
Workgroup (AAB#): WG382602 Units: ug/L
QC Key: STD Lot #: STD47572

Sample ID: WG382410-02 LCS File ID: 9GF66028.F Run Date: 11/21/2011 22:16
Sample ID: WG382410-03 LCS2 File ID: 9GF66029.F Run Date: 11/21/2011 22:34

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Aroclor-1016	2.50	2.32	92.6	2.50	2.17	86.6	6.71	40 - 140	40	
Aroclor-1260	2.50	2.14	85.5	2.50	1.93	77.0	10.4	40 - 140	40	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
2,4,5,6-Tetrachloro-m-xylene	64.6	61.4	30 - 132	PASS
Decachlorobiphenyl	61.0	48.4	36 - 144	PASS

* EXCEEDS %REC LIMIT

\# EXCEEDS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2233979
Report generated: 11/23/2011 13:52

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: P2.112911.135300
Prep Date: 11/18/11 11:28
Analyzed Date: 11/29/11 13:53
Analyst: SLP

Work Group: WG382964
Blank Sample ID: WG382480-02
Instrument ID: PE-ICP2
Method: 6010B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382480-03	P2.112911.135951	11/29/11 13:59	01
MW-2	L11110603-02	P2.112911.154312	11/29/11 15:43	01
MW-5	L11110603-04	P2.112911.155012	11/29/11 15:50	01
MW-12	L11110603-06	P2.112911.155707	11/29/11 15:57	01
MW-16	L11110603-08	P2.112911.160404	11/29/11 16:04	01
MW-56	L11110603-10	P2.112911.161100	11/29/11 16:11	01
MW-18	L11110603-12	P2.112911.161753	11/29/11 16:17	01
MW-28	L11110603-14	P2.112911.162447	11/29/11 16:24	01
MW-31	L11110603-16	P2.112911.163440	11/29/11 16:34	01
MW-51	L11110603-18	P2.112911.164134	11/29/11 16:41	01
MW-32	L11110603-20	P2.112911.164828	11/29/11 16:48	01
MW-35	L11110603-22	P2.112911.172519	11/29/11 17:25	01
MW-36	L11110603-24	P2.112911.173214	11/29/11 17:32	01
MW-37	L11110603-26	P2.112911.173909	11/29/11 17:39	01
MW-39S	L11110603-28	P2.112911.174601	11/29/11 17:46	01
MW-2	L11110603-02	P2.120111.172936	12/01/11 17:29	DL01
MW-5	L11110603-04	P2.120111.173626	12/01/11 17:36	DL01
MW-16	L11110603-08	P2.120111.174316	12/01/11 17:43	DL01
MW-56	L11110603-10	P2.120111.175007	12/01/11 17:50	DL01
MW-18	L11110603-12	P2.120111.175658	12/01/11 17:56	DL01
MW-31	L11110603-16	P2.120111.182427	12/01/11 18:24	DL01
MW-51	L11110603-18	P2.120111.183116	12/01/11 18:31	DL01
MW-32	L11110603-20	P2.120111.183805	12/01/11 18:38	DL01
MW-39S	L11110603-28	P2.120111.184454	12/01/11 18:44	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2238743
Report generated 12/02/2011 09:56

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/18/11 11:28 Sample ID: WG382480-02
Instrument ID: PE-ICP2 Run Date: 11/29/11 13:53 Prep Method: 3005A
File ID: P2.112911.135300 Analyst: SLP Method: 6010B
Workgroup (AAB#): WG382964 Matrix: Water Units: mg/L
Contract #: Cal ID: PE-ICP-29-NOV-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Beryllium, Dissolved	0.00100	0.00200	0.00200	1	U
Manganese, Dissolved	0.00500	0.0100	0.0100	1	U
Sodium, Dissolved	0.250	0.500	0.500	1	U
Vanadium, Dissolved	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2238744
30-NOV-2011 09:36

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/29/2011 Sample ID: WG382480-03
Instrument ID: PE-ICP2 Run Time: 13:59 Prep Method: 3005A
File ID: P2.112911.135951 Analyst: SLP Method: 6010B
Workgroup (AAB#): WG382964 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD48462 Cal ID: PE-ICP-29-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Beryllium, Dissolved	0.0250	0.0257	103	85 - 115	
Manganese, Dissolved	0.250	0.263	105	85 - 115	
Sodium, Dissolved	25.0	25.8	103	85 - 115	
Vanadium, Dissolved	0.500	0.510	102	85 - 115	

LCS - Modified 03/06/2008
PDF File ID: 2238745
Report generated: 11/30/2011 09:36

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11110603 Cal ID: PE-ICP2 - Worknum: WG382964
Instrument ID: PE-ICP2 Contract #: Method: 6010B
Parent ID: WG382480-01 File ID: P2.112911.145444 Dil: 1 Matrix: WATER
Sample ID: WG382480-04 MS File ID: P2.112911.151535 Dil: 1 Units: mg/L
Sample ID: WG382480-05 MSD File ID: P2.112911.152231 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Beryllium, Total	ND	0.0250	0.0245	98.2	0.0250	0.0257	103	4.61	80 - 120	20	
Manganese, Total	0.0315	0.250	0.290	104	0.250	0.301	108	3.73	80 - 120	20	
Sodium, Total	2.68	25.0	27.5	99.4	25.0	28.9	105	4.76	80 - 120	20	
Vanadium, Total	ND	0.500	0.500	100	0.500	0.518	104	3.66	80 - 120	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2238746
Report generated 11/30/2011 09:36

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: EL.120511.010209
Prep Date: 11/18/11 08:38
Analyzed Date: 12/05/11 01:02
Analyst: JYH

Work Group: WG383598
Blank Sample ID: WG382435-02
Instrument ID: ELAN-ICP
Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382435-03	EL.120511.010926	12/05/11 01:09	01
MW-2	L11110603-02	EL.120511.021543	12/05/11 02:15	DL01
MW-5	L11110603-04	EL.120511.022300	12/05/11 02:23	DL01
MW-12	L11110603-06	EL.120511.023017	12/05/11 02:30	DL01
MW-16	L11110603-08	EL.120511.023734	12/05/11 02:37	DL01
MW-56	L11110603-10	EL.120511.024452	12/05/11 02:44	DL01
MW-18	L11110603-12	EL.120511.025209	12/05/11 02:52	DL01
MW-28	L11110603-14	EL.120511.025926	12/05/11 02:59	DL01
MW-31	L11110603-16	EL.120511.030644	12/05/11 03:06	DL01
MW-51	L11110603-18	EL.120511.031402	12/05/11 03:14	DL01
MW-32	L11110603-20	EL.120511.032121	12/05/11 03:21	DL01
MW-35	L11110603-22	EL.120511.034353	12/05/11 03:43	DL01
MW-36	L11110603-24	EL.120511.035110	12/05/11 03:51	DL01
MW-37	L11110603-26	EL.120511.035827	12/05/11 03:58	DL01
MW-39S	L11110603-28	EL.120511.040544	12/05/11 04:05	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 2242996
Report generated 12/05/2011 10:17

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/18/11 08:38 Sample ID: WG382435-02
Instrument ID: ELAN-ICP Run Date: 12/05/11 01:02 Prep Method: 3015
File ID: EL.120511.010209 Analyst: JYH Method: 6020
Workgroup (AAB#): WG383598 Matrix: Water Units: mg/L
Contract #: Cal ID: ELAN-I-04-DEC-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Arsenic, Dissolved	0.000500	0.00100	0.00100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2242997
05-DEC-2011 10:17

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 12/05/2011 Sample ID: WG382435-03
Instrument ID: ELAN-ICP Run Time: 01:09 Prep Method: 3015
File ID: EL.120511.010926 Analyst: JYH Method: 6020
Workgroup (AAB#): WG383598 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD47574 Cal ID: ELAN-I-04-DEC-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Dissolved	0.0625	0.0646	103	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 2242998
Report generated: 12/05/2011 10:17

Microbac Laboratories Inc.
MATRIX SPIKE AND MATRIX SPIKE DUP (MS/MSD)

Loginnum: L11110603 Cal ID: ELAN-ICP- Worknum: WG383598
Instrument ID: ELAN-ICP Contract #: Method: 6020
Parent ID: WG382435-01 File ID: EL.120511.011643 Dil: 5 Matrix: WATER
Sample ID: WG382435-04 MS File ID: EL.120511.012401 Dil: 5 Units: mg/L
Sample ID: WG382435-05 MSD File ID: EL.120511.013119 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic, Total	0.000628	0.0625	0.0628	99.5	0.0625	0.0625	98.9	0.559	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

WG_MS_MSD_DRYWT - Modified 05/26/2011
PDF File ID: 2242999
Report generated 12/05/2011 10:17

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 1V.1111171530-01
Prep Date: 11/17/11 15:30
Analyzed Date: 11/17/11 15:30
Analyst: JBK

Work Group: WG382364
Blank Sample ID: WG382364-01
Instrument ID: UV-120-1V
Method: 9014-9010C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382364-02	1V.1111171530-02	11/17/11 15:30	
LCS	WG382364-03	1V.1111171530-03	11/17/11 15:30	
MW-2	L11110603-01	1V.1111171530-04	11/17/11 15:30	
MW-5	L11110603-03	1V.1111171530-05	11/17/11 15:30	
MW-12	L11110603-05	1V.1111171530-06	11/17/11 15:30	
MW-16	L11110603-07	1V.1111171530-07	11/17/11 15:30	
MW-56	L11110603-09	1V.1111171530-08	11/17/11 15:30	
MW-18	L11110603-11	1V.1111171530-09	11/17/11 15:30	
MW-28	L11110603-13	1V.1111171530-10	11/17/11 15:30	
MW-31	L11110603-15	1V.1111171530-11	11/17/11 15:30	
MW-51	L11110603-17	1V.1111171530-12	11/17/11 15:30	
MW-32	L11110603-19	1V.1111171530-13	11/17/11 15:30	
MW-35	L11110603-21	1V.1111171530-14	11/17/11 15:30	
MW-36	L11110603-23	1V.1111171530-15	11/17/11 15:30	
MW-37	L11110603-25	1V.1111171530-16	11/17/11 15:30	
MW-39S	L11110603-27	1V.1111171530-17	11/17/11 15:30	
DUP	WG382364-06	1V.1111171530-18	11/17/11 15:30	

Report Name: BLANK_SUMMARY
PDF File ID: 2236309
Report generated 11/28/2011 14:51

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 1V.1111221500-01
Prep Date: 11/22/11 15:00
Analyzed Date: 11/22/11 15:00
Analyst: JBK

Work Group: WG382823
Blank Sample ID: WG382823-01
Instrument ID: UV-120-1V
Method: SM4500-CN-C,G

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382823-02	1V.1111221500-02	11/22/11 15:00	CN-A
MW-2	L11110603-01	1V.1111221500-03	11/22/11 15:00	CN-A
MW-5	L11110603-03	1V.1111221500-04	11/22/11 15:00	CN-A
MW-12	L11110603-05	1V.1111221500-05	11/22/11 15:00	CN-A
MW-16	L11110603-07	1V.1111221500-06	11/22/11 15:00	CN-A
MW-56	L11110603-09	1V.1111221500-07	11/22/11 15:00	CN-A
MW-18	L11110603-11	1V.1111221500-08	11/22/11 15:00	CN-A
MW-28	L11110603-13	1V.1111221500-09	11/22/11 15:00	CN-A
MW-31	L11110603-15	1V.1111221500-10	11/22/11 15:00	CN-A
MW-51	L11110603-17	1V.1111221500-11	11/22/11 15:00	CN-A
MW-32	L11110603-19	1V.1111221500-12	11/22/11 15:00	CN-A
MW-35	L11110603-21	1V.1111221500-13	11/22/11 15:00	CN-A
MW-36	L11110603-23	1V.1111221500-14	11/22/11 15:00	CN-A
MW-37	L11110603-25	1V.1111221500-15	11/22/11 15:00	CN-A
MW-39S	L11110603-27	1V.1111221500-16	11/22/11 15:00	CN-A
DUP	WG382823-04	1V.1111221500-17	11/22/11 15:00	CN-A

Report Name: BLANK_SUMMARY
PDF File ID: 2236305
Report generated 11/28/2011 14:51

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 1V.1111221445-01
Prep Date: 11/22/11 14:45
Analyzed Date: 11/22/11 14:45
Analyst: JBK

Work Group: WG382589
Blank Sample ID: WG382589-01
Instrument ID: UV-120-1V
Method: SM4500-CN-I

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382589-02	1V.1111221445-02	11/22/11 14:45	WD
LCS	WG382589-03	1V.1111221445-03	11/22/11 14:45	WD
MW-2	L11110603-01	1V.1111221445-04	11/22/11 14:45	WD
MW-5	L11110603-03	1V.1111221445-05	11/22/11 14:45	WD
MW-12	L11110603-05	1V.1111221445-06	11/22/11 14:45	WD
MW-16	L11110603-07	1V.1111221445-07	11/22/11 14:45	WD
MW-56	L11110603-09	1V.1111221445-08	11/22/11 14:45	WD
MW-18	L11110603-11	1V.1111221445-09	11/22/11 14:45	WD
MW-28	L11110603-13	1V.1111221445-10	11/22/11 14:45	WD
MW-31	L11110603-15	1V.1111221445-11	11/22/11 14:45	WD
MW-51	L11110603-17	1V.1111221445-12	11/22/11 14:45	WD
MW-32	L11110603-19	1V.1111221445-13	11/22/11 14:45	WD
MW-35	L11110603-21	1V.1111221445-14	11/22/11 14:45	WD
MW-36	L11110603-23	1V.1111221445-15	11/22/11 14:45	WD
MW-37	L11110603-25	1V.1111221445-16	11/22/11 14:45	WD
MW-39S	L11110603-27	1V.1111221445-17	11/22/11 14:45	WD
DUP	WG382589-05	1V.1111221445-19	11/22/11 14:45	WD

Report Name: BLANK_SUMMARY
PDF File ID: 2236313
Report generated 11/28/2011 14:51

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/17/11 15:30 Sample ID: WG382364-01
Instrument ID: UV-120-1V Run Date: 11/17/11 15:30 Prep Method: 9014-9010C
File ID: 1V.1111171530-01 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG382364 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 07-NOV-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2236310
28-NOV-2011 14:51

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/22/11 15:00 Sample ID: WG382823-01
Instrument ID: UV-120-1V Run Date: 11/22/11 15:00 Prep Method: SM4500-CN-C,G
File ID: 1V.1111221500-01 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG382823 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 18-NOV-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Amenable to Chlor.	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2236306
28-NOV-2011 14:51

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/22/11 14:45 Sample ID: WG382589-01
Instrument ID: UV-120-1V Run Date: 11/22/11 14:45 Prep Method: SM4500-CN-I
File ID: 1V.1111221445-01 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG382589 Matrix: Water Units: mg/L
Contract #: Cal ID: UV-120 - 18-NOV-11

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Cyanide, Weak/Dissociable	0.00500	0.0100	0.0100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2236314
28-NOV-2011 14:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/17/2011 Sample ID: WG382364-02
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1111171530-02 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG382364 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120 - 07-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.198	0.198	100	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2236311
Report generated: 11/28/2011 14:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/17/2011 Sample ID: WG382364-03
Instrument ID: UV-120-1V Run Time: 15:30 Prep Method: 9014-9010C
File ID: 1V.1111171530-03 Analyst: JBK Method: 9014-9010C
Workgroup (AAB#): WG382364 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120 - 07-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide	0.0395	0.0401	102	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2236311
Report generated: 11/28/2011 14:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/22/2011 Sample ID: WG382823-02
Instrument ID: UV-120-1V Run Time: 15:00 Prep Method: SM4500-CN-C,G
File ID: 1V.1111221500-02 Analyst: JBK Method: SM4500-CN-C,G
Workgroup (AAB#): WG382823 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120 - 18-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Amenable to Chlor.	19.8	0.00149	0.00753	90 - 110	*

LCS - Modified 03/06/2008
PDF File ID: 2236307
Report generated: 11/28/2011 14:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/22/2011 Sample ID: WG382589-02
Instrument ID: UV-120-1V Run Time: 14:45 Prep Method: SM4500-CN-I
File ID: 1V.1111221445-02 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG382589 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120 - 22-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.198	0.200	101	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2236315
Report generated: 11/28/2011 14:51

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Run Date: 11/22/2011 Sample ID: WG382589-03
Instrument ID: UV-120-1V Run Time: 14:45 Prep Method: SM4500-CN-I
File ID: 1V.1111221445-03 Analyst: JBK Method: SM4500-CN-I
Workgroup (AAB#): WG382589 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD46106 Cal ID: UV-120-18-NOV-11

Analytes	Expected	Found	% Rec	LCS Limits	Q
Cyanide, Weak/Dissociable	0.0395	0.0393	99.5	90 - 110	

LCS - Modified 03/06/2008
PDF File ID: 2236315
Report generated: 11/28/2011 14:51

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: 32.1111181600-01
Prep Date: 11/18/11 16:00
Analyzed Date: 11/18/11 16:00
Analyst: DLP

Work Group: WG382537
Blank Sample ID: WG382537-01
Instrument ID: YSI-32
Method: 120.1

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG382537-02	32.1111181600-02	11/18/11 16:00	
MW-2	L11110603-01	32.1111181600-03	11/18/11 16:00	
MW-5	L11110603-03	32.1111181600-04	11/18/11 16:00	
MW-12	L11110603-05	32.1111181600-05	11/18/11 16:00	
MW-16	L11110603-07	32.1111181600-06	11/18/11 16:00	
MW-56	L11110603-09	32.1111181600-07	11/18/11 16:00	
MW-18	L11110603-11	32.1111181600-08	11/18/11 16:00	
MW-28	L11110603-13	32.1111181600-09	11/18/11 16:00	
MW-31	L11110603-15	32.1111181600-10	11/18/11 16:00	
MW-51	L11110603-17	32.1111181600-11	11/18/11 16:00	
MW-32	L11110603-19	32.1111181600-12	11/18/11 16:00	
MW-35	L11110603-21	32.1111181600-13	11/18/11 16:00	
MW-36	L11110603-23	32.1111181600-14	11/18/11 16:00	
MW-37	L11110603-25	32.1111181600-15	11/18/11 16:00	
MW-39S	L11110603-27	32.1111181600-16	11/18/11 16:00	
DUP	WG382537-06	32.1111181600-17	11/18/11 16:00	
DUP	WG382537-07	32.1111181600-18	11/18/11 16:00	
LCS2	WG382537-03	32.1111181600-19	11/18/11 16:00	

Report Name: BLANK_SUMMARY
PDF File ID: 2233398
Report generated 11/23/2011 09:41

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/18/11 16:00 Sample ID: WG382537-01
Instrument ID: YSI-32 Run Date: 11/18/11 16:00 Prep Method: 120.1
File ID: 32.1111181600-01 Analyst: DLP Method: 120.1
Workgroup (AAB#): WG382537 Matrix: Water Units: umhos/cm
Contract #: Cal ID: YSI-32 -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Conductivity	0.500	1.00	0.632	1	J

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2233399
23-NOV-2011 09:41

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Analyst: DLP Prep Method: 120.1
Instrument ID: YSI-32 Matrix: Water Method: 120.1
Workgroup (AAB#): WG382537 Units: umhos/cm
QC Key: STD Lot #: STD46142

Sample ID: WG382537-02 LCS File ID: 32.1111181600-02 Run Date: 11/18/2011 16:00
Sample ID: WG382537-03 LCS2 File ID: 32.1111181600-19 Run Date: 11/18/2011 16:00

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Conductivity	1410	1390	98.1	1410	1440	102	3.73	90 - 110	10	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2233400
Report generated: 11/23/2011 09:41

Microbac Laboratories Inc.

METHOD BLANK SUMMARY

Login Number: L11110603
Blank File ID: O211112113174401
Prep Date: 11/18/11 15:52
Analyzed Date: 11/18/11 15:52
Analyst: TMM

Work Group: WG382516
Blank Sample ID: WG382516-01
Instrument ID: ORION-710A2
Method: SM4500-F-C

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS2	WG382516-03	O211112113175601	11/18/11 15:52	1
MW-37	L11110603-25	O211112113201701	11/18/11 15:52	
DUP	WG382516-06	O211112113181201	11/18/11 15:52	
MW-2	L11110603-01	O211112113185501	11/18/11 15:52	
MW-36	L11110603-23	O211112113201101	11/18/11 15:52	
MW-39S	L11110603-27	O211112113202401	11/18/11 15:52	
LCS	WG382516-02	O211112113175101	11/18/11 15:52	1
LCS	WG382516-04	O211112113180001	11/18/11 15:52	
MW-18	L11110603-11	O211112113193201	11/18/11 15:52	
MW-51	L11110603-17	O211112113194701	11/18/11 15:52	
MW-35	L11110603-21	O211112113200401	11/18/11 15:52	
MW-5	L11110603-03	O211112113190601	11/18/11 15:52	
MW-12	L11110603-05	O211112113191101	11/18/11 15:52	
MW-16	L11110603-07	O211112113191701	11/18/11 15:52	
MW-56	L11110603-09	O211112113192501	11/18/11 15:52	
MW-28	L11110603-13	O211112113193601	11/18/11 15:52	
MW-32	L11110603-19	O211112113195501	11/18/11 15:52	
MW-31	L11110603-15	O211112113194201	11/18/11 15:52	

Report Name: BLANK_SUMMARY
PDF File ID: 2232089
Report generated 11/22/2011 14:33

Microbac Laboratories Inc.

METHOD BLANK REPORT

Login Number: L11110603 Prep Date: 11/18/11 15:52 Sample ID: WG382516-01
Instrument ID: ORION-710A2 Run Date: 11/18/11 15:52 Prep Method: SM4500-F-C
File ID: O211112113174401 Analyst: TMM Method: SM4500-F-C
Workgroup (AAB#): WG382516 Matrix: Water Units: mg/L
Contract #: Cal ID: ORION- -

Analytes	MDL	RL	Concentration	Dilution	Qualifier
Fluoride	0.0500	0.100	0.100	1	U

MDL Method Detection Limit
RL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 2232090
22-NOV-2011 14:33

Microbac Laboratories Inc.
LABORATORY CONTROL SAMPLE (LCS)

Login Number: L11110603 Analyst: TMM Prep Method: SM4500-F-C
Instrument ID: ORION-710A2 Matrix: Water Method: SM4500-F-C
Workgroup (AAB#): WG382516 Units: mg/L
QC Key: STD Lot #: STD48651

Sample ID: WG382516-02 LCS File ID: O211112113175101 Run Date: 11/18/2011 15:52
Sample ID: WG382516-03 LCS2 File ID: O211112113175601 Run Date: 11/18/2011 15:52

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Fluoride	2.00	2.04	102	2.00	2.00	100	1.98	85 - 115	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 2232091
Report generated: 11/22/2011 14:33

LABORATORY REPORT

L11110603

12/06/11 15:40

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Ormet Corporation
PO Box 176

Hannibal, OH 43931
Attention: John Reggi

Project Number: 2173.013
Project:
Site: REDUCTION PLANT

P.O. Number: HRDS-68283

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
MW-2	L11110603-01	9040C	1	16-NOV-11
MW-5	L11110603-03	9040C	1	16-NOV-11
MW-12	L11110603-05	9040C	1	16-NOV-11
MW-16	L11110603-07	9040C	1	16-NOV-11
MW-56	L11110603-09	9040C	1	16-NOV-11
MW-18	L11110603-11	9040C	1	16-NOV-11
MW-28	L11110603-13	9040C	1	16-NOV-11
MW-31	L11110603-15	9040C	1	16-NOV-11
MW-51	L11110603-17	9040C	1	16-NOV-11
MW-32	L11110603-19	9040C	1	16-NOV-11
MW-35	L11110603-21	9040C	1	16-NOV-11
MW-36	L11110603-23	9040C	1	16-NOV-11
MW-37	L11110603-25	9040C	1	16-NOV-11
MW-39S	L11110603-27	9040C	1	16-NOV-11

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-01**
Client ID: **MW-2**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 15:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811424401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.39			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-03**
Client ID: **MW-5**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 15:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811425001**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.93			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-05**
Client ID: **MW-12**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811425601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.36			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-07**
Client ID: **MW-16**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811430401**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.16			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-09**
Client ID: **MW-56**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:15**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811430901**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.16			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-11**
Client ID: **MW-18**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811431501**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.65			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-13**
Client ID: **MW-28**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/15/2011 16:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811432101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	5.83			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-15**
Client ID: **MW-31**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 09:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811432601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.54			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-17**
Client ID: **MW-51**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811433101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.53			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-19**
Client ID: **MW-32**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:45**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811433601**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.88			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-21**
Client ID: **MW-35**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:50**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811434101**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	7.39			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-23**
Client ID: **MW-36**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:20**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811434701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	8.37			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-25**
Client ID: **MW-37**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 11:00**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811435201**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	6.15			

Report Number: **L11110603**
Report Date : **December 6, 2011**

Sample Number: **L11110603-27**
Client ID: **MW-39S**
Matrix: **Water**
Workgroup Number: **WG382400**
Collect Date: **11/16/2011 10:30**

PrePrep Method: **NONE**
Prep Method: **9040C**
Analytical Method: **9040C**
Analyst: **DLP**
Dilution: **1**
Units: **UNITS**

Instrument: **ORION-4STAR**
Prep Date: **11/17/2011 17:00**
Cal Date:
Run Date: **11/17/2011 17:00**
File ID: **OS11111811435701**

Analyte	CAS. Number	Result	Qual	RL	MDL
pH	10-29-7	9.13			

Microbac Laboratories Inc.
Ohio Valley Division Analyst List
December 7, 2011

ADC - ANTHONY D. CANTER
AJF - AMANDA J. FICKIESEN
ALB - ANNIE L. BROWN
ALV - AMY L. VALENTINE
AML - TONY M. LONG
AZH - AFTER HOURS
BLG - BRENDA L. GREENWALT
BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN
CAF - CHERYL A. FLOWERS
CEB - CHAD E. BARNES
CLC - CHRYS L. CRAWFORD
CLS - CARA L. STRICKLER
CLW - CHARISSA L. WINTERS
CPD - CHAD P. DAVIS
CS - CODY M. STRAHLER
CSH - CHRIS S. HILL
DDE - DEBRA D. ELLIOTT
DEV - DAVID E. VANDENBERG
DGB - DOUGLAS G. BUTCHER
DHG - DEBORAH H. GRIFFITHS
DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER
DLP - DOROTHY L. PAYNE
DLR - DIANNA L. RAUCH
DSM - DAVID S. MOSSOR
ECL - ERIC C. LAWSON
EDL - ERIN D. LONG
ERP - ERIN R. PORTER
FJB - FRANCES J. BOLDEN
HAV - HEMA VILASAGAR
HJR - HOLLY J. REED
JAL - JOHN A. LENT
JBK - JEREMY B. KINNEY
JDH - JUSTIN D. HESSON
JKS - JANE K. SCHAAD
JLL - JOHN L. LENT
JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES
JYH - JI Y. HU
KEB - KATIE E. BARNES
KHR - KIM H. RHODES
KRA - KATHY R. ALBERTSON
LKN - LINDA K. NEDEFF
LSB - LESLIE S. BUCINA
MDA - MIKE D. ALBERTSON
MDC - MIKE D. COCHRAN
MES - MARY E. SCHILLING
MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR
MSW - MATT S. WILSON
PDM - PIERCE D. MORRIS
PWD - PAUL W. DENT
RAH - ROY A. HALSTEAD
REK - BOB E. KYER
RLB - BOB BUCHANAN
RLK - ROBIN L. KLINGER
RWC - RODNEY W. CAMPBELL
SJP - SUZANNE J. PAUGH
SLM - STEPHANIE L. MOSSBURG
SLP - SHERI L. PFALZGRAF
TIP - TAE I. PARRISH
TMB - TIFFANY M. BAILEY
TMM - TAMMY M. MORRIS
VC - VICKI COLLIER
WJB - WILL J. BEASLEY
WTD - WADE T. DELONG

Microbac Laboratories Inc.
List of Valid Qualifiers
December 07, 2011

Qualkey: STD_ND=U

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria failed. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Not detected at or above adjusted sample detection limit
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

*****Special Notes for Organic Analytes**

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.

L11110603 / 96 total pages

COC No. A 27899

158 Starlite Drive
Marietta, OH 45750

Microbac

CHAIN-OF-CUSTODY RECORD

Phone: 740-373-4071
Fax: 740-373-4835

Company Name: Ormet Primary Aluminum Corporation

Project Contact: Cleason Smith

Contact Phone #: 724-587-5690

Turn Around Requirements: Standard

Location: Hannibal, Ohio

Project ID: HM00327

Sampler (print): Cleason Smith

Signature: [signature]

Program: ☐ CWA ☐ RCRA ☐ DOD ☐ AFCEE ☒ Other CERCLA

Sample I.D. No.	Comp	Grab	Date	Time	Matrix*	NUMBER OF CONTAINERS	Hold	PCBs - 1L Amber Glass	Gen. Chem - 250 ML Plastic	Cyanides - 250 ML Amber Glass	Diss. Metals - 500 ML Plastic	PCE - 40 ML Glass	TOTAL # (LAB USE)	ADDITIONAL REQUIREMENTS
~~MW-77~~		~~X~~	~~11/15/11~~	~~[illegible]~~	~~Water~~									
~~MW-75~~			~~11/15/11~~	~~[illegible]~~										
~~MW-12~~			~~11/16/11~~	~~940~~										
~~MW-16~~			~~11/15/11~~	~~[illegible]~~										
MW-2		X	11/15/11	1530	Water	5			1	1	1	2		Call if any questions - 724-587-5690
MW-5			11/15/11	1500		5			1	1	1	2		
MW-12			11/16/11	1000		5		2	1	1	1			
MW-16			11/15/11	1600		3			1	1	1			
MW-56			11/15/11	1615		3			1	1	1			
MW-18			11/15/11	1645		5			1	1	1	2		
MW-28			11/15/11	1620		3			1	1	1			
MW-31			11/16/11	945		5			1	1	1	2		
MW-51			11/16/11	1000		5			1	1	1	2		
MW-32			11/16/11	1145		3			1	1	1			
MW-35			11/16/11	1050		3			1	1	1			
MW-36			11/16/11	1120		3			1	1	1			
MW-37			11/16/11	1100		3			1	1	1			
MW-39S			11/16/11	1030		3			1	1	1			
MW-44S			11/15/11	1430		2		2						
MW-44D			11/15/11	1410		2		2						

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	11/16/11	1:00pm			11-16-11	1410	[signature]
Relinquished by: (Signature) [signature]	Date 11-16-11	Time 1525	Rec (Sig				

221000020307

Microbac OVD
Received: 11/16/2011 15:31
By: JOCK SHEAVES
[signature]

Remarks:

*Water (W), Soil (S), Solid Waste (SD), Unknown (X)

Page 1 of 1

Generated: 12/07/2011 14:03

APPENDIX C

DATA VALIDATION SUMMARY REPORT FOR 2011 MONITORING EVENTS

Hydrosystems Management, Inc.

Appendix C
2011 Data Validation Summary
Ormet Primary Aluminum Corporation
Hannibal, Ohio

Laboratory Project Numbers: All 2011 groundwater analyses performed by Microbac Laboratories; **April 2011** Lab No. L11040220; **July 2011** Lab No. L11070369; **November 2011** Lab No. L11110603.

The following apply to all samples collected during 2011 unless specific sampling events are indicated.

General

Holding Times:
Sample Preparation: All holding times were met.
Sample Analysis: With the exception of pH (to be analyzed within 15 minutes of sample collection), all holding times were met. pH also analyzed in the field at time of sample collection.

Preparation: Sample preparation proceeded normally for all samples.

Calibration
Initial Calibration (PCE, PCBs): For all compounds that yielded a % greater than 15% (PCE) or 20% (PCBs), linear or higher order equations were applied. All acceptance criteria were met.
Initial Calibration (Metals): All acceptance criteria were met.
Alternative Source Standards (PCE, PCBs, Metals): All acceptance criteria were met.
Continuing Calibration and Tune (PCE, PCBs): All acceptance criteria were met.
Interference Check Standards (Metals): All acceptance criteria were met.
Continuing Calibration Verification (Metals): All acceptance criteria were met. Due to a continuing calibration verification failure for beryllium on April 12, 2011, all batch QA/QC and client samples 2, 4, 6, 8, 10, 12, 16, 18, 20, 22, 24, 26, 28, 30, and 32 were reanalyzed for beryllium on a later calibration.
Continuing Calibration Blank (Metals): All acceptance criteria were met. Due to continuing calibration blank failure for sodium on July 18, 2011, samples 28, 30, 32, 34, and 36 were reanalyzed on a later calibration for sodium.

Batch QA/QC
Method Blank (All Parameters): All acceptance criteria were met.
Laboratory Control Sample (LCS; All Parameters except Amenable Cyanide): All acceptance criteria were met. The LCS forms cannot calculate cyanide amenable.
Matrix Spikes (All Parameters except PCE and PCBs): All acceptance criteria were met.
Matrix Spikes (PCE and PCBs): There were no MS/MSD results associated with the sample delivery groups due to insufficient volume of sample. The laboratory included an LCS and LCS duplicate in the preparation batch in lieu of the NELAC prescribed MS/MSD.

Serial Dilution/Post Digestion Spikes (Metals): Certain samples required dilution analyses in order to obtain results for sodium within the linear range. All acceptance criteria were met.

Field Duplicate Relative Percent Difference (RPDs): RPD for field duplicate sample results within +/- 20% except for the following:

April 2011: (MW-18 and MW-36 duplicated): All duplicate sample values within 20% of primary sample values.

July 2011: (MW-17, MW-19, MW-30,. MW-39S duplicated): **MW-17** total cyanide at 1.12 mg/L vs. 7.42 mg/L, reanalysis reported total cyanide 2.98 mg/L vs. 3.25 mg/L meeting criteria; **MW-17** amenable cyanide at 1.11 mg/L vs. 7.42 mg/L, 1.11 mg/L more consistent with historical range; **MW-17** fluoride at 12.4 mg/L vs. 69.1 mg/L, reanalysis reported fluoride at 11.2 mg/L vs. 11.6 mg/L meeting criteria; **MW-30** total cyanide at 2.36 mg/L vs. 1.30 mg/L, either value within historical range; **MW-30** amenable cyanide at 2.36 mg/L vs. 1.29 mg/L, representativeness of either value questionable; **MW-39S** total cyanide at 0.285 mg/L vs. 8.31 mg/L, reanalysis reported total cyanide at 6.67 mg/L vs. 7.58 mg/L meeting criteria; **MW-39S** amenable cyanide at 0.284 mg/L vs. 8.31 mg/L, 0.284 mg/L more consistent with historical range.

November 2011: (MW-16 and MW-31 duplicated): **MW-16** amenable cyanide at 1.08 mg/L vs. 1.37 mg/L, either value within historical range; **MW-31** total cyanide at 3.86 mg/L vs. 2.77 mg/L, either value within historical range; **MW-31** amenable cyanide at 1.46 mg/L vs. 0.715 mg/L, either value within historical range.

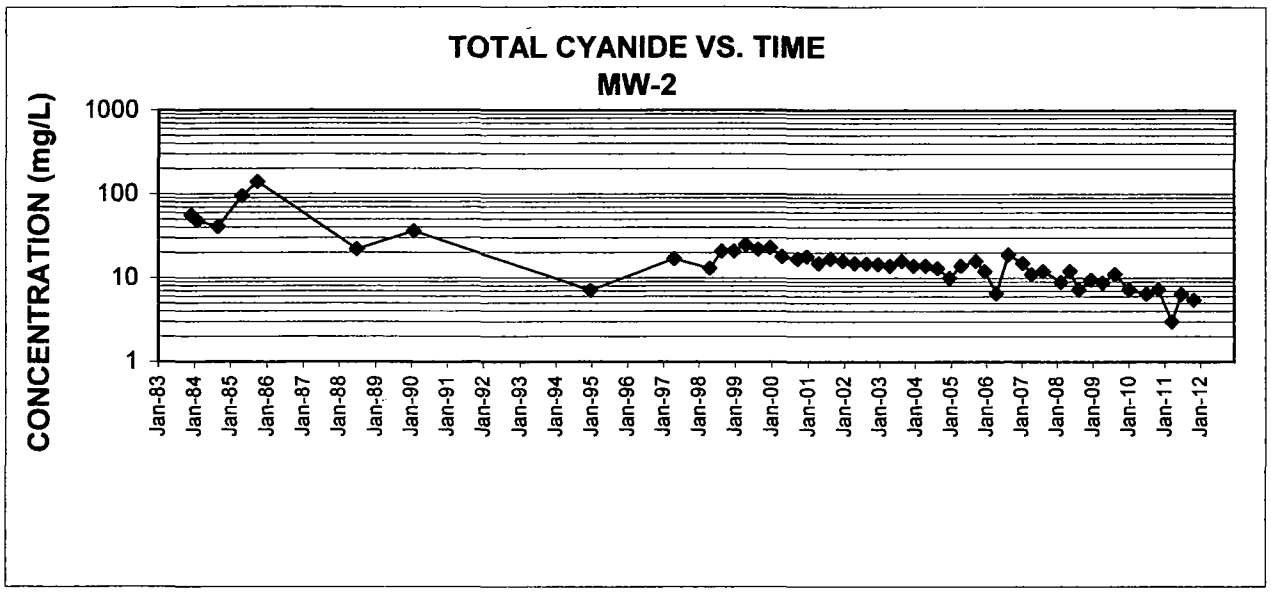
APPENDIX D

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
CONCENTRATION (mg/L)
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
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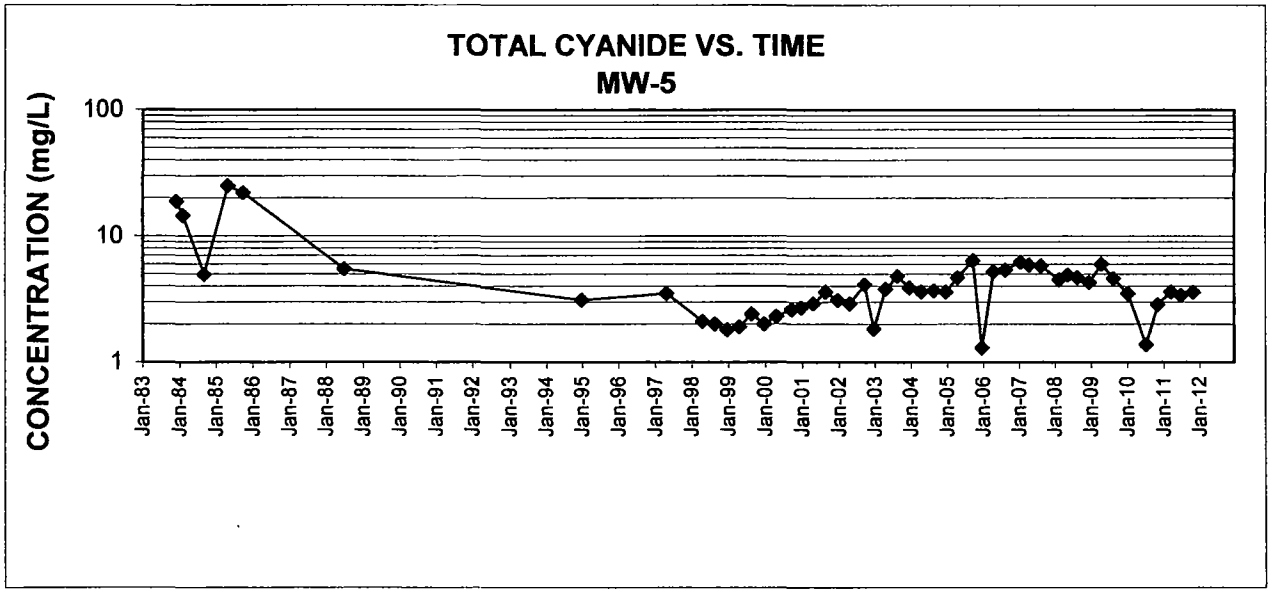
Jan-10
Jan-11
Jan-12


TOTAL CYANIDE VS. TIME
MW-5
CONCENTRATION (mg/L)
100
10
1
Jan-83
Jan-84
Jan-85
Jan-86
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Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
Jan-98
Jan-99
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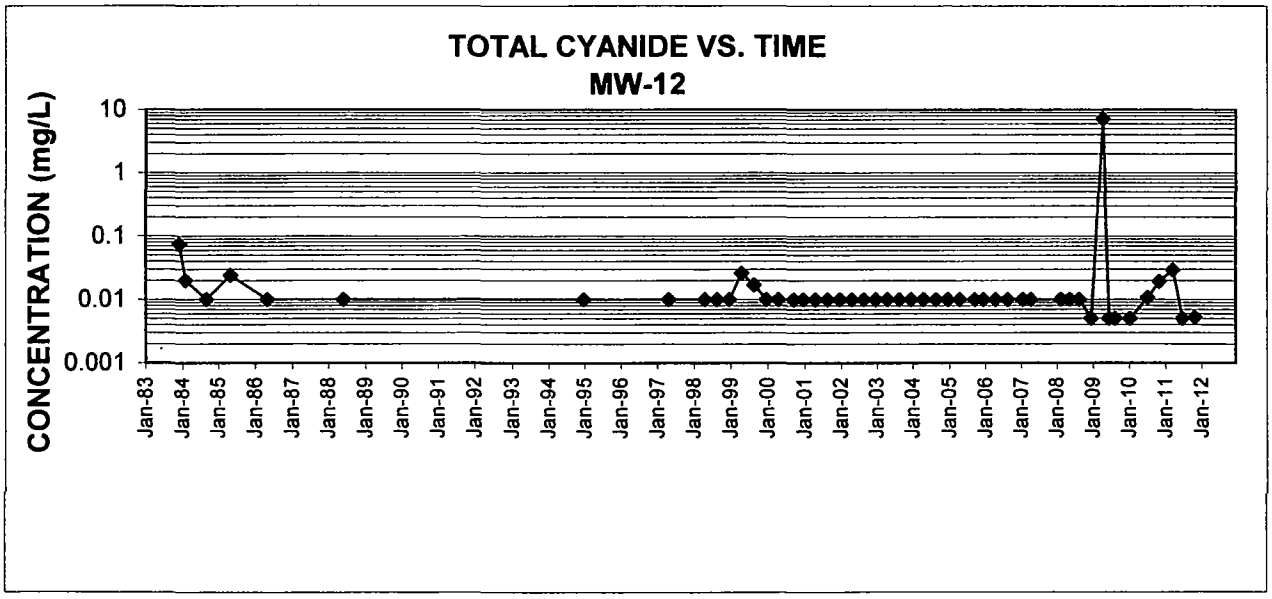
Jan-10
Jan-11
Jan-12


TOTAL CYANIDE VS. TIME
MW-12
CONCENTRATION (mg/L)
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0.1
0.01
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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
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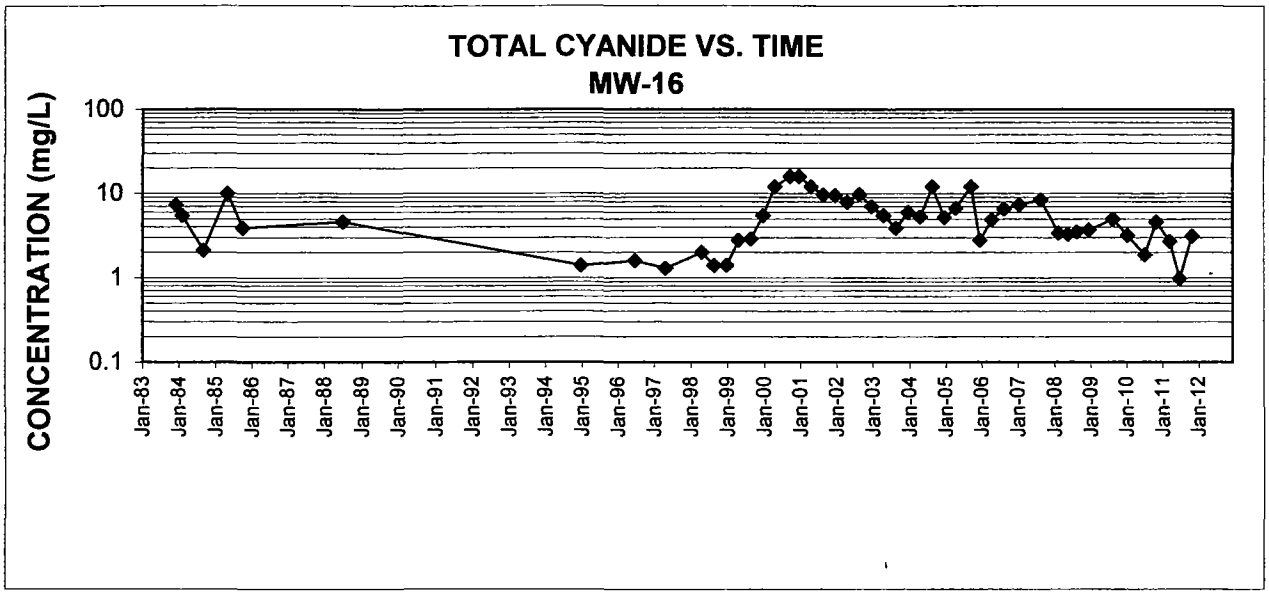
Jan-11
Jan-12


TOTAL CYANIDE VS. TIME
MW-16
CONCENTRATION (mg/L)
100
10
1
0.1
Jan-83
Jan-84
Jan-85
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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
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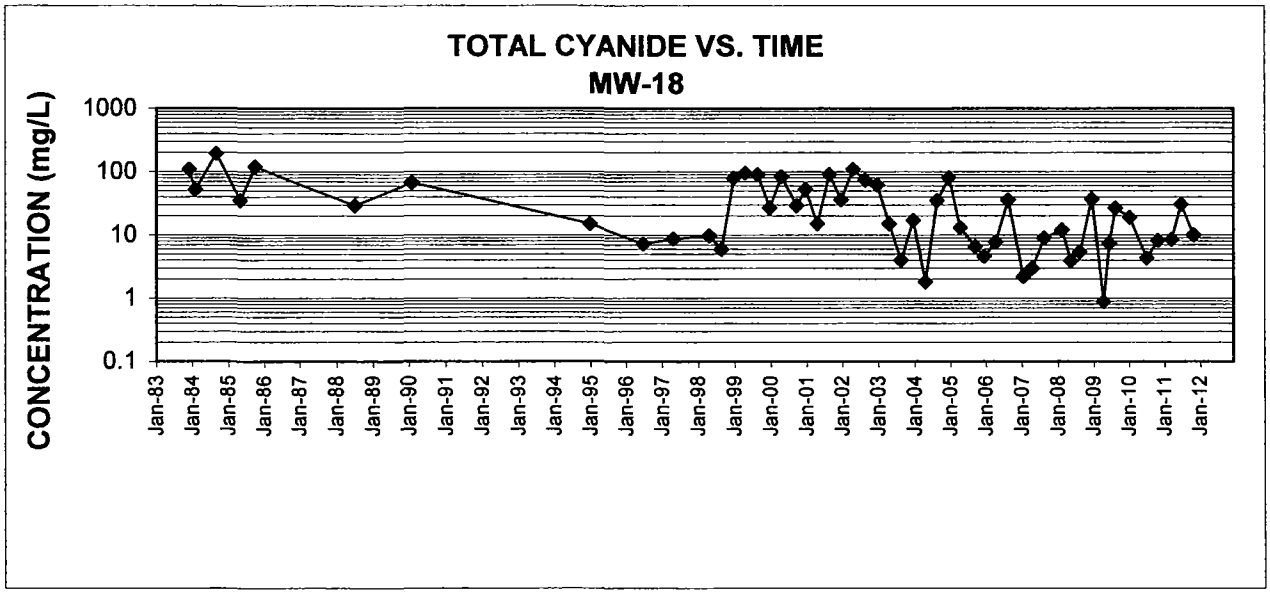
Jan-12


TOTAL CYANIDE VS. TIME
MW-18
CONCENTRATION (mg/L)
1000
100
10
1
0.1
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
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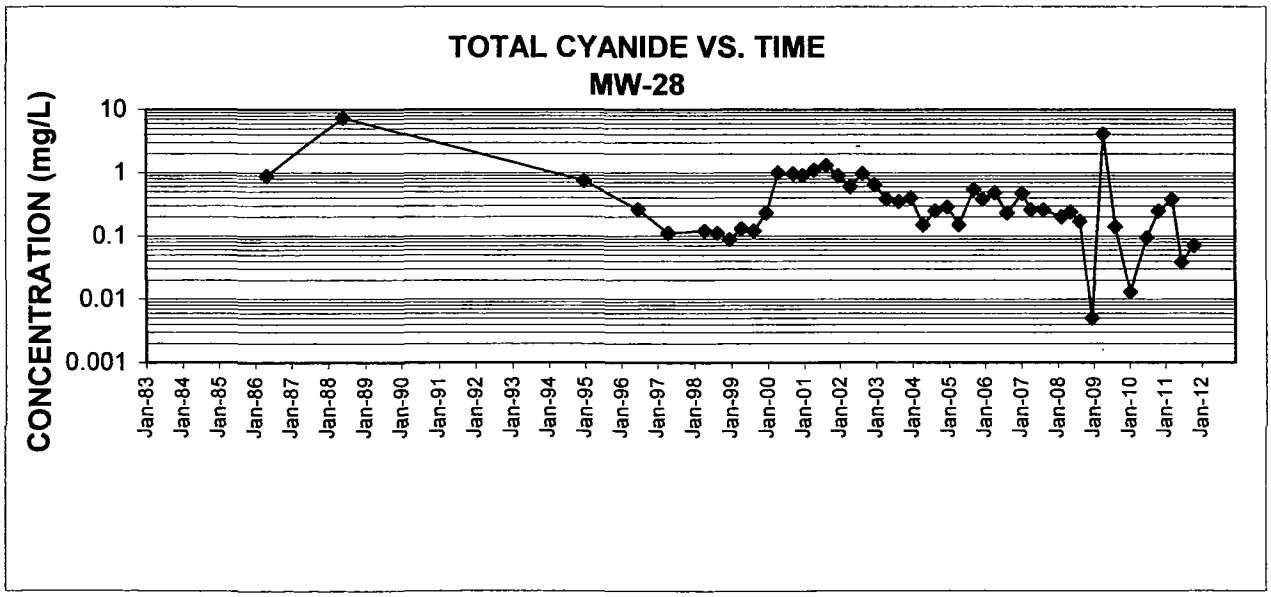
Jan-11
Jan-12


TOTAL CYANIDE VS. TIME
MW-28
CONCENTRATION (mg/L)
10
1
0.1
0.01
0.001
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
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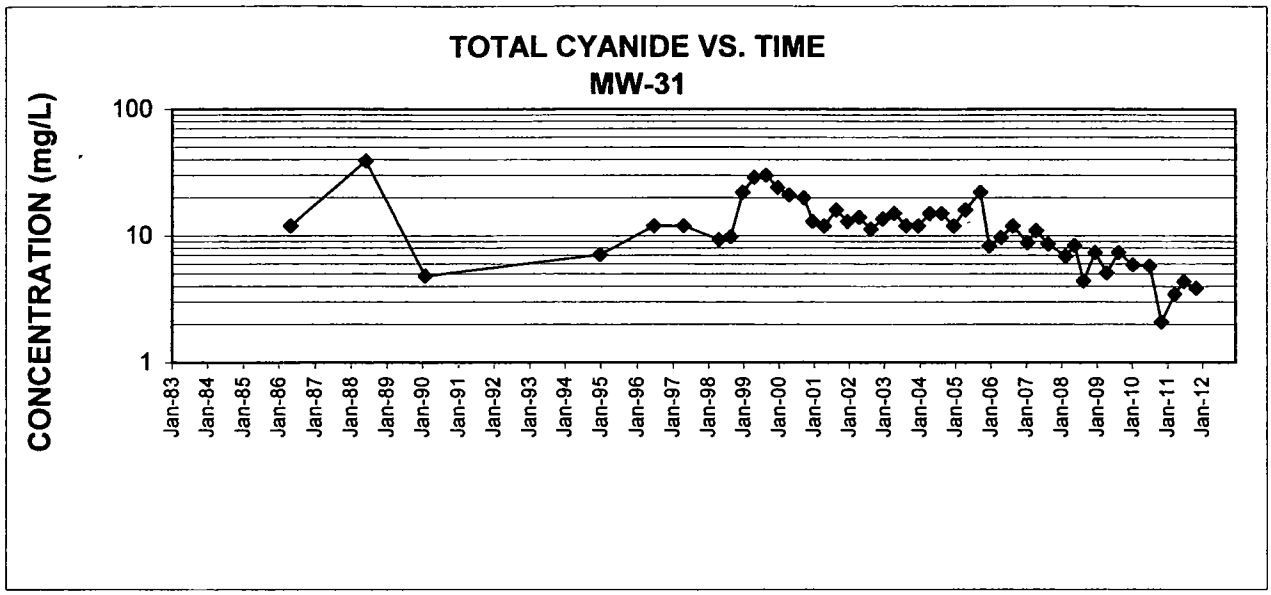
Jan-12


TOTAL CYANIDE VS. TIME
MW-31
CONCENTRATION (mg/L)
100
10
1
Jan-83
Jan-84
Jan-85
Jan-86
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Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
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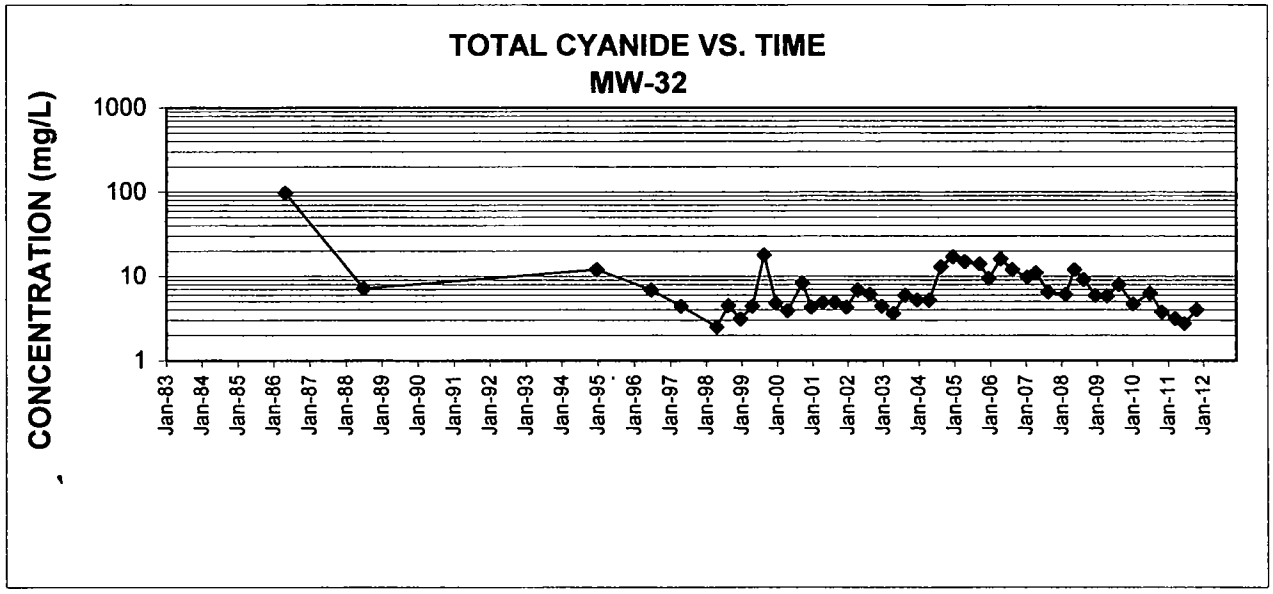
Jan-12


TOTAL CYANIDE VS. TIME
MW-32
CONCENTRATION (mg/L)
1000
100
10
1
Jan-83
Jan-84
Jan-85
Jan-86
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Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
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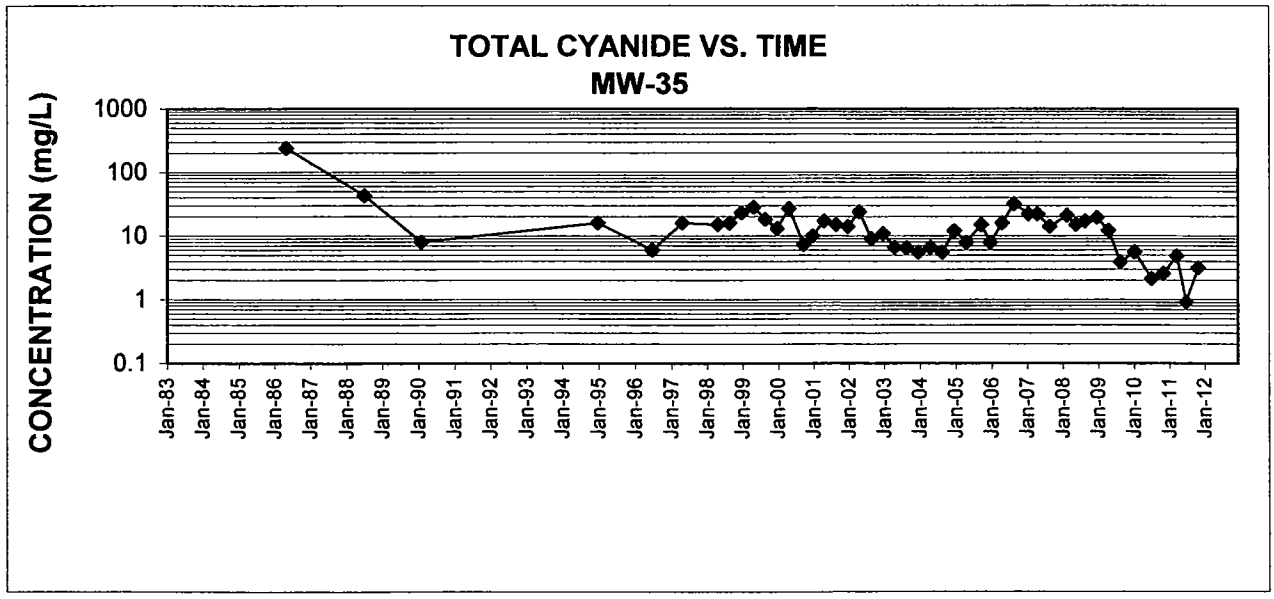
TOTAL CYANIDE VS. TIME
MW-35
CONCENTRATION (mg/L)
1000
100
10
1
0.1
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
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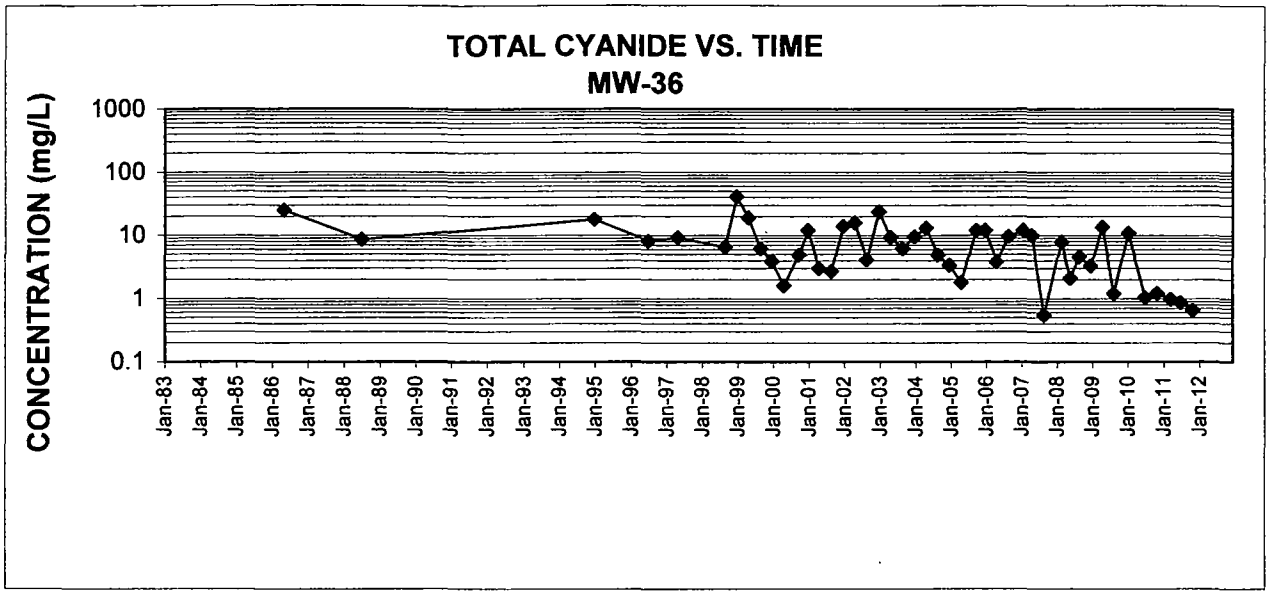
TOTAL CYANIDE VS. TIME
MW-36
CONCENTRATION (mg/L)
1000
100
10
1
0.1
Jan-83
Jan-84
Jan-85
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Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
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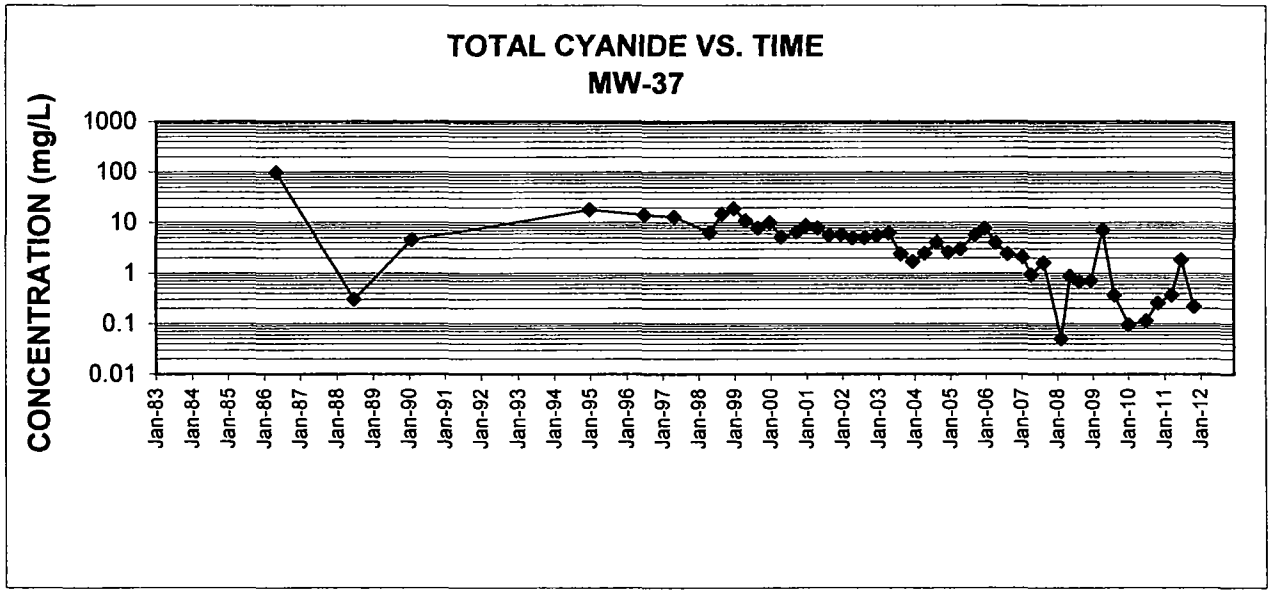
Jan-12


TOTAL CYANIDE VS. TIME
MW-37
CONCENTRATION (mg/L)
1000
100
10
1
0.1
0.01
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
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Jan-98
Jan-99
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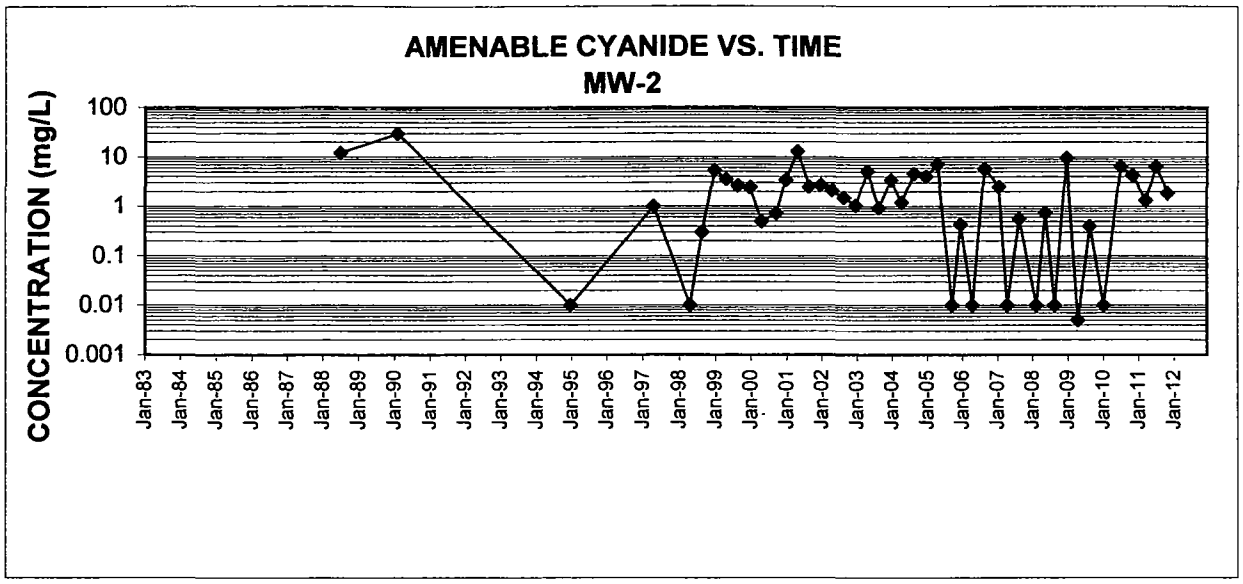
Jan-10
Jan-11
Jan-12

APPENDIX D-2

CYANIDE AMENABLE TO CHLORINATION


AMENABLE CYANIDE VS. TIME
MW-2
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
0.001
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
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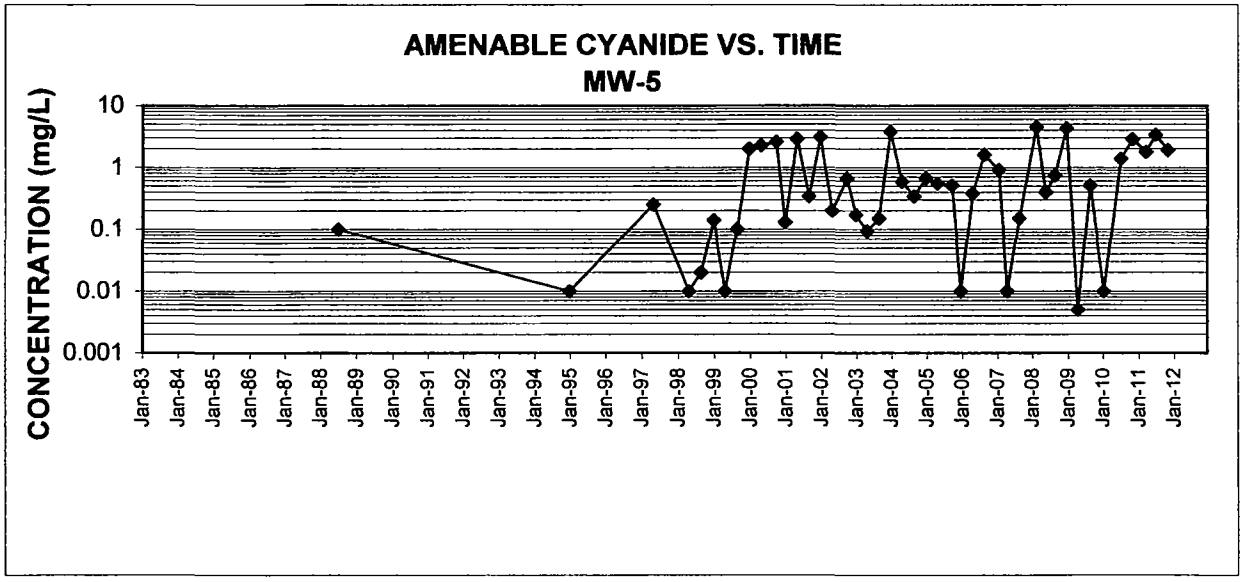
Jan-12


AMENABLE CYANIDE VS. TIME
MW-5
CONCENTRATION (mg/L)
10
1
0.1
0.01
0.001
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
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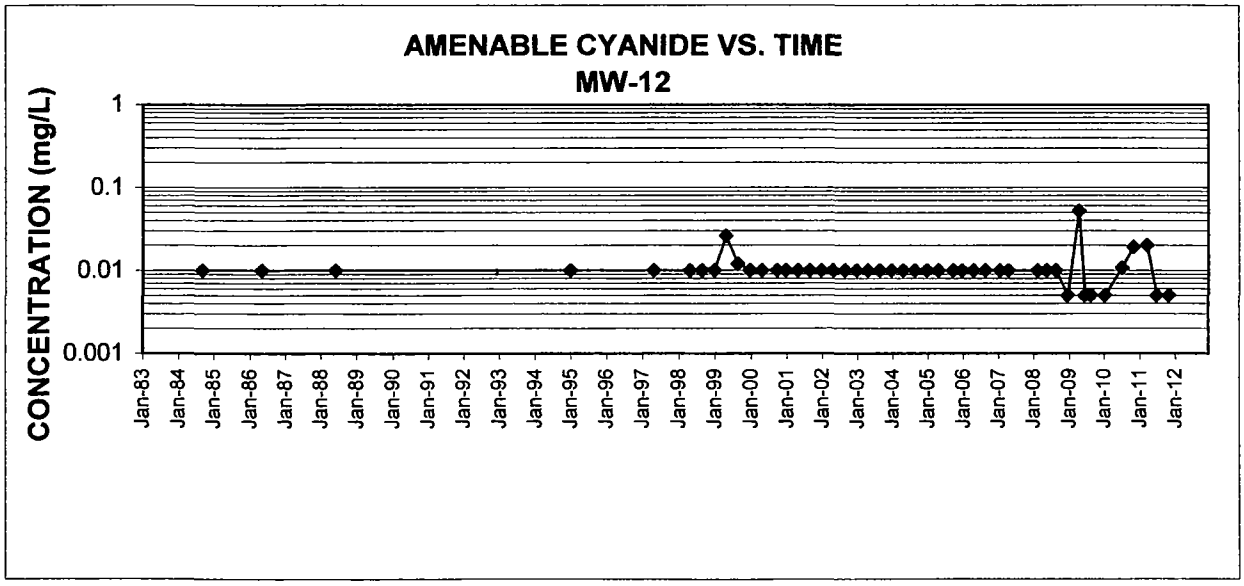
Jan-12


AMENABLE CYANIDE VS. TIME
MW-12
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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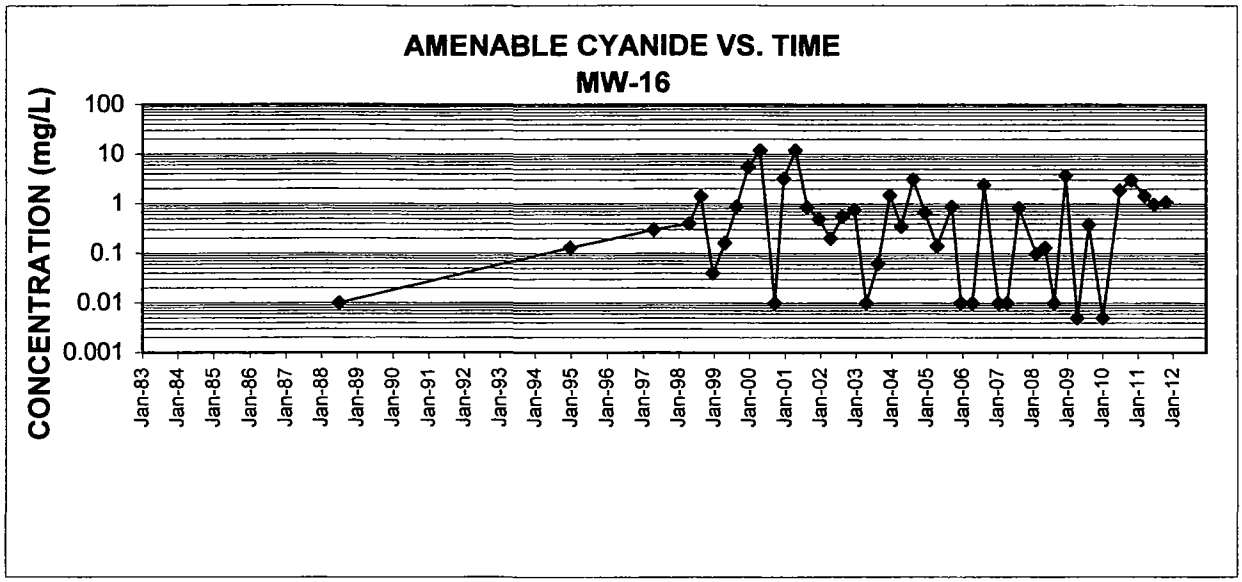
Jan-12


AMENABLE CYANIDE VS. TIME
MW-16
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
0.001
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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
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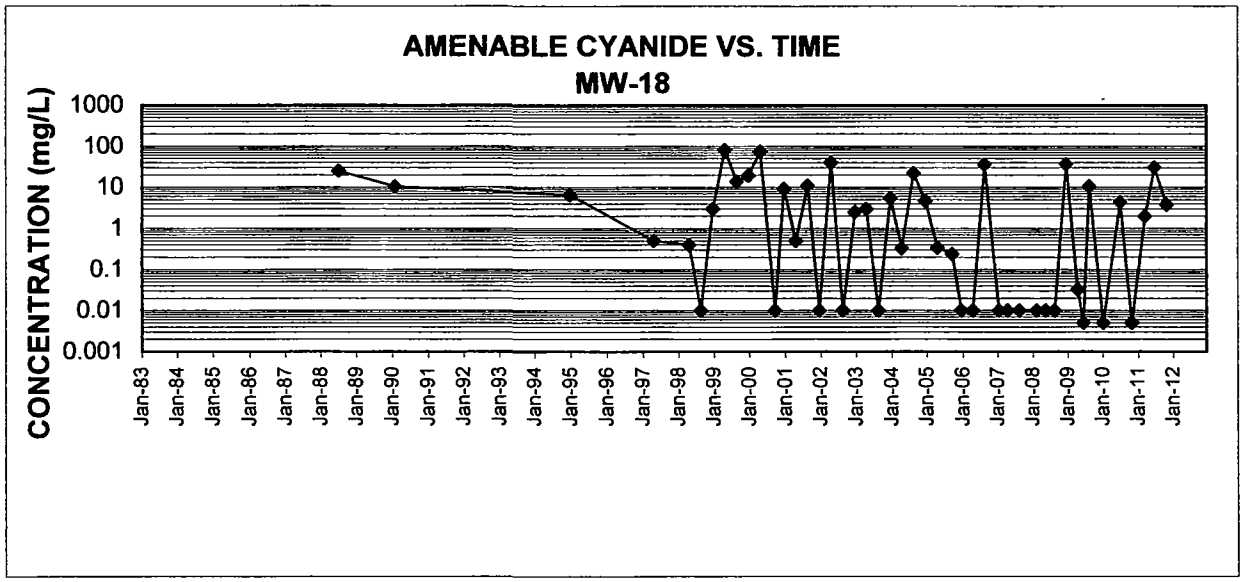
Jan-12


AMENABLE CYANIDE VS. TIME
MW-18
CONCENTRATION (mg/L)
1000
100
10
1
0.1
0.01
0.001
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
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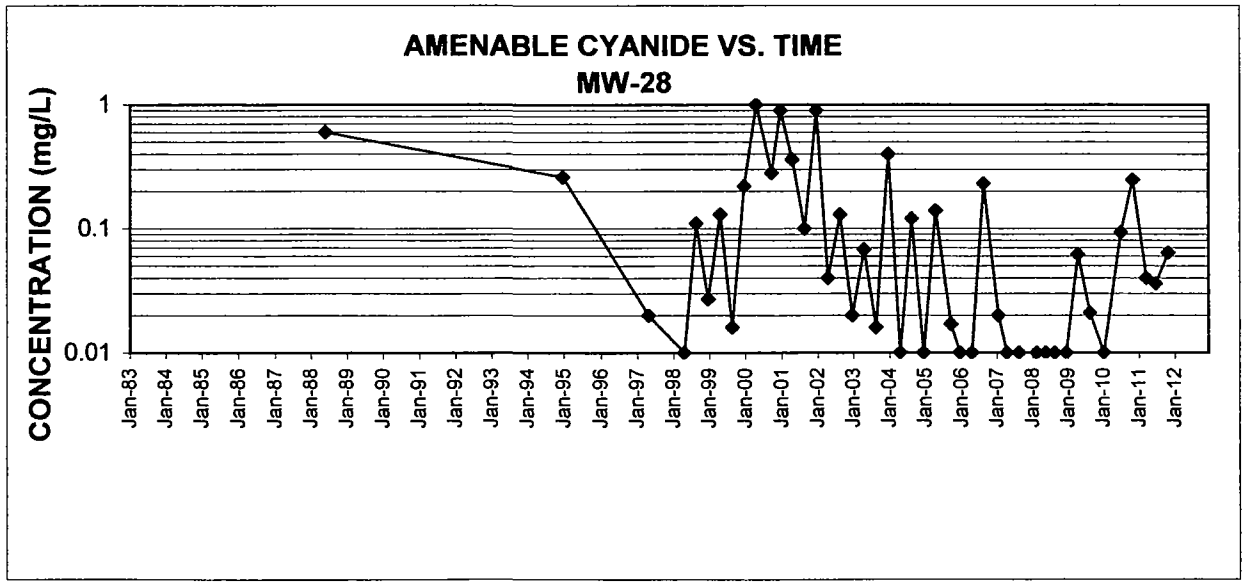
AMENABLE CYANIDE VS. TIME
MW-28
CONCENTRATION (mg/L)
1
0.1
0.01
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
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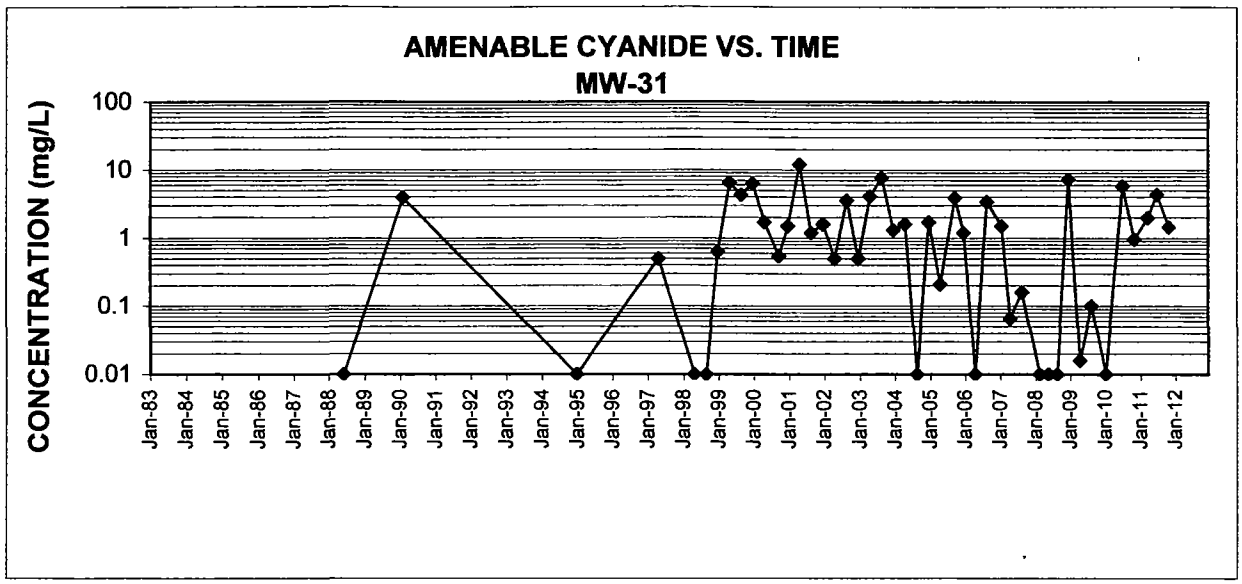
Jan-12


AMENABLE CYANIDE VS. TIME
MW-31
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
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
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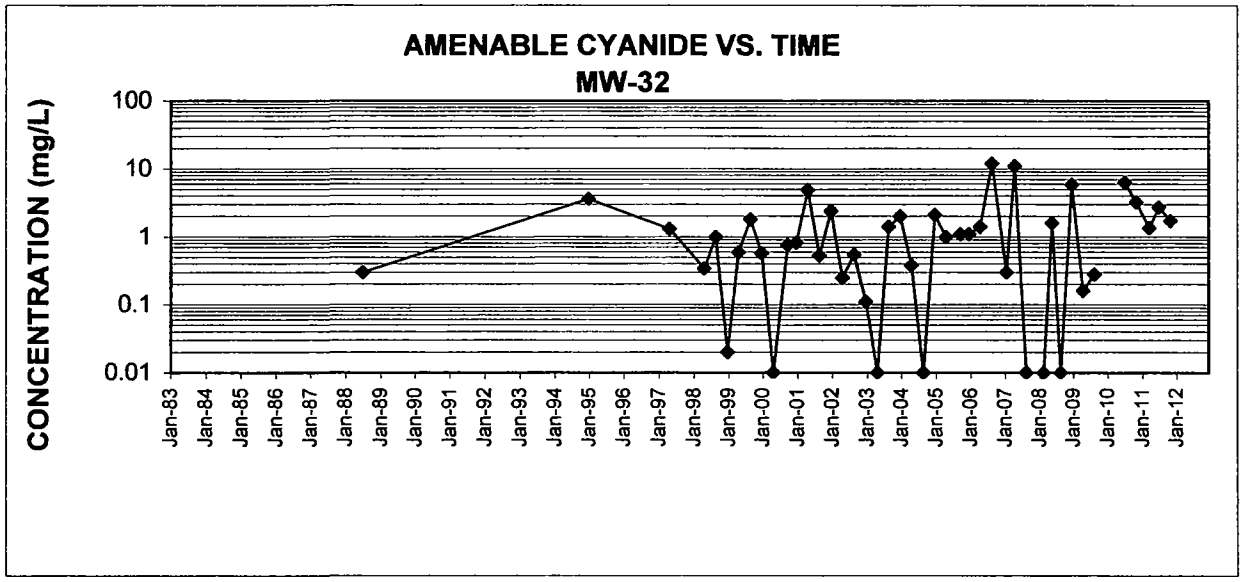
Jan-12


AMENABLE CYANIDE VS. TIME
MW-32
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
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
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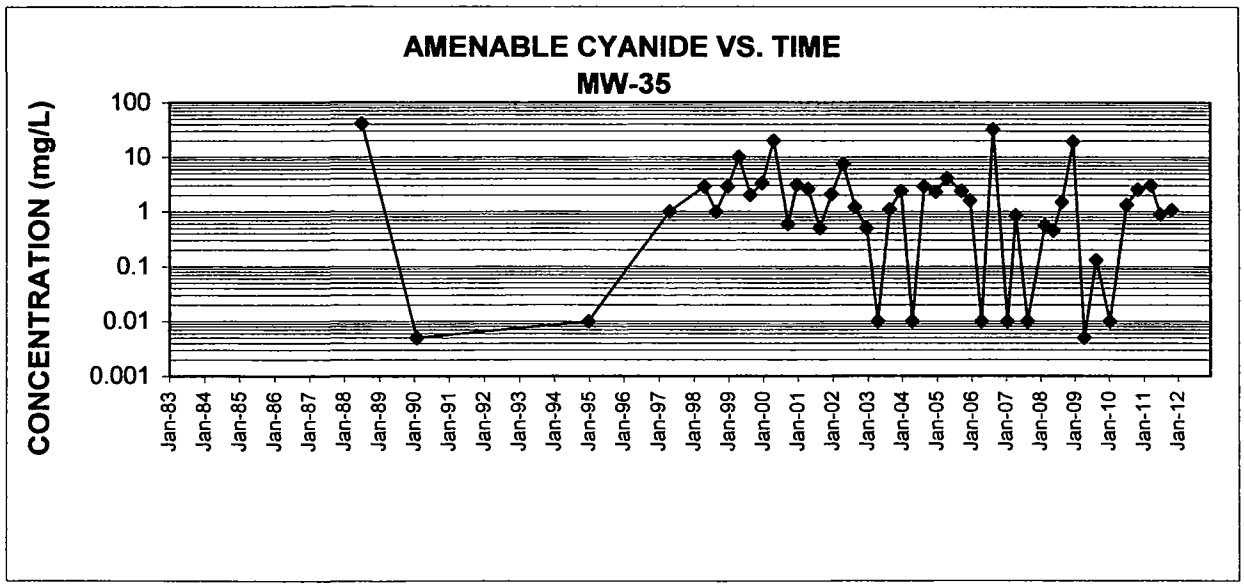
Jan-12


AMENABLE CYANIDE VS. TIME
MW-35
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
0.001
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
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Jan-95
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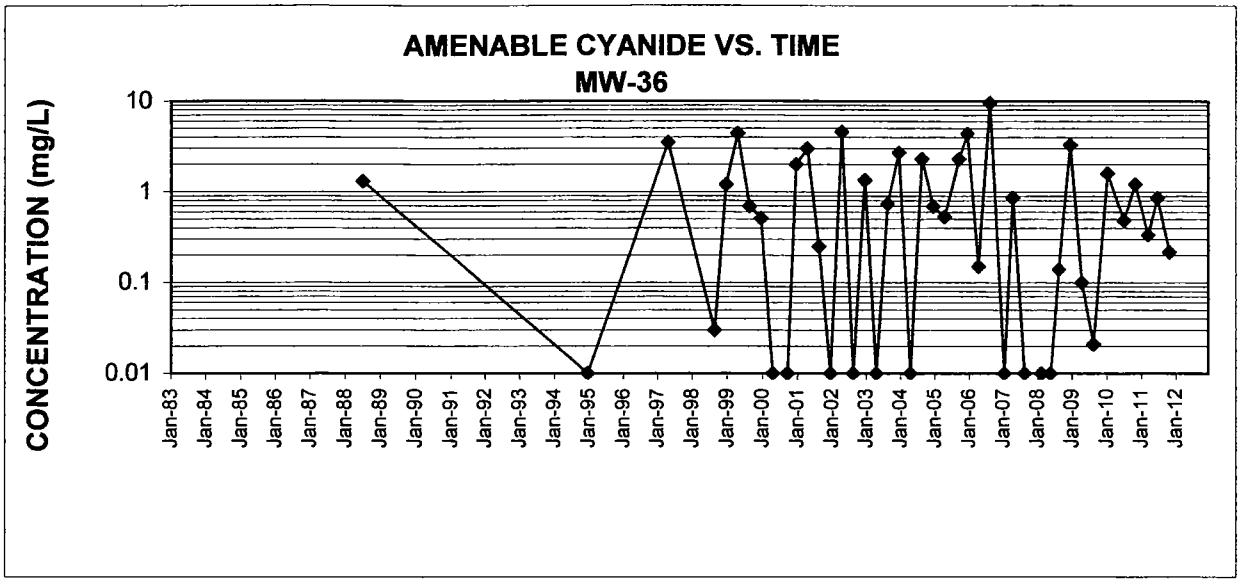
Jan-09
Jan-10
Jan-11
Jan-12


AMENABLE CYANIDE VS. TIME
MW-36
CONCENTRATION (mg/L)
10
1
0.1
0.01
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
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Jan-06
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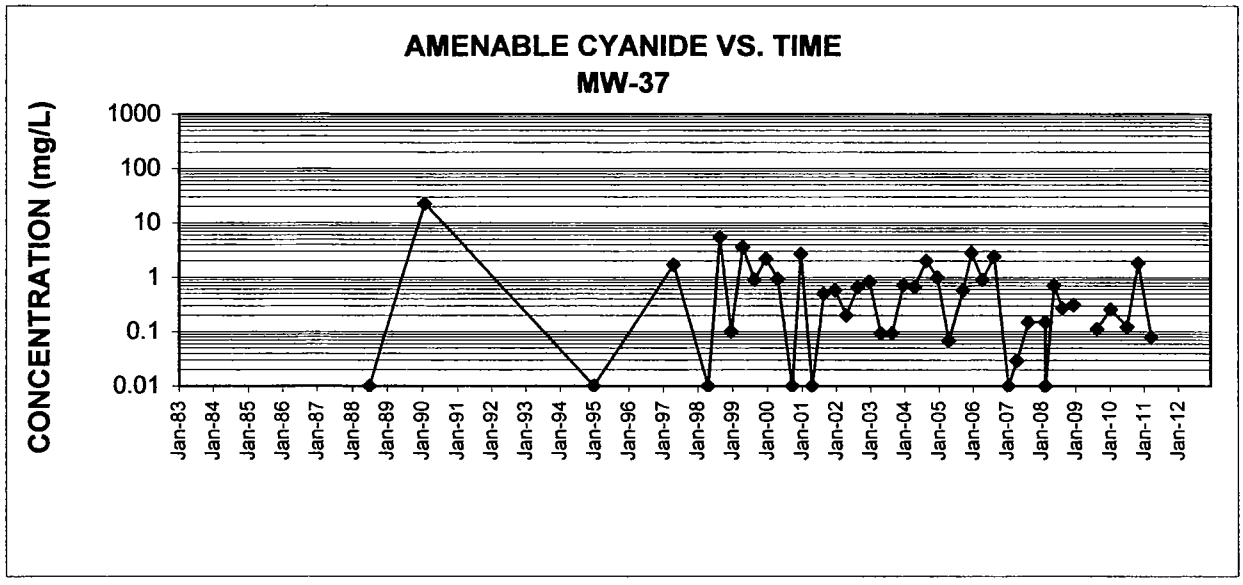
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12


AMENABLE CYANIDE VS. TIME
MW-37
CONCENTRATION (mg/L)
1000
100
10
1
0.1
0.01
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
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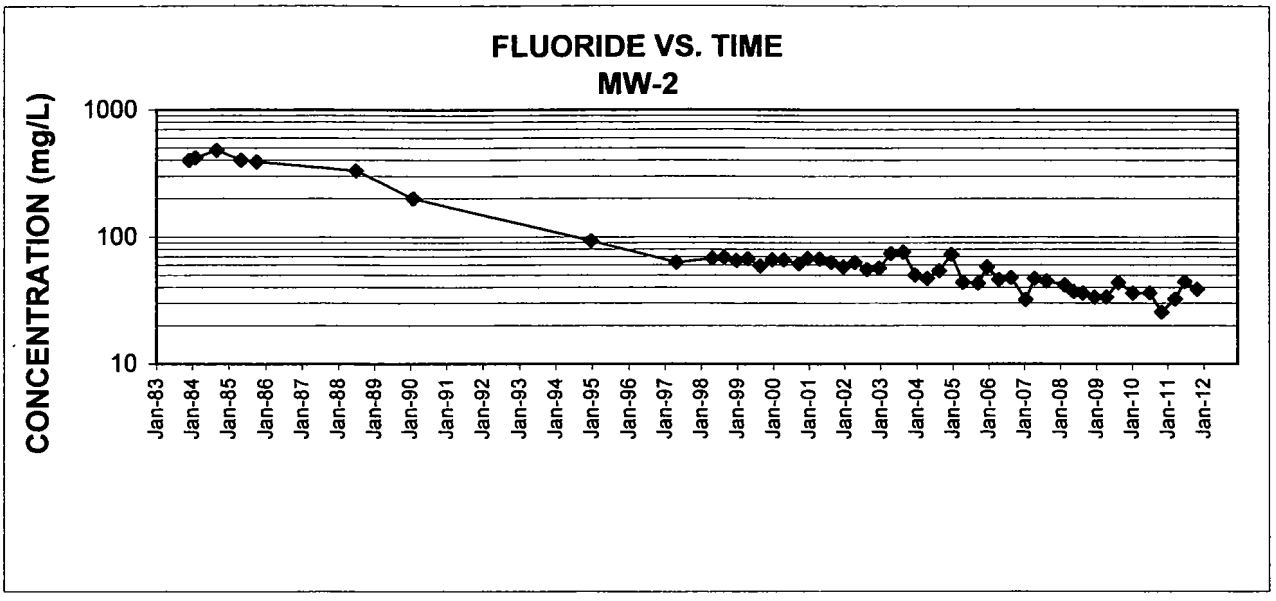
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12

APPENDIX D-3

FLUORIDE


FLUORIDE VS. TIME
MW-2
CONCENTRATION (mg/L)
1000
100
10
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
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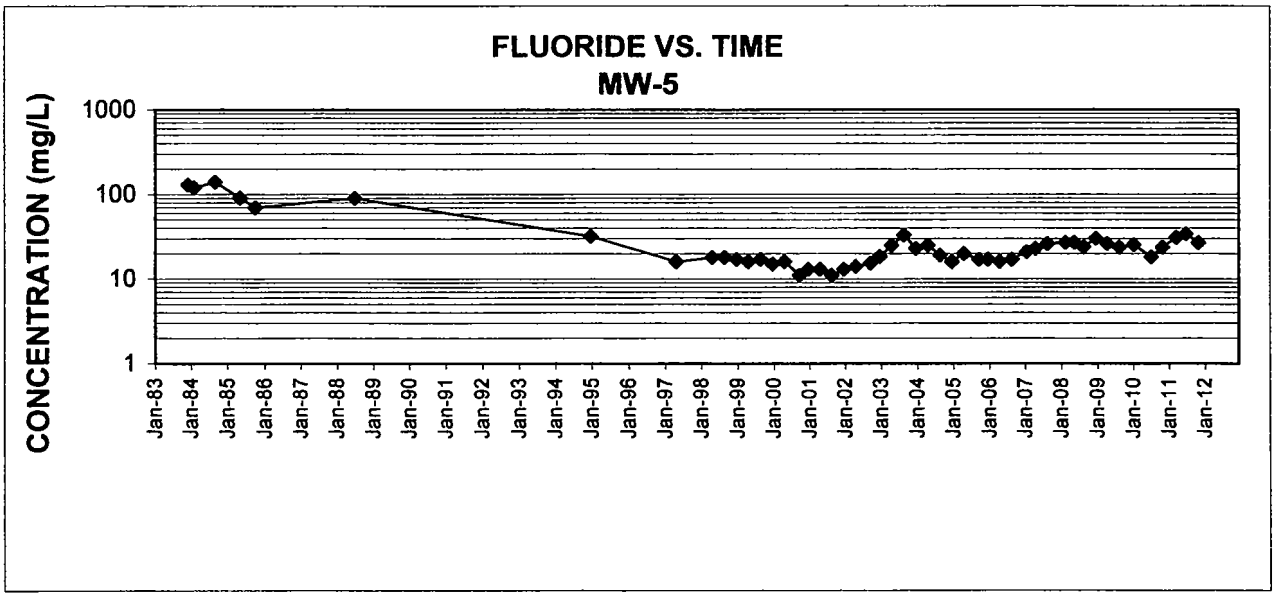
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-5
CONCENTRATION (mg/L)
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
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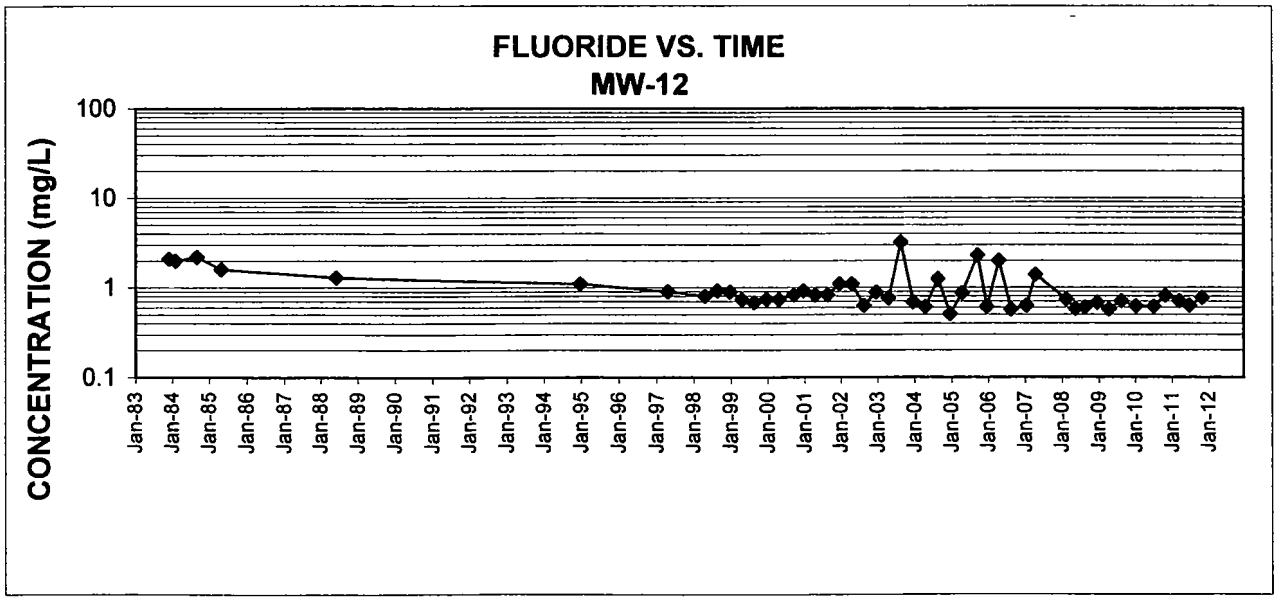
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-12
CONCENTRATION (mg/L)
100
10
1
0.1
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
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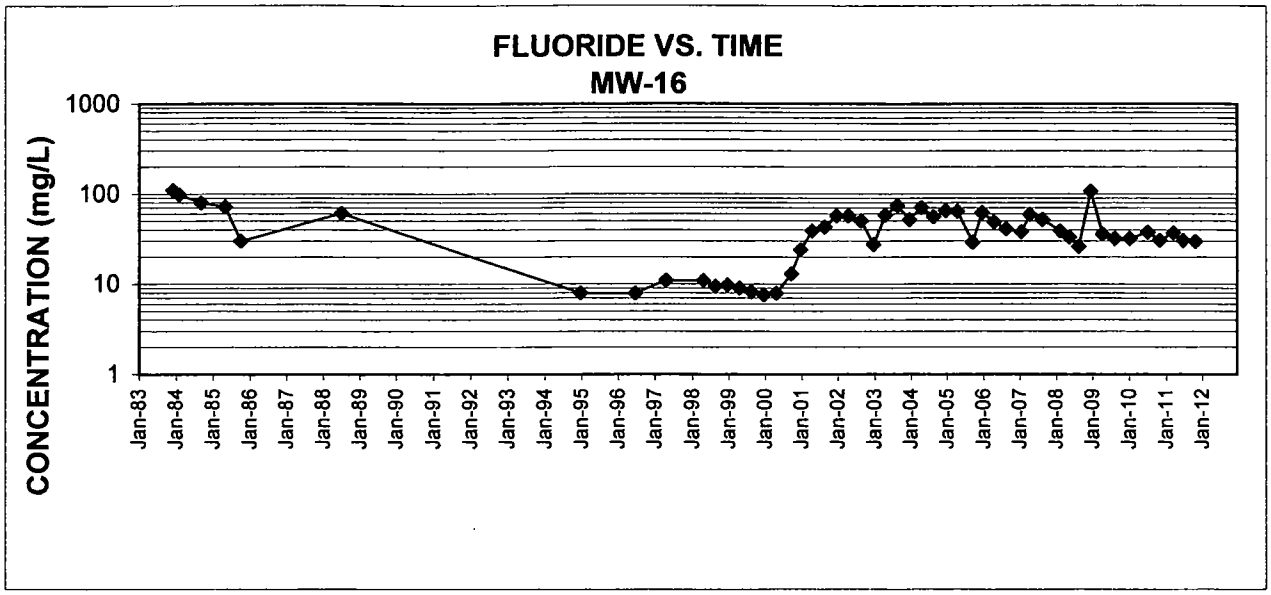
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-16
CONCENTRATION (mg/L)
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
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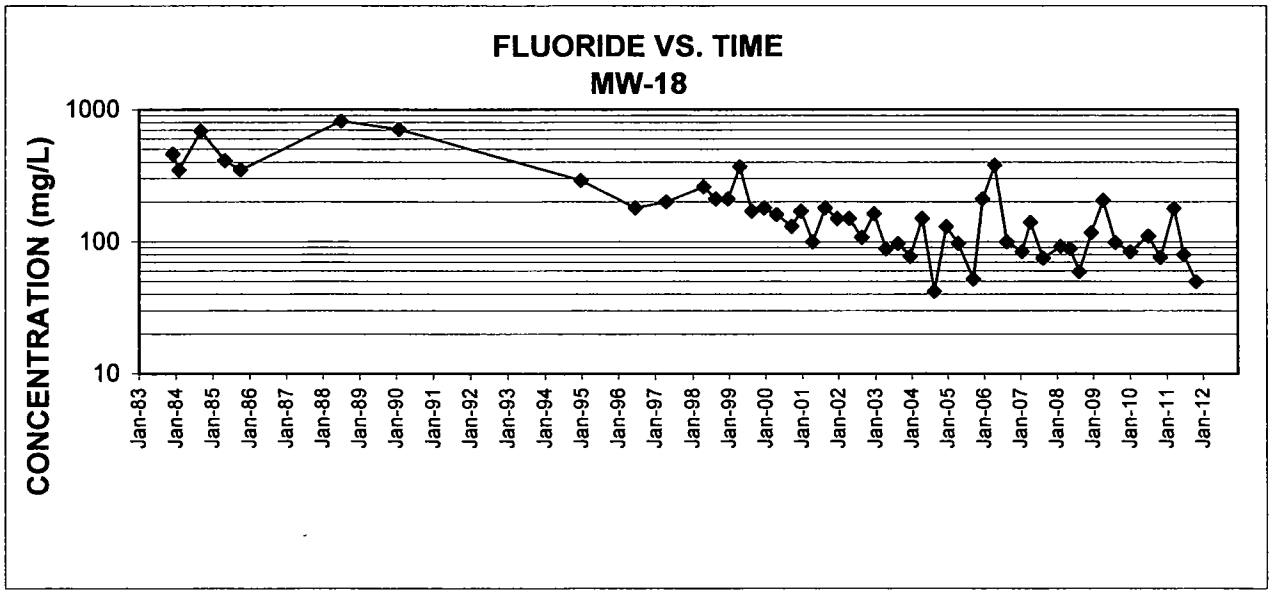
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-18
CONCENTRATION (mg/L)
1000
100
10
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
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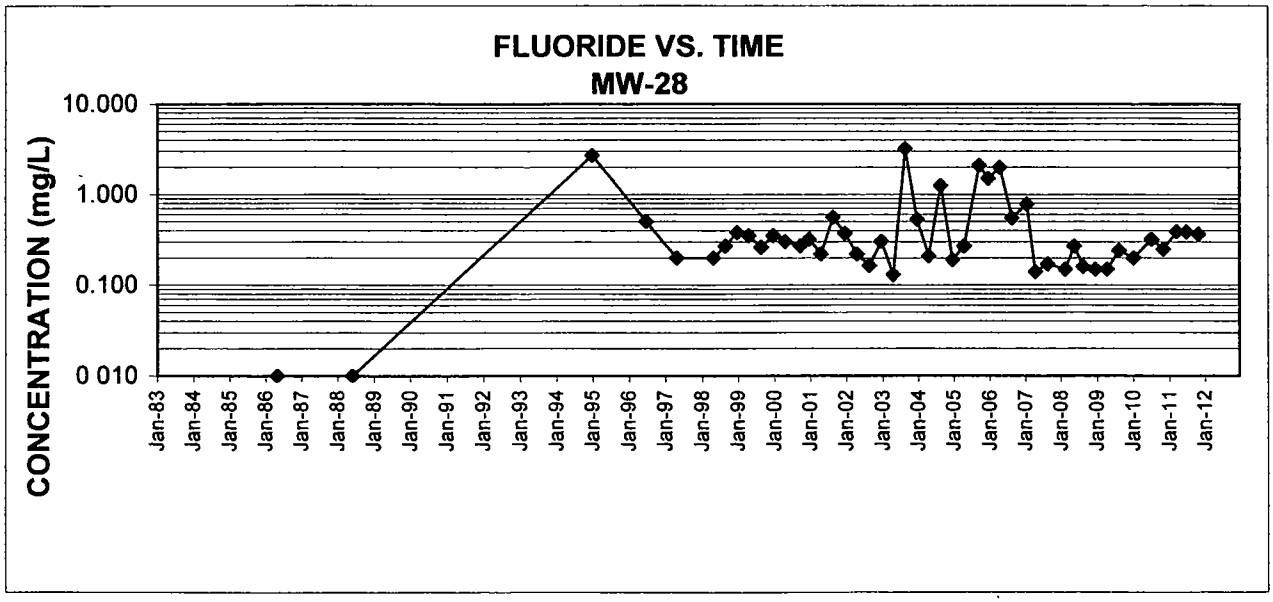
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-28
CONCENTRATION (mg/L)
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
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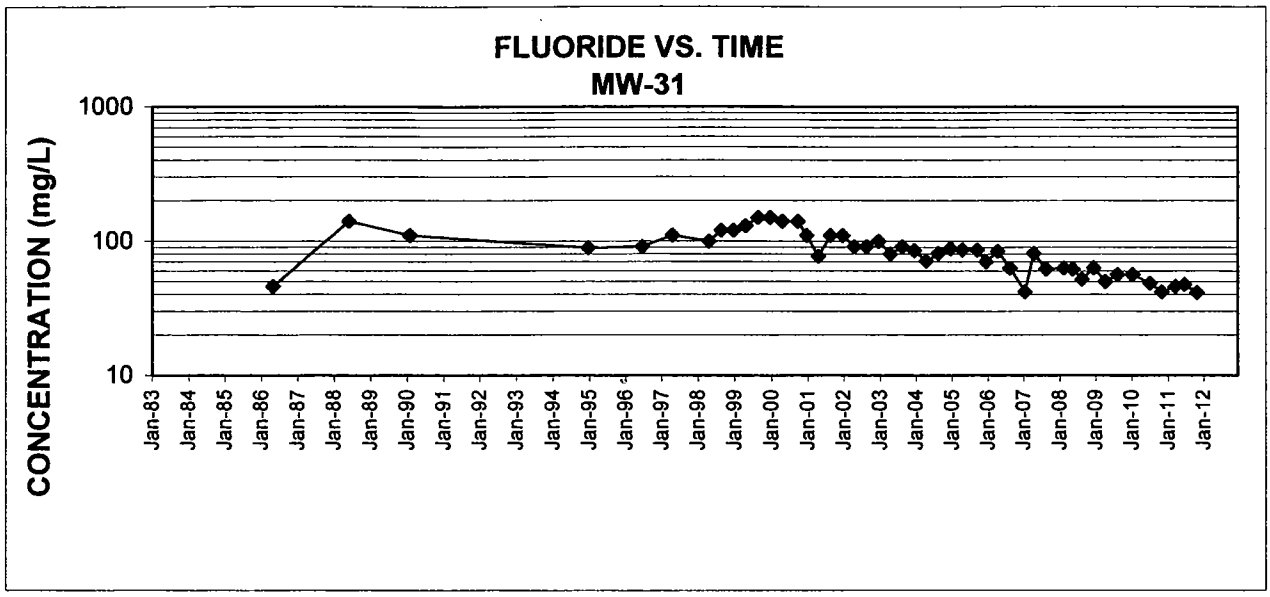
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-31
CONCENTRATION (mg/L)
1000
100
10
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
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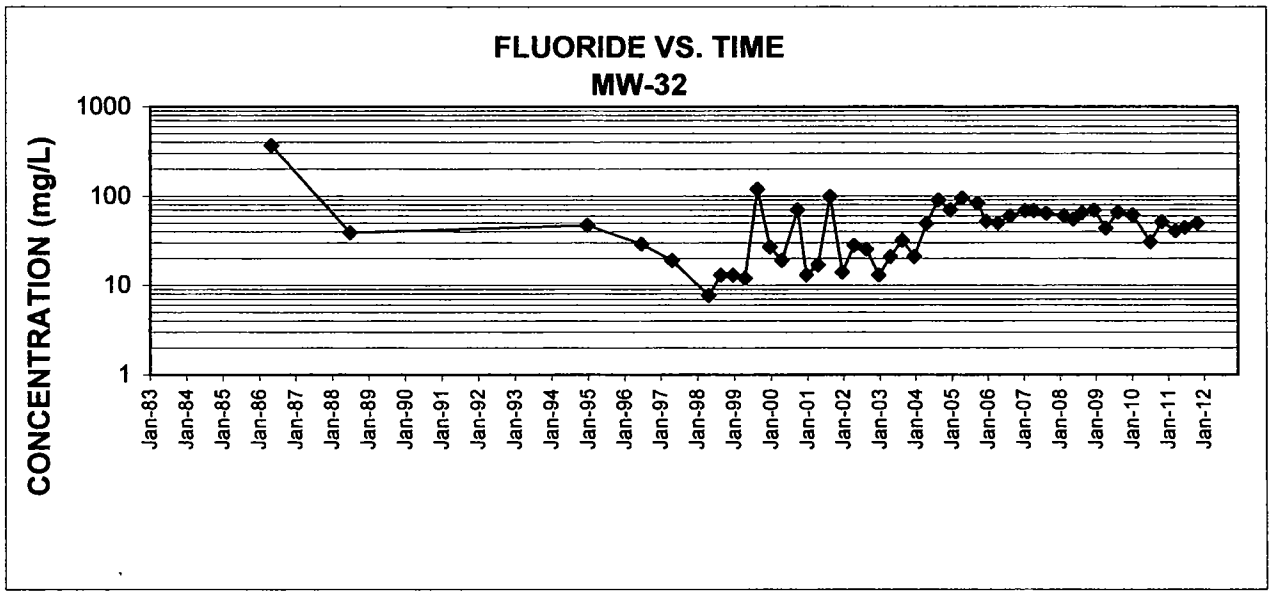
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-32
CONCENTRATION (mg/L)
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
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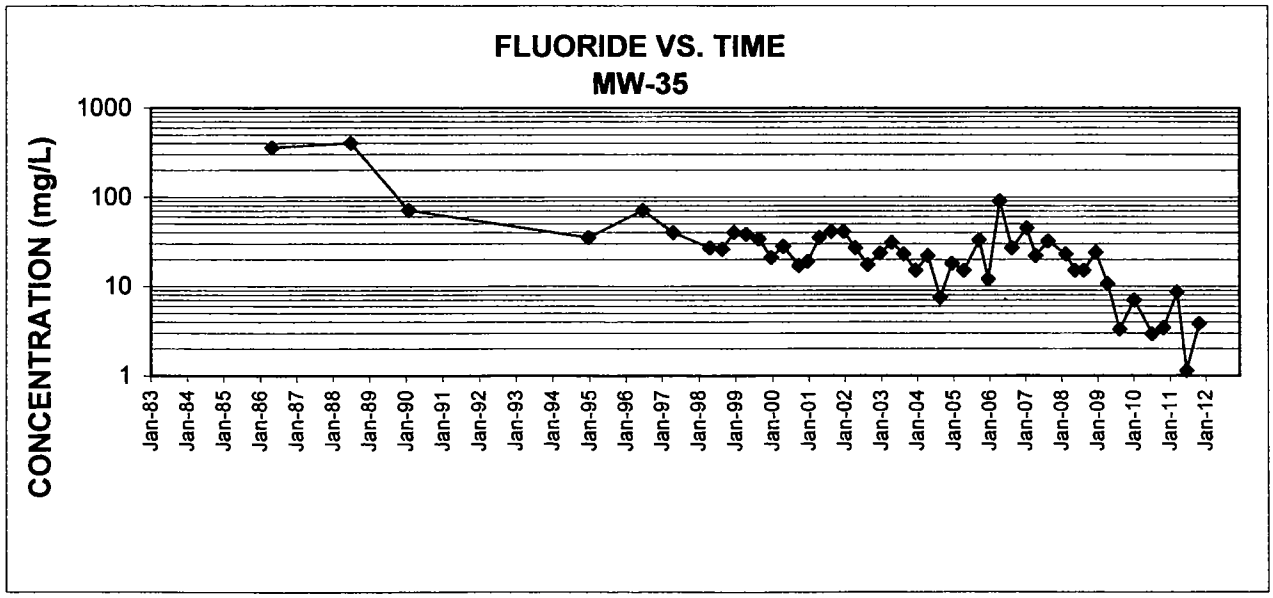
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-35
CONCENTRATION (mg/L)
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
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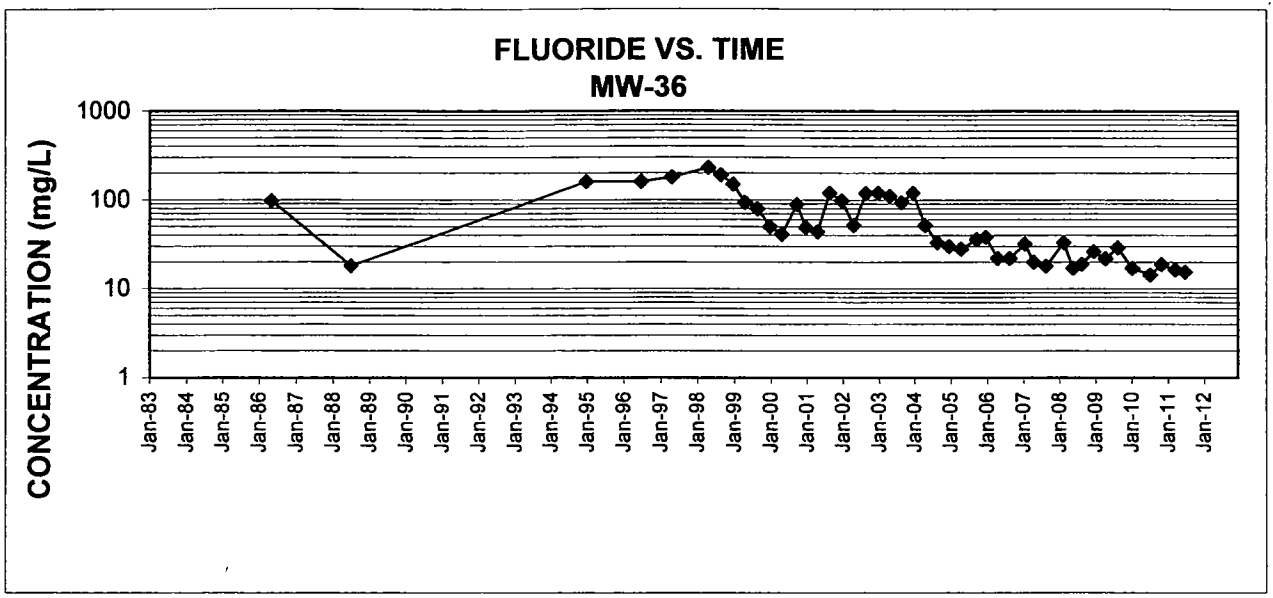
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-36
CONCENTRATION (mg/L)
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
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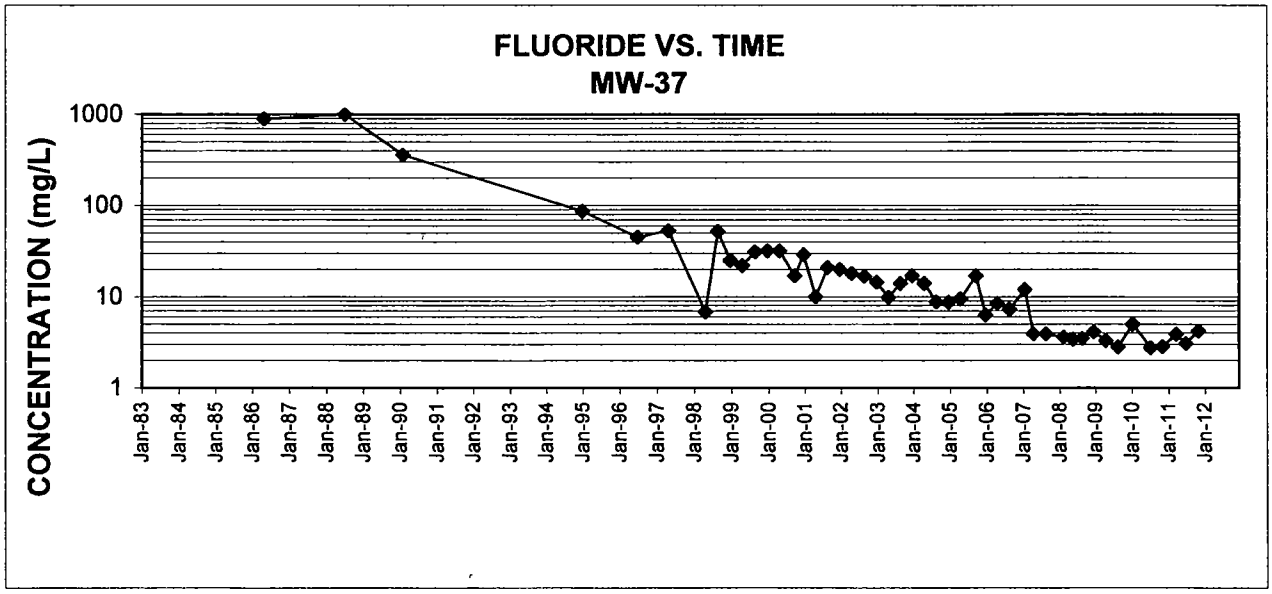
Jan-09
Jan-10
Jan-11
Jan-12


FLUORIDE VS. TIME
MW-37
CONCENTRATION (mg/L)
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
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Jan-08
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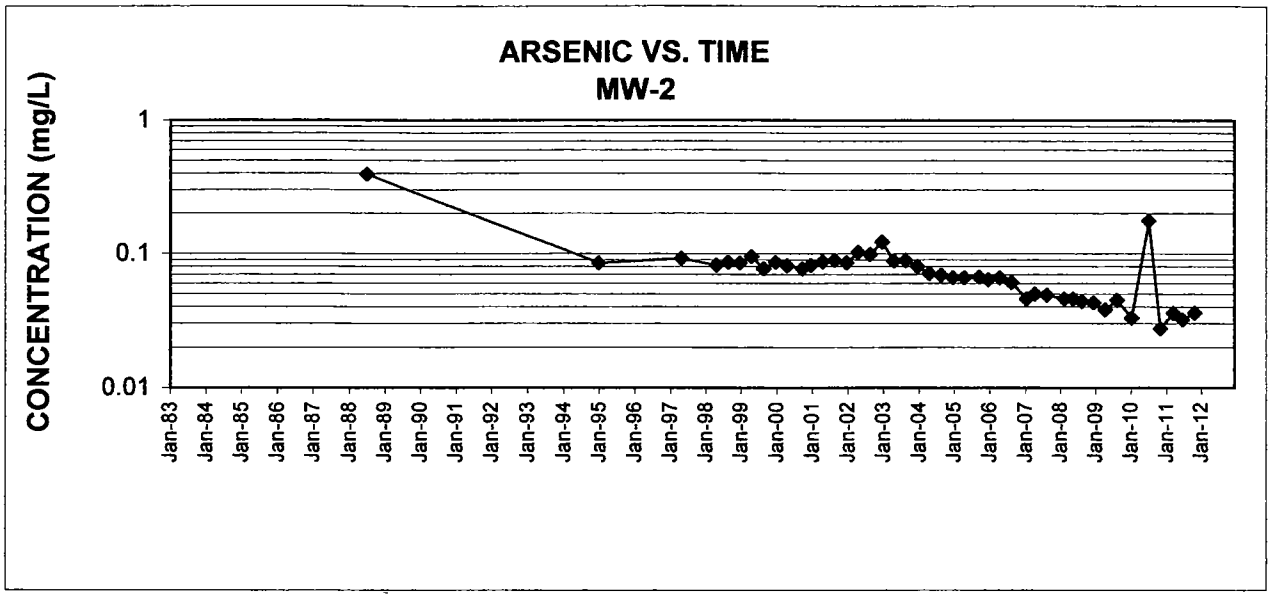
Jan-10
Jan-11
Jan-12

APPENDIX D-4

ARSENIC


ARSENIC VS. TIME
MW-2
CONCENTRATION (mg/L)
1
0.1
0.01
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
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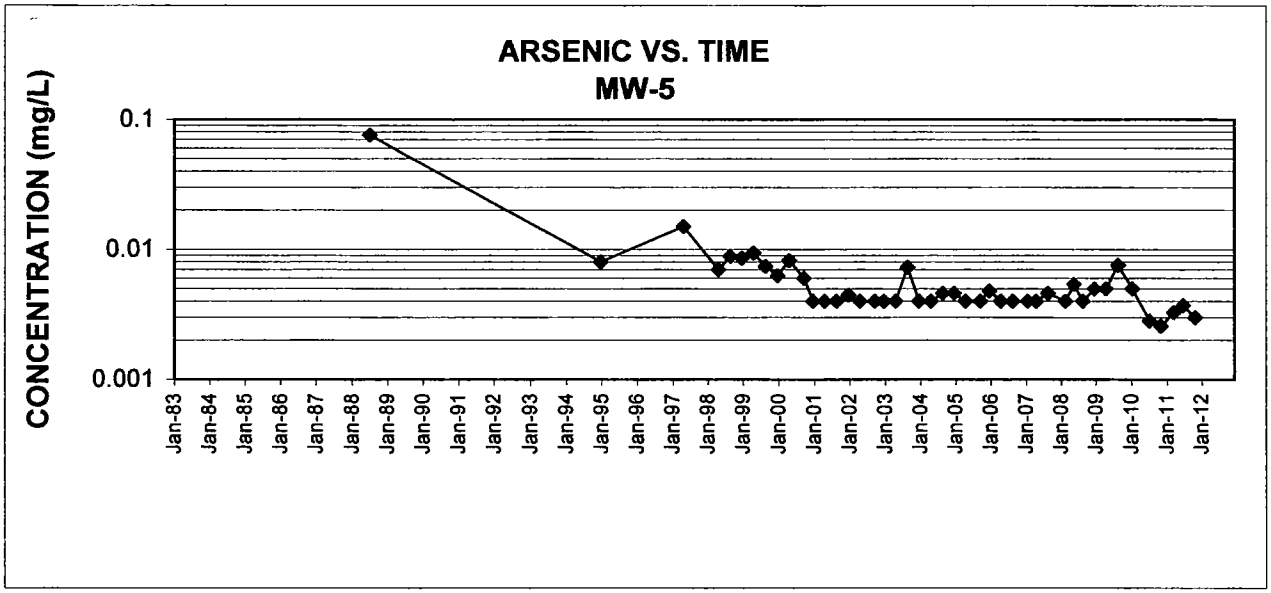
Jan-09
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-5
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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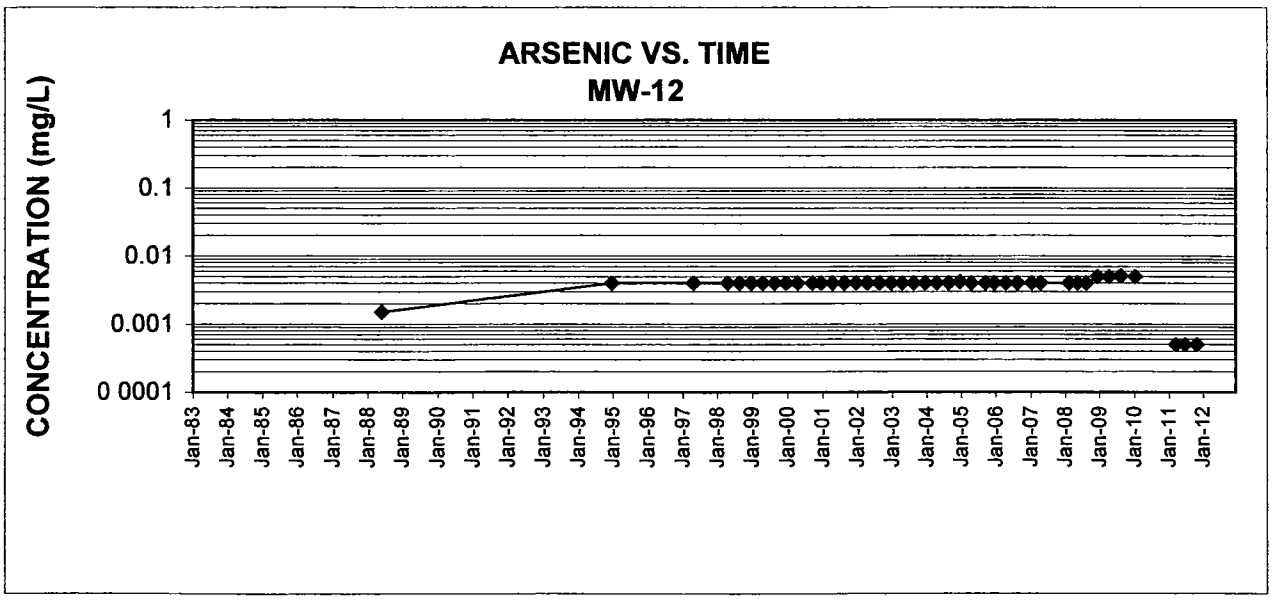
Jan-09
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-12
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
0 0001
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
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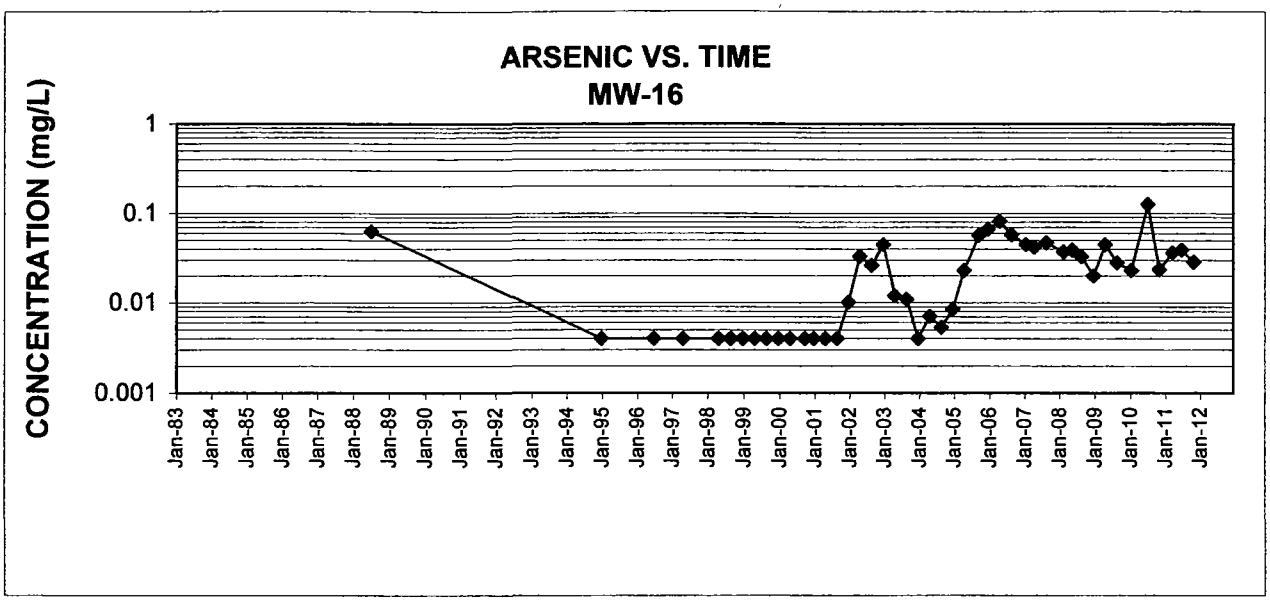
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-16
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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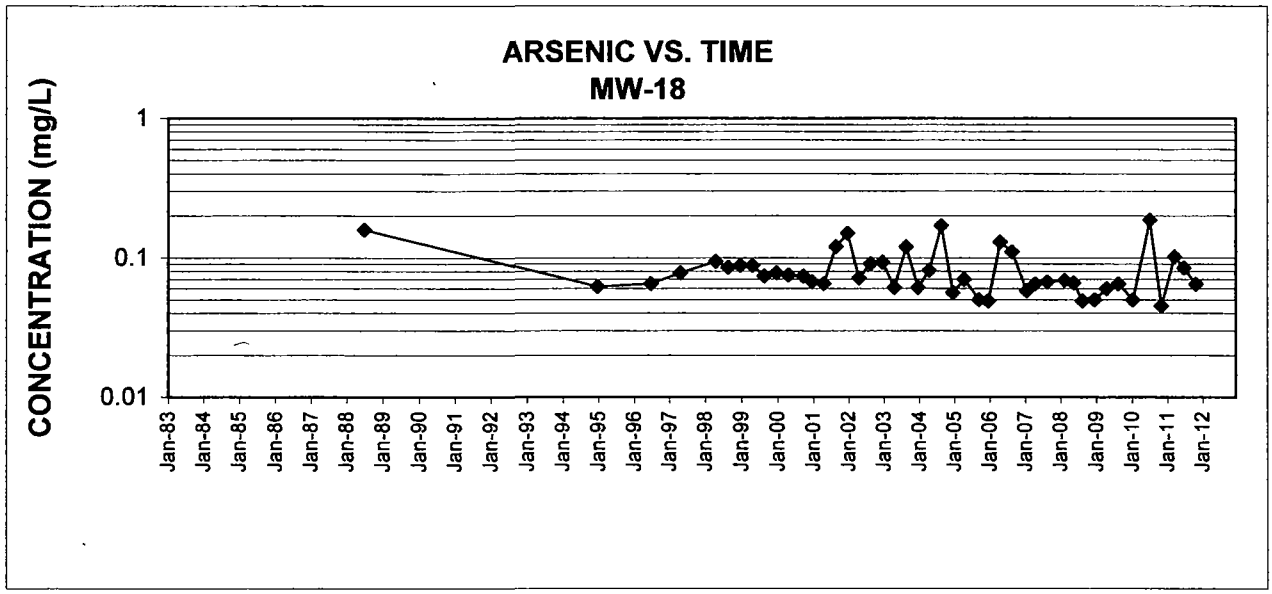
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-18
CONCENTRATION (mg/L)
1
0.1
0.01
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
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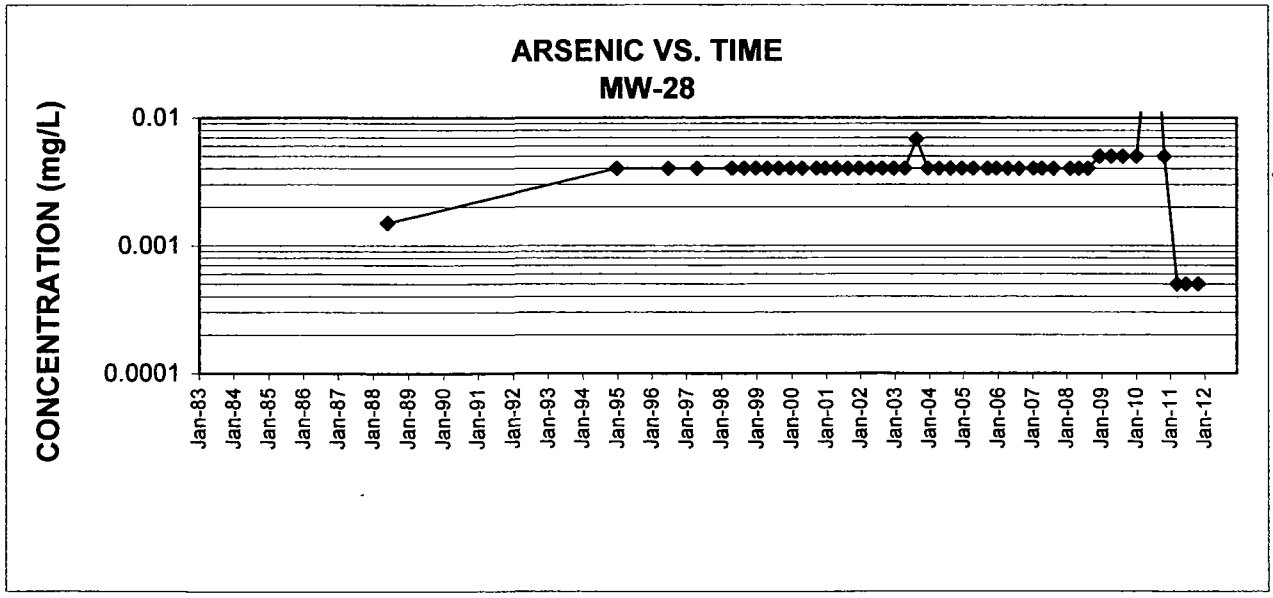
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-28
CONCENTRATION (mg/L)
0.01
0.001
0.0001
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
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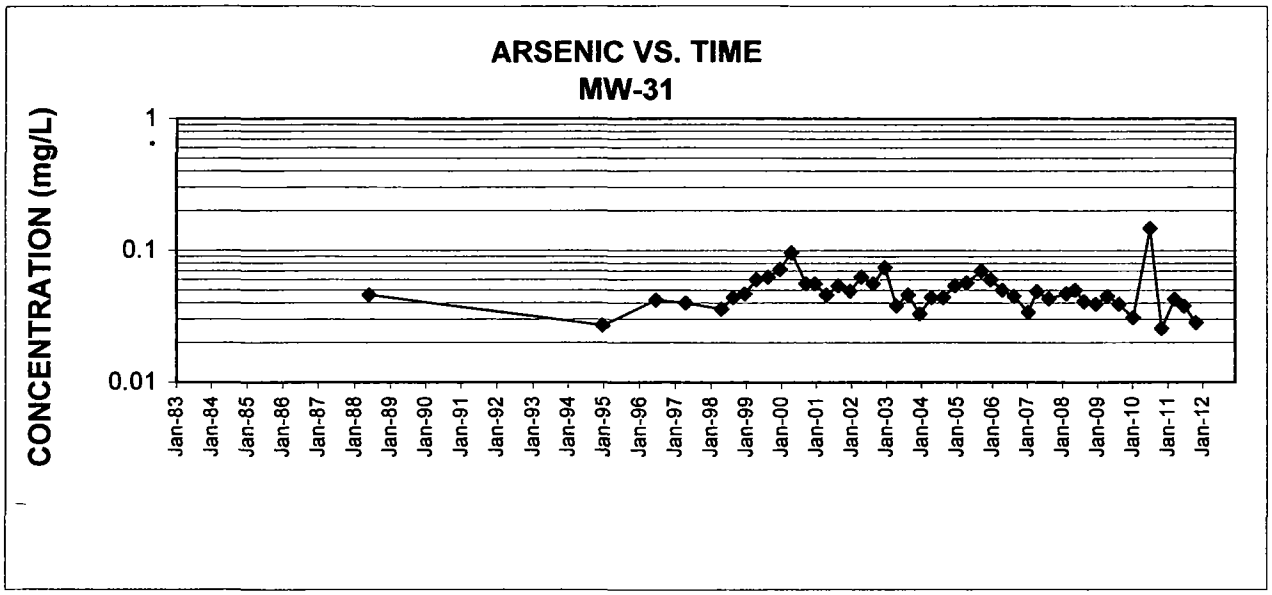
Jan-11
Jan-12


ARSENIC VS. TIME
MW-31
CONCENTRATION (mg/L)
1
0.1
0.01
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
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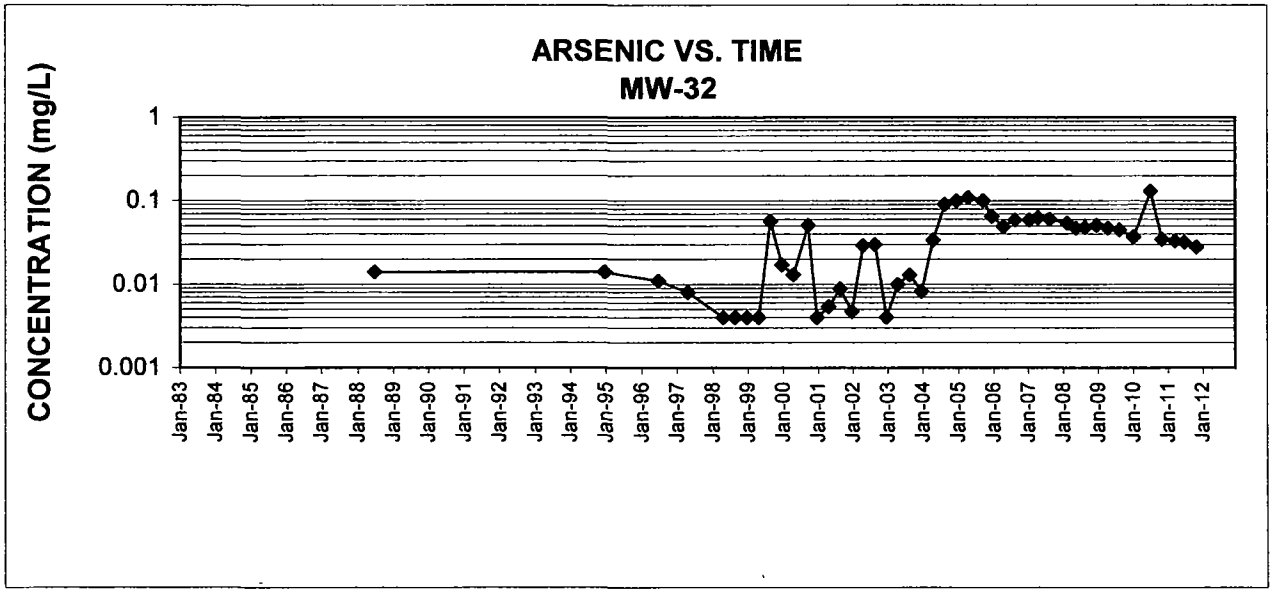
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-32
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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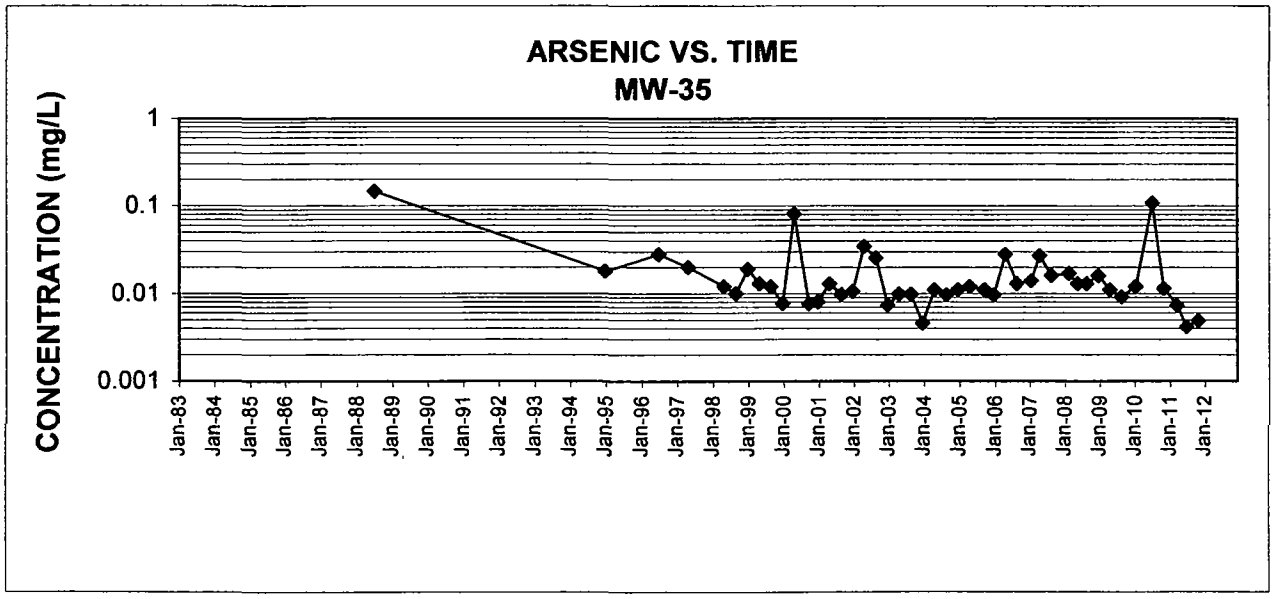
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-35
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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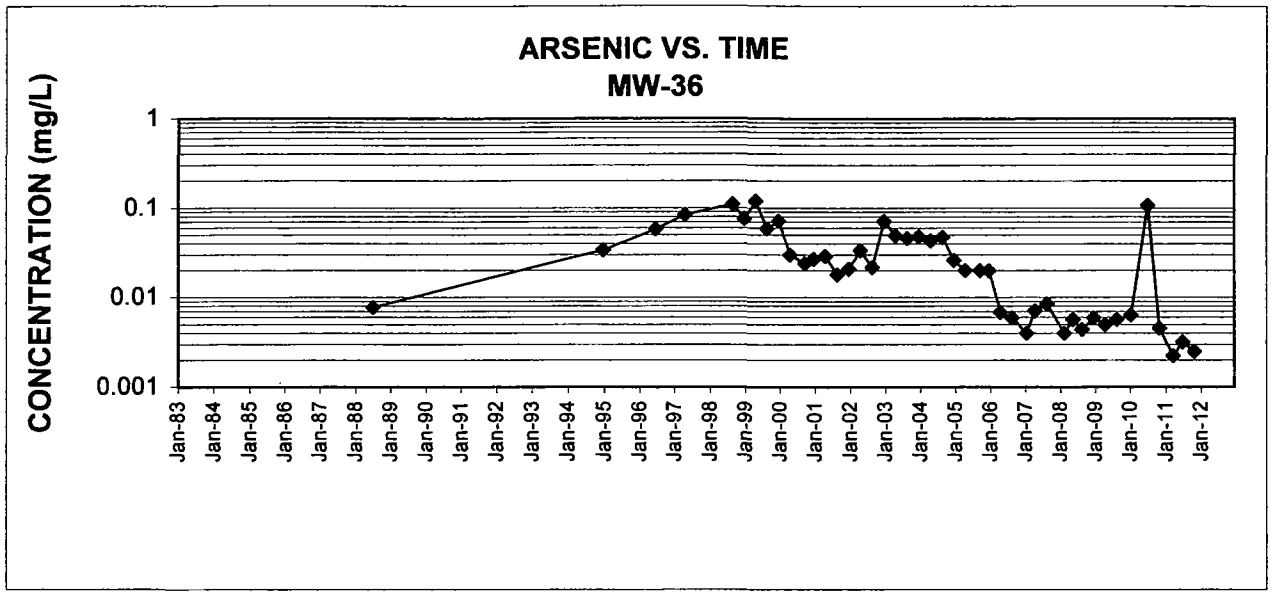
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-36
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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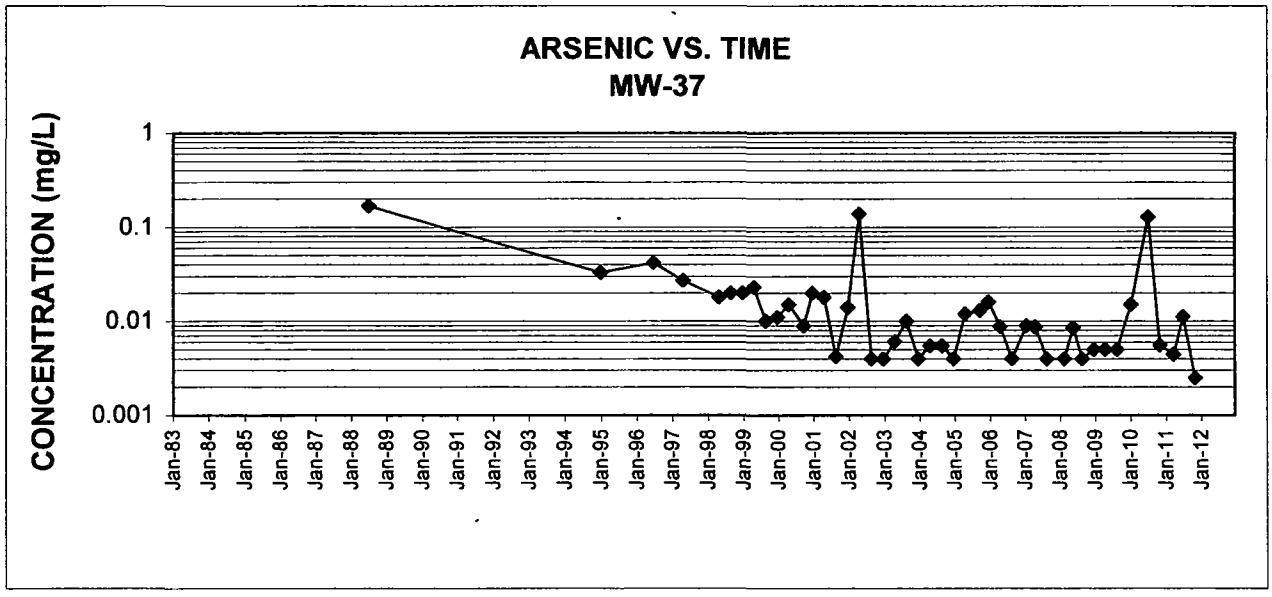
Jan-10
Jan-11
Jan-12


ARSENIC VS. TIME
MW-37
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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Jan-99
Jan-00
Jan-01
Jan-02
Jan-03
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Jan-07
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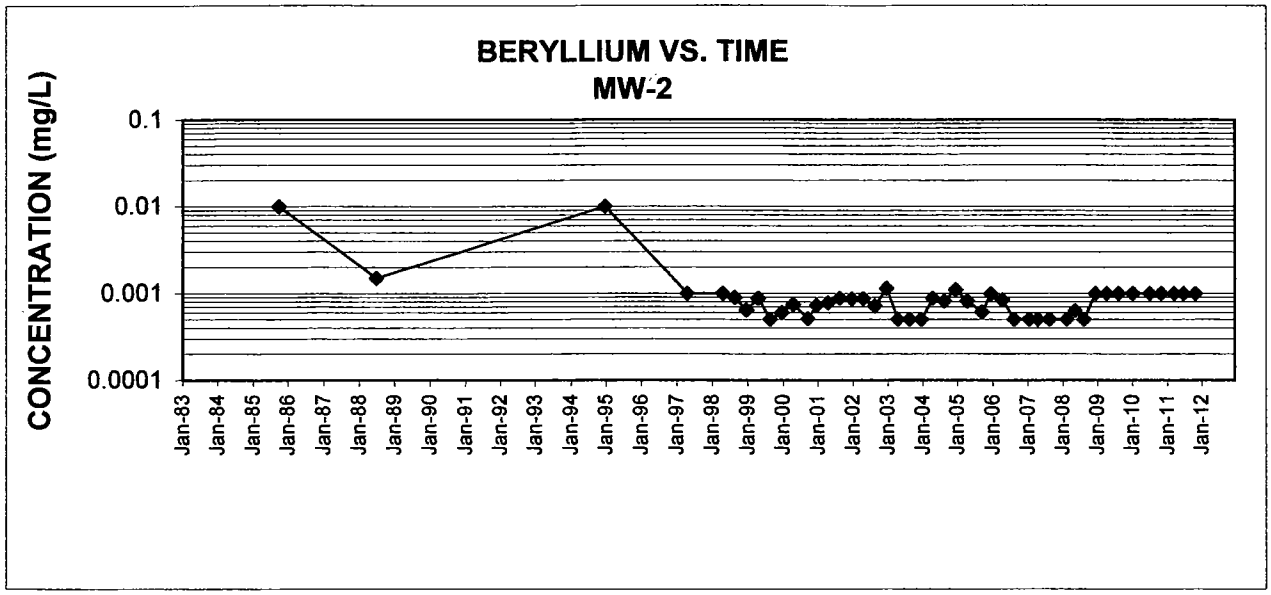
Jan-10
Jan-11
Jan-12

APPENDIX D-5

BERYLLIUM


BERYLLIUM VS. TIME
MW-2
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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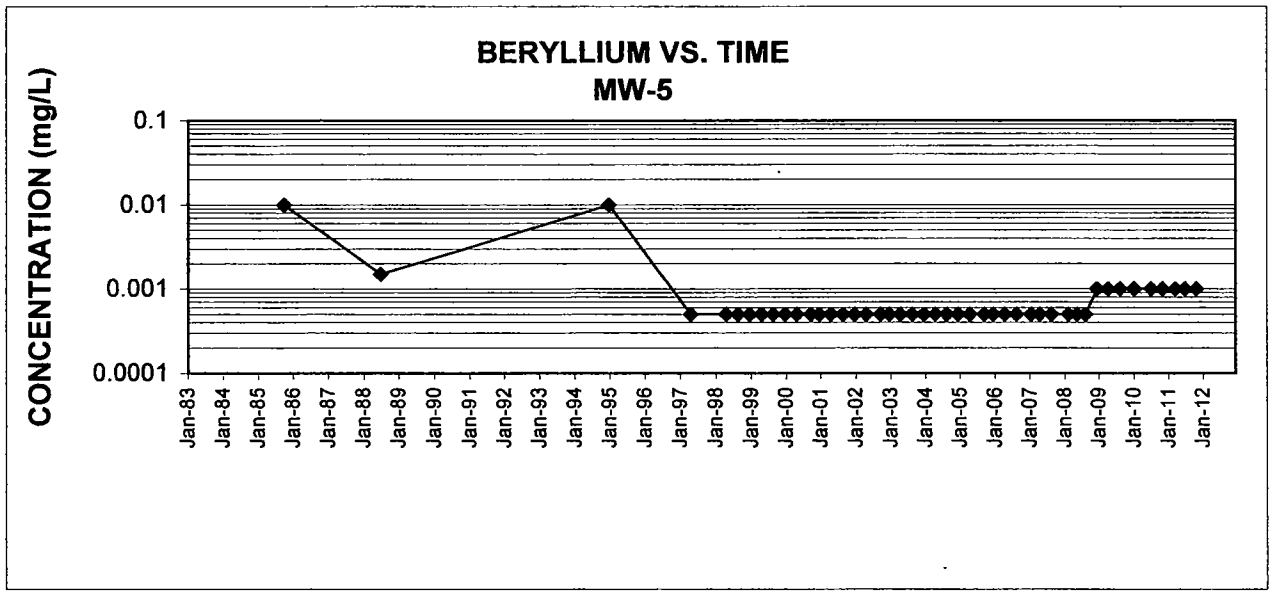
Jan-09
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-5
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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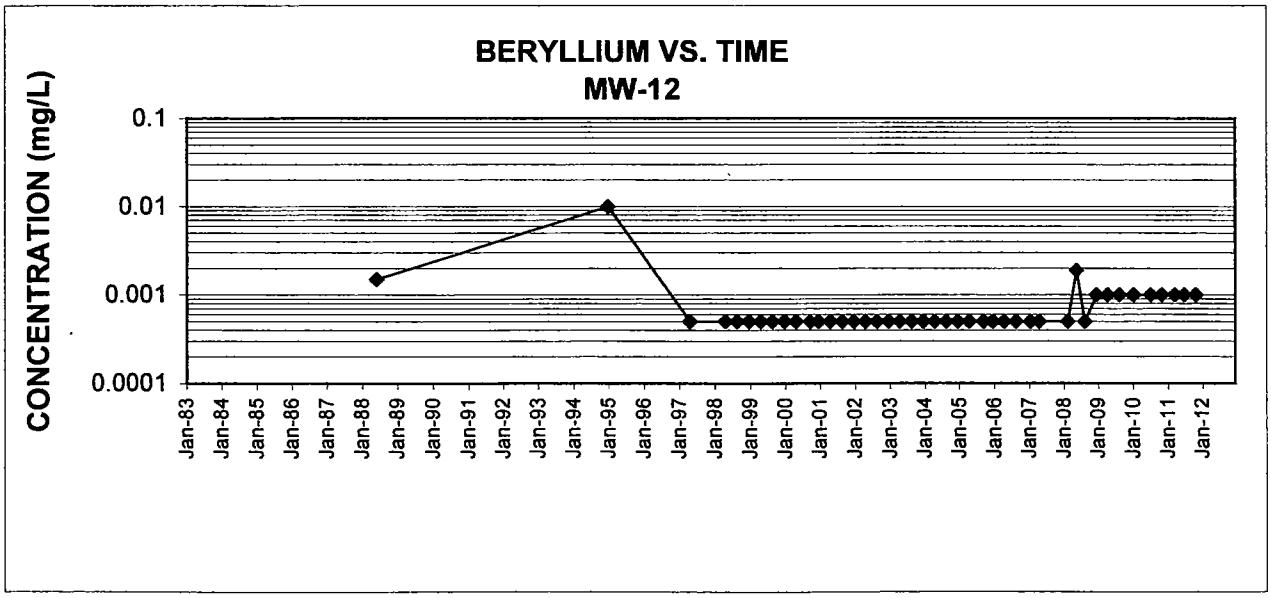
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-12
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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Jan-99
Jan-00
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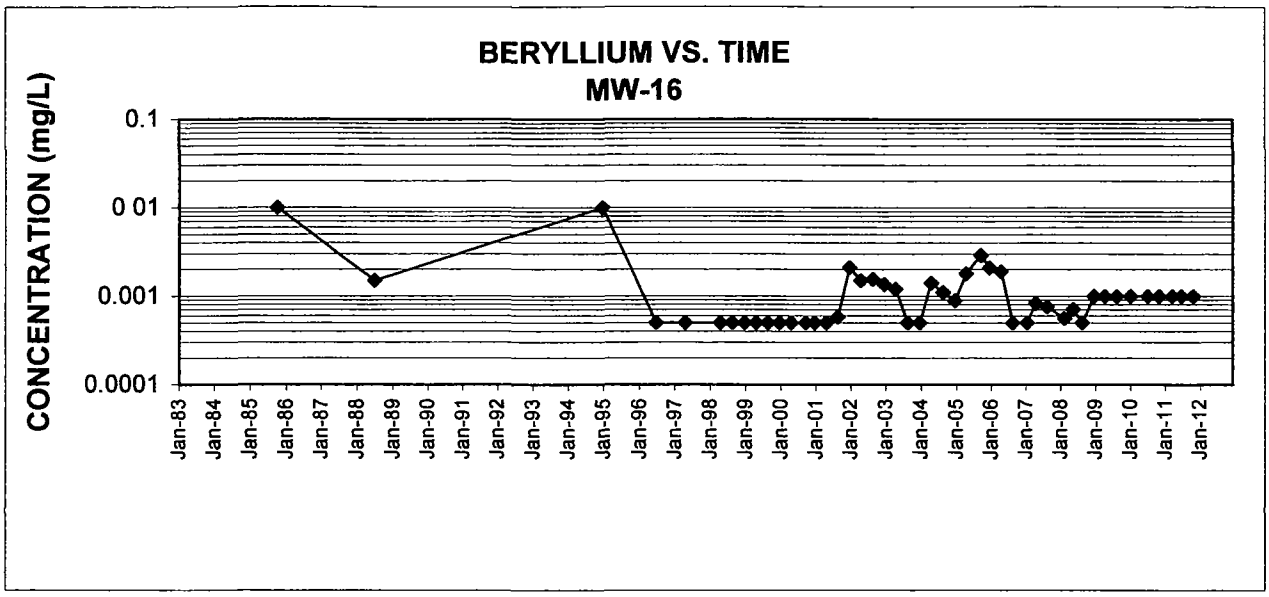
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-16
CONCENTRATION (mg/L)
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0 01
0.001
0.0001
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
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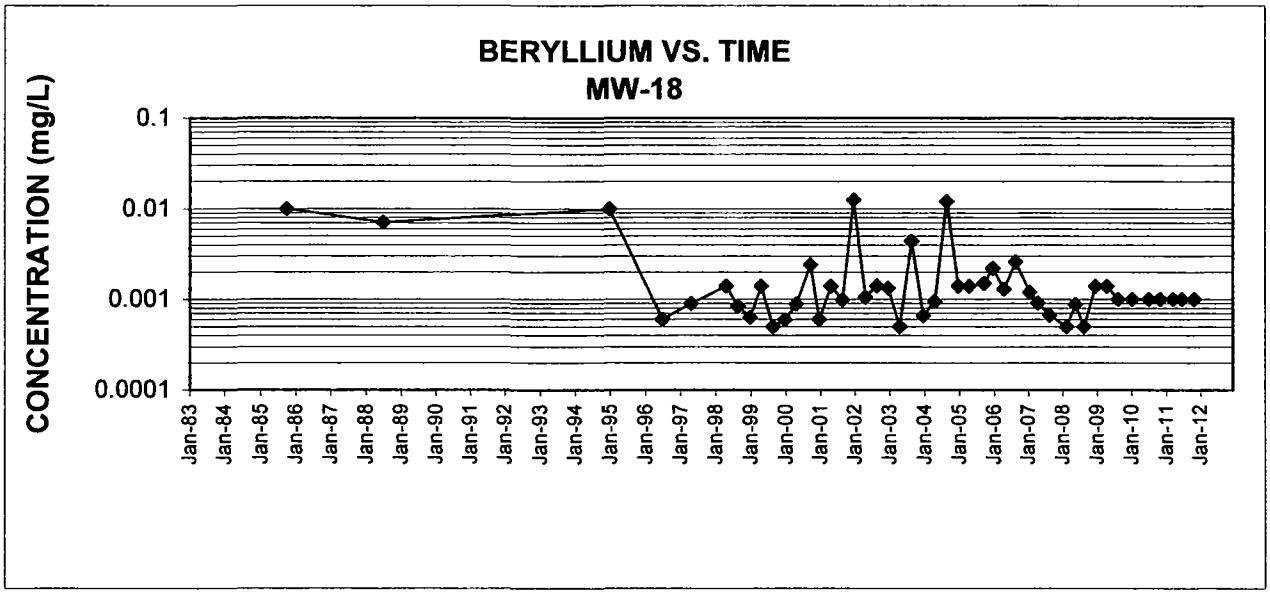
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-18
CONCENTRATION (mg/L)
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0.01
0.001
0.0001
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
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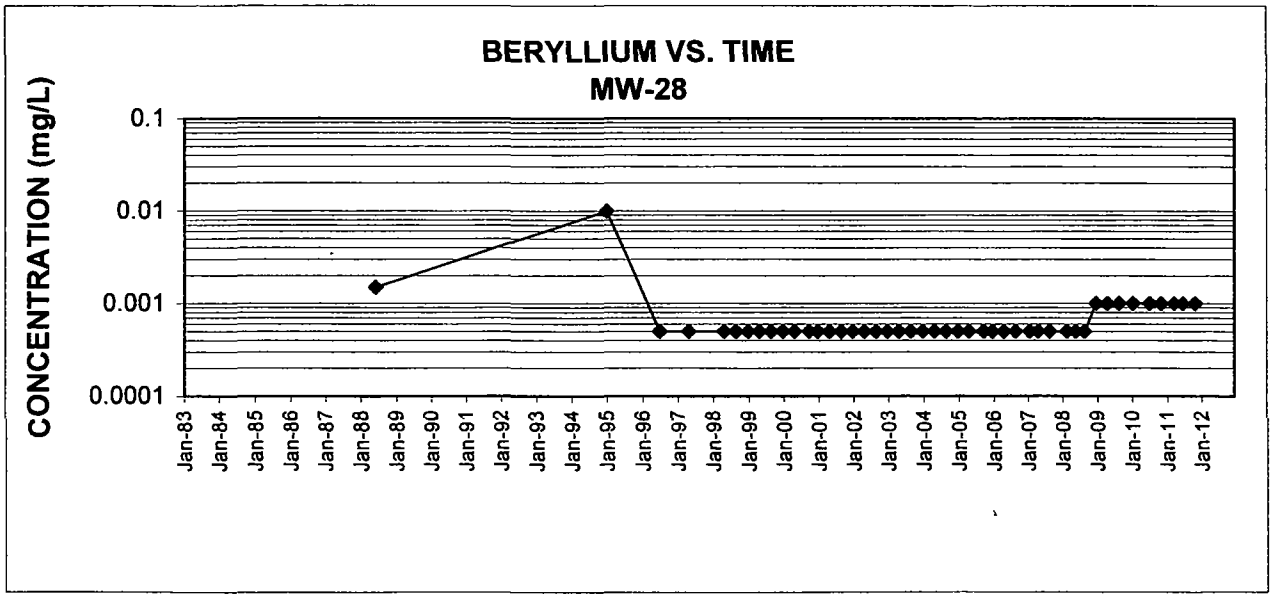
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-28
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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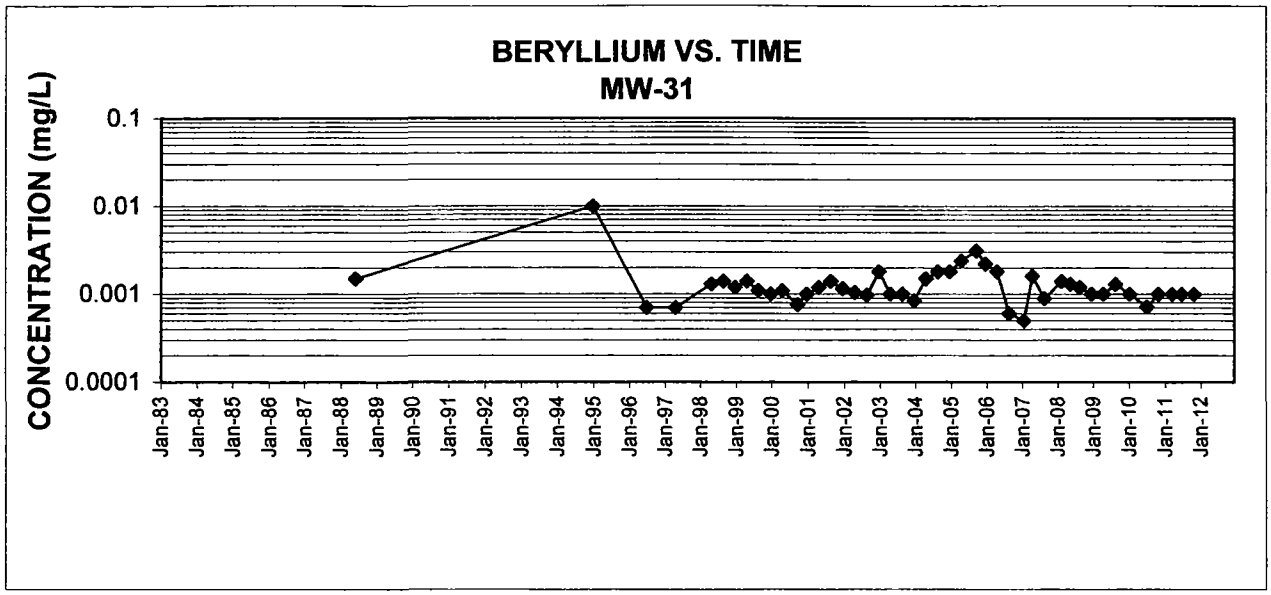
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-31
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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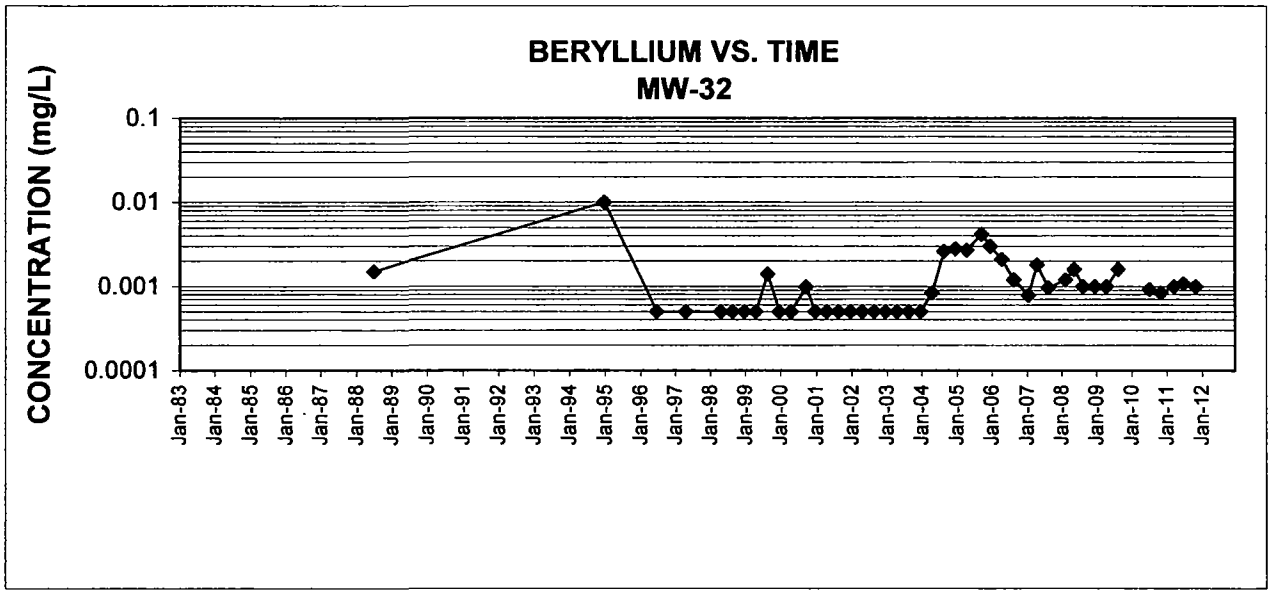
Jan-09
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-32
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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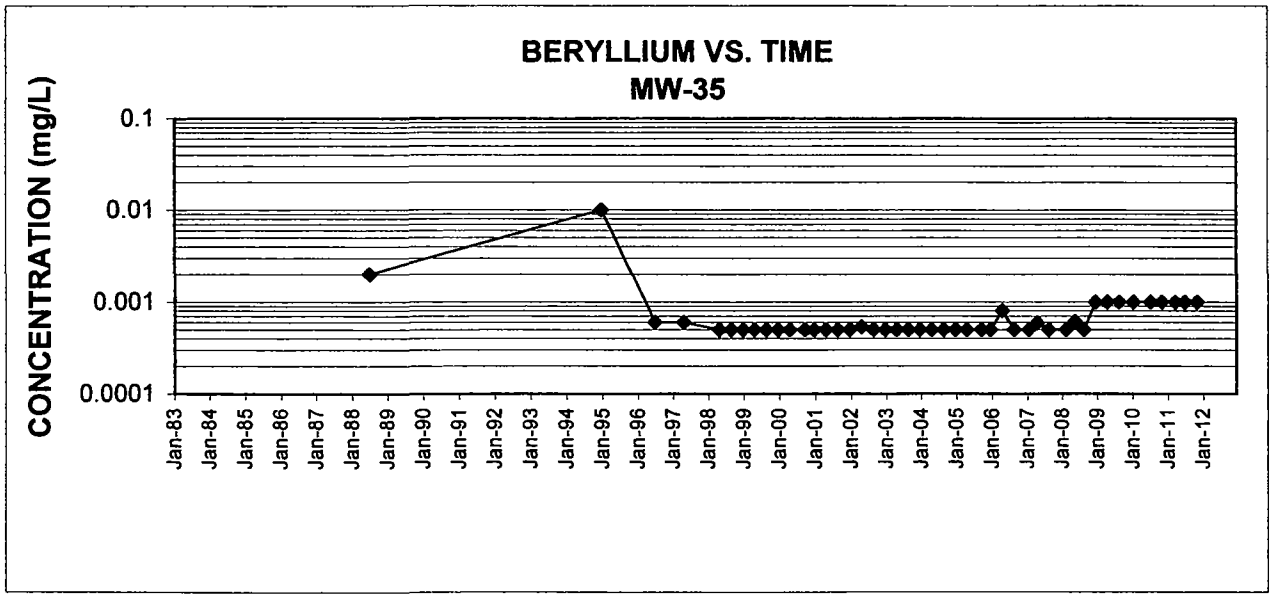
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-35
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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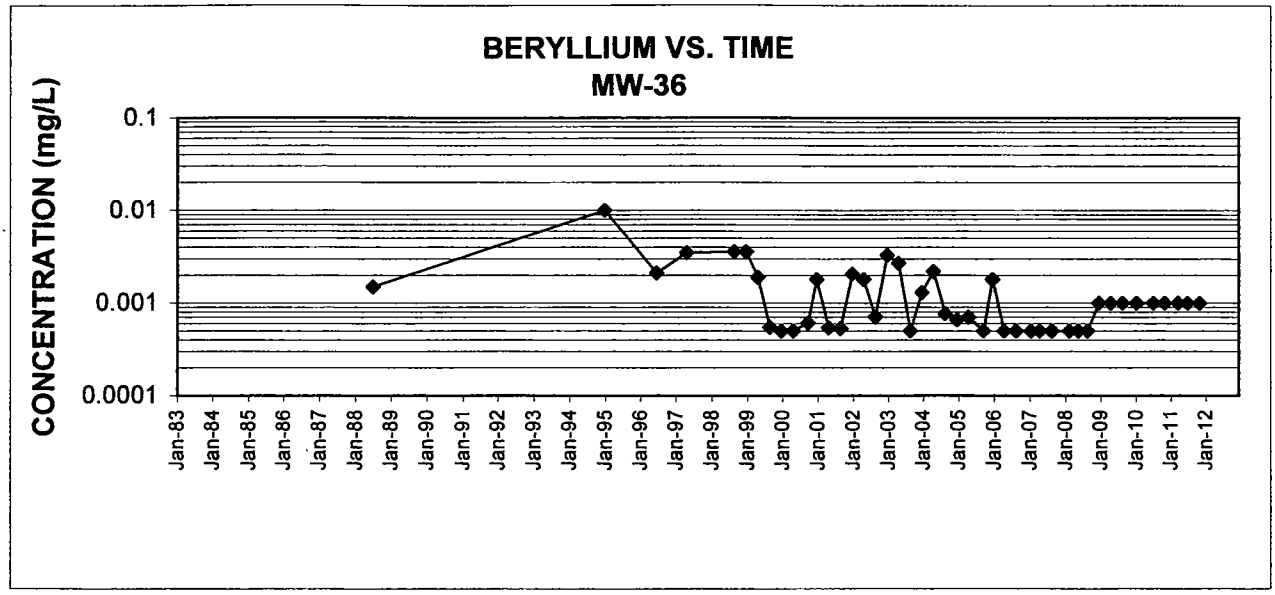
Jan-09
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-36
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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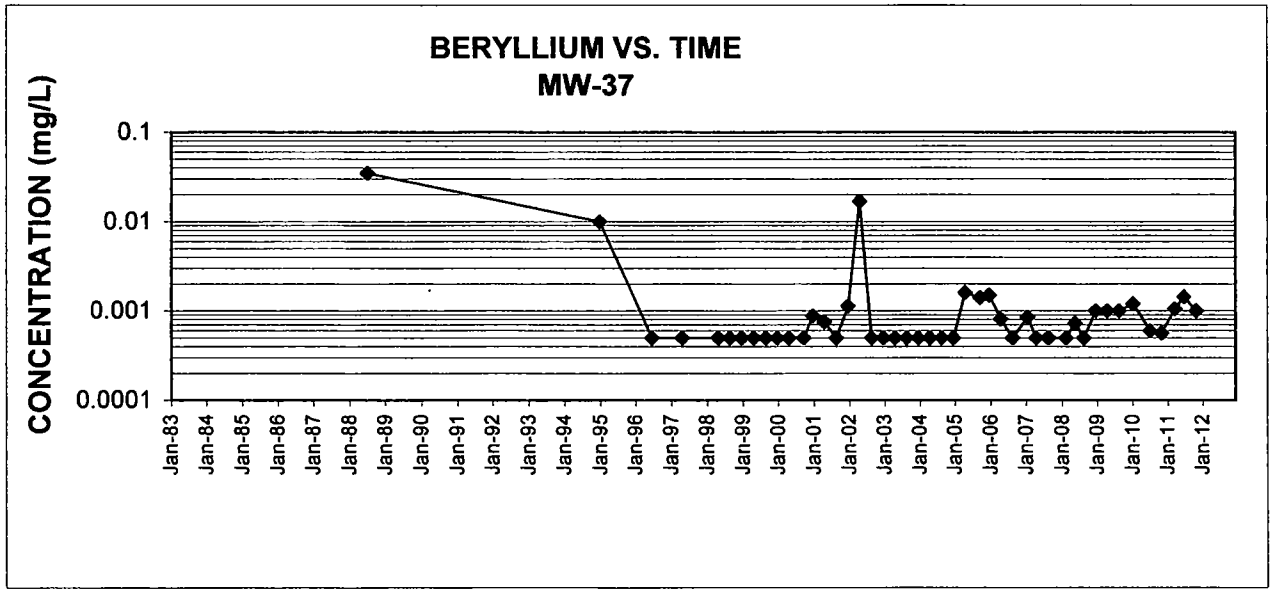
Jan-09
Jan-10
Jan-11
Jan-12


BERYLLIUM VS. TIME
MW-37
CONCENTRATION (mg/L)
0.1
0.01
0.001
0.0001
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
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Jan-03
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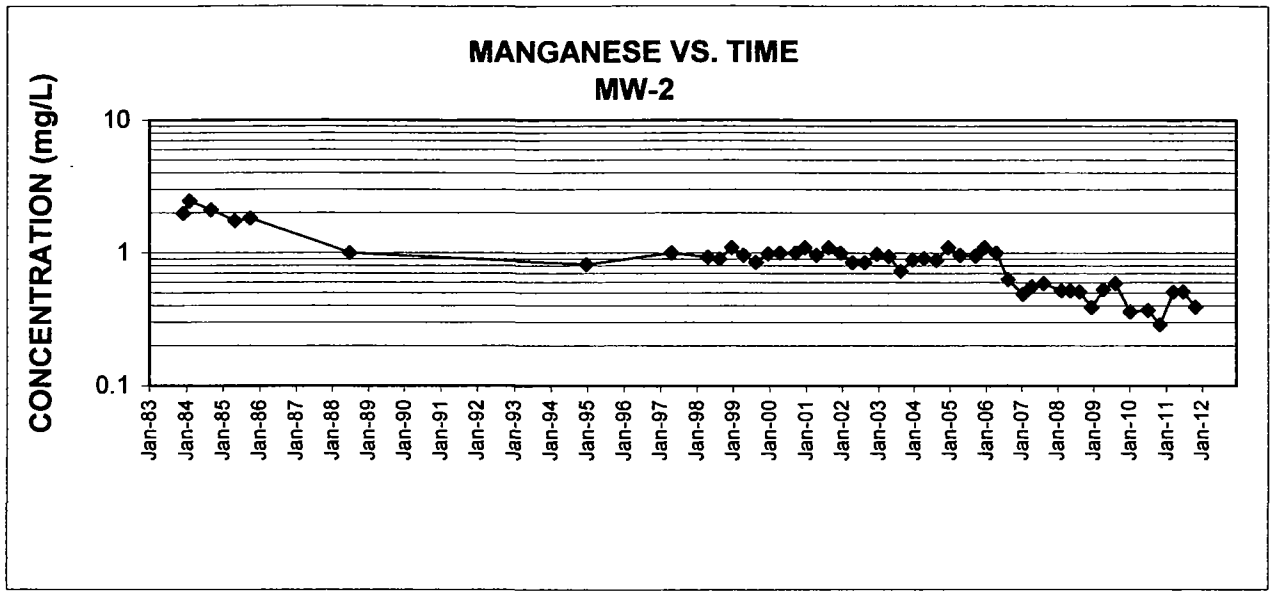
Jan-10
Jan-11
Jan-12

APPENDIX D-6

MANGANESE


MANGANESE VS. TIME
MW-2
CONCENTRATION (mg/L)
10
1
0.1
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
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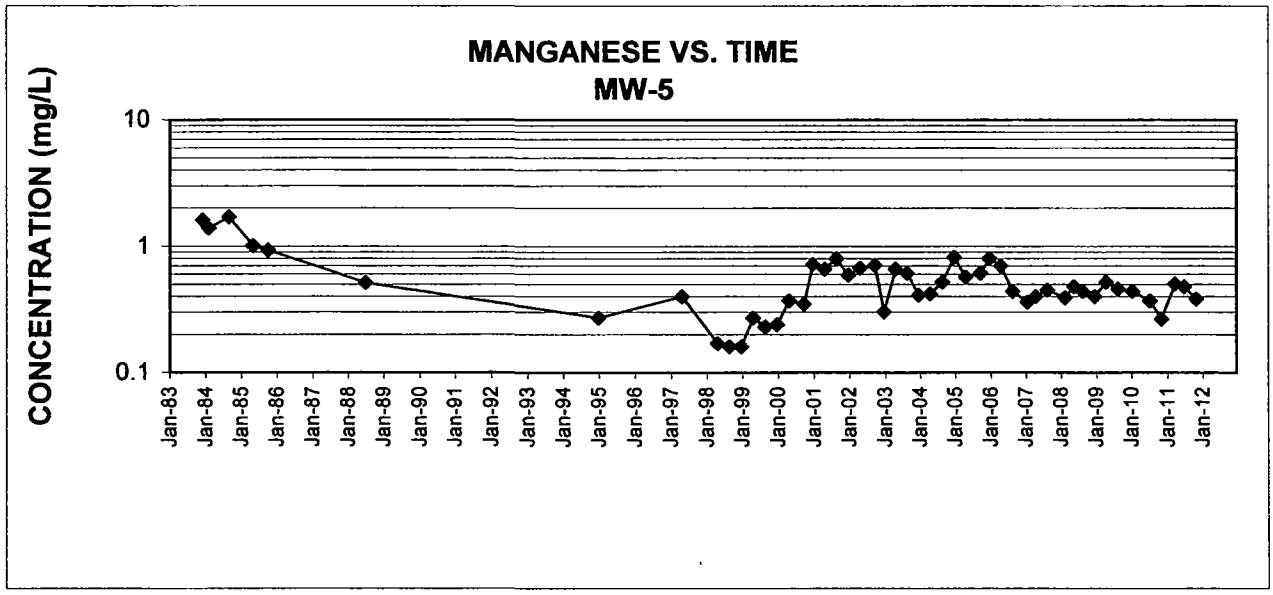
Jan-09
Jan-10
Jan-11
Jan-12


MANGANESE VS. TIME
MW-5
CONCENTRATION (mg/L)
10
1
0.1
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
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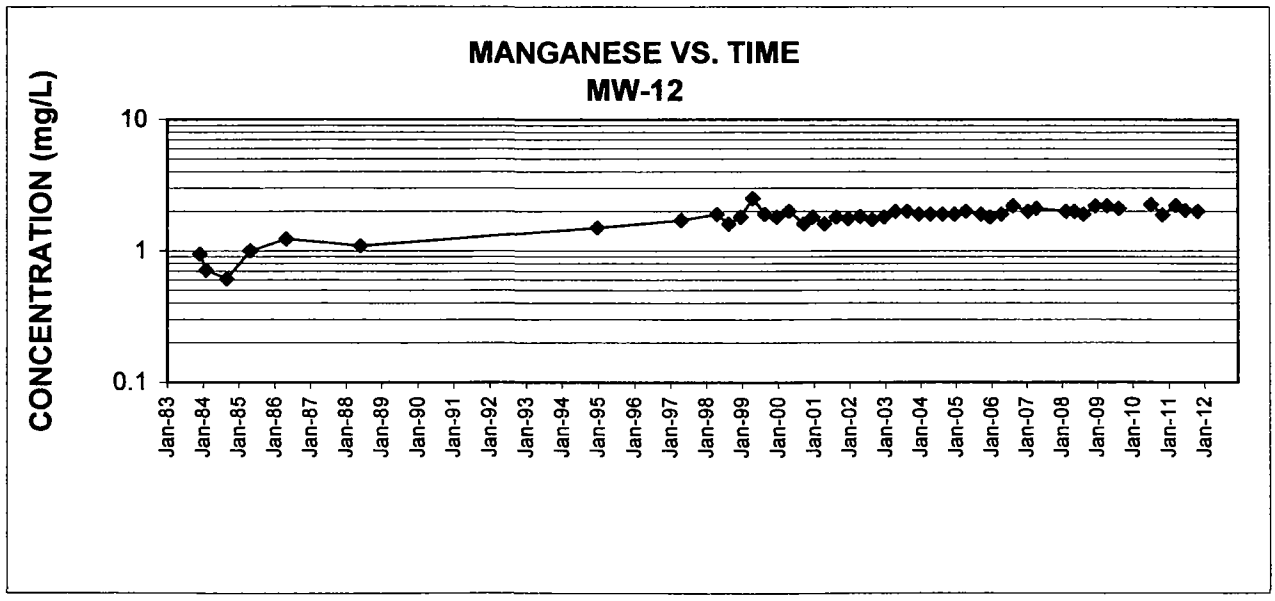
Jan-09
Jan-10
Jan-11
Jan-12


MANGANESE VS. TIME
MW-12
CONCENTRATION (mg/L)
10
1
0.1
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
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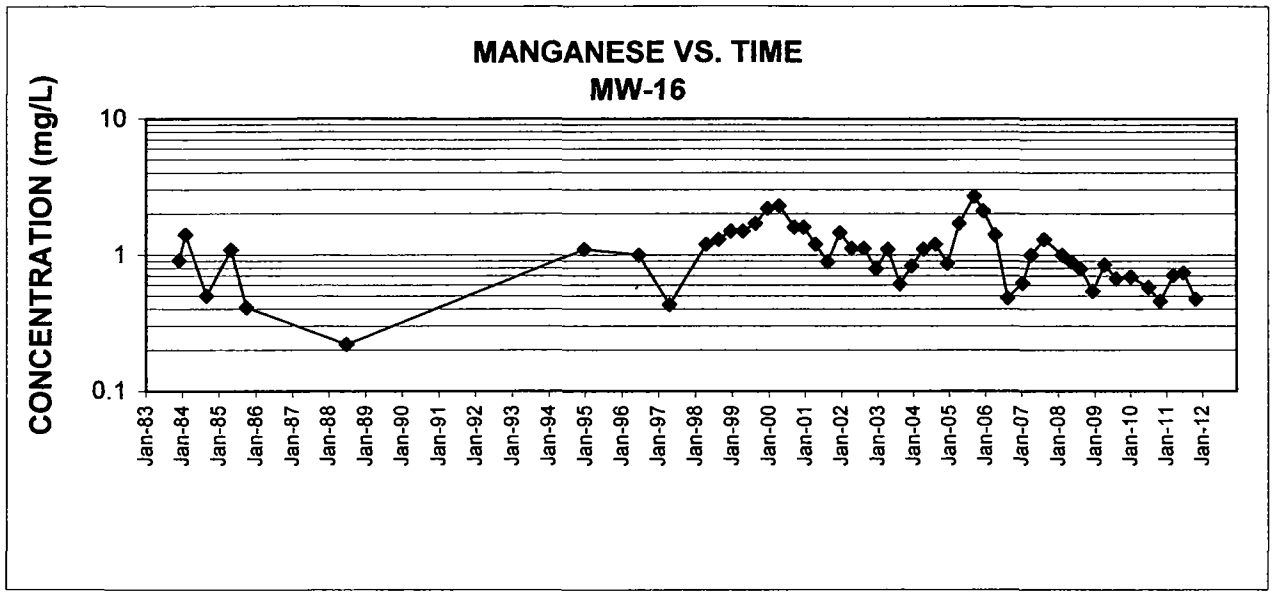
Jan-10
Jan-11
Jan-12


MANGANESE VS. TIME
MW-16
CONCENTRATION (mg/L)
10
1
0.1
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
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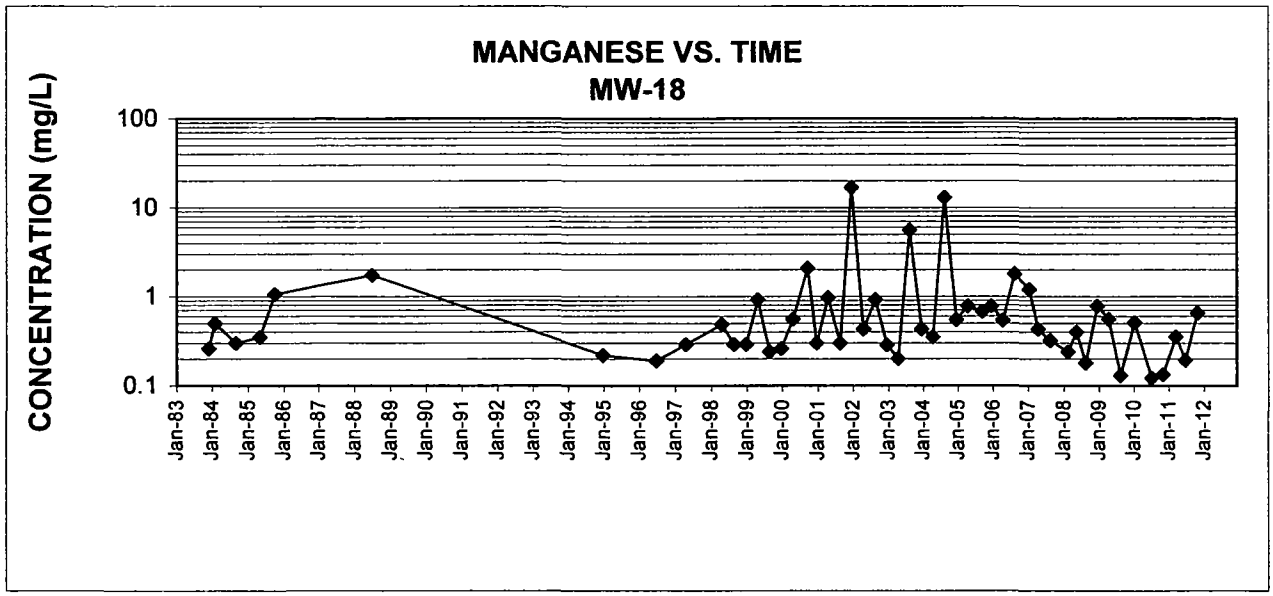
Jan-10
Jan-11
Jan-12


MANGANESE VS. TIME
MW-18
CONCENTRATION (mg/L)
100
10
1
0.1
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
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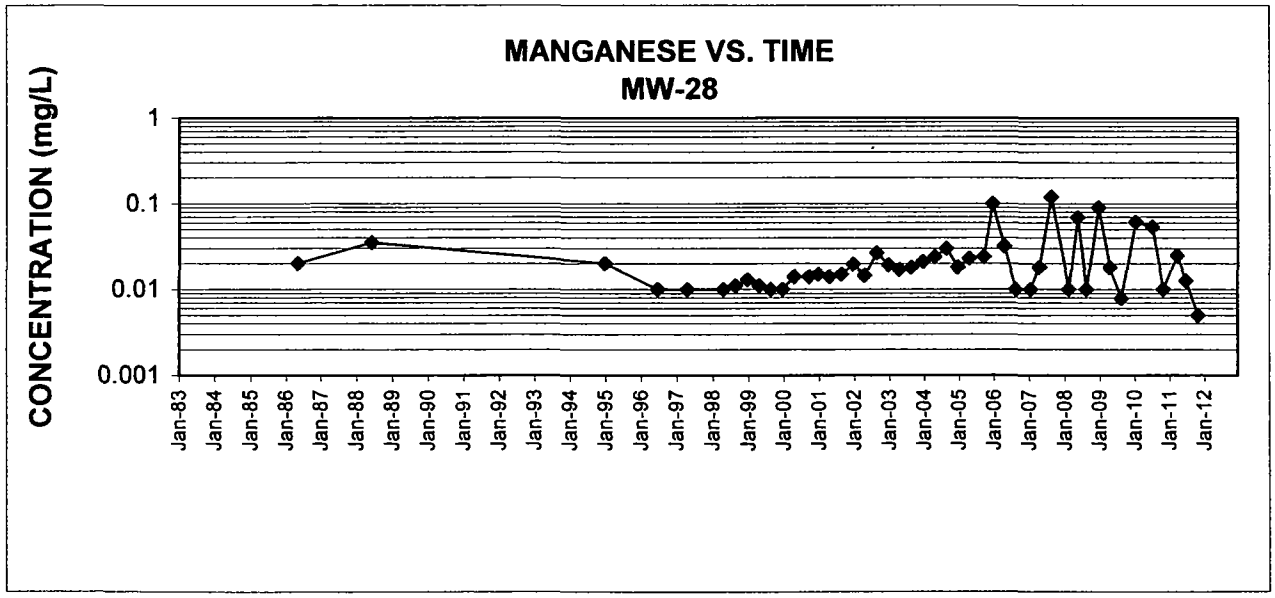
Jan-09
Jan-10
Jan-11
Jan-12


MANGANESE VS. TIME
MW-28
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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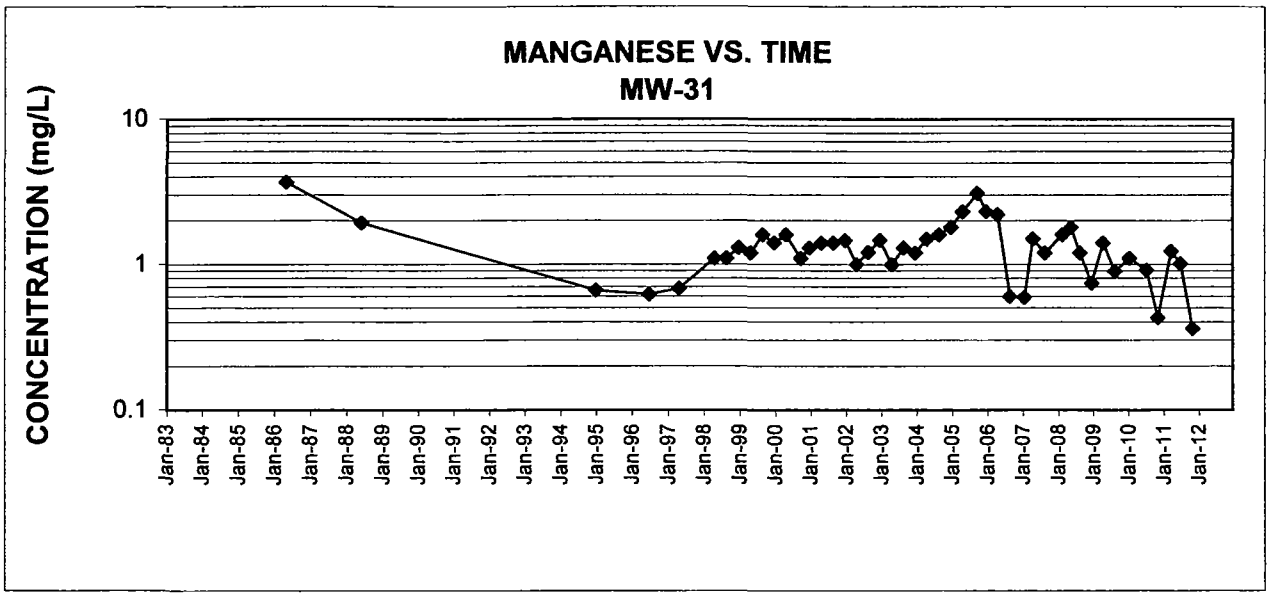
Jan-11
Jan-12


MANGANESE VS. TIME
MW-31
CONCENTRATION (mg/L)
10
1
0.1
Jan-83
Jan-84
Jan-85
Jan-86
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Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
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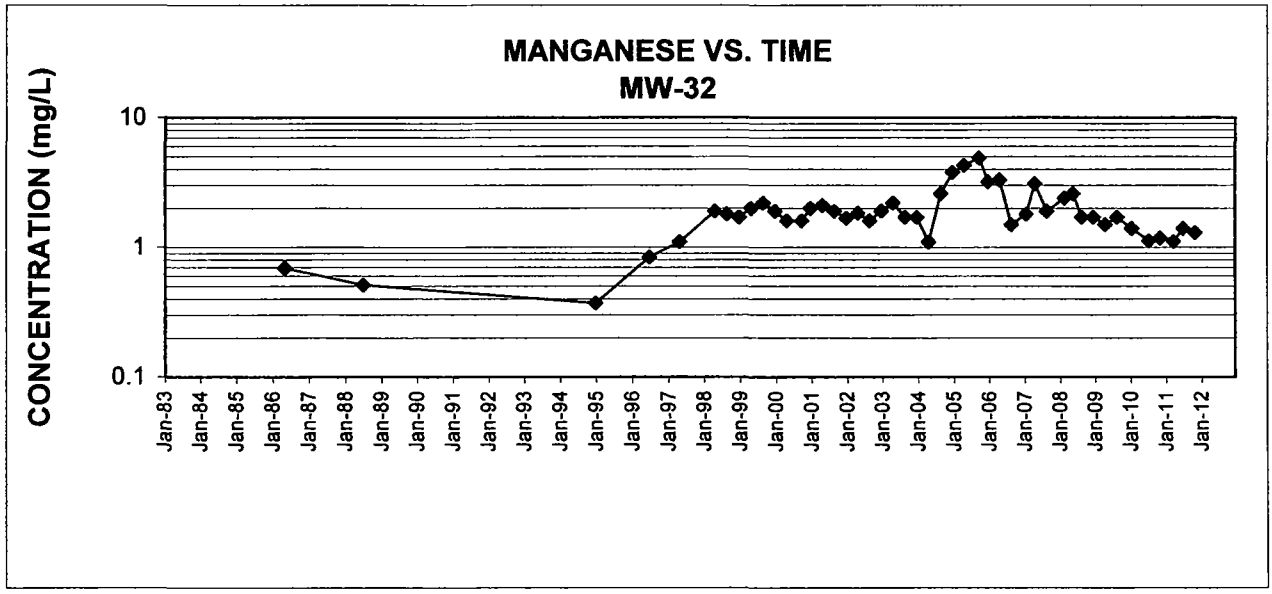
Jan-11
Jan-12


MANGANESE VS. TIME
MW-32
CONCENTRATION (mg/L)
10
1
0.1
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
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Jan-99
Jan-00
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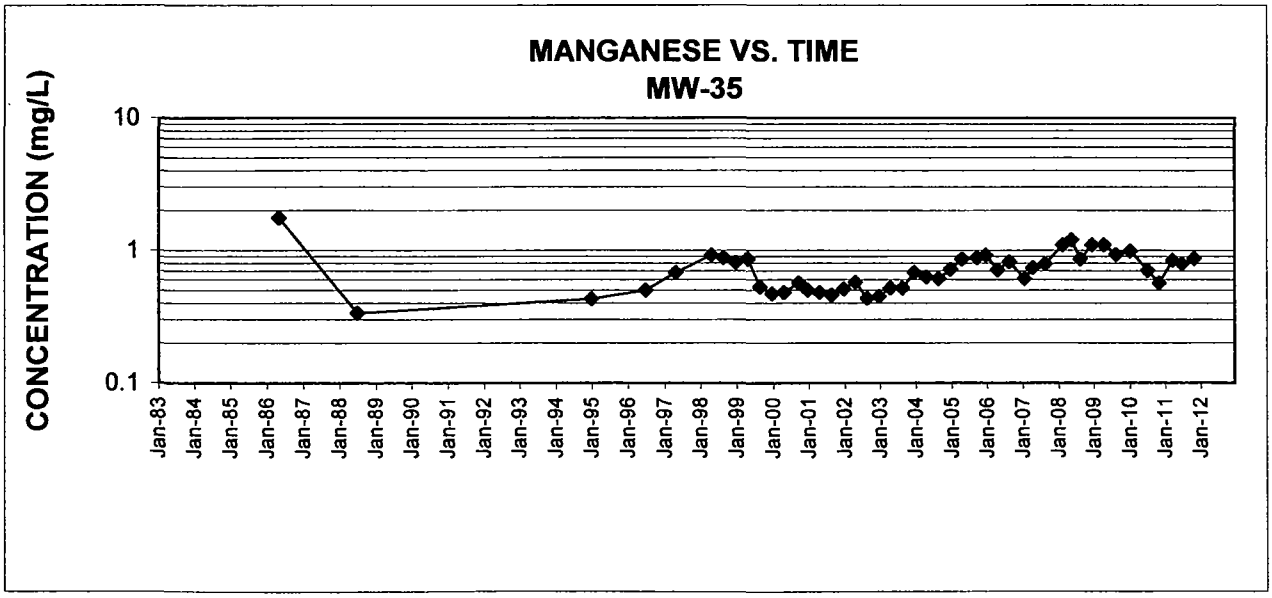
Jan-11
Jan-12


MANGANESE VS. TIME
MW-35
CONCENTRATION (mg/L)
10
1
0.1
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
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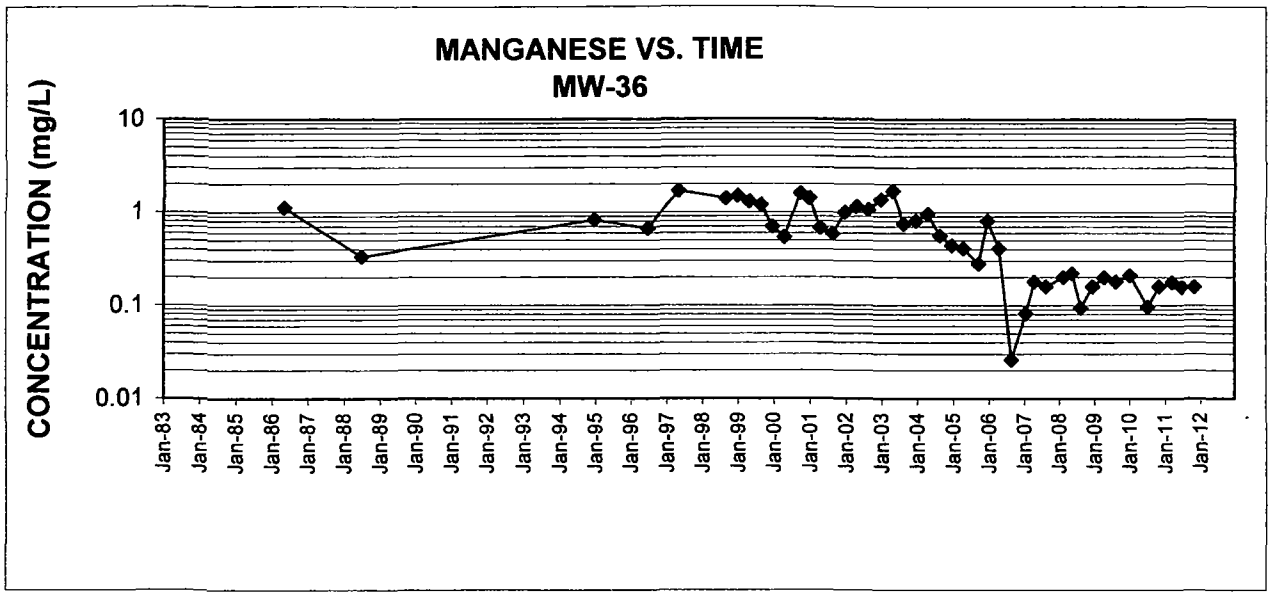
Jan-11
Jan-12


MANGANESE VS. TIME
MW-36
CONCENTRATION (mg/L)
10
1
0.1
0.01
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
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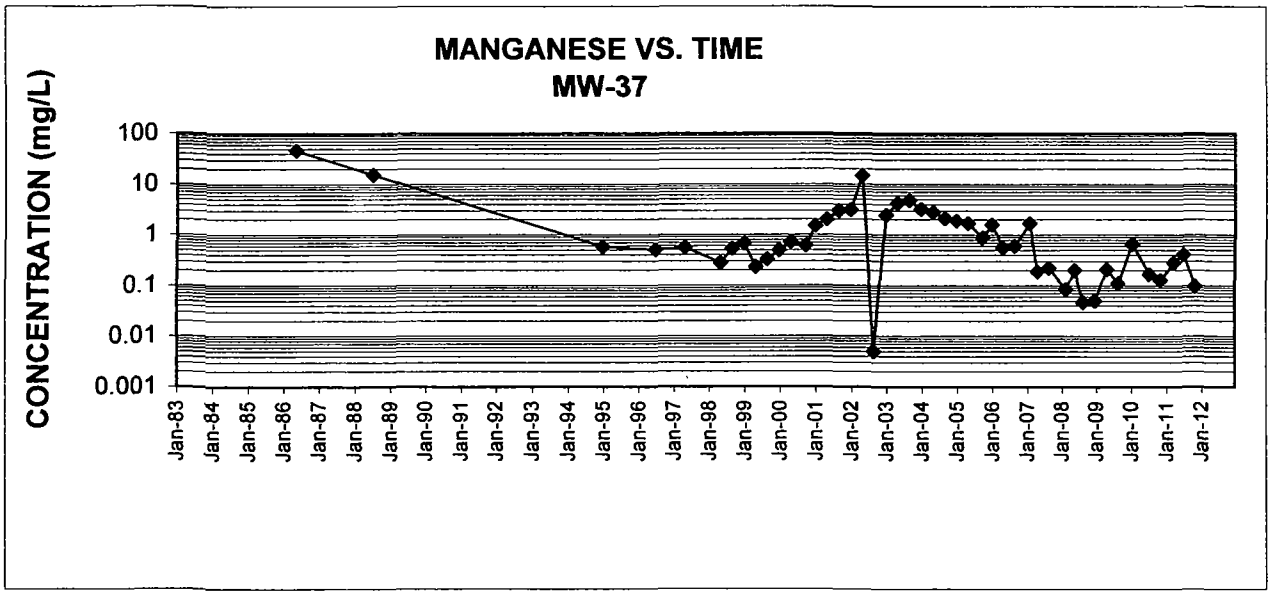
Jan-12


MANGANESE VS. TIME
MW-37
CONCENTRATION (mg/L)
100
10
1
0.1
0.01
0.001
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
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Jan-95
Jan-96
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Jan-98
Jan-99
Jan-00
Jan-01
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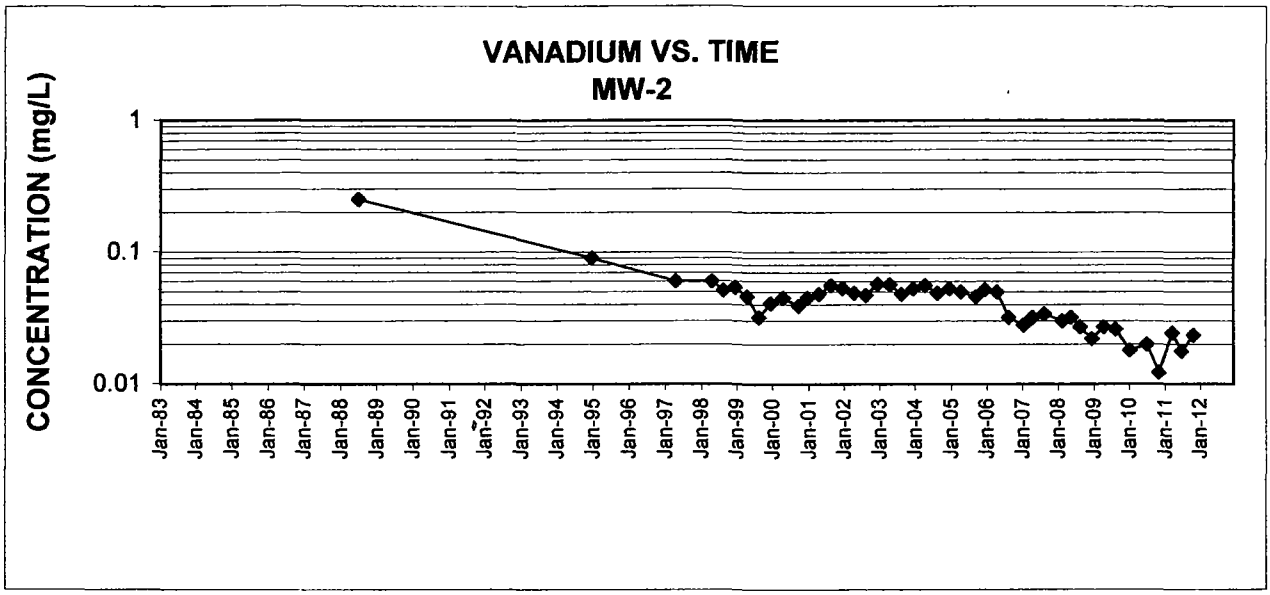
Jan-12

APPENDIX D-7

VANADIUM


VANADIUM VS. TIME
MW-2
CONCENTRATION (mg/L)
1
0.1
0.01
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
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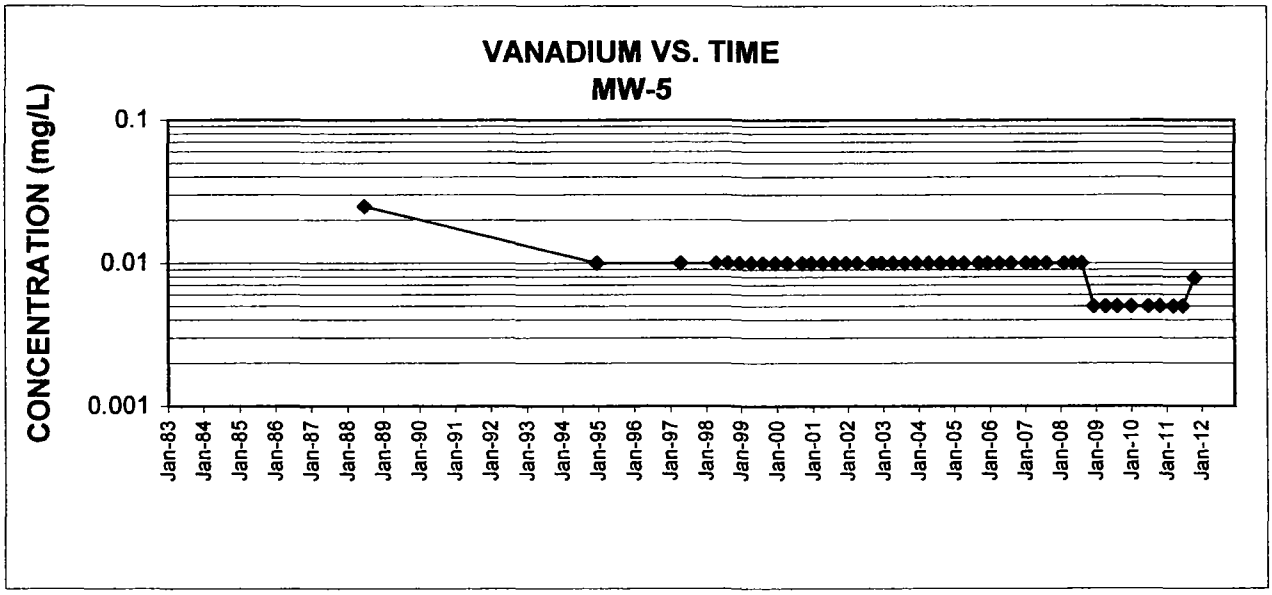
Jan-12


VANADIUM VS. TIME
MW-5
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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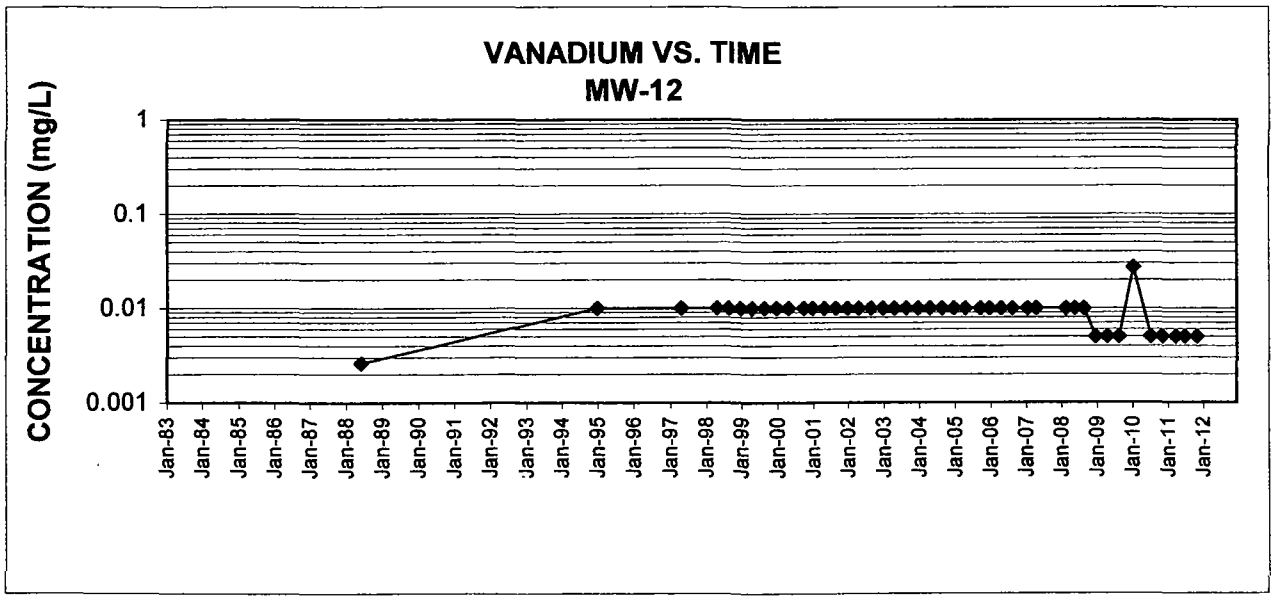
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-12
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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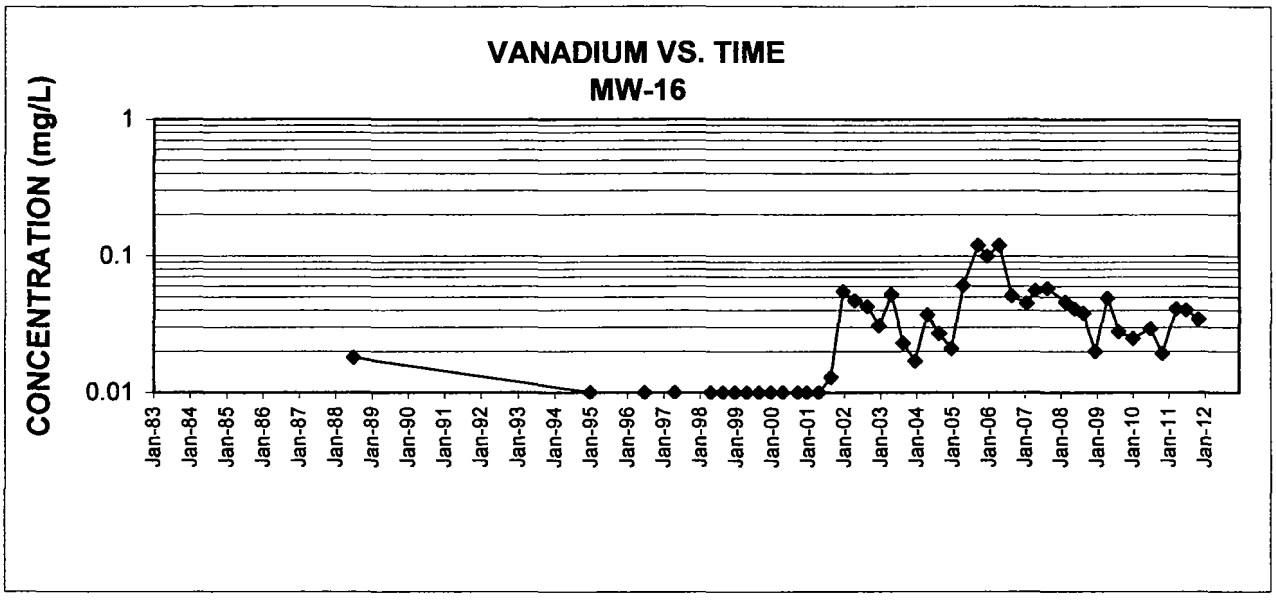
Jan-12


VANADIUM VS. TIME
MW-16
CONCENTRATION (mg/L)
1
0.1
0.01
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
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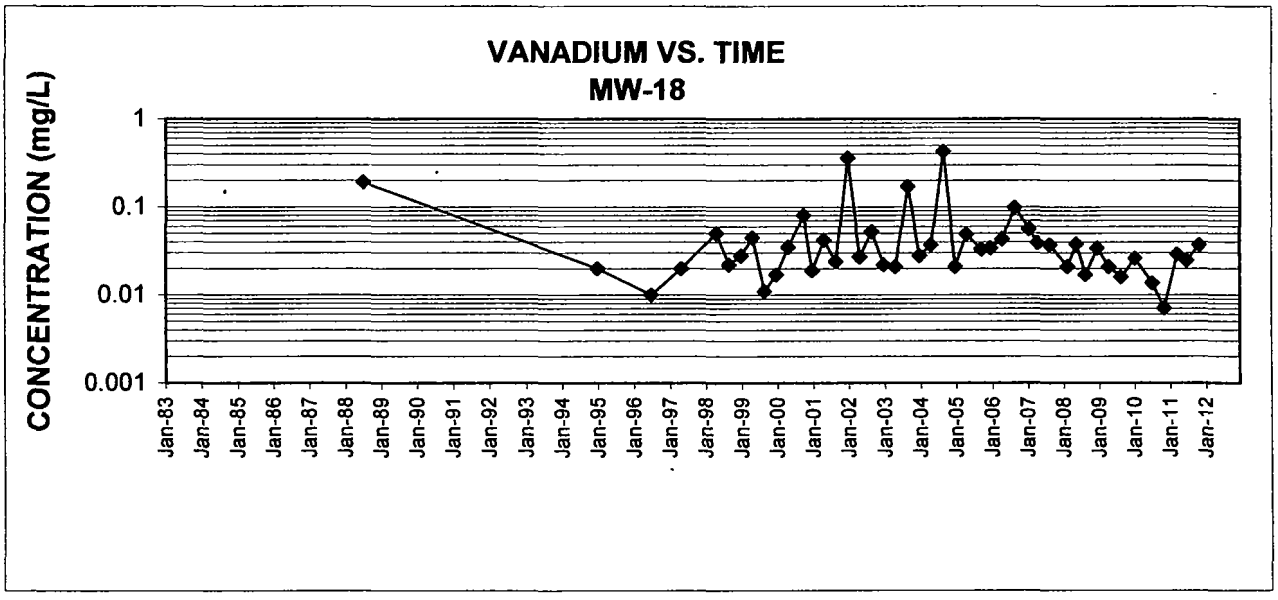
Jan-12


VANADIUM VS. TIME
MW-18
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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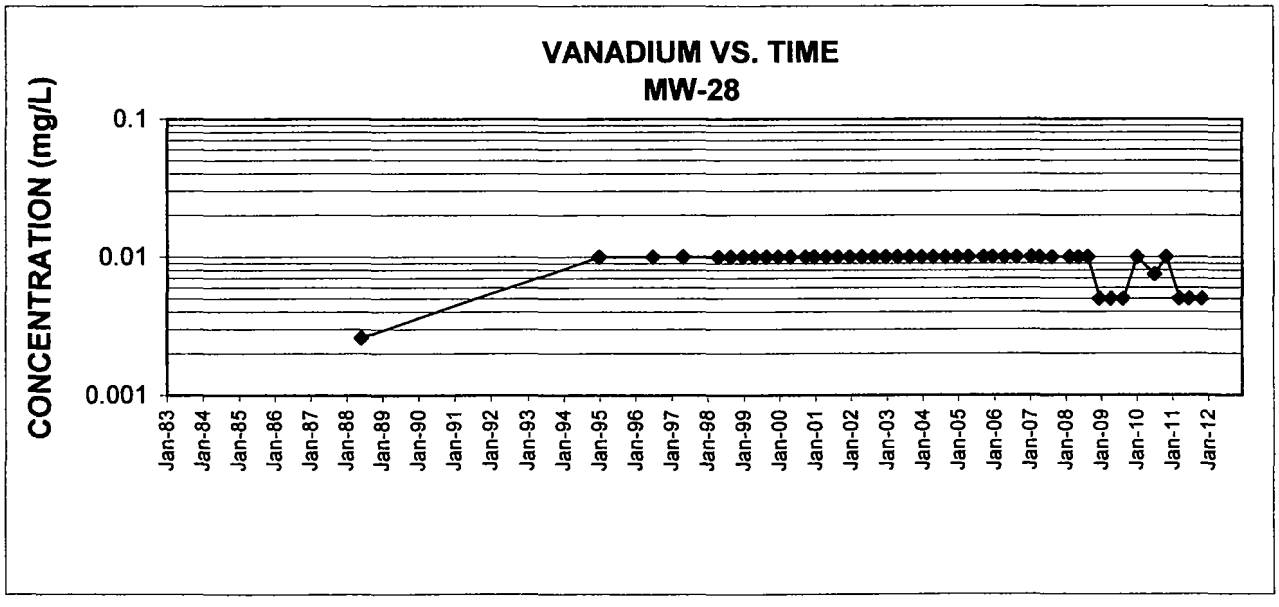
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-28
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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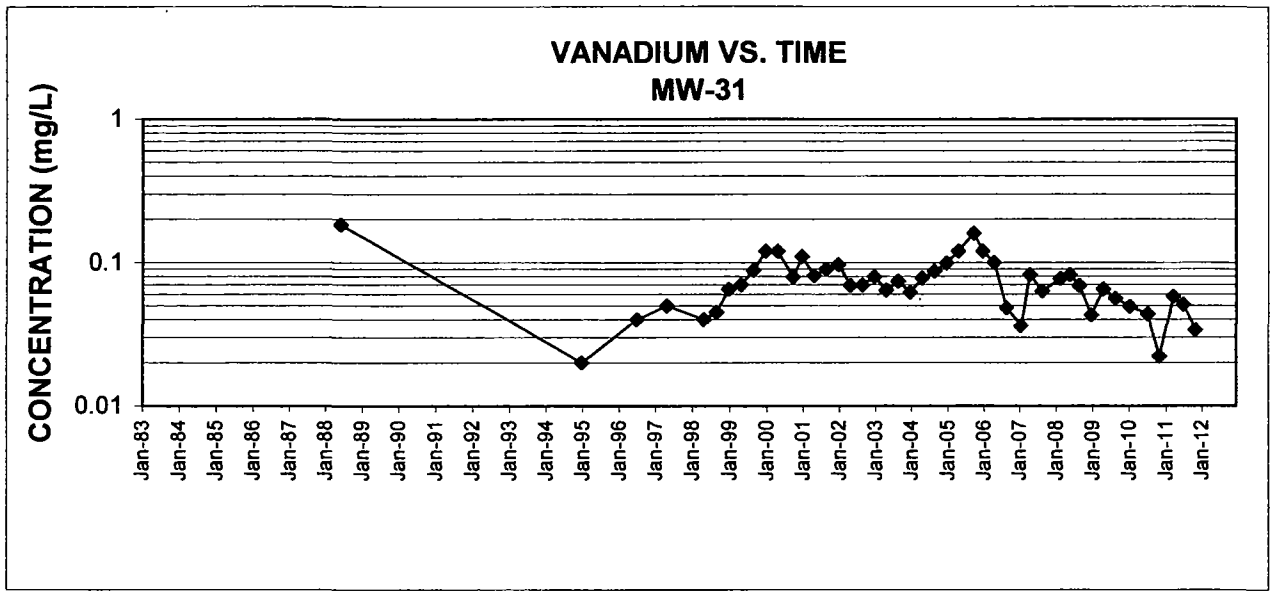
Jan-09
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-31
CONCENTRATION (mg/L)
1
0.1
0.01
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
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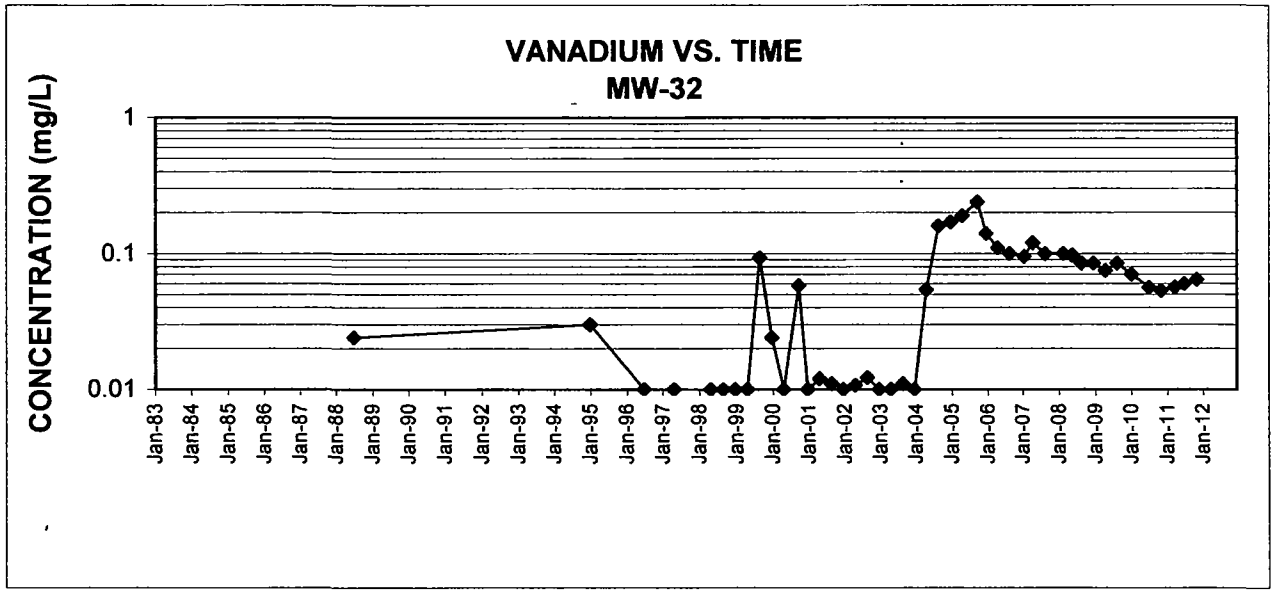
Jan-11
Jan-12


VANADIUM VS. TIME
MW-32
CONCENTRATION (mg/L)
1
0.1
0.01
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
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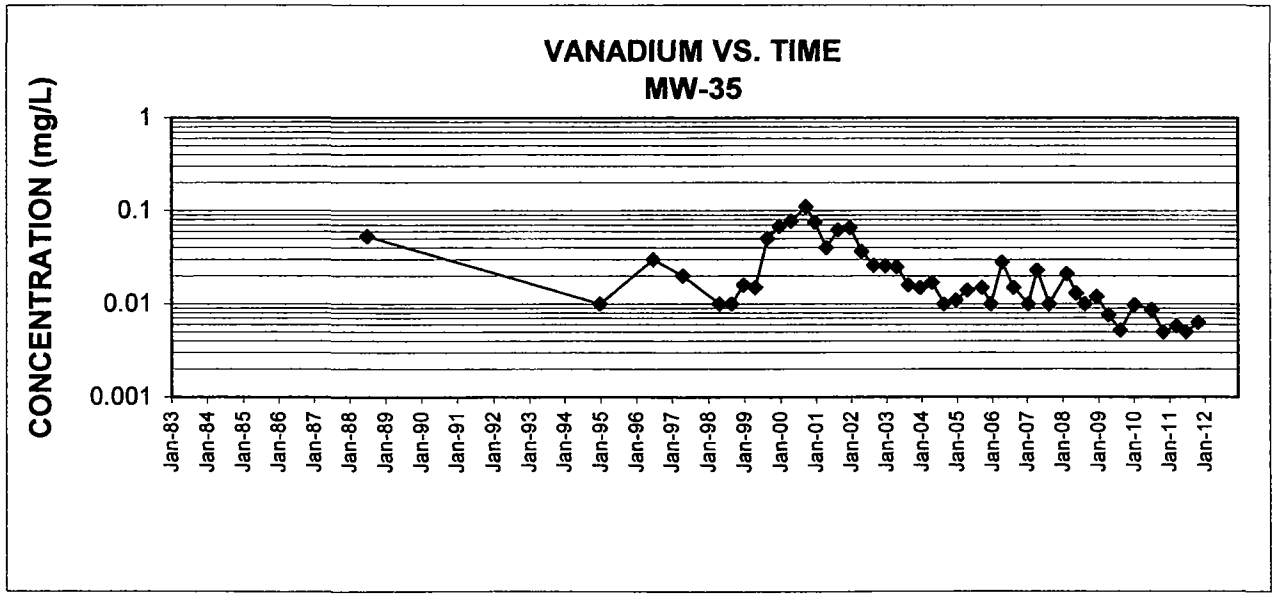
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-35
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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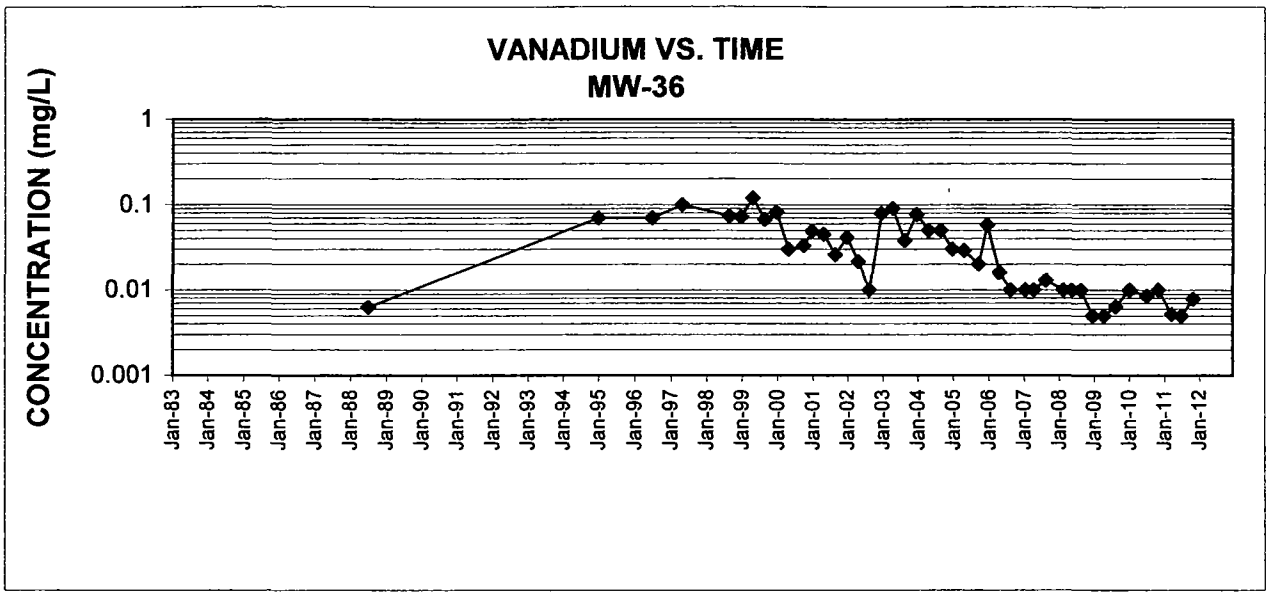
Jan-09
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-36
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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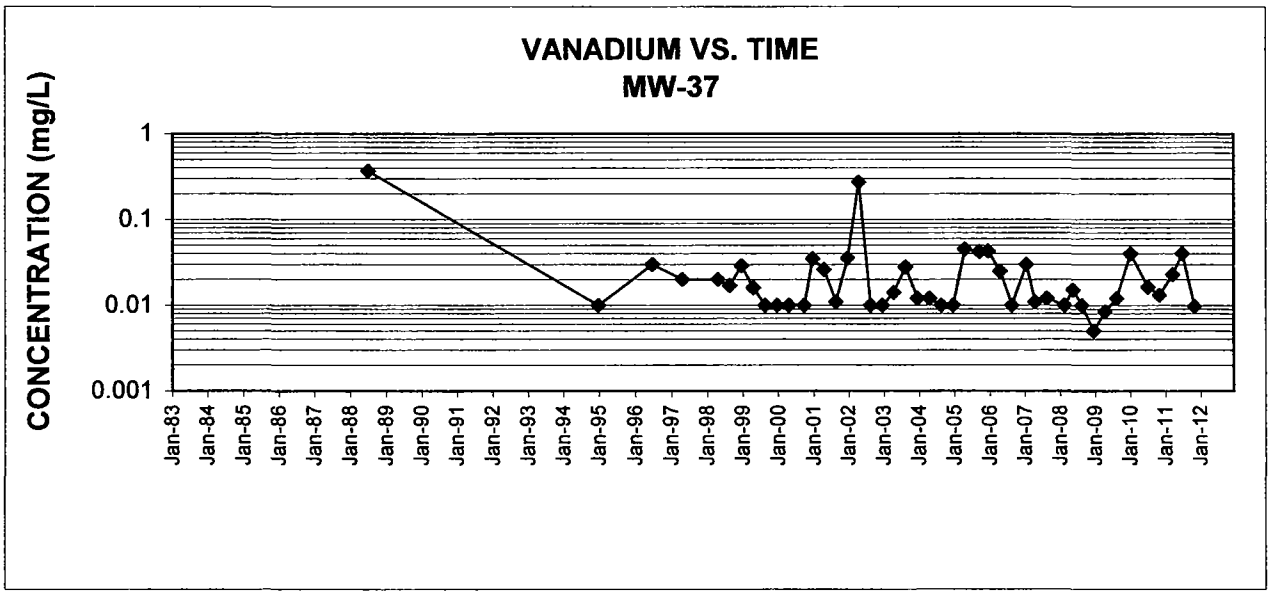
Jan-09
Jan-10
Jan-11
Jan-12


VANADIUM VS. TIME
MW-37
CONCENTRATION (mg/L)
1
0.1
0.01
0.001
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
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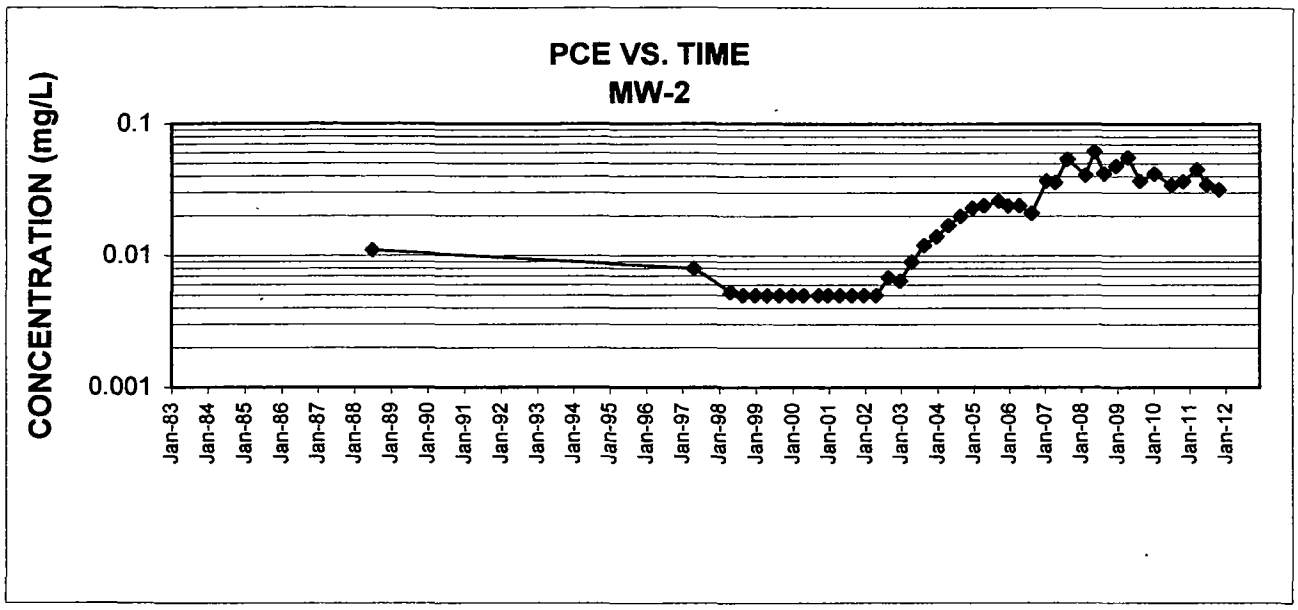
Jan-10
Jan-11
Jan-12

APPENDIX D-8

TETRACHLOROETHENE


PCE VS. TIME
MW-2
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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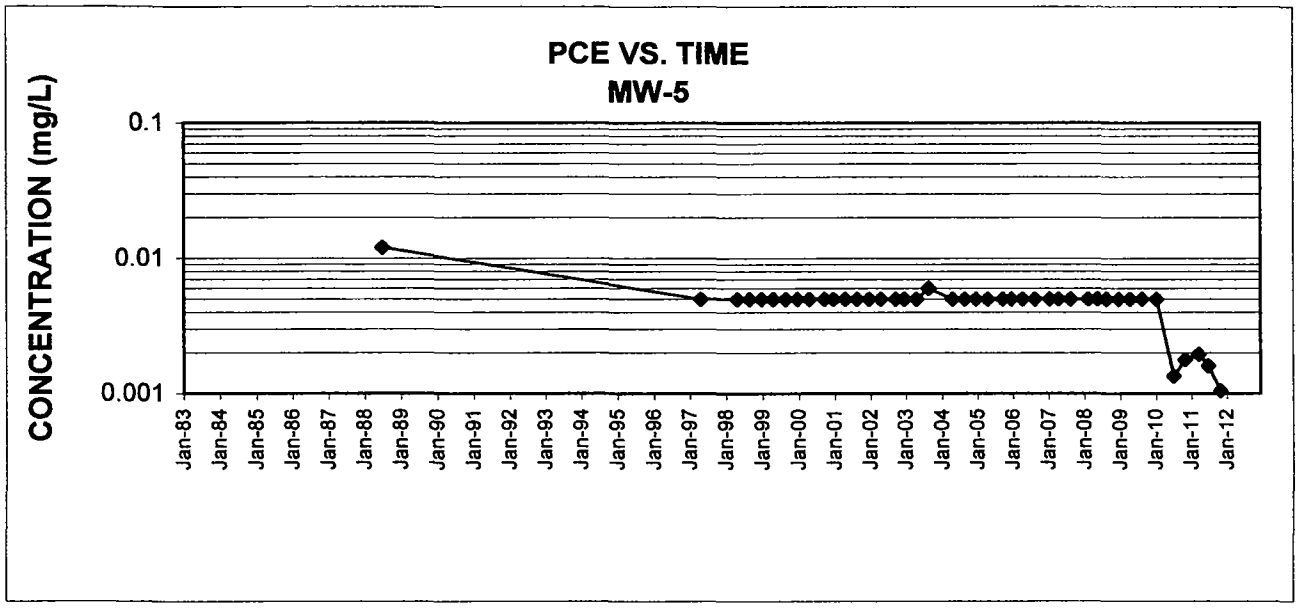
Jan-09
Jan-10
Jan-11
Jan-12


PCE VS. TIME
MW-5
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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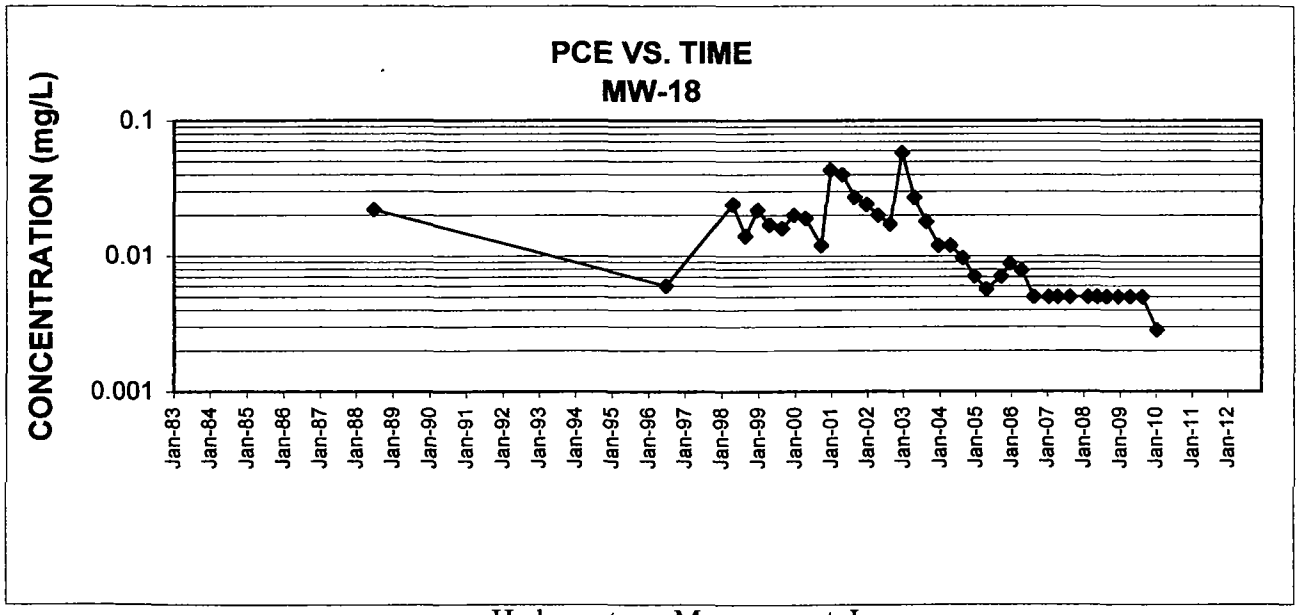
Jan-10
Jan-11
Jan-12


PCE VS. TIME
MW-18
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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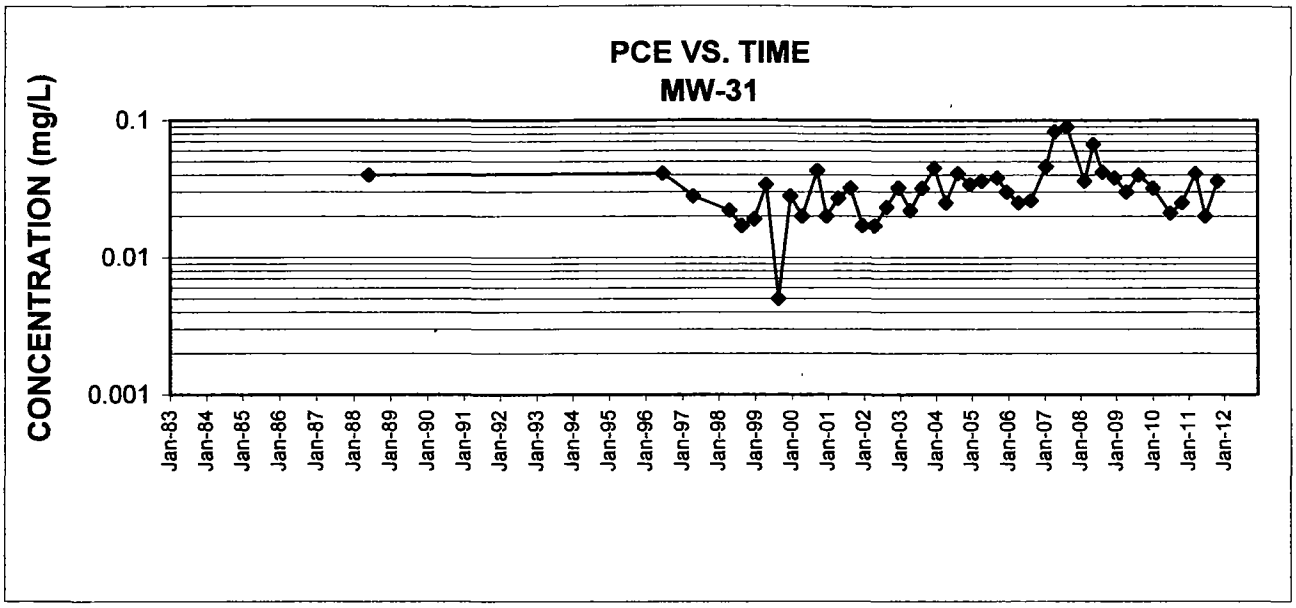
Jan-09
Jan-10
Jan-11
Jan-12


PCE VS. TIME
MW-31
CONCENTRATION (mg/L)
0.1
0.01
0.001
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
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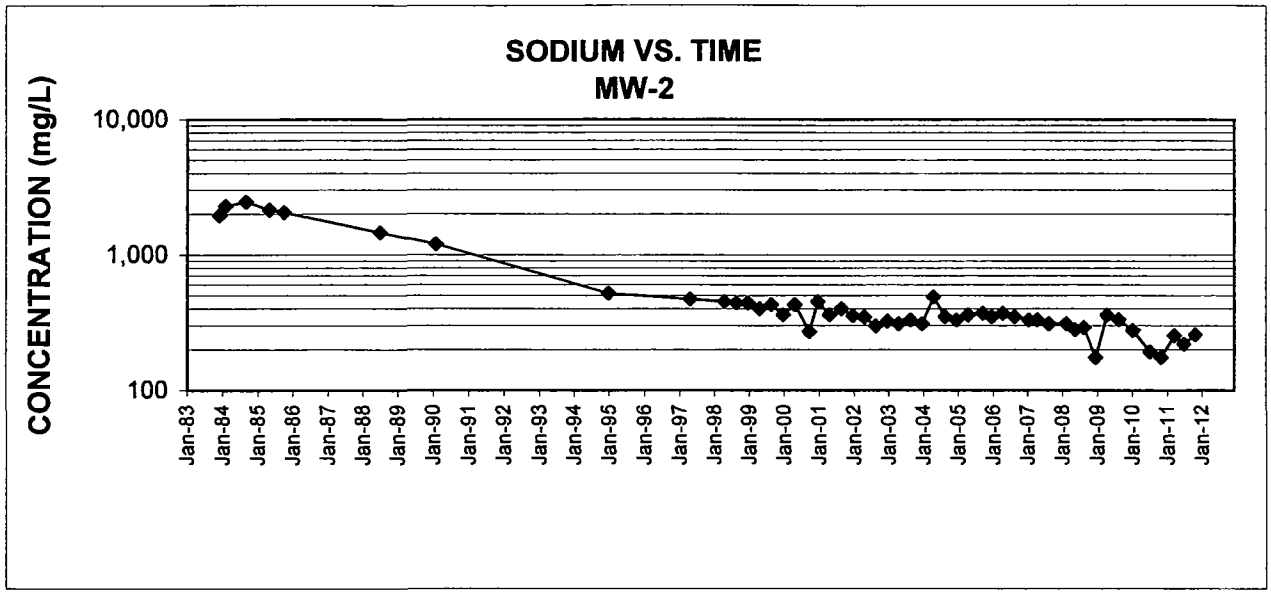
Jan-08
Jan-09
Jan-10
Jan-11
Jan-12

APPENDIX D-9

SODIUM


SODIUM VS. TIME
MW-2
CONCENTRATION (mg/L)
10,000
1,000
100
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
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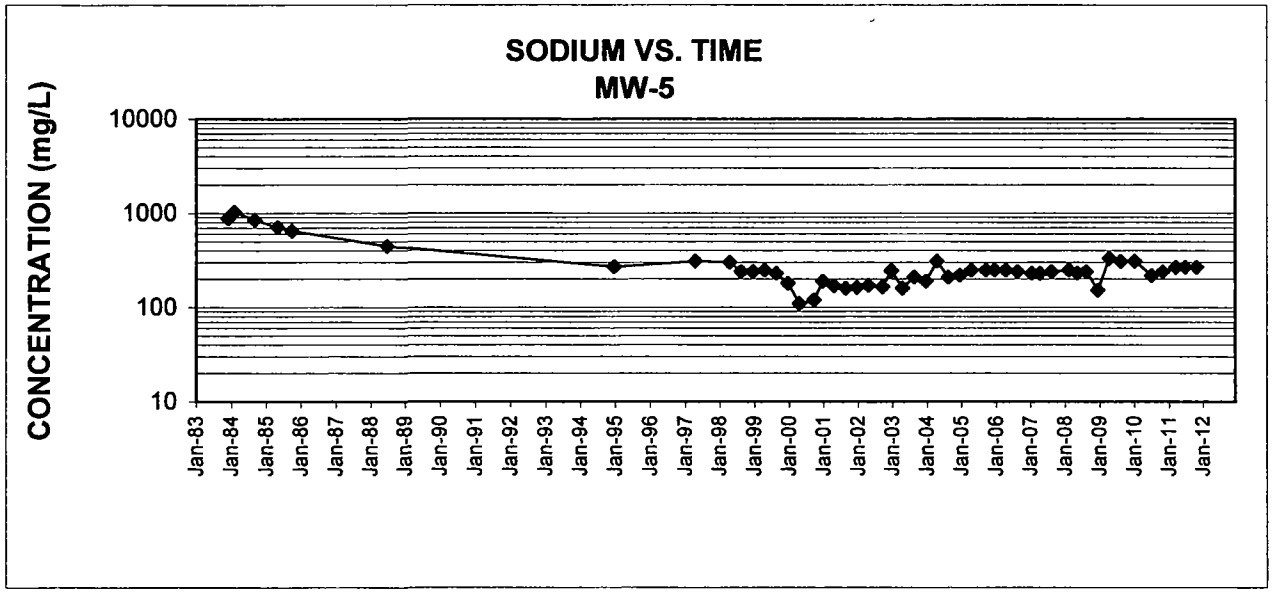
Jan-09
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-5
CONCENTRATION (mg/L)
10000
1000
100
10
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
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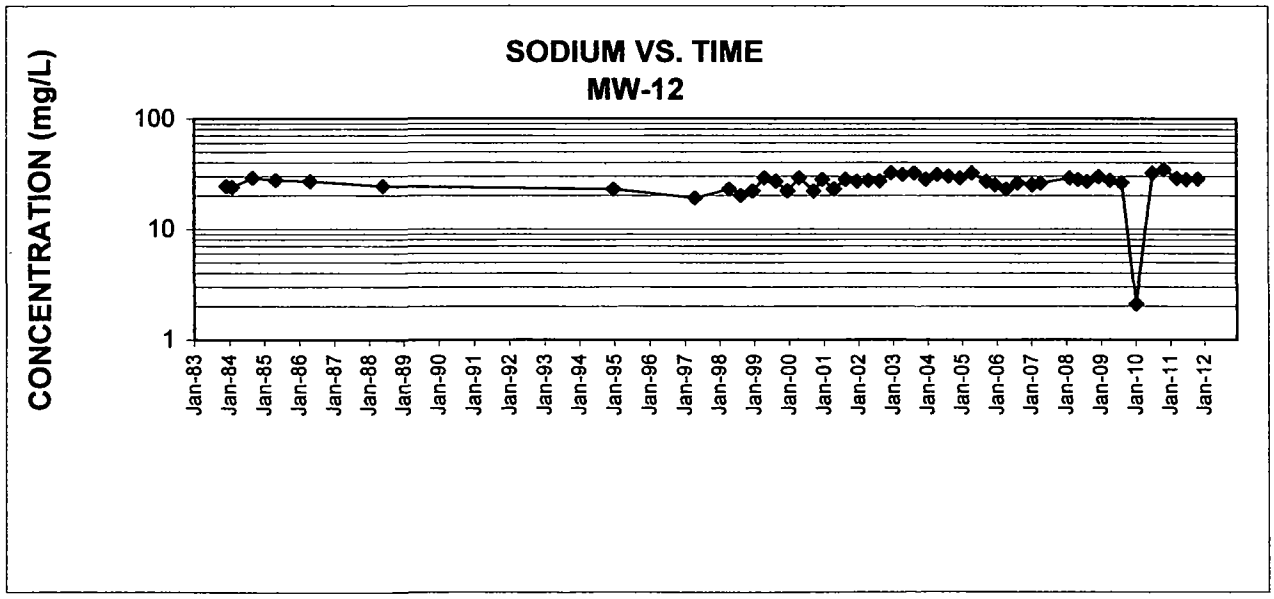
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-12
CONCENTRATION (mg/L)
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
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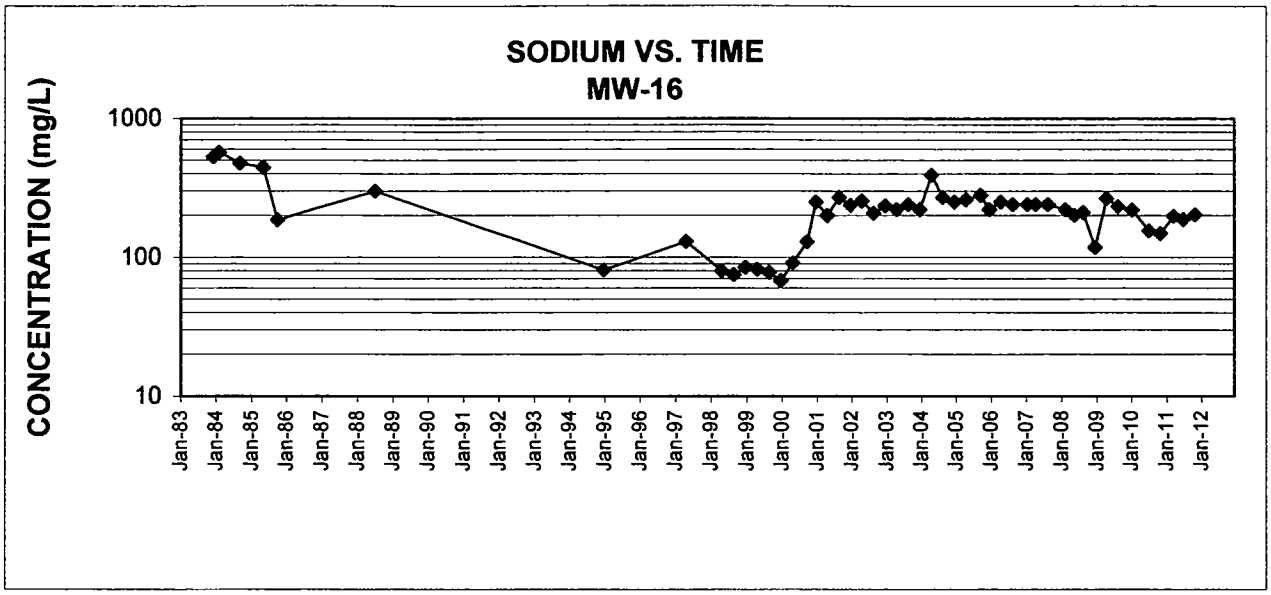
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-16
CONCENTRATION (mg/L)
1000
100
10
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
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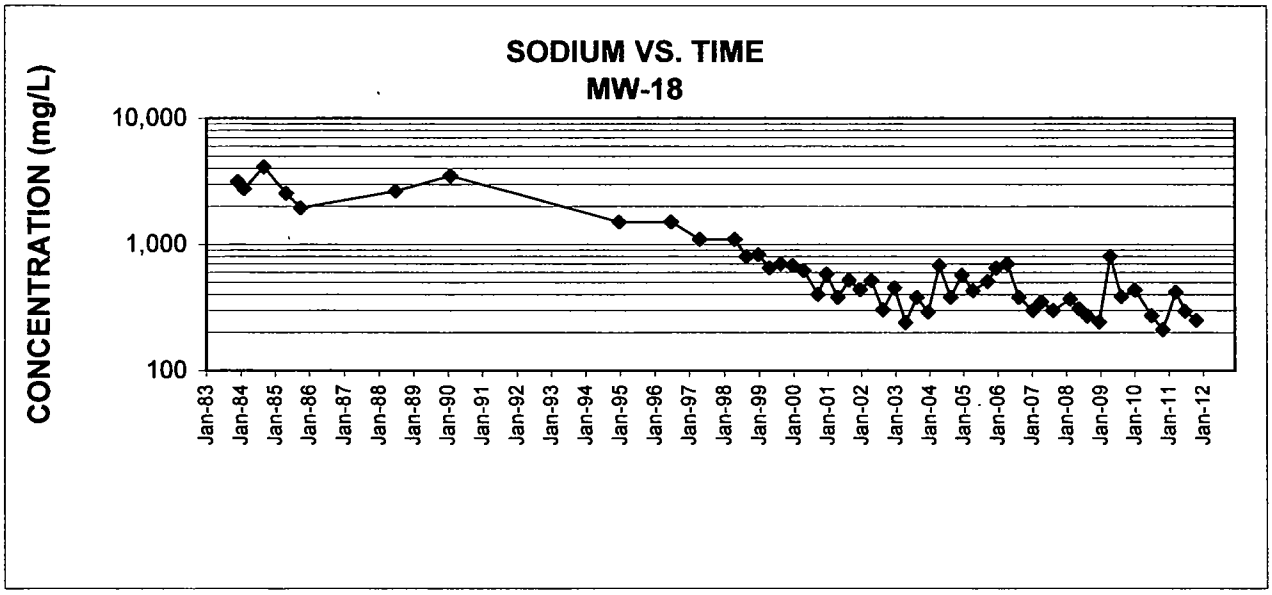
Jan-09
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-18
CONCENTRATION (mg/L)
10,000
1,000
100
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
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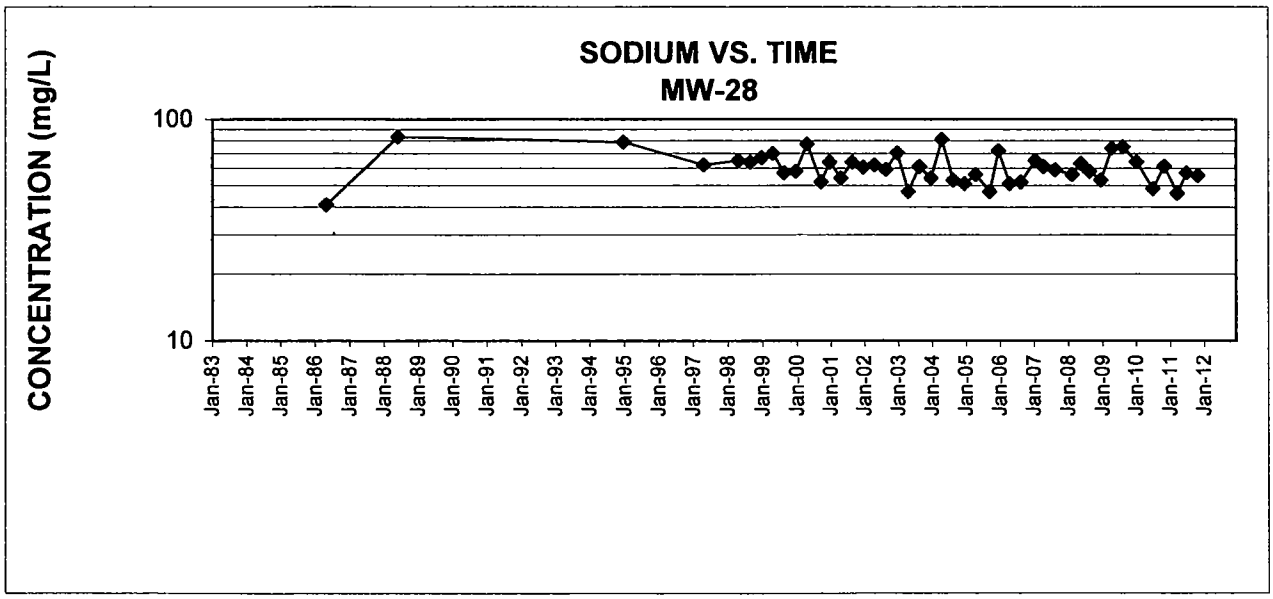
Jan-09
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-28
CONCENTRATION (mg/L)
100
10
Jan-83
Jan-84
Jan-85
Jan-86
Jan-87
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Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
Jan-97
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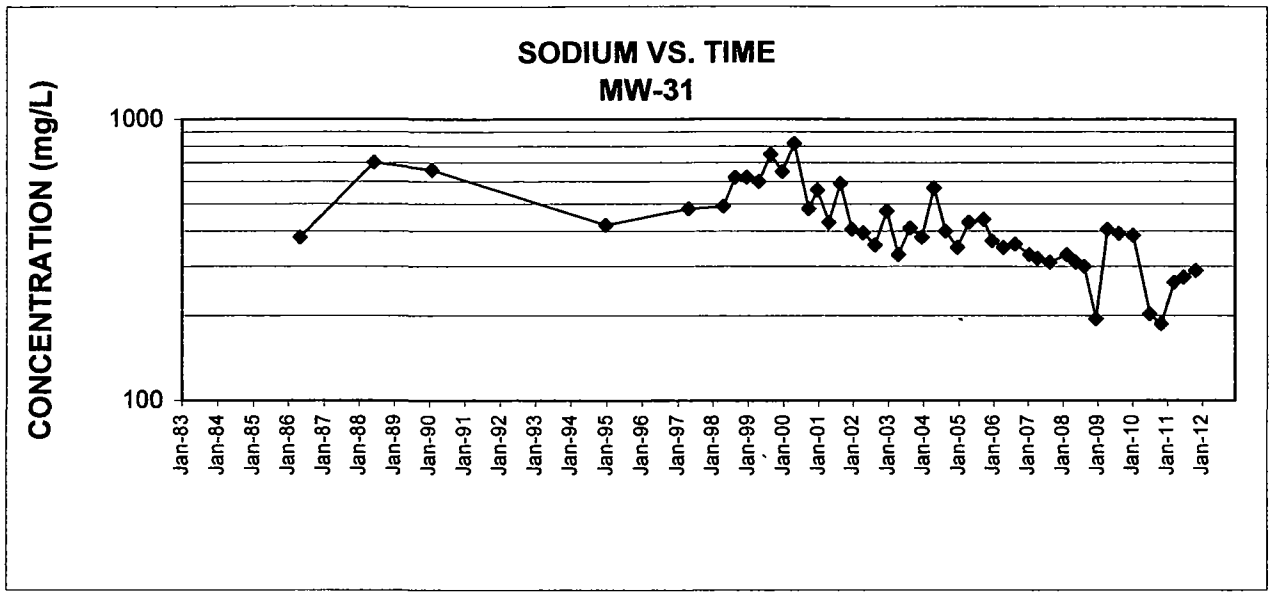
Jan-11
Jan-12


SODIUM VS. TIME
MW-31
CONCENTRATION (mg/L)
1000
100
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
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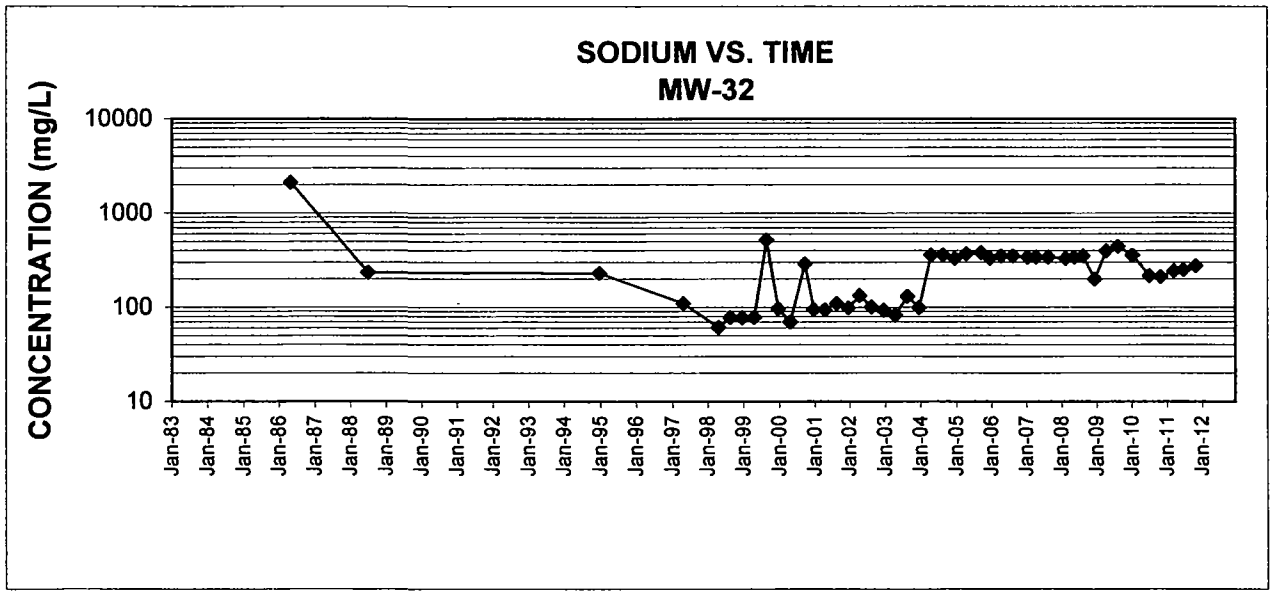
Jan-12


SODIUM VS. TIME
MW-32
CONCENTRATION (mg/L)
10000
1000
100
10
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
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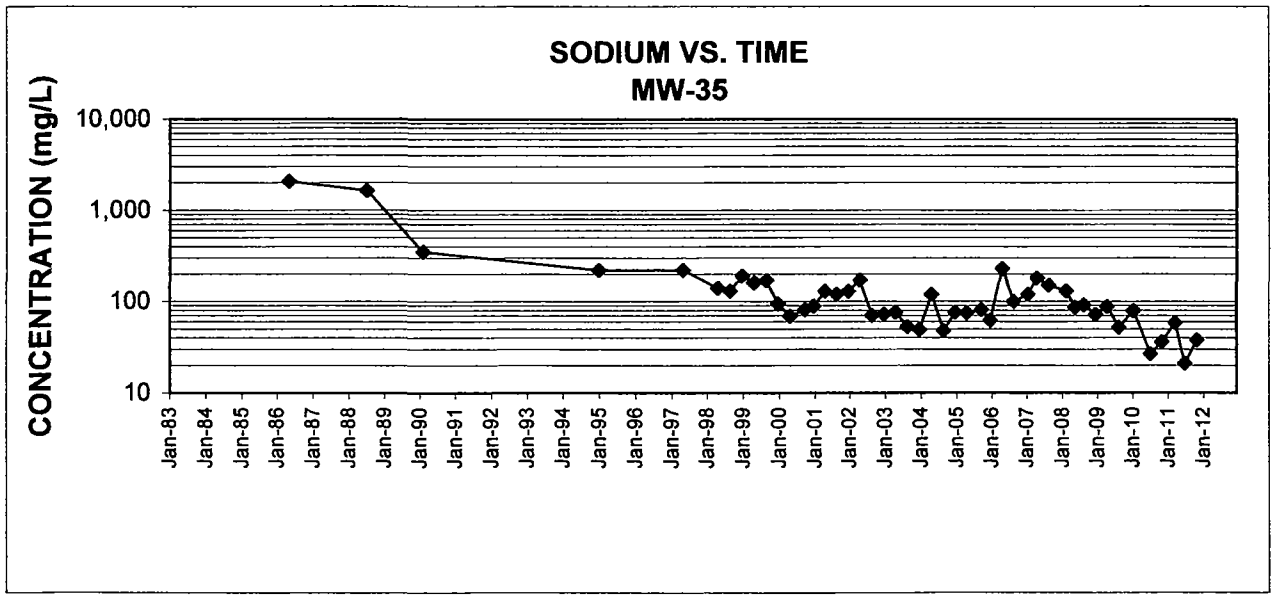
Jan-11
Jan-12


SODIUM VS. TIME
MW-35
CONCENTRATION (mg/L)
10,000
1,000
100
10
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
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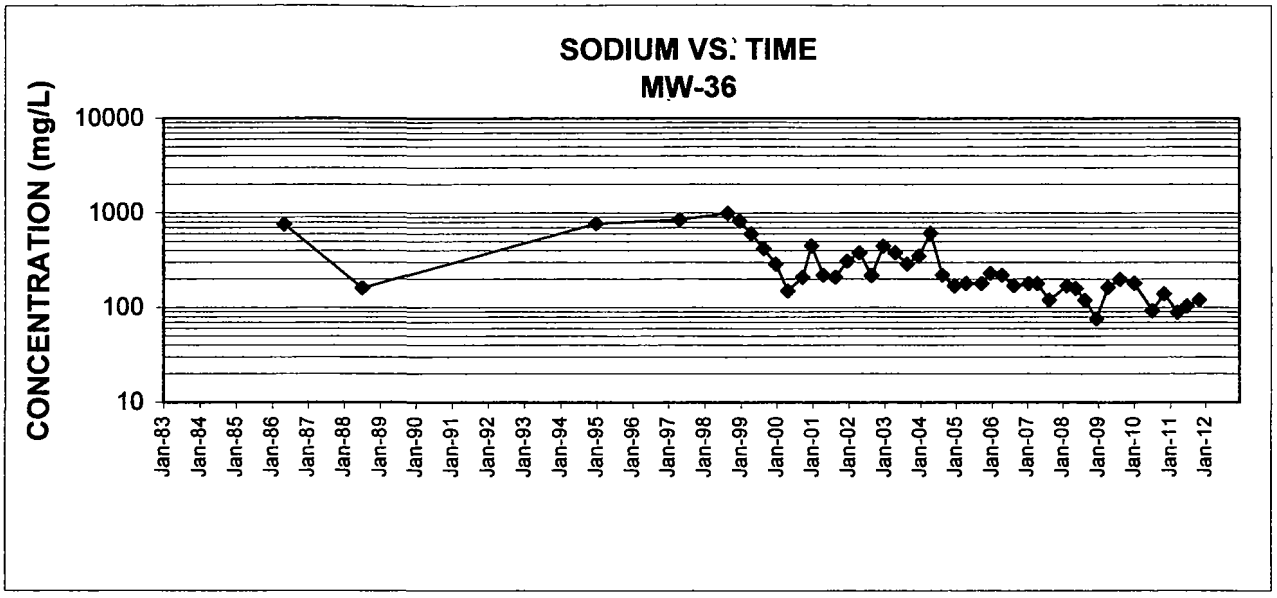
Jan-11
Jan-12


SODIUM VS. TIME
MW-36
CONCENTRATION (mg/L)
10000
1000
100
10
Jan-83
Jan-84
Jan-85
Jan-86
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Jan-88
Jan-89
Jan-90
Jan-91
Jan-92
Jan-93
Jan-94
Jan-95
Jan-96
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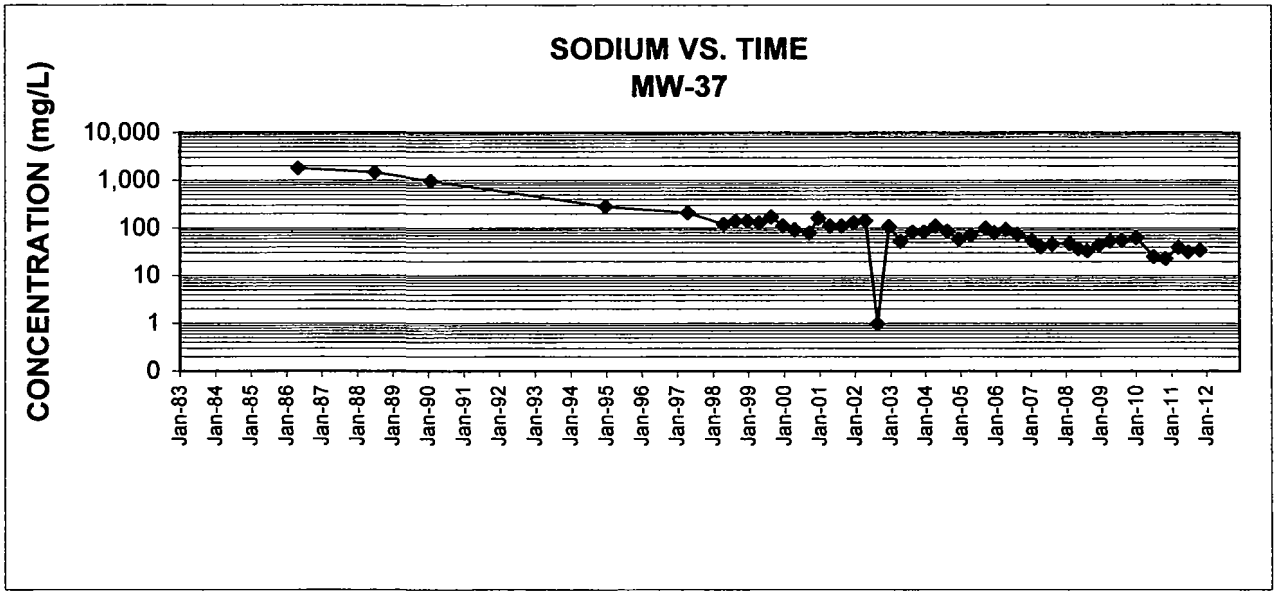
Jan-09
Jan-10
Jan-11
Jan-12


SODIUM VS. TIME
MW-37
CONCENTRATION (mg/L)
10,000
1,000
100
10
1
0
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
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Jan-00
Jan-01
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Jan-11
Jan-12

APPENDIX E

CONTAMINANT MASS-IN-PLACE ESTIMATION AND SUPPORTING DATA

BASED ON JULY 2011 MONITORING EVENT

Hydrosystems Management, Inc.

APPENDIX E-1
ANALYTICAL RESULTS FOR GROUND-WATER SAMPLES
COLLECTED JULY 2011

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 00595	6.40	3.38	<0.005	0.210	<0.005	0.540	<0.005	0 0204	2 24	0.978	2.98/3 25
Fluoride	0.136	44.3	34 2	0.0961	6.22	0 232	5 55	0.628	3.00	15.8	30 5	11.2/11.6

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	30.6	<0.005/<0.005	0.0384	1.58	0.483	2.36/1.30	4.36	2.74	2 10	9.30	0.908	0 863
Fluoride	80.0	0.681/0.651	0.387	30.6	4.13	7.72/8 87	47.5	44.5	23 9	20.4	1.14	16 4

SAMPLE I D	MW-37	MW-39S	MW-39D	MW-40S	MW-40D	MW-42S	MW-42D
Cyanide, Total	1.84	6 67/7.58	1 19	2 68	3.47	1.51	1.53
Fluoride	3.07	123/105	14 0	33.1	24.1	34.1	31 1

NOTE. All results in mg/L.

5 9/6 2 - Primary sample and duplicate sample

APPENDIX E-1 (CONT.)
PLUME CONTOUR AREA CALCULATIONS
FOR TOTAL CYANIDE AND FLUORIDE
BASED ON RESULTS OF SAMPLING CONDUCTED JULY 2011

ORMET CORPORATION
HANNIBAL, OHIO

TOTAL CYANIDE	CONTOUR INTERVAL (from Figure 4)	CONTOUR AREA in sqare feet (estimated using CAD* software)
	0.2 - 1 mg/L	543,411
	1 mg/L	10,583
	1 - 5 mg/L	951,431
	5 mg/L	66,810
	5-10 mg/L	381,281
	10-15 mg/L	17,070
	15-25 mg/L	8,522
	25 mg/L	5,182

TOTAL FLUORIDE	CONTOUR INTERVAL (from Figure 3)	CONTOUR AREA in sqare feet (estimated using CAD* software)
	4 - 10 mg/L	367,432
	10 - 15 mg/L	310,894
	15 - 25 mg/L	381,214
	25 - 50 mg/L	852,630
	50 mg/L	154,486

* CAD - Computer Aided Drafting

APPENDIX E-1 (CONT.)
AVERAGE AQUIFER THICKNESS CALCULATIONS
WITHIN EACH PLUME CONTOUR INTERVAL
BASED ON RESULTS OF SAMPLING CONDUCTED JULY 2011

ORMET CORPORATION
HANNIBAL, OHIO

TOTAL CYANIDE

CONTOUR INTERVAL (from Figure 4)	MONITORING WELL ID	REPORTED CONCENTRATION (mg/L)	AQUIFER THICKNESS (in feet)	AVERAGE AQUIFER THICKNESS (b, in feet)
0.2 - 1 mg/L	MW-8	0.210	48.38	35.34
	MW-11	0.540	48.07	
	[MW-15]	NA	25.12	
	MW-16	0.978	42.89	
	MW-35	0.908	12.24	
1 mg/L	MW-36	0.863	19.75	19.75
1 - 5 mg/L	MW-5	3.38	42.03	36.31
	MW-15	2.24	25.12	
	MW-17	3.25	46.65	
	MW-29S&D	1.03*	51.19	
	MW-30	2.36	16.51	
	MW-31	4.36	28.91	
	MW-32	2.74	24.33	
	MW-37	1.84	16.36	
	MW-39S&D	4.39*	46.38	
	MW-40S&D	3.08*	48.75	
	MW-42S&D	1.52*	53.15	
5 mg/L	MW-34S&D	5.70*	37.65	37.65
5 - 10 mg/L	MW-2	6.40	37.92	29.16
	[MW-18]	NA	20.40	
10 - 15 mg/L	[MW-18]	NA	20.40	20.40
15 - 25 mg/L	[MW-18]	NA	20.40	20.40
25 mg/L	MW-18	30.6	20.40	20.40

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 for the shallow well and the deep well of a well cluster were used to draw contour lines.

* - Denotes average of the values for the shallow well and the deep well of a 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 JULY 2011

ORMET CORPORATION
HANNIBAL, OHIO

FLUORIDE

CONTOUR INTERVAL (from Figure 3)	MONITORING WELL ID	REPORTED CONCENTRATION (mg/L)	AQUIFER THICKNESS (in feet)	AVERAGE AQUIFER THICKNESS (b, in feet)
4 - 10 mg/L	MW-8 MW-11 [MW-15] MW-30	6.22 5.6 NA 8.87	48.38 48.07 25.12 16.51	34.52
10 - 15 mg/L	MW-17 [MW-5] [MW-30]	11.60 NA NA	46.65 42.03 16.51	35.06
15 - 25 mg/L	[MW-5] MW-15 MW-29S&D MW-34S&D MW-36	NA 15.80 17.37* 22.15* 16.40	42.03 25.12 51.19 37.65 19.75	35.15
25 - 50 mg/L	MW-2 MW-5 MW-16 MW-31 MW-32 MW-40S&D MW-42S&D	44.30 34.20 30.50 47.50 44.50 28.60* 32.60*	37.92 42.03 42.89 28.91 24.33 48.75 53.15	39.71
50 mg/L	[MW-2] MW-18 MW-39S&D	NA 80.00 68.50*	37.92 20.40 46.38	34.90

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 for the shallow well and the deep well of a well cluster were used to draw contour lines.

* - Denotes average of the values for the shallow well and the deep well of a 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 JULY 2011

ORMET CORPORATION
HANNIBAL, OHIO

	Contour Interval	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
	(from Figure 4)									
	0.2 - 1 mg/L	543,411	35.34	19,204,145	0.25	4,801,036	135,965,345	0.6	81,579,207	180
	1 mg/L	10,583	19.75	209,014	0.25	52,254	1,479,821	0.863	1,277,085	3
TOTAL CYANIDE	1 - 5 mg/L	951,431	36.31	34,546,460	0.25	8,636,615	244,588,934	3.0	733,766,802	1,618
	5 mg/L	66,810	37.65	2,515,397	0.25	628,849	17,809,007	5 7	101,511,341	224
	5 - 10 mg/L	381,281	29.16	11,118,154	0.25	2,779,538	78,716,530	7 5	590,373,975	1,302
	10 - 15 mg/L	17,070	20.40	348,228	0.25	87,057	2,465,454	12.5	30,818,178	68
	15 - 25 mg/L	8,522	20.40	173,849	0.25	43,462	1,230,850	20.0	24,616,990	54
	25 mg/L	5,182	20.40	105,713	0.25	26,428	748,447	30 6	22,902,467	50
									Total Cyanide Mw	3,499
	(From Figure 3)									
FLUORIDE	4 - 10 mg/L	367,432	34.52	12,683,753	0.25	3,170,938	89,800,969	7 0	628,606,781	1,386
	10 - 15 mg/L	310,894	35.06	10,899,944	0.25	2,724,986	77,171,601	12 5	964,645,012	2,127
	15 - 25 mg/L	381,214	35.15	13,399,672	0.25	3,349,918	94,869,678	20.0	1,897,393,569	4,184
	25 - 50 mg/L	852,630	39.71	33,857,937	0.25	8,464,484	239,714,196	37.5	8,989,282,353	19,821
	50 mg/L	154,486	34.90	5,391,561	0.25	1,347,890	38,172,255	74 3	2,836,198,525	6,254
									Total Fluoride Mw	33,772

2 Vgw = VA x n
3 Vgw in ft3 multiplied by 28 32 L/ft3 = Vgw in Liters
4 Mi = Vgw x Cwi
5 Mi in mg divided by 1000 mg/g multiplied by 2 205x10-3 lb/g = Mi in pounds