2017 PERIODIC REVIEW REPORT

CC Metals and Alloys, LLC
Witmer Road
Niagara, New York

Submitted to:

New York State Department of
Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2915

Attn: Mr. Michael Hinton

Prepared by:

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

88 Riberia Street • St. Augustine, FL 32084 • Ph: (904) 824-6999 • Fax: (904) 824-0726 • www.lan-fl.com

LAN Ref # 2.3643.19
April 28, 2017

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

2017 PERIODIC REVIEW REPORT

CC Metals and Alloys, LLC
Witmer Road Property
Town of Niagara, NY

This report was prepared under the direction and review of the undersigned persons. It is hereby certified that in our professional judgment, the content of this report meets with industry standards, satisfies the requirements of the New York State Department of Environmental Conservation, and follows generally acceptable engineering principals.

Guy D. Van Doren, P.E.

Date: April 28, 2017

Enclosure 2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form

Site Details **Box 1**

Site No. **932001C**

Site Name SKW Newco Inc.

Site Address: Witmer Road Zip Code: 14305
City/Town: Niagara
County: Niagara
Site Acreage: 9.8

Reporting Period: June 03, 2013 to April 01, 2017

	YES	NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	☒
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	☐	☒

Box 2

	YES	NO
6. Is the current site use consistent with the use(s) listed below?	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 932001C

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
130.16-1-10	CC Metals and Alloys, LLC (formerly SKW)	Ground Water Use Restriction Landuse Restriction O&M Plan Site Management Plan

Box 4

Description of Engineering Controls

Parcel	Engineering Control
130.16-1-10	Cover System Fencing/Access Control

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

YES	NO
☒	☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

   (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

   (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES	NO
☒	☐

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 932001C

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1,2, and 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as _____(Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

_____ _____
Signature of Owner, Remedial Party, or Designated Representative Rendering Certification Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I _____ at _____,
print name print business address

am certifying as a Qualified Environmental Professional for the _____
(Owner or Remedial Party)

_____	_____	_____
Signature of Qualified Environmental Professional, for the Owner or Remedial Party, Rendering Certification	Stamp (Required for PE)	Date

PERIODIC REVIEW REPORT (PRR)

FOR
CC METALS AND ALLOYS, LLC
WITMER ROAD

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PERIODIC REVIEW REPORT (PRR)

FOR
CC METALS AND ALLOYS, LLC
WITMER ROAD

1.0 EXECUTIVE SUMMARY

A. PROVIDE A BRIEF SUMMARY OF SITE, NATURE AND EXTENT OF CONTAMINATION, AND REMEDIAL HISTORY.

CC Metals and Alloys, Inc. formerly known as SKW Metals and Alloys, Inc. (CCMA or SKW), owns a portion (SKW Property) of the "Vanadium Corporation of America" (Vanadium Site) site No. 932001, which is listed in the New York State Department of Environmental Conservation's (NYSDEC) Registry of Inactive Hazardous Waste Disposal Sites (Registry). A site location map is provided in Figure 1. A map showing the limits of the CCMA Property is provided in Figure 2. The Vanadium site has been divided into 3 operable units (OUs) based on current property ownership. OU #1 is owned by CCMA and consists of a landfill that occupies a part of the northern portion of the property. The landfill consists of Cells No. 1 and No. 2. The landfill was properly closed in 1992-1993 in accordance with NYSDEC regulations and the NYSDEC approved the closure in 1994. The presence of hazardous waste has created significant threats to human health and/or the environment. As noted in the Record of Decision dated March 2006 in the past, portions of the Vanadium site have been used for the disposal of waste from the on-site and off-site manufacturing of specialty steel products. These activities resulted in the disposal of hazardous wastes, containing ferromanganese slag, calcium hydroxide, and ferrochromium dust, and ferrochromium silicon dusts. These wastes have contaminated the surface soils, subsurface soils, shallow groundwater, surface water run-off, sediments and drainage pathways at the site.

Conferences with NYSDEC personnel developed a plan and scope of work that was agreed upon to install an earthen cap to manage and reduce stormwater infiltration on areas surrounding the landfill proper (Cells No. 1 and No. 2). The plan also addressed drainage onto the SKW property from adjoining properties through berm construction and re-grading, and establishment and fertilization of groundcover in areas surrounding Cells No.1 and No. 2.

B. EFFECTIVENESS OF THE REMEDIAL PROGRAM TO ACHIEVE THE REMEDIAL OBJECTIVES FOR THE SITE.

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) for the Vanadium site the NYSDEC selected a No Further Action for OU #1 on March 31, 2006.

1. PROGRESS MADE DURING THE REPORTING PERIOD TOWARD MEETING THE REMEDIAL OBJECTIVES FOR THE SITE

The site continues to meet the remedial objectives through following the monitoring plan (App.1) and implementing the operation and maintenance plan developed for the site. (App. 2) The progress made during the reporting period exemplifies that ability of the remedial program to be successful in the future.

C. COMPLIANCE

1. IDENTIFY ANY AREAS OF NON-COMPLIANCE REGARDING THE MAJOR ELEMENTS OF THE SITE MANAGEMENT PLAN (SMP,I.E., THE INSTITUTIONAL/ENGINEERING CONTROL (IC/EC) PLAN, THE MONITORING PLAN, AND THE OPERATION & MAINTENANCE (O&M) PLAN).

The CCMA site did not experience any non-compliance issues for the 2016 calendar year in regards to the (IC/EC) Plan, the Monitoring Plan or the (O&M) Plan.

2. PROPOSE STEPS TO BE TAKEN AND SCHEDULE TO CORRECT ANY AREAS OF NON-COMPLIANCE.

Not applicable at this time.

D. RECOMMENDATIONS

1. RECOMMEND WHETHER ANY CHANGES TO THE SMP ARE NEEDED

No changes to the SMP are necessary at this time.

2. RECOMMEND ANY CHANGES TO THE FREQUNECY FOR SUBMITTAL OF PRRS (INCREASE, DECREASE)

The CCMA OU#1 site is of relative low concern and the need to increase the submittal of PRRS is not necessary. It is recommended that submittal of PRRS continue at the annual frequency.

2.0 SITE OVERVIEW

A. DESCRIBE THE SITE LOCATION, BOUNDARIES (FIGURE), SIGNIFICANT EATURES, SURROUNDING AREA, AND THE NATURE AND EXTENT OF CONTAMINATION PRIOR TO SITE REMEDIATION.

The subject landfill is located on the south side of NY Highway #31, approximately two miles northeast of the intersection of NY Highway #31 and Hyde Park Boulevard in/near Niagara, NY. CCMA, formerly known as SKW Metals and Alloys, Inc., received a NYSDEC Permit to operate the subject solid waste disposal facility in 1980. The landfill consisted of two landfill cells that were designed for the disposal of baghouse dusts from the nearby ferroalloy production

plant. According to historical engineering documents there were two cells known as Cell No. 1 and Cell No. 2, that were permitted under the NYSDEC permit. Cell No. 1 has a 5-foot clay liner with leachate collection system, while Cell No. 2 has a 2-foot clay liner with leachate collection system. Permit #2585 (App. 3) issued by NYSDEC provided the closure requirements of this landfill. A closure plan was submitted on January 28, 1988, and was subsequently approved. Since that time, CCMA has been performing the required post-closure monitoring as required by the regulations and set forth in the closure plan.

B. DESCRIBE THE CHRONOLOGY OF THE MAIN FEATURES OF THE REMEDIALPROGRAM FOR THE SITE, THE COMPONENTS OF THE SELECTED REMEDY, CLEANUP GOALS, SITE CLOSURE CRITERIA, AND ANY SIGNIFICANT CHANGES TO THE SELECTED REMEDY THAT HAVE BEEN MADE SINCE REMEDY SELECTION.

In response to the NYSDEC's inclusion of the Vanadium Site on the Registry, CCMA entered into an Order on Consent in 1998 with the NYSDEC, Index No. B9-0470-94-12, a copy of which was attached to and made a part of a Declaration of Covenants and Restrictions which was recorded in the Niagara County's Clerk's Office on July 30, 1998. CCMA undertook remedial measures to address conditions in a n area in the southeast portion of the property, which measures included regarding to (i) eliminate off-site surface water runoff from entering the property, (ii) isolate on-site stormwater to prevent contact with underlying soil and groundwater, (iii) produce a site drainage system for the property to control stormwater discharge from the property and (iv) eliminate on-site low lying areas where surface water could accumulate. NYSDEC approved the remedial measures completion report in a letter dated January 13,2000 and the Declaration of Covenants and Restrictions recorded at the Niagara County Clerk Office on July 30, 1998 automatically terminated upon satisfaction of the obligations imposed under the Order on Consent.

3.0 EVALUATE REMEDY PERFORMANCE, EFFECTIVENESS, AND PROTECTIVENESS

Groundwater Monitoring continues to show positive results for the OU#1 site. As of 2014 groundwater monitoring events were adjusted from a semi-annual to annual occurrence. Appendix 4 (Annual Groundwater Analytical Summary) illustrates the results of the groundwater monitoring events from 2013 thru 2016. Exceedances are illustrated as being bold values in the table.

4.0 DECLARATION OF COVENENT AND RESTRICTIONS

Following the completion of the interim remedial measure a covenant & restriction was developed, approved and filed. This document remains in full force.

5.0 MONITORING PLAN COMPLIANCE REPORT

A. COMPONENETS OF THE MONITORING PLAN (TABULAR) PRESENTATIONS PREFERRED)-DESCRIBE THE REQUIRMENTS OF THE MONITORING PLAN BY MEDIA (I.E., SOIL, GROUNDWATER, SEDIMENT, ETC.) AND BY ANY REMEDIAL TECHNOLOGIES BEING USED AT THE SITE.

Provisions have been made for groundwater and surface water monitoring for Cells 1 and 2. Implementation of this program during the facility's post-closure period provides the required data to evaluate the potential effects of Cells 1 and 2 on both the site's ground and surface water. A series of five monitoring wells are utilized to monitor the quality of groundwater contained in the permeable sediments overlying the bedrock. Appendix 4 (Annual Groundwater Analytical Summary) illustrates the results of the groundwater monitoring events from 2013 thru 2016. Exceedances are illustrated as being bold values in the table.

B. SUMMARY OF MONITORING COMPLETED DURING REPORTING PERIOD-DESCRIBE THE MONITORING TASKS ACTUALLY COMPLETED DURING THIS PRR REPORTING PERIOD. TABLES AND/OR FIGURES SHOULD BE USED TO SHOW ALL DATA.

Based on groundwater elevation data obtained from the monitoring wells during the April 2016 monitoring period, groundwater flows in a southerly direction across the site. (Figure 3) This is consistent with recorded historic groundwater flow patterns. Surface water quality is monitored using samples obtained from the site's drainage retention swale. In addition, samples are obtained from the landfill leachate sump (LS-1).

Monitoring wells MW-3R, MW-5R, MW-12, MW-BR1, and MW-14N are indicated on Figure 2 showing locations, monitoring well sampling point top-of-casing elevations, and surface water drainage patterns. Based on the site's previously noted groundwater flow direction (southerly), monitoring well 3R is used to provide upgradient data, while monitoring wells 5R, 12, BR1, and 14N provide data on groundwater quality downgradient of the site's disposal areas (Cells 1 and 2).

Cell 1 was closed to all waste materials and covered with a minimum of 18 inches of low permeability compacted soil (maximum permeability of 1.0×10^{-7} cm/sec) and 6 inches of soil capable of supporting vegetative growth. It is reported that Cell 2 was similarly closed. Surface water runoff from the closed facilities does not come in contact with the waste materials previously deposited in Cells 1 and 2. However, as a precaution surface water samples are taken at the southwest corner of the site, where surface water collects and flows into the stormwater drainage pipe and then offsite to the City of Niagara Falls combined sewer system (sample location SW-1).

Groundwater and surface water analytical samples are collected by TestAmerica Laboratories, Inc. (TestAmerica). Historically samples have been collected on a semi-annual basis. However,

LAN submitted a *Request for Modification of Groundwater Sampling Plan* to the NYSDEC dated October 2013 which requested a change from semi-annual to annual sampling. This request was based on a thorough statistical analysis of historic water quality data collected to that time. In a letter dated March 2014 from the NYSDEC, the requested modification to annual sampling was approved. As such, samples are now analyzed on an annual basis for routine parameters; specific conductivity, temperature, pH, Eh, turbidity, COD, TOC, TDS, SO4, Cl, Br, Pb, Mn, K, and Na. In addition, annual samples are analyzed for baseline parameters; As, Ba, Cr, Cr+6, Hg, Se, and B. Samples are also obtained for Volatile Organic Compounds (VOCs) as specified in the New York State Regulation 6 NYCRR Part 360, §360-2.11(d)(6) Water Quality Analysis Tables, Baseline Parameters list.

The following laboratory analytical methods were utilized: VOCs analyzed via Method 8260C (VOCs by GC/MS); Metals analyzed via method 6010C (ICP); Mercury analyzed via Method 7470A (CVAA); General Chemistry Methods for bromide, chloride, sulfate via Method 300.0, Chemical Oxygen Demand (COD) via Method 410.4, Total Disolved Solids (TDS) via Method SM 2540C, Hexavalent Chromium-Cr (VI) via Method SM 3500 CR B, and Total Organic Carbon (TOC) via Method SM 5310D. Field parameters such as water temperature, pH, conductivity, turbidity and ORP were measured by the TestAmerica field personnel during the well sampling. Refer to the laboratory analytical report in Appendix 5.

C. CONCLUSIONS AND RECOMMENDATIONS FOR CHANGES-PROVIDE OVERALL CONCLUSIONS REGARDING THE MONITORING COMPLETED AND THE RESULTING EVALUATIONS REGARDING REMEDIAL EFFECTIVENESS.

Overall there have been no significant changes in water quality during the past year. A summary of groundwater quality data for the past year, as well as historic analytical data inclusive of the last six monitoring events, is provided in Appendix 4.

6.0 OPERATION & MAINTENANCE (O&M) PLAN COMPLIANCE REPORT

A. COMPONENTS OF O&M PLAN-DESCRIBE THE REQUIRMENTS OF THE O&M PLAN INCLUDING REQUIRED ACTIVITIES, FREQUNECIES, RECORD KEEPING, ETC.

LAN is responsible for conducting and filing a Waste Management Facility Maintenance Inspection Report. The inspection report consists of a checklist, which covers the following annual evaluation.

- Bank and cover erosion
- Settlement
- Cover soil integrity
- Condition of vegetative cover
- Condition of monitoring wells
- Site security

If items are encountered during the inspections that are of significant environmental concern, necessary corrective actions are undertaken as expeditiously as possible. Notices of these actions, if necessary, are reported to the NYSDEC explaining the nature and location of the problem and the corrective action taken.

B. SUMMARY OF O&M COMPLETED DURING REPORTING PERIOD-DESCRIBE THE O&M TASKS ACTUALLY COMPLETED DURING THIS PRR REPORTING PERIOD.

On November 9 & 10, 2016 the required annual inspection was conducted by a representative of LAN.

A copy of the inspection checklist is included as Appendix 6. Photographic documentation is included as Appendix 7. The following is a synopsis of the findings of the inspection.

- The landfill cells and surrounding property were mowed and cleared of debris (fallen limbs/branches) the day before the inspection and found in very good condition.

- Sevenson Environmental Services, Inc. (Sevenson) accessed the property to inspect an adjacent property on which they had performed environmental clean-up in 2014. There were no impacts to the CCMA property as a result of this access. This should be the last year that Sevenson needs to access their wetland through the CCMA property.

- No evidence of erosion or impact to the site was noted during the inspection.

- The 15” corrugated high-density polyethylene (HDPE) drainage pipe located at the SW-1 surface water sample location, repaired following the 2013 inspection, was found to be in proper working order.

- All monitoring wells and sampling locations were found in proper working order and in good condition.

- A fallen tree in the NW portion of the site was cleared by A-1 Land Care on 12/2/2016. Refer to Appendix 8.

- Areas of the fence required clearing of vegetative growth. This work was conducted by A-1 Land Care on 12/2/2016 (Appendix 8).

C. EVALUATION OF REMEDIAL SYSTEMS-BASED UPON THE RESULTS OF THE O&M ACTIVITIES COMPLETED,EVALUATE THE ABILITY OF EACH COMPONENT OF THE REMEDY SUBJECT TO O&M REQUIREMENTS TO PERFORM AS DESIGNED/EXPECTED.

The remedial system continues to meet the O&M requirements to perform as designed.

D. O&M DEFICIENCIES-IDENTIFY ANY DEFICIENCIES IN COMPLYING WITH THE O&M PLAN DURING THE PRR REPORTING PERIOD.

No deficiencies were identified during the PRR reporting year.

E. CONCLUSIONS AND RECOMMENDATIONS FOR IMPOROVEMENTS-PROVIDE AN OVERALL CONCLUSION REGARDING O&M FOR THE SITE AND IDENTIFY ANY SUGGESTED IMPROVEMENTS REQUIRING CHANGES IN THE O&M PLAN.

All required post-closure activities for the 2016 year have been conducted. Items of concern discovered during the annual site inspection were noted and appropriate corrective actions were implemented. Continued annual post-closure monitoring and inspections will be conducted to ensure the landfill is functioning as designed, and does not pose a threat to humans and/or the environment.

7.0 OVERALL PRR CONCLUSIONS AND RECOMMENDATIONS

A. COMPLIANCE WITH SMP-FOR EACH COMPONENT OF THE SMP (I.E. IC/EC, MONITORING, O&M), SUMMARIZE;

1. WHETHER ALL REQUIRMENTS OF EACH PLAN WERE MET DURING THE REPORTING PERIOD

All requirements made by the Monitoring and O&M plans were met during the reporting period.

2. ANY REQUIRMENTS WERE NOT MET

Not applicable.

3. PROPOSED PLANS AND A SCHEDULE FOR COMING INTO FULL COMPLIANCE.

OU#1 is currently in full compliance and scheduled accordingly.

FIGURE 1

SITE LOCATION

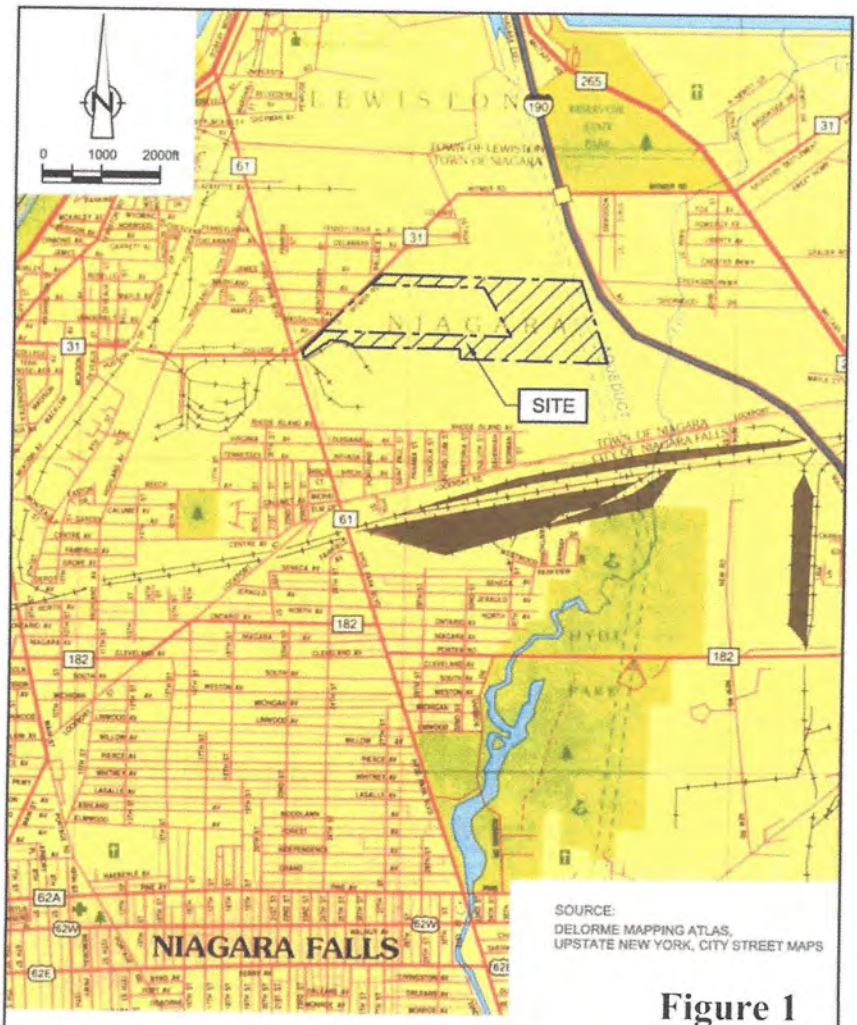


Figure 1

SITE LOCATION
PHASE III AND IV - RI/FS
VANADIUM CORPORATION OF AMERICA SITE
Niagara Falls, NY

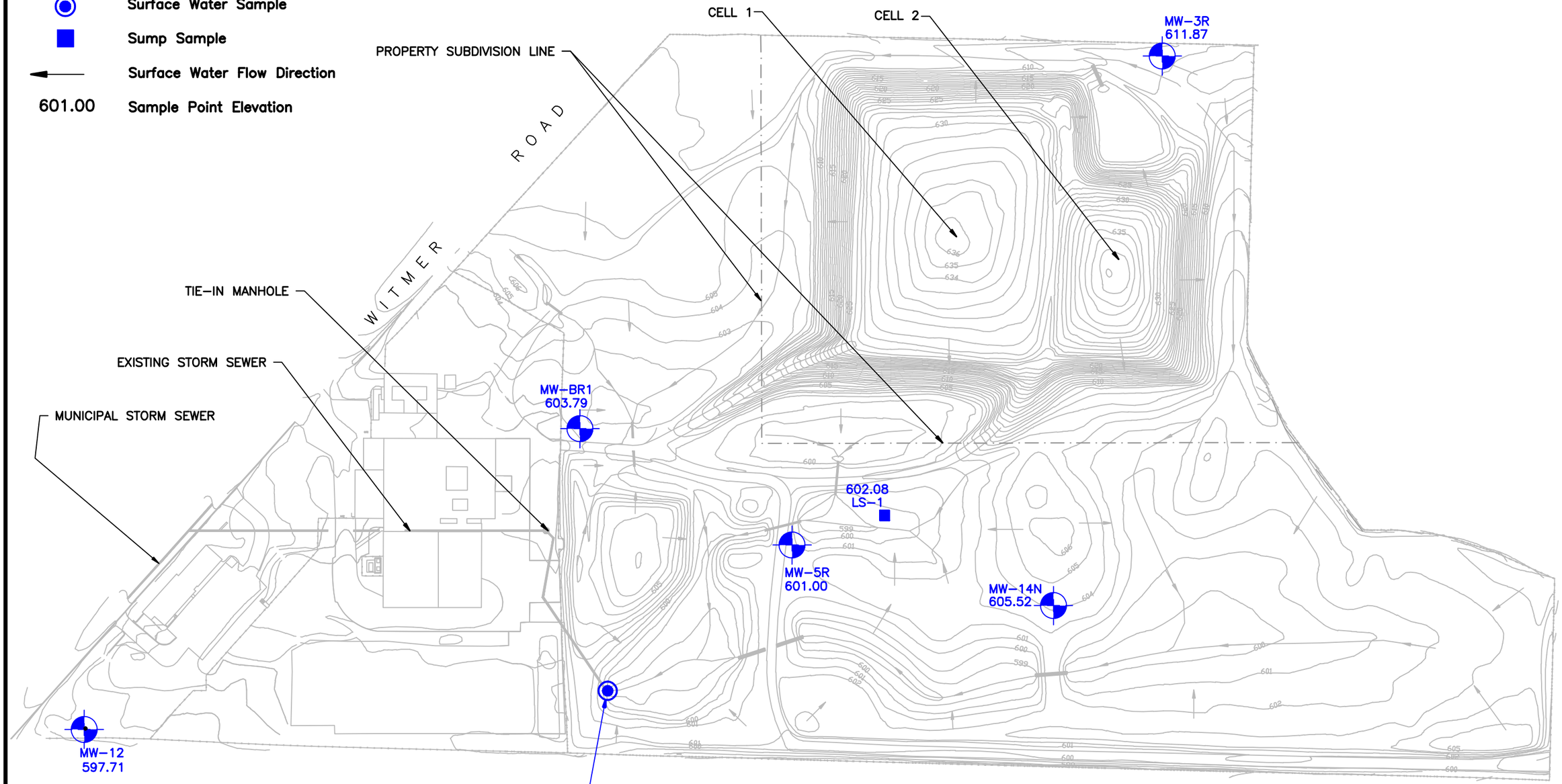
19867-00(004)GN-WA001 OCT 31/2005

FIGURE 2

SITE PLAN

LEGEND:

- MW-5R — Monitoring Well
- Surface Water Sample
- Sump Sample
- Surface Water Flow Direction
- 601.00 — Sample Point Elevation



GRAPHIC SCALE

75 0 37.5 75 150 300

(IN FEET)
1 inch = 150 ft.

DATE: 1/12/15
REV:
CHECKED : KEH
DRAWN : MJC
SCALE : 1"=150'

SITE PLAN

Calvert City Metals and Alloys, LLC (Witmer Road Landfill)
4201 Witmer Road
Niagara Falls, NY 14305

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING
88 RIBERIA ST., SUITE 400, ST AUGUSTINE, FL 32084 (904)824-6999

FIGURE: 2

JOB NO. 2.3643.17

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FIGURE 3

GROUNDWATER FLOW DIRECTION (4/28/2016)

LEGEND:

- MW-00 — Monitoring Well
- Surface Water Sample
- Sump Sample
- Surface Water Flow Direction
- Groundwater Flow Direction
- 594.28 — Groundwater Elevation
- (595.00) — GW Contour Interval
- Groundwater Contour

PROPERTY SUBDIVISION LINE

CELL 1

CELL 2

WITMER ROAD

TIE-IN MANHOLE

EXISTING STORM SEWER

MUNICIPAL STORM SEWER

(600.00)

(605.00)

(595.00)

(590.00)

MW-3R
609.75

MW-BR1
593.16

602.08(TOC)
LS-1

MW-5R
594.93

MW-14N
598.41

MW-12
589.36

SW-1

GRAPHIC SCALE

75 0 37.5 75 150 300

(IN FEET)
1 inch = 150 ft.

DATE: 12/07/16
REV:
CHECKED : CLC
DRAWN : MJC
SCALE : 1"=150'

Groundwater Flow Direction 4/28/2016

Calvert City Metals and Alloys, LLC (Witmer Road Landfill)
4201 Witmer Road
Niagara Falls, NY 14305

LAN ASSOCIATES, INC.
CONSULTING•ENGINEERING•PLANNING
88 RIBERIA ST., SUITE 400, ST AUGUSTINE, FL 32084 (904)824-6999

FIGURE: 3

JOB NO. 2.3643.17

S:\Drawings\2-3600's\2-3643-17 □MM - Witmer Road\CAD\GW_1604

APPENDIX 1

MODIFIED GROUNDWATER MONITORING PLAN

New York State Department of Environmental Conservation
Division of Materials Management, Region 9
270 Michigan Avenue, Buffalo, New York 14203-2915
Phone: (716) 851-7220 • **FAX:** (716) 851-7226
Website: www.dec.ny.gov

Joe Martens
Commissioner

March 11, 2014

Mr. Guy D. VanDoren, P.E.
President
LAN Associates, Inc.
88 Riberia Street, Suite 400
St. Augustine, Florida 32084

Dear Mr. VanDoren:

CC Metals and Alloys
#32N04

The Divisions of Materials Management and Remediation have reviewed the document "Request for Modification of Groundwater Sampling Plan" submitted with your letter dated November 5, 2013 prepared on behalf of CC Metals and Alloys for its closed landfill on Witmer Road in the town of Niagara. This document requested a reduction in monitoring frequency from semi-annual to annual, and provided supporting information for the request.

Both Divisions agree that based on the data presented, this request can be granted. Therefore, annual sampling will be required in 2014 and subsequent years, unless the annual sampling data indicates any issues which would warrant a return to semi-annual sampling.

If you have any questions, please contact this office at (716) 851-7220.

Sincerely,

Mary E. McIntosh, C.P.G.
Engineering Geologist 2

MEM/ed

cc: Mr. Dennis Weiss, Regional Materials Management Engineer
Mr. Michael Hinton, Division of Environmental Remediation
Mr. David Matthews, LAN Associates
Mr. Edward Bredniak, CC Metals and Alloys

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

November 5, 2013

VIA UPS GROUND

Ms. Mary McIntosh, C.P.G.
Engineering Geologist II
New York State Department of
Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999

Subject: CC Metals and Alloys, LLC
Witmer Road Solid Waste
Management Facility
LAN Ref. #2.3643.17

Dear Ms. McIntosh:

Per your telephone conversation with Dave Matthews of LAN Associates, Inc. (LAN), on behalf of CC Metals and Alloys, LLC (CCMA), enclosed is one original report of the *Request for Modification of Groundwater Sampling Plan*, for your review and approval.

If you have any questions after reviewing this report, please do not hesitate to contact me directly at (904) 824-6999.

Very truly yours,

Guy D. VanDoren, P.E.
President

GVD:kk
2.3643.17-L-NYSDEC-GWPlanMod Req-131105-gvd

Enclosure: Request for Modification of Groundwater Sampling Plan dated 10/30/2013

Copies to: Mr. Gary Joiner, Plant Manager, CCMA

CC Metals and Alloys, LLC
1542 N. Main Street
Calvert City, KY 42029

REQUEST FOR MODIFICATION
OF
GROUNDWATER SAMPLING PLAN
OCTOBER 2013

WITMER ROAD SOLID WASTE MANAGEMENT FACILITY
Niagara, NY

Submitted to:

New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203-2999

Attention:
Ms. Mary McIntosh, C.P.G.
Engineering Geologist II

Prepared by:

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

88 Riberia Street, Suite 400 • St. Augustine, FL 32084
Ph: (904) 824-6999 • Fax: (904) 824-0726 • www.lan-fl.com

LAN Ref. #2.3643.17
October 30, 2013

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

REQUEST FOR MODIFICATION
OF
GROUNDWATER SAMPLING PLAN
OCTOBER 2013

CC Metals and Alloys, LLC
Witmer Road Solid Waste Management Facility
Niagara, NY

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LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

REQUEST FOR MODIFICATION OF GROUNDWATER SAMPLING PLAN OCTOBER 2013

CC Metals and Alloys, LLC
Witmer Road Solid Waste Management Facility
Niagara, NY

1.0 INTRODUCTION

The following report is submitted to the New York State Department of Environmental Conservation (NYSDEC) by LAN Associates, Inc. (LAN), on behalf of CC Metals and Alloys, LLC (CCMA), as a request to modify the groundwater sampling plan for the Witmer Road Solid Waste Management Facility Permit #2585 (Appendix A). This report is submitted in compliance with NYSDEC regulations Chapter 4, Part 360-2.11(c)(5)(iv)(c), Chapter 4, Part 360-2.15(k)(4).

CCMA has been collecting data in accordance with the facility's groundwater sampling plan. The data collection began in 1991, to monitor the condition of the groundwater at the Witmer Road site. In 1998, CCMA implemented interim remedial measures (IRM) to reduce stormwater infiltration and remove potentially deleterious material from the site. In 2004, the collected data was analyzed by LAN to determine the effectiveness of the IRM. Based on this analysis, a request for modification was submitted to NYSDEC which recommended removing certain parameters from the sampling plan and reducing the frequency of measurements. The recommendations were accepted by NYSDEC. The sampling frequency was changed from quarterly to semi-annually, and the following parameters were omitted from future sampling events:

Parameters

Alkalinity	Color, True	Phenols
Aluminum	Copper	Silver
Ammonia	Total Cyanide	Thallium
Antimony	Hardness	Vanadium
Beryllium	Iron	Zinc
Cadmium	Magnesium	Biological Oxygen Demand
Calcium	Nickel	Sol Hexavalent Chromium
Cobalt	Nitrate	Total Kjeldahl Nitrogen

The modified sampling plan has been implemented since 2004. Recently, LAN performed an analysis of the data to determine if a second request for modification is warranted. This report contains an analysis of the data collected from 1991 through 2012, and concludes by recommending that CCMA submit a request for modification to reduce the frequency of measurements from semi-annual to annual. Justification for this request is provided herein.

2.0 SITE DESCRIPTION/HISTORY

The subject landfill is located on the south side of New York Highway 31, approximately two miles northeast of the intersection of New York Highway 31 and Hyde Park Boulevard in/near Niagara, New York. CCMA, formerly known as SKW Metals and Alloys, Inc., received a NYSDEC Permit to operate the solid waste disposal facility in 1980. The landfill consisted of two landfill cells designed for the disposal of baghouse dust from the nearby ferroalloy production plant. According to historical engineering documents, there were two cells known as Cell No. 1 and Cell No. 2, which were permitted under the NYSDEC permit. Cell No. 1 has a five-foot clay liner with leachate collection system, while Cell No. 2 has a two-foot clay liner with leachate collection system. Permit #2585 issued by NYSDEC provided the closure requirements of this landfill. A closure plan was submitted on January 28, 1988, and was subsequently approved. Since that time, CCMA has been performing the required post-closure monitoring as required by the regulations and set forth in the closure plan.

In 1997, SKW and LAN submitted a report to NYSDEC entitled *Remedial Investigation and Recommended Interim Remedial Measures for SKW Metals and Alloys, Witmer Road Property*. In this report and the conferences with NYSDEC personnel that followed, a scope of work was agreed upon to perform the following tasks:

1. Remove industrial and other wastes from the areas surrounding, and to the south of, the landfill cells;

2. Re-grade the area surrounding, and to the south of, the landfill cells for effective stormwater drainage; and

3. Cover the re-graded areas with clay to reduce permeability.

Since the monitoring program began, many upgradient well and leachate sump parameters have steadily decreased, and began converging with those of the upgradient well. Parameters which have New York state effluent groundwater maximum allowable concentrations[1] (NY-MACs) have shown fewer, if not the absence of, contraventions of these values since the closure was approved. The statistical analyses in Section 4.0 demonstrate that, while the IRM did not aim to mitigate landfill pollution, it has resulted in reduced groundwater contamination and contributed to the improvement of the environmental integrity of the landfill.

A previous request for modification was written in 2004. Based on a statistical analysis of the parameter measurements which compared the pre-IRM period to the post-IRM period, LAN recommended that various parameters be removed from the program and the frequency of measurements be changed from quarterly to annually. Twenty-four of the requested parameter removals (all of them except for those of boron and total organic

[1] [1] 6 NYCRR Part 703.6 Table 3

content) were accepted, and the monitoring frequency was changed to semi-annual rather than annual. Since the 2004 request for modification, measurements have shown that many parameters have continued to stabilize and remain at levels below those of the pre-IRM period. Section 5.0 statistical analysis justifies the current recommendation to change the monitoring frequency from semi-annual to annual.

3.0 GROUNDWATER MONITORING/FLOW/HYDROGEOLOGY

A robust record of groundwater elevation data confirms the upgradient and downgradient status of each well. A review of groundwater elevation data indicates a hydrogeological flow gradient from northeast (upgradient) to southwest (downgradient). The record indicates no groundwater flow reversals. A site plan with groundwater elevations is attached from a former baseline monitoring report to show representative groundwater flow during the period of record (Appendix B).

Four existing wells and a landfill leachate sump have been used to monitor groundwater conditions at the subject landfill since 2004. Well 3R is hydrogeologically upgradient, Well 5R is hydrogeologically downgradient. Well 14N is laterally downgradient, and Well 12 is the furthest downgradient.

Since 2004, additional measurements have been taken at a downgradient bedrock well – indicated as Well BR1 – as well as at a surface water location which has a downgradient orientation with respect to Well 3R.

4.0 STATISTICAL ANALYSIS OVERVIEW

Currently, each parameter is measured twice per year. A statistical analysis has been performed to determine if parameter measurements have continued to stabilize and remain below pre-IRM levels. The analysis for Wells 3R, 5R, 14N, 12, and the leachate sump included:

- Comparing arithmetic means, arithmetic standard deviations, medians, and geometric means of each parameter between the following periods
    - Pre-IRM period: 1991 through 1998
    - Post-IRM period, pre-Report[2]: 1999 through May, 2004
    - Post-IRM period, post-Report: September, 2004, through present
    - Post-IRM period: 1999 through present
    - Overall period: 1991 through present
- Graphically comparing upgradient well measurements to downgradient well measurements
- Comparing well measurements to NY-MACs
- Comparing ranges of arithmetic mean (+/- standard deviation) between parameters to test for significant difference; if the ranges overlapped, the data sets were not considered to be significantly different

[2] Refers to the previous request for modification report, which considered data up until May of 2004.

- Considering measurements that were below the detection limit

Surface water and Well BR1 measurements were not taken before the IRM period. Therefore, LAN was unable to compare pre-IRM levels to post-IRM levels at these measurement locations. Consequently, the analysis of the surface water and Well BR1 parameter measurements consisted solely of:

- Analyzing data trends
- Comparing bedrock measurements to upgradient well measurements and corresponding NY-MACs
- Comparing surface water measurements to NYSDEC water quality standards[3]

For each parameter discussed in this report, three graphical representations of the data are presented in Appendix C:

- Comparison of leachate and downgradient well measurements to upgradient well measurements
- Comparison of bedrock well measurements to upgradient well measurements
- Surface water measurement data

All results which were non-detect (i.e. below the detection limit[4]) are shown on the graphs as the detection limits themselves. The tables containing the statistical values and arithmetic mean (+/- standard deviation) for wells with pre-IRM data and leachate are included in Appendix D.

5.0 PARAMETER SPECIFIC ANALYSIS

The parameters analyzed in the following table were chosen because they best represent the extent to which the IRM results in reduced groundwater contamination and contributed to the improvement of the environmental integrity of the area. The parameters omitted from this report have also shown some degree of declination, but not as much as the included parameters (e.g. boron and chemical oxygen demand have shown an overall decrease since the IRM, but have been slightly trending up since 2009 and 2011, respectively). Some of the omitted parameters, while showing overall decreases, still yield significantly higher measurements in the downgradient wells than in the upgradient well.

[3] 6 NYCRR Part 703.5 Table 1 for Class C surface water

[4] The detection limit is the value below which the instrument of measurement is unable to detect the analyte. A reporting limit is the detection limit multiplied by a greater-than-one factor; this limit is the threshold below which a measurement is detected but not believed by the measurer to be reasonably accurate.

Parameter Analysis

Parameter	NY-MAC	Analysis
Arsenic	0.05 mg/L	- No wells have ever shown contraventions of the NY-MAC - Most measurements have been well below the NY-MAC, sometimes by as much as an order of magnitude - Most measurement results have been below the detection limit - No significant difference between arsenic content of the downgradient and upgradient wells - Bed rock measurements are similar to upgradient well measurements (below detection limit and well-below NY-MAC) - Surface water measurements are also roughly one order of magnitude lower than the water quality standard
Barium	2.0 mg/L	- No wells have ever shown contraventions of the NY-MAC - Graphical representation shows that most measurements have been well below the NY-MAC - No measurement has ever exceeded 0.2 mg/L, which is an order of magnitude below the NY-MAC - No significant difference between barium content of the upgradient and most downgradient wells - Bedrock measurements show slightly higher results than those of the upgradient well, but still remain about an order of magnitude lower than the NY-MAC - No water quality standard for surface water concentrations of barium, but measurements show a decreasing trend
Lead	0.05 mg/L	- Historically, there have been two contraventions of the limit: • One occurred in 1999, and the other occurred in 2000 (however, this measurement was below the detection limit, and the detection limit was greater than the NY-MAC) - Many lead measurements have been below the detection limit - Graphical representation of the data shows that downgradient and upgradient well measurements have converged and remained well below the NY-MAC - Since the previous request for modification, no measurements have exceeded 0.005 mg/L, which is an order of magnitude below the NY-MAC - No significant difference between upgradient and downgradient well measurements - Bedrock measurements are similar to upgradient well measurements (below detection limit and well below NY-MAC) - Surface water measurements were below the water quality standard* and have also been below the detection limit

Parameter Analysis (Cont'd)

Parameter	NY-MAC	Analysis
Mercury	0.0014 mg/L	- No wells have ever shown contraventions of the NY-MAC - Most measurements have been below detection limit - Graphical representation of data shows that measurements have converged and been well below the NY-MAC - Since the IRM period, all measurements have been below 40 percent of the NY-MAC - No significant difference between upgradient and downgradient well measurements - The six well curves overlapping indicate mercury measurements have always been below detection limit - Surface water measurements and bedrock well measurements have also resulted in non-detect
Specific Conductance	N/A	- Graphical representation of data shows that upgradient and downgradient well measurements have converged - Since the IRM period, data has also shown a decrease in specific conductance over all wells - Bedrock measurements have also shown a converging trend with upgradient well measurements - Surface water measurements show a decreasing trend (no water quality standard)
Sulfate	500 mg/L	- There have been no contraventions of the limit since 1995 (before the IRM period) - Since the IRM period itself, sulfate measurements have dropped to mostly below 50 percent of the NY-MAC - No significant difference between downgradient and upgradient well measurements - Measurements also show lower levels of sulfate in the bedrock than in the upgradient well - Surface water measurements indicate a decreasing trend of sulfates (no water quality standard) - Sulfate is also a good chemical indicator for the oxyanion-ligand group, indicating that concentration of that group is also decreasing and stabilizing with time
Turbidity	N/A	- Since the IRM period, measurement results for upgradient and downgradient wells have converged - Downgradient well measurements are not significantly different than upgradient well measurements - Bedrock measurements have also shown a converging trend with upgradient well measurements - Surface water measurements show a decreasing trend (no water quality standard)

Parameter Analysis (Cont'd)

Parameter	NY-MAC	Analysis
Chloride	500 mg/L	- No contraventions of the NY-MAC since 1992 - Since the IRM period, all measurements have been below 250 mg/L, 50 percent of the NY-MAC - Bedrock measurements have also shown a converging trend with upgradient well measurements - Surface water measurements show a decreasing trend (no water quality standard)
Elemental Chromium	N/A	- Downgradient well measurements are not significantly different than upgradient well measurements - Measurements from the leachate still seem, graphically, to be fluctuating significantly - Bedrock measurements have been lower than those of upgradient well - Surface water measurements have shown a decreasing trend - Surface water measurements are below water quality standard*
pH	Upper: 8.5 Lower: 6.5	- Before the IRM period, there have been 15 contraventions of the limits since 1991: • Between the IRM period and the previous request for modification, there were seven contraventions • No contraventions since previous request for modification • Measurement of 17.0 made on September 22, 2009, was thrown out as an outlier. - Trends indicate that pH has become more steady and consistent - Bedrock measurements have shown zero contraventions of pH limits - Surface water measurements indicate one contravention in 2007
Total Dissolved Solids		- Since the IRM period, there have been two contraventions of the NY-MAC: • One was in 2002, and the other was in 2003, both before previous request for modification. • No contraventions have occurred since 2003 - All downgradient well measurements, except for those from Well 12, are not significantly different than upgradient well measurements - Bedrock measurements show lower levels of total dissolved solids than those of the upgradient well - Surface water measurements show two contraventions of the water quality standard: • One in 2004, and one in 2011

* The water quality standard for surface water is only available for 2004, because this value fluctuates depending on the measurement of hardness, and hardness measurements ceased after 2004.

5.1 ADDITIONAL NOTES ON CHLORIDES

Graphically, the measurements seem to be converging. However, downgradient wells are still significantly higher than upgradient wells. While this warrants further data gathering, measurements have been declining and have been relatively consistent since the IRM period.

Chlorides are the best chemical indicators for the compact, non-metallic, and halogen anions, and are commonly used as a tracer or first indicator of breakthrough for dissolved constituents in porous media. The fact that chloride levels have been decreasing and stabilizing over the past 20 years demonstrates the success of the IRM program.

6.0 SUMMARY AND CONCLUSION

Interim remedial measures implemented in 1998, were conducted to mitigate the potential contamination in surrounding groundwater from the general site, which had been a metal processing area. Since the IRM was completed, many parameter concentrations have dropped and stabilized; downgradient well measurements have converged with those of upgradient wells; and there has been a 78 percent decrease in the frequency of contraventions of the NY-MACs. Since 2004, based on NYSDEC's approval of LAN's previous request for modification, parameters have been measured semi-annually instead of the quarterly frequency that was required before that time. Since the 2004 modification request, parameters have either continued to decrease or have shown continued stabilization. While there are some parameters that have not converged (upgradient concentrations equaling downgradient concentrations), there are no parameters that have shown discontinuous results. Therefore, the semi-annual sampling does not give further understanding of the site conditions than annual. For these reasons, annual sampling is recommended for the current parameters.

7.0 SAMPLING PLAN RECOMMENDATIONS

Parameter graphs show a clear trend toward convergence of parameter concentrations over wells (upgradient and downgradient), and stability of parameter concentration over the period of record. As such, LAN and CCMA recommend that the frequency of analysis be reduced from semi-annual year to annual.

APPENDIX A

SKW HISTORICAL WASTE MANAGEMENT PERMIT NO. 2585

23269.5

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

2585

EXPIRATION DATE
October 31, 1984

EFFECTIVE DATE - October 20, 19

[X] CONSTRUCTION [X] INITIAL ISSUE [ ] REISSUANCE
[X] OPERATION [ ] RENEWAL [ ] MODIFICATION

PERMIT ISSUED TO	ADDRESS OF PERMITTEE	TELEPHONE NO.
KW ALLOYS, INC.	3801 Highland Avenue, Niagara Falls, NY 14305	716/285-1252

LOCATION OF PROJECT Town	County	Environmental Conservation Regional Office
Niagara	Niagara	Region 9 Headquarters 600 Delaware Avenue, Buffalo, NY 14202

DESCRIPTION OF PROJECT	ON-SITE SUPERVISOR
Construct and Operate SKW Alloys, Inc. Landfill #2	William Lozow

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice on intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

1. Your application for a variance from 6NYCRR Part 360.8(b) (exemption from daily cover) is hereby approved. In the event that the deposited ferro silicon sludges become dried and create a fugitive dust problem, either on or off site, steps shall be taken to remedy the situation.

2. Upon the filling of the landfill, two feet of cover material shall be applied to the surface of the landfill. The top 6 inches shall be of a soil suitable for sustaining a vegetative cover crop to avoid erosion.

3. Quarterly reports shall be submitted indicating the volume of material which has been placed into the landfill and shall be submitted on the first business day of the months of November, February, May and August.

4. Semi-annual reports shall be submitted to the Region 9 Office containing the analytical results of the monitoring well sampling program and surface water sampling program as included in the permit for Landfill #1.

5. Within 60 days of the effective date of this permit, a certificate of deposit, bond or other negotiable instrument, payable to the Commissioner of the NYS Department of Environmental Conservation, shall be forwarded to this Region 9 Office in the amount of $5,000 to cover costs of closure and monitoring. The life of this undertaking shall be for the permit life (October 31, 1984).

6. The issuance of this permit does not relieve the applicant from the compliance with other State, Federal or local laws, ordinances or regulations.

7. Prior to the expiration date of this permit, the landfill shall be properly closed and maintained to prevent adverse environmental health impacts, such as contravention of surface or groundwater quality standards, gas migration, odors, and vectors. Proper

(CONT'D)

ISSUE DATE	ISSUING OFFICER	SIGNATURE
2 OCT 84	Robert J. Mitrey, P.E.	X Robert J. Mitrey, P.E.

SKW ALLOYS, INC.
3801 Highland Avenue
Niagara Falls, NY 14305

Permit to Construct and
Operate - Permit #2585
Expiration Date - 10/31/84
Facility #32N04

SPECIAL CONDITIONS (cont'd)

7. closure includes covering with a minimum of 2 feet of final cover, establishment of a grass cover crop, and sufficient grading to divert water off the fill area in order to minimize infiltration and to preclude ponding.

Robert H. Mettey, P.E. #4
Permit Administrator

20 Oct 84
Date

New York State Department of Environmental Conservation
584 Delaware Avenue, Buffalo, New York 14202

Robert F. Flacke
Commissioner

May 30, 1980

Mr. LeRoy C. Wintersteen, Manager
Environmental Control
SKW Alloys, Inc.
P.O. Box 368
Niagara Falls, NY 14302

Re: Permit to Operate
Solid Waste Management Facilities
Permit No. 2133
Niagara (T), Niagara County

Dear Mr. Wintersteen:

This will acknowledge receipt of the Certification of Construction and "As Built" drawings for the above facility. These materials are accepted for record purposes and are included in our files on the project.

We are transmitting herewith Permit No. 2133, Permit to Operate the Solid Waste Management Facility. The permit contains special conditions which require monitoring, record keeping, and reporting which should be followed, as well as the other conditions in the permit.

If you have any questions pertaining to the permit, the operation of the facility or the monitoring and reporting requirements, please do not hesitate to contact the writer or Mr. Tygert at 716/842-4311.

Very truly yours,

Robert J. Mitrey, P.E.
Associate Sanitary Engineer

JST:sk

cc: Niagara County Health Dept.
Secured Landfill Contractors, Inc.
Mr. Richard Snyder, P.E.
Albany, Division of Solid Waste

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

FACILITY NO. 2133

EXPIRATION DATE May 30, 1985

- [ ] CONSTRUCTION
- [x] OPERATION
- [x] INITIAL ISSUE
- [ ] RENEWAL
- [ ] REISSUANCE
- [ ] MODIFICATION

PERMIT ISSUED TO	ADDRESS OF PERMITTEE	TELEPHONE NO.
SKW Alloys, Inc.	P.O. Box 368, Niagara Falls, NY 14302	716/285-1252

LOCATION OF PROJECT — Town	County	Environmental Conservation Regional Office
Niagara	Niagara	Buffalo (9)

DESCRIPTION OF PROJECT	ON-SITE SUPERVISOR
Solid Waste Management Facility	L.D. Winterstein, Mgr. Env. Control

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice of intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

Page 1 of 2

1. That this permit is not transferable and is subject to revocation in the event of violation of this Permit, of the provisions of the Environmental Conservation Law, Article 27, Part 360 of the Rules and Regulations of the Department (6NYCRR360) or for violation of any other Rules and Regulations of the State of New York or other governmental bodies. This approval does not relieve the permittee of the responsibility of complying with local zoning, building or other laws, rules and regulations or ordinances.
2. That present monitoring wells and surface water monitoring locations shall be sampled on a quarterly basis starting January 1983, and continuing for one year after [illegible] of the operating permit for the parameters listed in the engineering report, and submitted to the department within thirty (30) days thereafter.
3. That after one year of operation samples shall be collected and analyzed on a six (6) month basis (April & October) with results submitted within thirty days of sampling.
4. That elevations of the water levels in the monitoring wells shall be recorded at the time of sampling and reported with the sample results.
5. That the elevations of [illegible] in the [illegible] shall be recorded monthly and reported on a quarterly basis with the above results, and shall be continued for at least one year after closure of the landfill.
6. That a minimum of eighteen (18) inches of compacted clay and six (6) inches of soil capable of supporting a vegetative cover shall be placed [illegible] upon completion. A certificate of construction [illegible] shall be submitted within thirty days of the completion of the landfill.

ISSUE DATE	ISSUING OFFICER	SIGNATURE
[illegible]	[illegible]	[illegible]

REGIONAL OFFICE

7. That only the materials described in the approved engineering report, prepared by Richard R. Snyder, P.E., dated June 18, 1979, and approved ammendments thereto, be placed in the facility.

8. That daily records of the quantity of waste material placed in the facility be maintained, and that an annual summary be submitted to this office on the anniversary date of this permit. The summary should include the total quantity of wastes disposed of and an estimate of the remaining life and/or volume of the facility.

NOTICE OF PERMIT

for:

[ ] CONSTRUCTION	[X] INITIAL ISSUE	[ ] REISSUANCE
[X] OPERATION	[ ] RENEWAL	[ ] MODIFICATION

has been issued to: SKW Alloys, Inc.

address: P.O. Box 368, Niagara Falls, New York, 14302

for a project described as: Solid Waste Management Facility

under the Environmental Conservation Law,
Article 27, Title 5, Part 360 (Solid Waste Management Facilities)

NOTE:

- This Notice of Permit must be posted on the project site in such a manner that it is protected from weather and is in a location readily visible to the public.
- A copy of the Permit with the general and special conditions noted thereon will be shown to anyone upon request.

New York State
Department of Environmental Conservation

47-12-2 (8/77)

Issuing Officer

584 Delaware Avenue, Buffalo, New York, 14202
Address

2133	5/30/80	5/30/83
Permit No.	Issue Date	Expiration Date

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

2585

DATE ISSUED: October 21, 1991

EFFECTIVE DATE: October 20, 1991

☒ CONSTRUCTION ☒ OPERATION ☐ INITIAL ISSUE ☐ RENEWAL ☐ REISSUANCE ☐ MODIFICATION

PERMIT ISSUED TO:	ADDRESS OF PERMITTEE:	TELEPHONE NO.
SCA ALLOYS, INC.	[illegible] Niagara Falls [illegible]	[illegible]

LOCATION OF PROJECT: Town: Niagara	County: Niagara	Environmental Conservation Regional Office: Region 9 Headquarters, 600 Delaware Avenue, Buffalo, NY 14202

DESCRIPTION OF PROJECT: Construct and operate SCA Alloys, Inc. Landfill #2

ON-SITE SUPERVISOR: William Loewe

GENERAL CONDITIONS

1. The permittee shall file in the office of the Department of Environmental Conservation specified above, prior to commencement of work at least 48 hours in advance of the time of commencement and shall also notify said office thereof in writing at the completion of the work.

2. The permitted work shall be subject to inspection by authorized representatives of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.

3. As a condition of the issuance of this permit, the applicant has accepted responsibility for the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.

4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.

5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-ways which may be required for this project.

6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and specified herein.

SPECIAL CONDITIONS

1. Your application for a variance from 6NYCRR Part 360.7(b)(1) (exemption from daily cover) is hereby approved. In the event that the deposited ferro silicon slimes become dried and create a fugitive dust problem, either on or off site, steps shall be taken to correct the situation.

2. Upon the filling of the landfill, two feet of cover material shall be applied to the surface of the landfill. The top 6 inches shall be of a soil suitable for sustaining a vegetative cover crop to avoid erosion.

3. Quarterly reports shall be submitted indicating the volume of material which has been placed into the landfill and shall be submitted on the first business day of the months of November, February, May and August.

4. Semi-annual reports shall be submitted to the Region 9 office summarizing and interpreting the results of the monitoring well sampling program and surface water sampling program as included in the permit for Landfill #1.

5. Within 60 days of the effective date of this permit, a certificate of deposit, bond or other negotiable instrument, payable to the Commissioner of the Department of Environmental Conservation, shall be forwarded to this Region's office in the amount of $5,000 to cover costs of closure and monitoring. The life of this instrument shall be for the permit life (October 20, 1996).

6. The issuance of this permit does not relieve the applicant from the requirements of other State, Federal or local laws, ordinances or permits.

7. Prior to the expiration date of this permit, the landfill shall be capped in accordance with Part 360 and shall be graded to prevent adverse environmental impacts.

Further conditions and/or attachments are made a part hereof.

ISSUED BY: [illegible] REGIONAL OFFICE

FEE PAID: $

SKW ALLOYS, INC.
3801 Highland Avenue
Niagara Falls, NY 14305

Permit to Construct and
Operate - Permit #2585
Expiration Date - 10/31/84
Facility #32N04

SPECIAL CONDITIONS (cont'd)

7. closure includes covering with a minimum of 2 feet of final cover, establishment of a grass cover crop, and sufficient grading to divert water off the fill area in order to minimize infiltration and to preclude ponding.

Robert H. Mattey, P.E. #4
Permit Administrator

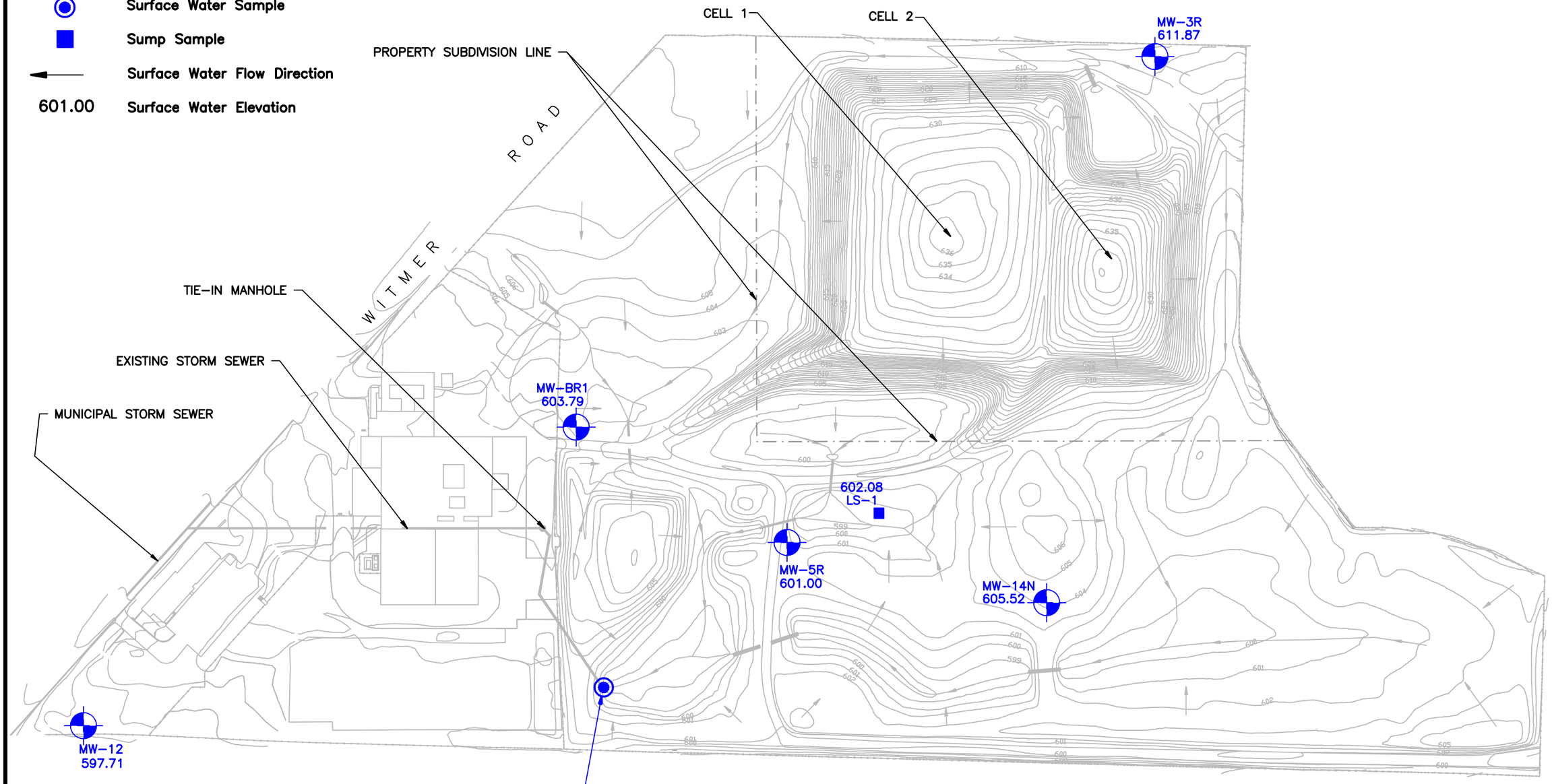
20 Oct '84
Date

APPENDIX B

SITE PLAN

LEGEND:

- MW-5R — Monitoring Well
- Surface Water Sample
- Sump Sample
- Surface Water Flow Direction
- 601.00 — Surface Water Elevation



GRAPHIC SCALE

150 0 75 150 300 600

(IN FEET)
1 inch = 150 ft.

DATE: 05/08/12
REV:
CHECKED : KEH
DRAWN : GRS
SCALE : 1"=150'

WELL LOCATION & SURFACE WATER DRAINAGE MAP

Calvert City Metals and Alloys, LLC
PO Box 217, Highway 95
Calvert City, Kentucky 42029

LAN ASSOCIATES, INC.
CONSULTING•ENGINEERING•PLANNING
88 RIBERIA ST., SUITE 400, ST.AUGUSTINE, FL 32084 (904) 824-6999

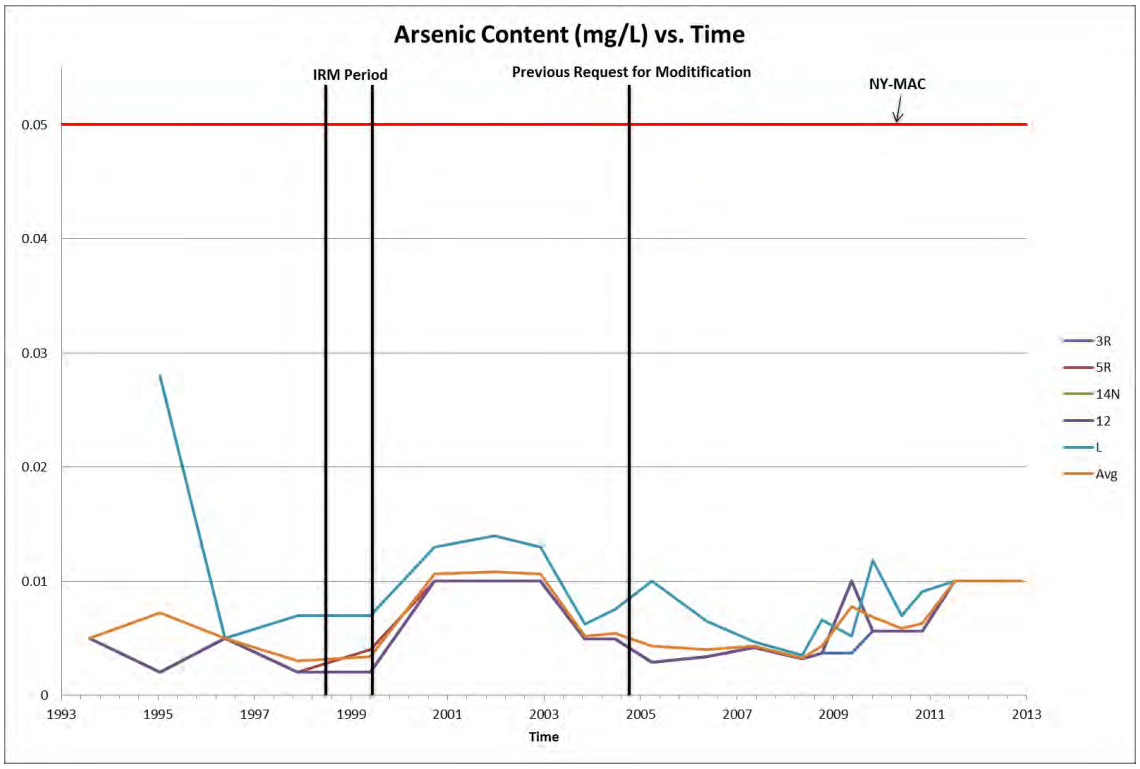
ATTACHMENT: 4

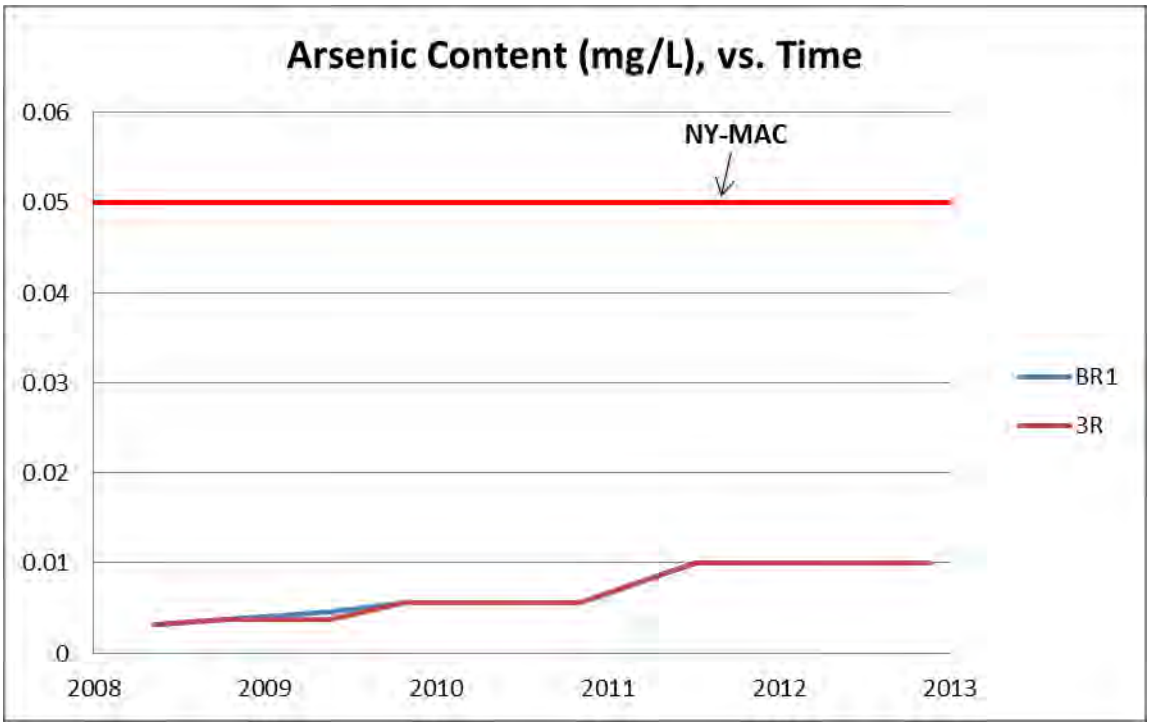
JOB NO. 2.3643.17

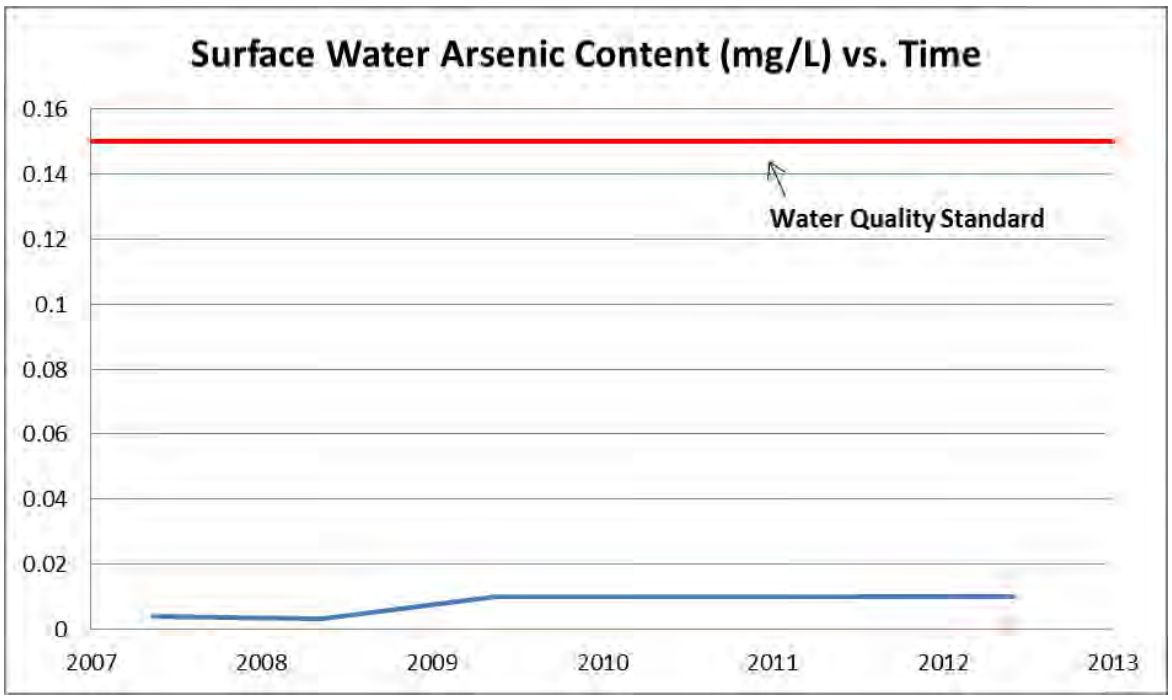
APPENDIX C

GRAPHICAL REPRESENTATIONS OF HISTORICAL DATA

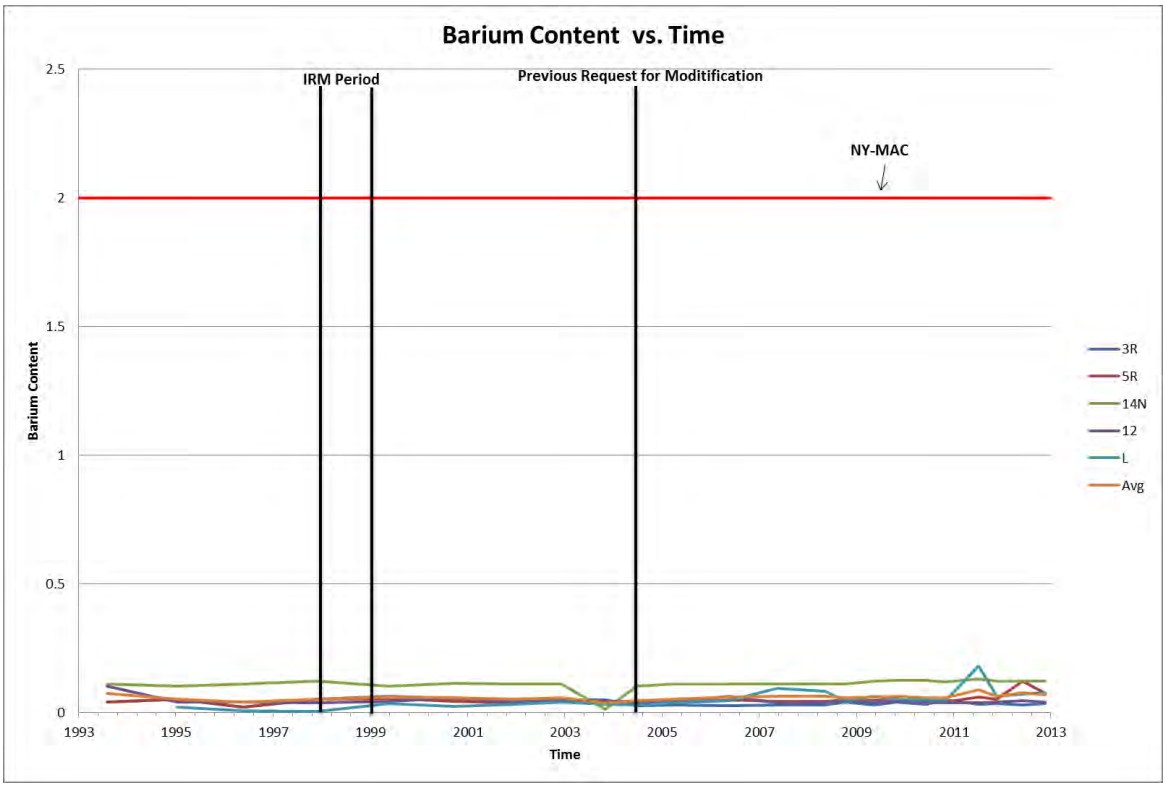
Arsenic Content (mg/L)

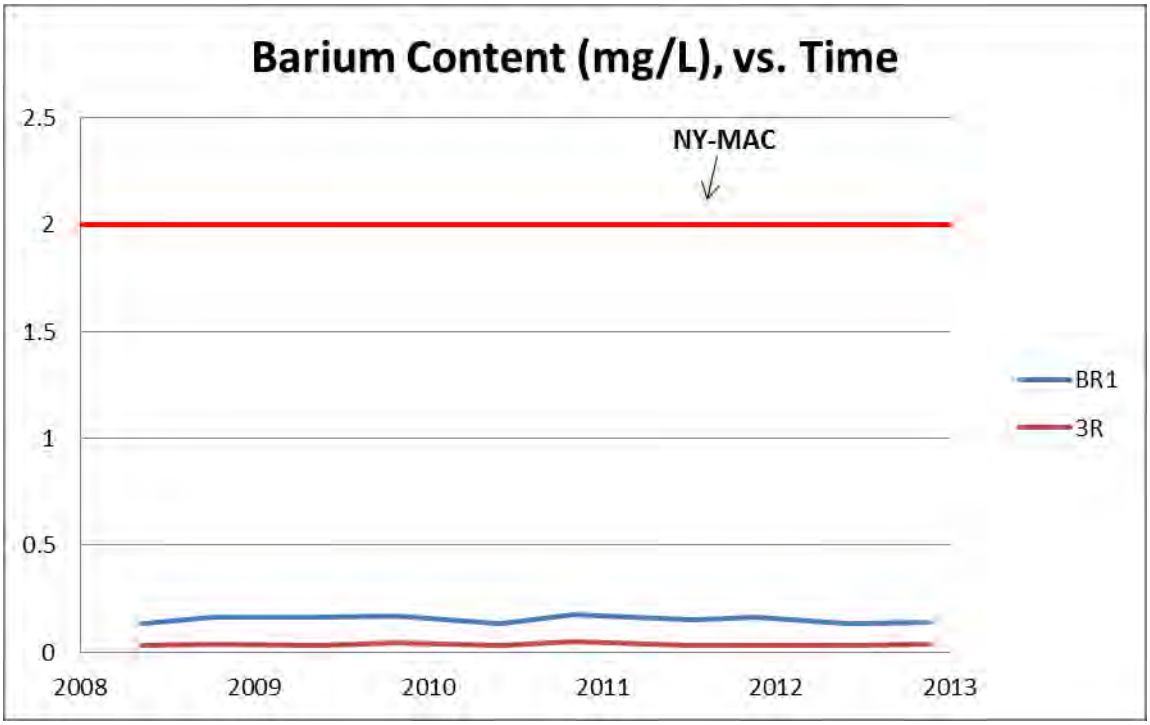


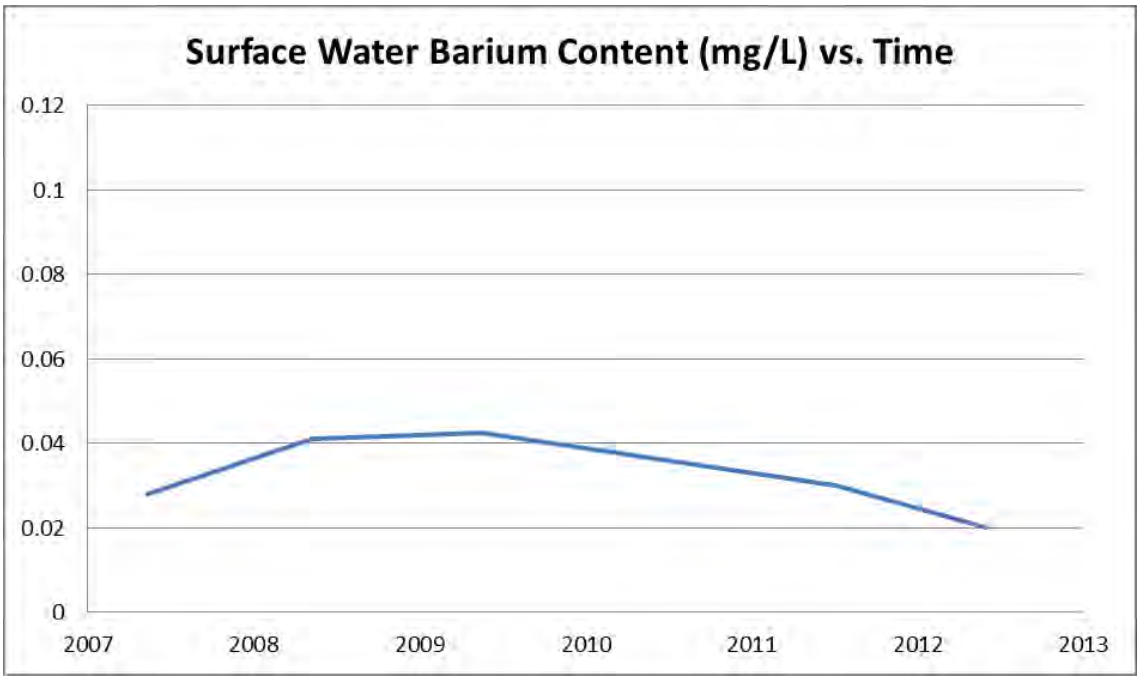




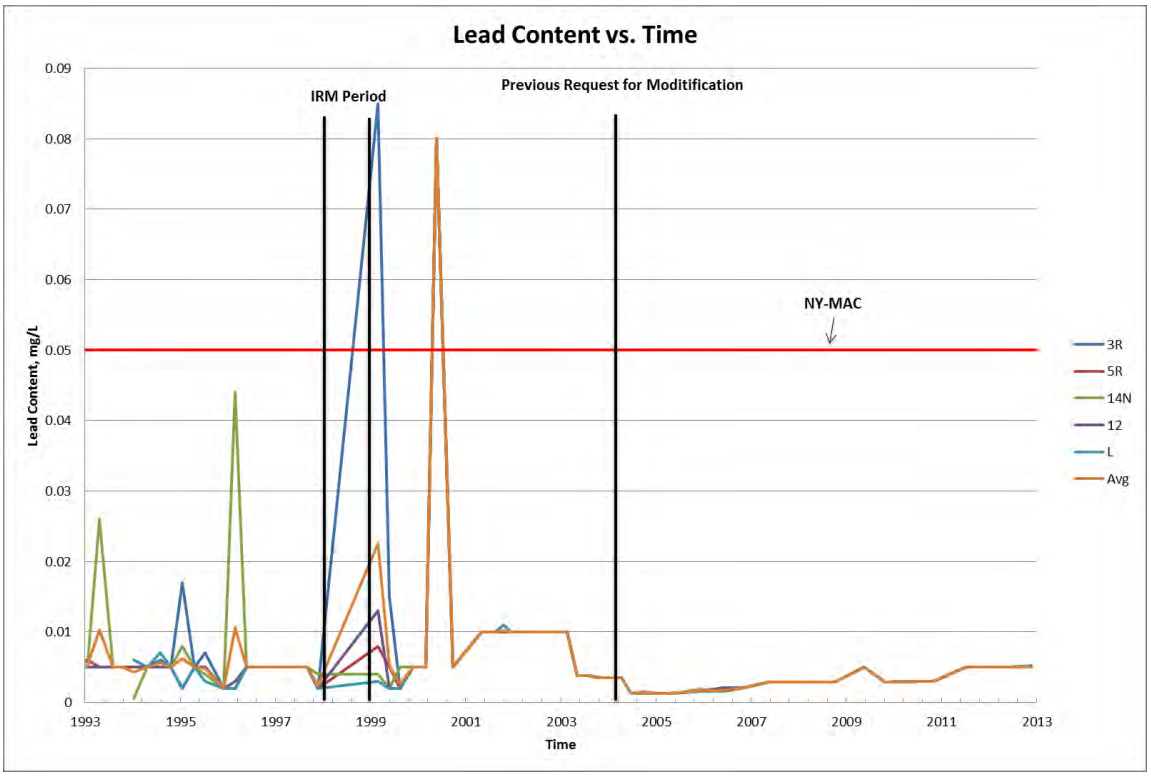
Barium Content (mg/L)

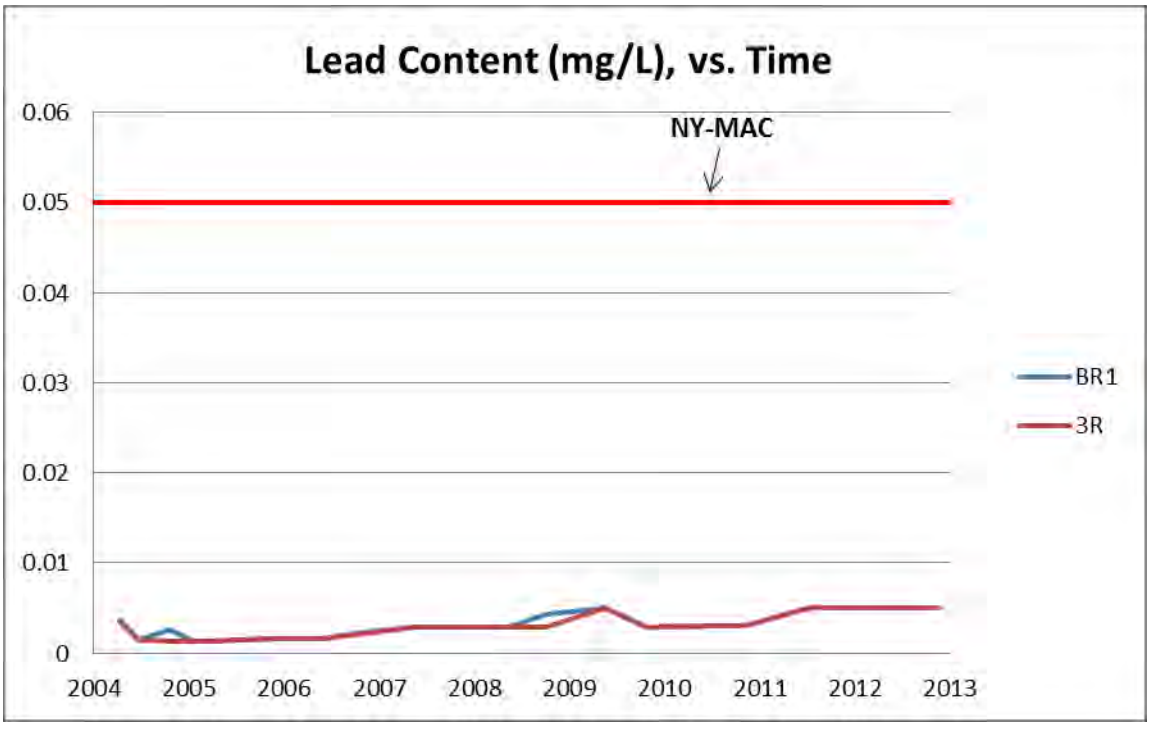


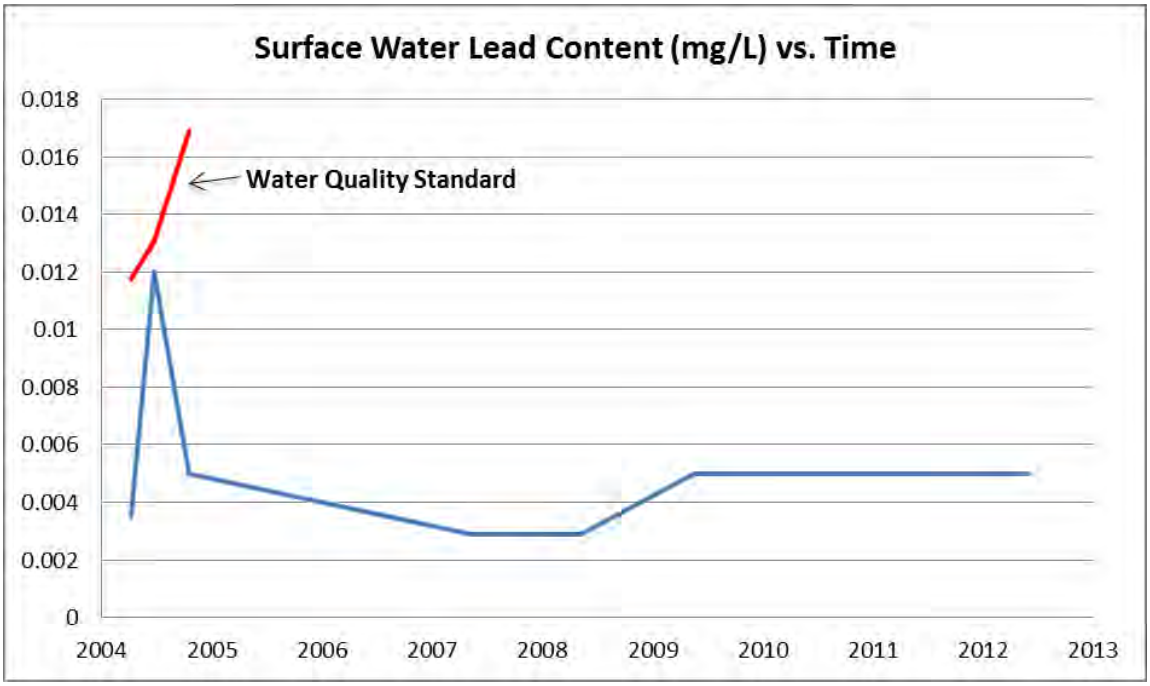

Barium Content (mg/L), vs. Time
2.5
2
1.5
1
0.5
0
NY-MAC
BR1
3R
2008
2009
2010
2011
2012
2013


Surface Water Barium Content (mg/L) vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
2007
2008
2009
2010
2011
2012
2013

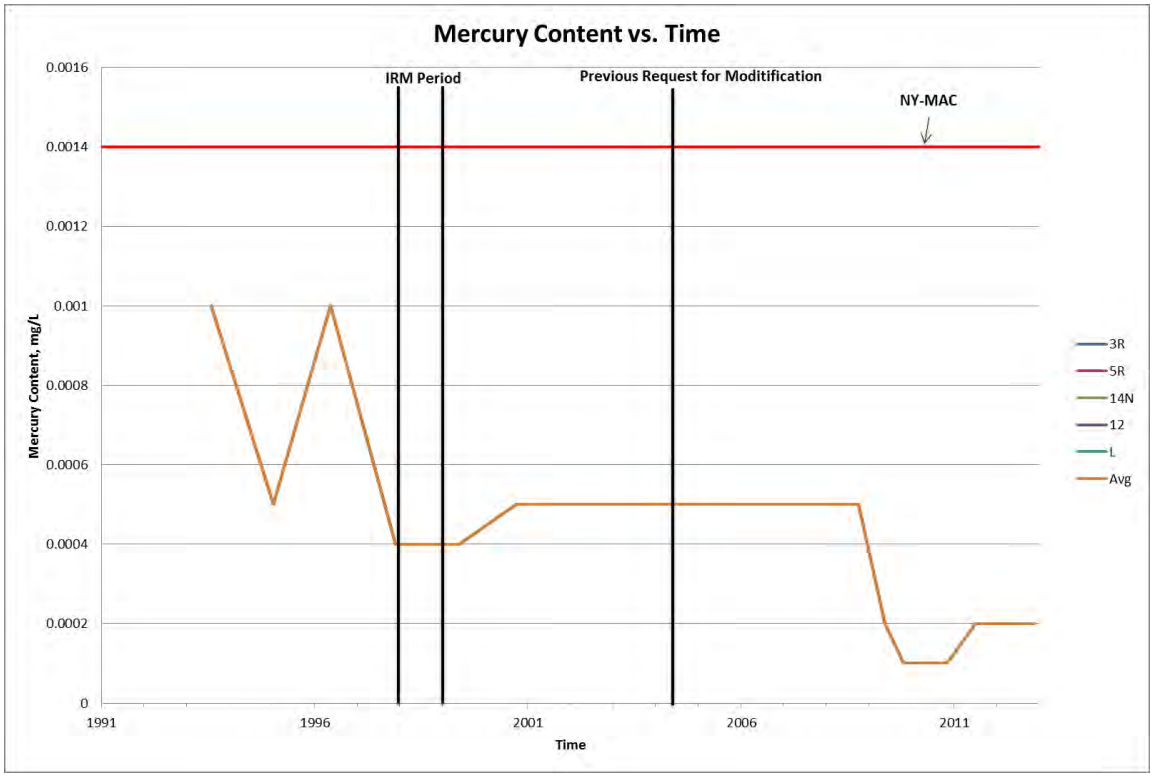
Lead Content (mg/L)

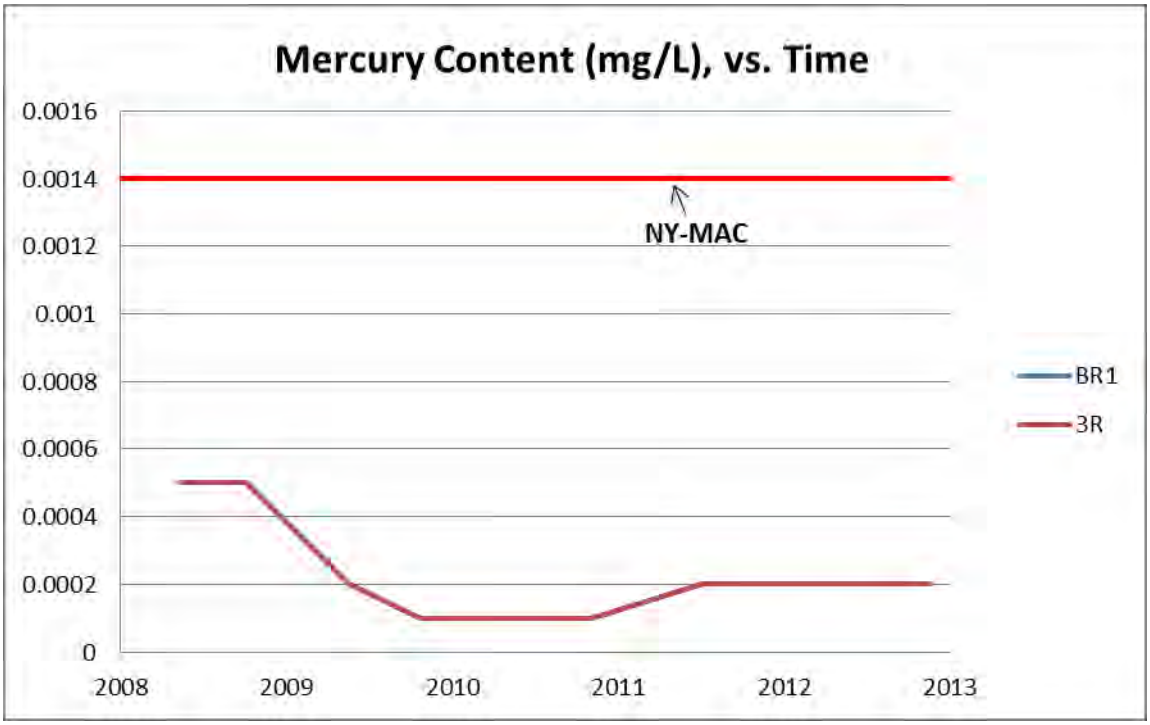


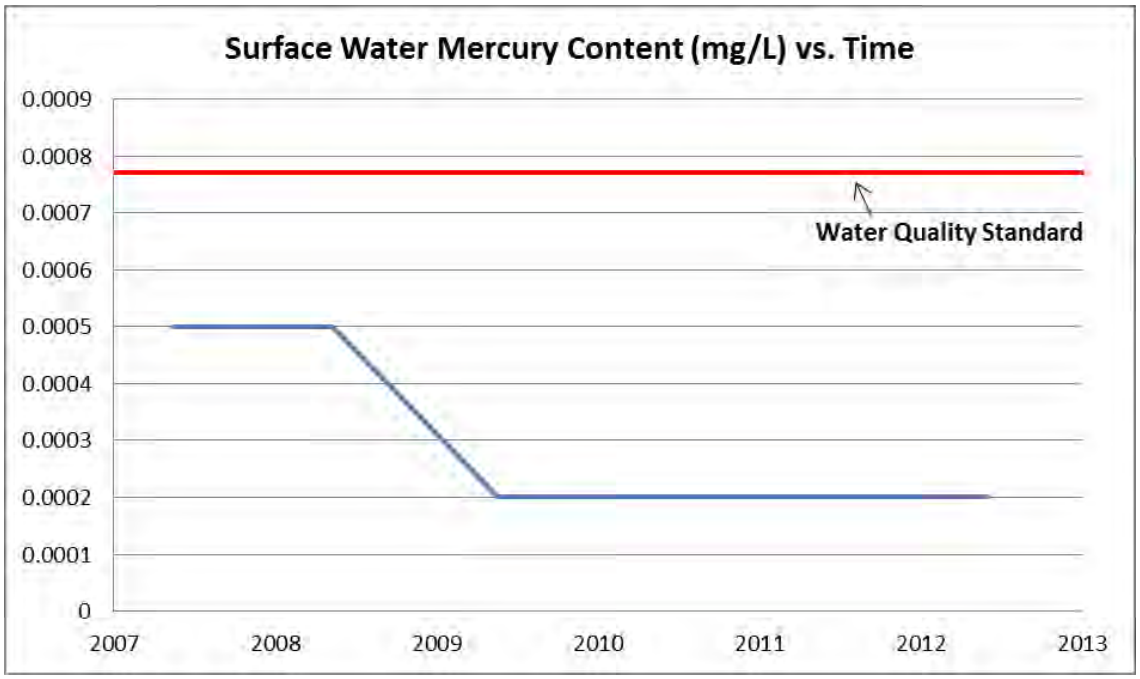




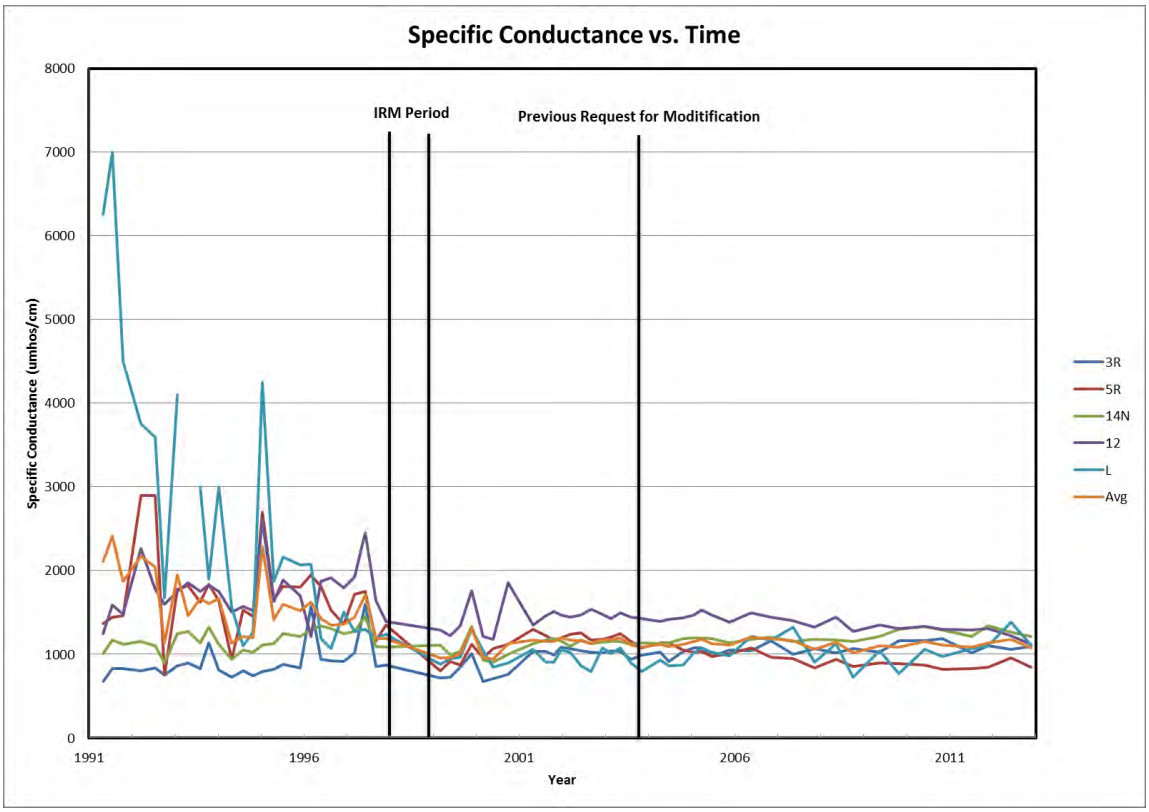
Mercury Content (mg/L)

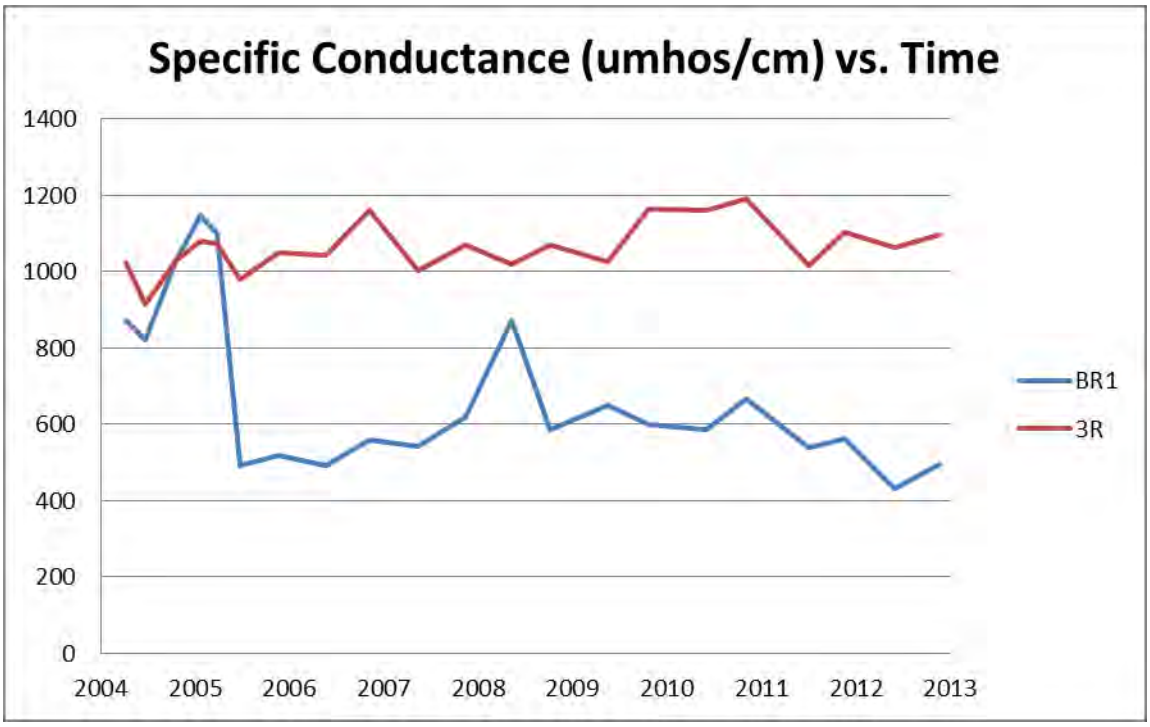


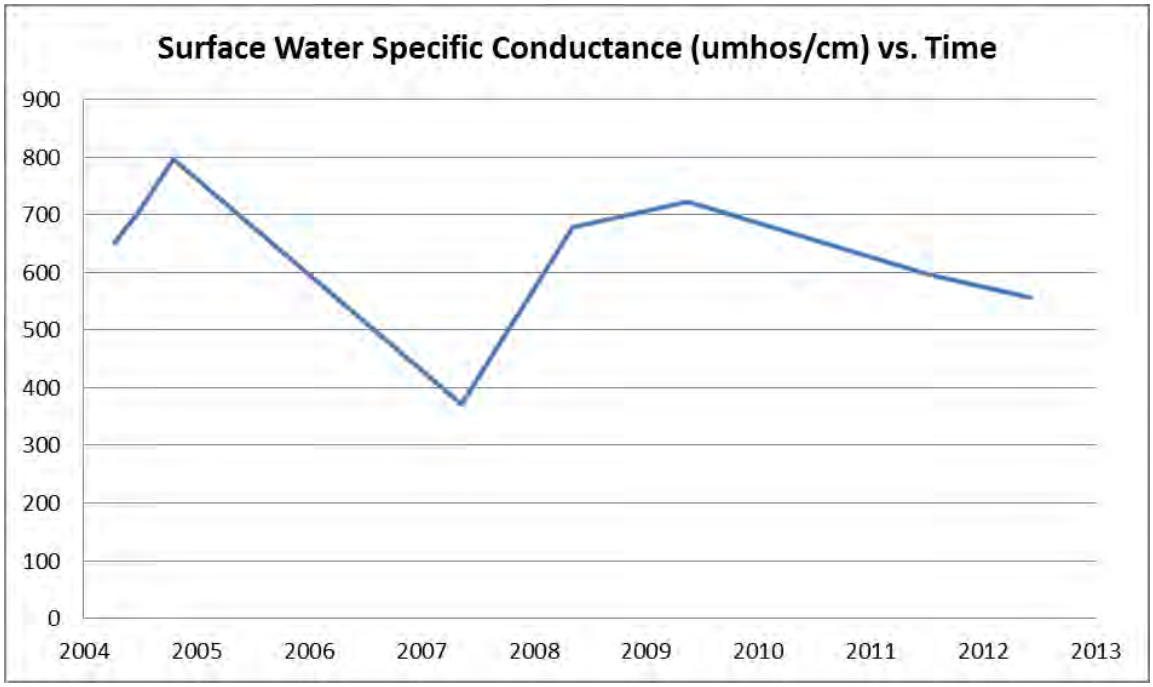

Mercury Content (mg/L), vs. Time
0.0016
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
2008
2009
2010
2011
2012
2013
NY-MAC
BR1
3R


Surface Water Mercury Content (mg/L) vs. Time
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0
2007
2008
2009
2010
2011
2012
2013
Water Quality Standard

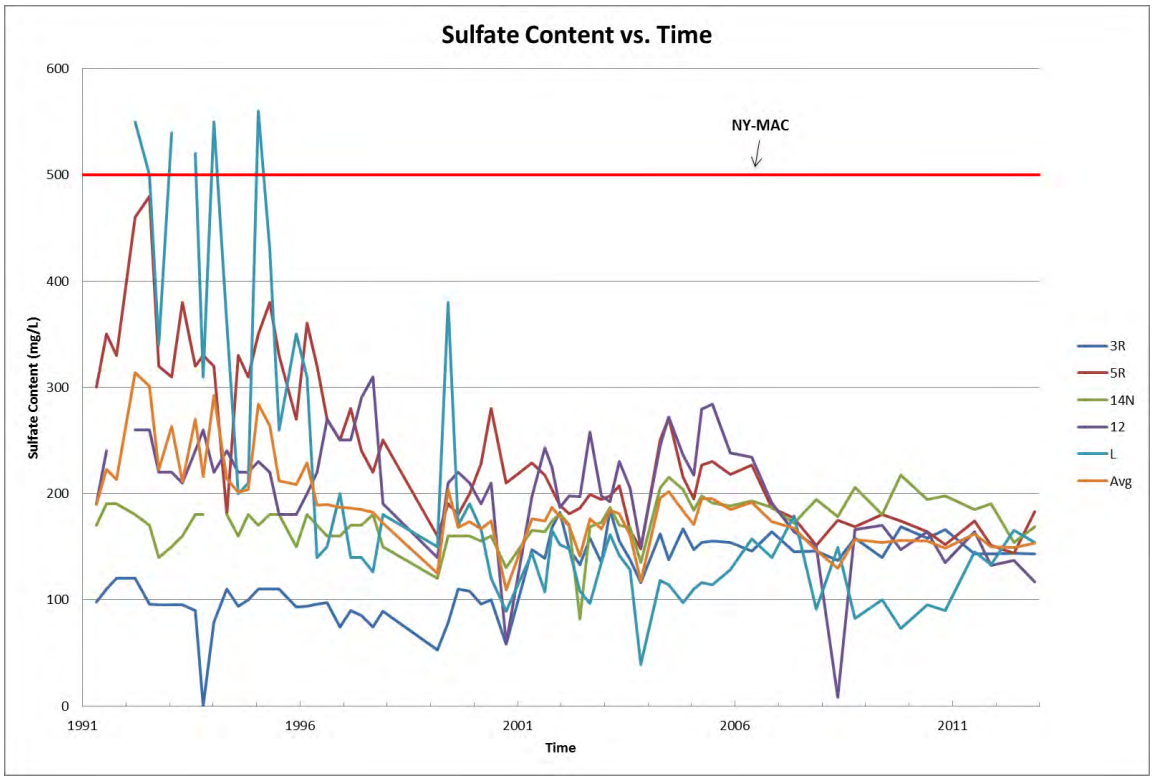
Specific Conductance (umhos/cm)

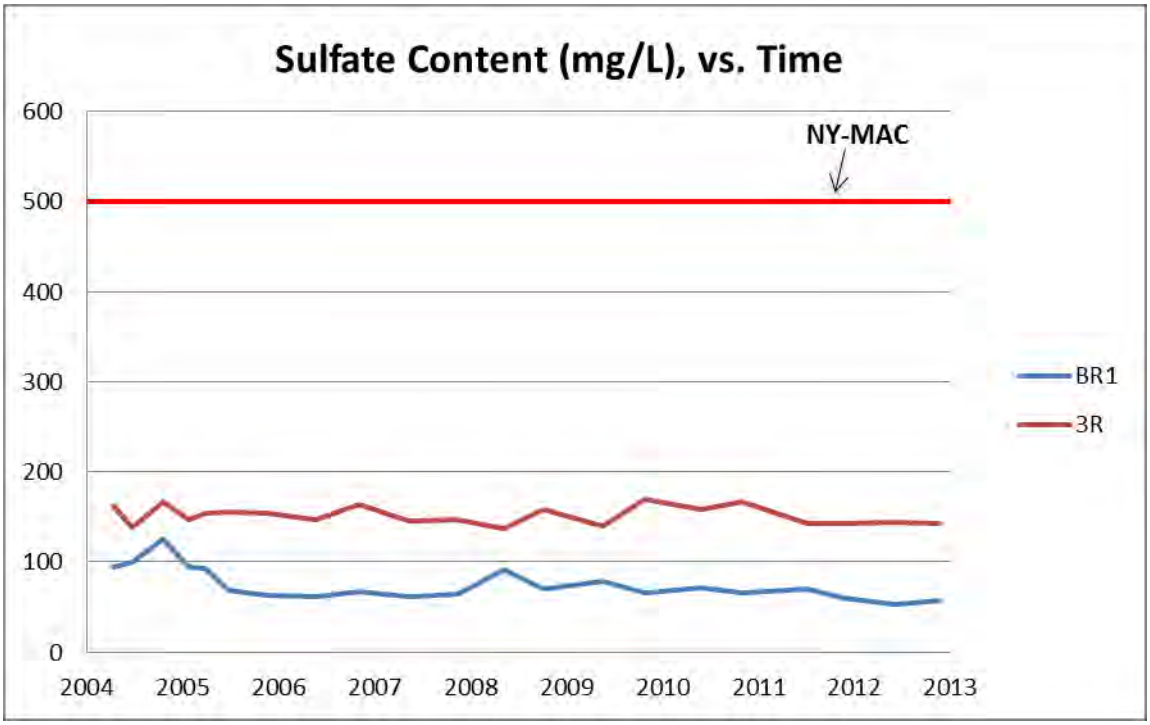


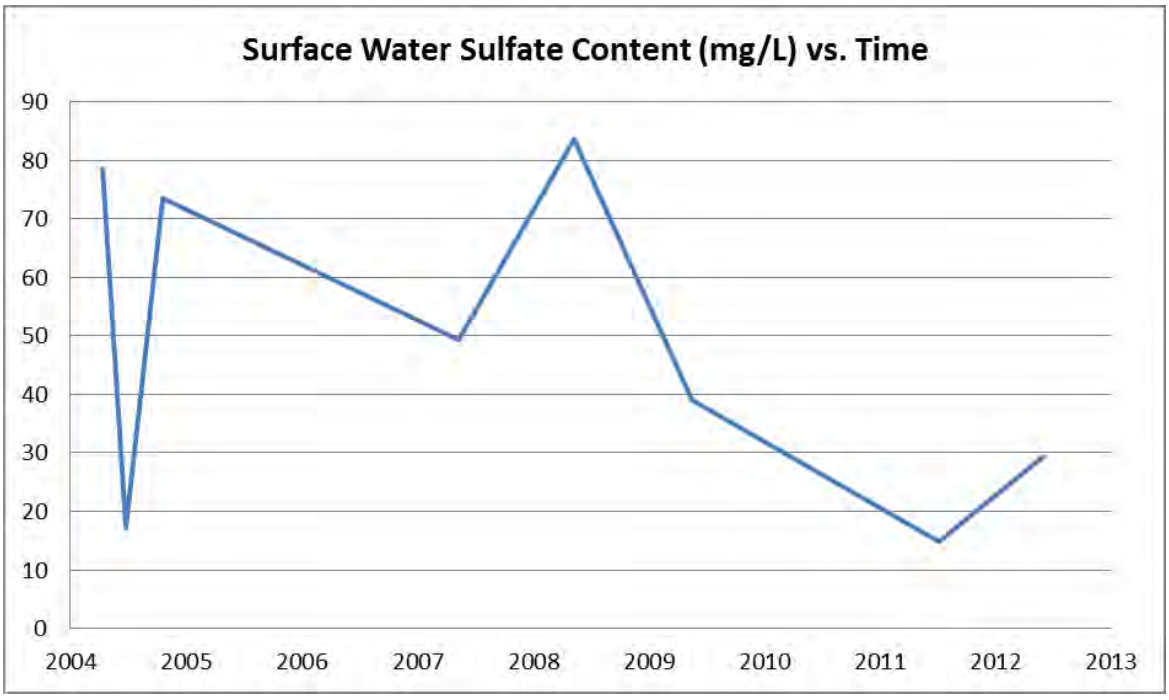




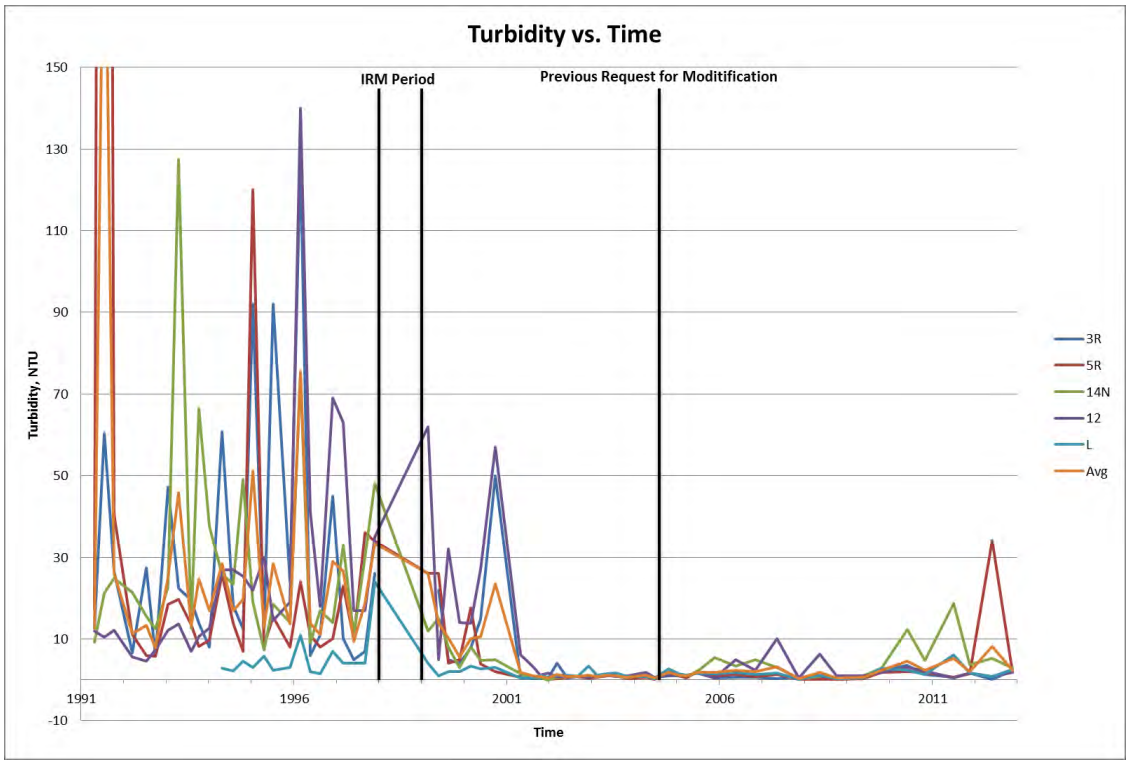
Sulfate Content (mg/L)

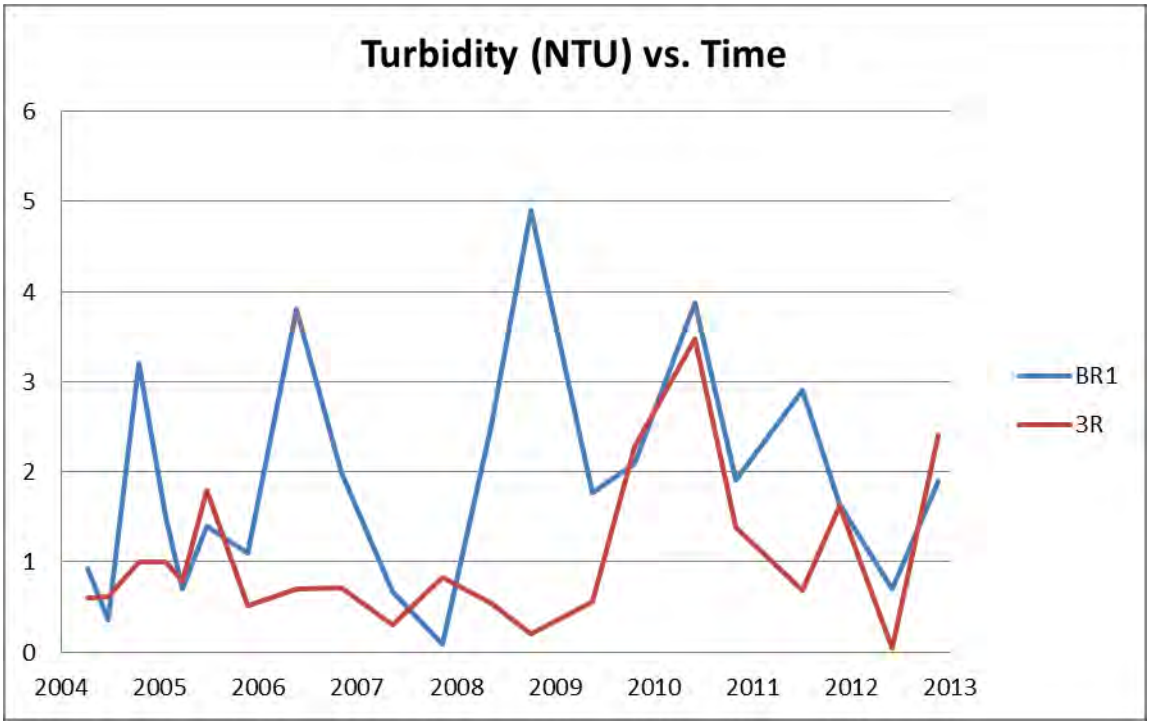


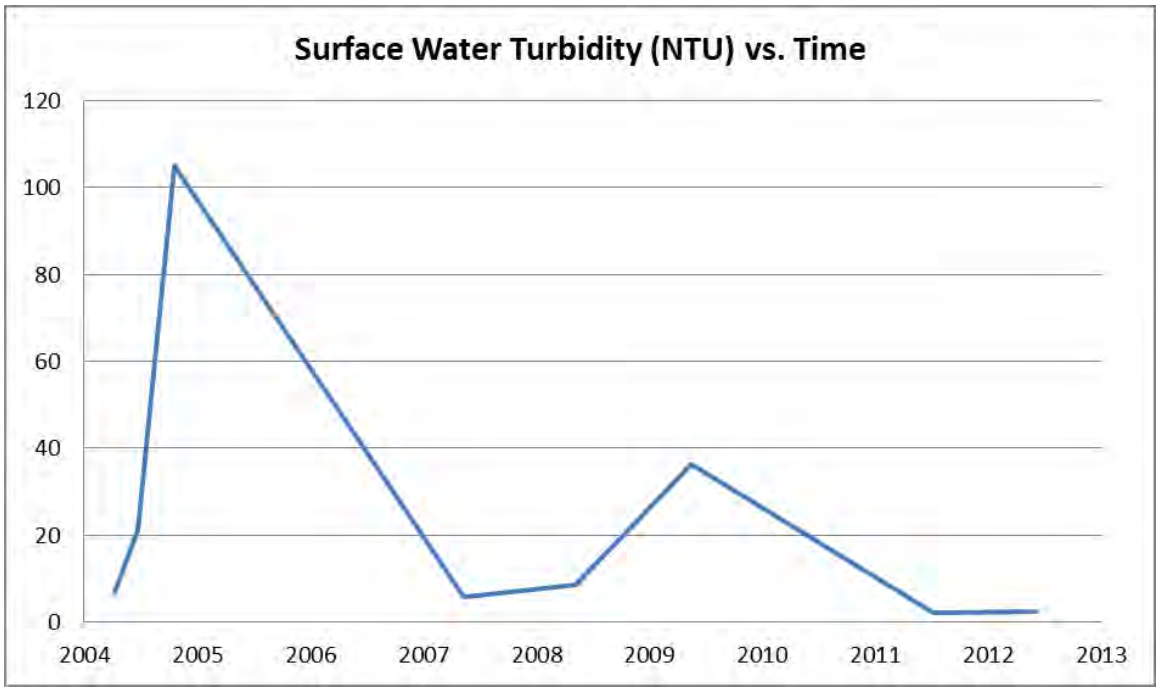

Sulfate Content (mg/L), vs. Time
600
500
400
300
200
100
0
NY-MAC
BR1
3R
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013


Surface Water Sulfate Content (mg/L) vs. Time
90
80
70
60
50
40
30
20
10
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

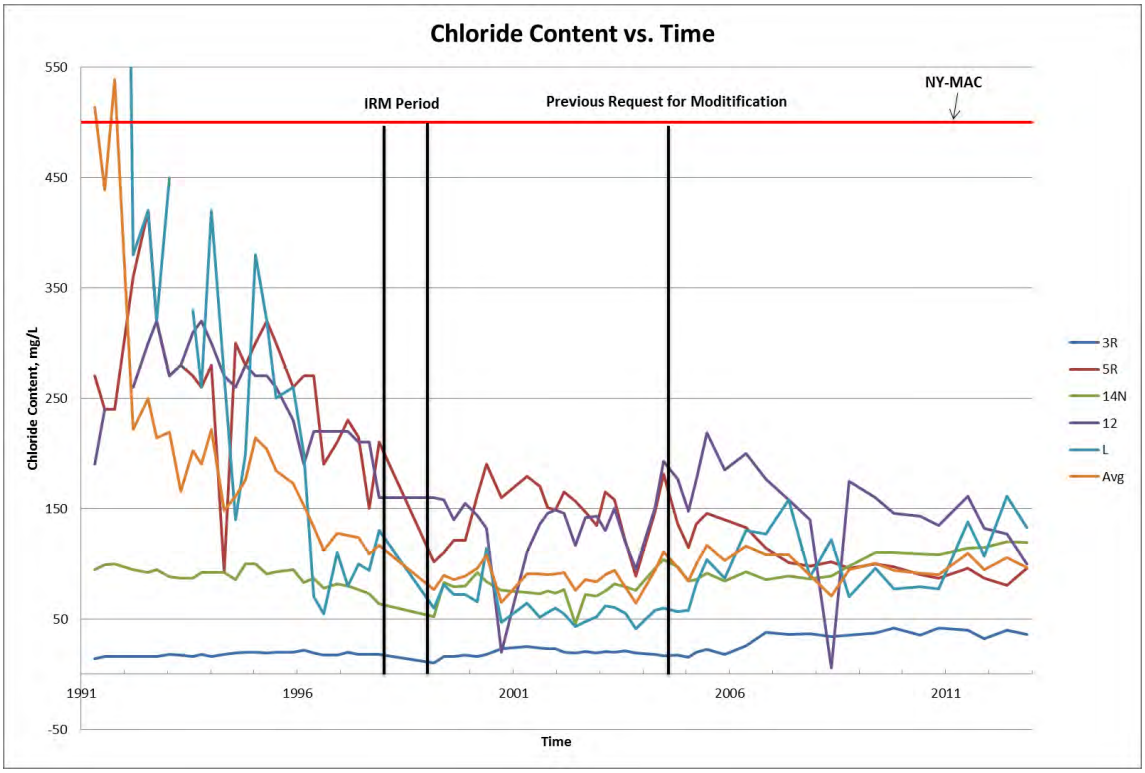
Turbidity (NTU)

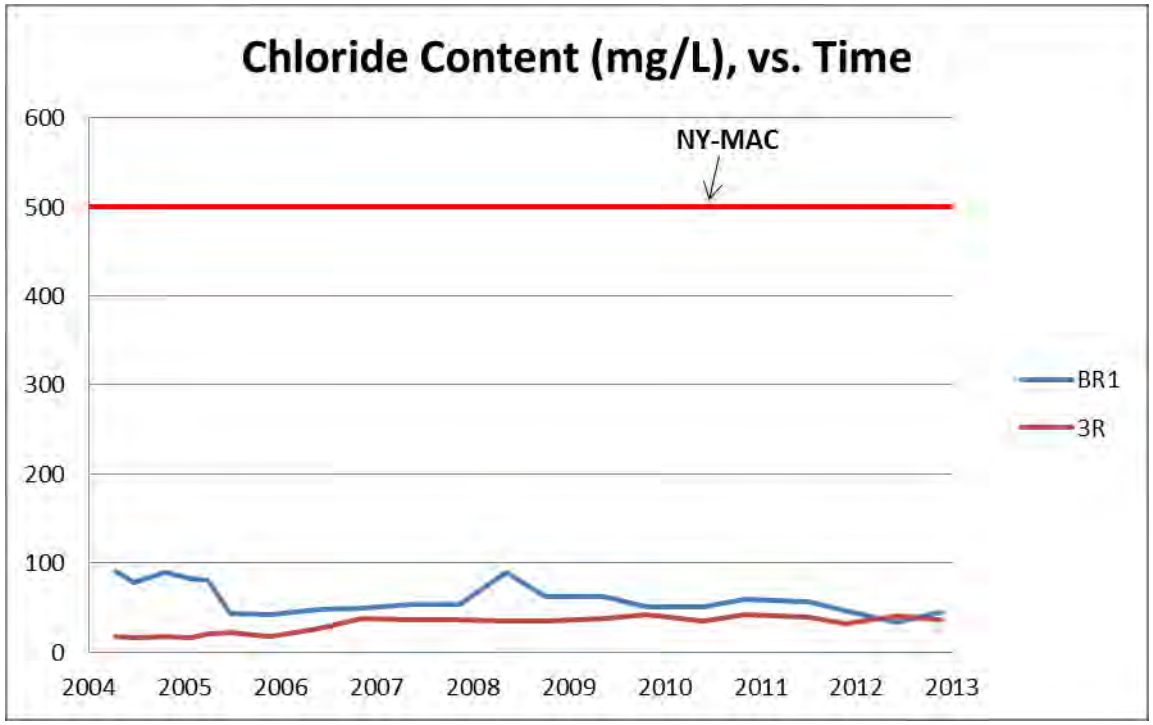


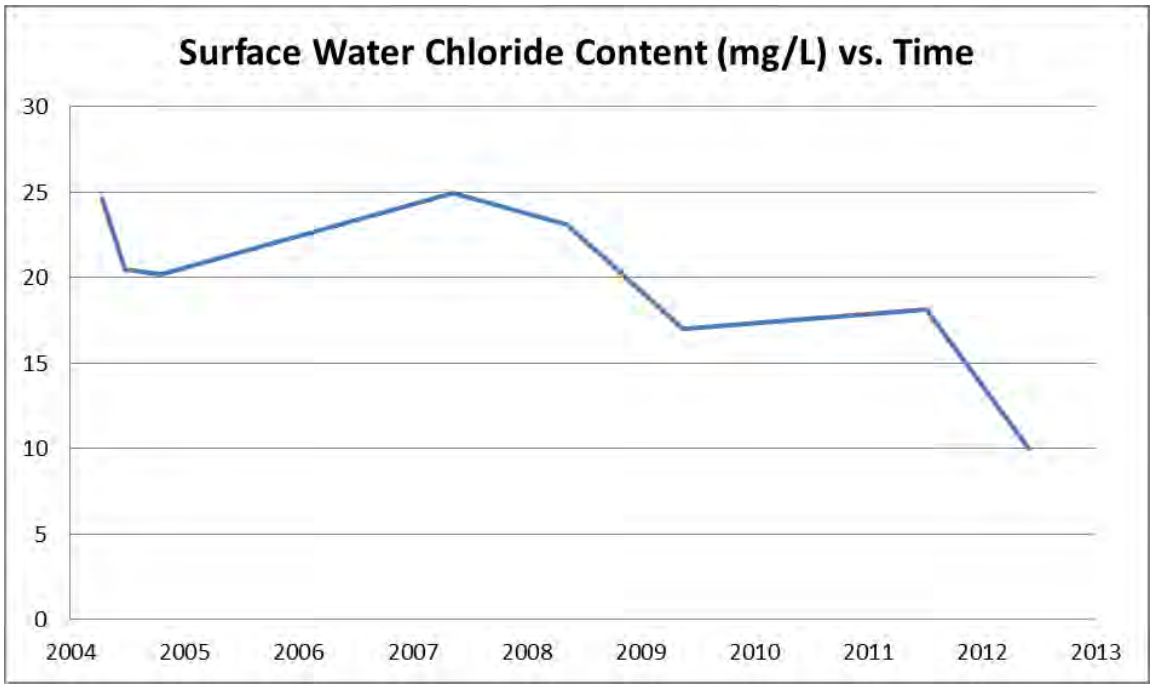




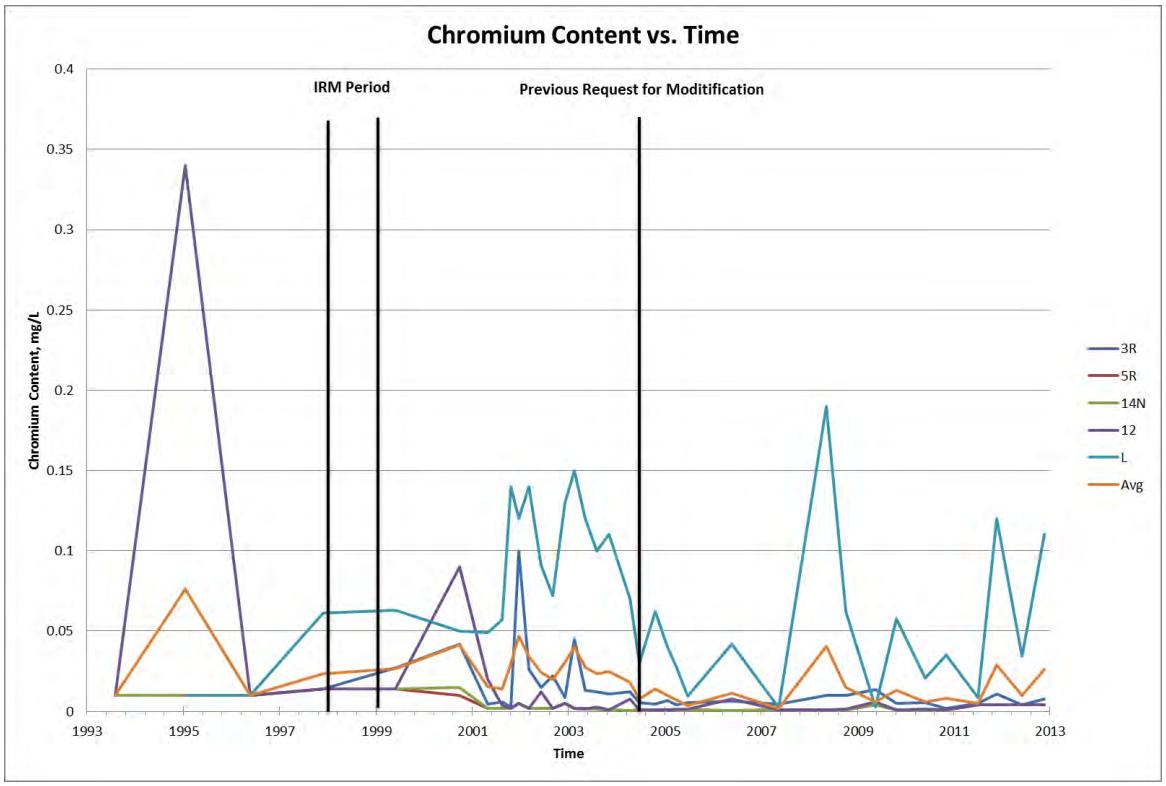
Chloride Content (mg/L)

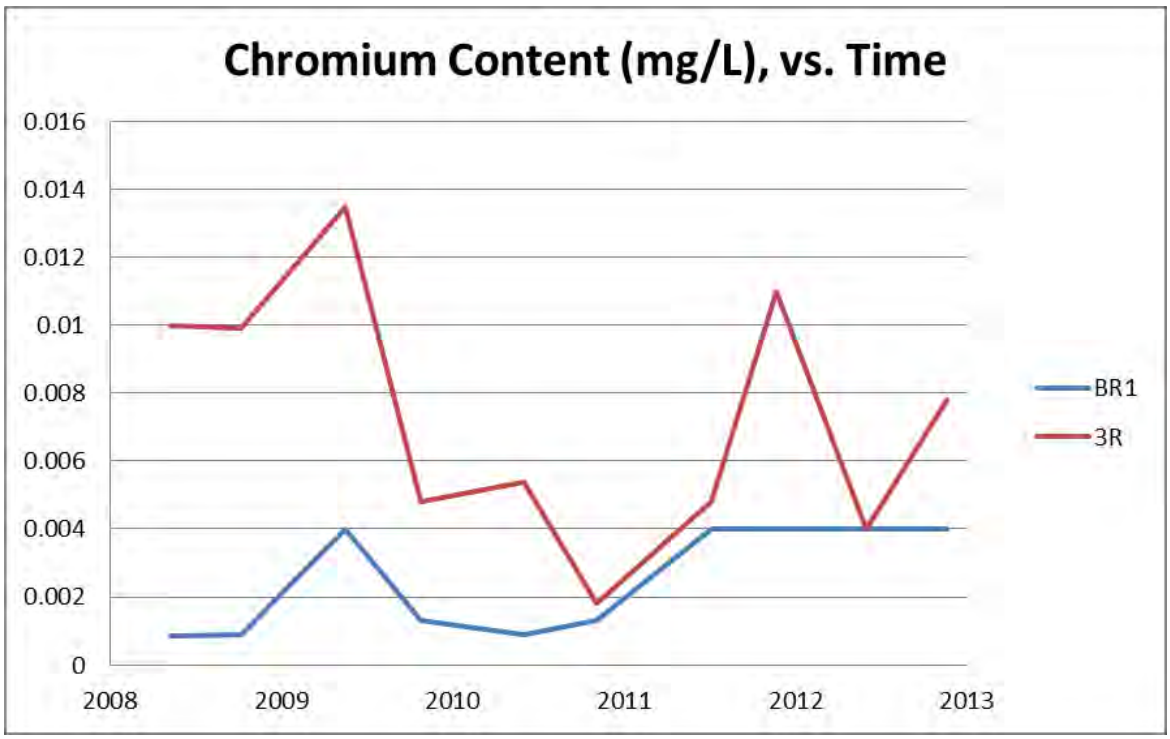


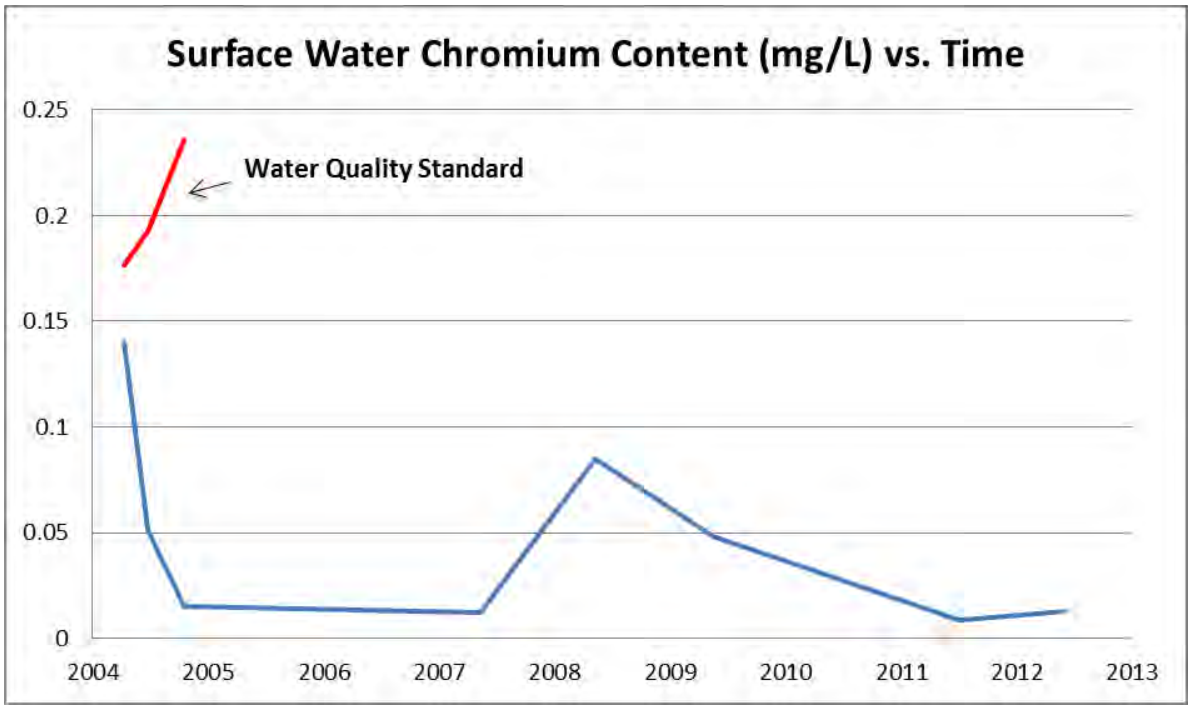

Chloride Content (mg/L), vs. Time
600
500
400
300
200
100
0
NY-MAC
BR1
3R
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013


Surface Water Chloride Content (mg/L) vs. Time
30
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

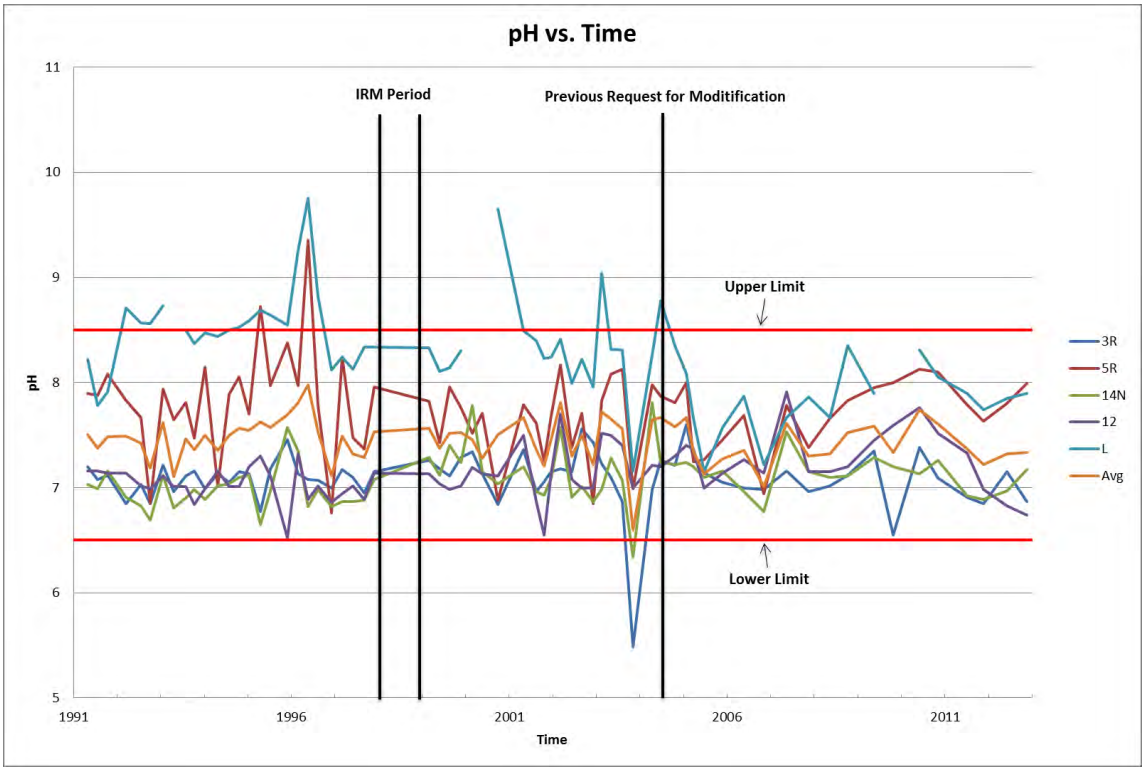
Elemental Chromium Content (mg/L)

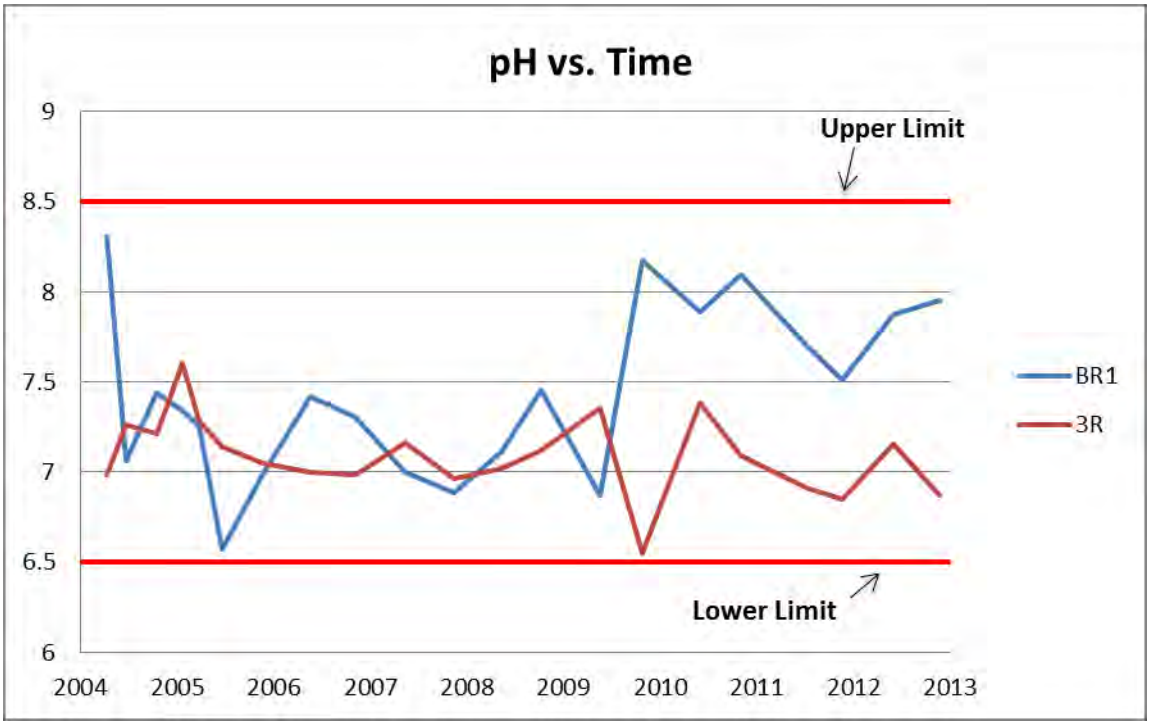


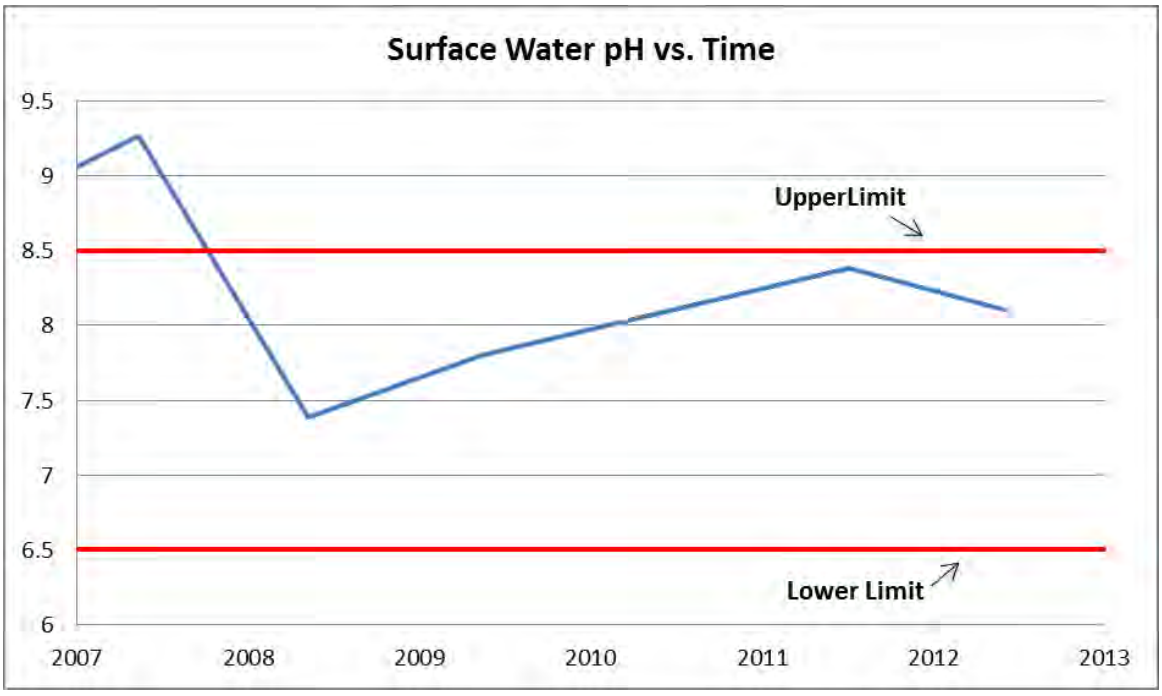



Surface Water Chromium Content (mg/L) vs. Time
0.25
0.2
0.15
0.1
0.05
0
Water Quality Standard
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

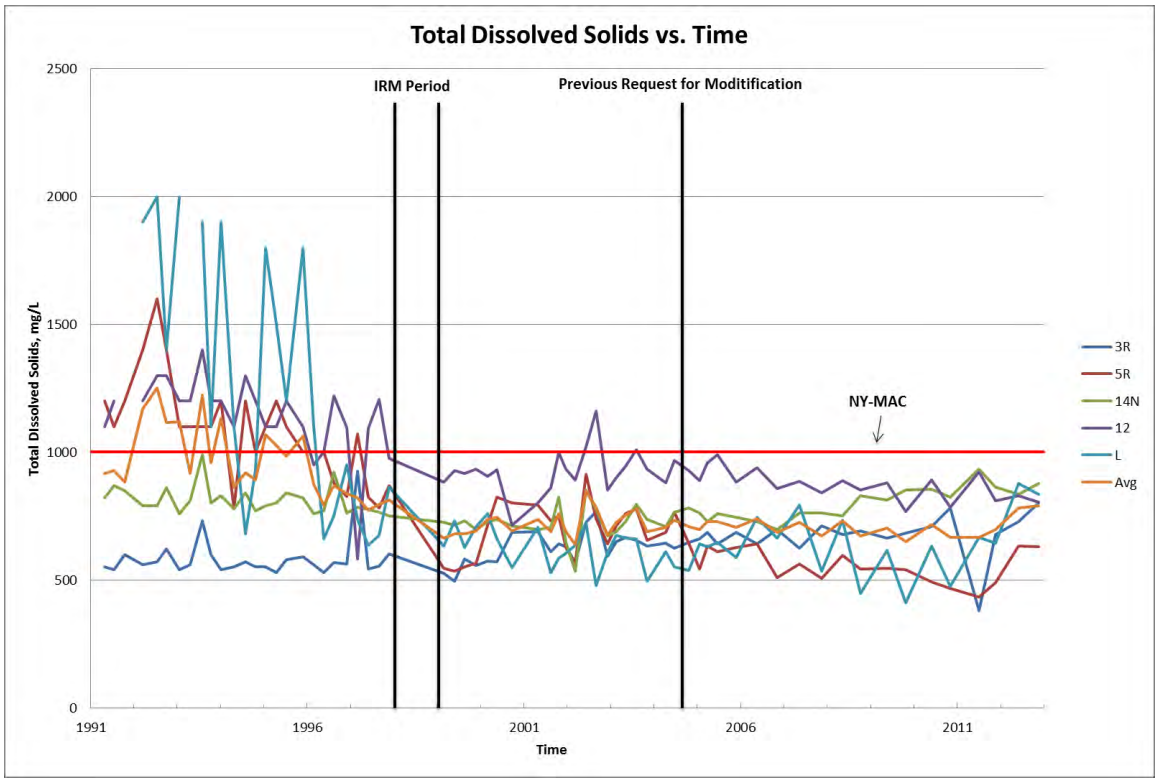
pH

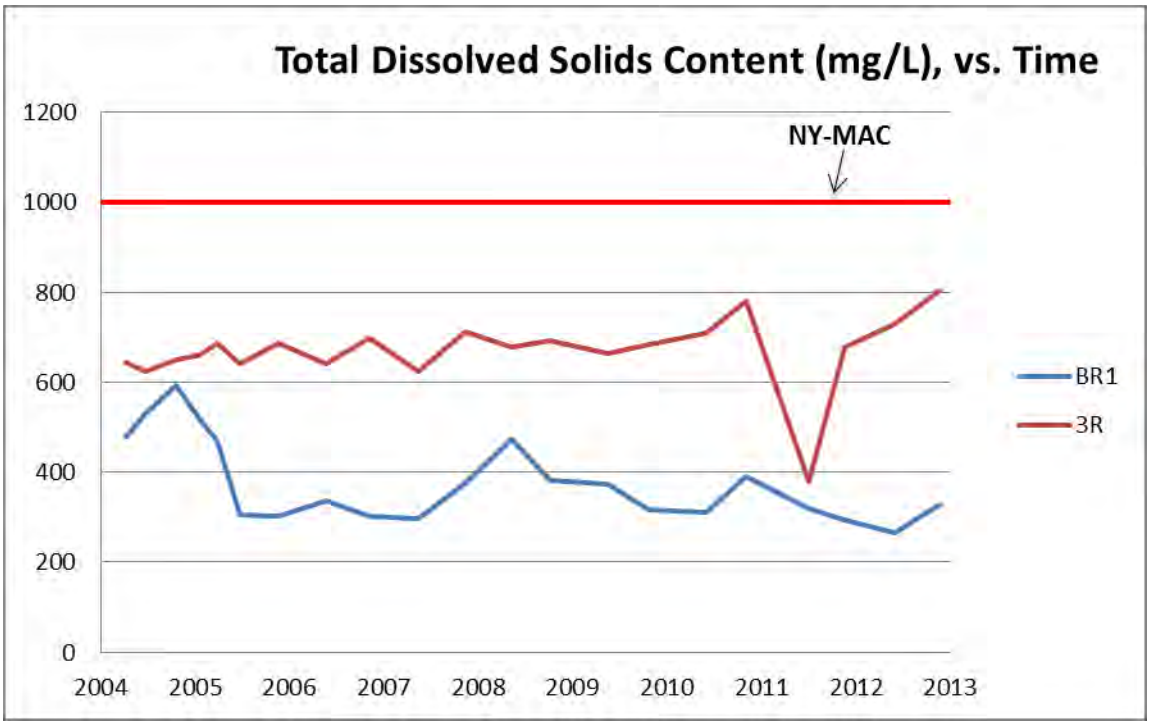

pH vs. Time
11
10
9
8
7
6
5
pH
IRM Period
Previous Request for Moditification
Upper Limit
Lower Limit
1991
1996
2001
2006
2011
Time
3R
5R
14N
12
L
Avg

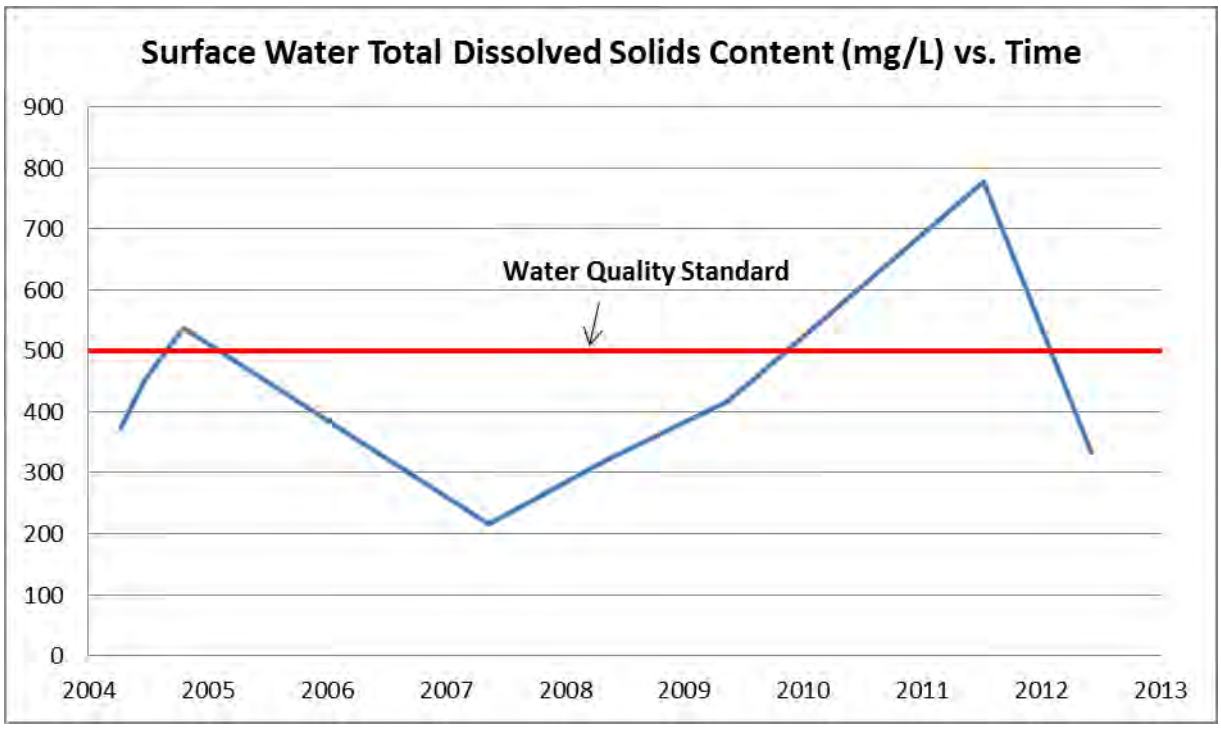

pH vs. Time
9
8.5
8
7.5
7
6.5
6
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
Upper Limit
Lower Limit
BR1
3R


Surface Water pH vs. Time
9.5
9
8.5
8
7.5
7
6.5
6
2007
2008
2009
2010
2011
2012
2013
UpperLimit
Lower Limit

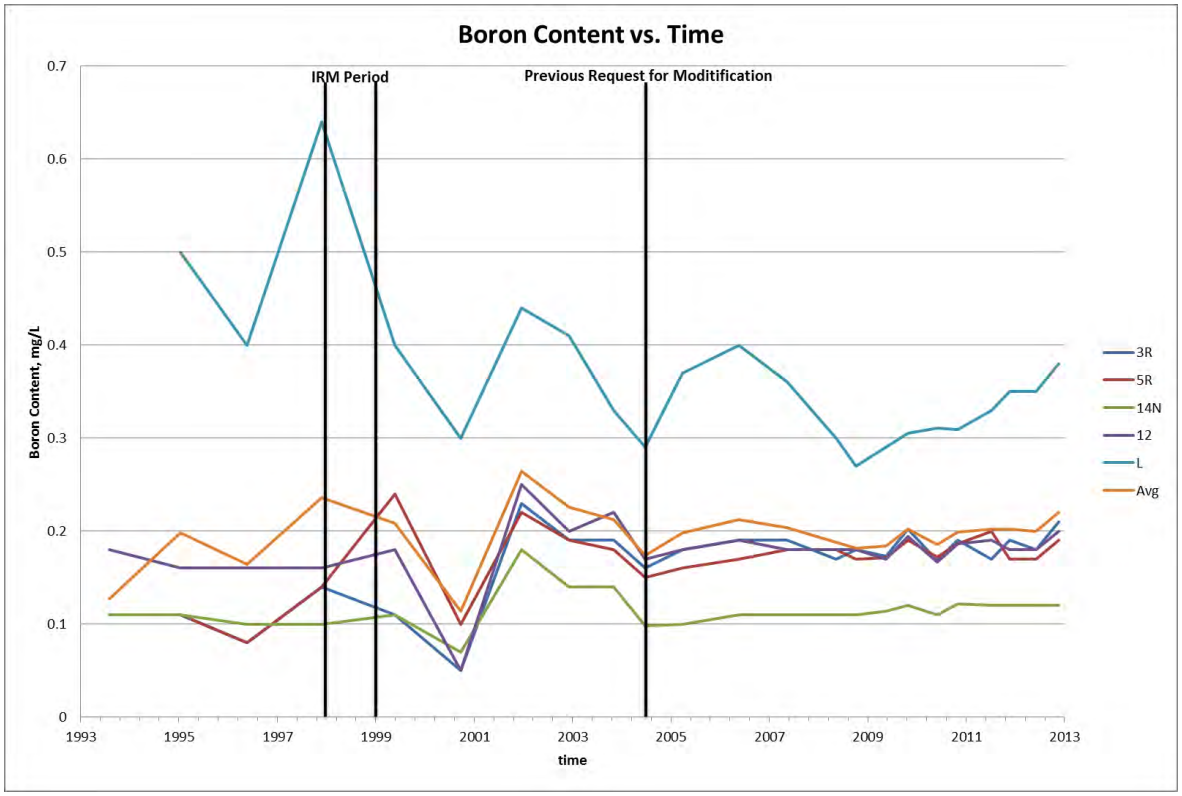
Total Dissolved Solids (mg/L)

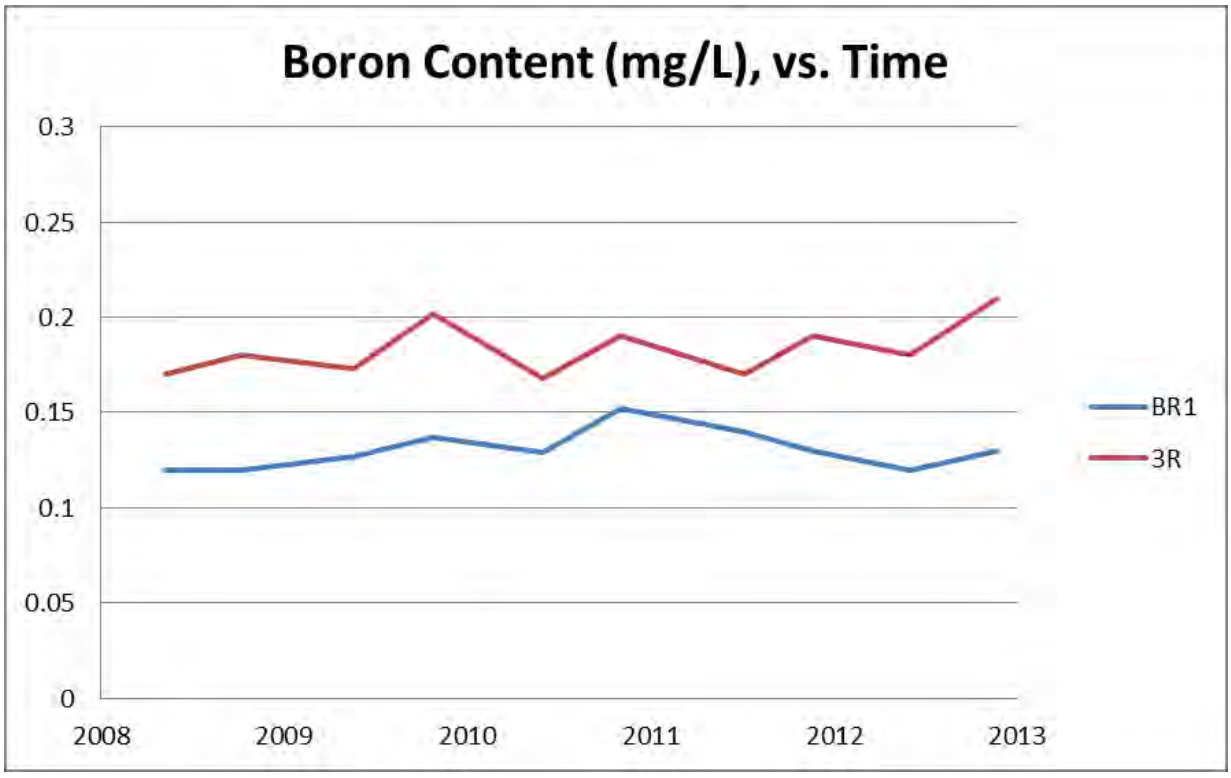


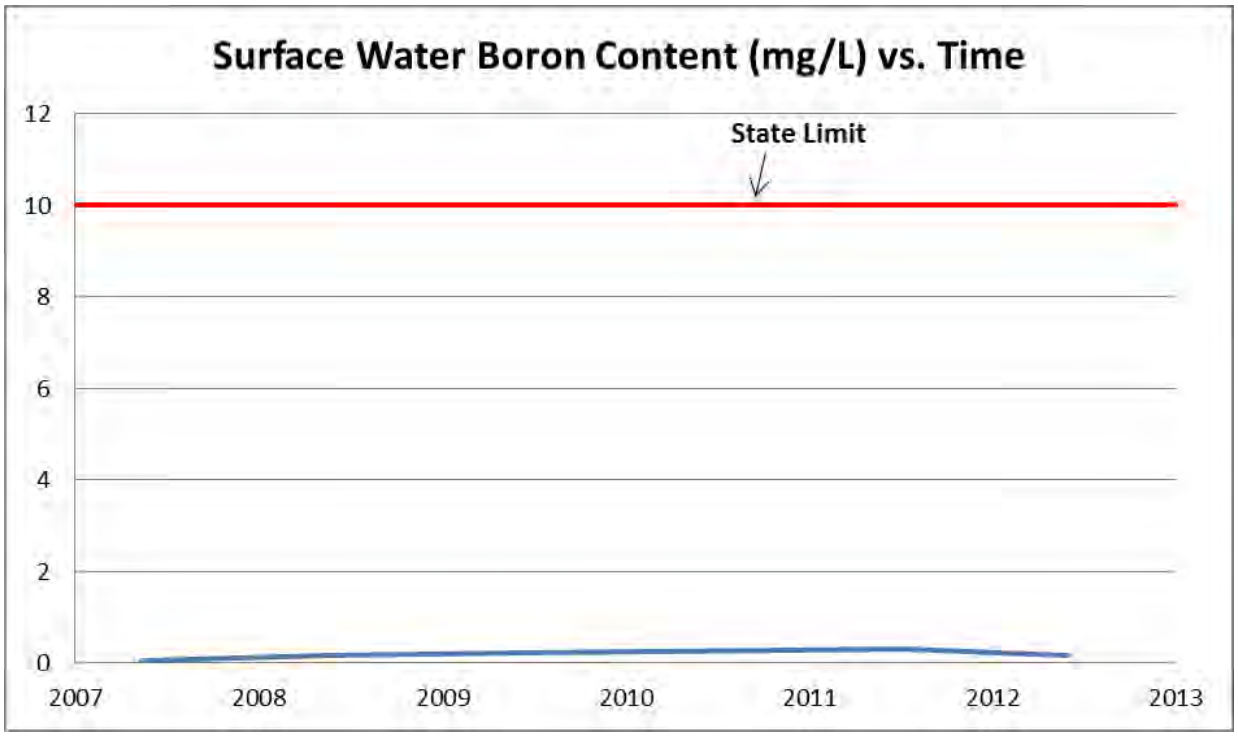




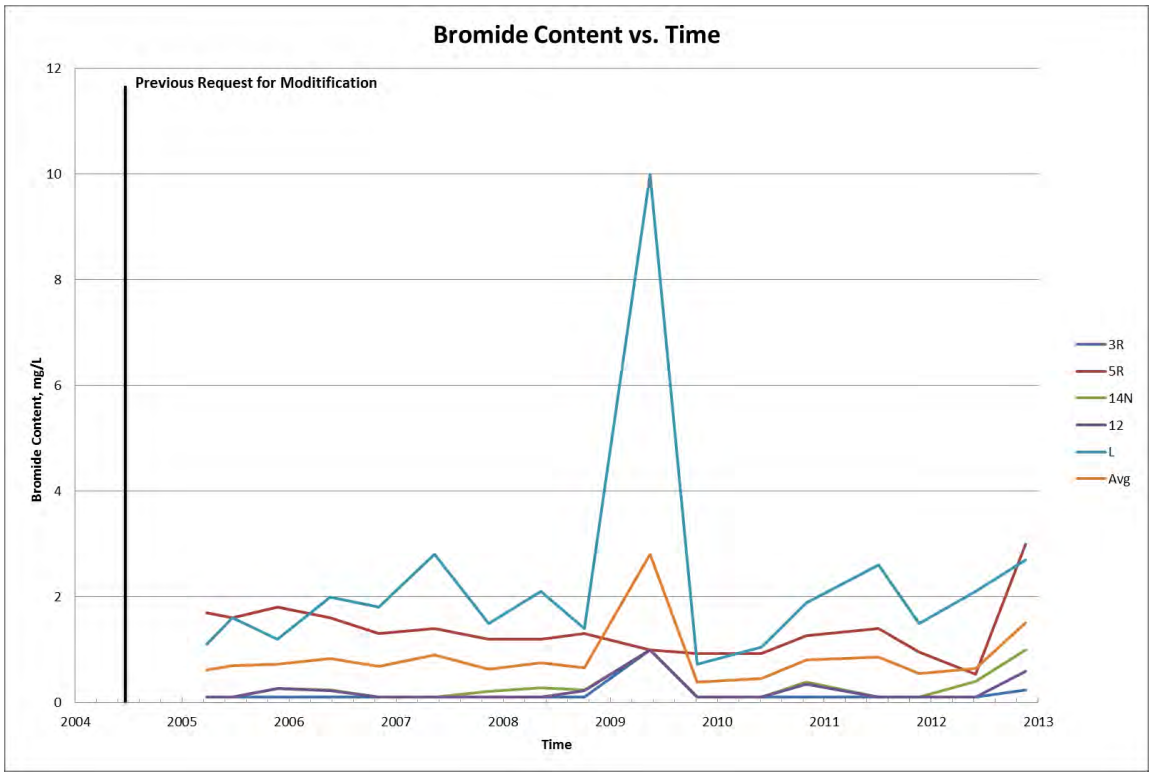
Boron Content (mg/L)

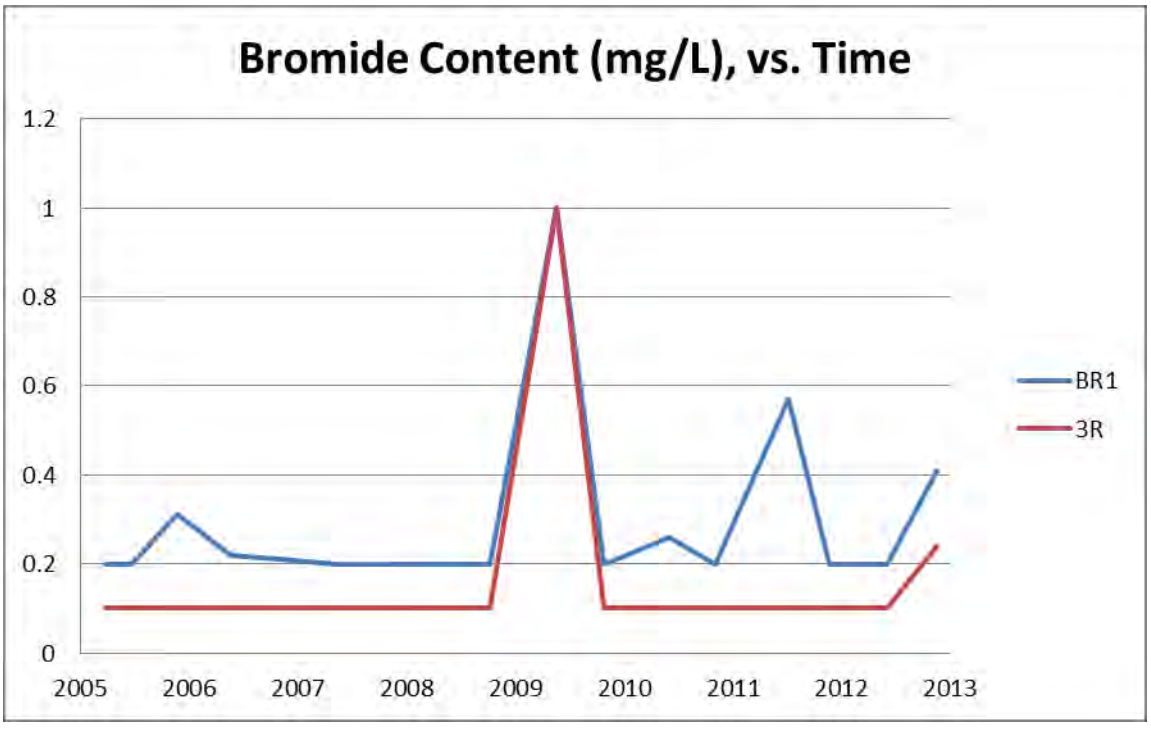


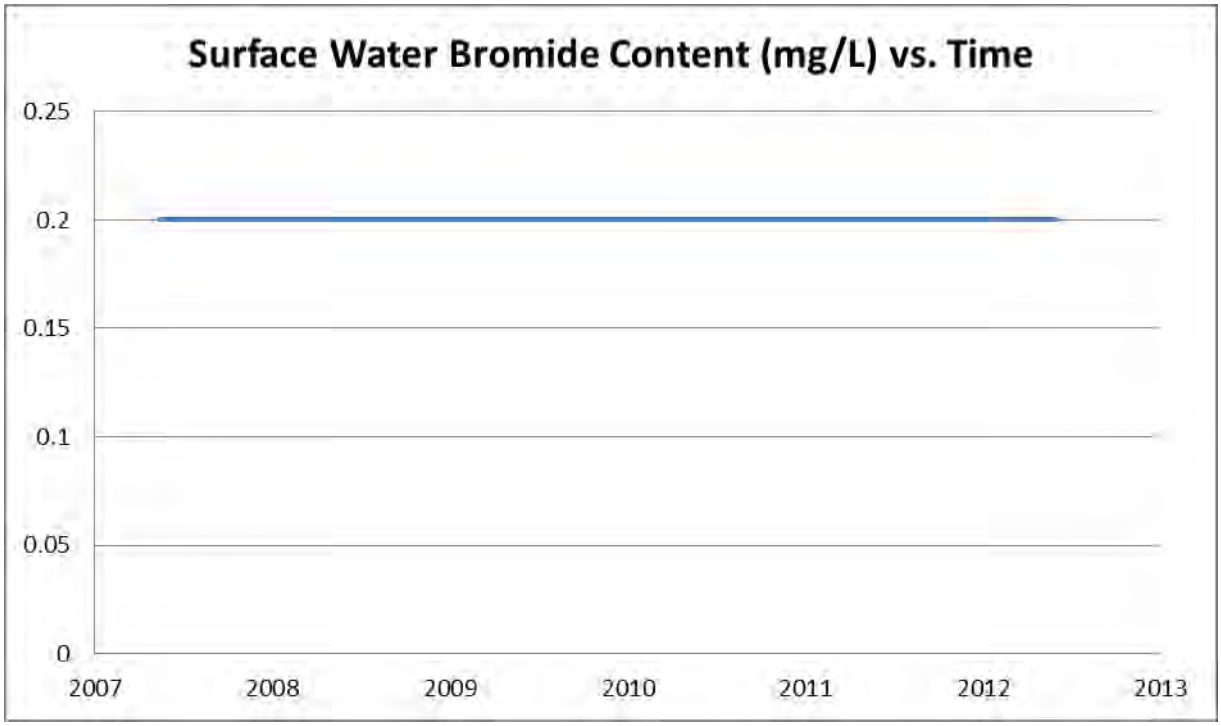

Boron Content (mg/L), vs. Time
0.3
0.25
0.2
0.15
0.1
0.05
0
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Boron Content (mg/L) vs. Time
12
10
8
6
4
2
0
State Limit
2007
2008
2009
2010
2011
2012
2013

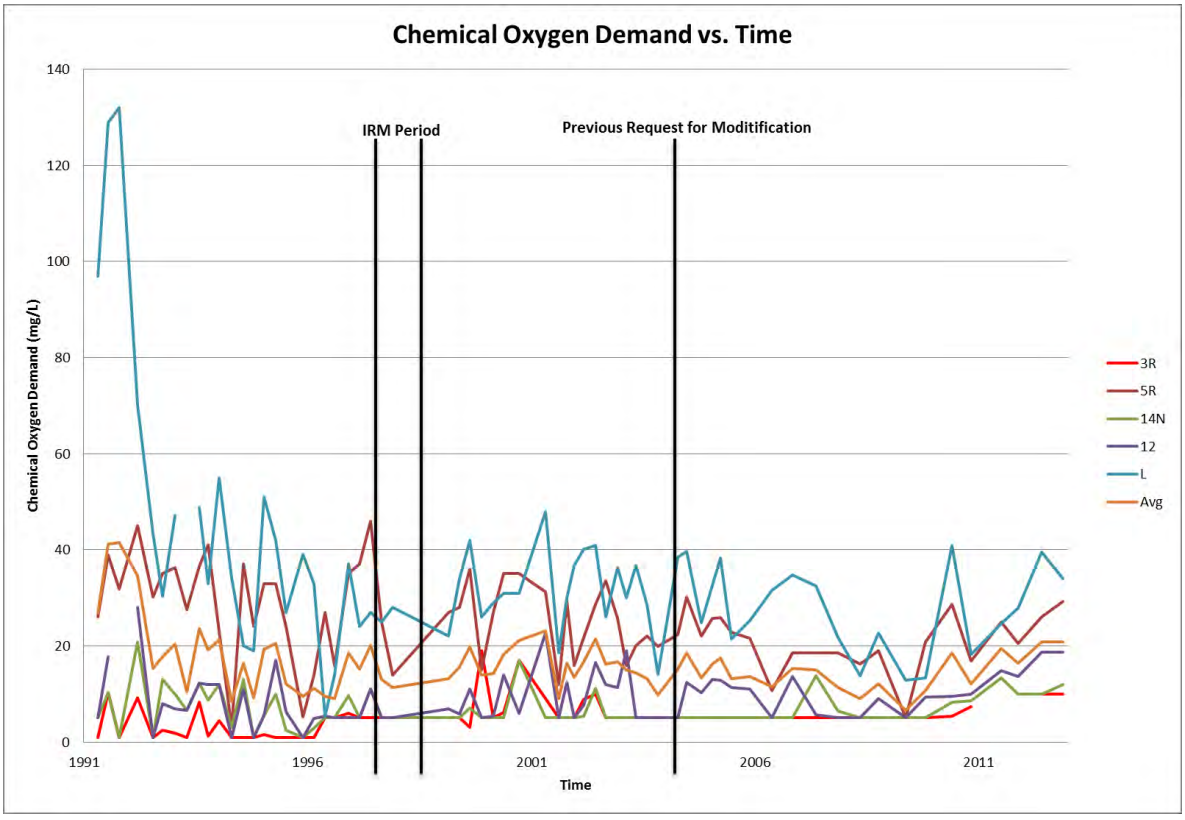
Bromide Content (mg/L)

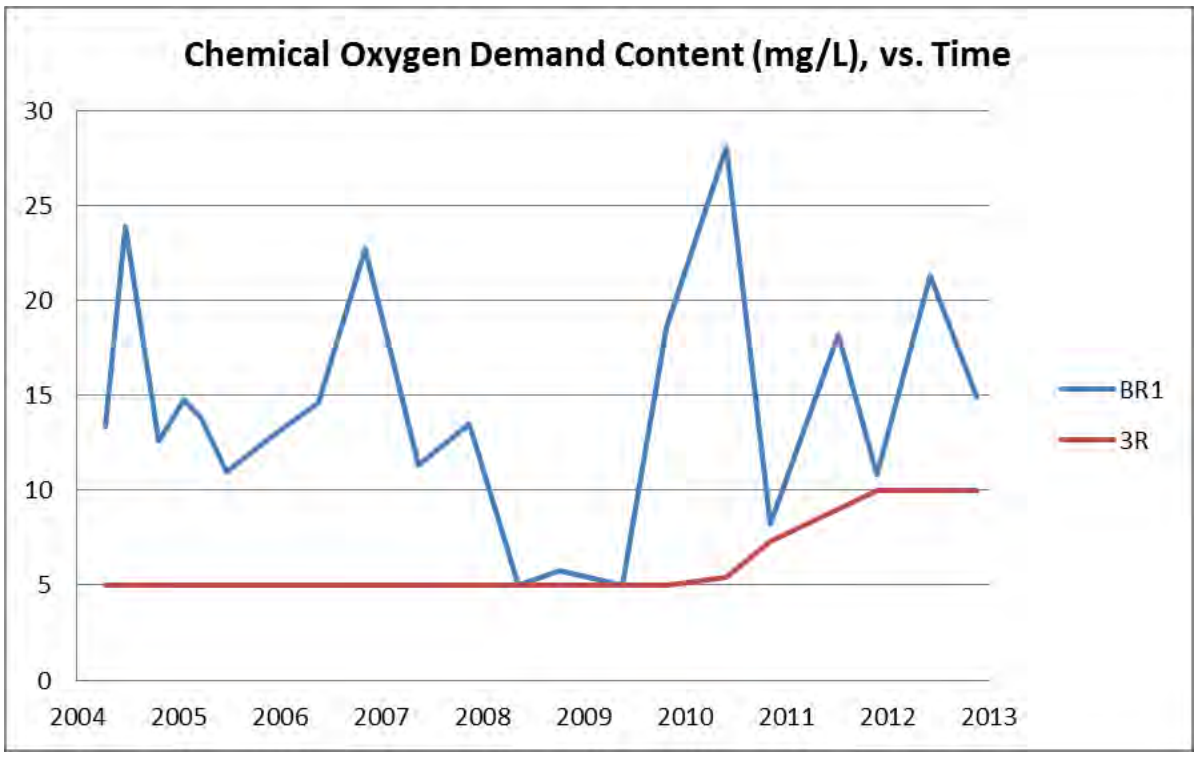


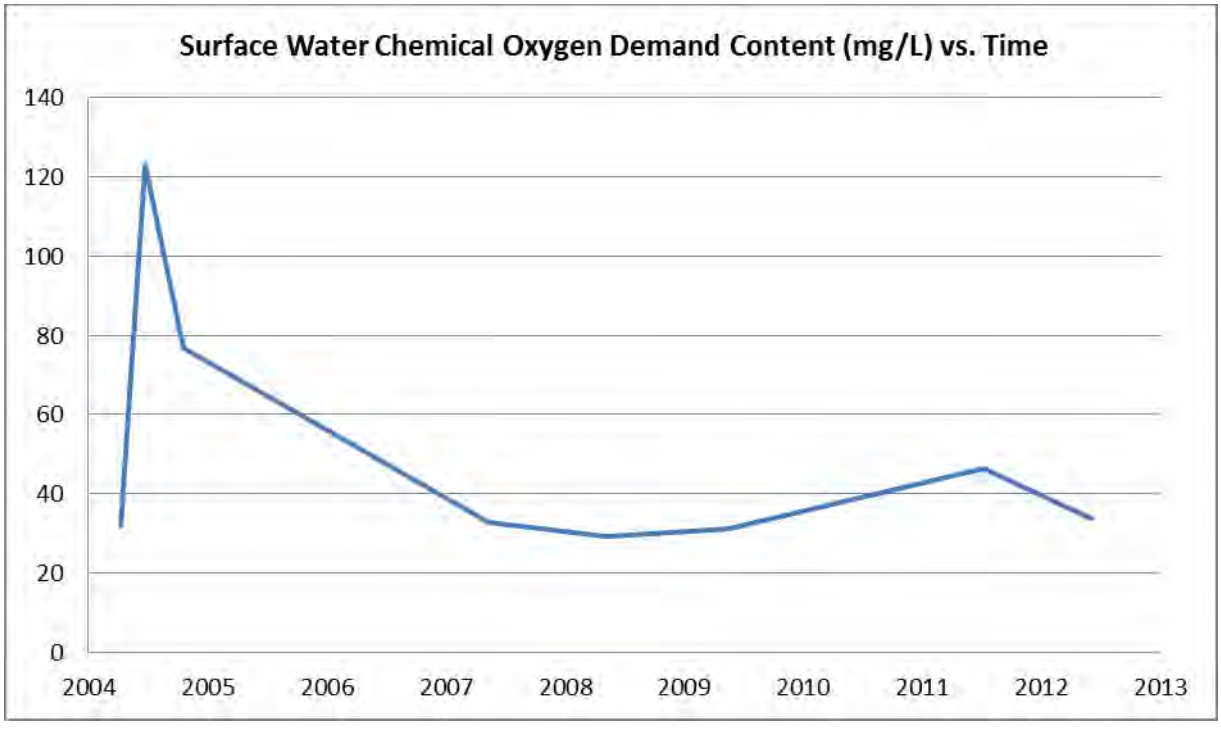




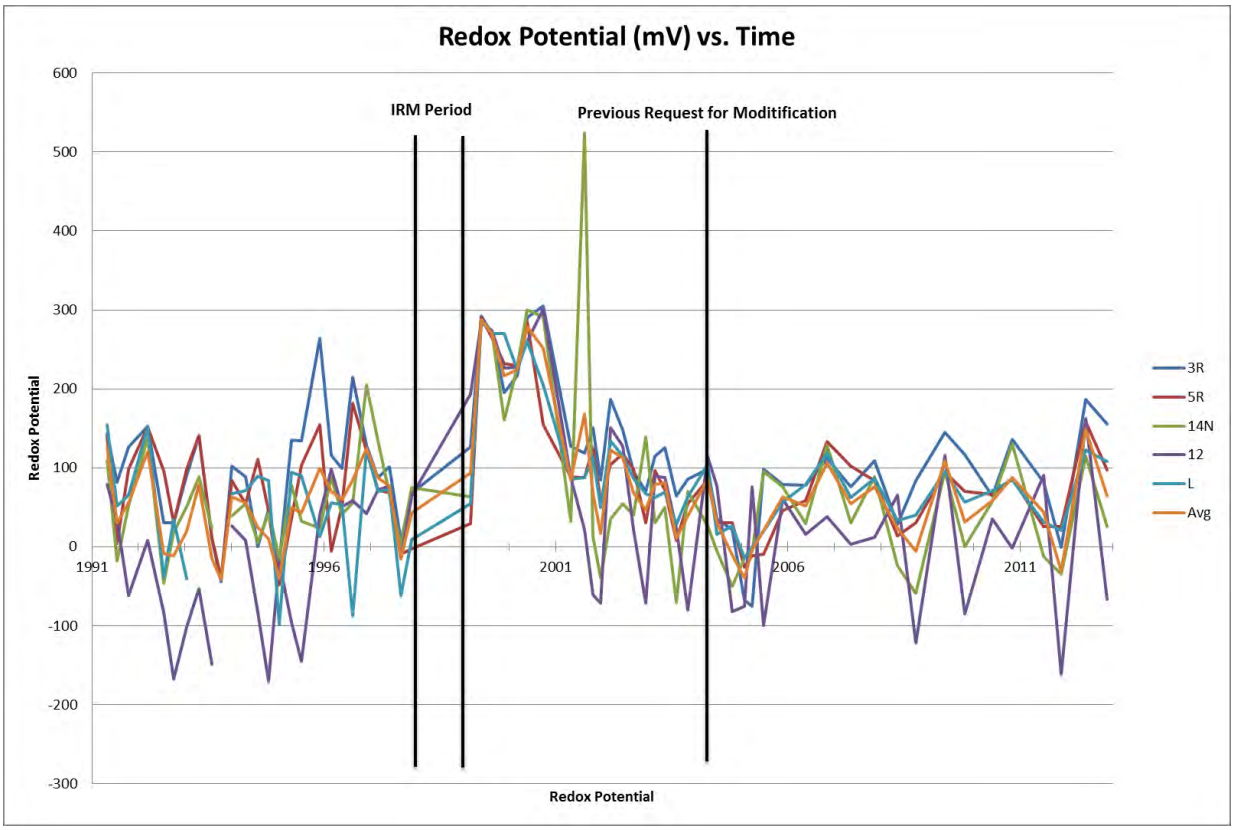
Chemical Oxygen Demand (mg/L)

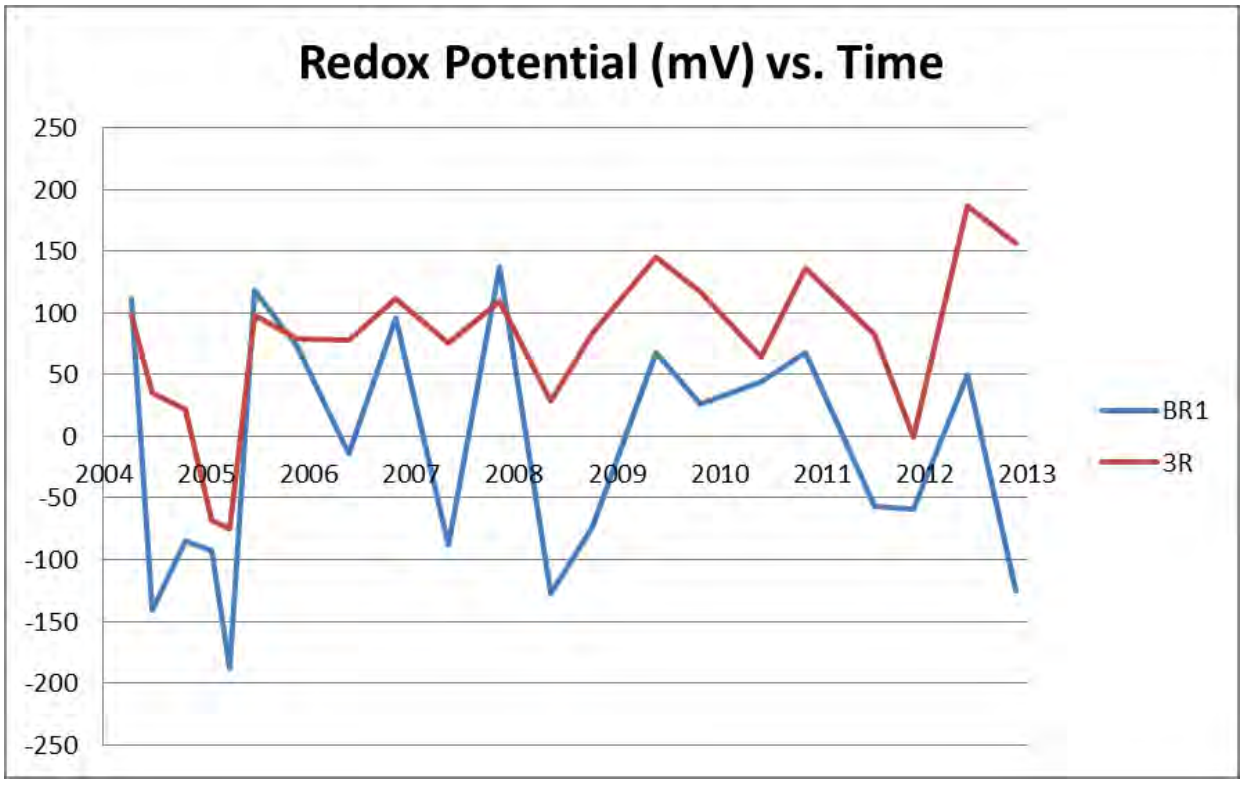


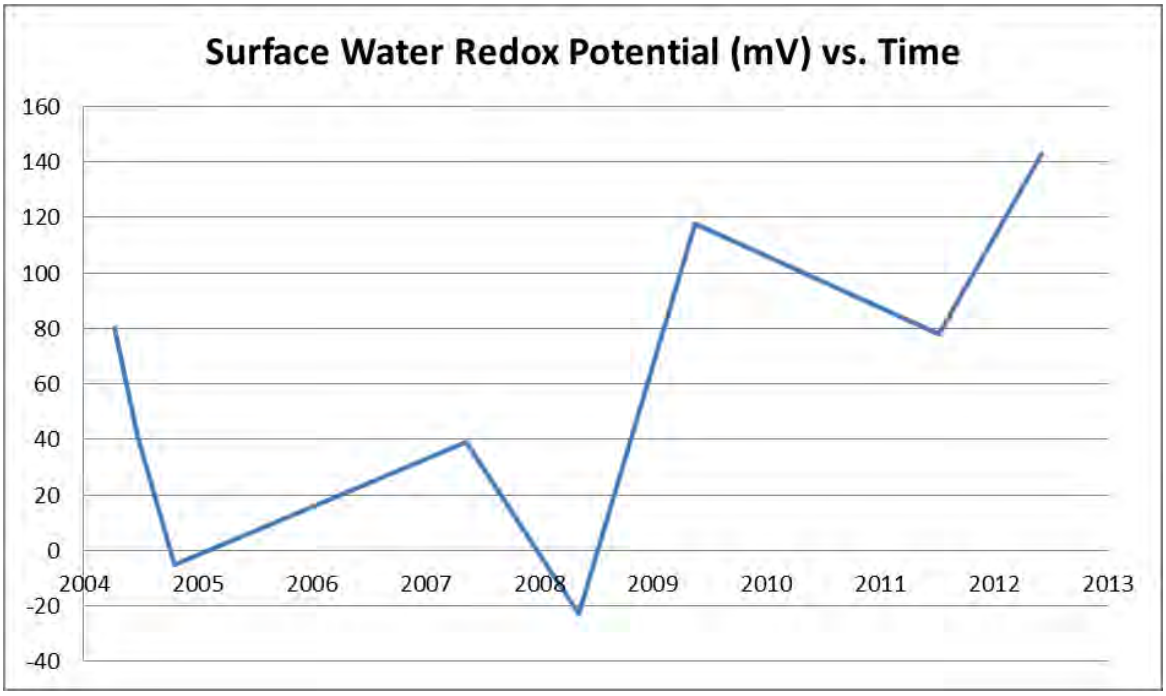

Chemical Oxygen Demand Content (mg/L), vs. Time
30
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Chemical Oxygen Demand Content (mg/L) vs. Time
140
120
100
80
60
40
20
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

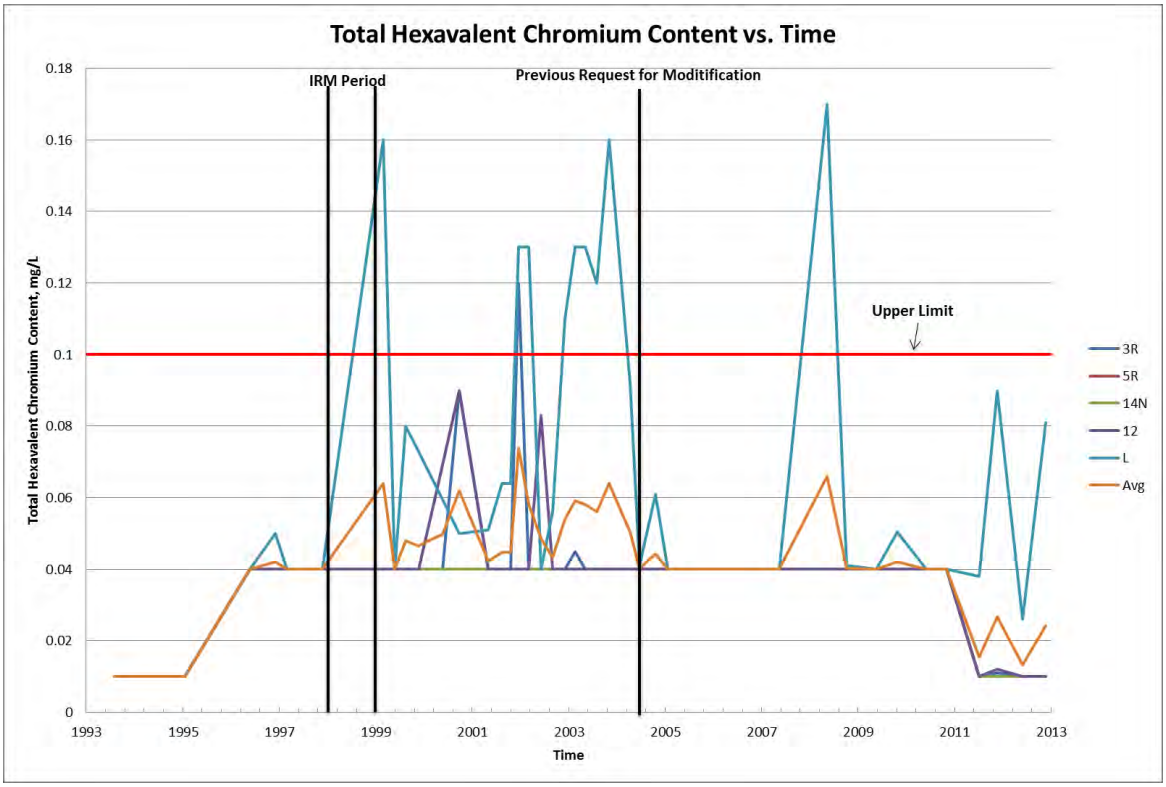
Redox Potential (mV)

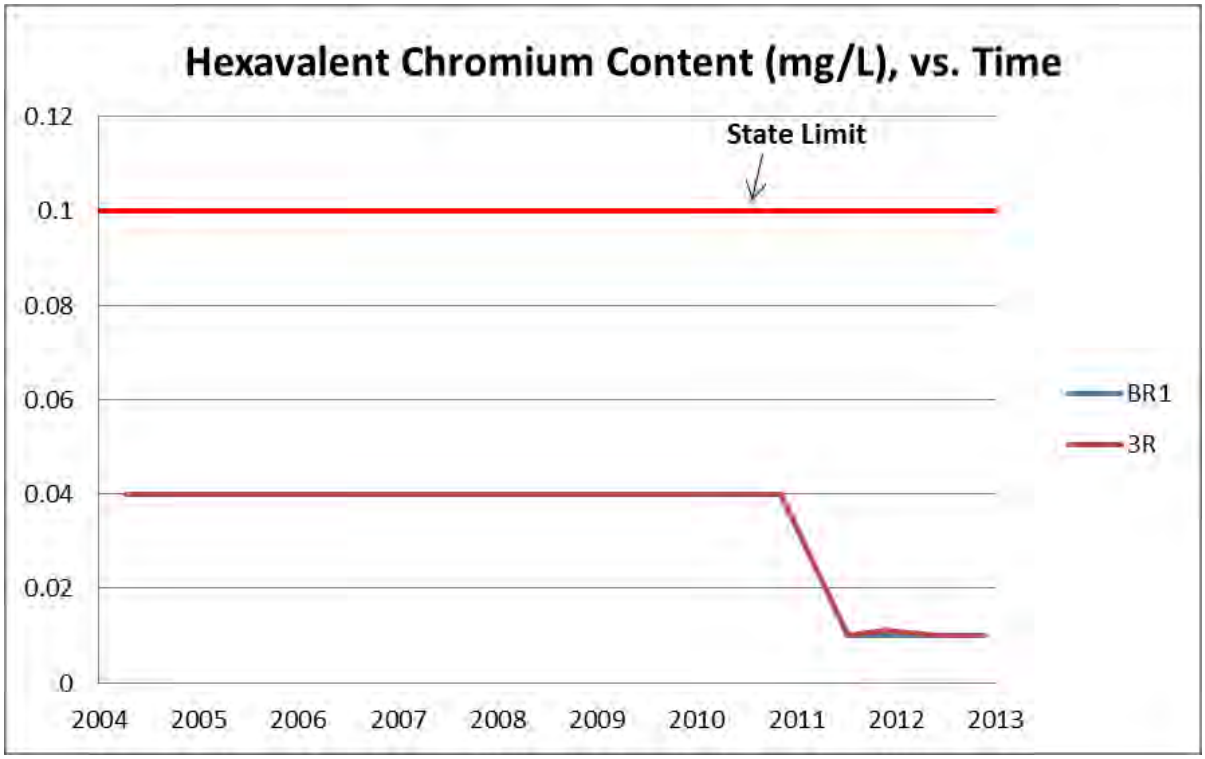


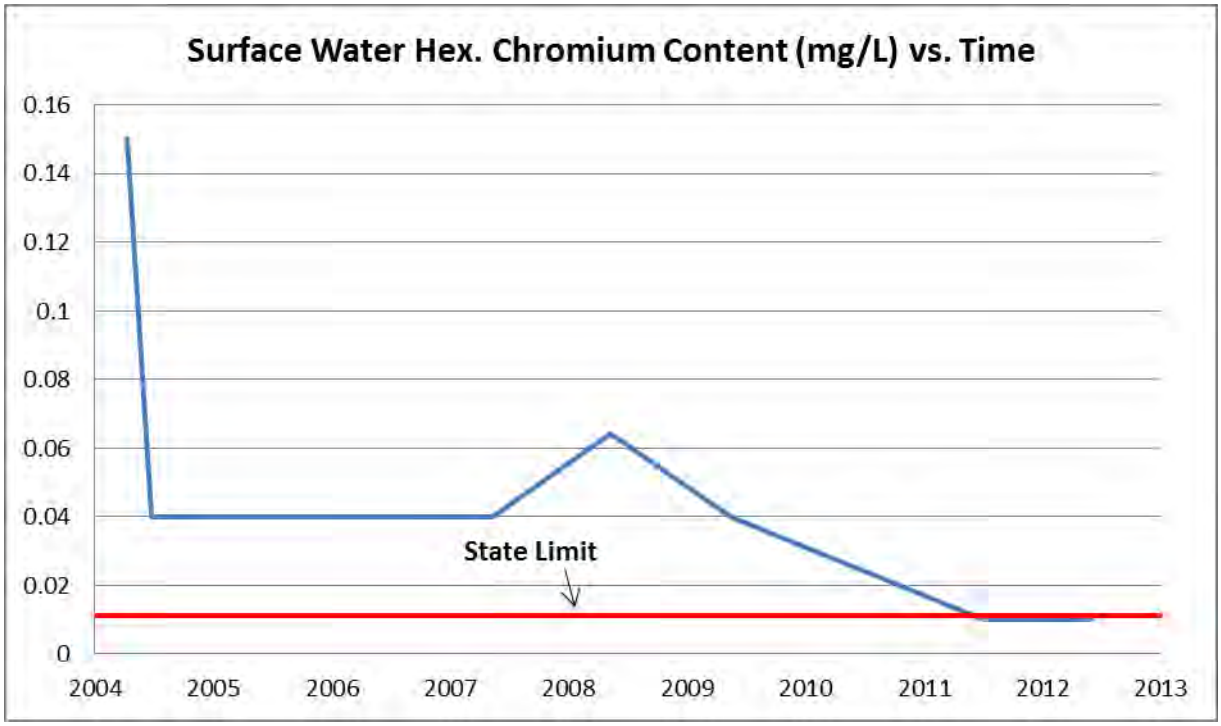




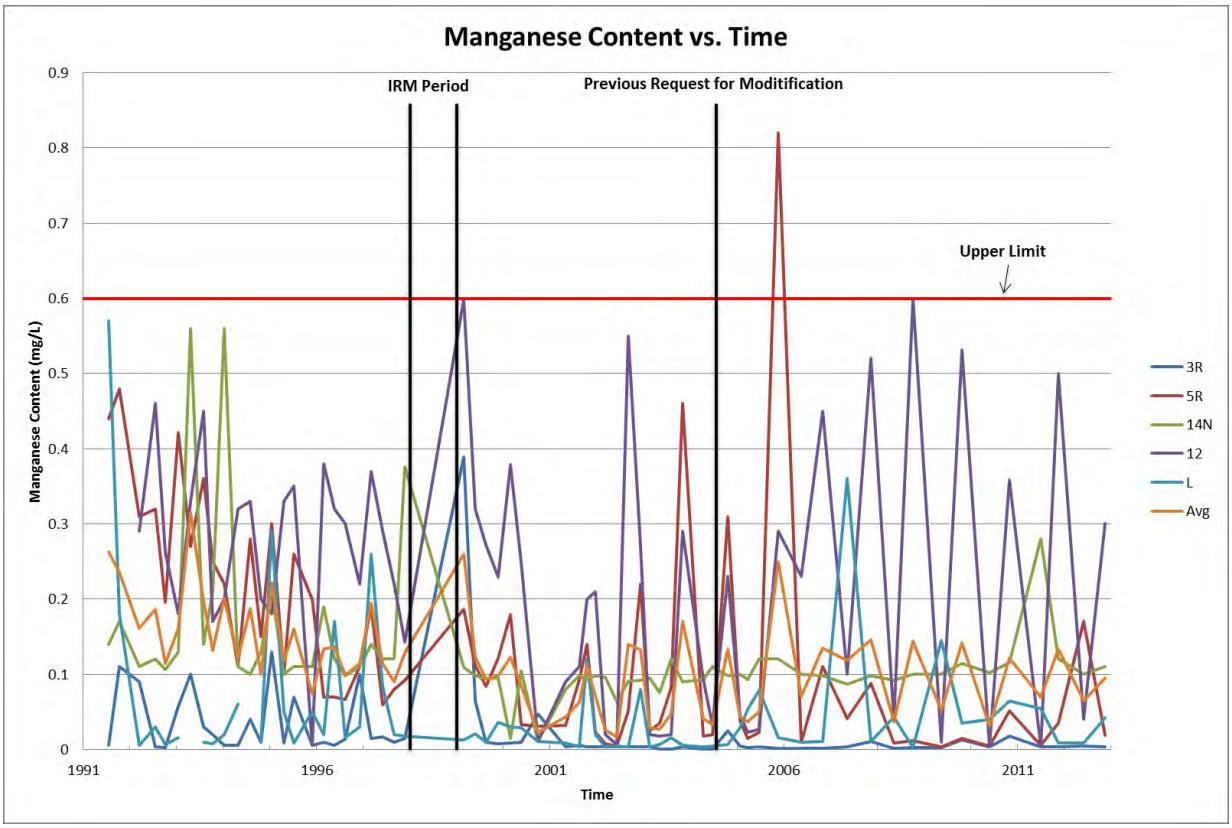
Total Hexavalent Chromium Content (mg/L)

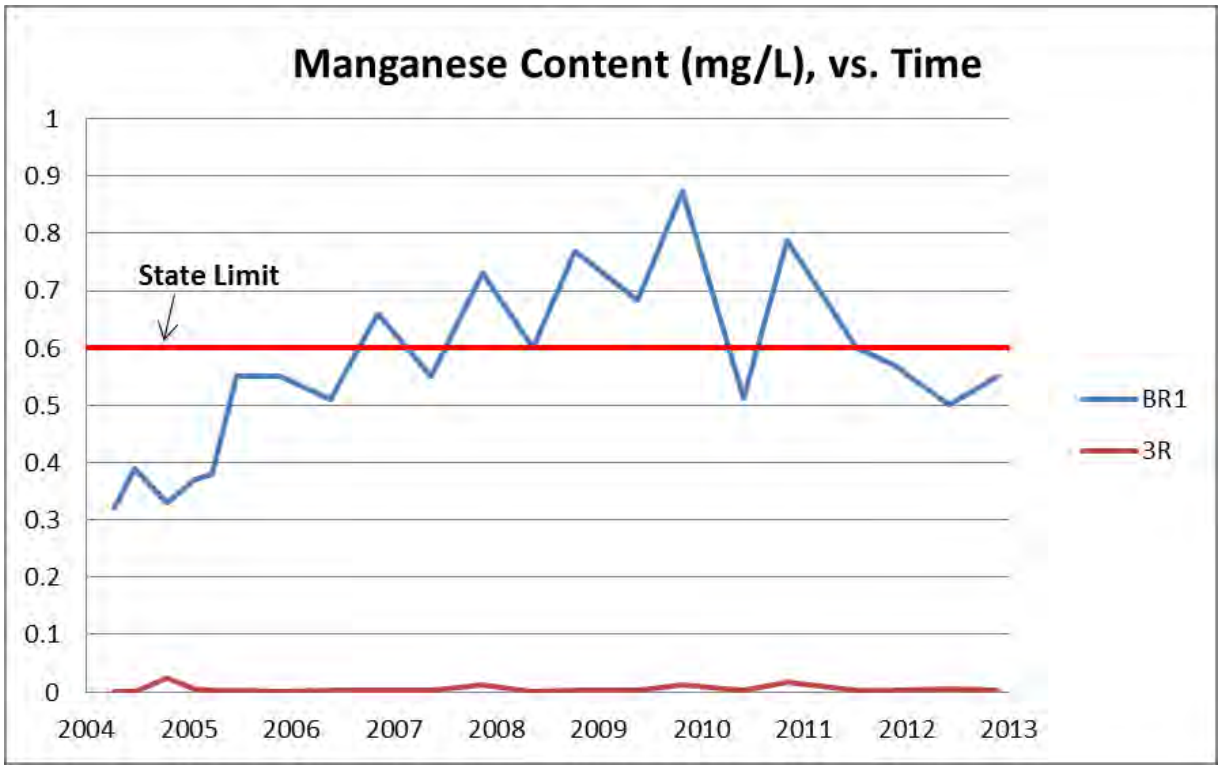


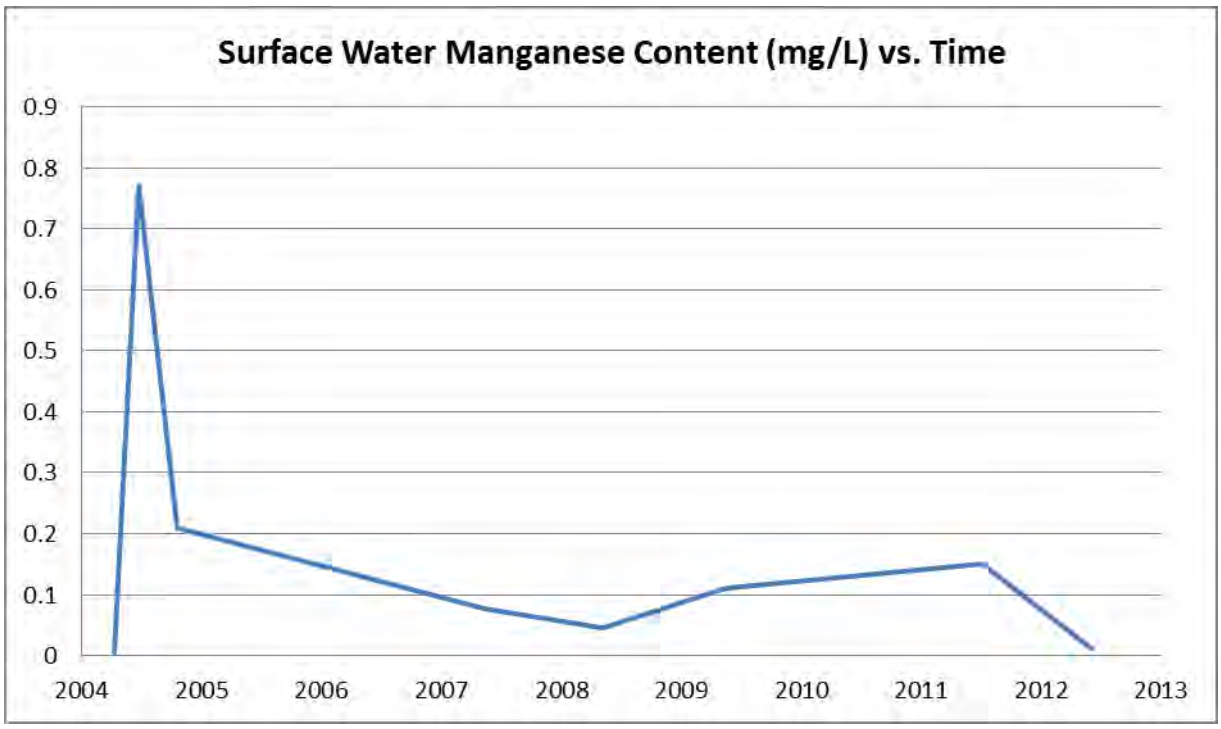

Hexavalent Chromium Content (mg/L), vs. Time
0.12
0.1
0.08
0.06
0.04
0.02
0
State Limit
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Hex. Chromium Content (mg/L) vs. Time
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
State Limit
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

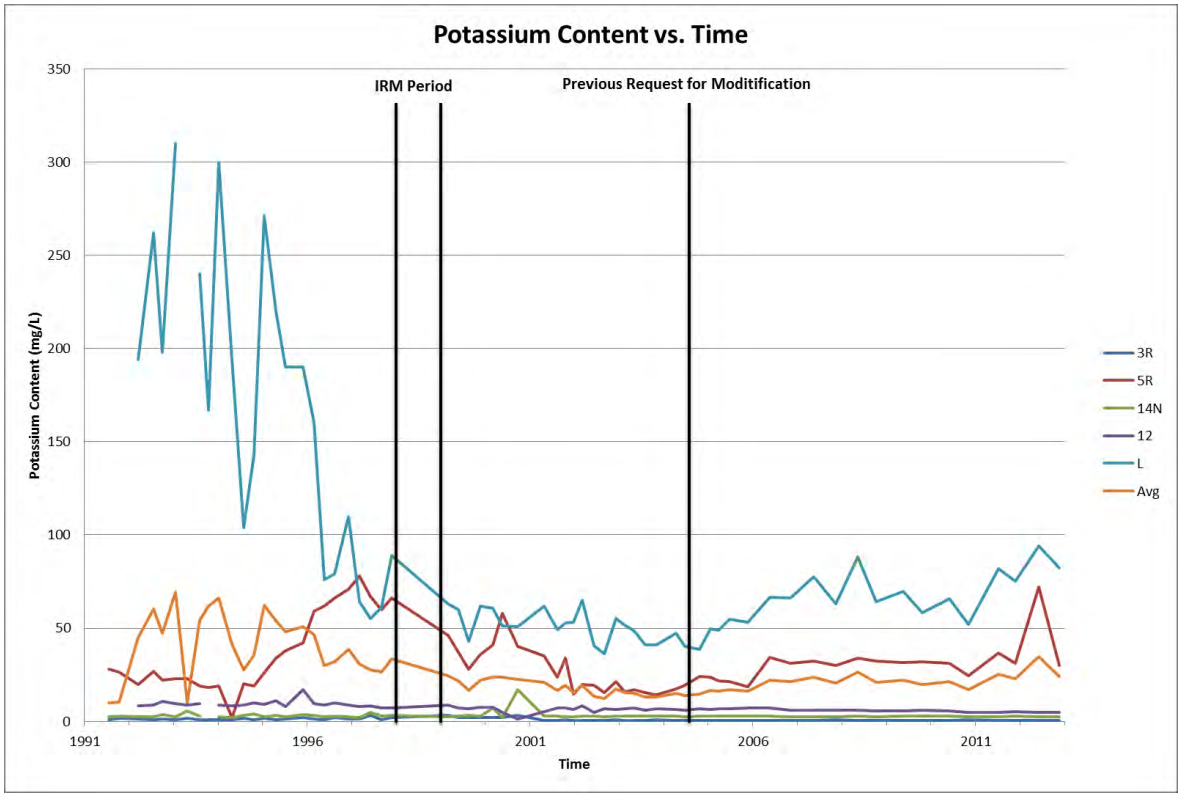
Manganese Content (mg/L)

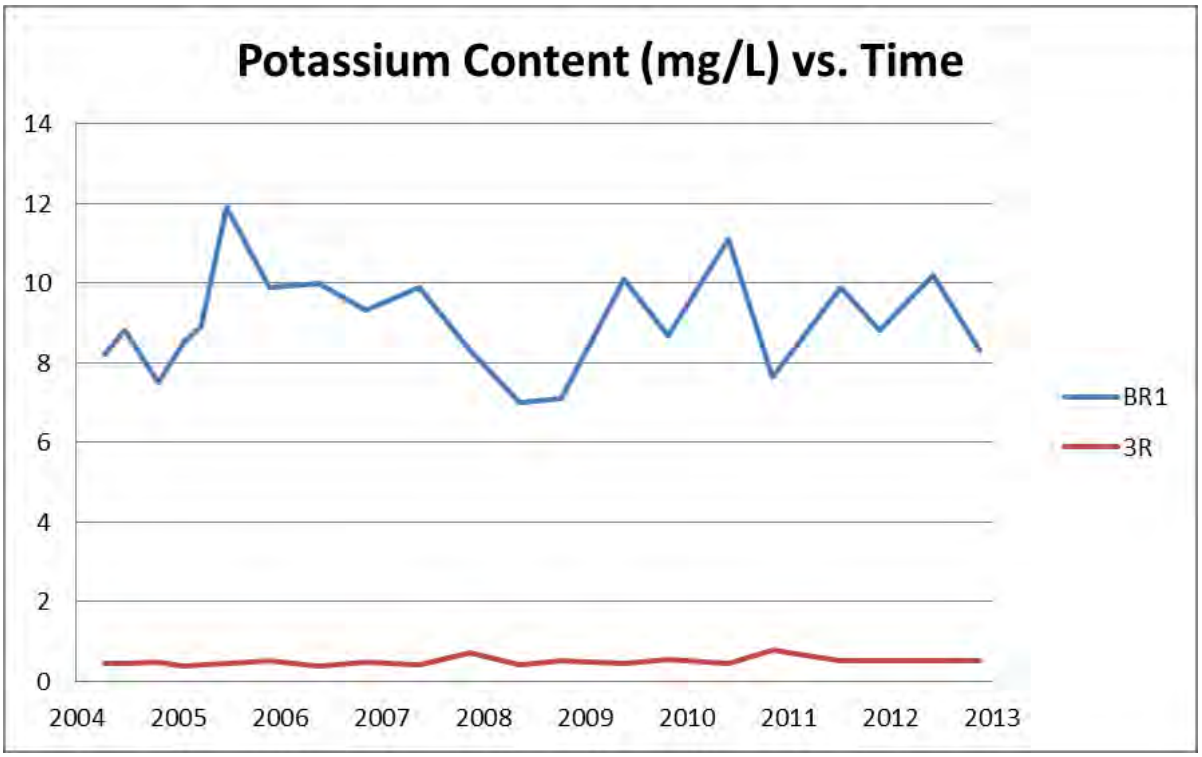


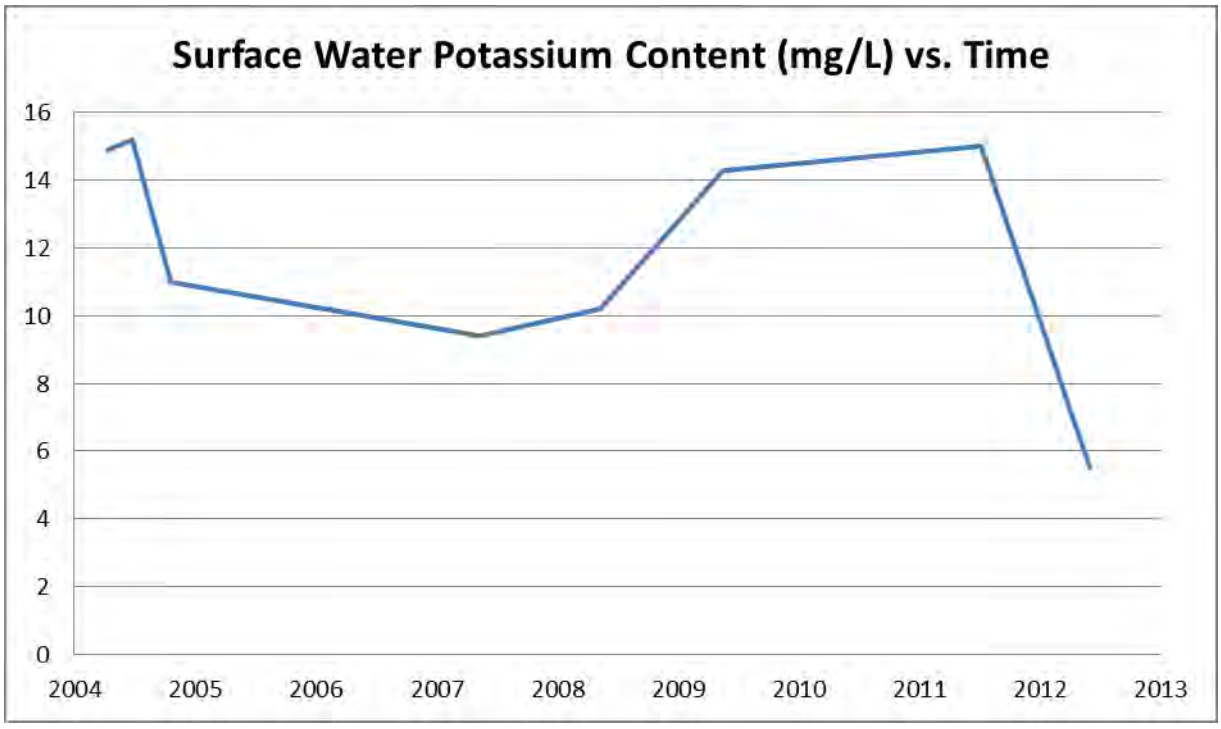




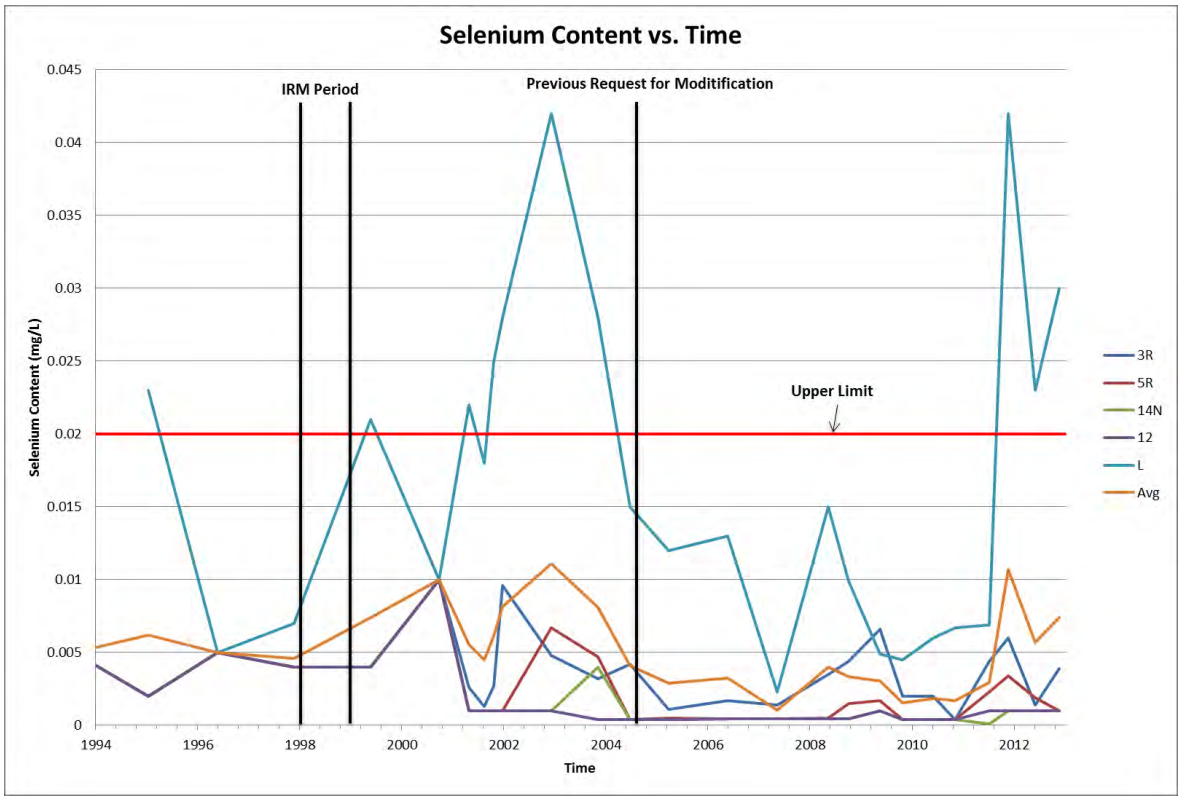
Potassium Content (mg/L)

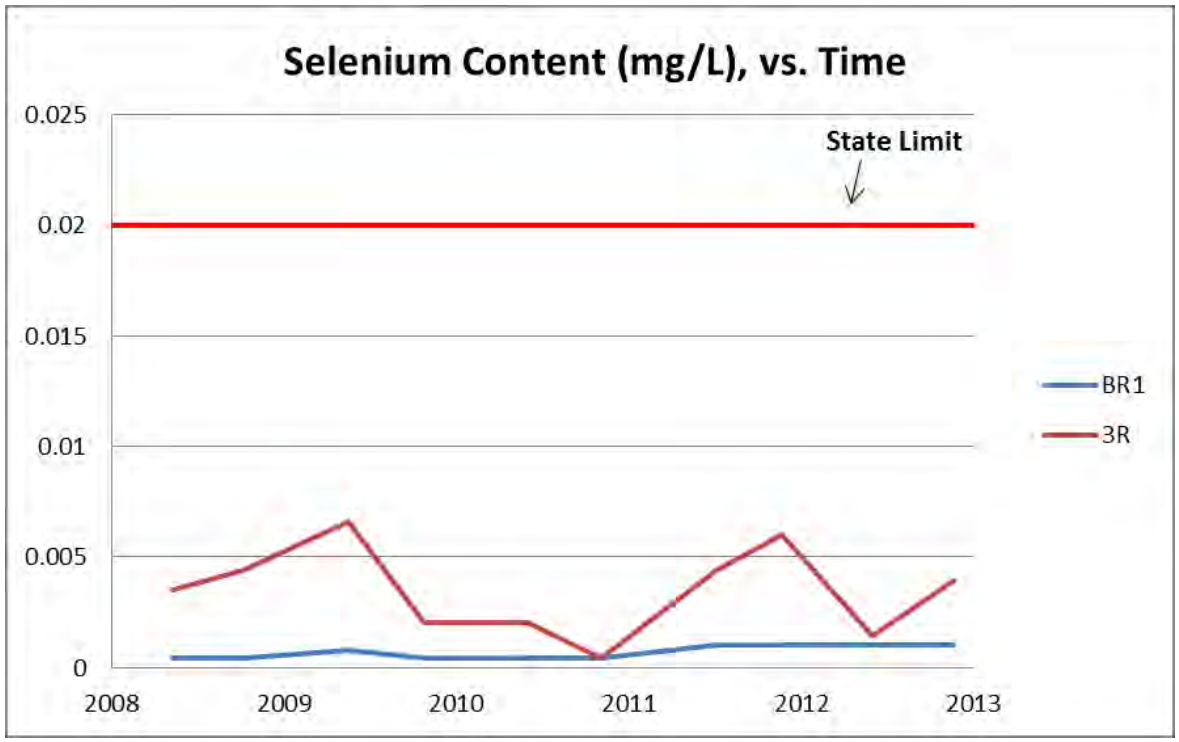


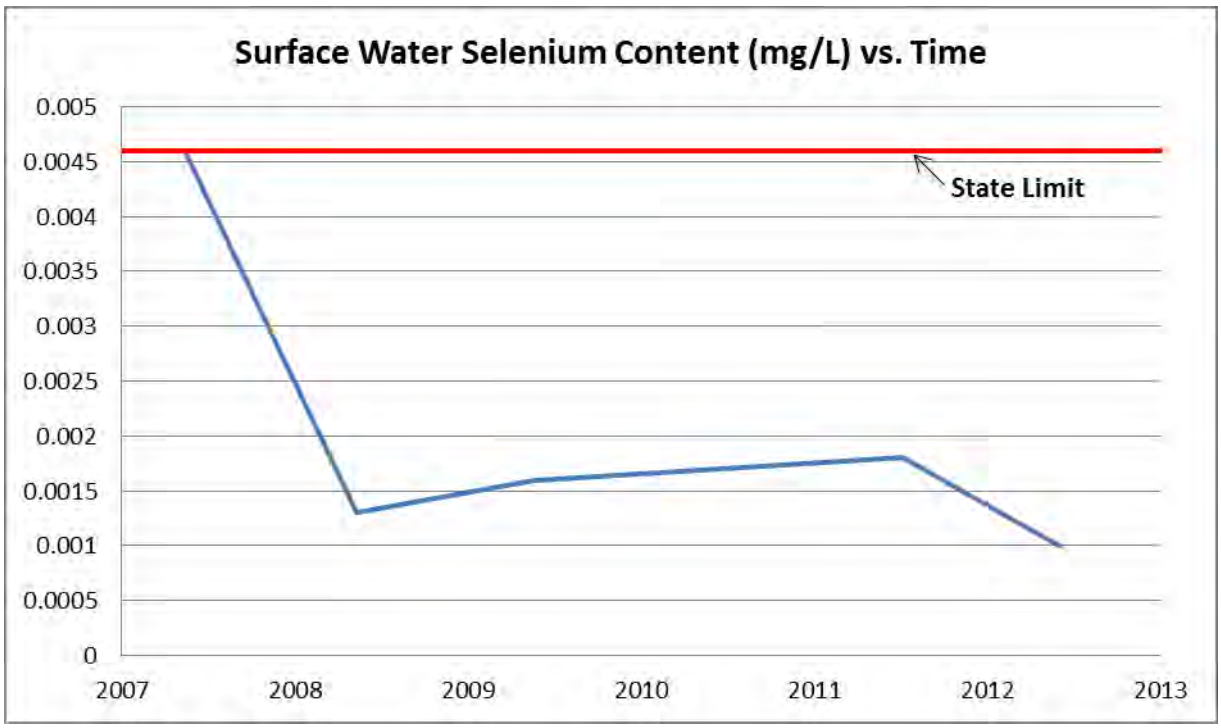

Potassium Content (mg/L) vs. Time
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Potassium Content (mg/L) vs. Time
16
14
12
10
8
6
4
2
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

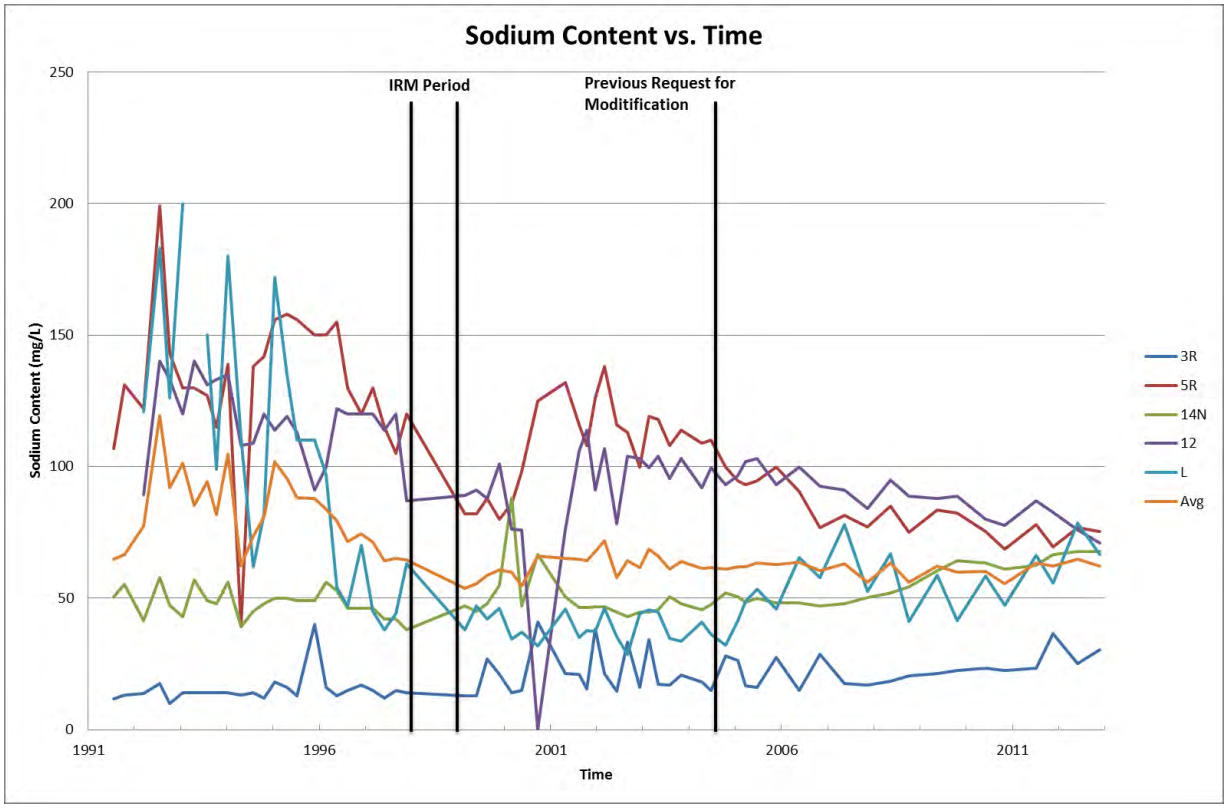
Selenium Content (mg/L)

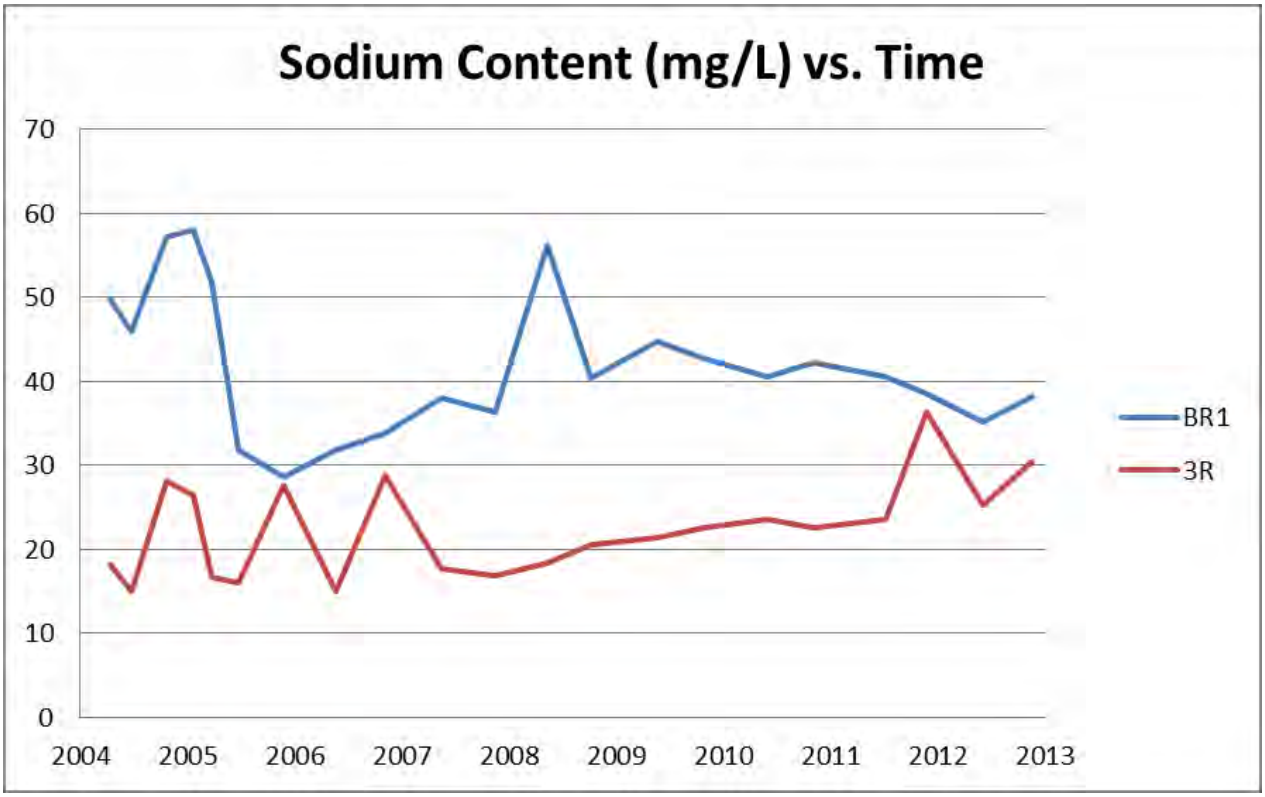


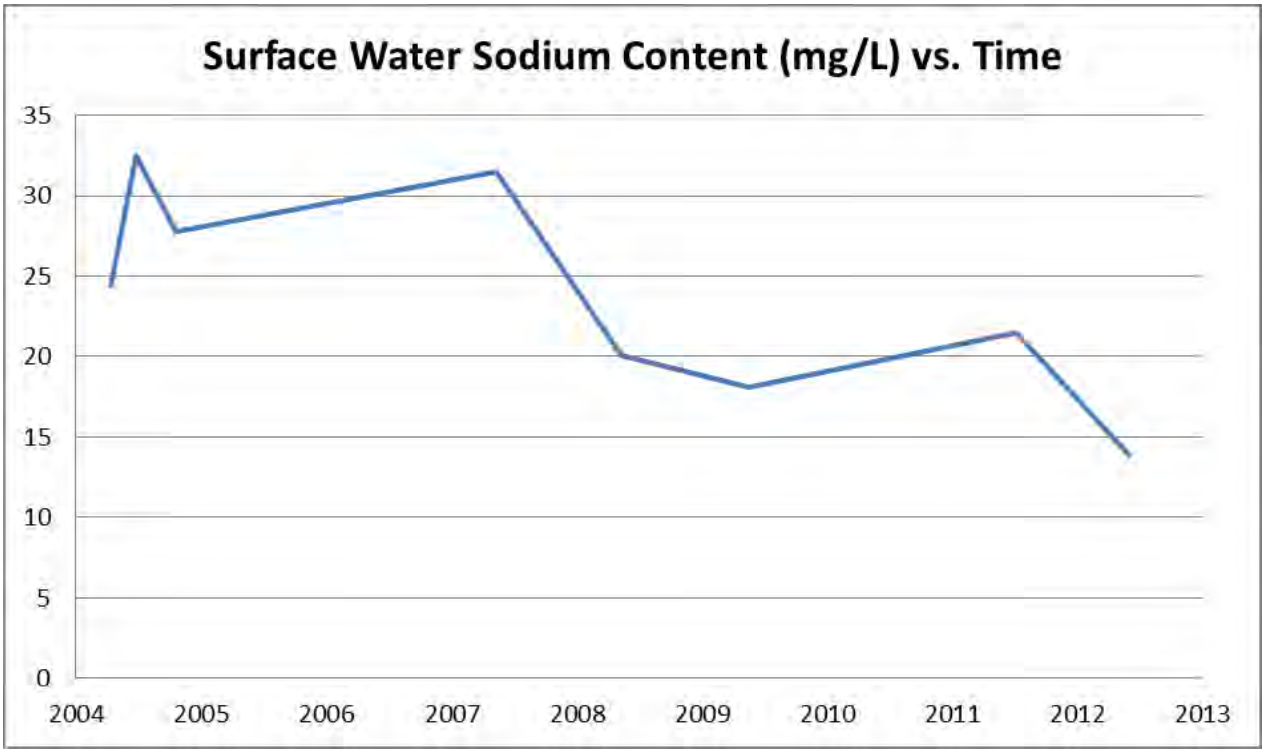




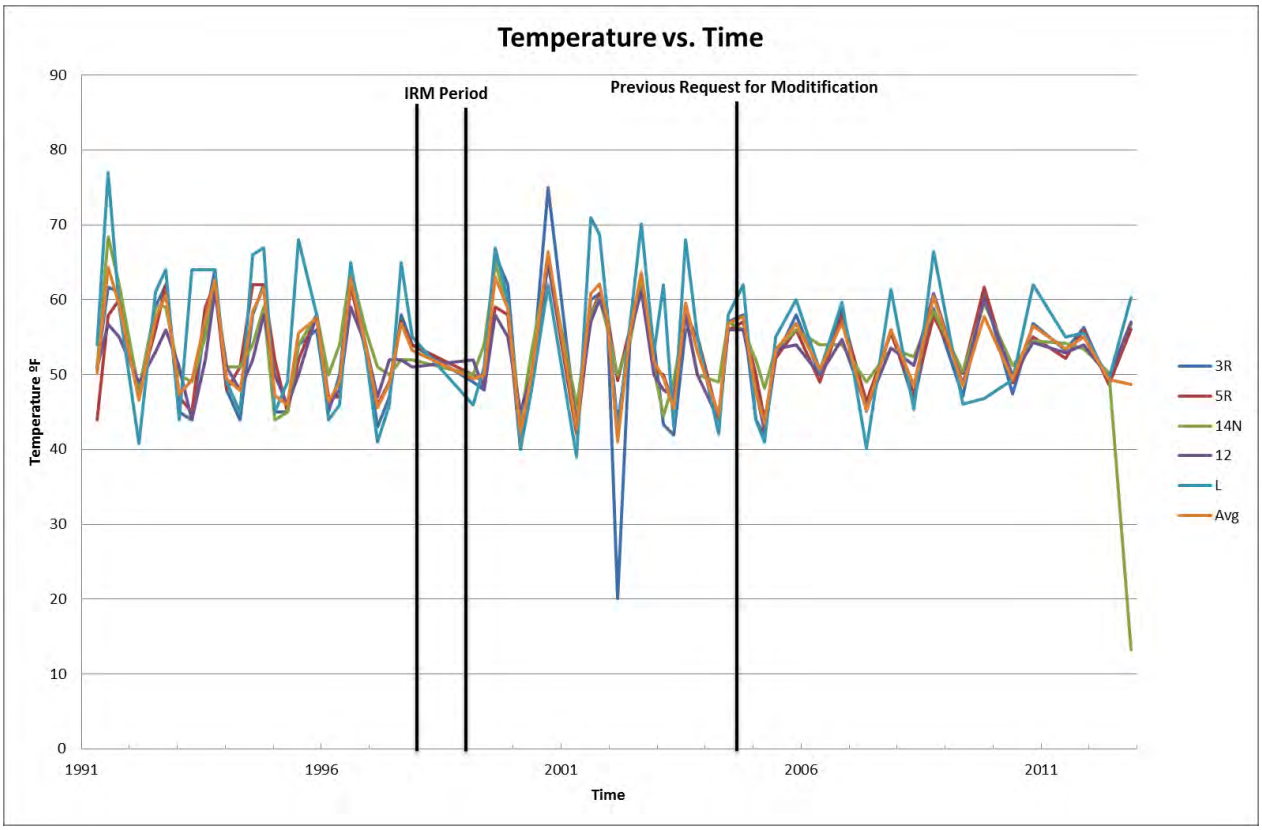
Sodium Content (mg/L)

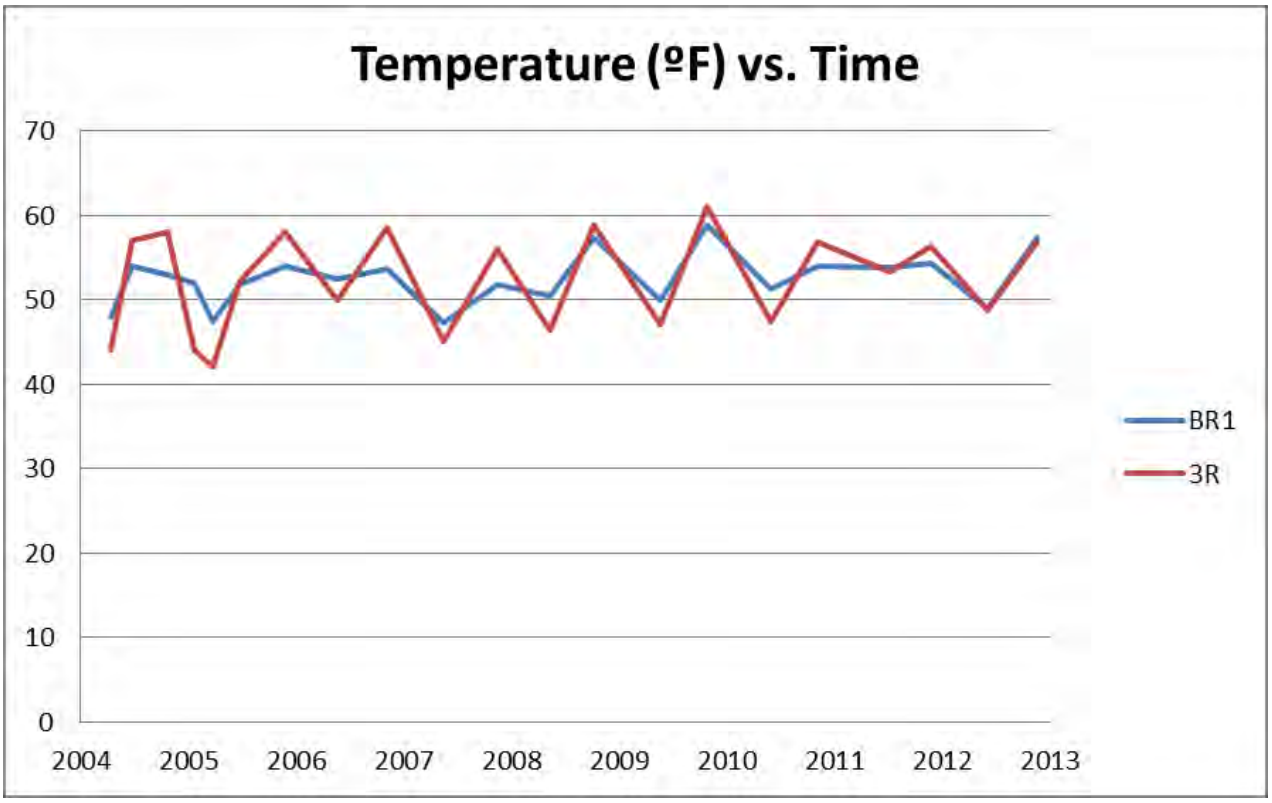


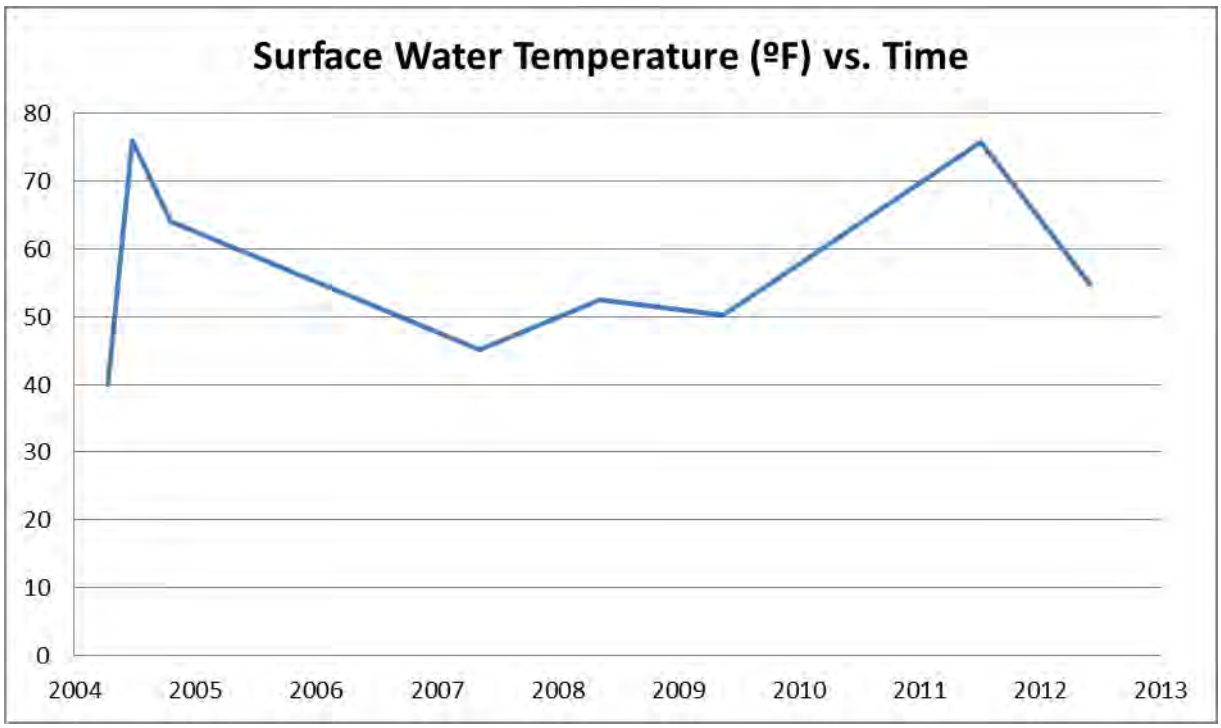

Sodium Content (mg/L) vs. Time
70
60
50
40
30
20
10
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Sodium Content (mg/L) vs. Time
35
30
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

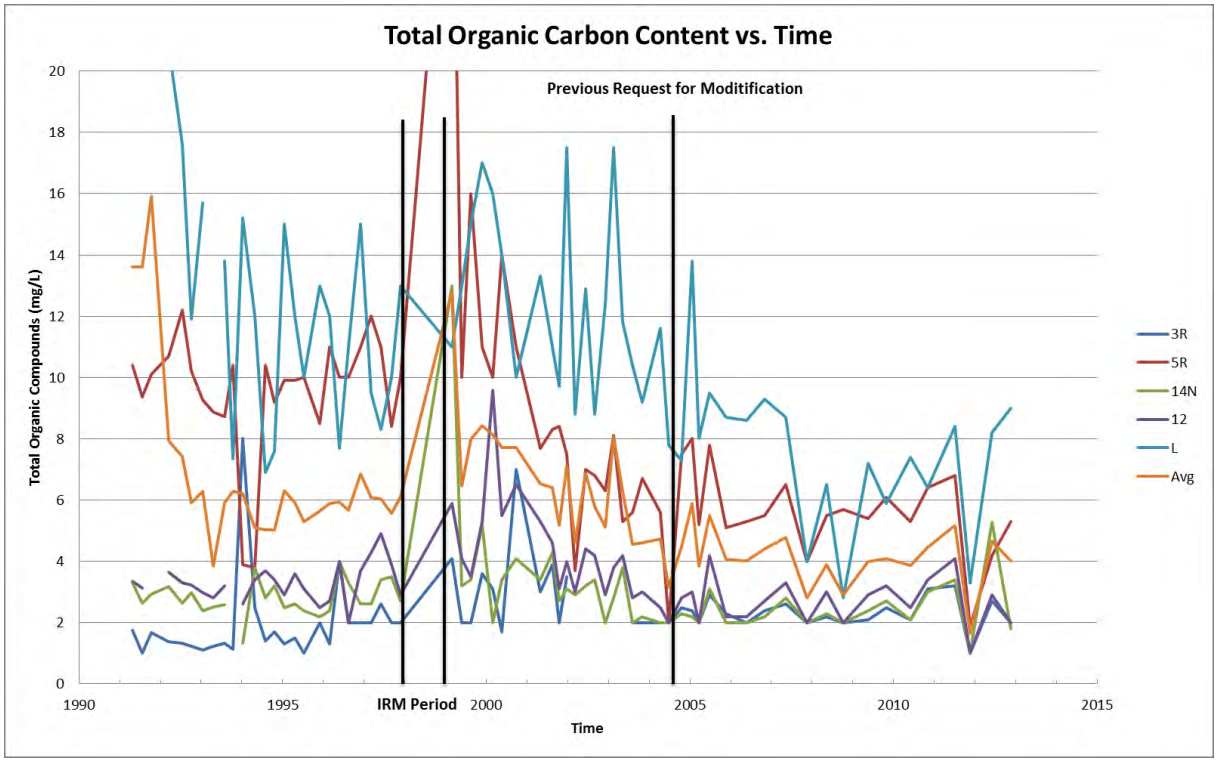
Temperature (ºF)

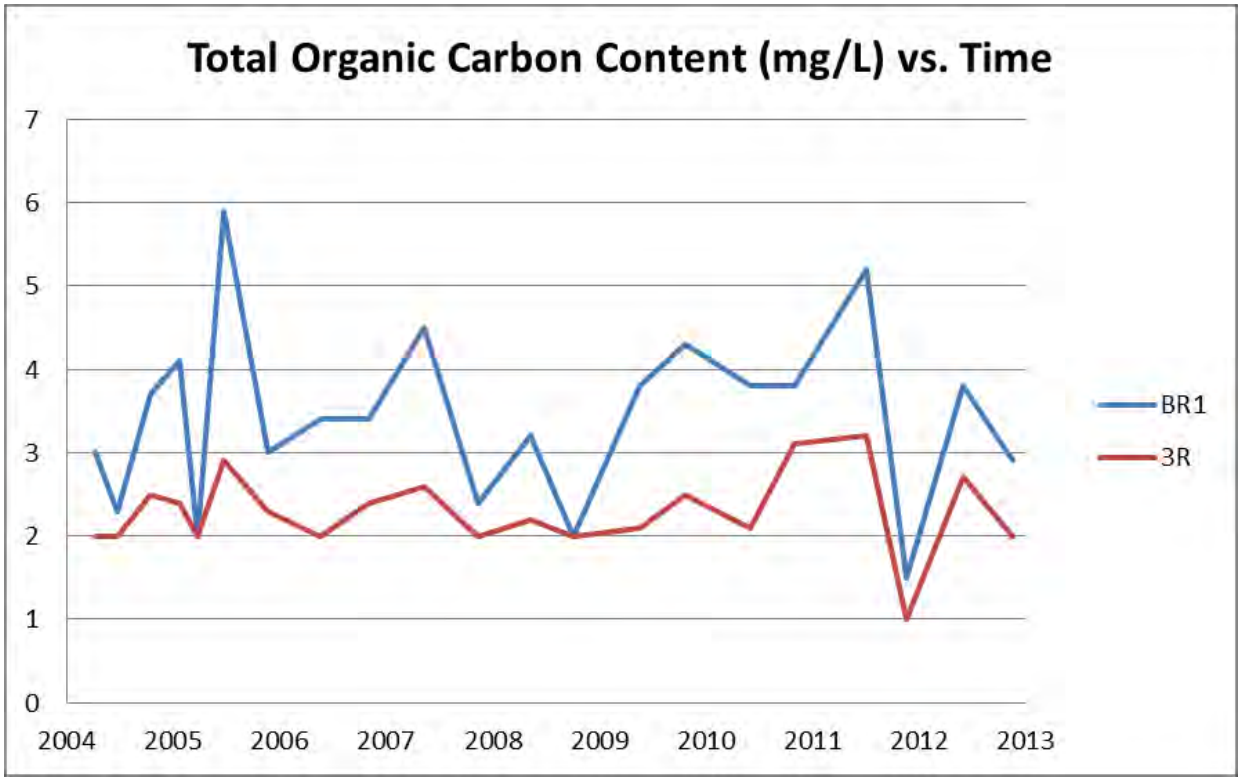


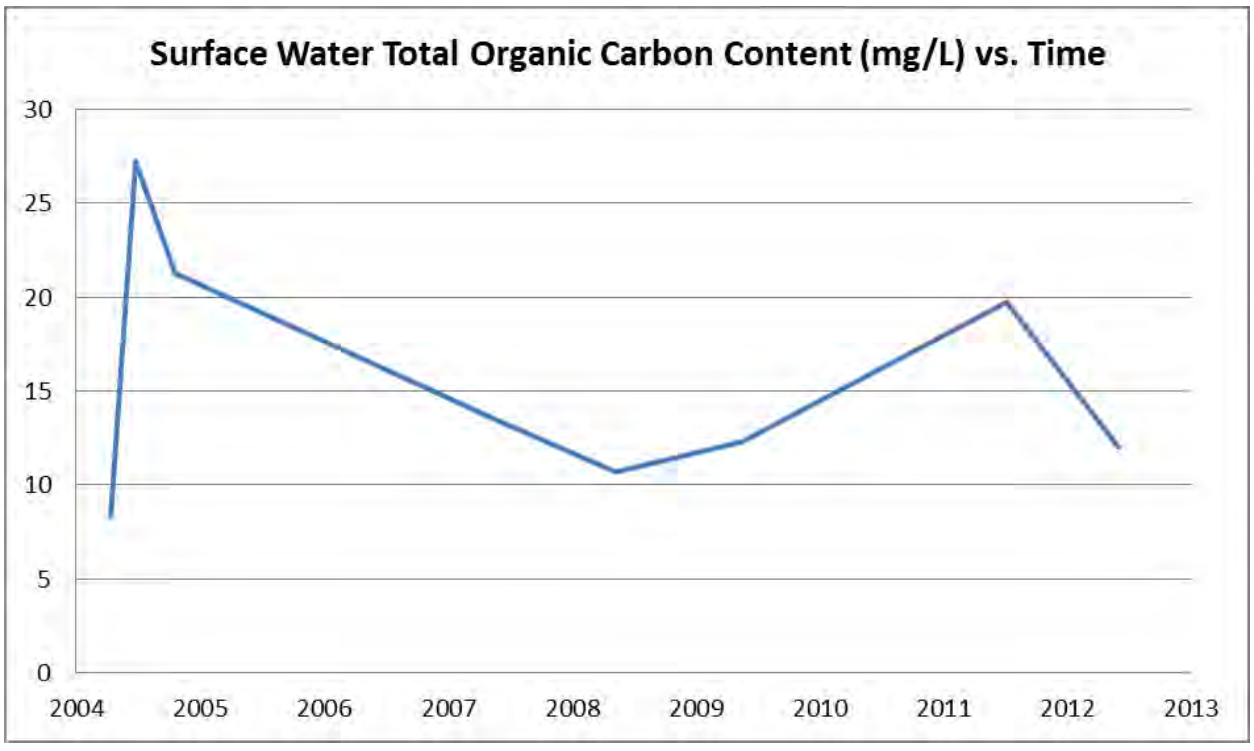




Total Organic Carbon Content (mg/L)




Total Organic Carbon Content (mg/L) vs. Time
7
6
5
4
3
2
1
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
BR1
3R


Surface Water Total Organic Carbon Content (mg/L) vs. Time
30
25
20
15
10
5
0
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013

APPENDIX D

HISTORICAL PARAMETER STATISTICAL VALUES

Arsenic Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	3.50E-03	3.50E-03	3.50E-03	3.50E-03	1.33E-02	5.05E-03
		1.73E-03	1.73E-03	1.73E-03	1.73E-03	1.27E-02	1.72E-03
	Post-IRM, Pre-report	6.97E-03	7.30E-03	6.97E-03	6.97E-03	1.01E-02	7.66E-03
		3.49E-03	2.98E-03	3.49E-03	3.49E-03	3.57E-03	3.36E-03
	Post-IRM, Post-report	5.99E-03	6.48E-03	6.48E-03	6.48E-03	8.03E-03	6.69E-03
		2.92E-03	3.03E-03	3.03E-03	3.03E-03	2.58E-03	2.61E-03
	Post-IRM	6.30E-03	6.74E-03	6.63E-03	6.63E-03	8.69E-03	7.00E-03
		3.05E-03	2.96E-03	3.09E-03	3.09E-03	2.99E-03	2.81E-03
	Overall	5.81E-03	6.17E-03	6.09E-03	6.09E-03	9.32E-03	6.66E-03
		3.03E-03	3.02E-03	3.11E-03	3.11E-03	5.08E-03	2.73E-03
Median	*Pre-IRM*	3.50E-03	3.50E-03	3.50E-03	3.50E-03	7.00E-03	5.00E-03
	Post-IRM, Pre-report	7.45E-03	7.45E-03	7.45E-03	7.45E-03	1.03E-02	8.01E-03
	Post-IRM, Post-report	5.60E-03	5.60E-03	5.60E-03	5.60E-03	9.10E-03	6.30E-03
	Post-IRM	5.60E-03	5.60E-03	5.60E-03	5.60E-03	9.10E-03	6.30E-03
	Overall	5.00E-03	5.00E-03	5.00E-03	5.00E-03	8.30E-03	5.88E-03
Geometric Mean	*Pre-IRM*	3.16E-03	3.16E-03	3.16E-03	3.16E-03	9.93E-03	4.82E-03
	Post-IRM, Pre-report	6.03E-03	6.77E-03	6.03E-03	6.03E-03	9.57E-03	6.98E-03
	Post-IRM, Post-report	5.38E-03	5.81E-03	5.81E-03	5.81E-03	7.59E-03	6.21E-03
	Post-IRM	5.58E-03	6.10E-03	5.88E-03	5.88E-03	8.17E-03	6.44E-03
	Overall	5.05E-03	5.44E-03	5.28E-03	5.28E-03	8.39E-03	6.13E-03

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.05 mg/L
- All well measurements have been well below effluent groundwater limitation
- Most data have been below detection limit
- Downgradient well measurements are not significantly higher than upgradient measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	1.0E-02	4.3E-03	3.5E-03	3.5E-03	6.5E-03	4.3E-03
Post-IRM, Post-report	8.9E-03	3.4E-03	3.4E-03	3.4E-03	5.5E-03	4.1E-03
Post-IRM	9.3E-03	3.8E-03	3.5E-03	3.5E-03	5.7E-03	4.2E-03

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Barium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	0.0400	0.0400	0.1100	0.0540	0.0090	0.0538
		0.0141	0.0141	0.0082	0.0307	0.0096	0.0139
	Post-IRM, Pre-report	0.0467	0.0432	0.0908	0.0432	0.0308	0.0509
		0.0121	0.0055	0.0395	0.0071	0.0062	0.0088
	Post-IRM, Post-report	0.0326	0.0538	0.1172	0.0413	0.0687	0.0627
		0.0061	0.0220	0.0067	0.0064	0.0375	0.0098
	Post-IRM	0.0370	0.0505	0.1089	0.0419	0.0567	0.0590
		0.0105	0.0189	0.0249	0.0065	0.0357	0.0108
	Overall	0.0375	0.0486	0.1091	0.0440	0.0502	0.0581
		0.0109	0.0183	0.0227	0.0136	0.0372	0.0113
Median	*Pre-IRM*	0.0450	0.0450	0.1100	0.0400	0.0050	0.0518
	Post-IRM, Pre-report	0.0485	0.0420	0.1055	0.0410	0.0305	0.0539
	Post-IRM, Post-report	0.0302	0.0470	0.1200	0.0400	0.0616	0.0608
	Post-IRM	0.0330	0.0430	0.1100	0.0400	0.0460	0.0580
	Overall	0.0350	0.0430	0.1100	0.0400	0.0437	0.0574
Geometric Mean	*Pre-IRM*	0.0376	0.0376	0.1098	0.0490	0.0058	0.0525
	Post-IRM, Pre-report	0.0451	0.0429	0.0730	0.0427	0.0303	0.0502
	Post-IRM, Post-report	0.0321	0.0510	0.1171	0.0410	0.0624	0.0621
	Post-IRM	0.0358	0.0483	0.1009	0.0415	0.0496	0.0581
	Overall	0.0361	0.0462	0.1024	0.0427	0.0371	0.0571

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 2 mg/L
- All well measurements have been well below effluent groundwater limitation
- Downgradient well measurements are not significantly higher than upgradient measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	5.9E-02	3.8E-02	5.1E-02	3.6E-02	2.5E-02	4.2E-02
Post-IRM, Post-report	3.9E-02	3.2E-02	1.1E-01	3.5E-02	3.1E-02	5.3E-02
Post-IRM	4.8E-02	3.2E-02	8.4E-02	3.5E-02	2.1E-02	4.8E-02

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Lead Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	5.84E-03	4.84E-03	7.57E-03	4.52E-03	4.70E-03	5.59E-03
		3.85E-03	1.89E-03	9.11E-03	1.08E-03	1.61E-03	2.35E-03
	Post-IRM, Pre-report	1.44E-02	1.03E-02	1.01E-02	1.04E-02	9.95E-03	1.10E-02
		2.29E-02	1.63E-02	1.63E-02	1.63E-02	1.64E-02	1.65E-02
	Post-IRM, Post-report	2.95E-03	2.95E-03	2.97E-03	2.99E-03	2.96E-03	2.97E-03
		1.41E-03	1.41E-03	1.40E-03	1.38E-03	1.43E-03	1.41E-03
	Post-IRM	8.98E-03	6.80E-03	6.71E-03	6.87E-03	6.63E-03	7.20E-03
		1.74E-02	1.23E-02	1.23E-02	1.23E-02	1.23E-02	1.25E-02
	Overall	7.77E-03	6.05E-03	7.03E-03	6.01E-03	5.93E-03	6.58E-03
		1.39E-02	9.70E-03	1.11E-02	9.86E-03	9.86E-03	9.91E-03
Median	*Pre-IRM*	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
	Post-IRM, Pre-report	1.00E-02	8.00E-03	5.00E-03	1.00E-02	5.00E-03	1.00E-02
	Post-IRM, Post-report	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03
	Post-IRM	4.40E-03	4.40E-03	3.90E-03	3.80E-03	3.65E-03	4.40E-03
	Overall	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03	5.00E-03
Geometric Mean	*Pre-IRM*	5.10E-03	4.50E-03	5.38E-03	4.34E-03	4.37E-03	5.21E-03
	Post-IRM, Pre-report	7.86E-03	6.66E-03	6.45E-03	6.53E-03	6.12E-03	7.11E-03
	Post-IRM, Post-report	2.63E-03	2.63E-03	2.65E-03	2.69E-03	2.64E-03	2.65E-03
	Post-IRM	4.67E-03	4.28E-03	4.23E-03	4.28E-03	4.10E-03	4.45E-03
	Overall	4.83E-03	4.37E-03	4.63E-03	4.30E-03	4.20E-03	4.73E-03

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.05 mg/L
- Two contraventions of limit since IRM: One in 1999, and the other was because detection limit > state limit
- All measurements since 1999 have been below state limitation
- Most measurements are below detection limit
- Downgradient well measurements are not significantly different than upgradient well measurements
- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	3.74E-02	-6.00E-03	-6.24E-03	-5.97E-03	-6.46E-03	-5.44E-03
Post-IRM, Post-report	4.37E-03	1.54E-03	1.57E-03	1.61E-03	1.53E-03	1.56E-03
Post-IRM	2.64E-02	-5.47E-03	-5.57E-03	-5.45E-03	-5.68E-03	-5.32E-03

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Mercury Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	7.25E-04	7.25E-04	7.25E-04	7.25E-04	6.33E-04	7.25E-04
		3.20E-04	3.20E-04	3.20E-04	3.20E-04	3.21E-04	3.20E-04
	Post-IRM, Pre-report	4.83E-04	4.83E-04	4.83E-04	4.83E-04	4.83E-04	4.83E-04
		4.08E-05	4.08E-05	4.08E-05	4.08E-05	4.08E-05	4.08E-05
	Post-IRM, Post-report	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04
		1.75E-04	1.75E-04	1.75E-04	1.75E-04	1.75E-04	1.75E-04
	Post-IRM	3.53E-04	3.53E-04	3.53E-04	3.53E-04	3.53E-04	3.53E-04
		1.71E-04	1.71E-04	1.71E-04	1.71E-04	1.71E-04	1.71E-04
	Overall	4.17E-04	4.17E-04	4.17E-04	4.17E-04	3.91E-04	4.17E-04
		2.42E-04	2.42E-04	2.42E-04	2.42E-04	2.11E-04	2.42E-04
Median	*Pre-IRM*	7.50E-04	7.50E-04	7.50E-04	7.50E-04	5.00E-04	7.50E-04
	Post-IRM, Pre-report	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04
	Post-IRM, Post-report	2.00E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04	2.00E-04
	Post-IRM	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04
	Overall	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04	5.00E-04
Geometric Mean	*Pre-IRM*	6.69E-04	6.69E-04	6.69E-04	6.69E-04	5.85E-04	6.69E-04
	Post-IRM, Pre-report	4.82E-04	4.82E-04	4.82E-04	4.82E-04	4.82E-04	4.82E-04
	Post-IRM, Post-report	2.42E-04	2.42E-04	2.42E-04	2.42E-04	2.42E-04	2.42E-04
	Post-IRM	3.01E-04	3.01E-04	3.01E-04	3.01E-04	3.01E-04	3.01E-04
	Overall	3.46E-04	3.46E-04	3.46E-04	3.46E-04	3.30E-04	3.46E-04

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.0014 mg/L
- Never any contraventions of state limitation
- Most measurements, while at detection limit, are well below state limitation
- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	5.24E-04	4.43E-04	4.43E-04	4.43E-04	4.43E-04	4.43E-04
Post-IRM, Post-report	4.68E-04	1.17E-04	1.17E-04	1.17E-04	1.17E-04	1.17E-04
Post-IRM	5.24E-04	1.81E-04	1.81E-04	1.81E-04	1.81E-04	1.81E-04

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Specific Conductance (umhos/cm)

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	906	1693	1168	1749	2555	1606
		221	506	130	319	1639	371
	Post-IRM, Pre-report	936	1120	1109	1437	958	1112
		137	131	95	159	118	95
	Post-IRM, Post-report	1073	929	1217	1363	1050	1126
		60	84	61	104	165	49
	Post-IRM	1001	1030	1160	1402	1002	1119
		127	146	96	139	148	76
	Overall	964	1291	1163	1539	1599	1311
		175	467	110	283	1265	338
Median	*Pre-IRM*	840	1647	1145	1750	1900	1561
	Post-IRM, Pre-report	1005	1155	1129	1443	930	1130
	Post-IRM, Post-report	1068	943	1194	1351	1060	1126
	Post-IRM	1030	1030	1163	1424	1016	1128
	Overall	998	1164	1157	1470	1078	1173
Geometric Mean	*Pre-IRM*	886	1624	1160	1723	2161	1567
	Post-IRM, Pre-report	925	1112	1105	1429	951	1108
	Post-IRM, Post-report	1071	926	1215	1359	1038	1125
	Post-IRM	992	1019	1156	1395	991	1116
	Overall	949	1225	1158	1516	1338	1276

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Measurements have converged to upgradient well measurements
- Overall reduction and stabilization of measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	1073	989	1014	1278	839	1017
Post-IRM, Post-report	1133	846	1156	1259	885	1078
Post-IRM	1128	883	1064	1263	854	1043

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Sulfate Content mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	93.24	316.92	170.00	231.60	321.18	223.94
		22.50	66.02	13.23	32.62	158.45	40.88
	Post-IRM, Pre-report	128.86	204.10	162.07	201.67	143.94	168.13
		36.93	33.48	28.47	45.31	63.74	25.53
	Post-IRM, Post-report	151.53	183.79	188.53	175.42	122.03	164.26
		9.89	27.72	14.32	64.08	30.82	18.64
	Post-IRM	139.63	194.45	174.64	189.20	133.53	166.29
		29.60	32.17	26.26	55.89	51.43	22.32
	Overall	121.35	242.70	172.85	205.51	200.12	189.00
		35.24	77.03	22.16	52.30	136.11	41.80
Median	*Pre-IRM*	95.00	320.00	170.00	220.00	310.00	212.67
	Post-IRM, Pre-report	138.00	199.00	165.00	205.00	142.00	174.00
	Post-IRM, Post-report	147.00	177.00	190.00	164.00	116.00	156.30
	Post-IRM	145.50	189.50	176.00	197.00	130.50	168.60
	Overall	120.00	219.00	173.00	210.00	148.50	184.12
Geometric Mean	*Pre-IRM*	75.86	310.30	169.49	229.44	282.83	220.62
	Post-IRM, Pre-report	122.68	201.59	159.23	194.39	133.09	166.03
	Post-IRM, Post-report	151.23	181.86	188.00	151.59	118.30	163.27
	Post-IRM	135.50	191.97	172.30	172.73	125.85	164.71
	Overall	107.82	231.94	171.21	192.66	167.74	184.81

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 500 mg/L
- No contraventions since 1995
- Sulfate content has been well-below limitation since IRM period and have been converging to upgradient values
- Downgradient well measurements are not significantly higher than upgradient well measurements
'- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	161	156	174	111	91	146
Post-IRM, Post-report	169	162	148	133	82	144
Post-IRM	157	166	151	153	64	147

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Tubidity, NTU

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	30.8	48.3	29.5	25.9	5.4	30.6
		31.8	144.9	26.4	28.2	5.7	39.7
	Post-IRM, Pre-report	5.8	4.4	3.2	11.1	1.6	5.4
		11.8	8.1	4.2	18.4	1.1	7.6
	Post-IRM, Post-report	1.1	2.9	4.2	2.3	1.7	2.4
		0.9	7.6	4.6	2.4	1.3	1.9
	Post-IRM	3.5	3.7	3.6	6.9	1.7	4.0
		8.7	7.8	4.3	14.0	1.2	5.8
	Overall	14.4	21.2	14.0	14.4	2.7	14.5
		24.9	92.7	21.1	22.6	3.5	28.2
Median	*Pre-IRM*	18.8	13.7	21.4	17.0	4.0	19.2
	Post-IRM, Pre-report	0.9	0.8	0.9	1.6	1.2	1.1
	Post-IRM, Post-report	0.8	1.3	2.9	1.6	1.5	2.0
	Post-IRM	0.8	0.9	1.8	1.6	1.4	1.8
	Overall	4.0	3.1	5.5	5.9	1.7	6.7
Geometric Mean	*Pre-IRM*	19.9	17.3	22.7	18.3	4.0	21.8
	Post-IRM, Pre-report	1.5	1.1	1.4	3.2	1.2	2.2
	Post-IRM, Post-report	0.8	1.0	2.7	1.5	1.3	1.8
	Post-IRM	1.1	1.0	1.9	2.3	1.3	2.0
	Overall	3.5	3.1	5.1	5.1	1.8	5.1

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Measurements have converged to upgradient well measurements
- Downgradient well measurements are not significantly higher than upgradient well measurements
  - Upgradient well measurements of 168 on 1/27/99 thrown out as outlier
'- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	2	-5	0	0	0	0
Post-IRM, Post-report	12	-4	-1	-7	0	-2
Post-IRM	39	-71	-7	-8	-1	-14

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Chloride Content mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	17.85	261.81	88.58	251.20	425.56	209.22
		1.85	64.24	8.93	43.14	534.74	114.13
	Post-IRM, Pre-report	19.25	146.67	77.14	135.15	60.84	87.81
		3.41	27.16	12.57	33.18	15.62	11.29
	Post-IRM, Post-report	31.71	107.96	99.48	150.79	102.69	98.53
		8.91	20.39	12.83	44.72	31.93	11.24
	Post-IRM	25.17	128.28	87.75	142.58	80.72	92.90
		9.07	30.88	16.87	39.37	32.31	12.37
	Overall	22.28	180.88	88.08	184.36	213.35	138.72
		7.98	80.51	14.20	66.92	369.39	91.55
Median	*Pre-IRM*	18.00	270.00	91.50	260.00	260.00	180.30
	Post-IRM, Pre-report	19.40	151.00	76.20	143.00	59.90	90.28
	Post-IRM, Post-report	35.30	100.00	97.40	158.00	96.00	96.80
	Post-IRM	21.65	127.00	85.15	146.00	71.10	91.88
	Overall	19.25	157.50	87.00	161.00	94.00	106.64
Geometric Mean	*Pre-IRM*	17.75	252.69	88.11	247.48	259.97	188.90
	Post-IRM, Pre-report	18.92	144.04	76.06	127.12	59.27	87.09
	Post-IRM, Post-report	30.27	106.24	98.71	131.69	98.01	97.89
	Post-IRM	23.65	124.65	86.08	129.27	75.26	92.06
	Overall	21.12	164.66	86.88	165.95	121.24	122.19

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 500 mg/L
- No contraventions since before IRM period
- Downgradient and leachate well measurements are still significantly higher than upgradient well measurements
- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	23	120	65	102	45	77
Post-IRM, Post-report	41	88	87	106	71	87
Post-IRM	34	97	71	103	48	81

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Chromium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	0.0055	0.0110	0.0113	0.0935	0.0270	0.0328
		0.0010	0.0020	0.0023	0.1643	0.0294	0.0395
	Post-IRM, Pre-report	0.0220	0.0033	0.0036	0.0107	0.0933	0.0266
		0.0244	0.0037	0.0044	0.0218	0.0381	0.0106
	Post-IRM, Post-report	0.0065	0.0018	0.0018	0.0025	0.0515	0.0128
		0.0031	0.0015	0.0015	0.0021	0.0505	0.0104
	Post-IRM	0.0143	0.0026	0.0027	0.0066	0.0724	0.0197
		0.0188	0.0029	0.0034	0.0158	0.0489	0.0125
	Overall	0.0139	0.0035	0.0036	0.0163	0.0685	0.0208
		0.0177	0.0038	0.0042	0.0575	0.0489	0.0153
Median	*Pre-IRM*	0.0050	0.0100	0.0100	0.0120	0.0100	0.0155
	Post-IRM, Pre-report	0.0125	0.0020	0.0020	0.0033	0.0955	0.0255
	Post-IRM, Post-report	0.0055	0.0009	0.0009	0.0014	0.0376	0.0099
	Post-IRM	0.0082	0.0019	0.0017	0.0020	0.0620	0.0169
	Overall	0.0100	0.0020	0.0020	0.0033	0.0610	0.0169
Geometric Mean	*Pre-IRM*	0.0054	0.0109	0.0112	0.0263	0.0183	0.0199
	Post-IRM, Pre-report	0.0143	0.0023	0.0023	0.0042	0.0849	0.0244
	Post-IRM, Post-report	0.0059	0.0014	0.0014	0.0019	0.0295	0.0097
	Post-IRM	0.0091	0.0018	0.0018	0.0028	0.0500	0.0154
	Overall	0.0093	0.0022	0.0022	0.0036	0.0459	0.0159

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Downgradient well measurements are not significantly higher than upgradient measurements
- Leachate measurementes still fluctuate significantly

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	4.64E-02	-3.35E-04	-8.13E-04	-1.11E-02	5.52E-02	1.60E-02
Post-IRM, Post-report	9.64E-03	3.24E-04	3.36E-04	4.22E-04	9.93E-04	2.43E-03
Post-IRM	3.31E-02	-2.79E-04	-6.49E-04	-9.19E-03	2.35E-02	7.25E-03

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

pH

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	7.08	7.84	6.98	7.04	8.51	7.48
		0.14	0.54	0.19	0.16	0.40	0.19
	Post-IRM, Pre-report	7.09	7.64	7.16	7.16	8.33	7.46
		0.41	0.39	0.32	0.26	0.48	0.26
	Post-IRM, Post-report	7.09	7.71	7.12	7.28	7.84	7.40
		0.23	0.32	0.17	0.30	0.33	0.19
	Post-IRM	7.09	7.67	7.14	7.21	8.09	7.43
		0.33	0.35	0.26	0.28	0.48	0.23
	Overall	7.09	7.74	7.08	7.14	8.26	7.45
		0.27	0.44	0.25	0.25	0.49	0.21
Median	*Pre-IRM*	7.11	7.89	6.98	7.02	8.50	7.50
	Post-IRM, Pre-report	7.15	7.71	7.12	7.13	8.30	7.50
	Post-IRM, Post-report	7.09	7.79	7.15	7.27	7.87	7.35
	Post-IRM	7.14	7.77	7.14	7.15	8.11	7.46
	Overall	7.12	7.80	7.08	7.14	8.31	7.49
Geometric Mean	*Pre-IRM*	7.08	7.82	6.98	7.04	8.50	7.48
	Post-IRM, Pre-report	7.08	7.63	7.15	7.15	8.32	7.45
	Post-IRM, Post-report	7.08	7.70	7.12	7.27	7.83	7.40
	Post-IRM	7.08	7.66	7.14	7.21	8.08	7.43
	Overall	7.08	7.73	7.07	7.14	8.25	7.45

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 8.5
- New York Effluent Groundwater Lower Limitation 6.5

- 15 contraventions of limitations Pre-IRM
- 7 contraventions of limitations Post-IRM, Pre-Report
- Zero contraventions since previous request for modification
  - One measurement of a pH of 17 thrown out as an outlier

Total Dissolved Solids, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	583.62	1081.92	811.54	1140.96	1253.82	961.86
		80.56	196.92	54.81	156.78	506.40	140.61
	Post-IRM, Pre-report	623.38	697.62	722.57	921.81	628.05	718.69
		65.30	105.28	65.05	87.84	77.83	48.89
	Post-IRM, Post-report	673.26	560.11	797.68	873.84	637.53	708.48
		84.13	66.26	61.86	59.40	124.57	37.06
	Post-IRM	647.08	632.30	758.25	899.03	632.55	713.84
		78.04	112.01	73.34	78.57	101.44	43.43
	Overall	622.08	809.42	779.24	992.08	853.00	811.54
		84.42	267.30	71.21	164.47	429.73	153.78
Median	*Pre-IRM*	560.00	1100.00	795.00	1200.00	1100.00	917.75
	Post-IRM, Pre-report	631.00	714.00	726.00	928.00	632.00	705.80
	Post-IRM, Post-report	684.00	546.00	782.00	883.00	640.00	705.80
	Post-IRM	652.50	627.50	748.50	890.00	634.50	705.80
	Overall	615.00	756.00	773.00	939.00	671.00	748.70
Geometric Mean	*Pre-IRM*	579.41	1065.14	809.87	1127.92	1156.08	952.36
	Post-IRM, Pre-report	620.12	689.88	719.62	917.83	623.29	717.15
	Post-IRM, Post-report	666.94	556.29	795.44	871.93	625.64	707.58
	Post-IRM	641.94	622.84	754.69	895.73	624.41	712.59
	Overall	616.54	769.44	775.96	978.77	776.95	798.84

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 1,000 mg/L
- No contraventions since before previous request for modification
- Well 12 values are still significantly higher than upgradient values
- Overall reduction and stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	689	592	658	834	550	670
Post-IRM, Post-report	757	494	736	814	513	671
Post-IRM	725	520	685	820	531	670

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Boron Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	0.1100	0.1100	0.1050	0.1650	0.5133	0.1814
		0.0245	0.0245	0.0058	0.0100	0.1206	0.0464
	Post-IRM, Pre-report	0.1550	0.1800	0.1230	0.1783	0.3617	0.1996
		0.0650	0.0502	0.0385	0.0691	0.0631	0.0511
	Post-IRM, Post-report	0.1841	0.1776	0.1143	0.1828	0.3327	0.1983
		0.0128	0.0112	0.0066	0.0091	0.0389	0.0111
	Post-IRM	0.1749	0.1784	0.1171	0.1814	0.3418	0.1987
		0.0384	0.0280	0.0214	0.0372	0.0480	0.0284
	Overall	0.1636	0.1665	0.1150	0.1786	0.3652	0.1957
		0.0438	0.0378	0.0200	0.0345	0.0836	0.0316
Median	*Pre-IRM*	0.1100	0.1100	0.1050	0.1600	0.5000	0.1810
	Post-IRM, Pre-report	0.1750	0.1850	0.1250	0.1900	0.3650	0.2100
	Post-IRM, Post-report	0.1800	0.1720	0.1140	0.1800	0.3300	0.2000
	Post-IRM	0.1800	0.1800	0.1140	0.1800	0.3300	0.2020
	Overall	0.1800	0.1710	0.1100	0.1800	0.3500	0.2000
Geometric Mean	*Pre-IRM*	0.1079	0.1079	0.1049	0.1648	0.5040	0.1768
	Post-IRM, Pre-report	0.1393	0.1733	0.1177	0.1601	0.3570	0.1932
	Post-IRM, Post-report	0.1837	0.1773	0.1141	0.1826	0.3306	0.1980
	Post-IRM	0.1683	0.1760	0.1153	0.1752	0.3387	0.1965
	Overall	0.1558	0.1617	0.1134	0.1733	0.3576	0.1929

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Downgradient well measurements are not significantly higher than upgradient well measurements
- Leachate sump content is still signifncantly higher than that of the upgradient well
- Other wells have shown stabilization

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	0.22	0.13	0.08	0.11	0.30	0.15
Post-IRM, Post-report	0.20	0.17	0.11	0.17	0.29	0.19
Post-IRM	0.21	0.15	0.10	0.14	0.29	0.17

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Bromide Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Pre-report	0.1000	2.2000	0.1000	0.1000	0.7400	0.6480
		N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Post-report	0.1612	1.3588	0.2829	0.2206	2.2388	0.8525
		0.2188	0.5332	0.2869	0.2402	2.0857	0.5565
	Post-IRM	0.1578	1.4056	0.2728	0.2139	2.1556	0.8411
		0.2128	0.5540	0.2817	0.2347	2.0540	0.5420
	Overall	0.1578	1.4056	0.2728	0.2139	2.1556	0.8411
		0.2128	0.5540	0.2817	0.2347	2.0540	0.5420
Median	*Pre-IRM*	N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Pre-report	0.1000	2.2000	0.1000	0.1000	0.7400	0.6480
	Post-IRM, Post-report	0.1000	1.3000	0.2100	0.1000	1.8000	0.7000
	Post-IRM	0.1000	1.3000	0.1550	0.1000	1.7000	0.6900
	Overall	0.1000	1.3000	0.1550	0.1000	1.7000	0.6900
Geometric Mean	*Pre-IRM*	N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Pre-report	0.1000	2.2000	0.1000	0.1000	0.7400	0.6480
	Post-IRM, Post-report	0.1206	1.2740	0.2004	0.1592	1.8326	0.7578
	Post-IRM	0.1193	1.3132	0.1928	0.1551	1.7426	0.7513
	Overall	0.1193	1.3132	0.1928	0.1551	1.7426	0.7513

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Leachate and most downgradient well measurements are not significantly higher than upgradient well measurements
- Well 5R content is still signifncantly higher than that of the upgradient well

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	N/A	N/A	N/A	N/A	N/A	N/A
Post-IRM, Post-report	0.38	0.83	0.00	-0.02	0.15	0.30
Post-IRM	0.37	0.85	-0.01	-0.02	0.10	0.30

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Chemical Oxygen Demand (mg/L)

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	3.31	28.64	7.12	7.94	44.45	18.29
		2.84	11.16	4.87	6.20	31.92	9.22
	Post-IRM, Pre-report	6.81	25.31	5.98	9.43	32.35	15.98
		4.08	7.13	2.89	5.26	8.28	3.57
	Post-IRM, Post-report	5.98	20.63	7.24	10.61	26.88	14.41
		1.93	5.98	3.14	4.31	8.80	3.93
	Post-IRM	6.43	23.09	6.58	9.99	29.75	15.23
		3.25	6.94	3.04	4.81	8.87	3.78
	Overall	5.18	25.28	6.79	9.20	35.41	16.44
		3.44	9.18	3.84	5.43	21.95	6.60
Median	*Pre-IRM*	1.66	31.00	5.32	5.50	34.10	17.08
	Post-IRM, Pre-report	5.00	27.00	5.00	6.90	31.00	15.58
	Post-IRM, Post-report	5.00	20.90	5.00	10.20	25.20	13.58
	Post-IRM	5.00	22.15	5.00	9.70	30.50	15.11
	Overall	5.00	25.75	5.00	7.60	31.60	15.34
Geometric Mean	*Pre-IRM*	2.31	25.08	5.28	5.74	35.95	16.44
	Post-IRM, Pre-report	6.08	24.25	5.62	8.25	31.18	15.58
	Post-IRM, Post-report	5.76	19.42	6.70	9.72	25.37	13.86
	Post-IRM	5.93	21.82	6.11	8.92	28.27	14.74
	Overall	4.07	23.05	5.77	7.53	31.01	15.39

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Outlier omitted: Well 3R, 6/3/2011, TOC = 146 mG/L
- Wells 5R and L continue to have significantly higher measurements than upgradient well

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	10.89	18.18	3.09	4.17	24.06	12.41
Post-IRM, Post-report	7.91	14.65	4.10	6.30	18.08	10.48
Post-IRM	9.68	16.15	3.54	5.18	20.89	11.45

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Total Hexavalent Chromium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	0.0325	0.0325	0.0325	0.0325	0.0371	0.0328
		0.0139	0.0139	0.0139	0.0139	0.0125	0.0141
	Post-IRM, Pre-report	0.0464	0.0400	0.0400	0.0449	0.0916	0.0510
		0.0201	0.0000	0.0000	0.0147	0.0424	0.0100
	Post-IRM, Post-report	0.0326	0.0325	0.0325	0.0326	0.0548	0.0370
		0.0133	0.0134	0.0134	0.0132	0.0349	0.0124
	Post-IRM	0.0404	0.0368	0.0368	0.0393	0.0743	0.0450
		0.0186	0.0094	0.0094	0.0152	0.0428	0.0130
	Overall	0.0390	0.0360	0.0360	0.0391	0.0678	0.0433
		0.0180	0.0103	0.0103	0.0156	0.0402	0.0139
Median	*Pre-IRM*	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400
	Post-IRM, Pre-report	0.0400	0.0400	0.0400	0.0400	0.0860	0.0486
	Post-IRM, Post-report	0.0400	0.0400	0.0400	0.0400	0.0400	0.0400
	Post-IRM	0.0400	0.0400	0.0400	0.0400	0.0535	0.0421
	Overall	0.0400	0.0400	0.0400	0.0400	0.0502	0.0420
Geometric Mean	*Pre-IRM*	0.0283	0.0283	0.0283	0.0283	0.0339	0.0285
	Post-IRM, Pre-report	0.0441	0.0400	0.0400	0.0434	0.0819	0.0501
	Post-IRM, Post-report	0.0285	0.0283	0.0283	0.0286	0.0487	0.0346
	Post-IRM	0.0365	0.0344	0.0344	0.0359	0.0641	0.0427
	Overall	0.0349	0.0332	0.0332	0.0352	0.0580	0.0402

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.1 mg/L
- Data still fluctuates and there have still been some contraventions of the effluent groundwater limit

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	0.066	0.040	0.040	0.030	0.049	0.041
Post-IRM, Post-report	0.046	0.019	0.019	0.019	0.020	0.025
Post-IRM	0.059	0.027	0.027	0.024	0.032	0.032

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Redox Potential (mV)

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	89.77	67.35	53.92	-19.32	43.83	45.82
		70.41	62.91	54.78	85.08	68.44	48.55
	Post-IRM, Pre-report	152.38	121.05	119.10	108.81	126.33	125.53
		80.92	87.92	146.75	124.17	87.63	92.07
	Post-IRM, Post-report	75.21	56.63	35.32	-1.11	57.89	44.79
		69.35	49.48	61.69	88.14	39.53	49.68
	Post-IRM	115.73	90.45	79.30	56.60	93.83	87.18
		84.26	78.46	120.81	120.76	76.53	84.58
	Overall	105.50	81.35	69.54	27.40	75.08	70.89
		79.56	73.11	100.87	113.95	77.01	74.92
Median	*Pre-IRM*	95.00	70.00	51.00	8.00	60.50	52.50
	Post-IRM, Pre-report	126.00	96.00	55.00	90.00	88.00	85.60
	Post-IRM, Post-report	82.00	59.00	29.00	12.00	57.00	52.20
	Post-IRM	110.50	84.50	45.00	49.00	75.00	68.40
	Overall	100.00	78.00	50.00	27.00	68.00	61.50
Geometric Mean	*Pre-IRM*	N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Pre-report	N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM, Post-report	N/A	N/A	N/A	N/A	N/A	N/A
	Post-IRM	N/A	N/A	N/A	N/A	N/A	N/A
	Overall	N/A	N/A	N/A	N/A	N/A	N/A

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Data continues to fluctuate significantly

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	233.30	33.13	-27.65	-15.36	38.71	33.46
Post-IRM, Post-report	144.56	7.15	-26.37	-89.24	18.36	-4.89
Post-IRM	199.99	11.99	-41.51	-64.16	17.30	2.60

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Manganese Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	3.5E-02	2.2E-01	1.8E-01	2.7E-01	8.4E-02	1.6E-01
		4.0E-02	1.3E-01	1.3E-01	1.1E-01	1.3E-01	5.8E-02
	Post-IRM, Pre-report	2.7E-02	9.3E-02	8.7E-02	1.9E-01	2.1E-02	8.4E-02
		8.4E-02	1.1E-01	2.7E-02	1.7E-01	2.9E-02	6.1E-02
	Post-IRM, Post-report	5.6E-03	9.4E-02	1.1E-01	2.3E-01	5.4E-02	9.8E-02
		6.5E-03	1.9E-01	4.2E-02	2.1E-01	8.2E-02	5.6E-02
	Post-IRM	1.7E-02	9.3E-02	9.9E-02	2.1E-01	3.6E-02	9.1E-02
		6.2E-02	1.5E-01	3.7E-02	1.9E-01	6.2E-02	5.8E-02
	Overall	2.4E-02	1.4E-01	1.3E-01	2.3E-01	5.4E-02	1.2E-01
		5.5E-02	1.5E-01	9.2E-02	1.7E-01	9.6E-02	6.7E-02
Median	*Pre-IRM*	1.5E-02	2.0E-01	1.2E-01	2.9E-01	2.0E-02	1.4E-01
	Post-IRM, Pre-report	3.0E-03	5.1E-02	9.4E-02	2.0E-01	1.0E-02	7.1E-02
	Post-IRM, Post-report	3.0E-03	2.3E-02	1.0E-01	2.3E-01	3.5E-02	9.5E-02
	Post-IRM	3.0E-03	3.5E-02	9.8E-02	2.1E-01	1.5E-02	7.8E-02
	Overall	5.0E-03	8.8E-02	1.0E-01	2.3E-01	2.0E-02	1.2E-01
Geometric Mean	*Pre-IRM*	1.7E-02	1.8E-01	1.5E-01	2.3E-01	3.3E-02	1.5E-01
	Post-IRM, Pre-report	4.2E-03	5.3E-02	7.7E-02	9.8E-02	1.1E-02	6.5E-02
	Post-IRM, Post-report	3.7E-03	3.0E-02	1.1E-01	9.3E-02	2.7E-02	8.4E-02
	Post-IRM	3.9E-03	4.1E-02	9.1E-02	9.6E-02	1.7E-02	7.3E-02
	Overall	7.0E-03	7.2E-02	1.1E-01	1.3E-01	2.1E-02	9.6E-02

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.6 mg/L
- Contravention in 2005 (Well 5R), measurement at limit in 2008 (Well 12)
- Data still fluctuates significantly
- Visually, downgradient wells seem to have significantly higher measurements than upgradient well

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	0.112	-0.012	0.059	0.015	-0.008	0.023
Post-IRM, Post-report	0.012	-0.098	0.071	0.013	-0.028	0.043
Post-IRM	0.079	-0.057	0.062	0.015	-0.025	0.032

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Potassium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	1.327	37.391	2.905	9.203	167.136	40.723
		0.485	21.672	0.879	1.943	79.861	17.232
	Post-IRM, Pre-report	1.067	27.052	3.508	6.400	51.124	17.830
		0.854	12.456	3.245	1.555	8.706	4.023
	Post-IRM, Post-report	0.485	31.174	2.608	5.867	65.779	21.183
		0.101	11.166	0.102	0.799	14.710	4.709
	Post-IRM	0.790	29.010	3.080	6.147	58.085	19.422
		0.682	11.894	2.369	1.268	13.917	4.627
	Overall	0.997	32.233	3.014	7.263	96.781	27.615
		0.664	16.710	1.940	2.133	71.320	15.279
Median	*Pre-IRM*	1.100	26.900	2.600	8.800	178.500	41.448
	Post-IRM, Pre-report	0.610	21.400	2.600	6.800	51.000	16.702
	Post-IRM, Post-report	0.470	31.200	2.600	5.900	65.800	21.130
	Post-IRM	0.500	30.100	2.600	6.300	55.050	19.636
	Overall	0.770	28.000	2.600	7.000	64.000	22.196
Geometric Mean	*Pre-IRM*	1.262	30.319	2.799	9.054	146.869	36.019
	Post-IRM, Pre-report	0.818	24.618	2.986	6.054	50.404	17.403
	Post-IRM, Post-report	0.476	29.829	2.606	5.816	64.192	20.729
	Post-IRM	0.633	26.969	2.799	5.940	56.539	18.911
	Overall	0.825	28.211	2.799	6.928	79.334	24.229

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Downgradient and leachate well measurements are still significantly higher than upgradient well measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	1.9	14.6	0.3	4.8	42.4	13.8
Post-IRM, Post-report	0.6	20.0	2.5	5.1	51.1	16.5
Post-IRM	1.5	17.1	0.7	4.9	44.2	14.8

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Selenium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	4.00E-03	4.00E-03	4.00E-03	4.00E-03	1.17E-02	5.20E-03
		1.41E-03	1.41E-03	1.41E-03	1.41E-03	9.87E-03	6.93E-04
	Post-IRM, Pre-report	4.71E-03	3.31E-03	2.60E-03	2.20E-03	2.32E-02	7.21E-03
		3.06E-03	3.33E-03	3.09E-03	3.12E-03	9.20E-03	2.39E-03
	Post-IRM, Post-report	2.98E-03	1.14E-03	5.74E-04	6.43E-04	1.36E-02	3.78E-03
		1.96E-03	9.55E-04	3.09E-04	2.94E-04	1.16E-02	2.70E-03
	Post-IRM	3.69E-03	2.03E-03	1.40E-03	1.28E-03	1.75E-02	5.18E-03
		2.55E-03	2.43E-03	2.17E-03	2.09E-03	1.15E-02	3.06E-03
	Overall	3.74E-03	2.33E-03	1.80E-03	1.70E-03	1.68E-02	5.19E-03
		2.39E-03	2.40E-03	2.26E-03	2.22E-03	1.13E-02	2.81E-03
Median	*Pre-IRM*	4.50E-03	4.50E-03	4.50E-03	4.50E-03	7.00E-03	5.00E-03
	Post-IRM, Pre-report	4.00E-03	1.00E-03	1.00E-03	1.00E-03	2.20E-02	7.40E-03
	Post-IRM, Post-report	2.00E-03	5.00E-04	4.40E-04	4.40E-04	9.90E-03	3.04E-03
	Post-IRM	3.35E-03	1.00E-03	1.00E-03	1.00E-03	1.50E-02	4.27E-03
	Overall	3.70E-03	1.25E-03	1.00E-03	1.00E-03	1.50E-02	4.80E-03
Geometric Mean	*Pre-IRM*	3.76E-03	3.76E-03	3.76E-03	3.76E-03	9.30E-03	5.17E-03
	Post-IRM, Pre-report	3.93E-03	2.00E-03	1.59E-03	1.23E-03	2.16E-02	6.85E-03
	Post-IRM, Post-report	2.34E-03	8.48E-04	4.91E-04	5.86E-04	9.96E-03	3.09E-03
	Post-IRM	2.89E-03	1.20E-03	7.93E-04	7.93E-04	1.37E-02	4.28E-03
	Overall	3.01E-03	1.43E-03	1.01E-03	1.01E-03	1.31E-02	4.40E-03

* Subtended with artithmetic standard deviation

Comments

- New York Effluent Groundwater Upper Limitation 0.02 mg/L
- Leachate continues to show measurements above the limit

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	7.77E-03	-1.43E-05	-4.89E-04	-9.18E-04	1.40E-02	4.81E-03
Post-IRM, Post-report	4.94E-03	1.90E-04	2.65E-04	3.49E-04	1.94E-03	1.08E-03
Post-IRM	6.25E-03	-4.03E-04	-7.72E-04	-8.10E-04	5.98E-03	2.13E-03

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Sodium Content, mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	15.2	132.3	48.2	116.2	104.5	82.1
		5.5	28.0	5.6	15.7	49.8	15.1
	Post-IRM, Pre-report	21.3	108.0	49.9	94.7	39.2	62.3
		8.5	16.9	10.1	11.4	5.5	4.7
	Post-IRM, Post-report	23.0	83.0	55.9	88.9	55.6	61.3
		5.7	9.8	7.6	8.8	12.7	2.7
	Post-IRM	22.1	96.1	52.7	91.9	47.0	61.8
		7.2	18.7	9.4	10.5	12.6	3.9
	Overall	19.4	110.0	51.0	101.2	67.4	69.6
		7.4	28.7	8.4	17.3	41.5	13.9
Median	*Pre-IRM*	14.0	130.0	48.0	120.0	104.5	80.8
	Post-IRM, Pre-report	18.2	110.0	46.7	97.6	37.7	61.6
	Post-IRM, Post-report	22.6	81.4	52.1	88.9	55.9	62.2
	Post-IRM	21.0	93.9	48.4	92.0	45.2	62.1
	Overall	16.9	110.0	48.2	99.6	48.1	64.3
Geometric Mean	*Pre-IRM*	14.6	128.2	47.9	115.1	92.8	80.8
	Post-IRM, Pre-report	20.0	106.7	49.2	94.1	38.8	62.2
	Post-IRM, Post-report	22.4	82.5	55.4	88.5	54.2	61.2
	Post-IRM	21.1	94.4	52.0	91.3	45.5	61.7
	Overall	18.3	106.2	50.4	99.7	58.6	68.5

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Downgradient and leachate well measurements are still significantly higher than upgradient well measurements
'- Overall stabilization of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	30	91	40	83	34	58
Post-IRM, Post-report	29	73	48	80	43	59
Post-IRM	29	77	43	81	34	58

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

Temperature, º F

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	53.1	53.3	54.2	51.9	55.9	53.7
		7.1	6.3	5.9	4.3	10.1	6.1
	Post-IRM, Pre-report	52.4	53.2	54.1	52.6	55.3	53.5
		11.5	6.9	6.3	6.3	10.6	7.7
	Post-IRM, Post-report	52.4	52.7	51.2	52.4	53.2	52.4
		5.9	4.7	9.7	4.6	8.0	4.8
	Post-IRM	52.4	53.0	52.7	52.5	54.3	53.0
		9.1	5.9	8.1	5.5	9.4	6.4
	Overall	52.7	53.1	53.3	52.3	54.9	53.3
		8.4	6.0	7.3	5.0	9.6	6.3
Median	*Pre-IRM*	54.0	52.5	53.0	51.5	56.5	53.6
	Post-IRM, Pre-report	55.0	55.0	54.0	52.0	57.0	53.0
	Post-IRM, Post-report	53.2	52.2	53.4	53.4	55.0	53.2
	Post-IRM	54.6	53.6	53.4	53.2	55.0	53.1
	Overall	54.0	52.6	53.4	52.0	55.0	53.2
Geometric Mean	*Pre-IRM*	52.6	52.9	53.9	51.8	55.0	53.3
	Post-IRM, Pre-report	50.9	52.8	53.7	52.2	54.3	53.0
	Post-IRM, Post-report	52.1	52.5	49.5	52.2	52.6	52.2
	Post-IRM	51.5	52.7	51.7	52.2	53.5	52.6
	Overall	51.9	52.8	52.5	52.1	54.1	52.9

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter

Total Organic Carbon Cotent mg/L

Statistic	Time Period	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
*Arithmetic Mean**	*Pre-IRM*	1.94	9.59	2.82	3.30	16.62	6.90
		1.39	1.93	0.56	0.62	13.05	2.89
	Post-IRM, Pre-report	2.87	9.10	3.53	4.30	12.32	6.59
		1.37	5.77	2.33	1.70	2.97	2.04
	Post-IRM, Post-report	2.32	5.66	2.45	2.71	7.53	4.13
		0.49	1.42	0.87	0.78	2.49	0.97
	Post-IRM	2.57	7.46	3.02	3.54	10.04	5.42
		1.02	4.58	1.86	1.55	3.64	2.03
	Overall	2.30	8.30	2.94	3.45	12.57	6.00
		1.22	3.89	1.49	1.28	9.08	2.49
Median	*Pre-IRM*	1.59	10.00	2.64	3.27	12.00	5.99
	Post-IRM, Pre-report	2.00	7.70	3.20	4.10	11.80	6.46
	Post-IRM, Post-report	2.30	5.50	2.20	2.80	8.00	4.06
	Post-IRM	2.20	6.45	2.70	3.05	9.25	4.76
	Overall	2.00	8.20	2.70	3.20	10.40	5.73
Geometric Mean	*Pre-IRM*	1.71	9.31	2.76	3.25	13.78	6.51
	Post-IRM, Pre-report	2.64	7.87	3.15	4.03	11.99	6.31
	Post-IRM, Post-report	2.26	5.44	2.33	2.58	7.07	4.00
	Post-IRM	2.43	6.60	2.73	3.26	9.33	5.08
	Overall	2.09	7.56	2.74	3.26	10.84	5.60

* Subtended with artithmetic standard deviation

Comments:

- No federal/state effluent groundwater limitation for this parameter
- Well L continues to have significantly higher values than upgradient well
'- Overall reduction of parameter measurements

	Mean + SD	Mean - SD				
	Well 3R	Well 5R	Well 14N	Well 12	Well L	Average
Post-IRM, Pre-report	4.24	3.33	1.19	2.60	9.35	4.54
Post-IRM, Post-report	2.81	4.24	1.58	1.92	5.04	3.17
Post-IRM	3.58	2.88	1.16	1.99	6.40	3.39

- Table above displays the Mean + SD of the up-gradient well (3R) versus the Mean - SD of the down-gradient wells (5R, 14N, etc.) for various time ranges. If the Mean - SD of the downgradient wells is smaller than the Mean + SD of the upgradient wells, then the up-gradient and down-gradient ranges of Mean +/- SD overlap. If this is the case, the two datasets are not considered to be significantly different. Cells are highlighted in yellow to indicate a lack of significant difference.

APPENDIX 2

OPERATION AND MAINTENANCE PLAN

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

OPERATION MONITORING AND MAINTENANCE MANUAL
CELLS 1 AND 2

FOR
CC METALS AND ALLOYS, LLC
WITMER ROAD

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LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

LIST OF APPENDICES

APPENDIX	TITLE
A	Deed Restriction
B	Inspection Checklist
C	Well Location & Surface Water Drainage Map
D	SOP Groundwater/Surface Water Sampling
E	TestAmerica Quality Assurance Manual

OPERATION MONITORING AND MAINTENANCE MANUAL
CELLS 1 AND 2

FOR
CC METALS AND ALLOYS, LLC
WITMER ROAD

1.0 INTRODUCTION

The following provides a post-closure maintenance and monitoring plan for the CC Metals and Alloys, LLC (CCMA) landfill Cells 1 and No. 2. These facilities are located at a 9.76 acre site adjacent to Witmer Road in the Town of Niagara. Waste disposed in Cell 1 includes ferrosilicon and ferrochromium metal baghouse dusts and waste disposed in Cell 2 contains ferroalloy dust.

Cell 1 was constructed in 1980 per a New York State Department of Environmental Conservation (NYSDEC) Part 360 Permit (#2133). It was closed in 1990 per a NYSDEC approved closure plan. Cell 2 was constructed in 1983 per a NYSDEC Part 360 Permit (#2585). Per NYSDEC Order on Consent 87-152A waste deposition into Cell 2 was stopped on September 30, 1991. Cell 2 was closed in 1992.

The principal objective of this manual is to provide the necessary instructions for the following:

1) Proper maintenance of all facility components,

2) Groundwater and surface water sampling and analysis, and

3) Interpretation of ground and surface water monitoring data. Adherence to this post-closure monitoring and maintenance program is required by 6 NYCRR Part 360 for a minimum period of thirty (30) years after final closure of Cells 1 and 2.

The information provided in this post-closure monitoring and maintenance operations manual is utilized by CCMA personnel and its consultants.

2.0 PROCEDURE FOR AMENDING POST-CLOSURE MONITORING AND MAINTENANCE OPERATIONS MANUAL

This post-closure monitoring and maintenance operations manual should be reviewed at regular intervals (initially once every three years) to ensure that it remains consistent with both the regulations and the technology concerning post-closure monitoring and maintenance at the Witmer Road site. All necessary modifications will be made under the

direction of a professional engineer licensed in the State of New York.

Since this plan (after approval) will be incorporated as a binding agreement between CCMA and the NYSDEC, any proposed modifications to this plan will be submitted to the NYSDEC for approval.

Upon receipt of NYSDEC approval, the changes will be made and the updated plan will be placed on file at the CC Metals and Alloys, Amherst, New York, office.

3.0 POST-CLOSURE MAINTENANCE REQUIREMENTS

The goals of the post-closure maintenance plan for the CCMA, Witmer Road Site, are as follows:

1) Ensure that structural integrity of closed Cells 1 and 2 is being properly maintained.

2) Correct any problems that might occur at the site before they have a chance to develop to such a degree that adverse environmental impacts might result.

3) Follow a program in which all involved parties (CCMA, regulatory agencies, and the public) have a sense of confidence that the site will not create problems which cannot be reasonably handled with minimum impacts.

4) Properly maintain the drainage pathways and controls implemented under the Interim Remedial Measure (IRM) order established in 1999.

5) Annual certification of the Deed Restriction (Institutional Control) filed with the Niagara County Clerk and recorded May 3, 2001, in Book 3114 on Page 291, ensuring it is still in effect and has not been altered. A copy of the Deed Restriction is included as Appendix A.

The post-closure maintenance plan can be summarized as follows:

1) LAN Associates, Inc. will be responsible for filing a Waste Management Facility Maintenance Inspection Report. Included in this inspection report will be a checklist which covers the following annual evaluation:

    a) Bank and cover erosion,
    b) Settlement,
    c) Cover soil integrity,
    d) Condition of vegetative cover, and
    e) Condition of monitoring wells.

2) If any problems are encountered during the inspections that may be of significant environmental concern, the necessary corrective actions will be undertaken as expeditiously as possible. Notice of these actions will be reported to the NYSDEC explaining the nature and location of the problem and the corrective action taken.

Post-closure maintenance requirements are expected to be minimal. However, areas where some maintenance may be necessary include landfill cover, berms, surface water drainage ditch, and groundwater monitoring wells.

Adequate information is not available to actually calculate how much subsidence will occur with Cells 1 and 2, however, only an insignificant amount of subsidence is expected. This is based on the results from compaction tests previously done on waste materials contained in Cells 1 and 2. In addition, the materials contained in these cells will not undergo any decomposition. Slopes utilized in the closures of Cells 1 and 2 will ensure that their final slope, after settling and subsidence, will be greater than three percent. A slope greater than three percent will allow for adequate surface water runoff rates.

Any deficiencies noted either during the sites scheduled or unscheduled inspections will be corrected as expeditiously as possible. While each situation must be evaluated on a case by case basis, a plan of action has been prepared to deal with those situations which are most likely to occur.

Landfill cover deterioration should be minimal. However, some will undoubtedly occur due to freeze-thaw effects, water erosion, etc. Such deterioration must be corrected as quickly as possible.

The vegetative growth covering the closed cells will be allowed to return to its natural state. The vegetative cover on the landfill cells as well as the drainage areas will be mowed once per year between September 1st and December 31st. If significant bare spots should develop, an attempt will be made to determine the cause. Factors which will be considered include the presence of excessive moisture, excessive dryness, wrong pH, or the absence of the proper soil nutrients. When the cause is determined, remedial action will be taken.

Both wind and water erosion of the landfill cover can occur. While this is not expected to be a significant problem, any erosion which does occur must be taken care of expeditiously. Repair will bring lines and grades to their original configuration. If the erosion can be attributed to inadequate original design, the necessary design modifications will be made and implemented (after receipt of NYSDEC approval). Future modifications could include changes in slope gradients or protection of slopes by riprap.

The facility's annual report will include notations concerning both scheduled and

unscheduled facility inspections. Inspections will be performed on an annual basis. An inspection checklist created specifically for the property will be used when performing the inspections. A copy of the inspection checklist is included as Appendix B. Annual inspections are appropriate because the landfill has been closed for 16 years with no disruption to the integrity of the system. Information will include the date and time of the inspection, inspector's name, and a summary of all problems observed and remedial actions taken.

Records of all inspections will be retained for a minimum period of seven (7) years (see Appendix B, Inspection Checklist). In addition, summary reports and records of all incidents requiring initiation of the site's contingency plan or resulting in human health or environmental damage will be prepared and maintained for a minimum period of seven (7) years.

It is important to note that the drainage system on the property is protected by a Deed Restriction. The Deed Restriction serves as a covenant for the land that binds all future property owners. Therefore, any person wishing to engage in any activity on the property that could interfere significantly with the completed closure and remedial program is required to obtain written approval from the NYSDEC and the New York State Department of Health, or any New York State agency created to protect the environment. A copy of the Deed Restriction is included in Appendix A.

4.0 POST-CLOSURE GROUNDWATER AND SURFACE WATER SAMPLING AND ANALYSIS PLAN

The following provides a post-closure site groundwater and surface water sampling and analysis plan for the Witmer Road landfill site. Its primary objective is to provide data relating to the site's groundwater and surface water quality during the solid waste management facility's post-closure period.

Factors which were given consideration in the design of this plan include the following:

1) Ground and surface water monitoring requirements at a non-hazardous waste management landfill facility as stipulated in 6 NYCRR Part 360 Solid Waste Management Facilities (effective December 31, 1988),

2) Physical and chemical characteristics of waste materials deposited in Cells No. 1 and 2,

3) Site's hydrological conditions,

4) Pollution potential of site as exemplified by the type of waste materials present, and

5) Groundwater use.

Items which are addressed in this post-closure groundwater and surface water sampling and analysis plan include the following:

1) Locations and construction of monitoring points,
2) Discussion of monitoring frequency and parameters,
3) Sampling personnel and equipment requirements,
4) Sampling procedures,
5) Sample handling,
6) Analytical procedures,
7) Laboratory quality assurance plan,
8) Data analysis,
9) Contingency monitoring requirements, and
10) Data reporting requirements.

By developing and implementing a comprehensive, site specific groundwater sampling and analysis program the potential for problems to arise when obtaining, handling, preserving, and analyzing samples will be minimized.

4.1 LOCATION AND CONSTRUCTION OF MONITORING POINTS

The post-closure monitoring program for Cells 1 and 2 includes groundwater and surface water monitoring. Implementation of this program during the facility's post-closure period will provide the required data to evaluate the effects of Cells 1 and 2 on both the site's ground and surface water. A series of five (5) wells will be utilized to monitor the quality of the groundwater contained in the permeable sediments overlying the bedrock. These wells were utilized to monitor the effects of Cells 1 and 2 on the site's groundwater during the operation of these facilities. Based upon previous data from these monitoring wells, groundwater flows in a southerly direction across the site. Surface water quality will be monitored using samples obtained from the site's drainage ditch.

4.1.1 Monitoring Well Location and Construction

Sample points (wells) 3R, 5R, 12, BR1, and 14N are indicated on the Well Location and Surface Water Drainage Map showing baseline locations, monitoring well elevations, and surface water drainage patterns (Appendix C). Based upon the site's previously noted groundwater flow direction (southerly), monitoring well 3R can be used to provide upgradient data while monitoring wells 5R, 12, BR1, and 14N provide data on

groundwater quality downgradient of the site's disposal areas (Cells 1 and 2).

"It has been reported that the wells are installed at the depth of refusal. Well #12 is constructed of 4-inch PVC with the lower two feet slotted with 1/16 inches wide horizontal slots spaced approximately 1 inch apart. The slots are covered with a stainless steel well screen. A sand pack was placed from the bottom of the well upward for approximately five feet. Bentonite pellets were utilized to provide a seal at the clayey-silt level. Loose bentonite was then placed around the monitoring well through most of the impervious lake sediment zone to the surface to prevent water seepage from the "perched" water table. Monitoring wells 3R, 5R, BR1, and 14N are constructed of 2-inch PVC risers attached to 5-foot lengths of PVC 10 slot screen. The PVC screens were installed immediately above the dense loamy glacial till which overlies the site's bedrock. The screen interval and associated sand column surrounding the screens extend partially above the screens. Bentonite pellet seals were utilized to separate the sand pack from the cement-bentonite grout seal. Each well casing is surrounded at the ground surface by a continuous pour concrete cap and well apron (minimum radius of 3 feet and minimum thickness of 4 inches)."[1]

4.1.2 Surface Water Monitoring Points

Cell 1 closure resulted in all waste materials being covered with a minimum of 18 inches of low permeability compacted soil (maximum permeability of 1.0 x 10 cm/sec) and 6 inches of soil capable of supporting vegetative growth. It is reported that Cell 2 was similarly closed. It is very unlikely that surface water runoff from the closed facilities has any contact with the waste materials previously deposited in Cells 1 and 2. However, samples will be taken from the location of the discharge flow control valve (SW-1) located in the southwest corner of site where surface water collects and flows into the stormwater drainage pipe and then offsite to the City of Niagara Falls sewer system.

4.2 MONITORING FREQUENCY AND PARAMETERS

Groundwater sample points will include monitoring wells 3R, 5R, 12, BR1, and 14N. Based upon an isopotential map of the site's groundwater, monitoring well 3R will provide upgradient data while monitoring wells 5R, 12, BR1, and 14N will provide data on groundwater quality downgradient of Cells 1 and 2. Surface water sampling will be performed at point SW-1. In addition, samples will be

[1] Original Post Closure Monitoring and Maintenance Operations Manual by Snyder Engineering 1991

obtained from the landfill leachate sump (LS-1). Site monitoring frequency will be on a semi-annual basis. Samples will be analyzed on a semi-annual basis for routine parameters; specific conductivity, temperature, pH, Eh, turbidity, COD, TOC, TDS, SO4, Cl, Br, Pb, Mn, K, and Na. In addition, semi-annual samples will be analyzed for baseline parameters; As, Ba, Cr, Cr+6, Hg, Se, and B. Annual samples will be obtained for Volatile Organic Compounds (VOCs) that are specified in the New York State Regulation 6 Part NYCRR 360 baseline parameter list. The laboratory analytical method for the VOCs is SW-846 method 8260.

4.3 SAMPLING PERSONNEL AND EQUIPMENT REQUIREMENTS

The laboratory utilized to implement the site's post-closure groundwater and surface water monitoring program must be approved by the NYSDEC. The laboratory must be approved to perform the required analyses for all parameters of concern. All sampling personnel must be properly trained in the collection and handling of groundwater and surface water samples. They must be familiar with all equipment required to collect a representative sample of groundwater from wells such as those present at the Witmer Road site. Sampling personnel must have a minimum two years of technical training in chemistry, environmental science, or other technical discipline. This educational requirement may be waived for personnel with a minimum of five years experience in the collection of environmental samples.

4.4 SAMPLING PROCEDURES

Standard Operating Procedure (SOP) No. BR-FS-005, Groundwater/Surface Water Sampling is included in Appendix D. The procedure for the sampling of the sump (LS-1) is performed under the standard operating procedures outlined in Appendix D. The actual sample itself is obtained through the use of a bailer dropped down into the sump.

4.5 LABORATORY QUALITY ASSURANCE PLAN

The primary objective of the Quality Assurance Plan for CCMA groundwater and surface water monitoring program is to ensure that the analytical results obtained from the program are reliable, statistically valid, and properly documented. As previously noted, CCMA will only utilize a laboratory for program implementation which has been approved by the NYSDEC. The basis of this quality assurance program is the establishment of methods which will be followed in obtaining the analytical results for each sample. Procedures (including quality assurance samples, replicates, spikes, and standards calibration) will be established and used for validating the methods utilized by the analytical laboratory and as an indicator of potential sources of cross-contamination. This will help ensure that the laboratory generates precise, accurate, and reliable data.

Test America Laboratories, Inc. located in Buffalo, New York, is currently the laboratory chosen to perform the sampling. A complete quality assurance manual for Test America is included in Appendix E.

4.5.1 Personnel Responsibilities

LAN Associates, Inc. will be responsible for ensuring that the required groundwater and surface water monitoring program at the Witmer Road site is correctly carried out. Their responsibilities will include the following:

1) Overall responsibility for management of the analytical program and validity of all data,

2) Selection of an analytical laboratory to perform sample analyses,

3) Performance monitoring of analytical laboratory and review of all analytical protocols required for measuring and monitoring,

4) Submission of all analytical data to New York State Department of Environmental Conservation, Town of Niagara, and Niagara County Health Department.

A project coordinator is to be designated by the analytical laboratory. This individual is to have responsibility for the following:

1) Communication with CCMA Environmental Manager or designated representative regarding the groundwater and surface water analysis program,

2) Monitor sampling and/or analytical techniques and recommend modifications as required,

3) Verify that laboratory quality control and analytical procedures are being followed as specified in the Quality Control Plan when laboratory personnel are analyzing CCMA groundwater and surface water samples,

4) Review raw analytical data and check arithmetic calculations for a minimum of 20% of the samples analyzed (includes inspection of reduced data, calibration curves and bound laboratory notebooks),

5) Receive groundwater and surface water samples at the laboratory and verify that incoming samples correspond to the chain of

custody sheet,

6) Maintain records of all incoming samples and track samples while they are being processed,

7) Prepare quality control samples for analysis as required to satisfy quality assurance requirements,

8) Approve completed data and analytical report before transmittal to CC Metals and Alloys, LLC.

A sampling coordinator is to be designated by the analytical laboratory. This individual is to have responsibility for the following:

1) Determine appropriate sampling equipment and sample containers,

2) Train field personnel in the necessary sampling and field analytical procedures,

3) Insure that all samples are collected, labeled, preserved, and stored as specified in other sections of this report,

4) Check that all required sample documentation is correct and is transmitted with the samples,

5) Check on field sampling to insure that it is being done correctly.

4.5.2 Analytical Quality Assurance

Specific analytical methods often prescribe the necessary specific quality assurance procedures. In order to achieve a high degree of accuracy (degree of measurement or average of measurements agreement with an accepted reference or true value obtained from executing a method in a particular laboratory using an interference free matrix), the laboratory must do the following:

1) References used as reference standards must be the highest purity commercially available materials and must be certified by the supplier.

2) Each instrument utilized in performing the analyses must be checked on each day that the samples are run in order to demonstrate performance.

3) Recovery factors for individual contaminants are determined for the analytical method which is utilized.

4) Analytical results for spiked level of the contaminant under evaluation in a replicate sample must be within the required limits for the contaminant under evaluation.

Full documentation of all analyses must be kept in notebooks and be available for inspection at the designated laboratory by either a representative of CCMA or the NYSDEC.

4.5.3 Data Validation and Reporting

The principal steps that will be used to verify the data integrity during data collection and reporting are as follows:

1) Project coordinator will review raw data generated by the laboratory chemist. It will be reviewed against calibration and quality control records, to ensure both the adequacy of documentation and the reliability of the data.

2) When the previously noted review has been completed, the data will be considered validated and a report will be prepared for submission to CCMA.

3) All laboratory notes and records will be maintained and stored in an accessible place.

A variety of samples will be analyzed at regular intervals to assess possible contamination from either the field and/or the laboratory. These include blank, spiked, and replicate samples. Blank samples include:

1) Field blanks are exposed to field and sampling conditions and analyzed in order to assess possible contamination from the field. A bottle is filled with de-ionized water and is transported to the sampling location and is returned to the laboratory in a manner identical to the handling procedure used for the samples.

2) Method blanks are prepared in the laboratory and are analyzed in order to determine the background of each of the reagents or solvents used in an analysis.

Spiked samples will be spiked (as prescribed by the analytical method) with one or more selected compounds prior to extraction and analysis. Concentration data will be used to calculate the recovery of the compounds. Such samples will provide a measure of sample preparation and analysis procedures accuracy.

Replicate samples are analyzed in order to establish control and assess the precision of an analysis and/or of sampling. Field replicates are obtained in order to assess the adequacy of overall sampling and handling procedures. Laboratory replicates are prepared in the laboratory and analyzed in order to assess the reproducibility of the laboratory procedures used.

4.6 CONTINGENCY MONITORING REQUIREMENTS

All waste materials which have been deposited by CCMA Cells 1 and 2 at the Witmer Road site were approved by the NYSDEC. In the unlikely event that significant groundwater contamination is detected, a contingency plan will be enacted. Objectives of this groundwater contingency plan will be as follows:

1) Confirm whether significant quantities of contaminants have entered the groundwater at the CCMA Witmer Road site from the waste materials previously deposited by CCMA in Cells No. 1 and 2,

2) If significant quantities of contaminants have entered the groundwater, determine their consequences and the rate and extent of their migration.

Under normal circumstances, Objective #1 will be satisfied by the site's groundwater monitoring program as previously described. However, if a statistical analysis of monitoring data from upgradient and downgradient wells utilizing the Student's t-test at the 0.01 level of significance indicates a significant difference in groundwater quality, additional samples will be obtained and analyzed. If the difference cannot be attributed to sampling or analytical errors, a written notice that the facility may be affecting the groundwater must be sent within 14 days to Region 9 of the NYSDEC.

During the next semi-annual sampling event, each monitoring well involved in triggering the contingency monitoring plan will be sampled and analyzed for the baseline parameters as defined by Water Quality Analysis Table in 6 NYCRR Part 360-2.1 1(c)(6). Every attempt will be made to report the analytical results to the NYSDEC within 30 days after the sampling date. In any case, the results will be reported to the NYSDEC within 14 days after receipt of results from the certified analytical laboratory.

In the event that the NYSDEC determines that any potential contamination as reflected by the baseline monitoring results poses an immediate threat to public health or the environment, CCMA will provide the NYSDEC with a corrective action plan. Upon receipt of plan approval from the NYSDEC, CCMA will implement the corrective action plan.

When the corrective action plan is implemented, the sampling and analysis for baseline parameters will be performed at least semi-annually until the conditions for curtailing contingency water quality monitoring are satisfied as follows:

1) Elevated parameter(s) is demonstrated not to be landfill derived, or
2) Remediation of release by landfill is demonstrated to be complete.

In addition, the contingency water quality monitoring may be reduced or discontinued with the approval of the NYSDEC, if such monitoring is no longer necessary to protect public health or the environment.

If during analysis for baseline parameters, contamination by any toxic metal, cyanide, volatile organic compound, or other substance identified in Appendix 33 of 6 NYCRR Part 373-2 occurs, CCMA will sample the appropriate environmental monitoring points in the next scheduled sampling event after receiving the analytical results from the laboratory. Each sample will be analyzed for all the expanded parameters listed in the Water Quality Analysis Table. Unless the NYSDEC requires more frequent sampling to evaluate a potential or adverse environmental impact or perceived health risk or until the previously noted conditions for curtailing contingency water quality monitoring are satisfied, subsequent annual analyses of these monitoring points will include all routine parameters and those baseline and expanded parameters that were elevated or were implicated in the expected pattern.

4.7 REPORTING AND RECORDKEEPING REQUIREMENTS

Copies of all semi-annual monitoring reports will be sent to the following:

1) Ms. Mary McIntosh
   Senior Engineering Geologist
   New York State Department of Environmental Conservation
   Region 9
   270 Michigan Avenue
   Buffalo, New York 14203-2999

2) Town of Niagara
   7105 Lockport Road
   Niagara Falls, New York 14305

In addition, CCMA will prepare and submit an annual summary report concerning facility post-closure maintenance and monitoring. This report will be certified by a Professional Engineer registered in the State of New York. It will be submitted to the NYSDEC Region 9 Solid Waste Regional Engineer no later than 60 days after the first day of January each year. These records will be retained for a minimum period of seven years.

Analytical data records which will be retained during the post-closure period include the following:

1) All chemical analyses of waste materials,

2) All EP toxicity and TCLP test data performed on waste material samples,

3) All chemical analyses and associated monitoring well elevations obtained as part of the site's groundwater and surface water monitoring program.

APPENDIX 3

SKW HISTORICAL PERMITS

23269.5

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

2585

EXPIRATION DATE
October 31, 1984

EFFECTIVE DATE - October 20, 19

[X] CONSTRUCTION [X] INITIAL ISSUE [ ] REISSUANCE
[X] OPERATION [ ] RENEWAL [ ] MODIFICATION

PERMIT ISSUED TO	ADDRESS OF PERMITTEE	TELEPHONE NO.
KW ALLOYS, INC.	3801 Highland Avenue, Niagara Falls, NY 14305	716/285-1252

LOCATION OF PROJECT Town	County	Environmental Conservation Regional Office
Niagara	Niagara	Region 9 Headquarters 600 Delaware Avenue, Buffalo, NY 14202

DESCRIPTION OF PROJECT	ON-SITE SUPERVISOR
Construct and Operate SKW Alloys, Inc. Landfill #2	William Lozow

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice on intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

1. Your application for a variance from 6NYCRR Part 360.8(b) (exemption from daily cover) is hereby approved. In the event that the deposited ferro silicon sludges become dried and create a fugitive dust problem, either on or off site, steps shall be taken to remedy the situation.

2. Upon the filling of the landfill, two feet of cover material shall be applied to the surface of the landfill. The top 6 inches shall be of a soil suitable for sustaining a vegetative cover crop to avoid erosion.

3. Quarterly reports shall be submitted indicating the volume of material which has been placed into the landfill and shall be submitted on the first business day of the months of November, February, May and August.

4. Semi-annual reports shall be submitted to the Region 9 Office containing the analytical results of the monitoring well sampling program and surface water sampling program as included in the permit for Landfill #1.

5. Within 60 days of the effective date of this permit, a certificate of deposit, bond or other negotiable instrument, payable to the Commissioner of the NYS Department of Environmental Conservation, shall be forwarded to this Region 9 Office in the amount of $5,000 to cover costs of closure and monitoring. The life of this undertaking shall be for the permit life (October 31, 1984).

6. The issuance of this permit does not relieve the applicant from the compliance with other State, Federal or local laws, ordinances or regulations.

7. Prior to the expiration date of this permit, the landfill shall be properly closed and maintained to prevent adverse environmental health impacts, such as contravention of surface or groundwater quality standards, gas migration, odors, and vectors. Proper

(CONT'D)

ISSUE DATE	ISSUING OFFICER	SIGNATURE
2 OCT 84	Robert J. Mitrey, P.E.	X Robert J. Mitrey, P.E.

SKW ALLOYS, INC.
3801 Highland Avenue
Niagara Falls, NY 14305

Permit to Construct and
Operate - Permit #2585
Expiration Date - 10/31/84
Facility #32N04

SPECIAL CONDITIONS (cont'd)

7. closure includes covering with a minimum of 2 feet of final cover, establishment of a grass cover crop, and sufficient grading to divert water off the fill area in order to minimize infiltration and to preclude ponding.

Robert H. Mettey, P.E. #4
Permit Administrator

20 Oct 84
Date

New York State Department of Environmental Conservation
584 Delaware Avenue, Buffalo, New York 14202

Robert F. Flacke
Commissioner

May 30, 1980

Mr. LeRoy C. Wintersteen, Manager
Environmental Control
SKW Alloys, Inc.
P.O. Box 368
Niagara Falls, NY 14302

Re: Permit to Operate
Solid Waste Management Facilities
Permit No. 2133
Niagara (T), Niagara County

Dear Mr. Wintersteen:

This will acknowledge receipt of the Certification of Construction and "As Built" drawings for the above facility. These materials are accepted for record purposes and are included in our files on the project.

We are transmitting herewith Permit No. 2133, Permit to Operate the Solid Waste Management Facility. The permit contains special conditions which require monitoring, record keeping, and reporting which should be followed, as well as the other conditions in the permit.

If you have any questions pertaining to the permit, the operation of the facility or the monitoring and reporting requirements, please do not hesitate to contact the writer or Mr. Tygert at 716/842-4311.

Very truly yours,

Robert J. Mitrey, P.E.
Associate Sanitary Engineer

JST:sk

cc: Niagara County Health Dept.
Secured Landfill Contractors, Inc.
Mr. Richard Snyder, P.E.
Albany, Division of Solid Waste

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

FACILITY NO. 2133

EXPIRATION DATE May 30, 1985

- [ ] CONSTRUCTION
- [x] OPERATION
- [x] INITIAL ISSUE
- [ ] RENEWAL
- [ ] REISSUANCE
- [ ] MODIFICATION

PERMIT ISSUED TO	ADDRESS OF PERMITTEE	TELEPHONE NO.
SKW Alloys, Inc.	P.O. Box 368, Niagara Falls, NY 14302	716/285-1252

LOCATION OF PROJECT: Town	County	Environmental Conservation Regional Office
Niagara	Niagara	Buffalo (9)

DESCRIPTION OF PROJECT	ON-SITE SUPERVISOR
Solid Waste Management Facility	L.D. Winterstein, Mgr. Env. Control

GENERAL CONDITIONS

1. The permittee shall file in the office of the Environmental Conservation Region specified above, a notice of intention to commence work at least 48 hours in advance of the time of commencement and shall also notify said office promptly in writing of the completion of the work.
2. The permitted work shall be subject to inspection by an authorized representative of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.
3. As a condition of the issuance of this permit, the applicant has accepted expressly, by the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.
4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.
5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-way which may be required for this project.
6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and attached hereto.

SPECIAL CONDITIONS

Page 1 of 2

1. That this permit is not transferable and is subject to revocation in the event of violation of this Permit, of the provisions of the Environmental Conservation Law, Article 27, Part 360 of the Rules and Regulations of the Department (6NYCRR-360) or for violation of any other Rules and Regulations of the State of New York or other governmental bodies. This approval does not relieve the permittee of the responsibility of complying with local zoning, building or other laws, rules and regulations or ordinances.

2. That present monitoring wells and surface water monitoring locations shall be sampled on a quarterly basis starting January 1985, and continuing for one year after closure of the operating permit for the parameters listed in the engineering report and submitted to the Department within thirty (30) days thereafter.

3. That after one year of operation samples shall be collected and analyzed on a six (6) month basis (April & October) with results submitted within thirty days of sampling.

4. That elevations of the water levels in the monitoring wells shall be recorded at the time of sampling and reported with the sample results.

5. That the elevations of [illegible] in the standpipes within the landfill shall be recorded monthly and reported on a quarterly basis with the above results, and shall be continued for at least one year after closure of the landfill.

6. That a minimum of eighteen (18) inches of compacted clay and six (6) inches of soil capable of supporting a vegetative cover must be placed [illegible] upon completion. A certificate of construction compliance shall be submitted within thirty days of the completion of the landfill.

ISSUE DATE	ISSUING OFFICER	SIGNATURE
[illegible]	[illegible], Director, [illegible]	[illegible signature]

REGIONAL OFFICE

7. That only the materials described in the approved engineering report, prepared by Richard R. Snyder, P.E., dated June 18, 1979, and approved ammendments thereto, be placed in the facility.

8. That daily records of the quantity of waste material placed in the facility be maintained, and that an annual summary be submitted to this office on the anniversary date of this permit. The summary should include the total quantity of wastes disposed of and an estimate of the remaining life and/or volume of the facility.

NOTICE OF PERMIT

for:

[ ] CONSTRUCTION	[X] INITIAL ISSUE	[ ] REISSUANCE
[X] OPERATION	[ ] RENEWAL	[ ] MODIFICATION

has been issued to: SKW Alloys, Inc.

address: P.O. Box 368, Niagara Falls, New York, 14302

for a project described as: Solid Waste Management Facility

under the Environmental Conservation Law,
Article 27, Title 5, Part 360 (Solid Waste Management Facilities)

NOTE:

- This Notice of Permit must be posted on the project site in such a manner that it is protected from weather and is in a location readily visible to the public.
- A copy of the Permit with the general and special conditions noted thereon will be shown to anyone upon request.

New York State
Department of Environmental Conservation

47-12-2 (8/77)

Issuing Officer

584 Delaware Avenue, Buffalo, New York, 14202
Address

2133	5/30/80	5/30/83
Permit No.	Issue Date	Expiration Date

PERMIT

Under the Environmental Conservation Law, Article 27, Title 7, Part 360

2585

DATE ISSUED: October 21, 1991

EFFECTIVE DATE: October 20, 1991

☒ CONSTRUCTION ☒ OPERATION ☐ INITIAL ISSUE ☐ RENEWAL ☐ REISSUANCE ☐ MODIFICATION

PERMIT ISSUED TO:	ADDRESS OF PERMITTEE:	TELEPHONE NO.
SCA ALLOYS, INC.	[illegible] Niagara Falls [illegible]	[illegible]

LOCATION OF PROJECT: Town: Niagara	County: Niagara	Environmental Conservation Regional Office: Region 9 Headquarters, 600 Delaware Avenue, Buffalo, NY 14202

DESCRIPTION OF PROJECT: Construct and operate SCA Alloys, Inc. Landfill #2

ON-SITE SUPERVISOR: William Loewe

GENERAL CONDITIONS

1. The permittee shall file in the office of the Department of Environmental Conservation specified above, prior to commencement of work at least 48 hours in advance of the time of commencement and shall also notify said office thereof in writing at the completion of the work.

2. The permitted work shall be subject to inspection by authorized representatives of the Department of Environmental Conservation who may order the work suspended if the public interest so requires.

3. As a condition of the issuance of this permit, the applicant has accepted responsibility for the execution of the application, the full legal responsibility for all damages, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and has agreed to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from the said project.

4. All work carried out under this permit shall conform to the approved plans and specifications. Any amendments must be approved by the Department of Environmental Conservation prior to their implementation.

5. The permittee is responsible for obtaining any other permits, approvals, easements and rights-of-ways which may be required for this project.

6. By acceptance of this permit, the permittee agrees that the permit is contingent upon strict compliance with Part 360 and the special conditions. Any variances granted by the Department of Environmental Conservation to Part 360 must be in writing and specified herein.

SPECIAL CONDITIONS

1. Your application for a variance from 6NYCRR Part 360.7(b)(1) (exemption from daily cover) is hereby approved. In the event that the deposited ferro silicon slimes become dried and create a fugitive dust problem, either on or off site, steps shall be taken to correct the situation.

2. Upon the filling of the landfill, two feet of cover material shall be applied to the surface of the landfill. The top 6 inches shall be of a soil suitable for sustaining a vegetative cover crop to avoid erosion.

3. Quarterly reports shall be submitted indicating the volume of material which has been placed into the landfill and shall be submitted on the first business day of the months of November, February, May and August.

4. Semi-annual reports shall be submitted to the Region 9 office summarizing and interpreting the results of the monitoring well sampling program and surface water sampling program as included in the permit for Landfill #1.

5. Within 60 days of the effective date of this permit, a certificate of deposit, bond or other negotiable instrument, payable to the Commissioner of the Department of Environmental Conservation, shall be forwarded to this Region's office in the amount of $5,000 to cover costs of closure and monitoring. The life of this instrument shall be for the permit life (October 20, 1996).

6. The issuance of this permit does not relieve the applicant from the requirements of other State, Federal or local laws, ordinances or permits.

7. Prior to the expiration date of this permit, the landfill shall be capped in accordance with Part 360 and shall be graded to prevent adverse environmental impacts.

Further conditions and/or attachments are made a part hereof.

ISSUED BY: [illegible] REGIONAL OFFICE

FEE PAID: $

SKW ALLOYS, INC.
3801 Highland Avenue
Niagara Falls, NY 14305

Permit to Construct and
Operate - Permit #2585
Expiration Date - 10/31/84
Facility #32N04

SPECIAL CONDITIONS (cont'd)

7. closure includes covering with a minimum of 2 feet of final cover, establishment of a grass cover crop, and sufficient grading to divert water off the fill area in order to minimize infiltration and to preclude ponding.

Robert H. Mattey, P.E. #4
Permit Administrator

20 Oct '84
Date

APPENDIX 4

ANNUAL GROUNDWATER ANALYTICAL SUMMARY

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

APPENDIX 4
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 14N												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	605.52		605.52		605.52		605.52		605.52	
WATER LEVEL	-	Feet	7.12		8.13		6.83		6.81		7.11	
WATER ELEVATION (BEFORE PURGE)	-	Feet	598.40		597.39		598.69		598.71		598.41	
WELL BOTTOM	-	Feet	26.35		26.35		26.35		26.35		26.50	
ARSENIC	*0.025*	mg/l	0.010	U	0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.11		0.12		0.11		0.11		0.12	
BORON, (TOTAL)	*1*	mg/l	0.11		0.13		0.12		0.11		0.11	
BROMIDE	-	mg/l	0.20	U	0.20	U	0.20	U	2.00	U	0.32	U
CHEMICAL OXYGEN DEMAND	-	mg/l	10.4		10.0	U	10.0	U	10.0	U	10.0	U
CHLORIDE	-	mg/l	117		109		92		110.0		132.0	
CHROMIUM	*0.05*	mg/l	0.0040	U	0.0040	U	0.0040	U	0.0040	U	0.0004	U
Eh	-	M.Volts	175		168		74		132		67	
HEXAVALENT CHROMIUM	*0.05*	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	0.08		0.120		0.07		0.130		0.090	
MERCURY	*0.0007*	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U
PH	*between 6.5 to 8.5*	S.U	6.99		7.01		6.87		7.01		6.98	
POTASSIUM	-	mg/l	2.5		3.0		2.4		2.4		2.6	
SELENIUM	*0.01*	mg/l	0.0010	U	0.0010	U	0.0250	U	0.025	U	0.025	U
SODIUM	*20*	mg/l	**63.8**		**73.9**		**57.8**		**58.2**		**68.8**	
SPECIFIC CONDUCTANCE	-	Umhos/cm	1139		1181		1163		1201		1368	
SULFATE	*250*	mg/l	175		171		168		162		160	
TEMPERATURE	-	^{o}F	52.16		54.68		58.28		47.48		50.18	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	**857**		**829**		**837**		**809**		**844**	
TOTAL ORGANIC CARBON	-	mg/l	2.6		2.3		3.1		2.5		2.0	
TURBIDITY	*not exceed 5*	N.T.U	1.93		5.11		2.51		1.93		2.48	

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 14N												
1,1,1,2-Tetrachloroethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,1-Trichloroethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromomethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	*3*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	*3*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10.0	U	10	U	10	U	10	U	10	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10.0	U	10	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15.0	U	15	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Tetrachloride	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	*7*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethene	*5*	ug/l	**28**		**29**		**28**		**28**		**21**	
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromomethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Methylene chloride	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,4-Dichloro-2-butene	*5*	ug/l	5.0	U	5.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichlorofluoromethane	*5*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	*2*	ug/l	1.6		**2.4**		1.0	U	1.4		1.1	

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 3R												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	611.87		611.87		611.87		611.87		611.87	
WATER LEVEL	-	Feet	2.09		3.55		1.65		1.93		2.12	
WATER ELEVATION (BEFORE PURGE)	-	Feet	609.78		608.32		610.22		609.94		609.75	
WELL BOTTOM	-	Feet	12.05		12.05		12.05		12.05		12.05	
ARSENIC	*0.025*	mg/l	0.010	U	0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.028		0.034		0.028		0.025		0.027	
BORON, (TOTAL)	*1*	mg/l	0.16		0.20		0.16		0.14		0.15	
BROMIDE	-	mg/l	0.20	U	0.20	U	0.20	U	2.00	U	0.20	U
CHEMICAL OXYGEN DEMAND	-	mg/l	10.0	U	10.0	U	16.3		12.5		10.0	U
CHLORIDE	-	mg/l	35.9		37.9		35.9		37.1		47.8	
CHROMIUM	*0.05*	mg/l	0.0052		0.0040	U	0.0040	U	0.0040	U	0.0040	U
Eh	-	M.Volts	112		148		168		131		158	
HEXAVALENT CHROMIUM TOTAL	*0.05*	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	0.0030	U	0.0190		0.003	U	0.0047	U	0.0035	U
MERCURY	*0.0007*	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U
PH	*between 6.5 to 8.5*	S.U	6.99		6.89		6.96		6.85		6.51	
POTASSIUM	-	mg/l	0.50	U	0.55		0.50	U	0.50	U	0.50	U
SELENIUM	*0.01*	mg/l	0.0023		0.0010	U	0.0250	U	0.025	U	0.025	U
SODIUM	*20*	mg/l	**23.8**		**29.0**		**24.1**		**22.2**		**23.8**	
SPECIFIC CONDUCTANCE	-	Umhos/cm	999		1069		1055		1177		1131	
SULFATE	*250*	mg/l	155		154		147		147		148	
TEMPERATURE	-	oF	49.46		56.32		57.02		42.98		48.38	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	**702**		**735**		**731**		**749**		**669**	
TOTAL ORGANIC CARBON	-	mg/l	2.9		2.8		5.0		2.6		1.9	
TURBIDITY	not exceed 5	N.T.U	1.87		3.56		0.92		1.07		1.82	

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 3R												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10	U	10	U	10	U	10	U	10	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10	U	10	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15	U	15	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	*2*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

LAN ASSOCIATES, INC.
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ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 5R												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	601.67		601.67		601.67		601.67		601.67	
WATER LEVEL	-	Feet	5.07		6.35		5.51		5.44		6.74	
WATER ELEVATION (BEFORE PURGE)	-	Feet	596.25		596.25		596.25		596.23		594.93	
WELL BOTTOM	-	Feet	19.75		19.75		19.75		19.74		19.74	
ARSENIC	*0.025*	mg/l	0.010	U	0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.064		0.063		0.053		0.043		0.056	
BORON, (TOTAL)	*1*	mg/l	0.18		0.20		0.18		0.18		0.17	
BROMIDE	-	mg/l	0.7		1.30		1.0		0.84		0.98	
CHEMICAL OXYGEN DEMAND	-	mg/l	15.8		25.7		27.1		12.8		10.0	
CHLORIDE	-	mg/l	94.9		94.7		80.6		92.8		85.6	
CHROMIUM	*0.05*	mg/l	0.0040	U	0.0040	U	0.0040	U	0.0040	U	0.0040	U
Eh	-	M.Volts	120		144		135		110		115	
HEXAVALENT CHROMIUM TOTAL	*0.05*	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	0.010		0.370		0.01		0.0160		0.0190	
MERCURY	*0.0007*	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U
PH	*between 6.5 to 8.5*	S.U	7.86		7.70		7.85		7.87		7.78	
POTASSIUM	-	mg/l	25.8		24.3		20.8		18.5		20.1	
SELENIUM	*0.01*	mg/l	0.0010	U	0.0010	U	0.0250		0.025	U	0.025	U
SODIUM	*20*	mg/l	**75.1**		**88.5**		**68.5**		**67.7**		**70.3**	
SPECIFIC CONDUCTANCE	-	Umhos/cm	818		857		825		851		886	
SULFATE	*250*	mg/l	178		183		157		157		164	
TEMPERATURE	-	°F	50.36		53.96		56.12		44.96		48.20	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	**552**		**587**		**545**		490		531	
TOTAL ORGANIC CARBON	-	mg/l	5.1		6.4		5.8		5.4		4.5	
TURBIDITY	*not exceed 5*	N.T.U	2.71		2.91		2.68		1.07		1.29	

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Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 5R												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10	U	10	U	10	U	10	U	10	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10	U	10	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15	U	15	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	5.0	U	1.0	U	1.0	U
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	*2*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

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ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 12												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	597.71		597.71		597.71		597.71		597.71	
WATER LEVEL	-	Feet	8.02		9		8.29		7.95		8.35	
WATER ELEVATION (BEFORE PURGE)	-	Feet	589.69		588.71		589.42		589.76		589.36	
WELL BOTTOM	-	Feet	19.65		19.65		19.65		19.65		19.65	
ARSENIC	*0.025*	mg/l	0.010	U	0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.038		0.038		0.040		0.036		0.042	
BORON, (TOTAL)	*1*	mg/l	0.19		0.19		0.17		0.17		0.18	
BROMIDE	-	mg/l	0.20		0.20	U	0.20	U	2.00	U	0.20	U
CHEMICAL OXYGEN DEMAND	-	mg/l	12.0		15.9		20.1		10.0		10.0	
CHLORIDE	-	mg/l	137		107		108		108		144	
CHROMIUM	*0.05*	mg/l	0.0040	U	0.0040	U	0.0040	U	0.0040	U	0.0040	U
Eh	-	M.Volts	181		142		186		136		149	
HEXAVALENT CHROMIUM TOTAL	*0.05*	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	0.01		0.097		0.009		0.0160		0.0160	
MERCURY	*0.0007*	mg/l	0.00020		0.00020	U	0.00020	U	0.00020	U	0.00020	U
PH	*between 6.5 to 8.5*	S.U	7.22		7.00		7.19		7.20		7.39	
POTASSIUM	-	mg/l	4.7		5.3		4.0		4.2		4.6	
SELENIUM	*0.01*	mg/l	0.0010	U	0.0010	U	0.0250	U	0.025	U	0.025	U
SODIUM	*20*	mg/l	**75.5**		**77.5**		**61.6**		**58.3**		**77.7**	
SPECIFIC CONDUCTANCE	-	mg/l	1144		1080		1204		1162		1294	
SULFATE	*250*	mg/l	147		117		142		127		135	
TEMPERATURE	-	F	50.00		52.5		60.4		46.9		49.5	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	**829**		**727**		**854**		**755**		**774**	
TOTAL ORGANIC CARBON	-	mg/l	2.6		2.6		3.6		2.7		2.1	
TURBIDITY	*not exceed 5*	N.T.U	2.87		4.02		2.71		1.67		1.78	

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Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Well 12												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10	U	10	U	10	U	10	U	10	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10	U	10	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15	U	15	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethene	*5.0*	ug/l	2.1		**5.5**		2.9		3.3		2.0	
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	*2*	ug/l	1.0	U	7.4	U	1.0	U	1.0	U	1.0	U

LAN ASSOCIATES, INC.
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ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Sump (Leachate)												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	602.08		602.08		602.08		602.08		602.08	
WATER LEVEL	-	Feet	NA		NA		NA		NA		NA	
WATER ELEVATION (BEFORE PURGE)	-	Feet	NA		NA		NA		NA		NA	
WELL BOTTOM	-	Feet	NA		NA		NA		NA		NA	
ARSENIC	*0.025*	mg/l	0.012		0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.061		0.042		0.033		0.032		0.057	
BORON, (TOTAL)	*1*	mg/l	0.35		0.26		0.02		0.21		0.32	
BROMIDE	-	mg/l	1.7		1.7		2.7		1.2		2.3	
CHEMICAL OXYGEN DEMAND	-	mg/l	27.5		20.3		30.2		13.1		11.6	F1
CHLORIDE	-	mg/l	150		81.6		103.0		91.5		70.6	
CHROMIUM	*0.05*	mg/l	0.03		0.037		0.004	U	0.019		0.037	
eH	-	M.Volts	135		83		128		112		105	
HEXAVALENT CHROMIUM TOTAL	*0.05*	mg/l	0.022		0.034		0.010	U	0.021		0.021	
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	0.007		0.0078		0.0520		0.016		0.016	
MERCURY	*0.0007*	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U
pH	*between 6.5 to 8.5*	S.U	8.01		7.90		8.08		7.92		7.59	
POTASSIUM	-	mg/l	86.5		68.7		42.8		41.4		74.2	
SELENIUM	*0.01*	mg/l	**0.012**		0.003		0.0250	U	0.025	U	0.025	U
SODIUM	*20*	mg/l	**72.8**		**47.2**		**45.1**		**40.6**		**74.0**	
SPECIFIC CONDUCTANCE	-	Umhos/cm	1160		714		745		791		1202	
SULFATE	*250*	mg/l	154		72		92.9		85.7		68.2	
TEMPERATURE	-	°F	45.68		53.60		53.1		43.88		45.50	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	**778**		443		480		456		681	
TOTAL ORGANIC CARBON	-	mg/l	7.0		5.2		6.5		5.8		6.8	
TURBIDITY	*not exceed 5*	N.T.U	2.27		1.76		1.72		0.92		1.48	

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Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
Sump (Leachate)												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10	U	10	U	10	U	10	U	20	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	10.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	10.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10	U	20	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15	U	30	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
cis-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	4.0	U
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	5.0	U	1.0	U	2.0	U
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	10.0	U
Vinyl chloride	*2*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	2.0	U

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Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
BR-1												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	603.79		603.79		603.79		603.79		603.79	
WATER LEVEL	-	Feet	10.59		11.52		10.44		10.52		10.63	
WATER ELEVATION (BEFORE PURGE)	-	Feet	593.20		592.27		593.35		593.27		593.16	
WELL BOTTOM	-	Feet	35.85		35.85		35.85		39.92		39.92	
ARSENIC	*0.025*	mg/l	0.010	U	0.010	U	0.015	U	0.015	U	0.015	U
BARIUM	*1*	mg/l	0.16		0.13		0.13		0.088		0.10	
BORON, (TOTAL)	*1*	mg/l	0.15		0.13		0.15		0.12		0.13	
BROMIDE	-	mg/l	0.26		0.20	U	0.64		0.40		0.20	U
CHEMICAL OXYGEN DEMAND	-	mg/l	10.0	U	15.9		24.5		10.0		10.0	U / F1
CHLORIDE	-	mg/l	59.9		38.7		54.4		44.6		51.2	
CHROMIUM	*0.05*	mg/l	0.0040	U	0.0040	U	0.0040	U	0.0040	U	0.0040	U
eH	-	M.Volts	151		117		48		114		32.000	U
HEXAVALENT CHROMIUM TOTAL	*0.05*	mg/l	0.010	U	0.010	U	0.010	U	0.010	U	0.010	U
LEAD	*0.025*	mg/l	0.0050	U	0.0050	U	0.0100	U	0.010	U	0.010	U
MANGANESE	*0.3*	mg/l	**0.55**		**0.45**		**0.50**		0.20		0.21	
MERCURY	*0.0007*	mg/l	0.00020	U	0.00020	U	0.00020	U	0.00020	U	0.00020	U
pH	*between 6.5 to 8.5*	S.U	7.56		7.80		7.57		7.69		7.59	
POTASSIUM	-	mg/l	10.2		11.3		9.2		8.7		9.4	^
SELENIUM	*0.01*	mg/l	0.0010	U	0.0010	U	0.0250	U	0.025	U	0.025	U
SODIUM	*20*	mg/l	**39.9**		**37.3**		**37.0**		**30.9**		**36.2**	
SPECIFIC CONDUCTANCE	-	Umhos/cm	563		419		549		450		488	
SULFATE	*250*	mg/l	77.6		59.2		74.3		51.5		53.8	
TEMPERATURE	-	°F	51.98		53.60		56.12		49.1		50.2	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	364		288		385		267		271	
TOTAL ORGANIC CARBON	-	mg/l	2.5		4.1		3.9		3.3		2.7	
TURBIDITY	*not exceed 5*	N.T.U	2.90		3.10		2.48		1.10		1.26	

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Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
BR-1												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
2-Butanone / Methyl Ethyl Ketone	-	ug/l	10	U	10	U	10	U	10	U	10	U
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
4-Methyl-2-pentanone / Methyl Isobutyl Ketone	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	10	U	10	U
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	15	U	15	U
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	1.0	U	1.0	U	1.0	U
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Vinyl chloride	*2*	ug/l	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U

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ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[1]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
SW-1												
SAMPLE DATE	-	NA	4/26/2013		10/25/2013		5/13/2014		4/23/2015		4/28/2016	
TOP OF CASING ELEVATION	-	Feet	596.72		596.72		596.72		NS		NS	
WATER LEVEL	-	Feet	NA		NA		NA		NS		NS	
WATER ELEVATION (BEFORE PURGE)	-	Feet	NA		NA		NA		NS		NS	
WELL BOTTOM	-	Feet	NA		NA		NA		NS		NS	
ARSENIC	0.15[2]	mg/l	0.01	U	0.010	U	0.015	U	NS		NS	
BARIUM	*1*	mg/l	0.033		0.016		0.021		NS		NS	
BORON, (TOTAL)	10[2]	mg/l	0.13		0.088		0.17		NS		NS	
BROMIDE	-	mg/l	0.2	U	0.20	U	0.20	U	NS		NS	
CHEMICAL OXYGEN DEMAND	-	mg/l	44.5		45.2		58.9		NS		NS	
CHLORIDE	-	mg/l	23.2		10.7		18.2		NS		NS	
CHROMIUM	*0.05*	mg/l	0.0074		0.004	U	0.0040	U	NS		NS	
Eh	-	M.Volts	109		91		124		NS		NS	
HEXAVALENT CHROMIUM TOTAL	0.011[2]	mg/l	0.01	U	0.010	U	0.010	U	NS		NS	
LEAD	*0.025*	mg/l	0.005	U	0.0050	U	0.0100	U	NS		NS	
MANGANESE	*0.3*	mg/l	0.026		0.0038		0.016		NS		NS	
MERCURY	*0.0007*	mg/l	0.0002	U	0.00020	U	0.00020	U	NS		NS	
PH	*between 6.5 to 8.5*	S.U	8.05		7.9		**8.51**		NS		NS	
POTASSIUM	-	mg/l	11.7		6.3		10.8		NS		NS	
SELENIUM	0.0046[2]	mg/l	0.001	U	0.0010	U	0.0250	U	NS		NS	
SODIUM	*20*	mg/l	17.5		13.3		19.1		NS		NS	
SPECIFIC CONDUCTANCE	-	Umhos/cm	535		435		480		NS		NS	
SULFATE	*250*	mg/l	37.2		53.9		15.1		NS		NS	
TEMPERATURE	-	^{o}F	60.98		51.98		65.48		NS		NS	
TOTAL DISSOLVED SOLIDS	*not to exceed 500*	mg/l	366		281		311		NS		NS	
TOTAL ORGANIC CARBON	-	mg/l	13.9		13.7		18.4		NS		NS	
TURBIDITY	*not exceed 5*	N.T.U	6.59		3.12		4.69		NS		NS	

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CC Metals and Alloys, LLC
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Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.
SW-1												
1,1,1,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,1,1-Trichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,1,2,2-Tetrachloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,1,2-Trichloroethane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,1-Dichloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,1-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2,3-Trichloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2-Dibromo-3-chloropropane	*0.04*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2-Dibromoethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2-Dichloroethane	*0.6*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,2-Dichloropropane	*1.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
1,4-Dichlorobenzene	*3.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
2-Butanone	-	ug/l	10	U	10	U	10	U	NS		NS	
2-Hexanone	-	ug/l	5.0	U	5.0	U	5.0	U	NS		NS	
4-Methyl-2-pentanone	-	ug/l	5.0	U	5.0	U	5.0	U	NS		NS	
Acetone	-	ug/l	10.0	U	10.0	U	10.0	U	NS		NS	
Acetonitrile	-	ug/l	40.0	U	40.0	U	15.0	U	NS		NS	
Benzene	*1*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Bromochloromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Bromodichloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Bromoform	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Bromomethane	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Carbon Disulfide	*60*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Carbon Tetrachloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Chlorobenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Chloroethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Chloroform	*7.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Chloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
cis-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
cis-1,3-Dichloropropene	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Dibromochloromethane	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Dibromomethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Ethylbenzene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Iodomethane	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
m/p-Xylenes	-	ug/l	2.0	U	2.0	U	2.0	U	NS		NS	
Methylene chloride	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
o-Xylene	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Styrene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Tetrachloroethene	-	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Toluene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
trans-1,2-Dichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
trans-1,3-Dichloropropene	*0.4*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
trans-1,4-Dichloro-2-butene	*5.0*	ug/l	5.0	U	5.0	U	1.0	U	NS		NS	
Trichloroethene	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Trichlorofluoromethane	*5.0*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	
Vinyl acetate	-	ug/l	5.0	U	5.0	U	5.0	U	NS		NS	
Vinyl chloride	*2*	ug/l	1.0	U	1.0	U	1.0	U	NS		NS	

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ATTACHMENT 2
Annual Groundwater Analytical Summary
CC Metals and Alloys, LLC
Town of Niagara, NY - Witmer Road

Quarter	Class GA Standard[(1)]	Units	1st H/13	Qual.	2nd H/13	Qual.	2014	Qual.	2015	Qual.	2016	Qual.

[(1)] Class GA fresh groundwaters; Water Quality Standards Surface Waters and Groundwater, NYSDEC Chapter X Division of Water, Part 703.5
[(2)] Class C fresh surface waters; Water Quality Standards Surface Waters and Groundwater, NYSDEC Chapter X Division of Water, Part 703.5

Qualifiers:
B: Analyte was detected in the associated Method Blank.
CF6: Results confirmed by reanalysis.
D: Data reported from a dilution.
D02: Dilution required due to sample matrix effects.
D08: Dilution required due to high concentration of target analyte(s)
F1: MS and/or MSD Recovery is outside acceptance limits
U: Not detected at the reporting limit (or MDL or EDL if shown)
^ Instrument related QC is outside acceptance limits
NS: Not Sampled
Result in Bold Text: Exceeds Class GA Standard

APPENDIX 5

LABORATORY ANALYTICAL REPORT

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-99235-1
Client Project/Site: Witmer Road G/W
Sampling Event: Witmer Road G/W

For:
LAN Associates
88 Riberia Street
Suite 400
St. Augustine, Florida 32084

Attn: Katie Kulik

Joseph V. Giacomazza

Authorized for release by:
5/11/2016 3:45:54 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

Table of Contents

Qualifiers

Metals

Qualifier	Qualifier Description
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 480-99235-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-99235-1

Receipt
The samples were received on 4/28/2016 3:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-300770 recovered outside acceptance criteria, low biased, for 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1-Dichloroethene, and Cyclohexane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were non-detect for these analytes, the data have been reported. The following samples are impacted: BR-1 (480-99235-1), MW-3R (480-99235-2), MW-12 (480-99235-3), MW-14N (480-99235-4), MW-5R (480-99235-5) and Leachate (480-99235-6).

Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: Leachate (480-99235-6). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatile samples were analyzed with significant headspace in the sample vials: MW-3R (480-99235-2), MW-12 (480-99235-3) and MW-14N (480-99235-4). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-300766 recovered above the upper control limit for Vinyl Chloride. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported. The following sample is impacted: Trip Blank (480-99235-7).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-300766 recovered outside acceptance criteria, low biased, for 1,2-Dichloroethane, Dibromomethane, and Dichlorobromomethane. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated sample was non-detect for these analytes, the data have been reported. The following sample is impacted: Trip Blank (480-99235-7).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HPLC/IC
Method(s) 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-3R (480-99235-2), MW-12 (480-99235-3) and MW-14N (480-99235-4). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted due to the nature of the sample matrix: BR-1 (480-99235-1) and Leachate (480-99235-6). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-5R (480-99235-5). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-299451/15) contained Total Potassium above the upper quality control limit. All reported samples BR-1 (480-99235-1), (LCS 480-299015/2-A), (LCSD 480-299015/3-A), (MB 480-299015/1-A), (480-99235-B-1-B MS), (480-99235-B-1-C MSD) and (480-99235-B-1-A PDS) associated with this CCVL were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: BR-1 — Lab Sample ID: 480-99235-1

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	32				millivolts	1		Field Sampling	Total/NA
pH, Field	7.59				SU	1		Field Sampling	Total/NA
Specific Conductance	488				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	10.1				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.26				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.10		0.0020		mg/L	1		6010C	Total/NA
Boron	0.13		0.020		mg/L	1		6010C	Total/NA
Manganese	0.21		0.0030		mg/L	1		6010C	Total/NA
Potassium	9.4	^	0.50		mg/L	1		6010C	Total/NA
Sodium	36.2		1.0		mg/L	1		6010C	Total/NA
Chloride	51.2		1.0		mg/L	2		300.0	Total/NA
Sulfate	53.8		4.0		mg/L	2		300.0	Total/NA
Total Dissolved Solids	271		10.0		mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	2.7		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: MW-3R — Lab Sample ID: 480-99235-2

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	158				millivolts	1		Field Sampling	Total/NA
pH, Field	6.51				SU	1		Field Sampling	Total/NA
Specific Conductance	1131				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	9.1				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.82				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.027		0.0020		mg/L	1		6010C	Total/NA
Boron	0.15		0.020		mg/L	1		6010C	Total/NA
Chromium	0.0040		0.0040		mg/L	1		6010C	Total/NA
Manganese	0.0035		0.0030		mg/L	1		6010C	Total/NA
Sodium	23.8		1.0		mg/L	1		6010C	Total/NA
Chloride	47.8		5.0		mg/L	10		300.0	Total/NA
Sulfate	148		20.0		mg/L	10		300.0	Total/NA
Total Dissolved Solids	669		10.0		mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	1.9		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: MW-12 — Lab Sample ID: 480-99235-3

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	149				millivolts	1		Field Sampling	Total/NA
pH, Field	7.39				SU	1		Field Sampling	Total/NA
Specific Conductance	1294				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	9.7				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.78				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.0		1.0		ug/L	1		8260C	Total/NA
Barium	0.042		0.0020		mg/L	1		6010C	Total/NA
Boron	0.18		0.020		mg/L	1		6010C	Total/NA
Manganese	0.016		0.0030		mg/L	1		6010C	Total/NA
Potassium	4.6		0.50		mg/L	1		6010C	Total/NA
Sodium	77.7		1.0		mg/L	1		6010C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample ID: MW-12 (Continued) — Lab Sample ID: 480-99235-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	144		5.0		mg/L	10		300.0	Total/NA
Sulfate	135		20.0		mg/L	10		300.0	Total/NA
Total Dissolved Solids	774		10.0		mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	2.1		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: MW-14N — Lab Sample ID: 480-99235-4

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	67				millivolts	1		Field Sampling	Total/NA
pH, Field	6.98				SU	1		Field Sampling	Total/NA
Specific Conductance	1368				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	10.1				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	2.48				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	21		1.0		ug/L	1		8260C	Total/NA
Vinyl chloride	1.1		1.0		ug/L	1		8260C	Total/NA
Barium	0.12		0.0020		mg/L	1		6010C	Total/NA
Boron	0.11		0.020		mg/L	1		6010C	Total/NA
Manganese	0.090		0.0030		mg/L	1		6010C	Total/NA
Potassium	2.6		0.50		mg/L	1		6010C	Total/NA
Sodium	68.8		1.0		mg/L	1		6010C	Total/NA
Bromide	0.32		0.20		mg/L	1		300.0	Total/NA
Chloride	132		5.0		mg/L	10		300.0	Total/NA
Sulfate	160		20.0		mg/L	10		300.0	Total/NA
Total Dissolved Solids	844		10.0		mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	2.0		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: MW-5R — Lab Sample ID: 480-99235-5

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	115				millivolts	1		Field Sampling	Total/NA
pH, Field	7.78				SU	1		Field Sampling	Total/NA
Specific Conductance	886				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	9.0				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.29				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.056		0.0020		mg/L	1		6010C	Total/NA
Boron	0.17		0.020		mg/L	1		6010C	Total/NA
Manganese	0.019		0.0030		mg/L	1		6010C	Total/NA
Potassium	20.1		0.50		mg/L	1		6010C	Total/NA
Sodium	70.3		1.0		mg/L	1		6010C	Total/NA
Bromide	0.98		0.40		mg/L	2		300.0	Total/NA
Chloride	85.6		1.0		mg/L	2		300.0	Total/NA
Sulfate	164		4.0		mg/L	2		300.0	Total/NA
Total Dissolved Solids	531		10.0		mg/L	1		SM 2540C	Total/NA
Total Organic Carbon	4.5		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: Leachate — Lab Sample ID: 480-99235-6

This Detection Summary does not include radiochemical test results.

Client Sample ID: Leachate (Continued) — Lab Sample ID: 480-99235-6

Analyte	Result	Qualifier	NONE	NONE	Unit	Dil Fac	D	Method	Prep Type
Field EH/ORP	105				millivolts	1		Field Sampling	Total/NA
pH, Field	7.59				SU	1		Field Sampling	Total/NA
Specific Conductance	1202				umhos/cm	1		Field Sampling	Total/NA
Temperature, Field (C)	7.5				Degrees C	1		Field Sampling	Total/NA
Turbidity, Field	1.48				NTU	1		Field Sampling	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.057		0.0020		mg/L	1		6010C	Total/NA
Boron	0.32		0.020		mg/L	1		6010C	Total/NA
Chromium	0.037		0.0040		mg/L	1		6010C	Total/NA
Manganese	0.016		0.0030		mg/L	1		6010C	Total/NA
Potassium	74.2		0.50		mg/L	1		6010C	Total/NA
Sodium	74.0		1.0		mg/L	1		6010C	Total/NA
Bromide	2.3		0.20		mg/L	1		300.0	Total/NA
Chloride	70.6		2.5		mg/L	5		300.0	Total/NA
Sulfate	68.2		10.0		mg/L	5		300.0	Total/NA
Chemical Oxygen Demand	11.6	F1	10.0		mg/L	1		410.4	Total/NA
Total Dissolved Solids	681		10.0		mg/L	1		SM 2540C	Total/NA
Chromium, hexavalent	0.021		0.010		mg/L	1		SM 3500 CR B	Total/NA
Total Organic Carbon	6.8		1.0		mg/L	1		SM 5310D	Total/NA

Client Sample ID: Trip Blank — Lab Sample ID: 480-99235-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: BR-1
Date Collected: 04/28/16 13:23
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-1
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1-Dichloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,1-Dichloroethene	ND		1.0		ug/L			05/09/16 23:13	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/09/16 23:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/09/16 23:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/09/16 23:13	1
1,2-Dibromoethane	ND		1.0		ug/L			05/09/16 23:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:13	1
1,2-Dichloroethane	ND		1.0		ug/L			05/09/16 23:13	1
1,2-Dichloropropane	ND		1.0		ug/L			05/09/16 23:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:13	1
2-Butanone (MEK)	ND		10		ug/L			05/09/16 23:13	1
2-Hexanone	ND		5.0		ug/L			05/09/16 23:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/09/16 23:13	1
Acetone	ND		10		ug/L			05/09/16 23:13	1
Acetonitrile	ND		15		ug/L			05/09/16 23:13	1
Benzene	ND		1.0		ug/L			05/09/16 23:13	1
Bromochloromethane	ND		1.0		ug/L			05/09/16 23:13	1
Bromodichloromethane	ND		1.0		ug/L			05/09/16 23:13	1
Bromoform	ND		1.0		ug/L			05/09/16 23:13	1
Bromomethane	ND		1.0		ug/L			05/09/16 23:13	1
Carbon disulfide	ND		1.0		ug/L			05/09/16 23:13	1
Carbon tetrachloride	ND		1.0		ug/L			05/09/16 23:13	1
Chlorobenzene	ND		1.0		ug/L			05/09/16 23:13	1
Chloroethane	ND		1.0		ug/L			05/09/16 23:13	1
Chloroform	ND		1.0		ug/L			05/09/16 23:13	1
Chloromethane	ND		1.0		ug/L			05/09/16 23:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:13	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:13	1
Cyclohexane	ND		1.0		ug/L			05/09/16 23:13	1
Dibromochloromethane	ND		1.0		ug/L			05/09/16 23:13	1
Dibromomethane	ND		1.0		ug/L			05/09/16 23:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/09/16 23:13	1
Ethylbenzene	ND		1.0		ug/L			05/09/16 23:13	1
Iodomethane	ND		1.0		ug/L			05/09/16 23:13	1
Isopropylbenzene	ND		1.0		ug/L			05/09/16 23:13	1
m,p-Xylene	ND		2.0		ug/L			05/09/16 23:13	1
Methyl acetate	ND		2.5		ug/L			05/09/16 23:13	1
Methylcyclohexane	ND		1.0		ug/L			05/09/16 23:13	1
Methylene Chloride	ND		1.0		ug/L			05/09/16 23:13	1
o-Xylene	ND		1.0		ug/L			05/09/16 23:13	1
Styrene	ND		1.0		ug/L			05/09/16 23:13	1
Tetrachloroethene	ND		1.0		ug/L			05/09/16 23:13	1
Toluene	ND		1.0		ug/L			05/09/16 23:13	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: BR-1
Date Collected: 04/28/16 13:23
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-1
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:13	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:13	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/09/16 23:13	1
Trichloroethene	ND		1.0		ug/L			05/09/16 23:13	1
Trichlorofluoromethane	ND		1.0		ug/L			05/09/16 23:13	1
Vinyl acetate	ND		5.0		ug/L			05/09/16 23:13	1
Vinyl chloride	ND		1.0		ug/L			05/09/16 23:13	1
Xylenes, Total	ND		2.0		ug/L			05/09/16 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*66 - 137*		*05/09/16 23:13*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/09/16 23:13*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/09/16 23:13*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 21:25	1
Barium	**0.10**		0.0020		mg/L		04/29/16 11:25	04/29/16 21:25	1
Boron	**0.13**		0.020		mg/L		04/29/16 11:25	04/29/16 21:25	1
Chromium	ND		0.0040		mg/L		04/29/16 11:25	04/29/16 21:25	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 21:25	1
Manganese	**0.21**		0.0030		mg/L		04/29/16 11:25	04/29/16 21:25	1
Potassium	**9.4**	^	0.50		mg/L		04/29/16 11:25	04/29/16 21:25	1
Sodium	**36.2**		1.0		mg/L		04/29/16 11:25	04/29/16 21:25	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 21:25	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20		mg/L			05/05/16 16:05	1
Chloride	**51.2**		1.0		mg/L			05/04/16 00:00	2
Sulfate	**53.8**		4.0		mg/L			05/04/16 00:00	2
Chemical Oxygen Demand	ND	F1	10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**271**		10.0		mg/L			05/04/16 08:26	1
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**2.7**		1.0		mg/L			05/05/16 04:53	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**32**				millivolts			04/28/16 13:23	1
pH, Field	**7.59**				SU			04/28/16 13:23	1
Specific Conductance	**488**				umhos/cm			04/28/16 13:23	1
Temperature, Field (C)	**10.1**				Degrees C			04/28/16 13:23	1
Turbidity, Field	**1.26**				NTU			04/28/16 13:23	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: MW-3R
Date Collected: 04/28/16 11:07
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-2
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1-Dichloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,1-Dichloroethene	ND		1.0		ug/L			05/09/16 23:40	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/09/16 23:40	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/09/16 23:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/09/16 23:40	1
1,2-Dibromoethane	ND		1.0		ug/L			05/09/16 23:40	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:40	1
1,2-Dichloroethane	ND		1.0		ug/L			05/09/16 23:40	1
1,2-Dichloropropane	ND		1.0		ug/L			05/09/16 23:40	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:40	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:40	1
2-Butanone (MEK)	ND		10		ug/L			05/09/16 23:40	1
2-Hexanone	ND		5.0		ug/L			05/09/16 23:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/09/16 23:40	1
Acetone	ND		10		ug/L			05/09/16 23:40	1
Acetonitrile	ND		15		ug/L			05/09/16 23:40	1
Benzene	ND		1.0		ug/L			05/09/16 23:40	1
Bromochloromethane	ND		1.0		ug/L			05/09/16 23:40	1
Bromodichloromethane	ND		1.0		ug/L			05/09/16 23:40	1
Bromoform	ND		1.0		ug/L			05/09/16 23:40	1
Bromomethane	ND		1.0		ug/L			05/09/16 23:40	1
Carbon disulfide	ND		1.0		ug/L			05/09/16 23:40	1
Carbon tetrachloride	ND		1.0		ug/L			05/09/16 23:40	1
Chlorobenzene	ND		1.0		ug/L			05/09/16 23:40	1
Chloroethane	ND		1.0		ug/L			05/09/16 23:40	1
Chloroform	ND		1.0		ug/L			05/09/16 23:40	1
Chloromethane	ND		1.0		ug/L			05/09/16 23:40	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:40	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:40	1
Cyclohexane	ND		1.0		ug/L			05/09/16 23:40	1
Dibromochloromethane	ND		1.0		ug/L			05/09/16 23:40	1
Dibromomethane	ND		1.0		ug/L			05/09/16 23:40	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/09/16 23:40	1
Ethylbenzene	ND		1.0		ug/L			05/09/16 23:40	1
Iodomethane	ND		1.0		ug/L			05/09/16 23:40	1
Isopropylbenzene	ND		1.0		ug/L			05/09/16 23:40	1
m,p-Xylene	ND		2.0		ug/L			05/09/16 23:40	1
Methyl acetate	ND		2.5		ug/L			05/09/16 23:40	1
Methylcyclohexane	ND		1.0		ug/L			05/09/16 23:40	1
Methylene Chloride	ND		1.0		ug/L			05/09/16 23:40	1
o-Xylene	ND		1.0		ug/L			05/09/16 23:40	1
Styrene	ND		1.0		ug/L			05/09/16 23:40	1
Tetrachloroethene	ND		1.0		ug/L			05/09/16 23:40	1
Toluene	ND		1.0		ug/L			05/09/16 23:40	1

Client Sample ID: MW-3R
Date Collected: 04/28/16 11:07
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-2
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:40	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:40	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/09/16 23:40	1
Trichloroethene	ND		1.0		ug/L			05/09/16 23:40	1
Trichlorofluoromethane	ND		1.0		ug/L			05/09/16 23:40	1
Vinyl acetate	ND		5.0		ug/L			05/09/16 23:40	1
Vinyl chloride	ND		1.0		ug/L			05/09/16 23:40	1
Xylenes, Total	ND		2.0		ug/L			05/09/16 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*66 - 137*		*05/09/16 23:40*	*1*
4-Bromofluorobenzene (Surr)	*97*		*73 - 120*		*05/09/16 23:40*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/09/16 23:40*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 21:41	1
Barium	**0.027**		0.0020		mg/L		04/29/16 11:25	04/29/16 21:41	1
Boron	**0.15**		0.020		mg/L		04/29/16 11:25	04/29/16 21:41	1
Chromium	**0.0040**		0.0040		mg/L		04/29/16 11:25	04/29/16 21:41	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 21:41	1
Manganese	**0.0035**		0.0030		mg/L		04/29/16 11:25	04/29/16 21:41	1
Potassium	ND		0.50		mg/L		04/29/16 11:25	05/02/16 09:45	1
Sodium	**23.8**		1.0		mg/L		04/29/16 11:25	04/29/16 21:41	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 21:41	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20		mg/L			05/05/16 16:19	1
Chloride	**47.8**		5.0		mg/L			05/04/16 00:15	10
Sulfate	**148**		20.0		mg/L			05/04/16 00:15	10
Chemical Oxygen Demand	ND		10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**669**		10.0		mg/L			05/04/16 17:13	1
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**1.9**		1.0		mg/L			05/05/16 05:10	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**158**				millivolts			04/28/16 11:07	1
pH, Field	**6.51**				SU			04/28/16 11:07	1
Specific Conductance	**1131**				umhos/cm			04/28/16 11:07	1
Temperature, Field (C)	**9.1**				Degrees C			04/28/16 11:07	1
Turbidity, Field	**1.82**				NTU			04/28/16 11:07	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: MW-12
Date Collected: 04/28/16 14:09
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-3
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1-Dichloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,1-Dichloroethene	ND		1.0		ug/L			05/10/16 00:06	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/10/16 00:06	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/10/16 00:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/10/16 00:06	1
1,2-Dibromoethane	ND		1.0		ug/L			05/10/16 00:06	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:06	1
1,2-Dichloroethane	ND		1.0		ug/L			05/10/16 00:06	1
1,2-Dichloropropane	ND		1.0		ug/L			05/10/16 00:06	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:06	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:06	1
2-Butanone (MEK)	ND		10		ug/L			05/10/16 00:06	1
2-Hexanone	ND		5.0		ug/L			05/10/16 00:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/10/16 00:06	1
Acetone	ND		10		ug/L			05/10/16 00:06	1
Acetonitrile	ND		15		ug/L			05/10/16 00:06	1
Benzene	ND		1.0		ug/L			05/10/16 00:06	1
Bromochloromethane	ND		1.0		ug/L			05/10/16 00:06	1
Bromodichloromethane	ND		1.0		ug/L			05/10/16 00:06	1
Bromoform	ND		1.0		ug/L			05/10/16 00:06	1
Bromomethane	ND		1.0		ug/L			05/10/16 00:06	1
Carbon disulfide	ND		1.0		ug/L			05/10/16 00:06	1
Carbon tetrachloride	ND		1.0		ug/L			05/10/16 00:06	1
Chlorobenzene	ND		1.0		ug/L			05/10/16 00:06	1
Chloroethane	ND		1.0		ug/L			05/10/16 00:06	1
Chloroform	ND		1.0		ug/L			05/10/16 00:06	1
Chloromethane	ND		1.0		ug/L			05/10/16 00:06	1
cis-1,2-Dichloroethene	**2.0**		1.0		ug/L			05/10/16 00:06	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 00:06	1
Cyclohexane	ND		1.0		ug/L			05/10/16 00:06	1
Dibromochloromethane	ND		1.0		ug/L			05/10/16 00:06	1
Dibromomethane	ND		1.0		ug/L			05/10/16 00:06	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/10/16 00:06	1
Ethylbenzene	ND		1.0		ug/L			05/10/16 00:06	1
Iodomethane	ND		1.0		ug/L			05/10/16 00:06	1
Isopropylbenzene	ND		1.0		ug/L			05/10/16 00:06	1
m,p-Xylene	ND		2.0		ug/L			05/10/16 00:06	1
Methyl acetate	ND		2.5		ug/L			05/10/16 00:06	1
Methylcyclohexane	ND		1.0		ug/L			05/10/16 00:06	1
Methylene Chloride	ND		1.0		ug/L			05/10/16 00:06	1
o-Xylene	ND		1.0		ug/L			05/10/16 00:06	1
Styrene	ND		1.0		ug/L			05/10/16 00:06	1
Tetrachloroethene	ND		1.0		ug/L			05/10/16 00:06	1
Toluene	ND		1.0		ug/L			05/10/16 00:06	1

Client Sample ID: MW-12
Date Collected: 04/28/16 14:09
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-3
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/10/16 00:06	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 00:06	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/10/16 00:06	1
Trichloroethene	ND		1.0		ug/L			05/10/16 00:06	1
Trichlorofluoromethane	ND		1.0		ug/L			05/10/16 00:06	1
Vinyl acetate	ND		5.0		ug/L			05/10/16 00:06	1
Vinyl chloride	ND		1.0		ug/L			05/10/16 00:06	1
Xylenes, Total	ND		2.0		ug/L			05/10/16 00:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/10/16 00:06*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/10/16 00:06*	*1*
Toluene-d8 (Surr)	*101*		*71 - 126*		*05/10/16 00:06*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 21:54	1
Barium	**0.042**		0.0020		mg/L		04/29/16 11:25	04/29/16 21:54	1
Boron	**0.18**		0.020		mg/L		04/29/16 11:25	04/29/16 21:54	1
Chromium	ND		0.0040		mg/L		04/29/16 11:25	04/29/16 21:54	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 21:54	1
Manganese	**0.016**		0.0030		mg/L		04/29/16 11:25	04/29/16 21:54	1
Potassium	**4.6**		0.50		mg/L		04/29/16 11:25	04/29/16 21:54	1
Sodium	**77.7**		1.0		mg/L		04/29/16 11:25	04/29/16 21:54	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 21:54	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 13:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20		mg/L			05/05/16 16:34	1
Chloride	**144**		5.0		mg/L			05/04/16 00:29	10
Sulfate	**135**		20.0		mg/L			05/04/16 00:29	10
Chemical Oxygen Demand	ND		10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**774**		10.0		mg/L			05/04/16 17:13	1
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**2.1**		1.0		mg/L			05/05/16 05:26	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**149**				millivolts			04/28/16 14:09	1
pH, Field	**7.39**				SU			04/28/16 14:09	1
Specific Conductance	**1294**				umhos/cm			04/28/16 14:09	1
Temperature, Field (C)	**9.7**				Degrees C			04/28/16 14:09	1
Turbidity, Field	**1.78**				NTU			04/28/16 14:09	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: MW-14N
Date Collected: 04/28/16 11:57
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-4
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1-Dichloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,1-Dichloroethene	ND		1.0		ug/L			05/10/16 00:33	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/10/16 00:33	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/10/16 00:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/10/16 00:33	1
1,2-Dibromoethane	ND		1.0		ug/L			05/10/16 00:33	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:33	1
1,2-Dichloroethane	ND		1.0		ug/L			05/10/16 00:33	1
1,2-Dichloropropane	ND		1.0		ug/L			05/10/16 00:33	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:33	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/10/16 00:33	1
2-Butanone (MEK)	ND		10		ug/L			05/10/16 00:33	1
2-Hexanone	ND		5.0		ug/L			05/10/16 00:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/10/16 00:33	1
Acetone	ND		10		ug/L			05/10/16 00:33	1
Acetonitrile	ND		15		ug/L			05/10/16 00:33	1
Benzene	ND		1.0		ug/L			05/10/16 00:33	1
Bromochloromethane	ND		1.0		ug/L			05/10/16 00:33	1
Bromodichloromethane	ND		1.0		ug/L			05/10/16 00:33	1
Bromoform	ND		1.0		ug/L			05/10/16 00:33	1
Bromomethane	ND		1.0		ug/L			05/10/16 00:33	1
Carbon disulfide	ND		1.0		ug/L			05/10/16 00:33	1
Carbon tetrachloride	ND		1.0		ug/L			05/10/16 00:33	1
Chlorobenzene	ND		1.0		ug/L			05/10/16 00:33	1
Chloroethane	ND		1.0		ug/L			05/10/16 00:33	1
Chloroform	ND		1.0		ug/L			05/10/16 00:33	1
Chloromethane	ND		1.0		ug/L			05/10/16 00:33	1
cis-1,2-Dichloroethene	**21**		1.0		ug/L			05/10/16 00:33	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 00:33	1
Cyclohexane	ND		1.0		ug/L			05/10/16 00:33	1
Dibromochloromethane	ND		1.0		ug/L			05/10/16 00:33	1
Dibromomethane	ND		1.0		ug/L			05/10/16 00:33	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/10/16 00:33	1
Ethylbenzene	ND		1.0		ug/L			05/10/16 00:33	1
Iodomethane	ND		1.0		ug/L			05/10/16 00:33	1
Isopropylbenzene	ND		1.0		ug/L			05/10/16 00:33	1
m,p-Xylene	ND		2.0		ug/L			05/10/16 00:33	1
Methyl acetate	ND		2.5		ug/L			05/10/16 00:33	1
Methylcyclohexane	ND		1.0		ug/L			05/10/16 00:33	1
Methylene Chloride	ND		1.0		ug/L			05/10/16 00:33	1
o-Xylene	ND		1.0		ug/L			05/10/16 00:33	1
Styrene	ND		1.0		ug/L			05/10/16 00:33	1
Tetrachloroethene	ND		1.0		ug/L			05/10/16 00:33	1
Toluene	ND		1.0		ug/L			05/10/16 00:33	1

Client Sample ID: MW-14N
Date Collected: 04/28/16 11:57
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-4
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/10/16 00:33	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 00:33	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/10/16 00:33	1
Trichloroethene	ND		1.0		ug/L			05/10/16 00:33	1
Trichlorofluoromethane	ND		1.0		ug/L			05/10/16 00:33	1
Vinyl acetate	ND		5.0		ug/L			05/10/16 00:33	1
Vinyl chloride	**1.1**		1.0		ug/L			05/10/16 00:33	1
Xylenes, Total	ND		2.0		ug/L			05/10/16 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*66 - 137*		*05/10/16 00:33*	*1*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*		*05/10/16 00:33*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/10/16 00:33*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 21:57	1
Barium	**0.12**		0.0020		mg/L		04/29/16 11:25	04/29/16 21:57	1
Boron	**0.11**		0.020		mg/L		04/29/16 11:25	04/29/16 21:57	1
Chromium	ND		0.0040		mg/L		04/29/16 11:25	04/29/16 21:57	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 21:57	1
Manganese	**0.090**		0.0030		mg/L		04/29/16 11:25	04/29/16 21:57	1
Potassium	**2.6**		0.50		mg/L		04/29/16 11:25	04/29/16 21:57	1
Sodium	**68.8**		1.0		mg/L		04/29/16 11:25	04/29/16 21:57	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 21:57	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 13:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.32**		0.20		mg/L			05/05/16 16:48	1
Chloride	**132**		5.0		mg/L			05/04/16 00:44	10
Sulfate	**160**		20.0		mg/L			05/04/16 00:44	10
Chemical Oxygen Demand	ND		10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**844**		10.0		mg/L			05/04/16 17:13	1
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**2.0**		1.0		mg/L			05/05/16 05:42	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**67**				millivolts			04/28/16 11:57	1
pH, Field	**6.98**				SU			04/28/16 11:57	1
Specific Conductance	**1368**				umhos/cm			04/28/16 11:57	1
Temperature, Field (C)	**10.1**				Degrees C			04/28/16 11:57	1
Turbidity, Field	**2.48**				NTU			04/28/16 11:57	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: MW-5R
Date Collected: 04/28/16 12:40
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-5
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1-Dichloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,1-Dichloroethene	ND		1.0		ug/L			05/10/16 01:00	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/10/16 01:00	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/10/16 01:00	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/10/16 01:00	1
1,2-Dibromoethane	ND		1.0		ug/L			05/10/16 01:00	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/10/16 01:00	1
1,2-Dichloroethane	ND		1.0		ug/L			05/10/16 01:00	1
1,2-Dichloropropane	ND		1.0		ug/L			05/10/16 01:00	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/10/16 01:00	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/10/16 01:00	1
2-Butanone (MEK)	ND		10		ug/L			05/10/16 01:00	1
2-Hexanone	ND		5.0		ug/L			05/10/16 01:00	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/10/16 01:00	1
Acetone	ND		10		ug/L			05/10/16 01:00	1
Acetonitrile	ND		15		ug/L			05/10/16 01:00	1
Benzene	ND		1.0		ug/L			05/10/16 01:00	1
Bromochloromethane	ND		1.0		ug/L			05/10/16 01:00	1
Bromodichloromethane	ND		1.0		ug/L			05/10/16 01:00	1
Bromoform	ND		1.0		ug/L			05/10/16 01:00	1
Bromomethane	ND		1.0		ug/L			05/10/16 01:00	1
Carbon disulfide	ND		1.0		ug/L			05/10/16 01:00	1
Carbon tetrachloride	ND		1.0		ug/L			05/10/16 01:00	1
Chlorobenzene	ND		1.0		ug/L			05/10/16 01:00	1
Chloroethane	ND		1.0		ug/L			05/10/16 01:00	1
Chloroform	ND		1.0		ug/L			05/10/16 01:00	1
Chloromethane	ND		1.0		ug/L			05/10/16 01:00	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/10/16 01:00	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 01:00	1
Cyclohexane	ND		1.0		ug/L			05/10/16 01:00	1
Dibromochloromethane	ND		1.0		ug/L			05/10/16 01:00	1
Dibromomethane	ND		1.0		ug/L			05/10/16 01:00	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/10/16 01:00	1
Ethylbenzene	ND		1.0		ug/L			05/10/16 01:00	1
Iodomethane	ND		1.0		ug/L			05/10/16 01:00	1
Isopropylbenzene	ND		1.0		ug/L			05/10/16 01:00	1
m,p-Xylene	ND		2.0		ug/L			05/10/16 01:00	1
Methyl acetate	ND		2.5		ug/L			05/10/16 01:00	1
Methylcyclohexane	ND		1.0		ug/L			05/10/16 01:00	1
Methylene Chloride	ND		1.0		ug/L			05/10/16 01:00	1
o-Xylene	ND		1.0		ug/L			05/10/16 01:00	1
Styrene	ND		1.0		ug/L			05/10/16 01:00	1
Tetrachloroethene	ND		1.0		ug/L			05/10/16 01:00	1
Toluene	ND		1.0		ug/L			05/10/16 01:00	1

Client Sample ID: MW-5R
Date Collected: 04/28/16 12:40
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-5
Matrix: Ground Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/10/16 01:00	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/10/16 01:00	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/10/16 01:00	1
Trichloroethene	ND		1.0		ug/L			05/10/16 01:00	1
Trichlorofluoromethane	ND		1.0		ug/L			05/10/16 01:00	1
Vinyl acetate	ND		5.0		ug/L			05/10/16 01:00	1
Vinyl chloride	ND		1.0		ug/L			05/10/16 01:00	1
Xylenes, Total	ND		2.0		ug/L			05/10/16 01:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*66 - 137*		*05/10/16 01:00*	*1*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/10/16 01:00*	*1*
Toluene-d8 (Surr)	*103*		*71 - 126*		*05/10/16 01:00*	*1*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 22:01	1
Barium	**0.056**		0.0020		mg/L		04/29/16 11:25	04/29/16 22:01	1
Boron	**0.17**		0.020		mg/L		04/29/16 11:25	04/29/16 22:01	1
Chromium	ND		0.0040		mg/L		04/29/16 11:25	04/29/16 22:01	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 22:01	1
Manganese	**0.019**		0.0030		mg/L		04/29/16 11:25	04/29/16 22:01	1
Potassium	**20.1**		0.50		mg/L		04/29/16 11:25	04/29/16 22:01	1
Sodium	**70.3**		1.0		mg/L		04/29/16 11:25	04/29/16 22:01	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 22:01	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 14:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.98**		0.40		mg/L			05/05/16 17:03	2
Chloride	**85.6**		1.0		mg/L			05/05/16 17:03	2
Sulfate	**164**		4.0		mg/L			05/05/16 17:03	2
Chemical Oxygen Demand	ND		10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**531**		10.0		mg/L			05/04/16 17:13	1
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**4.5**		1.0		mg/L			05/05/16 05:58	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**115**				millivolts			04/28/16 12:40	1
pH, Field	**7.78**				SU			04/28/16 12:40	1
Specific Conductance	**886**				umhos/cm			04/28/16 12:40	1
Temperature, Field (C)	**9.0**				Degrees C			04/28/16 12:40	1
Turbidity, Field	**1.29**				NTU			04/28/16 12:40	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: Leachate
Date Collected: 04/28/16 12:15
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-6
Matrix: Leachate

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1,1-Trichloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1,2,2-Tetrachloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1,2-Trichloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1-Dichloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,1-Dichloroethene	ND		2.0		ug/L			05/10/16 01:27	2
1,2,3-Trichloropropane	ND		2.0		ug/L			05/10/16 01:27	2
1,2,4-Trichlorobenzene	ND		2.0		ug/L			05/10/16 01:27	2
1,2-Dibromo-3-Chloropropane	ND		2.0		ug/L			05/10/16 01:27	2
1,2-Dibromoethane	ND		2.0		ug/L			05/10/16 01:27	2
1,2-Dichlorobenzene	ND		2.0		ug/L			05/10/16 01:27	2
1,2-Dichloroethane	ND		2.0		ug/L			05/10/16 01:27	2
1,2-Dichloropropane	ND		2.0		ug/L			05/10/16 01:27	2
1,3-Dichlorobenzene	ND		2.0		ug/L			05/10/16 01:27	2
1,4-Dichlorobenzene	ND		2.0		ug/L			05/10/16 01:27	2
2-Butanone (MEK)	ND		20		ug/L			05/10/16 01:27	2
2-Hexanone	ND		10		ug/L			05/10/16 01:27	2
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			05/10/16 01:27	2
Acetone	ND		20		ug/L			05/10/16 01:27	2
Acetonitrile	ND		30		ug/L			05/10/16 01:27	2
Benzene	ND		2.0		ug/L			05/10/16 01:27	2
Bromochloromethane	ND		2.0		ug/L			05/10/16 01:27	2
Bromodichloromethane	ND		2.0		ug/L			05/10/16 01:27	2
Bromoform	ND		2.0		ug/L			05/10/16 01:27	2
Bromomethane	ND		2.0		ug/L			05/10/16 01:27	2
Carbon disulfide	ND		2.0		ug/L			05/10/16 01:27	2
Carbon tetrachloride	ND		2.0		ug/L			05/10/16 01:27	2
Chlorobenzene	ND		2.0		ug/L			05/10/16 01:27	2
Chloroethane	ND		2.0		ug/L			05/10/16 01:27	2
Chloroform	ND		2.0		ug/L			05/10/16 01:27	2
Chloromethane	ND		2.0		ug/L			05/10/16 01:27	2
cis-1,2-Dichloroethene	ND		2.0		ug/L			05/10/16 01:27	2
cis-1,3-Dichloropropene	ND		2.0		ug/L			05/10/16 01:27	2
Cyclohexane	ND		2.0		ug/L			05/10/16 01:27	2
Dibromochloromethane	ND		2.0		ug/L			05/10/16 01:27	2
Dibromomethane	ND		2.0		ug/L			05/10/16 01:27	2
Dichlorodifluoromethane	ND		2.0		ug/L			05/10/16 01:27	2
Ethylbenzene	ND		2.0		ug/L			05/10/16 01:27	2
Iodomethane	ND		2.0		ug/L			05/10/16 01:27	2
Isopropylbenzene	ND		2.0		ug/L			05/10/16 01:27	2
m,p-Xylene	ND		4.0		ug/L			05/10/16 01:27	2
Methyl acetate	ND		5.0		ug/L			05/10/16 01:27	2
Methylcyclohexane	ND		2.0		ug/L			05/10/16 01:27	2
Methylene Chloride	ND		2.0		ug/L			05/10/16 01:27	2
o-Xylene	ND		2.0		ug/L			05/10/16 01:27	2
Styrene	ND		2.0		ug/L			05/10/16 01:27	2
Tetrachloroethene	ND		2.0		ug/L			05/10/16 01:27	2
Toluene	ND		2.0		ug/L			05/10/16 01:27	2

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: Leachate
Date Collected: 04/28/16 12:15
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-6
Matrix: Leachate

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		2.0		ug/L			05/10/16 01:27	2
trans-1,3-Dichloropropene	ND		2.0		ug/L			05/10/16 01:27	2
trans-1,4-Dichloro-2-butene	ND		2.0		ug/L			05/10/16 01:27	2
Trichloroethene	ND		2.0		ug/L			05/10/16 01:27	2
Trichlorofluoromethane	ND		2.0		ug/L			05/10/16 01:27	2
Vinyl acetate	ND		10		ug/L			05/10/16 01:27	2
Vinyl chloride	ND		2.0		ug/L			05/10/16 01:27	2
Xylenes, Total	ND		4.0		ug/L			05/10/16 01:27	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*66 - 137*		*05/10/16 01:27*	*2*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*		*05/10/16 01:27*	*2*
Toluene-d8 (Surr)	*102*		*71 - 126*		*05/10/16 01:27*	*2*

Method: 6010C - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 22:04	1
Barium	**0.057**		0.0020		mg/L		04/29/16 11:25	04/29/16 22:04	1
Boron	**0.32**		0.020		mg/L		04/29/16 11:25	04/29/16 22:04	1
Chromium	**0.037**		0.0040		mg/L		04/29/16 11:25	04/29/16 22:04	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 22:04	1
Manganese	**0.016**		0.0030		mg/L		04/29/16 11:25	04/29/16 22:04	1
Potassium	**74.2**		0.50		mg/L		04/29/16 11:25	04/29/16 22:04	1
Sodium	**74.0**		1.0		mg/L		04/29/16 11:25	04/29/16 22:04	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 22:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 14:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**2.3**		0.20		mg/L			05/05/16 18:45	1
Chloride	**70.6**		2.5		mg/L			05/04/16 02:26	5
Sulfate	**68.2**		10.0		mg/L			05/04/16 02:26	5
Chemical Oxygen Demand	**11.6**	**F1**	10.0		mg/L			05/02/16 05:22	1
Total Dissolved Solids	**681**		10.0		mg/L			05/04/16 17:13	1
Chromium, hexavalent	**0.021**		0.010		mg/L			04/28/16 21:58	1
Total Organic Carbon	**6.8**		1.0		mg/L			05/05/16 07:19	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field EH/ORP	**105**				millivolts			04/28/16 12:15	1
pH, Field	**7.59**				SU			04/28/16 12:15	1
Specific Conductance	**1202**				umhos/cm			04/28/16 12:15	1
Temperature, Field (C)	**7.5**				Degrees C			04/28/16 12:15	1
Turbidity, Field	**1.48**				NTU			04/28/16 12:15	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: Trip Blank
Date Collected: 04/28/16 00:00
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1-Dichloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,1-Dichloroethene	ND		1.0		ug/L			05/09/16 23:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/09/16 23:29	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/09/16 23:29	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/09/16 23:29	1
1,2-Dibromoethane	ND		1.0		ug/L			05/09/16 23:29	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:29	1
1,2-Dichloroethane	ND		1.0		ug/L			05/09/16 23:29	1
1,2-Dichloropropane	ND		1.0		ug/L			05/09/16 23:29	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:29	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/09/16 23:29	1
2-Butanone (MEK)	ND		10		ug/L			05/09/16 23:29	1
2-Hexanone	ND		5.0		ug/L			05/09/16 23:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/09/16 23:29	1
Acetone	ND		10		ug/L			05/09/16 23:29	1
Acetonitrile	ND		15		ug/L			05/09/16 23:29	1
Benzene	ND		1.0		ug/L			05/09/16 23:29	1
Bromochloromethane	ND		1.0		ug/L			05/09/16 23:29	1
Bromodichloromethane	ND		1.0		ug/L			05/09/16 23:29	1
Bromoform	ND		1.0		ug/L			05/09/16 23:29	1
Bromomethane	ND		1.0		ug/L			05/09/16 23:29	1
Carbon disulfide	ND		1.0		ug/L			05/09/16 23:29	1
Carbon tetrachloride	ND		1.0		ug/L			05/09/16 23:29	1
Chlorobenzene	ND		1.0		ug/L			05/09/16 23:29	1
Chloroethane	ND		1.0		ug/L			05/09/16 23:29	1
Chloroform	ND		1.0		ug/L			05/09/16 23:29	1
Chloromethane	ND		1.0		ug/L			05/09/16 23:29	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:29	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:29	1
Cyclohexane	ND		1.0		ug/L			05/09/16 23:29	1
Dibromochloromethane	ND		1.0		ug/L			05/09/16 23:29	1
Dibromomethane	ND		1.0		ug/L			05/09/16 23:29	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/09/16 23:29	1
Ethylbenzene	ND		1.0		ug/L			05/09/16 23:29	1
Iodomethane	ND		1.0		ug/L			05/09/16 23:29	1
Isopropylbenzene	ND		1.0		ug/L			05/09/16 23:29	1
m,p-Xylene	ND		2.0		ug/L			05/09/16 23:29	1
Methyl acetate	ND		2.5		ug/L			05/09/16 23:29	1
Methylcyclohexane	ND		1.0		ug/L			05/09/16 23:29	1
Methylene Chloride	ND		1.0		ug/L			05/09/16 23:29	1
o-Xylene	ND		1.0		ug/L			05/09/16 23:29	1
Styrene	ND		1.0		ug/L			05/09/16 23:29	1
Tetrachloroethene	ND		1.0		ug/L			05/09/16 23:29	1
Toluene	ND		1.0		ug/L			05/09/16 23:29	1

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: Trip Blank
Date Collected: 04/28/16 00:00
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-7
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 23:29	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 23:29	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/09/16 23:29	1
Trichloroethene	ND		1.0		ug/L			05/09/16 23:29	1
Trichlorofluoromethane	ND		1.0		ug/L			05/09/16 23:29	1
Vinyl acetate	ND		5.0		ug/L			05/09/16 23:29	1
Vinyl chloride	ND		1.0		ug/L			05/09/16 23:29	1
Xylenes, Total	ND		2.0		ug/L			05/09/16 23:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*84*		*66 - 137*		*05/09/16 23:29*	*1*
4-Bromofluorobenzene (Surr)	*103*		*73 - 120*		*05/09/16 23:29*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/09/16 23:29*	*1*

Surrogate Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-99235-1	BR-1	109	98	103
480-99235-2	MW-3R	101	97	103
480-99235-3	MW-12	103	98	101
480-99235-4	MW-14N	105	96	103
480-99235-5	MW-5R	103	98	103

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Leachate — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-99235-6	Leachate	104	98	102

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	TOL
Lab Sample ID	Client Sample ID	(66-137)	(73-120)	(71-126)
480-99235-7	Trip Blank	84	103	100
MB 480-300766/7	Method Blank	86	102	100
MB 480-300770/8	Method Blank	106	99	104

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-300766/7
Matrix: Water
Analysis Batch: 300766

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1-Dichloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,1-Dichloroethene	ND		1.0		ug/L			05/09/16 22:32	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/09/16 22:32	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/09/16 22:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/09/16 22:32	1
1,2-Dibromoethane	ND		1.0		ug/L			05/09/16 22:32	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:32	1
1,2-Dichloroethane	ND		1.0		ug/L			05/09/16 22:32	1
1,2-Dichloropropane	ND		1.0		ug/L			05/09/16 22:32	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:32	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:32	1
2-Butanone (MEK)	ND		10		ug/L			05/09/16 22:32	1
2-Hexanone	ND		5.0		ug/L			05/09/16 22:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/09/16 22:32	1
Acetone	ND		10		ug/L			05/09/16 22:32	1
Acetonitrile	ND		15		ug/L			05/09/16 22:32	1
Benzene	ND		1.0		ug/L			05/09/16 22:32	1
Bromochloromethane	ND		1.0		ug/L			05/09/16 22:32	1
Bromodichloromethane	ND		1.0		ug/L			05/09/16 22:32	1
Bromoform	ND		1.0		ug/L			05/09/16 22:32	1
Bromomethane	ND		1.0		ug/L			05/09/16 22:32	1
Carbon disulfide	ND		1.0		ug/L			05/09/16 22:32	1
Carbon tetrachloride	ND		1.0		ug/L			05/09/16 22:32	1
Chlorobenzene	ND		1.0		ug/L			05/09/16 22:32	1
Chloroethane	ND		1.0		ug/L			05/09/16 22:32	1
Chloroform	ND		1.0		ug/L			05/09/16 22:32	1
Chloromethane	ND		1.0		ug/L			05/09/16 22:32	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 22:32	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 22:32	1
Cyclohexane	ND		1.0		ug/L			05/09/16 22:32	1
Dibromochloromethane	ND		1.0		ug/L			05/09/16 22:32	1
Dibromomethane	ND		1.0		ug/L			05/09/16 22:32	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/09/16 22:32	1
Ethylbenzene	ND		1.0		ug/L			05/09/16 22:32	1
Iodomethane	ND		1.0		ug/L			05/09/16 22:32	1
Isopropylbenzene	ND		1.0		ug/L			05/09/16 22:32	1
m,p-Xylene	ND		2.0		ug/L			05/09/16 22:32	1
Methyl acetate	ND		2.5		ug/L			05/09/16 22:32	1
Methylcyclohexane	ND		1.0		ug/L			05/09/16 22:32	1
Methylene Chloride	ND		1.0		ug/L			05/09/16 22:32	1
o-Xylene	ND		1.0		ug/L			05/09/16 22:32	1
Styrene	ND		1.0		ug/L			05/09/16 22:32	1
Tetrachloroethene	ND		1.0		ug/L			05/09/16 22:32	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-300766/7
Matrix: Water
Analysis Batch: 300766

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		1.0		ug/L			05/09/16 22:32	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 22:32	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 22:32	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/09/16 22:32	1
Trichloroethene	ND		1.0		ug/L			05/09/16 22:32	1
Trichlorofluoromethane	ND		1.0		ug/L			05/09/16 22:32	1
Vinyl acetate	ND		5.0		ug/L			05/09/16 22:32	1
Vinyl chloride	ND		1.0		ug/L			05/09/16 22:32	1
Xylenes, Total	ND		2.0		ug/L			05/09/16 22:32	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*66 - 137*		*05/09/16 22:32*	*1*
4-Bromofluorobenzene (Surr)	*102*		*73 - 120*		*05/09/16 22:32*	*1*
Toluene-d8 (Surr)	*100*		*71 - 126*		*05/09/16 22:32*	*1*

Lab Sample ID: MB 480-300770/8
Matrix: Water
Analysis Batch: 300770

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1,1-Trichloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1,2-Trichloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1-Dichloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,1-Dichloroethene	ND		1.0		ug/L			05/09/16 22:36	1
1,2,3-Trichloropropane	ND		1.0		ug/L			05/09/16 22:36	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			05/09/16 22:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			05/09/16 22:36	1
1,2-Dibromoethane	ND		1.0		ug/L			05/09/16 22:36	1
1,2-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:36	1
1,2-Dichloroethane	ND		1.0		ug/L			05/09/16 22:36	1
1,2-Dichloropropane	ND		1.0		ug/L			05/09/16 22:36	1
1,3-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:36	1
1,4-Dichlorobenzene	ND		1.0		ug/L			05/09/16 22:36	1
2-Butanone (MEK)	ND		10		ug/L			05/09/16 22:36	1
2-Hexanone	ND		5.0		ug/L			05/09/16 22:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0		ug/L			05/09/16 22:36	1
Acetone	ND		10		ug/L			05/09/16 22:36	1
Acetonitrile	ND		15		ug/L			05/09/16 22:36	1
Benzene	ND		1.0		ug/L			05/09/16 22:36	1
Bromochloromethane	ND		1.0		ug/L			05/09/16 22:36	1
Bromodichloromethane	ND		1.0		ug/L			05/09/16 22:36	1
Bromoform	ND		1.0		ug/L			05/09/16 22:36	1
Bromomethane	ND		1.0		ug/L			05/09/16 22:36	1
Carbon disulfide	ND		1.0		ug/L			05/09/16 22:36	1
Carbon tetrachloride	ND		1.0		ug/L			05/09/16 22:36	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 480-300770/8
Matrix: Water
Analysis Batch: 300770

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0		ug/L			05/09/16 22:36	1
Chloroethane	ND		1.0		ug/L			05/09/16 22:36	1
Chloroform	ND		1.0		ug/L			05/09/16 22:36	1
Chloromethane	ND		1.0		ug/L			05/09/16 22:36	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 22:36	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 22:36	1
Cyclohexane	ND		1.0		ug/L			05/09/16 22:36	1
Dibromochloromethane	ND		1.0		ug/L			05/09/16 22:36	1
Dibromomethane	ND		1.0		ug/L			05/09/16 22:36	1
Dichlorodifluoromethane	ND		1.0		ug/L			05/09/16 22:36	1
Ethylbenzene	ND		1.0		ug/L			05/09/16 22:36	1
Iodomethane	ND		1.0		ug/L			05/09/16 22:36	1
Isopropylbenzene	ND		1.0		ug/L			05/09/16 22:36	1
m,p-Xylene	ND		2.0		ug/L			05/09/16 22:36	1
Methyl acetate	ND		2.5		ug/L			05/09/16 22:36	1
Methylcyclohexane	ND		1.0		ug/L			05/09/16 22:36	1
Methylene Chloride	ND		1.0		ug/L			05/09/16 22:36	1
o-Xylene	ND		1.0		ug/L			05/09/16 22:36	1
Styrene	ND		1.0		ug/L			05/09/16 22:36	1
Tetrachloroethene	ND		1.0		ug/L			05/09/16 22:36	1
Toluene	ND		1.0		ug/L			05/09/16 22:36	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			05/09/16 22:36	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			05/09/16 22:36	1
trans-1,4-Dichloro-2-butene	ND		1.0		ug/L			05/09/16 22:36	1
Trichloroethene	ND		1.0		ug/L			05/09/16 22:36	1
Trichlorofluoromethane	ND		1.0		ug/L			05/09/16 22:36	1
Vinyl acetate	ND		5.0		ug/L			05/09/16 22:36	1
Vinyl chloride	ND		1.0		ug/L			05/09/16 22:36	1
Xylenes, Total	ND		2.0		ug/L			05/09/16 22:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*66 - 137*		*05/09/16 22:36*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*05/09/16 22:36*	*1*
Toluene-d8 (Surr)	*104*		*71 - 126*		*05/09/16 22:36*	*1*

Method: 6010C - Metals (ICP)

Lab Sample ID: MB 480-299015/1-A
Matrix: Water
Analysis Batch: 299451

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 299015

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015		mg/L		04/29/16 11:25	04/29/16 21:16	1
Barium	ND		0.0020		mg/L		04/29/16 11:25	04/29/16 21:16	1
Boron	ND		0.020		mg/L		04/29/16 11:25	04/29/16 21:16	1
Chromium	ND		0.0040		mg/L		04/29/16 11:25	04/29/16 21:16	1
Lead	ND		0.010		mg/L		04/29/16 11:25	04/29/16 21:16	1
Manganese	ND		0.0030		mg/L		04/29/16 11:25	04/29/16 21:16	1

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: MB 480-299015/1-A
Matrix: Water
Analysis Batch: 299451

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 299015

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND	^	0.50		mg/L		04/29/16 11:25	04/29/16 21:16	1
Sodium	ND		1.0		mg/L		04/29/16 11:25	04/29/16 21:16	1
Selenium	ND		0.025		mg/L		04/29/16 11:25	04/29/16 21:16	1

Lab Sample ID: LCS 480-299015/2-A
Matrix: Water
Analysis Batch: 299451

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 299015

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	0.400	0.437		mg/L		109	80 - 120
Barium	0.200	0.207		mg/L		103	80 - 120
Boron	0.200	0.207		mg/L		104	80 - 120
Chromium	0.400	0.398		mg/L		100	80 - 120
Lead	0.400	0.406		mg/L		102	80 - 120
Manganese	0.400	0.389		mg/L		97	80 - 120
Potassium	10.0	9.93	^	mg/L		99	80 - 120
Sodium	10.0	10.04		mg/L		100	80 - 120
Selenium	0.400	0.404		mg/L		101	80 - 120

Lab Sample ID: LCSD 480-299015/3-A
Matrix: Water
Analysis Batch: 299451

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 299015

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	0.400	0.432		mg/L		108	80 - 120	1	20
Barium	0.200	0.208		mg/L		104	80 - 120	0	20
Boron	0.200	0.206		mg/L		103	80 - 120	1	20
Chromium	0.400	0.403		mg/L		101	80 - 120	1	20
Lead	0.400	0.408		mg/L		102	80 - 120	0	20
Manganese	0.400	0.390		mg/L		97	80 - 120	0	20
Potassium	10.0	9.97	^	mg/L		100	80 - 120	0	20
Sodium	10.0	10.15		mg/L		101	80 - 120	1	20
Selenium	0.400	0.401		mg/L		100	80 - 120	1	20

Lab Sample ID: 480-99235-1 MS
Matrix: Ground Water
Analysis Batch: 299451

Client Sample ID: BR-1
Prep Type: Total/NA
Prep Batch: 299015

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	ND		0.400	0.430		mg/L		107	75 - 125
Barium	0.10		0.200	0.295		mg/L		97	75 - 125
Boron	0.13		0.200	0.321		mg/L		98	75 - 125
Chromium	ND		0.400	0.392		mg/L		98	75 - 125
Lead	ND		0.400	0.402		mg/L		100	75 - 125
Manganese	0.21		0.400	0.576		mg/L		92	75 - 125
Potassium	9.4	^	10.0	18.55	^	mg/L		92	75 - 125
Sodium	36.2		10.0	44.46		mg/L		82	75 - 125
Selenium	ND		0.400	0.397		mg/L		99	75 - 125

Method: 6010C - Metals (ICP) (Continued)

Lab Sample ID: 480-99235-1 MSD — **Client Sample ID: BR-1**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 299451 — **Prep Batch: 299015**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	ND		0.400	0.455		mg/L		114	75 - 125	6	20
Barium	0.10		0.200	0.307		mg/L		103	75 - 125	4	20
Boron	0.13		0.200	0.334		mg/L		104	75 - 125	4	20
Chromium	ND		0.400	0.419		mg/L		105	75 - 125	7	20
Lead	ND		0.400	0.428		mg/L		107	75 - 125	6	20
Manganese	0.21		0.400	0.616		mg/L		102	75 - 125	7	20
Potassium	9.4	^	10.0	19.61	^	mg/L		102	75 - 125	6	20
Sodium	36.2		10.0	46.93		mg/L		107	75 - 125	5	20
Selenium	ND		0.400	0.411		mg/L		103	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 480-299058/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 299430 — **Prep Batch: 299058**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		05/02/16 09:10	05/02/16 13:41	1

Lab Sample ID: LCS 480-299058/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 299430 — **Prep Batch: 299058**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.00667		mg/L		100	80 - 120

Lab Sample ID: 480-99235-2 MS — **Client Sample ID: MW-3R**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 299430 — **Prep Batch: 299058**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	ND		0.00667	0.00680		mg/L		102	80 - 120

Lab Sample ID: 480-99235-2 MSD — **Client Sample ID: MW-3R**
Matrix: Ground Water — **Prep Type: Total/NA**
Analysis Batch: 299430 — **Prep Batch: 299058**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	ND		0.00667	0.00675		mg/L		101	80 - 120	1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-299618/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 299618

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20		mg/L			05/03/16 23:31	1
Chloride	ND		0.50		mg/L			05/03/16 23:31	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 480-299618/4
Matrix: Water
Analysis Batch: 299618

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0		mg/L			05/03/16 23:31	1

Lab Sample ID: LCS 480-299618/3
Matrix: Water
Analysis Batch: 299618

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.46		mg/L		109	90 - 110
Chloride	50.0	52.25		mg/L		104	90 - 110
Sulfate	50.0	50.42		mg/L		101	90 - 110

Lab Sample ID: MB 480-300147/4
Matrix: Water
Analysis Batch: 300147

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.20		mg/L			05/05/16 15:50	1
Chloride	ND		0.50		mg/L			05/05/16 15:50	1
Sulfate	ND		2.0		mg/L			05/05/16 15:50	1

Lab Sample ID: LCS 480-300147/3
Matrix: Water
Analysis Batch: 300147

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	5.09		mg/L		102	90 - 110
Chloride	50.0	51.52		mg/L		103	90 - 110
Sulfate	50.0	50.66		mg/L		101	90 - 110

Method: 410.4 - COD

Lab Sample ID: MB 480-299282/3
Matrix: Water
Analysis Batch: 299282

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		10.0		mg/L			05/02/16 05:22	1

Lab Sample ID: LCS 480-299282/4
Matrix: Water
Analysis Batch: 299282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	25.0	25.05		mg/L		100	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: 480-99235-1 MS
Matrix: Ground Water
Analysis Batch: 299282

Client Sample ID: BR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND	F1	50.0	70.16	F1	mg/L		140	75 - 125

Lab Sample ID: 480-99235-6 MS
Matrix: Leachate
Analysis Batch: 299282

Client Sample ID: Leachate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	11.6	F1	50.0	76.37	F1	mg/L		129	75 - 125

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 480-299829/1
Matrix: Water
Analysis Batch: 299829

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L			05/04/16 08:26	1

Lab Sample ID: LCS 480-299829/2
Matrix: Water
Analysis Batch: 299829

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	540	519.0		mg/L		96	85 - 115

Lab Sample ID: MB 480-299986/1
Matrix: Water
Analysis Batch: 299986

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10.0		mg/L			05/04/16 17:13	1

Lab Sample ID: LCS 480-299986/2
Matrix: Water
Analysis Batch: 299986

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	540	532.0		mg/L		99	85 - 115

Lab Sample ID: 480-99235-4 DU
Matrix: Ground Water
Analysis Batch: 299986

Client Sample ID: MW-14N
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	844		825.0		mg/L		2	10

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 480-298924/3
Matrix: Water
Analysis Batch: 298924

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.010		mg/L			04/28/16 21:58	1

Lab Sample ID: LCS 480-298924/4
Matrix: Water
Analysis Batch: 298924

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	0.0500	0.0524		mg/L		105	85 - 115

Lab Sample ID: 480-99235-2 MS
Matrix: Ground Water
Analysis Batch: 298924

Client Sample ID: MW-3R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium, hexavalent	ND		0.0500	0.0488		mg/L		98	85 - 115

Lab Sample ID: 480-99235-1 DU
Matrix: Ground Water
Analysis Batch: 298924

Client Sample ID: BR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/L		NC	15

Method: SM 5310D - Organic Carbon, Total (TOC)

Lab Sample ID: MB 480-300288/27
Matrix: Water
Analysis Batch: 300288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			05/05/16 00:21	1

Lab Sample ID: MB 480-300288/51
Matrix: Water
Analysis Batch: 300288

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			05/05/16 06:46	1

Lab Sample ID: LCS 480-300288/28
Matrix: Water
Analysis Batch: 300288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	60.0	59.87		mg/L		100	90 - 110

Method: SM 5310D - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 480-300288/52
Matrix: Water
Analysis Batch: 300288

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Organic Carbon			60.0	58.77		mg/L		98	90 - 110		

GC/MS VOA

Analysis Batch: 300766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-7	Trip Blank	Total/NA	Water	8260C	
MB 480-300766/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 300770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	8260C	
480-99235-2	MW-3R	Total/NA	Ground Water	8260C	
480-99235-3	MW-12	Total/NA	Ground Water	8260C	
480-99235-4	MW-14N	Total/NA	Ground Water	8260C	
480-99235-5	MW-5R	Total/NA	Ground Water	8260C	
480-99235-6	Leachate	Total/NA	Leachate	8260C	
MB 480-300770/8	Method Blank	Total/NA	Water	8260C	

Metals

Prep Batch: 299015

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	3005A	
480-99235-1 MS	BR-1	Total/NA	Ground Water	3005A	
480-99235-1 MSD	BR-1	Total/NA	Ground Water	3005A	
480-99235-2	MW-3R	Total/NA	Ground Water	3005A	
480-99235-3	MW-12	Total/NA	Ground Water	3005A	
480-99235-4	MW-14N	Total/NA	Ground Water	3005A	
480-99235-5	MW-5R	Total/NA	Ground Water	3005A	
480-99235-6	Leachate	Total/NA	Leachate	3005A	
LCS 480-299015/2-A	Lab Control Sample	Total/NA	Water	3005A	
LCSD 480-299015/3-A	Lab Control Sample Dup	Total/NA	Water	3005A	
MB 480-299015/1-A	Method Blank	Total/NA	Water	3005A	

Prep Batch: 299058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	7470A	
480-99235-2	MW-3R	Total/NA	Ground Water	7470A	
480-99235-2 MS	MW-3R	Total/NA	Ground Water	7470A	
480-99235-2 MSD	MW-3R	Total/NA	Ground Water	7470A	
480-99235-3	MW-12	Total/NA	Ground Water	7470A	
480-99235-4	MW-14N	Total/NA	Ground Water	7470A	
480-99235-5	MW-5R	Total/NA	Ground Water	7470A	
480-99235-6	Leachate	Total/NA	Leachate	7470A	
LCS 480-299058/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 480-299058/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 299430

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	7470A	299058
480-99235-2	MW-3R	Total/NA	Ground Water	7470A	299058
480-99235-2 MS	MW-3R	Total/NA	Ground Water	7470A	299058
480-99235-2 MSD	MW-3R	Total/NA	Ground Water	7470A	299058
480-99235-3	MW-12	Total/NA	Ground Water	7470A	299058
480-99235-4	MW-14N	Total/NA	Ground Water	7470A	299058

Metals (Continued)

Analysis Batch: 299430 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-5	MW-5R	Total/NA	Ground Water	7470A	299058
480-99235-6	Leachate	Total/NA	Leachate	7470A	299058
LCS 480-299058/2-A	Lab Control Sample	Total/NA	Water	7470A	299058
MB 480-299058/1-A	Method Blank	Total/NA	Water	7470A	299058

Analysis Batch: 299444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-2	MW-3R	Total/NA	Ground Water	6010C	299015

Analysis Batch: 299451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	6010C	299015
480-99235-1 MS	BR-1	Total/NA	Ground Water	6010C	299015
480-99235-1 MSD	BR-1	Total/NA	Ground Water	6010C	299015
480-99235-2	MW-3R	Total/NA	Ground Water	6010C	299015
480-99235-3	MW-12	Total/NA	Ground Water	6010C	299015
480-99235-4	MW-14N	Total/NA	Ground Water	6010C	299015
480-99235-5	MW-5R	Total/NA	Ground Water	6010C	299015
480-99235-6	Leachate	Total/NA	Leachate	6010C	299015
LCS 480-299015/2-A	Lab Control Sample	Total/NA	Water	6010C	299015
LCSD 480-299015/3-A	Lab Control Sample Dup	Total/NA	Water	6010C	299015
MB 480-299015/1-A	Method Blank	Total/NA	Water	6010C	299015

General Chemistry

Analysis Batch: 298924

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	SM 3500 CR B	
480-99235-1 DU	BR-1	Total/NA	Ground Water	SM 3500 CR B	
480-99235-2	MW-3R	Total/NA	Ground Water	SM 3500 CR B	
480-99235-2 MS	MW-3R	Total/NA	Ground Water	SM 3500 CR B	
480-99235-3	MW-12	Total/NA	Ground Water	SM 3500 CR B	
480-99235-4	MW-14N	Total/NA	Ground Water	SM 3500 CR B	
480-99235-5	MW-5R	Total/NA	Ground Water	SM 3500 CR B	
480-99235-6	Leachate	Total/NA	Leachate	SM 3500 CR B	
LCS 480-298924/4	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
MB 480-298924/3	Method Blank	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 299282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	410.4	
480-99235-1 MS	BR-1	Total/NA	Ground Water	410.4	
480-99235-2	MW-3R	Total/NA	Ground Water	410.4	
480-99235-3	MW-12	Total/NA	Ground Water	410.4	
480-99235-4	MW-14N	Total/NA	Ground Water	410.4	
480-99235-5	MW-5R	Total/NA	Ground Water	410.4	
480-99235-6	Leachate	Total/NA	Leachate	410.4	
480-99235-6 MS	Leachate	Total/NA	Leachate	410.4	
LCS 480-299282/4	Lab Control Sample	Total/NA	Water	410.4	
MB 480-299282/3	Method Blank	Total/NA	Water	410.4	

General Chemistry (Continued)

Analysis Batch: 299618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	300.0	
480-99235-2	MW-3R	Total/NA	Ground Water	300.0	
480-99235-3	MW-12	Total/NA	Ground Water	300.0	
480-99235-4	MW-14N	Total/NA	Ground Water	300.0	
480-99235-6	Leachate	Total/NA	Leachate	300.0	
LCS 480-299618/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-299618/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 299829

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	SM 2540C	
LCS 480-299829/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 480-299829/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 299986

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-2	MW-3R	Total/NA	Ground Water	SM 2540C	
480-99235-3	MW-12	Total/NA	Ground Water	SM 2540C	
480-99235-4	MW-14N	Total/NA	Ground Water	SM 2540C	
480-99235-4 DU	MW-14N	Total/NA	Ground Water	SM 2540C	
480-99235-5	MW-5R	Total/NA	Ground Water	SM 2540C	
480-99235-6	Leachate	Total/NA	Leachate	SM 2540C	
LCS 480-299986/2	Lab Control Sample	Total/NA	Water	SM 2540C	
MB 480-299986/1	Method Blank	Total/NA	Water	SM 2540C	

Analysis Batch: 300147

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	300.0	
480-99235-2	MW-3R	Total/NA	Ground Water	300.0	
480-99235-3	MW-12	Total/NA	Ground Water	300.0	
480-99235-4	MW-14N	Total/NA	Ground Water	300.0	
480-99235-5	MW-5R	Total/NA	Ground Water	300.0	
480-99235-6	Leachate	Total/NA	Leachate	300.0	
LCS 480-300147/3	Lab Control Sample	Total/NA	Water	300.0	
MB 480-300147/4	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 300288

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	SM 5310D	
480-99235-2	MW-3R	Total/NA	Ground Water	SM 5310D	
480-99235-3	MW-12	Total/NA	Ground Water	SM 5310D	
480-99235-4	MW-14N	Total/NA	Ground Water	SM 5310D	
480-99235-5	MW-5R	Total/NA	Ground Water	SM 5310D	
480-99235-6	Leachate	Total/NA	Leachate	SM 5310D	
LCS 480-300288/28	Lab Control Sample	Total/NA	Water	SM 5310D	
LCS 480-300288/52	Lab Control Sample	Total/NA	Water	SM 5310D	
MB 480-300288/27	Method Blank	Total/NA	Water	SM 5310D	
MB 480-300288/51	Method Blank	Total/NA	Water	SM 5310D	

QC Association Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Field Service / Mobile Lab

Analysis Batch: 300309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-99235-1	BR-1	Total/NA	Ground Water	Field Sampling	
480-99235-2	MW-3R	Total/NA	Ground Water	Field Sampling	
480-99235-3	MW-12	Total/NA	Ground Water	Field Sampling	
480-99235-4	MW-14N	Total/NA	Ground Water	Field Sampling	
480-99235-5	MW-5R	Total/NA	Ground Water	Field Sampling	
480-99235-6	Leachate	Total/NA	Leachate	Field Sampling	

Lab Chronicle

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: BR-1

Date Collected: 04/28/16 13:23
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300770	05/09/16 23:13	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 21:25	AMH	TAL BUF
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 13:44	TAS	TAL BUF
Total/NA	Analysis	300.0		2	299618	05/04/16 00:00	CAV	TAL BUF
Total/NA	Analysis	300.0		1	300147	05/05/16 16:05	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299829	05/04/16 08:26	EKB	TAL BUF
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 04:53	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 13:23	FLD	TAL BUF

Client Sample ID: MW-3R

Date Collected: 04/28/16 11:07
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300770	05/09/16 23:40	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 21:41	AMH	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299444	05/02/16 09:45	AMH	TAL BUF
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 13:46	TAS	TAL BUF
Total/NA	Analysis	300.0		10	299618	05/04/16 00:15	CAV	TAL BUF
Total/NA	Analysis	300.0		1	300147	05/05/16 16:19	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299986	05/04/16 17:13	MGH	TAL BUF
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 05:10	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 11:07	FLD	TAL BUF

Client Sample ID: MW-12

Date Collected: 04/28/16 14:09
Date Received: 04/28/16 15:30

Lab Sample ID: 480-99235-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300770	05/10/16 00:06	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 21:54	AMH	TAL BUF

Client Sample ID: MW-12

Lab Sample ID: 480-99235-3

Date Collected: 04/28/16 14:09

Matrix: Ground Water

Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 13:57	TAS	TAL BUF
Total/NA	Analysis	300.0		10	299618	05/04/16 00:29	CAV	TAL BUF
Total/NA	Analysis	300.0		1	300147	05/05/16 16:34	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299986	05/04/16 17:13	MGH	TAL BUF
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 05:26	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 14:09	FLD	TAL BUF

Client Sample ID: MW-14N

Lab Sample ID: 480-99235-4

Date Collected: 04/28/16 11:57

Matrix: Ground Water

Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300770	05/10/16 00:33	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 21:57	AMH	TAL BUF
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 13:59	TAS	TAL BUF
Total/NA	Analysis	300.0		10	299618	05/04/16 00:44	CAV	TAL BUF
Total/NA	Analysis	300.0		1	300147	05/05/16 16:48	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299986	05/04/16 17:13	MGH	TAL BUF
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 05:42	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 11:57	FLD	TAL BUF

Client Sample ID: MW-5R

Lab Sample ID: 480-99235-5

Date Collected: 04/28/16 12:40

Matrix: Ground Water

Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300770	05/10/16 01:00	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 22:01	AMH	TAL BUF
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 14:00	TAS	TAL BUF
Total/NA	Analysis	300.0		2	300147	05/05/16 17:03	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299986	05/04/16 17:13	MGH	TAL BUF

Lab Chronicle

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Client Sample ID: MW-5R

Lab Sample ID: 480-99235-5

Date Collected: 04/28/16 12:40
Matrix: Ground Water
Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 05:58	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 12:40	FLD	TAL BUF

Client Sample ID: Leachate

Lab Sample ID: 480-99235-6

Date Collected: 04/28/16 12:15
Matrix: Leachate
Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		2	300770	05/10/16 01:27	SWO	TAL BUF
Total/NA	Prep	3005A			299015	04/29/16 11:25	BAE	TAL BUF
Total/NA	Analysis	6010C		1	299451	04/29/16 22:04	AMH	TAL BUF
Total/NA	Prep	7470A			299058	05/02/16 09:10	TAS	TAL BUF
Total/NA	Analysis	7470A		1	299430	05/02/16 14:02	TAS	TAL BUF
Total/NA	Analysis	300.0		5	299618	05/04/16 02:26	CAV	TAL BUF
Total/NA	Analysis	300.0		1	300147	05/05/16 18:45	CAV	TAL BUF
Total/NA	Analysis	410.4		1	299282	05/02/16 05:22	CDC	TAL BUF
Total/NA	Analysis	SM 2540C		1	299986	05/04/16 17:13	MGH	TAL BUF
Total/NA	Analysis	SM 3500 CR B		1	298924	04/28/16 21:58	DSC	TAL BUF
Total/NA	Analysis	SM 5310D		1	300288	05/05/16 07:19	DLG	TAL BUF
Total/NA	Analysis	Field Sampling		1	300309	04/28/16 12:15	FLD	TAL BUF

Client Sample ID: Trip Blank

Lab Sample ID: 480-99235-7

Date Collected: 04/28/16 00:00
Matrix: Water
Date Received: 04/28/16 15:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	300766	05/09/16 23:29	SWO	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Certification Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Field Sampling		Ground Water	Field EH/ORP
Field Sampling		Ground Water	pH, Field
Field Sampling		Ground Water	Specific Conductance
Field Sampling		Ground Water	Temperature, Field (C)
Field Sampling		Ground Water	Turbidity, Field
Field Sampling		Leachate	Field EH/ORP
Field Sampling		Leachate	pH, Field
Field Sampling		Leachate	Specific Conductance
Field Sampling		Leachate	Temperature, Field (C)
Field Sampling		Leachate	Turbidity, Field

Method Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF
7470A	Mercury (CVAA)	SW846	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
410.4	COD	MCAWW	TAL BUF
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL BUF
SM 3500 CR B	Chromium, Hexavalent	SM	TAL BUF
SM 5310D	Organic Carbon, Total (TOC)	SM	TAL BUF
Field Sampling	Field Sampling	EPA	TAL BUF

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: LAN Associates
Project/Site: Witmer Road G/W

TestAmerica Job ID: 480-99235-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-99235-1	BR-1	Ground Water	04/28/16 13:23	04/28/16 15:30
480-99235-2	MW-3R	Ground Water	04/28/16 11:07	04/28/16 15:30
480-99235-3	MW-12	Ground Water	04/28/16 14:09	04/28/16 15:30
480-99235-4	MW-14N	Ground Water	04/28/16 11:57	04/28/16 15:30
480-99235-5	MW-5R	Ground Water	04/28/16 12:40	04/28/16 15:30
480-99235-6	Leachate	Leachate	04/28/16 12:15	04/28/16 15:30
480-99235-7	Trip Blank	Water	04/28/16 00:00	04/28/16 15:30

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: TW, EB	Lab PM: Stone, Judy L	Carrier Tracking No(s):	COC No: 480-81162-16534.1
Client Contact: Gary Joiner	Phone: 585-455-0867	E-Mail: judy.stone@testamericainc.com		Page: Page 1 of 1

Company: CC Metals and Alloys LLC

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State, Zip: KY, 42029
Phone: 270-395-2155(Tel)
Email: gjoiner@ccmetals.com
Project Name: Witmer Road G/W/ Event Desc: Witmer Road G/W
Site: New York

Due Date Requested:
TAT Requested (days):
PO #: Purchase Order not required
WO #:
Project #: 48003429
SSOW#:

Analysis Request

480-99235 Chain of Custody

F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	300.0_28D - (MOD) Local Method	410.4 - Chemical Oxygen Demand	6010C, 7470A	SM6310D - (MOD) Local Method	8280C - TCL list OLM04.2	2540C_Calcd - Total Dissolved Solids	FieldSampling - (MOD) pH,Cond,Temp,Turb	3500_CR_B - Cr (VI)	Total Number of containers	Special Instructions/Note:
Preservation Code:							N	S	D	A	A	N	N	N		
BR-1	4-28-16	1323	G	Water			1	1	1	2	3	1		1	10	
MW-3R		1107		Water			1	1	1	2	3	1		1	10	
MW-12		1409		Water			1	1	1	2	3	1		1	10	
MW-14N		1157		Water			1	1	1	2	3	1		1	10	
MW-5R		1240		Water			1	1	1	2	3	1		1	10	
Leachate		1215		Water			1	1	1	2	3	1		1	10	
SW-1				Water												Dry, no Sample
TRIP BLANK		0900									2				2	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Shawn Wells	4-28-16 1530	TAL/Buf	[illegible]	4/28/16 1530	TAB
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 2.5 #1

FIELD OBSERVATIONS

Facility: CCMA- Witmer Rd Sample Point ID: BR-1

Field Personnel: TW, EB Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 4-28-16 / 1254 Cond of seal: ( ) Good (X) Cracked ____ %
( ) None ( ) Buried

Prot. Casing/riser height: - Cond of prot. Casing/riser: ( ) Unlocked (X) Good
( ) Loose ( ) Flush Mount
( ) Damaged ____

If prot.casing; depth to riser below: -

Gas Meter (Calibration/ Reading): % Gas: - / - % LEL: - / -

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm) - / -

PURGE INFORMATION:

Date / Time Initiated: 4-28-16 / 1256 Date / Time Completed: 4-28-16 / 1321

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 10.63 Elevation. G/W MSL: ____

Well Total Depth, Feet: 39.92 Method of Well Purge: peristaltic pump

One (1) Riser Volume, Gal: ____ Dedicated: (Y) / N

Total Volume Purged, Gal: ____ Purged To Dryness Y / (N)

Purge Observations: Low-Flow Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other
1311	WL 11.05	mL/min 200		10.7	7.85 (78)	488	1.24	64 (72)	
1316	11.08			10.2	7.71	488	1.28	57	
1321	11.08			10.1	7.59	488	1.26	32 (38)	

FIELD OBSERVATIONS

SAMPLING INFORMATION:

POINT ID BR-1

Date/Time 4-28-16 1323 Water Level @ Sampling, Feet: 11.08

Method of Sampling: peristaltic pump Dedicated: (Y)/ N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1323	10.1	7.59	488	1.26	32	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~ 44

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 4/28/16 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: CCMA- Witmer Rd Sample Point ID: MW-3R

Field Personnel: TW, EB Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 4-28-16 / 1030 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: – Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: –

Gas Meter (Calibration/ Reading): % Gas: – / – % LEL: – / –

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): – / –

PURGE INFORMATION:

Date / Time Initiated: 4-28-16 / 1035 Date / Time Completed: 4-28-16 / 1105

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 2.12 Elevation. G/W MSL:

Well Total Depth, Feet: 12.05 Method of Well Purge: peristaltic pump

One (1) Riser Volume, Gal: Dedicated: (Y) / (N) TW 4-28-16

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: Low flow Start clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (Temp)	Other
1050	2.53		9.4	6.20	1137	2.99 2.39 TW 4.89	175	
1055	2.55		9.4	6.43	1124	1.81 2.39 TW	158	
1100	2.56		9.3	6.46	1129	1.84	159	
1105	2.58		9.1	6.51	1131	1.82	158	

FIELD OBSERVATIONS

SAMPLING INFORMATION

POINT ID MW-3R

Date/Time 4-28-16 1107 Water Level @ Sampling, Feet: 2.58

Method of Sampling: Peristaltic pump Dedicated: (Y) / N

Multi-phased/ layered: ( ) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1107	9.1	6.51	1131	1.82	158	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~40

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 4/28/16 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: CCMA - Witmer Rd Sample Point ID: MW-12

Field Personnel: TW, EB Sample Matrix: G-W

MONITORING WELL INSPECTION:

Date/Time 4-28-16 / 1340 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: – Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: –

Gas Meter (Calibration/ Reading): % Gas: – / – % LEL: – / –

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): – / –

PURGE INFORMATION:

Date / Time Initiated: 4-28-16 / 1341 Date / Time Completed: 4-28-16/1407

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 4.0

Initial Water Level, Feet: 8.35 Elevation. G/W MSL:

Well Total Depth, Feet: 19.65 Method of Well Purge: peristaltic pump

One (1) Riser Volume, Gal: Dedicated: (Y) / N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: Low-Flow Start clear Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other	Other
1356	a.L 9.03	mL/min ~~150~~ 130		9.7	7.38	1285	1.84	147	
1401	9.05	130		9.7	7.38	1292	1.86	134	
1406	9.09	↓		9.7	7.39	1294	1.78	149	

FIELD OBSERVATIONS

SAMPLING INFORMATION

POINT ID MW-12

Date/Time 4-28-16 / 1409 Water Level @ Sampling, Feet: 9.09

Method of Sampling: peristaltic pump Dedicated: (Y) / N

Multi-phased/ layered: (X) Yes ( ) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other ( )
1409	9.7	7.39	1294	1.78	149	

INSTRUMENT CALIBRATION/CHECK DATA

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION

Weather conditions @ time of sampling: cloudy ~49

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 4 28 16 By: [signature] Company: TAC

FIELD OBSERVATIONS

Facility: CCMA- Witmer Rd Sample Point ID: MW-14N

Field Personnel: TW, EB Sample Matrix: G-W

MONITORING WELL INSPECTION:

Date/Time 4-28-16 / 1128 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: — Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 4-28-16 / 1130 Date / Time Completed: 4-28-16 / 1155

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: 7.11 Elevation. G/W MSL:

Well Total Depth, Feet: 26.50 Method of Well Purge: peristaltic pump

One (1) Riser Volume, Gal: Dedicated: (Y) / N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: Low Flow Start clear w/sl tint Finish clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)		Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other
	WL	mL/min							
1140	7.18	200		10.3	6.99	1364	2.40	85	
1145	7.20	↓		10.2	7.01	1365	2.46	79	
1150	7.21			10.1	6.97	1372	2.50	68	
1155	7.21			10.1	6.98	1368	2.48	67	

FIELD OBSERVATIONS

SAMPLING INFORMATION

POINT ID MW-14N

Date/Time 4-28-16 / 1157 Water Level @ Sampling, Feet: 7.21

Method of Sampling: peristaltic pump Dedicated: (Y) / N

Multi-phased/ layered: ( ) Yes (X) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1157	10.1	6.98	1368	2.48	67	

INSTRUMENT CALIBRATION/CHECK DATA

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION

Weather conditions @ time of sampling: cloudy ~44

Sample Characteristics: clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 4/28/16 By: [signature] Company: TA

FIELD OBSERVATIONS

Facility: CCMA- Wilmer Rd Sample Point ID: MW-5R

Field Personnel: TW, EB Sample Matrix: GW

MONITORTING WELL INSPECTION:

Date/Time 4-28-16 / 1205 Cond of seal: (X) Good ( ) Cracked ( ) None ( ) Buried %

Prot. Casing/riser height: — Cond of prot. Casing/riser: ( ) Unlocked (X) Good ( ) Loose ( ) Flush Mount ( ) Damaged

If prot.casing; depth to riser below: —

Gas Meter (Calibration/ Reading): % Gas: — / — % LEL: — / —

Vol. Organic Meter (Calibration/Reading): Volatiles (ppm): — / —

PURGE INFORMATION:

Date / Time Initiated: 4-28-16 / 1207 Date / Time Completed: 4-28-16 / 1237

Surf. Meas. Pt: ( ) Prot. Casing (X) Riser Riser Diameter, Inches: 2.0

Initial Water Level, Feet: ~~6.74~~ 6.74 Elevation. G/W MSL:

Well Total Depth, Feet: 19.74 Method of Well Purge: peristaltic pump

One (1) Riser Volume, Gal: Dedicated: (Y) / N

Total Volume Purged, Gal: Purged To Dryness Y / (N)

Purge Observations: Low-Flow Start Clear Finish Clear

PURGE DATA: (if applicable)

Time	Purge Rate (gpm/htz)	Cumulative Volume	Temp. (C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (ORP)	Other
1222	wL / ml/min: 7.97 / 120		9.1	7.89	888	1.43	112	
1227	8.31 / 80		9.0	7.79	891	1.06 / ~~0.88~~	104	
1232	8.78	90	9.0	7.78	887	1.34	114	
1237	9.03	90	9.0	7.78	886	1.29	115	

FIELD OBSERVATIONS

SAMPLING INFORMATION

POINT ID MW-5R

Date/Time 4-28-16 1240 Water Level @ Sampling, Feet: 9.03

Method of Sampling: Peristaltic pump Dedicated: (Y)/N

Multi-phased/ layered: ( ) Yes (Y) No If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (std units)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1240	9.0	7.78	886	1.29	115	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: Cloudy ~49

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable EPA, State and Site-Specific protocals.

Date: 4/28/16 By: [signature] Company: TAL

FIELD OBSERVATIONS

Facility: CCMA - Witmer Rd

Sample Point ID: Leachate

Field Personnel: TW, EB

Sample Matrix: G/ew

(Y) Grab ( ) Composite

SAMPLING INFORMATION:

Date/Time 4-28-16 / 1215

Water Level @ Sampling, Feet: NA

Method of Sampling: Dipper

Dedicated: Y (N)

Multi-phased/ layered: ( ) Yes (Y) No

If YES: ( ) light ( ) heavy

SAMPLING DATA:

Time	Temp. (°C)	pH (SU)	Conductivity (µmhos/cm)	Turb. (NTU)	Other (orp)	Other ( )
1215	7.5	7.59	1202	1.48	105	

INSTRUMENT CALIBRATION/CHECK DATA:

Meter ID#	Cal Std 7.0 SU	Cal Std 4.0 SU	Cal Std 10.0 SU	Check Std 7.0 SU (± 10%)	Cal.Std 1,413 µmhos/cm	Check.Std 1,413 µmhos/cm (± 10%)	Cal.Std 10 NTU	Check Std 10 NTU (± 10%)
Solution ID#								

GENERAL INFORMATION:

Weather conditions @ time of sampling: cloudy ~44

Sample Characteristics: Clear

COMMENTS AND OBSERVATIONS:

I certify that sampling procedures were in accordance with all applicable USEPA, State and Site-Specific protocals.

Date: 4/28/16 By: [signature] Company: TAL

Login Sample Receipt Checklist

Client: LAN Associates

Job Number: 480-99235-1

Login Number: 99235

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl M

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	TAL
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

APPENDIX 6

LANDFILL INSPECTION CHECKLIST

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

Date	11/9/2016 – 4:00 p.m.
Weather Conditions	Sunny / 45º F
Inspector	Guy D. VanDoren, P.E.

CC Metals and Alloys, LLC
Witmer Road Landfill Inspection Checklist

General Instructions

The inspector should note the various observations he/she makes under the various sections and questions. If any corrective actions need to be taken, they will be noted on the Checklist of Recommended Corrective Actions, Page 4 of 4. If any unusual conditions are encountered during the inspections, they should be reported to the engineer (LAN Associates, Inc., 88 Riberia St. Suite 400, St. Augustine, FL 32084, 904-824-6999).

Landfill Cover

1) Observe any areas on the cover that indicate signs of subsidence (e.g., obvious visible low spots on the cover surface where significant amounts of standing water can accumulate in puddles during significant precipitation events, check for the presence of large cracks on the surface of the cover, etc.).

The landfill area and surrounding areas were inspected. No subsidence or surface cracks were observed. Signs of flooded vegetation in the last pond were observed.

2) Check for erosional swales, washouts, etc. in the landfill cover caused by stormwater runoff.

No disturbance of the landfill cover was observed.

3) Inspect landfill vegetative cover for overall health and consistency. (e.g. check for bare spots in the vegetative cover.)

The vegetative cover is in excellent condition. The area has experienced signification rain and warm weather recently. This has resulted in healthy cover with strong root growth developing.

4) Inspect vegetative cover for existence of unwanted woody species or the abnormal growth of weeds that may out-compete the natural vegetation.

On the landfill the vegetation was free from any vegetation that would be competitive with the cover.

Monitoring Wells and Sampling Locations

1) Check the general condition of the individual monitoring wells; make sure the bollards are intact (have not been knocked over by a vehicle), check for cracks on the concrete pad (monitor any minor cracks to ensure they do not widen and compromise the pad's integrity otherwise repairs may be necessary), make sure that the padlocks are in working condition (not stiff when unlocking the padlock), make sure that the plug on the PVC riser is present and that the threads are in good condition.

The sampling locations were inspected. They were all in order.

2) Inspect the drainage flow control valve and piping system for functionality and condition (SW-1).

The control valve has been replaced with a simple culvert protected by sand bags.

3) Inspect the sump collection tank for cracks or any visible problems that may effect the integrity of the system (LS-1)

This area was in good condition.

Surface Water Drainage

1) Inspect the overall function of the surface water drainage system. Look for signs of erosion or subsidence that could lead to offsite surface water drainage or pooling water onsite.

The surface water collection and retainage system appears to be functioning properly.

2) Check all stormwater drainage systems (e.g. piping, manholes, drains) for overall function. Make sure there are no blockages or diversions.

The collection system is free of deleterious material and is functioning as designed.

Property

1) Check the condition of fences and gates throughout the property.

Fences are all in good condition. There is vegetation encroachment in the southwest cover (adjacent to SW-1). Arrangements are being made to get this removed.

2) Conduct a thorough investigation of the entire site for any areas of concern.

There is a fallen tree in the northwest corner that needs to be removed. Arrangements are being made to remove the tree.

LAN ASSOCIATES, INC.
CONSULTING • ENGINEERING • PLANNING

Date 11/9/2016 – 4:00 p.m.
Weather Conditions Sunny / 45° F
Inspector Guy D. VanDoren, P.E.

CC Metals and Alloys, LLC
Checklist of Recommended Corrective Actions

Item Number	Item	Action Taken	Date of Correction	Signature
1	Remove brush in SW encroaching on fence	A-1 Land Care performed the work	12/2/2016	GVD
2	Remove fallen Tree	A-1 Land Care performed the work	12/2/2016	GVD

APPENDIX 7

PHOTOGRAPHIC DOCUMENTATION

Photograph Documentation

Witmer Road Post Annual Mowing & Maintenance

From NE of Cell 1 looking NE (IMG_2225)

From North End of Cell 1 Looking East (IMG_2226)

From North End of Cell 1 Looking West (IMG_2227)

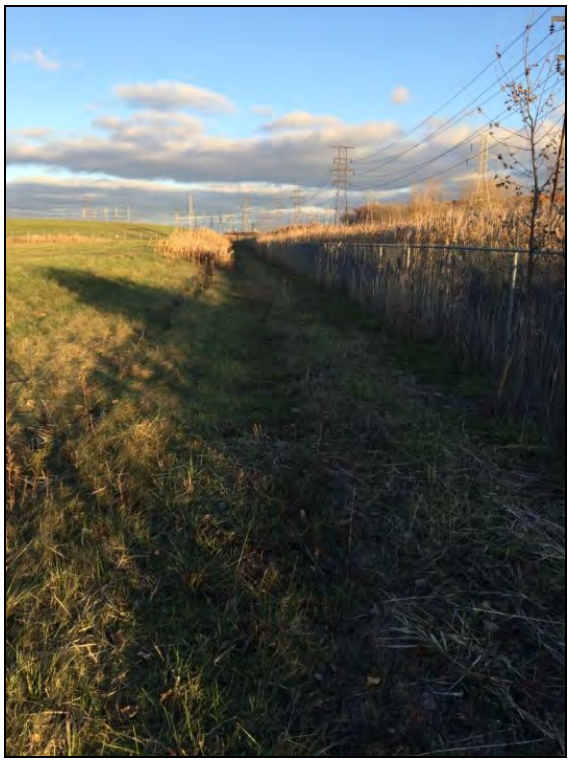
From Cell 2 Looking West Across Cell 1 (IMG_2229)

Top of Cell 2 Looking SE (IMG_2230)

From SE Side of Cell 1 Looking SW (IMG_2234)

From East Side of Cell 2 looking SE (IMG_2237)

Monitoring Well 14N (IMG_2238)



South East Side of Site Looking East (IMG_2239)

South East Side of Site Looking West (IMG_2240)

Monitoring Well 3R (IMG_2241)

Fallen Tree in NW Corner (IMG_2243)

Control Structure (pipe with sandbags) at SW-1 (IMG_2247)

Signs of Flooded Vegetation - From SW of Site Looking East (IMG_2248)

Vegetative Encroachment at SW corner (IMG_2250)

Katie Kulik

From: Marc Lombardo <marc@a-1landcare.com>
Sent: Friday, December 02, 2016 11:15 AM
To: Katie Kulik
Cc: Guy VanDoren
Subject: RE: 2.3643.17.05 - Witmer Road Follow up Maintenance Items
Attachments: IMG_0446.JPG; IMG_0448.JPG; IMG_0474.JPG; IMG_0471.JPG; IMG_0473.JPG

Hi Katie,
The tree removal and vegetative encroachment removal was completed today. Weather is supposed to get nasty soon so I put on two crews to get it completed. Please see attached photos for your verification of work. We were also able to remove the large stump from the fallen tree area at no extra cost, this should help with the future lawn mowing in that area. Let me know if you need anything else regarding this scope of work.

Thanks again for the business and we are looking forward to servicing your needs in the future.

Respectfully,

Marc Lombardo
Operations Manager
A-1 Land Care, Inc.
office (716) 754-4999
mobile (716) 251-7389
fax (716) 754-2622

From: Katie Kulik [mailto:kkulik@lan-fl.com]
Sent: Thursday, December 1, 2016 8:39 AM
To: Marc Lombardo
Cc: Guy VanDoren
Subject: RE: 2.3643.17.05 - Witmer Road Follow up Maintenance Items

Good morning Marc,

Please proceed with the follow up maintenance work at Witmer Road. Attached is the signed proposal.

Please take before and after pictures as the client is requiring this for proof of work.

Thanks very much.

Katie Kulik, AICP
Compliance Manager & Planner
LAN Associates, Inc.
88 Riberia Street, Suite 400
St. Augustine, FL 32084
Tel: 904-824-6999 Fax: 904-824-0726
Cell: 904-540-2288 www.lan-fl.com

LAN ASSOCIATES, INC.
CONSULTING · ENGINEERING · PLANNING

my LinkedIn profile

From: Marc Lombardo [mailto:marc@a-1landcare.com]
Sent: Monday, November 28, 2016 3:32 PM
To: Katie Kulik
Cc: Guy VanDoren
Subject: RE: 2.3643.17.05 - Witmer Road Follow up Maintenance Items

Hi Katie,
Please see attached proposal for the tree removal/disposal per your request below. I have a crew available now, if you choose to accept our proposal and would like the work completed in December 2016.

thx

Marc Lombardo
Operations Manager
A-1 Land Care, Inc.
office (716) 754-4999
mobile (716) 251-7389
fax (716) 754-2622

From: Katie Kulik [mailto:kkulik@lan-fl.com]
Sent: Wednesday, November 16, 2016 9:52 AM
To: marc@a-1landcare.com
Cc: Guy VanDoren
Subject: 2.3643.17.05 - Witmer Road Follow up Maintenance Items

Good morning Marc,

Would you please provide a quote for the follow up work from your Witmer Road site inspection with Guy VanDoren on November 9, 2016?

He identified the two items needing repair to be:

1. Removal of a fallen tree at the NW corner of the site, and
2. Removal of vegetative encroachment at the SW corner fence.

I would like to include this pricing in the inspection report.

Thanks very much and have a great day.

Regards,

Katie

Katie Kulik, AICP
Compliance Manager & Planner
LAN Associates, Inc.
88 Riberia Street, Suite 400
St. Augustine, FL 32084
Tel: 904-824-6999 Fax: 904-824-0726
Cell: 904-540-2288 www.lan-fl.com

A-1 Land Care Follow Up Maintenance Conducted at Witmer Road Landfill on December 2, 2016

A-1 Land Care Follow Up Maintenance Conducted at Witmer Road Landfill on December 2, 2016

A-1 Land Care Follow Up Maintenance Conducted at Witmer Road Landfill on December 2, 2016

APPENDIX 8

LAND CARE DOCUMENTATION

A-1 LAND CARE INC
1527 Ridge Road
Lewiston NY 14092
(716) 754-4999 Fax (716) 754-2622
An Equal Opportunity Employer/Affirmative Action Company

11-28-16

LAN ASSOCIATES INC.
88 Riberia Street, Suite 400
St. Augustine, FL 32084

Attn: Katie Kulik
RE: Site Maintenance at former landfill site in Niagara Falls, NY

Ms. Kulik,

A-1 Land Care, Inc. respectfully submits the following quote for work for the above referenced project:

Furnish all labor, equipment and supervision to complete the removal and disposal of a fallen tree at the NW corner of the site and vegetative encroachment at the SW corner fence.

Lump Sum: $1,500.00

Sales tax at a rate of 8% will be added to final billing

We thank you for the opportunity to quote this work and look forward to hearing from you soon.

Best Regards,

Marc Lombardo
Operations Manager
A-1 Land Care, Inc.

Customer approval to perform services:

Signature _____ Date 11/30/2016

A1 Land Care Inc

PO Box 765
Lewiston, NY 14092

Invoice

Date	Invoice #
12/5/2016	16598

LAN Associates
88 Riberia Street, Suite 400
St. Augustine, FL 32084

P.O. No.	Terms	Project
	Due on receipt	

Description	Qty	Rate	Amount
Site Maintenance at former landfill site in Niagara Falls, NY			
Furnish all labor, equipment and supervision to complete the removal and disposal of fallen tree at the NW corner of the site and vegetation encroachment at the SW corner fence completed on 12-2-16		1,500.00	1,500.00T
Niagara County Sales Tax		8.00%	120.00

Total	$1,620.00
Payments/Credits	$0.00
Balance Due	$1,620.00