SEMI-ANNUAL
OPERATION & MAINTENANCE REPORT
January through June – 2014

APPLETON WIRE
FORMER ALBANY INTERNATIONAL
Chrome Plant
Groundwater Treatment System

908 North Lawe Street
Appleton, Wisconsin
WDNR ERP# 02-45-000015

Prepared for the
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

August 1, 2014

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

Re: Appleton Wire, Former Albany International Chrome Plant – Appleton, WI
Semi-Annual Operation & Maintenance Report
January through June, 2014
WDNR ERP# 02-45-000015

Dear Ms. Borski:

Enclosed, please find Badger Laboratories and Engineering Co., Inc.'s "Semi-Annual Operation and Maintenance Report" for the Appleton Wire, Former Albany International Chrome Plant, 908 North Lawe Street Street, Appleton, Wisconsin, (WDNR ERP# 02-45-000015). Our report covers the time period from January 1, 2014 through June 30, 2014.

This report 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.

Very truly yours,

Badger Laboratories and Engineering Co., Inc.

David J. Casper *John M. Stoeger*

David J. Casper
Project Manager

John M. Stoeger
Stoeger and Associates, LLC

Enclosure: "Semi-Annual Operation & Maintenance Report"
cc: Ron Buck, Albany International
Amy Monk, Albany International
Joe Gaug, Albany International
Ron Moddes, Luvata
Brian Kreski, City of Appleton Wastewater Division

SEMI-ANNUAL
OPERATION & MAINTENANCE REPORT
Year
January through June - 2014

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
Badger Laboratories & Engineering Co., Inc.
Neenah, Wisconsin

And

Stoeger & Associates, LLC
Appleton, Wisconsin

August 1, 2014

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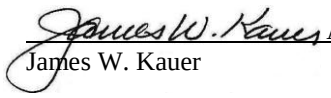
HYDROGEOLOGIST CERTIFICATION

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



Associate Geologist

James W. Kauer

8/1/2014

Date

Document Reference: Semi-annual Operation and Maintenance Report –
January through June, 2014
Albany International Former Chrome Site, Appleton, WI

SEMI-ANNUAL
OPERATION & MAINTENANCE REPORT
January through June – 2014

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

Prepared for the
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 #5.

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 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 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.

A total of 12 groundwater monitoring wells exist on the former chrome plant property to monitor the subsurface chromium contamination. 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 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 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 Appleton production area

The results of the May, 2014 investigation and sampling will be submitted under a separate cover. Groundwater sample results from the four new monitoring wells (MW-20, MW-20A, MW-21 and MW-21A) are included in this report.

A total of 16 groundwater monitoring wells exist on the former chrome plant property to monitor the subsurface chromium contamination. Additionally, the groundwater collection system (French Drain) and basement sump are monitored to track the effectiveness of the treatment system

The monitoring well and soil boring locations are shown on Figure #1. The May 2014 Geoprobe and monitoring well locations have been added to 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. Historical investigation data in regard to soil borings and abandoned monitoring wells are contained in Appendix D.

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 05-17, issued for the site in May, 2014 and are valid through May 31, 2017.

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, 2014 and June 30, 2014, the following significant operational and maintenance activities were performed:

- Between May 12 and 14, 2014, a subsurface site investigation was conducted in the interior of the former Chrome Plant area and into the current Luvata production area to better define the horizontal and vertical extent of the chromium contamination. As part of the investigation, groundwater monitoring wells were placed in the Luvata production area (MW-21) and in the former chrome plant area (MW-20). Piezometers were also placed adjacent to the monitoring wells and are numbered MW-21A and MW-20A. Dedicated groundwater pumps were built for each monitoring well and piezometer for groundwater sampling. After sampling, the pumps are removed from the wells and stored in separate containers to prevent any cross contamination.

- The new monitoring wells and piezometers were sampled in June, 2014 and will be added to the list of monitoring points sampled on a quarterly basis..

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

G. 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.

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.

H. Groundwater Sampling Results

The collected groundwater samples are analyzed for Total and Hexavalent chromium.

A total of three sampling events took place during the reporting period. On January 15, 2014, monitoring wells MW-05, MW5A, MW19 and MW-19A were sampled as part of the regularly schedule quarterly sampling. Monitoring wells MW-05 and MW-19 had exceedences of the NR 140.10 Enforcement Standard (ES) for Total Chromium, (1,594 ug/l and 20,218 ug/l, respectively). Monitoring Well MW 05A had an exceedence of the NR140.10 Preventative Action limit (PAL) for total chromium (23 ug/l). MW 19A did not have an exceedence of the ES or the NR140.10 Preventive Action Limit (PAL).

On April 9, 2014, all 12 monitoring wells, extant on the site, were sampled. Exceedences of the ES for total chromium were detected in monitoring wells MW-05 and MW-19 (1,430 ug/l and 2,005 ug/l, respectively). MW-5A had an exceedence of

the PAL (12 ug/l). MW-19A did not have an exceedence for the ES or PAL. There were no exceedences in the ES or PAL for any of the remaining 9 monitoring wells.

On June 2, 2014, the four newly installed groundwater monitoring wells were sampled. MW-20 and MW-20A were installed in the warehouse, in an area that once contained a chrome plating line. MW-20 and MW-20A both had exceedences of the ES for total chromium (338,000 ug/l and 1,200 ug/l, respectively). MW-21 and MW-21A were installed in the Luvata production area, outside of what are presumed to be the footings for the warehouse area. MW-21 and MW-21A did not have exceedences of the ES or PAL.

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 9, 2014 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, 2014 through June 30, 2014 had exceedences of the ES for Total Chromium. The laboratory analytical results for the Manhole and Collection Sump are shown 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 monitoring wells MW-05 and MW-05A. Historical data from the French Drain and Building Sump also show stable or decreasing chromium concentrations. Historical data collected for MW-19 shows a stable or increasing chromium concentration. Data from MW-19A is too inconsistent to develop a trend line. There is only one set of data points for MW-20, MW-20A, MW-21 and MW-21A.

The groundwater treatment system is effectively removing chromium from the groundwater on the site. With the information gathered from sampling the four new groundwater wells, a discussion of remediation options to potentially enhance the chromium removal process is underway.

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, 2014 through June 30, 2014, 4.37 pounds of chromium was removed from the building sump and 0.51 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

Three sets of groundwater samples were collected during this sampling period. On January 15, 2014 and April 9, 2014, groundwater samples collected from a contaminant source area monitoring well (MW-05) and the nearest groundwater well to the west of the source area (MW-19), had residual chromium contamination above the WDNR NR140.10 Enforcement Standards (ES). During the subsequent subsurface investigation of the interior building area, conducted between May 12-14, 2014, four additional monitoring wells were installed on the site. Monitoring well MW-20 and Piezometer MW-20A were installed in former chrome plating operations area and near the basement collection sump. Monitoring well MW-21 and Piezometer MW-21A were installed outside of the former chrome plating production area and in the adjacent production area now utilized by Luvata Appleton. On June 2, 2014, the four new wells were sampled. MW-20 and MW-20A had exceedences of the ES (338,000 ug/l and 1,200 ug/l, respectively). MW-21 and MW-21A did not record exceedences of the ES or PAL. All monthly samples collected during the monitoring period from the French Drain 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 chromium in the groundwater monitoring wells. Monitoring well MW-19 has shown a stable, if not increasing concentrations of total chromium. Piezometer MW-19 has recorded inconsistent analytical results and a trend line cannot be reasonably created. Only one round of groundwater samples has been collected from MW-20 and Piezometer 20A and the initial results show that chromium contamination exists in the area of the two wells.

The sampling data from the four new monitoring wells as well as the data collected during the May, 2014 subsurface investigation of the site will be included in an investigation and remedial options report, submitted under a separate cover.

Prior to issuance of the current three year wastewater discharge permit, the City of Appleton was petitioned to allow the direct discharge of flows from the French Drain (Manhole). Total chromium concentrations in the Manhole have remained close to an average of 7 mg/l, which is the current upper limit for direct discharge to the City of Appleton Wastewater Treatment Facility. The City of Appleton determined that there was not enough historical data to allow the direct discharge and will again reevaluate the option when the current permit expires in 2017.

Based upon the historical analytical results from the groundwater monitoring wells and treatment systems, Badger Laboratories and Engineering Co., Inc., recommends continued operation of the groundwater treatment system at the Appleton Wire, Former Albany International Chrome Plant.

Table #1

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

		Aluminum (mg/l)	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	70	1.0	0.3	7.0	3.5	0.3	2.0	0.002	2.0	10.0	4.5

mg/l = milligram / liter
ug/l = microgram / 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
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, 2014 Through June 30, 2014
Appleton Wire Former Albany International Chrome Plant
Appleton, Wisconsin

Month	Monthly (gallons)	Quarterly Flow (gallons)
January	2,480	
February	3,190	17,940
March	12,270	
April	17,900	
May	21,190	55,360
June	16,270	
TOTAL	**73,300**	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-1	02/09/87	*50*	*50*	
	07/29/87	*20*	<40	
	09/25/87	*50*	<100	
	12/11/87	*50*	<100	
	03/21/88	1.6	1.6	
	06/13/88	3.0	3.0	
	09/08/88	9	9	
	12/15/88	2.5	2.5	
	03/26/92	*20*	<40	
	06/16/92	4.9	4.9	
	09/04/92	*50*	*50*	
	03/25/93	40	<80	
	09/16/93	40	<80	
	03/15/94	*35*	<70	
	09/20/94	*13*	*13*	
	03/31/95	*39*	*39*	
	09/07/95	7.2	7.2	
	03/15/96	*15*	*15*	
	09/05/96	6.4	6.4	
	04/26/97	*11*	*11*	
	04/30/98	*60*	*60*	
	10/22/98	7	7	
	04/16/99	*12*	*12*	
	10/19/99	9.3	9.3	
	04/17/00	*11*	*22***	
	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/16/03	2.9	2.9	
	04/19/04	2.8	2.8	<2.0
	04/11/05	*82*	*82*	16
	07/18/05	*15*	*<30*	<2
	04/11/06	1.7	1.7	<2.0
	04/29/07	4	4	<2.0
	04/23/08	4.4	4.4	<2.0
	4/7/2009	4.6	4.6	<0.1
	4/13/2010	26	*26*	<3.0
	4/27/2011	*3*	3	<3
	4/10/2012	1.7	1.7	<3
	4/15/2013	2.6	2.6	<2.6
	4/9/2014	4.2	4.2	<3.0

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	02/09/87	*70*	*70*	
MW-2	07/29/87	*20*	<40	
	09/25/87	**100**	**100**	
	12/11/87	**100**	**100**	
	03/21/88	*85*	*85*	
	06/13/88	**140**	**140**	
	09/08/88	*70*	*71*	
	12/15/88	**130**	**130**	
	03/26/92	*20*	<40	
	06/16/92	*17*	*17*	
	09/04/92	*20*	<40	
	03/25/93	*40*	<80	
	09/16/93	*40*	<80	
	03/15/94	*35*	<70	
	09/20/94	*19*	*19*	
	03/31/95	*19*	*19*	
	09/07/95	*14*	*14*	
	03/15/96	*11*	*11*	
	09/05/96	*29*	*29*	
	04/26/97	9.2	9.2	
	10/29/97	*10*	*10*	
	04/30/98	*11*	*11*	
	10/22/98	9.3	9.3	
	04/16/99	7.7	7.7	
	10/19/99	6.8	6.8	
	04/17/00	*11*	*22***	
	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/16/03	0.55	<1.1	
	04/19/04	1.0	1.0	<2.0
	04/11/05	1.3	1.3	<2.0
	04/11/06	0.4	0.4	<2.0
	04/29/07	1.5	1.5	<2.0
	04/23/08	2.4	2.4	<2.0
	4/7/2009	8.3	8.3	<.1
	4/13/2010	5	5	<3.0
	4/27/2011	3	3	<3.0
	4/10/2012	0.7	0.7	<3.0
	4/15/2013	0.4	0.4	<.4
	4/9/2014	0.6	0.6	<0.6

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	03/26/92	*20*	<40	
MW-2A	06/16/92	1.5	1.5	
	09/04/92	*20*	<40	
	03/25/93	*40*	<80	
	09/16/93	*40*	<80	
	03/15/94	*35*	<70	
	09/20/94	*14*	*14*	
	03/31/95	*17*	*17*	
	09/07/95	3.9	3.9	
	03/15/96	3.6	3.6	
	09/05/96	1.2	1.2	
	04/26/97	0.3	0.3	
	04/30/98	2.5	2.5	
	04/16/99	2.4	2.4	
	04/17/00	*11.5*	*23***	
	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/16/03	0.55	<1.1	
	04/19/04	0.6	0.6	<2.0
	04/11/05	0.4	0.4	<2.0
	04/11/06	0.1	0.1	<2.0
	04/29/07	0.7	0.7	<2.0
	04/23/08	0.2	<0.4	<2.0
	4/7/2009	1.5	1.5	<0.1
	4/13/2010	5	5	<3.0
	4/27/2011	2	2	<3.0
	4/10/2012	0.5	0.5	<3.0
	4/15/2013	0.1	<0.2	<0.2
	4/9/2014	0.4	0.4	<0.4
	03/26/92	**33,000**	**33,000**	
MW-5	06/16/92	**27,000**	**27,000**	
	09/04/92	**33,000**	**33,000**	
	12/17/92	**28,000**	**28,000**	
	03/25/93	**29,000**	**29,000**	
	06/22/93	**24,000**	**24,000**	
	09/16/93	**25,000**	**25,000**	
	12/03/93	**26,000**	**26,000**	
	03/15/94	**26,000**	**26,000**	
	06/16/94	**2,013**	**2,013**	
	09/20/94	**29,000**	**29,000**	
	12/13/94	**19,000**	**19,000**	
	03/31/95	**19,960**	**19,960**	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	06/15/95	**21,190**	**21,190**	
MW-5	09/07/95	**25,400**	**25,400**	
Cont.	12/11/95	**18,000**	**18,000**	
	03/15/96	**15,830**	**15,830**	
	06/27/96	**18,000**	**18,000**	
	09/05/96	**14,000**	**14,000**	
	12/03/96	**24,000**	**24,000**	
	01/23/97	**22,000**	**22,000**	
	04/26/97	**17,000**	**17,000**	
	07/16/97	**20,000**	**20,000**	
	10/29/97	**1,600**	**1,600**	
	01/20/98	**18,000**	**18,000**	
	04/30/98	**15,000**	**15,000**	
	07/10/98	**18,000**	**18,000**	
	10/22/98	**21,000**	**21,000**	
	01/19/99	**14,000**	**14,000**	
	04/16/99	**15,000**	**15,000**	
	07/23/99	**14,000**	**14,000**	
	10/19/99	**18,175**	**18,175**	
	01/10/00	**12,000**	**12,000**	
	04/17/00	**8,500**	**8,500**	
	07/20/00	**11,000**	**11,000**	
	10/25/00	**8,500**	**8,500**	
	01/17/01	**14,000**	**14,000**	
	04/06/01	**7,900**	**7,900**	
	07/20/01	**10,000**	**10,000**	
	10/16/01	**12,000**	**12,000**	
	01/14/02	**11,000**	**11,000**	
	04/18/02	**5,500**	**5,500**	
	07/23/02	**788**	**788**	
	10/30/02	**1,500**	**1,500**	
	01/20/03	**19,000**	**19,000**	
	04/16/03	**7,000**	**7,000**	
	07/10/03	*33*	*33*	
	10/07/03	**3,300**	**3,300**	
	01/30/04	**1,200**	**1,200**	
	04/19/04	**7,900**	**7,900**	**10000**
	07/26/04	**6,700**	**6,700**	**6300**
	10/11/04	**6,500**	**6,500**	**6500**

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	01/12/05	**6,460**	**6,460**	**6300**
MW-5	04/11/05	**5,085**	**5,085**	**4500**
Cont.	07/18/05	**4,900**	**4,900**	**4900**
	10/11/05	**5,100**	**5,100**	**4900**
	01/10/06	**10,880**	**10,880**	**10000**
	04/11/06	**4,455**	**4,455**	**3880**
	07/27/06	**3,190**	**3,190**	**3400**
	10/18/06	**5,100**	**5,100**	**4500**
	01/09/07	**2,900**	**2,900**	**2800**
	04/29/07	**2,895**	**2,895**	**2500**
	07/24/07	**2,465**	**2,465**	**2465**
	10/24/07	**3,205**	**3,205**	**2700**
	01/16/08	**2,335**	**2,335**	**2300**
	04/23/08	**2,067**	**2,067**	**1700**
	07/15/08	**2,425**	**2,425**	**1700**
	10/23/08	**2,400**	**2,400**	**1800**
	1/22/09	**2,024**	**2,024**	**1900**
	4/7/09	**2,116**	**2,116**	**1700**
	7/7/09	**2,200**	**2,200**	**2000**
	10/11/09	**2,500**	**2,500**	**2300**
	1/19/10	**2,015**	**2,015**	**1900**
	4/13/10	**1,600**	**1,600**	**1400**
	7/29/10	**1,800**	**1,800**	**1300**
	10/19/10	**1,700**	**1,700**	**1400**
	1/13/11	**1,500**	**1,500**	**1400**
	4/27/11	**1,200**	**1,200**	**1200**
	7/19/11	**1,100**	**1,100**	**1000**
	10/11/11	**1,100**	**1,100**	**1000**
	1/10/12	**1,140**	**1,140**	**950**
	4/10/12	**1,200**	**1,200**	**1100**
	8/8/12	**1,200**	**1,200**	**49**
	10/9/12	**1,139**	**1,139**	**1100**
	1/8/13	**1,500**	**1,500**	**1310**
	4/15/13	**1,166**	**1,166**	**1166**
	7/10/13	**1,300**	**1,300**	**1300**
	10/14/13	**1,338**	**1,338**	**1300**
	1/15/14	**1,594**	**1,594**	**1730**
	4/9/14	**1,430**	**1,430**	**1280**

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

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

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	01/10/00	**1,200**	**1,200**	
MW-5A*	04/17/00	**880**	**880**	
Cont.	07/20/00	**400**	**400**	
	10/25/00	**1,100**	**1,100**	
	01/17/01	**280**	**280**	
	04/06/01	*65*	*65*	
	07/20/01	*11*	*11*	
	10/16/01	8	*16***	
	01/14/02	*78*	*78*	
	04/18/02	**380**	**380**	
	07/23/02	**207**	**207**	
	10/30/02	*45*	*45*	
	01/20/03	**1,200**	**1,200**	
	04/16/03	**270**	**270**	
	07/10/03	**1,200**	**1,200**	
	10/07/03	*16*	*16*	
	01/30/04	*23*	*23*	
	04/19/04	**480**	**480**	*82*
	07/26/04	*40*	*40*	<4
	10/11/04	*12*	*12*	12
	01/12/05	*30*	*30*	<2
	04/11/05	*13*	*13*	10
	07/18/05	*15*	*<30*	<2
	10/11/05	*26*	*26*	<2
	01/10/06	1	*<2*	
	04/11/06	1	*<2*	
	07/27/06	**720**	**720**	
	10/18/06	5.2	*5.2*	
	01/09/07	2.3	2.3	<2.0
	04/29/07	*12*	*12*	10
	07/24/07	2.4	2.4	<2.0
	10/24/07	2.7	2.7	<2.0
	01/16/08	*10*	*10*	<2.0
	04/23/08	**167**	**167**	20
	07/15/08	6.4	6.4	<1.0
	10/23/08	*18*	*18*	10
	01/22/09	*248*	*248*	210
	4/7/2009	*630*	*630*	590
	7/7/2009	*7*	*7*	<4.0
	10/11/2009	*33*	*33*	<3.0

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	1/19/2010	*24*	*24*	<3.0
MW-5A*	4/13/2010	7	*7*	7
Cont.	7/29/2010	6	*6*	<3.0
	10/19/2010	5	*5*	5
	1/13/2011	5	*5*	5
	4/27/2011	*27*	*27*	14
	7/19/2011	1.5	<3	<3
	10/11/2011	11	*11*	7
	1/10/2012	*94*	*94*	60
	4/10/2012	4.2	*4.2*	<3.0
	8/8/2012	49	*49*	<3.0
	10/9/2012	39	*39*	26
	1/8/2013	7.9	7.9	<3.0
	4/15/2013	3.7	3.7	<3.0
	7/10/2013	**1300**	**1300**	<3.0
	10/14/2013	*65*	*65*	*67*
	1/15/2014	*23*	*23*	*21*
	4/9/2014	*12*	*12*	*7*
MW-10R	01/19/99	3.7	3.7	
	04/16/99	4.4	4.4	
	07/23/99	8.3	8.3	
	10/19/99	1	1	
	01/10/00	5.5	<11	
	04/17/00	*6.5*	*13***	
	07/20/00	*8*	*16***	
	10/25/00	5.5	<11	
	01/17/01	5.5	<11	
	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/30/03	1.1	1.1	
	04/19/04	1.2	1.2	<2.0
	04/11/05	1.2	1.2	<2.0
	07/18/05	*15*	<30	<2.0
	04/11/06	1	1	<2.0
	04/29/07	1.5	1.5	1.5
	04/23/08	3.5	3.5	3.5
	4/7/09	4.4	4.4	<0.1
	4/13/10	*11*	11	<3.0
	4/27/11	*5*	5	<3.0
	4/10/12	5.5	5.5	<3.0
	4/15/13	0.5	0.5	<0.5
	4/9/14	0.5	0.5	<0.5

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-17	03/26/92	*20*	<40	
	06/16/92	1.3	1.3	
	09/04/92	*20*	<40	
	03/25/93	*40*	<80	
	09/16/93	*40*	<80	
	03/15/94	*35*	<70	
	09/20/94	15	*15*	
	03/31/95	9.8	9.8	
	09/07/95	8.1	8.1	
	03/15/96	3.6	3.6	
	09/05/96	2.4	2.4	
	04/26/97	0.5	0.5	
	04/30/98	1.7	1.7	
	04/16/99	2.9	2.9	
	04/17/00	5.5	<11	
	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/16/03	0.55	<1.1	
	04/19/04	1.7	1.7	<2.0
	04/11/05	0.3	0.3	<2.0
	04/11/06	1.5	1.5	<2.0
	04/29/07	0.8	0.8	<2.0
	04/23/08	0.2	<0.4	<2.0
	4/7/2009	1.7	1.7	<0.1
	4/13/2010	12	*12*	<3.0
	4/27/2011	2	2	<3.0
	4/10/2012	0.4	0.4	<3.0
	4/15/2013	0.1	<0.2	<0.2
	4/9/2014	0.8	0.8	<0.8
MW-17A	03/26/92	*20*	<40	
	06/16/92	*26*	*26*	
	09/04/92	*20*	<40	
	03/25/93	*40*	<80	
	09/16/93	*40*	<80	
	03/15/94	*35*	<70	
	09/20/94	*22*	*22*	
	03/31/95	*14*	*14*	
	09/07/95	6.4	6.4	
	03/15/96	3.4	3.4	
	09/05/96	0.7	0.7	
	04/26/97	0.1	<.2	
	04/30/98	1.5	1.5	

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
	04/16/99	0.9	0.9	
MW-17A	04/17/00	5.5	<11	
Cont.	04/06/01	5.5	<11	
	04/18/02	5.5	<11	
	04/16/03	0.55	<1.1	
	04/19/04	0.2	0.2	<2.0
	04/11/05	0.3	0.3	<2.0
	04/11/06	0.05	<0.1	<2.0
	04/29/07	0.2	0.2	<2.0
	04/23/08	0.2	<0.4	<2.0
	04/07/09	0.3	0.3	<0.1
	04/13/10	0.9	0.9	<3.0
	04/27/11	3	3	<3.0
	04/10/12	0.5	0.5	<3.0
	04/15/13	0.1	0.2	0.2
	04/09/14	0.2	0.2	<0.2
MW-18	08/13/02	6	<12	
	04/16/03	0.55	<1.1	
	04/19/04	0.1	<0.2	<2.0
	04/11/05	0.1	<0.2	<2.0
	04/11/06	0.55	<0.1	<2.0
	04/29/07	0.55	0.1	2
	04/23/08	0.2	<0.4	<2.0
	04/07/09	0.3	0.3	<0.1
	04/13/10	8.1	8.1	<3.0
	04/27/11	0.3	0.3	<3.0
	04/10/12	0.2	0.2	<3.0
	04/15/13	0.1	<0.2	<0.2
	04/09/14	0.4	0.4	<0.4
MW-18A	08/13/02	6	<12	
	04/16/03	0.55	<1.1	
	04/19/04	0.1	<0.2	<2.0
	04/11/05	0.4	0.4	<2.0
	04/11/06	1.5	1.5	<2.0
	04/29/07	0.3	0.3	<2.0
	04/23/08	1.1	1.1	<4.0
	04/07/09	3.8	3.8	<2.0
	04/13/10	6.9	6.9	<3.0
	04/27/11	0.4	0.4	<3.0
	04/10/12	0.2	0.2	<3.0
	04/15/13	0.1	<0.2	<0.2
	04/09/14	3.3	3.3	<3.0

Table #4

Groundwater Analytical Results
Appleton Wire Former Albany International Chrome Plant

Well Name	Sample Date	Adjusted Chromium Value	Total Chromium (ug/l)	Hexavalent Chromium (ug/l)
MW-19	07/13/09	13000	**13000**	**15000**
	07/28/09	22000	**22000**	**20000**
	10/11/09	5300	**5300**	**4000**
	01/19/10	3030	**3030**	**2600**
	04/13/10	5270	**5270**	**5270**
	07/29/10	6400	**6400**	**3900**
	10/19/10	7100	**7100**	**4800**
	01/13/11	7100	**7100**	**7100**
	04/27/11	15000	**15000**	**15000**
	07/19/11	9400	**9400**	**8700**
	10/11/11	21000	**21000**	**17000**
	01/10/12	41100	**41100**	**40000**
	04/10/12	21672	**21672**	**23000**
	08/08/12	26000	**26000**	**26000**
	10/09/12	14187	**14187**	**13000**
	01/08/13	12575	**12575**	**11000**
	04/15/13	16300	**16300**	**16300**
	07/10/13	**19000**	**19000**	**19000**
	10/14/13	**15440**	**15440**	**16000**
	04/09/14	**20005**	**20005**	**20005**
MW-19A	07/13/09	*30*	*30*	*50*
	07/28/09	*40*	*40*	*40*
	10/11/09	3	3	<3.0
	01/19/10	4.3	4.3	<3.0
	04/13/10	8.2	8.2	<3.0
	07/29/10	3	3	<3.0
	10/19/10	1	1	<3.0
	01/13/11	1	1	1
	04/27/11	3	3	3
	07/19/11	**143**	**143**	<3
	10/11/11	4	4	4
	01/10/12	4	4	<3.0
	04/10/12	1.8	1.8	<3.0
	08/08/12	**6100**	**6100**	5400
	10/09/12	*22*	*22*	40
	01/08/13	8.1	8.1	<3.0
	04/15/13	**500**	**500**	<3.0
	04/09/14	1.8	1.8	<1.8

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**	

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
01/20/03	**16,000**		**47,000**	
02/19/03	**22,000**		**37,000**	
03/17/03	9000**		**30,000**	
04/16/03	**8,800**		**5,300**	
05/28/03	**11,000**		**32,000**	
06/10/03	**10,000**		**66,000**	
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**	NA	**17,000**	NA
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**	NA	**7,700**	NA
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**

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
01/10/06	**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**
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**
11/27/007	**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**

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
01/22/09	**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**
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	**320**	**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**

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
01/10/12	**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	*<30*	<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**
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**

** Estimated result based on Enchem Laboratory Report
* Number are average over 1-year.

Max. Contaminant Level	100	100
NR 140.10 ES	100	100
NR 140.10 PAL	10	10

102 Indicates exceedance of NR 140.10 ES & PAL
14 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)	Elevation Top of Screen
MW-1	7/23/99	6.61	770.01	763.40	757.96
	10/19/99	9.10		760.91	
	1/10/00	10.03		759.98	
	4/17/00	8.05		761.96	
	7/20/00	9.44		760.57	
	10/25/00	9.98		760.03	
	1/17/01	10.38		759.63	
	4/6/01	6.70		763.31	
	7/20/01	9.28		760.73	
	10/16/01	9.03		760.98	
	1/14/02	9.70		760.31	
	4/18/02	6.98		763.03	
	8/13/02	9.69		760.32	
	10/30/02	9.04		760.97	
	1/20/03	10.55		759.46	
	4/16/03	6.62		763.39	
	7/10/03	10.73		759.28	
	10/7/03	8.72		761.29	
	1/30/04	9.55		760.46	
	4/19/04	8.15		761.86	
	7/26/04	9.01		761.00	
	10/11/04	10.13		759.88	
	10/19/04	10.21		759.80	
	1/12/05	8.72		761.29	
	4/11/05	7.42		762.59	
	7/18/05	9.52		760.49	
	10/11/05	8.55		761.46	
	1/10/06	8.04		761.97	
	4/11/06	8.75		761.26	
	7/27/06	9.97		760.04	
	10/18/06	7.50		762.51	
	1/9/07	7.75		762.26	
	4/29/07	7.71		762.30	
	7/24/07	9.66		760.35	
	10/24/07	7.11		762.90	
	1/16/08	7.51		762.50	
	4/23/08	7.58		762.43	
	7/15/08	5.31		764.70	
	10/23/08	8.97		761.04	
	1/22/09	10.00		760.01	
	4/7/09	8.18		761.83	
	7/7/09	9.30		760.71	
	7/28/09	9.98		760.03	
	10/11/09	7.98		762.03	
	1/19/10	9.48		760.53	
	4/13/10	8.21		761.80	
	7/29/10	9.28		760.73	
	10/19/10	7.31		762.70	
	1/13/11	7.94		762.07	
	4/27/11	6.86		763.15	
	7/19/11	5.51		764.50	
	10/11/11	7.41		762.60	
	1/10/12	9.32		760.69	
	4/10/12	8.45		761.56	
	8/8/12	9.88		760.13	
	10/9/12	9.83		760.18	
	1/18/13	9.17		760.84	
	4/15/13	7.30		762.71	
	7/10/13	8.22		761.79	
	11/14/13	9.32		760.69	
	1/15/14	10.32		759.69	
	4/9/14	7.42		762.59	
	6/2/14	8.16		761.85	

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)	Elevation Top of Screen
MW-2	7/23/99	6.50	770.76	764.26	759.04
	10/19/99	8.72		762.04	
	1/10/00	9.05		761.71	
	4/17/00	8.21		762.55	
	7/20/00	8.95		761.81	
	10/25/00	8.72		762.04	
	1/17/01	7.62		763.14	
	4/6/01	7.27		763.49	
	7/20/01	8.03		762.73	
	10/16/01	8.80		761.96	
	1/14/02	9.11		761.65	
	4/18/02	6.84		763.92	
	8/13/02	8.86		761.90	
	10/30/02	7.98		762.78	
	1/20/03	10.01		760.75	
	4/16/03	6.64		764.12	
	7/10/03	9.15		761.61	
	10/7/03	7.71		763.05	
	1/30/04	9.05		761.71	
	4/19/04	7.71		763.05	
	7/26/04	8.61		762.15	
	10/11/04	9.51		761.25	
	10/19/04	9.58		761.18	
	1/12/05	7.88		762.88	
	4/11/05	7.86		762.90	
	7/18/05	9.05		761.71	
	10/11/05	8.08		762.68	
	1/10/06	6.70		764.06	
	4/11/06	7.44		763.32	
	7/27/06	9.30		761.46	
	10/18/06	8.22		762.54	
	1/9/07	7.17		763.59	
	4/29/07	7.52		763.24	
	7/24/07	9.03		761.73	
	10/24/07	6.81		763.95	
	1/16/08	6.20		764.56	
	4/23/08	6.45		764.31	
	7/15/08	4.18		766.58	
	10/23/08	8.81		761.95	
	1/22/09	8.53		762.23	
	4/7/09	6.42		764.34	
	7/7/09	8.90		761.86	
	7/28/09	9.18		761.58	
	10/11/09	7.72		763.04	
	1/19/10	8.42		762.34	
	4/13/10	8.31		762.45	
	7/29/10	9.00		761.76	
	10/19/10	7.03		763.73	
	1/13/11	8.81		761.95	
	4/27/11	7.51		763.25	
	7/19/11	4.41		766.35	
	10/11/11	7.20		763.56	
	1/10/12	8.70		762.06	
	4/10/12	7.54		763.22	
	8/8/12	8.57		762.19	
	10/9/12	9.21		761.55	
	1/8/13	8.20		762.56	
	4/15/13	5.30		765.46	
	7/10/13	7.42		763.34	
	10/14/13	8.71		762.05	
	1/15/14	8.98		761.78	
	4/9/14	6.53		764.23	
	6/2/14	7.10		763.66	

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)	Elevation Top of Screen
MW-2A	7/23/99	15.42	770.64	755.22	733.72
	10/19/99	15.44		755.20	
	1/10/00	15.78		754.86	
	4/17/00	16.23		754.41	
	7/20/00	17.27		753.37	
	10/25/00	15.32		755.32	
	1/17/01	15.70		754.94	
	4/6/01	16.04		754.60	
	7/20/01	15.81		754.83	
	10/16/01	15.72		754.92	
	1/14/02	16.78		753.86	
	4/18/02	15.45		755.19	
	8/13/02	16.28		754.36	
	10/30/02	15.35		755.29	
	1/20/03	14.31		756.33	
	4/16/03	16.10		754.54	
	7/10/03	16.44		754.20	
	10/7/03	15.56		755.08	
	1/30/04	15.75		754.89	
	4/19/04	15.82		754.82	
	7/26/04	15.93		754.71	
	10/11/04	16.25		754.39	
	10/19/04	16.25		754.39	
	1/12/05	15.30		755.34	
	4/11/05	15.86		754.78	
	7/18/05	16.62		754.02	
	10/11/05	15.45		755.19	
	1/10/06	14.92		755.72	
	4/11/06	15.79		754.85	
	7/27/06	16.67		753.97	
	10/18/06	15.88		754.76	
	1/9/07	15.26		755.38	
	4/29/07	16.02		754.62	
	7/24/07	16.60		754.04	
	10/24/07	15.07		755.57	
	1/16/08	14.33		756.31	
	4/23/08	15.26		755.38	
	7/15/08	14.03		756.61	
	10/23/08	15.86		754.78	
	1/22/09	16.66		753.98	
	4/7/2009	6.21		764.43	
	7/7/09	16.97		753.67	
	7/28/09	16.48		754.16	
	10/11/09	15.74		754.90	
	1/19/10	15.39		755.25	
	4/13/10	15.55		755.09	
	7/29/10	15.55		755.09	
	10/19/10	13.62		757.02	
	1/13/11	17.13		753.51	
	4/27/11	16.22		754.42	
	7/19/11	15.21		755.43	
	10/11/11	14.16		756.48	
	1/10/12	15.03		755.61	
	4/10/12	15.32		755.32	
	8/8/12	16.54		754.10	
	10/9/12	15.41		755.23	
	1/8/13	14.84		755.80	
	4/15/13	14.57		756.07	
	7/10/13	15.20		755.44	
	10/14/13	15.20		755.44	
	1/15/14	15.22		755.42	
	4/9/14	15.12		755.52	
	6/2/14	15.18		755.46	

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)	Elevation Top of Screen
MW-5	7/23/99	5.22	771.16	765.94	756.73
	10/19/99	7.34		763.82	
	1/10/00	10.41		760.75	
	4/17/00	7.17		763.99	
	7/20/00	6.71		764.45	
	10/25/00	7.69		763.47	
	1/17/01	7.08		764.08	
	4/6/01	6.05		765.11	
	7/20/01	8.20		762.96	
	10/16/01	6.96		764.20	
	1/14/02	10.14		761.02	
	4/18/02	6.30		764.86	
	8/13/02	8.02		763.14	
	10/30/02	6.78		764.38	
	1/20/03	9.90		761.26	
	4/16/03	6.04		765.12	
	7/10/03	9.18		761.98	
	10/7/03	5.99		765.17	
	1/30/04	10.36		760.80	
	4/19/04	6.56		764.60	
	7/26/04	8.22		762.94	
	10/11/04	10.73		760.43	
	10/19/04	10.81		760.35	
	1/12/05	8.21		762.95	
	4/11/05	6.65		764.51	
	7/18/05	8.89		762.27	
	10/11/05	6.55		764.61	
	1/10/06	5.96		765.20	
	4/11/06	6.40		764.76	
	7/27/06	10.26		760.90	
	10/18/06	6.65		764.51	
	1/9/07	6.48		764.68	
	4/29/07	5.86		765.30	
	7/24/07	9.63		761.53	
	10/24/07	5.84		765.32	
	1/16/08	5.35		765.81	
	4/23/08	5.85		765.31	
	7/15/08	3.80		767.36	
	10/23/08	8.95		762.21	
	1/22/09	6.84		764.32	
	4/7/2009	6.04		765.12	
	7/7/09	8.90		762.26	
	7/28/09	10.33		760.83	
	10/11/09	6.27		764.89	
	1/19/10	11.25		759.91	
	4/13/10	5.50		765.66	
	7/29/10	10.13		761.03	
	10/19/10	8.44		762.72	
	1/13/11	7.17		763.99	
	4/27/11	6.20		764.96	
	7/19/11	4.16		767.00	
	10/11/11	8.50		762.66	
	1/10/12	8.79		762.37	
	4/10/12	8.82		762.34	
	8/8/12	11.72		759.44	
	10/9/12	12.52		758.64	
	1/8/13	8.36		762.80	
	4/15/13	5.39		765.77	
	7/10/13	7.04		764.12	
	10/14/13	11.67		759.49	
	1/15/14	9.74		761.42	
	4/9/14	6.08		765.08	
	6/2/14	5.96		765.20	

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)	Elevation Top of Screen
MW-5A	7/23/99	4.58	769.94	765.36	732.83
	10/19/99	7.60		762.34	
	1/10/00	11.26		758.68	
	4/17/00	4.47		765.47	
	7/20/00	5.27		764.67	
	10/25/00	6.62		763.32	
	1/17/01	3.72		766.22	
	4/6/01	3.47		766.47	
	7/20/01	6.05		763.89	
	10/16/01	6.02		763.92	
	1/14/02	11.42		758.52	
	4/18/02	4.00		765.94	
	8/13/02	7.26		762.68	
	10/30/02	5.70		764.24	
	1/20/03	13.86		756.08	
	4/16/03	3.25		766.69	
	7/10/03	9.33		760.61	
	10/7/03	11.34		758.60	
	1/30/04	13.71		756.23	
	4/19/04	4.10		765.84	
	7/26/04	6.40		763.54	
	10/11/04	10.65		759.29	
	10/19/04	10.93		759.01	
	1/12/05	8.25		761.69	
	4/11/05	4.87		765.07	
	7/18/05	8.70		761.24	
	10/11/05	9.62		760.32	
	1/10/06	4.72		765.22	
	4/11/06	7.10		762.84	
	7/27/06	13.98		755.96	
	10/18/06	10.14		759.80	
	1/9/07	9.56		760.38	
	4/29/07	5.50		764.44	
	7/24/07	10.89		759.05	
	10/24/07	11.40		758.54	
	1/16/08	9.08		760.86	
	4/23/08	7.42		762.52	
	7/15/08	7.01		762.93	
	10/23/08	15.02		754.92	
	1/22/09	15.57		754.37	
	4/7/2009	4.30		765.64	
	7/7/2009	7.46		762.48	
	7/28/2009	10.97		758.97	
	10/11/2009	6.32		763.62	
	1/19/2010	8.90		761.04	
	4/13/2010	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	

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)	Elevation Top of Screen
	7/23/99	7.48		759.65	
MW-10R	10/19/99	5.72	767.13	761.41	757.51
	1/10/00	6.69		760.44	
	4/17/00	5.28		761.85	
	7/20/00	5.71		761.42	
	10/25/00	5.97		761.16	
	1/17/01	4.91		762.22	
	4/6/01	4.62		762.51	
	7/20/01	6.20		760.93	
	10/16/01	6.31		760.82	
	1/14/02	6.88		760.25	
	4/18/02	8.13		759.00	
	8/13/02	9.37		757.76	
	10/30/02	7.91		759.22	
	1/20/03	10.11		757.02	
	4/16/03	6.75		760.38	
	7/10/03	10.13		757.00	
	10/7/03	5.78		761.35	
	1/30/04	n/a		n/a	
	4/19/04	5.11		762.02	
	7/26/04	4.91		762.22	
	10/11/04	10.91		756.22	
	10/19/04	11.13		756.00	
	1/12/05	8.63		758.50	
	4/11/05	4.95		762.18	
	7/18/05	6.20		760.93	
	10/11/05	5.23		761.90	
	1/10/06	4.96		762.17	
	4/11/06	3.87		763.26	
	7/27/06	7.17		759.96	
	10/18/06	3.48		763.65	
	1/9/07	3.02		764.11	
	4/29/07	4.89		762.24	
	7/24/07	5.01		762.12	
	10/24/07	5.16		761.97	
	1/16/08	4.45		762.68	
	4/23/08	4.48		762.65	
	7/15/08	3.04		764.09	
	10/23/08	5.03		762.10	
	1122/09	13.22		753.91	
	4/7/09	4.64		762.49	
	7/7/09	6.41		760.72	
	7/28/09	7.21		759.92	
	10/11/09	5.75		761.38	
	1/19/10	7.88		759.25	
	4/13/10	4.84		762.29	
	7/29/10	6.98		760.15	
	10/19/10	5.59		761.54	
	1/13/11	4.80		762.33	
	4/27/11	4.81		762.32	
	7/19/11	3.36		763.77	
	10/11/11	5.68		761.45	
	1/10/12	5.41		761.72	
	4/10/12	5.37		761.76	
	8/8/12	6.01		761.12	
	10/9/12	8.14		758.99	
	1/8/13	8.03		759.10	
	4/15/13	2.32		764.81	
	7/10/13	4.38		762.75	
	10/14/13	5.86		761.27	
	1/15/14	7.92		759.21	
	4/9/14	4.53		762.60	
	6/2/14	4.51		762.62	

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)	Elevation Top of Screen
MW-17	7/23/99	7.50	771.97	764.47	759.39
	10/19/99	8.50		763.47	
	1/10/00	9.78		762.19	
	4/17/00	7.41		764.56	
	7/20/00	9.76		762.21	
	10/25/00	8.89		763.08	
	1/17/01	9.12		762.85	
	4/6/01	7.74		764.23	
	7/20/01	9.01		762.96	
	10/16/01	8.53		763.44	
	1/14/02	9.67		762.30	
	4/18/02	8.15		763.82	
	8/13/02	9.04		762.93	
	10/30/02	7.79		764.18	
	1/20/03	10.36		761.61	
	4/16/03	8.94		763.03	
	7/10/03	10.04		761.93	
	10/7/03	7.07		764.90	
	1/30/04	10.79		761.18	
	4/19/04	8.23		763.74	
	7/26/04	9.10		762.87	
	10/11/04	8.62		763.35	
	10/19/04	9.02		762.95	
	1/12/05	9.68		762.29	
	4/11/05	8.27		763.70	
	7/18/05	8.32		763.65	
	10/11/05	7.52		764.45	
	1/10/06	8.02		763.95	
	4/11/06	8.18		763.79	
	7/27/06	8.22		763.75	
	10/18/06	7.42		764.55	
	1/9/07	7.68		764.29	
	4/29/07	8.28		763.69	
	7/24/07	8.95		763.02	
	10/24/07	7.12		764.85	
	1/16/08	7.66		764.31	
	4/23/08	7.80		764.17	
	7/15/08	5.97		766.00	
	10/23/08	8.40		763.57	
	01/22/09	10.30		761.67	
	04/07/09	8.00		763.97	
	07/07/09	9.73		762.24	
	07/28/09	9.42		762.55	
	10/11/09	7.73		764.24	
	01/19/10	9.58		762.39	
	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	

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)	Elevation Top of Screen
MW-17A	7/23/99	15.02	771.26	756.24	733.85
	10/19/99	15.38		755.88	
	1/10/00	16.32		754.94	
	4/17/00	16.89		754.37	
	7/20/00	17.99		753.27	
	10/25/00	16.17		755.09	
	1/17/01	17.30		753.96	
	4/6/01	17.88		753.38	
	7/20/01	15.79		755.47	
	10/16/01	16.35		754.91	
	1/14/02	16.40		754.86	
	4/18/02	17.18		754.08	
	8/13/02	17.20		754.06	
	10/30/02	16.11		755.15	
	1/20/03	17.31		753.95	
	4/16/03	18.05		753.21	
	7/10/03	17.31		753.95	
	10/7/03	16.56		754.70	
	1/30/04	16.85		754.41	
	4/19/04	17.45		753.81	
	7/26/04	16.40		754.86	
	10/11/04	16.48		754.78	
	10/19/04	16.40		754.86	
	1/12/05	15.85		755.41	
	4/11/05	16.87		754.39	
	7/18/05	17.01		754.25	
	10/11/05	15.91		755.35	
	1/10/06	16.10		755.16	
	4/11/06	17.15		754.11	
	7/27/06	17.14		754.12	
	10/18/06	16.06		755.20	
	1/9/07	16.18		755.08	
	4/29/07	17.45		753.81	
	7/24/07	17.02		754.24	
	10/24/07	15.69		755.57	
	1/16/08	16.45		754.81	
	4/23/08	16.98		754.28	
	7/15/08	15.93		755.33	
	10/23/08	16.34		754.92	
	01/22/09	16.88		754.38	
	04/07/09	17.08		754.18	
	07/07/09	16.72		754.54	
	07/28/09	17.30		753.96	
	10/11/09	16.46		754.80	
	01/19/10	16.32		754.94	
	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	

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)	Elevation Top of Screen
MW-18	8/13/02	11.75	770.03	758.28	757.23
	10/30/02	8.92		761.11	
	1/20/03	13.49		756.54	
	4/16/03	8.50		761.53	
	7/10/03	9.38		760.65	
	10/7/03	8.82		761.21	
	1/30/04	9.91		760.12	
	4/19/04	8.86		761.17	
	7/26/04	9.14		760.89	
	10/11/04	10.80		759.23	
	10/19/04	9.94		760.09	
	1/12/05	9.26		760.77	
	4/11/05	8.97		761.06	
	7/18/05	9.45		760.58	
	10/11/05	8.78		761.25	
	1/10/06	8.29		761.74	
	4/11/06	8.67		761.36	
	7/27/06	9.98		760.05	
	10/18/06	8.78		761.25	
	1/9/07	8.59		761.44	
	4/29/07	8.88		761.15	
	7/24/07	9.48		760.55	
	10/24/07	8.44		761.59	
	1/16/08	8.00		762.03	
	4/23/08	8.30		761.73	
	7/15/08	6.22		763.81	
	10/23/08	8.92		761.11	
	01/22/09	10.02		760.01	
	04/07/09	8.11		761.92	
	07/07/09	9.48		760.55	
	07/28/09	9.78		760.25	
	10/11/09	8.72		761.31	
	01/19/10	9.60		760.43	
	04/13/10	7.80		762.23	
	07/29/10	9.57		760.46	
	10/19/10	8.63		761.40	
	1/13/11	8.35		761.68	
	4/27/11	8.82		761.21	
	7/19/11	6.42		763.61	
	10/11/11	8.60		761.43	
	1/10/12	9.27		760.76	
	4/10/12	8.80		761.23	
	8/8/12	9.31		760.72	
	10/9/12	9.85		760.18	
	1/8/13	9.22		760.81	
	4/15/13	7.06		762.97	
	7/10/13	8.78		761.25	
	10/14/13	9.04		760.99	
	1/15/14	10.35		759.68	
	4/9/14	8.20		761.83	
	6/2/14	8.75		761.28	

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)	Elevation Top of Screen
MW-18A	8/13/02	39.88	770.67	730.79	732.37
	10/30/02	33.94		736.73	
	1/20/03	24.89		745.78	
	4/16/03	29.10		741.57	
	7/10/03	27.41		743.26	
	10/7/03	28.73		741.94	
	1/30/04	27.76		742.91	
	4/19/04	28.17		742.50	
	7/26/04	28.88		741.79	
	10/11/04	28.40		742.27	
	10/19/04	28.40		742.27	
	1/12/05	27.58		743.09	
	4/11/05	28.04		742.63	
	7/18/05	29.41		741.26	
	10/11/05	28.40		742.27	
	1/10/06	27.38		743.29	
	4/11/06	28.18		742.49	
	7/27/06	26.68		743.99	
	10/18/06	28.51		742.16	
	1/9/07	27.60		743.07	
	4/29/07	28.59		742.08	
	7/24/07	28.90		741.77	
	10/24/07	28.20		742.47	
	1/16/08	28.19		742.48	
	4/23/08	27.87		742.80	
	7/15/08	25.31		745.36	
	10/23/08	28.32		742.35	
	1/22/09	27.44		743.23	
	4/7/09	27.05		743.62	
	7/7/09	28.52		742.15	
	7/28/09	28.61		742.06	
	10/11/09	28.37		742.30	
	1/19/10	27.48		743.19	
	4/13/10	27.72		742.95	
	7/29/10	27.93		742.74	
	10/19/10	27.72		742.95	
	1/13/11	29.44		741.23	
	4/27/11	29.44		741.23	
	7/19/11	28.87		741.80	
	10/11/11	28.33		742.34	
	1/10/12	26.43		744.24	
	4/10/12	26.80		743.87	
	8/8/12	27.45		743.22	
	10/9/12	27.97		742.70	
	1/8/13	26.11		744.56	
	4/15/13	26.48		744.19	
	7/10/13	27.18		743.49	
	10/14/13	27.32		743.35	
	1/15/14	26.32		744.35	
	4/9/14	27.03		743.64	
	6/2/14	29.62		741.05	

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)	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	15.74		752.45	
	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	
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	
MW-20	06/02/14	7.36	768.29	760.93	764.29
MW-20A	06/02/14	32.73	768.36	735.63	739.02
MW-21	06/02/14	4.96	768.85	763.89	764.8
MW-21A	06/02/14	32.18	768.85	763.89	739.85

Table #7

Appleton Wire Former Albany international Chrome Plant
Total Pounds Chromium Removed

Year	Sump	Manhole	Yearly Total	Historic 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***	4.37	0.51	4.88	864.25

*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	**5300**	5100
	08/01/07	**8490**	N/A
	10/24/07	**3085**	1900
	01/16/08	**3020**	2260
	04/23/08	**2001**	2000
GMW-02	06/30/04	**5700**	4700
	08/01/04	**6355**	N/A
	10/24/07	**6115**	6115
	01/16/08	**7040**	6800
	04/23/08	**6600**	4900
GMW-03	06/30/04	**5000**	4700
	08/01/04	**4790**	N/A
	10/24/07	**3545**	2300
	01/16/08	**4550**	3100
	04/23/08	**3320**	1400
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

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

	04/23/08	4.2	<2.0
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		100.0	****
Preventive Action Limit, Chpater NR 140		10.0	****

EXPLANATION:
**** = Hexavalent Chromi not have a State G Groundwater Quality Standard.
However, Hexavalent Chromium is part of total chromium, which has a State Groundwater Quality Standard.
N/A = Not Analyzed
ug/l = Microgram / Liter (ppb)
100 = Exceeds Enforcement Standards (ES), Chapter NR 140of the Wis. Admin. C
121 = Exceeds Preventive Action Limit (PAL), Chapter NR 140 of the Wis. Admin. C