Chambers, Danielle

From: Clearwater, Scott <Scott.Clearwater@arcadis-us.com>
Sent: Tuesday, December 16, 2014 1:19 PM
To: MATLOCKS@michigan.gov
Cc: dfavero@racertrust.org; Grant Trigger; Tomka, Mike; Pardys, John-Eric
Subject: RACER Saginaw Malleable Iron & Green Point Landfill - Annual Progress Report ~OUT-007878~
Attachments: SMI_GPL_2014 Annual Report 12162014.pdf

Sue,
Attached please find an electronic copy of the Annual Progress Report for RACER Saginaw Malleable Iron and Green Point Landfill. A hard copy is also being submitted to you via FedEx for overnight delivery. Feel free to contact me with any questions.
Thanks,
Scott

Scott Clearwater | Certified Project Manager | scott.clearwater@arcadis-us.com
ARCADIS U.S., Inc. | 10559 Citation Dr, Suite 100 | Brighton, MI, 48116
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ENVIRONMENT

Ms. Susan Kaelber-Matlock
Saginaw Bay District Office
Michigan Department of Environmental Quality
401 Ketchum Street, Suite B
Bay City, Michigan 48708

Subject:
Annual Progress Report – December 2013 through December 2014
RACER Trust Saginaw Malleable Iron (SMI) Plant Property and
Green Point Landfill (GPL) Property
Saginaw, Michigan

Date:
December 16, 2014

Contact:
Scott Clearwater

Phone:
810-225-1921

Email:
Scott.Clearwater@arcadis-us.com

Our ref:
B0050096/B0064434

Dear Ms. Kaelber-Matlock:

This annual progress report presents a summary of the work activities conducted during the period of December 2013 through December 2014 for the above-referenced Site. This progress report also provides a summary of the work activities anticipated for the next 12 month period.

Key Correspondence

- The key deliverables submitted to the MDEQ, EPA, or City of Saginaw are as follows: The annual progress report for December 2012 through November 2013 was submitted to you on December 13, 2013. The annual report was submitted by ARCADIS on behalf of Revitalizing Automotive Communities Environmental Response (RACER) Trust. The annual report included a summary of the site activities completed and presented data from the September 2014 groundwater monitoring events at the SMI and Green Point Landfill properties.

- An email dated December 6, 2013, was sent by Dave Favero (RACER) proposing additional delineation of PCB impacts in soil in the I27.7 area to Sue Kaelber-Matlock (MDEQ)

- An email dated January 27, 2014, was sent by John-eric Pardys (CRA) proposing additional delineation of PCB impacts in soil in the I27.7 area to Sue Kaelber-Matlock (MDEQ) as a follow-up to the sampling conducted on December 30, 2013

- On February 28, 2014, a Site Identification Verification Form (MDEQ), RCRA Subtitle C Site Identification Form – EPA, and 2013 Hazardous Waste

Report was submitted by John-eric Pardys (CRA) on behalf of RACER to the MDEQ.

- On March 21, 2014, a draft presentation of the Southwest Plant LNAPL Area Evaluation was submitted by Dave Favero (RACER) to Sue Kaelber-Matlock (MDEQ) for review and comment.

- On May 6, 2014, CRA conducted a presentation of the Southwest Plant LNAPL Area Evaluation to the MDEQ District staff

- On May 27, 2014, a proposed Monitoring Plan for the Southwest Plant LNAPL Area was submitted by Michael Tomka (CRA) to Sue Kaelber-Matlock (CRA)

- On July 9, 2014, Dave Favero (RACER) submitted a 2014 Budget Amendment No. 1 to MDEQ, which covered implementation of additional monitoring for the Southwest Plant LNAPL Area and additional investigation, data evaluation, and reporting for the Quench Pit LNAPL Area

- On July 15, 2014, Leonard Lipinski (MDEQ) submitted an approved fully executed 2014 Budget Amendment No.1

- On September 8, 2014, Dave Favero (RACER) submitted a response to MDEQ's August 21, 2014 comments on the Southwest Plant LNAPL Area Proposed Monitoring Plan

- On September 11, 2014, CRA conducted a presentation of the Quench Pit LNAPL Area Evaluation to Sue Kaelber-Matlock (MDEQ)

- An email dated September 18, 2014, was submitted by John-eric Pardys (CRA) to Sue Kaelber-Matlock (MDEQ) as a follow-up to the meeting held on September 11, 2014 regarding PCB delineation of the concrete floor slab and the I27.7 area

- An email dated November 3, 2014, was submitted by Sue Kaelber-Matlock (MDEQ) regarding the I27.7 area

- On November 7, 2014, 2014, CRA conducted a presentation of the Southwest Plant LNAPL Area Evaluation and the Quench Pit LNAPL Area Evaluation to the MDEQ LNAPL TAPS Team

- On November 20, 2014, Dave Favero (RACER) submitted a 2015 Budget Request to MDEQ, which covered activities proposed for 2015

- On November 25, 2014, Leonard Lipinski (MDEQ) submitted an approved fully executed 2015 Budget Request

Conference Call/Meetings

- On April 21, 2014, a conference call to discuss potential future site redevelopment was held between MDEQ, RACER, The Nature Conservancy, U.S. Fish and Wildlife Service, and RACER's consultants, CRA, and ARCADIS.

- A project status meeting/conference call and review of the draft 2015 Annual EA Budget Request was held on October 7, 2014, between MDEQ, RACER, CRA, and ARCADIS.

Site Activities

- Conducted additional rounds of delineation sampling of PCB impacted soil in the I27.7 area including the advancement of 28 borings.

- Conducted quarterly inspections at the Site including; gauging of manholes and remaining monitoring wells in the Southwest Plant LNAPL Area and the Quench Pit Area; stormwater/secondary pond visual inspection for LNAPL; and inspection of concrete floor slab for signs of LNAPL from the high water table.

- On-going LNAPL recovery from QPTW-10.

- Conducted transmissivity testing at monitoring wells in the Quench Pit Area.

- Groundwater samples were collected between September 22 and 24, 2014, from 10 wells located in the river berm area. This included MW-110WTR which had been dry during the past sampling events. As in previous years well MW-108WT was dry and could not be sampled. MW-107WT, MW-110WTR, MW-111WT, MW-114WT, and MW-185WT were initially purged dry during sampling and were allowed to recharge before being sampled. Summary data tables for SMI are included in Appendix A. The results from the sampling are summarized as follows:

    - No individual Aroclors were detected at any of the five locations (MW-110WTR, MW-111WT, MW-114WT, MW-185WT and MW-186WT) that were analyzed for polychlorinated biphenyls (PCBs) in 2014. These results are similar or lower than 2013 results. This is true for MW-111WT where Aroclor 1248 was detected at a concentration of 0.45 ug/L in 2013 and was non-detect in 2014.

- Arsenic was detected in both parent and duplicate samples at MW-149WT at estimated concentrations between the reporting limit and the instrument detection limit at values of 0.075 mg/L and 0.069 mg/L, respectively. MW-149WT is designated as perimeter GSI monitoring well. The concentration is above the MDEQ groundwater surface water interface (GSI) criteria of 0.01 mg/L, but significantly below the 0.680 mg/L GSI mixing zone concentration established for venting groundwater under the conditionally approved Remedial Action Plan (RAP).

- MDEQ has previously evaluated a mixing zone application submitted by GM Corp and established that there is no reasonable potential for ammonia to cause an exceedance of water quality standards. No significant changes in ammonia concentrations were observed in comparison to prior events, and concentrations remained relatively stable in the perimeter GSI monitoring wells.

- The total phosphorus concentration in the groundwater sample collected from well MW-149-WT (2.0 mg/L in the parent sample and 2.1 mg/L in the duplicate) exceeded the GSI criterion of 1.0 mg/L. The phosphorus concentration in samples has remained relatively stable, ranging between 1.6 mg/L and 2.2 mg/L over the course of the last five years of annual sampling. The GSI criterion for total phosphorus is 1.0 mg/L.

· Twelve of the fourteen wells included in the annual Green Point Landfill groundwater monitoring program were sampled between September 22, 2013, and September 23, 2013. Well X-4AR was observed to have a measurable amount of water during the monitoring event, but not enough to provide for collection of stabilization parameters and groundwater samples. While field staff noted that well X-10BR could not be located. ARCADIS will attempt to locate X-10BR to determine if it still able to be sampled in future events. Summary data tables for GPL are included in Appendix B. Results of primary significance are summarized as follows:

  - Barium was detected at a concentration above the GSI criterion at the MW-117 monitoring well cluster. Lower barium concentrations, below the GSI criterion, were detected in samples collected from monitoring wells X-4 and X-9 well clusters adjacent to the Saginaw River, in the down gradient groundwater direction from the MW-117 well cluster.

- Arsenic was detected at concentrations slightly above the GSI criterion of .01 mg/L in samples collected from monitoring wells X-9BR and X-9D, both adjacent to the Saginaw River. These results were both below the 0.680 mg/L GSI mixing zone concentration established for venting groundwater under the conditionally approved RAP.

- Manganese was detected at a concentration above the GSI criterion at MW-117WT, which is greater than 600 feet upgradient of the Saginaw River. Lower manganese concentrations, below the GSI criterion, were detected in samples collected from monitoring wells located adjacent to the Saginaw River (i.e. X-4 and X-9 monitoring well clusters.

- Perimeter GSI monitoring wells X-9AR and X-9BR are potentially both showing overall increasing concentration trends with respect to total ammonia concentrations, while X-9CAUG is showing decreasing concentrations. MDEQ has previously evaluated a mixing zone application submitted by RACER and established that there is no reasonable potential for ammonia to cause an exceedance of water quality standards. Concentrations will continue to be monitored.

- Total dissolved solids (TDS) concentrations were generally very consistent with concentrations for prior years. No perimeter well used for evaluating GSI impacts exceeded the 2,200 mg/L background screening level concentration established for TDS in the conditionally approved RAP.

· One well located in the south-west portion of the GPL property (TWW-1) was sampled on September 23, 2014. This well is included in the annual monitoring program due to the historical discharge of volatile organic compounds to the subsurface from the neighboring property to the west through a drainage pipe. Cis-1,2-dichloroethene (cis-1,2-DCE) was detected above the laboratory detection limit at 0.020 milligrams per liter (mg/L), however this detection is below the GSI criteria. The concentration of cis-1,2-DCE is showing a declining trend over the last three sampling events. Vinyl chloride was detected at a concentration of 0.470 mg/L in the duplicate. This vinyl chloride concentration is higher than the concentration detected during the sampling event conducted in September 2013, but significantly lower than the historical high of 1.7 mg/L detected in 2010. As previously mentioned in the 2013 annual report, a portion of a drain pipe was removed and the remaining in-place ends sealed to eliminate a migration pathway for VOCs from the adjacent property.

- Sampling logs and full analytical data packages for the SMI and GPL September 2014 groundwater sampling events are provided in Appendix C.

- During the June 2014 groundwater sampling event, field staff noticed a broken bolt on the GPL gate. New locks were placed on the gates at GPL on June 19, 2014.

- A GPL Cap inspection was completed on September 17, 2014. The cap was found to be in sounds condition. No erosion gullies or other issues were found requiring maintenance response action. The inspection forms are located in Appendix D.

Inspection of the SMI Type III Landfill, River Berm Area, SMI Plant and Former Railyard Area were all conducted on September 17, 2014. No issues were noted at the SMI Landfill., with the exception of overgrown vegetation encroaching on the access road. There was nothing to note along the River Berm Area. Although the SMI Plant inspection also noted overgrown vegetation and the Rail yard Area inspection mentioned the privacy tarp was down, neither area had any recommendations for follow-up. The inspection forms are located in Appendix D.

Recommendations

- ARCADIS recommends that discussions be held with MDEQ regarding potential modification of the sampling plan and sampling procedures as they relate to wells that purge dry or found dry upon initial gauging to ensure that only samples truly representative of site groundwater are collected during events. Wells X-4AR, and MW-108WT have been dry on each event annual event dating back to 2010 and it may be appropriate to remove these wells from the monitoring plan.

Anticipated Site Activities

Although there is some uncertainty associated with the scope of the activities to be completed during the next calendar year, the following activities may be completed during the period from January 2015 through December 2015:

- Complete a groundwater analytical trend analysis and evaluation of potential for reducing the number of wells and/or parameters in the performance monitoring plan.

- Evaluate if the re-occurring dry wells are necessary to remain in the monitoring program.

- Complete activities necessary to procure a contractor to complete the PCB remediation.
- Remove, transport and dispose of PCB impacted concrete from small, hot spot areas within the slab and address soil in the I27.7 Area.
- Evaluate LNAPL remediation alternatives for the Quench Pit Area and the Southwest Plant LNAPL Area and abandon 16 monitoring wells in the Quench Pit LNAPL Area.
- Complete annual groundwater sampling of 12 wells using ultra-low-flow procedures and quarterly monitoring of LNAPL well locations.
- Perform quarterly water/LNAPL measurements in the Southwest Plant LNAPL Area and the Quench Pit Area in accordance with monitoring plans submitted to MDEQ.
- The City of Saginaw is expected to bulkhead the sewer line going onto RACER property and re-direct flow to the City owned sewer in Salt Street.
- Provide support for evaluating alternative cleanup strategies, if necessary.
- Provide support for remediation related activities for possible transactions.
- Provide support for finalizing deed restrictions and completion of professional surveys to include with the deed restrictions.
- Provide support for Corrective Action Activities including possible follow-up to the PA/VSI review.

Please contact me at 810-225-1921 if you have any questions regarding the enclosed report or its attachments.

Sincerely,

ARCADIS

Scott Clearwater
Certified Project Manager

Attachments:
Figure 1 – Site Map
Figure 2 – Site Wide Water Table Elevation Contour Map – September 2014
Appendix A – SMI Summary Tables
Appendix B – GPL Summary Tables
Appendix C – Analytical Reports and Field Sampling Logs
Appendix D – Site Inspection Forms

Copies:
John Fordell Leone, Department of Attorney General
Grant Trigger, RACER
David Favero, RACER
Mike Tomka, CRA

ARCADIS

Figures

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: GMS PM: SC LYR:ON=*;OFF=*REF
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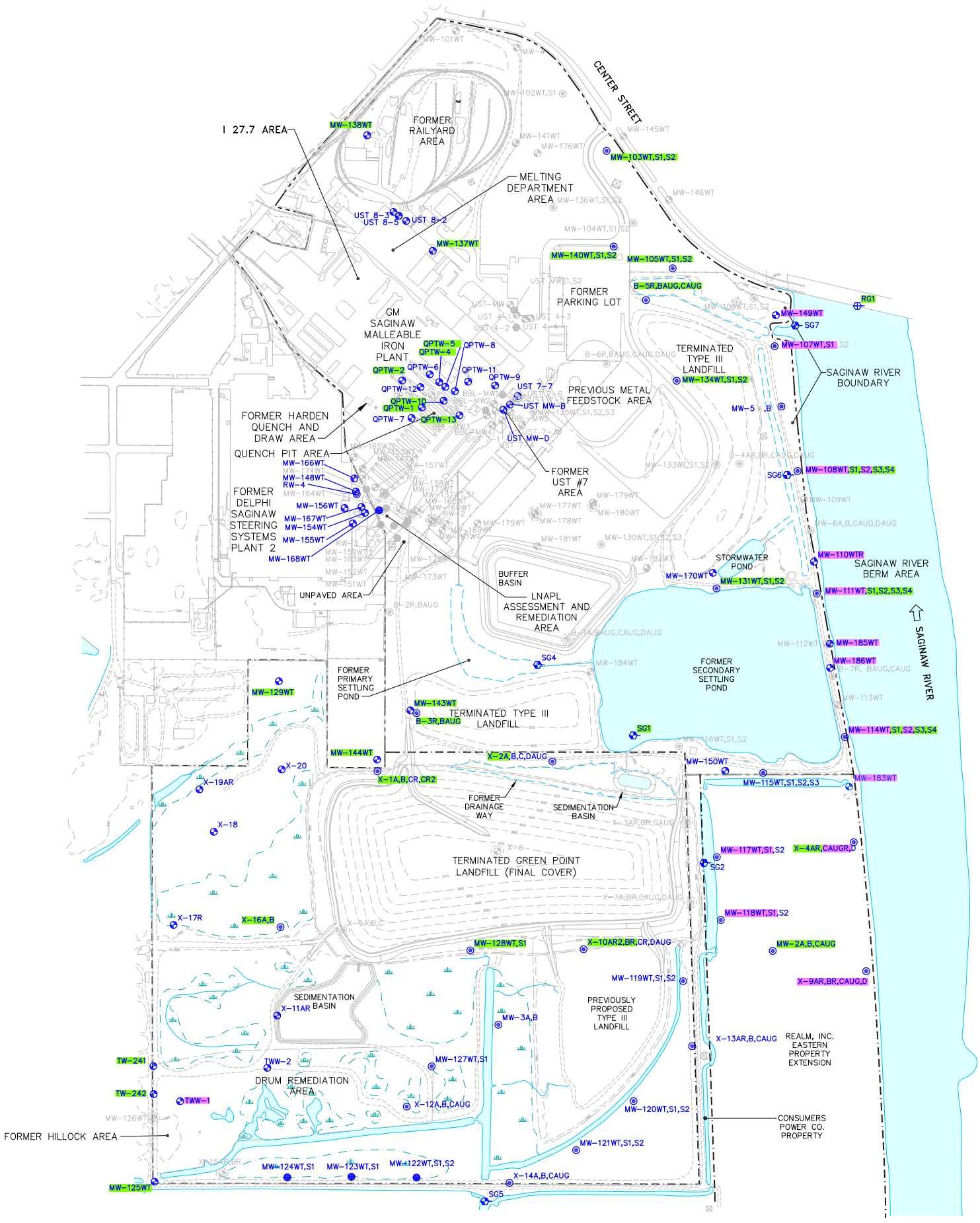

LEGEND:

- GM SAGINAW MALLEABLE IRON PLANT PROPERTY LINE (APPROX.)
- REALM, INC. PROPERTY LINE (APPROX.)
- UNPAVED ROAD
- GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)
- FENCE LINE
- SWAMPY AREA
- MW-125WT — MONITORING WELL
- MW-2A,B,CAUG — MONITORING WELL CLUSTER
- SG5 — STAFF GAUGE
- TP-1 — PIEZOMETER
- RW-1 — RECOVERY WELL
- X-6 — ABANDONED MONITORING WELL
- X-5A,B,C — ABANDONED MONITORING WELL CLUSTER
- RG1 — RIVER GAUGE
- MW-152WT — WELL NOT FOUND

RAP (7/31/08)
MONITORING PROGRAM; REVISED 12/08

- SAMPLING AND GROUNDWATER ELEVATION MEASUREMENT LOCATION
- LNAPL AND/OR GROUNDWATER ELEVATION MEASUREMENT LOCATION

0 300' 600'
GRAPHIC SCALE

NOTES:

1. THIS PHOTOGRAMMETRIC BASE MAP FOR THE GM SAGINAW MALLEABLE IRON PLANT AND DELPHI SAGINAW STEERING SYSTEMS PLANT 2 PROPERTIES WAS PREPARED BY LOCKWOOD MAPPING, INC. OF ROCHESTER, NEW YORK. AERIAL PHOTOGRAPHY WAS CONDUCTED ON 11/11/94. ORIGINAL LOCKWOOD MAP WAS AT A SCALE OF 1"=100' AND WAS INTERPRETED FOR TWO-FOOT CONTOURS.
2. BASE MAP HAS BEEN MODIFIED TO INCORPORATE BUFFER BASIN, SEDIMENTATION BASINS, WETLANDS MITIGATION AREA, AND GREEN POINT LANDFILL (GPL) FINAL COVER FROM THE FINAL ENGINEERING DESIGN REPORT PREPARED BY BBL FOR THE GPL, DATED JANUARY 1998.
3. VERTICAL DATUM REFERENCED TO NGVD OF 1929, HORIZONTAL DATUM REFERENCED TO MICHIGAN SPC-NAD 1983.
4. PROPERTY BOUNDARY FOR REALM, INC, DIGITIZED FROM SPICER GROUP DRAWING NO. A-21854-1, DATED 3/27/98.
5. BASE MAP INFORMATION SOUTH OF MAIN REALM, INC. PROPERTY LINE FROM AIR-LAND SURVEYS, INC. PHOTO DATE 11/90, MAPPING DATE 10/91.

SAGINAW MALLEABLE IRON PLANT PROPERTY,
GREEN POINT LANDFILL, AND DRUM REMEDIATION AREA
SAGINAW, MICHIGAN

SITE MAP

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FIGURE
1

CITY: SYRACUSE DIV/GROUP: 141 DB: GMS LD: GMS PM: SC LYR:ON=*;OFF=*REF
G:\ENVCAD\Lansing-MI\ACT\B0064434\2014\00002\27608W05.DWG LAYOUT: 2 SAVED: 12/9/2014 4:44 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: -- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/9/2014 4:45 PM BY: AKENS, DAVID
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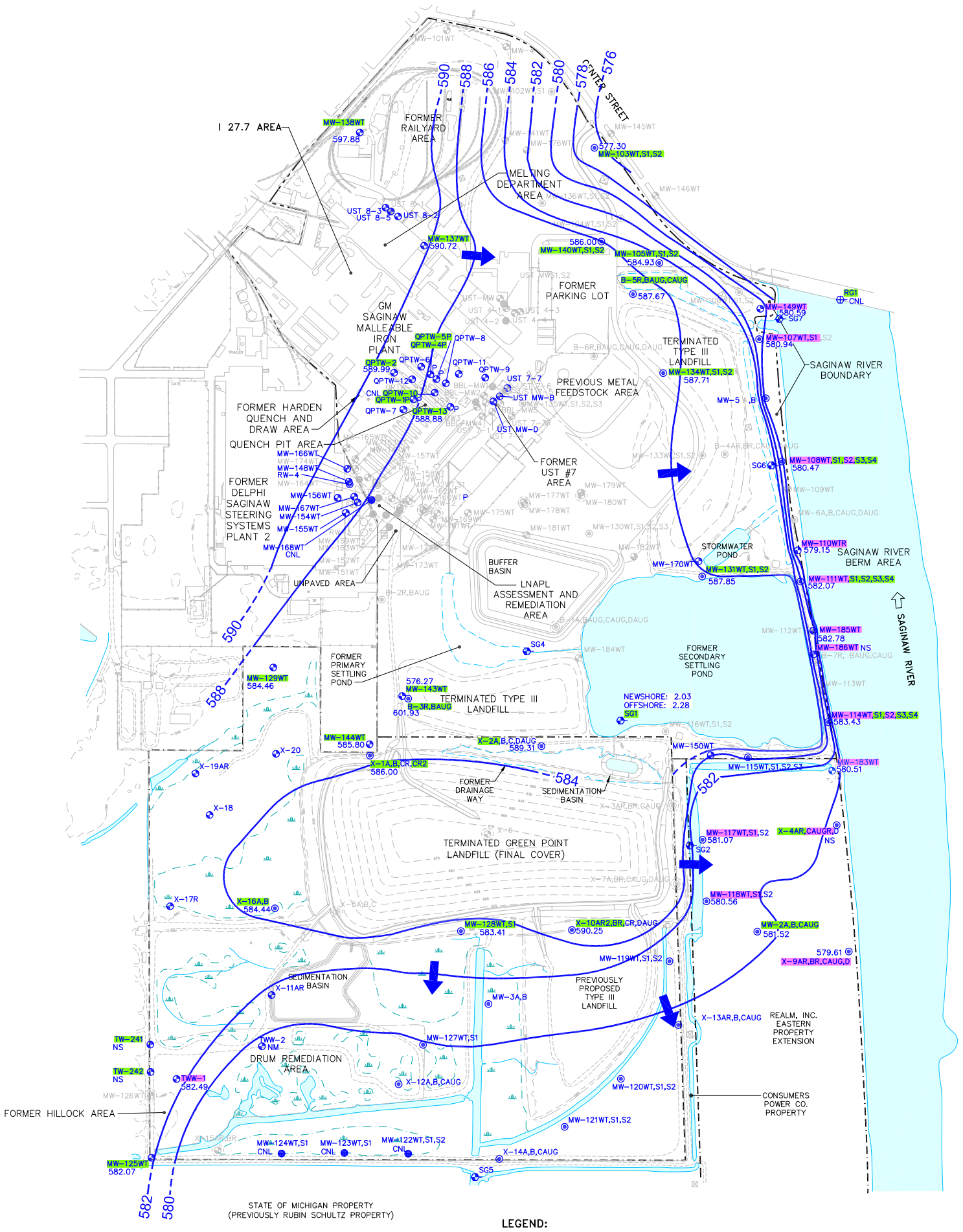

LEGEND:

- GM SAGINAW MALLEABLE IRON PLANT PROPERTY LINE (APPROX.)
- REALM, INC. PROPERTY LINE (APPROX.)
- UNPAVED ROAD
- GROUND SURFACE ELEVATION CONTOUR (10 FT INTERVAL)
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- MW-2A,B,CAUG — MONITORING WELL CLUSTER
- SG5 — STAFF GAUGE
- TP-1 — PIEZOMETER
- RW-1 — RECOVERY WELL
- X-6 — ABANDONED MONITORING WELL
- X-5A,B,C — ABANDONED MONITORING WELL CLUSTER
- RG1 — RIVER GAUGE
- MW-152WT — WELL NOT FOUND
- 580.23 — GROUNDWATER ELEVATION (FEET AMSL)
- NS — NOT SURVEYED
- CNL — COULD NOT LOCATE
- NM — NOT MEASURED
- P — PRODUCT MEASURED IN WELL
- DRY — MONITORING WELL DRY AT TIME OF GAUGING
- 582 — GROUNDWATER ELEVATION CONTOUR LINE (FEET AMSL), DASHED WHERE INFERRED
- GROUNDWATER FLOW DIRECTION

RAP (7/31/08)
MONITORING PROGRAM; REVISED 12/08

- SAMPLING AND GROUNDWATER ELEVATION MEASUREMENT LOCATION
- LNAPL AND/OR GROUNDWATER ELEVATION MEASUREMENT LOCATION

0 300' 600'
GRAPHIC SCALE

1. DEPTH TO WATER MEASUREMENTS WERE TAKEN IN SEPTEMBER 2014 AND WERE COLLECTED FROM TOP OF WELL CASING.
2. ALL GROUNDWATER ELEVATIONS AND MEASUREMENTS ARE IN FEET ABOVE MEAN SEA LEVEL (AMSL).
3. THIS PHOTOGRAMMETRIC BASE MAP FOR THE GM SAGINAW MALLEABLE IRON PLANT AND DELPHI SAGINAW STEERING SYSTEMS PLANT 2 PROPERTIES WAS PREPARED BY LOCKWOOD MAPPING, INC. OF ROCHESTER, NEW YORK. AERIAL PHOTOGRAPHY WAS CONDUCTED ON 11/11/94. ORIGINAL LOCKWOOD MAP WAS AT A SCALE OF 1"=100' AND WAS INTERPRETED FOR TWO-FOOT CONTOURS.
4. BASE MAP HAS BEEN MODIFIED TO INCORPORATE BUFFER BASIN, SEDIMENTATION BASINS, WETLANDS MITIGATION AREA, AND GREEN POINT LANDFILL (GPL) FINAL COVER FROM THE FINAL ENGINEERING DESIGN REPORT PREPARED BY BBL FOR THE GPL, DATED JANUARY 1998.
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7. BASE MAP INFORMATION SOUTH OF MAIN REALM, INC. PROPERTY LINE FROM AIR-LAND SURVEYS, INC. PHOTO DATE 11/90, MAPPING DATE 10/91.
8. CONTOURS HAVE BEEN INFERRED IN THE AREA OF THE LANDFILL BASED ON HISTORICAL DATA.

SAGINAW MALLEABLE IRON PLANT PROPERTY,
GREEN POINT LANDFILL, AND DRUM REMEDIATION AREA
SAGINAW, MICHIGAN

SITE-WIDE WATER TABLE ELEVATION COUNTOUR MAP - SEPTEMBER 2014

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FIGURE
2

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Appendix A

Saginaw Malleable Iron Plant Data Tables

Table 1. Monitoring Well Sampling Plan and Construction Summary, 2014 Annual Report RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Well ID	Screen Interval (ft)[1]	Screened Unit/Zone	Well Construction	Date Installed	TIC[2] Elevation (ft)[3]
MW-107WT	4-9	Water table	2" PVC	12/23/94	590.65
MW-107S1	12.5-17.5	Upper sand	2" PVC	5/3/95	590.74
MW-108WT	2.5-7.5	Water table	2" PVC	12/21/94	590.53
MW-108S2	22-27	Upper sand	2" PVC	12/21/94	590.26
MW-110WTR	3-8	Water table	2" PVC	11/9/2001	591.52
MW-111WT	5.5-10.5	Water table	2" PVC	1/6/95	590.95
MW-114WT	3.5-8.56	Water table	2" PVC	7/24/07	591.12
MW-114S2	22.5-27.5	Upper sand	2" PVC	7/23/07	591.2
MW-149WT	7-17	Water table	2" PVC	9/21/95	592.27
MW-185WT	3-8	Water table	2" PVC	11/8/2001	588.67
MW-186WT	8-18	Water table	2" PVC	NA	NA

Notes:

[1] Depths are in feet below ground surface (bgs). Note that the screened intervals of the MW-128 and X-1 well clusters have been adjusted due to the addition of riser to the wells during landfill capping.

[2] TIC = Top of inner casing.

[3] Elevations are in feet above mean sea level (AMSL).

NA = not applicable/not available.

Table 2. Site-Wide Water Level Measurements, September 17 and 18, 2014
2014 Annual Report - RACER Trust, Saginaw Malleable Iron Plant and Green Point Landfill, Saginaw, Michigan

Location	Reference Elevation (feet AMSL)	Depth to Water (feet)	Groundwater Elevation (feet AMSL)	Site Area (GPL or SMI)
Sampled Monitoring Wells (Green Point Landfill)				
MW-117WT	582.37	1.30	581.07	GPL
MW-117S1	583.70	1.50	582.20	GPL
MW-118WT	582.98	2.42	580.56	GPL
MW-118S1	583.28	1.15	582.13	GPL
MW-183WT	588.77	8.26	580.51	GPL
X-4AR	NA	7.14	NA	GPL
X-4CAUGR	NA	9.17	NA	GPL
X-4D	NA	2.71	NA	GPL
X-9AR	586.95	7.34	579.61	GPL
X-9BR	586.85	7.69	579.16	GPL
X-9CAUG	586.62	7.79	578.83	GPL
X-9D	NA	3.71	NA	GPL
X-10BR	592.67	NA	NA	GPL
TWW-1	587.31	4.82	582.49	GPL
Sampled Monitoring Wells (Saginaw Malleable Iron Plant Area)				
MW-107WT	590.65	9.71	580.94	SMI
MW-107S1	590.74	11.04	579.70	SMI
MW-108WT	590.53	10.06	580.47	SMI
MW-108S1	590.24	9.85	580.39	SMI
MW-110WTR	591.52	12.37	579.15	SMI
MW-111WT	590.95	8.88	582.07	SMI
MW-114WT	591.12	7.69	583.43	SMI
MW-114S2	591.20	11.11	580.09	SMI
MW-149WT	592.27	11.68	580.59	SMI
MW-185WT	588.67	5.89	582.78	SMI
MW-186WT	NA	8.87	NA	SMI
Gauging Only Monitoring Wells				
B-3R	609.51	7.58	601.93	SMI
B-3BAUG	596.54	12.99	583.55	SMI
B-5BAUG	594.17	12.01	582.16	SMI
B-5CAUG	594.23	12.08	582.15	SMI
B-5R	594.54	6.87	587.67	SMI
MW-103S1	595.75	12.00	583.75	SMI
MW-103S2	596.34	14.61	581.73	SMI
MW-103WT	591.21	13.91	577.30	SMI
MW-105S1	593.67	11.49	582.18	SMI
MW-105S2	593.27	11.10	582.17	SMI
MW-105WT	593.35	8.42	584.93	SMI
MW-108S2	590.26	10.71	579.55	SMI
MW-108S3	589.98	7.37	582.61	SMI
MW-108S4	590.11	7.41	582.70	SMI
MW-111S1	591.14	10.57	580.57	SMI
MW-111S2	591.50	11.11	580.39	SMI
MW-111S3	591.35	8.77	582.58	SMI
MW-111S4	591.66	8.95	582.71	SMI
MW-114S1	591.13	8.52	582.61	SMI
MW-114S3	591.02	8.31	582.71	SMI
MW-114S4	591.14	CNL	NA	SMI
MW-122WT	584.97	CNL	NA	GPL
MW-122S1	584.97	CNL	NA	GPL
MW-122S2	585.13	CNL	NA	GPL
MW-123WT	584.53	CNL	NA	GPL
MW-123S1	584.58	CNL	NA	GPL
MW-124WT	585.94	CNL	NA	GPL
MW-124S1	586.41	CNL	NA	GPL
MW-125WT	586.98	4.91	582.07	GPL
MW-128S1	594.99	12.40	582.59	GPL
MW-128WT	594.96	11.55	583.41	GPL
MW-129WT	587.38	2.92	584.46	GPL
MW-131WT	592.56	4.71	587.85	SMI
MW-131S1	592.75	10.26	582.49	SMI
MW-131S2	592.39	9.84	582.55	SMI

See Notes on Page 2.

Table 2. Site-Wide Water Level Measurements, September 17 and 18, 2014
2014 Annual Report - RACER Trust, Saginaw Malleable Iron Plant and Green Point Landfill, Saginaw, Michigan

Location	Reference Elevation (feet AMSL)	Depth to Water (feet)	Groundwater Elevation (feet AMSL)	Site Area (GPL or SMI)
Gauging Only Monitoring Wells Continued				
MW-134WT	594.02	6.31	587.71	SMI
MW-134S1	593.31	10.99	582.32	SMI
MW-134S2	593.14	10.87	582.27	SMI
MW-137WT	595.91	5.19	590.72	SMI
MW-138WT	602.39	4.51	597.88	SMI
MW-140WT	595.90	9.90	586.00	SMI
MW-140S1	595.33	13.31	582.02	SMI
MW-140S2	595.80	13.84	581.96	SMI
MW-143WT	596.52	20.25	576.27	SMI
MW-144WT	593.25	7.45	585.80	SMI
MW-147WT	592.07	NA	NA	SMI
MW-158WT	591.78	NA	NA	SMI
MW-160WT	591.53	NA	NA	SMI
MW-168WT	592.11	CNL	NA	SMI
MW-169WT	591.82	NA	NA	SMI
MW-172WT	591.51	NA	NA	SMI
MW-178WT	590.35	NA	NA	SMI
MW-180WT	590.67	NA	NA	SMI
MW-2A	584.56	3.04	581.52	GPL
MW-2B	584.56	2.46	582.10	GPL
MW-2CAUG	585.15	DRY	NA	GPL
QPTW-01	591.95	Product[4]	NA	SMI
QPTW-02	592.35	2.36	589.99	SMI
QPTW-03[5]	592.13	NA	NA	SMI
QPTW-04	592.00	Product[4]	NA	SMI
QPTW-05	592.13	Product[4]	NA	SMI
QPTW-10	592.15	NA	NA	SMI
QPTW-13	592.36	3.48	NA	SMI
RG1	NA	CNL	NA	SMI
RW-1	NA	NA	NA	SMI
RW-2	588.09	NA	NA	SMI
RW-3	588.40	NA	NA	SMI
SG1 (Near shore)	NA	2.03	NA	SMI
SG1 (Offshore)	NA	2.28	NA	SMI
TP-2	592.12	NA	NA	SMI
TW-241	NA	4.88	NA	GPL
TW-242	NA	5.92	NA	GPL
X-10AR2	594.67	4.42	590.25	GPL
X-15AR	584.61	NA	NA	GPL
X-15BR	585.13	NA	NA	GPL
X-16A	587.44	3.00	584.44	GPL
X-16B	587.20	2.57	584.63	GPL
X-1A	597.72	11.72	586.00	GPL
X-1B	597.69	12.63	585.06	GPL
X-1CR2	598.41	12.31	586.10	GPL
X-2A	593.12	3.81	589.31	GPL

Notes:

1. Elevations are shown in feet above mean sea level (AMSL) relative to the NGVD datum of 1929.
2. Depth to water measurements were taken from the top of well casing.
3. Monitoring wells in the MW-128 and X-1 well clusters were extended during landfill capping activities. Reference elevations shown above are from August 2000 when the wells were resurveyed.
4. Product was measured in the following wells at the indicated thickness: QPTW-01 with 1.04 feet; QPTW-04 with 1.90 feet; and QPTW-05 with 1.78 feet.
5. QPTW-03 was replaced by QPTW-03R and neither were monitored in 2014.

CNL	Could not locate
GPL	Green Point Landfill
NA	Not available
SMI	Saginaw Malleable Iron Plant

Table 3. Laboratory Analytical Parameters, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Monitoring Well ID	Summary from RAP (2008)	Ultra Low Flow Location[1]	Ammonia Nitrogen	Phosphorus	Total Arsenic	Total Manganese	Total Thallium	SVOCs	Total PCBs	Dissolved PCBs	TDS
MW-107WT[2]	Ammonia nitrogen, phosphorus, DO, total arsenic, total manganese, and total thallium	X	X	X	X	X	X				
MW-107S1	Ammonia nitrogen		X								
MW-108WT[3]	TCL SVOCs, DO, ammonia, phosphorus, and total manganese	X	X	X		X		X			
MW-108S2	Ammonia nitrogen		X								
MW-110WTR[2]	PCBs (total and dissolved,) ammonia nitrogen, phosphorus, DO, TDS, total manganese, and thallium	X	X	X		X	X		X	X	
MW-111WT[2]	PCBs (total and dissolved), DO, ammonia, phosphorus, total thallium, and total manganese	X	X	X		X	X		X	X	
MW-114WT[2]	PCBs (total and dissolved), ammonia, phosphorus, DO total thallium, and total manganese	X	X	X		X	X		X	X	
MW-114S2	Ammonia nitrogen		X								
MW-149WT	Ammonia, phosphorus, total arsenic, and total thallium	X	X	X	X		X				
MW-185WT[2]	PCBs (total and dissolved), ammonia, phosphorus, DO, total manganese, and total thallium.	X	X	X		X	X		X	X	
MW-186WT	PCBs (total and dissolved), ammonia, phosphorus, DO total thallium, and total manganese	X	X	X		X	X		X	X	

Notes:

[1]Ultra Low Flow sampling refers to the use of a purge and sampling rate of approximately 1 liter per hour, implemented to minimize sample turbidity.

[2]Monitoring well purged dry upon sampling. Well was allowed to recharge and then a sample was collected.

[3]Monitoring well was dry or had insufficient volume upon gauging; therefore, a sample was not collected.

Table 4. Field Parameters, 2014 Annual Report, RACER Trust Saginaw Malleable Iron Plant, Saginaw, Michigan

Well ID	Date Sampled	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Temperature (ºC)	Turbidity (NTUs)
MW-107S1	**09/30/10**	1.258	0.4	-104.2	7.54	22.9	0.35
MW-107S1	**09/21/11**	1.26	0.90	-111.7	7.11	14.93	0.6
MW-107S1	**09/17/12**	1.109	-[2]	-83.0	7.19	15.3	1.02
MW-107S1	**09/25/13**	3.474	0.79	180.3	7.41	12.70	0.1
MW-107S1	**09/24/14**	1.149	3.03	-76.8	7.40	12.68	2.3
MW-107WT	**DRY 2010 and 2011**	NA	NA	NA	NA	NA	NA
MW-107WT[1]	**09/18/12**	NA	NA	NA	NA	NA	11.0
MW-107WT[1]	**09/26/13**	NA	NA	NA	NA	NA	93.2
MW-107WT[1]	**09/24/14**	0.861	0.64	-88.8	6.94	14.26	1.3
MW-108S2	**09/28/10**	1.142	0.12	-116.6	7.52	13.87	0.4
MW-108S2	**09/21/11**	0.808	0.63	-96.9	7.51	13.87	3.8
MW-108S2	**09/17/12**	0.901	0.28	-238.8	7.38	13.23	0.83
MW-108S2	**09/26/13**	2.641	0.37	160.1	7.49	12.37	0.8
MW-108S2	**09/24/14**	Missing field notes					
MW-108WT	**DRY 2010 through 2014**	NA	NA	NA	NA	NA	NA
MW-110WTR	**DRY 2010 through 2013**	NA	NA	NA	NA	NA	NA
MW-110WTR	**09/24/14**	Missing field notes					
MW-111WT	**DRY 2010 and 2011**	NA	NA	NA	NA	NA	NA
MW-111WT[1]	**09/18/12**	NA	NA	NA	NA	NA	5.36
MW-111WT[1]	**09/26/13**	NA	NA	NA	NA	NA	6.62
MW-111WT	**09/23/14**	Missing field notes					
MW-114S2	**09/29/10**	0.69	0.10	-118.5	8.40	16.43	1.0
MW-114S2	**09/22/11**	0.929	1.83	-109.6	7.20	16.3	1.1
MW-114S2	**09/18/12**	0.809	7.67	-21.1	7.25	14.25	3.47
MW-114S2	**09/25/13**	2.810	0.63	-206.2	7.37	14.15	0.2
MW-114S2	**09/23/14**	0.637	0.07	-113.4	6.73	15.96	1.3
MW-114WT	**DRY 2010, 2011 and 2012**	NA	NA	NA	NA	NA	NA
MW-114WT[1]	**09/25/13**	NA	NA	NA	NA	NA	12.3
MW-114WT	**09/23/14**	0.705	0.19	-88.1	6.43	20.25	0.98
MW-149WT	**09/30/10**	1.395	0.53	-133.4	6.91	12.79	1.6
MW-149WT	**09/28/11**	1.441	0.43	-136.6	6.77	13.79	1.7
MW-149WT	**09/18/12**	1.161	-[2]	-75.0	6.73	14.03	0.72
MW-149WT	**09/25/13**	4.722	0.28	-150.7	6.70	14.93	1.25
MW-149WT	**09/24/14**	Missing field notes					

Table 4. Field Parameters, 2014 Annual Report, RACER Trust Saginaw Malleable Iron Plant, Saginaw, Michigan

Well ID	Date Sampled	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Temperature (ºC)	Turbidity (NTUs)
MW-185WT	**DRY 2010 and 2011**	NA	NA	NA	NA	NA	NA
MW-185WT[1]	**09/18/12**	NA	NA	NA	NA	NA	27.7
MW-185WT[1]	**09/25/13**	NA	NA	NA	NA	NA	19.7
MW-185WT	**09/24/14**	0.48	0.29	-125.7	7.75	22.01	1.65
MW-186WT	**09/29/10**	0.53	0.39	-130.1	7.88	14.52	0.6
MW-186WT	**09/28/11**	0.94	1.68	-136	8.04	14.18	0.5
MW-186WT	**09/18/12**	0.748	4.43	-222.8	7.43	15.07	0.60
MW-186WT	**09/25/13**	2.239	0.48	-104.2	6.86	16.15	0.5
MW-186WT	**09/24/14**	0.853	0.24	-124.9	6.50	18.99	1.5

Notes:
ºC = Celsius.
mg/L = milligrams per liter.
mV = millivolts.
NTUs = Nephelometric Turbidity Units.
SU = Standard Units.
mS/cm = milliSiemens per centimeter.
NA = not applicable/not available.
1. Monitoring well purged dry upon sampling. Well was allowed to recharge and then a sample was collected. Only turbidity was measured prior to sampling.
2. No reading due to faulty dissolved oxygen sensor.

Table 5. PCBs in Groundwater, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-110WTR 09/24/14	MW-111WT 09/18/12	MW-111WT 09/26/13	MW-111WT 09/23/14	MW-114WT 09/26/13
PCBs							
Aroclor-1016	- -	ug/L	ND(0.095)	ND(0.098)*	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1221	- -	ug/L	ND(0.095)	ND(0.098)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1232	- -	ug/L	ND(0.095)	ND(0.098)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1242	- -	ug/L	ND(0.095)	ND(0.098)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1248	- -	ug/L	ND(0.095)	ND(0.098)	**0.45**	ND(0.095)	ND(0.095)
Aroclor-1254	- -	ug/L	ND(0.095)	ND(0.098)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1260	- -	ug/L	ND(0.095)	ND(0.098)*	ND(0.095)	ND(0.095)	ND(0.095)
Total PCBs	0.2(M)	ug/L	ND(0.095)	ND(0.098)	**0.45**	ND(0.095)	ND(0.095)
PCBs-Dissolved							
Aroclor-1016 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)*	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1221 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1232 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1242 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1248 (Dissolved)	- -	ug/L	ND(0.098)	**0.082 J**	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1254 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1260 (Dissolved)	- -	ug/L	ND(0.098)	ND(0.096)*	ND(0.095)	ND(0.095)	ND(0.095)
Total PCBs (Dissolved)	0.2(M)	ug/L	ND(0.098)	**0.082 J**	ND(0.095)	ND(0.095)	ND(0.095)

Location ID: / Date Collected:	MDEQ GSI	Units	MW-114WT 09/23/14	MW-185WT 09/18/12	MW-185WT 09/25/13	MW-185WT 09/24/14	MW-186WT 09/30/10
PCBs							
Aroclor-1016	- -	ug/L	ND(0.095)	ND(0.096)*	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1221	- -	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1232	- -	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1242	- -	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1248	- -	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1254	- -	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1260	- -	ug/L	ND(0.095)	ND(0.096)*	ND(0.095)	ND(0.095)	ND(0.10)
Total PCBs	0.2(M)	ug/L	ND(0.095)	ND(0.096)	ND(0.095)	ND(0.095)	ND(0.10)
PCBs-Dissolved							
Aroclor-1016 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)*	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1221 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1232 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1242 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1248 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1254 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.10)
Aroclor-1260 (Dissolved)	- -	ug/L	ND(0.095)	**0.041 J***	ND(0.095)	ND(0.095)	ND(0.10)
Total PCBs (Dissolved)	0.2(M)	ug/L	ND(0.095)	**0.041 J**	ND(0.095)	ND(0.095)	ND(0.10)

Location ID: / Date Collected:	MDEQ GSI	Units	MW-186WT 09/23/11	MW-186WT 09/18/12	MW-186WT 09/25/13	MW-186WT 09/24/14
PCBs						
Aroclor-1016	- -	ug/L	ND(0.095)	ND(0.095)* [ND(0.095)*]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1221	- -	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1232	- -	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1242	- -	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1248	- -	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1254	- -	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Aroclor-1260	- -	ug/L	ND(0.095)	ND(0.095)* [ND(0.095)*]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
Total PCBs	0.2(M)	ug/L	ND(0.095)	ND(0.095) [ND(0.095)]	ND(0.095) [ND(0.095)]	ND(0.10) [ND(0.097)]
PCBs-Dissolved						
Aroclor-1016 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1221 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1232 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1242 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1248 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1254 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Aroclor-1260 (Dissolved)	- -	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)
Total PCBs (Dissolved)	0.2(M)	ug/L	ND(0.095)	ND(0.095)	ND(0.095)	ND(0.095)

Footnotes in Table 8.

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-107WT 09/18/12	MW-107WT 09/24/14	MW-110WTR 09/24/14	MW-111WT 09/18/12
Inorganics						
Arsenic	0.01	mg/L	**0.0011 J**	**0.0042**	NA	NA
Manganese	6.2E+3 (G,X)**	mg/L	**0.170**	**1.5**	**4**	**3.6**
Thallium	0.0037(X)	mg/L	**0.00046 J,B**	ND(0.0010)	ND(0.0010)	**0.00024 J,B**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-111WT 09/26/13	MW-111WT 09/23/14	MW-114WT 09/26/13	MW-114WT 09/23/14
Inorganics						
Arsenic	0.01	mg/L	NA	**0.0077**	NA	**0.0053**
Manganese	6.2E+3 (G,X)**	mg/L	**1.6**	**0.78**	**1.1**	**1.4**
Thallium	0.0037(X)	mg/L	ND(0.00100)	ND(0.0010)	ND(0.0010)	ND(0.0010)

Location ID: / Date Collected:	MDEQ GSI	Units	MW-149WT 09/30/10	MW-149WT 09/28/11	MW-149WT 09/18/12	MW-149WT 09/25/13
Inorganics						
Arsenic	0.01	mg/L	**0.126 [0.122]**	**0.190 [0.180]**	**0.160 [0.160]**	**0.140 B [0.140 B]**
Manganese	6.2E+3 (G,X)**	mg/L	NA	NA	NA	NA
Thallium	0.0037(X)	mg/L	ND(0.0010) [ND(0.0010)]	**0.000840 [0.000170]**	**0.00065 J [0.00032 J,B]**	ND(0.0010) [ND(0.0010)]

Location ID: / Date Collected:	MDEQ GSI	Units	MW-149WT 09/24/14	MW-185WT 09/18/12	MW-185WT 09/25/13	MW-185WT 09/24/14
Inorganics						
Arsenic	0.01	mg/L	**0.075 B [0.069 B]**	NA	NA	NA
Manganese	6.2E+3 (G,X)**	mg/L	NA	**0.700**	**0.400**	**0.32**
Thallium	0.0037(X)	mg/L	**0.00062 J** [ND(0.0010)]	**0.00015 J,B**	ND(0.0010)	**0.00071 J**

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Location ID: Date Collected:	MDEQ GSI	Units	MW-186WT 09/30/10	MW-186WT 09/23/11	MW-186WT 09/18/12	MW-186WT 09/25/13
Inorganics						
Arsenic	0.01	mg/L	NA	NA	NA	NA
Manganese	6.2E+3 (G,X)**	mg/L	**0.252**	**0.450**	**0.400**	**1.1**
Thallium	0.0037(X)	mg/L	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)

Location ID: Date Collected:	MDEQ GSI	Units	MW-186WT 09/24/14
Inorganics			
Arsenic	0.01	mg/L	NA
Manganese	6.2E+3 (G,X)**	mg/L	**2.1**
Thallium	0.0037(X)	mg/L	**0.00056 J**

Footnotes in Table 8.

Table 7. Indicator Parameters in Groundwater, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-107WT 09/18/12	MW-107WT 09/26/13	MW-107WT 09/24/14	MW-107S1 09/30/10	MW-107S1 09/21/11	MW-107S1 09/17/12	MW-107S1 09/26/13	MW-107S1 09/24/14	MW-108S2 09/29/10	MW-108S2 09/21/11
Miscellaneous												
Phosphorus (Total)	1.0	mg/L	ND(0.10)	**0.10**	ND(0.10)	NA	NA	NA	NA	NA	NA	NA
Ammonia Nitrogen	(NH3)	mg/L	**0.062 J**	**0.88 B**	**1.3 B**	**1.2**	**1.4**	**1.4**	**1.4 B**	**1.7 B**	**4.6**	**4.9**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-108S2 09/17/12	MW-108S2 09/26/13	MW-108S2 09/24/14	MW-110WTR 09/24/14	MW-111WT 09/18/12	MW-111WT 09/26/13	MW-111WT 09/23/14	MW-114WT 09/26/13	MW-114WT 09/23/14	MW-114S2 09/29/10
Miscellaneous												
Phosphorus (Total)	1.0	mg/L	NA	NA	NA	**0.12**	**0.087 J**	**0.37**	**0.61**	ND(0.10)	ND(0.10)	NA
Ammonia Nitrogen	(NH3)	mg/L	**6.2**	**5.3 B**	**4.6 B**	**0.10 J,B**	**1.6**	**1.4 B**	**1.7^**	**0.066 J,B**	ND(0.20)	**2.3 [2.2]**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-114S2 09/22/11	MW-114S2 09/18/12	MW-114S2 09/25/13	MW-114S2 09/23/14	MW-149WT 09/30/10	MW-149WT 09/28/11	MW-149WT 09/18/12	MW-149WT 09/25/13	MW-149WT 09/24/14	MW-185WT 09/18/12
Miscellaneous												
Phosphorus (Total)	1.0	mg/L	NA	NA	NA	**NA**	**2.2 [1.8]**	**1.6 [1.6]**	**2.0 [1.9]**	**2.0 [2.1]**	**2.0 [1.3]**	ND(0.10)
Ammonia Nitrogen	(NH3)	mg/L	**3.0 [3.0]**	**2.9 [2.8]**	**3.8 B [3.8 B]**	**5.0^ [5.5^]**	**3.6**	**4.7**	**5.0**	**4.6 B**	**3.2 B**	**0.38**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-185WT 09/25/13	MW-185WT 09/24/14	MW-186WT 09/30/10	MW-186WT 09/23/11	MW-186WT 09/18/12	MW-186WT 09/25/13	MW-186WT 09/24/14
Miscellaneous									
Phosphorus (Total)	1.0	mg/L	ND(0.10)	ND(0.10)	**0.3**	**0.36**	**0.25**	**0.29**	**0.17**
Ammonia Nitrogen	(NH3)	mg/L	**0.40 B**	**0.16 J,B**	**1.5**	**2.1**	**2.1**	**2.0 B**	**2.0 B**

Footnotes in Table 8.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Table 8 - Footnotes

General Notes:

Samples were collected by ARCADIS, and submitted to TestAmerica Laboratories in North Canton, Ohio for analysis.
Duplicate results are presented in brackets.
Groundwater concentrations are presented in milligrams per liter (mg/L), except where noted.
Green shading of well ID represents a groundwater surface water interface (GSI) perimeter monitoring well.
Gray shaded cells represent constituent concentrations that exceed Groundwater/Surface Water (GSI) Michigan Part 201 Criteria updated September 28, 2012.
Bolded values represent a detection.
(MZ) = Mixing zone based GSI criterion applicable to GSI perimeter montioring wells.
(BSL) = Background screening level; results evaluated respective to BSL concentration.
(NH3) = MDEQ has determined that there is not a reasonable potential to expect the maximum concentration of ammonia (i.e., 425 ug/L concentration of unionized ammonia in mixing zone application) to cause an unacceptable risk.

Data Qualifiers:

ND = Not detected. The value in parentheses represents the associated detection limit.
NA = Not analyzed for this constituent.
B = Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL).
B = Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
BJ = The detected analyte is an estimated concentration between the IDL and the RL.
U = The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit.
UJ = The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result.
D = Concentration is based on a diluted sample analysis.
J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.
R = Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes.
* = LCS or LCSD exceeds the control limits.
^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: Instrument related QC exceeds the control limits.

MDEQ Criteria Qualifiers:

ID = *Inadequate data* to develop criterion.
NA = Criterion or value is *not available* or, as is the case for Csat, *not applicable*.
NLV = Hazardous substance is *not likely to volatilize* under most conditions.

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 pa 399, mcl 325.1005.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion.
(C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration since the calculated risk-based criterion is greater than Csat. Concentrations greater than Csat are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.
(D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value provided in the following table:

Hazardous Substance	Chemical Abstract Service Number	Residential Health-Based Drinking Water Value (ug/L)	Industrial-Commercial Health-Based Drinking Water Value (ug/L)
Aluminum	7429905	300	4,100
tertiary Amyl methyl ether	994058	910	2,600
Copper	7440508	1,400	4,000
Diethyl ether	60297	3,700	10,000
Ethylbenzene	100414	700	700
Iron	7439896	2,000	5,600
Manganese	7439965	860	2,500
Methyl-tert-butyl ether (MTBE)	1634044	240	690
Toluene	108883	1,000	1,000
1,2,4-Trimethylbenzene	95636	1,000	2,900
1,3,5-Trimethylbenzene	108678	1,000	2,900
Xylenes	1330207	10,000	10,000

MDEQ Criteria Qualifiers (continued):

(F) Criterion is based on adverse impacts to plant life and phytotoxicity.
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Hazardous Substance	FCV Formula (ug/L)	FCV Conversion Factor	WV (ug/L)	HNDV (ug/L)
Acetate	7.0362)	NA	NA	1.30E+06
Barium[x]	EXP(1.0629*(LnH)+1.1869)	NA	NA	1.60E+05
Beryllium	EXP(2.5279*(LnH)-10.7689)	NA	NA	1,200
Cadmium[x]	(EXP(0.7852*(LnH)-2.715))*CF	1.101672-((LnH)*(0.041838))	NA	130
Chromium (III)[x]	(EXP(0.819*(LnH)+0.6848))*CF	0.86	NA	9,400
Copper	(EXP(0.8545*(LnH)-1.702)) *CF	0.96	NA	64,000
Lead[x]	(EXP(0.9859*(LnH)-1.270))*CF	1.46203-((LnH)*(0.14571))	NA	190
Manganese	EXP(0.8784*(LnH)+3.5385)	NA	NA	59,000
Nickel	(EXP(0.846*(LnH)+0.0584))*CF	0.997	NA	2.10E+05
Pentachlorophenol[x]	EXP(1.005*(pH)-5.134)	NA	NA	2.8
Zinc	(EXP(0.8473*(LnH)+0.884))*CF	0.986	NA	22,000

where,

[x] =The GSI criterion developed here may not be protective for surface water that is used as a drinking water source.

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/l. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001),

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(K) Hazardous substance may be flammable or explosive, or both.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable combinations of site-specific soil and drinking water concentrations are presented in the following table:

Acceptable Combinations of Lead in Drinking Water and Soil

Drinking Water Concentration (ug/L)	Soil Concentration (mg/kg)
5	386-395
6	376-385
7	376-385
8	366-375
9	356-365
10	346-355
11	336-345
12	336-345
13	326-335
14	316-325
15	306-315

MDEQ Criteria Qualifiers (continued):

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Industrial-commercial direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001)

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. see formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Saginaw Malleable Iron Plant, Saginaw, Michigan

Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria (HDV) (ug/L)
Acrylonitrile	107131	2.0 (M); 0.87	100 (M); 17
Alachlor	15972608	3.5	91
Antimony	7440360	2	1,400
Arsenic	7440382	50	23,000
Atrazine	1912249	4.3	86
Barium	7440393	1,900*	*
Benzene	71432	12	240
bis(2-Chloroethyl)ether	111444	1 (M); 0.79	100 (M); 20
Bromate	15541454	10 (M); 0.5	200 (M); 10
Butyl benzyl phthalate	85687	6.9	13,000
Cadmium	7440439	2.5*	*
Carbon tetrachloride	56235	5.6	110
Chloride	16887006	50,000	1.00E+06
Chloroform	67663	77	1,500
Chromium (III)	16065831	120*	*
Cyanazine	21725462	2 (M); 0.93	200 (M); 40
3,3'-Dichlorobenzidine	91941	0.3 (M); 0.14	2,000 (M); 7.7
1,2-Dichloroethane	107062	6	120
1,1-Dichloroethylene	75354	24	480
1,2-Dichloropropane	78875	9.1	180
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Ethylene dibromide	106934	0.05 (M); 0.006	20 (M); 1.0
Ethylene glycol	107211	56,000	1.10E+06
Heptachlor	76448	0.01 (M); 0.0017	NLL
beta-Hexachlorocyclohexane	319857	0.024	20 (M)
Hexachloroethane	67721	5.3	310
Isophorone	78591	310	6,200
Isopropyl alcohol	67630	28,000	5.60E+05
Lead	7439921	14*	*
Manganese	7439965	3600	72,000
Methyl-tert-butyl ether (MTBE)	1634044	100	2,000
Methylene chloride	75092	47	940
Mirex	2385855	0.02 (M); 1.6E-5	NLL
Molybdenum	7439987	120	2,400
Nitrobenzene	98953	4.7	330 (M); 94
Pentachlorophenol	87865	1.8*	*
1,2,4,5-Tetrachlorobenzene	95943	2.8	3,300
1,1,1,2-Tetrachloroethane	630206	19	380
1,1,2,2-Tetrachloroethane	79345	3.2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	2.0 (M); 1.2	2,300
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580

{AA} = Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

{EE} = The following is an applicable generic GSI criterion as required by Section 210120a(15) of the NREPA: total dissolved solids (TDS), GSI criteria = 500 mg/L. Phosphorus = 1.0 mg/L, the criteria is applicable unless receiving water is a surface water that has a phosphorus waste load application or is an inland lake. In those cases, contact the department for applicable values.

{FF} = The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the TDS criterion is applicable.

** GSI value was calculated using the MDEQ calculation of generic facility-specific Part 201 GSI criteria for {G} footnoted hazardous substances. A site specific hardness value of 370 mg/L of $CaCO_3$ was acquired from the *Site Investigation Report* completed by BBL dated August 2005. Generic values of 235 mg/L of CaCO3, can be found for the Saginaw River in the *Michigan Water Chemistry Monitoring Great Lakes Tributaries 1998-2005 Report.* Results are below GSI RBSLs for either calculation.

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Appendix B

Green Point Landfill Data Tables

Table 1. Monitoring Well Sampling Plan and Construction Summary, 2014 Annual Report RACER Trust, Green Point Landfill, Saginaw, Michigan

Well ID	Screen Interval (ft)[1]	Screened Unit/Zone	Well Construction	Date Installed	TIC[2] Elevation (ft)[3]
MW-117WT	3 - 13	Water table	2" PVC	5/3/95	582.37
MW-117S1	24.2 - 29.2	Lower Sand	2" PVC	5/3/95	583.70
MW-118WT	1.6 - 11.6	Water table	2" PVC	5/2/95	582.98
MW-118S1	23.5 - 28.5	Lower Sand	2" PVC	5/2/95	583.28
MW-183WT	6-16	Water table	2" PVC	7/24/00	588.77
X-4AR	NA-8.3	Water table	2" PVC	NA	NA
X-4CAUGR	14-19	Upper Sand	2" PVC	7/24/07	NA
X-4D	40-45	Lower Sand	2" PVC	7/23/07	NA
X-9AR	3-13	Water table	2" PVC	6/2/80	586.95
X-9BR	26-31	Upper Sand	2" PVC	6/2/80	586.85
X-9CAUG	20-25	Upper Sand	2" PVC	6/2/80	586.62
X-9D	42.5-47.5	Lower Sand	2" PVC	7/23/07	NA
TWW-1	1.5-6.5	Water table	2” PVC	1/22/97	587.31

Notes:
1 Depths are in feet below ground surface (bgs). Note that the screened intervals of the MW-128 and X-1 well clusters have been adjusted due to the addition of riser to the wells during landfill capping.
2 TIC = Top of inner casing.
3 Elevations are in feet above mean sea level (AMSL).
NA = not applicable/not available.

Table 2. Site-Wide Water Level Measurements, September 17 and 18, 2014
2014 Annual Report - RACER Trust, Saginaw Malleable Iron and Green Point Landfill, Saginaw, Michigan

Location	Reference Elevation (feet AMSL)	Depth to Water (feet)	Groundwater Elevation (feet AMSL)	Site Area (GPL or SMI)
Sampled Monitoring Wells (Green Point Landfill)				
MW-117WT	582.37	1.30	581.07	GPL
MW-117S1	583.70	1.50	582.20	GPL
MW-118WT	582.98	2.42	580.56	GPL
MW-118S1	583.28	1.15	582.13	GPL
MW-183WT	588.77	8.26	580.51	GPL
X-4AR	NA	7.14	NA	GPL
X-4CAUGR	NA	9.17	NA	GPL
X-4D	NA	2.71	NA	GPL
X-9AR	586.95	7.34	579.61	GPL
X-9BR	586.85	7.69	579.16	GPL
X-9CAUG	586.62	7.79	578.83	GPL
X-9D	NA	3.71	NA	GPL
X-10BR	592.67	NA	NA	GPL
TWW-1	587.31	4.82	582.49	GPL
Sampled Monitoring Wells (Saginaw Malleable Iron Plant Area)				
MW-107WT	590.65	9.71	580.94	SMI
MW-107S1	590.74	11.04	579.70	SMI
MW-108WT	590.53	10.06	580.47	SMI
MW-108S1	590.24	9.85	580.39	SMI
MW-110WTR	591.52	12.37	579.15	SMI
MW-111WT	590.95	8.88	582.07	SMI
MW-114WT	591.12	7.69	583.43	SMI
MW-114S2	591.20	11.11	580.09	SMI
MW-149WT	592.27	11.68	580.59	SMI
MW-185WT	588.67	5.89	582.78	SMI
MW-186WT	NA	8.87	NA	SMI
Gauging Only Monitoring Wells				
B-3R	609.51	7.58	601.93	SMI
B-3BAUG	596.54	12.99	583.55	SMI
B-5BAUG	594.17	12.01	582.16	SMI
B-5CAUG	594.23	12.08	582.15	SMI
B-5R	594.54	6.87	587.67	SMI
MW-103S1	595.75	12.00	583.75	SMI
MW-103S2	596.34	14.61	581.73	SMI
MW-103WT	591.21	13.91	577.30	SMI
MW-105S1	593.67	11.49	582.18	SMI
MW-105S2	593.27	11.10	582.17	SMI
MW-105WT	593.35	8.42	584.93	SMI
MW-108S2	590.26	10.71	579.55	SMI
MW-108S3	589.98	7.37	582.61	SMI
MW-108S4	590.11	7.41	582.70	SMI
MW-111S1	591.14	10.57	580.57	SMI
MW-111S2	591.50	11.11	580.39	SMI
MW-111S3	591.35	8.77	582.58	SMI
MW-111S4	591.66	8.95	582.71	SMI
MW-114S1	591.13	8.52	582.61	SMI
MW-114S3	591.02	8.31	582.71	SMI
MW-114S4	591.14	CNL	NA	SMI
MW-122WT	584.97	CNL	NA	GPL
MW-122S1	584.97	CNL	NA	GPL
MW-122S2	585.13	CNL	NA	GPL
MW-123WT	584.53	CNL	NA	GPL
MW-123S1	584.58	CNL	NA	GPL
MW-124WT	585.94	CNL	NA	GPL
MW-124S1	586.41	CNL	NA	GPL
MW-125WT	586.98	4.91	582.07	GPL
MW-128S1	594.99	12.40	582.59	GPL
MW-128WT	594.96	11.55	583.41	GPL
MW-129WT	587.38	2.92	584.46	GPL
MW-131WT	592.56	4.71	587.85	SMI
MW-131S1	592.75	10.26	582.49	SMI
MW-131S2	592.39	9.84	582.55	SMI

See Notes on Page 2.

Table 2. Site-Wide Water Level Measurements, September 17 and 18, 2014
2014 Annual Report - RACER Trust, Saginaw Malleable Iron and Green Point Landfill, Saginaw, Michigan

Location	Reference Elevation (feet AMSL)	Depth to Water (feet)	Groundwater Elevation (feet AMSL)	Site Area (GPL or SMI)
Gauging Only Monitoring Wells Continued				
MW-134WT	594.02	6.31	587.71	SMI
MW-134S1	593.31	10.99	582.32	SMI
MW-134S2	593.14	10.87	582.27	SMI
MW-137WT	595.91	5.19	590.72	SMI
MW-138WT	602.39	4.51	597.88	SMI
MW-140WT	595.90	9.90	586.00	SMI
MW-140S1	595.33	13.31	582.02	SMI
MW-140S2	595.80	13.84	581.96	SMI
MW-143WT	596.52	20.25	576.27	SMI
MW-144WT	593.25	7.45	585.80	SMI
MW-147WT	592.07	NA	NA	SMI
MW-158WT	591.78	NA	NA	SMI
MW-160WT	591.53	NA	NA	SMI
MW-168WT	592.11	CNL	NA	SMI
MW-169WT	591.82	NA	NA	SMI
MW-172WT	591.51	NA	NA	SMI
MW-178WT	590.35	NA	NA	SMI
MW-180WT	590.67	NA	NA	SMI
MW-2A	584.56	3.04	581.52	GPL
MW-2B	584.56	2.46	582.10	GPL
MW-2CAUG	585.15	DRY	NA	GPL
QPTW-01	591.95	Product[4]	NA	SMI
QPTW-02	592.35	2.36	589.99	SMI
QPTW-03[5]	592.13	NA	NA	SMI
QPTW-04	592.00	Product[4]	NA	SMI
QPTW-05	592.13	Product[4]	NA	SMI
QPTW-10	592.15	NA	NA	SMI
QPTW-13	592.36	3.48	NA	SMI
RG1	NA	CNL	NA	SMI
RW-1	NA	NA	NA	SMI
RW-2	588.09	NA	NA	SMI
RW-3	588.40	NA	NA	SMI
SG1 (Near shore)	NA	2.03	NA	SMI
SG1 (Offshore)	NA	2.28	NA	SMI
TP-2	592.12	NA	NA	SMI
TW-241	NA	4.88	NA	GPL
TW-242	NA	5.92	NA	GPL
X-10AR2	594.67	4.42	590.25	GPL
X-15AR	584.61	NA	NA	GPL
X-15BR	585.13	NA	NA	GPL
X-16A	587.44	3.00	584.44	GPL
X-16B	587.20	2.57	584.63	GPL
X-1A	597.72	11.72	586.00	GPL
X-1B	597.69	12.63	585.06	GPL
X-1CR2	598.41	12.31	586.10	GPL
X-2A	593.12	3.81	589.31	GPL

Notes:

1. Elevations are shown in feet above mean sea level (AMSL) relative to the NGVD datum of 1929.
2. Depth to water measurements were taken from the top of well casing.
3. Monitoring wells in the MW-128 and X-1 well clusters were extended during landfill capping activities. Reference elevations shown above are from August 2000 when the wells were resurveyed.
4. Product was measured in the following wells at the indicated thickness: QPTW-01 with 1.04 feet; QPTW-04 with 1.90 feet; and QPTW-05 with 1.78 feet.
5. QPTW-03 was replaced by QPTW-03R and neither were monitored in 2014.

CNL	Could not locate
GPL	Green Point Landfill
NA	Not available
SMI	Saginaw Malleable Iron Plant

Table 3. Laboratory Analytical Parameters, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Well	Standard GPL Sampling List[1]	TCL VOCs	Ultra Low Flow[2] Total TAL Metals
MW-117S1	X		
MW-117WT	X		
MW-118S1	X		
MW-118WT	X		
MW-183WT	X		X
X-4AR[3]	X[3]		X[3]
X-4CAUGR	X		X
X-4D	X		X
X-9AR	X		X
X-9BR	X		X
X-9CAUG	X		X
X-9D	X		X
TWW-1		X	

Notes:

[1]TAL Dissolved Metals plus cyanide, and Indicator Parameters (pH, sulfide, chloride, total dissolved solids, nitrate, nitrite, and ammonia nitrogen).

[2]Ultra Low Flow sampling refers to the use of a purge and sampling rate of approximately 1 liter per hour, implemented to minimize sample turbidity.

[3]Monitoring well was dry, and a sample could not be collected.

Table 4. Field Parameters, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Well ID	Date Sampled	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Temperature (ºC)	Turbidity (NTUs)
MW-117S1	**10/01/10**	1.243	0.21	-82.5	8.14	13.15	1.3
MW-117S1	**09/27/11**	1.7	1.26	-82.3	6.89	15.7	0.8
MW-117S1	**09/13/12**	1.310	-[2]	-90.3	6.77	15.61	0.42
MW-117S1	**09/24/13**	4.123	0.75	-126.0	6.87	11.23	0.4
MW-117S1	**09/22/14**	1.307	0.58	-50.4	6.45	12.14	4.5
MW-117WT	**10/01/10**	8.45	0.11	-90	8.45	16.51	0.9
MW-117WT	**09/27/11**	9.535	0.68	-103	6.60	13.39	1.1
MW-117WT	**09/13/12**	10.33	-[2]	-77.2	6.23	16.32	0.68
MW-117WT	**09/24/13**	29.95	0.4	-109.8	6.37	12.72	0.80
MW-117WT	**09/23/14**	8.05	0.7	-57.8	6.25	12.05	8.60
MW-118S1[1]	**09/27/11**	1.81	1.19	-91.9	7.02	17.6	0.3
MW-118S1	**09/13/12**	1.803	3.82	-230.3	6.83	15.83	1.03
MW-118S1	**09/24/13**	4.289	0.72	-95.8	6.36	13.17	0.9
MW-118S1	**09/22/14**	1.38	0.30	-56	6.35	12.49	9.7
MW-118WT	**09/30/10**	3.435	0.22	-104.2	7.27	14.89	1.8
MW-118WT	**09/27/11**	3.261	0.71	-92.8	6.43	17.13	0.3
MW-118WT	**09/13/12**	2.451	1.37	-201.4	6.74	16.99	0.66
MW-118WT	**09/24/13**	5.017	0.95	-115.3	6.38	15.17	0.4
MW-118WT	**09/22/14**	1.521	0.20	-60.4	6.72	12.88	8.2
MW-183WT	**09/28/10**	0.633	0.33	-119.6	7.45	13.01	3.5
MW-183WT	**09/28/11**	0.814	0.26	-128.1	7.73	13.82	1.2
MW-183WT	**09/14/12**	0.962	0.25	-207.6	7.11	15.30	0.43
MW-183WT	**09/24/13**	2.390	0.51	-105.2	6.56	17.12	1.8
MW-183WT	**09/22/14**	Missing field notes					
TWW-1	**09/29/10**	3.924	1.15	-54.7	6.99	15.08	9.1
TWW-1	**09/21/11**	2.89	3.11	-7.1	6.87	18.42	1.2
TWW-1	**09/14/12**	2.289	-[2]	19.0	6.87	19.30	0.59
TWW-1	**09/24/13**	3.004	0.64	-139.6	6.84	17.47	2.27
TWW-1	**09/23/14**	2.342	0.23	-89.9	6.91	17.35	1.01
X-4AR	**DRY 2010, 2011, 2012, 2013**	NA	NA	NA	NA	NA	NA
X-4CAUGR	**09/28/10**	1.03	0.34	-79.8	7.11	12.29	1.1
X-4CAUGR	**09/26/11**	0.971	1.17	-97.1	6.96	17.25	1.2
X-4CAUGR	**09/14/12**	1.050	0.19	-293.7	6.93	11.83	0.48
X-4CAUGR	**09/24/13**	0.783	0.19	-64.1	6.22	13.21	1.49
X-4CAUGR	**09/22/14**	Missing field notes					
X-4D	**09/28/10**	4.58	0.53	-146.7	7.41	13.45	1.3
X-4D	**09/26/11**	4.897	1.67	-105.7	7.62	15.94	0.0
X-4D	**09/14/12**	4.884	0.50	-208.1	7.20	11.92	0.4
X-4D	**09/24/13**	3.937	0.23	-36.8	6.40	13.30	1.45
X-4D	**09/22/14**	Missing field notes					

Table 4. Field Parameters, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Well ID	Date Sampled	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Temperature (ºC)	Turbidity (NTUs)
X-9AR	**09/29/10**	0.815	0.24	-81.5	7.45	11.44	0.9
X-9AR	**09/23/11**	1.142	0.38	-114.8	7.09	11.63	0.0
X-9AR	**09/12/12**	1.056	8.20	-92.7	6.88	14.03	0.45
X-9AR	**09/25/13**	5.685	0.26	-122.6	6.95	10.54	1.90
X-9AR	**09/22/14**	Missing field notes					
X-9BR	**09/28/10**	1.215	0.10	-93.4	7.09	14.53	0.8
X-9BR	**09/23/11**	1.41	0.20	-113.8	7.13	11.29	0.0
X-9BR	**09/12/12**	1.358	0.21	-217.9	6.69	14.02	0.97
X-9BR	**09/25/13**	6.571	0.24	-146.0	6.98	11.31	1.76
X-9BR	**09/22/14**	Missing field notes					
X-9CAUG	**09/28/10**	0.995	0.29	-72.3	6.97	12.45	0.1
X-9CAUG	**09/23/11**	1.07	0.45	-116.9	7.03	12.79	0.0
X-9CAUG	**09/12/12**	1.132	1.98	-137.1	6.65	21.04	0.76
X-9CAUG	**09/25/13**	5.046	0.27	-69.0	6.54	15.64	1.29
X-9CAUG	**09/22/14**	Missing field notes					
X-9D	**09/28/10**	3.257	0.41	-93.2	7.31	12.54	0.1
X-9D	**09/23/11**	4.27	0.56	-113.8	7.44	11.73	0.0
X-9D	**09/12/12**	3.510	-[2]	-83.1	7.13	14.20	0.10
X-9D	**09/25/13**	19.53	0.17	-113.1	7.08	13.03	1.71
X-9D	**09/22/14**	Missing field notes					
X-10BR	**09/29/10**	2.446	0.20	-101.2	6.69	14.17	1.4
X-10BR	**09/22/11**	1.692	0.79	-88.1	6.87	13.25	4.8
X-10BR	**09/14/12**	1.953	-[2]	-91.6	6.59	14.58	0.42
X-10BR	**09/24/13**	21.55	0.28	-104.5	6.40	14.21	4.89

Notes:
ºC = Celsius.
mg/L = milligrams per liter.
mV = millivolts.
NTUs = Nephelometric Turbidity Units.
SU = Standard Units.
mS/cm = milliSiemens per centimeter.
NA = not applicable/not available.
1. Monitoring well MW-188S1 was sampled on October 10, 2010 but the sampling log was not found.
2. No reading due to faulty dissolved oxygen sensor.

Table 5. Volatile Organic Compounds in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: Date Collected:	MDEQ GSI	Units	TWW-1 09/29/10	TWW-1 09/21/11	TWW-1 09/14/12	TWW-1 09/24/13	TWW-1 09/23/14
Volatile Organics							
1,1,1-Trichloroethane	89	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,1,2,2-Tetrachloroethane	78(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,1,2-trichloro-1,2,2-trifluoroethane	32	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	NA
1,1,2-Trichloroethane	330(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,1-Dichloroethane	740	ug/L	ND(71)	ND(77) [ND(77)]	**1.7 J [1.6 J]**	ND(18) [ND(20)]	ND(25) [ND(25)]
1,1-Dichloroethene	130	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,2,4-Trichlorobenzene	99(X)	ug/L	ND(360)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,2-Dibromo-3-chloropropane	- -	ug/L	ND(71)	ND(150) [ND(150)]	ND(8.0) [ND(8.0)]	ND(36) [ND(40)]	ND(50) [ND(50)]
1,2-Dibromoethane	5.7(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,2-Dichlorobenzene	13	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,2-Dichloroethane	360(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,2-Dichloropropane	230(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,3-Dichlorobenzene	28	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
1,4-Dichlorobenzene	17	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
2-Butanone	2,200	ug/L	ND(1,800)	ND(770) [ND(770)]	ND(40) [ND(40)]	ND(180) [ND(200)]	ND(250) [ND(250)]
2-Hexanone	ID	ug/L	ND(3,600)	ND(770) [ND(770)]	ND(40) [ND(40)]	ND(180) [ND(200)]	ND(250) [ND(250)]
4-Methyl-2-pentanone	ID	ug/L	ND(3,600)	ND(770) [ND(770)]	ND(40) [ND(40)]	ND(180) [ND(200)]	ND(250) [ND(250)]
Acetone	1,700	ug/L	ND(1,800)	ND(770) [ND(770)]	ND(40) [ND(40)]	**26 J [24 J]**	ND(250) [ND(250)]
Benzene	200(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Bromodichloromethane	ID	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Bromoform	ID	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Bromomethane	35	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Carbon Disulfide	ID	ug/L	ND(360)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Carbon Tetrachloride	45(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Chlorobenzene	25	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Chloroethane	1,100(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Chloroform	350	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Chloromethane	ID	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
cis-1,2-Dichloroethene	620	ug/L	**230**	**1,800 [1,800]**	**190 [200]**	**45 [41]**	**20 J [21 J]**
cis-1,3-Dichloropropene	- -	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Cyclohexane	- -	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Dibromochloromethane	ID	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Dichlorodifluoromethane	ID	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Ethylbenzene	18	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Isopropylbenzene	28	ug/L	ND(360)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25) [ND(25)]
Methyl acetate	- -	ug/L	ND(710)	ND(770) [ND(770)]	ND(40) [ND(40)]	ND(180) [ND(200)]	ND(250) [ND(250)]
Methyl cyclohexane	- -	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Methyl tert-butyl ether	7,100(X)	ug/L	ND(360)	ND(380) [ND(380)]	ND(20) [ND(20)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Methylene Chloride	1,500(X)	ug/L	ND(360)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	**18 B [17 J,B]**	ND(25)[ND(25)]
Styrene	80(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Tetrachloroethene	60(X)	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Toluene	270	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
trans-1,2-Dichloroethene	1,500(X)	ug/L	ND(71)	**19 [18]**	**2.2 J [1.3 J]**	ND(18) [ND(20)]	ND(25)[ND(25)]
trans-1,3-Dichloropropene	- -	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Trichloroethene	200(X)	ug/L	ND(71)	ND(77) [ND(77)]	**0.89 J** [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Trichlorofluoromethane	32	ug/L	ND(71)	ND(77) [ND(77)]	ND(4.0) [ND(4.0)]	ND(18) [ND(20)]	ND(25)[ND(25)]
Vinyl Chloride	13(X)	ug/L	**1,700**	**500 [540]**	**40 [48]**	**390 [400]**	**470 [450]**
Total Xylenes	41	ug/L	ND(140)	ND(150) [ND(150)]	ND(8.0) [ND(8.0)]	ND(36) [ND(40]	ND(50) [ND(50)]

Footnotes in Table 8.

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-117S1 10/01/10	MW-117S1 09/27/11	MW-117S1 09/13/12	MW-117S1 09/24/13	MW-117S1 09/22/14	MW-117WT 10/01/10	MW-117WT 09/27/11	MW-117WT 09/13/12	MW-117WT 09/24/13	MW-117WT 09/23/14
Inorganics												
Arsenic	0.01	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Barium	0.67 (G)	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	NA	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	6.2 (G,X)**	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Mercury	0.0000013	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.005	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sodium	NA	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Inorganics-Dissolved												
Arsenic (Dissolved)	0.01	mg/L	ND(0.005)	**0.0016**	**0.0016 J**	**0.0043 B**	**0.0046 B**	ND(0.005)	**0.0025**	**0.0037**	**0.0048 B**	**0.0014 J,B**
Barium (Dissolved)	1.3 (G)	mg/L	**1.8 J**	**2**	**1.8 B**	**2**	**2.1 B**	**2.91 J**	**3.3**	**3.0 B**	**3.1**	**2.8 B**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.01)	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	NA	ND(0.010)	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**8.98**	**9.5**	**8.6**	**3.9**	**12 B**	**119**	**130**	**110**	**130**	**110 B**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.307 J**	**0.33**	**0.300**	**0.510**	**0.29**	**4.36 J**	**4.7**	**4.1**	**7**	**3.7**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	**0.00014 J**	ND(0.00020)	ND(0.00020)
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00029 J,B**	ND(0.0050)	ND(0.0050)	**0.00078 J**	ND(0.0050)	**0.00059 J,B**
Sodium (Dissolved)	NA	mg/L	**119**	**120**	**110**	**120**	**120 B**	**604**	**560**	**560 B**	**570**	**520 B**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-118S1 10/01/10	MW-118S1 09/27/11	MW-118S1 09/13/12	MW-118S1 09/24/13	MW-118S1 09/22/14	MW-118WT 09/30/10	MW-118WT 09/27/11	MW-118WT 09/13/12	MW-118WT 09/24/13	MW-118WT 09/22/14
Inorganics												
Arsenic	0.01	mg/L	NA	NA	NA	NA	**0.0030**	NA	NA	NA	NA	NA
Barium	0.67 (G)	mg/L	NA	NA	NA	NA	**0.83 B**	NA	NA	NA	NA	NA
Iron	NA	mg/L	NA	NA	NA	NA	**8.7**	NA	NA	NA	NA	NA
Manganese	6.2 (G,X)**	mg/L	NA	NA	NA	NA	**0.35**	NA	NA	NA	NA	NA
Mercury	0.0000013	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium	0.005	mg/L	NA	NA	NA	NA	**0.00029 J,B**	NA	NA	NA	NA	NA
Sodium	NA	mg/L	NA	NA	NA	NA	**120 B**	NA	NA	NA	NA	NA
Inorganics-Dissolved												
Arsenic (Dissolved)	0.01	mg/L	ND(0.0050)	**0.00058**	**0.00074**	**0.018 B**	**0.00086 J**	ND(0.0050)	**0.0011**	**0.00080 J**	**0.00072 J,B**	**0.00037 J,B**
Barium (Dissolved)	1.3 (G)	mg/L	**0.759 J**	**0.81**	**0.710 B**	**0.970 B**	**0.73 B**	**0.571 J**	**0.6**	**0.390**	**0.390 B**	**0.36 B**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.010)	ND(0.010)	**0.011**	ND(0.010)	ND(0.010)	ND(0.010)	NA	NA	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**6.57**	**6.7**	**5.9**	**3.9 B**	ND(0.050)	**16.9**	**16**	**11**	**8.7 B**	**8.6 B**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.395 J**	**0.41**	**0.400**	**0.470 B**	**0.35**	**0.448 J**	**0.47**	**0.340**	**0.330 B**	**0.3**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	NA	ND(0.00020)	ND(0.00020)	**0.00017 J**	ND(0.00020)	ND(0.00020)
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00047 J**	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00027 J,B**
Sodium (Dissolved)	NA	mg/L	**129**	**130**	**130**	**150 B**	**130 B**	**216**	**200**	**140**	**120 B**	**86 B**

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-183WT 09/28/10	MW-183WT 09/28/11	MW-183WT 09/14/12	MW-183WT 09/24/13	MW-183WT 09/23/14
Inorganics							
Arsenic	0.01	mg/L	ND(0.0050) **[0.00690]**	**0.00190 [0.0020]**	**0.0010 [0.00073 J]**	**0.0039 B [0.0033 B]**	**0.0018 J,B [0.0019 J,B]**
Barium	0.67 (G)	mg/L	**0.0382 BJ [0.0377 BJ]**	**0.0360 [0.0380]**	**0.079 B [0.085 B]**	**0.085 B [0.083 B]**	**0.043 B [0.045 B]**
Iron	NA	mg/L	**3.85 [3.63]**	**2.60 [2.60]**	**2.2 [2.1]**	**4.5 B [3.8 B]**	**2.3 B [2.6 B]**
Manganese	6.2 (G,X)**	mg/L	**0.252 [0.248]**	**0.240 [0.260]**	**0.400 B [0.440 B^]**	**0.500 B [0.490 B]**	**0.46 [0.54]**
Mercury	0.0000013	mg/L	ND(0.00020) [ND(0.00020)]	ND(0.00020) [ND(0.00020)]	ND(0.00020) [ND(0.00020)]	ND(0.00020) [ND(0.00020)]	ND(0.00020) [ND(0.00020)]
Selenium	0.005	mg/L	ND(0.0050) [ND(0.0050)]	ND(0.0050) [ND(0.0050)]	ND(0.0050) [ND(0.0050)]	ND(0.0050) [ND(0.0050)]	**0.00032 J,B [0.00027 J,B]**
Sodium	NA	mg/L	**84.5 [86.8]**	**87.0 [93.0]**	**96 [96]**	**93 B [110 B]**	**43 B [46 B]**
Inorganics-Dissolved							
Arsenic (Dissolved)	0.01	mg/L	ND(0.0050) [ND(0.0050)]	**0.002**	**0.0014 J**	**0.0032 B**	**0.0019 J,B [0.0019 J,B]**
Barium (Dissolved)	1.3 (G)	mg/L	**0.0368 BJ [0.037 BJ]**	**0.039**	**0.078 B**	**0.082 B**	**0.46 B [0.47 B]**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.010) [ND(0.010)]	NA	ND(0.010)	ND(0.010) [ND(0.010)]	ND(0.010) [ND(0.010)]
Iron (Dissolved)	NA	mg/L	**3.06 [3.02]**	**2.6**	**2.1**	**3.4 B**	**2.7 B [2.6 B]**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.243 [0.238]**	**0.25**	**0.400 B**	**0.490 B**	**0.55 [0.56]**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020) [ND(0.00020)]	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020) [ND(0.00020)]
Selenium (Dissolved)	0.005	mg/L	ND(0.0050) [ND(0.0050)]	ND(0.0050)	**0.00078 J**	ND(0.0050)	**0.00027 J,B** [ND(0.0050)]
Sodium (Dissolved)	NA	mg/L	**87.4 [85.6]**	**94**	**93**	**100 B**	**47 B [47 B]**

Location ID: / Date Collected:	MDEQ GSI	Units	X-4CAUGR 09/28/10	X-4CAUGR 09/26/11	X-4CAUGR 09/14/12	X-4CAUGR 09/24/13	X-4CAUGR 09/23/14	X-4D 09/28/10	X-4D 09/26/11	X-4D 09/14/12	X-4D 09/24/13	X-4D 09/23/14
Inorganics												
Arsenic	0.01	mg/L	ND(0.0050)	**0.000740**	**0.00042 J**	**0.0019 B**	**0.0023 B**	ND(0.0050)	**0.00110**	0.0011	0.00091 J,B	**0.00049 J,B**
Barium	0.67 (G)	mg/L	**0.132 J**	**0.140**	**0.120 B**	**0.089**	**0.13 B**	**0.0997 BJ**	**0.100**	**0.086 B**	**0.092**	**0.058 B**
Iron	NA	mg/L	**4.93**	**5.40**	**4.5**	**6.7**	**9.1 B**	**1.03**	**1.40**	**0.980**	**1.3**	**0.29 J,B**
Manganese	6.2 (G,X)**	mg/L	**0.559**	**0.620**	**0.560 B^**	**0.730**	**0.61**	**0.265**	**0.190**	**0.180 B**	**0.160**	**0.34**
Mercury	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020) H	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020) H	ND(0.00020)
Selenium	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00036 J,B**	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00042 J,B**
Sodium	NA	mg/L	**54.0**	**44.0**	**53**	**22 B**	**59 B**	**699**	**720**	**690**	**690**	**260 B**
Inorganics-Dissolved												
Arsenic (Dissolved)	0.01	mg/L	ND(0.005)	**0.00045**	**0.00040 J**	**0.0069 B**	**0.0022 B**	ND(0.0050)	**0.00094**	**0.00089 J**	**0.00079 J,B**	**0.00053 J,B**
Barium (Dissolved)	1.3 (G)	mg/L	**0.129 J**	**0.13**	**0.120 B**	**0.089 B**	**0.14 B**	**0.0989 BJ**	**0.099**	**0.087 B**	**0.089 B**	**0.082 B**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**5.18**	**5.0**	**4.4**	**6.3 B**	**9.0 B**	**0.979**	**1.3**	**1.0**	**1.2**	**0.035 J,B**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.571**	**0.59**	**0.570 B^**	**0.760 B**	**0.61**	**0.275**	**0.18**	**0.190 B^**	**0.160 B**	**0.18**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00031 J,B**
Sodium (Dissolved)	NA	mg/L	**52.3**	**41**	**54**	**26 B**	**60 B**	**708**	**700**	**690**	**680 B**	**550 B**

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	X-9AR 09/29/10	X-9AR 09/23/11	X-9AR 09/12/12	X-9AR 09/25/13	X-9AR 09/22/14	X-9BR 09/28/10	X-9BR 09/23/11	X-9BR 09/12/12	X-9BR 09/25/13	X-9BR 09/22/14
Inorganics												
Arsenic	0.01	mg/L	ND(0.0050)	0.00040	0.00043 J	0.006	**0.0012 J**	ND(0.0050)	0.000650	0.00094 J	0.0062	**0.0020**
Barium	0.67 (G)	mg/L	**0.113 J**	**0.200**	**0.190**	**0.220 B**	**0.16 B**	**0.175 J**	**0.180**	**0.170**	**0.130 B**	**0.17 B**
Iron	NA	mg/L	**6.32**	**6.60**	**5.4**	**10 B**	**8.8**	**3.97**	**3.70**	**5.1**	**9.2 B**	**10**
Manganese	6.2 (G,X)**	mg/L	**0.380**	**0.770**	**0.790 B^**	**0.840 B**	**0.57**	**0.893**	**0.960**	**0.900 B^**	**0.620 B**	**0.61**
Mercury	0.0000013	mg/L	ND(0.00020)	**0.000150**	ND(0.00020)	ND(0.00020)	NA	ND(0.00020)	**0.000140**	ND(0.00020)	ND(0.00020)	NA
Selenium	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00025 J**
Sodium	NA	mg/L	**55.6**	**95.0**	**120**	**120 B**	**60 B**	**151**	**140**	**190**	**210 B**	**230 B**
Inorganics-Dissolved												
Arsenic (Dissolved)	0.01	mg/L	ND(0.0050)	ND(0.0020)	ND(0.0020)	**0.0055**	**0.0013 J**	ND(0.0050)	**0.00063**	**0.00091 J**	**0.0066**	**0.0019 J**
Barium (Dissolved)	1.3 (G)	mg/L	**0.116 J**	**0.2**	**0.190**	**0.220 B**	**0.17 B**	**0.164 J**	**0.18**	**0.160**	**0.140 B**	**0.16 B**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.01)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**6.58**	**6.6**	**5.5**	**8.9 B**	**9.1**	**4.06**	**3.7**	**5.3**	**9.0 B**	**10**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.388**	**0.75**	**0.780 B^**	**0.670 B**	**0.59**	**0.848**	**0.96**	**0.850 B^**	**0.740 B**	**0.63**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	**0.00014**	ND(0.00020)	ND(0.00020)	NA	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	NA
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00025 J**	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00039 J**
Sodium (Dissolved)	NA	mg/L	**56.4**	**91**	**120**	**110 B**	**63 B**	**145**	**140**	**190**	**210 B**	**220 B**

Location ID: / Date Collected:	MDEQ GSI	Units	X-9CAUG 09/28/10	X-9CAUG 09/23/11	X-9CAUG 09/12/12	X-9CAUG 09/25/13	X-9CAUG 09/22/14	X-9D 09/28/10	X-9D 09/23/11	X-9D 09/12/12	X-9D 09/25/13	X-9D 09/22/14
Inorganics												
Arsenic	0.01	mg/L	ND(0.0050)	**0.00150**	**0.0019 J**	**0.0018 J**	**0.0011 J,B**	ND(0.0050)	**0.000640**	**0.00067 J**	**0.021**	**0.015**
Barium	0.67 (G)	mg/L	**0.193 J**	**0.110**	**0.110 B**	**0.089 B**	**0.084 B**	**0.0930 BJ**	**0.100**	**0.084 B**	**0.140 B**	**0.11 B**
Iron	NA	mg/L	**5.42**	**6.00**	**4.7**	**4.5 B**	**5.7 B**	**2.93**	**3.10**	**2.5**	**3.1 B**	**3.0**
Manganese	6.2 (G,X)**	mg/L	**0.760**	**0.350**	**0.340**	**0.290 B**	**0.33**	**0.132**	**0.130**	**0.110**	**0.360 B**	**0.17**
Mercury	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020) L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	NA
Selenium	0.005	mg/L	ND(0.0050)	ND(0.0050)	**0.00068 J**	ND(0.0050)	**0.00040 J,B**	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00058 J**
Sodium	NA	mg/L	**100**	**54.0**	**47**	**47 B**	**38 B**	**685**	**690**	**650**	**690 B**	**680 B**
Inorganics-Dissolved												
Arsenic (Dissolved)	0.01	mg/L	ND(0.0050)	**0.0017**	**0.00012 J**	**0.0018 J**	**0.0011 J,B**	ND(0.0050)	**0.00063**	**0.00083 J**	**0.022**	**0.016**
Barium (Dissolved)	1.3 (G)	mg/L	**0.194 J**	**0.12**	**0.100 B**	**0.087 B**	**0.86 B**	**0.0903 BJ**	**0.095**	**0.088 B**	**0.140 B**	**0.11 B**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**5.79**	**6**	**5.2**	**4.4 B**	**5.7 B**	**2.67**	**2.9**	**2.7**	**2.9 B**	**2.8**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.801**	**0.35**	**0.340**	**0.300 B**	**0.35**	**0.125**	**0.12**	**0.120**	**0.390 B**	**0.17**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	**0.00015**	**0.00012 J**	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)	NA
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00042 J,B**	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	**0.00050 J**
Sodium (Dissolved)	NA	mg/L	**101**	**55**	**48**	**47 B**	**38 B**	**679**	**650**	**680**	**690 B**	**640 B**

Table 6. TAL Inorganic Constituents in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: Date Collected:	MDEQ GSI	Units	X-10BR 09/29/10	X-10BR 09/22/11	X-10BR 09/14/12	X-10BR 09/24/13
Inorganics						
Arsenic	0.01	mg/L	NA	NA	NA	NA
Barium	0.67 (G)	mg/L	NA	NA	NA	NA
Iron	NA	mg/L	NA	NA	NA	NA
Manganese	6.2 (G,X)**	mg/L	NA	NA	NA	NA
Mercury	0.0000013	mg/L	NA	NA	NA	NA
Selenium	0.005	mg/L	NA	NA	NA	NA
Sodium	NA	mg/L	NA	NA	NA	NA
Inorganics-Dissolved						
Arsenic (Dissolved)	0.01	mg/L	**0.0285**	**0.03**	**0.027**	**0.028 B**
Barium (Dissolved)	1.3 (G)	mg/L	**0.581 J**	**0.63**	**0.570**	**0.630**
Cyanide (Dissolved)	0.0052	mg/L	ND(0.01)	ND(0.010)	ND(0.010)	ND(0.010)
Iron (Dissolved)	NA	mg/L	**31.7**	**35**	**30**	**33**
Manganese (Dissolved)	6.2 (G,X)**	mg/L	**0.751**	**0.75**	**0.730 B^**	**0.750**
Mercury (Dissolved)	0.0000013	mg/L	ND(0.00020)	ND(0.00020)	ND(0.00020)	ND(0.00020)
Selenium (Dissolved)	0.005	mg/L	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
Sodium (Dissolved)	NA	mg/L	**187**	**190**	**200**	**200**

Footnotes in Table 8.

Table 7. Indicator Parameters in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	MW-117S1 10/01/10	MW-117S1 09/27/11	MW-117S1 09/13/12	MW-117S1 09/24/13	MW-117S1 09/22/14	MW-117WT 10/01/10	MW-117WT 09/27/11	MW-117WT 09/13/12	MW-117WT 09/24/13	MW-117WT 09/23/14	MW-118S1 10/01/10	MW-118S1 09/27/11
Miscellaneous														
Chloride	(FF)	mg/L	**319**	**270**	**270**	**250**	**260**	**5,210**	**4,300**	**4,600**	**4,500 B**	**3,700**	**362**	**290**
Nitrate (as N)	ID	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(1.0) H	ND(0.10)	ND(0.10)
Nitrite (as N)	NA	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(5 G)	ND(2.5)	ND(5.0)	ND(1.0)	ND(1.0) H	ND(0.10)	ND(0.10)
pH	6.5 to 9.0	SU	**7**	**7.14**	**6.99**	**7.15**	**7.07**	**6.5**	**6.57**	**6.43**	**6.59**	**6.53**	**7**	**7.19**
Sulfate	NA	mg/L	ND(1.0)	ND(1.0)	ND(1.0)	**0.45 J**	ND(1.0)	ND(1.0)	**0.38**	**0.35 J**	**0.71 J**	ND(10)	ND(1.0)	ND(1.0)
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**940**	**970**	**930**	**880**	**880**	**7,900**	**9,800**	**9,900**	**7,300**	**6,300**	**970**	**1,000**
Ammonia Nitrogen	(NH3)	mg/L	**6.5**	**8.4**	**7.8**	**7.0 B**	**7.8**	**64**	**71**	**78**	**86 B**	**3.0^**	**6.7**	**7.9**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-118S1 09/13/12	MW-118S1 09/24/13	MW-118S1 09/22/14	MW-118WT 09/30/10	MW-118WT 09/27/11	MW-118WT 09/13/12	MW-118WT 09/24/13	MW-118WT 09/22/14	MW-183WT 09/28/10	MW-183WT 09/28/11
Miscellaneous												
Chloride	(FF)	mg/L	**290**	**300 B**	**320**	**932**	**730**	**410**	**280 B**	**260**	**76.6 [77.4]**	**63 [63]**
Nitrate (as N)	ID	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.1)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(0.10) [ND(0.10)]	ND(0.10) [ND(0.10)]
Nitrite (as N)	NA	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(1 G)	ND(1.0)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(0.10) [ND(0.10)]	ND(0.10) [ND(0.10)]
pH	6.5 to 9.0	SU	**7.10**	**7.19**	**7.06**	**6.8**	**6.94**	**6.95**	**7.12**	**7.06**	**7.4 [7.4]**	**7.52 [7.47]**
Sulfate	NA	mg/L	ND(1.0)	**0.32 J**	ND(1.0)	**10**	**5.2**	**2.3**	**18**	**19**	ND(1.0) [ND(1.0)]	**11 [11]**
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**960**	**920**	**980**	**2,000**	**2,300**	**1,300**	**1,000**	**990**	**360 [370]**	**410 [430]**
Ammonia Nitrogen	(NH3)	mg/L	**7.2**	**6.9 B**	**7.5**	**34**	**38**	**35**	**35 B**	**29**	**0.8 J [0.8 J]**	**0.53 [0.55]**

Location ID: / Date Collected:	MDEQ GSI	Units	MW-183WT 09/14/12	MW-183WT 09/24/13	MW-183WT 09/23/14	X-4CAUGR 09/28/10	X-4CAUGR 09/26/11	X-4CAUGR 09/14/12	X-4CAUGR 09/24/13	X-4CAUGR 09/23/14	X-4D 09/28/10
Miscellaneous											
Chloride	(FF)	mg/L	**36 [46]**	**36 B [36 B]**	**29 [23]**	**123**	**99**	**140**	**37 B**	**129**	**1,470**
Nitrate (as N)	ID	mg/L	ND(0.10) [ND(0.10)]	ND(0.10) [ND(0.10 H)]	ND(0.10) [ND(1.0) H]	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	**0.13**
Nitrite (as N)	NA	mg/L	ND(0.10) [ND(0.10)]	ND(0.10) [ND(0.10 H)]	ND(0.10) [ND(1.0) H]	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(1 G)
pH	6.5 to 9.0	SU	**7.42 [7.33]**	**7.37 [7.35]**	**7.25 [7.21]**	**7**	**7.24**	**7.23**	**7.17**	**7.26**	**7.4**
Sulfate	NA	mg/L	**200 [200]**	**89 [88]**	**3.2 [2.9 J]**	**0.21 B**	ND(1.0)	ND(1.0)	**0.19 J**	ND(1.0)	**122**
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**600 [600]**	**570 [570]**	**410 [400]**	**570**	**570**	**630**	**540**	**630**	**2,500**
Ammonia Nitrogen	(NH3)	mg/L	**0.92 [1.1]**	**1.1 B [0.80 B]**	ND(0.20) **[0.14 J]**	**1.9 J**	**1.8**	**1.9**	**2.9 B**	**1.6**	**6.8 J**

Table 7. Indicator Parameters in Groundwater, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Location ID: / Date Collected:	MDEQ GSI	Units	X-4D 09/26/11	X-4D 09/14/12	X-4D 09/24/13	X-4D 09/23/14	X-9AR 09/29/10	X-9AR 09/23/11	X-9AR 09/12/12	X-9AR 09/25/13	X-9AR 09/22/14	X-9BR 09/28/10	X-9BR 09/23/11	X-9BR 09/12/12
Miscellaneous														
Chloride	(FF)	mg/L	**1,400**	**1,500**	**1,500 B**	**760**	**52.1**	**180**	**180**	**160**	**100**	**269**	**250**	**280**
Nitrate (as N)	ID	mg/L	ND(0.10)	ND(0.50)	ND(0.10)	**1.8**	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.1)	ND(0.10)	ND(0.10)
Nitrite (as N)	NA	mg/L	ND(2.0)	ND(0.10)	ND(1.0)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.1)	ND(0.10)	ND(0.10)
pH	6.5 to 9.0	SU	**7.47**	**7.51**	**7.54**	**7.52**	**7**	**7.45**	**7.15**	**7.25**	**7.08**	**7**	**7.50**	**7.14**
Sulfate	NA	mg/L	**150**	**190**	**160**	**88**	**0.31 B**	ND(1.0)	ND(1.0)	**0.79 J**	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**2,800**	**2,400**	**2,400**	**830**	**700**	**750**	**820**	**800**	**630**	**880**	**900**	**980**
Ammonia Nitrogen	(NH3)	mg/L	**9.7**	**8.3**	**8.8 B**	ND(0.20)	**0.6**	**4.3**	**5.0**	**6.2 B**	**3.7^**	**2.9 J**	**6.7**	**7.3**

Location ID: / Date Collected:	MDEQ GSI	Units	X-9BR 09/25/13	X-9BR 09/22/14	X-9CAUG 09/28/10	X-9CAUG 09/23/11	X-9CAUG 09/12/12	X-9CAUG 09/25/13	X-9CAUG 09/22/14	X-9D 09/28/10	X-9D 09/23/11	X-9D 09/12/12	X-9D 09/25/13	X-9D 09/22/14
Miscellaneous														
Chloride	(FF)	mg/L	**240**	**260**	**200**	**41**	**34**	**24**	**16**	**1,520**	**1,400**	**1,400**	**1,300**	**1,400**
Nitrate (as N)	ID	mg/L	ND(0.10)	ND(0.10)	**0.034 B**	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(0.1)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
Nitrite (as N)	NA	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10) H	ND(1 G)	ND(1.0)	ND(1.0)	ND(0.10)	ND(0.50) H
pH	6.5 to 9.0	SU	**7.35**	**7.18**	**7**	**7.52**	**7.15**	**7.33**	**7.15**	**7.3**	**7.73**	**7.45**	**7.51**	**7.41**
Sulfate	NA	mg/L	**2.1**	ND(1.0)	**0.26 B**	**0.31**	ND(1.0)	**0.34 J**	**1.1**	**220**	**220**	**200**	**240**	**220**
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**870**	**1,000**	**750**	**690**	**680**	**640**	**640**	**2,400**	**2,700**	**2,600**	**2,400**	**2,600**
Ammonia Nitrogen	(NH3)	mg/L	**9.4 B**	**9.9**	**4.4 J**	**0.55**	**0.69**	**0.43 B**	**0.12 J**	**7.4 J**	**8.6**	**7.7**	**7.4 B**	**7.5**

Location ID: / Date Collected:	MDEQ GSI	Units	X-10BR 09/29/10	X-10BR 09/22/11	X-10BR 09/14/12	X-10BR 09/24/13
Miscellaneous						
Chloride	(FF)	mg/L	**595**	**540**	**620**	**540 B**
Nitrate (as N)	ID	mg/L	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.10)
Nitrite (as N)	NA	mg/L	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)
pH	6.5 to 9.0	SU	**6.7**	**6.85**	**6.84**	**6.97**
Sulfate	NA	mg/L	ND(1.0)	**0.36**	**0.59 J**	**0.12 J**
Total Dissolved Solids (TDS)	500 (EE) 2,200 (BSL)	mg/L	**1,400**	**1,500**	**1,500**	**1,500**
Ammonia Nitrogen	(NH3)	mg/L	**4.8**	**6.0**	**7.9**	**9.1 B**

Footnotes in Table 8.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

General Notes:

Samples were collected by ARCADIS, and submitted to TestAmerica Laboratories in North Canton, Ohio for analysis.
Duplicate results are presented in brackets.
Groundwater concentrations are presented in milligrams per liter (mg/L), except where noted.
Green shading of well ID represents a groundwater surface water interface (GSI) perimeter monitoring well.
Gray shaded cells represent constituent concentrations that exceed Groundwater/Surface Water (GSI) Michigan Part 201 Criteria updated December 30, 2013.
Bolded values represent a detection.
(MZ) = Mixing zone based GSI criterion applicable to GSI perimeter montioring wells.
(BSL) = Background screening level; results evaluated respective to BSL concentration.
(NH3) = MDEQ has determined that there is not a reasonable potential to expect the maximum concentration of ammonia (i.e., 425 ug/L concentration of unionized ammonia in mixing zone application) to cause an unacceptable risk.

Data Qualifiers:

ND = Not detected. The value in parentheses represents the associated detection limit.
NA = Not analyzed for this constituent.
B = Inorganics: the detected analyte is an estimated value between the instrument detection limit (IDL) and the reporting limit (RL).
B = Organics: the compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
BJ = The detected analyte is an estimated concentration between the IDL and the RL.
H = Sample was prepped or analyzed beyond the specified hold time.
U = The constituent was analyzed for but not detected. The associated value is the constituent quantitation limit.
UJ = The constituent was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual result.
D = Concentration is based on a diluted sample analysis.
J = The compound/constituent was positively identified; however, the associated numerical value is an estimated concentration only.
R = Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data shall not be used for any qualitative or quantitative purposes.
L = A negative instrument reading had an absolute value greater than the reporting limit.
^ = ICV, CCV, ICB, CCB, ISA, ISB, CRI, CRA, DLCK, or MRL standard: instrument related QC exceeds the control limits.

MDEQ Criteria Qualifiers:

ID = *Inadequate data* to develop criterion.
NA = Criterion or value is *not available* or, as is the case for Csat, *not applicable* .
NLV = Hazardous substance is *not likely to volatilize* under most conditions.

(A) Criterion is the state of Michigan drinking water standard established pursuant to Section 5 of 1976 pa 399, mcl 325.1005.
(B) Background, as defined in R 299.5701(b), may be substituted if higher than the calculated cleanup criterion.
(C) Value presented is a screening level based on the chemical-specific generic soil saturation concentration since the calculated risk-based criterion is greater than Csat. Concentrations greater than Csat are acceptable cleanup criteria for this pathway where a site-specific demonstration indicates that free-phase material containing a hazardous substance is not present.
(D) Calculated criterion exceeds 100 percent, hence it is reduced to 100 percent or 1.0E+9 parts per billion (ppb).
(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA). A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water value provided in the following table:

Hazardous Substance	Chemical Abstract Service Number	Residential Health-Based Drinking Water Value (ug/L)	Industrial-Commercial Health-Based Drinking Water Value (ug/L)
Aluminum	7429905	300	4,100
tertiary Amyl methyl ether	994058	910	2,600
Copper	7440508	1,400	4,000
Diethyl ether	60297	3,700	10,000
Ethylbenzene	100414	700	700
Iron	7439896	2,000	5,600
Manganese	7439965	860	2,500
Methyl-tert-butyl ether (MTBE)	1634044	240	690
Toluene	108883	1,000	1,000
1,2,4-Trimethylbenzene	95636	1,000	2,900
1,3,5-Trimethylbenzene	108678	1,000	2,900
Xylenes	1330207	10,000	10,000

MDEQ Criteria Qualifiers (continued):

(F) Criterion is based on adverse impacts to plant life and phytotoxicity.
(G) Groundwater surface water interface (GSI) criterion depends on the pH or water hardness, or both, of the receiving surface water. The final chronic value (FCV) for the protection of aquatic life shall be calculated based on the pH or hardness of the receiving surface water. Where water hardness exceeds 400 mg CaCO3/L, use 400 mg CaCO3/L for the FCV calculation. The FCV formula provides values in units of ug/L or ppb. The generic GSI criterion is the lesser of the calculated FCV, the wildlife value (WV), and the surface water human non-drinking water value (HNDV). The soil GSI protection criteria for these hazardous substances are the greater of the 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Hazardous Substance	FCV Formula (ug/L)	FCV Conversion Factor	WV (ug/L)	HNDV (ug/L)
Acetate	7.0362)	NA	NA	1.30E+06
Barium[x]	EXP(1.0629*(LnH)+ 1.1869)	NA	NA	1.60E+05
Beryllium	EXP(2.5279*(LnH)- 10.7689)	NA	NA	1,200
Cadmium[x]	(EXP(0.7852*(LnH)- 2.715))*CF	1.101672-((LnH)*(0.041838))	NA	130
Chromium (III)[x]	(EXP(0.819*(LnH)+ 0.6848))*CF	0.86	NA	9,400
Copper	(EXP(0.8545*(LnH)- 1.702)) *CF	0.96	NA	64,000
Lead[x]	(EXP(0.9859*(LnH)- 1.270))*CF	1.46203-((LnH)*(0.14571))	NA	190
Manganese	EXP(0.8784*(LnH)+ 3.5385)	NA	NA	59,000
Nickel	(EXP(0.846*(LnH)+ 0.0584))*CF	0.997	NA	2.10E+05
Pentachlorophenol[x]	EXP(1.005*(pH)- 5.134)	NA	NA	2.8
Zinc	(EXP(0.8473*(LnH) +0.884))*CF	0.986	NA	22,000

where,

[x] =The GSI criterion developed here may not be protective for surface water that is used as a drinking water source.

(H) Valence-specific chromium data (Cr III and Cr VI) shall be compared to the corresponding valence-specific cleanup criteria. If both Cr III and Cr VI are present in groundwater, the total concentration of both cannot exceed the drinking water criterion of 100 ug/l. If analytical data are provided for total chromium only, they shall be compared to the cleanup criteria for Cr VI. Cr III soil cleanup criterion for protection of drinking water can only be used at sites where groundwater is prevented from being used as a public water supply, currently and in the future, through an approved land or resource use restriction.

(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. §261.21 (revised as of July 1, 2001),

(J) Hazardous substance may be present in several isomer forms. Isomer-specific concentrations shall be added together for comparison to criteria.

(K) Hazardous substance may be flammable or explosive, or both.

(L) Criteria for lead are derived using a biologically based model, as allowed for under Section 20120a(10) of the NREPA, and are not calculated using the algorithms and assumptions specified in pathway-specific rules. The generic residential drinking water criterion of 4 ug/L is linked to the generic residential soil direct contact criterion of 400 mg/kg. A higher concentration in the drinking water, up to the state action level of 15 ug/L, may be allowed as a site-specific remedy and still allow for drinking water use, under Section 20120a(2) of the NREPA if soil concentrations are appropriately lower than 400 mg/kg. If a site-specific criterion is approved based on this subdivision, a notice shall be filed on the deed for all property where the groundwater concentrations will exceed 4 ug/L to provide notice of the potential for unacceptable risk if soil or groundwater concentrations increase. Acceptable combinations of site-specific soil and drinking water concentrations are presented in the following table:

Acceptable Combinations of Lead in Drinking Water and Soil

Drinking Water Concentration (ug/L)	Soil Concentration (mg/kg)
5	386-395
6	376-385
7	376-385
8	366-375
9	356-365
10	346-355
11	336-345
12	336-345
13	326-335
14	316-325
15	306-315

MDEQ Criteria Qualifiers (continued):

(M) Calculated criterion is below the analytical target detection limit, therefore, the criterion defaults to the target detection limit.

(P) Amenable cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with all groundwater criteria. Total cyanide methods or method OIA-1677 shall be used to quantify cyanide concentrations for compliance with soil criteria. Industrial-commercial direct contact criteria may not be protective of the potential for release of hydrogen cyanide gas. Additional land or resource use restrictions may be necessary to protect for the acute inhalation concerns associated with hydrogen cyanide gas.

(Q) Criteria for carcinogenic polycyclic aromatic hydrocarbons were developed using relative potential potencies to benzo(a)pyrene.

(R) Hazardous substance may exhibit the characteristic of reactivity as defined in 40 C.F.R. §261.23 (revised as of July 1, 2001)

(S) Criterion defaults to the hazardous substance-specific water solubility limit.

(W) Concentrations of trihalomethanes in groundwater shall be added together to determine compliance with the Michigan drinking water standard of 80 ug/L. Concentrations of trihalomethanes in soil shall be added together to determine compliance with the drinking water protection criterion of 1,600 ug/kg.

(X) The GSI criterion shown in the generic cleanup criteria tables is not protective for surface water that is used as a drinking water source. For a groundwater discharge to the Great Lakes and their connecting waters or discharge in close proximity to a water supply intake in inland surface waters, the generic GSI criterion shall be the surface water human drinking water value (HDV) listed in the table in this footnote, except for those HDV indicated with an asterisk. For HDV with an asterisk, the generic GSI criterion shall be the lowest of the HDV, the WV, and the calculated FCV. see formulas in footnote (G). Soil protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria based on the HDV shall be as listed in the table in this footnote, except for those values with an asterisk. Soil GSI protection criteria for compounds with an asterisk shall be the greater of 20 times the GSI criterion or the GSI soil-water partition values using the GSI criteria developed with the procedure described in this footnote.

Table 8. Notes For Groundwater Analytical Data Tables, 2014 Annual Report, RACER Trust, Green Point Landfill, Saginaw, Michigan

Hazardous Substance	Chemical Abstract Service Number	Surface Water Human Drinking Water Values (HDV) (ug/L)	Soil GSI Protection Criteria (HDV) (ug/L)
Acrylonitrile	107131	2.0 (M); 0.87	100 (M); 17
Alachlor	15972608	3.5	91
Antimony	7440360	2	1,400
Arsenic	7440382	50	23,000
Atrazine	1912249	4.3	86
Barium	7440393	1,900*	*
Benzene	71432	12	240
bis(2-Chloroethyl)ether	111444	1 (M); 0.79	100 (M); 20
Bromate	15541454	10 (M); 0.5	200 (M); 10
Butyl benzyl phthalate	85687	6.9	13,000
Cadmium	7440439	2.5*	*
Carbon tetrachloride	56235	5.6	110
Chloride	16887006	50,000	1.00E+06
Chloroform	67663	77	1,500
Chromium (III)	16065831	120*	*
Cyanazine	21725462	2 (M); 0.93	200 (M); 40
3,3'-Dichlorobenzidine	91941	0.3 (M); 0.14	2,000 (M); 7.7
1,2-Dichloroethane	107062	6	120
1,1-Dichloroethylene	75354	24	480
1,2-Dichloropropane	78875	9.1	180
N,N-Dimethylacetamide	127195	700	14,000
1,4-Dioxane	123911	34	680
Ethylene dibromide	106934	0.05 (M); 0.006	20 (M); 1.0
Ethylene glycol	107211	56,000	1.10E+06
Heptachlor	76448	0.01 (M); 0.0017	NLL
beta-Hexachlorocyclohexane	319857	0.024	20 (M)
Hexachloroethane	67721	5.3	310
Isophorone	78591	310	6,200
Isopropyl alcohol	67630	28,000	5.60E+05
Lead	7439921	14*	*
Manganese	7439965	3600	72,000
Methyl-tert-butyl ether (MTBE)	1634044	100	2,000
Methylene chloride	75092	47	940
Mirex	2385855	0.02 (M); 1.6E-5	NLL
Molybdenum	7439987	120	2,400
Nitrobenzene	98953	4.7	330 (M); 94
Pentachlorophenol	87865	1.8*	*
1,2,4,5-Tetrachlorobenzene	95943	2.8	3,300
1,1,1,2-Tetrachloroethane	630206	19	380
1,1,2,2-Tetrachloroethane	79345	3.2	64
Tetrachloroethylene	127184	11	220
Tetrahydrofuran	109999	350	7,000
Thallium	7440280	2.0 (M); 1.2	2,300
1,1,2-Trichloroethane	79005	12	240
Trichloroethylene	79016	29	580

{AA} = Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.

{EE} = The following is an applicable generic GSI criterion as required by Section 210120a(15) of the NREPA: total dissolved solids (TDS), GSI criteria = 500 mg/L.

{FF} = The chloride GSI criterion shall be 125 mg/L when the discharge is to surface waters of the state designated as public water supply sources or 50 mg/L when the discharge is to the Great Lakes or connecting waters. Chloride GSI criteria shall not apply for surface waters of the state that are not designated as a public water supply source, however, the TDS criterion is applicable.

** GSI value was calculated using the MDEQ calculation of generic facility-specific Part 201 GSI criteria for {G} footnoted hazardous substances. A site specific hardness value of 370 mg/L of $CaCO_3$ was acquired from the *Site Investigation Report* completed by BBL dated August 2005. Generic values of 235 mg/L of CaCO3, can be found for the Saginaw River in the *Michigan Water Chemistry Monitoring Great Lakes Tributaries 1998-2005*

Appendix C

Analytical Reports and Field Sampling Logs

ARCADIS

Water Sampling Log

Project RACER Saginaw Plant 2 GWS Project No. B00866 91.2014.0002 Page 1 of 2

Site Location Plant 2, Saginaw MI Date 9/19/14

Site/Well No. MW04-122WT Replicate No. _____ Code No. _____

Weather 65F, sunny Sampling Time: Begin 1300 End 1302

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	12.45'
Depth to Water (ft bmp)	8.94'
Water-Level Elevation (ft)	–
Water Column in Well (ft)	8.51
Casing Diameter/Type	2" PVC
Gallons in Well	1.36
Gallons Pumped/Bailed Prior to Sampling	1.5
Sample Pump Intake Setting (ft bmp)	~15.5'
Purge Time	begin 1240 end 1300
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	16.73
SpC (mS/cm)	3.133
CND (mS/cm)	2.497
Dissolved Oxygen (%)	2.0
Dissolved Oxygen (mg/L)	0.20
pH (s.u.)	7.45
ORP (mV)	-106.0
Turbidity (NTU)	1.26
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	ultra low flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
TAL Metals	500 ml plastic	1	HNO_3

Sampling Personnel _____

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW04-122WT PROJ #: B0086691.2014.00002

DATE : 9/19/14 LOC: Plant 2, RACER Saginaw

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1240	16.27	4.771	3.967	7.2	0.72	7.20	-47.7	50	1.74	8.94
1245	16.46	3.991	3.330	2.8	0.28	7.27	-71.5	50	1.82	8.99
1250	16.70	3.264	2.743	2.2	0.21	7.41	-94.8	50	1.958	9.31
1255	16.72	3.144	2.637	2.1	0.21	7.43	-100.8	50	1.96	9.52
1300	16.73	3.133	2.497	2.0	0.20	7.45	-106.0	50	1.26	9.47
1300	Sample Well									

Total Depth of Well:	17.45'
Depth To Water Before Purging:	8.94
Depth To Water After Purging:	9.47'

ARCADIS

Water Sampling Log

Project Racer Saginaw Plant 2 GWS Project No. B0086691.2014.00002 Page 1 of 2

Site Location Saginaw, MI Plant 2 Date 9/19/14

Site/Well No. MW01-118WT Replicate No. NA Code No. NA

Weather 65F, sunny Sampling Time: Begin 1220 End 1222

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	18.99'
Depth to Water (ft bmp)	8.06'
Water-Level Elevation (ft)	~~10.93~~ BFO 9/19/14 NA
Water Column in Well (ft)	10.93'
Casing Diameter/Type	2" PVC
Gallons in Well	1.75
Gallons Pumped/Bailed Prior to Sampling	~~3.5 gal.~~ BFO 9/19/14 4.06 gal.
Sample Pump Intake Setting (ft bmp)	~16.99'
Purge Time	1055 begin ~~806~~ BFO 9/19/14 end 1215
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic

Field Parameters

Temperature (°C)	14.99
SpC (mS/cm)	2.180
CND (mS/cm)	1.760
Dissolved Oxygen (%)	1.8
Dissolved Oxygen (mg/L)	0.18
pH (s.u.)	7.49
ORP (mV)	-50.2
Turbidity (NTU)	~~8~~ BFO 9/19/14 3.09
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	ultra low flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
Tal Metals	500 mL Plastic	1	HNO_3

Sampling Personnel B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW01-118WT PROJ #: B0086691.2014.00002

DATE : 9/19/14 LOC: Plant 2

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1055	14.45	3.106	2.478	12.3	1.22	6.90	-20.9	50	9.12	8.06'
1100	14.56	2.918	2.335	3.9	0.39	7.03	-18.4	50	6.55	8.06
1105	14.63	2.815	2.256	3.2	0.31	7.12	-55.0	50	8.72	8.05
1110	14.62	2.725	2.154	2.9	0.29	7.22	-70.9	50	8.20	8.04
1115	14.62	2.611	2.092	3.3	0.33	7.27	-81.5 DUP 81.1	50	7.46	8.04
1130	14.73	2.429	1.952	2.5	0.26	7.36	-89.6 DUP 89.9	50	5.53	8.30
1145	14.83	2.326	1.871	2.1	0.21	7.43	-68.2	50	4.93	8.30
1200	14.97	2.257	1.825	1.8	0.18	7.47	-77.1	50	3.06	8.41
1215	14.99	2.180	1.760	1.8	0.18	7.49	-50.2	50	3.09	8.40
1220	Sample well									

Total Depth of Well:	18.99'
Depth To Water Before Purging:	8.06
Depth To Water After Purging:	8.40

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No. B0086691.2014.00002 | Page 1 of 2

Site Location: Plant 2, Racer Saginaw | Date: 9/18/14

Site/Well No.: TW98-111WT | Replicate No.: NA | Code No.: NA

Weather: 65F, sunny | Sampling Time: Begin 1745 End 1750

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	NA
Land Surface Elevation (ft)	NA
Sounded Well Depth (ft bmp)	14.95
Depth to Water (ft bmp)	7.09
Water-Level Elevation (ft)	NA
Water Column in Well (ft)	
Casing Diameter/Type	2" PVC
Gallons in Well	
Gallons Pumped/Bailed Prior to Sampling	~1.25
Sample Pump Intake Setting (ft bmp)	~11.5
Purge Time	begin 1705 end 1745
Pumping Rate (ml/min)	50
Evacuation Method	Peristaltic Pump

Field Parameters

Temperature (°C)	15.24
SpC (mS/cm)	1.113
CND (mS/cm)	0.906
Dissolved Oxygen (%)	0.9
Dissolved Oxygen (mg/L)	0.09
pH (s.u.)	8.10
ORP (mV)	-140.6
Turbidity (NTU)	1.67
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	ultra low flow
Remarks	NA

Constituents Sampled	Container Description	Number	Preservative
TAL Metals	500 ml plastic	1	HNO_3

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL: TW98-111WT PROJ #: B0086691.2014.00002

DATE: 9/18/14 LOC: RIKER Saginaw - Plant II

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1705	14.49	1.111	0.890	5.7	0.57	7.97	-136.7	50	3.3	7.09
1710	14.93	1.110	0.896	2.8	0.28	8.00	-70.1	50	2.65	7.09
1715	15.00	1.111	0.899	2.1	0.21	8.02	-72.3	50	2.29	7.09
1720	15.07	1.112	0.901	1.0	0.11	8.04	-124.3	50	2.12	7.10
1725	15.10	1.113	0.903	1.1	0.11	8.05	-140.8	50	2.07	7.10
1730	15.14	1.112	0.904	0.6	0.05	8.06	-134.8	50	1.72	7.10
1735	15.18	1.114	0.905	1.1	0.11	8.08	-141.6	50	1.77	7.10
1740	15.24	1.113	0.906	0.9	0.09	8.10	-140.6	50	1.67	7.10
1745	Sample Well									

Total Depth of Well:	14.95
Depth To Water Before Purging:	7.09
Depth To Water After Purging:	7.10

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0050096.2014.00002 | Page: 1 of 2

Site Location: ~~TWW-1~~ GPL, Saginaw MI | Date: 9/23/14

Site/Well No.: TWW-1 | Replicate No.: NA | Code No.: NA

Weather: 60F, sunny | Sampling Time: Begin 1130 | End 1145

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	10.51'
Depth to Water (ft bmp)	4.57'
Water-Level Elevation (ft)	---
Water Column in Well (ft)	5.94'
Casing Diameter/Type	2" PVC
Gallons in Well	0.95
Gallons Pumped/Bailed Prior to Sampling	~1 gal
Sample Pump Intake Setting (ft bmp)	~ 9.5'
Purge Time	begin 1105 end 1130
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	17.35
SpC (mS/cm)	2.743
CND (mS/cm)	2.342
Dissolved Oxygen (%)	2.4
Dissolved Oxygen (mg/L)	0.23
pH (s.u.)	6.91
ORP (mV)	-89.9
Turbidity (NTU)	1.01
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
VOCs (8260B) and DCA	40 mL VOA	3	HCL

Sampling Personnel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL: TWW-1 PROJ #: B0050096.2014.00002

DATE: 9/23/14 LOC: GPL, Saginaw MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1105	17.37	3.381	2.886	13.1	1.23	7.07	-82.9	150	7.44	4.57
1110	17.35	3.092	2.636	6.8	0.64	6.99	-92.0	150	5.15	4.67
1115	17.35	2.808	2.397	3.5	0.33	6.91	-90.2	150	2.10	4.64
1120	17.35	2.752	2.349	2.7	0.25	6.91	-89.9	150	1.16	4.59
1125	17.35	2.743	2.342	2.4	0.23	6.91	-89.9	150	1.01	4.60
1130	TWW-1(092314) Sampled									

Total Depth of Well:	10.51'
Depth To Water Before Purging:	4.57'
Depth To Water After Purging:	4.60'

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0050096.2014.00002 | Page: 1 of 2

Site Location: GPL, Saginaw MI | Date: 4/22/14

Site/Well No.: MW-11751 | Replicate No.: NA | Code No.: NA

Weather: 65F, sunny | Sampling Time: Begin 1735 End 1755

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	32.5'
Depth to Water (ft bmp)	1.42'
Water-Level Elevation (ft)	–
Water Column in Well (ft)	31.08'
Casing Diameter/Type	2" PVC
Gallons in Well	4.97
Gallons Pumped/Bailed Prior to Sampling	2 gal
Sample Pump Intake Setting (ft bmp)	~30.5'
Purge Time	begin 1715 end 1730
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	12.14
SpC (mS/cm)	1.733
CND (mS/cm)	1.307
Dissolved Oxygen (%)	5.5
Dissolved Oxygen (mg/L)	0.58
pH (s.u.)	6.45
ORP (mV)	-50.4
Turbidity (NTU)	4.45
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	low flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
TAL dissolved solids	500 mL	1	HNO_3
Ammonium nitrogen	500 mL	1	H_2SO_4
pH, sulfate, chloride, nitrate, nitrite	500 mL	1	None
Cyanide	250 mL	1	NaOH
Dissolved cyanide	250 mL	1	NaOH
Total dissolved solids	500 mL	1	None

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-117S1 PROJ #: B0050096.2014.00002

DATE : 9/22/14 LOC: Green

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1715	12.80	1.309	1.129	98.3	9.62	7.14	-73.8	150	7.12	1.42
1720	12.15	1.720	1.298	10.5	1.11	6.51	-58.5	150	8.21	1.52
1725	12.16	1.730	1.306	6.4	0.68	6.45	-45.0	150	4.67	1.44
1730	12.14	1.733	1.307	5.5	0.58	6.45	-60.4	150	4.45	1.45
1735	Sample taken									

Total Depth of Well:	32.5'
Depth To Water Before Purging:	1.42'
Depth To Water After Purging:	1.45'

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No. B0050046.2014.00002 | Page 1 of 2

Site Location: Green Point Landfill | Date: 9/22/14

Site/Well No.: MW-118S1 | Replicate No. | Code No.

Weather: 65F, Sunny | Sampling Time: Begin 1435 End 1450

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	-
Land Surface Elevation (ft)	-
Sounded Well Depth (ft bmp)	~~32.5~~ 31.59 (BRO 9/24/14)
Depth to Water (ft bmp)	~~1.18~~ 1.18
Water-Level Elevation (ft)	-
Water Column in Well (ft)	~~31.32~~ 30.41
Casing Diameter/Type	2" PVC
Gallons in Well	~~5.01 gal~~ 4.87 gal (BRO 9/24/14)
Gallons Pumped/Bailed Prior to Sampling	2
Sample Pump Intake Setting (ft bmp)	~30.5
Purge Time	begin 1415 end 1435
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	12.49
SpC (mS/cm)	1.814
CND (mS/cm)	1.380
Dissolved Oxygen (%)	3.0
Dissolved Oxygen (mg/L)	0.30
pH (s.u.)	6.35
ORP (mV)	-56.0
Turbidity (NTU)	9.72
Color	clear
Odor	odor present
Appearance	Clear
Sampling Method	Low flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
TAL dissolved metals	500 mL	1	HNO_3
Ammonium nitrogen	500 mL	1	H_2SO_4
Alk, Sulfate, chloride, nitrate, nitrate	500 mL	1	None
Cyanide		1	NaOH
Dissolved Cyanide		1	NaOH
Total dissolved Solids	500 mL	1	None

Sampling Personnel

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL: MW-118 S1

PROJ #: B0050096.2014.00002

DATE: 9/22/14

LOC: Green Point Landfill

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1415	13.32	6.822	1.413	19.0	1.86	6.33	-48.5	150	9.96	1.18
1420	12.59	1.812	1.382	2.3	0.23	6.23	-70.7	160	9.78	1.21
1425	12.64	1.812	1.381	2.8	0.30	6.30	-59.2	150	10.04	1.23
1430	12.49	1.814	1.380	3.0	0.30	6.35	-56.0	150	9.72	1.24
1435	MW-118S1 sampled									

Total Depth of Well: 31.59

Depth To Water Before Purging:

Depth To Water After Purging:

ARCADIS

Water Sampling Log

Project _____ Project No. B0050096.2014.00002 Page 1 of 2

Site Location GPL, Saginaw MI Date 9/22/14

Site/Well No. MW-118WT Replicate No. No Code No. N/A

Weather 55F, sunny Sampling Time: Begin 1815 End 1835

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	14.50'
Depth to Water (ft bmp)	2.90'
Water-Level Elevation (ft)	–
Water Column in Well (ft)	11.60'
Casing Diameter/Type	2" PVC
Gallons in Well	1.9
Gallons Pumped/Bailed Prior to Sampling	2.38
Sample Pump Intake Setting (ft bmp)	~12.50'
Purge Time	begin 1545 end 1645
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	12.88
SpC (mS/cm)	1.980
CND (mS/cm)	1.521
Dissolved Oxygen (%)	2.0
Dissolved Oxygen (mg/L)	0.20
pH (s.u.)	6.72
ORP (mV)	-60.4
Turbidity (NTU)	8.15
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	low flow
Remarks	Let well settle for 1.5 hours, turbidity went BFO 09/27/14 from 29.3 to 8.15 NTU

Constituents Sampled	Container Description	Number	Preservative
TAL dissolved metals	500mL	1	HNO_3
ammonium nitrogen	500mL	1	H_2SO_4
pH, sulfate, chloride, nitrate, nitrite	500mL	1	None
Cyanide	250mL	1	NaOH
Dissolved cyanide	250mL	1	NaOH
Total dissolved solids	500mL	1	None

Sampling Personnel B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-118WT PROJ #:

DATE : 9/22/14 LOC: Green Point Landfill

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1545	13.28	1.997	1.650	13.5	1.34	6.68	-70.5	150	14.2	2.9
1550	13.04	1.990	1.535	4.0	0.41	6.50	-69.1	150	12.9	3.0
1555	12.94	1.980	1.524	3.3	0.34	6.50	-61.9	150	10.01	3.2
1600	12.92	1.972	1.517	2.8	0.30	6.55	-61.9	150	12.6	2.26
1605	12.90	1.968	1.512	2.7	0.29	6.57	-68.6	150	11.9	2.31
1610	12.79	1.966	1.508	2.7	0.28	6.58	-81.2	150	15.0	2.78
1615	12.72	1.974	1.511	2.4	0.26	6.59	-67.1	150	16.4	2.80
1635	12.88	1.980	1.521	2.0	0.20	6.72	-60.4	150	28.2	2.70
1645	12.89	1.981	1.525	2.0	0.20	6.73	-60.1	150	29.3	2.75
1815	Sample taken after waiting for well to settle									

Total Depth of Well:	14.50'
Depth To Water Before Purging:	2.90'
Depth To Water After Purging:	2.75'

ARCADIS

Water Sampling Log

Project _____ Project No. B0050096.204.00002 Page 1 of 2

Site Location GPL, Saginaw MI Date 9/23/14

Site/Well No. MW-117WT Replicate No. NA Code No. NA

Weather 55F, sunny Sampling Time: Begin 0925 End 0945

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	-
Land Surface Elevation (ft)	-
Sounded Well Depth (ft bmp)	15.03'
Depth to Water (ft bmp)	1.26'
Water-Level Elevation (ft)	-
Water Column in Well (ft)	13.77'
Casing Diameter/Type	2" PVC
Gallons in Well	2.2
Gallons Pumped/Bailed Prior to Sampling	1.5 gal
Sample Pump Intake Setting (ft bmp)	~13.03'
Purge Time	begin 0900 end 0925
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	12.05
SpC (mS/cm)	10.68
CND (mS/cm)	8.050
Dissolved Oxygen (%)	6.8
Dissolved Oxygen (mg/L)	0.70
pH (s.u.)	6.25
ORP (mV)	-57.8
Turbidity (NTU)	8.6
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	low flow
Remarks	

Constituents Sampled	Container Description	Number	Preservative
TAL dissolved metals	500mL	1	HNO_3
ammonium nitrogen	500 mL	1	H_2SO_4
pH, sulfate, chloride, nitrate, nitrite	500mL	1	None
Cyanide	250mL	1	NaOH
dissolved Cyanide	250mL	1	NaOH
Total dissolved solids	500mL	1	None

Sampling Personnel B. O'Leary

Well Casing Volumes

Gal./Ft.				
0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-117WT PROJ #: B0050096.2014.00002

DATE : 9/23/14 LOC: GPL, Saginaw MI

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
0900	11.77	10.56	7.896	22.3	2.21	5.92	-17.3	150	21.7	1.26
0905	11.85	10.61	7.944	10.4	1.05	6.14	-55.4	150	12.3	1.41
0910	11.89	10.60	7.948	7.0	0.73	6.22	-57.8	150	10.4	1.44
0915	12.03	10.61	7.987	7.1	0.73	6.23	-60.4	150	14.0	1.42
0920	12.05	10.68	8.050	6.8	0.70	6.25	-57.8	150	8.6	1.51
0925	MW-117WT(092314)			taken						

Total Depth of Well:	15.03'	
Depth To Water Before Purging:	1.26'	
Depth To Water After Purging:	1.51'	

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0064434.2014.00005 | Page: 1 of 2

Site Location: Saginaw, MI | Date: 9/23/14

Site/Well No.: MW-114WT | Replicate No.: NA | Code No.: NA

Weather: 60, sunny | Sampling Time: Begin 1240 | End 1255

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	10.79'
Depth to Water (ft bmp)	7.60'
Water-Level Elevation (ft)	---
Water Column in Well (ft)	3.19'
Casing Diameter/Type	2" PVC
Gallons in Well	0.51
Gallons Pumped/Bailed Prior to Sampling	0.33
Sample Pump Intake Setting (ft bmp)	~9.4'
Purge Time	begin 1215 end 1240
Pumping Rate (ml/min)	50
Evacuation Method	Peristaltic pump

Field Parameters

Temperature (°C)	20.25
SpC (mS/cm)	0.776
CND (mS/cm)	0.705
Dissolved Oxygen (%)	2.0
Dissolved Oxygen (mg/L)	0.19
pH (s.u.)	6.43
ORP (mV)	-88.1
Turbidity (NTU)	0.98
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	Grab
Remarks	

BFO 9/23/14

Constituents Sampled	Container Description	Number	Preservative
~~VOCs (8260B) and DCA~~	~~40 mL VOA~~		~~HCL~~
Ammonium nitrogen	500 mL	1	H_2SO_4
Phosphorous	500 mL	1	H_2SO_4
Total Manganese, total thallium	500 mL	1	HNO_3
Total PCBs	4 Liter	1	NA
Dissolved PCBs	1 liter	1	NA

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL: MW-114WT PROJ #: B0064434.2014.00005

DATE: 9/23/14 LOC: SMI, RACER Saginaw

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1215	20.54	0.825	0.751	4.6	0.40	6.43	-93.7	50	1.49	7.60
1220	20.43	0.788	0.728	2.3	0.20	6.38	-88.7	50	0.76	7.59
1225	20.29	0.782	0.711	2.1	0.20	6.41	-87.3	50	1.11	8.02
1230	20.25	0.776	0.705	2.0	0.19	6.43	-88.1	50	0.98	8.03
1240	MW-114WT(092314)			Sampled						
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0064434.2014.00005 | Page: 1 of 2

Site Location: Saginaw, MI | Date: 9/23/14

Site/Well No.: MW-1152 | Replicate No.: NA | Code No.: NA

Weather: 60, Sunny | Sampling Time: Begin 1405 | End 1450

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	30.60'
Depth to Water (ft bmp)	11.24'
Water-Level Elevation (ft)	---
Water Column in Well (ft)	19.36'
Casing Diameter/Type	2" PVC
Gallons in Well	~3.1 gal.
Gallons Pumped/Bailed Prior to Sampling	0.33
Sample Pump Intake Setting (ft bmp)	~28.60'
Purge Time	begin 1340 end 1405
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	15.96
SpC (mS/cm)	0.766
CND (mS/cm)	0.637
Dissolved Oxygen (%)	0.7
Dissolved Oxygen (mg/L)	0.07
pH (s.u.)	6.73
ORP (mV)	-113.4
Turbidity (NTU)	1.32
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
	BPO 9/23/14		
~~VOCs (8260B) and DCA~~	~~40 mL VOA~~		~~HCL~~
Ammonia Nitrogen	500mL	1	H_2SO_4

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-11452 PROJ #: B0064434.2014.00005

DATE : 9/23/14 LOC: SMI, RACER Saginaw

Time	Temp Degree C	SpC mS/cm	CND mS/cm	DO%	DO mg/L	pH	ORP mV	Flow Rate mL/min	Turbidity NTU	DTW
1340	16.63	0.763	0.641	2.3	0.22	6.57	-97.0	50	4.5	11.24
1345	16.73	0.754	0.636	1.0	0.10	6.56	-93.7	50	2.52	11.11
1350	16.59	0.756	0.634	0.9	0.09	6.68	-103.2	50	2.48	11.26
1355	15.94	0.761	0.629	0.7	0.07	6.67	-109.6	50	1.83	11.27
1400	15.96	0.766	0.637	0.7	0.07	6.73	-113.4	50	1.32	11.29
1405	MW-	11452(0	92314)	sampled						
Total Depth of Well:		30.60'								
Depth To Water Before Purging:			11.24							
Depth To Water After Purging:			11.29							

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0064434.2014.00005 | Page: 1 of 2

Site Location: Saginaw MI | Date: 9/24/14

Site/Well No.: MW-10751 | Replicate No.: NA | Code No.: NA

Weather: 60, Sunny | Sampling Time: Begin 1015 End 1100

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	20.02
Depth to Water (ft bmp)	11.46
Water-Level Elevation (ft)	---
Water Column in Well (ft)	8.56
Casing Diameter/Type	2" PVC
Gallons in Well	~1.36
Gallons Pumped/Bailed Prior to Sampling	~0.60
Sample Pump Intake Setting (ft bmp)	~18.02
Purge Time	begin 1000 end 1015
Pumping Rate (ml/min)	150
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	12.68
SpC (mS/cm)	1.499
CND (mS/cm)	1.149
Dissolved Oxygen (%)	30.1
Dissolved Oxygen (mg/L)	3.03
pH (s.u.)	7.40
ORP (mV)	-76.8
Turbidity (NTU)	2.31
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	Grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
BFO 9/24/14			
~~VOCs (8260B) and DCA~~	~~40 mL VOA~~		~~HCL~~
Ammonium Nitrogen	500mL	1	H_2SO_4

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-107S1

PROJ #: ~~B0086806.2010.00005~~ B0064434.2014.00005

DATE : 9/24/14

LOC: ~~Milford, MI~~ SMI (River Berm)

Time	Temp Degree C +/- 3%	SpC mS/cm +/- 3%	CND mS/cm +/- 3%	DO% +/- 10%	DO mg/L +/- 10%	pH +/- 0.1 S.U.	ORP mV +/- 10 mV	Flow Rate L/min	Turbidity NTU +/- 10%	DTW
1000	12.94	1.535	1.180	56.0	5.77	7.35	-19.47	150	4.98	11.46
1005	12.77	1.516	1.162	41.0	4.30	7.35	133.4	150	3.20	11.78
1010	12.67	1.506	1.157	31.9	3.37	7.38	-44.5	150	3.03	11.60
1015	12.68	1.499	1.149	30.1	3.03	7.40	-76.8	150	2.31	11.62
1015	MW-107S1(092414) taken									

Total Depth of Well:	20.02
Depth To Water Before Purging:	11.46
Depth To Water After Purging:	11.62

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No. B0064434.2014.00005 | Page 1 of 2

Site Location: Saginaw, MI | Date:

Site/Well No.: MW-107WT | Replicate No.: NA | Code No.: 9/24/14

Weather: 60, sunny | Sampling Time: Begin 1025 | End 1100

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	---
Land Surface Elevation (ft)	---
Sounded Well Depth (ft bmp)	11.60'
Depth to Water (ft bmp)	9.54'
Water-Level Elevation (ft)	---
Water Column in Well (ft)	2.06'
Casing Diameter/Type	2" PVC
Gallons in Well	~ 0.32
Gallons Pumped/Bailed Prior to Sampling	~ 0.32
Sample Pump Intake Setting (ft bmp)	~10.50
Purge Time	begin 0900 end 0950
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	14.26
SpC (mS/cm)	1.084
CND (mS/cm)	0.861
Dissolved Oxygen (%)	6.1
Dissolved Oxygen (mg/L)	0.64
pH (s.u.)	6.94
ORP (mV)	-88.8
Turbidity (NTU)	1.27
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	Grab
Remarks	well was dry @ 0950

Constituents Sampled	Container Description	Number	Preservative
~~VOCs (8260B) and DCA~~	BFO 09/24/14 40 ml VOA		~~HCL~~
Ammonium nitrogen	500mL	1	H_2SO_4
Phosphorous	500mL	1	H_2SO_4
Total arsenic, magnanese, thallium	500mL	1	HNO_3

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-107WT

PROJ #: ~~B0086606.2010.00005~~ B0064434.2014.00005

DATE : 9/24/14

LOC: ~~Milford, MI~~ SMI, Saginaw MI

Time	Temp Degree C +/- 3%	SpC mS/cm +/- 3%	CND mS/cm +/- 3%	DO% +/- 10%	DO mg/L +/- 10%	pH +/- 0.1 S.U.	ORP mV +/- 10 mV	Flow Rate L/min	Turbidity NTU +/- 10%	DTW
0900	13.82	1.115	0.877	21.1	2.17	6.54	-35.2	50	8.14	9.54
0905	13.91	1.112	0.876	14.7	1.52	6.55	-53.7	50	9.68	9.74
0910	13.52	1.119	0.871	13.7	1.43	6.64	-67.3	50	57.8	9.96
0915	13.72	1.102	0.865	12.6	1.30	6.62	-62.7	50	32.9	10.02
0925	14.16	1.091	0.865	6.4	0.66	6.90	-88.7	50	6.00	10.66
0930	14.08	1.087	0.860	6.3	0.65	6.93	-93.2	50	42.1	10.68
0945	14.26	1.084	0.861	6.1	0.64	6.96	-88.8	50	1.27	10.82
0950	wait for well to recharge									
1025	~~MW-107WT sample~~ MW-107WT(092414) sample taken									
	BFO	092414								
Total Depth of Well:		11.60'								
Depth To Water Before Purging:			9.54'							
Depth To Water After Purging:			10.82'							

ARCADIS

Water Sampling Log

Project: RACER Saginaw | Project No.: B0064434.2014.00005 | Page: 1 of 2

Site Location: Saginaw MI | Date: 9/24/14

Site/Well No.: MW-186WT | Replicate No.: NA | Code No.: NA

Weather: 60, sunny | Sampling Time: Begin 1330 End 1400

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	14.50'
Depth to Water (ft bmp)	9.41'
Water-Level Elevation (ft)	~~5.09~~ BFO 9/24/14 NA
Water Column in Well (ft)	5.09'
Casing Diameter/Type	2" PVC
Gallons in Well	0.81
Gallons Pumped/Bailed Prior to Sampling	0.26
Sample Pump Intake Setting (ft bmp)	~12.50'
Purge Time	begin 1310 end 1330
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	18.99
SpC (mS/cm)	0.965
CND (mS/cm)	0.853
Dissolved Oxygen (%)	2.6
Dissolved Oxygen (mg/L)	0.24
pH (s.u.)	6.50
ORP (mV)	-124.9
Turbidity (NTU)	1.53
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
Ammonium Nitrogen	500mL	1	H_2SO_4
Phosphorous	500ml	1	H_2SO_4
Total manganese, thallium	500ml	1	HNO_3
Total PCBs	1 Liter	8	NA
Dissolved PCBS	1 liter	6	NA

Sampling Personnel: B. O'Leary

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-186WT

PROJ #: ~~B0066806.2010.00005~~ B0064434.2014.00005

DATE : 9/24/14

LOC: ~~Milford, MI~~ Saginaw, MI

Time	Temp Degree C +/- 3%	SpC mS/cm +/- 3%	CND mS/cm +/- 3%	DO% +/- 10%	DO mg/L +/- 10%	pH +/- 0.1 S.U.	ORP mV +/- 10 mV	Flow Rate L/min	Turbidity NTU +/- 10%	DTW
1310	19.76	0.950	0.855	7.5	0.66	6.33	-64.2	50	1.65	9.41
1315	20.12	0.948	0.860	3.5	0.32	6.32	-100.8	50	1.82	9.43
1320	19.88	0.955	0.861	3.0	0.29	6.42	-113.8	50	2.57	10.50
1325	19.51	0.959	0.858	2.7	0.25	6.48	-121.9	50	1.63	10.58
1330	18.99	0.965	0.853	2.6	0.24	6.50	-124.9	50	1.53	10.59
MW-186WT(092414) taken @ 1330										
DUP-04(092414) taken @ 1330										
Total Depth of Well:		14.50'								
Depth To Water Before Purging:			9.41'							
Depth To Water After Purging:			10.59'							

ARCADIS

Water Sampling Log

Project RACER Saginaw | Project No. B0064434.2014.00005 | Page 1 of 2

Site Location Saginaw MI | Date 9/24/14

Site/Well No. MW-185WT | Replicate No. NA | Code No. NA

Weather CeO, sunny | Sampling Time: Begin 1200 End 1300

Evacuation Data

Measuring Point	TOC
MP Elevation (ft)	–
Land Surface Elevation (ft)	–
Sounded Well Depth (ft bmp)	10.21'
Depth to Water (ft bmp)	9.60'
Water-Level Elevation (ft)	–
Water Column in Well (ft)	0.81'
Casing Diameter/Type	2" PVC
Gallons in Well	0.13
Gallons Pumped/Bailed Prior to Sampling	0.53
Sample Pump Intake Setting (ft bmp)	~ 10.00'
Purge Time	begin 1120 end 1200
Pumping Rate (ml/min)	50
Evacuation Method	peristaltic pump

Field Parameters

Temperature (°C)	22.01
SpC (mS/cm)	0.505
CND (mS/cm)	0.480
Dissolved Oxygen (%)	3.1
Dissolved Oxygen (mg/L)	0.29
pH (s.u.)	7.75
ORP (mV)	-125.7
Turbidity (NTU)	1.65
Color	clear
Odor	odor present
Appearance	clear
Sampling Method	grab
Remarks	

Constituents Sampled	Container Description	Number	Preservative
Ammonium Nitrogen	500mL	1	H_2SO_4
Phosphorous	500mL	1	H_2SO_4
Total manganese, thallium	500mL	1	HNO_3
Total PCBs	1 Liter	2	NA
~~Pregamma~~ Total, Dissolved PCBs	1 Liter	2	NA

Sampling Personnel

Well Casing Volumes

Gal./Ft.					
	0.5" = 0.01	1-¼" = 0.06	2" = 0.16	3" = 0.37	4" = 0.65
	1" = 0.04	1-½" = 0.09	2-½" = 0.26	3-½" = 0.50	6" = 1.47

bmp	Below measuring point	mL	Milliliter	NTU	Nephelometric turbidity units
°C	Degrees Celsius	mS/cm	Millisiemens per centimeter	PVC	Polyvinyl chloride
ft	Feet	msl	Mean sea level	s.u.	Standard units
gpm	Gallons per minute	N/A	Not applicable	umhos/cm	Micromhos per centimeter
mg/L	Milligrams per liter	NR	Not recorded	VOC	Volatile organic compounds

ARCADIS

YSI/LOW FLOW SAMPLING LOG

WELL : MW-185WT

PROJ #: ~~B0086806.2010.00005~~ B006434.2014.00005

DATE : 9/24/14

LOC: ~~Milford, MI~~ SMI (River Berm)

Time	Temp Degree C +/- 3%	SpC mS/cm +/- 3%	CND mS/cm +/- 3%	DO% +/- 10%	DO mg/L +/- 10%	pH +/- 0.1 S.U.	ORP mV +/- 10 mV	Flow Rate L/min	Turbidity NTU +/- 10%	DTW
1120	21.34	0.503	0.468	74.4	5.09	7.74	-152.5	50	17.3	9.60
1125	21.27	0.503	0.467	6.9	0.60	7.61	-131.0	50	5.62	9.82
1130	21.57	0.503	0.470	3.5	0.31	7.63	-127.7	50	2.78	9.91
1135	21.87	0.503	0.472	3.3	0.30	7.73	-125.2	50	3.18	9.93
1140	21.75	0.505	0.472	3.4	0.34	7.73	-131.2	50	4.41	9.95
1145	21.95	0.503	0.474	~~3.7~~ 3.1	0.30	7.69	-130.2	50	3.37	9.91
1155	22.01	0.505	0.480	3.1	0.29	7.75	-125.7	50	1.65	9.92
1200	MW-185WT	Sample	taken							
Total Depth of Well:										
Depth To Water Before Purging:										
Depth To Water After Purging:										

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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TestAmerica Job ID: 240-42246-1
Client Project/Site: RACER Green Point Landfill

For:
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Attn: Scott Clearwater

Denise Pohl

Authorized for release by:
10/8/2014 3:58:40 PM

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Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
H	Sample was prepped or analyzed beyond the specified holding time
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery exceeds the control limits
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control 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: 240-42246-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: RACER Green Point Landfill

Report Number: 240-42246-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 9/23/2014 9:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6º C and 3.8º C.

DISSOLVED METALS (ICPMS)

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 09/24/2014 and 10/01/2014 and analyzed on 09/25/2014 and 10/02/2014.

Sodium failed the recovery criteria low for the MS/MSD of sample X-9D(092214)MS/MSD (240-42246-1) in batch 240-148795. Refer to the QC report for details.

Method(s) 6020: Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.MW-118S1(092214) (240-42246-4), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3), X-9D(092214) (240-42246-1).

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

Job ID: 240-42246-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

TOTAL RECOVERABLE METALS (ICPMS)

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 09/24/2014 and analyzed on 09/25/2014.

Barium and Sodium were detected in method blank MB 240-148399/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Barium, Iron and Sodium were detected in method blank MB 240-149543/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Sodium failed the recovery criteria high for the MS/MSD of sample X-9D(092214)MS/MSD (240-42246-1) in batch 240-148795. Refer to the QC report for details.

Sample X-9D(092214) (240-42246-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 6020: Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.MW-118S1(092214) (240-42246-4), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3), X-9D(092214) (240-42246-1).

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

PH

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for pH in accordance with EPA Method 150.1. The samples were analyzed on 09/23/2014.

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

TOTAL DISSOLVED SOLIDS

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 09/25/2014 and 09/26/2014.

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

ANIONS

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/24/2014.

Nitrite as N failed the recovery criteria high for the MS/MSD of sample X-9D(092214)MS/MSD (240-42246-1) in batch 240-148493. Refer to the QC report for details.

Sample X-9D(092214) (240-42246-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

ANIONS

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/24/2014, 09/26/2014 and 09/27/2014.

Chloride failed the recovery criteria low for the MS/MSD of sample X-9D(092214)MS/MSD (240-42246-1) in batch 240-148970.

Job ID: 240-42246-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Chloride failed the recovery criteria low for the MS/MSD of sample X-9BR(092214)MS/MSD (240-42246-3) in batch 240-148972.

Refer to the QC report for details.

Samples X-9D(092214) (240-42246-1)[10X], X-9D(092214) (240-42246-1)[5X], X-9BR(092214) (240-42246-3)[5X] and MW-118S1(092214) (240-42246-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

AMMONIA

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 09/24/2014 and 09/25/2014.

Samples X-9D(092214) (240-42246-1)[2X], X-9BR(092214) (240-42246-3)[2X] and MW-118S1(092214) (240-42246-4)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

DISSOLVED CYANIDE

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for dissolved cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 09/26/2014.

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

TOTAL CYANIDE

Samples X-9D(092214) (240-42246-1), X-9AR(092214) (240-42246-2), X-9BR(092214) (240-42246-3) and MW-118S1(092214) (240-42246-4) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 09/26/2014.

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

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Method	Method Description	Protocol	Laboratory
6020	Metals (ICP/MS)	SW846	TAL CAN
150.1	pH (Electrometric)	MCAWW	TAL CAN
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
9012A	Cyanide, Total and/or Amenable	SW846	TAL CAN

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-42246-1	X-9D(092214)	Water	09/22/14 11:00	09/23/14 09:30
240-42246-2	X-9AR(092214)	Water	09/22/14 13:50	09/23/14 09:30
240-42246-3	X-9BR(092214)	Water	09/22/14 16:05	09/23/14 09:30
240-42246-4	MW-118S1(092214)	Water	09/22/14 14:35	09/23/14 09:30

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9D(092214) — Lab Sample ID: 240-42246-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	15		2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	110	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	3000		50	16	ug/L	1		6020	Total Recoverable
Manganese	170		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.58	J	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	680000	B	5000	340	ug/L	5		6020	Total Recoverable
Arsenic	16		2.0	0.18	ug/L	1		6020	Dissolved
Barium	110	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	2800		50	16	ug/L	1		6020	Dissolved
Manganese	170		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.50	J	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	640000	B	5000	340	ug/L	5		6020	Dissolved
pH	7.41		0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	2600		40	30	mg/L	1		160.1	Total/NA
Chloride	1400		10	4.1	mg/L	10		300.0	Total/NA
Sulfate	220		5.0	0.65	mg/L	5		300.0	Total/NA
Ammonia (as N)	7.5		0.40	0.18	mg/L	2		350.3	Total/NA

Client Sample ID: X-9AR(092214) — Lab Sample ID: 240-42246-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.2	J	2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	160	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	8800		50	16	ug/L	1		6020	Total Recoverable
Manganese	570		2.0	1.1	ug/L	1		6020	Total Recoverable
Sodium	60000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	1.3	J	2.0	0.18	ug/L	1		6020	Dissolved
Barium	170	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	9100		50	16	ug/L	1		6020	Dissolved
Manganese	590		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.25	J	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	63000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.08	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	630		10	7.4	mg/L	1		160.1	Total/NA
Chloride	100		1.0	0.41	mg/L	1		300.0	Total/NA
Ammonia (as N)	3.7	^	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: X-9BR(092214) — Lab Sample ID: 240-42246-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.0		2.0	0.18	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample ID: X-9BR(092214) (Continued)

Lab Sample ID: 240-42246-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	170	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	10000		50	16	ug/L	1		6020	Total Recoverable
Manganese	610		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.25	J	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	230000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	1.9	J	2.0	0.18	ug/L	1		6020	Dissolved
Barium	160	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	10000		50	16	ug/L	1		6020	Dissolved
Manganese	630		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.39	J	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	220000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.18		0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	1000		20	15	mg/L	1		160.1	Total/NA
Chloride	260		5.0	2.0	mg/L	5		300.0	Total/NA
Ammonia (as N)	9.9		0.40	0.18	mg/L	2		350.3	Total/NA

Client Sample ID: MW-118S1(092214)

Lab Sample ID: 240-42246-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.0		2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	830	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	8700		50	16	ug/L	1		6020	Total Recoverable
Manganese	350		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.29	J	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	120000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	0.86	J	2.0	0.18	ug/L	1		6020	Dissolved
Barium	730	B	5.0	1.1	ug/L	1		6020	Dissolved
Manganese	350		2.0	1.1	ug/L	1		6020	Dissolved
Sodium	130000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.06		0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	980		10	7.4	mg/L	1		160.1	Total/NA
Chloride	320		5.0	2.0	mg/L	5		300.0	Total/NA
Ammonia (as N)	7.5		0.40	0.18	mg/L	2		350.3	Total/NA

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9D(092214)
Date Collected: 09/22/14 11:00
Date Received: 09/23/14 09:30

Lab Sample ID: 240-42246-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	15		2.0	0.18	ug/L		09/24/14 09:13	09/25/14 12:06	1
Barium	110	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:06	1
Iron	3000		50	16	ug/L		09/24/14 09:13	09/25/14 12:06	1
Manganese	170		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:06	1
Selenium	0.58	J	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 12:06	1
Sodium	680000	B	5000	340	ug/L		09/24/14 09:13	09/25/14 13:31	5

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		2.0	0.18	ug/L		09/24/14 09:13	09/25/14 11:49	1
Barium	110	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 11:49	1
Iron	2800		50	16	ug/L		09/24/14 09:13	09/25/14 11:49	1
Manganese	170		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 11:49	1
Selenium	0.50	J	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 11:49	1
Sodium	640000	B	5000	340	ug/L		09/24/14 09:13	09/25/14 13:16	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.41		0.100	0.100	SU			09/23/14 11:37	1
Total Dissolved Solids	2600		40	30	mg/L			09/25/14 11:49	1
Chloride	1400		10	4.1	mg/L			09/26/14 22:11	10
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 08:46	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 08:46	1
Sulfate	220		5.0	0.65	mg/L			09/24/14 14:46	5
Ammonia (as N)	7.5		0.40	0.18	mg/L			09/24/14 10:19	2
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 08:02	09/26/14 09:38	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.50	U H	0.50	0.19	mg/L			09/24/14 14:46	5

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9AR(092214)
Date Collected: 09/22/14 13:50
Date Received: 09/23/14 09:30

Lab Sample ID: 240-42246-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.2	J	2.0	0.18	ug/L		09/24/14 09:13	09/25/14 12:43	1
Barium	160	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:43	1
Iron	8800		50	16	ug/L		09/24/14 09:13	09/25/14 12:43	1
Manganese	570		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:43	1
Selenium	5.0	U	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 12:43	1
Sodium	60000	B	1000	68	ug/L		09/24/14 09:13	09/25/14 12:43	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.3	J	2.0	0.18	ug/L		09/24/14 09:13	09/25/14 13:05	1
Barium	170	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 13:05	1
Iron	9100		50	16	ug/L		09/24/14 09:13	09/25/14 13:05	1
Manganese	590		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 13:05	1
Selenium	0.25	J	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 13:05	1
Sodium	63000	B	1000	68	ug/L		09/24/14 09:13	09/25/14 13:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.08	HF	0.100	0.100	SU			09/23/14 12:01	1
Total Dissolved Solids	630		10	7.4	mg/L			09/26/14 10:53	1
Chloride	100		1.0	0.41	mg/L			09/24/14 09:41	1
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 09:41	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 09:41	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 09:41	1
Ammonia (as N)	3.7	^	0.20	0.092	mg/L			09/25/14 14:21	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 08:02	09/26/14 09:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9BR(092214)
Date Collected: 09/22/14 16:05
Date Received: 09/23/14 09:30

Lab Sample ID: 240-42246-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0		2.0	0.18	ug/L		09/24/14 09:13	09/25/14 12:47	1
Barium	170	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:47	1
Iron	10000		50	16	ug/L		09/24/14 09:13	09/25/14 12:47	1
Manganese	610		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 12:47	1
Selenium	0.25	J	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 12:47	1
Sodium	230000	B	1000	68	ug/L		09/24/14 09:13	09/25/14 12:47	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J	2.0	0.18	ug/L		09/24/14 09:13	09/25/14 13:09	1
Barium	160	B	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 13:09	1
Iron	10000		50	16	ug/L		09/24/14 09:13	09/25/14 13:09	1
Manganese	630		2.0	1.1	ug/L		09/24/14 09:13	09/25/14 13:09	1
Selenium	0.39	J	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 13:09	1
Sodium	220000	B	1000	68	ug/L		09/24/14 09:13	09/25/14 13:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.18		0.100	0.100	SU			09/23/14 12:26	1
Total Dissolved Solids	1000		20	15	mg/L			09/26/14 10:53	1
Chloride	260		5.0	2.0	mg/L			09/27/14 02:14	5
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 10:00	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 10:00	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 10:00	1
Ammonia (as N)	9.9		0.40	0.18	mg/L			09/24/14 10:42	2
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 08:02	09/26/14 09:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: MW-118S1(092214)
Date Collected: 09/22/14 14:35
Date Received: 09/23/14 09:30

Lab Sample ID: 240-42246-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**3.0**		2.0	0.18	ug/L		09/24/14 12:33	09/25/14 13:13	1
Barium	**830**	**B**	5.0	1.1	ug/L		09/24/14 12:33	09/25/14 13:13	1
Iron	**8700**		50	16	ug/L		09/24/14 12:33	09/25/14 13:13	1
Manganese	**350**		2.0	1.1	ug/L		09/24/14 12:33	09/25/14 13:13	1
Selenium	**0.29**	**J**	5.0	0.25	ug/L		09/24/14 12:33	09/25/14 13:13	1
Sodium	**120000**	**B**	1000	68	ug/L		09/24/14 12:33	09/25/14 13:13	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.86**	**J**	2.0	0.18	ug/L		10/01/14 09:40	10/02/14 10:41	1
Barium	**730**	**B**	5.0	1.1	ug/L		10/01/14 09:40	10/02/14 10:41	1
Iron	50	U	50	16	ug/L		10/01/14 09:40	10/02/14 10:41	1
Manganese	**350**		2.0	1.1	ug/L		10/01/14 09:40	10/02/14 10:41	1
Selenium	5.0	U	5.0	0.25	ug/L		10/01/14 09:40	10/02/14 10:41	1
Sodium	**130000**	**B**	1000	68	ug/L		10/01/14 09:40	10/02/14 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.06**		0.100	0.100	SU			09/23/14 12:50	1
Total Dissolved Solids	**980**		10	7.4	mg/L			09/25/14 11:49	1
Chloride	**320**		5.0	2.0	mg/L			09/26/14 23:00	5
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 10:18	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 10:18	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 10:18	1
Ammonia (as N)	**7.5**		0.40	0.18	mg/L			09/24/14 11:42	2
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 08:02	09/26/14 09:43	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-148399/1-A
Matrix: Water
Analysis Batch: 148795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0	U	2.0	0.18	ug/L		09/24/14 09:13	09/25/14 11:42	1
Barium	1.11	J	5.0	1.1	ug/L		09/24/14 09:13	09/25/14 11:42	1
Iron	50	U	50	16	ug/L		09/24/14 09:13	09/25/14 11:42	1
Manganese	2.0	U	2.0	1.1	ug/L		09/24/14 09:13	09/25/14 11:42	1
Selenium	5.0	U	5.0	0.25	ug/L		09/24/14 09:13	09/25/14 11:42	1
Sodium	159	J	1000	68	ug/L		09/24/14 09:13	09/25/14 11:42	1

Lab Sample ID: LCS 240-148399/2-A
Matrix: Water
Analysis Batch: 148795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	945		ug/L		94	80 - 120
Barium	1000	1090		ug/L		109	80 - 120
Iron	10000	10400		ug/L		104	80 - 120
Manganese	1000	1000		ug/L		100	80 - 120
Selenium	1000	969		ug/L		97	80 - 120
Sodium	10000	10400		ug/L		104	80 - 120

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	15		1000	962		ug/L		95	82 - 123
Barium	110	B	1000	1230		ug/L		112	45 - 144
Iron	3000		10000	12900		ug/L		99	22 - 169
Manganese	170		1000	1140		ug/L		97	10 - 172
Selenium	0.58	J	1000	934		ug/L		93	72 - 148

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	680000	B	10000	731000	4	ug/L		487	80 - 120

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	15		1000	968		ug/L		95	82 - 123	1	20
Barium	110	B	1000	1250		ug/L		114	45 - 144	2	20
Iron	3000		10000	12800		ug/L		98	22 - 169	1	20
Manganese	170		1000	1140		ug/L		96	10 - 172	0	20
Selenium	0.58	J	1000	942		ug/L		94	72 - 148	1	20

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Total Recoverable
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	680000	B	10000	753000	4	ug/L		708	80 - 120	3	20

Lab Sample ID: MB 240-149543/1-A
Matrix: Water
Analysis Batch: 149884

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 149543

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0	U	2.0	0.18	ug/L		10/01/14 09:40	10/02/14 08:32	1
Barium	1.35	J	5.0	1.1	ug/L		10/01/14 09:40	10/02/14 08:32	1
Iron	16.3	J	50	16	ug/L		10/01/14 09:40	10/02/14 08:32	1
Manganese	2.0	U	2.0	1.1	ug/L		10/01/14 09:40	10/02/14 08:32	1
Selenium	5.0	U	5.0	0.25	ug/L		10/01/14 09:40	10/02/14 08:32	1
Sodium	95.7	J	1000	68	ug/L		10/01/14 09:40	10/02/14 08:32	1

Lab Sample ID: LCS 240-149543/20-A
Matrix: Water
Analysis Batch: 149884

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 149543

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	951		ug/L		95	80 - 120
Iron	10000	9870		ug/L		99	80 - 120
Manganese	1000	978		ug/L		98	80 - 120
Selenium	1000	944		ug/L		94	80 - 120
Sodium	10000	10200		ug/L		102	80 - 120

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	16		1000	951		ug/L		94	82 - 123
Barium	110	B	1000	1180		ug/L		108	45 - 144
Iron	2800		10000	12300		ug/L		95	22 - 169
Manganese	170		1000	1110		ug/L		94	10 - 172
Selenium	0.50	J	1000	925		ug/L		92	72 - 148

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sodium	640000	B	10000	636000	4	ug/L		-70	80 - 120

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	16		1000	970		ug/L		95	82 - 123	2	20
Barium	110	B	1000	1210		ug/L		110	45 - 144	2	20
Iron	2800		10000	12600		ug/L		97	22 - 169	2	20
Manganese	170		1000	1130		ug/L		96	10 - 172	2	20
Selenium	0.50	J	1000	940		ug/L		94	72 - 148	2	20

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148795

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148399

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sodium	640000	B	10000	672000	4	ug/L		291	80 - 120	6	20

Method: 150.1 - pH (Electrometric)

Lab Sample ID: LCS 240-148195/2
Matrix: Water
Analysis Batch: 148195

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.09	7.060		SU		100	97 - 103		

Lab Sample ID: 240-42246-1 DU
Matrix: Water
Analysis Batch: 148195

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.41			7.390		SU				0.3	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-148702/1
Matrix: Water
Analysis Batch: 148702

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	10	U	10	7.4	mg/L			09/25/14 11:49	1

Lab Sample ID: LCS 240-148702/2
Matrix: Water
Analysis Batch: 148702

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			223	214		mg/L		96	88 - 110		

Method: 160.1 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: 240-42246-1 DU
Matrix: Water
Analysis Batch: 148702

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2600		2560		mg/L		0.5	20

Lab Sample ID: MB 240-148896/1
Matrix: Water
Analysis Batch: 148896

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	10	U	10	7.4	mg/L			09/26/14 10:53	1

Lab Sample ID: LCS 240-148896/2
Matrix: Water
Analysis Batch: 148896

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	223	210		mg/L		94	88 - 110

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-148275/51
Matrix: Water
Analysis Batch: 148275

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/24/14 08:09	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 08:09	1

Lab Sample ID: LCS 240-148275/52
Matrix: Water
Analysis Batch: 148275

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	53.7		mg/L		107	90 - 110
Sulfate	50.0	50.5		mg/L		101	90 - 110

Lab Sample ID: MB 240-148276/51
Matrix: Water
Analysis Batch: 148276

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 08:09	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 08:09	1

Lab Sample ID: LCS 240-148276/52
Matrix: Water
Analysis Batch: 148276

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	2.50	2.64		mg/L		105	90 - 110
Nitrate as N	2.50	2.63		mg/L		105	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148276

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	0.10	U	2.50	2.65		mg/L		106	80 - 120

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148276

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	0.10	U	2.50	2.71		mg/L		108	80 - 120	2	20

Lab Sample ID: MB 240-148492/3
Matrix: Water
Analysis Batch: 148492

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/24/14 14:09	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 14:09	1

Lab Sample ID: LCS 240-148492/4
Matrix: Water
Analysis Batch: 148492

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	54.1		mg/L		108	90 - 110
Sulfate	50.0	50.7		mg/L		101	90 - 110

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148492

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	220		50.0	263	4	mg/L		87	80 - 120

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148492

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	220		50.0	262	4	mg/L		85	80 - 120	0	20

Lab Sample ID: MB 240-148493/3
Matrix: Water
Analysis Batch: 148493

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 14:09	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 14:09	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-148493/4
Matrix: Water
Analysis Batch: 148493

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N			2.50	2.66		mg/L		107	90 - 110		
Nitrate as N			2.50	2.65		mg/L		106	90 - 110		

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148493

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrite as N	0.50	U H	2.50	4.55	H F1	mg/L		182	80 - 120		

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148493

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.50	U H	2.50	4.38	H F1	mg/L		175	80 - 120	4	20

Lab Sample ID: MB 240-148970/3
Matrix: Water
Analysis Batch: 148970

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/26/14 21:06	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/26/14 21:06	1

Lab Sample ID: LCS 240-148970/4
Matrix: Water
Analysis Batch: 148970

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			50.0	52.5		mg/L		105	90 - 110		
Sulfate			50.0	48.6		mg/L		97	90 - 110		

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148970

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	1400		50.0	1370	4	mg/L		-56	80 - 120		

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148970

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	1400		50.0	1410	4	mg/L		10	80 - 120	2	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-148972/27
Matrix: Water
Analysis Batch: 148972

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/27/14 01:35	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/27/14 01:35	1

Lab Sample ID: LCS 240-148972/28
Matrix: Water
Analysis Batch: 148972

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	47.4		mg/L		95	90 - 110
Sulfate	50.0	46.6		mg/L		93	90 - 110

Lab Sample ID: 240-42246-3 MS
Matrix: Water
Analysis Batch: 148972

Client Sample ID: X-9BR(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	260		50.0	296	4	mg/L		72	80 - 120
Sulfate	5.0		50.0	49.9		mg/L		100	80 - 120

Lab Sample ID: 240-42246-3 MSD
Matrix: Water
Analysis Batch: 148972

Client Sample ID: X-9BR(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	260		50.0	295	4	mg/L		71	80 - 120	0	20
Sulfate	5.0		50.0	49.4		mg/L		99	80 - 120	1	20

Method: 350.3 - Nitrogen, Ammonia

Lab Sample ID: MB 240-148494/7
Matrix: Water
Analysis Batch: 148494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/24/14 07:47	1

Lab Sample ID: LCS 240-148494/8
Matrix: Water
Analysis Batch: 148494

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	15.3	16.0		mg/L		105	85 - 114

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148494

Client Sample ID: X-9D(092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	7.5		12.5	22.2		mg/L		118	75 - 125

Method: 350.3 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 240-42246-1 MSD — **Client Sample ID: X-9D(092214)**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148494

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	7.5		12.5	21.4		mg/L		111	75 - 125	4	20

Lab Sample ID: MB 240-148777/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148777

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/25/14 12:23	1

Lab Sample ID: LCS 240-148777/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148777

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	15.3	14.1		mg/L		92	85 - 114

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-148819/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148911 — **Prep Batch: 148819**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 08:02	09/26/14 09:33	1

Lab Sample ID: LCS 240-148819/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148911 — **Prep Batch: 148819**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0921	0.0939		mg/L		102	69 - 118

Lab Sample ID: MB 240-148883/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148940 — **Prep Batch: 148883**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Lab Sample ID: LCS 240-148883/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148940 — **Prep Batch: 148883**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0921	0.0867		mg/L		94	69 - 120

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: MRL 240-148911/6
Matrix: Water
Analysis Batch: 148911

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.0100		mg/L		100	70 - 130

Lab Sample ID: 240-42246-1 MS
Matrix: Water
Analysis Batch: 148940

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148883

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.010	U	0.0400	0.0392		mg/L		98	42 - 140

Lab Sample ID: 240-42246-1 MSD
Matrix: Water
Analysis Batch: 148940

Client Sample ID: X-9D(092214)
Prep Type: Dissolved
Prep Batch: 148883

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.010	U	0.0400	0.0350		mg/L		88	42 - 140	11	20

Metals

Prep Batch: 148399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Dissolved	Water	3005A	
240-42246-1	X-9D(092214)	Total Recoverable	Water	3005A	
240-42246-1 MS	X-9D(092214)	Dissolved	Water	3005A	
240-42246-1 MS	X-9D(092214)	Total Recoverable	Water	3005A	
240-42246-1 MSD	X-9D(092214)	Dissolved	Water	3005A	
240-42246-1 MSD	X-9D(092214)	Total Recoverable	Water	3005A	
240-42246-2	X-9AR(092214)	Dissolved	Water	3005A	
240-42246-2	X-9AR(092214)	Total Recoverable	Water	3005A	
240-42246-3	X-9BR(092214)	Dissolved	Water	3005A	
240-42246-3	X-9BR(092214)	Total Recoverable	Water	3005A	
240-42246-4	MW-118S1(092214)	Total Recoverable	Water	3005A	
LCS 240-148399/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-148399/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 148795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-1	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-1 MS	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1 MS	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1 MS	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-1 MS	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-1 MSD	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1 MSD	X-9D(092214)	Dissolved	Water	6020	148399
240-42246-1 MSD	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-1 MSD	X-9D(092214)	Total Recoverable	Water	6020	148399
240-42246-2	X-9AR(092214)	Dissolved	Water	6020	148399
240-42246-2	X-9AR(092214)	Total Recoverable	Water	6020	148399
240-42246-3	X-9BR(092214)	Dissolved	Water	6020	148399
240-42246-3	X-9BR(092214)	Total Recoverable	Water	6020	148399
240-42246-4	MW-118S1(092214)	Total Recoverable	Water	6020	148399
LCS 240-148399/2-A	Lab Control Sample	Total Recoverable	Water	6020	148399
MB 240-148399/1-A	Method Blank	Total Recoverable	Water	6020	148399

Filtration Batch: 149488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-4	MW-118S1(092214)	Dissolved	Water	FILTRATION	

Prep Batch: 149543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-4	MW-118S1(092214)	Dissolved	Water	3005A	149488
LCS 240-149543/20-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-149543/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 149884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-4	MW-118S1(092214)	Dissolved	Water	6020	149543
LCS 240-149543/20-A	Lab Control Sample	Total Recoverable	Water	6020	149543
MB 240-149543/1-A	Method Blank	Total Recoverable	Water	6020	149543

General Chemistry

Analysis Batch: 148195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	150.1	
240-42246-1 DU	X-9D(092214)	Total/NA	Water	150.1	
240-42246-2	X-9AR(092214)	Total/NA	Water	150.1	
240-42246-3	X-9BR(092214)	Total/NA	Water	150.1	
240-42246-4	MW-118S1(092214)	Total/NA	Water	150.1	
LCS 240-148195/2	Lab Control Sample	Total/NA	Water	150.1	

Analysis Batch: 148275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-2	X-9AR(092214)	Total/NA	Water	300.0	
240-42246-3	X-9BR(092214)	Total/NA	Water	300.0	
240-42246-4	MW-118S1(092214)	Total/NA	Water	300.0	
LCS 240-148275/52	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148275/51	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	300.0	
240-42246-2	X-9AR(092214)	Total/NA	Water	300.0	
240-42246-3	X-9BR(092214)	Total/NA	Water	300.0	
240-42246-4	MW-118S1(092214)	Total/NA	Water	300.0	
LCS 240-148276/52	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148276/51	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	300.0	
LCS 240-148492/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148492/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1 - RA	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	300.0	
LCS 240-148493/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148493/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	350.3	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	350.3	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	350.3	
240-42246-3	X-9BR(092214)	Total/NA	Water	350.3	
240-42246-4	MW-118S1(092214)	Total/NA	Water	350.3	
LCS 240-148494/8	Lab Control Sample	Total/NA	Water	350.3	
MB 240-148494/7	Method Blank	Total/NA	Water	350.3	

General Chemistry (Continued)

Analysis Batch: 148702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	160.1	
240-42246-1 DU	X-9D(092214)	Total/NA	Water	160.1	
240-42246-4	MW-118S1(092214)	Total/NA	Water	160.1	
LCS 240-148702/2	Lab Control Sample	Total/NA	Water	160.1	
MB 240-148702/1	Method Blank	Total/NA	Water	160.1	

Analysis Batch: 148777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-2	X-9AR(092214)	Total/NA	Water	350.3	
LCS 240-148777/8	Lab Control Sample	Total/NA	Water	350.3	
MB 240-148777/7	Method Blank	Total/NA	Water	350.3	

Prep Batch: 148819

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	9012A	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	9012A	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	9012A	
240-42246-2	X-9AR(092214)	Total/NA	Water	9012A	
240-42246-3	X-9BR(092214)	Total/NA	Water	9012A	
240-42246-4	MW-118S1(092214)	Total/NA	Water	9012A	
LCS 240-148819/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-148819/1-A	Method Blank	Total/NA	Water	9012A	

Prep Batch: 148883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Dissolved	Water	9012A	
240-42246-1 MS	X-9D(092214)	Dissolved	Water	9012A	
240-42246-1 MSD	X-9D(092214)	Dissolved	Water	9012A	
240-42246-2	X-9AR(092214)	Dissolved	Water	9012A	
240-42246-3	X-9BR(092214)	Dissolved	Water	9012A	
240-42246-4	MW-118S1(092214)	Dissolved	Water	9012A	
LCS 240-148883/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-148883/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 148896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-2	X-9AR(092214)	Total/NA	Water	160.1	
240-42246-3	X-9BR(092214)	Total/NA	Water	160.1	
LCS 240-148896/2	Lab Control Sample	Total/NA	Water	160.1	
MB 240-148896/1	Method Blank	Total/NA	Water	160.1	

Analysis Batch: 148911

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	9012A	148819
240-42246-1 MS	X-9D(092214)	Total/NA	Water	9012A	148819
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	9012A	148819
240-42246-2	X-9AR(092214)	Total/NA	Water	9012A	148819
240-42246-3	X-9BR(092214)	Total/NA	Water	9012A	148819
240-42246-4	MW-118S1(092214)	Total/NA	Water	9012A	148819
LCS 240-148819/2-A	Lab Control Sample	Total/NA	Water	9012A	148819
MB 240-148819/1-A	Method Blank	Total/NA	Water	9012A	148819

General Chemistry (Continued)

Analysis Batch: 148911 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 240-148911/6	Lab Control Sample	Total/NA	Water	9012A	

Analysis Batch: 148940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Dissolved	Water	9012A	148883
240-42246-1 MS	X-9D(092214)	Dissolved	Water	9012A	148883
240-42246-1 MSD	X-9D(092214)	Dissolved	Water	9012A	148883
240-42246-2	X-9AR(092214)	Dissolved	Water	9012A	148883
240-42246-3	X-9BR(092214)	Dissolved	Water	9012A	148883
240-42246-4	MW-118S1(092214)	Dissolved	Water	9012A	148883
LCS 240-148883/2-A	Lab Control Sample	Total/NA	Water	9012A	148883
MB 240-148883/1-A	Method Blank	Total/NA	Water	9012A	148883

Analysis Batch: 148970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-1	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MS	X-9D(092214)	Total/NA	Water	300.0	
240-42246-1 MSD	X-9D(092214)	Total/NA	Water	300.0	
240-42246-4	MW-118S1(092214)	Total/NA	Water	300.0	
LCS 240-148970/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148970/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42246-3	X-9BR(092214)	Total/NA	Water	300.0	
240-42246-3 MS	X-9BR(092214)	Total/NA	Water	300.0	
240-42246-3 MSD	X-9BR(092214)	Total/NA	Water	300.0	
LCS 240-148972/28	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148972/27	Method Blank	Total/NA	Water	300.0	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9D(092214)

Lab Sample ID: 240-42246-1

Date Collected: 09/22/14 11:00

Matrix: Water

Date Received: 09/23/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Dissolved	Analysis	6020		1	148795	09/25/14 11:49	AMM2	TAL CAN
Dissolved	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Dissolved	Analysis	6020		5	148795	09/25/14 13:16	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	148795	09/25/14 12:06	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Total Recoverable	Analysis	6020		5	148795	09/25/14 13:31	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148195	09/23/14 11:37	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148276	09/24/14 08:46	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148492	09/24/14 14:46	LKG	TAL CAN
Total/NA	Analysis	300.0	RA	5	148493	09/24/14 14:46	LKG	TAL CAN
Total/NA	Analysis	300.0		10	148970	09/26/14 22:11	LKG	TAL CAN
Total/NA	Analysis	350.3		2	148494	09/24/14 10:19	JAK	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:27	BLW	TAL CAN
Total/NA	Prep	9012A			148819	09/26/14 08:02	BLW	TAL CAN
Total/NA	Analysis	9012A		1	148911	09/26/14 09:38	BLW	TAL CAN

Client Sample ID: X-9AR(092214)

Lab Sample ID: 240-42246-2

Date Collected: 09/22/14 13:50

Matrix: Water

Date Received: 09/23/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Dissolved	Analysis	6020		1	148795	09/25/14 13:05	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	148795	09/25/14 12:43	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148195	09/23/14 12:01	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148896	09/26/14 10:53	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148275	09/24/14 09:41	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148276	09/24/14 09:41	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148777	09/25/14 14:21	JMB	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:27	BLW	TAL CAN
Total/NA	Prep	9012A			148819	09/26/14 08:02	BLW	TAL CAN
Total/NA	Analysis	9012A		1	148911	09/26/14 09:43	BLW	TAL CAN

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Client Sample ID: X-9BR(092214)

Lab Sample ID: 240-42246-3

Date Collected: 09/22/14 16:05
Matrix: Water
Date Received: 09/23/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Dissolved	Analysis	6020		1	148795	09/25/14 13:09	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148399	09/24/14 09:13	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	148795	09/25/14 12:47	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148195	09/23/14 12:26	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148896	09/26/14 10:53	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148275	09/24/14 10:00	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148276	09/24/14 10:00	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148972	09/27/14 02:14	LKG	TAL CAN
Total/NA	Analysis	350.3		2	148494	09/24/14 10:42	JAK	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:27	BLW	TAL CAN
Total/NA	Prep	9012A			148819	09/26/14 08:02	BLW	TAL CAN
Total/NA	Analysis	9012A		1	148911	09/26/14 09:43	BLW	TAL CAN

Client Sample ID: MW-118S1(092214)

Lab Sample ID: 240-42246-4

Date Collected: 09/22/14 14:35
Matrix: Water
Date Received: 09/23/14 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			149488	10/01/14 07:23	WAL	TAL CAN
Dissolved	Prep	3005A			149543	10/01/14 09:40	WAL	TAL CAN
Dissolved	Analysis	6020		1	149884	10/02/14 10:41	KLC	TAL CAN
Total Recoverable	Prep	3005A			148399	09/24/14 12:33	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	148795	09/25/14 13:13	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148195	09/23/14 12:50	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148275	09/24/14 10:18	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148276	09/24/14 10:18	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148970	09/26/14 23:00	LKG	TAL CAN
Total/NA	Analysis	350.3		2	148494	09/24/14 11:42	JAK	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:27	BLW	TAL CAN
Total/NA	Prep	9012A			148819	09/26/14 08:02	BLW	TAL CAN
Total/NA	Analysis	9012A		1	148911	09/26/14 09:43	BLW	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill

TestAmerica Job ID: 240-42246-1

Laboratory: TestAmerica Canton

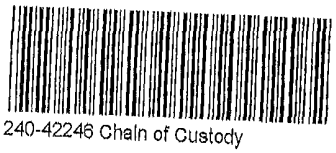
All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-42246 Chain of Custody

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

Chain of Custody Record

3.8, 2.6

055582

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	
Company Name:	ARCADIS
Address:	28550 Cabot Dr Suite 500
City/State/Zip:	Novi MI 48377
Phone:	248 994 2240
Fax:	248 994 2241
Project Name:	RACER SMI GPL GWS
Site:	Green Point Landfill
P O #	

Project Manager: K. Templin
Tel/Fax: 248 994 2320
Site Contact: S. Solomon
Lab Contact: D. Pohl
Date: 9/22/14
Carrier: R. Clase

Analysis Turnaround Time
☒ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below Standard
☒ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

COC No:
1 of 1 COCs
Sampler: J. Ness
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.: 24006824

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Dissolved TAL Metals	Cyanide	Dissolved Cyanide	TAL Metals	pH, sulfate, chloride, nitrate nitrite	TDS	NH3 as N	Sample Specific Notes:
X-9D(092214)	9/22	1100	G	W	7	Y	N								
X-9D(092214) MS/MSD	↓	1105	↓	↓	14	Y	Y								
X-9AR(092214)	↓	1350	↓	↓	6	Y	N								1L Amber used to combine
X-9BR(092214)	↓	1605	↓	↓	6	Y	N								TDS + ph, sulfate, chloride,
~~MW-11851(092214)~~	↓	1435	↓	↓	6	Y	N								nitrate & nitrite parameters
MW-11851(092214)															

Michigan
190

Preservation Used: 1=Ice, 2=HCl; 3=H2SO4; 4=HNO3; 5=NaOH; 6=Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:
All samples immediately packed on ice. Standard TAT. Job # 24006824

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: ______ Corr'd: ______ Therm ID No.: ______

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
James B Ness	ARCADIS	9/22/14	[signature]	TA	9/22/14 16:30
[signature]	TAL	9/22/14 17:30	Dakota Chapman	TA-Canton	9/23/14 9:30
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 42246

Client Arcadis Site Name

Cooler unpacked by: Dakota Dunn

Cooler Received on 9/23/14 Opened on 9/23/14

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box (Client Cooler) Box Other

Packing material used: Bubble Wrap Foam (Plastic Bag) None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A (CF +2 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 4 (CF -2 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 5 (CF 0 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

IR GUN# 8 (CF 0 °C) Observed Cooler Temp. 3.8 °C Corrected Cooler Temp. 3.8 °C

[X] See Multiple Cooler Form

2.	Were custody seals on the outside of the cooler(s)? If Yes Quantity 2	(Yes) No
	-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes) No NA
	-Were custody seals on the bottle(s)?	(Yes) No
3.	Shippers' packing slip attached to the cooler(s)?	(Yes) No
4.	Did custody papers accompany the sample(s)?	(Yes) No
5.	Were the custody papers relinquished & signed in the appropriate place?	(Yes) No
6.	Did all bottles arrive in good condition (Unbroken)?	(Yes) No
7.	Could all bottle labels be reconciled with the COC?	(Yes) No
8.	Were correct bottle(s) used for the test(s) indicated?	(Yes) No
9.	Sufficient quantity received to perform indicated analyses?	(Yes) No
10.	Were sample(s) at the correct pH upon receipt?	(Yes) No NA pH Strip Lot# HC412469
11.	Were VOAs on the COC?	Yes (No)
12.	Were air bubbles >6 mm in any VOA vials?	Yes No (NA)
13.	Was a trip blank present in the cooler(s)?	Yes (No)

Contacted PM DJP Date 9/24/14 by SM via (Verbal) Voice Mail Other

Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Did not receive dissolved metals for MW-11 (051.092214).

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.

Sample(s) were received in a broken container.

Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.

Time preserved: Preservative(s) added/Lot number(s):

TestAmerica Multiple Cooler Receipt Form/Narrative — Login #: 402240
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	8	3.8	3.8	wet ice
client	8	2.6	2.6	wet ice

C:\Users\livengoodc\AppData\Local\Microsoft\Windows\Temporary Internet Files\OLKD16\WI-NC-099-031813 Cooler Receipt Form_page 2 - Multiple Coolers.doc
Revision 3, 3/18/13 rls

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
X-9D(092214)	240-42246-A-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-B-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-C-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-D-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-E-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-F-1	Plastic 250ml - with Sodium Hydro›	>12		
X-9D(092214)	240-42246-G-1	Plastic 500ml - with Sulfuric Acid	<2		
X-9D(092214)	240-42246-H-1	Plastic 500ml - with Sulfuric Acid	<2		
X-9D(092214)	240-42246-I-1	Plastic 500ml - with Sulfuric Acid	<2		
X-9D(092214)	240-42246-P-1	Plastic 500ml - with Nitric Acid	<2		
X-9D(092214)	240-42246-Q-1	Plastic 500ml - with Nitric Acid	<2		
X-9D(092214)	240-42246-R-1	Plastic 500ml - with Nitric Acid	<2		
X-9D(092214)	240-42246-S-1	Plastic 500ml - w/ Nitric - Dis.	<2		
X-9D(092214)	240-42246-T-1	Plastic 500ml - w/ Nitric - Dis.	<2		
X-9D(092214)	240-42246-U-1	Plastic 500ml - w/ Nitric - Dis.	<2		
X-9AR(092214)	240-42246-A-2	Plastic 250ml - with Sodium Hydro›	>12		
X-9AR(092214)	240-42246-B-2	Plastic 250ml - with Sodium Hydro›	>12		
X-9AR(092214)	240-42246-C-2	Plastic 500ml - with Sulfuric Acid	<2		
X-9AR(092214)	240-42246-D-2	Plastic 500ml - with Nitric Acid	<2		
X-9AR(092214)	240-42246-E-2	Plastic 500ml - w/ Nitric - Dis.	<2		
X-9BR(092214)	240-42246-A-3	Plastic 250ml - with Sodium Hydro›	>12		
X-9BR(092214)	240-42246-B-3	Plastic 250ml - with Sodium Hydro›	>12		
X-9BR(092214)	240-42246-C-3	Plastic 500ml - with Sulfuric Acid	<2		
X-9BR(092214)	240-42246-D-3	Plastic 500ml - with Nitric Acid	<2		
X-9BR(092214)	240-42246-E-3	Plastic 500ml - w/ Nitric - Dis.	<2		
MW-118S1(092214)	240-42246-A-4	Plastic 250ml - with Sodium Hydro›	>12		
MW-118S1(092214)	240-42246-B-4	Plastic 250ml - with Sodium Hydro›	>12		
MW-118S1(092214)	240-42246-C-4	Plastic 500ml - with Sulfuric Acid	<2		
MW-118S1(092214)	240-42246-F-4	Plastic 500ml - with Nitric Acid	<2		

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-42275-1
Client Project/Site: RACER Green Point Landfill (GPL/SMI)

For:
ARCADIS U.S. Inc
10559 Citation Drive
Suite 100
Brighton, Michigan 48116

Attn: Scott Clearwater

Denise Pohl

Authorized for release by:
10/8/2014 2:42:20 PM

Denise Pohl, Project Manager II
(330)966-9789
denise.pohl@testamericainc.com

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
L	A negative instrument reading had an absolute value greater than the reporting limit
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
H	Sample was prepped or analyzed beyond the specified holding time
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
F2	MS/MSD RPD exceeds control limits
F1	MS and/or MSD Recovery exceeds the control 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: 240-42275-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: RACER Green Point Landfill (GPL/SMI)

Report Number: 240-42275-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 9/24/2014 9:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.2º C, 1.4º C and 1.6º C.

VOLATILE ORGANIC COMPOUNDS (GCMS)

Samples DUP-01 (092314) (240-42275-8), TRIP BLANK (240-42275-10) and TWW-01 (240-42275-11) were analyzed for volatile organic compounds (GCMS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 10/01/2014.

Samples DUP-01 (092314) (240-42275-8)[25X] and TWW-01 (240-42275-11)[25X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

DISSOLVED POLYCHLORINATED BIPHENYLS (PCBS)

Samples MW-111WT (092314) (240-42275-7) and MW-114WT (092314) (240-42275-15) were analyzed for dissolved polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 09/25/2014 and analyzed on 09/26/2014 and 09/29/2014.

All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before

Job ID: 240-42275-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

instrumental analysis, per EPA Method 3665A.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MW-111WT (092314) (240-42275-7), and MW-114WT (092314) (240-42275-15). Reagents: 1671559, 1526414, and 1647110.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MW-111WT (092314) (240-42275-7) and MW-114WT (092314) (240-42275-15) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 09/25/2014 and analyzed on 09/29/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

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

DISSOLVED METALS (ICPMS)

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 09/25/2014 and analyzed on 09/26/2014 and 09/29/2014.

Method(s) 200.8, 6020: Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.DUP-02 (092314) (240-42275-9), MW-111WT (092314) (240-42275-7), MW-114WT (092314) (240-42275-15), MW-117SI (092214) (240-42275-3), MW-117WT (092314) (240-42275-12), MW-118WT (092214) (240-42275-2), MW-183WT (092314) (240-42275-6), X-4CAUG (092314) (240-42275-5), X-4D (092314) (240-42275-4), and X-9CAUG (092214) (240-42275-1).

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

TOTAL RECOVERABLE METALS (ICPMS)

Samples X-9CAUG (092214) (240-42275-1), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), MW-111WT (092314) (240-42275-7), DUP-02 (092314) (240-42275-9) and MW-114WT (092314) (240-42275-15) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 09/25/2014 and analyzed on 09/26/2014.

Arsenic, Barium, Iron, Selenium and Sodium were detected in method blank MB 240-148635/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 200.8, 6020: Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.DUP-02 (092314) (240-42275-9), MW-111WT (092314) (240-42275-7), MW-114WT (092314) (240-42275-15), MW-117SI (092214) (240-42275-3), MW-117WT (092314) (240-42275-12), MW-118WT (092214) (240-42275-2), MW-183WT (092314) (240-42275-6), X-4CAUG (092314) (240-42275-5), X-4D (092314) (240-42275-4), and X-9CAUG (092214) (240-42275-1).

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

DISSOLVED MERCURY (CVAA)

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/25/2014 and analyzed on 09/30/2014.

Job ID: 240-42275-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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

TOTAL MERCURY

Samples X-9CAUG (092214) (240-42275-1), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6) and DUP-02 (092314) (240-42275-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 09/25/2014 and analyzed on 09/30/2014.

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

PH

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for pH in accordance with EPA Method 150.1. The samples were analyzed on 09/24/2014.

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

TOTAL DISSOLVED SOLIDS

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 09/25/2014.

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

ANIONS

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/24/2014 and 09/25/2014.

Nitrite as N failed the recovery criteria high for the MS/MSD of sample X-4D (092314)MS/MSD (240-42275-4) in batch 240-148493. Refer to the QC report for details.

Samples DUP-02 (092314) (240-42275-9)[10X] and MW-117WT (092314) (240-42275-12)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 300.0: Due to instrument failure no closing QC was obtained for the associated samples. They were then reanalyzed outside of hold, both sets of data are reported: DUP-02 (092314) (240-42275-9).

Method(s) 300.0: The following samples were received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-117SI (092214) (240-42275-3), MW-118WT (092214) (240-42275-2), X-9CAUG (092214) (240-42275-1) and MW-117WT (092314) (240-42275-12).

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

ANIONS

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/24/2014, 09/25/2014 and 09/27/2014.

Sulfate failed the recovery criteria high for the MS/MSD of sample X-4D (092314)MS/MSD (240-42275-4) in batch 240-148492. Refer to the QC report for details.

Job ID: 240-42275-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Samples MW-118WT (092214) (240-42275-2)[5X], MW-117SI (092214) (240-42275-3)[5X], X-4D (092314) (240-42275-4)[5X], DUP-02 (092314) (240-42275-9)[10X], MW-117WT (092314) (240-42275-12)[10X] and MW-117WT (092314) (240-42275-12)[50X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

AMMONIA

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), MW-111WT (092314) (240-42275-7), DUP-02 (092314) (240-42275-9), MW-117WT (092314) (240-42275-12), DUP-03 (092314) (240-42275-13), MW-114S2 (092314) (240-42275-14) and MW-114WT (092314) (240-42275-15) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 09/25/2014 and 09/26/2014.

Samples MW-118WT (092214) (240-42275-2)[10X], MW-117SI (092214) (240-42275-3)[2X], DUP-03 (092314) (240-42275-13)[2X] and MW-114S2 (092314) (240-42275-14)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Method(s) 300.0: The following samples were diluted due to the nature of the sample matrix: DUP-02 (092314) (240-42275-9), and MW-117WT (092314) (240-42275-12). 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.

TOTAL PHOSPHORUS

Samples MW-111WT (092314) (240-42275-7) and MW-114WT (092314) (240-42275-15) were analyzed for total phosphorus in accordance with EPA Method 365.1. The samples were prepared and analyzed on 09/25/2014.

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

DISSOLVED CYANIDE

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), MW-183WT (092314) (240-42275-6), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for dissolved cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 09/26/2014 and 10/01/2014.

Cyanide, Total exceeded the RPD limit for the MSD of sample MW-117SI (092214)MSD (240-42275-3) in batch 240-148940. Refer to the QC report for details.

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

TOTAL CYANIDE

Samples X-9CAUG (092214) (240-42275-1), MW-118WT (092214) (240-42275-2), MW-117SI (092214) (240-42275-3), X-4D (092314) (240-42275-4), X-4CAUG (092314) (240-42275-5), DUP-02 (092314) (240-42275-9) and MW-117WT (092314) (240-42275-12) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 09/30/2014 and 10/01/2014.

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

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CAN
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
7470A	Mercury (CVAA)	SW846	TAL CAN
150.1	pH (Electrometric)	MCAWW	TAL CAN
160.1	Solids, Total Dissolved (TDS)	MCAWW	TAL CAN
300.0	Anions, Ion Chromatography	MCAWW	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
365.1	Phosphorus, Total	EPA	TAL CAN
9012A	Cyanide, Total and/or Amenable	SW846	TAL CAN

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.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-42275-1	X-9CAUG (092214)	Water	09/22/14 17:55	09/24/14 09:25
240-42275-2	MW-118WT (092214)	Water	09/22/14 18:15	09/24/14 09:25
240-42275-3	MW-117SI (092214)	Water	09/22/14 17:35	09/24/14 09:25
240-42275-4	X-4D (092314)	Water	09/23/14 09:50	09/24/14 09:25
240-42275-5	X-4CAUG (092314)	Water	09/23/14 10:55	09/24/14 09:25
240-42275-6	MW-183WT (092314)	Water	09/23/14 12:05	09/24/14 09:25
240-42275-7	MW-111WT (092314)	Water	09/23/14 14:50	09/24/14 09:25
240-42275-8	DUP-01 (092314)	Water	09/23/14 00:00	09/24/14 09:25
240-42275-9	DUP-02 (092314)	Water	09/23/14 00:00	09/24/14 09:25
240-42275-10	TRIP BLANK	Water	09/23/14 00:00	09/24/14 09:25
240-42275-11	TWW-01	Water	09/23/14 11:30	09/24/14 09:25
240-42275-12	MW-117WT (092314)	Water	09/23/14 09:25	09/24/14 09:25
240-42275-13	DUP-03 (092314)	Water	09/23/14 00:00	09/24/14 09:25
240-42275-14	MW-114S2 (092314)	Water	09/23/14 14:05	09/24/14 09:25
240-42275-15	MW-114WT (092314)	Water	09/23/14 12:40	09/24/14 09:25

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: X-9CAUG (092214) — Lab Sample ID: 240-42275-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.1	J B	2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	84	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	5700	B	50	16	ug/L	1		6020	Total Recoverable
Manganese	330		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.40	J B	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	38000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	1.1	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	86	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	5700	B	50	16	ug/L	1		6020	Dissolved
Manganese	350		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.42	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	38000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.15	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	640		10	7.4	mg/L	1		160.1	Total/NA
Chloride	16		1.0	0.41	mg/L	1		300.0	Total/NA
Sulfate	1.1		1.0	0.13	mg/L	1		300.0	Total/NA
Ammonia (as N)	0.12	J	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: MW-118WT (092214) — Lab Sample ID: 240-42275-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.37	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	360	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	8600	B	50	16	ug/L	1		6020	Dissolved
Manganese	300		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.27	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	86000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.06	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	990		20	15	mg/L	1		160.1	Total/NA
Chloride	260		5.0	2.0	mg/L	5		300.0	Total/NA
Sulfate	19		1.0	0.13	mg/L	1		300.0	Total/NA
Ammonia (as N)	29		2.0	0.92	mg/L	10		350.3	Total/NA

Client Sample ID: MW-117SI (092214) — Lab Sample ID: 240-42275-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.6	B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	2100	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	12000	B	50	16	ug/L	1		6020	Dissolved
Manganese	290		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.29	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	120000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.07	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	880		20	15	mg/L	1		160.1	Total/NA
Chloride	260		5.0	2.0	mg/L	5		300.0	Total/NA
Ammonia (as N)	7.8		0.40	0.18	mg/L	2		350.3	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: X-4D (092314) — Lab Sample ID: 240-42275-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.49	J B	2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	58	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	29	J B	50	16	ug/L	1		6020	Total Recoverable
Manganese	34		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.42	J B	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	260000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	0.53	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	82	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	35	J B	50	16	ug/L	1		6020	Dissolved
Manganese	180		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.31	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	550000	B	5000	340	ug/L	5		6020	Dissolved
pH	7.52	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	830		20	15	mg/L	1		160.1	Total/NA
Chloride	760		5.0	2.0	mg/L	5		300.0	Total/NA
Nitrate as N	1.8		0.10	0.035	mg/L	1		300.0	Total/NA
Sulfate	88		1.0	0.13	mg/L	1		300.0	Total/NA

Client Sample ID: X-4CAUG (092314) — Lab Sample ID: 240-42275-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	2.3	B	2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	130	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	9100	B	50	16	ug/L	1		6020	Total Recoverable
Manganese	610		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.36	J B	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	59000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	2.2	B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	140	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	9000	B	50	16	ug/L	1		6020	Dissolved
Manganese	610		2.0	1.1	ug/L	1		6020	Dissolved
Sodium	60000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.26	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	630		10	7.4	mg/L	1		160.1	Total/NA
Chloride	120		1.0	0.41	mg/L	1		300.0	Total/NA
Ammonia (as N)	1.6		0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: MW-183WT (092314) — Lab Sample ID: 240-42275-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.8	J B	2.0	0.18	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-183WT (092314) (Continued) — Lab Sample ID: 240-42275-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	43	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	2300	B	50	16	ug/L	1		6020	Total Recoverable
Manganese	460		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.32	J B	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	43000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	1.9	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	46	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	2700	B	50	16	ug/L	1		6020	Dissolved
Manganese	550		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.27	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	47000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.25	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	410		10	7.4	mg/L	1		160.1	Total/NA
Chloride	29		1.0	0.41	mg/L	1		300.0	Total/NA
Sulfate	3.2		1.0	0.13	mg/L	1		300.0	Total/NA

Client Sample ID: MW-111WT (092314) — Lab Sample ID: 240-42275-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	7.7		2.0	0.18	ug/L	1		6020	Total Recoverable
Manganese	780		2.0	1.1	ug/L	1		6020	Total Recoverable
Ammonia (as N)	1.7	^	0.20	0.092	mg/L	1		350.3	Total/NA
Total Phosphorus as P	0.61		0.10	0.050	mg/L	1		365.1	Total/NA

Client Sample ID: DUP-01 (092314) — Lab Sample ID: 240-42275-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	450		25	7.3	ug/L	25		8260B	Total/NA
cis-1,2-Dichloroethene	21	J	25	5.0	ug/L	25		8260B	Total/NA

Client Sample ID: DUP-02 (092314) — Lab Sample ID: 240-42275-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.9	J B	2.0	0.18	ug/L	1		6020	Total Recoverable
Barium	45	B	5.0	1.1	ug/L	1		6020	Total Recoverable
Iron	2600	B	50	16	ug/L	1		6020	Total Recoverable
Manganese	540		2.0	1.1	ug/L	1		6020	Total Recoverable
Selenium	0.27	J B	5.0	0.25	ug/L	1		6020	Total Recoverable
Sodium	46000	B	1000	68	ug/L	1		6020	Total Recoverable
Arsenic	1.9	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	47	B	5.0	1.1	ug/L	1		6020	Dissolved

This Detection Summary does not include radiochemical test results.

Client Sample ID: DUP-02 (092314) (Continued) — Lab Sample ID: 240-42275-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	2600	B	50	16	ug/L	1		6020	Dissolved
Manganese	560		2.0	1.1	ug/L	1		6020	Dissolved
Sodium	47000	B	1000	68	ug/L	1		6020	Dissolved
pH	7.21	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	400		10	7.4	mg/L	1		160.1	Total/NA
Chloride	23		10	4.1	mg/L	10		300.0	Total/NA
Sulfate	2.9	J	10	1.3	mg/L	10		300.0	Total/NA
Ammonia (as N)	0.14	J ^	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-42275-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.46	J	1.0	0.21	ug/L	1		8260B	Total/NA

Client Sample ID: TWW-01 — Lab Sample ID: 240-42275-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Vinyl chloride	470		25	7.3	ug/L	25		8260B	Total/NA
cis-1,2-Dichloroethene	20	J	25	5.0	ug/L	25		8260B	Total/NA

Client Sample ID: MW-117WT (092314) — Lab Sample ID: 240-42275-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.4	J B	2.0	0.18	ug/L	1		6020	Dissolved
Barium	2800	B	5.0	1.1	ug/L	1		6020	Dissolved
Iron	110000	B	50	16	ug/L	1		6020	Dissolved
Manganese	3700		2.0	1.1	ug/L	1		6020	Dissolved
Selenium	0.59	J B	5.0	0.25	ug/L	1		6020	Dissolved
Sodium	520000	B	5000	340	ug/L	5		6020	Dissolved
pH	6.53	HF	0.100	0.100	SU	1		150.1	Total/NA
Total Dissolved Solids	6300		50	37	mg/L	1		160.1	Total/NA
Chloride	3700		50	20	mg/L	50		300.0	Total/NA
Ammonia (as N)	3.0	^	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: DUP-03 (092314) — Lab Sample ID: 240-42275-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	5.5	^	0.40	0.18	mg/L	2		350.3	Total/NA

Client Sample ID: MW-114S2 (092314) — Lab Sample ID: 240-42275-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	5.0	^	0.40	0.18	mg/L	2		350.3	Total/NA

Client Sample ID: MW-114WT (092314) — Lab Sample ID: 240-42275-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	5.3		2.0	0.18	ug/L	1		6020	Total Recoverable
Manganese	1400		2.0	1.1	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: X-9CAUG (092214)
Date Collected: 09/22/14 17:55
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-1
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 15:40	1
Barium	84	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:40	1
Iron	5700	B	50	16	ug/L		09/25/14 09:18	09/26/14 15:40	1
Manganese	330		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:40	1
Selenium	0.40	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 15:40	1
Sodium	38000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 15:40	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.1	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 15:29	1
Barium	86	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:29	1
Iron	5700	B	50	16	ug/L		09/25/14 09:18	09/26/14 15:29	1
Manganese	350		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:29	1
Selenium	0.42	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 15:29	1
Sodium	38000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 15:29	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U L	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:19	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.15	HF	0.100	0.100	SU			09/24/14 13:29	1
Total Dissolved Solids	640		10	7.4	mg/L			09/25/14 11:49	1
Chloride	16		1.0	0.41	mg/L			09/24/14 19:40	1
Nitrite as N	0.10	U H	0.10	0.038	mg/L			09/24/14 19:40	1
Nitrate as N	0.10	U H	0.10	0.035	mg/L			09/24/14 19:40	1
Sulfate	1.1		1.0	0.13	mg/L			09/24/14 19:40	1
Ammonia (as N)	0.12	J	0.20	0.092	mg/L			09/25/14 15:43	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/30/14 15:28	09/30/14 16:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:33	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-118WT (092214)
Date Collected: 09/22/14 18:15
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-2
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.37	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:06	1
Barium	360	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:06	1
Iron	8600	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:06	1
Manganese	300		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:06	1
Selenium	0.27	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:06	1
Sodium	86000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 16:06	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.06	HF	0.100	0.100	SU			09/24/14 13:40	1
Total Dissolved Solids	990		20	15	mg/L			09/25/14 11:49	1
Chloride	260		5.0	2.0	mg/L			09/27/14 01:12	5
Nitrite as N	0.10	U H	0.10	0.038	mg/L			09/24/14 20:17	1
Nitrate as N	0.10	U H	0.10	0.035	mg/L			09/24/14 20:17	1
Sulfate	19		1.0	0.13	mg/L			09/24/14 20:17	1
Ammonia (as N)	29		2.0	0.92	mg/L			09/25/14 15:51	10
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/30/14 15:28	09/30/14 16:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:33	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-117SI (092214)
Date Collected: 09/22/14 17:35
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.6**	**B**	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:09	1
Barium	**2100**	**B**	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:09	1
Iron	**12000**	**B**	50	16	ug/L		09/25/14 09:18	09/26/14 16:09	1
Manganese	**290**		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:09	1
Selenium	**0.29**	**J B**	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:09	1
Sodium	**120000**	**B**	1000	68	ug/L		09/25/14 09:18	09/26/14 16:09	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.07**	**HF**	0.100	0.100	SU			09/24/14 13:51	1
Total Dissolved Solids	**880**		20	15	mg/L			09/25/14 11:49	1
Chloride	**260**		5.0	2.0	mg/L			09/24/14 21:49	5
Nitrite as N	0.10	U H	0.10	0.038	mg/L			09/24/14 21:31	1
Nitrate as N	0.10	U H	0.10	0.035	mg/L			09/24/14 21:31	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 21:31	1
Ammonia (as N)	**7.8**		0.40	0.18	mg/L			09/25/14 16:02	2
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/30/14 15:28	09/30/14 16:39	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:33	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: X-4D (092314)
Date Collected: 09/23/14 09:50
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-4
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.49	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 15:44	1
Barium	58	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:44	1
Iron	29	J B	50	16	ug/L		09/25/14 09:18	09/26/14 15:44	1
Manganese	34		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:44	1
Selenium	0.42	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 15:44	1
Sodium	260000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 15:44	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.53	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:13	1
Barium	82	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:13	1
Iron	35	J B	50	16	ug/L		09/25/14 09:18	09/26/14 16:13	1
Manganese	180		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:13	1
Selenium	0.31	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:13	1
Sodium	550000	B	5000	340	ug/L		09/25/14 09:18	09/29/14 14:37	5

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:53	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.52	HF	0.100	0.100	SU			09/24/14 14:02	1
Total Dissolved Solids	830		20	15	mg/L			09/25/14 11:49	1
Chloride	760		5.0	2.0	mg/L			09/24/14 23:03	5
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 22:07	1
Nitrate as N	1.8		0.10	0.035	mg/L			09/24/14 22:07	1
Sulfate	88		1.0	0.13	mg/L			09/24/14 22:07	1
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/25/14 16:17	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: X-4CAUG (092314)
Date Collected: 09/23/14 10:55
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-5
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.3	B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 15:47	1
Barium	130	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:47	1
Iron	9100	B	50	16	ug/L		09/25/14 09:18	09/26/14 15:47	1
Manganese	610		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:47	1
Selenium	0.36	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 15:47	1
Sodium	59000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 15:47	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2	B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:17	1
Barium	140	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:17	1
Iron	9000	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:17	1
Manganese	610		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:17	1
Selenium	5.0	U	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:17	1
Sodium	60000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 16:17	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:51	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.26	HF	0.100	0.100	SU			09/24/14 14:13	1
Total Dissolved Solids	630		10	7.4	mg/L			09/25/14 11:49	1
Chloride	120		1.0	0.41	mg/L			09/24/14 23:21	1
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 23:21	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 23:21	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 23:21	1
Ammonia (as N)	1.6		0.20	0.092	mg/L			09/25/14 16:29	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-183WT (092314)
Date Collected: 09/23/14 12:05
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-6
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.8	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 15:51	1
Barium	43	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:51	1
Iron	2300	B	50	16	ug/L		09/25/14 09:18	09/26/14 15:51	1
Manganese	460		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 15:51	1
Selenium	0.32	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 15:51	1
Sodium	43000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 15:51	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:20	1
Barium	46	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:20	1
Iron	2700	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:20	1
Manganese	550		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:20	1
Selenium	0.27	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:20	1
Sodium	47000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 16:20	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:49	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.25	HF	0.100	0.100	SU			09/24/14 14:24	1
Total Dissolved Solids	410		10	7.4	mg/L			09/25/14 11:49	1
Chloride	29		1.0	0.41	mg/L			09/24/14 23:58	1
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 23:58	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 23:58	1
Sulfate	3.2		1.0	0.13	mg/L			09/24/14 23:58	1
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/25/14 16:42	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-111WT (092314)
Date Collected: 09/23/14 14:50
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-7
Matrix: Water

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/25/14 07:54	09/29/14 13:36	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/25/14 07:54	09/29/14 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*15*		*10 - 130*	*09/25/14 07:54*	*09/29/14 13:36*	*1*
Tetrachloro-m-xylene	*73*		*23 - 136*	*09/25/14 07:54*	*09/29/14 13:36*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/25/14 07:54	09/26/14 22:09	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/25/14 07:54	09/26/14 22:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*51*		*23 - 136*	*09/25/14 07:54*	*09/26/14 22:09*	*1*
DCB Decachlorobiphenyl	*45*		*10 - 130*	*09/25/14 07:54*	*09/26/14 22:09*	*1*

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**7.7**		2.0	0.18	ug/L		09/25/14 09:26	09/26/14 12:37	1
Manganese	**780**		2.0	1.1	ug/L		09/25/14 09:26	09/26/14 12:37	1
Thallium	1.0	U	1.0	0.074	ug/L		09/25/14 09:26	09/26/14 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.7**	^	0.20	0.092	mg/L			09/26/14 14:21	1
Total Phosphorus as P	**0.61**		0.10	0.050	mg/L		09/25/14 06:30	09/25/14 14:10	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: DUP-01 (092314)
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-8
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	250	U	250	86	ug/L			10/01/14 12:28	25
Benzene	25	U	25	6.0	ug/L			10/01/14 12:28	25
Dichlorobromomethane	25	U	25	3.8	ug/L			10/01/14 12:28	25
Bromoform	25	U	25	14	ug/L			10/01/14 12:28	25
Bromomethane	25	U	25	16	ug/L			10/01/14 12:28	25
2-Butanone (MEK)	250	U	250	100	ug/L			10/01/14 12:28	25
Carbon disulfide	25	U	25	7.0	ug/L			10/01/14 12:28	25
Carbon tetrachloride	25	U	25	4.3	ug/L			10/01/14 12:28	25
Chlorobenzene	25	U	25	4.8	ug/L			10/01/14 12:28	25
Chloroethane	25	U	25	8.3	ug/L			10/01/14 12:28	25
Chloroform	25	U	25	5.3	ug/L			10/01/14 12:28	25
Chloromethane	25	U	25	11	ug/L			10/01/14 12:28	25
1,1-Dichloroethane	25	U	25	6.5	ug/L			10/01/14 12:28	25
1,2-Dichloroethane	25	U	25	5.0	ug/L			10/01/14 12:28	25
1,1-Dichloroethene	25	U	25	11	ug/L			10/01/14 12:28	25
1,2-Dichloropropane	25	U	25	5.5	ug/L			10/01/14 12:28	25
cis-1,3-Dichloropropene	25	U	25	12	ug/L			10/01/14 12:28	25
trans-1,3-Dichloropropene	25	U	25	14	ug/L			10/01/14 12:28	25
Ethylbenzene	25	U	25	5.8	ug/L			10/01/14 12:28	25
2-Hexanone	250	U	250	97	ug/L			10/01/14 12:28	25
Methylene Chloride	25	U	25	7.0	ug/L			10/01/14 12:28	25
4-Methyl-2-pentanone (MIBK)	250	U	250	90	ug/L			10/01/14 12:28	25
Styrene	25	U	25	11	ug/L			10/01/14 12:28	25
1,1,2,2-Tetrachloroethane	25	U	25	5.5	ug/L			10/01/14 12:28	25
Tetrachloroethene	25	U	25	5.0	ug/L			10/01/14 12:28	25
Toluene	25	U	25	5.5	ug/L			10/01/14 12:28	25
Trichloroethene	25	U	25	3.8	ug/L			10/01/14 12:28	25
Vinyl chloride	**450**		25	7.3	ug/L			10/01/14 12:28	25
Xylenes, Total	50	U	50	11	ug/L			10/01/14 12:28	25
1,1,1-Trichloroethane	25	U	25	5.5	ug/L			10/01/14 12:28	25
1,1,2-Trichloroethane	25	U	25	4.3	ug/L			10/01/14 12:28	25
Cyclohexane	25	U	25	8.3	ug/L			10/01/14 12:28	25
1,2-Dibromo-3-Chloropropane	50	U	50	21	ug/L			10/01/14 12:28	25
Ethylene Dibromide	25	U	25	4.8	ug/L			10/01/14 12:28	25
Dichlorodifluoromethane	25	U	25	13	ug/L			10/01/14 12:28	25
cis-1,2-Dichloroethene	**21**	**J**	25	5.0	ug/L			10/01/14 12:28	25
trans-1,2-Dichloroethene	25	U	25	6.5	ug/L			10/01/14 12:28	25
Isopropylbenzene	25	U	25	8.8	ug/L			10/01/14 12:28	25
Methyl acetate	250	U	250	57	ug/L			10/01/14 12:28	25
Methyl tert-butyl ether	25	U	25	4.0	ug/L			10/01/14 12:28	25
1,1,2-Trichloro-1,2,2-trifluoroethane	25	U	25	9.3	ug/L			10/01/14 12:28	25
1,2,4-Trichlorobenzene	25	U	25	8.0	ug/L			10/01/14 12:28	25
1,2-Dichlorobenzene	25	U	25	4.3	ug/L			10/01/14 12:28	25
1,3-Dichlorobenzene	25	U	25	4.3	ug/L			10/01/14 12:28	25
1,4-Dichlorobenzene	25	U	25	4.0	ug/L			10/01/14 12:28	25
Trichlorofluoromethane	25	U	25	12	ug/L			10/01/14 12:28	25
Chlorodibromomethane	25	U	25	11	ug/L			10/01/14 12:28	25
Methylcyclohexane	25	U	25	5.8	ug/L			10/01/14 12:28	25

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: DUP-01 (092314)
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-8
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 129		10/01/14 12:28	25
4-Bromofluorobenzene (Surr)	79		66 - 120		10/01/14 12:28	25
Toluene-d8 (Surr)	85		74 - 120		10/01/14 12:28	25
Dibromofluoromethane (Surr)	107		75 - 121		10/01/14 12:28	25

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: DUP-02 (092314)
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:02	1
Barium	45	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:02	1
Iron	2600	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:02	1
Manganese	540		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:02	1
Selenium	0.27	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:02	1
Sodium	46000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 16:02	1

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.9	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:24	1
Barium	47	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:24	1
Iron	2600	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:24	1
Manganese	560		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:24	1
Selenium	5.0	U	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:24	1
Sodium	47000	B	1000	68	ug/L		09/25/14 09:18	09/26/14 16:24	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:55	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.21	HF	0.100	0.100	SU			09/24/14 14:35	1
Total Dissolved Solids	400		10	7.4	mg/L			09/25/14 11:49	1
Chloride	23		10	4.1	mg/L			09/25/14 17:32	10
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/25/14 01:11	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/25/14 01:11	1
Sulfate	2.9	J	10	1.3	mg/L			09/25/14 17:32	10
Ammonia (as N)	0.14	J ^	0.20	0.092	mg/L			09/26/14 14:38	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

General Chemistry - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	1.0	U H	1.0	0.38	mg/L			09/25/14 17:32	10
Nitrate as N	1.0	U H	1.0	0.35	mg/L			09/25/14 17:32	10

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: TRIP BLANK
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-10
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	3.4	ug/L			10/01/14 12:03	1
Benzene	1.0	U	1.0	0.24	ug/L			10/01/14 12:03	1
Dichlorobromomethane	1.0	U	1.0	0.15	ug/L			10/01/14 12:03	1
Bromoform	1.0	U	1.0	0.56	ug/L			10/01/14 12:03	1
Bromomethane	1.0	U	1.0	0.63	ug/L			10/01/14 12:03	1
2-Butanone (MEK)	10	U	10	4.1	ug/L			10/01/14 12:03	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			10/01/14 12:03	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			10/01/14 12:03	1
Chlorobenzene	1.0	U	1.0	0.19	ug/L			10/01/14 12:03	1
Chloroethane	1.0	U	1.0	0.33	ug/L			10/01/14 12:03	1
Chloroform	**0.46**	**J**	1.0	0.21	ug/L			10/01/14 12:03	1
Chloromethane	1.0	U	1.0	0.44	ug/L			10/01/14 12:03	1
1,1-Dichloroethane	1.0	U	1.0	0.26	ug/L			10/01/14 12:03	1
1,2-Dichloroethane	1.0	U	1.0	0.20	ug/L			10/01/14 12:03	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			10/01/14 12:03	1
1,2-Dichloropropane	1.0	U	1.0	0.22	ug/L			10/01/14 12:03	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			10/01/14 12:03	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			10/01/14 12:03	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			10/01/14 12:03	1
2-Hexanone	10	U	10	3.9	ug/L			10/01/14 12:03	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			10/01/14 12:03	1
4-Methyl-2-pentanone (MIBK)	10	U	10	3.6	ug/L			10/01/14 12:03	1
Styrene	1.0	U	1.0	0.45	ug/L			10/01/14 12:03	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			10/01/14 12:03	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			10/01/14 12:03	1
Toluene	1.0	U	1.0	0.22	ug/L			10/01/14 12:03	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			10/01/14 12:03	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			10/01/14 12:03	1
Xylenes, Total	2.0	U	2.0	0.43	ug/L			10/01/14 12:03	1
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			10/01/14 12:03	1
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			10/01/14 12:03	1
Cyclohexane	1.0	U	1.0	0.33	ug/L			10/01/14 12:03	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82	ug/L			10/01/14 12:03	1
Ethylene Dibromide	1.0	U	1.0	0.19	ug/L			10/01/14 12:03	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			10/01/14 12:03	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			10/01/14 12:03	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			10/01/14 12:03	1
Isopropylbenzene	1.0	U	1.0	0.35	ug/L			10/01/14 12:03	1
Methyl acetate	10	U	10	2.3	ug/L			10/01/14 12:03	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/01/14 12:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.37	ug/L			10/01/14 12:03	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			10/01/14 12:03	1
1,2-Dichlorobenzene	1.0	U	1.0	0.17	ug/L			10/01/14 12:03	1
1,3-Dichlorobenzene	1.0	U	1.0	0.17	ug/L			10/01/14 12:03	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			10/01/14 12:03	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			10/01/14 12:03	1
Chlorodibromomethane	1.0	U	1.0	0.43	ug/L			10/01/14 12:03	1
Methylcyclohexane	1.0	U	1.0	0.23	ug/L			10/01/14 12:03	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: TRIP BLANK
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-10
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		63 - 129		10/01/14 12:03	1
4-Bromofluorobenzene (Surr)	79		66 - 120		10/01/14 12:03	1
Toluene-d8 (Surr)	85		74 - 120		10/01/14 12:03	1
Dibromofluoromethane (Surr)	108		75 - 121		10/01/14 12:03	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: TWW-01
Date Collected: 09/23/14 11:30
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-11
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	250	U	250	86	ug/L			10/01/14 11:41	25
Benzene	25	U	25	6.0	ug/L			10/01/14 11:41	25
Dichlorobromomethane	25	U	25	3.8	ug/L			10/01/14 11:41	25
Bromoform	25	U	25	14	ug/L			10/01/14 11:41	25
Bromomethane	25	U	25	16	ug/L			10/01/14 11:41	25
2-Butanone (MEK)	250	U	250	100	ug/L			10/01/14 11:41	25
Carbon disulfide	25	U	25	7.0	ug/L			10/01/14 11:41	25
Carbon tetrachloride	25	U	25	4.3	ug/L			10/01/14 11:41	25
Chlorobenzene	25	U	25	4.8	ug/L			10/01/14 11:41	25
Chloroethane	25	U	25	8.3	ug/L			10/01/14 11:41	25
Chloroform	25	U	25	5.3	ug/L			10/01/14 11:41	25
Chloromethane	25	U	25	11	ug/L			10/01/14 11:41	25
1,1-Dichloroethane	25	U	25	6.5	ug/L			10/01/14 11:41	25
1,2-Dichloroethane	25	U	25	5.0	ug/L			10/01/14 11:41	25
1,1-Dichloroethene	25	U	25	11	ug/L			10/01/14 11:41	25
1,2-Dichloropropane	25	U	25	5.5	ug/L			10/01/14 11:41	25
cis-1,3-Dichloropropene	25	U	25	12	ug/L			10/01/14 11:41	25
trans-1,3-Dichloropropene	25	U	25	14	ug/L			10/01/14 11:41	25
Ethylbenzene	25	U	25	5.8	ug/L			10/01/14 11:41	25
2-Hexanone	250	U	250	97	ug/L			10/01/14 11:41	25
Methylene Chloride	25	U	25	7.0	ug/L			10/01/14 11:41	25
4-Methyl-2-pentanone (MIBK)	250	U	250	90	ug/L			10/01/14 11:41	25
Styrene	25	U	25	11	ug/L			10/01/14 11:41	25
1,1,2,2-Tetrachloroethane	25	U	25	5.5	ug/L			10/01/14 11:41	25
Tetrachloroethene	25	U	25	5.0	ug/L			10/01/14 11:41	25
Toluene	25	U	25	5.5	ug/L			10/01/14 11:41	25
Trichloroethene	25	U	25	3.8	ug/L			10/01/14 11:41	25
Vinyl chloride	**470**		25	7.3	ug/L			10/01/14 11:41	25
Xylenes, Total	50	U	50	11	ug/L			10/01/14 11:41	25
1,1,1-Trichloroethane	25	U	25	5.5	ug/L			10/01/14 11:41	25
1,1,2-Trichloroethane	25	U	25	4.3	ug/L			10/01/14 11:41	25
Cyclohexane	25	U	25	8.3	ug/L			10/01/14 11:41	25
1,2-Dibromo-3-Chloropropane	50	U	50	21	ug/L			10/01/14 11:41	25
Ethylene Dibromide	25	U	25	4.8	ug/L			10/01/14 11:41	25
Dichlorodifluoromethane	25	U	25	13	ug/L			10/01/14 11:41	25
cis-1,2-Dichloroethene	**20**	**J**	25	5.0	ug/L			10/01/14 11:41	25
trans-1,2-Dichloroethene	25	U	25	6.5	ug/L			10/01/14 11:41	25
Isopropylbenzene	25	U	25	8.8	ug/L			10/01/14 11:41	25
Methyl acetate	250	U	250	57	ug/L			10/01/14 11:41	25
Methyl tert-butyl ether	25	U	25	4.0	ug/L			10/01/14 11:41	25
1,1,2-Trichloro-1,2,2-trifluoroethane	25	U	25	9.3	ug/L			10/01/14 11:41	25
1,2,4-Trichlorobenzene	25	U	25	8.0	ug/L			10/01/14 11:41	25
1,2-Dichlorobenzene	25	U	25	4.3	ug/L			10/01/14 11:41	25
1,3-Dichlorobenzene	25	U	25	4.3	ug/L			10/01/14 11:41	25
1,4-Dichlorobenzene	25	U	25	4.0	ug/L			10/01/14 11:41	25
Trichlorofluoromethane	25	U	25	12	ug/L			10/01/14 11:41	25
Chlorodibromomethane	25	U	25	11	ug/L			10/01/14 11:41	25
Methylcyclohexane	25	U	25	5.8	ug/L			10/01/14 11:41	25

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: TWW-01
Date Collected: 09/23/14 11:30
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-11
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		63 - 129		10/01/14 11:41	25
4-Bromofluorobenzene (Surr)	78		66 - 120		10/01/14 11:41	25
Toluene-d8 (Surr)	82		74 - 120		10/01/14 11:41	25
Dibromofluoromethane (Surr)	102		75 - 121		10/01/14 11:41	25

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-117WT (092314)
Date Collected: 09/23/14 09:25
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-12
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.4	J B	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 16:28	1
Barium	2800	B	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:28	1
Iron	110000	B	50	16	ug/L		09/25/14 09:18	09/26/14 16:28	1
Manganese	3700		2.0	1.1	ug/L		09/25/14 09:18	09/26/14 16:28	1
Selenium	0.59	J B	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 16:28	1
Sodium	520000	B	5000	340	ug/L		09/25/14 09:18	09/26/14 16:31	5

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.53	HF	0.100	0.100	SU			09/24/14 14:46	1
Total Dissolved Solids	6300		50	37	mg/L			09/25/14 11:49	1
Chloride	3700		50	20	mg/L			09/27/14 01:28	50
Nitrite as N	1.0	U H	1.0	0.38	mg/L			09/25/14 17:48	10
Nitrate as N	1.0	U H	1.0	0.35	mg/L			09/25/14 17:48	10
Sulfate	10	U	10	1.3	mg/L			09/25/14 17:48	10
Ammonia (as N)	3.0	^	0.20	0.092	mg/L			09/26/14 14:45	1
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:29	1

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: DUP-03 (092314)
Date Collected: 09/23/14 00:00
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-13
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	5.5	^	0.40	0.18	mg/L			09/26/14 15:13	2

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-114S2 (092314)
Date Collected: 09/23/14 14:05
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-14
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	5.0	^	0.40	0.18	mg/L			09/26/14 15:13	2

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-114WT (092314)
Date Collected: 09/23/14 12:40
Date Received: 09/24/14 09:25

Lab Sample ID: 240-42275-15
Matrix: Water

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/25/14 07:54	09/29/14 13:50	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/25/14 07:54	09/29/14 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*43*		*10 - 130*	*09/25/14 07:54*	*09/29/14 13:50*	*1*
Tetrachloro-m-xylene	*62*		*23 - 136*	*09/25/14 07:54*	*09/29/14 13:50*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/25/14 07:54	09/29/14 14:33	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/25/14 07:54	09/29/14 14:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*70*		*23 - 136*	*09/25/14 07:54*	*09/29/14 14:33*	*1*
DCB Decachlorobiphenyl	*35*		*10 - 130*	*09/25/14 07:54*	*09/29/14 14:33*	*1*

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**5.3**		2.0	0.18	ug/L		09/25/14 09:26	09/26/14 12:40	1
Manganese	**1400**		2.0	1.1	ug/L		09/25/14 09:26	09/26/14 12:40	1
Thallium	1.0	U	1.0	0.074	ug/L		09/25/14 09:26	09/26/14 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/26/14 15:30	1
Total Phosphorus as P	0.10	U	0.10	0.050	mg/L		09/25/14 06:32	09/25/14 14:10	1

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

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

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	TOL	DBFM
Lab Sample ID	Client Sample ID	(63-129)	(66-120)	(74-120)	(75-121)
240-42275-8	DUP-01 (092314)	99	79	85	107
240-42275-8 MS	DUP-01 (092314)	81	93	91	96
240-42275-8 MSD	DUP-01 (092314)	83	98	94	94
240-42275-10	TRIP BLANK	99	79	85	108
240-42275-11	TWW-01	96	78	82	102
LCS 240-149519/4	Lab Control Sample	91	103	102	104
MB 240-149519/6	Method Blank	98	81	87	105

Surrogate Legend

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

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)	
		DCB2	TCX2
Lab Sample ID	Client Sample ID	(10-130)	(23-136)
240-42275-7	MW-111WT (092314)	15	73
240-42275-15	MW-114WT (092314)	43	62
LCS 240-148588/11-A	Lab Control Sample	99	87
MB 240-148588/10-A	Method Blank	96	79

Surrogate Legend

DCB = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water — **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(23-136)	(10-130)
240-42275-7	MW-111WT (092314)	51	45
240-42275-15	MW-114WT (092314)	70	35

Surrogate Legend

TCX = Tetrachloro-m-xylene
DCB = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 240-149519/6
Matrix: Water
Analysis Batch: 149519

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	10	U	10	3.4	ug/L			10/01/14 11:14	1
Benzene	1.0	U	1.0	0.24	ug/L			10/01/14 11:14	1
Dichlorobromomethane	1.0	U	1.0	0.15	ug/L			10/01/14 11:14	1
Bromoform	1.0	U	1.0	0.56	ug/L			10/01/14 11:14	1
Bromomethane	1.0	U	1.0	0.63	ug/L			10/01/14 11:14	1
2-Butanone (MEK)	10	U	10	4.1	ug/L			10/01/14 11:14	1
Carbon disulfide	1.0	U	1.0	0.28	ug/L			10/01/14 11:14	1
Carbon tetrachloride	1.0	U	1.0	0.17	ug/L			10/01/14 11:14	1
Chlorobenzene	1.0	U	1.0	0.19	ug/L			10/01/14 11:14	1
Chloroethane	1.0	U	1.0	0.33	ug/L			10/01/14 11:14	1
Chloroform	1.0	U	1.0	0.21	ug/L			10/01/14 11:14	1
Chloromethane	1.0	U	1.0	0.44	ug/L			10/01/14 11:14	1
1,1-Dichloroethane	1.0	U	1.0	0.26	ug/L			10/01/14 11:14	1
1,2-Dichloroethane	1.0	U	1.0	0.20	ug/L			10/01/14 11:14	1
1,1-Dichloroethene	1.0	U	1.0	0.45	ug/L			10/01/14 11:14	1
1,2-Dichloropropane	1.0	U	1.0	0.22	ug/L			10/01/14 11:14	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.46	ug/L			10/01/14 11:14	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.56	ug/L			10/01/14 11:14	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			10/01/14 11:14	1
2-Hexanone	10	U	10	3.9	ug/L			10/01/14 11:14	1
Methylene Chloride	1.0	U	1.0	0.28	ug/L			10/01/14 11:14	1
4-Methyl-2-pentanone (MIBK)	10	U	10	3.6	ug/L			10/01/14 11:14	1
Styrene	1.0	U	1.0	0.45	ug/L			10/01/14 11:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.22	ug/L			10/01/14 11:14	1
Tetrachloroethene	1.0	U	1.0	0.20	ug/L			10/01/14 11:14	1
Toluene	1.0	U	1.0	0.22	ug/L			10/01/14 11:14	1
Trichloroethene	1.0	U	1.0	0.15	ug/L			10/01/14 11:14	1
Vinyl chloride	1.0	U	1.0	0.29	ug/L			10/01/14 11:14	1
Xylenes, Total	2.0	U	2.0	0.43	ug/L			10/01/14 11:14	1
1,1,1-Trichloroethane	1.0	U	1.0	0.22	ug/L			10/01/14 11:14	1
1,1,2-Trichloroethane	1.0	U	1.0	0.17	ug/L			10/01/14 11:14	1
Cyclohexane	1.0	U	1.0	0.33	ug/L			10/01/14 11:14	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.82	ug/L			10/01/14 11:14	1
Ethylene Dibromide	1.0	U	1.0	0.19	ug/L			10/01/14 11:14	1
Dichlorodifluoromethane	1.0	U	1.0	0.50	ug/L			10/01/14 11:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.20	ug/L			10/01/14 11:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.26	ug/L			10/01/14 11:14	1
Isopropylbenzene	1.0	U	1.0	0.35	ug/L			10/01/14 11:14	1
Methyl acetate	10	U	10	2.3	ug/L			10/01/14 11:14	1
Methyl tert-butyl ether	1.0	U	1.0	0.16	ug/L			10/01/14 11:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	0.37	ug/L			10/01/14 11:14	1
1,2,4-Trichlorobenzene	1.0	U	1.0	0.32	ug/L			10/01/14 11:14	1
1,2-Dichlorobenzene	1.0	U	1.0	0.17	ug/L			10/01/14 11:14	1
1,3-Dichlorobenzene	1.0	U	1.0	0.17	ug/L			10/01/14 11:14	1
1,4-Dichlorobenzene	1.0	U	1.0	0.16	ug/L			10/01/14 11:14	1
Trichlorofluoromethane	1.0	U	1.0	0.49	ug/L			10/01/14 11:14	1
Chlorodibromomethane	1.0	U	1.0	0.43	ug/L			10/01/14 11:14	1
Methylcyclohexane	1.0	U	1.0	0.23	ug/L			10/01/14 11:14	1

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

Lab Sample ID: MB 240-149519/6
Matrix: Water
Analysis Batch: 149519

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		63 - 129		10/01/14 11:14	1
4-Bromofluorobenzene (Surr)	81		66 - 120		10/01/14 11:14	1
Toluene-d8 (Surr)	87		74 - 120		10/01/14 11:14	1
Dibromofluoromethane (Surr)	105		75 - 121		10/01/14 11:14	1

Lab Sample ID: LCS 240-149519/4
Matrix: Water
Analysis Batch: 149519

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	20.0	18.2		ug/L		91	43 - 136
Benzene	10.0	11.6		ug/L		116	80 - 120
Dichlorobromomethane	10.0	10.6		ug/L		106	72 - 121
Bromoform	10.0	9.94		ug/L		99	40 - 131
Bromomethane	10.0	8.84		ug/L		88	11 - 185
2-Butanone (MEK)	20.0	18.8		ug/L		94	60 - 126
Carbon disulfide	10.0	12.6		ug/L		126	62 - 142
Carbon tetrachloride	10.0	10.5		ug/L		105	66 - 128
Chlorobenzene	10.0	10.8		ug/L		108	80 - 120
Chloroethane	10.0	8.53		ug/L		85	25 - 153
Chloroform	10.0	10.8		ug/L		108	79 - 120
Chloromethane	10.0	12.2		ug/L		122	44 - 126
1,1-Dichloroethane	10.0	11.3		ug/L		113	80 - 120
1,2-Dichloroethane	10.0	10.4		ug/L		104	71 - 127
1,1-Dichloroethene	10.0	10.2		ug/L		102	78 - 131
1,2-Dichloropropane	10.0	11.4		ug/L		114	80 - 120
cis-1,3-Dichloropropene	10.0	11.4		ug/L		114	61 - 120
trans-1,3-Dichloropropene	10.0	10.6		ug/L		106	58 - 120
Ethylbenzene	10.0	10.9		ug/L		109	80 - 120
2-Hexanone	20.0	19.4		ug/L		97	55 - 133
Methylene Chloride	10.0	12.3		ug/L		123	66 - 131
4-Methyl-2-pentanone (MIBK)	20.0	19.7		ug/L		98	63 - 128
Styrene	10.0	11.8		ug/L		118	79 - 120
1,1,2,2-Tetrachloroethane	10.0	9.35		ug/L		94	68 - 120
Tetrachloroethene	10.0	10.9		ug/L		109	79 - 120
Toluene	10.0	10.9		ug/L		109	80 - 120
Trichloroethene	10.0	11.0		ug/L		110	76 - 120
Vinyl chloride	10.0	10.4		ug/L		104	53 - 127
Xylenes, Total	20.0	22.5		ug/L		113	80 - 120
1,1,1-Trichloroethane	10.0	11.3		ug/L		113	74 - 120
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 120
Cyclohexane	10.0	10.5		ug/L		105	54 - 121
1,2-Dibromo-3-Chloropropane	10.0	8.45		ug/L		85	42 - 136
Ethylene Dibromide	10.0	9.86		ug/L		99	79 - 120
Dichlorodifluoromethane	10.0	7.78		ug/L		78	19 - 129
cis-1,2-Dichloroethene	10.0	11.0		ug/L		110	80 - 120
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	80 - 120
Isopropylbenzene	10.0	10.9		ug/L		109	75 - 120

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

Lab Sample ID: LCS 240-149519/4
Matrix: Water
Analysis Batch: 149519

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl acetate	50.0	49.1		ug/L		98	58 - 131
Methyl tert-butyl ether	10.0	9.94		ug/L		99	52 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	10.0	9.57		ug/L		96	74 - 151
1,2,4-Trichlorobenzene	10.0	9.88		ug/L		99	48 - 135
1,2-Dichlorobenzene	10.0	9.97		ug/L		100	80 - 120
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	80 - 120
1,4-Dichlorobenzene	10.0	10.6		ug/L		106	80 - 120
Trichlorofluoromethane	10.0	8.08		ug/L		81	49 - 157
Chlorodibromomethane	10.0	10.0		ug/L		100	64 - 120
Methylcyclohexane	10.0	9.94		ug/L		99	56 - 127
m-Xylene & p-Xylene	10.0	11.0		ug/L		110	80 - 120
o-Xylene	10.0	11.5		ug/L		115	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*91*		*63 - 129*
4-Bromofluorobenzene (Surr)	*103*		*66 - 120*
Toluene-d8 (Surr)	*102*		*74 - 120*
Dibromofluoromethane (Surr)	*104*		*75 - 121*

Lab Sample ID: 240-42275-8 MS
Matrix: Water
Analysis Batch: 149519

Client Sample ID: DUP-01 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	250	U	500	383		ug/L		77	33 - 145
Benzene	25	U	250	265		ug/L		106	72 - 121
Dichlorobromomethane	25	U	250	246		ug/L		99	67 - 120
Bromoform	25	U	250	229		ug/L		92	32 - 128
Bromomethane	25	U	250	205		ug/L		82	10 - 186
2-Butanone (MEK)	250	U	500	398		ug/L		80	54 - 129
Carbon disulfide	25	U	250	296		ug/L		118	57 - 147
Carbon tetrachloride	25	U	250	246		ug/L		99	59 - 129
Chlorobenzene	25	U	250	245		ug/L		98	80 - 120
Chloroethane	25	U	250	208		ug/L		83	21 - 165
Chloroform	25	U	250	253		ug/L		101	76 - 120
Chloromethane	25	U	250	282		ug/L		113	33 - 132
1,1-Dichloroethane	25	U	250	271		ug/L		108	79 - 120
1,2-Dichloroethane	25	U	250	242		ug/L		97	68 - 129
1,1-Dichloroethene	25	U	250	239		ug/L		95	74 - 135
1,2-Dichloropropane	25	U	250	258		ug/L		103	78 - 120
cis-1,3-Dichloropropene	25	U	250	239		ug/L		96	51 - 120
trans-1,3-Dichloropropene	25	U	250	225		ug/L		90	46 - 120
Ethylbenzene	25	U	250	251		ug/L		100	75 - 120
2-Hexanone	250	U	500	447		ug/L		89	47 - 139
Methylene Chloride	25	U	250	298		ug/L		119	63 - 128
4-Methyl-2-pentanone (MIBK)	250	U	500	435		ug/L		87	56 - 131
Styrene	25	U	250	272		ug/L		109	71 - 120

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

Lab Sample ID: 240-42275-8 MS
Matrix: Water
Analysis Batch: 149519

Client Sample ID: DUP-01 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	25	U	250	218		ug/L		87	63 - 122
Tetrachloroethene	25	U	250	240		ug/L		96	70 - 120
Toluene	25	U	250	247		ug/L		99	78 - 120
Trichloroethene	25	U	250	247		ug/L		99	66 - 120
Vinyl chloride	450		250	610		ug/L		66	49 - 130
Xylenes, Total	50	U	500	508		ug/L		102	76 - 120
1,1,1-Trichloroethane	25	U	250	262		ug/L		105	68 - 121
1,1,2-Trichloroethane	25	U	250	236		ug/L		94	75 - 120
Cyclohexane	25	U	250	226		ug/L		91	49 - 123
1,2-Dibromo-3-Chloropropane	50	U	250	184		ug/L		74	32 - 139
Ethylene Dibromide	25	U	250	228		ug/L		91	74 - 120
Dichlorodifluoromethane	25	U	250	156		ug/L		62	17 - 128
cis-1,2-Dichloroethene	21	J	250	282		ug/L		104	70 - 120
trans-1,2-Dichloroethene	25	U	250	262		ug/L		105	80 - 120
Isopropylbenzene	25	U	250	245		ug/L		98	68 - 120
Methyl acetate	250	U	1250	1150		ug/L		92	47 - 130
Methyl tert-butyl ether	25	U	250	225		ug/L		90	46 - 144
1,1,2-Trichloro-1,2,2-trifluoroethane	25	U	250	214		ug/L		85	70 - 152
1,2,4-Trichlorobenzene	25	U	250	200		ug/L		80	38 - 138
1,2-Dichlorobenzene	25	U	250	232		ug/L		93	75 - 120
1,3-Dichlorobenzene	25	U	250	229		ug/L		92	73 - 120
1,4-Dichlorobenzene	25	U	250	236		ug/L		95	75 - 120
Trichlorofluoromethane	25	U	250	170		ug/L		68	46 - 157
Chlorodibromomethane	25	U	250	233		ug/L		93	56 - 120
Methylcyclohexane	25	U	250	205		ug/L		82	49 - 127
m-Xylene & p-Xylene	50		250	250		ug/L		100	75 - 120
o-Xylene	25		250	258		ug/L		103	76 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*81*		*63 - 129*
4-Bromofluorobenzene (Surr)	*93*		*66 - 120*
Toluene-d8 (Surr)	*91*		*74 - 120*
Dibromofluoromethane (Surr)	*96*		*75 - 121*

Lab Sample ID: 240-42275-8 MSD
Matrix: Water
Analysis Batch: 149519

Client Sample ID: DUP-01 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	250	U	500	409		ug/L		82	33 - 145	6	30
Benzene	25	U	250	273		ug/L		109	72 - 121	3	30
Dichlorobromomethane	25	U	250	248		ug/L		99	67 - 120	1	30
Bromoform	25	U	250	225		ug/L		90	32 - 128	2	30
Bromomethane	25	U	250	211		ug/L		84	10 - 186	3	30
2-Butanone (MEK)	250	U	500	408		ug/L		82	54 - 129	3	30
Carbon disulfide	25	U	250	298		ug/L		119	57 - 147	1	30
Carbon tetrachloride	25	U	250	248		ug/L		99	59 - 129	1	30

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

Lab Sample ID: 240-42275-8 MSD
Matrix: Water
Analysis Batch: 149519

Client Sample ID: DUP-01 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	25	U	250	254		ug/L		102	80 - 120	4	30
Chloroethane	25	U	250	206		ug/L		82	21 - 165	1	30
Chloroform	25	U	250	255		ug/L		102	76 - 120	1	30
Chloromethane	25	U	250	295		ug/L		118	33 - 132	5	30
1,1-Dichloroethane	25	U	250	279		ug/L		111	79 - 120	3	30
1,2-Dichloroethane	25	U	250	245		ug/L		98	68 - 129	1	30
1,1-Dichloroethene	25	U	250	248		ug/L		99	74 - 135	4	30
1,2-Dichloropropane	25	U	250	266		ug/L		106	78 - 120	3	30
cis-1,3-Dichloropropene	25	U	250	247		ug/L		99	51 - 120	3	30
trans-1,3-Dichloropropene	25	U	250	231		ug/L		92	46 - 120	3	30
Ethylbenzene	25	U	250	252		ug/L		101	75 - 120	1	30
2-Hexanone	250	U	500	452		ug/L		90	47 - 139	1	30
Methylene Chloride	25	U	250	295		ug/L		118	63 - 128	1	30
4-Methyl-2-pentanone (MIBK)	250	U	500	442		ug/L		88	56 - 131	2	30
Styrene	25	U	250	282		ug/L		113	71 - 120	3	30
1,1,2,2-Tetrachloroethane	25	U	250	226		ug/L		90	63 - 122	3	30
Tetrachloroethene	25	U	250	251		ug/L		100	70 - 120	5	30
Toluene	25	U	250	257		ug/L		103	78 - 120	4	30
Trichloroethene	25	U	250	249		ug/L		100	66 - 120	1	30
Vinyl chloride	450		250	619		ug/L		69	49 - 130	1	30
Xylenes, Total	50	U	500	529		ug/L		106	76 - 120	4	30
1,1,1-Trichloroethane	25	U	250	269		ug/L		108	68 - 121	2	30
1,1,2-Trichloroethane	25	U	250	238		ug/L		95	75 - 120	1	30
Cyclohexane	25	U	250	238		ug/L		95	49 - 123	5	30
1,2-Dibromo-3-Chloropropane	50	U	250	193		ug/L		77	32 - 139	5	30
Ethylene Dibromide	25	U	250	230		ug/L		92	74 - 120	1	30
Dichlorodifluoromethane	25	U	250	170		ug/L		68	17 - 128	9	30
cis-1,2-Dichloroethene	21	J	250	288		ug/L		107	70 - 120	2	30
trans-1,2-Dichloroethene	25	U	250	270		ug/L		108	80 - 120	3	30
Isopropylbenzene	25	U	250	253		ug/L		101	68 - 120	3	30
Methyl acetate	250	U	1250	1150		ug/L		92	47 - 130	0	30
Methyl tert-butyl ether	25	U	250	231		ug/L		92	46 - 144	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	25	U	250	222		ug/L		89	70 - 152	4	30
1,2,4-Trichlorobenzene	25	U	250	220		ug/L		88	38 - 138	10	30
1,2-Dichlorobenzene	25	U	250	236		ug/L		94	75 - 120	2	30
1,3-Dichlorobenzene	25	U	250	235		ug/L		94	73 - 120	3	30
1,4-Dichlorobenzene	25	U	250	244		ug/L		98	75 - 120	3	30
Trichlorofluoromethane	25	U	250	185		ug/L		74	46 - 157	8	30
Chlorodibromomethane	25	U	250	240		ug/L		96	56 - 120	3	30
Methylcyclohexane	25	U	250	217		ug/L		87	49 - 127	6	30
m-Xylene & p-Xylene	50		250	260		ug/L		104	75 - 120	4	30
o-Xylene	25		250	269		ug/L		107	76 - 120	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*83*		*63 - 129*
4-Bromofluorobenzene (Surr)	*98*		*66 - 120*
Toluene-d8 (Surr)	*94*		*74 - 120*

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

Lab Sample ID: 240-42275-8 MSD
Matrix: Water
Analysis Batch: 149519

Client Sample ID: DUP-01 (092314)
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*94*		*75 - 121*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-148588/10-A
Matrix: Water
Analysis Batch: 148922

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148588

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1221	0.10	U	0.10	0.045	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1232	0.10	U	0.10	0.073	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1242	0.10	U	0.10	0.060	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1248	0.10	U	0.10	0.061	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1254	0.10	U	0.10	0.032	ug/L		09/25/14 07:59	09/26/14 22:38	1
Aroclor-1260	0.10	U	0.10	0.038	ug/L		09/25/14 07:59	09/26/14 22:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*96*		*10 - 130*	*09/25/14 07:59*	*09/26/14 22:38*	*1*
Tetrachloro-m-xylene	*79*		*23 - 136*	*09/25/14 07:59*	*09/26/14 22:38*	*1*

Lab Sample ID: LCS 240-148588/11-A
Matrix: Water
Analysis Batch: 148922

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148588

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	2.50	2.52		ug/L		101	66 - 120
Aroclor-1260	2.50	2.64		ug/L		106	55 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*99*		*10 - 130*
Tetrachloro-m-xylene	*87*		*23 - 136*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-148635/1-A
Matrix: Water
Analysis Batch: 149118

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 148635

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.186	J	2.0	0.18	ug/L		09/25/14 09:18	09/26/14 14:41	1
Barium	1.18	J	5.0	1.1	ug/L		09/25/14 09:18	09/26/14 14:41	1
Iron	25.0	J	50	16	ug/L		09/25/14 09:18	09/26/14 14:41	1
Manganese	2.0	U	2.0	1.1	ug/L		09/25/14 09:18	09/26/14 14:41	1
Selenium	0.598	J	5.0	0.25	ug/L		09/25/14 09:18	09/26/14 14:41	1
Sodium	144	J	1000	68	ug/L		09/25/14 09:18	09/26/14 14:41	1

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 240-148635/2-A
Matrix: Water
Analysis Batch: 149118

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 148635

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	959		ug/L		96	80 - 120
Barium	1000	1080		ug/L		108	80 - 120
Iron	10000	10900		ug/L		109	80 - 120
Manganese	1000	1090		ug/L		109	80 - 120
Selenium	1000	983		ug/L		98	80 - 120
Sodium	10000	10700		ug/L		107	80 - 120

Lab Sample ID: MB 240-148638/1-A
Matrix: Water
Analysis Batch: 149118

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 148638

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.0	U	2.0	0.18	ug/L		09/25/14 09:26	09/26/14 12:01	1
Thallium	1.0	U	1.0	0.074	ug/L		09/25/14 09:26	09/26/14 12:01	1
Manganese	2.0	U	2.0	1.1	ug/L		09/25/14 09:26	09/26/14 12:01	1

Lab Sample ID: LCS 240-148638/2-A
Matrix: Water
Analysis Batch: 149118

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 148638

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	975		ug/L		97	80 - 120
Thallium	250	253		ug/L		101	80 - 120
Manganese	1000	1010		ug/L		101	80 - 120

Lab Sample ID: 240-42275-1 MS
Matrix: Water
Analysis Batch: 149118

Client Sample ID: X-9CAUG (092214)
Prep Type: Dissolved
Prep Batch: 148635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1.1	J B	1000	924		ug/L		92	82 - 123
Barium	86	B	1000	1130		ug/L		104	45 - 144
Iron	5700	B	10000	15900		ug/L		102	22 - 169
Manganese	350		1000	1370		ug/L		101	10 - 172
Selenium	0.42	J B	1000	934		ug/L		93	72 - 148
Sodium	38000	B	10000	46800		ug/L		87	80 - 120

Lab Sample ID: 240-42275-1 MSD
Matrix: Water
Analysis Batch: 149118

Client Sample ID: X-9CAUG (092214)
Prep Type: Dissolved
Prep Batch: 148635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.1	J B	1000	942		ug/L		94	82 - 123	2	20
Barium	86	B	1000	1150		ug/L		106	45 - 144	2	20
Iron	5700	B	10000	16100		ug/L		104	22 - 169	1	20
Manganese	350		1000	1400		ug/L		104	10 - 172	2	20
Selenium	0.42	J B	1000	947		ug/L		95	72 - 148	1	20
Sodium	38000	B	10000	47600		ug/L		95	80 - 120	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-148636/1-A
Matrix: Water
Analysis Batch: 149622

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148636

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	0.090	ug/L		09/25/14 11:35	09/30/14 15:05	1

Lab Sample ID: LCS 240-148636/2-A
Matrix: Water
Analysis Batch: 149622

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148636

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.86		ug/L		97	81 - 123

Lab Sample ID: 240-42275-1 MS
Matrix: Water
Analysis Batch: 149622

Client Sample ID: X-9CAUG (092214)
Prep Type: Dissolved
Prep Batch: 148636

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.20	U	1.00	0.966		ug/L		97	69 - 134

Lab Sample ID: 240-42275-1 MSD
Matrix: Water
Analysis Batch: 149622

Client Sample ID: X-9CAUG (092214)
Prep Type: Dissolved
Prep Batch: 148636

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.20	U	1.00	0.965		ug/L		97	69 - 134	0	20

Method: 150.1 - pH (Electrometric)

Lab Sample ID: LCS 240-148487/2
Matrix: Water
Analysis Batch: 148487

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.09	7.130		SU		101	97 - 103

Lab Sample ID: 240-42275-1 DU
Matrix: Water
Analysis Batch: 148487

Client Sample ID: X-9CAUG (092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.15	HF	7.130		SU		0.3	20

Method: 160.1 - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-148702/1
Matrix: Water
Analysis Batch: 148702

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	10	U	10	7.4	mg/L			09/25/14 11:49	1

Method: 160.1 - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-148702/2
Matrix: Water
Analysis Batch: 148702

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	223	214		mg/L		96	88 - 110

Lab Sample ID: 240-42275-1 DU
Matrix: Water
Analysis Batch: 148702

Client Sample ID: X-9CAUG (092214)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	640		636		mg/L		1	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 240-148492/3
Matrix: Water
Analysis Batch: 148492

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/24/14 14:09	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/24/14 14:09	1

Lab Sample ID: LCS 240-148492/4
Matrix: Water
Analysis Batch: 148492

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	54.1		mg/L		108	90 - 110
Sulfate	50.0	50.7		mg/L		101	90 - 110

Lab Sample ID: 240-42275-4 MS
Matrix: Water
Analysis Batch: 148492

Client Sample ID: X-4D (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	88		50.0	153	F1	mg/L		131	80 - 120

Lab Sample ID: 240-42275-4 MSD
Matrix: Water
Analysis Batch: 148492

Client Sample ID: X-4D (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	88		50.0	151	F1	mg/L		127	80 - 120	1	20

Lab Sample ID: MB 240-148493/3
Matrix: Water
Analysis Batch: 148493

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/24/14 14:09	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/24/14 14:09	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-148493/4
Matrix: Water
Analysis Batch: 148493

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	2.50	2.66		mg/L		107	90 - 110
Nitrate as N	2.50	2.65		mg/L		106	90 - 110

Lab Sample ID: 240-42275-4 MS
Matrix: Water
Analysis Batch: 148493

Client Sample ID: X-4D (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	0.10	U	2.50	5.17	F1	mg/L		207	80 - 120
Nitrate as N	1.8		2.50	4.89	F1	mg/L		125	80 - 120

Lab Sample ID: 240-42275-4 MSD
Matrix: Water
Analysis Batch: 148493

Client Sample ID: X-4D (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrite as N	0.10	U	2.50	5.45	F1	mg/L		218	80 - 120	5	20
Nitrate as N	1.8		2.50	4.76		mg/L		120	80 - 120	3	20

Lab Sample ID: MB 240-148692/27
Matrix: Water
Analysis Batch: 148692

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/25/14 18:37	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/25/14 18:37	1

Lab Sample ID: MB 240-148692/3
Matrix: Water
Analysis Batch: 148692

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/25/14 12:03	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/25/14 12:03	1

Lab Sample ID: LCS 240-148692/28
Matrix: Water
Analysis Batch: 148692

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.1		mg/L		104	90 - 110
Sulfate	50.0	48.4		mg/L		97	90 - 110

Lab Sample ID: LCS 240-148692/4
Matrix: Water
Analysis Batch: 148692

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.5		mg/L		105	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-148692/4
Matrix: Water
Analysis Batch: 148692

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	49.0		mg/L		98	90 - 110

Lab Sample ID: MB 240-148693/27
Matrix: Water
Analysis Batch: 148693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/25/14 18:37	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/25/14 18:37	1

Lab Sample ID: MB 240-148693/3
Matrix: Water
Analysis Batch: 148693

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.10	U	0.10	0.038	mg/L			09/25/14 12:03	1
Nitrate as N	0.10	U	0.10	0.035	mg/L			09/25/14 12:03	1

Lab Sample ID: LCS 240-148693/28
Matrix: Water
Analysis Batch: 148693

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	2.50	2.37		mg/L		95	90 - 110
Nitrate as N	2.50	2.36		mg/L		95	90 - 110

Lab Sample ID: LCS 240-148693/4
Matrix: Water
Analysis Batch: 148693

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrite as N	2.50	2.42		mg/L		97	90 - 110
Nitrate as N	2.50	2.38		mg/L		95	90 - 110

Lab Sample ID: MB 240-148970/3
Matrix: Water
Analysis Batch: 148970

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.41	mg/L			09/26/14 21:06	1
Sulfate	1.0	U	1.0	0.13	mg/L			09/26/14 21:06	1

Lab Sample ID: LCS 240-148970/4
Matrix: Water
Analysis Batch: 148970

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	52.5		mg/L		105	90 - 110
Sulfate	50.0	48.6		mg/L		97	90 - 110

Method: 350.3 - Nitrogen, Ammonia

Lab Sample ID: MB 240-148777/7
Matrix: Water
Analysis Batch: 148777

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/25/14 12:23	1

Lab Sample ID: LCS 240-148777/8
Matrix: Water
Analysis Batch: 148777

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	15.3	14.1		mg/L		92	85 - 114

Lab Sample ID: MB 240-148974/7
Matrix: Water
Analysis Batch: 148974

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.20	U	0.20	0.092	mg/L			09/26/14 13:33	1

Lab Sample ID: LCS 240-148974/8
Matrix: Water
Analysis Batch: 148974

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	1.20	1.12		mg/L		93	85 - 114

Lab Sample ID: 240-42275-14 MS
Matrix: Water
Analysis Batch: 148974

Client Sample ID: MW-114S2 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.0	^	12.5	17.0		mg/L		97	75 - 125

Lab Sample ID: 240-42275-14 MSD
Matrix: Water
Analysis Batch: 148974

Client Sample ID: MW-114S2 (092314)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	5.0	^	12.5	17.8		mg/L		103	75 - 125	5	20

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-148570/10-A
Matrix: Water
Analysis Batch: 148744

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148570

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.050	mg/L		09/25/14 06:02	09/25/14 14:44	1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 240-148570/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148744 — **Prep Batch: 148570**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	3.13	3.15		mg/L		101	90 - 110

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 240-148883/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148940 — **Prep Batch: 148883**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/26/14 10:32	09/26/14 12:27	1

Lab Sample ID: LCS 240-148883/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148940 — **Prep Batch: 148883**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0921	0.0867		mg/L		94	69 - 120

Lab Sample ID: MB 240-149447/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149461 — **Prep Batch: 149447**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		09/30/14 15:28	09/30/14 16:39	1

Lab Sample ID: LCS 240-149447/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149461 — **Prep Batch: 149447**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0921	0.0939		mg/L		102	69 - 118

Lab Sample ID: MB 240-149497/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149577 — **Prep Batch: 149497**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.010	U	0.010	0.0020	mg/L		10/01/14 07:44	10/01/14 09:23	1

Lab Sample ID: LCS 240-149497/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149577 — **Prep Batch: 149497**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0921	0.0848		mg/L		92	69 - 120

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: MRL 240-149577/6
Matrix: Water
Analysis Batch: 149577

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0100	0.0102		mg/L		102	70 - 130

Lab Sample ID: 240-42275-3 MS
Matrix: Water
Analysis Batch: 148940

Client Sample ID: MW-117SI (092214)
Prep Type: Dissolved
Prep Batch: 148883

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.010	U	0.0400	0.0323		mg/L		81	42 - 140

Lab Sample ID: 240-42275-3 MSD
Matrix: Water
Analysis Batch: 148940

Client Sample ID: MW-117SI (092214)
Prep Type: Dissolved
Prep Batch: 148883

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.010	U	0.0400	0.0414	F2	mg/L		104	42 - 140	25	20

GC/MS VOA

Analysis Batch: 149519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-8	DUP-01 (092314)	Total/NA	Water	8260B	
240-42275-8 MS	DUP-01 (092314)	Total/NA	Water	8260B	
240-42275-8 MSD	DUP-01 (092314)	Total/NA	Water	8260B	
240-42275-10	TRIP BLANK	Total/NA	Water	8260B	
240-42275-11	TWW-01	Total/NA	Water	8260B	
LCS 240-149519/4	Lab Control Sample	Total/NA	Water	8260B	
MB 240-149519/6	Method Blank	Total/NA	Water	8260B	

GC Semi VOA

Prep Batch: 148588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Dissolved	Water	3520C	
240-42275-7	MW-111WT (092314)	Total/NA	Water	3520C	
240-42275-15	MW-114WT (092314)	Dissolved	Water	3520C	
240-42275-15	MW-114WT (092314)	Total/NA	Water	3520C	
LCS 240-148588/11-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-148588/10-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 148922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Dissolved	Water	8082	148588
LCS 240-148588/11-A	Lab Control Sample	Total/NA	Water	8082	148588
MB 240-148588/10-A	Method Blank	Total/NA	Water	8082	148588

Analysis Batch: 149133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Total/NA	Water	8082	148588
240-42275-15	MW-114WT (092314)	Dissolved	Water	8082	148588
240-42275-15	MW-114WT (092314)	Total/NA	Water	8082	148588

Metals

Prep Batch: 148635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	3005A	
240-42275-1	X-9CAUG (092214)	Total Recoverable	Water	3005A	
240-42275-1 MS	X-9CAUG (092214)	Dissolved	Water	3005A	
240-42275-1 MSD	X-9CAUG (092214)	Dissolved	Water	3005A	
240-42275-2	MW-118WT (092214)	Dissolved	Water	3005A	
240-42275-3	MW-117SI (092214)	Dissolved	Water	3005A	
240-42275-4	X-4D (092314)	Dissolved	Water	3005A	
240-42275-4	X-4D (092314)	Total Recoverable	Water	3005A	
240-42275-5	X-4CAUG (092314)	Dissolved	Water	3005A	
240-42275-5	X-4CAUG (092314)	Total Recoverable	Water	3005A	
240-42275-6	MW-183WT (092314)	Dissolved	Water	3005A	
240-42275-6	MW-183WT (092314)	Total Recoverable	Water	3005A	
240-42275-9	DUP-02 (092314)	Dissolved	Water	3005A	
240-42275-9	DUP-02 (092314)	Total Recoverable	Water	3005A	
240-42275-12	MW-117WT (092314)	Dissolved	Water	3005A	

Metals (Continued)

Prep Batch: 148635 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-148635/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-148635/1-A	Method Blank	Total Recoverable	Water	3005A	

Prep Batch: 148636

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	7470A	
240-42275-1	X-9CAUG (092214)	Total/NA	Water	7470A	
240-42275-1 MS	X-9CAUG (092214)	Dissolved	Water	7470A	
240-42275-1 MSD	X-9CAUG (092214)	Dissolved	Water	7470A	
240-42275-2	MW-118WT (092214)	Dissolved	Water	7470A	
240-42275-3	MW-117SI (092214)	Dissolved	Water	7470A	
240-42275-4	X-4D (092314)	Dissolved	Water	7470A	
240-42275-4	X-4D (092314)	Total/NA	Water	7470A	
240-42275-5	X-4CAUG (092314)	Dissolved	Water	7470A	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	7470A	
240-42275-6	MW-183WT (092314)	Dissolved	Water	7470A	
240-42275-6	MW-183WT (092314)	Total/NA	Water	7470A	
240-42275-9	DUP-02 (092314)	Dissolved	Water	7470A	
240-42275-9	DUP-02 (092314)	Total/NA	Water	7470A	
240-42275-12	MW-117WT (092314)	Dissolved	Water	7470A	
LCS 240-148636/2-A	Lab Control Sample	Total/NA	Water	7470A	
MB 240-148636/1-A	Method Blank	Total/NA	Water	7470A	

Prep Batch: 148638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Total Recoverable	Water	3005A	
240-42275-15	MW-114WT (092314)	Total Recoverable	Water	3005A	
LCS 240-148638/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-148638/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 149118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	6020	148635
240-42275-1	X-9CAUG (092214)	Total Recoverable	Water	6020	148635
240-42275-1 MS	X-9CAUG (092214)	Dissolved	Water	6020	148635
240-42275-1 MSD	X-9CAUG (092214)	Dissolved	Water	6020	148635
240-42275-2	MW-118WT (092214)	Dissolved	Water	6020	148635
240-42275-3	MW-117SI (092214)	Dissolved	Water	6020	148635
240-42275-4	X-4D (092314)	Dissolved	Water	6020	148635
240-42275-4	X-4D (092314)	Total Recoverable	Water	6020	148635
240-42275-5	X-4CAUG (092314)	Dissolved	Water	6020	148635
240-42275-5	X-4CAUG (092314)	Total Recoverable	Water	6020	148635
240-42275-6	MW-183WT (092314)	Dissolved	Water	6020	148635
240-42275-6	MW-183WT (092314)	Total Recoverable	Water	6020	148635
240-42275-7	MW-111WT (092314)	Total Recoverable	Water	6020	148638
240-42275-9	DUP-02 (092314)	Dissolved	Water	6020	148635
240-42275-9	DUP-02 (092314)	Total Recoverable	Water	6020	148635
240-42275-12	MW-117WT (092314)	Dissolved	Water	6020	148635
240-42275-12	MW-117WT (092314)	Dissolved	Water	6020	148635
240-42275-15	MW-114WT (092314)	Total Recoverable	Water	6020	148638
LCS 240-148635/2-A	Lab Control Sample	Total Recoverable	Water	6020	148635

Metals (Continued)

Analysis Batch: 149118 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-148638/2-A	Lab Control Sample	Total Recoverable	Water	6020	148638
MB 240-148635/1-A	Method Blank	Total Recoverable	Water	6020	148635
MB 240-148638/1-A	Method Blank	Total Recoverable	Water	6020	148638

Analysis Batch: 149423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-4	X-4D (092314)	Dissolved	Water	6020	148635

Analysis Batch: 149622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	7470A	148636
240-42275-1	X-9CAUG (092214)	Total/NA	Water	7470A	148636
240-42275-1 MS	X-9CAUG (092214)	Dissolved	Water	7470A	148636
240-42275-1 MSD	X-9CAUG (092214)	Dissolved	Water	7470A	148636
240-42275-2	MW-118WT (092214)	Dissolved	Water	7470A	148636
240-42275-3	MW-117SI (092214)	Dissolved	Water	7470A	148636
240-42275-4	X-4D (092314)	Dissolved	Water	7470A	148636
240-42275-4	X-4D (092314)	Total/NA	Water	7470A	148636
240-42275-5	X-4CAUG (092314)	Dissolved	Water	7470A	148636
240-42275-5	X-4CAUG (092314)	Total/NA	Water	7470A	148636
240-42275-6	MW-183WT (092314)	Dissolved	Water	7470A	148636
240-42275-6	MW-183WT (092314)	Total/NA	Water	7470A	148636
240-42275-9	DUP-02 (092314)	Dissolved	Water	7470A	148636
240-42275-9	DUP-02 (092314)	Total/NA	Water	7470A	148636
240-42275-12	MW-117WT (092314)	Dissolved	Water	7470A	148636
LCS 240-148636/2-A	Lab Control Sample	Total/NA	Water	7470A	148636
MB 240-148636/1-A	Method Blank	Total/NA	Water	7470A	148636

General Chemistry

Analysis Batch: 148487

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	150.1	
240-42275-1 DU	X-9CAUG (092214)	Total/NA	Water	150.1	
240-42275-2	MW-118WT (092214)	Total/NA	Water	150.1	
240-42275-3	MW-117SI (092214)	Total/NA	Water	150.1	
240-42275-4	X-4D (092314)	Total/NA	Water	150.1	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	150.1	
240-42275-6	MW-183WT (092314)	Total/NA	Water	150.1	
240-42275-9	DUP-02 (092314)	Total/NA	Water	150.1	
240-42275-12	MW-117WT (092314)	Total/NA	Water	150.1	
LCS 240-148487/2	Lab Control Sample	Total/NA	Water	150.1	

Analysis Batch: 148492

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	300.0	
240-42275-2	MW-118WT (092214)	Total/NA	Water	300.0	
240-42275-3	MW-117SI (092214)	Total/NA	Water	300.0	
240-42275-3	MW-117SI (092214)	Total/NA	Water	300.0	
240-42275-4	X-4D (092314)	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 148492 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-4	X-4D (092314)	Total/NA	Water	300.0	
240-42275-4 MS	X-4D (092314)	Total/NA	Water	300.0	
240-42275-4 MSD	X-4D (092314)	Total/NA	Water	300.0	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	300.0	
240-42275-6	MW-183WT (092314)	Total/NA	Water	300.0	
LCS 240-148492/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148492/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	300.0	
240-42275-2	MW-118WT (092214)	Total/NA	Water	300.0	
240-42275-3	MW-117SI (092214)	Total/NA	Water	300.0	
240-42275-4	X-4D (092314)	Total/NA	Water	300.0	
240-42275-4 MS	X-4D (092314)	Total/NA	Water	300.0	
240-42275-4 MSD	X-4D (092314)	Total/NA	Water	300.0	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	300.0	
240-42275-6	MW-183WT (092314)	Total/NA	Water	300.0	
240-42275-9	DUP-02 (092314)	Total/NA	Water	300.0	
LCS 240-148493/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148493/3	Method Blank	Total/NA	Water	300.0	

Prep Batch: 148570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Total/NA	Water	365.2/365.3/365	
240-42275-15	MW-114WT (092314)	Total/NA	Water	365.2/365.3/365	
LCS 240-148570/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-148570/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 148692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-9	DUP-02 (092314)	Total/NA	Water	300.0	
240-42275-12	MW-117WT (092314)	Total/NA	Water	300.0	
LCS 240-148692/28	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-148692/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148692/27	Method Blank	Total/NA	Water	300.0	
MB 240-148692/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-9 - RA	DUP-02 (092314)	Total/NA	Water	300.0	
240-42275-12	MW-117WT (092314)	Total/NA	Water	300.0	
LCS 240-148693/28	Lab Control Sample	Total/NA	Water	300.0	
LCS 240-148693/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148693/27	Method Blank	Total/NA	Water	300.0	
MB 240-148693/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	160.1	
240-42275-1 DU	X-9CAUG (092214)	Total/NA	Water	160.1	

General Chemistry (Continued)

Analysis Batch: 148702 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-2	MW-118WT (092214)	Total/NA	Water	160.1	
240-42275-3	MW-117SI (092214)	Total/NA	Water	160.1	
240-42275-4	X-4D (092314)	Total/NA	Water	160.1	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	160.1	
240-42275-6	MW-183WT (092314)	Total/NA	Water	160.1	
240-42275-9	DUP-02 (092314)	Total/NA	Water	160.1	
240-42275-12	MW-117WT (092314)	Total/NA	Water	160.1	
LCS 240-148702/2	Lab Control Sample	Total/NA	Water	160.1	
MB 240-148702/1	Method Blank	Total/NA	Water	160.1	

Analysis Batch: 148744

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Total/NA	Water	365.1	148570
240-42275-15	MW-114WT (092314)	Total/NA	Water	365.1	148570
LCS 240-148570/11-A	Lab Control Sample	Total/NA	Water	365.1	148570
MB 240-148570/10-A	Method Blank	Total/NA	Water	365.1	148570

Analysis Batch: 148777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	350.3	
240-42275-2	MW-118WT (092214)	Total/NA	Water	350.3	
240-42275-3	MW-117SI (092214)	Total/NA	Water	350.3	
240-42275-4	X-4D (092314)	Total/NA	Water	350.3	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	350.3	
240-42275-6	MW-183WT (092314)	Total/NA	Water	350.3	
LCS 240-148777/8	Lab Control Sample	Total/NA	Water	350.3	
MB 240-148777/7	Method Blank	Total/NA	Water	350.3	

Prep Batch: 148883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	9012A	
240-42275-2	MW-118WT (092214)	Dissolved	Water	9012A	
240-42275-3	MW-117SI (092214)	Dissolved	Water	9012A	
240-42275-3 MS	MW-117SI (092214)	Dissolved	Water	9012A	
240-42275-3 MSD	MW-117SI (092214)	Dissolved	Water	9012A	
LCS 240-148883/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-148883/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 148940

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Dissolved	Water	9012A	148883
240-42275-2	MW-118WT (092214)	Dissolved	Water	9012A	148883
240-42275-3	MW-117SI (092214)	Dissolved	Water	9012A	148883
240-42275-3 MS	MW-117SI (092214)	Dissolved	Water	9012A	148883
240-42275-3 MSD	MW-117SI (092214)	Dissolved	Water	9012A	148883
LCS 240-148883/2-A	Lab Control Sample	Total/NA	Water	9012A	148883
MB 240-148883/1-A	Method Blank	Total/NA	Water	9012A	148883

Analysis Batch: 148970

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-2	MW-118WT (092214)	Total/NA	Water	300.0	

General Chemistry (Continued)

Analysis Batch: 148970 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-12	MW-117WT (092314)	Total/NA	Water	300.0	
LCS 240-148970/4	Lab Control Sample	Total/NA	Water	300.0	
MB 240-148970/3	Method Blank	Total/NA	Water	300.0	

Analysis Batch: 148974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-7	MW-111WT (092314)	Total/NA	Water	350.3	
240-42275-9	DUP-02 (092314)	Total/NA	Water	350.3	
240-42275-12	MW-117WT (092314)	Total/NA	Water	350.3	
240-42275-13	DUP-03 (092314)	Total/NA	Water	350.3	
240-42275-14	MW-114S2 (092314)	Total/NA	Water	350.3	
240-42275-14 MS	MW-114S2 (092314)	Total/NA	Water	350.3	
240-42275-14 MSD	MW-114S2 (092314)	Total/NA	Water	350.3	
240-42275-15	MW-114WT (092314)	Total/NA	Water	350.3	
LCS 240-148974/8	Lab Control Sample	Total/NA	Water	350.3	
MB 240-148974/7	Method Blank	Total/NA	Water	350.3	

Prep Batch: 149447

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	9012A	
240-42275-2	MW-118WT (092214)	Total/NA	Water	9012A	
240-42275-3	MW-117SI (092214)	Total/NA	Water	9012A	
LCS 240-149447/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-149447/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 149461

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-1	X-9CAUG (092214)	Total/NA	Water	9012A	149447
240-42275-2	MW-118WT (092214)	Total/NA	Water	9012A	149447
240-42275-3	MW-117SI (092214)	Total/NA	Water	9012A	149447
LCS 240-149447/2-A	Lab Control Sample	Total/NA	Water	9012A	149447
MB 240-149447/1-A	Method Blank	Total/NA	Water	9012A	149447

Prep Batch: 149497

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-4	X-4D (092314)	Dissolved	Water	9012A	
240-42275-4	X-4D (092314)	Total/NA	Water	9012A	
240-42275-5	X-4CAUG (092314)	Dissolved	Water	9012A	
240-42275-5	X-4CAUG (092314)	Total/NA	Water	9012A	
240-42275-6	MW-183WT (092314)	Dissolved	Water	9012A	
240-42275-9	DUP-02 (092314)	Dissolved	Water	9012A	
240-42275-9	DUP-02 (092314)	Total/NA	Water	9012A	
240-42275-12	MW-117WT (092314)	Dissolved	Water	9012A	
240-42275-12	MW-117WT (092314)	Total/NA	Water	9012A	
LCS 240-149497/2-A	Lab Control Sample	Total/NA	Water	9012A	
MB 240-149497/1-A	Method Blank	Total/NA	Water	9012A	

Analysis Batch: 149577

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-4	X-4D (092314)	Dissolved	Water	9012A	149497
240-42275-4	X-4D (092314)	Total/NA	Water	9012A	149497

General Chemistry (Continued)

Analysis Batch: 149577 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42275-5	X-4CAUG (092314)	Dissolved	Water	9012A	149497
240-42275-5	X-4CAUG (092314)	Total/NA	Water	9012A	149497
240-42275-6	MW-183WT (092314)	Dissolved	Water	9012A	149497
240-42275-9	DUP-02 (092314)	Dissolved	Water	9012A	149497
240-42275-9	DUP-02 (092314)	Total/NA	Water	9012A	149497
240-42275-12	MW-117WT (092314)	Dissolved	Water	9012A	149497
240-42275-12	MW-117WT (092314)	Total/NA	Water	9012A	149497
LCS 240-149497/2-A	Lab Control Sample	Total/NA	Water	9012A	149497
MB 240-149497/1-A	Method Blank	Total/NA	Water	9012A	149497
MRL 240-149577/6	Lab Control Sample	Total/NA	Water	9012A	

Client Sample ID: X-9CAUG (092214)

Lab Sample ID: 240-42275-1

Date Collected: 09/22/14 17:55

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 15:29	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 15:40	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:09	AMM2	TAL CAN
Total/NA	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Total/NA	Analysis	7470A		1	149622	09/30/14 15:19	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 13:29	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 19:40	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 19:40	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148777	09/25/14 15:43	JMB	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:33	BLW	TAL CAN
Total/NA	Prep	9012A			149447	09/30/14 15:28	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149461	09/30/14 16:39	SEM	TAL CAN

Client Sample ID: MW-118WT (092214)

Lab Sample ID: 240-42275-2

Date Collected: 09/22/14 18:15

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:06	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:59	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 13:40	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 20:17	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 20:17	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148970	09/27/14 01:12	LKG	TAL CAN
Total/NA	Analysis	350.3		10	148777	09/25/14 15:51	JMB	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:33	BLW	TAL CAN
Total/NA	Prep	9012A			149447	09/30/14 15:28	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149461	09/30/14 16:39	SEM	TAL CAN

Client Sample ID: MW-117SI (092214)

Lab Sample ID: 240-42275-3

Date Collected: 09/22/14 17:35

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:09	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:25	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 13:51	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 21:31	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 21:31	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148492	09/24/14 21:49	LKG	TAL CAN
Total/NA	Analysis	350.3		2	148777	09/25/14 16:02	JMB	TAL CAN
Dissolved	Prep	9012A			148883	09/26/14 10:32	BLW	TAL CAN
Dissolved	Analysis	9012A		1	148940	09/26/14 12:33	BLW	TAL CAN
Total/NA	Prep	9012A			149447	09/30/14 15:28	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149461	09/30/14 16:39	SEM	TAL CAN

Client Sample ID: X-4D (092314)

Lab Sample ID: 240-42275-4

Date Collected: 09/23/14 09:50

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:13	AMM2	TAL CAN
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		5	149423	09/29/14 14:37	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 15:44	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:42	AMM2	TAL CAN
Total/NA	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Total/NA	Analysis	7470A		1	149622	09/30/14 15:53	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 14:02	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 22:07	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 22:07	LKG	TAL CAN
Total/NA	Analysis	300.0		5	148492	09/24/14 23:03	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148777	09/25/14 16:17	JMB	TAL CAN
Dissolved	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Dissolved	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN
Total/NA	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN

Client Sample ID: X-4CAUG (092314)

Lab Sample ID: 240-42275-5

Date Collected: 09/23/14 10:55

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:17	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 15:47	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:35	AMM2	TAL CAN
Total/NA	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Total/NA	Analysis	7470A		1	149622	09/30/14 15:51	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 14:13	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 23:21	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 23:21	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148777	09/25/14 16:29	JMB	TAL CAN
Dissolved	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Dissolved	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN
Total/NA	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN

Client Sample ID: MW-183WT (092314)

Lab Sample ID: 240-42275-6

Date Collected: 09/23/14 12:05

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:20	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 15:51	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:36	AMM2	TAL CAN
Total/NA	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Total/NA	Analysis	7470A		1	149622	09/30/14 15:49	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 14:24	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148492	09/24/14 23:58	LKG	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/24/14 23:58	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148777	09/25/14 16:42	JMB	TAL CAN
Dissolved	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Dissolved	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN

Client Sample ID: MW-111WT (092314)

Lab Sample ID: 240-42275-7

Date Collected: 09/23/14 14:50

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3520C			148588	09/25/14 07:54	SDE	TAL CAN
Dissolved	Analysis	8082		1	148922	09/26/14 22:09	LSH	TAL CAN
Total/NA	Prep	3520C			148588	09/25/14 07:54	SDE	TAL CAN
Total/NA	Analysis	8082		1	149133	09/29/14 13:36	LSH	TAL CAN
Total Recoverable	Prep	3005A			148638	09/25/14 09:26	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 12:37	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	148974	09/26/14 14:21	JMB	TAL CAN
Total/NA	Prep	365.2/365.3/365			148570	09/25/14 06:30	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148744	09/25/14 14:10	TPH	TAL CAN

Client Sample ID: DUP-01 (092314)

Lab Sample ID: 240-42275-8

Date Collected: 09/23/14 00:00

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	149519	10/01/14 12:28	RJQ	TAL CAN

Client Sample ID: DUP-02 (092314)

Lab Sample ID: 240-42275-9

Date Collected: 09/23/14 00:00

Matrix: Water

Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:24	AMM2	TAL CAN
Total Recoverable	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 16:02	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:45	AMM2	TAL CAN
Total/NA	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Total/NA	Analysis	7470A		1	149622	09/30/14 15:55	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 14:35	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		1	148493	09/25/14 01:11	LKG	TAL CAN
Total/NA	Analysis	300.0		10	148692	09/25/14 17:32	LKG	TAL CAN
Total/NA	Analysis	300.0	RA	10	148693	09/25/14 17:32	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148974	09/26/14 14:38	JMB	TAL CAN
Dissolved	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Dissolved	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN
Total/NA	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: TRIP BLANK — Lab Sample ID: 240-42275-10

Date Collected: 09/23/14 00:00 — **Matrix: Water**
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	149519	10/01/14 12:03	RJQ	TAL CAN

Client Sample ID: TWW-01 — Lab Sample ID: 240-42275-11

Date Collected: 09/23/14 11:30 — **Matrix: Water**
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		25	149519	10/01/14 11:41	RJQ	TAL CAN

Client Sample ID: MW-117WT (092314) — Lab Sample ID: 240-42275-12

Date Collected: 09/23/14 09:25 — **Matrix: Water**
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		1	149118	09/26/14 16:28	AMM2	TAL CAN
Dissolved	Prep	3005A			148635	09/25/14 09:18	ADS	TAL CAN
Dissolved	Analysis	6020		5	149118	09/26/14 16:31	AMM2	TAL CAN
Dissolved	Prep	7470A			148636	09/25/14 11:35	ADS	TAL CAN
Dissolved	Analysis	7470A		1	149622	09/30/14 15:47	AMM2	TAL CAN
Total/NA	Analysis	150.1		1	148487	09/24/14 14:46	BLW	TAL CAN
Total/NA	Analysis	160.1		1	148702	09/25/14 11:49	AS1	TAL CAN
Total/NA	Analysis	300.0		10	148692	09/25/14 17:48	LKG	TAL CAN
Total/NA	Analysis	300.0		10	148693	09/25/14 17:48	LKG	TAL CAN
Total/NA	Analysis	300.0		50	148970	09/27/14 01:28	LKG	TAL CAN
Total/NA	Analysis	350.3		1	148974	09/26/14 14:45	JMB	TAL CAN
Dissolved	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Dissolved	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN
Total/NA	Prep	9012A			149497	10/01/14 07:44	SEM	TAL CAN
Total/NA	Analysis	9012A		1	149577	10/01/14 09:29	SEM	TAL CAN

Client Sample ID: DUP-03 (092314) — Lab Sample ID: 240-42275-13

Date Collected: 09/23/14 00:00 — **Matrix: Water**
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.3		2	148974	09/26/14 15:13	JMB	TAL CAN

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Client Sample ID: MW-114S2 (092314)

Lab Sample ID: 240-42275-14

Date Collected: 09/23/14 14:05
Matrix: Water
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.3		2	148974	09/26/14 15:13	JMB	TAL CAN

Client Sample ID: MW-114WT (092314)

Lab Sample ID: 240-42275-15

Date Collected: 09/23/14 12:40
Matrix: Water
Date Received: 09/24/14 09:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3520C			148588	09/25/14 07:54	SDE	TAL CAN
Dissolved	Analysis	8082		1	149133	09/29/14 14:33	LSH	TAL CAN
Total/NA	Prep	3520C			148588	09/25/14 07:54	SDE	TAL CAN
Total/NA	Analysis	8082		1	149133	09/29/14 13:50	LSH	TAL CAN
Total Recoverable	Prep	3005A			148638	09/25/14 09:26	ADS	TAL CAN
Total Recoverable	Analysis	6020		1	149118	09/26/14 12:40	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	148974	09/26/14 15:30	JMB	TAL CAN
Total/NA	Prep	365.2/365.3/365			148570	09/25/14 06:32	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148744	09/25/14 14:10	TPH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER Green Point Landfill (GPL/SMI)

TestAmerica Job ID: 240-42275-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

* Certification renewal pending - certification considered valid.

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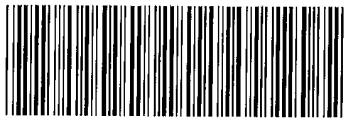
TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY
AND
RECEIVING DOCUMENTS



240-42275 Chain of Custody

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

1, 6, 1.4

Chain of Custody Record

055579

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact			
Company Name: ARCADIS	Project Manager: K. Templin	Site Contact: S. Solomon	Date: 9/22/14
Address: 28550 Cabot Dr Suite 500	Tel/Fax: 248 994 2320	Lab Contact: D Pohl	Carrier: R. Clase
City/State/Zip: Novi MI 48377	Analysis Turnaround Time		COC No: 1 of 2 COCs
Phone: 248 994 2240	☒ CALENDAR DAYS ☐ WORKING DAYS		Sampler:
Fax: 248 994 2241	TAT if different from Below Standard		For Lab Use Only:
Project Name: RACER Saginaw	☒ 2 weeks		Walk-in Client:
Site: Green Point Landfill (GPL)	☐ 1 week		Lab Sampling:
P O # NA	☐ 2 days		Job / SDG No.: 24006824
	☐ 1 day		

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Total Dissolved Solids	pH, sulfate, chloride, nitrite, nitrate	TAL Metals	Dissolved TAL Metals	Cyanide	Dissolved Cyanide	NH3 as N	TCL SVOCs	Ammonia Nitrogen	Phosphorus	Total Ar, Mn, & Th	Total PCBs	Dissolved PCBs	Sample Specific Notes
X-9 CAUG (092214)	9/22	1755	G	W	7	Y	N	X	X	X	X	X	X	X							
MW-118WT (092214)	~~9/23~~ 92214 JW	1815			6	Y	N	X	X		X	X	X	X							9/22
MW-117SI (092214)	9/22	1735			6	Y	N	X	X		X	X	X	X							9/22
X-4D (092314)	9/23	0950			7	Y	N	X	X	X	X	X	X	X							9/23
X-4 RAUG (092314)		1055			7	Y	N	X	X	X	X	X	X	X							
MW-183WT (092314)		1205													X (struck)	X	X	X	X	X	Do not run TCL SVOCs
MW-111WT (092314)		1450														X	X	X	X	X	
DUP-01 (092314)		—			3	N	N								X						
DUP-02 (092314)		—			7	Y	N	X	X	X	X	X	X	X							

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other 1

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ____ Months

Special Instructions/QC Requirements & Comments:
All samples immediately packed on ice. Standard TAT. Job # 24006824

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ | Therm ID No.: ____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
James B Nese [illegible]	ARCADIS	9/23/14 1615	[signature]	TAL	9/23/14 1615
Relinquished by: [signature]	Company: TAL	Date/Time: 9/23/14 1700	Received by: Jake Mackwn	Company: TA-Canton	Date/Time: 9/24/14 8:25
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

1.4

Chain of Custody Record

055610

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact		Project Manager: K. Templan	Site Contact:	Date: 9/23/14	COC No:
Company Name:	ARCADIS	Tel/Fax: 248 994 2320	Lab Contact:	Carrier:	2 of 2 COCs
Address:	28550 Cabot Dr.	Analysis Turnaround Time			Sampler:
City/State/Zip:	Novi, MI 48377	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	248 994 2240	TAT if different from Below ______			Walk-in Client:
Fax:	248 994 2241	☒ 2 weeks			Lab Sampling:
Project Name:	RACER Saginaw	☐ 1 week			
Site:	Greenpoint Landfill/SMI	☐ 2 days			Job / SDG No.:
P O #	NA	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TAL dissolved metals	ammonium nitrogen	pH, sulfate, chloride	Total dissolved solids	Cyanide	dissolved cyanide	TCL VOCs	Phosphorous	Total Manganese	Total Thallium	Total PCBs	Dissolved PCBs	Sample Specific Notes:
MW-117WT(092314)	9/23/14	0925	G	W	6	Y	N	✓	✓	✓	✓	✓	✓							
TWW-01(092314)	9/23/14	1130	G	↓	3									✓						
DUP-01(092314)	9/23/14	—	G	↓	3									✓						
TRIPBLANK(092314)	9/23/14	—	G	↓	~~3~~ 1									✓						
DUP-03(092314)	9/23/14	—	G	↓	1				✓											
~~MW-114(092314)~~ MW-114S2(092314)MSD	9/23/14	1410	G	↓	1				✓											MSD
MW-114S2(092314)MS	9/23/14	1415	G	↓	1				✓											MS
MW-114S2(092314)	9/23/14	1405	G	↓	1				✓											
MW-114WT(092314)	↓	1240	↓	↓																

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:
Samples placed immediatly on ice, Job #24006824

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: ______ Corr'd: ______ | Therm ID No.: ______

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	ARCADIS	9/23/14 1612	[signature]	TAL	9/23/14 16:20
[signature]	TAL	9/23/14 1700	[signature]	TA-Canton	9/24/14 9:25
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 42275

Client Arcadis Site Name

Cooler unpacked by: Dakota Aurora

Cooler Received on 9/24/14 Opened on 9/24/14

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box (Client Cooler) Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C
IR GUN# 8	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C

☒ See Multiple Cooler Form

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM DJP Date 9/24/14 by JB via (Verbal) Voice Mail Other
Concerning

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: [illegible]

Dup-01 (092314) listed twice on COC, only received one set of vials. Will log once.

No tests marked on COC for sample MW-114WT (092314), will log per volume received.

sample MW-183WT (092314) tests are marked incorrectly for volume received. Will log tests per PM. for volume received

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica Multiple Cooler Receipt Form/Narrative Login #: 42275
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
client	8	1.6	1.6	wet ice
client	8	1.4	1.4	wet ice
client	8	1.2	1.2	wet ice

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
X-9CAUG (092214)	240-42275-A-1	Plastic 250ml - with Sodium Hydro	>12		
X-9CAUG (092214)	240-42275-B-1	Plastic 250ml - with Sodium Hydro	>12		
X-9CAUG (092214)	240-42275-E-1	Plastic 500ml - with Sulfuric Acid	<2		
X-9CAUG (092214)	240-42275-F-1	Plastic 500ml - with Nitric Acid	<2		
X-9CAUG (092214)	240-42275-G-1	Plastic 500ml - w/ Nitric - Dis.	<2		
MW-118WT (092214)	240-42275-A-2	Plastic 250ml - with Sodium Hydro	>12		
MW-118WT (092214)	240-42275-B-2	Plastic 250ml - with Sodium Hydro	>12		
MW-118WT (092214)	240-42275-E-2	Plastic 500ml - with Sulfuric Acid	<2		
MW-118WT (092214)	240-42275-F-2	Plastic 500ml - with Nitric Acid	<2		
MW-117SI (092214)	240-42275-A-3	Plastic 250ml - with Sodium Hydro	>12		
MW-117SI (092214)	240-42275-B-3	Plastic 250ml - with Sodium Hydro	>12		
MW-117SI (092214)	240-42275-E-3	Plastic 500ml - with Sulfuric Acid	<2		
MW-117SI (092214)	240-42275-F-3	Plastic 500ml - with Nitric Acid	<2		
X-4D (092314)	240-42275-A-4	Plastic 250ml - with Sodium Hydro	>12		
X-4D (092314)	240-42275-B-4	Plastic 250ml - with Sodium Hydro	>12		
X-4D (092314)	240-42275-E-4	Plastic 500ml - with Sulfuric Acid	<2		
X-4D (092314)	240-42275-F-4	Plastic 500ml - with Nitric Acid	<2		
X-4D (092314)	240-42275-G-4	Plastic 500ml - w/ Nitric - Dis.	<2		
X-4CAUG (092314)	240-42275-A-5	Plastic 250ml - with Sodium Hydro	>12		
X-4CAUG (092314)	240-42275-B-5	Plastic 250ml - with Sodium Hydro	>12		
X-4CAUG (092314)	240-42275-E-5	Plastic 500ml - with Sulfuric Acid	<2		
X-4CAUG (092314)	240-42275-F-5	Plastic 500ml - with Nitric Acid	<2		
X-4CAUG (092314)	240-42275-G-5	Plastic 500ml - w/ Nitric - Dis.	<2		
MW-183WT (092314)	240-42275-A-6	Plastic 250ml - with Sodium Hydro	>12		
MW-183WT (092314)	240-42275-B-6	Plastic 250ml - with Sodium Hydro	>12		
MW-183WT (092314)	240-42275-E-6	Plastic 500ml - with Sulfuric Acid	<2		
MW-183WT (092314)	240-42275-F-6	Plastic 500ml - with Nitric Acid	<2		
MW-183WT (092314)	240-42275-G-6	Plastic 500ml - w/ Nitric - Dis.	<2		
MW-111WT (092314)	240-42275-A-7	Plastic 500ml - with Sulfuric Acid	<2		
MW-111WT (092314)	240-42275-B-7	Plastic 500ml - with Sulfuric Acid	<2		
MW-111WT (092314)	240-42275-C-7	Plastic 500ml - with Nitric Acid	<2		
DUP-02 (092314)	240-42275-A-9	Plastic 250ml - with Sodium Hydro	>12		
DUP-02 (092314)	240-42275-B-9	Plastic 250ml - with Sodium Hydro	>12		
DUP-02 (092314)	240-42275-E-9	Plastic 500ml - with Sulfuric Acid	<2		
DUP-02 (092314)	240-42275-F-9	Plastic 500ml - with Nitric Acid	<2		
DUP-02 (092314)	240-42275-G-9	Plastic 500ml - w/ Nitric - Dis.	<2		
MW-117WT (092314)	240-42275-A-12	Plastic 250ml - with Sodium Hydro	>12		

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW-117WT (092314)	240-42275-B-12	Plastic 250ml - with Sodium Hydro	>12		
MW-117WT (092314)	240-42275-E-12	Plastic 500ml - with Sulfuric Acid	<2		
MW-117WT (092314)	240-42275-F-12	Plastic 500ml - with Nitric Acid	<2		
MW-117WT (092314)	240-42275-G-12	Plastic 500ml - w/ Nitric - Dis.	<2		

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

TestAmerica Job ID: 240-42337-1
Client Project/Site: RACER SMI River Berm - B0064434.2014

For:
ARCADIS U.S. Inc
10559 Citation Drive
Suite 100
Brighton, Michigan 48116

Attn: Scott Clearwater

Denise Pohl

Authorized for release by:
10/8/2014 3:03:28 PM

Denise Pohl, Project Manager II
(330)966-9789
denise.pohl@testamericainc.com

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QC Sample Results 22
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Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery exceeds the control 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: 240-42337-1

Laboratory: TestAmerica Canton

Narrative

CASE NARRATIVE

Client: ARCADIS U.S. Inc

Project: RACER SMI River Berm - B0064434.2014

Report Number: 240-42337-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

All solid sample results are reported on an "as received" basis unless otherwise indicated by the presence of a % solids value in the method header.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 9/25/2014 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.0º C, 1.6º C, 1.8º C and 2.6º C.

DISSOLVED POLYCHLORINATED BIPHENYLS (PCBS)

Samples MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2) and MW-110WTR (092414) (240-42337-6) were analyzed for dissolved polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 09/26/2014 and analyzed on 09/29/2014, 09/30/2014 and 10/06/2014.

All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: DUP-04 (092414) (240-42337-5), MW-110WTR (092414) (240-42337-6), MW-186WT (092414) (240-42337-2), MW-186WT (092414) (240-42337-2 MS), MW-186WT (092414) (240-42337-2 MSD).1671559
1526415
1501522

Job ID: 240-42337-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

Method(s) 8082: The continuing calibration verification (CCV) associated with batch 149289 recovered above the upper control limit for pcb. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-186WT (092414) (240-42337-2).

Method(s) 8082: The following sample(s) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MW-110WTR (092414) (240-42337-6). Reagents: 1671559,1526413 and 1647110

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 149329, 8082.

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

POLYCHLORINATED BIPHENYLS (PCBS)

Samples MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2), DUP-04 (092414) (240-42337-5) and MW-110WTR (092414) (240-42337-6) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 09/26/2014 and 09/30/2014 and analyzed on 09/30/2014 and 10/01/2014.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required. All of the samples in this data set analyzed for PCBs were subjected to the sulfuric acid cleanup procedure before instrumental analysis, per EPA Method 3665A.

Method(s) 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: DUP-04 (092414) (240-42337-5), MW-110WTR (092414) (240-42337-6), MW-186WT (092414) (240-42337-2), MW-186WT (092414) (240-42337-2 MS), MW-186WT (092414) (240-42337-2 MSD).1671559
1526415
1501522

Method(s) 8082: The continuing calibration verification (CCV) associated with batch 149289 recovered above the upper control limit for pcb. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: MW-186WT (092414) (240-42337-2).

Method(s) 8082: The following sample(s) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: MW-110WTR (092414) (240-42337-6). Reagents: 1671559,1526413 and 1647110

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 149329, 8082.

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

TOTAL RECOVERABLE METALS (ICPMS)

Samples MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2), MW-107WT (092414) (240-42337-3), MW-110WTR (092414) (240-42337-6), RINSATE (092414) (240-42337-8), MW-149WT (092414) (240-42337-9) and DUP-05 (092414) (240-42337-10) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 09/26/2014 and analyzed on 09/29/2014.

Arsenic and Sodium were detected in method blank MB 240-148897/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Method(s) 6020: Requested reporting limits (RL) that fall below the laboratory's verified standard quantitation limit have less certainty (i.e., are estimated) and must be used at the client's discretion. The continuing calibration blanks and method blanks may not support the lower RL.DUP-05 (092414) (240-42337-10), MW-107WT (092414) (240-42337-3), MW-110WTR (092414) (240-42337-6), MW-149WT (092414) (240-42337-9), MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2), RINSATE (092414) (240-42337-8)

Job ID: 240-42337-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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

AMMONIA

Samples MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2), MW-107WT (092414) (240-42337-3), MW-107S1 (092414) (240-42337-4), MW-110WTR (092414) (240-42337-6), MW-108S2 (092414) (240-42337-7) and MW-149WT (092414) (240-42337-9) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 09/30/2014.

Ammonia (as N) was detected in method blank MB 240-149452/7 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TOTAL PHOSPHORUS

Samples MW-185WT (092414) (240-42337-1), MW-186WT (092414) (240-42337-2), MW-107WT (092414) (240-42337-3), MW-110WTR (092414) (240-42337-6), MW-149WT (092414) (240-42337-9) and DUP-05 (092414) (240-42337-10) were analyzed for total phosphorus in accordance with EPA Method 365.1. The samples were prepared and analyzed on 09/26/2014.

Total Phosphorus as P failed the recovery criteria high for the MS of sample MW-149WT (092414)MS (240-42337-9) in batch 240-148937. Refer to the QC report for details.

Samples MW-149WT (092414) (240-42337-9)[5X] and DUP-05 (092414) (240-42337-10)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

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

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Method	Method Description	Protocol	Laboratory
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
350.3	Nitrogen, Ammonia	MCAWW	TAL CAN
365.1	Phosphorus, Total	EPA	TAL CAN

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.

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Sample Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-42337-1	MW-185WT (092414)	Water	09/24/14 13:00	09/25/14 08:45
240-42337-2	MW-186WT (092414)	Water	09/24/14 13:30	09/25/14 08:45
240-42337-3	MW-107WT (092414)	Water	09/24/14 10:25	09/25/14 08:45
240-42337-4	MW-107S1 (092414)	Water	09/24/14 10:15	09/25/14 08:45
240-42337-5	DUP-04 (092414)	Water	09/24/14 09:55	09/25/14 08:45
240-42337-6	MW-110WTR (092414)	Water	09/24/14 11:40	09/25/14 08:45
240-42337-7	MW-108S2 (092414)	Water	09/24/14 00:00	09/25/14 08:45
240-42337-8	RINSATE (092414)	Water	09/24/14 12:35	09/25/14 08:45
240-42337-9	MW-149WT (092414)	Water	09/24/14 12:40	09/25/14 08:45
240-42337-10	DUP-05 (092414)	Water	09/24/14 00:00	09/25/14 08:45

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-185WT (092414) — Lab Sample ID: 240-42337-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	320		2.0	1.1	ug/L	1		6020	Total Recoverable
Thallium	0.71	J	1.0	0.074	ug/L	1		6020	Total Recoverable
Ammonia (as N)	0.16	J B	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: MW-186WT (092414) — Lab Sample ID: 240-42337-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	2100		2.0	1.1	ug/L	1		6020	Total Recoverable
Thallium	0.56	J	1.0	0.074	ug/L	1		6020	Total Recoverable
Ammonia (as N)	2.0	B	0.20	0.092	mg/L	1		350.3	Total/NA
Total Phosphorus as P	0.17		0.10	0.050	mg/L	1		365.1	Total/NA

Client Sample ID: MW-107WT (092414) — Lab Sample ID: 240-42337-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	4.2	B	2.0	0.18	ug/L	1		6020	Total Recoverable
Manganese	1500		2.0	1.1	ug/L	1		6020	Total Recoverable
Ammonia (as N)	1.3	B	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: MW-107S1 (092414) — Lab Sample ID: 240-42337-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	1.7	B	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: DUP-04 (092414) — Lab Sample ID: 240-42337-5

No Detections.

Client Sample ID: MW-110WTR (092414) — Lab Sample ID: 240-42337-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	4000		2.0	1.1	ug/L	1		6020	Total Recoverable
Ammonia (as N)	0.10	J B	0.20	0.092	mg/L	1		350.3	Total/NA
Total Phosphorus as P	0.12		0.10	0.050	mg/L	1		365.1	Total/NA

Client Sample ID: MW-108S2 (092414) — Lab Sample ID: 240-42337-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ammonia (as N)	4.6	B	0.20	0.092	mg/L	1		350.3	Total/NA

Client Sample ID: RINSATE (092414) — Lab Sample ID: 240-42337-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.20	J B	2.0	0.18	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample ID: RINSATE (092414) (Continued) — Lab Sample ID: 240-42337-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	190	J B	1000	68	ug/L	1		6020	Total Recoverable

Client Sample ID: MW-149WT (092414) — Lab Sample ID: 240-42337-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	75	B	2.0	0.18	ug/L	1		6020	Total Recoverable
Thallium	0.62	J	1.0	0.074	ug/L	1		6020	Total Recoverable
Ammonia (as N)	3.2	B	0.20	0.092	mg/L	1		350.3	Total/NA
Total Phosphorus as P	1.3		0.50	0.25	mg/L	5		365.1	Total/NA

Client Sample ID: DUP-05 (092414) — Lab Sample ID: 240-42337-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	69	B	2.0	0.18	ug/L	1		6020	Total Recoverable
Total Phosphorus as P	1.3		0.50	0.25	mg/L	5		365.1	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-185WT (092414)
Date Collected: 09/24/14 13:00
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-1
Matrix: Water

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/30/14 08:47	10/01/14 18:04	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/30/14 08:47	10/01/14 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*71*		*10 - 130*	*09/30/14 08:47*	*10/01/14 18:04*	*1*
Tetrachloro-m-xylene	*77*		*23 - 136*	*09/30/14 08:47*	*10/01/14 18:04*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/26/14 08:04	09/29/14 17:29	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/26/14 08:04	09/29/14 17:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*64*		*23 - 136*	*09/26/14 08:04*	*09/29/14 17:29*	*1*
DCB Decachlorobiphenyl	*69*		*10 - 130*	*09/26/14 08:04*	*09/29/14 17:29*	*1*

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**320**		2.0	1.1	ug/L		09/26/14 10:55	09/29/14 13:13	1
Thallium	**0.71**	**J**	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.16**	**J B**	0.20	0.092	mg/L			09/30/14 10:16	1
Total Phosphorus as P	0.10	U	0.10	0.050	mg/L		09/26/14 05:37	09/26/14 13:00	1

Client Sample ID: MW-186WT (092414)

Lab Sample ID: 240-42337-2

Date Collected: 09/24/14 13:30

Matrix: Water

Date Received: 09/25/14 08:45

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.045	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1221	0.10	U	0.10	0.046	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1232	0.10	U	0.10	0.074	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1242	0.10	U	0.10	0.061	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1248	0.10	U	0.10	0.062	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1254	0.10	U	0.10	0.033	ug/L		09/26/14 08:04	09/30/14 15:31	1
Aroclor-1260	0.10	U	0.10	0.039	ug/L		09/26/14 08:04	09/30/14 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*45*		*10 - 130*	*09/26/14 08:04*	*09/30/14 15:31*	*1*
Tetrachloro-m-xylene	*70*		*23 - 136*	*09/26/14 08:04*	*09/30/14 15:31*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/26/14 08:04	09/30/14 18:47	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/26/14 08:04	09/30/14 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*23 - 136*	*09/26/14 08:04*	*09/30/14 18:47*	*1*
DCB Decachlorobiphenyl	*51*		*10 - 130*	*09/26/14 08:04*	*09/30/14 18:47*	*1*

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**2100**		2.0	1.1	ug/L		09/26/14 10:55	09/29/14 12:28	1
Thallium	**0.56**	**J**	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 12:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.0**	**B**	0.20	0.092	mg/L			09/30/14 10:33	1
Total Phosphorus as P	**0.17**		0.10	0.050	mg/L		09/26/14 05:35	09/26/14 13:00	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-107WT (092414)
Date Collected: 09/24/14 10:25
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-3
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**4.2**	**B**	2.0	0.18	ug/L		09/26/14 10:55	09/29/14 13:17	1
Manganese	**1500**		2.0	1.1	ug/L		09/26/14 10:55	09/29/14 13:17	1
Thallium	1.0	U	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.3**	**B**	0.20	0.092	mg/L			09/30/14 10:43	1
Total Phosphorus as P	0.10	U	0.10	0.050	mg/L		09/26/14 05:38	09/26/14 13:03	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-107S1 (092414)
Date Collected: 09/24/14 10:15
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-4
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.7	B	0.20	0.092	mg/L			09/30/14 10:54	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: DUP-04 (092414)
Date Collected: 09/24/14 09:55
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-5
Matrix: Water

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.097	U	0.097	0.043	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1221	0.097	U	0.097	0.044	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1232	0.097	U	0.097	0.071	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1242	0.097	U	0.097	0.058	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1248	0.097	U	0.097	0.059	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1254	0.097	U	0.097	0.031	ug/L		09/26/14 08:04	09/30/14 16:12	1
Aroclor-1260	0.097	U	0.097	0.037	ug/L		09/26/14 08:04	09/30/14 16:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*46*		*10 - 130*	*09/26/14 08:04*	*09/30/14 16:12*	*1*
Tetrachloro-m-xylene	*76*		*23 - 136*	*09/26/14 08:04*	*09/30/14 16:12*	*1*

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-110WTR (092414)
Date Collected: 09/24/14 11:40
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-6
Matrix: Water

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.095	U	0.095	0.042	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1221	0.095	U	0.095	0.043	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1232	0.095	U	0.095	0.070	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1242	0.095	U	0.095	0.057	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1248	0.095	U	0.095	0.058	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1254	0.095	U	0.095	0.030	ug/L		09/26/14 08:04	09/30/14 16:26	1
Aroclor-1260	0.095	U	0.095	0.036	ug/L		09/26/14 08:04	09/30/14 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*36*		*10 - 130*	*09/26/14 08:04*	*09/30/14 16:26*	*1*
Tetrachloro-m-xylene	*69*		*23 - 136*	*09/26/14 08:04*	*09/30/14 16:26*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.098	U	0.098	0.043	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1221	0.098	U	0.098	0.044	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1232	0.098	U	0.098	0.072	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1242	0.098	U	0.098	0.059	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1248	0.098	U	0.098	0.060	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1254	0.098	U	0.098	0.031	ug/L		09/26/14 08:04	10/06/14 19:24	1
Aroclor-1260	0.098	U	0.098	0.037	ug/L		09/26/14 08:04	10/06/14 19:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*56*		*23 - 136*	*09/26/14 08:04*	*10/06/14 19:24*	*1*
DCB Decachlorobiphenyl	*55*		*10 - 130*	*09/26/14 08:04*	*10/06/14 19:24*	*1*

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	**4000**		2.0	1.1	ug/L		09/26/14 10:55	09/29/14 13:21	1
Thallium	1.0	U	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 13:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.10**	**J B**	0.20	0.092	mg/L			09/30/14 11:10	1
Total Phosphorus as P	**0.12**		0.10	0.050	mg/L		09/26/14 05:28	09/26/14 12:57	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-108S2 (092414)
Date Collected: 09/24/14 00:00
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-7
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.6	B	0.20	0.092	mg/L			09/30/14 11:15	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: RINSATE (092414)
Date Collected: 09/24/14 12:35
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-8
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**0.20**	**J B**	2.0	0.18	ug/L		09/26/14 10:55	09/29/14 13:32	1
Barium	5.0	U	5.0	1.1	ug/L		09/26/14 10:55	09/29/14 13:32	1
Iron	50	U	50	16	ug/L		09/26/14 10:55	09/29/14 13:32	1
Manganese	2.0	U	2.0	1.1	ug/L		09/26/14 10:55	09/29/14 13:32	1
Selenium	5.0	U	5.0	0.25	ug/L		09/26/14 10:55	09/29/14 13:32	1
Sodium	**190**	**J B**	1000	68	ug/L		09/26/14 10:55	09/29/14 13:32	1

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: MW-149WT (092414)
Date Collected: 09/24/14 12:40
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-9
Matrix: Water

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	75	B	2.0	0.18	ug/L		09/26/14 10:55	09/29/14 12:53	1
Thallium	0.62	J	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.2	B	0.20	0.092	mg/L			09/30/14 13:44	1
Total Phosphorus as P	1.3		0.50	0.25	mg/L		09/26/14 05:23	09/26/14 13:08	5

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: DUP-05 (092414)

Lab Sample ID: 240-42337-10

Date Collected: 09/24/14 00:00

Matrix: Water

Date Received: 09/25/14 08:45

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**69**	**B**	2.0	0.18	ug/L		09/26/14 10:55	09/29/14 13:35	1
Thallium	1.0	U	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	**1.3**		0.50	0.25	mg/L		09/26/14 05:28	09/26/14 13:08	5

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

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

		Percent Surrogate Recovery (Acceptance Limits)											
		DCB2	TCX2										
Lab Sample ID	Client Sample ID	(10-130)	(23-136)										
240-42337-1	MW-185WT (092414)	71	77										
240-42337-2	MW-186WT (092414)	45	70										
240-42337-2 MS	MW-186WT (092414)	52	77										
240-42337-2 MSD	MW-186WT (092414)	53	75										
240-42337-5	DUP-04 (092414)	46	76										
240-42337-6	MW-110WTR (092414)	36	69										
LCS 240-148821/24-A	Lab Control Sample	96	90										
LCS 240-149329/3-A	Lab Control Sample	69	63										
MB 240-148821/23-A	Method Blank	92	91										
MB 240-149329/2-A	Method Blank	68	57										

Surrogate Legend

DCB = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Dissolved**

		Percent Surrogate Recovery (Acceptance Limits)											
		TCX2	DCB2										
Lab Sample ID	Client Sample ID	(23-136)	(10-130)										
240-42337-1	MW-185WT (092414)	64	69										
240-42337-2	MW-186WT (092414)	72	51										
240-42337-2 MS	MW-186WT (092414)	77	44										
240-42337-2 MSD	MW-186WT (092414)	76	56										
240-42337-6	MW-110WTR (092414)	56	55										

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 240-148821/23-A
Matrix: Water
Analysis Batch: 149237

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 148821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1221	0.10	U	0.10	0.045	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1232	0.10	U	0.10	0.073	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1242	0.10	U	0.10	0.060	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1248	0.10	U	0.10	0.061	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1254	0.10	U	0.10	0.032	ug/L		09/26/14 08:04	09/29/14 19:35	1
Aroclor-1260	0.10	U	0.10	0.038	ug/L		09/26/14 08:04	09/29/14 19:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*92*		*10 - 130*	*09/26/14 08:04*	*09/29/14 19:35*	*1*
Tetrachloro-m-xylene	*91*		*23 - 136*	*09/26/14 08:04*	*09/29/14 19:35*	*1*

Lab Sample ID: LCS 240-148821/24-A
Matrix: Water
Analysis Batch: 149237

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 148821

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			2.50	2.47		ug/L		99	66 - 120		
Aroclor-1260			2.50	2.62		ug/L		105	55 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*96*		*10 - 130*
Tetrachloro-m-xylene	*90*		*23 - 136*

Lab Sample ID: 240-42337-2 MS
Matrix: Water
Analysis Batch: 149289

Client Sample ID: MW-186WT (092414)
Prep Type: Total/NA
Prep Batch: 148821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016	0.10	U	2.38	2.09		ug/L		88	67 - 120		
Aroclor-1260	0.10	U	2.38	1.96		ug/L		82	31 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*52*		*10 - 130*
Tetrachloro-m-xylene	*77*		*23 - 136*

Lab Sample ID: 240-42337-2 MSD
Matrix: Water
Analysis Batch: 149289

Client Sample ID: MW-186WT (092414)
Prep Type: Total/NA
Prep Batch: 148821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	0.10	U	2.38	2.15		ug/L		90	67 - 120	3	30
Aroclor-1260	0.10	U	2.38	2.11		ug/L		89	31 - 120	8	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*53*		*10 - 130*
Tetrachloro-m-xylene	*75*		*23 - 136*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 240-149329/2-A
Matrix: Water
Analysis Batch: 149597

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149329

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.10	U	0.10	0.044	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1221	0.10	U	0.10	0.045	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1232	0.10	U	0.10	0.073	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1242	0.10	U	0.10	0.060	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1248	0.10	U	0.10	0.061	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1254	0.10	U	0.10	0.032	ug/L		09/30/14 08:47	10/01/14 18:19	1
Aroclor-1260	0.10	U	0.10	0.038	ug/L		09/30/14 08:47	10/01/14 18:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*68*		*10 - 130*	*09/30/14 08:47*	*10/01/14 18:19*	*1*
Tetrachloro-m-xylene	*57*		*23 - 136*	*09/30/14 08:47*	*10/01/14 18:19*	*1*

Lab Sample ID: LCS 240-149329/3-A
Matrix: Water
Analysis Batch: 149597

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149329

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016			2.50	1.81		ug/L		73	66 - 120		
Aroclor-1260			2.50	2.02		ug/L		81	55 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*69*		*10 - 130*
Tetrachloro-m-xylene	*63*		*23 - 136*

Lab Sample ID: 240-42337-2 MS
Matrix: Water
Analysis Batch: 149289

Client Sample ID: MW-186WT (092414)
Prep Type: Dissolved
Prep Batch: 148821

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Aroclor-1016	0.095	U	2.38	2.01		ug/L		85	67 - 120		
Aroclor-1260	0.095	U	2.38	1.97		ug/L		83	31 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*77*		*23 - 136*
DCB Decachlorobiphenyl	*44*		*10 - 130*

Lab Sample ID: 240-42337-2 MSD
Matrix: Water
Analysis Batch: 149289

Client Sample ID: MW-186WT (092414)
Prep Type: Dissolved
Prep Batch: 148821

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	0.095	U	2.38	2.04		ug/L		86	67 - 120	1	30
Aroclor-1260	0.095	U	2.38	2.03		ug/L		85	31 - 120	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*76*		*23 - 136*
DCB Decachlorobiphenyl	*56*		*10 - 130*

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-148897/1-A
Matrix: Water
Analysis Batch: 149423

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.214	J	5.0	0.18	ug/L		09/26/14 10:55	09/29/14 12:21	1
Barium	5.0	U	5.0	1.1	ug/L		09/26/14 10:55	09/29/14 12:21	1
Iron	100	U	100	16	ug/L		09/26/14 10:55	09/29/14 12:21	1
Thallium	1.0	U	1.0	0.074	ug/L		09/26/14 10:55	09/29/14 12:21	1
Manganese	2.0	U	2.0	1.1	ug/L		09/26/14 10:55	09/29/14 12:21	1
Selenium	5.0	U	5.0	0.25	ug/L		09/26/14 10:55	09/29/14 12:21	1
Sodium	107	J	1000	68	ug/L		09/26/14 10:55	09/29/14 12:21	1

Lab Sample ID: LCS 240-148897/2-A
Matrix: Water
Analysis Batch: 149423

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	915		ug/L		92	80 - 120
Barium	1000	1000		ug/L		100	80 - 120
Iron	10000	9400		ug/L		94	80 - 120
Thallium	250	227		ug/L		91	80 - 120
Manganese	1000	921		ug/L		92	80 - 120
Selenium	1000	916		ug/L		92	80 - 120
Sodium	10000	9250		ug/L		93	80 - 120

Lab Sample ID: 240-42337-2 MS
Matrix: Water
Analysis Batch: 149423

Client Sample ID: MW-186WT (092414)
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	2100		1000	2980		ug/L		83	10 - 172
Thallium	0.56	J	250	228		ug/L		91	69 - 117

Lab Sample ID: 240-42337-2 MSD
Matrix: Water
Analysis Batch: 149423

Client Sample ID: MW-186WT (092414)
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Manganese	2100		1000	2950		ug/L		81	10 - 172	1	20
Thallium	0.56	J	250	225		ug/L		90	69 - 117	1	20

Lab Sample ID: 240-42337-9 MS
Matrix: Water
Analysis Batch: 149423

Client Sample ID: MW-149WT (092414)
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	75	B	1000	974		ug/L		90	82 - 123
Thallium	0.62	J	250	220		ug/L		88	69 - 117

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-42337-9 MSD
Matrix: Water
Analysis Batch: 149423

Client Sample ID: MW-149WT (092414)
Prep Type: Total Recoverable
Prep Batch: 148897

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	75	B	1000	995		ug/L		92	82 - 123	2	20
Thallium	0.62	J	250	225		ug/L		90	69 - 117	2	20

Method: 350.3 - Nitrogen, Ammonia

Lab Sample ID: MB 240-149452/7
Matrix: Water
Analysis Batch: 149452

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.0934	J	0.20	0.092	mg/L			09/30/14 10:00	1

Lab Sample ID: LCS 240-149452/8
Matrix: Water
Analysis Batch: 149452

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	1.20	1.26		mg/L		105	85 - 114

Lab Sample ID: 240-42337-2 MS
Matrix: Water
Analysis Batch: 149452

Client Sample ID: MW-186WT (092414)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.0	B	2.50	4.53		mg/L		103	75 - 125

Lab Sample ID: 240-42337-2 MSD
Matrix: Water
Analysis Batch: 149452

Client Sample ID: MW-186WT (092414)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	2.0	B	2.50	4.60		mg/L		106	75 - 125	2	20

Lab Sample ID: 240-42337-9 MS
Matrix: Water
Analysis Batch: 149452

Client Sample ID: MW-149WT (092414)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	3.2	B	12.5	17.3		mg/L		113	75 - 125

Lab Sample ID: 240-42337-9 MSD
Matrix: Water
Analysis Batch: 149452

Client Sample ID: MW-149WT (092414)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	3.2	B	12.5	17.2		mg/L		112	75 - 125	0	20

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 240-148790/10-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.050	mg/L		09/26/14 05:22	09/26/14 12:56	1

Lab Sample ID: LCS 240-148790/11-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	3.13	3.22		mg/L		103	90 - 110

Lab Sample ID: 240-42337-2 MS — **Client Sample ID: MW-186WT (092414)**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.17		0.500	0.690		mg/L		104	90 - 110

Lab Sample ID: 240-42337-2 MSD — **Client Sample ID: MW-186WT (092414)**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.17		0.500	0.676		mg/L		101	90 - 110	2	20

Lab Sample ID: 240-42337-9 MS — **Client Sample ID: MW-149WT (092414)**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	1.3		0.500	1.94	F1	mg/L		128	90 - 110

Lab Sample ID: 240-42337-9 MSD — **Client Sample ID: MW-149WT (092414)**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148937 — **Prep Batch: 148790**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	1.3		0.500	1.78		mg/L		96	90 - 110	9	20

GC Semi VOA

Prep Batch: 148821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Dissolved	Water	3520C	
240-42337-2	MW-186WT (092414)	Dissolved	Water	3520C	
240-42337-2	MW-186WT (092414)	Total/NA	Water	3520C	
240-42337-2 MS	MW-186WT (092414)	Dissolved	Water	3520C	
240-42337-2 MS	MW-186WT (092414)	Total/NA	Water	3520C	
240-42337-2 MSD	MW-186WT (092414)	Dissolved	Water	3520C	
240-42337-2 MSD	MW-186WT (092414)	Total/NA	Water	3520C	
240-42337-5	DUP-04 (092414)	Total/NA	Water	3520C	
240-42337-6	MW-110WTR (092414)	Dissolved	Water	3520C	
240-42337-6	MW-110WTR (092414)	Total/NA	Water	3520C	
LCS 240-148821/24-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-148821/23-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 149237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Dissolved	Water	8082	148821
LCS 240-148821/24-A	Lab Control Sample	Total/NA	Water	8082	148821
MB 240-148821/23-A	Method Blank	Total/NA	Water	8082	148821

Analysis Batch: 149289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-2	MW-186WT (092414)	Dissolved	Water	8082	148821
240-42337-2	MW-186WT (092414)	Total/NA	Water	8082	148821
240-42337-2 MS	MW-186WT (092414)	Dissolved	Water	8082	148821
240-42337-2 MS	MW-186WT (092414)	Total/NA	Water	8082	148821
240-42337-2 MSD	MW-186WT (092414)	Dissolved	Water	8082	148821
240-42337-2 MSD	MW-186WT (092414)	Total/NA	Water	8082	148821
240-42337-5	DUP-04 (092414)	Total/NA	Water	8082	148821
240-42337-6	MW-110WTR (092414)	Total/NA	Water	8082	148821

Prep Batch: 149329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total/NA	Water	3520C	
LCS 240-149329/3-A	Lab Control Sample	Total/NA	Water	3520C	
MB 240-149329/2-A	Method Blank	Total/NA	Water	3520C	

Analysis Batch: 149597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total/NA	Water	8082	149329
LCS 240-149329/3-A	Lab Control Sample	Total/NA	Water	8082	149329
MB 240-149329/2-A	Method Blank	Total/NA	Water	8082	149329

Analysis Batch: 150306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-6	MW-110WTR (092414)	Dissolved	Water	8082	148821

Metals

Prep Batch: 148897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total Recoverable	Water	3005A	
240-42337-2	MW-186WT (092414)	Total Recoverable	Water	3005A	
240-42337-2 MS	MW-186WT (092414)	Total Recoverable	Water	3005A	
240-42337-2 MSD	MW-186WT (092414)	Total Recoverable	Water	3005A	
240-42337-3	MW-107WT (092414)	Total Recoverable	Water	3005A	
240-42337-6	MW-110WTR (092414)	Total Recoverable	Water	3005A	
240-42337-8	RINSATE (092414)	Total Recoverable	Water	3005A	
240-42337-9	MW-149WT (092414)	Total Recoverable	Water	3005A	
240-42337-9 MS	MW-149WT (092414)	Total Recoverable	Water	3005A	
240-42337-9 MSD	MW-149WT (092414)	Total Recoverable	Water	3005A	
240-42337-10	DUP-05 (092414)	Total Recoverable	Water	3005A	
LCS 240-148897/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 240-148897/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 149423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total Recoverable	Water	6020	148897
240-42337-2	MW-186WT (092414)	Total Recoverable	Water	6020	148897
240-42337-2 MS	MW-186WT (092414)	Total Recoverable	Water	6020	148897
240-42337-2 MSD	MW-186WT (092414)	Total Recoverable	Water	6020	148897
240-42337-3	MW-107WT (092414)	Total Recoverable	Water	6020	148897
240-42337-6	MW-110WTR (092414)	Total Recoverable	Water	6020	148897
240-42337-8	RINSATE (092414)	Total Recoverable	Water	6020	148897
240-42337-9	MW-149WT (092414)	Total Recoverable	Water	6020	148897
240-42337-9 MS	MW-149WT (092414)	Total Recoverable	Water	6020	148897
240-42337-9 MSD	MW-149WT (092414)	Total Recoverable	Water	6020	148897
240-42337-10	DUP-05 (092414)	Total Recoverable	Water	6020	148897
LCS 240-148897/2-A	Lab Control Sample	Total Recoverable	Water	6020	148897
MB 240-148897/1-A	Method Blank	Total Recoverable	Water	6020	148897

General Chemistry

Prep Batch: 148790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-2	MW-186WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-2 MS	MW-186WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-2 MSD	MW-186WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-3	MW-107WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-6	MW-110WTR (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-9	MW-149WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-9 MS	MW-149WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-9 MSD	MW-149WT (092414)	Total/NA	Water	365.2/365.3/365	
240-42337-10	DUP-05 (092414)	Total/NA	Water	365.2/365.3/365	
LCS 240-148790/11-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
MB 240-148790/10-A	Method Blank	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 148937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total/NA	Water	365.1	148790

General Chemistry (Continued)

Analysis Batch: 148937 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-2	MW-186WT (092414)	Total/NA	Water	365.1	148790
240-42337-2 MS	MW-186WT (092414)	Total/NA	Water	365.1	148790
240-42337-2 MSD	MW-186WT (092414)	Total/NA	Water	365.1	148790
240-42337-3	MW-107WT (092414)	Total/NA	Water	365.1	148790
240-42337-6	MW-110WTR (092414)	Total/NA	Water	365.1	148790
240-42337-9	MW-149WT (092414)	Total/NA	Water	365.1	148790
240-42337-9 MS	MW-149WT (092414)	Total/NA	Water	365.1	148790
240-42337-9 MSD	MW-149WT (092414)	Total/NA	Water	365.1	148790
240-42337-10	DUP-05 (092414)	Total/NA	Water	365.1	148790
LCS 240-148790/11-A	Lab Control Sample	Total/NA	Water	365.1	148790
MB 240-148790/10-A	Method Blank	Total/NA	Water	365.1	148790

Analysis Batch: 149452

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-42337-1	MW-185WT (092414)	Total/NA	Water	350.3	
240-42337-2	MW-186WT (092414)	Total/NA	Water	350.3	
240-42337-2 MS	MW-186WT (092414)	Total/NA	Water	350.3	
240-42337-2 MSD	MW-186WT (092414)	Total/NA	Water	350.3	
240-42337-3	MW-107WT (092414)	Total/NA	Water	350.3	
240-42337-4	MW-107S1 (092414)	Total/NA	Water	350.3	
240-42337-6	MW-110WTR (092414)	Total/NA	Water	350.3	
240-42337-7	MW-108S2 (092414)	Total/NA	Water	350.3	
240-42337-9	MW-149WT (092414)	Total/NA	Water	350.3	
240-42337-9 MS	MW-149WT (092414)	Total/NA	Water	350.3	
240-42337-9 MSD	MW-149WT (092414)	Total/NA	Water	350.3	
LCS 240-149452/8	Lab Control Sample	Total/NA	Water	350.3	
MB 240-149452/7	Method Blank	Total/NA	Water	350.3	

Client Sample ID: MW-185WT (092414)

Lab Sample ID: 240-42337-1

Date Collected: 09/24/14 13:00

Matrix: Water

Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Dissolved	Analysis	8082		1	149237	09/29/14 17:29	KMG	TAL CAN
Total/NA	Prep	3520C			149329	09/30/14 08:47	SDE	TAL CAN
Total/NA	Analysis	8082		1	149597	10/01/14 18:04	KMG	TAL CAN
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 13:13	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	149452	09/30/14 10:16	LKG	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:37	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148937	09/26/14 13:00	TPH	TAL CAN

Client Sample ID: MW-186WT (092414)

Lab Sample ID: 240-42337-2

Date Collected: 09/24/14 13:30

Matrix: Water

Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Dissolved	Analysis	8082		1	149289	09/30/14 18:47	LSH	TAL CAN
Total/NA	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Total/NA	Analysis	8082		1	149289	09/30/14 15:31	LSH	TAL CAN
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 12:28	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	149452	09/30/14 10:33	LKG	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:35	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148937	09/26/14 13:00	TPH	TAL CAN

Client Sample ID: MW-107WT (092414)

Lab Sample ID: 240-42337-3

Date Collected: 09/24/14 10:25

Matrix: Water

Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 13:17	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	149452	09/30/14 10:43	LKG	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:38	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148937	09/26/14 13:03	TPH	TAL CAN

Client Sample ID: MW-107S1 (092414)

Lab Sample ID: 240-42337-4

Date Collected: 09/24/14 10:15

Matrix: Water

Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.3		1	149452	09/30/14 10:54	LKG	TAL CAN

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: DUP-04 (092414)

Lab Sample ID: 240-42337-5

Date Collected: 09/24/14 09:55
Matrix: Water
Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Total/NA	Analysis	8082		1	149289	09/30/14 16:12	LSH	TAL CAN

Client Sample ID: MW-110WTR (092414)

Lab Sample ID: 240-42337-6

Date Collected: 09/24/14 11:40
Matrix: Water
Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Dissolved	Analysis	8082		1	150306	10/06/14 19:24	HMB	TAL CAN
Total/NA	Prep	3520C			148821	09/26/14 08:04	SDE	TAL CAN
Total/NA	Analysis	8082		1	149289	09/30/14 16:26	LSH	TAL CAN
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 13:21	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	149452	09/30/14 11:10	LKG	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:28	TPH	TAL CAN
Total/NA	Analysis	365.1		1	148937	09/26/14 12:57	TPH	TAL CAN

Client Sample ID: MW-108S2 (092414)

Lab Sample ID: 240-42337-7

Date Collected: 09/24/14 00:00
Matrix: Water
Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.3		1	149452	09/30/14 11:15	LKG	TAL CAN

Client Sample ID: RINSATE (092414)

Lab Sample ID: 240-42337-8

Date Collected: 09/24/14 12:35
Matrix: Water
Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 13:32	AMM2	TAL CAN

Client Sample ID: MW-149WT (092414)

Lab Sample ID: 240-42337-9

Date Collected: 09/24/14 12:40
Matrix: Water
Date Received: 09/25/14 08:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 12:53	AMM2	TAL CAN
Total/NA	Analysis	350.3		1	149452	09/30/14 13:44	LKG	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:23	TPH	TAL CAN
Total/NA	Analysis	365.1		5	148937	09/26/14 13:08	TPH	TAL CAN

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Client Sample ID: DUP-05 (092414)
Date Collected: 09/24/14 00:00
Date Received: 09/25/14 08:45

Lab Sample ID: 240-42337-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			148897	09/26/14 10:55	WAL	TAL CAN
Total Recoverable	Analysis	6020		1	149423	09/29/14 13:35	AMM2	TAL CAN
Total/NA	Prep	365.2/365.3/365			148790	09/26/14 05:28	TPH	TAL CAN
Total/NA	Analysis	365.1		5	148937	09/26/14 13:08	TPH	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: RACER SMI River Berm - B0064434.2014

TestAmerica Job ID: 240-42337-1

Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-15
Connecticut	State Program	1	PH-0590	12-31-14
Florida	NELAP	4	E87225	06-30-15
Georgia	State Program	4	N/A	06-30-15
Illinois	NELAP	5	200004	07-31-15
Kansas	NELAP	7	E-10336	01-31-15
Kentucky (UST)	State Program	4	58	06-30-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-14
Nevada	State Program	9	OH-000482008A	07-31-15
New Jersey	NELAP	2	OH001	06-30-15
New York	NELAP	2	10975	03-31-15
Ohio VAP	State Program	5	CL0024	10-31-15
Pennsylvania	NELAP	3	68-00340	08-31-15
Texas	NELAP	6		08-31-15
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-15
Washington	State Program	10	C971	01-12-15
West Virginia DEP	State Program	3	210	12-31-14
Wisconsin	State Program	5	999518190	08-31-15

* Certification renewal pending - certification considered valid.

TestAmerica Laboratories, Inc.

CHAIN OF CUSTODY AND RECEIVING DOCUMENTS

240-42337 Chain of Custody

4101 Shuffel Street, N.W. North Canton, OH 44720 **tel** 330.497.9396 **fax** 330.497.0772 **www.testamericainc.com**

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

2.6, 1.0, 1.6, 1.8

Chain of Custody Record

055592

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kristen Temple	Site Contact:	Date: 9/24/14	COC No:
Company Name: ARCADIS	Tel/Fax: 248 994 2320	Lab Contact:	Carrier:	2 of 2 COCs
Address: 28550 Cabot dr.	Analysis Turnaround Time			Sampler:
City/State/Zip: Novi MI 48377	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 248 994 2240	TAT if different from Below			Walk-in Client:
Fax: 248 994 2241	☒ 2 weeks			Lab Sampling:
Project Name: SMI River Berm	☐ 1 week			
Site: RACER Saginaw	☐ 2 days			Job / SDG No.:
PO # NA	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Ammonium Nitrogen	Phosphorous	Total Arsenic	Total Manganese	Total Thallium	Total PCBs	Dissolved PCBs	Sample Specific Notes:
MW-185WT(092414)	9/24/14	1300	G	W	7	Y	N	✓	✓		✓	✓	✓	✓	
MW-186WT(092414)	↓	1330	↓	↓	7	Y	~~N~~ ✓	✓	✓		✓	✓	✓	✓	
MW-186WT(092414)MS/MSD		1335			4	Y	Y						✓	✓	
MW-107WT(092414)		1025			3	N	N	✓	✓	✓	✓	✓			
MW-107SI(092414)		1015			1	N	N	✓							
DUP-04(092414)			↓	↓	2	N	N						✓	✓ BDL 092414	only sample for total PCBs

Michigan
190

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if sa

☐ Return to Client ☒ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments:
Samples placed immediatly on ice, Job #24006824

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Brad Ojeay	ARCADIS	9/24/14 15:10		TAL	9/24/14 15:10
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAL	9/24/14 16:00	Barry Burns	TA Cam	9/25/14 0845
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica Michigan
10448 Citation Drive
Suite 200
Brighton, MI 48116
Phone: 810.229.2763 Fax:

2.6, 1.0, 1.6, 1.8

Chain of Custody Record

055580

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.
TAL-8210 (0713)

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: K. Templen	Site Contact: S. Solomon	Date: 9/24/14	COC No:
Company Name: ARCADIS	Tel/Fax: 248 994 2320	Lab Contact: D. Pohl	Carrier: R. Close	1 of ____ COCs
Address: 28550 Cabot Dr Suite 500	Analysis Turnaround Time			Sampler:
City/State/Zip: Novi MI 48377	☒ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 248 994 2240	TAT if different from Below Standard			Walk-in Client:
Fax: 248 994 2241	☒ 2 weeks			Lab Sampling:
Project Name: RACER SMI River Berm	☐ 1 week			
Site: RACER Saginaw	☐ 2 days			Job / SDG No.: 240006824
PO # NA	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Ammonia Nitrogen	Phosphorous	Total: Mn, Fe	Total PCBs	Dissolved PCBs	TAL Metals	Total: Ar, Fe	Sample Specific Notes:
MW-110WTR(092414)	9/24	0955	G	W	7			X	X	X	X	X			
MW-1085Z(092414)		1140			1			X							
RINSATE(092414)		—			1								X		
MW-149WT(092414)		1235			3			X	X					X	
MW-149WT(092414)MS/MSD		1240			6 4				X					X	
DUP-05(092414)		—			2				X					X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if s

☐ Return to Client ☒ Disposal by Lab ☐ Archive for_____ Months

Michigan
190

Special Instructions/QC Requirements & Comments:
All samples immediately packed on ice. TestAmerica Job # 240006824

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ | Therm ID No.:_____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
James Ness	ARCADIS	9/24/14 15:10		TAL	9/24/14 15:10
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TAL	9/24/14 16:00		TA Can	9/25/14 0845
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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10/8/2014

TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 42337

Client Arcadis Site Name SMT

Cooler unpacked by: Dewy Burns

Cooler Received on 9/25/14 Opened on 9/25/14

FedEx: 1st (Grd) Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# A	(CF +2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
IR GUN# 4	(CF -2 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	☒ See Multiple Cooler Form
IR GUN# 5	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	
(IR GUN# 8)	(CF 0 °C)	Observed Cooler Temp._____°C	Corrected Cooler Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 each (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA pH Strip Lot# HC412469
11. Were VOAs on the COC? Yes (No)
12. Were air bubbles >6 mm in any VOA vials? Yes No (NA)
13. Was a trip blank present in the cooler(s)? Yes (No)

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: JH

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) Rinsate (092414) were further preserved in the laboratory.
Time preserved: 11:00 Preservative(s) added/Lot number(s): Nitric acid

TestAmerica Multiple Cooler Receipt Form/Narrative — Login # : 42337
Canton Facility

Cooler #	IR Gun #	Observed Temp °C	Corrected Temp °C	Coolant
M-SVC	8	2.6	2.6	ICE
190TA MI	"	1.0	1.0	"
Buffalo	"	1.6	1.6	"
client	"	1.8	1.8	"

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Preservative Added (mls)	Lot #
MW-185WT (092414)	240-42337-A-1	Plastic 500ml - with Sulfuric Acid	<2		
MW-185WT (092414)	240-42337-B-1	Plastic 500ml - with Sulfuric Acid	<2		
MW-185WT (092414)	240-42337-C-1	Plastic 500ml - with Nitric Acid	<2		
MW-186WT (092414)	240-42337-A-2	Plastic 500ml - with Sulfuric Acid	<2		
MW-186WT (092414)	240-42337-B-2	Plastic 500ml - with Sulfuric Acid	<2		
MW-186WT (092414)	240-42337-C-2	Plastic 500ml - with Sulfuric Acid	<2		
MW-186WT (092414)	240-42337-D-2	Plastic 500ml - with Nitric Acid	<2		
MW-107WT (092414)	240-42337-A-3	Plastic 500ml - with Sulfuric Acid	<2		
MW-107WT (092414)	240-42337-B-3	Plastic 500ml - with Sulfuric Acid	<2		
MW-107WT (092414)	240-42337-C-3	Plastic 500ml - with Nitric Acid	<2		
MW-107S1 (092414)	240-42337-A-4	Plastic 500ml - with Sulfuric Acid	<2		
MW-110WTR (092414)	240-42337-A-6	Plastic 500ml - with Sulfuric Acid	<2		
MW-110WTR (092414)	240-42337-B-6	Plastic 500ml - with Sulfuric Acid	<2		
MW-110WTR (092414)	240-42337-C-6	Plastic 500ml - with Nitric Acid	<2		
MW-108S2 (092414)	240-42337-A-7	Plastic 500ml - with Sulfuric Acid	<2		
RINSATE (092414)	240-42337-A-8	Plastic 250ml - with Nitric Acid	<2		
MW-149WT (092414)	240-42337-A-9	Plastic 500ml - with Sulfuric Acid	<2		
MW-149WT (092414)	240-42337-B-9	Plastic 500ml - with Sulfuric Acid	<2		
MW-149WT (092414)	240-42337-C-9	Plastic 500ml - with Sulfuric Acid	<2		
MW-149WT (092414)	240-42337-D-9	Plastic 500ml - with Sulfuric Acid	<2		
MW-149WT (092414)	240-42337-E-9	Plastic 500ml - with Nitric Acid	<2		
MW-149WT (092414)	240-42337-F-9	Plastic 500ml - with Nitric Acid	<2		
MW-149WT (092414)	240-42337-G-9	Plastic 500ml - with Nitric Acid	<2		
DUP-05 (092414)	240-42337-A-10	Plastic 500ml - with Sulfuric Acid	<2		
DUP-05 (092414)	240-42337-B-10	Plastic 500ml - with Nitric Acid	<2		

Appendix D

Site Inspection Forms

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1150 ~~PM AM~~ Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 60°F
Barometric Pressure _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel	✓		
B. Site Security	✓		
• Access Gates		✓	gate left and unlocked
• Fence Integrity	✓	✓ BF 09/17/14	
• Fence Straight	✓	✓	
• Post Condition	✓	✓	
• Signs	✓	✓	
• Locks	✓		Site lock and 20-35 on gate
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Stressed Vegetation	✓		
• Cracks	✓		
• Burrowing Animals	✓		
• Erosion	✓		
• Settlement	✓		

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
• Water Ponding	✓		No water ponding.
• Protruding Objects	✓		
• Undesirable Growth	✓		No major undesirable growth
• Slope Movement	✓		
D. Leachate Breakouts	✓		
• Area Locations	✓		
• Entering Surface Water	✓		
E. Surface Water Drainage System	✓		All surface water drainage system components in great shape
• Exposed Clay Barrier	✓		
• Drainage Swales	✓		
• Culverts	✓		
• Downchutes	✓		
• Primary Sedimentation Basin	✓		
• Bank Erosion	✓		
• Silt Levels	✓		
• Berms	✓		
F. Ground-Water Monitoring System	✓		
• Casing	✓		
• Locks	✓		
• Bollards	✓		
• Surface Seal	✓		

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
G. Surface Water Monitoring System	✓		Great condition
H. Gas Management System	✓		
• Vent Condition	✓		
• Detectable Odor	✓		NO odor
• Surface Seal	✓		
I. Overall Site Appearance	✓		overall site appearance good.
J. Wetlands	✓		wetlands are wet, standing water, tall vegetation

SMI TYPE III LANDFILL
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1050 ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain No
Snow No
Temperature 60F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road			Considerable encroachment of vegetation onto road
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel	✓		
B. Site Security			
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		Well 107WT, left open w/o j-plug
C. Vegetative Cover			
• Bare Spots	✓		
• Stressed Vegetation	✓		
• Cracks	✓		
• Burrowing Animals	✓		
• Erosion	✓		
• Settlement	✓		Overall site appearance good, moderate overgrowth of vegetation

SMI TYPE III LANDFILL
INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
• Water Ponding	✓		
• Protruding Objects	✓		
• Undesirable Growth	✓	~~✓~~ BFO 09/17/14	
• Slope Movement	✓		
D. Leachate Breakouts	✓		
• Area Locations	✓		
• Entering Surface Water	✓		
E. Surface Water Drainage System	✓		
• Exposed Clay Barrier	✓		
• Drainage Swales	✓		
• Culverts	✓		
• Downchutes	✓		
• Primary Sedimentation Basin	✓		
• Bank Erosion	✓		
• Silt Levels	✓		
• Berms	✓		
F. Overall Site Appearance	✓		Overall site in good condition, main issue is vegetation in the road.

SMI River Berm Area
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1110 ~~PM~~ AM Time Departed: _____PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature ~60F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel (at least 6 inches on the road)	✓		
B. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Erosion	✓		

SMI Plant Inspection Form
(Former CTC Parking Lot, I27.7, Melting Department, or Parking Lot North of Buffer Basin)
INSPECTION FORM

Inspection Date: 9/17/14

Plant Area: Parking Lot North of Buffer Basin

Time Arrived: _____ ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 60 F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
B. Vegetative Cover or Paved Cover	✓		Slight overgrowth of vegetation
• Bare Spots	✓		
• Erosion	✓		

Former Railyard Area
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1120 ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 55F,
Barometric Pressure _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel (at least 6 inches on the road)	✓		
B. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		privacy tarps are down.
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Erosion	✓		

Appendix D

Site Inspection Forms

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1150 ~~PM AM~~ Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 60°F
Barometric Pressure _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel	✓		
B. Site Security	✓		
• Access Gates		✓	gate left and unlocked
• Fence Integrity	✓	✓ BF 09/17/14	
• Fence Straight	✓	✓	
• Post Condition	✓	✓	
• Signs	✓	✓	
• Locks	✓		Site lock and 20-35 on gate
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Stressed Vegetation	✓		
• Cracks	✓		
• Burrowing Animals	✓		
• Erosion	✓		
• Settlement	✓		

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
• Water Ponding	✓		No water ponding.
• Protruding Objects	✓		
• Undesirable Growth	✓		No major undesirable growth
• Slope Movement	✓		
D. Leachate Breakouts	✓		
• Area Locations	✓		
• Entering Surface Water	✓		
E. Surface Water Drainage System	✓		All surface water drainage system components in great shape
• Exposed Clay Barrier	✓		
• Drainage Swales	✓		
• Culverts	✓		
• Downchutes	✓		
• Primary Sedimentation Basin	✓		
• Bank Erosion	✓		
• Silt Levels	✓		
• Berms	✓		
F. Ground-Water Monitoring System	✓		
• Casing	✓		
• Locks	✓		
• Bollards	✓		
• Surface Seal	✓		

GREEN POINT LANDFILL
POST-CLOSURE INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
G. Surface Water Monitoring System	✓		Great condition
H. Gas Management System	✓		
• Vent Condition	✓		
• Detectable Odor	✓		NO odor
• Surface Seal	✓		
I. Overall Site Appearance	✓		overall site appearance good.
J. Wetlands	✓		wetlands are wet, standing water, tall vegetation

SMI TYPE III LANDFILL
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1050 ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain No
Snow No
Temperature 60F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road			Considerable encroachment of vegetation onto road
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel	✓		
B. Site Security			
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		Well 107WT, left open w/o j-plug
C. Vegetative Cover			
• Bare Spots	✓		
• Stressed Vegetation	✓		
• Cracks	✓		
• Burrowing Animals	✓		
• Erosion	✓		
• Settlement	✓		Overall site appearance good, moderate overgrowth of vegetation

SMI TYPE III LANDFILL
INSPECTION FORM

Inspection Date: _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
• Water Ponding	✓		
• Protruding Objects	✓		
• Undesirable Growth	✓	~~✓~~ BFO 09/17/14	
• Slope Movement	✓		
D. Leachate Breakouts	✓		
• Area Locations	✓		
• Entering Surface Water	✓		
E. Surface Water Drainage System	✓		
• Exposed Clay Barrier	✓		
• Drainage Swales	✓		
• Culverts	✓		
• Downchutes	✓		
• Primary Sedimentation Basin	✓		
• Bank Erosion	✓		
• Silt Levels	✓		
• Berms	✓		
F. Overall Site Appearance	✓		Overall site in good condition, main issue is vegetation in the road.

SMI River Berm Area
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1110 ~~PM~~ AM Time Departed: _____PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature ~60F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel (at least 6 inches on the road)	✓		
B. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Erosion	✓		

SMI Plant Inspection Form
(Former CTC Parking Lot, I27.7, Melting Department, or Parking Lot North of Buffer Basin)
INSPECTION FORM

Inspection Date: 9/17/14

Plant Area: Parking Lot North of Buffer Basin

Time Arrived: _____ ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 60 F
Barometric Pressure

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
B. Vegetative Cover or Paved Cover	✓		Slight overgrowth of vegetation
• Bare Spots	✓		
• Erosion	✓		

Former Railyard Area
INSPECTION FORM

Inspection Date: 9/17/14

Time Arrived: 1120 ~~PM~~ AM Time Departed: _____ PM

Inspectors: B. O'Leary
J. Ness

Weather Conditions
Rain None
Snow None
Temperature 55F,
Barometric Pressure _____

Inspection Items	Site/Area Condition		Comments
	Satisfactory	Unsatisfactory	
A. Site Access Road	✓		
• Erosion/Washout/Settlement	✓		
• Sufficient Gravel (at least 6 inches on the road)	✓		
B. Site Security	✓		
• Access Gates	✓		
• Fence Integrity	✓		privacy tarps are down.
• Fence Straight	✓		
• Post Condition	✓		
• Signs	✓		
• Locks	✓		
C. Vegetative Cover	✓		
• Bare Spots	✓		
• Erosion	✓		