August 18, 2017

Ms. Jennifer Borski
Wisconsin Department of Natural Resources
625 East County Road Y, Suite No. 700
Oshkosh, WI 54901-9731

Re: Appleton Wire (Former) – 908 N. Lawe Street, Appleton, WI
Semi-Annual Operation & Maintenance Report
January through June 2017
BRRTS# 02-45-000015

Dear Ms. Borski:

Enclosed, please find the Semi-Annual Operation and Maintenance Report for the Appleton Wire, Former Albany International Chrome Plant located at 908 North Lawe Street in Appleton, Wisconsin. The report was prepared by Stoeger & Associates with the assistance of EnviroForensics in preparing graphs and figures. As we discussed on the phone, s. NR 712 certifications are not included on Form 4400-194 because EnviroForensics did not direct or observe operation and maintenance activities during the reporting period. EnviroForensics will oversee future groundwater sampling and remedial system operations and therefore future reports will be certified by us.

The enclosed report covers the time period from January 1, 2017 through June 30, 2017 and includes a site history, a summary of treatment system performance and monitoring, results of any compliance sampling, operation and maintenance activities over the last six months, historical analytical data, and conclusions and recommendations for the site.

If you have any questions or require additional information, feel free to contact me.

Sincerely,
EnviroForensics, LLC

Wayne Fassbender, PG, PMP
Senior Project Manager

Enclosure: Semi-Annual Operation & Maintenance Report

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SEMI-ANNUAL
OPERATION & MAINTENANCE REPORT
Year
January through June - 2017

APPLETON WIRE
FORMER ALBANY INTERNATIONAL
CHROME PLANT
GOUNDWATER TREATMENT SYSTEM
908 North Lawe Street
Appleton, Wisconsin

Appleton, Wisconsin
WDNR ERP# 02-45-000015

Prepared for the
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Prepared by
Stoeger & Associates, LLC
Appleton, Wisconsin

August 18, 2017

Table of Contents

SEMI-ANNUAL
OPERATION & MAINTENANCE REPORT
January through June – 2017

APPLETON WIRE
Former Albany International
Chrome Plant
Groundwater Treatment System
908 North Lawe Street
Appleton, Wisconsin
WDNR ERP# 02-45-000015

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WISCONSIN DEPARTMENT OF NATURAL RESOURCES

I. SITE BACKGROUND

The Appleton Wire Former Albany International Chrome Plant, located at 908 North Lawe, Appleton, Wisconsin, was utilized as a chrome plating facility from 1963 to 1982. The chrome plant building and a parking lot north of the building were sold to Valley Cast in 1984. The address of the Valley Cast portion of the site is 908 North Lawe Street. The loading dock area near the chrome plating area was referred to as 831 North Meade Street. An office building and parking lot south of the former chrome plant were sold to Appleton Papers (now Appvion) between 1985 and 1990. The address of the office building is 714 East Hancock Street. Reporting related to the release of chromium on the site has been referenced under the Meade Street, Hancock Street and Lawe Street addresses. As of June, 2009, the physical address (for reporting purposes) of the former chrome plant site was changed to 908 North Lawe Street. An aerial photograph of the site delineating current property ownership is shown in Figure #6.

Valley Cast became a fully owned subsidiary of Outokumpu in 1985. The facility name was changed to Outokumpu in 2001. In 2006, the company was sold to Luvata and, in 2017 was sold again to Mitsubishi and currently operates under the name Luvata Appleton.

In 1985, Valley Cast employees noted groundwater collecting in the basement of the building. Subsequent tests indicated concentrations of chromium in the collected groundwater.

STS Consultants, Inc. conducted an investigation of the former chrome plant site on January 19, 1987. The purpose of the investigation was to determine the horizontal and vertical extent of the chromium contamination and to evaluate the effectiveness of the facility's basement sump to collect contaminated groundwater from the north and south sides of the building.

The results of the STS Consultants investigation indicated that the chromium contamination appeared limited to areas along the northeast and southeast ends of the building and to a depth of approximately 15-feet below grade. The existing basement sump was found to be adequate for collection of groundwater along the south end of the building. The consultant proposed installation of a collection system along the north side of the building to improve groundwater collection.

In 1988, a chemical precipitation process was installed to treat the groundwater collecting in the facility basement sump. The system was operated until 1998, when it was replaced by an ion exchange treatment system.

In 1992, a groundwater collection system was installed along the north side of the building. The system consists of approximately 110 feet of perforated piping, placed 14 feet below grade. The piping empties into a manhole, located at the northeast corner of the facility. Collected groundwater is pumped from the manhole to two storage tanks, located in the basement of the facility. Groundwater flowing to the basement sump is also pumped to the storage tanks.

Data from 16 existing groundwater monitoring wells on the former chrome plant property was utilized, for this report, to monitor the subsurface chromium contamination. Additional monitoring wells have been installed on the site as part of an ongoing site investigation. The monitoring well locations and any soil and groundwater analytical data from the site investigation will be submitted under a separate report and incorporated into our July-December Semi-Annual Report.

Additionally, the groundwater collection system (French Drain) and basement sump are monitored to track the effectiveness of the treatment system.

In 2003, eleven geoprobe monitoring wells were installed in and around the two known source areas in an attempt to better define the vertical and horizontal extent of the chromium contamination. Periodic sampling was conducted from the geoprobe monitoring wells until their abandonment in April, 2008. The results of the sampling are contained in Table # 8.

On June 30, 2009, groundwater monitoring wells MW-19 and MW-19A were placed in the warehouse portion of the Luvata facility, west of the basement. MW-19 was placed to a depth of 20 feet below the facility floor. MW-19A was placed to a depth of approximately 40 feet below the facility floor. The resultant groundwater sampling data indicated that chromium contaminated groundwater is present to the west of the former plating area and under the current Luvata Appleton warehouse building.

Between May 12, 2014 and May 14, 2014, eleven Geoprobe borings were placed in the interior of the former chrome plant building and current Luvata Appleton production area to further delineate the extent of the subsurface Chromium contamination. As part of the investigation, Monitoring Well MW-20 and Piezometer MW-20A were installed in the former warehouse area. Monitoring well MW-21 and Piezometer MW-21A were installed in the Luvata production area. The Geoprobe and monitoring well locations are shown on Figure #1.

The results of the May, 2014 investigation indicated that subsurface chromium contamination was present in the northeastern portion of the Luvata Appleton warehouse area. Several former employees were interviewed regarding these findings and it was discovered that there had been a second plating operation to the north of the main chrome plating line. Groundwater samples collected from monitoring wells MW-20 and MW-20A, in the area of the second plating line, recorded high levels of total chromium. Groundwater sampling conducted in the Luvata production area at Monitoring wells MW-21 and MW-21A, recorded little to no total chromium.

The monitoring well and soil boring locations are shown on Figure #1. Historical investigation data in regard to soil borings and abandoned monitoring wells is contained in Appendix D. The current property and adjacent property ownership

information, monitoring well locations and soil boring locations are shown on Figure #1.

II. BATCH TREATMENT PROCESS

A. Groundwater Treatment System

The impacted groundwater on the site is collected in a basement sump and a groundwater collection system (French Drain). The collected water is pumped to two-2000 gallon storage tanks, located in the basement of the facility. The groundwater is treated in batches at the operator's discretion. Prior to initiation of the treatment process, the pH in the basement storage tanks is adjusted down to a pH of around 4.00 to maximize the efficiency of the ion exchange resin. The water is pumped at a flow rate of 8-12 gallons per minute through a series of filters and two (2) ion exchange canisters. The water then flows to another tank where the pH is adjusted back up to a pH between 6.0 and 7.0. The treated water then decants to the City of Appleton Sanitary Sewer System.

B. Permit Monitoring and Reporting

The discharge from the groundwater treatment system is tested for Hexavalent Chromium during each batch discharge using a Hach Hexavalent Chromium test kit. The effluent is tested monthly for Total Chromium and annually for the parameters listed in Table #1. The parameters are a requirement of the City of Appleton Industrial Use Permit Number 17-17, issued for the site in May, 2017 and are valid through May 31, 2020.

The reporting requirements for compliance with the City of Appleton Industrial User Permit and the Wisconsin DNR are summarized below.

1. Quarterly Reporting

a. City of Appleton Quarterly Discharge Reports

Quarterly reports are submitted to the City of Appleton Wastewater Division covering the time periods of January through March, April through June, July through September, and October through December. The City Reports include batch process discharge volumes; discharge pHs, Hexavalent chromium as measured with the Hach test kit and the monthly laboratory analytical results.

b. Wisconsin DNR Quarterly Groundwater Sampling Reports

As of April, 2009, quarterly groundwater sampling reports are no longer required by the Wisconsin DNR.

2. Semi-Annual Operation and Maintenance Summary

With the elimination of quarterly groundwater monitoring reports to the Wisconsin DNR, semi annual reports are prepared. The semi-annual operation and maintenance summary consists of a review of the treatment process, an overview of operation and maintenance activities, a summary of the treatment system analytical results and a

summary of the analytical results from the groundwater monitoring wells.

C. Compliance Sampling

Compliance sampling of the treatment system effluent is conducted twice per year by the City of Appleton. The effluent is analyzed for all the parameters listed in Table #1, except hexavalent chromium. During the first quarter of each year, Stoeger & Associates, LLC collects one sample at the system outfall and tests for the parameters listed in Table #1. The compliance sampling laboratory results are summarized on Table #2. Table #3 summarizes the monthly batch discharge volumes by month and totaled by quarter.

D. Routine Operation and Maintenance Activities

The groundwater treatment system is operated in batches, at the operator's discretion. Site visits are conducted 1-2 times per week to check on the water levels in the storage tanks. When sufficient water is collected to run a batch, the system is operated. Each batch discharge is tested for Hexavalent Chromium using a Hach test kit. The monthly and quarterly volumes of treated groundwater are shown on Table #3.

Additionally, a walk through of the building is conducted to check the equipment or look for any obvious problems. Site activities are documented on log sheets. The log sheets are kept on-site.

The pH probes are cleaned and calibrated monthly. The in-line filters are changed when an increase in system pressure is noted. The ion exchange canisters are changed out when the total chromium concentration in the outfall exceeds 2 mg/l.

E. Significant Operation and Maintenance Activities

Between January 1, 2017 and June 30, 2017, there were no significant changes in the operation of the on-site treatment system.

The operation and maintenance summary form 4400-194 is contained in Appendix C.

F. Emergency Shut Downs

There were no emergency shut downs of the system during the reporting period.

III. GROUNDWATER SAMPLING

A. Groundwater Sampling Procedures

A total of 16 groundwater monitoring wells are associated with the groundwater treatment system. Monitoring Wells MW-20, MW-20A, MW-21 and MW-21A were installed between May 12 and 14, 2014 and were first sampled on June 2, 2014. Monitoring wells, MW-19 and MW-19A were installed on June 30, 2009 and were first sampled on July 13, 2009. Sampling of MW-20, MW-20A, MW-21, MW-21A, MW-19 and MW-19A will be conducted quarterly along with the two source area wells, MW-05 and MW-05A. The remainder of the monitoring wells are sampled annually.

At the time this report is being written, additional monitoring wells have been installed at the site and are in the process of being developed and sampled. The results of recent site investigation activities and groundwater sampling will be contained in a separate report and summarized in the July-December Semi-Annual report.

Groundwater levels are measured in the monitoring wells and piezometers relative to the north side of the top of the well casing. The groundwater elevations are collected from each monitoring well prior to sampling. A dedicated 12-volt submersible pump is installed in each well. Each well is slowly pumped dry, allowed to recharge and sampled. Purge water is collected and treated in the treatment system.

The laboratory analytical data is contained in Tables #4, and #5. The analytical data sheets are contained in Appendix E.

Graphs of the chromium contaminant concentrations for each monitoring well, the building sump and French Drain are contained in Appendix A.

Table #6 summarizes the historical groundwater elevation data collected from each monitoring well during the quarterly sampling. Groundwater elevation contours are calculated based upon the observed elevations of the monitoring wells, basement sump and French Drain. The groundwater elevation contour maps from the January and April sampling events are presented in Figures #3 and #4. Groundwater elevation versus time graphs is presented in Appendix B.

B. <u>Groundwater Sampling Results</u>

The collected groundwater samples are analyzed for Total and Hexavalent chromium. Selected groundwater wells and the building sump and Manhole were also sampled for VOC's during the April, 2017 sampling event.

A total of two sampling events took place during the reporting period. On January 10, 2017, monitoring wells MW-05, MW5A, MW19, MW-19A, MW-20, MW-20A, MW-21 and MW-21A were sampled as part of the regularly scheduled quarterly sampling. Monitoring wells MW-05 (174 ug/l), MW-19 (14,320 ug/l), MW-20 (389,925 ug/l) had exceedances of the NR 140.10 Enforcement Standard (ES) for Total Chromium. Monitoring well MW-20A (65 ug/l) had an exceedance of the NR140.10 Preventative Action limit (PAL). There were no exceedances of the ES or PAL in the remaining four monitoring wells.

On April 5, 2017, all 16 monitoring wells were sampled. Exceedances of the ES were recorded in MW-05 (234 ug/l), MW-19 (24,700 ug/l) and MW-20 (262,000) ug/l). Exceedances of the PAL were recorded in MW-17A (44.2 ug/l), MW-18A (14 ug/l) and MW-20A (23.1 ug/l). There were no exceedances of the ES or PAL in the ten remaining monitoring wells.

During the April sampling, MW-10R, MW-19, MW-20, the Manhole and building Sump were also sampled for volatile organic compounds, (VOC's). A summary of the sampling results is included in Table #9.

A chromium isoconcentration map is developed once per year with the results from the April sampling. The April sampling is the only event where all the wells attributed to the property are sampled and therefore is the most accurate representation of the

data as a whole. The chromium isoconcentration map from the April 5, 2017 sampling is shown on Figure #2.

Samples are collected monthly from the Manhole (French Drain) and basement Collection Sump. All samples collected from the Manhole and basement Collection Sump during the period from January 1, 2017 through June 30, 2017 had exceedances of the ES for Total Chromium. The laboratory analytical results for the Manhole and Collection Sump are summarized in Table #5. Current and historical groundwater elevation data is contained in Table #6.

A review of the historical analytical data shows decreasing concentrations of chromium in 13 of the 16 monitoring wells. Chromium concentrations in MW-20 do not follow a trend and MW-17A (44.2 ug/l) and MW-18A (14.8 ug/l) had stable or decreasing chromium concentrations until the April sampling event. Both recorded significantly higher concentrations of Total Chromium, although neither monitoring well had detections for Hexavalent Chromium. Historical data from the French Drain and Building Sump also show stable or decreasing chromium concentrations.

The groundwater treatment system is effectively removing chromium from the groundwater on the site. EnviroForensics is currently reviewing recent site investigation data and will evaluate options for enhancing the removal of the subsurface chromium contamination.

The yearly chromium removal quantities were calculated utilizing the monthly analytical data and flow quantities from the building sump and French Drain. From January 1, 2017 through June 30, 2017, 5.16 pounds of chromium was removed from the building sump and 0.71 pounds of chromium removed from the French Drain. The pounds of chromium removed from the sump and French Drain is calculated using the chromium concentrations (in mg/L) from the sump and French Drain from each months sampling; times the total volume (in millions of gallons) of groundwater treated during each month from the two extraction points; times 8.34 pounds per gallon of water treated. The historical chromium removal quantities are summarized in Table #7. The Wisconsin DNR Operation and Maintenance form 4400-194 is included in Appendix C.

IV. GROUNDWATER COLLECTION SYSTEM

The groundwater collection system (French Drain) was installed in 1992 to collect contaminated groundwater from the north side of the property. The collection system consists of approximately 110-feet of perforated piping, placed 14-feet below grade. The collected groundwater flows by gravity to a collection sump, where it is pumped to the storage tanks in the basement of the facility. The collection trench creates a capture zone for contaminated groundwater along the north end of the building.

The building sump creates a capture zone for contaminants along the south side and under the building. The building sump is located at the northeast corner of the building basement.

V. CONCLUSIONS AND RECOMMENDATIONS

Two sets of groundwater samples were collected during this reporting period. On January 10, 2017, groundwater samples collected from monitoring wells, MW-05, MW-19 and MW-20 had residual chromium contamination above the WDNR NR140.10 Enforcement Standards (ES). Monitoring Well MW-20A had a residual

chromium contamination above the WDNR NR140.10 Preventative Action Limit (PAL).

On April 5, 2017, groundwater samples collected from monitoring wells MW-05, MW-19 and MW-20 had residual chromium contamination above the WDNR NR 140.10 ES for total chromium. Monitoring wells MW-17A, MW-18A and MW-20A had total chromium concentrations above the WDNR NR 140.10 PAL.

All monthly samples collected during the monitoring period from the French Drain (Manhole) and collection sump had exceedances of the NR 140.10 ES for Total Chromium.

Data collected, to date, from the groundwater wells on the exterior of the building, the collection sump and French drain show stable, if not decreasing, concentrations of total chromium with the exception of MW-20A (no definitive trend line) and MW-17A and MW-18A (high current concentration level).

EnviroForensics is currently conducting an investigation of the site to better determine the horizontal and vertical extent of the chromium contamination. As part of the investigation, options to improve the existing groundwater collection system will be studied as well as a cost/benefit review of other treatment options for the site.

Until the studies are completed, EnviroForensics recommends continued operation of the groundwater treatment system at the Appleton Wire, Former Albany International Chrome Plant.

DATA TABLES

Table #1

CITY OF APPLETON EFFLUENT COMPLIANCE LIMITS
Effluent Point 001
Appleton Wire Former Albany International Chrome Plant

		Arsenic (mg/l)	Cadmium (mg/l)	Chromium Total (mg/l)	Copper (mg/l)	Cyanide (mg/l)	Lead (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Zinc (mg/l)	Hexavalent Chromium (mg/L)
Effluent Limits Permit	#11-17	1.0	0.3	7.0	3.5	0.3	2.0	0.002	2.0	10.0	4.5

mg/l = milligram / liter

Table #2

LABORATORY ANALYTICAL RESULTS
Effluent Point 001
Appleton Wire Former Albany International Chrome Plant

Date	Cyanide (mg/l)	Aluminum (mg/l)	Arsenic (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Hexavalent Chromium (mg/l)	Copper (mg/l)	Lead (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Zinc (mg/l)
2/26/03 ***	<0.0014	<0.027	<0.0082	<0.00053	1.0	NA	0.011	0.0075	<0.000028	0.0045	0.0057
4/24/03 **	<0.0015	<0.027	<0.0081	<0.0053	0.049	N/A	0.1	0.0017	<0.00003	<0.0021	<0.0072
10/23/03 ***	<2.7	0.0500	<0.0012	<0.0001	1.588	NA	0.034	0.0033	<0.0002	0.0046	<0.010
03/18/04 **	<.005	0.001	<.0012	<.0001	0.399	NA	0.019	0.0053	<.0002	0.0034	0.02
04/19/04 ***	<.005	<.01	<.0012	<.01	0.32	<.002	0.02	<.05	<.0002	<.03	0.01
01/13/05 ***	<0.005	0.012	0.009	<0.0001	1.651	NA	0.024	0.0051	<0.0002	0.0035	<0.010
04/11/05**	<0.005	<0.07	<0.0012	<0.01	0.0027	<0.002	0.02	<0.05	<0.0002	<0.03	0.03
10/12/05 ***	0.014	0.132	<0.006	<0.0005	0.0032	NA	0.0087	0.0089	<0.0002	0.0046	0.05
01/31/06 ***	<0.005	0.068	<0.0012	0.0002	1.887	NA	0.038	0.051	<0.0002	0.0071	0.03
04/11/06 **	<0.005	<0.07	<0.0011	<0.01	1.3	0.004	0.06	<0.05	0.0006	<0.03	0.05
9/26/06 ***	0.004	0.152	0.0016	<0.0001	5.59	NA	0.156	0.019	<0.0002	0.0086	0.03
02/28/07 ***	0.010	0.096	<0.001	<0.0001	1.222	NA	0.019	0.0042	<.0002	0.0077	0.050
04/29/07 **	0.005	<0.07	<0.001	<.01	0.12	<0.002	0.12	<0.03	<0.0002	<0.04	0.03
10/30/07 ***	<0.004	<0.07	<1.0	<0.01	0.04	NA	<0.01	<0.03	<0.0002	<0.04	0.03
2/17/08 ***	<.004	<.07	<.001	<.01	2.4	NA	0.25	<.03	<.0002	<.04	0.98
4/23/08 **	<.008	<.08	<.001	<.01	0.36	<.002	0.05	<.03	<.0002	<.02	0.81
11/20/08 ***	<.008	<.08	<.08	<.01	0.72	NA	0.03	<.03	<.0002	0.02	0.07
2/24/09 ***	<0.008	<0.09	<0.09	<0.01	3.9	NA	0.04	0.05	<0.0002	<0.02	0.07
4/07/09 **	<0.008	<0.09	<0.0012	<0.01	0.07	<0.001	<0.01	<0.05	<0.0002	<0.02	0.15
10/08/09 ***	<0.008	<0.08	<0.012	<0.01	0.03	NA	<0.01	<0.05	<0.0002	<0.02	0.01
2/24/10 ***	<0.008	<0.06	<0.0002	<0.01	0.11	NA	<0.01	<0.03	<0.0002	<0.01	0.06
4/13/10 **	<0.008	<0.06	<0.0019	<0.01	0.2	0.047	0.05	<0.03	<0.0002	<0.01	0.06
2/17/11 ***	<0.008	<0.08	<0.001	<0.001	0.15	NA	0.05	<0.04	<0.0002	0.02	0.08
4/27/11**	<0.008	0.33	<0.01	<0.01	0.47	0.008	0.84	<0.04	<0.0002	<0.02	0.27
11/15/11***	<0.007	<0.008	<0.005	<0.01	0.27	NA	0.05	<0.04	<0.0002	<0.02	0.05
3/19/12***	<0.007	<0.11	<0.001	<0.01	0.1	NA	0.02	<0.02	<0.0002	<0.02	0.05
Appleton Permit Limits	0.30	70	1.0	0.30	7.0	4.5	3.5	2.0	0.002	2.0	10.0

Table #2

LABORATORY ANALYTICAL RESULTS
Effluent Point 001
Appleton Wire Former Albany International Chrome Plant

Date	Cyanide (mg/l)	Aluminum (mg/l)	Arsenic (mg/l)	Cadmium (mg/l)	Chromium (mg/l)	Hexavalent Chromium (mg/l)	Copper (mg/l)	Lead (mg/l)	Mercury (mg/l)	Nickel (mg/l)	Zinc (mg/l)
04/10/12**	<0.007	<0.08	<0.001	<0.01	0.07	0.023	<0.01	<0.04	<0.0002	<0.02	0.08
08/07/12***	0.0046	3.38	0.044	0.0012	0.336	NA	0.462	<0.0014	<0.0001	0.171	0.0699
4/15/13**	<.006	<0.1	<0.001	0.01	0.16	0.073	<0.01	<0.02	<0.0002	<0.02	0.01
5/22/13***	0.0039	<0.714	<0.0042	<0.00048	0.389	NA	0.01	<0.0027	<0.0001	0.006	0.0188
11/18/13***	<0.0038	<0.714	<0.0042	<0.00048	0.0185	NA	0.0156	<0.0027	<0.0001	0.0054	0.0192
04/09/14**	<0.006	<0.05	<0.0015	<0.01	0.1	0.04	<0.01	<0.03	<0.0002	<0.02	0.04
5/12/2014***	<0.020	0.102*	<0.0068	<0.001	0.0724	NA	0.017	<0.0016	<0.0001	0.0033	0.025*
9/25/14***	<0.01	<0.0655	<0.0068	<0.001	0.0075*	NA	0.0075*	0.0023*	<0.001	0.0058*	0.0141*
4/2/15***	<0.01	<0.112*	0.0148*	0.0014*	0.24	NA	0.0079*	0.0043*	<.0001	0.0069*	0.0319*
4/21/2015	<0.007	<0.1	<0.0015	<0.01	0.24	0.162	0.03	<0.03	<0.0002	<0.03	0.03
7/22/2015***	<0.010	0.155*	<0.0068	<0.0010	0.0587	NA	0.0474	0.0021*	<0.0001	0.0043*	0.0477
4/4/16***	<0.007	<0.09	<0.001	<0.01	0.03	NA	0.02	<0.03	<0.0002	<0.02	0.01
4/14/16**	<0.007	<0.09	<0.001	<0.01	0.09	0.053	0.04	<0.03	<0.0002	<0.02	0.03
10/27/16***	<0.007	<0.09	<0.01	<0.01	0.06	NA	<0.01	<0.03	<0.0002	<0.02	0.01
4/5/17**	<0.0068	0.0914*	<0.0083	<0.0013	0.0674	0.068	0.0106*	<0.0043	<0.0013	0.003*	0.0152*
Appleton Permit Limits	0.30	70	1.0	0.30	7.0	4.5	3.5	2.0	0.002	2.0	10.0

mg/l = milligram / liter (ppm)
NA = Not Analyzed
* = Analyte detected between Limit of Detection and Limit of Quantitation
** = Sampled by Operator
*** = Sampled by the City of Appleton

Table #3

BATCH DISCHARGES
January 1, 2017 Through June 30, 2017
Appleton Wire Former Albany International Chrome Plant
Appleton, Wisconsin

Month	Monthly (gallons)	Quarterly Flow (gallons)
January	10,440	
February	8,050	40,590
March	22,100	
April	13,870	
May	9,990	30,890
June	7,030	
TOTAL	**71,480**	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-1	2/9/1987	*50*	
	7/29/1987	<40	
	9/25/1987	<100	
	12/11/1987	<100	
	3/21/1988	1.6	
	6/13/1988	3.0	
	9/8/1988	9	
	12/15/1988	2.5	
	3/26/1992	<40	
	6/16/1992	4.9	
	9/4/1992	*50*	
	3/25/1993	<80	
	9/16/1993	<80	
	3/15/1994	<70	
	9/20/1994	*13*	
	3/31/1995	*39*	
	9/7/1995	7.2	
	3/15/1996	*15*	
	9/5/1996	6.4	
	4/26/1997	*11*	
	4/30/1998	*60*	
	10/22/1998	7	
	4/16/1999	*12*	
	10/19/1999	9.3	
	4/17/2000	*22**	
	4/6/2001	<11	
	4/18/2002	<11	
	4/16/2003	2.9	
	4/19/2004	2.8	<2.0
	4/11/2005	*82*	16
	7/18/2005	*<30*	<2
	4/11/2006	1.7	<2.0
	4/29/2007	4	<2.0
	4/23/2008	4.4	<2.0
	4/7/2009	4.6	<0.1
	4/13/2010	*26*	<3.0
	4/27/2011	3	<3
	4/10/2012	1.7	<3
	4/15/2013	2.6	<2.6
	4/9/2014	4.2	<3.0
	4/21/2015	0.5	<0.5
	4/14/2016	0.35	<2
	4/5/2017	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	02/09/87	*70*	
MW-2	07/29/87	<40	
	09/25/87	**100**	
	12/11/87	**100**	
	03/21/88	*85*	
	06/13/88	**140**	
	09/08/88	*71*	
	12/15/88	**130**	
	03/26/92	<40	
	06/16/92	*17*	
	09/04/92	<40	
	03/25/93	<80	
	09/16/93	<80	
	03/15/94	<70	
	09/20/94	*19*	
	03/31/95	*19*	
	09/07/95	*14*	
	03/15/96	*11*	
	09/05/96	*29*	
	04/26/97	9.2	
	10/29/97	*10*	
	04/30/98	*11*	
	10/22/98	9.3	
	04/16/99	7.7	
	10/19/99	6.8	
	04/17/00	*22**	
	04/06/01	<11	
	04/18/02	<11	
	04/16/03	<1.1	
	04/19/04	1.0	<2.0
	04/11/05	1.3	<2.0
	04/11/06	0.4	<2.0
	04/29/07	1.5	<2.0
	04/23/08	2.4	<2.0
	4/7/2009	8.3	<.1
	4/13/2010	5	<3.0
	4/27/2011	3	<3.0
	4/10/2012	0.7	<3.0
	4/15/2013	0.4	<.4
	4/9/2014	0.6	<0.6
	4/21/2015	0.94	<0.94
	4/14/2016	4.9	<2
	4/5/2017	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	03/26/92	<40	
MW-2A	06/16/92	1.5	
	09/04/92	<40	
	03/25/93	<80	
	09/16/93	<80	
	03/15/94	<70	
	09/20/94	*14*	
	03/31/95	*17*	
	09/07/95	3.9	
	03/15/96	3.6	
	09/05/96	1.2	
	04/26/97	0.3	
	04/30/98	2.5	
	04/16/99	2.4	
	04/17/00	*23**	
	04/06/01	<11	
	04/18/02	<11	
	04/16/03	<1.1	
	04/19/04	0.6	<2.0
	04/11/05	0.4	<2.0
	04/11/06	0.1	<2.0
	04/29/07	0.7	<2.0
	04/23/08	<0.4	<2.0
	4/7/2009	1.5	<0.1
	4/13/2010	5	<3.0
	4/27/2011	2	<3.0
	4/10/2012	0.5	<3.0
	4/15/2013	<0.2	<0.2
	4/9/2014	0.4	<0.4
	4/21/2015	0.11	<0.11
	4/14/2016	0.56	<2
	4/5/2017	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	03/26/92	**33,000**	
MW-5	06/16/92	**27,000**	
	09/04/92	**33,000**	
	12/17/92	**28,000**	
	03/25/93	**29,000**	
	06/22/93	**24,000**	
	09/16/93	**25,000**	
	12/03/93	**26,000**	
	03/15/94	**26,000**	
	06/16/94	**2,013**	
	09/20/94	**29,000**	
	12/13/94	**19,000**	
	03/31/95	**19,960**	
	06/15/95	**21,190**	
	09/07/95	**25,400**	
	12/11/95	**18,000**	
	03/15/96	**15,830**	
	06/27/96	**18,000**	
	09/05/96	**14,000**	
	12/03/96	**24,000**	
	01/23/97	**22,000**	
	04/26/97	**17,000**	
	07/16/97	**20,000**	
	10/29/97	**1,600**	
	01/20/98	**18,000**	
	04/30/98	**15,000**	
	07/10/98	**18,000**	
	10/22/98	**21,000**	
	01/19/99	**14,000**	
	04/16/99	**15,000**	
	07/23/99	**14,000**	
	10/19/99	**18,175**	
	01/10/00	**12,000**	
	04/17/00	**8,500**	
	07/20/00	**11,000**	
	10/25/00	**8,500**	
	01/17/01	**14,000**	
	04/06/01	**7,900**	
	07/20/01	**10,000**	
	10/16/01	**12,000**	
	01/14/02	**11,000**	
	04/18/02	**5,500**	
	07/23/02	**788**	
	10/30/02	**1,500**	
	01/20/03	**19,000**	
	04/16/03	**7,000**	
	07/10/03	*33*	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	10/07/03	**3,300**	
	01/30/04	**1,200**	
	04/19/04	**7,900**	10,000
	07/26/04	**6,700**	6,300
	10/11/04	**6,500**	6,500
	01/12/05	**6,460**	6,300
MW-5	04/11/05	**5,085**	4,500
Cont.	07/18/05	**4,900**	4,900
	10/11/05	**5,100**	4,900
	01/10/06	**10,880**	10,000
	04/11/06	**4,455**	3,880
	07/27/06	**3,190**	3,400
	10/18/06	**5,100**	4,500
	01/09/07	**2,900**	2,800
	04/29/07	**2,895**	2,500
	07/24/07	**2,465**	2,465
	10/24/07	**3,205**	2,700
	01/16/08	**2,335**	2,300
	04/23/08	**2,067**	1,700
	07/15/08	**2,425**	1,700
	10/23/08	**2,400**	1,800
	1/22/09	**2,024**	1,900
	4/7/09	**2,116**	1,700
	7/7/09	**2,200**	2,000
	10/11/09	**2,500**	2,300
	1/19/10	**2,015**	1,900
	4/13/10	**1,600**	1,400
	7/29/10	**1,800**	1,300
	10/19/10	**1,700**	1,400
	1/13/11	**1,500**	1,400
	4/27/11	**1,200**	1,200
	7/19/11	**1,100**	1,000
	10/11/11	**1,100**	1,000
	1/10/12	**1,140**	950
	4/10/12	**1,200**	1,100
	8/8/12	**1,200**	49
	10/9/12	**1,139**	1,100
	1/8/13	**1,500**	1,310
	4/15/13	**1,166**	1,166
	7/10/13	**1,300**	1,300
	10/14/13	**1,338**	1,300
	1/15/14	**1,594**	1,730
	4/9/14	**1,430**	1,280
	7/8/14	**1,300**	1,180
	10/14/14	**960**	960
	1/13/15	**784**	670
	4/21/15	**576**	514

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-5 Cont.	7/15/15	**605**	591
	10/20/15	**604**	512
	1/21/16	***444***	408
	4/14/16	**462**	430
	7/14/16	**536**	466
	10/18/16	*37*	48
	1/26/17	**174**	171
	4/5/17	***234***	240

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	02/09/87	*80*	
MW-5A*	07/29/87	**8,000**	
	09/25/87	**2,100**	
	12/11/87	**14,400**	
	03/21/88	**26,000**	
	06/13/88	**7,800**	
	09/08/88	**3,000**	
	12/15/88	**7,100**	
	03/26/92	**5,600**	
	06/16/92	**7,600**	
	09/04/92	**13,000**	
	12/17/92	**1,500**	
	03/25/93	**2,200**	
	06/22/93	**1,400**	
	09/16/93	**3,800**	
	12/03/93	**10,000**	
	03/15/94	**900**	
	06/16/94	**312**	
	09/20/94	**350**	
	12/13/94	**580**	
	03/31/95	**568**	
	06/15/95	**228**	
	09/07/95	**1,928**	
	12/11/95	*24*	
	03/15/96	**552**	
	06/27/96	**490**	
	09/05/96	**2,200**	
	12/03/96	**1,600**	
	01/23/97	**170**	
	04/26/97	*68*	
	07/16/97	*40*	
	10/29/97	**140**	
	01/20/98	**1,500**	
	04/30/98	**130**	
	07/10/98	**150**	
	10/22/98	**160**	
	01/19/99	**900**	
	04/16/99	*99*	
	07/23/99	*76*	
	10/19/99	**104**	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	01/10/00	**1,200**	
MW-5A*	04/17/00	**880**	
Cont.	07/20/00	**400**	
	10/25/00	**1,100**	
	01/17/01	**280**	
	04/06/01	*65*	
	07/20/01	*11*	
	10/16/01	*16**	
	01/14/02	*78*	
	04/18/02	**380**	
	07/23/02	**207**	
	10/30/02	*45*	
	01/20/03	**1,200**	
	04/16/03	**270**	
	07/10/03	**1,200**	
	10/07/03	*16*	
	01/30/04	*23*	
	04/19/04	**480**	82
	07/26/04	*40*	<4
	10/11/04	*12*	12
	01/12/05	*30*	<2
	04/11/05	*13*	10
	07/18/05	*<30*	<2
	10/11/05	*26*	<2
	01/10/06	*<2*	
	04/11/06	*<2*	
	07/27/06	**720**	
	10/18/06	*5.2*	
	01/09/07	2.3	<2.0
	04/29/07	*12*	10
	07/24/07	2.4	<2.0
	10/24/07	2.7	<2.0
	01/16/08	*10*	<2.0
	04/23/08	**167**	20
	07/15/08	6.4	<1.0
	10/23/08	*18*	10
	1/22/2009	**248**	210
	4/7/2009	**630**	590
	7/7/2009	7	<4.0
	10/11/2009	*33*	<3.0

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	1/19/2010	*24*	<3.0
MW-5A*	4/13/2010	*7*	7
Cont.	7/29/2010	*6*	<3.0
	10/19/2010	*5*	5
	1/13/2011	*5*	5
	4/27/2011	*27*	14
	7/19/2011	<3	<3
	10/11/2011	*11*	7
	1/10/2012	*94*	60
	4/10/2012	*4.2*	<3.0
	8/8/2012	*49*	<3.0
	10/9/2012	*39*	26
	1/8/2013	7.9	<3.0
	4/15/2013	3.7	<3.0
	7/10/2013	**1,300**	<3.0
	10/14/2013	*65*	67
	1/15/2014	*23*	21
	4/9/2014	*12*	7
	7/8/2014	4	<3
	10/14/2014	5	<3
	1/13/2015	3.1	<3
	4/21/2015	1.2	<1.2
	7/15/2015	4.6	<0.1
	10/20/2015	*16*	<2.0
	1/21/2016	7.8	<2.0
	4/14/2016	1.2	9
	7/14/2016	*12*	6
	10/18/2016	0.79	<2
	1/26/2017	0.71	<2
	4/5/2017	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-10R	01/19/99	3.7	
	04/16/99	4.4	
	07/23/99	8.3	
	10/19/99	1	
	01/10/00	<11	
	04/17/00	*13**	
	07/20/00	*16**	
	10/25/00	<11	
	01/17/01	<11	
	04/06/01	<11	
	04/18/02	<11	
	04/30/03	1.1	
	04/19/04	1.2	<2.0
	04/11/05	1.2	<2.0
	07/18/05	<30	<2.0
	04/11/06	1	<2.0
	04/29/07	1.5	1.5
	04/23/08	3.5	3.5
	4/7/09	4.4	<0.1
	4/13/10	11	<3.0
	4/27/11	5	<3.0
	4/10/12	5.5	<3.0
	4/15/13	0.5	<0.5
	4/9/14	0.5	<0.5
	4/21/15	0.41	<0.41
	4/14/16	0.31	<2
	4/5/17	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-17	03/26/92	<40	
	06/16/92	1.3	
	09/04/92	<40	
	03/25/93	<80	
	09/16/93	<80	
	03/15/94	<70	
	09/20/94	*15*	
	03/31/95	9.8	
	09/07/95	8.1	
	03/15/96	3.6	
	09/05/96	2.4	
	04/26/97	0.5	
	04/30/98	1.7	
	04/16/99	2.9	
	04/17/00	<11	
	04/06/01	<11	
	04/18/02	<11	
	04/16/03	<1.1	
	04/19/04	1.7	<2.0
	04/11/05	0.3	<2.0
	04/11/06	1.5	<2.0
	04/29/07	0.8	<2.0
	04/23/08	<0.4	<2.0
	4/7/2009	1.7	<0.1
	4/13/2010	*12*	<3.0
	4/27/2011	2	<3.0
	4/10/2012	0.4	<3.0
	4/15/2013	<0.2	<0.2
	4/9/2014	0.8	<0.8
	4/21/2015	0.39	<0.39
	4/14/2016	0.68	<2
	4/5/2017	<2.5	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-17A	03/26/92	<40	
	06/16/92	*26*	
	09/04/92	<40	
	03/25/93	<80	
	09/16/93	<80	
	03/15/94	<70	
	09/20/94	*22*	
	03/31/95	*14*	
	09/07/95	6.4	
	03/15/96	3.4	
	09/05/96	0.7	
	04/26/97	<.2	
	04/30/98	1.5	
	04/16/99	0.9	
	04/17/00	<11	
	04/06/01	<11	
	04/18/02	<11	
	04/16/03	<1.1	
	04/19/04	0.2	<2.0
	04/11/05	0.3	<2.0
	04/11/06	<0.1	<2.0
	04/29/07	0.2	<2.0
	04/23/08	<0.4	<2.0
	04/07/09	0.3	<0.1
	04/13/10	0.9	<3.0
	04/27/11	3	<3.0
	04/10/12	0.5	<3.0
	04/15/13	0.2	0.2
	04/09/14	0.2	<0.2
	04/21/15	0.17	<0.17
	04/14/16	<0.2	<2
	04/05/17	*44.2*	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-18	08/13/02	<12	
	04/16/03	<1.1	
	04/19/04	<0.2	<2.0
	04/11/05	<0.2	<2.0
	04/11/06	<0.1	<2.0
	04/29/07	0.1	2
	04/23/08	<0.4	<2.0
	04/07/09	0.3	<0.1
	04/13/10	8.1	<3.0
	04/27/11	0.3	<3.0
	04/10/12	0.2	<3.0
	04/15/13	<0.2	<0.2
	04/09/14	0.4	<0.4
	04/21/15	<0.1	<0.1
	04/14/16	1.6	<2
	04/05/17	<2.5	<3.9
MW-18A	08/13/02	<12	
	04/16/03	<1.1	
	04/19/04	<0.2	<2.0
	04/11/05	0.4	<2.0
	04/11/06	1.5	<2.0
	04/29/07	0.3	<2.0
	04/23/08	1.1	<4.0
	04/07/09	3.8	<2.0
	04/13/10	6.9	<3.0
	04/27/11	0.4	<3.0
	04/10/12	0.2	<3.0
	04/15/13	<0.2	<0.2
	04/09/14	3.3	<3.0
	04/21/15	*15*	<3.0
	04/14/16	<0.2	2
	04/05/17	*14.8*	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-19	07/13/09	**13,000**	15,000
	07/28/09	**22,000**	20,000
	10/11/09	**5,300**	4,000
	01/19/10	**3,030**	2,600
	04/13/10	**5,270**	5,270
	07/29/10	**6,400**	3,900
	10/19/10	**7,100**	4,800
	01/13/11	**7,100**	7,100
	04/27/11	**15,000**	15,000
	07/19/11	**9,400**	8,700
	10/11/11	**21,000**	17,000
	01/10/12	**41,100**	40,000
	04/10/12	**21,672**	23,000
	08/08/12	**26,000**	26,000
	10/09/12	**14,187**	13,000
	01/08/13	**12,575**	11,000
	04/15/13	**16,300**	16,300
	07/10/13	**19,000**	19,000
	10/14/13	**15,440**	16,000
	04/09/14	**20,005**	20,005
	07/08/14	**18,000**	17,000
	10/14/14	**21,600**	21,300
	01/13/15	**18,050**	15,000
	04/21/15	**18,587**	18,000
	07/15/15	**17,200**	16,000
	10/20/15	**18,000**	18,000
	01/21/16	**15,295**	17,000
	04/14/16	**18,420**	18,100
	07/14/16	**16,227**	17,600
	10/18/16	**18,618**	17,100
	01/26/17	**14,320**	16,000
	04/05/17	**24,700**	25,000

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-19A	07/13/09	*30*	50
	07/28/09	*40*	40
	10/11/09	3	<3.0
	01/19/10	4.3	<3.0
	04/13/10	8.2	<3.0
	07/29/10	3	<3.0
	10/19/10	1	<3.0
	01/13/11	1	1
	04/27/11	3	3
	07/19/11	**143**	<3
	10/11/11	4	4
	01/10/12	4	<3.0
	04/10/12	1.8	<3.0
	08/08/12	**6,100**	5,400
	10/09/12	*22*	40
	01/08/13	8.1	<3.0
	04/15/13	**500**	<3.0
	04/09/14	1.8	<1.8
	07/08/14	3.8	<3
	10/14/14	4	<3
	01/13/15	**321**	<3
	04/21/15	1.5	<1.5
	07/15/15	*97*	<2.0
	10/20/15	1.7	<2.0
	01/21/16	**121**	<2.0
	04/14/16	**233**	<2.0
	07/14/16	1	2
	10/18/16	3.5	<2
	01/26/17	3	<2
	04/05/17	4.2*	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-20	06/02/14	**338,000**	338,000
	07/08/14	**283,000**	89,000
	10/14/14	**330,000**	297,000
	01/13/15	**199,000**	155,000
	04/21/15	**248,900**	248,900
	07/15/15	**248,150**	247,000
	10/20/15	**385,000**	385,000
	01/21/16	**212,000**	234,000
	04/14/16	**412,750**	279,000
	07/14/16	**287,875**	326,000
	10/18/16	**269,075**	283,000
	01/26/17	**389,925**	324,000
	04/05/17	**262,000**	242,000
MW-20A	06/02/14	**1,200**	1,060
	07/08/14	**230**	15
	10/14/14	**117**	<3
	01/13/15	*11*	<3
	04/21/15	1.1	<1.1
	07/15/15	**192**	<2.0
	10/20/15	*23*	<2.0
	01/21/16	5.4	<2.0
	04/14/16	*66*	8
	07/14/16	5.3	4
	10/18/16	**140**	<19
	01/26/17	*65*	<19
	04/05/17	*23.1*	<3.9

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-21	06/02/14	2.6	<30
	07/08/14	**210**	<3
	10/14/14	<0.1	<3
	01/13/15	0.63	<3
	04/21/15	5.9	<3.0
	07/15/15	2.6	<2.0
	10/20/15	1.7	<2.0
	01/21/16	0.89	<2.0
	04/14/16	2.2	<2.0
	07/14/16	0.62	4
	10/18/16	0.29	<19
	01/26/17	1.1	<19
	04/05/17	<2.5	<3.9
MW-21A	06/02/14	1.8	<30
	07/08/14	1.1	<3
	10/14/14	<0.1	<3
	01/13/15	<0.1	<3
	04/21/15	0.054	<0.54
	07/15/15	0.1	<2.0
	10/20/15	0.51	<2.0
	01/21/16	0.21	<2
	04/14/16	0.6	<2.0
	07/14/16	<0.2	8
	10/18/16	<0.2	<19
	01/26/17	0.77	<19
	04/05/17	<2.5	<3.9

* Estimated Concentration Above the LOD and Below the LOQ
11 Indicates Concentration above WDNR PAL of 10 ug/L
111 Indicates Concentration above WDNR ES of 100 ug/L

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
1989*			**9,700**	
1990*			**129,000**	
1991*			**94,000**	
1992*	**125,000**		**101,000**	
1993*	**71,000**		**72,000**	
1994*	**58,000**		**76,000**	
1995*	**36,000**		**88,000**	
1996*	**44,000**		**35,000**	
1997*	**32,000**		**41,000**	
1998*	**37,000**		**61,000**	
12/09/99	**21,000**		**76,000**	
03/08/00	**13,000**		**33,000**	
01/17/01	**20,000**		**6,000**	
02/15/01	**11,000**		**35,000**	
03/15/01	**19,000**		**38,000**	
04/06/01	**8,300**		**21,000**	
05/18/01	**15,000**		**48,000**	
06/18/01	**15,000**		**51,000**	
07/20/01	**31,000**		**74,000**	
08/14/01	**17,000**		**70,000**	
09/18/01	**16,000**		**55,000**	
10/16/01	**13,000**		**38,000**	
11/12/01	**17,000**		**53,000**	
12/25/01	**15,000**		**39,000**	
01/11/02	**15,000**		**54,000**	
02/12/02	**16,000**		**43,000**	
03/13/02	**11,000**		**27,000**	
04/18/02	**11,000**		**17,000**	
05/20/02	**17,000**		**49,000**	
06/20/02	**14,000**		**35,000**	
07/15/02	**16,000**		**61,000**	
08/15/02	**19,000**		**63,000**	
09/18/02	**13,000**		**61,000**	
10/30/02	**18,000**		**12,000**	
11/20/02	**13,000**		**38,000**	
12/12/02	**13,000**		**44,000**	
01/20/03	**16,000**		**47,000**	
02/19/03	**22,000**		**37,000**	
03/17/03	**9,000**		**30,000**	
04/16/03	**8,800**		**5,300**	
05/28/03	**11,000**		**32,000**	
06/10/03	**10,000**		**66,000**	

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
07/10/03	**9,600**		**27,000**	
08/20/03	**13,000**		**55,000**	
09/12/03	**16,000**		**64,000**	
10/07/03	**9,800**		**32,000**	
11/18/03	**8,100**		**29,000**	
12/08/03	**8,700**		**31,000**	
01/30/04	**9,700**		**44,000**	
02/12/04	**11,260**		**42,175**	
03/25/04	**9,200**		**55,000**	
04/19/04	**13,000**	14,000	**41,000**	41,000
05/10/04	**10,000**		**17,000**	
06/14/04	**5,400**	5,000	**16,000**	15,000
07/19/04	**8,700**	8,700	**52,000**	52,000
08/17/04	**11,000**	10,000	**79,000**	66,000
09/14/04	**12,000**	12,000	**76,000**	43,000
10/11/04	**9,900**	8,900	**80,000**	73,000
11/16/04	**11,000**	10,500	**55,000**	53,000
12/08/04	**15,000**		**7,700**	
01/12/05	**8,900**	7,200	**33,000**	13,100
02/16/05	**6,200**	5,600	**25,000**	22,000
03/07/05	**9,900**	8,500	**9,800**	7,600
04/11/05	**5,700**	5,800	**33,000**	31,000
05/18/05	**12,000**	9,200	**33,000**	33,000
06/13/05	**11,000**	8,000	**42,000**	42,000
07/18/05	**10,000**	10,000	**82,000**	40,000
08/19/05	**10,000**	9,500	**76,000**	80,000
09/15/05	**8,900**	7,600	**64,000**	60,000
10/11/05	**8,100**	7,400	**46,000**	46,000
11/16/05	**8,200**	6,500	**14,000**	13,000
12/15/05	**7,900**	7,000	**43,000**	40,000
01/10/06	**5,600**	5,100	**17,000**	15,000
02/01/06	**7,000**	5,800	**15,000**	14,000
03/13/06	**3,800**	3,400	**9,000**	7,200
04/11/06	**8,000**	8,000	**25,000**	23,900
05/17/06	**6,800**	6,800	**23,000**	23,000
06/21/06	**6,900**	6,800	**66,000**	67,000
07/27/06	**7,400**	7,200	**67,000**	67,000
08/11/06	**11,000**	9,800	**80,000**	59,000
09/12/06	**6,800**	6,000	**19,000**	17,000
10/18/06	**8,200**	6,500	**9,100**	6,900
11/14/06	**7,800**	4,200	**47,000**	22,900
12/13/06	**7,800**	7,000	**32,000**	26,000

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
01/09/07	**6,900**	6,900	**32,000**	32,000
02/14/07	**7,100**	6,900	**48,000**	48,000
03/06/07	**5,100**	4,500	**29,000**	29,000
04/29/07	**7,500**	7,400	**31,000**	16,200
05/14/07	**8,400**	6,600	**45,000**	17,800
06/17/07	**7,600**	3,900	**18,000**	9,800
07/24/07	**8,000**	7,300	**103,000**	103,000
08/09/07	**11,000**	8,200	**95,000**	95,000
09/20/07	**7,100**	6,200	**58,000**	50,000
10/24/07	**5,800**	5,600	**22,000**	18,700
11/27/07	**6,400**	4,000	**65,000**	26,500
12/12/07	**5,500**	4,700	**60,000**	60,000
01/16/08	**4,700**	3,700	**25,000**	27,000
02/07/08	**6,000**	4,300	**45,000**	9,600
03/05/08	**6,100**	5,600	**15,000**	9,600
04/23/08	**5,900**	5,100	**48,000**	48,000
05/21/08	**5,900**	1,500	**49,000**	25,000
06/16/08	**4,900**	3,900	**34,000**	23,000
07/15/08	**6,600**	3,900	**68,000**	52,000
08/21/08	**7,500**	6,200	**94,000**	69,000
09/09/08	**5,565**	4,600	**94,800**	64,000
10/23/08	**5,900**	4,700	**89,000**	88,000
11/20/08	**6,400**	3,600	**48,000**	21,000
12/16/08	**4,900**	3,700	**21,000**	8,900
01/22/09	**5,200**	3,200	**40,000**	18,000
02/10/09	**5,200**	3,600	**5,800**	4,000
03/16/09	**3,100**	1,700	**8,900**	3,800
04/07/09	**3,900**	2,800	**33,000**	15,000
05/12/09	**3,400**	1,600	**41,000**	19,000
06/17/09	**3,200**	2,300	**47,000**	39,000
07/07/09	**6,000**	4,000	**91,000**	49,000
08/11/09	**4,900**	3,500	**95,000**	94,000
09/08/09	**7,200**	2,900	**99,000**	61,000
10/08/09	**7,800**	3,100	**38,000**	15,000
11/10/09	**4,900**	4,400	**49,000**	42,000
12/15/09	**5,000**	3,600	**47,000**	17,000
01/19/10	**5,300**	5,300	**43,000**	44,000
02/09/10	**4,400**	4,100	**36,000**	31,000
03/15/10	**2,000**	1,800	**19,000**	16,000
04/13/10	**3,900**	2,800	**31,000**	20,000
05/11/10	**5,000**	4,200	**23,000**	20,000
06/08/10	**5,500**	5,100	**52,000**	42,000

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
07/14/10	**5,800**	3,800	**66,000**	27,000
08/24/10	**7,700**	2,700	**66,000**	26,000
09/15/10	**5,700**	2,900	**85,000**	39,000
10/19/10	**5,800**	2,300	**81,000**	62,000
11/04/10	**5,000**	3,500	**53,000**	53,000
12/14/10	**4,800**	3,000	**49,000**	65,000
01/13/11	**3,200**	3,200	**39,000**	36,000
02/08/11	**5,700**	4,000	**46,000**	43,000
03/15/11	**3,500**	3,300	**9,500**	7,100
04/27/11	**2,400**	2,400	**20,000**	20,000
05/16/11	**5,500**	5,300	**25,000**	25,000
06/07/11	**5,500**	5,200	**56,000**	62,000
07/19/11	**4,200**	3,600	**105,000**	51,000
08/23/11	**4,900**	4,100	**98,000**	89,000
09/13/11	**5,300**	3,900	**100,000**	61,000
10/11/11	**31,000**	26,000	**88,000**	72,000
11/08/11	**4,300**	2,800	**54,000**	39,000
12/13/11	**3,600**	3,400	**57,000**	52,000
01/10/12	**5,400**	3,800	**60,000**	49,000
02/14/12	**420**	360	**41,000**	39,000
03/13/12	**2,000**	1,500	**20,000**	18,000
04/10/12	**4,800**	4,200	**44,000**	32,000
05/22/12	**5,300**	5,100	**84,000**	37,000
06/18/12	**5,000**	4,400	**111,000**	88,000
07/18/12	**4,800**	4,200	**122,000**	90,000
08/08/12	**6,100**	5,500	**63,000**	18,000
09/11/12	**4,100**	4,100	**101,000**	92,000
10/09/12	**620**	505	**89,000**	92,000
11/20/12	**3,500**	3,400	**43,000**	44,000
12/18/12	**3,600**	3,200	**30,000**	30,000
01/08/13	*1.5*	<3	**41,000**	33,000
02/11/13	**3,300**	3,000	**13,000**	14,000
03/12/13	**2,600**	2,200	**12,000**	7,500
04/15/13	**3,900**	3,490	**25,000**	25,000
05/07/13	**3,900**	3,900	**38,000**	35,000
06/20/13	**3,900**	3,900	**48,000**	50,000
07/10/13	**4,300**	4,300	**9,000**	41,506
08/20/13	**5,100**	5,000	**84,000**	80,000
09/19/13	**6,000**	6,000	**76,000**	76,000
10/14/13	**3,800**	3,800	**75,000**	85,000
11/12/13	**3,900**	3,700	**27,000**	29,000
12/17/13	**3,700**	3,500	**46,000**	48,000

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
01/15/14	**170**	*126*	**27,000**	27,600
02/18/14	**12,000**	2,900	**39,000**	38,000
03/11/14	**2,300**	2,400	**7,300**	6,100
04/09/14	**1,900**	1,570	**19,000**	17,000
05/12/14	**2,200**	2,200	**4,400**	4,400
06/02/14	**1,500**	1,500	**7,000**	6,800
07/08/14	**3,800**	3,200	**27,000**	27,000
08/05/14	**4,200**	3,300	**64,000**	41,000
09/09/14	**4,700**	4,000	**67,000**	61,000
10/16/14	**3,300**	3,300	**8,000**	6,800
11/04/14	**2,600**	2,600	**37,000**	37,000
12/16/14	**3,000**	2,700	**15,000**	12,000
01/13/15	**2,400**	2,100	**36,000**	31,000
02/10/15	**3,200**	2,500	**39,000**	33,000
03/10/15	**2,700**	2,400	**25,000**	18,000
04/21/15	**1,800**	1,600	**16,000**	4,400
05/18/15	**2,700**	1,800	**1,900**	8,600
06/09/15	**1,900**	1,700	**56,000**	9,100
07/15/15	**3,441**	3,300	**10,627**	10,000
08/11/15	**3,700**	3,200	**45,000**	32,000
09/08/15	**5,900**	3,400	**42,000**	24,000
10/20/15	**3,700**	3,200	**50,000**	42,000
11/10/15	**3,700**	3,000	**24,000**	19,000
12/08/15	**3,300**	2,700	**25,000**	7,900
01/21/16	**2,800**	2,640	**22,000**	22,400
02/08/16	**3,200**	3,150	**6,700**	6,130
03/14/16	**2,600**	2,490	**17,000**	16,500
04/14/16	**3,200**	3,150	**19,000**	18,200
05/17/16	**3,100**	2,880	**26,000**	25,300
06/09/16	**2,700**	2,210	**35,000**	24,400
07/14/16	**2,900**	2,960	**52,000**	26,500
08/09/16	**3,300**	3,300	**77,000**	77,000
09/07/16	**4,400**	3,080	**22,000**	21,200
10/18/16	**3,500**	3,400	**24,000**	33,500
11/16/16	**3,200**	3,470	**32,000**	29,000
12/06/16	**3,400**	3,030	**16,000**	12,800
01/26/17	**2,900**	2,900	**24,000**	23,000
02/07/17	**2,500**	2,130	**26,000**	24,100
03/27/17	**2,000**	1,800	**9,400**	8,900
04/05/17	**1,720**	1,900	**11,400**	12,200
05/30/17	**2,610**	2,700	**27,400**	26,700
06/15/17	**3,300**	3,640	**23,000**	24,500

Table #5

Groundwater Analytical Results / Total and Hexavalent Chromium- Manhole and Sump
Appleton Wire Former Albany International Chrome Plant

Date	Manhole (French Drain) Total Chromium ug/l	Manhole (French Drain) Hexavalent Chromium ug/l	Sump Total Chromium ug/l	Sump Hexavalent Chromium ug/l
* Analytical results were recorded off a report prepared by Albany International and represent the average concentrations of total chromium from all of the sampling events conducted each given year. No laboratory data sheets for the individual sampling events were ever found.				
NR 140.10 ES	100		100	
NR 140.10 PAL	10		10	
102	Bold value indicates exceedance of NR 140.10 ES & PAL			
14	Italicized value indicates exceedance of NR 140.10 PAL			

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-1	01/19/10	9.48		760.53	757.96
	04/13/10	8.21		761.80	
	07/29/10	9.28		760.73	
	10/19/10	7.31		762.70	
	01/13/11	7.94		762.07	
	04/27/11	6.86		763.15	
	07/19/11	5.51		764.50	
	10/11/11	7.41		762.60	
	01/10/12	9.32		760.69	
	04/10/12	8.45		761.56	
	08/08/12	9.88		760.13	
	10/09/12	9.83		760.18	
	01/18/13	9.17		760.84	
	04/15/13	7.30		762.71	
	07/10/13	8.22		761.79	
	11/14/13	9.32		760.69	
	01/15/14	10.32		759.69	
	04/09/14	7.42		762.59	
	06/02/14	8.16		761.85	
	07/08/14	7.80		762.21	
	10/14/14	8.18		761.83	
	01/13/15	9.22		760.79	
	04/21/15	8.68		761.33	
	07/15/15	8.90		761.11	
	10/20/15	8.72		761.29	
	01/21/16	8.90		761.11	
	04/14/16	8.61		761.40	
	07/14/16	8.62		761.39	
	10/18/16	8.40		761.61	
	12/06/16	8.58		761.43	
	01/10/17	8.98		761.03	
	04/05/17	8.66		761.35	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-2	01/19/10	8.42		762.34	759.04
	04/13/10	8.31		762.45	
	07/29/10	9.00		761.76	
	10/19/10	7.03		763.73	
	01/13/11	8.81		761.95	
	04/27/11	7.51		763.25	
	07/19/11	4.41		766.35	
	10/11/11	7.20		763.56	
	01/10/12	8.70		762.06	
	04/10/12	7.54		763.22	
	08/08/12	8.57		762.19	
	10/09/12	9.21		761.55	
	01/08/13	8.20		762.56	
	04/15/13	5.30		765.46	
	07/10/13	7.42		763.34	
	10/14/13	8.71		762.05	
	01/15/14	8.98		761.78	
	04/09/14	6.53		764.23	
	06/02/14	7.10		763.66	
	07/08/14	7.48		763.28	
	10/14/14	7.82		762.94	
	01/13/15	8.52		762.24	
	04/21/15	6.63		764.13	
	07/15/15	8.31		762.45	
	10/20/15	8.38		762.38	
	01/21/16	7.38		763.38	
	04/14/16	6.42		764.34	
	07/14/16	7.97		762.79	
	10/18/16	7.49		763.27	
	12/06/16	6.77		763.99	
	01/10/17	6.34		764.42	
	04/05/17	5.98		764.78	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-2A	01/19/10	15.39		755.25	733.72
	04/13/10	15.55		755.09	
	07/29/10	15.55		755.09	
	10/19/10	13.62		757.02	
	01/13/11	17.13		753.51	
	04/27/11	16.22		754.42	
	07/19/11	15.21		755.43	
	10/11/11	14.16		756.48	
	01/10/12	15.03		755.61	
	04/10/12	15.32		755.32	
	08/08/12	16.54		754.10	
	10/09/12	15.41		755.23	
	01/08/13	14.84		755.80	
	04/15/13	14.57		756.07	
	07/10/13	15.20		755.44	
	10/14/13	15.20		755.44	
	01/15/14	15.22		755.42	
	04/09/14	15.12		755.52	
	06/02/14	15.18		755.46	
	07/08/14	15.11		755.53	
	10/14/14	14.63		756.01	
	01/13/15	14.63		756.01	
	04/21/15	15.23		755.41	
	07/15/15	15.38		755.26	
	10/20/15	14.58		756.06	
	01/21/16	13.32		757.32	
	04/14/16	14.22		756.42	
	07/14/16	15.14		755.50	
	10/18/16	14.10		756.54	
	12/06/16	13.91		756.73	
	01/10/17	13.98		756.66	
	04/05/17	14.33		756.31	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-5	01/19/10	11.25		759.91	756.73
	04/13/10	5.50		765.66	
	07/29/10	10.13		761.03	
	10/19/10	8.44		762.72	
	01/13/11	7.17		763.99	
	04/27/11	6.20		764.96	
	07/19/11	4.16		767.00	
	10/11/11	8.50		762.66	
	01/10/12	8.79		762.37	
	04/10/12	8.82		762.34	
	08/08/12	11.72		759.44	
	10/09/12	12.52		758.64	
	01/08/13	8.36		762.80	
	04/15/13	5.39		765.77	
	07/10/13	7.04		764.12	
	10/14/13	11.67		759.49	
	01/15/14	9.74		761.42	
	04/09/14	6.08		765.08	
	06/02/14	5.96		765.20	
	07/08/14	7.69		763.47	
	10/14/14	6.48		764.68	
	01/13/15	8.28		762.88	
	04/21/15	5.48		765.68	
	07/15/15	7.18		763.98	
	10/20/15	11.84		759.32	
	01/21/16	6.61		764.55	
	04/14/16	5.65		765.51	
	07/14/16	7.60		763.56	
	10/18/16	6.48		764.68	
	12/06/16	5.67		765.49	
	01/10/17	7.33		763.83	
	04/05/17	5.04		766.12	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-5A	01/19/10	8.90		761.04	732.83
	04/13/10	5.81		764.13	
	07/29/10	8.31		761.63	
	10/19/10	10.24		759.70	
	01/13/11	14.98		754.96	
	04/27/11	3.72		766.22	
	07/19/11	8.12		761.82	
	10/11/11	9.95		759.99	
	01/10/12	13.08		756.86	
	04/10/12	6.70		763.24	
	08/08/12	14.15		755.79	
	10/09/12	14.04		755.90	
	01/08/13	11.24		758.70	
	04/15/13	4.32		765.62	
	07/10/13	6.77		763.17	
	10/14/13	16.42		753.52	
	01/15/14	13.80		756.14	
	04/09/14	4.40		765.54	
	06/02/14	5.48		764.46	
	07/08/14	6.72		763.22	
	10/14/14	13.73		756.21	
	01/13/15	7.61		762.33	
	04/21/15	4.04		765.90	
	07/15/15	8.44		761.50	
	10/20/15	7.44		762.50	
	01/21/16	7.50		762.44	
	04/14/16	5.34		764.60	
	07/14/16	11.92		758.02	
	10/18/16	13.84		756.10	
	12/06/16	13.62		756.32	
	01/10/17	6.08		763.86	
	04/05/17	3.60		766.34	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-10R	01/19/10	7.88		759.25	757.51
	04/13/10	4.84		762.29	
	07/29/10	6.98		760.15	
	10/19/10	5.59		761.54	
	01/13/11	4.80		762.33	
	04/27/11	4.81		762.32	
	07/19/11	3.36		763.77	
	10/11/11	5.68		761.45	
	01/10/12	5.41		761.72	
	04/10/12	5.37		761.76	
	08/08/12	6.01		761.12	
	10/09/12	8.14		758.99	
	01/08/13	8.03		759.10	
	04/15/13	2.32		764.81	
	07/10/13	4.38		762.75	
	10/14/13	5.86		761.27	
	01/15/14	7.92		759.21	
	04/09/14	4.53		762.60	
	06/02/14	4.51		762.62	
	07/08/14	5.54		761.59	
	10/14/14	5.08		762.05	
	01/13/15	6.35		760.78	
	04/21/15	5.02		762.11	
	07/15/15	5.61		761.52	
	10/20/15	5.83		761.30	
	01/21/16	5.68		761.45	
	04/14/16	5.08		762.05	
	07/14/16	6.13		761.00	
	10/18/16	5.41		761.72	
	12/06/16	5.33		761.80	
	01/10/17	5.84		761.29	
	04/05/17	4.63		762.50	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-17	01/19/10	9.58		762.39	759.39
	04/13/10	6.36		765.61	
	07/29/10	8.61		763.36	
	10/29/10	7.11		764.86	
	01/13/11	8.06		763.91	
	04/27/11	7.92		764.05	
	07/19/11	6.30		765.67	
	10/11/11	7.20		764.77	
	01/10/12	9.25		762.72	
	04/10/12	8.24		763.73	
	08/08/12	8.23		763.74	
	10/09/12	9.46		762.51	
	01/08/13	9.76		762.21	
	04/15/13	7.78		764.19	
	07/10/13	8.18		763.79	
	10/14/13	8.38		763.59	
	01/15/14	9.71		762.26	
	04/09/14	7.90		764.07	
	06/02/14	7.82		764.15	
	07/08/14	7.96		764.01	
	10/14/14	7.96		764.01	
	01/13/15	6.14		765.83	
	04/21/15	6.68		765.29	
	07/15/15	7.71		764.26	
	10/20/15	9.18		762.79	
	01/21/16	9.61		762.36	
	04/14/16	8.20		763.77	
	07/14/16	8.68		763.29	
	10/18/16	8.49		763.48	
	12/06/16	7.60		764.37	
	01/10/17	9.01		762.96	
	04/05/17	7.72		764.25	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-17A	01/19/10	16.32		754.94	733.85
	04/13/10	16.58		754.68	
	07/29/10	14.28		756.98	
	10/19/10	16.97		754.29	
	01/13/11	17.20		754.06	
	04/27/11	18.02		753.24	
	07/19/11	17.21		754.05	
	10/11/11	16.82		754.44	
	01/10/12	15.50		755.76	
	04/10/12	16.16		755.10	
	08/08/12	16.00		755.26	
	10/09/12	15.56		755.70	
	01/08/13	15.60		755.66	
	04/15/13	16.29		754.97	
	07/10/13	15.32		755.94	
	10/14/13	15.32		755.94	
	01/15/14	15.91		755.35	
	04/09/14	16.32		754.94	
	06/02/14	15.48		755.78	
	07/08/14	15.21		756.05	
	10/14/14	6.60		764.66	
	01/13/15	15.02		756.24	
	04/21/15	16.08		755.18	
	07/15/15	15.72		755.54	
	10/10/15	15.09		756.17	
	01/21/16	14.98		756.28	
	04/14/16	15.22		756.04	
	07/14/16	15.95		755.31	
	10/18/16	14.98		756.28	
	12/06/16	15.08		756.18	
	01/10/17	15.25		756.01	
	04/05/17	15.79		755.47	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-18	01/19/10	9.60		760.43	757.23
	04/13/10	7.80		762.23	
	07/29/10	9.57		760.46	
	10/19/10	8.63		761.40	
	01/13/11	8.35		761.68	
	04/27/11	8.82		761.21	
	07/19/11	6.42		763.61	
	10/11/11	8.60		761.43	
	01/10/12	9.27		760.76	
	04/10/12	8.80		761.23	
	08/08/12	9.31		760.72	
	10/09/12	9.85		760.18	
	01/08/13	9.22		760.81	
	04/15/13	7.06		762.97	
	07/10/13	8.78		761.25	
	10/14/13	9.04		760.99	
	01/15/14	10.35		759.68	
	04/09/14	8.20		761.83	
	06/02/14	8.75		761.28	
	07/08/14	8.62		761.41	
	10/14/14	8.71		761.32	
	01/13/15	9.32		760.71	
	04/21/15	8.00		762.03	
	07/15/15	8.94		761.09	
	10/20/15	8.85		761.18	
	01/21/16	8.61		761.42	
	04/14/16	8.04		761.99	
	07/14/16	8.65		761.38	
	10/18/16	7.36		762.67	
	12/06/16	8.00		762.03	
	01/10/17	8.48		761.55	
	04/05/17	7.82		762.21	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-18A	01/19/10	27.48		743.19	732.37
	04/13/10	27.72		742.95	
	07/29/10	27.93		742.74	
	10/19/10	27.72		742.95	
	01/13/11	29.44		741.23	
	04/27/11	29.44		741.23	
	07/19/11	28.87		741.80	
	10/11/11	28.33		742.34	
	01/10/12	26.43		744.24	
	04/10/12	26.80		743.87	
	08/08/12	27.45		743.22	
	10/09/12	27.97		742.70	
	01/08/13	26.11		744.56	
	04/15/13	26.48		744.19	
	07/10/13	27.18		743.49	
	10/14/13	27.32		743.35	
	01/15/14	26.32		744.35	
	04/09/14	27.03		743.64	
	06/02/14	29.62		741.05	
	07/08/14	28.14		742.53	
	10/14/14	26.88		743.79	
	01/13/15	9.32			
	04/21/15	26.92		743.75	
	07/15/15	27.13		743.54	
	10/20/15	26.31		744.36	
	01/21/16	25.18		745.49	
	04/14/16	25.56		745.11	
	07/14/16	26.43		744.24	
	10/18/16	25.66		745.01	
	12/06/16	25.05		745.62	
	01/10/17	24.90		745.77	
	04/05/17	25.27		745.40	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-19	07/07/09	8.24	768.19	759.95	758.27
	07/28/09	6.98		761.21	
	10/11/09	5.74		762.45	
	01/19/10	5.20		762.99	
	04/13/10	5.33		762.86	
	07/29/10	6.57		761.62	
	10/19/10	5.50		762.69	
	01/13/11	7.29		760.90	
	04/27/11	5.60		762.59	
	07/19/11	6.63		761.56	
	10/11/11	5.55		762.64	
	01/10/12	5.97		762.22	
	04/10/12	4.78		763.41	
	08/08/12	6.38		761.81	
	10/09/12	6.70		761.49	
	01/08/13	5.74		762.45	
	04/15/13	2.40		765.79	
	07/10/13	4.25		763.94	
	10/14/13	6.30		761.89	
	01/15/14	6.22		761.97	
	04/09/14	4.47		763.72	
	06/02/14	4.11		764.08	
	07/08/14	4.40		763.79	
	10/14/14	4.70		763.49	
	01/13/15	5.78		762.41	
	04/21/15	4.20		763.99	
	07/15/15	5.17		763.02	
	10/20/15	5.70		762.49	
	01/21/16	4.44		763.75	
	04/14/16	3.48		764.71	
	07/14/16	5.16		763.03	
	10/18/16	4.74		763.45	
	12/06/16	4.35		763.84	
	01/10/17	4.72		763.47	
	04/05/17	3.28		764.91	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-19A	07/07/09	27.72	768.04	740.32	731.10
	07/28/09	22.93		745.11	
	10/11/09	18.12		749.92	
	01/19/10	18.36		749.68	
	04/13/10	18.33		749.71	
	07/29/10	18.22		749.82	
	10/19/10	18.40		749.64	
	01/13/11	20.47		747.57	
	04/27/11	18.40		749.64	
	07/19/11	18.44		749.60	
	10/11/11	18.42		749.62	
	01/10/12	16.58		751.46	
	04/10/12	16.98		751.06	
	08/08/12	20.13		747.91	
	10/09/12	16.56		751.48	
	01/08/13	15.40		752.64	
	04/15/13	16.22		751.82	
	07/10/13	16.37		751.67	
	10/14/13	16.83		751.21	
	01/15/14	18.73		749.31	
	04/09/14	17.24		750.80	
	06/02/14	16.80		751.24	
	07/08/14	16.84		751.20	
	10/14/14	16.24		751.80	
	01/13/15	16.23		751.81	
	04/21/15	18.21		749.83	
	07/15/15	18.42		749.62	
	10/20/15	18.03		750.01	
	01/21/16	15.68		752.36	
	04/14/16	16.02		752.02	
	07/14/16	18.46		749.58	
	10/18/16	16.65		751.39	
	12/06/16	15.62		752.42	
	01/10/17	17.44		750.60	
	04/05/17	15.79		752.25	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-20	06/02/14	7.36	768.29	760.93	764.29
	07/08/14	5.63		762.66	
	10/14/14	5.57		762.72	
	01/13/15	7.91		760.38	
	04/21/15	5.68		762.61	
	07/15/15	6.48		761.81	
	10/20/15	7.48		760.81	
	01/21/16	7.19		761.10	
	04/14/16	5.81		762.48	
	07/14/16	7.04		761.25	
	10/18/16	6.32		761.97	
	12/06/16	6.28		762.01	
	01/10/17	7.68		760.61	
	04/05/17	5.30		762.99	
MW-20A	06/02/14	32.73	768.36	735.63	739.02
	07/08/14	20.88		747.48	
	10/14/14	12.61		755.75	
	01/13/15	17.04		751.32	
	04/21/15	18.06		750.30	
	07/15/15	18.53		749.83	
	10/20/15	16.78		751.58	
	01/21/16	16.07		752.29	
	04/14/16	17.25		751.11	
	07/14/16	16.68		751.68	
	10/18/16	16.22		752.14	
	12/06/16	16.55		751.81	
	01/10/17	16.80		751.56	
	04/05/17	16.22		752.14	

Table #6

Groundwater Elevations
Appleton Wire Former Albany International Chrome Plant

Well Name	Date Measured	Depth Water (feet)	Reference Elevation (to top PVC)	Groundwater Elevation (feet above mean sea level)	Elevation Top of Screen
MW-21	06/02/14	4.96	768.85	763.89	764.8
	07/08/14	5.02		763.83	
	10/14/14	6.82		762.03	
	01/13/15	6.18		762.67	
	04/21/15	5.34		763.51	
	07/15/15	5.74		763.11	
	10/20/15	6.00		762.85	
	01/21/16	5.22		763.63	
	04/14/16	4.48		764.37	
	07/14/16	5.37		763.48	
	10/18/16	5.34		763.51	
	12/06/16	4.27		764.58	
	01/10/17	5.38		763.47	
	04/05/17	4.55		764.30	
MW-21A	06/02/14	32.18	768.85	736.67	739.85
	07/08/14	16.27		752.58	
	10/14/14	15.98		752.87	
	01/13/15	14.80		754.05	
	04/21/15	15.52		753.33	
	07/15/15	13.03		755.82	
	10/20/15	14.73		754.12	
	01/21/16	14.49		754.36	
	04/14/16	12.35		756.50	
	07/14/16	12.74		756.11	
	10/18/16	12.25		756.60	
	12/06/16	12.45		756.40	
	01/10/17	12.24		756.61	
	04/05/17	12.38		756.47	

Table #7

Appleton Wire Former Albany international Chrome Plant
Total Pounds Chromium Removed

Year	Sump	Manhole	Yearly Total	Cumulative Total
1988-1998*				550.00
1998**	10.68	13.26	23.94	573.94
1999	21.81	8.4	30.21	604.15
2000	NA	NA	22.00	626.15
2001	18.75	8.69	27.64	653.79
2002	13.1	9.98	23.08	676.87
2003	12.94	4.95	17.89	694.76
2004	12.83	5.29	18.12	712.88
2005	8.07	4.57	12.64	725.52
2006	7.36	4.27	11.63	736.88
2007	11.72	2.87	14.59	751.47
2008	16.40	3.40	19.80	771.27
2009	13.79	2.66	16.45	796.03
2010	17.09	3.36	20.45	816.48
2011	16.26	2.60	18.86	835.34
2012	11.66	2.39	14.05	849.39
2013	8.24	1.78	10.02	859.37
2014	8.10	1.30	9.4	868.77
2015	8.59	1.30	9.89	878.66
2016	8.37	1.49	9.86	888.52
2017	5.16***	0.71***	5.87***	894.39

*Chemical Precipitation process was utilized from June 29, 1988 to April 20, 1998.
During that period 550# of chromium was removed in the form of chromium sulfate.

** Partial Year - Ion exchange System on-line April 20, 1998

*** Partial Year

NA - Data not available

Table #8
Geoprobe Monitoring Wells
GROUNDWATER ANALYTICAL RESULTS
Total Chromium and Hexavalent Chromium
Appleton Wire Former Albany International Chrome Plant
Appleton, Wisconsin

Well Name	Sample Date	Total Chromium	Hexavalent Chromium (ug/l)
GMW-01	06/30/04	**5,300**	5,100
	08/01/07	**8,490**	N/A
	10/24/07	**3,085**	1,900
	01/16/08	**3,020**	2,260
	04/23/08	**2,001**	2,000
GMW-02	06/30/04	**5,700**	4,700
	08/01/04	**6,355**	N/A
	10/24/07	**6,115**	6,115
	01/16/08	**7,040**	6,800
	04/23/08	**6,600**	4,900
GMW-03	06/30/04	**5,000**	4,700
	08/01/04	**4,790**	N/A
	10/24/07	**3,545**	2,300
	01/16/08	**4,550**	3,100
	04/23/08	**3,320**	1,400
GMW-04	06/30/04	*52*	52
	08/01/04	*56*	N/A
	10/24/07	*14*	<2.0
	01/16/08	*31*	<.002
	04/23/08	3.7	<2.0
GMW-05	06/30/04	*40*	34
	08/01/04	*55*	N/A
	10/24/07	5.6	<2.0
	01/16/08	8.5	<.002
	04/23/08	*31.0*	<2.0
GMW-06	06/30/04	3.3	<2
	08/01/04	4.2	N/A
	10/24/07	3.5	<2.0
	01/16/08	3.3	<.002
	04/23/08	5.2	<2.0
GMW-07	06/30/04	0.8	<2
	08/01/04	1.7	N/A
	10/24/07	2.3	<2.0
	01/16/08	*13.0*	<.002
	04/23/08	3.1	<2.0
GMW-08	06/30/04	0.4	<2
	08/01/04	1.4	N/A
	10/24/07	**489.0**	270
	01/16/08	8.6	<.002
	04/23/08	**101.0**	20
GMW-09	06/30/04	1.3	<2
	08/01/04	1.5	N/A
	10/24/07	2.8	<2.0
	01/16/08	9.3	<.002
	04/23/08	4.2	<2.0

Table #8
Geoprobe Monitoring Wells
GROUNDWATER ANALYTICAL RESULTS
Total Chromium and Hexavalent Chromium
Appleton Wire Former Albany International Chrome Plant
Appleton, Wisconsin

GMW-10	06/30/04	0.5	<2
	08/01/04	0.6	N/A
	10/24/07	*11.0*	<2.0
	01/16/08	0.5	<.002
	04/23/08	2.6	<2.0
GMW-11	06/30/04	1.1	<2
	08/01/04	1.9	N/A
	10/24/07	3.6	<2.0
	01/16/08	5.6	<.002
	04/23/08	4.1	<2.0
Enforcement Standard, Chapter NR140		**100**	********
Preventive Action Limit, Chpater NR 140		*10*	****

EXPLANATION:
**** = Hexavalent Chromium does not have a Sstate Groundwater Quality Standard
N/A = Not Analyzed
ug/l = Microgram / Liter (ppb)
100 = Exceeds Chapter NR 140 Enforcement Standards (ES)
10 = Exceeds Chapter NR 140 Preventive Action Limit (PAL)

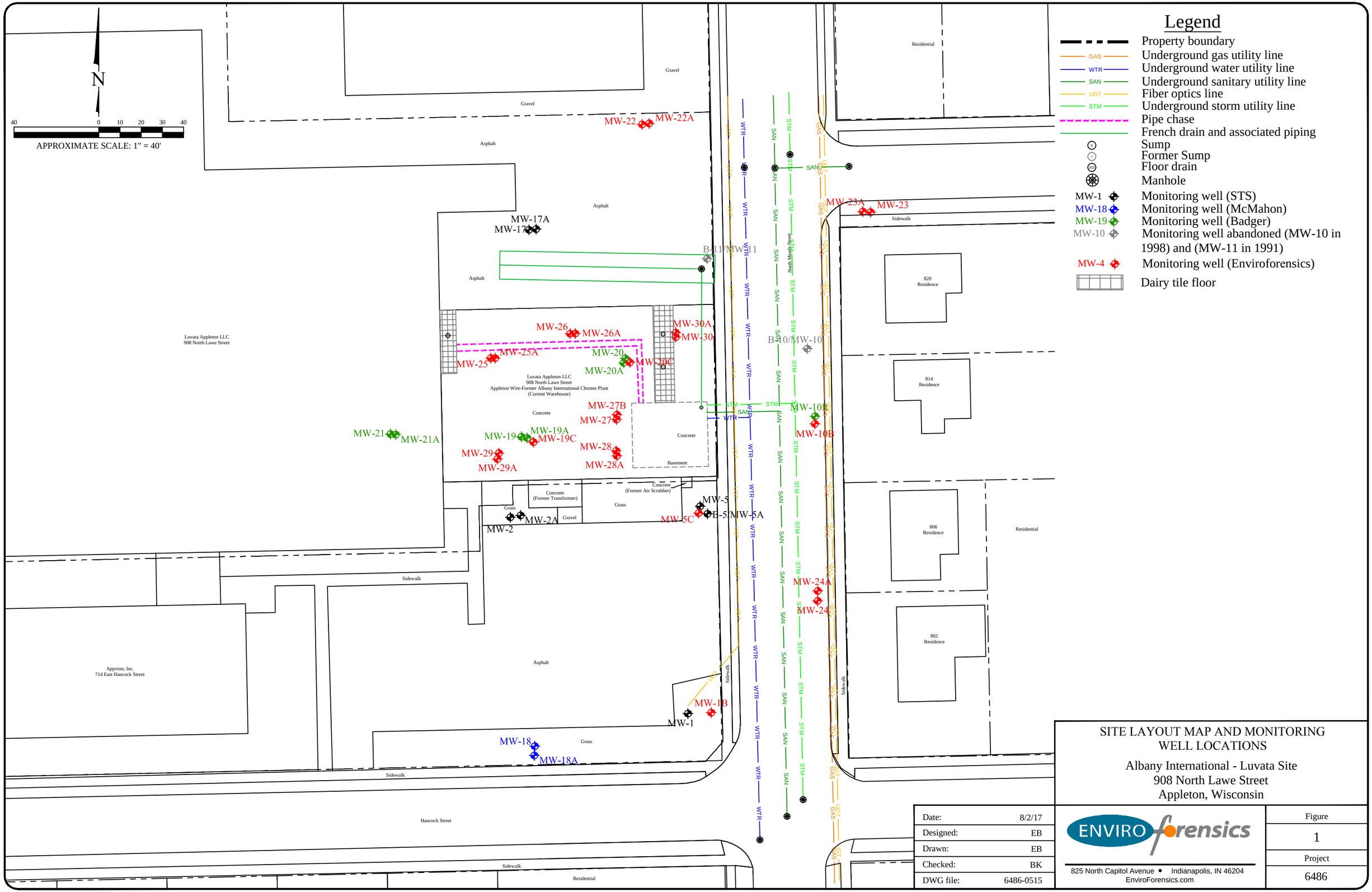
Table #9

Groundwater Analytical Results-Detectable VOC's
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	1,1 Dichloroethane ug/l	cis-1,2-Dichloroethene ug/l	Tetrachloroethane ug/l	1,1,1 Trichloroethane ug/l	Trichloroethene ug/l	trans-1,2-Dichloroethane ug/l
MW-10R	4/5/2017	ND	ND	ND	ND	ND	ND
MW-19	04/05/17	0.26*	3.1	**8.7**	2.5	*3.3*	ND
MW-20	04/05/17	ND	0.31*	ND	ND	ND	ND
Manhole	04/05/17	ND	*21.4*	*0.79**	ND	*3.3*	0.58*
Sump	04/05/17	ND	1	ND	ND	ND	ND
Preventive Action Limit		*85*	*7*	*0.5*	*40*	*0.5*	*20*
Enforcement Standard		**850**	**70**	**5**	**200**	**5**	**100**

ND - Not detected at or above the Limit of Detection.
* - Estimated concentration at or above the Limit of Detection and below the Limit of Quantitation
ug/l - microgram per liter
Bolded values exceed the Chapter NR 140 Enforcement Standard (ES)
Italicized values exceed the Chapter NR 140 Preventive Action Limit (PAL)

FIGURES



SITE LAYOUT MAP AND MONITORING WELL LOCATIONS

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

Date:	8/2/17
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6486-0515

ENVIRO forensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 1

Project 6486

N

40 0 10 20 30 40

APPROXIMATE SCALE: 1" = 40'

Legend

- Property boundary
- GAS — Underground gas utility line
- WTR — Underground water utility line
- SAN — Underground sanitary utility line
- UGT — Fiber optics line
- STM — Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Former Sump
- FD — Floor drain
- Manhole
- MW-1 — Monitoring well (STS)
- MW-18 — Monitoring well (McMahon)
- MW-19 — Monitoring well (Badger)
- MW-10 — Monitoring well abandoned (MW-10 in 1998) and (MW-11 in 1991)
- MW-4 — Monitoring well (Enviroforensics)
- Dairy tile floor
- 234 — Total Chromium concentration in groundwater µg/L
- Approxiamte extent of Chromium impacts in groundwater exceeding the ES of >100 µg/L

Note:
Units in micrograms per liter (µg/L)

Gravel
Asphalt
Residential
Luvata Appleton LLC
908 North Lawe Street
Appleton Wire-Former Albany International Chrome Plant
(Current Warehouse)
Concrete
Concrete (Former Transformer)
Concrete (Former Air Scrubber)
Basement
Grass
Gravel
Sidewalk
Appvion, Inc.
714 East Hancock Street
Hancock Street
820 Residence
814 Residence
806 Residence
802 Residence

MW-22 MW-22A
44.2 MW-17A
MW-17 <2.5
B-11/MW-11
1,720
MW-26 MW-26A
MW-30A MW-30
B-10/MW-10
MW-25 MW-25A
MW-20 262,000 MW-20C
MW-20A 23.1
MW-27B MW-27
11,400
<2.5 MW-10A
MW-10B
MW-21 <2.5 MW-21A <2.5
MW-19 24,700 MW-19A MW-19C
MW-28 MW-28A
MW-29 MW-29A
4.2
MW-23A MW-23
234 MW-5
B-5/MW-5A <2.5
MW-5C
MW-2A <2.5
MW-2 <2.5
MW-24A MW-24
MW-1B
MW-1 <2.5
<2.5 MW-18
14.8 MW-18A

Date:	8/2/17
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6486-0515

TOTAL CHROMIUM CONCENTRATIONS IN GROUNDWATER APRIL 5, 2017

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

ENVIROforensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 2

Project 6486

N

40 0 10 20 30 40

APPROXIMATE SCALE: 1" = 40'

Legend

- Property boundary
- GAS — Underground gas utility line
- WTR — Underground water utility line
- SAN — Underground sanitary utility line
- UGT — Fiber optics line
- STM — Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Former Sump
- Floor drain
- Manhole
- MW-1 — Monitoring well (STS)
- MW-18 — Monitoring well (McMahon)
- MW-19 — Monitoring well (Badger)
- MW-10 — Monitoring well abandoned (MW-10 in 1998) and (MW-11 in 1991)
- MW-4 — Monitoring well (Enviroforensics)
- Dairy tile floor
- 761 — Groundwater elevation contour
- 758.64 — Groundwater elevation (feet above mean sea level)

Gravel
Asphalt
Residential
Luvata Appleton LLC
908 North Lawe Street
Appleton Wire-Former Albany International Chrome Plant
(Current Warehouse)
Concrete
Concrete
(Former Air Scrubber)
Concrete
(Former Transformer)
Grass
Gravel
Basement
Sidewalk
Appvion, Inc.
714 East Hancock Street
Hancock Street
820 Residence
814 Residence
806 Residence
802 Residence

MW-22 MW-22A
MW-17A
MW-17
762.91
PZ-1/MW-11
MW-23A
MW-23
MW-26
MW-26A
MW-30A
MW-30
PZ-2/MW-10
MW-25A
MW-25
MW-20
760.91
MW-20C
MW-20A
MW-27B
MW-27
761.47
MW-10R
MW-10B
MW-21
763.64
MW-21A
MW-19
763.69
MW-19A
MW-19C
MW-28
MW-29
MW-29A
MW-28A
MW-5
760.53
MW-5C
PZ-5/MW-5A
MW-2A
MW-2
762.21
MW-24A
MW-24
MW-13
759
MW-1
758.64
MW-18
761.49
MW-18A

GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 10, 2017

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

Date:	8/2/17
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6486-0516

ENVIROforensics
825 North Capitol Avenue • Indianapolis, IN 46204
EnviroForensics.com

Figure 3

Project 6486

N

40 0 10 20 30 40

APPROXIMATE SCALE: 1" = 40'

Legend

- Property boundary
- GAS — Underground gas utility line
- WTR — Underground water utility line
- SAN — Underground sanitary utility line
- UGT — Fiber optics line
- STM — Underground storm utility line
- Pipe chase
- French drain and associated piping
- Sump
- Former Sump
- Floor drain
- Manhole
- MW-1 — Monitoring well (STS)
- MW-18 — Monitoring well (McMahon)
- MW-19 — Monitoring well (Badger)
- MW-10 — Monitoring well abandoned (MW-10 in 1998) and (MW-11 in 1991)
- MW-4 — Monitoring well (Enviroforensics)
- Dairy tile floor
- 761 — Groundwater elevation contour
- 758.64 — Groundwater elevation (feet above mean sea level)

Gravel
Asphalt
Residential
Luvata Appleton LLC
908 North Lawe Street
Appleton Wire-Former Albany International Chrome Plant
(Current Warehouse)
Concrete
Basement
Concrete
(Former Transformer)
Concrete
(Former Air Scrubber)
Grass
Gravel
Sidewalk
820 Residence
814 Residence
806 Residence
802 Residence
Appvion, Inc.
714 East Hancock Street
Hancock Street
North Lawe Street

MW-22 MW-22A
MW-17A
MW-17
764.20
B-11/MW-11
MW-23A
MW-23
MW-26
MW-26A
MW-30A
MW-30
B-10/MW-10
MW-25A
MW-25
MW-20
763.29
MW-20A
MW-20B
MW-27B
MW-27
MW-19
765.13
MW-19A
MW-19C
MW-21
764.47
MW-21A
MW-28
MW-28A
MW-29
MW-29A
MW-10R
762.68
MW-10B
MW-5
762.82
MW-5C
B-5/MW-5A
MW-2A
MW-2
762.57
MW-24A
MW-24
MW-18B
MW-1
758.96
MW-18
762.15
MW-18A

765 764 763 762 761 760 759 758 757 756 755

Date:	8/2/17
Designed:	EB
Drawn:	EB
Checked:	BK
DWG file:	6486-0517

GROUNDWATER ELEVATION CONTOUR MAP
APRIL 5, 2017

Albany International - Luvata Site
908 North Lawe Street
Appleton, Wisconsin

ENVIROforensics
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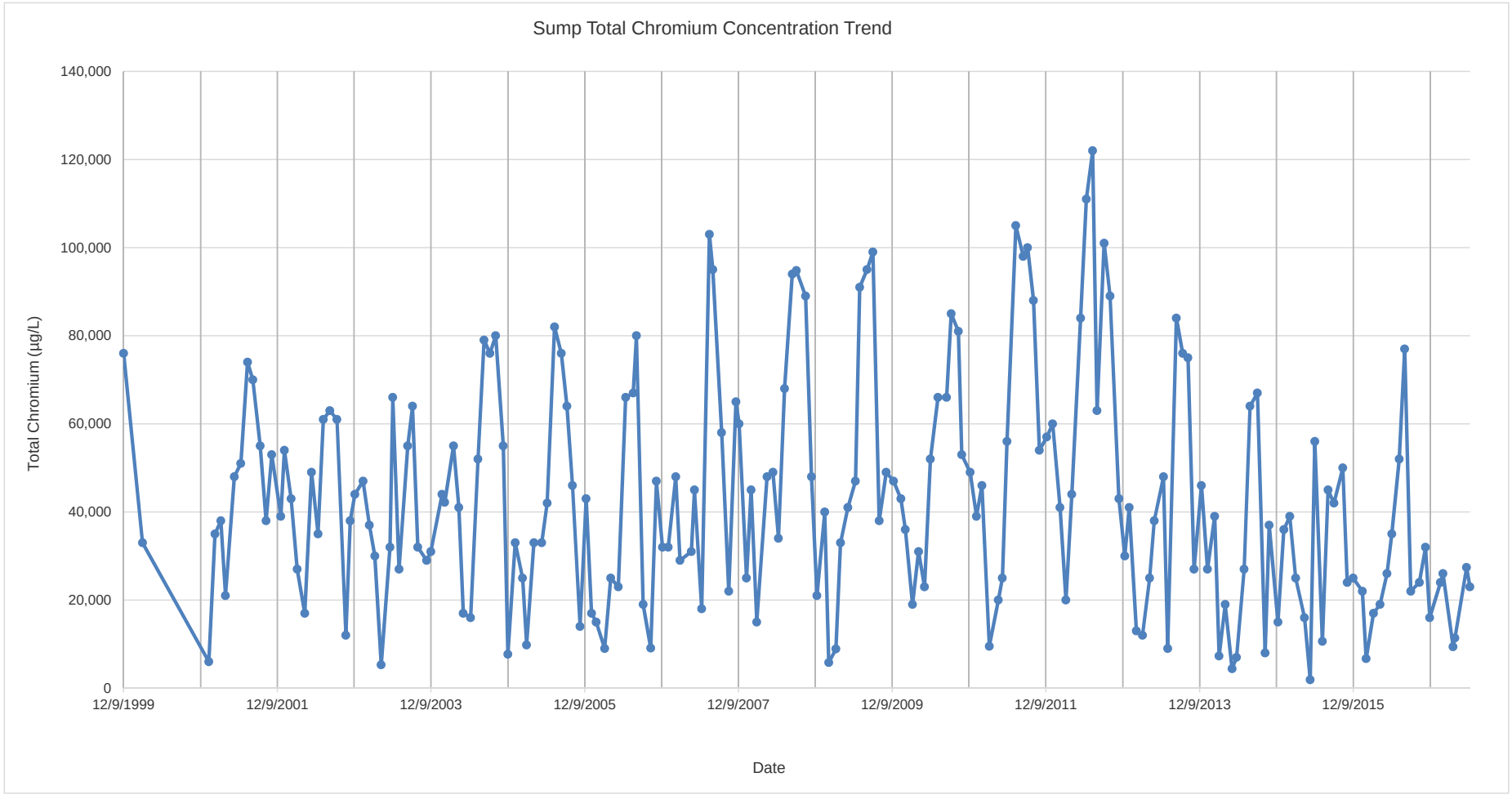
EnviroForensics.com

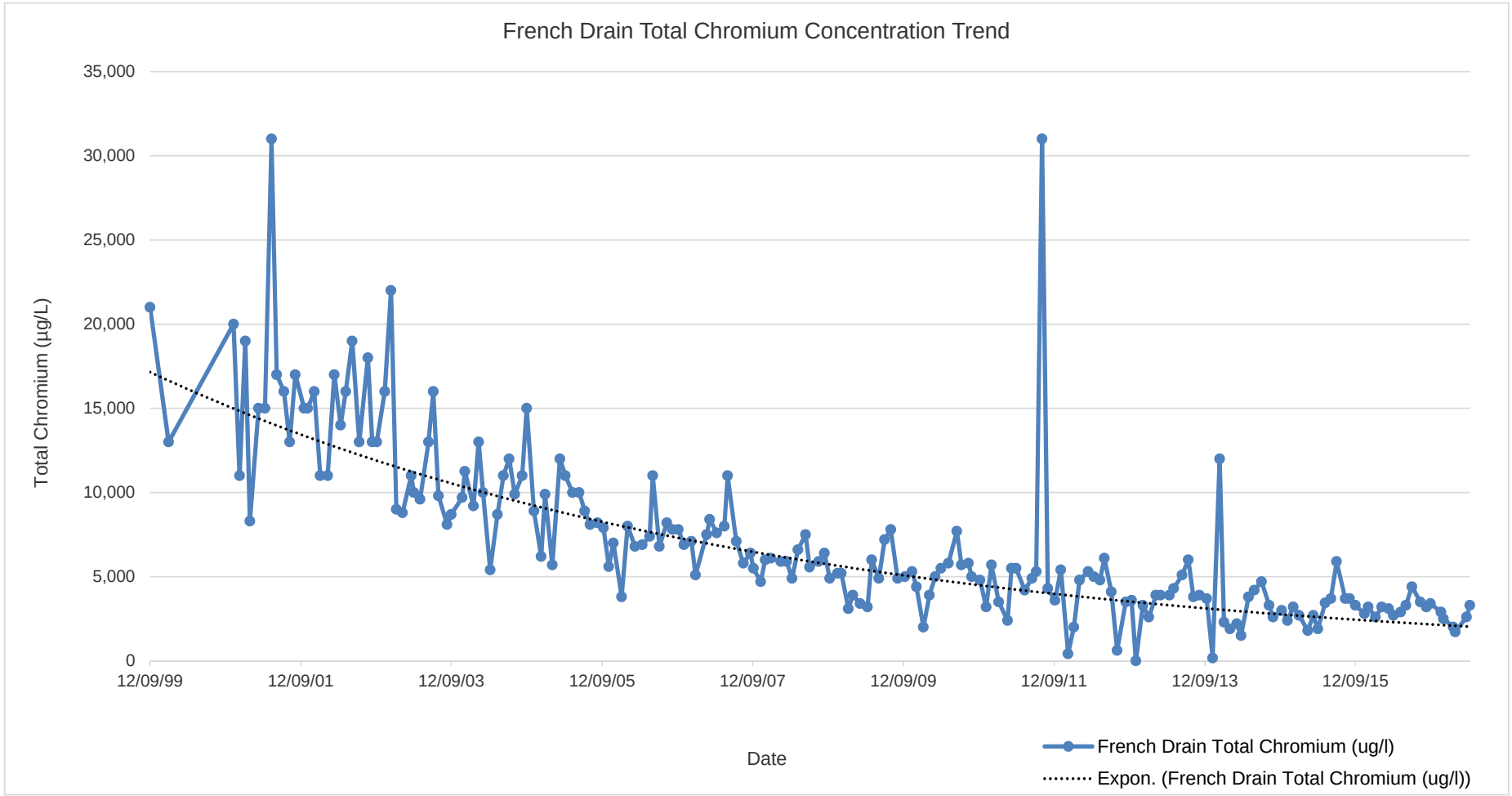
Figure 4

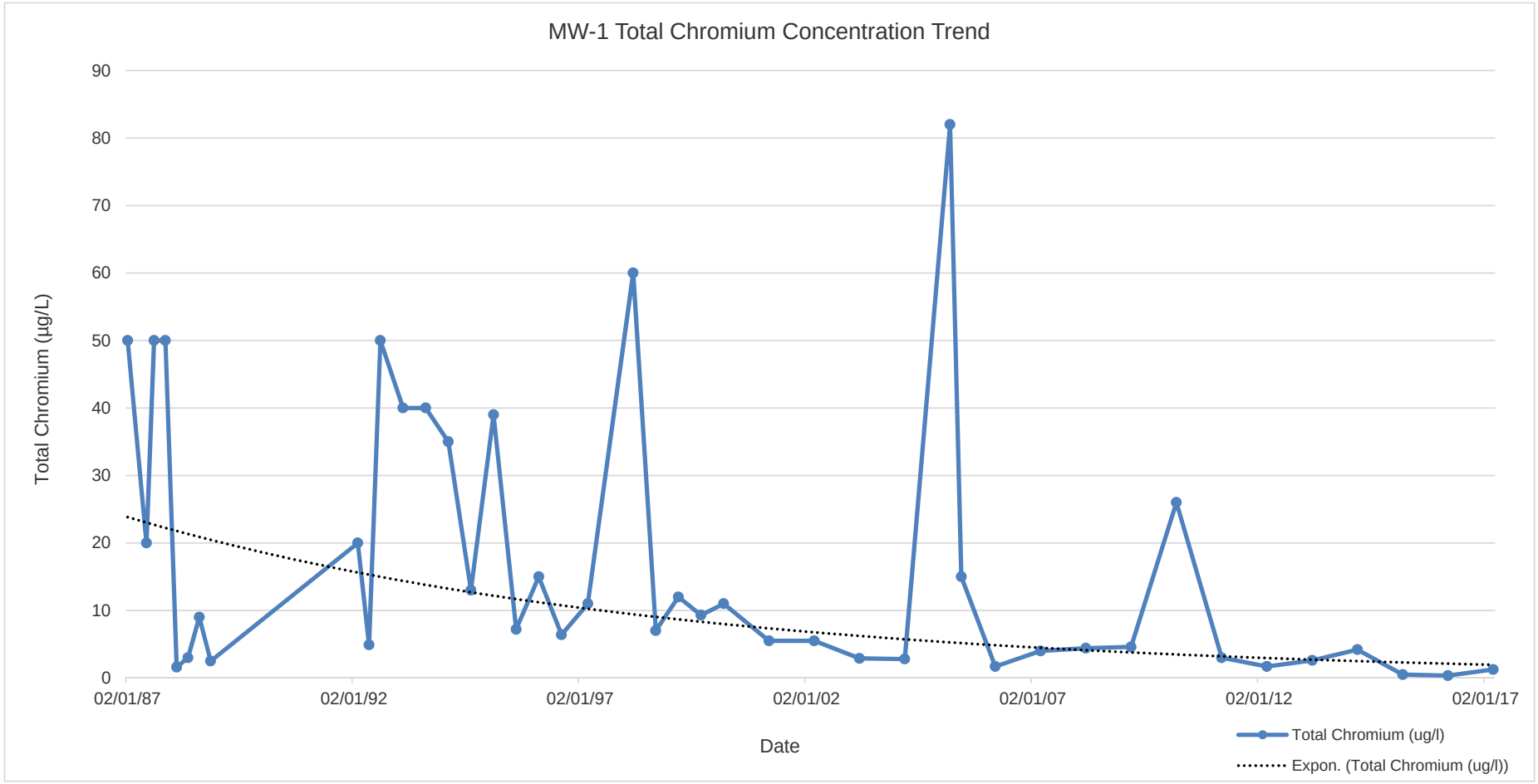
Project 6486

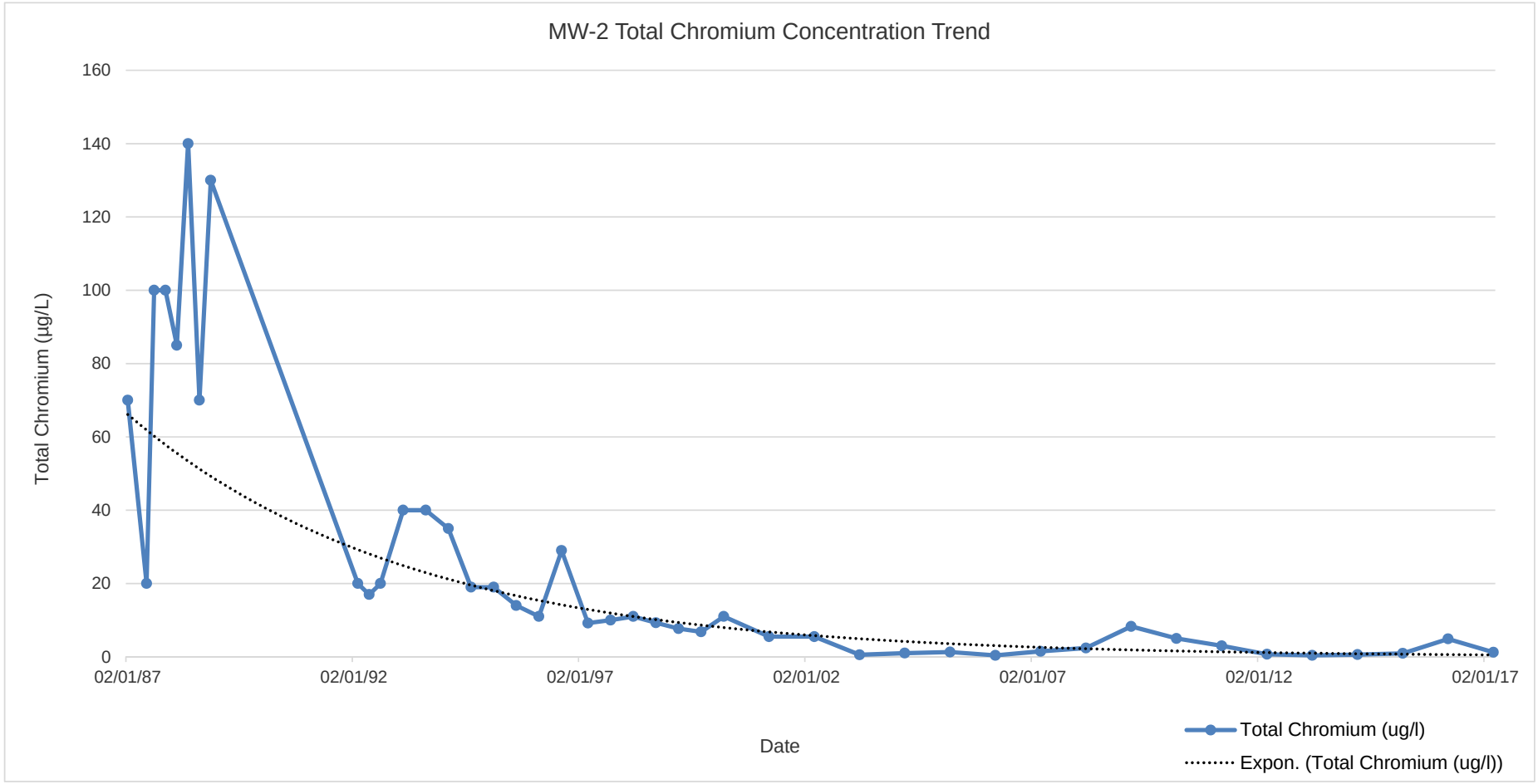
APPENDIX A

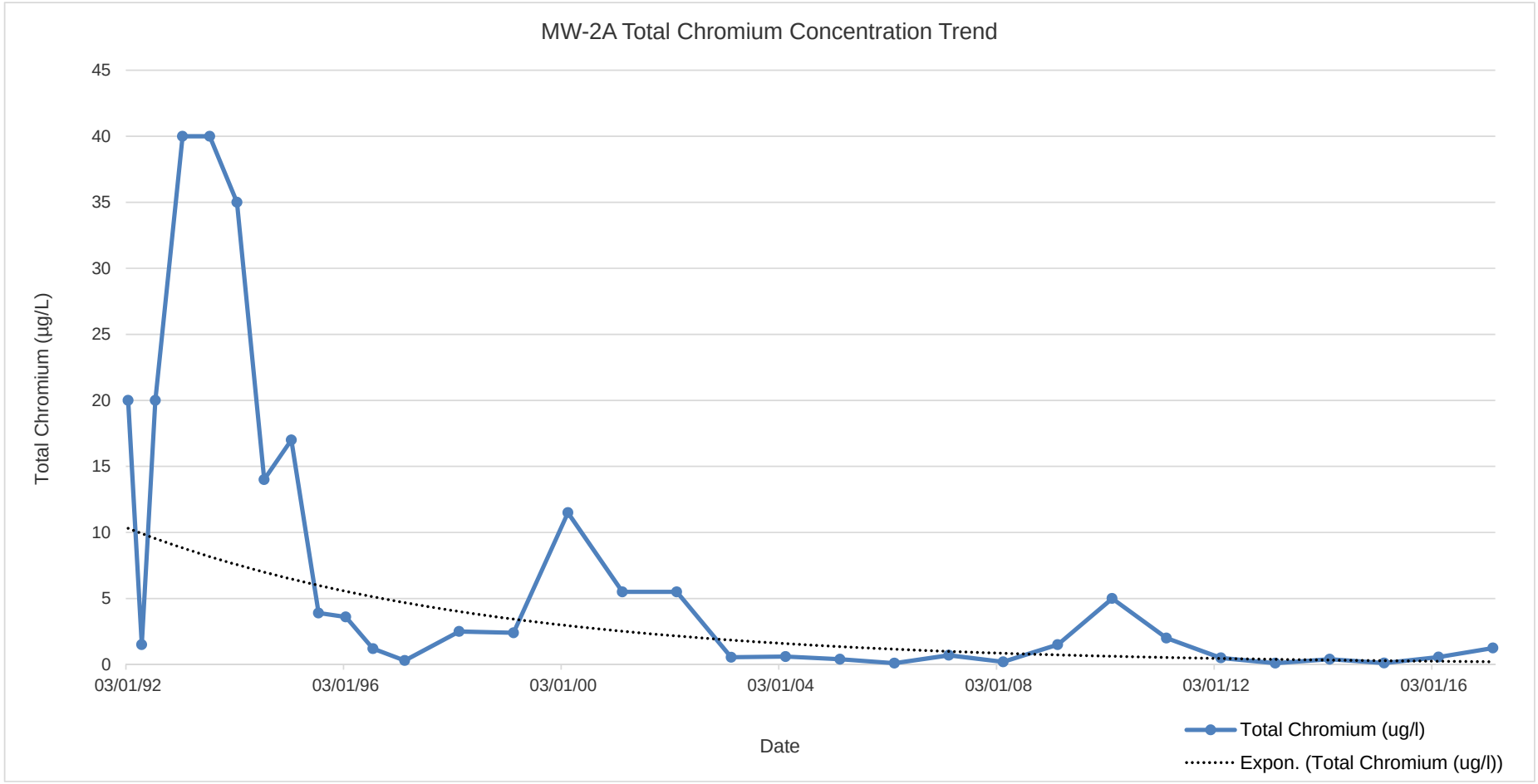
Concentration Versus Time Graphs – All Wells, Sump and French Drain

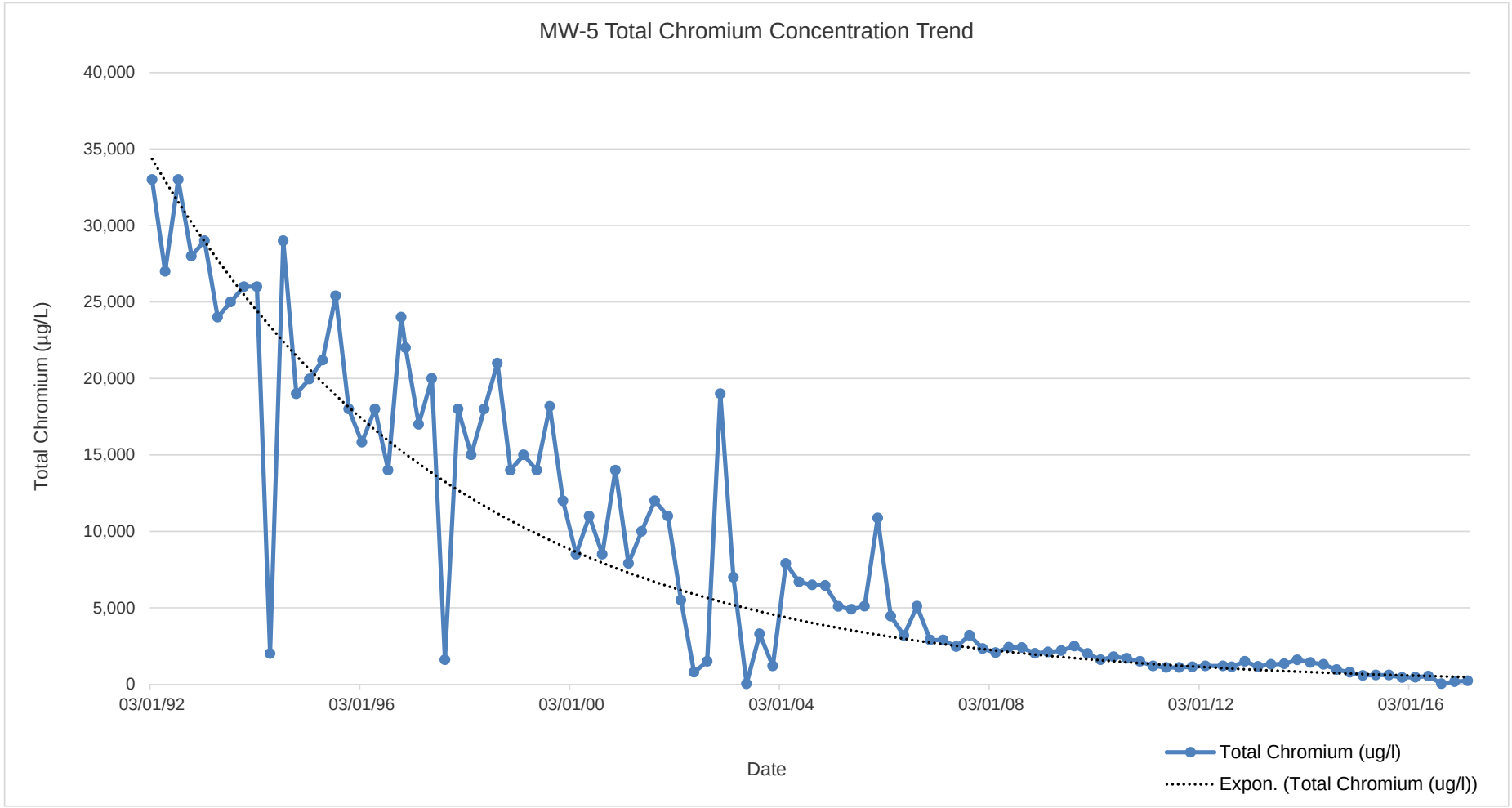

Sump Total Chromium Concentration Trend
Total Chromium (µg/L)
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
12/9/1999
12/9/2001
12/9/2003
12/9/2005
12/9/2007
12/9/2009
12/9/2011
12/9/2013
12/9/2015
Date

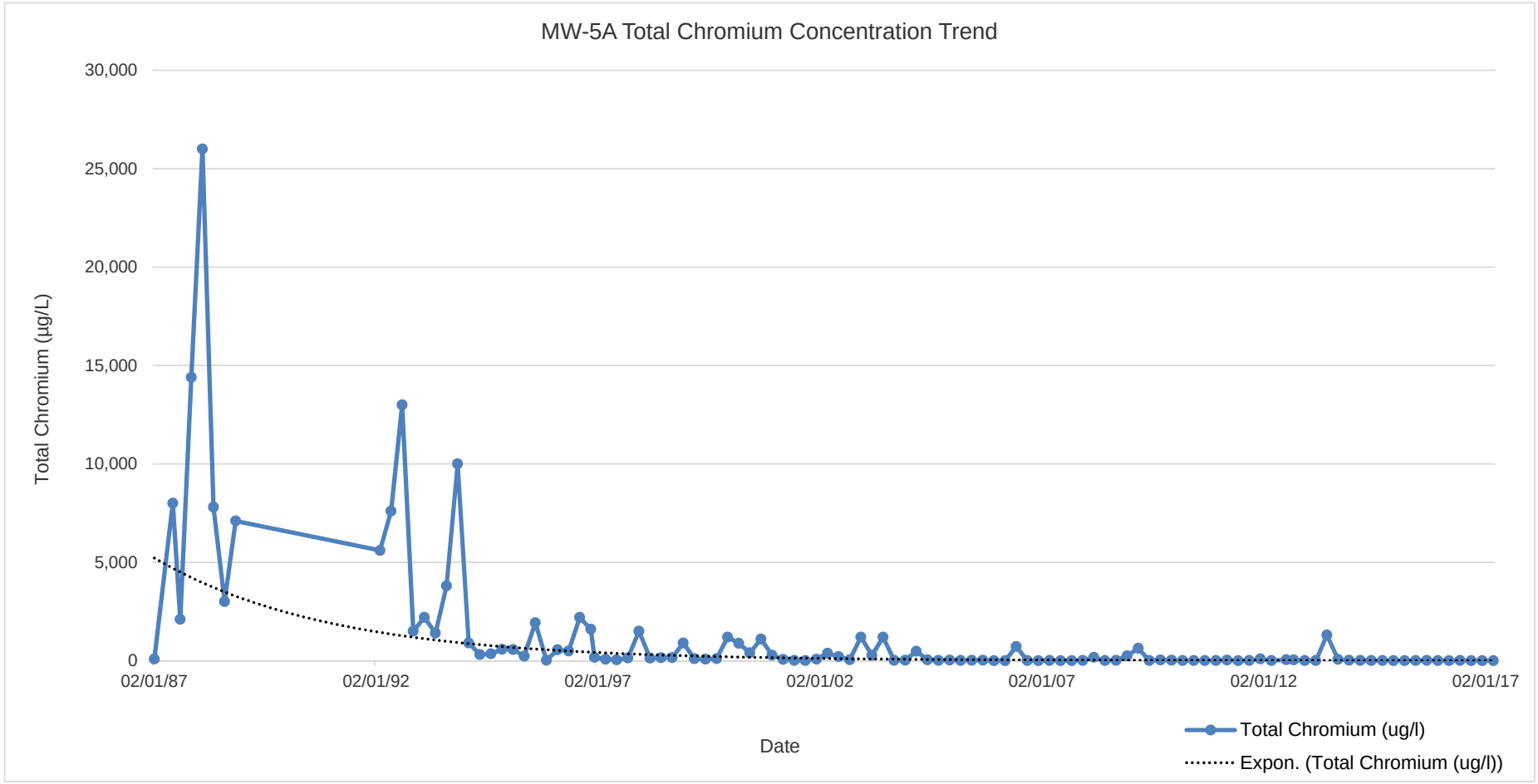

French Drain Total Chromium Concentration Trend
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Total Chromium (µg/L)
12/09/99
12/09/01
12/09/03
12/09/05
12/09/07
12/09/09
12/09/11
12/09/13
12/09/15
Date
French Drain Total Chromium (ug/l)
Expon. (French Drain Total Chromium (ug/l))

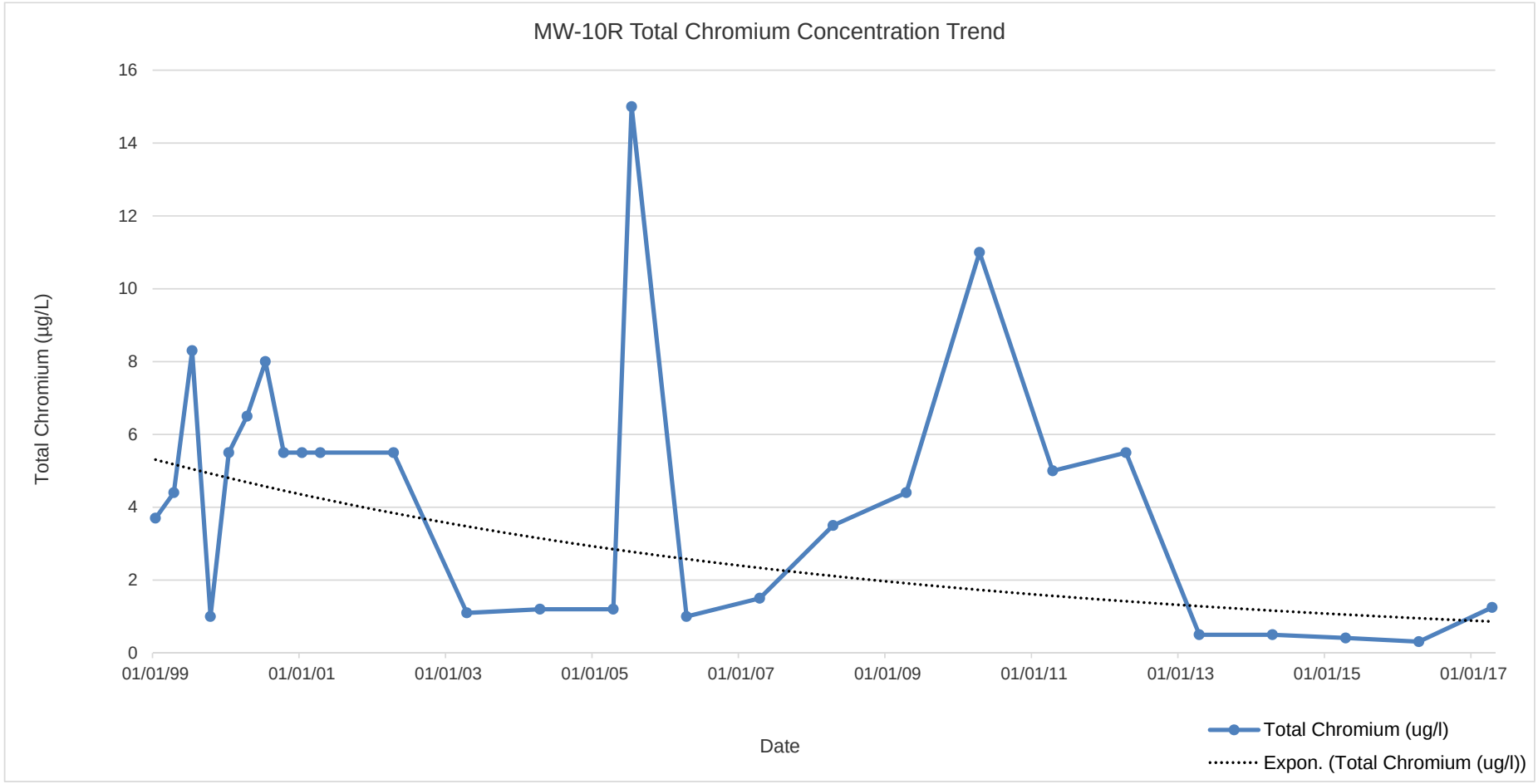

MW-1 Total Chromium Concentration Trend
Total Chromium (µg/L)
90
80
70
60
50
40
30
20
10
0
02/01/87
02/01/92
02/01/97
02/01/02
02/01/07
02/01/12
02/01/17
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

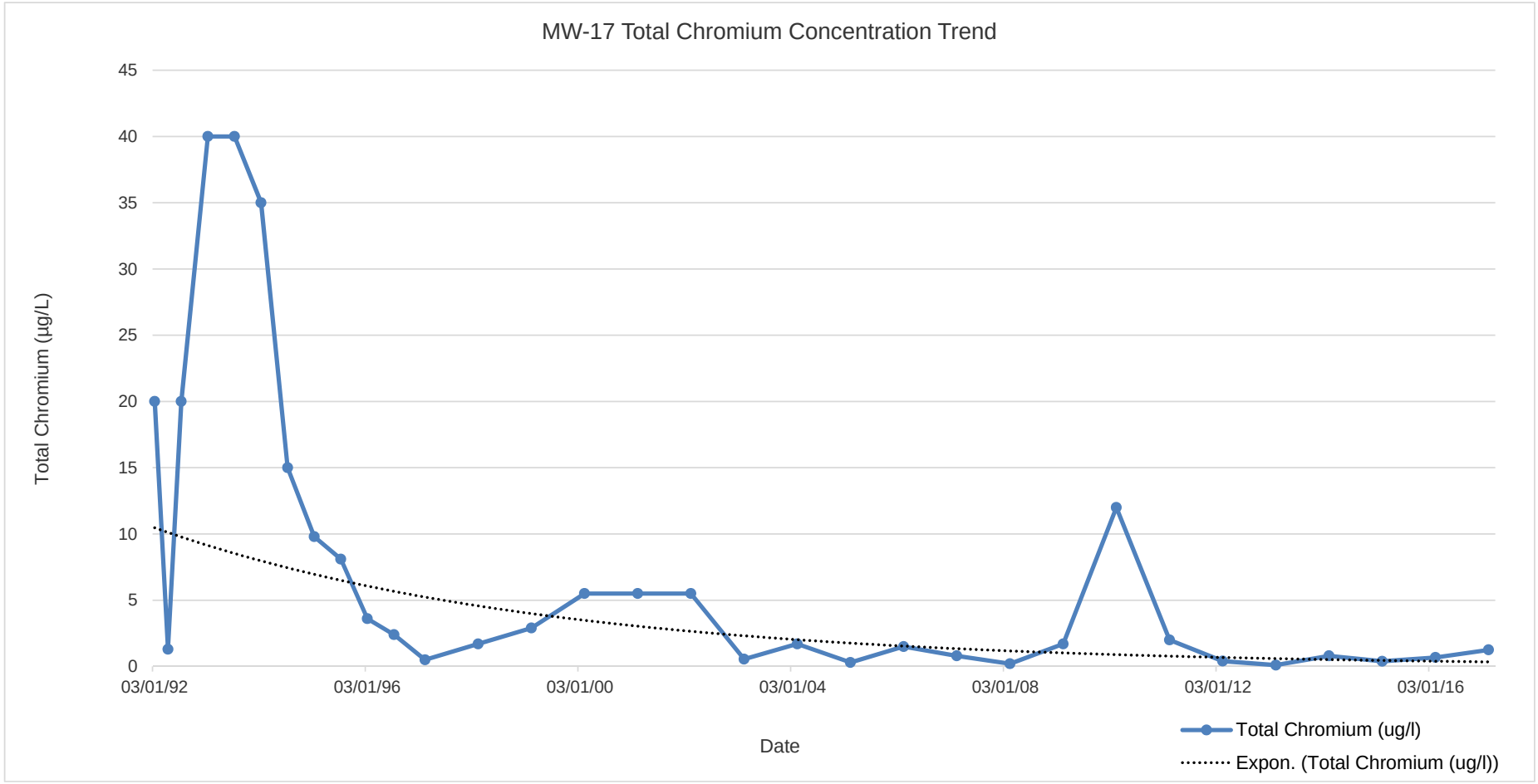

MW-2 Total Chromium Concentration Trend
160
140
120
100
80
60
40
20
0
Total Chromium (µg/L)
02/01/87
02/01/92
02/01/97
02/01/02
02/01/07
02/01/12
02/01/17
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

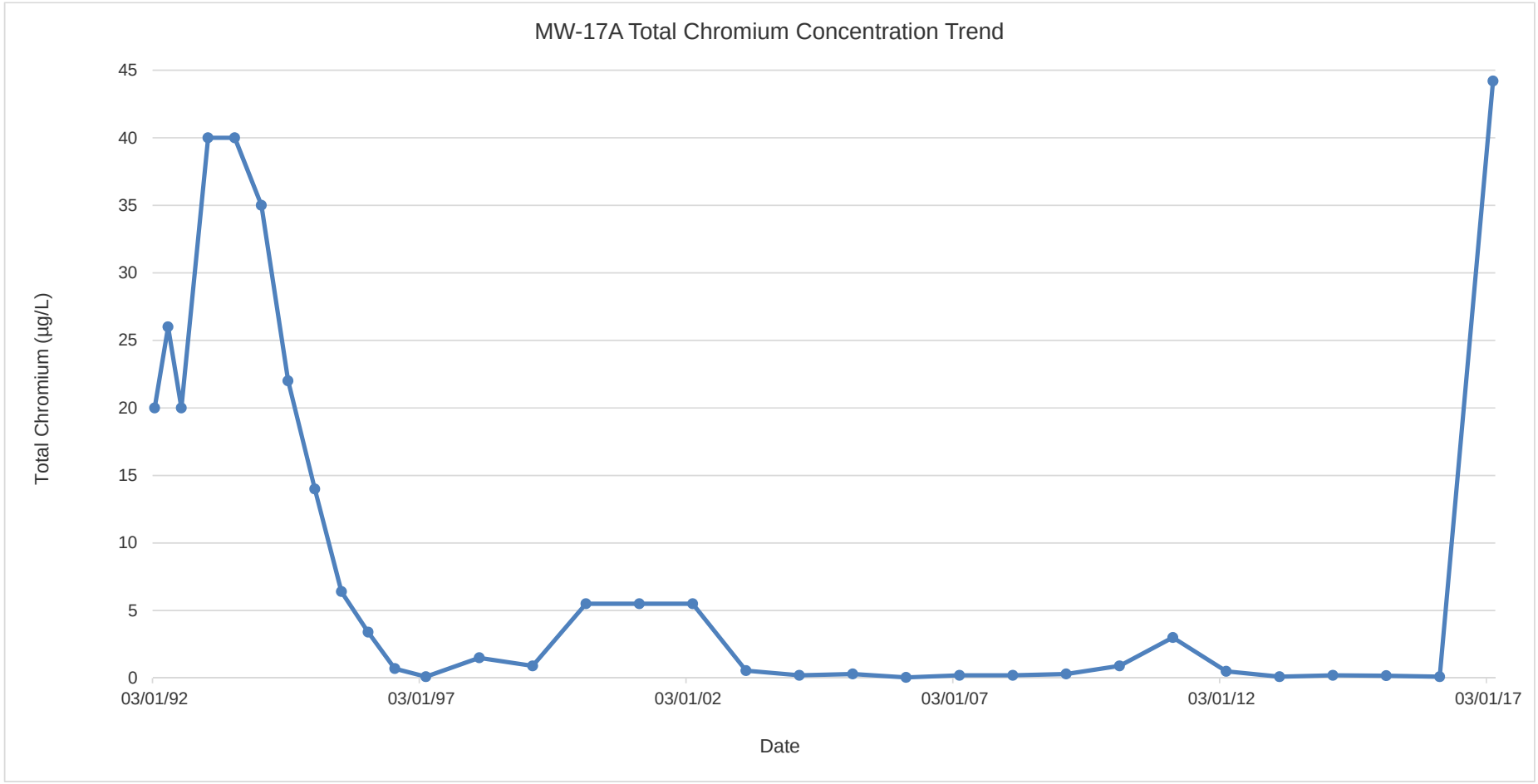

MW-2A Total Chromium Concentration Trend
Total Chromium (µg/L)
45
40
35
30
25
20
15
10
5
0
03/01/92
03/01/96
03/01/00
03/01/04
03/01/08
03/01/12
03/01/16
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

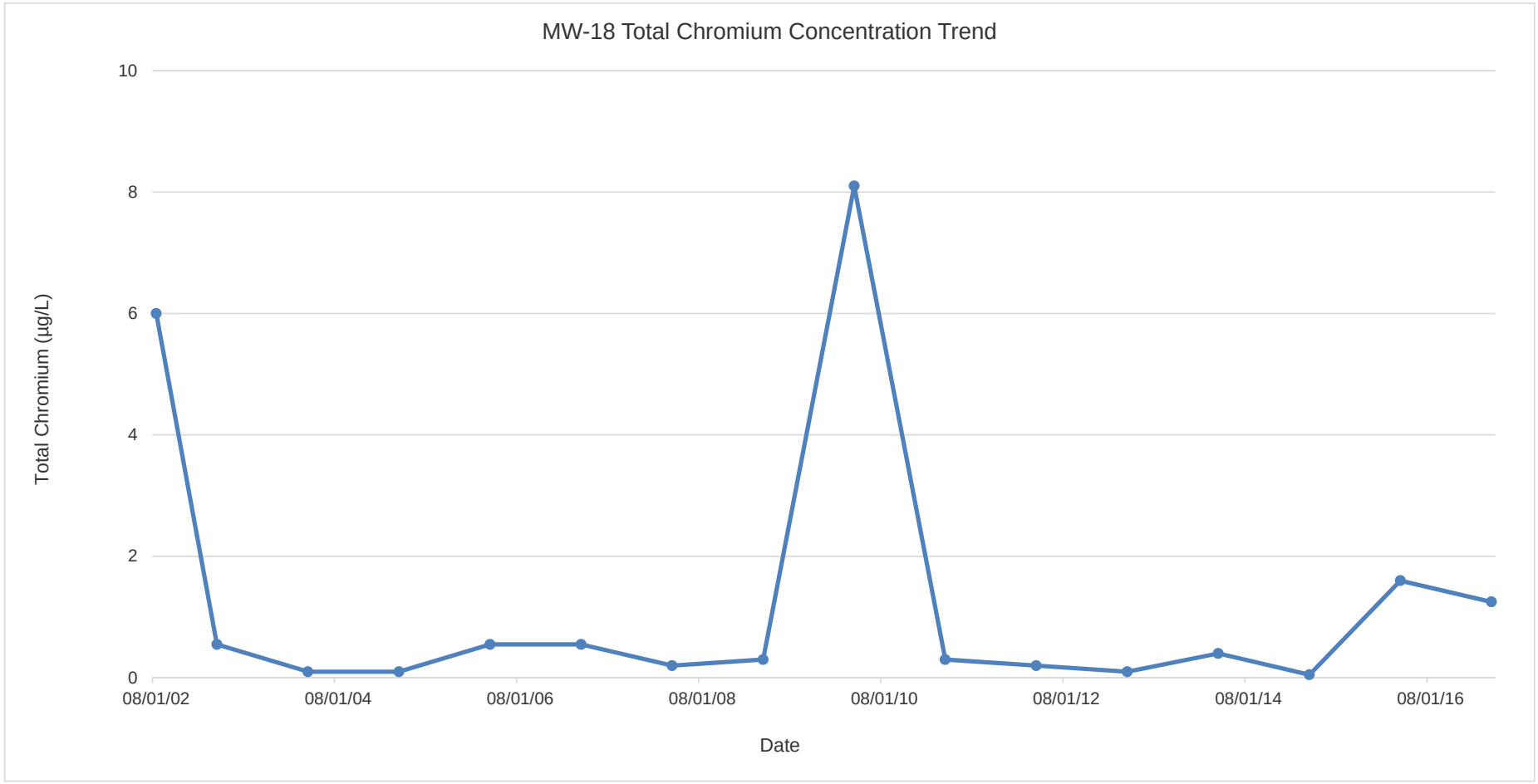

MW-5 Total Chromium Concentration Trend
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Total Chromium (µg/L)
03/01/92
03/01/96
03/01/00
03/01/04
03/01/08
03/01/12
03/01/16
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

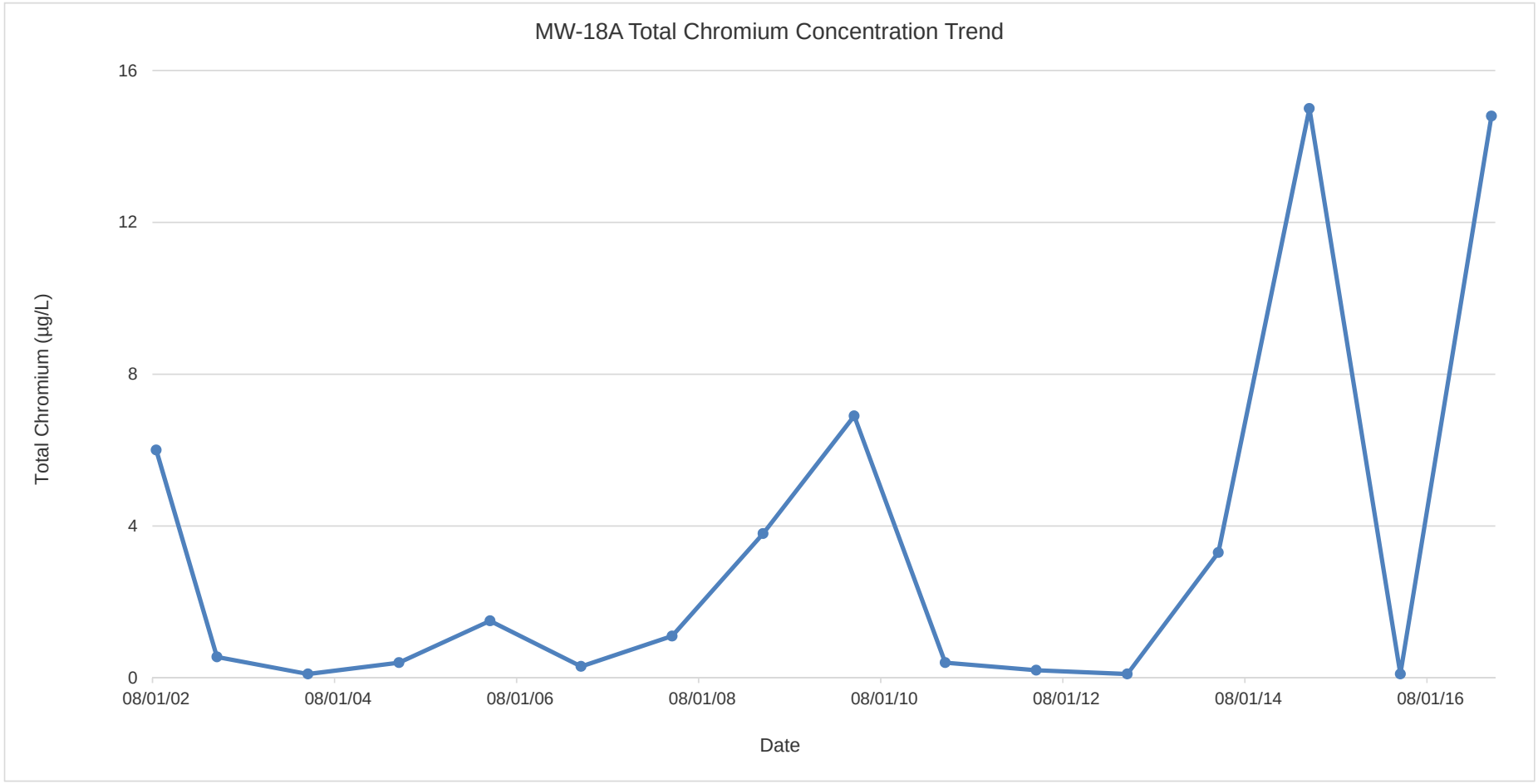

MW-5A Total Chromium Concentration Trend
30,000
25,000
20,000
15,000
10,000
5,000
0
Total Chromium (µg/L)
02/01/87
02/01/92
02/01/97
02/01/02
02/01/07
02/01/12
02/01/17
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

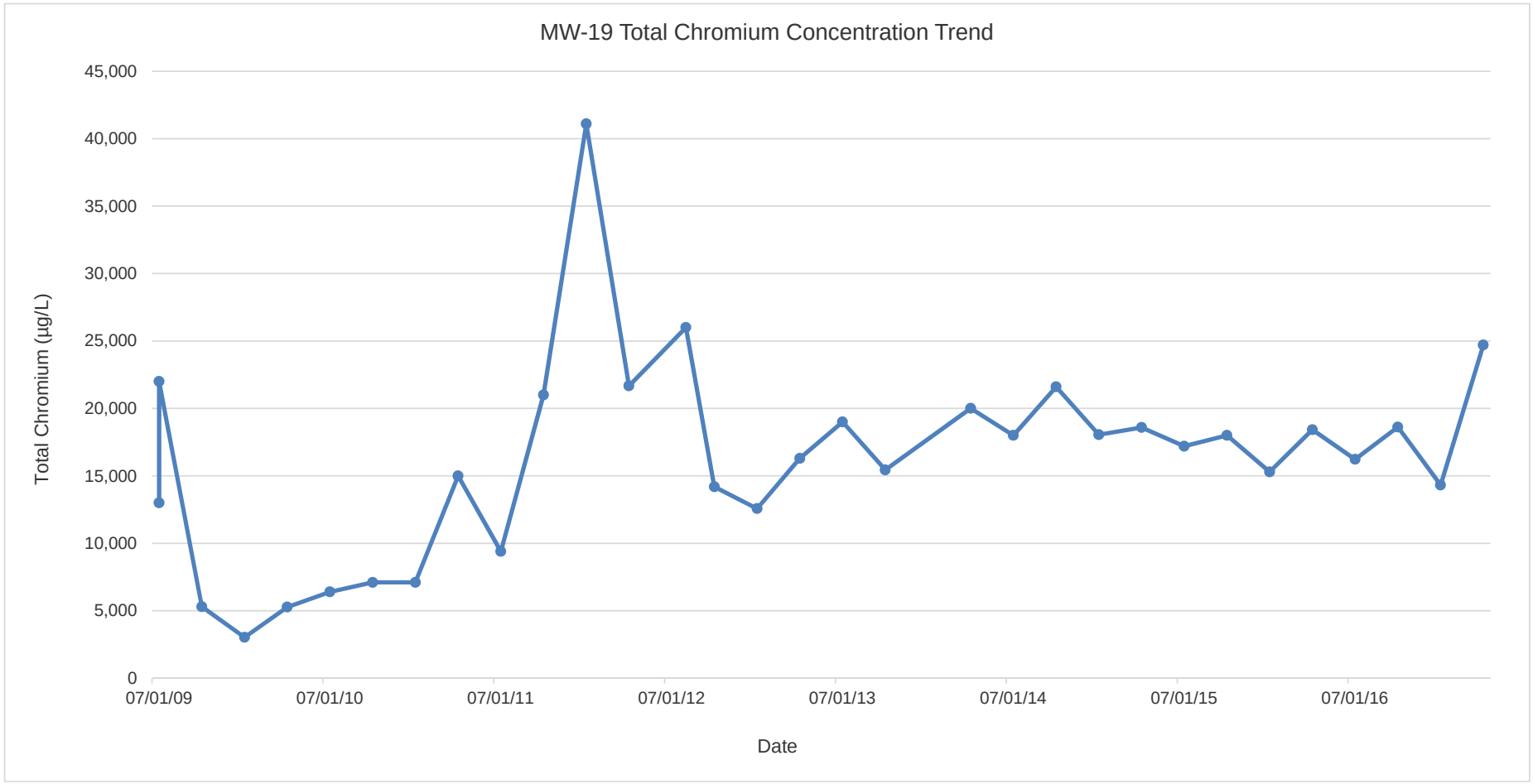

MW-10R Total Chromium Concentration Trend
Total Chromium (µg/L)
16
14
12
10
8
6
4
2
0
01/01/99
01/01/01
01/01/03
01/01/05
01/01/07
01/01/09
01/01/11
01/01/13
01/01/15
01/01/17
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

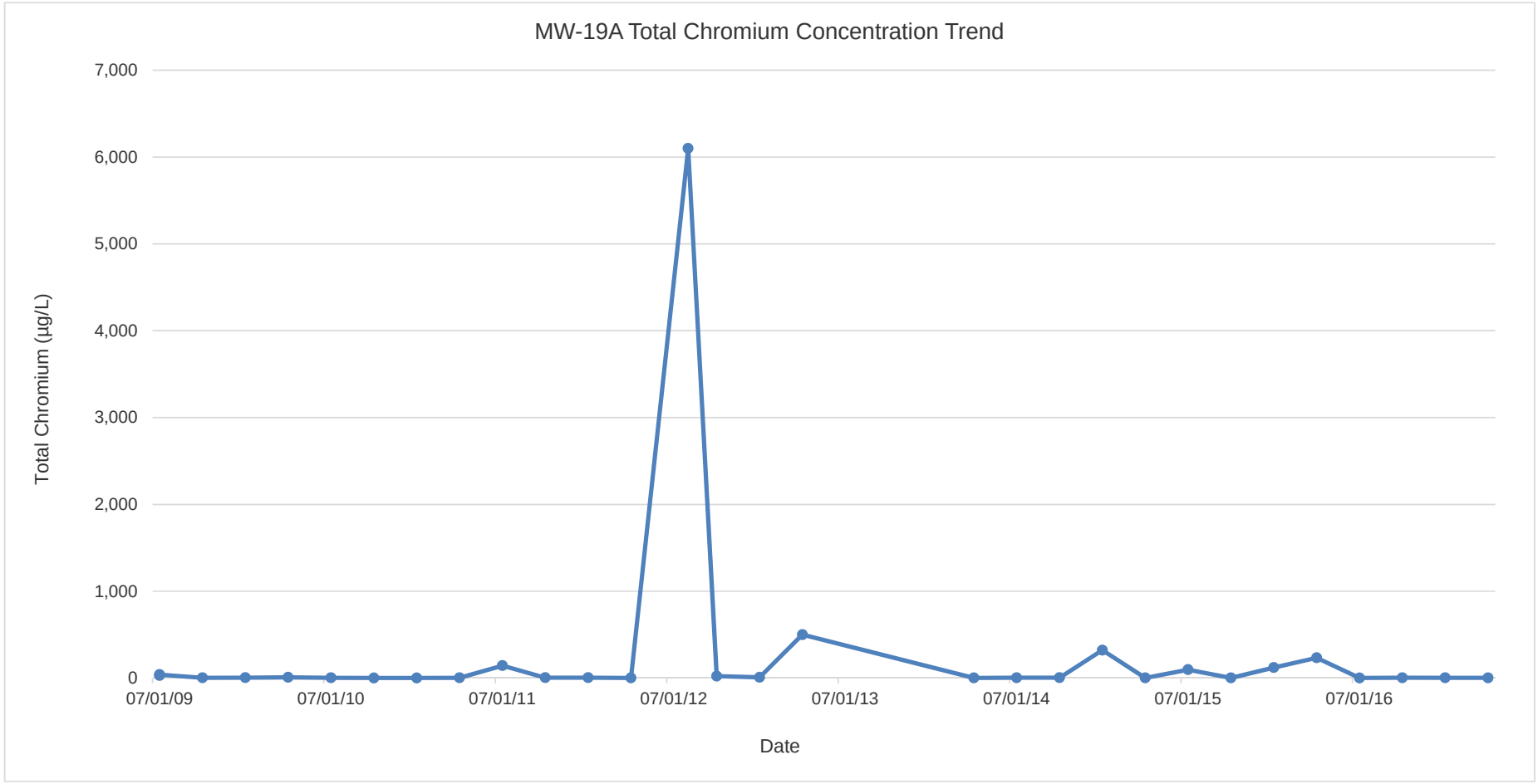

MW-17 Total Chromium Concentration Trend
Total Chromium (µg/L)
45
40
35
30
25
20
15
10
5
0
03/01/92
03/01/96
03/01/00
03/01/04
03/01/08
03/01/12
03/01/16
Date
Total Chromium (ug/l)
Expon. (Total Chromium (ug/l))

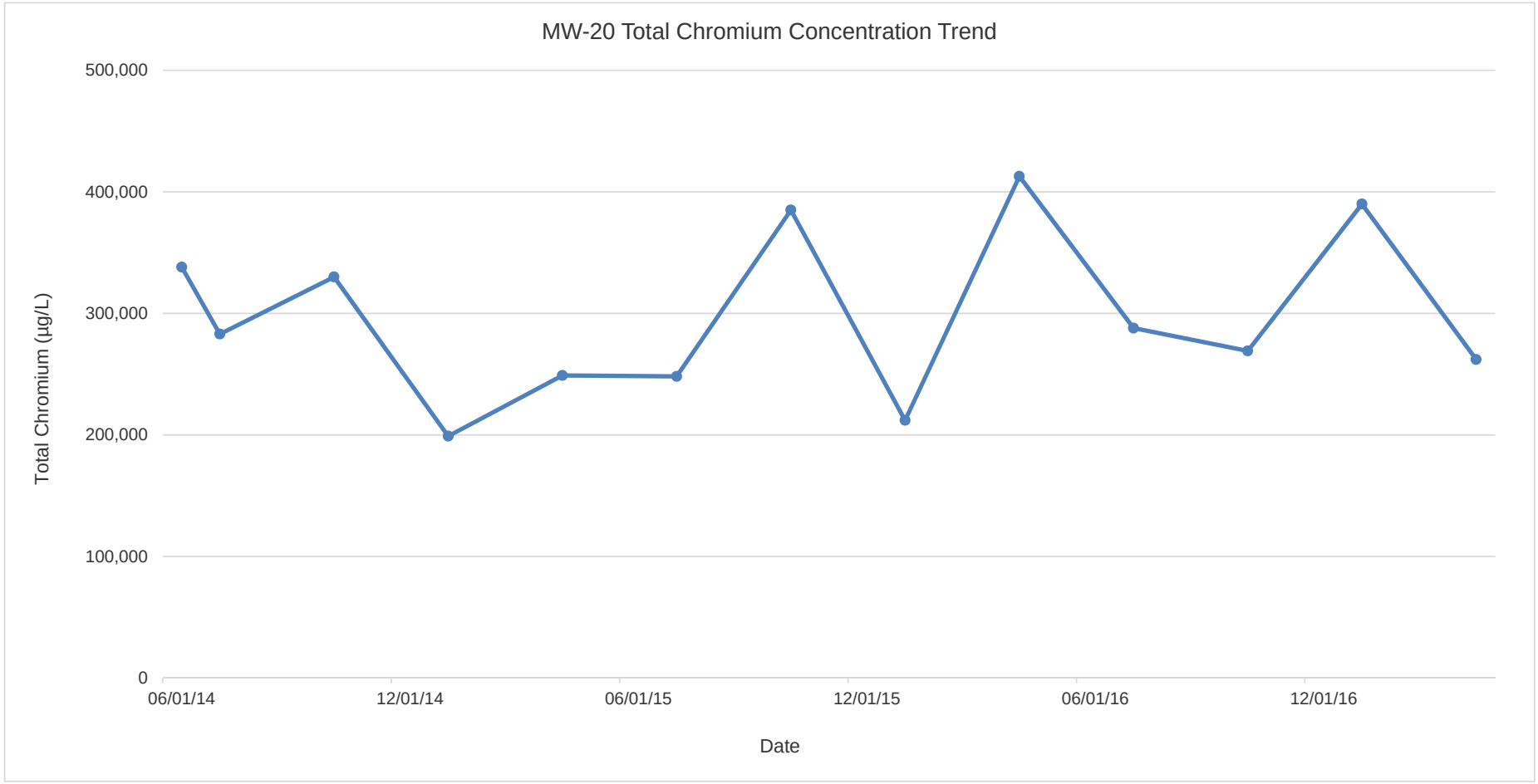

MW-17A Total Chromium Concentration Trend
Total Chromium (µg/L)
45
40
35
30
25
20
15
10
5
0
03/01/92
03/01/97
03/01/02
03/01/07
03/01/12
03/01/17
Date

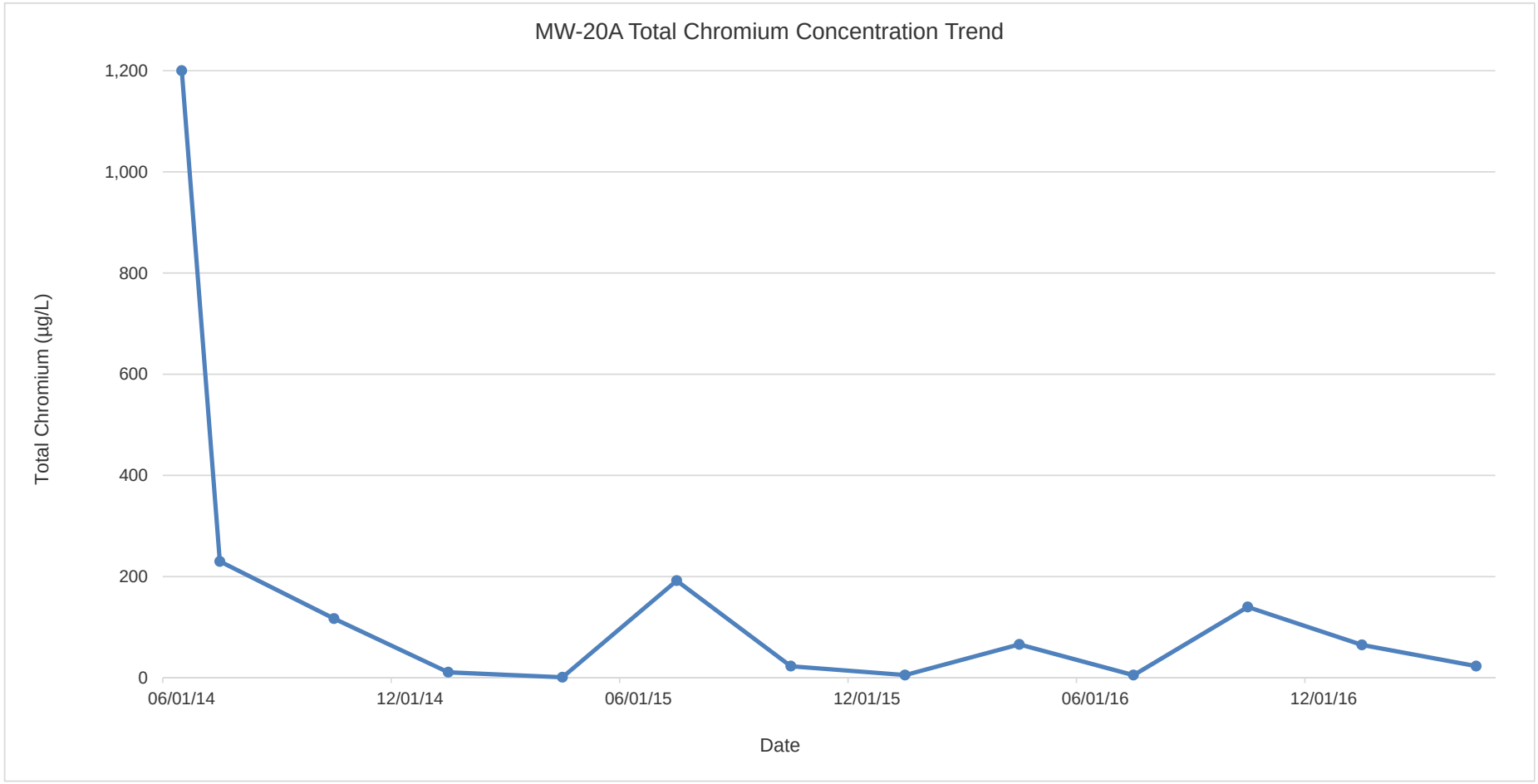

MW-18 Total Chromium Concentration Trend
Total Chromium (µg/L)
10
8
6
4
2
0
08/01/02
08/01/04
08/01/06
08/01/08
08/01/10
08/01/12
08/01/14
08/01/16
Date

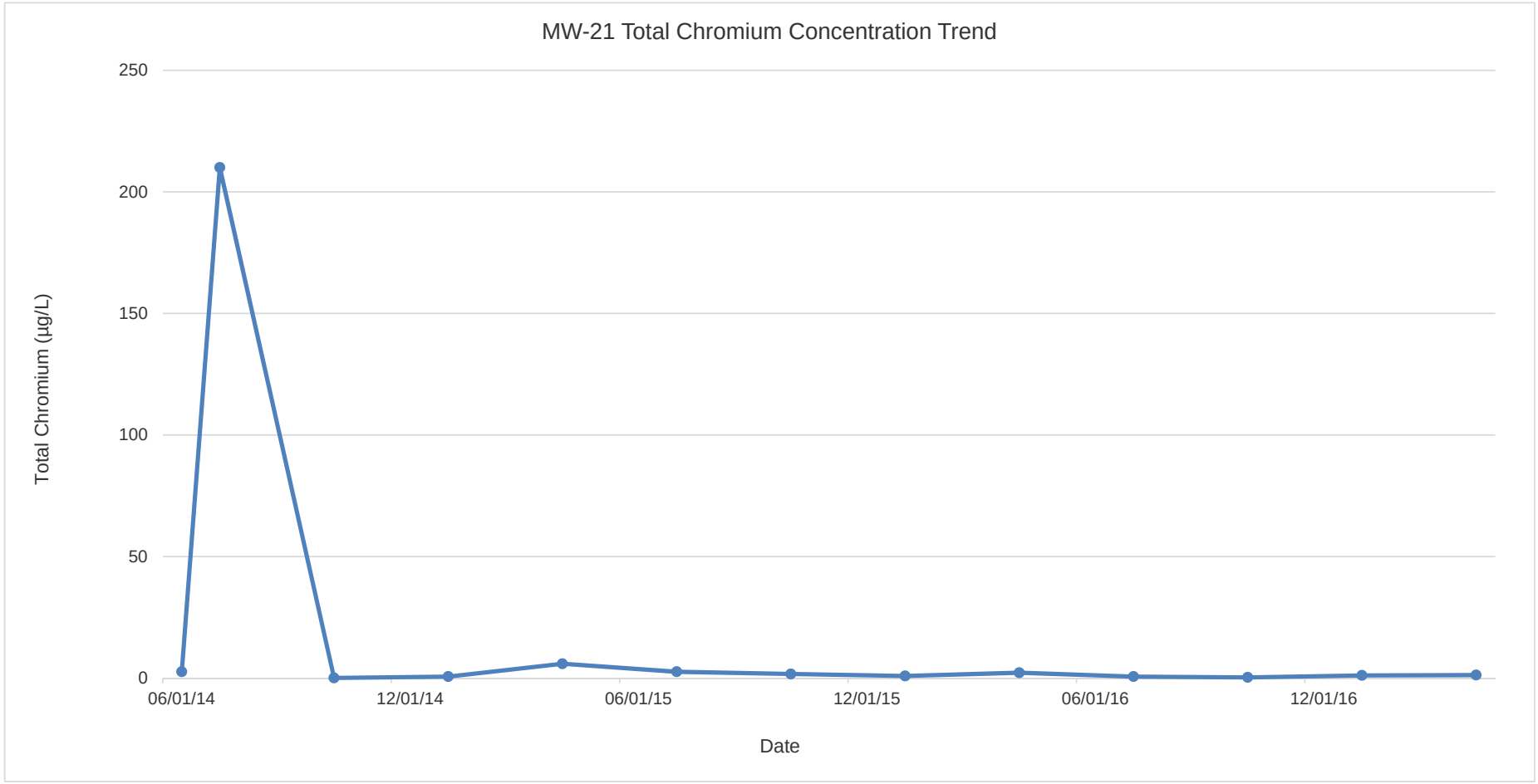

MW-18A Total Chromium Concentration Trend
Total Chromium (µg/L)
16
12
8
4
0
08/01/02
08/01/04
08/01/06
08/01/08
08/01/10
08/01/12
08/01/14
08/01/16
Date

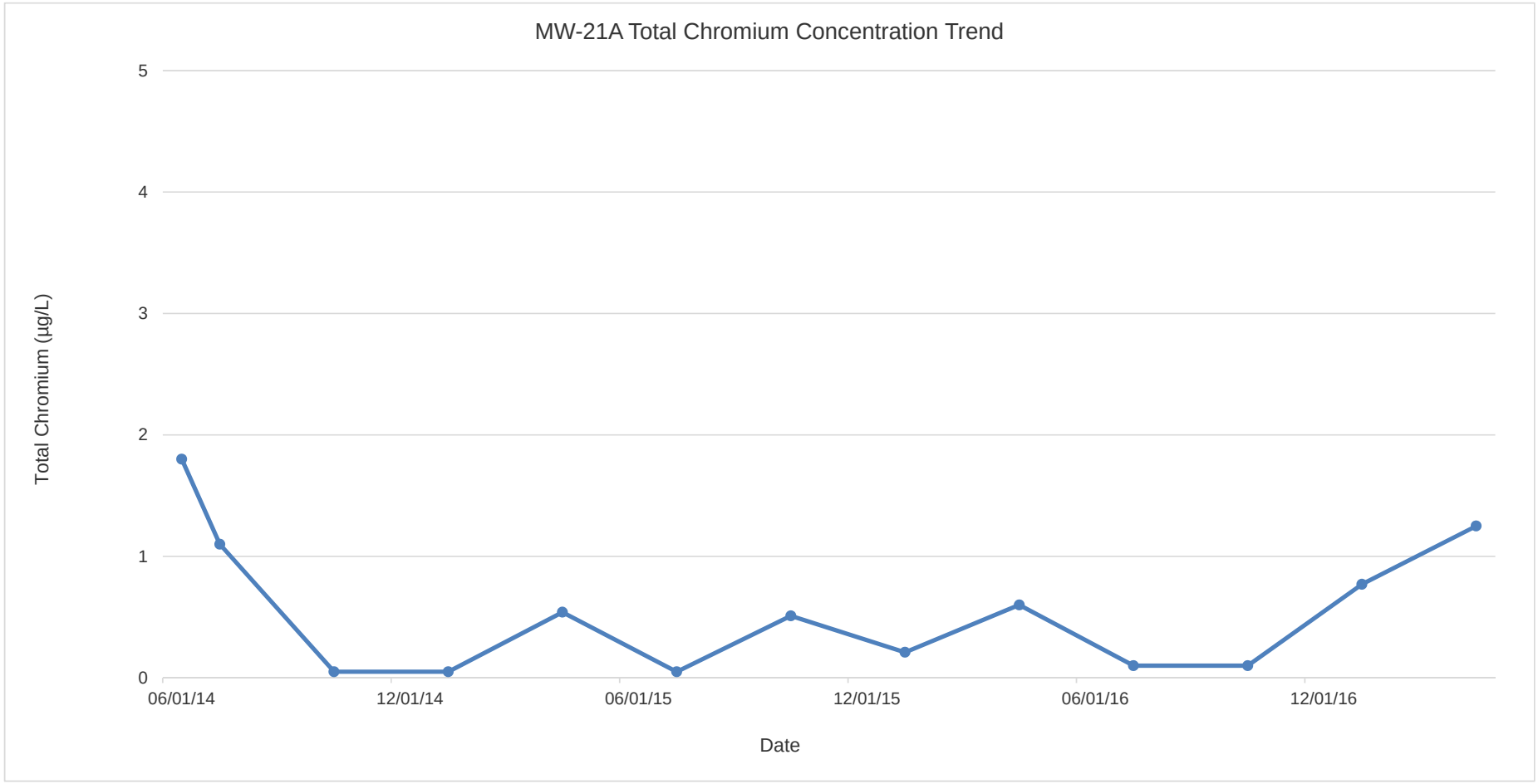

MW-19 Total Chromium Concentration Trend
Total Chromium (µg/L)
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
07/01/09
07/01/10
07/01/11
07/01/12
07/01/13
07/01/14
07/01/15
07/01/16
Date


MW-19A Total Chromium Concentration Trend
Total Chromium (µg/L)
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
07/01/09
07/01/10
07/01/11
07/01/12
07/01/13
07/01/14
07/01/15
07/01/16
Date


MW-20 Total Chromium Concentration Trend
500,000
400,000
300,000
200,000
100,000
0
Total Chromium (µg/L)
06/01/14
12/01/14
06/01/15
12/01/15
06/01/16
12/01/16
Date

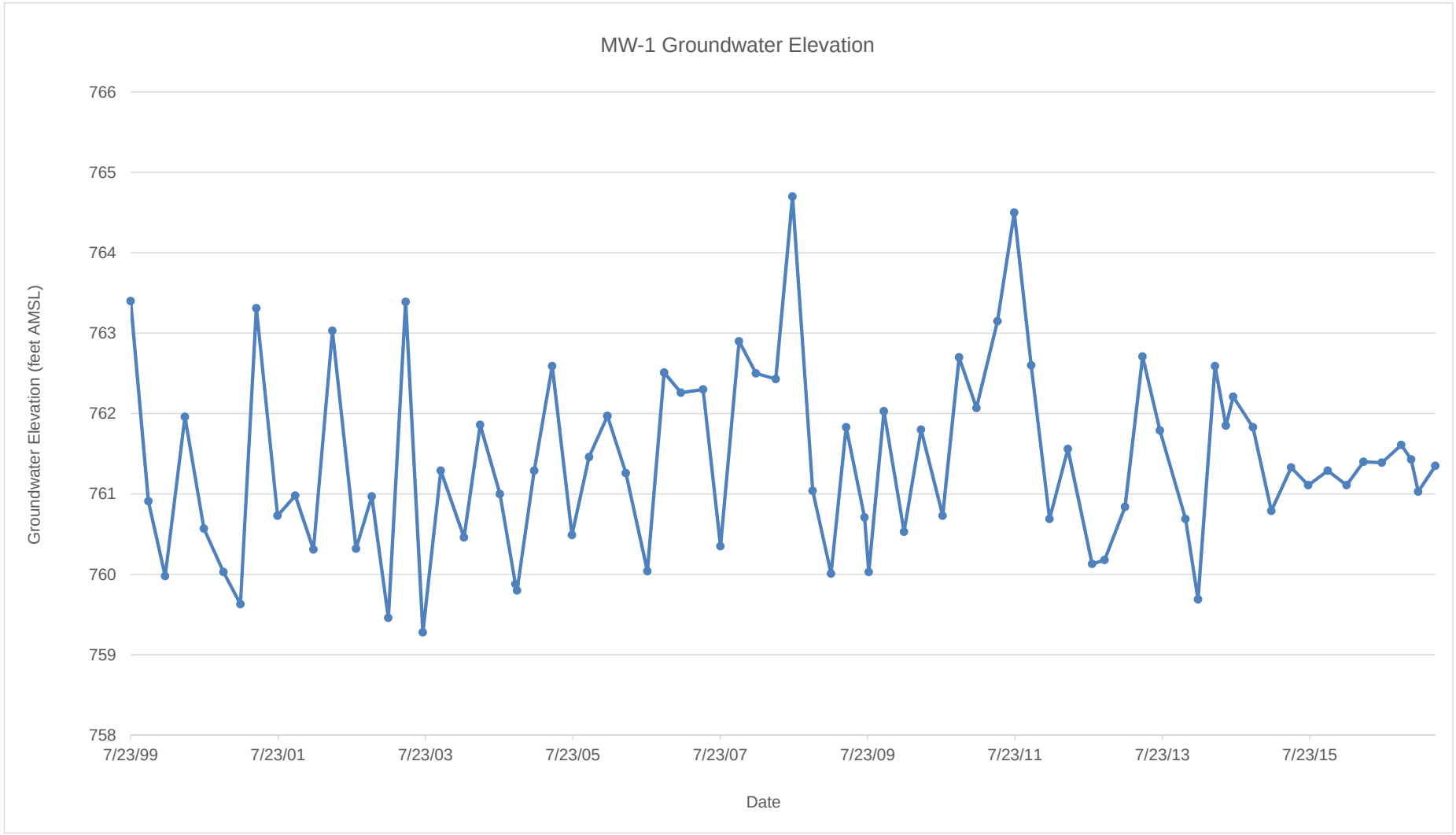

MW-20A Total Chromium Concentration Trend
Total Chromium (µg/L)
1,200
1,000
800
600
400
200
0
06/01/14
12/01/14
06/01/15
12/01/15
06/01/16
12/01/16
Date

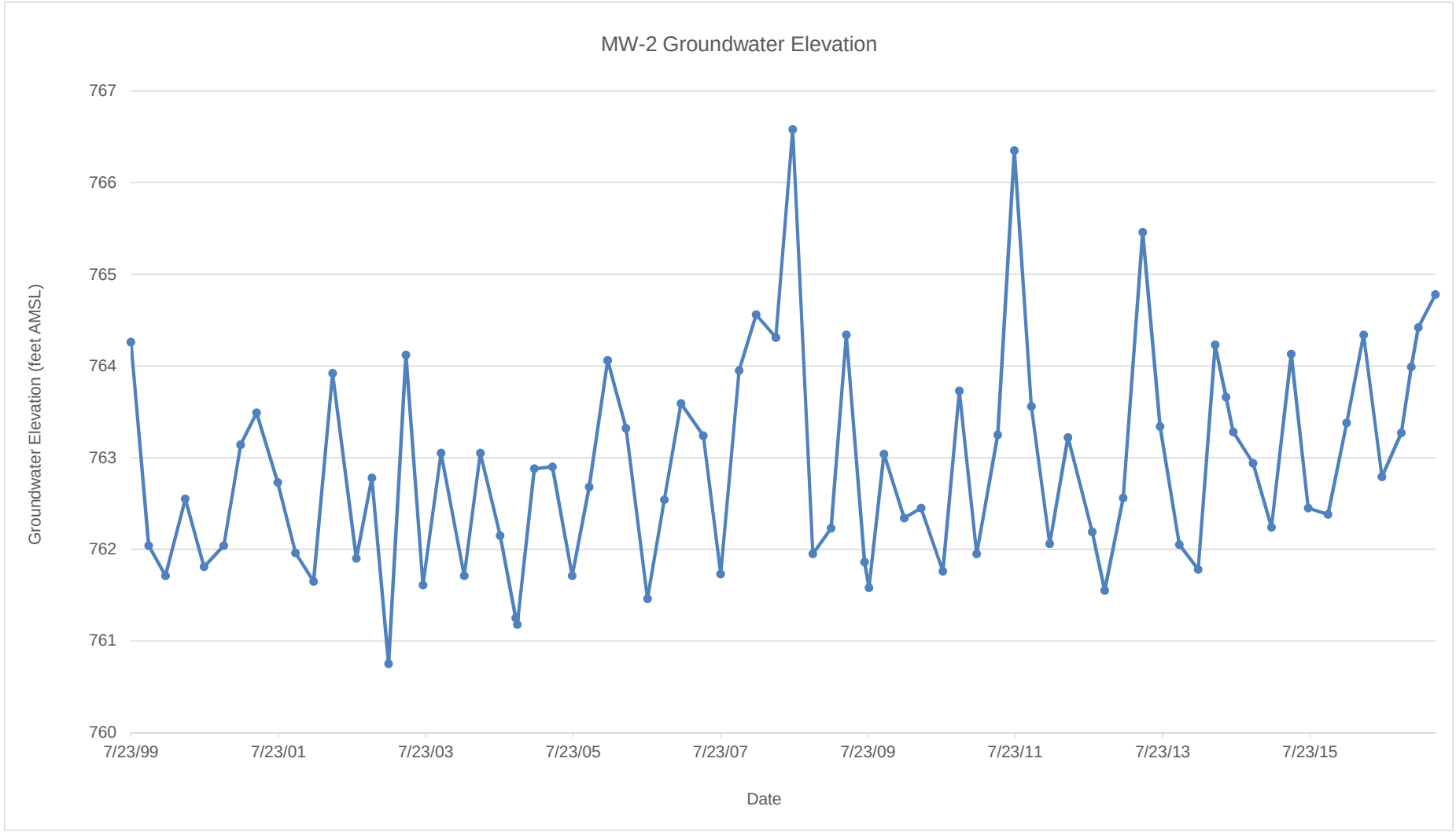

MW-21 Total Chromium Concentration Trend
250
200
150
100
50
0
Total Chromium (µg/L)
06/01/14
12/01/14
06/01/15
12/01/15
06/01/16
12/01/16
Date

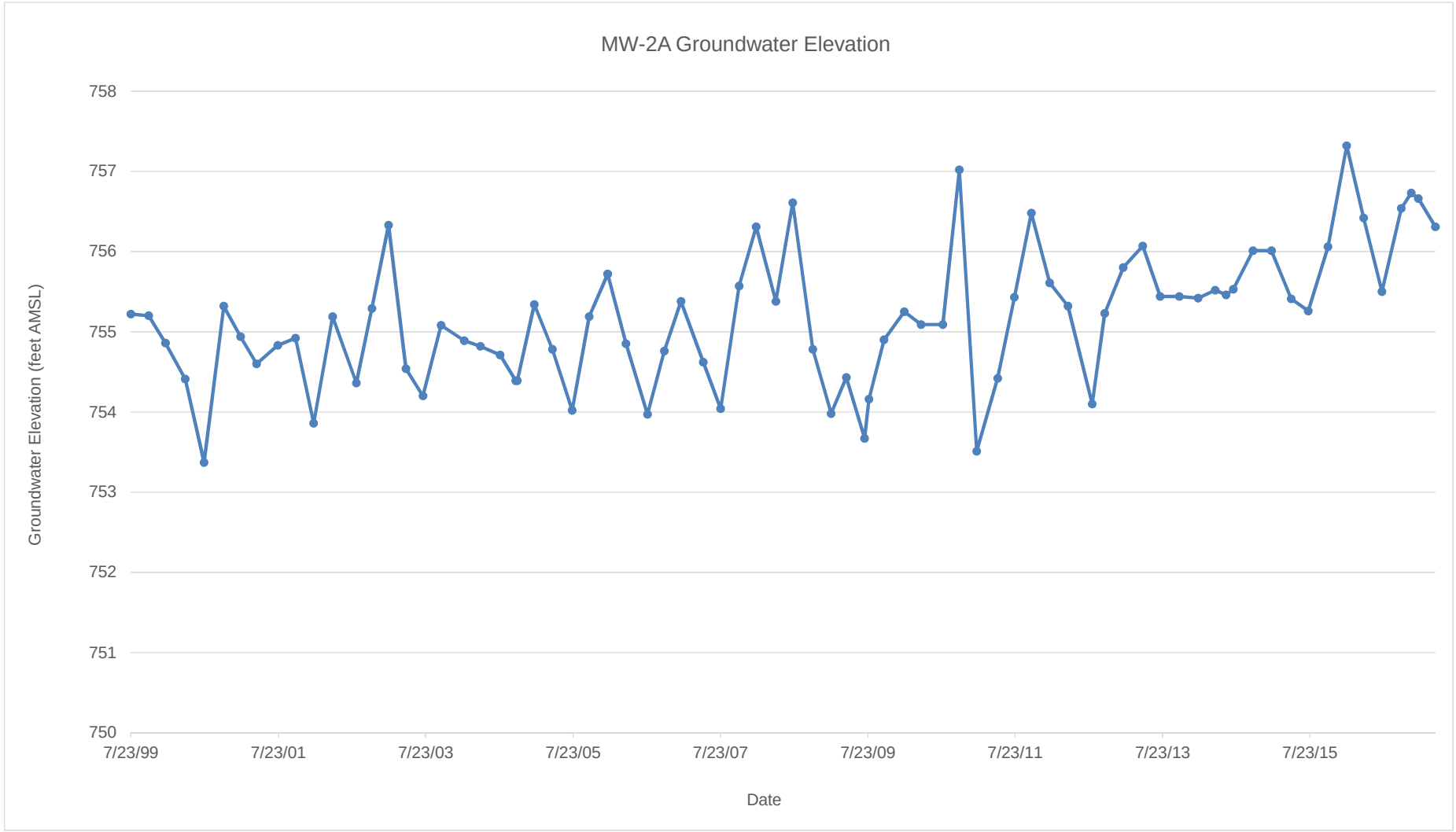

MW-21A Total Chromium Concentration Trend
Total Chromium (µg/L)
5
4
3
2
1
0
06/01/14
12/01/14
06/01/15
12/01/15
06/01/16
12/01/16
Date

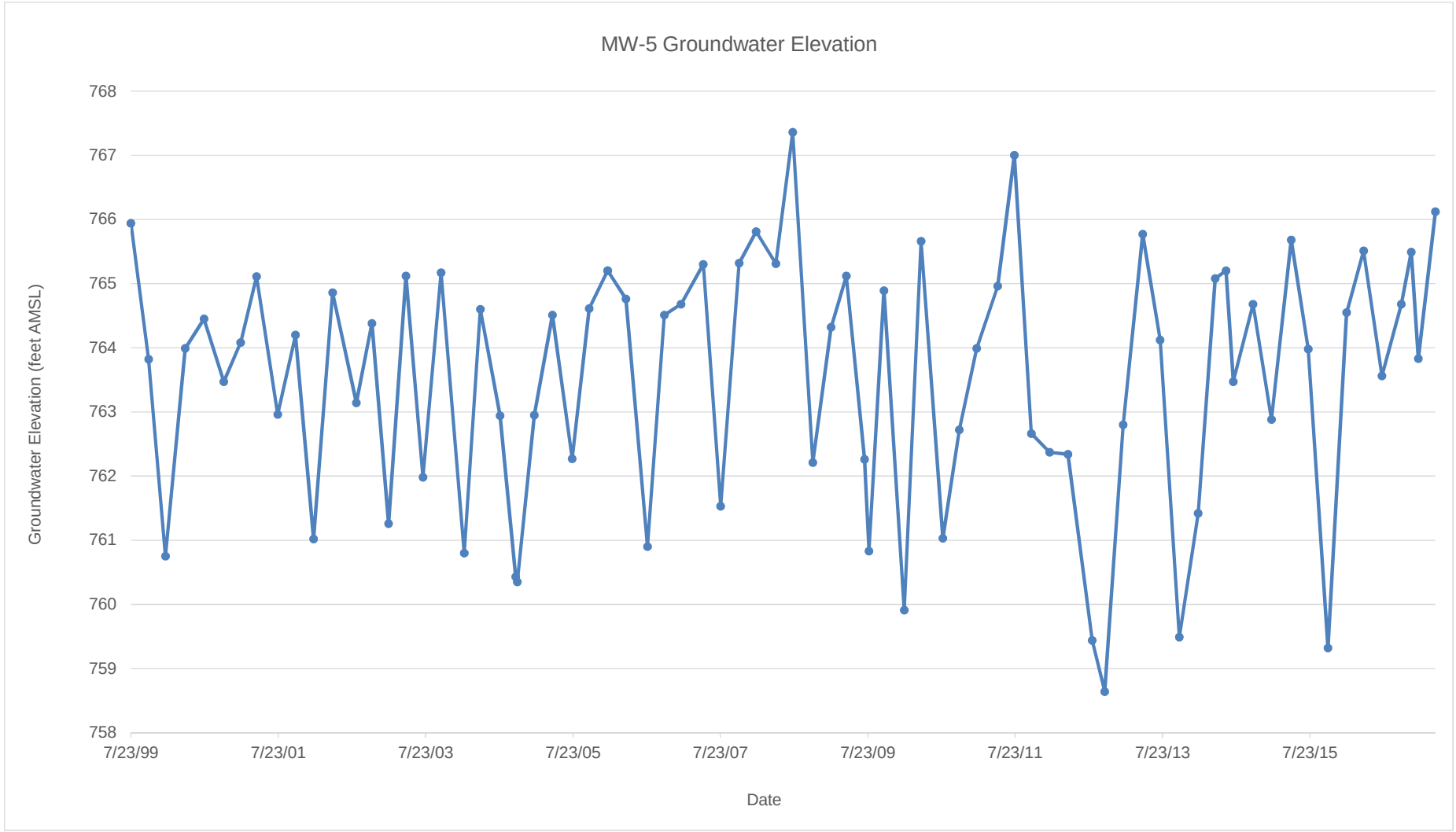
APPENDIX B

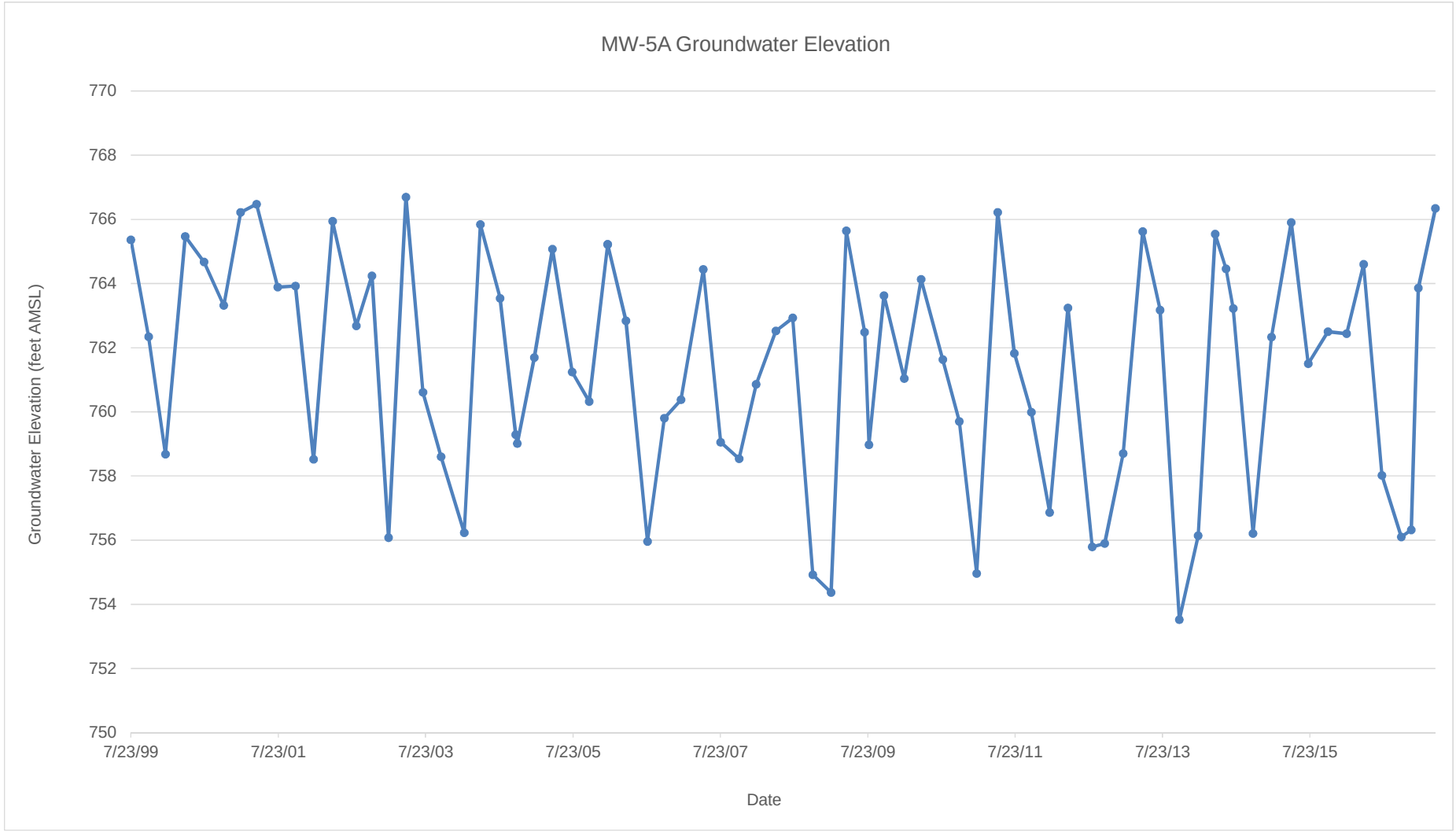
Groundwater Elevations Versus Time – All Wells

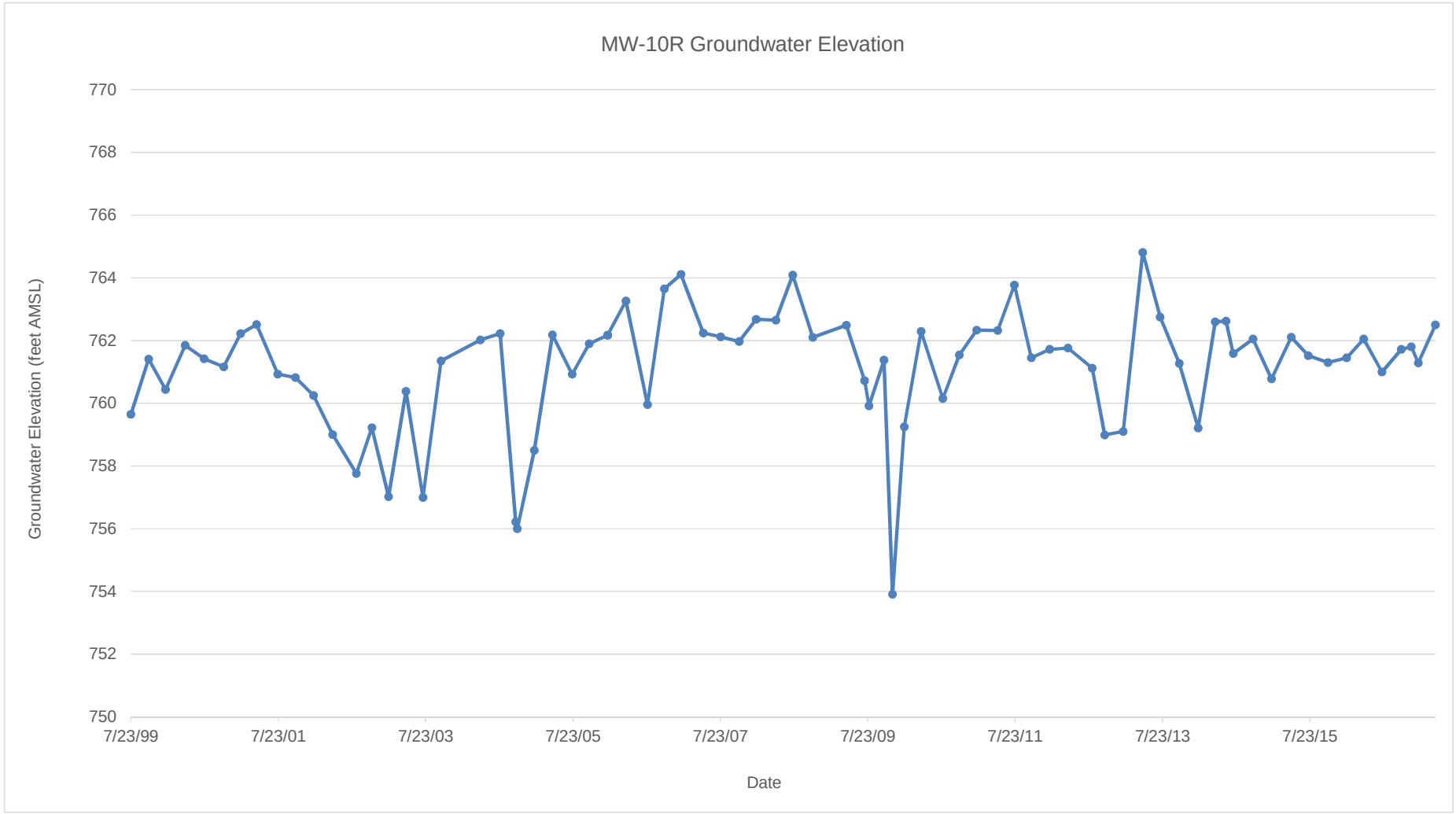

MW-1 Groundwater Elevation
Groundwater Elevation (feet AMSL)
766
765
764
763
762
761
760
759
758
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

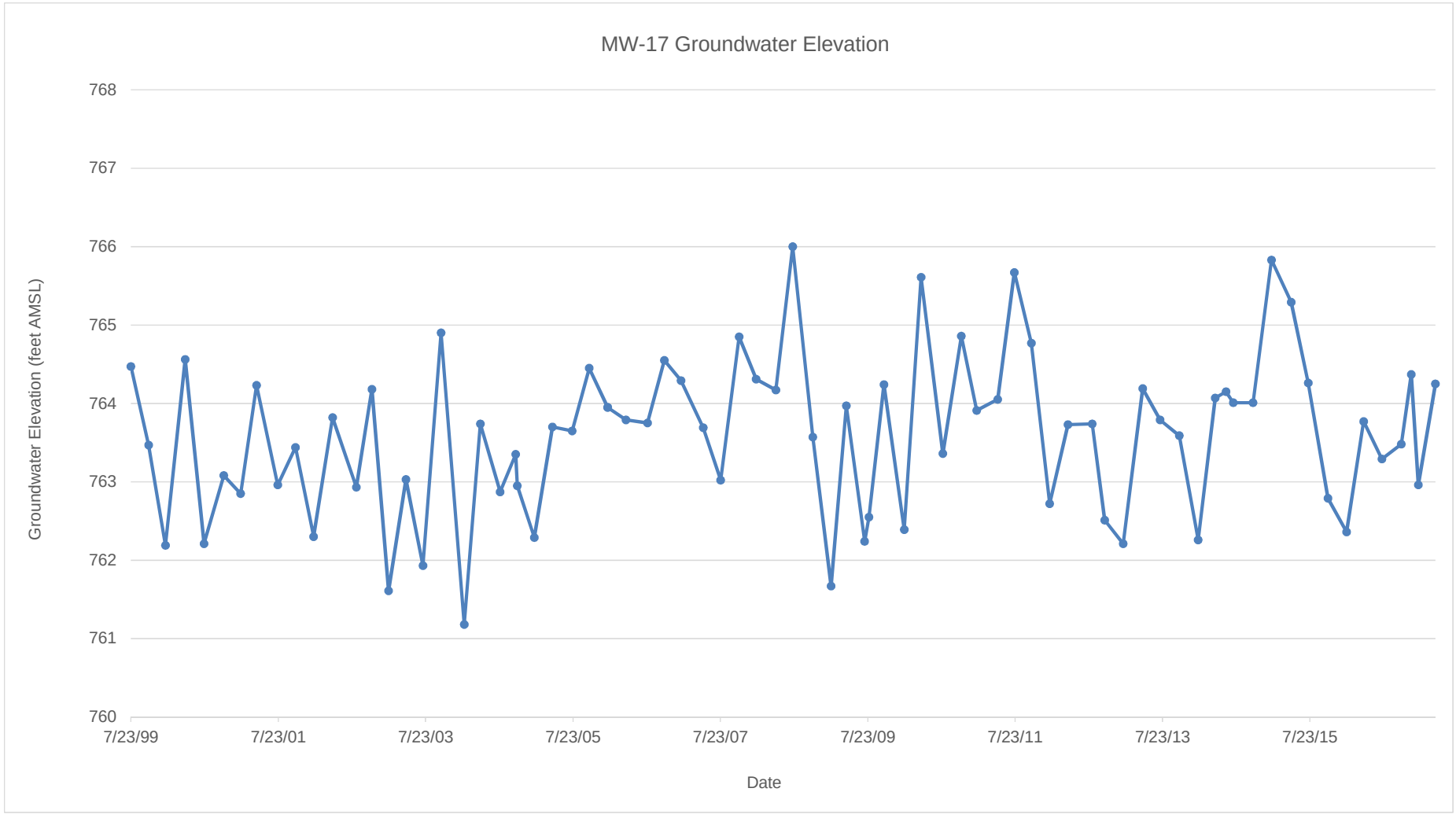

MW-2 Groundwater Elevation
Groundwater Elevation (feet AMSL)
767
766
765
764
763
762
761
760
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

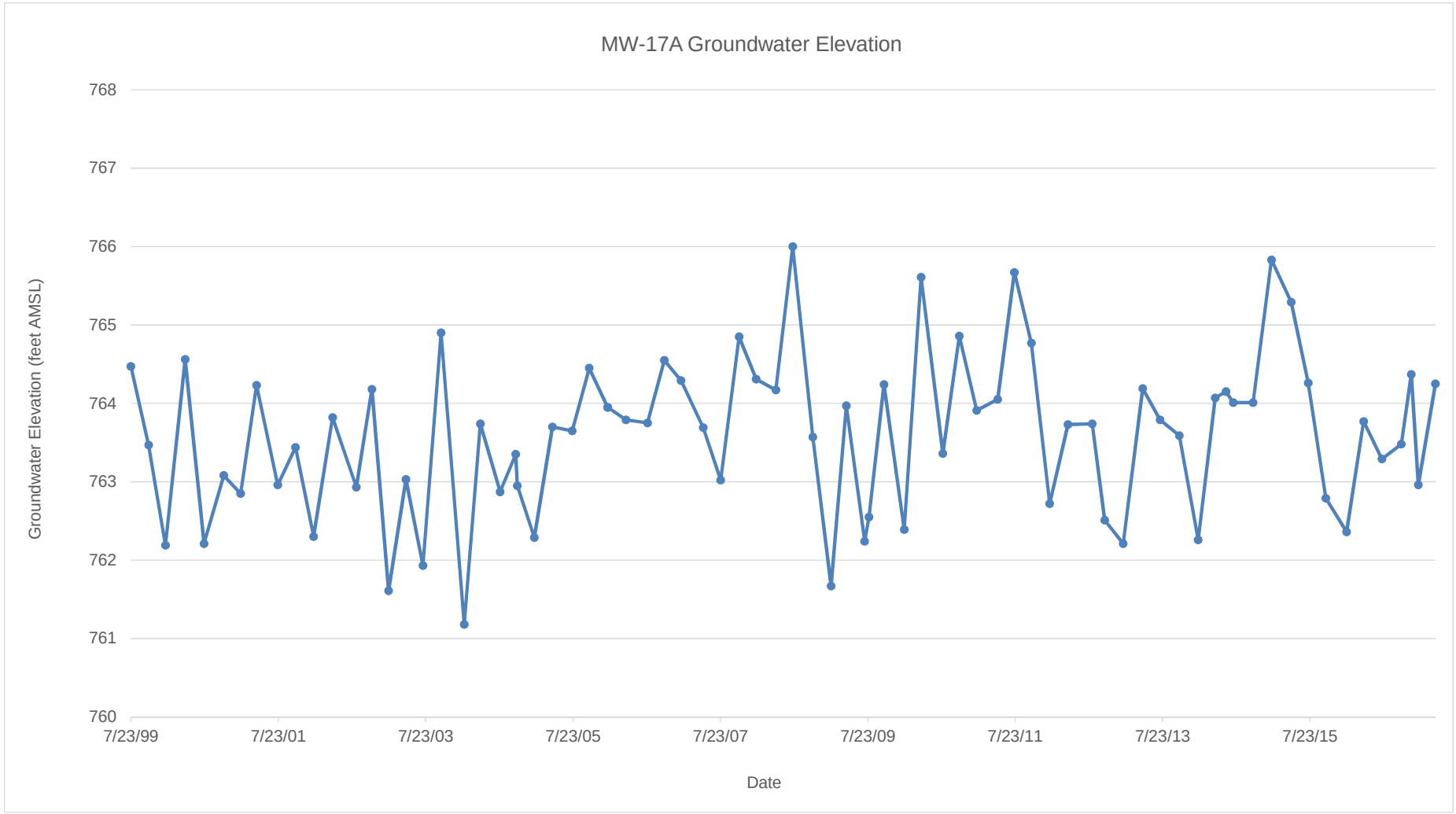

MW-2A Groundwater Elevation
Groundwater Elevation (feet AMSL)
758
757
756
755
754
753
752
751
750
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

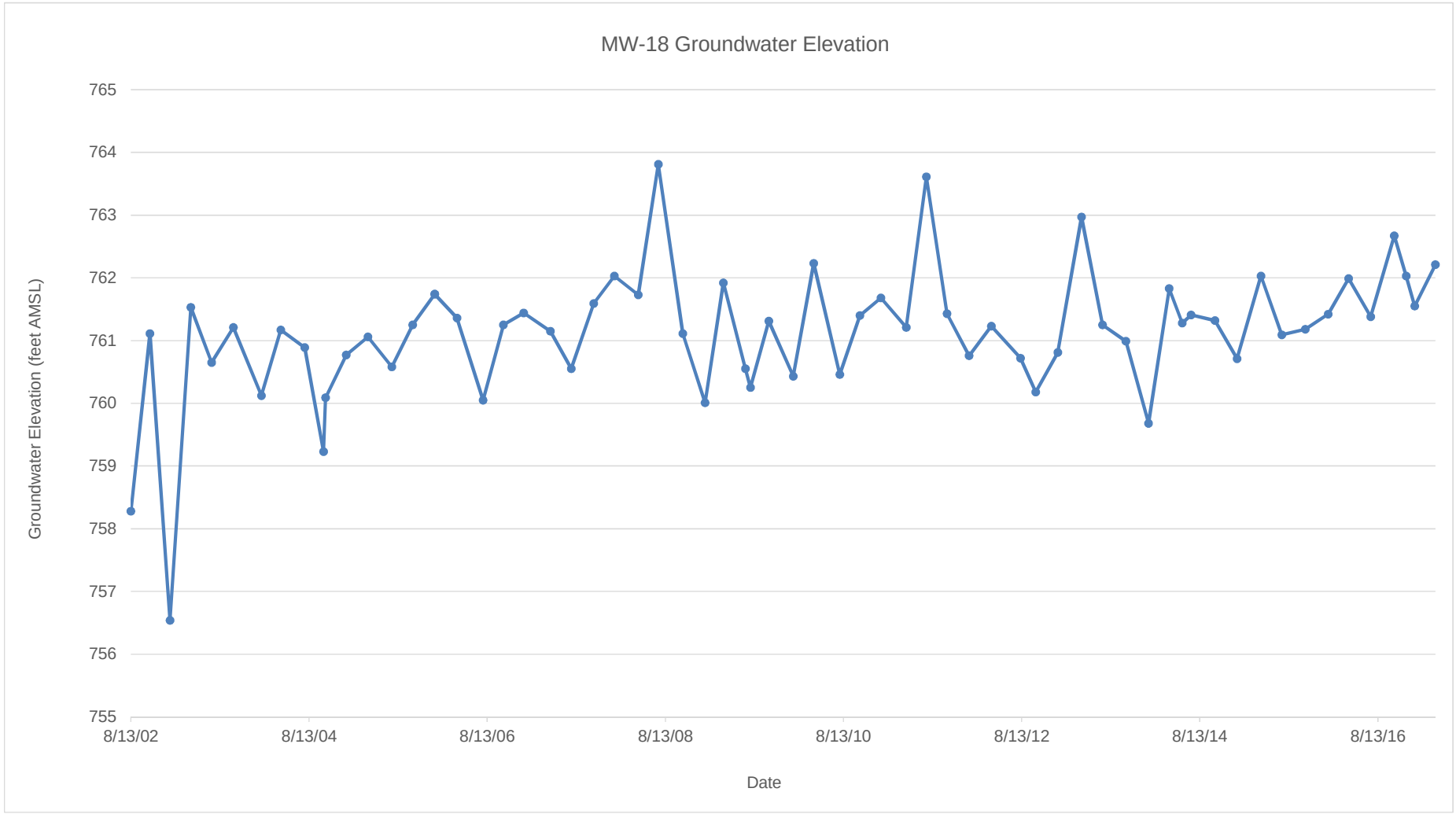

MW-5 Groundwater Elevation
Groundwater Elevation (feet AMSL)
768
767
766
765
764
763
762
761
760
759
758
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

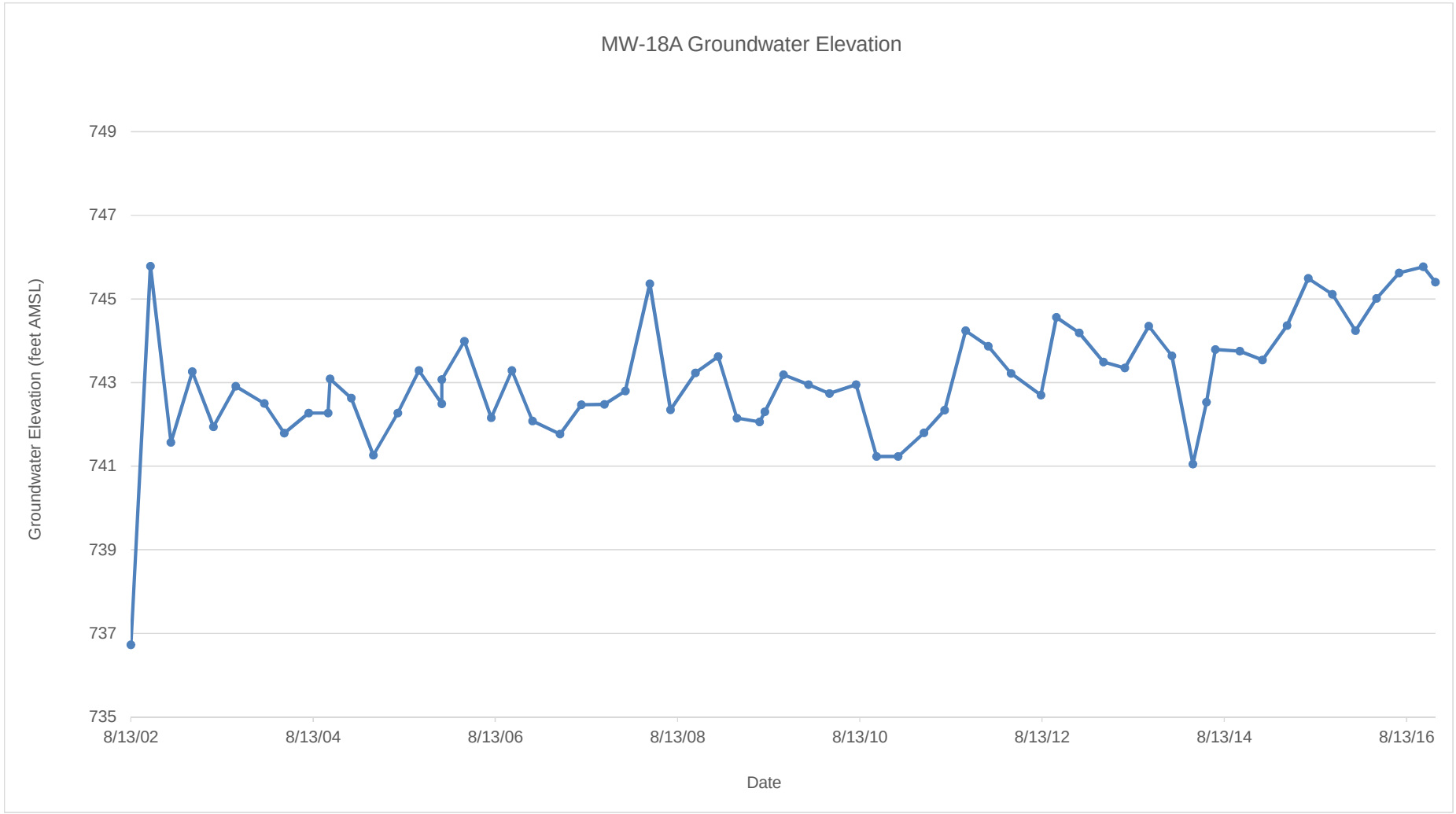

MW-5A Groundwater Elevation
Groundwater Elevation (feet AMSL)
770
768
766
764
762
760
758
756
754
752
750
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

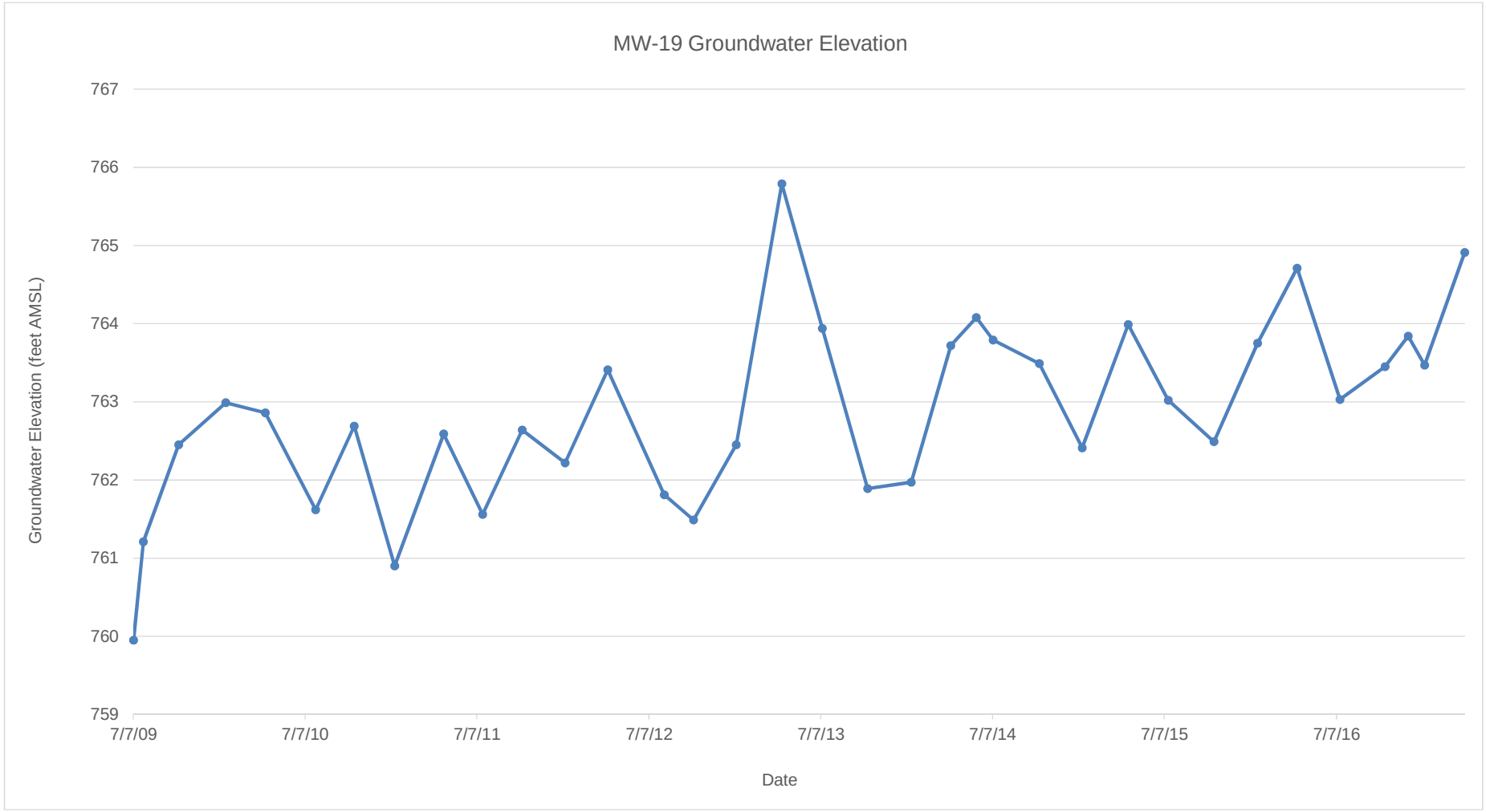

MW-10R Groundwater Elevation
Groundwater Elevation (feet AMSL)
770
768
766
764
762
760
758
756
754
752
750
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

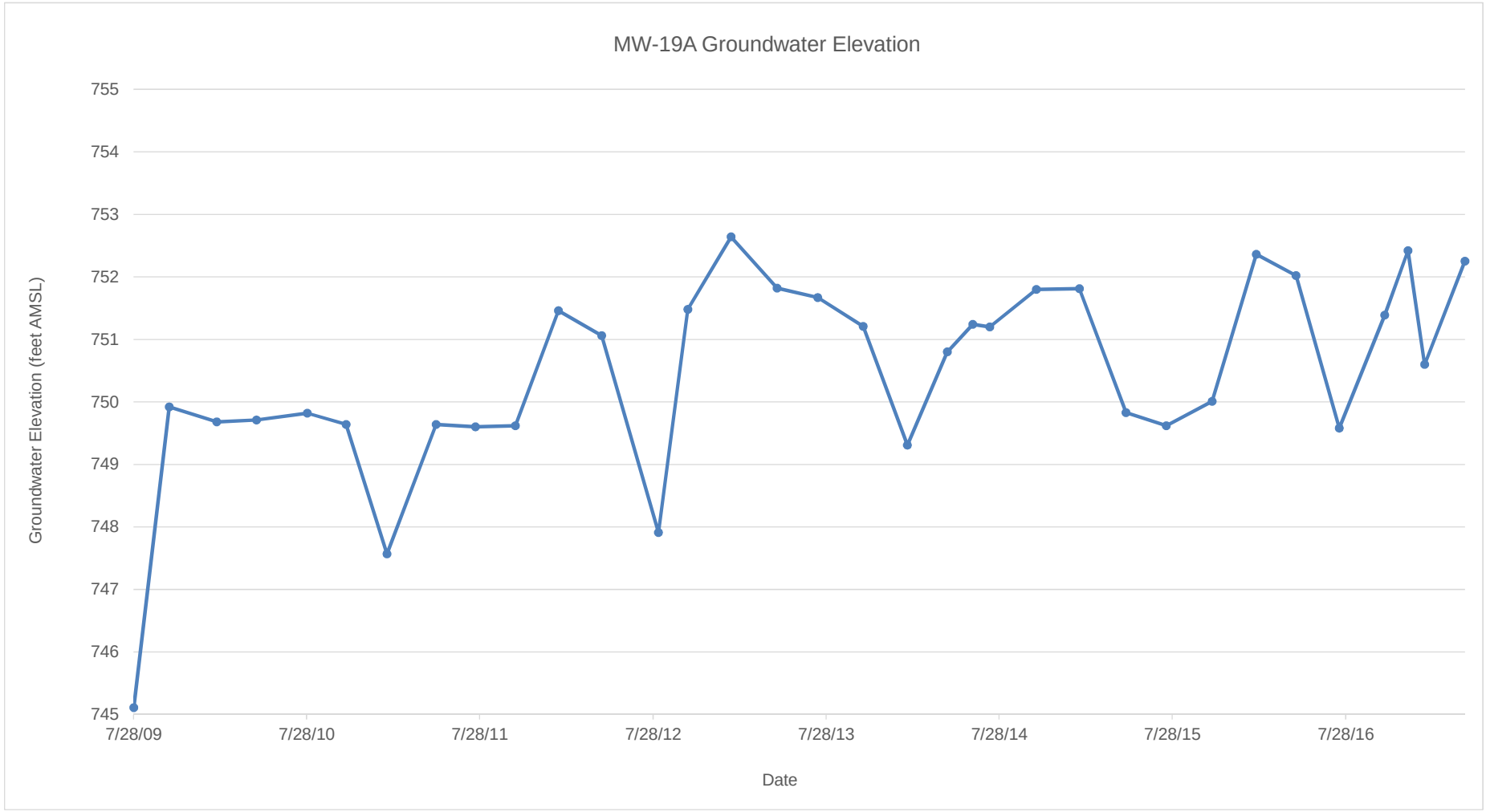

MW-17 Groundwater Elevation
Groundwater Elevation (feet AMSL)
768
767
766
765
764
763
762
761
760
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

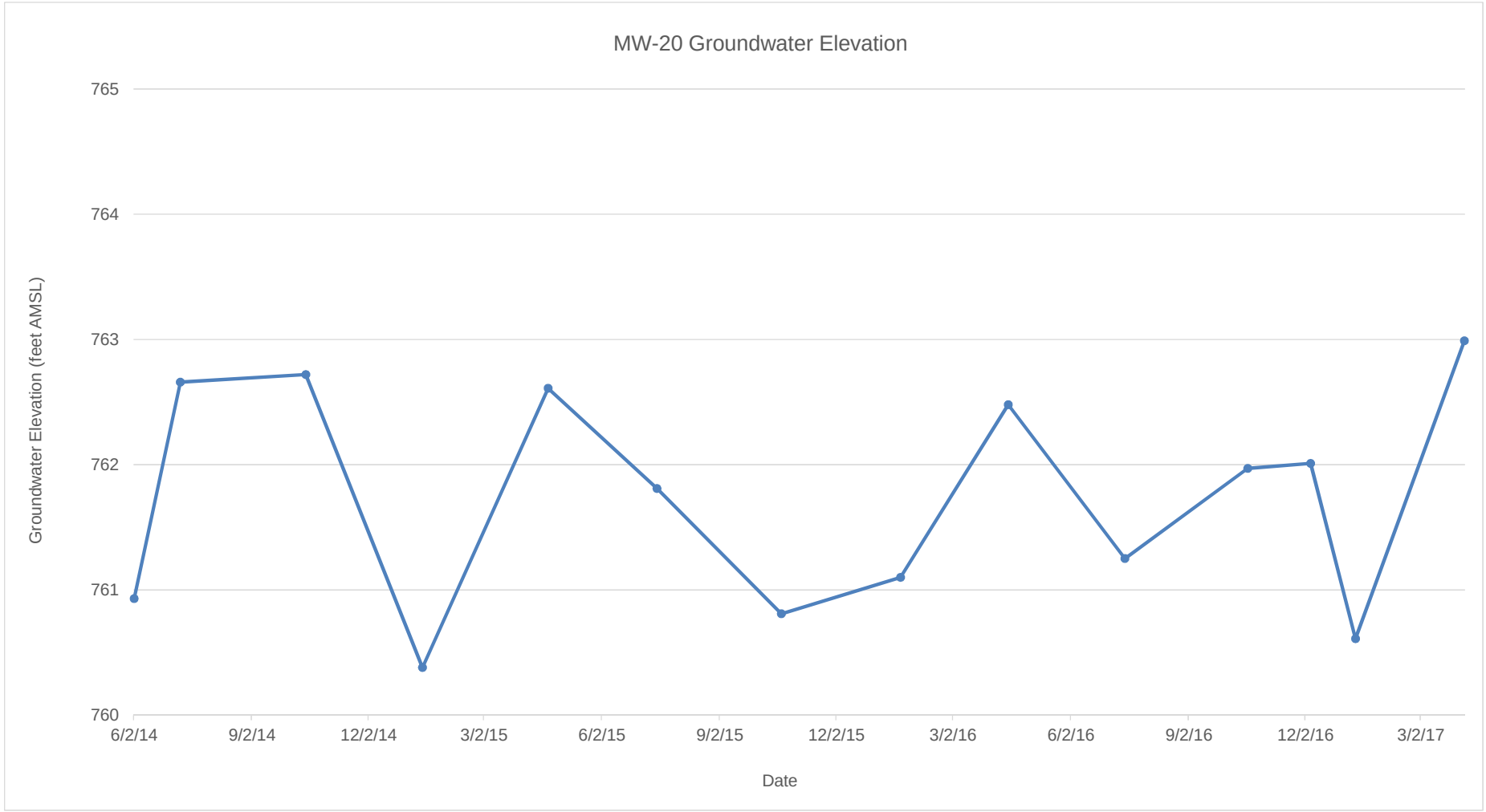

MW-17A Groundwater Elevation
Groundwater Elevation (feet AMSL)
768
767
766
765
764
763
762
761
760
7/23/99
7/23/01
7/23/03
7/23/05
7/23/07
7/23/09
7/23/11
7/23/13
7/23/15
Date

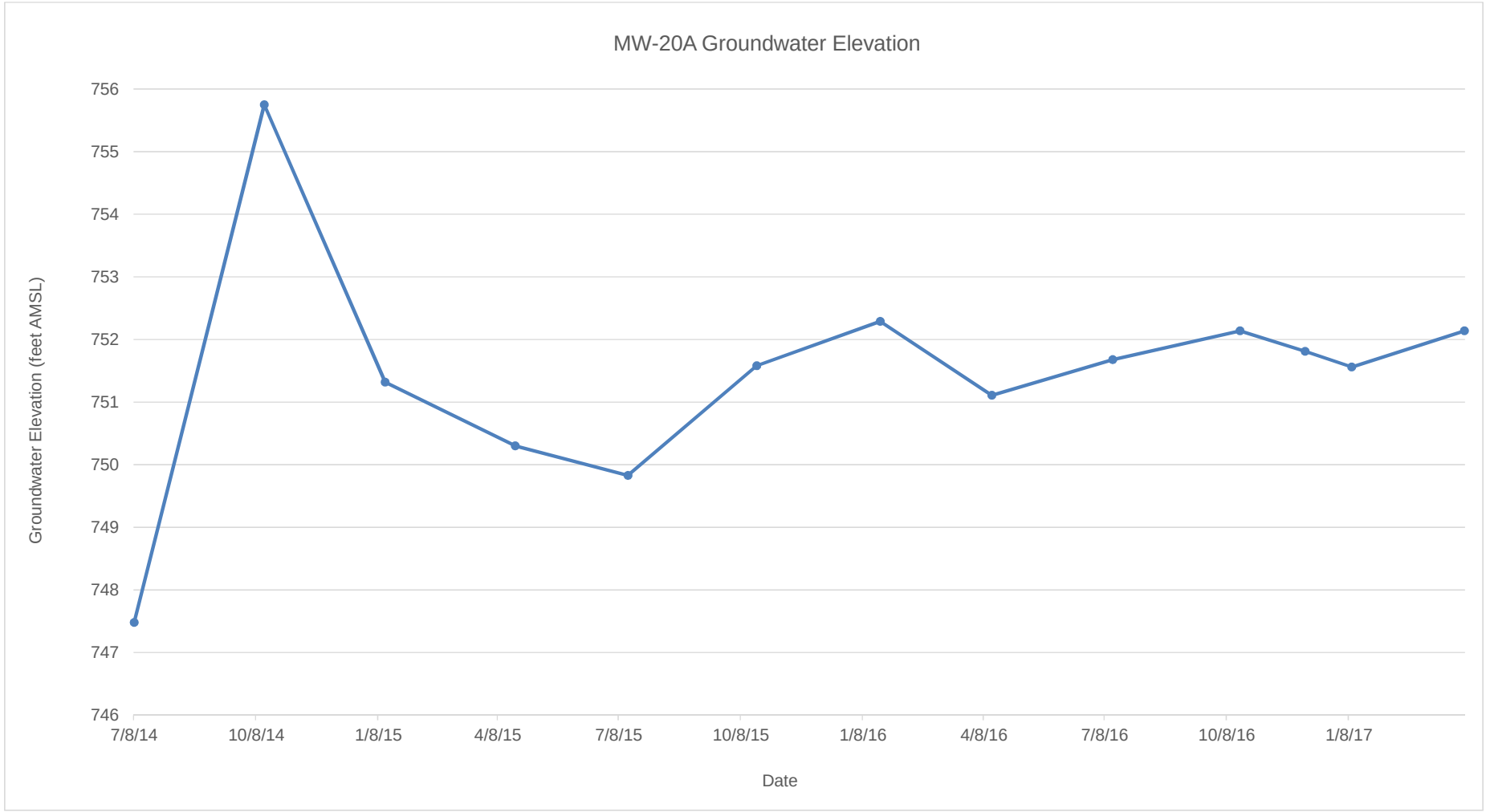

MW-18 Groundwater Elevation
Groundwater Elevation (feet AMSL)
765
764
763
762
761
760
759
758
757
756
755
8/13/02
8/13/04
8/13/06
8/13/08
8/13/10
8/13/12
8/13/14
8/13/16
Date

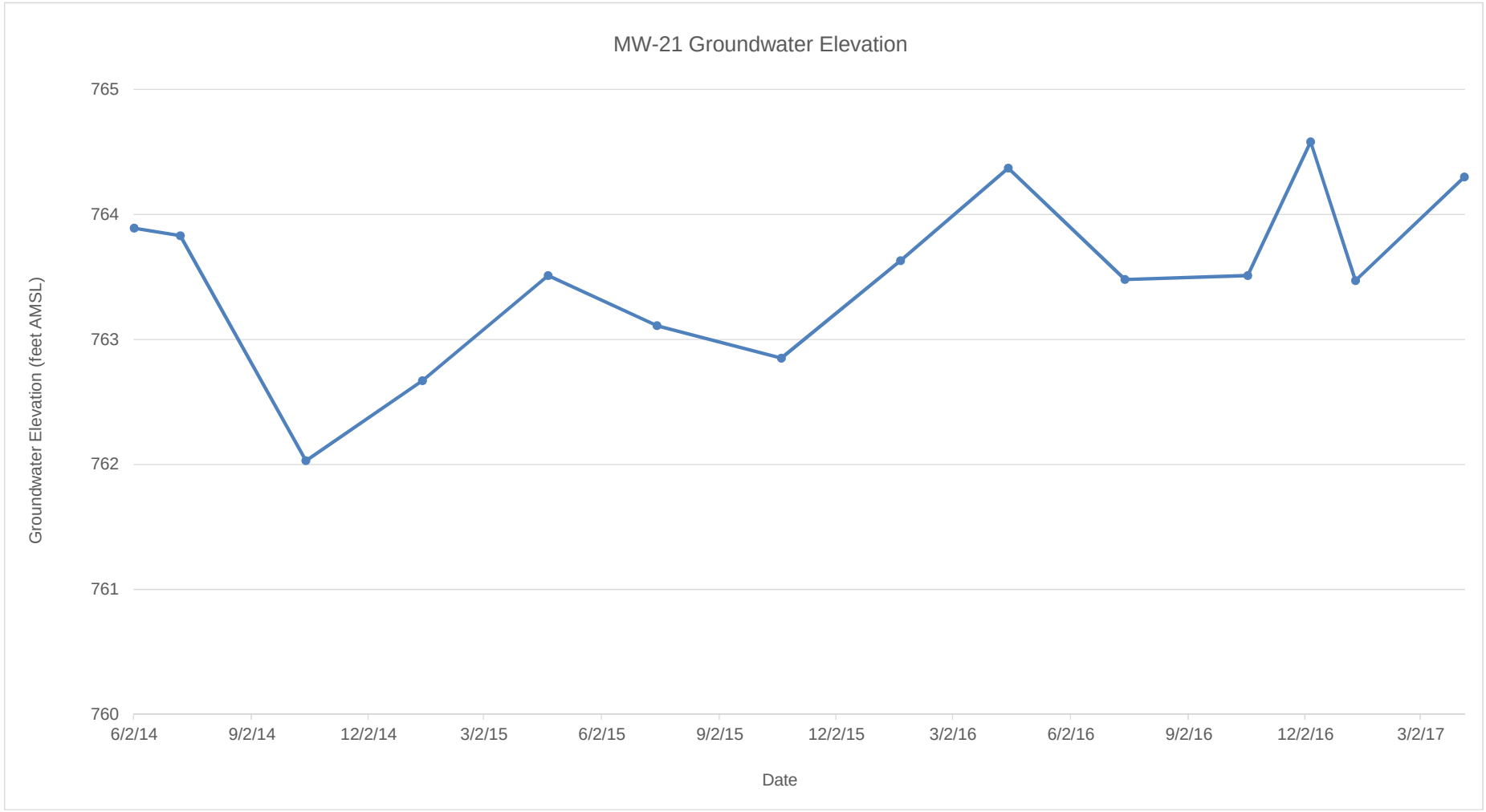

MW-18A Groundwater Elevation
Groundwater Elevation (feet AMSL)
749
747
745
743
741
739
737
735
8/13/02
8/13/04
8/13/06
8/13/08
8/13/10
8/13/12
8/13/14
8/13/16
Date

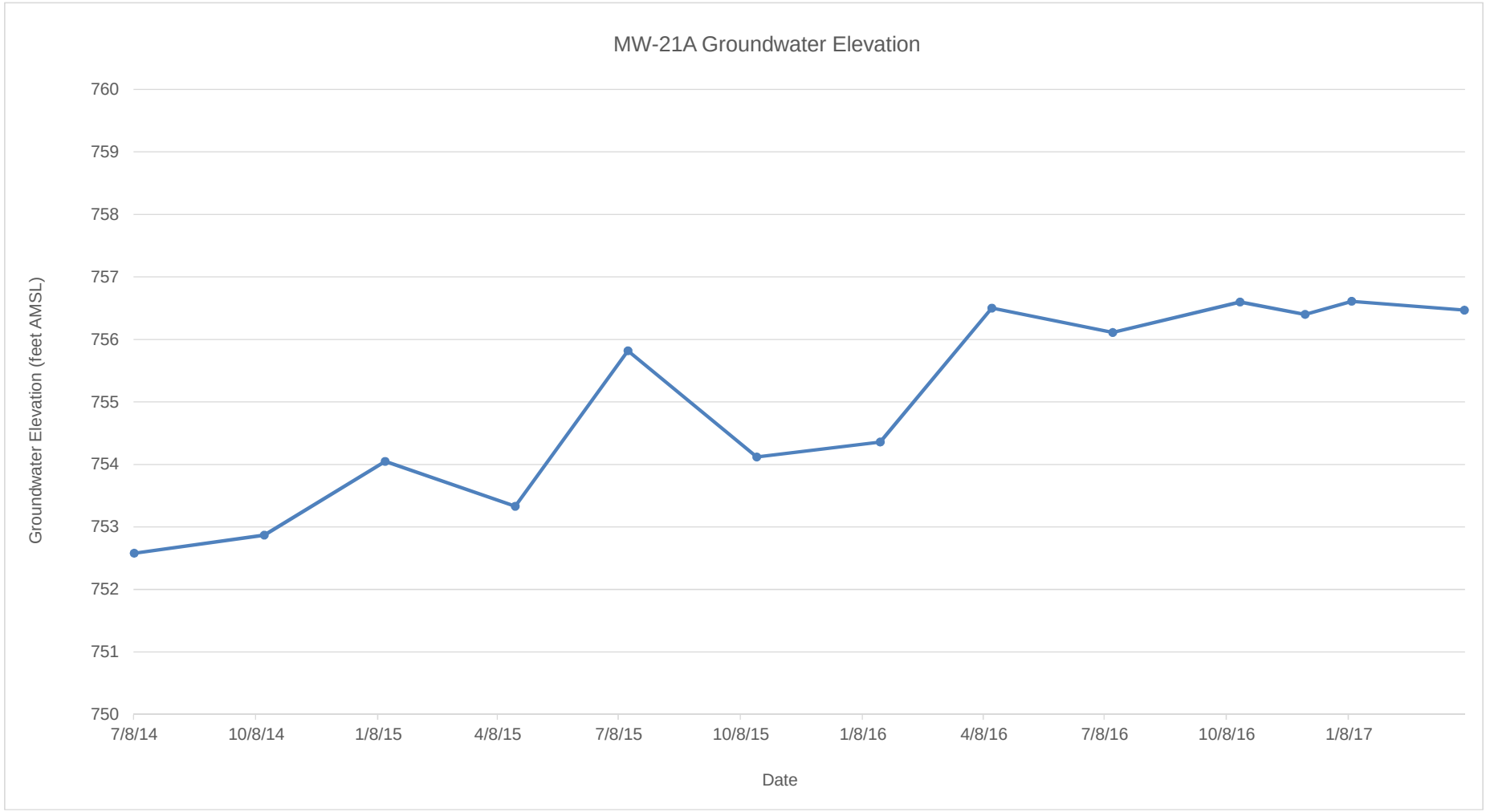

MW-19 Groundwater Elevation
Groundwater Elevation (feet AMSL)
767
766
765
764
763
762
761
760
759
7/7/09
7/7/10
7/7/11
7/7/12
7/7/13
7/7/14
7/7/15
7/7/16
Date


MW-19A Groundwater Elevation
Groundwater Elevation (feet AMSL)
755
754
753
752
751
750
749
748
747
746
745
7/28/09
7/28/10
7/28/11
7/28/12
7/28/13
7/28/14
7/28/15
7/28/16
Date


MW-20 Groundwater Elevation
765
764
763
762
761
760
Groundwater Elevation (feet AMSL)
6/2/14
9/2/14
12/2/14
3/2/15
6/2/15
9/2/15
12/2/15
3/2/16
6/2/16
9/2/16
12/2/16
3/2/17
Date


MW-20A Groundwater Elevation
Groundwater Elevation (feet AMSL)
756
755
754
753
752
751
750
749
748
747
746
7/8/14
10/8/14
1/8/15
4/8/15
7/8/15
10/8/15
1/8/16
4/8/16
7/8/16
10/8/16
1/8/17
Date


MW-21 Groundwater Elevation
765
764
763
762
761
760
Groundwater Elevation (feet AMSL)
6/2/14
9/2/14
12/2/14
3/2/15
6/2/15
9/2/15
12/2/15
3/2/16
6/2/16
9/2/16
12/2/16
3/2/17
Date


MW-21A Groundwater Elevation
Groundwater Elevation (feet AMSL)
760
759
758
757
756
755
754
753
752
751
750
7/8/14
10/8/14
1/8/15
4/8/15
7/8/15
10/8/15
1/8/16
4/8/16
7/8/16
10/8/16
1/8/17
Date

APPENDIX C

Operation & Maintenance
Report Form 4400-194

State of Wisconsin
Department of Natural Resources
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Remediation Site Operation, Maintenance, Monitoring & Optimization Report

GENERAL INSTRUCTIONS, PURPOSE AND APPLICABILITY OF THIS FORM: Completion of this form is required under s. NR 724.13(3), Wis. Adm. Code. A narrative report or letter containing the equivalent information required in this form may be submitted in lieu of the actual form. Failure to submit this form as required is a violation of s. NR 724.13(3), Wis. Adm. Code, and is subject to the penalties in s. 292.99, Wis. Stats. This form must be submitted every six months for soil or groundwater remediation projects that report operation and maintenance progress in accordance with s. NR 724.13(3), Wis. Adm. Code.

Note: Long-term monitoring results submitted in accordance with s. NR 724.17(3), Wis. Adm. Code are required to be submitted within 10 business days of receiving sampling results and are not required to be submitted using this form. However, portions of this form require monitoring data summary information that may be based on information previously submitted in accordance with s. NR 724.17(3), Wis. Adm. Code.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if this form is required to be submitted at sites responded to under the Federal Comprehensive Environmental Response and Compensation Act (commonly known as Superfund) or an equivalent State lead Superfund response.

Note: Responsible parties should check with the State Project Manager assigned to the site to determine if any of the information required in this form may be omitted or changed and obtain prior written approval for any omissions or changes.

Submittal of this form is not a substitute for reporting required by Department programs such as Waste Water or Air Management. Personally identifiable information on this form is not intended to be used for any other purpose than tracking progress of the remediation by the Bureau for Remediation and Redevelopment.

Personal information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Open Records Law (ss. 19.31-19.39, Wis. Stats.). Unless otherwise noted, all citations refer to Wisconsin Administrative Code.

Note: There is a separate semi-annual report required under s. NR 700.11(1), Wis. Adm. Code. Reporting under that provision is through an internet-based form:

http://dnr.wi.gov/topic/Brownfields/documents/regs/NR700progreport.pdf

Section GI - General Site Information

A. General Information

1. Site name

Appleton Wire - Albany International Former Chrome Plant

2. Reporting period from:	To:	Days in period:
01/01/2017	06/30/2017	181

3. Regulatory agency (enter DNR, DATCP and/or other)	4. BRRTS ID No. (2 digit program-2 digit county-6 digit site specific)
WDNR	02-45-000015

5. Site location

Region	County	Address
Northeast Region	Outagamie	908 N. Lawe St.

Municipality name ◯ City ◯ Town ◯ Village	Township	Range ◉E ◯W	Section	¼	¼ ¼
Appleton	21 N	17	25	NW	NW

6. Responsible party	7. Consultant
Name: Albany International Forming Fabrics Division	☐ Select if the following information has changed since the last submittal
Mailing address: PO Box 1939, Appleton, WI 54913-1939	Company name: Stoeger & Associates, LLC
Phone number: (920) 725-2600	Mailing address: 527 S. Story St., Appleton, WI 54914
	Phone number: (920) 428-9513

8. Contaminants

Chromium

9. Soil types (USCS or USDA)

Clay/Silty Clay

10. Hydraulic conductivity(cm/sec):	11. Average linear velocity of groundwater (ft/yr)
1 X 10 -7	0.002

12. If soil is treated ex situ, is the treatment location off site? ◯ Yes ◯ No

If yes, give location: Region	County

Municipality name ◯ City ◯ Town ◯ Village	Township	Range ◯E ◯W	Section	¼	¼ ¼
	N				

B. Remediation Method

Only submit sections that apply to an individual site. Check all that apply:

- [x] Groundwater extraction (submit a completed Section GW-1).
- [ ] Free product recovery (submit a completed Section GW-1).
- [ ] In situ air sparging (submit a completed Section GW-2).
- [ ] Groundwater natural attenuation (submit a completed Section GW-3).
- [x] Other groundwater remediation method (submit a completed Section GW-4).
- [ ] Soil venting (including soil vapor extraction building venting and bioventing submit a completed Section IS-1).
- [ ] Soil natural attenuation (submit a completed Section IS-2).
- [ ] Other in situ soil remediation method (submit a completed Section IS-3).
- [ ] Biopiles (submit a completed Section ES-1).
- [ ] Landspreading/thinspreading of petroleum contaminated soil (submit a completed Section ES-2).
- [ ] Other ex situ remediation method (submit a completed Section ES-3).
- [ ] Site is a landfill (submit a completed Section LF-1).

C. General Effectiveness Evaluation for All Active Systems

If the remediation is active (not natural attentuation), complete this subsection.

1. Is the system operating at design rates and specifications? (●) Yes ( ) No
   If the answer is no, explain whether or not modifications are necessary to achieve the goal that was previously established in design.

2. Are modifications to the system warranted to improve effectiveness ( ) Yes (●) No
   If yes, explain:

3. Is natural attenuation an effective low cost option at this time? ( ) Yes (●) No
4. Is closure sampling warranted at this time? ( ) Yes (●) No
5. Are there any modifications that can be made to the remediation to improve cost effectiveness? (●) Yes ( ) No
   If yes, explain:
   Studies are underway to determine if the existing groundwater collection system can be enhanced or whether other treatment options are available which are more cost effective and may result in case closure within a reasonable period of time.

D. Economic and Cost Data to Date

1. Total investigation cost: $544,000.00
2. Implementation costs (design, capital and installation costs, excluding investigation costs: $633,000.00
3. Total costs during the previous reporting period: $10,000.00
4. Total costs during this reporting period: $12,000.00
5. Total anticipated costs for the next reporting period: $12,000.00
6. Are any unusual or one-time costs listed in the reporting periods covered by D.3., D.4. or D.5. above? ( ) Yes ( ) No
   If yes, explain:

7. If closure is anticipated within 12 months, estimated costs for project closeout:

E. Name(s), Signature(s) and Date of Person(s) Submitting Form

Legibly print name, date and sign. Only persons qualified to submit reports under ch. NR 712 Wis. Adm. Code are to sign this form for sites with any ongoing active remediation, monitoring or an investigation. Other persons may sign this form for sites with no response activities during the six month reporting period.

Registered Professional Engineers:

I hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

Hydrogeologists:

I hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

Scientists:

I hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code.

Print name	Title
Signature	Date

Other Persons:

Print name	Title
John Stoeger	Project Manager
Signature	Date

Professional Seal(s), if applicable:

Section GW-1, Groundwater Pump and Treat Systems and Free Product Recovery Systems

A. Groundwater Extraction System Operation:

1. Total number of groundwater extraction wells or trenches available: 2 and the number in use during period: 2
2. Number of days of operation (only list the number of days the system actually operated, if unknown explain:
   181
3. System utilization in percent (days of operation divided by reporting time period multiplied by 100). If < 80%, explain:
   100
4. Quantity of groundwater extracted during this time period: 71,480 gallons
5. Average groundwater extraction rate: 0.27 gpm
6. Quantity of dissolved phase contaminants removed during this time period in pounds: 5.87 lbs

B. Free Product Recovery System Operation

1. Is free product (nonaqueous phase liquid) being recovered at this site? ◯ Yes ◉ No
   If yes, explain:
2. Quantity of free product extracted during this time period (enter none if none): 0 gallons
3. Average free product extraction rate: _____ gpm

C. System Effectiveness Evaluation

1. Is a contaminated groundwater plume fully contained in the capture zone? ◉ Yes ◯ No
   If no, explain:
2. If free product is present, is the free product fully contained in capture zone? ◯ Yes ◯ No
   If no, explain:
3. If free product is present in any wells at the site, but free product was not recovered during reporting period, explain:
4. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in C.4.a.
   a. Contaminant: Chromium
   b. Percent reduction necessary to reach ch. NR 140 ES and PAL: 99.99 %
   c. Maximum contaminant concentration level in any monitoring well of that contaminant: 389,925 µg/L
   d. Maximum contaminant concentration level in any extraction well of that contaminant: 27,400 µg/L

e. If the maximum concentration in a monitoring well is more that one order of magnitude above the concentration measured in an extraction well, explain why the extracted groundwater contamination levels are significantly less than the levels at other locations within the aquifer.

D. Additional Attachments

Attach the following to this form:

- Most recent report to the DNR Wastewater Program, if applicable.
- Groundwater contour map with capture zone indicated.
- Groundwater contaminant distribution map (may be combined with contour map).
- Graph of cumulative contaminant removal, if both free product recovery and ground water extraction are used, provide separate graphs.
- Time versus groundwater contaminant concentration graphs for the contaminant listed in C.4.a. (above), as follows:
  - -- Graph of contaminant concentrations versus time for each extraction well in use during the period.
  - -- Graph of contaminant concentrations versus time for the monitoring well with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- System operational data table.

Section GW-4, Other Groundwater Remediation Methods

A. Effectiveness Evaluation

1. If free product is not present, determine the single contaminant that requires the greatest percent reduction to achieve ch. NR 140 ES and PAL. Perform this calculation for all contaminants that were present at the site that have ch. NR 140 standards. Use the highest contaminant concentration measured in any sampling points during reporting period. If free product is present, write "FREE PRODUCT" in A.1.a.

   a. Contaminant: Chromium

   b. Percent reduction necessary: 99.99 %

   c. Maximum contaminant concentration level in any monitoring well: 389,925 µg/L

2. Is the size of the plume: ◯ Increasing ◉ Stabalized ◯ Decreasing ?

3. Describe the method used to remediate groundwater at the site:
   Groundwater from beneath the former chrome plant building is collected into a building sump or a French Drain and the chromium is removed through an ion exchange process. Wastewater from the process is discharged to the City of Appleton municipal sanitary sewer system and the captured chromium in the ion exchanged canisters is shipped off site and recycled.

4. List any additional information required by the DNR for this method for this site:

B. Additional Attachments

Attach the following:

- Groundwater contour map.
- Groundwater contaminant distribution map (may be combined with contour map).
- When contaminants are aerobically biodegradable, attach a dissolved oxygen in groundwater map (dissolved oxygen may be combined with the contaminant data on a single map).
- Graph of contaminant concentrations versus time for the contaminant listed in A.1.a. (above) for the monitoring point with the greatest level of contamination.
- Groundwater contaminant chemistry table.
- Groundwater elevations table.
- Any other attachments required by the DNR for this remediation method.

Appendix D

Historical Soil Boring and Groundwater Monitoring Well Data
Abandoned Borings and Wells

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	MW-1
PROJECT NAME	**ENGINEER**
Chromium Contamination Assessment	

SITE LOCATION N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. + 769.98

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					SURFACE ELEVATION 767.89 (USGS)							
	1	SS			Dark brown sandy silt (ML) - little roots and grass - medium dense - topsoil	12						
	1A	SS										
	2	SS			Fill: Brown silty clay (CL) - trace of sand and gravel - medium dense	21/6"						
5	3	SS				15						
	4	SS				36						
	5	SS				37						
10	6	SS				29						
	7	SS			Brown silty clay (CL) - trace of gravel - medium dense to dense - glacial till - saturated at 13.0 feet	15						
15	8	SS				8						
	9	SS				6						
20	10	SS				6						
					End of Boring Boring advanced from 0.0 to 20.0 feet by power auger 2 inch diameter PVC observation well installed at 20.0 feet with protector pipe							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME
Dry	1-21-87		15.3	2-9-87	
Dry	1-22-87		9.0	3-26-87	
16.1	2-4-87				

BORING STARTED	1-19-87
BORING COMPLETED	1-19-87
RIG	Joy 15
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY	JJT
SHEET	1 OF 1
APP'D. BY	JWK
STS JOB NO.	13685

L: 5-983

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	MW-2
PROJECT NAME	**ENGINEER**
Chromium Contamination Assessment	

SITE LOCATION N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. + 770.63

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					SURFACE ELEVATION 768.53 (USGS)							
	1	SS			Dark brown sandy silt (ML) - trace of gravel, little roots - loose - topsoil	9						
	2	SS			Brown silty clay (CL) - trace of sand and gravel - trace of roots - medium dense - possible fill	10						
	3	SS				25						
	4	SS				26						
	5	SS				29						
15	6	SS			Brown silty clay (CL) - trace of gravel - medium dense - glacial till - saturated at 14.0 feet	23						
	7	SS				23						
20	8	SS				7						
	9	SS				6						
	10	SS				7						
					End of Boring Boring advanced from 0.0 to 20.0 feet by power auger 2 inch diameter PVC observation well installed at 20.0 feet with protector pipe							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	
14.3	1-21-87		8.1	2-9-87		
11.4	1-22-87		6.1	3-26-87		
7.7	2-4-87					

BORING STARTED	1-19-87
BORING COMPLETED	1-19-87
RIG	Joy 15
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY JJT	SHEET 1 OF 1
APP'D. BY JWK	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-2A
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 764.74

SURFACE ELEVATION +762.80

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
5			HS			No samples collected - see boring log of Boring 2							
10													
15			RB										
20													
		1	ST			Brown silty clay (CL) - trace of gravel - firm - wet - till		1.5					
25		2	ST					1.0					
30		3	ST					1.0					
35		4	ST					.75					
40		5	ST					.75					
42						End of Boring Boring advanced to 7.0 feet with power auger and from 7.0 to 42.0 feet with rock bit - 8.0 feet of 6 inch diameter temporary casing installed while drilling - 2 inch diameter monitoring well installed at 40.0 feet							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

/L		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME
8.96'	2-5-90				

BORING STARTED	1-29-90
BORING COMPLETED	1-29-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street, Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

: 5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-3
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION							
		1	SS			Dark brown clayey sandy silt (ML) - trace of gravel, little roots and gravel - loose - topsoil	5						
		1a	SS										
		2	SS			Brown silty clay (CL) - trace of gravel - loose - possible fill	6						
		3	SS				30						
		4	SS				26						
		5	SS				24						
10		6	SS			Brown silty clay (CL) - trace of gravel - medium dense - glacial till - saturated at 16.0 feet	20						
		7	SS				18						
12		8	SS				11						
		9	SS				6						
9.5		10	SS				9						
						End of Boring Boring advanced from 0.0 to 19.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL	BCR			ACR	
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED 1-14-87	STS OFFICE 540 Lambeau Street Green Bay, WI. 54303
BORING COMPLETED 1-14-87	DRAWN BY JJT
RIG Joy 15	SHEET 1 OF 1
FOREMAN RER	APP'D. BY JWK
	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International

LOG OF BORING NUMBER: B-4

PROJECT NAME: Chromium Contamination Assessment

ENGINEER:

SITE LOCATION: N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
SURFACE ELEVATION												
	1	SS			Dark brown clayey sandy silt (ML) - trace of gravel, little grass, roots - loose - topsoil	7						
	2	SS				9						
5	3	SS			Brown silty clay (CL) - trace of gravel - loose to medium dense - possible fill	25						
	4	SS				24						
	5	SS				6						
10	6	SS				17						
	7	SS			Brown silty clay (CL) - trace of gravel - loose to medium dense - glacial till - saturated at 10.0 feet	9						
15	8	SS				9						
	9	SS				7						
19.5	10	SS				7						
					End of Boring Boring advanced from 0.0 to 19.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

BCR WL-T. PIPE	DATE	TIME	ACR WL-T. PIPE	DATE	TIME

BORING STARTED 1-19-87
BORING COMPLETED 1-19-87
RIG Joy 15
FOREMAN RER

STS OFFICE 540 Lambeau Street, Green Bay, WI. 54303
DRAWN BY JJT
SHEET 1 OF 1
APP'D. BY JWK
STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-5
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 769.88

SURFACE ELEVATION 768.08 (USGS)

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					Concrete							
					Fill: Crushed stone							
	1	SS			Brown silty clay (CL) - trace of gravel - medium dense - possible fill	12						
5	2	SS				15						
	3	SS				26						
10	4	SS				12						
	5	SS				14						
15	6	SS				5						
	7	SS				6						
20	8	SS				6						
					Brown silty clay (CL) - trace of gravel - loose to medium dense - glacial till - saturated at 18.0 feet							
25	9	SS				5						
30	10	SS				6						
35	11	SS				6						
40												
41.5	12	SS				9						
					End of Boring Boring advanced from 0.0 to 17.5 feet by power auger - Boring advanced from 17.5 to 41.5 feet by roller bit and water 2 inch diameter PVC piezometer installed at 40 ft. with protector pipe - 7.0 feet of HW casing used							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL	BCR		ACR		
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME
5.2	1-21-87		25.3	2-9-87	
15.4	1-22-87		16.8	3-26-87	
26.6	2-4-87				

BORING STARTED	1-20-87
BORING COMPLETED	1-29-87
RIG	Joy 15
FOREMAN	RER
STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY	JJT
SHEET	1 OF 1
APP'D. BY	JWK
STS JOB NO.	13685

L: 5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-5A
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 765.29

SURFACE ELEVATION +762.41

FT	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
10			HS			No samples collected - see log of boring log MW-5							
20						End of Boring Boring advanced to 20.0 feet with power auger 2 inch diameter monitoring well installed at 20.0 feet							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WATER LEVEL OBSERVATIONS						
Dry WD		BCR			ACR	
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	

BORING STARTED	1-29-90	STS OFFICE	540 Lambeau Street Green Bay, WI 54303
BORING COMPLETED	1-29-90		
RIG	CME 75	DRAWN BY RLS	SHEET 1 OF 1
FOREMAN	BZ	APP'D. BY MAB	STS JOB NO. 16898XH

983

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	B-6
PROJECT NAME	**ENGINEER**
Chromium Contamination Assessment	

SITE LOCATION N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					SURFACE ELEVATION							
					Blacktop and crushed stone							
	1	SS				18						
5	2	SS				20						
	3	SS				23						
10	4	SS			Brown silty clay (CL) - trace of gravel - loose to medium dense - glacial till - saturated at 15.0 feet	15						
	5	SS				9						
15	6	SS				4						
	7	SS				5						
20	8	SS				5						
21.5					End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	

BORING STARTED	1-20-87
BORING COMPLETED	1-20-87
RIG	Joy 15
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY JJT	SHEET 1 OF 1
APP'D. BY JWK	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	B-7
PROJECT NAME	**ENGINEER**
Chromium Contamination Assessment	

SITE LOCATION

N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION							
						Blacktop and crushed stone							
		1	SS				30						
2.5		2	SS				14						
		3	SS			Brown silty clay (CL) - trace of gravel - loose to medium dense - glacial till - saturated at 15.0 feet	20						
10		4	SS				15						
		5	SS				9						
15		6	SS				9						
		7	SS				6						
20		8	SS				5						
21.5						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL	BCR		ACR		
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-20-87	STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
BORING COMPLETED	1-20-87	DRAWN BY JJT	SHEET 1 OF 1
RIG	Joy 15		
FOREMAN	RER	APP'D. BY JWK	STS JOB NO. 13685

S-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-8
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION							
						Fill: Blacktop, stone and clay							
		1	SS				19						
		2	SS			Brown to yellowish brown slightly clayey silt (ML) trace of fine to coarse sand - moist at 5.0 feet - medium dense	16						
		3	SS				28						
10		4	SS				17						
		5	SS			Brown silty clay (CL) - trace of fine to medium sand - trace of organics at 12.5 feet - loose to medium dense - moist	8						
15		6	SS				7						
		7	SS				7						
20		8	SS			Brown to pale olive silty clay (CL) - trace of fine sand and wood - pale olive by wood - moist	5						
21.5						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring bacfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	

BORING STARTED	1-20-87
BORING COMPLETED	1-20-87
RIG	Joy 15
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY	JJT
SHEET	1 OF 1
APP'D. BY	JWK
STS JOB NO.	13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-9
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
SURFACE ELEVATION												
	1	SS			Fill: Yellowish brown silty gravelly fine sand (SM) - little fine gravel - little silt - loose to medium dense	5						
5	2	SS				18						
	3	SS				27						
10	4	SS				16						
	5	SS			Brown silty clay (CL) - trace of fine sand - trace of coarse sand - thin streaks of gray clay 12.5 to 14.0 feet - streaks of fine to medium sand at 15.0 to 16.5 feet - moist at 19.0 feet - loose to medium dense	9						
15	6	SS				6						
	7	SS				6						
20												
21.5	8	SS				5						
					End of Boring Boring advanced from 0.0 to 215. feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 15
FOREMAN	RER
STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY	JJT
SHEET	1 OF 1
APP'D. BY	JWK
STS JOB NO.	13685

IL: 5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-10
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 767.46

SURFACE ELEVATION 767.80 (USGS)

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
		1	SS			Brown clayey sandy silt (ML) - trace of fine gravel - medium dense	23						
5		2	SS				22						
		3	SS				18						
10		4	SS				11						
		5	SS			Brown silty clay (CL) - trace of sand - fractured at 10.0 feet - moist at 20.0 feet - loose to medium dense	11						
15		6	SS				11						
		7	SS				6						
20													
21.5		8	SS				5						
						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger 2 inch diameter PVC observation well installed at 20.0 feet with protector pipe							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME
Dry	1-21-87		6.1	3-26-87	
7.5	1-22-87				
6.5	2-9-87				

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 12
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY JJT	SHEET 1 OF 1
APP'D. BY JWK	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-11
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 768.65

SURFACE ELEVATION 768.90 (USGS)

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
		1	SS				20						
5		2	SS			Brown silty clay (CL) - 2" topsoil - medium dense	24						
		3	SS				24						
10		4	SS				17						
		5	SS				8						
15		6	SS			Brown silty clay (CL) - trace of sand and gravel - moist at 15.0 feet - loose	5						
		7	SS				6						
20		8	SS				6						
21.5						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger 2 inch diameter PVC observation well installed at 20.0 feet with protector pipe							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL	BCR		ACR		
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME
Dry	1-21-87		3.1	3-26-87	
Dry	1-22-87				
6.3	2-9-87				

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 12
FOREMAN	RER
STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY	JJT
SHEET	1 OF 1
APP'D. BY	JWK
STS JOB NO.	13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-12
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + _____

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION							
		1	SS			Dark brown silty clay (CL) - medium dense	12						
5		2	SS				23						
		3	SS				23						
10		4	SS			Brown silty clay (CL) - trace of sand and gravel - fractured - moist at 15.0 feet - loose to medium dense	16						
		5	SS				12						
15		6	SS				6						
		7	SS				5						
20		8	SS				5						
21.5						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 12
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY JJT	SHEET 1 OF 1
APP'D. BY JWK	STS JOB NO. 13685

L: 5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-13
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH / ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
SURFACE ELEVATION												
	1	SS			Fill: Dark brown to brown silty clay (CL) - trace of gravel - medium dense	10						
5	2	SS				27						
	3	SS				26						
10	4	SS			Brown silty clay (CL) - trace of sand and gravel - moist at 15.0 feet - medium dense	20						
	5	SS				13						
15	6	SS				17						
	7	SS			Gray to brown silty clay (CL) - trace of sand - some wood - loose	4						
20	8	SS			Brown silty clay (CL) - trace of coarse sand - loose	6						
21.5					End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME	

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 12
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY: JJT	SHEET 1 OF 1
APP'D. BY: JWK	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-14
PROJECT NAME: Chromium Contamination Assessment	ENGINEER
TE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
SURFACE ELEVATION												
	1	SS			Fill: Brown silty clay (CL) - some sand - trace of gravel - slight yellow stain on gravel - medium dense	11						
	2	SS				27						
	3	SS				20						
	4	SS			Brown silty clay (CL) - trace to a little sand - trace of gravel - fractured to 14.0 feet - moist at 15.0 feet - loose to medium dense	20						
	5	SS				12						
	6	SS				6						
	7	SS				6						
-21.5	8	SS				13						
					End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

BCR			ACR		
L-T PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-21-87
BORING COMPLETED	1-21-87
RIG	Joy 12
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303
DRAWN BY JJT	SHEET 1 OF 1
APP'D. BY JWK	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	B-15
PROJECT NAME	**ENGINEER**
Chromium Contamination Assessment	

SITE LOCATION N. Meade Street, Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION							
		1	SS			Brown silty clay (CL) - little sand - trace of gravel - medium dense	16						
5		2	SS		LS		26						
		3	SS				26						
10		4	SS				17						
		5	SS				9						
15		6	SS			Brown silty clay (CL) - trace of sand and gravel - moist at 15.0 to 16.5 feet - loose to medium dense	6						
		7	SS				6						
20		8	SS				5						
21.5						End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-4-87
BORING COMPLETED	2-4-87
RIG	#12
FOREMAN	RER

STS OFFICE	540 Lambeau Street Green Bay, WI. 54303		
DRAWN BY	JJT	SHEET 1	OF 1
APP'D. BY	JWK	STS JOB NO.	13685

C 5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-16
PROJECT NAME: Chromium Contamination Assessment	ENGINEER:
SITE LOCATION: N. Meade Street, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +_____

ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
TH					SURFACE ELEVATION							
	1	SS			Fill: Brown silty clay (CL) - trace of sand - some gravel - loose	5						
2	2	SS				24						
	3	SS				28						
10	4	SS				13						
	5	SS			Brown silty clay (CL) - trace of sand and gravel - fractured - moist at 12.0 to 15.5 feet - loose to medium dense	9						
15	6	SS				7						
	7	SS				6						
20												
21.5	8	SS				6						
					End of Boring Boring advanced from 0.0 to 21.5 feet by power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR		ACR	
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED 2-4-87	STS OFFICE 540 Lambeau Street Green Bay, WI. 54303
BORING COMPLETED 2-4-87	DRAWN BY JJT
RIG #12	SHEET 1 OF 1
FOREMAN RER	APP'D. BY JWK
	STS JOB NO. 13685

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-17
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. + 771.84

SURFACE ELEVATION +769.07

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
5													
10			HS			No samples collected - see boring log of MW-17A							
15													
20						End of Boring Boring advanced to 20.0 feet with power auger 2 inch diameter Schedule 40 PVC monitoring well installed at 20.0 feet							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-31-90
BORING COMPLETED	1-31-90
RIG	CME 45
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: MW-17A
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.

SITE LOCATION: Former Albany International Chromium Facility, Appleton, Wisconsin

WELL INSTALLATION TOP STANDPIPE EL. + 771.07

SURFACE ELEVATION +769.02

FT ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
	1	PA			Brown sand and gravel - fill							
	2	ST			Red silty clay - fill							
					Black peat - trace of roots - trace of cinders - dry - topsoil							
5	3	ST					4.5+					
					Reddish brown silty clay (CL) - trace of gravel - trace of cobbles - very stiff to very hard - damp - till							
	4	ST					3.75					
10	5	ST					3.5					
	6	ST			Reddish brown silty clay (CL) - stiff - damp - till		1.0					
15	7	ST			Brown silty clay (CL) - trace of gravel - trace of silt and very fine sand layers-moist-firm-till							
	8	ST					1.0					
20	9	ST					.5					
					Brown silty clay (CL) - trace of gravel - very soft to soft - wet - till							
25	10	ST					.25					
30	11	ST					.5					
35	12	ST					.75					
40	13	ST					1.5					
42					End of Boring Boring advanced to 20.0 feet with power auger and from 20.0 to 42.0 feet with rock bit 10.0 feet of 6 inch diameter temporary casing installed while drilling 2 inch diameter Schedule 40 PVC monitoring well installed at 40.0 feet							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL	BCR		ACR		
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-30-90
BORING COMPLETED	1-30-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street, Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-18
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +_____

SURFACE ELEVATION +768.94

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
		1	PA			Fill: Brown sand and gravel							
		2	ST					4.5+					
5		3	ST			Reddish brown silty clay (CL) - trace of gravel - yellowish brown silt laminations - very stiff to very hard - damp - fractured - till		3.75					
		4	ST					3.75					
10		5	ST					1.75					
		6	ST					3.50					
13		7	ST			Reddish brown to brown silty clay (CL) - stiff - moist - till		.75					
		8	ST			Brown silty clay (CL) - firm - wet - till		.50					
20													
22		9	ST					1.75					
						End of Boring Boring advanced to 22.0 feet with power auger Boring backfilled with granular bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL			BCR		ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-1-90
BORING COMPLETED	2-1-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-19
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility, Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +_____

ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					SURFACE ELEVATION +768.98							
	1	AS			Fill: Brown sand and gravel							
	2	ST			Reddish brown silty clay (CL) - trace of gravel - trace of medium sand from 10.0 to 12.0 feet - very hard - damp - fractured - till		4.5+					
	3	ST					4.5+					
10	4	ST					4.5+					
	5	ST					4.5+					
15	6	ST					4.5+					
	7	ST			Brown silty clay (CL) - firm - wet - till		.75					
20	8	ST					.75					
22	9	ST					.75					
					End of Boring Boring advanced to 22.0 feet with power auger Boring backfilled with granular bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

AL		BCR			ACR
WL-T PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	1-31-90
BORING COMPLETED	1-31-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street, Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-20
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +_____

SURFACE ELEVATION +769.01

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
		1	PA			Fill: Brown sand and gravel							
		2	ST			Reddish brown silty clay (CL) - trace of gravel - yellowish brown fine sand laminations from 3.0 to 3.5 feet - trace of coarse sand from 5.0 to 7.0 feet - 1/4 inch thick yellowish brown fine sand lense at 8.0 feet - very hard - damp - fractured-till		4.5+					
		3	ST					4.5+					
10		4	ST					4.5+					
		5	ST			Reddish brown silty clay (CL) - very stiff - moist - fractured - till		3.5					
15		6	ST			Reddish brown silty clay (CL) - trace of gravel - very stiff - moist - till		2.25					
		7	ST			Brown silty clay (CL) - trace of gravel from 15.0 to 17.0 feet - firm - wet - till		.75					
20		8	ST					.5					
22		9	ST					.5					
						End of Boring Boring advanced to 22.0 feet with power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR		ACR	
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-1-90
BORING COMPLETED	2-1-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER Albany International	**LOG OF BORING NUMBER** B-21
PROJECT NAME Site Remediation	**ENGINEER** STS Consultants, Ltd.

SITE LOCATION Former Albany International Chromium Facility
Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION +769.04							
		1	PA			Fill: Brown sand and gravel							
		2	ST					4.5+					
3		3	ST			Reddish brown silty clay (CL) - trace of gravel - very hard - damp - fractured from 5.0 to 10.0 feet - till		4.5+					
		4	ST					4.5+					
10		5	ST					4.5+					
		6	ST			Reddish brown silty clay (CL) - trace of coarse sand - trace of gravel - stiff - moist - till		1.75					
15		7	ST					1.0					
		8	ST			Brown silty clay (CL) - trace of gravel - firm - wet - till		.5					
20		9	ST					.5					
22						End of Boring Boring advanced to 22.0 feet with power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

VL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-1-90
BORING COMPLETED	2-1-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER: Albany International	LOG OF BORING NUMBER: B-22
PROJECT NAME: Site Remediation	ENGINEER: STS Consultants, Ltd.
SITE LOCATION: Former Albany International Chromium Facility Appleton, Wisconsin	

WELL INSTALLATION
TOP STANDPIPE EL. +

DEPTH	ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
						SURFACE ELEVATION +769.07							
		1	PA			Fill: Brown sand and gravel							
		2	ST					4.5+					
5		3	ST			Reddish brown silty clay (CL) - trace of gravel - trace of coarse sand from 7.0 to 9.0 feet - very hard - damp - fractured from 5.0 to 7.0 feet - till		4.5+					
		4	ST					4.5+					
10		5	ST					4.5+					
		6	ST			Reddish brown silty clay (CL) - trace of gravel - very stiff - moist - till		2.75					
15		7	ST					.50					
		8	ST			Brown silty clay (CL) - trace of gravel from 20.0 to 22.0 feet - firm to stiff - wet - till		.75					
20													
22		9	ST					.50					
						End of Boring Boring advanced to 22.0 feet with power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-1-90
BORING COMPLETED	2-1-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY RLS	SHEET 1 OF 1
APP'D. BY MAB	STS JOB NO. 16898XH

5-983

STS Consultants Ltd.

OWNER	LOG OF BORING NUMBER
Albany International	B-23
PROJECT NAME	**ENGINEER**
Site Remediation	STS Consultants, Ltd.

SITE LOCATION Former Albany International Chromium Facility
Appleton, Wisconsin

WELL INSTALLATION
TOP STANDPIPE EL. +

ELEVATION	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	STANDARD PENETRATION TEST, N (B/FT)	UNCONFINED COMPRESSIVE STRENGTH, Qp (TONS/FT²)	WATER CONTENT, %	UNIT DRY WEIGHT (LBS/FT³)	LIQUID/PLASTIC LIMIT LL/PL	PERCENT PASSING #200 SIEVE	PERMEABILITY, K (CM/SEC)
					SURFACE ELEVATION +769.12							
	1	PA			Fill: Brown sand and gravel							
	2	ST			Reddish brown silty clay (CL) - trace of gravel - trace of coarse sand from 3.0 to 4.0 feet - very hard - damp - fractured from 5.0 to 7.0 feet - till		4.5+					
	3	ST					4.5+					
	4	ST					4.5+					
	5	ST					4.5+					
	6	ST			Reddish brown silty clay (CL) - trace of gravel - very stiff - moist - till		2.0					
14.5					End of Boring Boring advanced to 14.5 feet with power auger Boring backfilled with bentonite							

The stratification lines represent the approximate boundary between soil types. In situ, the transition may be gradual. Water levels were measured at the times indicated. Water levels may vary seasonally.

WL		BCR			ACR
WL-T. PIPE	DATE	TIME	WL-T. PIPE	DATE	TIME

BORING STARTED	2-1-90
BORING COMPLETED	2-1-90
RIG	CME 75
FOREMAN	BZ

STS OFFICE	540 Lambeau Street Green Bay, WI 54303
DRAWN BY	RLS
SHEET	1 OF 1
APP'D. BY	MAB
STS JOB NO.	16898XH

5-983

CHEMISTS ENGINEERS

BADGER LABORATORIES & ENGINEERING CO. INC.

1110 S. ONEIDA STREET • APPLETON, WISCONSIN 54915 • (414) 739-9213

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STS Project No. 16898XH
Forty-Five (45) Soil Samples
Received February 5, 1990
Sampled By: Client

Our Report No. 200856
Issued February 26, 1990

STS CONSULTANTS, LTD.
540 Lambeau Street
Green Bay, WI 54303

Att'n: Mr. Mark Bergeron

Request: Total and EP Toxicity Chromium determination as listed below.

Results:

	Chromium, Total ppm. Wet Weight Basis	Chromium, EP Toxicity mg/l.
18-2	26.1	NR
18-3	46.7	NR
18-4	38.7	NR
18-5	40.0	NR
18-6	26.6	NR
18-7	23.9	NR
18-8	20.9	NR
18-9	20.2	NR
19-2	164	<0.04
19-3	105	0.40
19-4	138	1.7
19-5	103	2.8
19-6	42.8	NR
19-7	24.7	NR
19-8	23.6	NR
19-9	22.6	NR
20-2	96.2	NR
20-3	111	0.97
20-4	138	4.0
20-5	340	10.1
20-6	167	4.5
20-7	20.5	NR
20-8	22.2	NR
20-9	22.2	NR
21-2	138	<0.04
21-3	148	0.24
21-4	170	4.3
21-5	439	10.9

	Chromium, Total ppm. Wet Weight Basis	Chromium, EP Toxicity mg/l.
21-6	596	21.5
21-7	280	1.8
21-8	20.4	NR
21-9	19.6	NR
22-2	472	<0.04
22-3	150	<0.04
22-4	121	1.2
22-5	184	5.0
22-6	510	15.0
22-7	21.0	NR
22-8	20.9	NR
22-9	21.8	NR
23-2	20.4	NR
23-3	108	0.83
23-4	142	3.4
23-5	203	7.0
23-6	140	4.1

Method: Test Methods for Evaluating Solid Waste, EPA, 1982, SW-846.

BADGER LABORATORIES & ENGINEERING
WDNR Certified Lab #445023150

Carla M Brown

Carla M. Brown
Lab Analyst

CMB:mw

Chain of Custody Enclosed.

WELL DATA SUMMARY SHEET

June 11, 1991

Total Chromium*

(parts per million)

Well No.	3-31-89	6-30-89	9-28-89	12-14-89	3-30-90	6-21-90	9-27-90	12-12-90	3-26-91	6-11-91		
MW-1	<.001	.0037	<.10	<.04	.06	<0.04	<0.04	<0.04	0.07	<0.04		
MW-2	.083	.073	.13	.05	.07	0.09	0.05	0.05	<0.04	0.04		
MW-2A					<.04	<0.04	0.05	0.06	0.05	<0.04		
MW-5	18.80	1.55	3.4	4.4	14.1	1.8	0.75	1.32	2.69	1.8		
MW-5A					34.4	39.3	57.1	47.8	43.3	41		
MW-10	**	<.10	<.10	<.04	.07	0.05	<0.04	<0.04	<0.04	<0.04		
MW-11	14.30	40.90	24.5	9.2	18.0	31.3	28.1	19.1	11.2	14		
MW-17					<.04	0.09	<0.04	<0.04	<0.04	<0.04		
MW-17A					.04	<0.04	<0.04	<0.04	<0.04	<0.04		

* Analyses were run by Badger Laboratories

** Flush mounted well cap jammed

Appendix E

Laboratory Analytical Data

CHEMISTS
ENGINEERS

BADGER LABORATORIES & ENGINEERING INC.
501 WEST BELL STREET • NEENAH, WISCONSIN 54956-4868 • EST. 1966
(920) 729-1100 • FAX (920) 729-4945 • 1-800-776-7196

ALBANY INTERNATIONAL-APPLETON
253 TROY RD
RENSSLEAER, NY 12144-

Report Number: 17001266
Report Date: 1/26/2017
Sampled By: Client

PO#: 4500 208835
Samples: 13 WASTEWATERS/ GROUNDWATERS

Sample Number: 47002905
Description: MW-05
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	174	ug/l	20	67	1	SM3111D	01/19/17	
HEX CHROME	171	ug/l	19	63	9.5	SM3500CrB	01/11/17	

Sample Number: 47002906
Description: MW-05A
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	0.71	ug/l	0.20	0.66	1	SM3113B	01/24/17	
HEX CHROME	<2.0	ug/l	2.0	6.0	1	SM3500CrB	01/11/17	

Sample Number: 47002907
Description: MW-19
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	14320	ug/l	200	666	10	SM3111D	01/19/17	
HEX CHROME	16000	ug/l	190	633	95	SM3500CrB	01/11/17	

Sample Number: 47002908
Description: MW-19A
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	3.0	ug/l	0.20	0.66	1	SM3113B	01/24/17	
HEX CHROME	<2.0	ug/l	2.0	6.0	1	SM3500CrB	01/11/17	

Sample Number: 47002909
Description: MW-20
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	389925	ug/l	7100	23643	355	SM3111D	01/19/17	
HEX CHROME	324000	ug/l	2000	6660	1000	SM3500CrB	01/11/17	

Sample Number: 47002910
Description: MW-20A
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	65	ug/l	2.0	6.7	10	SM3113B	01/24/17	
HEX CHROME	<19	ug/l	19	63	9.5	SM3500CrB	01/11/17	

Sample Number: 47002911
Description: BLND FUP
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	311300	ug/l	5885	19597	294	SM3111D	01/19/17	
HEX CHROME	384000	ug/l	2000	6660	1000	SM3500CrB	01/11/17	

Sample Number: 47002912
Description: MW-21
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	1.1	ug/l	0.20	0.66	1	SM3113B	01/24/17	
HEX CHROME	<19	ug/l	19	63	9.5	SM3500CrB	01/11/17	

Sample Number: 47002913
Description: MW-21A
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,DISSOLVED	0.77	ug/l	0.20	0.66	1	SM3113B	01/24/17	
HEX CHROME	<19	ug/l	19	63	9.5	SM3500CrB	01/11/17	

Sample Number: 47002914
Description: MANOLE
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,TOTAL REC	2.9	mg/l	0.06	0.20	3	SM3111D	01/16/17	
HEX CHROME	2900	ug/l	38	127	19	SM3500CrB	01/11/17	
TURBIDITY-LAB	0.25	NTU	0	0		EPA180.1	01/12/17	

Sample Number: 47002915
Description: SUMP
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,TOTAL REC	24	mg/l	0.44	1.5	22	SM3111D	01/16/17	
HEX CHROME	23000	ug/l	380	1265	190	SM3500CrB	01/11/17	
METALS DIGESTION	DONE		0	0		EPA200.2	01/13/17	

CHEMISTS
ENGINEERS

BADGER LABORATORIES & ENGINEERING INC.
501 WEST BELL STREET • NEENAH, WISCONSIN 54956-4868 • EST. 1966
(920) 729-1100 • FAX (920) 729-4945 • 1-800-776-7196

Sample Number: 47002916
Description: CANISTER A
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,TOTAL REC	2.8	mg/l	0.06	0.20	3	SM3111D	01/16/17	
TURBIDITY-LAB	0.25	NTU	0	0		EPA180.1	01/12/17	

Sample Number: 47002917
Description: OUTFALL 001
Sample Date: 1/10/2017
Date Received: 1/10/2017

Parameter	Results	Units	LOD	LOQ	Dil.	Method	Analyzed	Codes
CHROMIUM,TOTAL REC	0.22	mg/l	0.02	0.06	1	SM3111D	01/16/17	
TURBIDITY-LAB	0.20	NTU	0	0		EPA180.1	01/12/17	

All LOD/LOQs adjusted for dilution and/or solids content.

BADGER LABS & ENGINEERING
WDNR Certified Lab #445023150
Approved By:

Amanda Kordus

BLE:rt

BADGER LABORATORIES & ENGINEERING CO., INC.

SAMPLE RECEIPT FORM

17001266
1 of 2

CLIENT INFORMATION

COMPANY: Albany International
NAME:
ADDRESS: 253 Troy Road
Rensselaer, NY 12144
PHONE/ FAX:
P.O. #: 4500 208835
PROJECT/SITE: Appleton Chrome Site
REPORT & BILL TO: Monthly Billing No Report to Albany
ADDITIONAL REPORTS TO: John Stacey of DJC.

TURN AROUND TIME:
- [x] Normal
- [ ] Rush (Approval _____)

SAMPLE TYPE:
- [x] Groundwater
- [x] Wastewater
- [ ] WPDES
- [ ] Cooling Water
- [ ] Drinking Water
- [ ] Solid Waste
- [ ] Oil
- [ ] Other _____
- [ ] Lab Filtered
- [x] Field Filtered
- [ ] Grab
- [ ] Composite
- [ ] Flow Proportional
- [ ] Time Proportional

CUSTOMER SAMPLE ID	SAMPLE DATE/TIME	DATE REC'D	BL & E REPORT #	BL & E SAMPLE #	TEMP °	# OF CONTAINERS	Ice Y/N	DELIVERY METHOD: BLAE	CLIENT	UPS	OTHER	PRESERVATION: PIF	PIL	NON-PRES	H2SO4	HNO3	NAOH	OTHER	ANALYTICAL REQUESTS	pH ok	EP
MW-05	1/10/17 11:00AM	1/10/17	D66	2904		2			X					X		X			Total & Hex Chrom		
MW-05A				6		2			X					X		X					
MW-19				7		2			X					X		X					
MW-19A				8		2			X					X		X					
MW-20				9		2			X					X		X					
MW-20A				10		2			X					X		X					
Blind Duplicate				4		2			X					X		X					
MW-21				12		2			X					X		X					
MW-21A				13		2			X					X		X					
Manhole				14		2			X					X		X					

CHAIN OF CUSTODY RECORD

FILLED IN BY CUSTOMER
SAMPLED BY: John Stacey
DATE/TIME SAMPLED: 1/10/17 11:00 AM
RELINQUISHED BY:

FILLED IN BY BADGER LABS & ENG
RECEIVED BY: 13:00
DATE/TIME RECEIVED: JAN 10 2017
LOGGED IN:

* Temperature over 4°C are above EPA/DNR Protocol unless received on ice.
* EP= If pH was not correct, extra preservation was added until correct pH was achieved.
* PIF= Preserved in field.
* PIL= Preserved in lab.

samprct2.xls
11-26-08

BADGER LABORATORIES & ENGINEERING CO., INC.

SAMPLE RECEIPT FORM

2 of 2

CLIENT INFORMATION

COMPANY: Albany International
NAME:
ADDRESS: 253 Troy Road
Rensselaer, NY 12144
PHONE/ FAX:
P.O. #: 4500 208835
PROJECT/SITE: Appleton Chrome Site
REPORT & BILL TO: Monthly Billing No Report To Albany
ADDITIONAL REPORTS TO: John Stoeger & DJC.

TURN AROUND TIME:

- [x] Normal
- [ ] Rush (Approval _____)

SAMPLE TYPE:

- [x] Groundwater
- [x] Wastewater
- [ ] WPDES
- [ ] Cooling Water
- [ ] Drinking Water
- [ ] Solid Waste
- [ ] Oil
- [ ] Other _____
- [ ] Lab Filtered
- [x] Field Filtered
- [ ] Grab
- [ ] Composite
- [ ] Flow Proportional
- [ ] Time Proportional

CUSTOMER SAMPLE ID	SAMPLE DATE/TIME	DATE RECD	BL & E REPORT #	BL & E SAMPLE #	TEMP °	# OF CONTAINERS	Ice Y/N	DELIVERY METHOD: BL&E	CLIENT	UPS	OTHER	PRESERVATION: PIF	PIL	NON-PRES	H2SO4	HNO3	NAOH	OTHER	ANALYTICAL REQUESTS	pH ok	EP
~~Sump~~ Effluent	1/10/17 11:00AM	1/10	12466	29		2			X			7		X		X			Total & Hex Chrom		
Counter A	↓			14		1			X			↓				X			Total Chromium		
Outfall 001	↓			12		1			X			↓				X			Total Chromium		

CHAIN OF CUSTODY RECORD

FILLED IN BY CUSTOMER
SAMPLED BY: John Stoeger
DATE/TIME SAMPLED: 1/10/17 11:00AM
RELINQUISHED BY:

FILLED IN BY BADGER LABS & ENG
RECEIVED BY: 13:00
DATE/TIME RECEIVED: JAN 10 2017
LOGGED IN:

* Temperature over 4°C are above EPA/DNR Protocol unless received on ice.
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* PIF= Preserved in field.
* PIL= Preserved in lab.

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

April 14, 2017

Wayne Fassbender
Enviroforensics
N16 W23390 Stone Ridge Drive
Suite G
Waukesha, WI 53188

RE: Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Dear Wayne Fassbender:
Enclosed are the analytical results for sample(s) received by the laboratory on April 05, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
(920)469-2436
Project Manager

Enclosures

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40147765001	**MW-01**	Water	04/05/17 11:00	04/05/17 13:15
40147765002	**MW-02**	Water	04/05/17 11:00	04/05/17 13:15
40147765003	**MW-02A**	Water	04/05/17 11:00	04/05/17 13:15
40147765004	**MW-05**	Water	04/05/17 11:00	04/05/17 13:15
40147765005	**MW-05A**	Water	04/05/17 11:00	04/05/17 13:15
40147765006	**MW-10R**	Water	04/05/17 11:00	04/05/17 13:15
40147765007	**MW-17**	Water	04/05/17 11:00	04/05/17 13:15
40147765008	**MW-17A**	Water	04/05/17 11:00	04/05/17 13:15
40147765009	**MW-18**	Water	04/05/17 11:00	04/05/17 13:15
40147765010	**MW-18A**	Water	04/05/17 11:00	04/05/17 13:15
40147765011	**MW-19**	Water	04/05/17 11:00	04/05/17 13:15
40147765012	**MW-19A**	Water	04/05/17 11:00	04/05/17 13:15
40147765013	**MW-20**	Water	04/05/17 11:00	04/05/17 13:15
40147765014	**MW-20A**	Water	04/05/17 11:00	04/05/17 13:15
40147765015	**MW-21**	Water	04/05/17 11:00	04/05/17 13:15
40147765016	**MW-21A**	Water	04/05/17 11:00	04/05/17 13:15
40147765017	**BLIND DUPLICATE**	Water	04/05/17 11:00	04/05/17 13:15
40147765018	**TRIP BLANK**	Water	04/05/17 11:00	04/05/17 13:15
40147765019	**MANHOLE**	Water	04/05/17 11:00	04/05/17 13:15
40147765020	**SUMP**	Water	04/05/17 11:00	04/05/17 13:15
40147765021	**OUTFALL 001**	Water	04/05/17 11:00	04/05/17 13:15
40147765022	**CANISTER A**	Water	04/05/17 11:00	04/05/17 13:15

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40147765001	**MW-01**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765002	**MW-02**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765003	**MW-02A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765004	**MW-05**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765005	**MW-05A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765006	**MW-10R**	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765007	**MW-17**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765008	**MW-17A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765009	**MW-18**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765010	**MW-18A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765011	**MW-19**	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765012	**MW-19A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765013	**MW-20**	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765014	**MW-20A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765015	**MW-21**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765016	**MW-21A**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765017	**BLIND DUPLICATE**	EPA 6010	DLB	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40147765018	**TRIP BLANK**	EPA 8260	HNW	64	PASI-G
40147765019	**MANHOLE**	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765020	**SUMP**	EPA 6010	DLB	1	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
40147765021	**OUTFALL 001**	EPA 6010	DLB	8	PASI-G
		EPA 7470	AJT	1	PASI-G
		SM 3500-Cr B (Online)	DEY	1	PASI-G
		EPA 335.4	DAW	1	PASI-G
40147765022	**CANISTER A**	EPA 6010	DLB	1	PASI-G

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SUMMARY OF DETECTION

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40147765004	**MW-05**					
EPA 6010	Chromium, Dissolved	234	ug/L	10.0	04/13/17 11:22	
SM 3500-Cr B (Online)	Chromium, Hexavalent, Dissolved	0.24	mg/L	0.020	04/05/17 16:00	
40147765008	**MW-17A**					
EPA 6010	Chromium, Dissolved	44.2	ug/L	10.0	04/13/17 11:38	
40147765010	**MW-18A**					
EPA 6010	Chromium, Dissolved	14.8	ug/L	10.0	04/13/17 11:44	
40147765011	**MW-19**					
EPA 6010	Chromium, Dissolved	24700	ug/L	10.0	04/13/17 11:47	
EPA 8260	1,1-Dichloroethane	0.26J	ug/L	1.0	04/07/17 11:50	
EPA 8260	cis-1,2-Dichloroethene	3.1	ug/L	1.0	04/07/17 11:50	
EPA 8260	Tetrachloroethene	8.7	ug/L	1.0	04/07/17 11:50	
EPA 8260	1,1,1-Trichloroethane	2.5	ug/L	1.0	04/07/17 11:50	
EPA 8260	Trichloroethene	3.3	ug/L	1.0	04/07/17 11:50	
SM 3500-Cr B (Online)	Chromium, Hexavalent, Dissolved	25.0	mg/L	5.0	04/05/17 16:00	
40147765012	**MW-19A**					
EPA 6010	Chromium, Dissolved	4.2J	ug/L	10.0	04/13/17 11:49	
40147765013	**MW-20**					
EPA 6010	Chromium, Dissolved	262000	ug/L	100	04/13/17 13:42	
EPA 8260	cis-1,2-Dichloroethene	0.31J	ug/L	1.0	04/07/17 12:13	
SM 3500-Cr B (Online)	Chromium, Hexavalent, Dissolved	242	mg/L	10.0	04/05/17 16:00	
40147765014	**MW-20A**					
EPA 6010	Chromium, Dissolved	23.1	ug/L	10.0	04/13/17 11:55	
40147765017	**BLIND DUPLICATE**					
EPA 6010	Chromium, Dissolved	254000	ug/L	100	04/13/17 13:44	
SM 3500-Cr B (Online)	Chromium, Hexavalent, Dissolved	248	mg/L	10.0	04/05/17 16:00	
40147765019	**MANHOLE**					
EPA 6010	Chromium	1720	ug/L	10.0	04/07/17 16:05	
EPA 8260	cis-1,2-Dichloroethene	21.4	ug/L	1.0	04/07/17 14:30	
EPA 8260	trans-1,2-Dichloroethene	0.58J	ug/L	1.0	04/07/17 14:30	
EPA 8260	Tetrachloroethene	0.79J	ug/L	1.0	04/07/17 14:30	
EPA 8260	Trichloroethene	3.3	ug/L	1.0	04/07/17 14:30	
SM 3500-Cr B (Online)	Chromium, Hexavalent	1.9	mg/L	0.17	04/05/17 16:00	
40147765020	**SUMP**					
EPA 6010	Chromium	11400	ug/L	10.0	04/07/17 16:08	
EPA 8260	cis-1,2-Dichloroethene	1.0	ug/L	1.0	04/07/17 17:33	
SM 3500-Cr B (Online)	Chromium, Hexavalent	12.2	mg/L	4.3	04/05/17 16:00	1q
40147765021	**OUTFALL 001**					
EPA 6010	Aluminum	91.4J	ug/L	500	04/07/17 15:51	
EPA 6010	Chromium	67.4	ug/L	10.0	04/07/17 15:51	
EPA 6010	Copper	10.6J	ug/L	20.0	04/07/17 15:51	
EPA 6010	Nickel	3.0J	ug/L	10.0	04/07/17 15:51	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

SUMMARY OF DETECTION

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40147765021	**OUTFALL 001**					
EPA 6010	Zinc	15.2J	ug/L	40.0	04/07/17 15:51	
SM 3500-Cr B (Online)	Chromium, Hexavalent	0.068	mg/L	0.017	04/05/17 16:00	
40147765022	**CANISTER A**					
EPA 6010	Chromium	890	ug/L	10.0	04/07/17 16:11	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-01 **Lab ID: 40147765001** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:09	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-02 **Lab ID: 40147765002** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:17	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-02A **Lab ID: 40147765003** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:19	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-05 **Lab ID: 40147765004** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**234**	ug/L	10.0	2.5	1		04/13/17 11:22	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**0.24**	mg/L	0.020	0.0039	1		04/05/17 16:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-05A **Lab ID: 40147765005** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:25	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-10R **Lab ID: 40147765006** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:33	7440-47-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:07	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 14:07	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 14:07	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:07	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:07	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 14:07	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 14:07	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 14:07	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:07	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:07	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 14:07	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 14:07	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/07/17 14:07	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 14:07	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 14:07	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 14:07	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 14:07	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:07	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 14:07	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 14:07	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:07	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 14:07	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 14:07	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:07	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 14:07	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 14:07	91-20-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-10R **Lab ID: 40147765006** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:07	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 14:07	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 14:07	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:07	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 14:07	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		04/07/17 14:07	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:07	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:07	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 14:07	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:07	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		04/07/17 14:07	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/07/17 14:07	1868-53-7	
Toluene-d8 (S)	88	%	70-130		1		04/07/17 14:07	2037-26-5	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-17 **Lab ID: 40147765007** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:35	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-17A **Lab ID: 40147765008** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**44.2**	ug/L	10.0	2.5	1		04/13/17 11:38	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-18 **Lab ID: 40147765009** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:41	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-18A **Lab ID: 40147765010** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**14.8**	ug/L	10.0	2.5	1		04/13/17 11:44	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-19 **Lab ID: 40147765011** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**24700**	ug/L	10.0	2.5	1		04/13/17 11:47	7440-47-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 11:50	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 11:50	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 11:50	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 11:50	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 11:50	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 11:50	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 11:50	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 11:50	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 11:50	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 11:50	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 11:50	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 11:50	75-71-8	
1,1-Dichloroethane	**0.26J**	ug/L	1.0	0.24	1		04/07/17 11:50	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 11:50	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 11:50	75-35-4	
cis-1,2-Dichloroethene	**3.1**	ug/L	1.0	0.26	1		04/07/17 11:50	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 11:50	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 11:50	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 11:50	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 11:50	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 11:50	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 11:50	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 11:50	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 11:50	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 11:50	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 11:50	91-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-19 **Lab ID: 40147765011** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 11:50	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 11:50	79-34-5	
Tetrachloroethene	**8.7**	ug/L	1.0	0.50	1		04/07/17 11:50	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 11:50	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 11:50	120-82-1	
1,1,1-Trichloroethane	**2.5**	ug/L	1.0	0.50	1		04/07/17 11:50	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 11:50	79-00-5	
Trichloroethene	**3.3**	ug/L	1.0	0.33	1		04/07/17 11:50	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 11:50	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 11:50	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 11:50	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 11:50	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		04/07/17 11:50	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		04/07/17 11:50	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		04/07/17 11:50	2037-26-5	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**25.0**	mg/L	5.0	0.97	250		04/05/17 16:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-19A **Lab ID: 40147765012** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**4.2J**	ug/L	10.0	2.5	1		04/13/17 11:49	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-20 **Lab ID: 40147765013** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**262000**	ug/L	100	25.3	10		04/13/17 13:42	7440-47-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 12:13	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 12:13	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 12:13	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 12:13	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 12:13	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 12:13	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 12:13	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 12:13	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 12:13	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 12:13	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 12:13	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 12:13	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/07/17 12:13	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 12:13	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 12:13	75-35-4	
cis-1,2-Dichloroethene	**0.31J**	ug/L	1.0	0.26	1		04/07/17 12:13	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 12:13	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 12:13	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 12:13	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 12:13	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 12:13	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 12:13	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 12:13	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 12:13	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 12:13	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 12:13	91-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-20 **Lab ID: 40147765013** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 12:13	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 12:13	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 12:13	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 12:13	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 12:13	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		04/07/17 12:13	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 12:13	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 12:13	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 12:13	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 12:13	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	85	%	70-130		1		04/07/17 12:13	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		1		04/07/17 12:13	1868-53-7	
Toluene-d8 (S)	89	%	70-130		1		04/07/17 12:13	2037-26-5	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**242**	mg/L	10.0	1.9	500		04/05/17 16:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-20A **Lab ID: 40147765014** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**23.1**	ug/L	10.0	2.5	1		04/13/17 11:55	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-21 **Lab ID: 40147765015** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 11:57	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MW-21A **Lab ID: 40147765016** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		04/13/17 12:05	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**<0.0039**	mg/L	0.020	0.0039	1		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: BLIND DUPLICATE **Lab ID: 40147765017** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Chromium, Dissolved	**254000**	ug/L	100	25.3	10		04/13/17 13:44	7440-47-3	
Chromium, Dissolved Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent, Dissolved	**248**	mg/L	10.0	1.9	500		04/05/17 16:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: TRIP BLANK **Lab ID: 40147765018** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 15:39	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 15:39	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 15:39	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 15:39	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 15:39	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 15:39	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 15:39	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 15:39	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 15:39	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 15:39	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 15:39	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 15:39	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/07/17 15:39	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 15:39	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 15:39	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 15:39	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 15:39	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 15:39	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 15:39	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 15:39	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 15:39	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 15:39	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 15:39	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 15:39	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 15:39	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 15:39	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 15:39	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: TRIP BLANK **Lab ID: 40147765018** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 15:39	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 15:39	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 15:39	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 15:39	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		04/07/17 15:39	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 15:39	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 15:39	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 15:39	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 15:39	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	89	%	70-130		1		04/07/17 15:39	460-00-4	
Dibromofluoromethane (S)	108	%	70-130		1		04/07/17 15:39	1868-53-7	
Toluene-d8 (S)	88	%	70-130		1		04/07/17 15:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MANHOLE **Lab ID: 40147765019** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**1720**	ug/L	10.0	2.5	1	04/07/17 08:50	04/07/17 16:05	7440-47-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:30	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 14:30	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 14:30	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:30	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:30	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 14:30	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 14:30	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 14:30	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:30	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:30	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 14:30	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 14:30	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/07/17 14:30	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 14:30	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 14:30	75-35-4	
cis-1,2-Dichloroethene	**21.4**	ug/L	1.0	0.26	1		04/07/17 14:30	156-59-2	
trans-1,2-Dichloroethene	**0.58J**	ug/L	1.0	0.26	1		04/07/17 14:30	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:30	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 14:30	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 14:30	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:30	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 14:30	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 14:30	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 14:30	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 14:30	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 14:30	91-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: MANHOLE **Lab ID: 40147765019** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:30	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 14:30	79-34-5	
Tetrachloroethene	**0.79J**	ug/L	1.0	0.50	1		04/07/17 14:30	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 14:30	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 14:30	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 14:30	79-00-5	
Trichloroethene	**3.3**	ug/L	1.0	0.33	1		04/07/17 14:30	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:30	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 14:30	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 14:30	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 14:30	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	88	%	70-130		1		04/07/17 14:30	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		04/07/17 14:30	1868-53-7	
Toluene-d8 (S)	88	%	70-130		1		04/07/17 14:30	2037-26-5	
Chromium, Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	**1.9**	mg/L	0.17	0.051	10		04/05/17 16:00		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: SUMP **Lab ID: 40147765020** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**11400**	ug/L	10.0	2.5	1	04/07/17 08:50	04/07/17 16:08	7440-47-3	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 17:33	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		04/07/17 17:33	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		04/07/17 17:33	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 17:33	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		04/07/17 17:33	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		04/07/17 17:33	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		04/07/17 17:33	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		04/07/17 17:33	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		04/07/17 17:33	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		04/07/17 17:33	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		04/07/17 17:33	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		04/07/17 17:33	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		04/07/17 17:33	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		04/07/17 17:33	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		04/07/17 17:33	75-35-4	
cis-1,2-Dichloroethene	**1.0**	ug/L	1.0	0.26	1		04/07/17 17:33	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		04/07/17 17:33	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		04/07/17 17:33	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		04/07/17 17:33	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		04/07/17 17:33	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		04/07/17 17:33	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 17:33	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		04/07/17 17:33	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		04/07/17 17:33	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		04/07/17 17:33	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		04/07/17 17:33	91-20-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: SUMP **Lab ID: 40147765020** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 17:33	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		04/07/17 17:33	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		04/07/17 17:33	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		04/07/17 17:33	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		04/07/17 17:33	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		04/07/17 17:33	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		04/07/17 17:33	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		04/07/17 17:33	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		04/07/17 17:33	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		04/07/17 17:33	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	87	%	70-130		1		04/07/17 17:33	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		04/07/17 17:33	1868-53-7	
Toluene-d8 (S)	87	%	70-130		1		04/07/17 17:33	2037-26-5	
Chromium, Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	**12.2**	mg/L	4.3	1.3	250		04/05/17 16:00		1q

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: OUTFALL 001 **Lab ID: 40147765021** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Aluminum	**91.4J**	ug/L	500	55.5	1	04/07/17 08:50	04/07/17 15:51	7429-90-5	
Arsenic	**<8.3**	ug/L	25.0	8.3	1	04/07/17 08:50	04/07/17 15:51	7440-38-2	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	04/07/17 08:50	04/07/17 15:51	7440-43-9	
Chromium	**67.4**	ug/L	10.0	2.5	1	04/07/17 08:50	04/07/17 15:51	7440-47-3	
Copper	**10.6J**	ug/L	20.0	6.3	1	04/07/17 08:50	04/07/17 15:51	7440-50-8	
Lead	**<4.3**	ug/L	13.0	4.3	1	04/07/17 08:50	04/07/17 15:51	7439-92-1	
Nickel	**3.0J**	ug/L	10.0	2.6	1	04/07/17 08:50	04/07/17 15:51	7440-02-0	
Zinc	**15.2J**	ug/L	40.0	9.3	1	04/07/17 08:50	04/07/17 15:51	7440-66-6	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/06/17 13:50	04/07/17 09:29	7439-97-6	
Chromium, Hexavalent	Analytical Method: SM 3500-Cr B (Online)								
Chromium, Hexavalent	**0.068**	mg/L	0.017	0.0051	1		04/05/17 16:00		
335.4 Cyanide, Total	Analytical Method: EPA 335.4 Preparation Method: EPA 335.4								
Cyanide	**<0.0068**	mg/L	0.023	0.0068	1	04/12/17 10:20	04/12/17 12:42	57-12-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Sample: CANISTER A **Lab ID: 40147765022** Collected: 04/05/17 11:00 Received: 04/05/17 13:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**890**	ug/L	10.0	2.5	1	04/07/17 08:50	04/07/17 16:11	7440-47-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 252501 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40147765001, 40147765002, 40147765003, 40147765004, 40147765005, 40147765006, 40147765007, 40147765008, 40147765009, 40147765010, 40147765011, 40147765012, 40147765013, 40147765014, 40147765015, 40147765016, 40147765017

METHOD BLANK: 1489711 Matrix: Water
Associated Lab Samples: 40147765001, 40147765002, 40147765003, 40147765004, 40147765005, 40147765006, 40147765007, 40147765008, 40147765009, 40147765010, 40147765011, 40147765012, 40147765013, 40147765014, 40147765015, 40147765016, 40147765017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Dissolved	ug/L	<2.5	10.0	04/13/17 11:04	

LABORATORY CONTROL SAMPLE: 1489712

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Dissolved	ug/L	500	530	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1489713 1489714

Parameter	Units	40147765001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Dissolved	ug/L	<2.5	500	500	513	512	103	102	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 252033 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40147765021

METHOD BLANK: 1487141 Matrix: Water
Associated Lab Samples: 40147765021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	04/07/17 08:33	

LABORATORY CONTROL SAMPLE: 1487142

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	88	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1487143 1487144

Parameter	Units	40147559001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.4	4.3	87	86	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 252119 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40147765019, 40147765020, 40147765021, 40147765022

METHOD BLANK: 1487720 Matrix: Water
Associated Lab Samples: 40147765019, 40147765020, 40147765021, 40147765022

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	<55.5	500	04/07/17 15:46	
Arsenic	ug/L	<8.3	25.0	04/07/17 15:46	
Cadmium	ug/L	<1.3	5.0	04/07/17 15:46	
Chromium	ug/L	<2.5	10.0	04/07/17 15:46	
Copper	ug/L	<6.3	20.0	04/07/17 15:46	
Lead	ug/L	<4.3	13.0	04/07/17 15:46	
Nickel	ug/L	<2.6	10.0	04/07/17 15:46	
Zinc	ug/L	<9.3	40.0	04/07/17 15:46	

LABORATORY CONTROL SAMPLE: 1487721

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	5060	101	80-120	
Arsenic	ug/L	500	458	92	80-120	
Cadmium	ug/L	500	473	95	80-120	
Chromium	ug/L	500	513	103	80-120	
Copper	ug/L	500	472	94	80-120	
Lead	ug/L	500	481	96	80-120	
Nickel	ug/L	500	477	95	80-120	
Zinc	ug/L	500	496	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1487722 1487723

Parameter	Units	40147765021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	91.4J	5000	5000	5070	5090	100	100	75-125	0	20	
Arsenic	ug/L	<8.3	500	500	467	464	93	93	75-125	1	20	
Cadmium	ug/L	<1.3	500	500	489	476	98	95	75-125	3	20	
Chromium	ug/L	67.4	500	500	561	550	99	97	75-125	2	20	
Copper	ug/L	10.6J	500	500	497	489	97	96	75-125	2	20	
Lead	ug/L	<4.3	500	500	462	451	92	90	75-125	2	20	
Nickel	ug/L	3.0J	500	500	463	456	92	91	75-125	2	20	
Zinc	ug/L	15.2J	500	500	483	476	94	92	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 251954 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40147765006, 40147765011, 40147765013, 40147765018, 40147765019, 40147765020

METHOD BLANK: 1486760 Matrix: Water
Associated Lab Samples: 40147765006, 40147765011, 40147765013, 40147765018, 40147765019, 40147765020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	04/07/17 06:52	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	04/07/17 06:52	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	04/07/17 06:52	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	04/07/17 06:52	
1,1-Dichloroethane	ug/L	<0.24	1.0	04/07/17 06:52	
1,1-Dichloroethene	ug/L	<0.41	1.0	04/07/17 06:52	
1,1-Dichloropropene	ug/L	<0.44	1.0	04/07/17 06:52	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	04/07/17 06:52	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	04/07/17 06:52	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	04/07/17 06:52	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	04/07/17 06:52	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	04/07/17 06:52	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	04/07/17 06:52	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	04/07/17 06:52	
1,2-Dichloroethane	ug/L	<0.17	1.0	04/07/17 06:52	
1,2-Dichloropropane	ug/L	<0.23	1.0	04/07/17 06:52	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	04/07/17 06:52	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	04/07/17 06:52	
1,3-Dichloropropane	ug/L	<0.50	1.0	04/07/17 06:52	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	04/07/17 06:52	
2,2-Dichloropropane	ug/L	<0.48	1.0	04/07/17 06:52	
2-Chlorotoluene	ug/L	<0.50	1.0	04/07/17 06:52	
4-Chlorotoluene	ug/L	<0.21	1.0	04/07/17 06:52	
Benzene	ug/L	<0.50	1.0	04/07/17 06:52	
Bromobenzene	ug/L	<0.23	1.0	04/07/17 06:52	
Bromochloromethane	ug/L	<0.34	1.0	04/07/17 06:52	
Bromodichloromethane	ug/L	<0.50	1.0	04/07/17 06:52	
Bromoform	ug/L	<0.50	1.0	04/07/17 06:52	
Bromomethane	ug/L	<2.4	5.0	04/07/17 06:52	
Carbon tetrachloride	ug/L	<0.50	1.0	04/07/17 06:52	
Chlorobenzene	ug/L	<0.50	1.0	04/07/17 06:52	
Chloroethane	ug/L	<0.37	1.0	04/07/17 06:52	
Chloroform	ug/L	<2.5	5.0	04/07/17 06:52	
Chloromethane	ug/L	<0.50	1.0	04/07/17 06:52	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	04/07/17 06:52	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	04/07/17 06:52	
Dibromochloromethane	ug/L	<0.50	1.0	04/07/17 06:52	
Dibromomethane	ug/L	<0.43	1.0	04/07/17 06:52	
Dichlorodifluoromethane	ug/L	<0.22	1.0	04/07/17 06:52	
Diisopropyl ether	ug/L	<0.50	1.0	04/07/17 06:52	
Ethylbenzene	ug/L	<0.50	1.0	04/07/17 06:52	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

METHOD BLANK: 1486760 Matrix: Water
Associated Lab Samples: 40147765006, 40147765011, 40147765013, 40147765018, 40147765019, 40147765020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	04/07/17 06:52	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	04/07/17 06:52	
m&p-Xylene	ug/L	<1.0	2.0	04/07/17 06:52	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	04/07/17 06:52	
Methylene Chloride	ug/L	<0.23	1.0	04/07/17 06:52	
n-Butylbenzene	ug/L	<0.50	1.0	04/07/17 06:52	
n-Propylbenzene	ug/L	<0.50	1.0	04/07/17 06:52	
Naphthalene	ug/L	<2.5	5.0	04/07/17 06:52	
o-Xylene	ug/L	<0.50	1.0	04/07/17 06:52	
p-Isopropyltoluene	ug/L	<0.50	1.0	04/07/17 06:52	
sec-Butylbenzene	ug/L	<2.2	5.0	04/07/17 06:52	
Styrene	ug/L	<0.50	1.0	04/07/17 06:52	
tert-Butylbenzene	ug/L	<0.18	1.0	04/07/17 06:52	
Tetrachloroethene	ug/L	<0.50	1.0	04/07/17 06:52	
Toluene	ug/L	<0.50	1.0	04/07/17 06:52	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	04/07/17 06:52	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	04/07/17 06:52	
Trichloroethene	ug/L	<0.33	1.0	04/07/17 06:52	
Trichlorofluoromethane	ug/L	<0.18	1.0	04/07/17 06:52	
Vinyl chloride	ug/L	<0.18	1.0	04/07/17 06:52	
4-Bromofluorobenzene (S)	%	90	70-130	04/07/17 06:52	
Dibromofluoromethane (S)	%	107	70-130	04/07/17 06:52	
Toluene-d8 (S)	%	90	70-130	04/07/17 06:52	

LABORATORY CONTROL SAMPLE: 1486761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	51.6	103	70-131	
1,1,2,2-Tetrachloroethane	ug/L	50	40.1	80	67-130	
1,1,2-Trichloroethane	ug/L	50	44.5	89	70-130	
1,1-Dichloroethane	ug/L	50	49.7	99	70-133	
1,1-Dichloroethene	ug/L	50	51.9	104	70-130	
1,2,4-Trichlorobenzene	ug/L	50	46.4	93	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	36.6	73	50-150	
1,2-Dibromoethane (EDB)	ug/L	50	47.7	95	70-130	
1,2-Dichlorobenzene	ug/L	50	47.7	95	70-130	
1,2-Dichloroethane	ug/L	50	40.6	81	70-130	
1,2-Dichloropropane	ug/L	50	50.3	101	70-130	
1,3-Dichlorobenzene	ug/L	50	47.5	95	70-130	
1,4-Dichlorobenzene	ug/L	50	48.6	97	70-130	
Benzene	ug/L	50	38.5	77	60-135	
Bromodichloromethane	ug/L	50	51.0	102	70-130	
Bromoform	ug/L	50	48.2	96	70-130	
Bromomethane	ug/L	50	38.0	76	33-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

LABORATORY CONTROL SAMPLE: 1486761

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	50	50.7	101	70-138	
Chlorobenzene	ug/L	50	49.1	98	70-130	
Chloroethane	ug/L	50	43.0	86	51-130	
Chloroform	ug/L	50	47.2	94	70-130	
Chloromethane	ug/L	50	40.6	81	25-132	
cis-1,2-Dichloroethene	ug/L	50	48.6	97	69-130	
cis-1,3-Dichloropropene	ug/L	50	46.1	92	70-130	
Dibromochloromethane	ug/L	50	47.3	95	70-130	
Dichlorodifluoromethane	ug/L	50	55.5	111	23-130	
Ethylbenzene	ug/L	50	47.5	95	70-136	
Isopropylbenzene (Cumene)	ug/L	50	48.6	97	70-140	
m&p-Xylene	ug/L	100	99.2	99	70-138	
Methyl-tert-butyl ether	ug/L	50	44.9	90	66-138	
Methylene Chloride	ug/L	50	51.2	102	70-130	
o-Xylene	ug/L	50	47.5	95	70-134	
Styrene	ug/L	50	49.3	99	70-133	
Tetrachloroethene	ug/L	50	54.5	109	70-138	
Toluene	ug/L	50	48.5	97	70-130	
trans-1,2-Dichloroethene	ug/L	50	52.9	106	70-131	
trans-1,3-Dichloropropene	ug/L	50	37.5	75	69-130	
Trichloroethene	ug/L	50	56.8	114	70-130	
Trichlorofluoromethane	ug/L	50	60.5	121	50-150	
Vinyl chloride	ug/L	50	51.8	104	49-130	
4-Bromofluorobenzene (S)	%			94	70-130	
Dibromofluoromethane (S)	%			107	70-130	
Toluene-d8 (S)	%			90	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1487668 1487669

Parameter	Units	40147737003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	52.2	54.4	104	109	70-134	4	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	39.1	41.0	78	82	67-130	5	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	43.0	45.7	86	91	70-130	6	20	
1,1-Dichloroethane	ug/L	1.4	50	50	48.8	55.8	95	109	70-134	13	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	57.9	58.6	116	117	68-136	1	20	
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	46.3	48.6	93	97	62-139	5	20	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	35.2	36.9	70	74	50-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	45.9	48.7	92	97	70-130	6	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	47.1	49.3	94	99	70-130	5	20	
1,2-Dichloroethane	ug/L	<0.17	50	50	41.6	51.3	83	103	70-130	21	20	R1
1,2-Dichloropropane	ug/L	0.29J	50	50	43.4	46.0	86	91	70-130	6	20	
1,3-Dichlorobenzene	ug/L	<0.50	50	50	47.1	49.3	94	99	70-131	4	20	
1,4-Dichlorobenzene	ug/L	<0.50	50	50	48.6	50.3	97	101	70-130	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1487668 1487669

Parameter	Units	40147737003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	<0.50	50	50	40.4	53.2	80	106	57-138	27	20	R1
Bromodichloromethane	ug/L	<0.50	50	50	43.2	46.0	86	92	70-130	6	20	
Bromoform	ug/L	<0.50	50	50	46.4	49.5	93	99	70-130	6	20	
Bromomethane	ug/L	<2.4	50	50	41.0	48.9	82	98	33-130	18	27	
Carbon tetrachloride	ug/L	<0.50	50	50	50.8	52.2	102	104	70-138	3	20	
Chlorobenzene	ug/L	<0.50	50	50	47.9	50.2	96	100	70-130	5	20	
Chloroethane	ug/L	<0.37	50	50	43.5	48.6	87	97	51-130	11	20	
Chloroform	ug/L	<2.5	50	50	49.2	49.5	98	99	70-130	1	20	
Chloromethane	ug/L	<0.50	50	50	41.5	47.5	83	95	25-132	13	20	
cis-1,2-Dichloroethene	ug/L	3.1	50	50	54.3	58.0	102	110	61-140	7	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	39.0	41.6	78	83	70-130	6	20	
Dibromochloromethane	ug/L	<0.50	50	50	46.5	49.1	93	98	70-130	5	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	55.5	61.4	111	123	23-130	10	20	
Ethylbenzene	ug/L	<0.50	50	50	46.2	48.7	92	97	70-138	5	20	
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	47.5	49.9	95	100	70-152	5	20	
m&p-Xylene	ug/L	<1.0	100	100	96.0	102	96	102	70-140	6	20	
Methyl-tert-butyl ether	ug/L	<0.17	50	50	45.4	50.2	91	100	66-139	10	20	
Methylene Chloride	ug/L	<0.23	50	50	53.3	57.3	107	115	70-130	7	20	
o-Xylene	ug/L	<0.50	50	50	46.7	49.0	93	98	70-134	5	20	
Styrene	ug/L	<0.50	50	50	47.6	50.1	95	100	70-138	5	20	
Tetrachloroethene	ug/L	<0.50	50	50	53.0	55.8	106	111	70-148	5	20	
Toluene	ug/L	<0.50	50	50	47.1	49.4	94	99	70-130	5	20	
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	54.2	59.6	108	119	70-133	10	20	
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	36.5	39.1	73	78	69-130	7	20	
Trichloroethene	ug/L	<0.33	50	50	48.9	51.8	97	103	70-131	6	20	
Trichlorofluoromethane	ug/L	<0.18	50	50	61.1	67.4	122	135	50-150	10	20	
Vinyl chloride	ug/L	0.76J	50	50	53.3	59.1	105	117	49-133	10	20	
4-Bromofluorobenzene (S)	%						93	94	70-130			
Dibromofluoromethane (S)	%						111	106	70-130			
Toluene-d8 (S)	%						90	90	70-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 251949 Analysis Method: SM 3500-Cr B (Online)
QC Batch Method: SM 3500-Cr B (Online) Analysis Description: Chromium, Hexavalent by 3500
Associated Lab Samples: 40147765001, 40147765002, 40147765003, 40147765004, 40147765005, 40147765006, 40147765007, 40147765008, 40147765009, 40147765010, 40147765011, 40147765012, 40147765013, 40147765014, 40147765015, 40147765016, 40147765017, 40147765019, 40147765020, 40147765021

METHOD BLANK: 1486744 Matrix: Water
Associated Lab Samples: 40147765001, 40147765002, 40147765003, 40147765004, 40147765005, 40147765006, 40147765007, 40147765008, 40147765009, 40147765010, 40147765011, 40147765012, 40147765013, 40147765014, 40147765015, 40147765016, 40147765017, 40147765019, 40147765020, 40147765021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/L	<0.0051	0.017	04/05/17 16:00	

LABORATORY CONTROL SAMPLE: 1486745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/L	.3	0.28	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1486746 1486747

Parameter	Units	40147765001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/L	<0.0039	.3	.3	0.29	0.29	97	98	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1486748 1486749

Parameter	Units	40147765011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/L	25.0	75	75	103	97.8	103	97	90-110	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

QC Batch: 252447 Analysis Method: EPA 335.4
QC Batch Method: EPA 335.4 Analysis Description: 335.4 Cyanide, Total
Associated Lab Samples: 40147765021

METHOD BLANK: 1489501 Matrix: Water
Associated Lab Samples: 40147765021

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	<0.0068	0.023	04/12/17 12:39	

LABORATORY CONTROL SAMPLE: 1489502

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1489503 1489504

Parameter	Units	40147862001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	<0.0068	.1	.1	0.10	0.10	100	103	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1489505 1489506

Parameter	Units	40148063001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	mg/L	<0.041	.6	.6	0.60	0.60	100	100	90-110	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALIFIERS

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at a concentration of -0.0061 mg/L.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40147765019	**MANHOLE**	EPA 3010	252119	EPA 6010	252173
40147765020	**SUMP**	EPA 3010	252119	EPA 6010	252173
40147765021	**OUTFALL 001**	EPA 3010	252119	EPA 6010	252173
40147765022	**CANISTER A**	EPA 3010	252119	EPA 6010	252173
40147765001	**MW-01**	EPA 6010	252501		
40147765002	**MW-02**	EPA 6010	252501		
40147765003	**MW-02A**	EPA 6010	252501		
40147765004	**MW-05**	EPA 6010	252501		
40147765005	**MW-05A**	EPA 6010	252501		
40147765006	**MW-10R**	EPA 6010	252501		
40147765007	**MW-17**	EPA 6010	252501		
40147765008	**MW-17A**	EPA 6010	252501		
40147765009	**MW-18**	EPA 6010	252501		
40147765010	**MW-18A**	EPA 6010	252501		
40147765011	**MW-19**	EPA 6010	252501		
40147765012	**MW-19A**	EPA 6010	252501		
40147765013	**MW-20**	EPA 6010	252501		
40147765014	**MW-20A**	EPA 6010	252501		
40147765015	**MW-21**	EPA 6010	252501		
40147765016	**MW-21A**	EPA 6010	252501		
40147765017	**BLIND DUPLICATE**	EPA 6010	252501		
40147765021	**OUTFALL 001**	EPA 7470	252033	EPA 7470	252064
40147765006	**MW-10R**	EPA 8260	251954		
40147765011	**MW-19**	EPA 8260	251954		
40147765013	**MW-20**	EPA 8260	251954		
40147765018	**TRIP BLANK**	EPA 8260	251954		
40147765019	**MANHOLE**	EPA 8260	251954		
40147765020	**SUMP**	EPA 8260	251954		
40147765019	**MANHOLE**	SM 3500-Cr B (Online)	251949		
40147765020	**SUMP**	SM 3500-Cr B (Online)	251949		
40147765021	**OUTFALL 001**	SM 3500-Cr B (Online)	251949		
40147765001	**MW-01**	SM 3500-Cr B (Online)	251949		
40147765002	**MW-02**	SM 3500-Cr B (Online)	251949		
40147765003	**MW-02A**	SM 3500-Cr B (Online)	251949		
40147765004	**MW-05**	SM 3500-Cr B (Online)	251949		
40147765005	**MW-05A**	SM 3500-Cr B (Online)	251949		
40147765006	**MW-10R**	SM 3500-Cr B (Online)	251949		
40147765007	**MW-17**	SM 3500-Cr B (Online)	251949		
40147765008	**MW-17A**	SM 3500-Cr B (Online)	251949		
40147765009	**MW-18**	SM 3500-Cr B (Online)	251949		
40147765010	**MW-18A**	SM 3500-Cr B (Online)	251949		
40147765011	**MW-19**	SM 3500-Cr B (Online)	251949		
40147765012	**MW-19A**	SM 3500-Cr B (Online)	251949		
40147765013	**MW-20**	SM 3500-Cr B (Online)	251949		
40147765014	**MW-20A**	SM 3500-Cr B (Online)	251949		
40147765015	**MW-21**	SM 3500-Cr B (Online)	251949		
40147765016	**MW-21A**	SM 3500-Cr B (Online)	251949		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17-100 ALBANY FMR CHROME PLANT
Pace Project No.: 40147765

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40147765017	**BLIND DUPLICATE**	SM 3500-Cr B (Online)	251949		
40147765021	**OUTFALL 001**	EPA 335.4	252447	EPA 335.4	252533

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

CHAIN OF CUSTODY

401477605

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Stoeger & Associates, LLC
Branch/Location:	Appleton, WI
Project Contact:	John Stoeger
Phone:	920-428-9513
Project Number:	17-100
Project Name:	Albany Former Chrome Plant
Project State:	WI
Sampled By (Print):	John Stoeger
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	See Attached
Mail To Company:	Invoicing & Distribution List.
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Total Chromium	Hex Chromium	VOC's	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y	D	Y	A	N	B		
001	MW-01	4/5/17	11:04	GW			X	X			Discoloration	2-250mlpAD
002	MW-02			GW			X	X			of VOC Samples	
003	MW-02A			GW			X	X			due to	
004	MW-05			GW			X	X			Chromium in	
005	MW-05A			GW			X	X			GW. Do not	
006	MW-10R			GW			X	X	X		dilute	3-40mlVB
007	MW-17			GW			X	X				
008	MW-17A			GW			X	X				
009	MW-18			GW			X	X				
010	MW-18A			GW			X	X				
011	MW-19			GW			X	X	X			3-40mlVB
012	MW-19A	↓	↓	GW			X	X				

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	4-5-17 1:15pm	Pace	4/5/17 1315

PACE Project No.
401477605

Receipt Temp = 20.1 °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	Stoeger & Associates, LLC
Branch/Location:	Appleton, WI
Project Contact:	John Stoeger
Phone:	920-428-9513
Project Number:	17-100
Project Name:	Albany Former Chrome Plant
Project State:	WI
Sampled By (Print):	John Stoeger
Sampled By (Sign):	JL JS
PO #:	Regulatory Program:

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SL = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

Quote #:	
Mail To Contact:	See Attached for
Mail To Company:	Invoicing &
Mail To Address:	Distribution List
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: Total Chromium	Het Chromium	VOCs	See Attached *	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
					Y/N	Pick Letter	Y	Y	N	N		Profile #
013	MW-20	4-5-17	11:44am	GW		D	X	X	X		* Outfall 001	2-250mlHDPE D 3-40mlVB
014	MW-20A			GW			X	X			Testing For:	
015	MW-21			GW			X	X			Aluminum, Arsenic	
016	MW-21A			GW			X	X			Cadmium, Copper	
017	Blind Duplicate			GW			X	X			Cyanide, Lead	
018	Trip Blank								X		Mercury, Nickel	2-40mlVB
019	Manhole			GW			X	X	X		Zinc, Total Het Chrome	3-40mlVB
020	Sump			GW			X	X	X			
021	Outfall 001			WW			X	X		X	Do Not dilute	3-250mlHDPE D,G
022	Canister A	↓	↓	WW			X				VOC Samples.	1-250mlHDPE D
											Dissolution due	
											to chromium in	
											GW	

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
JL JS	4-5-17 1:15 pm	Pace	4/5/17 1315

PACE Project No.: 40147765

Receipt Temp = R0.1 °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

401477165

Albany International, Corp.
Former Chrome Plant Sampling
Invoice and Report Distribution

Invoice and Report to:

Wayne Fassbender P.G.
EnviroForensics
N16 W23390 Stone Ridge Drive, Suite G
Waukesha, WI 53188

Reports only to:

John Stoeger
Stoeger & Associates, LLC
527 S Story St
Appleton, WI 54914

JP Hammerton
Albany International, Corp.
3601 Electric City Blvd
Kaukauna, WI 54130

Sample Condition Upon Receipt

Pace Analytical Services, Inc.
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Pace Analytical™

Project #: WO# : 40147765

40147765

Client Name: Stoeger + Assoc.

Courier: ☐ Fed Ex ☐ UPS ☑ Client ☐ Pace Other: _____

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☑ no

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other _____

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: RO1 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 4.5.17
Initials: mm.

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A	2.
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A	3.
Sampler Name & Signature on COC:	☑Yes	☐No	☐N/A	4.
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☑N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☑Yes	☐No	☐N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. no collect time mm 4.5.17 on all sample labels.
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes	☐No	☐N/A	13. ☑ HNO3 ☐ H2SO4 ☑ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation: (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☑Yes	☐No		Initial when completed mm / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes	☑No	☐N/A	14.
Trip Blank Present:	☑Yes	☐No	☐N/A	15.
Trip Blank Custody Seals Present	☑Yes	☐No	☐N/A	
Pace Trip Blank Lot # (if purchased): 375				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Rvwd by DM **Date:** 4/5/17