

**GROUNDWATER PERFORMANCE  
MONITORING REPORT**

**June 2016 Sampling**

**ROTH BROS. SMELTING CORP.  
CORRECTIVE ACTION MANAGEMENT UNIT (CAMU)**

**Prepared For:  
Metalico Aluminum Recovery, Inc.  
6223 Thompson Road  
P.O. Box 88  
East Syracuse, New York 13057**

**Prepared By:  
Barton & Loguidice, D.P.C.  
443 Electronics Parkway  
Liverpool, New York 13088**



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*Engineers • Environmental Scientists • Planners • Landscape Architects*

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## 1.0 INTRODUCTION

This report presents the results of the June 2016 groundwater monitoring performed at the Corrective Action Management Unit (CAMU) located at the former Wabash Aluminum Alloys, LLC (Wabash) facility located at 6223 Thompson Road, East Syracuse, Onondaga County, New York (Site). The Plant #2 portion of the site is now owned by Metalico Syracuse Realty, Inc. (MSR), and Thompson Corners, LLC owns the Plant #1 portion of the Site.

Metalico Aluminum Recovery, Inc. (MARI) currently operates a scrap metal recycling facility and a secondary aluminum smelting operation at the MSR portion of the site. By agreement with Wabash, MARI assumed “Wabash’s obligations to conduct ongoing environmental monitoring and testing at the Site” under a Consent Order with the New York State Department of Environmental Conservation (NYSDEC) that was entered into by Roth Bros. Smelting Corp. (Index # C7-0001-94-10), the owner of the Site at the time the CAMU was constructed. To satisfy this contractual obligation, MARI retained Barton & Loguidice, D.P.C., to prepare this report.

This report has been prepared in accordance with the site Operations and Maintenance Plan (Malcolm Pirnie, 1997) and the subsequent Sampling & Analysis Plan revisions [Appendix D to the Operations and Maintenance Plan] as a result of letter correspondence with NYSDEC in 2002, and the approval letter from NYSDEC in April 2011.

On June 28, 2016 personnel from Barton & Loguidice, D.P.C. (B&L) collected samples of the eight (8) monitoring well locations that comprise the CAMU active monitoring network. All samples were submitted to ALS Environmental (ALS) in Rochester, New York for analysis.

Three locations (B402R, B403, and MW-8R) exhibited results from the June 2016 sampling event that were not consistent with historical results. In response, B&L conducted confirmatory sampling of these three wells on August 4, 2016 and submitted the samples to TestAmerica Laboratories (TAL) in Amherst, New York for analysis.

Figure 1 shows the location of the Plant #1 and Plant #2 properties. The asphalt-paved CAMU area is located north of Plant #2. The monitoring locations associated with the CAMU groundwater performance monitoring, are included on Figure 1.

Groundwater sampling was performed on a quarterly basis prior to June 2005 after which semi-annual monitoring was performed through 2010. Beginning with the June 2011 monitoring event, sampling is now performed on an annual basis in June of each year. This report addresses the data generated from the June and August 2016 monitoring.

## 2.0 CAMU GROUNDWATER PERFORMANCE MONITORING

### 2.1 Monitoring Well Inspection

The following monitoring wells are sampled as part of the CAMU Groundwater Monitoring Performance Program (see Figure 1):

B291	B281	B290	B401
B402R	B403	B404	MW-8R

Over the course of time, several CAMU monitoring wells have been inadvertently damaged, destroyed, or needed maintenance including:

- Monitoring well B280, formerly located north of the CAMU, was destroyed in September 2000. Based on its adjacent location, monitoring well B291 replaced monitoring well B280.
- Between the June 2004 and September 2004 sampling events, monitoring well B402 was destroyed. Monitoring well B402R was installed in November 2005 and began to be sampled for the December 2005 sampling event. The destroyed well (B402) was properly decommissioned using a rotary drilling rig on April 24, 2007.
- Monitoring well MW-8, installed as part of the 2001 Groundwater Investigation, was destroyed during construction of scrap yard improvements. Subsequently, monitoring well MW-8R was installed adjacent to the MW-8 location for inclusion in the CAMU Groundwater Performance Monitoring Program. The wellhead for monitoring well MW-8R was replaced on April 24, 2007 due to deterioration as the flush mounted well was set in a high traffic working area.
- On April 24, 2007 the area surrounding well B291 was cleared of vegetation, and the existing damaged flush-mounted well cover was removed and replaced with a stick-up-type protective casing installed in a concrete base. The wellhead was vertically surveyed relative to well B402R, with the new reference elevation being calculated at 410.86. A new, lockable well plug was installed in the well opening.
- In an effort to avoid further well damage or loss prior to the December 2008 sampling event, all of the facility monitoring wells were painted, labeled and affixed with pole extensions and flagging. The wells were also fitted with new keyed alike locks. It was also noted that all the wells had old deteriorating polyethylene tubing dedicated to each well which is not a standard field sampling practice. All of the old tubing was removed from the wells and disposed of. New tubing for each well is now utilized during each round of sampling and then removed and disposed of properly when sampling is completed.
- In late 2012 the drainage swale piping enclosure along the east side of the CAMU was extended. The extension of this enclosure eliminated access to the open surface water and sediment monitoring locations.

B&L personnel sampled all of the required CAMU monitoring wells in June 2016 and performed confirmatory sampling of three locations in August 2016.

## **2.2 Groundwater Monitoring Work**

This section describes the field and laboratory procedures that were followed during this monitoring event. Table 1 provides a summary of the sampling frequency and the analytical parameters for each monitoring well for the CAMU groundwater monitoring program that began in 1998.

### **(a) Groundwater Contour Map**

Prior to the sampling of the groundwater monitoring wells, the static water level of each monitoring well was measured. This work was performed using an electronic water level sensor capable of measuring to an accuracy of +/- 0.01 foot. The water level probe was decontaminated between wells by washing in an Alconox/water solution and rinsing with distilled water.

Figure 1 presents a groundwater contour map that reflects the water level data, which is set forth in Table 2. Table 2 also includes historical water level data for prior groundwater sampling events.

The contour map indicates that the general groundwater flow direction at the Site is to the northeast toward the South Branch of Ley Creek. This finding is consistent with historical groundwater contour data.

### **(b) Groundwater Sampling & Analysis**

Each of the monitoring wells was purged prior to sampling. Water surface elevations and field parameters (pH and Specific Conductance) were measured immediately prior to sample collection.

Purging of monitoring wells was performed with disposable bailers until a minimum of three (3) well volumes were removed or until the well went dry. After the monitoring wells were allowed to recharge overnight groundwater samples were collected using a low-flow peristaltic pump with new non-dedicated tubing at each location.

Collected samples were placed into clean coolers and kept on ice at 4°C until delivery to the laboratory for analysis.

Appendix A includes the field sampling data sheets and chain of custody records associated with this round of sampling.

### **(c) Monitoring Results**

Appendix B contains the analytical laboratory reports prepared by ALS (New York NELAC Laboratory I.D. # 10145) and TAL (New York NELAC Laboratory I.D. # 10026). Table 3 provides an historical summary of the analytical groundwater data for this project, including the

results of the June and August 2016 groundwater monitoring. Data are highlighted, as appropriate, to indicate detected concentrations that exceed the following NYSDEC Class GA Groundwater Standards:

<u>Parameter</u>	<u>Class GA Standard</u>
pH	6.5 – 8.5 Std. Units
Lead	0.025 mg/L
Arsenic	0.025 mg/L
Aroclor 1016	0.09 ug/L*
Aroclor 1221	0.09 ug/L*
Aroclor 1232	0.09 ug/L*
Aroclor 1242	0.09 ug/L*
Aroclor 1248	0.09 ug/L*
Aroclor 1254	0.09 ug/L*
Aroclor 1260	0.09 ug/L*
Aroclor 1262	0.09 ug/L*
Aroclor 1268	0.09 ug/L*

Notes: \*Limit applies to sum of all Aroclors

The results of the June and August 2016 sampling events indicate that the groundwater quality conditions at the CAMU have remained generally consistent since the last monitoring event and appear to correspond with historical groundwater quality data. The following sections summarize the analytical data collected during this sampling event:

**pH** – The Class GA standard for pH was not exceeded within any monitoring location.

**PCBs** – During the June 2015 monitoring event MW-8R exceeded the NYSDEC Class GA groundwater standard for Aroclor 1254 with a concentration of 130 ug/L. Monitoring locations B402R and B403 exhibited detections of Aroclor 1242 (0.082 ug/L) and Aroclor 1254 (0.085 ug/L) respectively at concentrations below the Class GA Standard of 0.09 ug/L. Confirmatory re-sampling of PCBs within monitoring wells MW-8R, B402R, and B403 took place on August 4, 2016.

The August MW-8R results exhibited Aroclor 1254 at a concentration (76 ug/L) that was approximately half of the June result. Monitoring wells B402R and B403 did not demonstrate any PCB detections during the August monitoring event.

It should be noted that MW-8R which has a very slow recharge rate is a flush mounted surface well located in a high traffic / working area of the facility upgradient of the CAMU. The well is located directly adjacent to a former used engine block storage area and is also near a former facility transformer location that has long since been removed by a prior owner. The well seal has previously been reported as compromised and the integrity of the well screen has also been reported as a concern based on the inflow of gravel and debris observed in the purge water. Attempts will be made to sample this well again in the first quarter of 2017. No other PCB detections were reported for the June 2016 monitoring event.

**Specific Conductivity** – Monitoring location MW-8R continued to exhibit elevated specific conductivity result during the 2016 monitoring event. No Class GA standard for specific conductivity is currently established. Historically, salts used in various processes at the plant were stockpiled in a storage bay immediately adjacent to flush mounted MW-8R monitoring well. It is suspected that surface contamination likely infiltrated the flush mounted well in the high traffic area resulting in elevated conductivity readings. The surface seal and well cover should be replaced at this monitoring well. Alternatively, consideration should be given that this well be pressure grouted and decommissioned to prevent further influence from operational surface contamination. Again, MW-8R is upgradient from the CAMU and not needed as a monitoring well.

**Total & Dissolved Lead** – Total and dissolved lead were not detected within any monitoring wells during the June 2016 monitoring event.

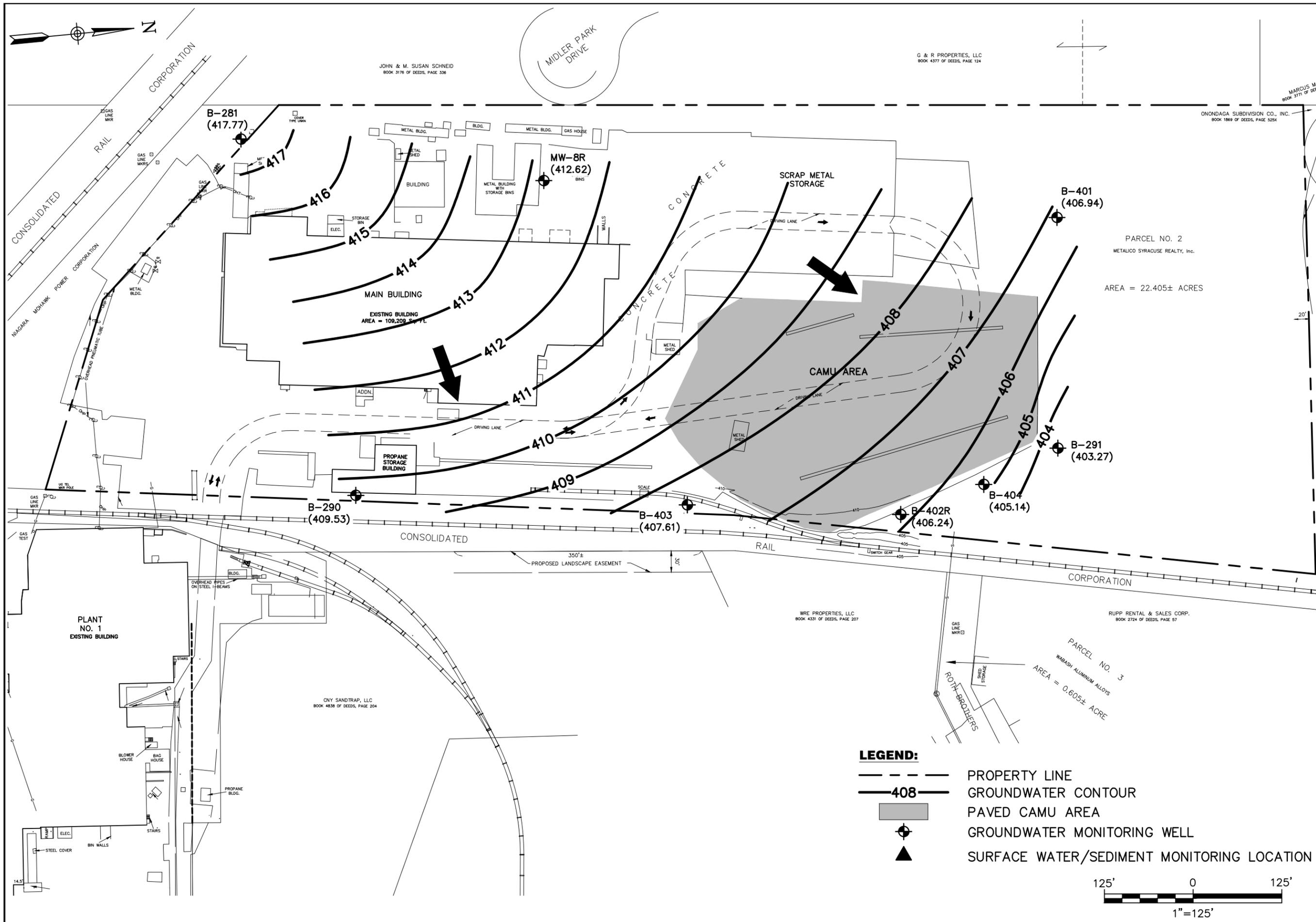
During the August re-sampling event total lead was detected within B402R (0.004 mg/L) at a concentration below the Class GA standard of 0.025 mg/L, and MW-8R exhibited Class GA exceedances of both total lead (0.130 mg/L) and dissolved lead (0.065 mg/L). Total lead has previously been detected within MW-8R as indicated in the historical data included in Table 3.

**Total & Dissolved Arsenic** – The Class GA standard of 0.025 mg/L for total arsenic was exceeded within monitoring well B290 (total arsenic 0.034 mg/L) during the June 2015 monitoring event; however, dissolved arsenic was not detected. The MW-8R June results for total arsenic (0.039 mg/L) and dissolved arsenic (0.036 mg/L) both exceeded the Class GA standard. No arsenic was detected within any of the remaining monitoring wells during the June 2016 sampling event.

During the August 2016 re-sampling event B402R exhibited a detection of total arsenic at a concentration (0.010 mg/L) below the Class GA standard and dissolved arsenic was not detected. The MW-8R August results for total arsenic (0.060 mg/L) and dissolved arsenic (0.058 mg/L) both exceeded the Class GA standard. Due to the slow groundwater recharge, turbidity values are repeatedly difficult to deal with during field purging of the wells.

## **Figures**

Plotted: Sep 08, 2015 - 1:21PM SYR By: jgs2  
 I:\Shared\1200\1206002\1206002\_CW CONTS\_JULY 2015.dwg



- LEGEND:**
- PROPERTY LINE
  - 408 GROUNDWATER CONTOUR
  - PAVED CAMU AREA
  - GROUNDWATER MONITORING WELL
  - SURFACE WATER/SEDIMENT MONITORING LOCATION



METALICO ALUMINUM RECOVERY, INC.  
 FACILITY NO. 7102372

**JUNE 2015  
 GROUNDWATER CONTOUR MAP**

ONONDAGA COUNTY, NEW YORK

EAST SYRACUSE



Date  
 SEPTEMBER 2015

Scale  
 1" = 125'

Figure Number  
 1

Project Number  
 1206.002

# Tables

**Table 1**  
**ROTH BROS. SMELTING CORP.**  
**Corrective Action Management Unit (CAMU)**  
**Monitoring Schedule**

<b>Sampling Frequency</b>	<b>Parameter</b>	<b>Analytical Method</b>	<b>MDL</b>	<b>Well Location</b>
Annual (June)	Arsenic (Total and Dissolved)	EPA Method 6010	3 ug/L	B281
	Lead (Total and Dissolved)		5 ug/L	B290
	PCB's	EPA Method 8082	0.050 ug/L	B291 B401 B402R B403 B404 MW-8R

**Table 2**  
**ROTH BROS. SMELTING CORP.**  
**Corrective Action Management Unit (CAMU)**  
**Groundwater Performance Monitoring**  
**Groundwater Elevation Summary Table**

Page 1 of 2

Monitoring Well	<b>B281</b>		<b>B290</b>		<b>B291</b>		<b>B401</b>	
WELL DEPTH (FT):	13.03		10.26		12.54		13.03	
REFERNCE ELEVATION:	423.39		414.61		410.86		413.54	
DATE	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL
27-Jun-16	416.09	7.30	409.33	5.28	401.80	9.06	404.41	9.13
25-Jun-15	417.77	5.62	409.53	5.08	403.27	7.59	406.94	6.60
10-Jun-14	417.39	6.00	409.52	5.09	402.73	8.13	406.14	7.40
13-Jun-13	419.88	3.51	410.23	4.38	405.34	5.52	408.43	5.11
18-Jun-12	417.31	6.08	409.25	5.36	402.37	8.49	405.11	8.43
22-Jun-11	419.27	4.12	409.71	4.90	403.35	7.51	405.50	8.04
29-Dec-10	418.82	4.57	409.63	4.98	404.14	6.72	407.42	6.12
23-Jun-10	419.53	3.86	409.69	4.92	404.81	6.05	407.79	5.75
16-Dec-09	419.28	4.11	409.71	4.90	403.95	6.91	408.48	5.06
29-Jun-09	413.75	9.64	409.50	5.11	403.53	7.33	406.84	6.70
18-Dec-08	419.31	4.08	409.63	4.98	404.43	6.43	408.39	5.15
05-Jun-08	417.18	6.21	404.35	10.26	403.72	7.14	404.62	8.92
31-Dec-07	416.66	6.73	409.77	4.84	404.73	6.13	408.33	5.21
29-Jun-07	416.44	6.95	410.38	4.23	401.96	8.90	404.83	8.71
19-Dec-06	420.25	3.14	409.57	5.04	404.43	6.43	407.30	6.24

**Table 2**  
**ROTH BROS. SMELTING CORP.**  
**Corrective Action Management Unit (CAMU)**  
**Groundwater Performance Monitoring**  
**Groundwater Elevation Summary Table**

Page 2 of 2

Monitoring Well	<b>B402R</b>		<b>B403</b>		<b>B404</b>		<b>8R</b>	
WELL DEPTH (FT):	12.24		11.26		16.14		10.00	
REFERNCE ELEVATION:	409.44		411.05		410.77		415.30	
DATE	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL
27-Jun-16	405.04	4.40	406.74	4.31	403.89	6.88	411.31	3.99
25-Jun-15	406.24	3.20	407.61	3.44	405.14	5.63	412.62	2.68
10-Jun-14	405.98	3.46	407.37	3.68	405.14	5.63	412.21	3.09
13-Jun-13	406.69	2.75	408.26	2.79	408.37	2.40	412.95	2.35
18-Jun-12	405.03	4.41	406.95	4.10	404.33	6.44	412.46	2.84
22-Jun-11	405.73	3.71	407.94	3.11	406.08	4.69	412.54	2.76
29-Dec-10	406.64	2.80	407.98	3.07	406.73	4.04	412.18	3.12
23-Jun-10	406.62	2.82	408.23	2.82	407.84	2.93	412.64	2.66
16-Dec-09	406.64	2.80	408.11	2.94	407.56	3.21	411.92	3.38
29-Jun-09	406.46	2.98	408.05	3.00	406.66	4.11	412.72	2.58
18-Dec-08	406.81	2.63	407.91	3.14	406.92	3.85	412.59	2.71
05-Jun-08	405.56	3.88	407.42	3.63	405.42	5.35	411.88	3.42
31-Dec-07	406.97	2.47	408.08	2.97	407.27	3.50	412.45	2.85
29-Jun-07	405.32	4.12	407.20	3.85	404.27	6.50	411.93	3.37
19-Dec-06	405.47	3.97	408.01	3.04	406.76	4.01	412.00	3.30

**Table 3**  
**ROTH BROS. SMELTING CORP.**  
**Corrective Action Management Unit (CAMU)**  
**Groundwater Performance Monitoring**  
**Historical Laboratory Analytical Summary Table (Monitoring Well 8R)**

	Total Arsenic	Dissolved Arsenic	Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors									
							1016	1221	1232	1242	1248	1254	1260	1262	1268	
Units	mg/L	mg/L	mg/L	mg/L	s.u.	us/cm	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
Class GA Standard	0.025	0.025	0.025	0.025	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	
8R	Sep-02	-	-	0.004	0.001	9.21	933	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-02	-	-	0.002	-	9.62	567	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.60	< 0.05	-	-
	Mar-03	-	-	0.001	0.002	8.82	551	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.30	< 0.05	-	-
	Jun-03	-	-	0.002	0.002	8.59	726	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.25	< 0.05	-	-
	Sep-03	-	-	0.002	< 0.001	8.05	441	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	5.90	< 0.05	-	-
	Dec-03	-	-	0.004	0.002	8.37	576	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	3.60	< 0.05	-	-
	Mar-04	-	-	0.002	< 0.001	7.91	531	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.60	< 0.05	-	-
	Jun-04	-	-	0.002	< 0.001	8.06	332	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.32	< 0.05	-	-
	Sep-04	-	-	< 0.001	0.002	7.14	811	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	-	-
	Dec-04	-	-	0.009	< 0.001	7.36	996	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.98	< 0.05	-	-
	Mar-05	-	-	< 0.001	< 0.001	7.76	1158	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.20	< 0.05	-	-
	Jun-05	-	-	0.002	0.001	8.00	402	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	3.30	< 0.05	-	-
	Dec-05	-	-	0.001	0.001	7.67	893	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.63	< 0.05	-	-
	Jun-06	-	-	0.004	< 0.003	8.39	239	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.92	< 0.05	-	-
	Dec-06	-	-	0.210	< 0.003	7.46	549	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	9.30	< 0.05	-	-
	Jun-07	-	-	0.006	< 0.003	8.48	449	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	3.90	< 0.05	-	-
	Dec-07	-	-	< 0.003	< 0.003	8.47	1113	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	0.70	< 1.00	-	-
	Jun-08	-	-	0.210	< 0.003	7.81	1459	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	6.40	< 0.05	-	-
	Dec-08	-	-	< 0.003	< 0.003	7.68	2668	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Jun-09	-	-	< 0.003	< 0.003	7.30	780	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	16.00	< 1.00	< 1.00	< 1.00
	Dec-09	-	-	< 0.003	< 0.003	7.10	1010	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	6.90	< 1.10	< 1.10	< 1.10
	Jun-10	-	-	< 0.003	< 0.003	7.40	22	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	9.20	< 2.00	-	-
	Dec-10	-	-	< 0.003	< 0.003	7.40	11200	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	1.70 J	< 1.00	-	-
	Jun-11	0.013	0.013	< 0.003	< 0.003	7.10	10400	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	23.00	< 10.00	< 10.00	< 10.00
	Jun-12	0.016	0.012	< 0.050	< 0.050	6.90	15300	-	-	-	< 0.47	< 0.47	15.00	< 0.47	-	-
	Aug-12	0.016	< 0.010	< 0.050	< 0.050	6.90	12500	< 0.05	< 0.05	< 0.05	< 0.47	0.80	1.30	0.18 P	-	-
Jun-13	< 0.010	0.016	< 0.050	< 0.050	6.46	> 20000	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	4.30	< 0.24	-	-	
Jun-14	0.018	0.030	< 0.050	< 0.050	6.60	720000	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	4.30	< 0.24	-	-	
Jun-15	< 0.100	< 0.500	< 0.100	< 0.500	7.50	>20000	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	620.00	< 0.24	-	-	
Sep-15	-	-	-	-	-	-	< 0.47	< 0.50	< 0.47	< 0.47	1.1 P	6.40	< 0.47	-	-	
Jun-16	0.039	0.036	< 0.100	< 0.500	6.70	>20000	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	130.00	< 0.24	-	-	
Aug-16	0.060	0.058	0.130	0.065	6.70	13100	< 50.00	< 50.00	< 50.00	< 50.00	< 50.00	76.00	< 50.00	-	-	

# **Appendix A**



FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road
CLIENT: Metalico Aluminum Recovery, Inc.
Weather Conditions: Partly Cloudy

SAMPLE LOCATION: B-281 (MS/MSD)
JOB #: 1206.002.007
Temperature: 79°F

SAMPLE TYPE: Groundwater [X] Surface Water [ ] Other (specify):
Sediment [ ] Leachate [ ]

WATER LEVEL DATA

Table with 2 columns: Parameter and Value. Rows include Static Water Level (7.30), Measured Well Depth (13.03), Well Casing Diameter (2), and Calculated Volume in Well Casing (0.92).

Measuring Point: Top of Riser
Measured by: MPS
Date: 06/27/16
Time: 13:25

\*depth from measuring point

PURGING METHOD

Equipment: Bailer [X] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [ ]
Dedicated [ ] Bladder Pump [ ]

Calculated Volume Of Water To Be Purged (gallons): 2.76
Actual Volume of Water Purged (gallons): 2.25

Did well purge dry? No [ ] Yes [X]
Did well recover? No [ ] Yes [X]
Recovery Time: Overnight

SAMPLING METHOD

Equipment: Bailer [ ] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [X]
Dedicated [ ] Bladder Pump [ ]

Sampled by: MPS/NCM Time: 9:27 Date: 06/28/16

SAMPLING DATA

Sample Appearance
Color: Clear Sediment: None
Odor: None

Field Measured Parameters

Table with 4 columns: Parameter, Value, Parameter, Value. Rows include pH (6.9), Sp. Conductivity (350), Temperature (66.5), Eh-Redox Potential (80), Turbidity (8.1), and Dissolved Oxygen.

Samples Collected (Number/Type):
Six bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: Date:

COMMENTS:



**FIELD SAMPLING DATA SHEET**

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road  
 CLIENT: Metalico Aluminum Recovery, Inc.  
 Weather Conditions: Light Sun

SAMPLE LOCATION: B-290  
 JOB #: 1206.002.007  
 Temperature: 77°F

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
 Sediment  Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	<u>5.28</u>
Measured Well Depth (feet)*:	10.26
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	<u>0.30</u>

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 06/27/16  
 Time: 1:34

\*depth from measuring point

**PURGING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 2.40  
 Actual Volume of Water Purged (gallons): 1.25

Did well purge dry? No  Yes   
 Did well recover? No  Yes  Recovery Time: Overnight

**SAMPLING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Sampled by: MPS/NCM Time: 10.13 Date: 06/28/16

**SAMPLING DATA**

Sample Appearance  
 Color: Brown Tint Sediment: None  
 Odor: None

**Field Measured Parameters**

pH (Standard Units)	<u>7.1</u>	Sp. Conductivity (umhos/cm)	<u>270</u>
Temperature (F)	<u>77.4</u>	Eh-Redox Potential (mV)	<u>-24</u>
Turbidity (NTUs)	<u>47.6</u>	Dissolved Oxygen (mg/L)	<u>-</u>

Samples Collected (Number/Type):  
 Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS:**



FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road
CLIENT: Metalico Aluminum Recovery, Inc.
Weather Conditions: Sunny

SAMPLE LOCATION: B-291
JOB #: 1206.002.007
Temperature: 78°F

SAMPLE TYPE: Groundwater [X] Surface Water [ ] Other (specify):
Sediment [ ] Leachate [ ]

WATER LEVEL DATA

Table with 2 columns: Parameter and Value. Rows include Static Water Level (feet)\*: 9.06, Measured Well Depth (feet)\*: 12.54, Well Casing Diameter (inches): 2, Calculated Volume in Well Casing (gallons): 0.56

Measuring Point: Top of Riser
Measured by: MPS
Date: 06/27/16
Time: 14:25

\*depth from measuring point

PURGING METHOD

Equipment: Bailer [X] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [ ]
Dedicated [ ] Bladder Pump [ ]

Calculated Volume Of Water To Be Purged (gallons): 1.68
Actual Volume of Water Purged (gallons): 0.65

Did well purge dry? No [ ] Yes [X]
Did well recover? No [ ] Yes [X]
Recovery Time: Over night

SAMPLING METHOD

Equipment: Bailer [ ] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [X]
Dedicated [ ] Bladder Pump [ ]

Sampled by: MPS/NCM Time: 12:48 Date: 06/28/16

SAMPLING DATA

Sample Appearance
Color: Clear Sediment: None
Odor: None

Field Measured Parameters

Table with 4 columns: Parameter, Value, Parameter, Value. Rows include pH (Standard Units): 7.1, Sp. Conductivity (umhos/cm): 1070, Temperature (F): 61.7, Eh-Redox Potential (mV): 55, Turbidity (NTUs): 8.12, Dissolved Oxygen (mg/L): .

Samples Collected (Number/Type):
Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: Date:

COMMENTS:



FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road
CLIENT: Metalico Aluminum Recovery, Inc.
Weather Conditions: Sunny

SAMPLE LOCATION: B-401
JOB #: 1206.002.007
Temperature: 78 F

SAMPLE TYPE: Groundwater [X] Surface Water [ ] Other (specify):
Sediment [ ] Leachate [ ]

WATER LEVEL DATA

Table with 2 columns: Parameter and Value. Rows include Static Water Level (feet)\*: 9.13, Measured Well Depth (feet)\*: 28.03 / 11.34, Well Casing Diameter (inches): 2, Calculated Volume in Well Casing (gallons): 0.62

Measuring Point: Top of Riser
Measured by: MPS
Date: 06/27/16
Time: 14:12

\*depth from measuring point

PURGING METHOD

Equipment: Bailer [X] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [ ]
Dedicated [ ] Bladder Pump [ ]

Calculated Volume Of Water To Be Purged (gallons): 7.86 / 1.05
Actual Volume of Water Purged (gallons): 0.35

Did well purge dry? No [ ] Yes [X]
Did well recover? No [ ] Yes [X]

Recovery Time: overnight

SAMPLING METHOD

Equipment: Bailer [ ] Submersible Pump [ ] Air Lift System [ ]
Non-dedicated [X] Foot Valve [ ] Peristaltic Pump [X]
Dedicated [ ] Bladder Pump [ ]

Sampled by: MPS/NCM Time: 11:10 Date: 06/28/16

SAMPLING DATA

Sample Appearance
Color: Clear Sediment: None
Odor: None

Field Measured Parameters

Table with 4 columns: Parameter, Value, Parameter, Value. Rows include pH (Standard Units): 6.9, Sp. Conductivity (umhos/cm): 1190, Temperature (F): 61.4, Eh-Redox Potential (mV): 85, Turbidity (NTUs): 4.67, Dissolved Oxygen (mg/L): .

Samples Collected (Number/Type):

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: Date:

COMMENTS:



**FIELD SAMPLING DATA SHEET**

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road  
 CLIENT: Metalico Aluminum Recovery, Inc.  
 Weather Conditions: Sunny

SAMPLE LOCATION: B-402R / ~~11/26/16~~  
 JOB #: 1206.002.007  
 Temperature: 80F

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
 Sediment  Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	<u>440</u>
Measured Well Depth (feet)*:	<u>12.24</u>
Well Casing Diameter (inches):	<u>2</u>
Calculated Volume in Well Casing (gallons):	<u>1.25</u>

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 06/27/16  
 Time: 15:07

\*depth from measuring point

**PURGING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 3.75  
 Actual Volume of Water Purged (gallons): 2.00

Did well purge dry? No  Yes   
 Did well recover? No  Yes  Recovery Time: Overnight

**SAMPLING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Sampled by: MPS/NCA Time: 13:38 Date: 06/28/16

**SAMPLING DATA**

Sample Appearance  
 Color: Clear Sediment: None  
 Odor: None

**Field Measured Parameters**

pH (Standard Units)	<u>7.7</u>	Sp. Conductivity (umhos/cm)	<u>250</u>
Temperature (F)	<u>61.4</u>	Eh-Redox Potential (mV)	<u>85</u>
Turbidity (NTUs)	<u>19.1</u>	Dissolved Oxygen (mg/L)	<u>-</u>

**Samples Collected (Number/Type):**

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS:**



# FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road  
CLIENT: Metalico Aluminum Recovery, Inc.  
Weather Conditions: Sunny

SAMPLE LOCATION: B-403  
JOB #: 1206.002.007  
Temperature: 78°F

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
Sediment  Leachate

### WATER LEVEL DATA

Static Water Level (feet)*:	<u>4.31</u>
Measured Well Depth (feet)*:	<u>11.26</u>
Well Casing Diameter (inches):	<u>.2</u>
Calculated Volume in Well Casing (gallons):	<u>1.11</u>

Measuring Point: Top of Riser  
Measured by: MPS  
Date: 06/28/16  
Time: 13:53

\*depth from measuring point

### PURGING METHOD

Equipment: Bailer  Submersible Pump  Air Lift System   
Non-dedicated  Foot Valve  Peristaltic Pump   
Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 3.33

Actual Volume of Water Purged (gallons): 1.05

Did well purge dry? No  Yes   
Did well recover? No  Yes  Recovery Time: Overnight

### SAMPLING METHOD

Equipment: Bailer  Submersible Pump  Air Lift System   
Non-dedicated  Foot Valve  Peristaltic Pump   
Dedicated  Bladder Pump

Sampled by MPS / WCM Time: 10:37 Date: 06/28/16

### SAMPLING DATA

Sample Appearance  
Color: Clear Sediment: None  
Odor: None

### Field Measured Parameters

pH (Standard Units)	<u>7.1</u>	Sp. Conductivity (umhos/cm)	<u>960</u>
Temperature (F)	<u>65.6</u>	Eh-Redox Potential (mV)	<u>30</u>
Turbidity (NTUs)	<u>10.31</u>	Dissolved Oxygen (mg/L)	<u>-</u>

### Samples Collected (Number/Type):

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

### COMMENTS:



FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road
CLIENT: Metalico Aluminum Recovery, Inc.
Weather Conditions: Sunny

SAMPLE LOCATION: B-404
JOB #: 1206.002.007
Temperature: 78F

SAMPLE TYPE: Groundwater [X], Surface Water [ ], Sediment [ ], Leachate [ ], Other (specify):

WATER LEVEL DATA

Table with 2 columns: Parameter and Value. Rows include Static Water Level (6.88), Measured Well Depth (16.14), Well Casing Diameter (2), and Calculated Volume in Well Casing (1.48).

Measuring Point: Top of Riser
Measured by: MPS
Date: 06/27/06
Time: 14:48

PURGING METHOD

Equipment: Bailer [X], Non-dedicated [X], Dedicated [ ], Submersible Pump [ ], Foot Valve [ ], Bladder Pump [ ], Air Lift System [ ], Peristaltic Pump [ ]

Calculated Volume Of Water To Be Purged (gallons): 4.44
Actual Volume of Water Purged (gallons): 4.50

Did well purge dry? No [X] Yes [ ]
Did well recover? No [ ] Yes [X]
Recovery Time: overnight

SAMPLING METHOD

Equipment: Bailer [ ], Non-dedicated [X], Dedicated [ ], Submersible Pump [ ], Foot Valve [ ], Bladder Pump [ ], Air Lift System [ ], Peristaltic Pump [X]

Sampled by: MPS/AM Time: 13.12 Date: 06/27/06

SAMPLING DATA

Sample Appearance
Color: Clear Sediment: None
Odor: None

Field Measured Parameters

Table with 4 columns: Parameter, Value, Parameter, Value. Rows include pH (7.0), Temperature (62.9), Turbidity (3.22), Sp. Conductivity (660), Eh-Redox Potential (65), and Dissolved Oxygen (-).

Samples Collected (Number/Type):

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: Date:

COMMENTS:



## FIELD SAMPLING DATA SHEET

Engineers • Environmental Scientists • Planners • Landscape Architects

**SITE:** Metalico - Thompson Road  
**CLIENT:** Metalico Aluminum Recovery, Inc.  
 Weather Conditions: Sunny

**SAMPLE LOCATION:** MW-8R (Depth) - Dye-X  
**JOB #:** 1206.002.007  
 Temperature: 80F

**SAMPLE TYPE:** Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
 Sediment  Leachate

### WATER LEVEL DATA

Static Water Level (feet)*:	3.94
Measured Well Depth (feet)*:	10.00
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	0.96

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 06/23/16  
 Time: 15:25

\*depth from measuring point

### PURGING METHOD

**Equipment:** Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 2.88

Actual Volume of Water Purged (gallons): 1.00

Did well purge dry? No  Yes

Did well recover? No  Yes

Recovery Time: Overtime

### SAMPLING METHOD

**Equipment:** Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Sampled by: MPS/NEM Time: 14:00 Date: 06/28/16

### SAMPLING DATA

Sample Appearance: \_\_\_\_\_  
 Color: Yellowish Murky Sediment: None  
 Odor: Chemical

### Field Measured Parameters

pH (Standard Units)	6.7	Sp. Conductivity (umhos/cm)	0
Temperature (F)	65.0	Eh-Redox Potential (mV)	-76
Turbidity (NTUs)	9.4 All	Dissolved Oxygen (mg/L)	-

### Samples Collected (Number/Type):

Eight bottles - T-Pb,As; D-Pb,As; PCBs (2) + Dupe-X

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

### COMMENTS:



**FIELD SAMPLING DATA SHEET**

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SITE: Metalico - Thompson Road  
CLIENT: Metalico Aluminum Recovery, Inc.  
Weather Conditions: \_\_\_\_\_

SAMPLE LOCATION: Equipment Blank  
JOB #: 1206.002.007  
Temperature: \_\_\_\_\_

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
Sediment  Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	
Measured Well Depth (feet)*:	
Well Casing Diameter (inches):	
Calculated Volume in Well Casing (gallons):	

Measuring Point: \_\_\_\_\_  
Measured by: \_\_\_\_\_  
Date: \_\_\_\_\_  
Time: \_\_\_\_\_

\*depth from measuring point

**PURGING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
Non-dedicated  Foot Valve  Peristaltic Pump   
Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): \_\_\_\_\_

Actual Volume of Water Purged (gallons): \_\_\_\_\_

Did well purge dry? No  Yes   
Did well recover? No  Yes

Recovery Time: \_\_\_\_\_

**SAMPLING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
Non-dedicated  Foot Valve  Peristaltic Pump   
Dedicated  Bladder Pump

Sampled by: MPS/ALCM Time: 15:04 Date: 06/28/16

**SAMPLING DATA**

*Sample Appearance*

Color: - \_\_\_\_\_ Sediment: - \_\_\_\_\_  
Odor: - \_\_\_\_\_

*Field Measured Parameters*

pH (Standard Units)	-	Sp. Conductivity (umhos/cm)	-
Temperature (F)	-	Eh-Redox Potential (mV)	-
Turbidity (NTUs)	-	Dissolved Oxygen (mg/L)	-

*Samples Collected (Number/Type):*

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS:**



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# Record of Calibration

Project No: 1206.002.007

Date: 06/26/15

Calibrated By: MPS/NCM

Time: 09:00

### pH Instrument Model: pH Testr 10

Standard Solution	Calibration Reading	Acceptable Range	Pass / Fail
pH 4:	4.0	(+/- 1.0 pH, pH 3.0 - 5.0)	Pass / Fail
pH 7:	6.7	(+/- 1.5 pH, pH 5.5 - 8.5)	
pH 10:	10.1	(+/- 1.0 pH, pH 9.0 - 11.0)	

### Sp. Conductivity

#### Instrument Model: EC Testr 11

Standard Solution	Calibration Reading	Acceptable Range	Pass / Fail
1413 uS	1420	(+/- 1.0 % Error = 1399-1427)	Pass / Fail

### ORP Instrument Model: ORP Testr 10

Standard Solution	Calibration Reading	Acceptable Range	Pass / Fail
220 mV	241 <i>at 74°F</i>	(+/- 5% at 25°C, 209 - 231 mV)	Pass / Fail
or YSI Zobell Soln	-	(Refer to YSI calibration table)	

### Turbidimeter Model: Micro TPI

Standard Solution	Calibration Reading	Acceptable Range	Pass / Fail
0 NTU	0.00	Blank with 0.0 NTU (0.5-1.5 NTU) (8-12 NTU)	Pass / Fail
1.0 NTU	0.94		
10 NTU	10.00		

### Methane Meter Model: NA

Standard Gas	Calibration Reading	Acceptable Range	Pass / Fail
2.50% Methane	-	(+/- 5.0% Error, 2.63-2.38% methane)	Pass / Fail

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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**FIELD SAMPLING DATA SHEET**

**SITE:** Metalico - Thompson Road      **SAMPLE LOCATION:** B-402R  
**CLIENT:** Metalico Aluminum Recovery, Inc.      **JOB #:** 1206.002.007  
**Weather Conditions:** Clear      **Temperature:** 72F  
**SAMPLE TYPE:**      Groundwater       Surface Water       Other (specify): \_\_\_\_\_  
                                  Sediment       Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	<u>5.20</u>
Measured Well Depth (feet)*:	<u>12.24</u>
Well Casing Diameter (inches):	<u>2</u>
Calculated Volume in Well Casing (gallons):	<u>1.13</u>

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 08/03/16  
 Time: 13:45

\*depth from measuring point

**PURGING METHOD**

**Equipment:**      Bailer       Submersible Pump       Air Lift System   
                                  Non-dedicated       Foot Valve       Peristaltic Pump   
                                  Dedicated       Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 3.39

Actual Volume of Water Purged (gallons): 2.00

Did well purge dry?      No       Yes   
 Did well recover?      No       Yes

Recovery Time: Overnight

**SAMPLING METHOD**

**Equipment:**      Bailer       Submersible Pump       Air Lift System   
                                  Non-dedicated       Foot Valve       Peristaltic Pump   
                                  Dedicated       Bladder Pump

Sampled by: MPS      Time: 0915      Date: 08/04/16

**SAMPLING DATA**

**Sample Appearance**  
 Color: Clean - Slight haze      Sediment: None  
 Odor: None

**Field Measured Parameters**

pH (Standard Units)	<u>7.5</u>	Sp. Conductivity (umhos/cm)	<u>1320</u>
Temperature (F)	<u>62.6</u>	Eh-Redox Potential (mV)	
Turbidity (NTUs)	<u>16.4</u>	Dissolved Oxygen (mg/L)	

**Samples Collected (Number/Type):**

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

**Samples Delivered to:** ALS Courier      Time: \_\_\_\_\_      Date: \_\_\_\_\_

**COMMENTS:**

Became cloudy during filling of 2nd PCB bottle



**FIELD SAMPLING DATA SHEET**

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road SAMPLE LOCATION: B-403  
 CLIENT: Metalico Aluminum Recovery, Inc. JOB #: 1206.002.007  
 Weather Conditions: Clear Temperature: 68°

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
 Sediment  Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	<u>4.60</u>
Measured Well Depth (feet)*:	<u>11.26</u>
Well Casing Diameter (inches):	<u>2</u>
Calculated Volume in Well Casing (gallons):	<u>1.06</u>

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 08/03/16  
 Time: 13:30

\*depth from measuring point

**PURGING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 3.18  
 Actual Volume of Water Purged (gallons): 1.25

Did well purge dry? No  Yes   
 Did well recover? No  Yes  Recovery Time: Overnight

**SAMPLING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Sampled by: MPS Time: 7:45 Date: 08/04/16

**SAMPLING DATA**

Sample Appearance  
 Color: Clear Sediment: None  
 Odor: None

**Field Measured Parameters**

pH (Standard Units)	<u>7.0</u>	Sp. Conductivity (umhos/cm)	<u>970</u>
Temperature (F)	<u>65.0</u>	Eh-Redox Potential (mV)	
Turbidity (NTUs)	<u>12.0</u>	Dissolved Oxygen (mg/L)	

**Samples Collected (Number/Type):**

Four bottles - T-Pb,As; D-Pb,As; PCBs (2)

Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_



**FIELD SAMPLING DATA SHEET**

Engineers • Environmental Scientists • Planners • Landscape Architects

SITE: Metalico - Thompson Road SAMPLE LOCATION: MW-8R  
 CLIENT: Metalico Aluminum Recovery, Inc. JOB #: 1206.002.007  
 Weather Conditions: Clear Temperature: 72F

SAMPLE TYPE: Groundwater  Surface Water  Other (specify): \_\_\_\_\_  
 Sediment  Leachate

**WATER LEVEL DATA**

Static Water Level (feet)*:	<u>4.75</u>
Measured Well Depth (feet)*:	<u>10.00</u>
Well Casing Diameter (inches):	<u>2</u>
Calculated Volume in Well Casing (gallons):	<u>0.84</u>

Measuring Point: Top of Riser  
 Measured by: MPS  
 Date: 08/03/16  
 Time: 10:00

\*depth from measuring point

**PURGING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Calculated Volume Of Water To Be Purged (gallons): 2.52  
 Actual Volume of Water Purged (gallons): 2.25

Did well purge dry? No  Yes   
 Did well recover? No  Yes  Recovery Time: Overnight

**SAMPLING METHOD**

Equipment: Bailer  Submersible Pump  Air Lift System   
 Non-dedicated  Foot Valve  Peristaltic Pump   
 Dedicated  Bladder Pump

Sampled by: MPS Time: 08:50 Date: 08/04/16

**SAMPLING DATA**

Sample Appearance  
 Color: Milky yellow brown Sediment: None  
 Odor: Chemical

**Field Measured Parameters**

pH (Standard Units)	<u>6.7</u>	Sp. Conductivity (umhos/cm)	<u>13100</u>
Temperature (F)	<u>69.5</u>	Eh-Redox Potential (mV)	
Turbidity (NTUs)	<u>FRACED Over Range</u>	Dissolved Oxygen (mg/L)	

**Samples Collected (Number/Type):**

~~2~~ bottles - T-Pb,As; D-Pb,As; PCBs (2)  
4  
 Samples Delivered to: ALS Courier Time: \_\_\_\_\_ Date: \_\_\_\_\_

**COMMENTS:**

Yellow-brown purge water. Strong chemical odor  
Milky during sampling

## **Appendix B**



July 14, 2016

Service Request No:R1606839

Mr. Dave Hanny  
Barton & Loguidice, PC  
11 Centre Park  
Suite 203  
Rochester, NY 14614

**Laboratory Results for: Metalico Site-CAMU**

Dear Mr.Hanny,

Enclosed are the results of the sample(s) submitted to our laboratory June 29, 2016  
For your reference, these analyses have been assigned our service request number **R1606839**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7478. You may also contact me via email at [Vanessa.Badman@alsglobal.com](mailto:Vanessa.Badman@alsglobal.com).

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Vanessa Badman  
Customer Service  
Manager

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ALS Group USA, Corp.

dba ALS Environmental



# Narrative Documents

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
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[www.alsglobal.com](http://www.alsglobal.com)

## CASE NARRATIVE

This report contains analytical results for the following samples:

Service Request Number: R1606839

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1606839-001	B-281	6/28/2016	0927
R1606839-002	B-281 Dissolved	6/28/2016	0927
R1606839-003	B-290	6/28/2016	1013
R1606839-004	B-290 Dissolved	6/28/2016	1013
R1606839-005	B-291	6/28/2016	1248
R1606839-006	B-291 Dissolved	6/28/2016	1248
R1606839-007	B-401	6/28/2016	1110
R1606839-008	B-401 Dissolved	6/28/2016	1110
R1606839-009	B-402R	6/28/2016	1338
R1606839-010	B-402R Dissolved	6/28/2016	1338
R1606839-011	B-403	6/28/2016	1037
R1606839-012	B-403 Dissolved	6/28/2016	1037
R1606839-013	B-404	6/28/2016	1312
R1606839-014	B-404 Dissolved	6/28/2016	1312
R1606839-015	MW-8R	6/28/2016	1400
R1606839-016	MW-8R Dissolved	6/28/2016	1400
R1606839-017	DUPE-X	6/28/2016	2359
R1606839-018	DUPE-X Dissolved	6/28/2016	2359
R1606839-019	EQUIPMENT BLANK	6/28/2016	1504
R1606839-020	EQUIPMENT BLANK Dissolved	6/28/2016	1504

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered unless otherwise qualified/flagged within the report.

All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications.



**SAMPLE DETECTION SUMMARY**

**CLIENT ID: B-290** **Lab ID: R1606839-003**

Analyte	Results	Flag	MDL	PQL	Units	Method
Arsenic, Total	34		5	10	ug/L	6010C

**CLIENT ID: B-402R** **Lab ID: R1606839-009**

Analyte	Results	Flag	MDL	PQL	Units	Method
Aroclor 1242	0.082		0.025	0.047	ug/L	8082A

**CLIENT ID: B-403** **Lab ID: R1606839-011**

Analyte	Results	Flag	MDL	PQL	Units	Method
Aroclor 1254	0.085		0.025	0.047	ug/L	8082A

**CLIENT ID: MW-8R** **Lab ID: R1606839-015**

Analyte	Results	Flag	MDL	PQL	Units	Method
Arsenic, Total	39		5	10	ug/L	6010C
Aroclor 1254	130		6.3	12	ug/L	8082A

**CLIENT ID: MW-8R Dissolved** **Lab ID: R1606839-016**

Analyte	Results	Flag	MDL	PQL	Units	Method
Arsenic, Dissolved	36		5	10	ug/L	6010C

**CLIENT ID: DUPE-X** **Lab ID: R1606839-017**

Analyte	Results	Flag	MDL	PQL	Units	Method
Arsenic, Total	38		5	10	ug/L	6010C
Aroclor 1254	240		6.3	12	ug/L	8082A

**CLIENT ID: DUPE-X Dissolved** **Lab ID: R1606839-018**

Analyte	Results	Flag	MDL	PQL	Units	Method
Arsenic, Dissolved	35		5	10	ug/L	6010C



## Sample Receipt Information

**ALS Environmental—Rochester Laboratory**  
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Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:**R1606839

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1606839-001	B-281	6/28/2016	0927
R1606839-002	B-281 Dissolved	6/28/2016	0927
R1606839-003	B-290	6/28/2016	1013
R1606839-004	B-290 Dissolved	6/28/2016	1013
R1606839-005	B-291	6/28/2016	1248
R1606839-006	B-291 Dissolved	6/28/2016	1248
R1606839-007	B-401	6/28/2016	1110
R1606839-008	B-401 Dissolved	6/28/2016	1110
R1606839-009	B-402R	6/28/2016	1338
R1606839-010	B-402R Dissolved	6/28/2016	1338
R1606839-011	B-403	6/28/2016	1037
R1606839-012	B-403 Dissolved	6/28/2016	1037
R1606839-013	B-404	6/28/2016	1312
R1606839-014	B-404 Dissolved	6/28/2016	1312
R1606839-015	MW-8R	6/28/2016	1400
R1606839-016	MW-8R Dissolved	6/28/2016	1400
R1606839-017	DUPE-X	6/28/2016	2359
R1606839-018	DUPE-X Dissolved	6/28/2016	2359
R1606839-019	EQUIPMENT BLANK	6/28/2016	1504
R1606839-020	EQUIPMENT BLANK Dissolved	6/28/2016	1504





# Cooler Receipt and Preservation Check Form

R1606839

Barton & Loguidice, PC  
Metalico Site-CAMU

5



Project/Client Metalico Folder Number R1606839

Cooler received on 6/29 by sy COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<input checked="" type="radio"/> Y	<input type="radio"/> N
2	Custody papers properly completed (ink, signed)?	<input checked="" type="radio"/> Y	<input type="radio"/> N
3	Did all bottles arrive in good condition (unbroken)?	<input checked="" type="radio"/> Y	<input type="radio"/> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<input checked="" type="radio"/> Y	<input type="radio"/> N

5a	Perchlorate samples have required headspace?	<input type="radio"/> Y	<input type="radio"/> N	<input checked="" type="radio"/> NA
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	<input type="radio"/> Y	<input type="radio"/> N	<input checked="" type="radio"/> NA
6	Where did the bottles originate?	ALS/ROC	CLIENT	
7	Soil VOA received as:	Bulk	Encore	5035set <input checked="" type="radio"/> NA

8. Temperature Readings Date: 6/29/16 Time: 11:58A ID: IR#3 IR#5 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3.0</u>							
Correction Factor (°C)	<u>0</u>							
Corrected Temp (°C)	<u>3.0</u>							
Within 0-6°C?	<input checked="" type="radio"/> Y <input type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N						
If <0°C, were samples frozen?	<input type="radio"/> Y <input checked="" type="radio"/> N	<input type="radio"/> Y <input type="radio"/> N						

If out of Temperature, note packing/ice condition:  Ice melted  Poorly Packed  Same Day Rule

& Client Approval to Run Samples:  Standing Approval  Client aware at drop-off  Client notified by: \_\_\_\_\_

All samples held in storage location: 2-002 by sy on 6/29/16 at \_\_\_\_\_  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: \_\_\_\_\_

Cooler Breakdown: Date: 6/29/16 Time: 16:20 by: ME

- Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES  NO  NO sample dates/times on bottles
- Did all bottle labels and tags agree with custody papers?  YES  NO
- Were correct containers used for the tests indicated?  YES  NO
- Air Samples: Cassettes / Tubes Intact  Canisters Pressurized  Tedlar® Bags Inflated  N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>	<input checked="" type="checkbox"/>		<u>BDB26153F</u>	<u>5/17</u>				
≤2	H <sub>2</sub> SO <sub>4</sub>								
≤4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (CN), ascorbic (phenol).					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: \_\_\_\_\_

\*\*Not to be tested before analysis - pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 0523-16-2AA0, 050916-1BLT  
Other Comments: \_\_\_\_\_

PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter



## Miscellaneous Forms

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## REPORT QUALIFIERS AND DEFINITIONS

<p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration &gt;40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the öNotesö column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an öimmediateö hold time criteria.</p> <p># Spike was diluted out.</p>	<p>+ Correlation coefficient for MSA is &lt;0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is &lt;50% of the spike absorbance.</p> <p>P Concentration &gt;40% (25% for CLP) difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (<math>\times 100\%</math> Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as: LOQ Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p>
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### Rochester Lab ID # for State Certifications<sup>1</sup>

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID #
Delaware Accredited	Nebraska Accredited	294100 A/B
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047	North Carolina #676	Virginia #460167

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads>

# ALS Laboratory Group

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## Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

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Analyst Summary report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:** R1606839

**Sample Name:** B-281  
**Lab Code:** R1606839-001  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-281 Dissolved  
**Lab Code:** R1606839-002  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

**Sample Name:** B-290  
**Lab Code:** R1606839-003  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-290 Dissolved  
**Lab Code:** R1606839-004  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

ALS Group USA, Corp.  
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Analyst Summary report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:** R1606839

**Sample Name:** B-291  
**Lab Code:** R1606839-005  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-291 Dissolved  
**Lab Code:** R1606839-006  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

**Sample Name:** B-401  
**Lab Code:** R1606839-007  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-401 Dissolved  
**Lab Code:** R1606839-008  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

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dba ALS Environmental

Analyst Summary report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:** R1606839

**Sample Name:** B-402R  
**Lab Code:** R1606839-009  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-402R Dissolved  
**Lab Code:** R1606839-010  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

**Sample Name:** B-403  
**Lab Code:** R1606839-011  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-403 Dissolved  
**Lab Code:** R1606839-012  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

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Analyst Summary report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:** R1606839

**Sample Name:** B-404  
**Lab Code:** R1606839-013  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** B-404 Dissolved  
**Lab Code:** R1606839-014  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

**Sample Name:** MW-8R  
**Lab Code:** R1606839-015  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** MW-8R Dissolved  
**Lab Code:** R1606839-016  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

ALS Group USA, Corp.  
dba ALS Environmental

Analyst Summary report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007

**Service Request:** R1606839

**Sample Name:** DUPE-X  
**Lab Code:** R1606839-017  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** DUPE-X Dissolved  
**Lab Code:** R1606839-018  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---

**Sample Name:** EQUIPMENT BLANK  
**Lab Code:** R1606839-019  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR
8082A	DMURPHY	MPEDRO

---

**Sample Name:** EQUIPMENT BLANK Dissolved  
**Lab Code:** R1606839-020  
**Sample Matrix:** Water

**Date Collected:** 06/28/16  
**Date Received:** 06/29/16

Analysis Method	Extracted/Digested By	Analyzed By
6010C	CGILDAY	AMESSUR

---



# INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

## Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

## Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



# Sample Results

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dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 09:27  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-281  
**Lab Code:** R1606839-001

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/11/16 13:38	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/11/16 13:38	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/11/16 13:38	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/11/16 13:38	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/11/16 13:38	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/11/16 13:38	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/11/16 13:38	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	74	10 - 125	07/11/16 13:38	
Tetrachloro-m-xylene	76	18 - 126	07/11/16 13:38	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:13  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-290  
**Lab Code:** R1606839-003

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 08:00	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 08:00	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 08:00	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 08:00	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 08:00	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 08:00	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 08:00	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	55	10 - 125	07/12/16 08:00	
Tetrachloro-m-xylene	74	18 - 126	07/12/16 08:00	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 12:48  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-291  
**Lab Code:** R1606839-005

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 08:25	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 08:25	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 08:25	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 08:25	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 08:25	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 08:25	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 08:25	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	58	10 - 125	07/12/16 08:25	
Tetrachloro-m-xylene	70	18 - 126	07/12/16 08:25	

**ALS Group USA, Corp.**  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 11:10  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-401  
**Lab Code:** R1606839-007

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 08:51	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 08:51	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 08:51	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 08:51	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 08:51	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 08:51	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 08:51	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	103	10 - 125	07/12/16 08:51	
Tetrachloro-m-xylene	92	18 - 126	07/12/16 08:51	

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:38  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-402R  
**Lab Code:** R1606839-009

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 09:16	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 09:16	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 09:16	6/30/16	
Aroclor 1242	<b>0.082</b>	0.047	1	07/12/16 09:16	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 09:16	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 09:16	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 09:16	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 125	07/12/16 09:16	
Tetrachloro-m-xylene	81	18 - 126	07/12/16 09:16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:37  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-403  
**Lab Code:** R1606839-011

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 09:42	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 09:42	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 09:42	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 09:42	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 09:42	6/30/16	
Aroclor 1254	<b>0.085</b>	0.047	1	07/12/16 09:42	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 09:42	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	86	10 - 125	07/12/16 09:42	
Tetrachloro-m-xylene	73	18 - 126	07/12/16 09:42	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:12  
**Date Received:** 06/29/16 11:40

**Sample Name:** B-404  
**Lab Code:** R1606839-013

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 10:08	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 10:08	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 10:08	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 10:08	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 10:08	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 10:08	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 10:08	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	76	10 - 125	07/12/16 10:08	
Tetrachloro-m-xylene	62	18 - 126	07/12/16 10:08	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 14:00  
**Date Received:** 06/29/16 11:40

**Sample Name:** MW-8R  
**Lab Code:** R1606839-015

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	12 U	12	250	07/12/16 14:49	6/30/16	
Aroclor 1221	13 U	13	250	07/12/16 14:49	6/30/16	
Aroclor 1232	12 U	12	250	07/12/16 14:49	6/30/16	
Aroclor 1242	12 U	12	250	07/12/16 14:49	6/30/16	
Aroclor 1248	12 U	12	250	07/12/16 14:49	6/30/16	
Aroclor 1254	<b>130</b>	12	250	07/12/16 14:49	6/30/16	
Aroclor 1260	12 U	12	250	07/12/16 14:49	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	0 *	10 - 125	07/12/16 14:49	D
Tetrachloro-m-xylene	0 *	18 - 126	07/12/16 14:49	D

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 23:59  
**Date Received:** 06/29/16 11:40

**Sample Name:** DUPE-X  
**Lab Code:** R1606839-017

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	12 U	12	250	07/12/16 15:15	6/30/16	
Aroclor 1221	13 U	13	250	07/12/16 15:15	6/30/16	
Aroclor 1232	12 U	12	250	07/12/16 15:15	6/30/16	
Aroclor 1242	12 U	12	250	07/12/16 15:15	6/30/16	
Aroclor 1248	12 U	12	250	07/12/16 15:15	6/30/16	
Aroclor 1254	<b>240</b>	12	250	07/12/16 15:15	6/30/16	
Aroclor 1260	12 U	12	250	07/12/16 15:15	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	0 *	10 - 125	07/12/16 15:15	D
Tetrachloro-m-xylene	0 *	18 - 126	07/12/16 15:15	D

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dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16 15:04  
**Date Received:** 06/29/16 11:40

**Sample Name:** EQUIPMENT BLANK  
**Lab Code:** R1606839-019

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.047 U	0.047	1	07/12/16 10:34	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/12/16 10:34	6/30/16	
Aroclor 1232	0.047 U	0.047	1	07/12/16 10:34	6/30/16	
Aroclor 1242	0.047 U	0.047	1	07/12/16 10:34	6/30/16	
Aroclor 1248	0.047 U	0.047	1	07/12/16 10:34	6/30/16	
Aroclor 1254	0.047 U	0.047	1	07/12/16 10:34	6/30/16	
Aroclor 1260	0.047 U	0.047	1	07/12/16 10:34	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	59	10 - 125	07/12/16 10:34	
Tetrachloro-m-xylene	56	18 - 126	07/12/16 10:34	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-281  
**Lab Code:** R1606839-001

**Service Request:** R1606839  
**Date Collected:** 06/28/16 09:27  
**Date Received:** 06/29/16 11:40

**Basis:** NA

Inorganic Parameters

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 19:02	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 07:16	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-281 Dissolved  
**Lab Code:** R1606839-002

**Service Request:** R1606839  
**Date Collected:** 06/28/16 09:27  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 19:33	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 07:35	06/30/16	

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dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-290  
**Lab Code:** R1606839-003

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:13  
**Date Received:** 06/29/16 11:40

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Total	6010C	34	ug/L	10	1	07/05/16 20:16	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:02	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-290 Dissolved  
**Lab Code:** R1606839-004

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:13  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 20:22	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:06	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-291  
**Lab Code:** R1606839-005

**Service Request:** R1606839  
**Date Collected:** 06/28/16 12:48  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 20:28	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:10	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-291 Dissolved  
**Lab Code:** R1606839-006

**Service Request:** R1606839  
**Date Collected:** 06/28/16 12:48  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 20:34	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:13	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-401  
**Lab Code:** R1606839-007

**Service Request:** R1606839  
**Date Collected:** 06/28/16 11:10  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 20:41	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:17	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-401 Dissolved  
**Lab Code:** R1606839-008

**Service Request:** R1606839  
**Date Collected:** 06/28/16 11:10  
**Date Received:** 06/29/16 11:40

**Basis:** NA

Inorganic Parameters

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 20:47	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:21	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-402R  
**Lab Code:** R1606839-009

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:38  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 20:53	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:25	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-402R Dissolved  
**Lab Code:** R1606839-010

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:38  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 21:11	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:29	06/30/16	

ALS Group USA, Corp.  
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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-403  
**Lab Code:** R1606839-011

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:37  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 21:16	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:40	06/30/16	

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-403 Dissolved  
**Lab Code:** R1606839-012

**Service Request:** R1606839  
**Date Collected:** 06/28/16 10:37  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 21:22	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:44	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-404  
**Lab Code:** R1606839-013

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:12  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 21:28	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:48	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** B-404 Dissolved  
**Lab Code:** R1606839-014

**Service Request:** R1606839  
**Date Collected:** 06/28/16 13:12  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 21:34	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 08:52	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** MW-8R  
**Lab Code:** R1606839-015

**Service Request:** R1606839  
**Date Collected:** 06/28/16 14:00  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	39	ug/L	10	1	07/05/16 21:41	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 08:56	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** MW-8R Dissolved  
**Lab Code:** R1606839-016

**Service Request:** R1606839  
**Date Collected:** 06/28/16 14:00  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	36	ug/L	10	1	07/05/16 21:47	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 09:00	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** DUPE-X  
**Lab Code:** R1606839-017

**Service Request:** R1606839  
**Date Collected:** 06/28/16 23:59  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	38	ug/L	10	1	07/05/16 22:05	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 09:03	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** DUPE-X Dissolved  
**Lab Code:** R1606839-018

**Service Request:** R1606839  
**Date Collected:** 06/28/16 23:59  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	35	ug/L	10	1	07/05/16 22:11	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 09:07	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** EQUIPMENT BLANK  
**Lab Code:** R1606839-019

**Service Request:** R1606839  
**Date Collected:** 06/28/16 15:04  
**Date Received:** 06/29/16 11:40  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 22:17	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 09:16	06/30/16	

ALS Group USA, Corp.  
dba ALS Environmental

Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** EQUIPMENT BLANK Dissolved  
**Lab Code:** R1606839-020

**Service Request:** R1606839  
**Date Collected:** 06/28/16 15:04  
**Date Received:** 06/29/16 11:40

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Analysis Method</b>	<b>Result</b>	<b>Units</b>	<b>MRL</b>	<b>Dil.</b>	<b>Date Analyzed</b>	<b>Date Extracted</b>	<b>Q</b>
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 22:23	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 09:20	06/30/16	



# QC Summary Forms

**ALS Environmental—Rochester Laboratory**  
1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623  
Phone (585) 288-5380 Fax (585) 288-8475  
[www.alsglobal.com](http://www.alsglobal.com)

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839

**SURROGATE RECOVERY SUMMARY**  
**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Extraction Method:** EPA 3510C

Sample Name	Lab Code	Decachlorobiphenyl	Tetrachloro-m-xylene
		10 - 125	18 - 126
B-281	R1606839-001	74	76
B-290	R1606839-003	55	74
B-291	R1606839-005	58	70
B-401	R1606839-007	103	92
B-402R	R1606839-009	76	81
B-403	R1606839-011	86	73
B-404	R1606839-013	76	62
MW-8R	R1606839-015	0 *	0 *
DUPE-X	R1606839-017	0 *	0 *
EQUIPMENT BLANK	R1606839-019	59	56
Method Blank	RQ1607727-01	95	76
Lab Control Sample	RQ1607727-02	106	84
Duplicate Lab Control Sample	RQ1607727-03	107	83

**ALS Group USA, Corp.**  
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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** NA  
**Date Received:** NA

**Sample Name:** Method Blank  
**Lab Code:** RQ1607727-01

**Units:** ug/L  
**Basis:** NA

**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Analysis Method:** 8082A  
**Prep Method:** EPA 3510C

Analyte Name	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
Aroclor 1016	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1221	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1232	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1242	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1248	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1254	0.050 U	0.050	1	07/11/16 10:13	6/30/16	
Aroclor 1260	0.050 U	0.050	1	07/11/16 10:13	6/30/16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	95	10 - 125	07/11/16 10:13	
Tetrachloro-m-xylene	76	18 - 126	07/11/16 10:13	

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QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Analyzed:** 07/11/16

**Duplicate Lab Control Sample Summary**  
**Low Level Polychlorinated Biphenyls (PCBs) by GC**

**Units:**ug/L  
**Basis:**NA

Analyte Name	Lab Control Sample				Duplicate Lab Control Sample					
	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Aroclor 1016	8082A	0.355	0.500	71	0.369	0.500	74	40-140	4	30
Aroclor 1260	8082A	0.490	0.500	98	0.509	0.500	102	24-157	4	30

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Analytical Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1606839-MB

**Service Request:** R1606839  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Arsenic, Dissolved	6010C	10 U	ug/L	10	1	07/05/16 18:51	06/30/16	
Arsenic, Total	6010C	10 U	ug/L	10	1	07/05/16 18:51	06/30/16	
Lead, Dissolved	6010C	50 U	ug/L	50	1	07/07/16 07:08	06/30/16	
Lead, Total	6010C	50 U	ug/L	50	1	07/07/16 07:08	06/30/16	

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dba ALS Environmental

QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:**R1606839  
**Date Collected:**06/28/16  
**Date Received:**06/29/16  
**Date Analyzed:**07/05/16 - 07/07/16

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** B-281  
**Lab Code:** R1606839-001

**Units:**ug/L  
**Basis:**NA

**Matrix Spike**  
R1606839-001MS

<b>Analyte Name</b>	<b>Method</b>	<b>Sample Result</b>	<b>Result</b>	<b>Spike Amount</b>	<b>% Rec</b>	<b>% Rec Limits</b>
Arsenic, Total	6010C	10	46	40	116	75-125
Lead, Total	6010C	50	447	500	89	75-125

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
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QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:**R1606839  
**Date Collected:**06/28/16  
**Date Received:**06/29/16  
**Date Analyzed:**07/05/16 - 07/07/16

**Matrix Spike Summary**  
**Inorganic Parameters**

**Sample Name:** B-281 Dissolved **Units:**ug/L  
**Lab Code:** R1606839-002 **Basis:**NA

**Matrix Spike**  
R1606839-002MS

<b>Analyte Name</b>	<b>Method</b>	<b>Sample Result</b>	<b>Result</b>	<b>Spike Amount</b>	<b>% Rec</b>	<b>% Rec Limits</b>
Arsenic, Dissolved	6010C	10	46	40	114	75-125
Lead, Dissolved	6010C	50	456	500	91	75-125

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

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QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16  
**Date Received:** 06/29/16  
**Date Analyzed:** 07/05/16 - 07/07/16

**Replicate Sample Summary**  
**Inorganic Parameters**

**Sample Name:** B-281  
**Lab Code:** R1606839-001

**Units:** ug/L  
**Basis:** NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				R1606839-001DUP Result			
Arsenic, Total	6010C	10	10 U	10 U	NC	NC	20
Lead, Total	6010C	50	50 U	50 U	NC	NC	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

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QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Collected:** 06/28/16  
**Date Received:** 06/29/16  
**Date Analyzed:** 07/05/16 - 07/07/16

**Replicate Sample Summary**  
**Inorganic Parameters**

**Sample Name:** B-281 Dissolved  
**Lab Code:** R1606839-002

**Units:** ug/L  
**Basis:** NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample	Average	RPD	RPD Limit
				R1606839-002DUP Result			
Arsenic, Dissolved	6010C	10	10 U	10 U	NC	NC	20
Lead, Dissolved	6010C	50	50 U	50 U	NC	NC	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.  
dba ALS Environmental

QA/QC Report

**Client:** Metalico Aluminum Recovery  
**Project:** Metalico Site-CAMU/1206.002.007  
**Sample Matrix:** Water

**Service Request:** R1606839  
**Date Analyzed:** 07/05/16 - 07/07/16

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:**ug/L  
**Basis:**NA

**Lab Control Sample**  
R1606839-LCS

<b>Analyte Name</b>	<b>Analytical Method</b>	<b>Result</b>	<b>Spike Amount</b>	<b>% Rec</b>	<b>% Rec Limits</b>
Arsenic, Dissolved	6010C	41.7	40	104	80-120
Arsenic, Total	6010C	41.7	40	104	80-120
Lead, Dissolved	6010C	478	500	96	80-120
Lead, Total	6010C	478	500	96	80-120

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

10 Hazelwood Drive

Amherst, NY 14228-2298

Tel: (716)691-2600

TestAmerica Job ID: 480-104160-1

Client Project/Site: Metalico CAMU Monitoring Wells

For:

Barton & Loguidice, D.P.C.

443 Electronics Parkway

Liverpool, New York 13088

Attn: Matthew Strodel



Authorized for release by:

8/17/2016 8:26:17 AM

Orlette Johnson, Senior Project Manager

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Definitions/Glossary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## Qualifiers

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### 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.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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)

# Case Narrative

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

**Job ID: 480-104160-1**

**Laboratory: TestAmerica Buffalo**

## Narrative

### Job Narrative 480-104160-1

#### Receipt

The samples were received on 8/5/2016 1:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.2° C.

#### GC Semi VOA

Method(s) 8082A: Tetrachloro-m-xylene and Decachlorobiphenyl surrogate recoveries for the following sample failed to meet acceptance limits: MW-8R (480-104160-3). The sample was diluted due to the nature of the sample matrix and matrix interference likely affected surrogate recoveries. As such, surrogate recoveries are not representative.

Method(s) 8082A: The following sample was diluted due to the nature of the sample matrix: MW-8R (480-104160-3). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method(s) 6010C: The interference check standard solution (ICSA 480-315472/8) associated with the following samples showed results for strontium at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. MW-8R (480-104160-3) and (MB 480-314901/1-A)

Method(s) 6010C: The following sample was diluted due to the nature of the sample matrix: MW-8R (480-104160-3). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The Low Level Continuing Calibration Verification (CCVL 480-315472/25) contained Dissolved Boron above the upper quality control limit. All reported samples B-402R (480-104160-1), B-403 (480-104160-2) and MW-8R (480-104160-3) associated with this CCVL were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCVL; therefore, re-analysis of samples was not performed.

Method(s) 6010C: The interference check standard solution (ICSA 480-315309/8) associated with the following samples showed results for strontium at a level greater than 2 times the limit of detection (LOD). It is believed that the solution contains trace impurities of this element and the results are not due to matrix interference. These results are consistent with those found by the manufacturer of the ICSA solution. B-402R (480-104160-1), B-403 (480-104160-2) and (LCS 480-314901/2-A).

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

#### Organic Prep

Method(s) 3510C: Due to the matrix, the initial volume(s) used for the following sample deviated from the standard procedure: MW-8R (480-104160-3). The reporting limits (RLs) have been adjusted proportionately.

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

# Detection Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## Client Sample ID: B-402R

## Lab Sample ID: 480-104160-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.0095	J	0.015	0.0056	mg/L	1		6010C	Total/NA
Lead	0.0038	J	0.010	0.0030	mg/L	1		6010C	Total/NA

## Client Sample ID: B-403

## Lab Sample ID: 480-104160-2

No Detections.

## Client Sample ID: MW-8R

## Lab Sample ID: 480-104160-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1254	76		50	25	ug/L	10		8082A	Total/NA
Arsenic	0.060		0.015	0.0056	mg/L	1		6010C	Total/NA
Lead	0.13		0.010	0.0030	mg/L	1		6010C	Total/NA
Arsenic, Dissolved	0.058		0.015	0.0056	mg/L	1		6010C	Dissolved
Lead, Dissolved	0.065		0.010	0.0030	mg/L	1		6010C	Dissolved

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

# Client Sample Results

Client: Barton & Loguidice, D.P.C.  
 Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

**Client Sample ID: B-402R**

**Date Collected: 08/04/16 08:15**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-1**

**Matrix: Water**

**Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1221	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1232	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1242	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1248	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1254	ND		0.50	0.25	ug/L		08/09/16 07:49	08/10/16 03:10	1
PCB-1260	ND		0.50	0.25	ug/L		08/09/16 07:49	08/10/16 03:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	97		39 - 121	08/09/16 07:49	08/10/16 03:10	1
DCB Decachlorobiphenyl	47		19 - 120	08/09/16 07:49	08/10/16 03:10	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0095	J	0.015	0.0056	mg/L		08/08/16 08:18	08/09/16 23:21	1
Lead	0.0038	J	0.010	0.0030	mg/L		08/08/16 08:18	08/09/16 23:21	1

**Method: 6010C - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		0.015	0.0056	mg/L		08/08/16 08:39	08/10/16 03:28	1
Lead, Dissolved	ND		0.010	0.0030	mg/L		08/08/16 08:39	08/10/16 03:28	1

**Client Sample ID: B-403**

**Date Collected: 08/04/16 07:45**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-2**

**Matrix: Water**

**Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1221	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1232	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1242	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1248	ND		0.50	0.18	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1254	ND		0.50	0.25	ug/L		08/09/16 07:49	08/10/16 03:26	1
PCB-1260	ND		0.50	0.25	ug/L		08/09/16 07:49	08/10/16 03:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	105		39 - 121	08/09/16 07:49	08/10/16 03:26	1
DCB Decachlorobiphenyl	57		19 - 120	08/09/16 07:49	08/10/16 03:26	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		08/08/16 08:18	08/09/16 23:25	1
Lead	ND		0.010	0.0030	mg/L		08/08/16 08:18	08/09/16 23:25	1

**Method: 6010C - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		0.015	0.0056	mg/L		08/08/16 08:39	08/10/16 03:31	1
Lead, Dissolved	ND		0.010	0.0030	mg/L		08/08/16 08:39	08/10/16 03:31	1

TestAmerica Buffalo

# Client Sample Results

Client: Barton & Loguidice, D.P.C.  
 Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

**Client Sample ID: MW-8R**

**Date Collected: 08/04/16 08:50**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-3**

**Matrix: Water**

**Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		50	18	ug/L		08/09/16 07:49	08/10/16 03:42	10
PCB-1221	ND		50	18	ug/L		08/09/16 07:49	08/10/16 03:42	10
PCB-1232	ND		50	18	ug/L		08/09/16 07:49	08/10/16 03:42	10
PCB-1242	ND		50	18	ug/L		08/09/16 07:49	08/10/16 03:42	10
PCB-1248	ND		50	18	ug/L		08/09/16 07:49	08/10/16 03:42	10
<b>PCB-1254</b>	<b>76</b>		50	25	ug/L		08/09/16 07:49	08/10/16 03:42	10
PCB-1260	ND		50	25	ug/L		08/09/16 07:49	08/10/16 03:42	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	15	X	39 - 121	08/09/16 07:49	08/10/16 03:42	10
<i>DCB Decachlorobiphenyl</i>	0	X	19 - 120	08/09/16 07:49	08/10/16 03:42	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.060</b>		0.015	0.0056	mg/L		08/08/16 08:18	08/09/16 23:28	1
<b>Lead</b>	<b>0.13</b>		0.010	0.0030	mg/L		08/08/16 08:18	08/09/16 23:28	1

**Method: 6010C - Metals (ICP) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic, Dissolved</b>	<b>0.058</b>		0.015	0.0056	mg/L		08/08/16 08:39	08/10/16 03:35	1
<b>Lead, Dissolved</b>	<b>0.065</b>		0.010	0.0030	mg/L		08/08/16 08:39	08/10/16 03:35	1

# Surrogate Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

**Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography**

**Matrix: Water**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1 (39-121)	DCB1 (19-120)
480-104160-1	B-402R	97	47
480-104160-2	B-403	105	57
480-104160-3	MW-8R	15 X	0 X
LCS 480-315051/2-A	Lab Control Sample	99	60
MB 480-315051/1-A	Method Blank	86	75

### Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

# QC Sample Results

Client: Barton & Loguidice, D.P.C.  
 Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 480-315051/1-A**  
**Matrix: Water**  
**Analysis Batch: 315211**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 315051**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.50	0.18	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1221	ND		0.50	0.18	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1232	ND		0.50	0.18	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1242	ND		0.50	0.18	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1248	ND		0.50	0.18	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1254	ND		0.50	0.25	ug/L		08/09/16 07:49	08/09/16 21:52	1
PCB-1260	ND		0.50	0.25	ug/L		08/09/16 07:49	08/09/16 21:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		39 - 121	08/09/16 07:49	08/09/16 21:52	1
DCB Decachlorobiphenyl	75		19 - 120	08/09/16 07:49	08/09/16 21:52	1

**Lab Sample ID: LCS 480-315051/2-A**  
**Matrix: Water**  
**Analysis Batch: 315211**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 315051**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	4.00	4.16		ug/L		104	62 - 130
PCB-1260	4.00	3.92		ug/L		98	56 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	99		39 - 121
DCB Decachlorobiphenyl	60		19 - 120

## Method: 6010C - Metals (ICP)

**Lab Sample ID: MB 480-314898/1-A**  
**Matrix: Water**  
**Analysis Batch: 315311**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 314898**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.015	0.0056	mg/L		08/08/16 08:18	08/09/16 21:55	1
Lead	ND		0.010	0.0030	mg/L		08/08/16 08:18	08/09/16 21:55	1

**Lab Sample ID: LCS 480-314898/2-A**  
**Matrix: Water**  
**Analysis Batch: 315311**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 314898**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.200	0.198		mg/L		99	80 - 120
Lead	0.200	0.200		mg/L		100	80 - 120

**Lab Sample ID: MB 480-314901/1-A**  
**Matrix: Water**  
**Analysis Batch: 315472**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 314901**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic, Dissolved	ND		0.015	0.0056	mg/L		08/08/16 08:39	08/10/16 20:02	1

TestAmerica Buffalo

# QC Sample Results

Client: Barton & Loguidice, D.P.C.  
 Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

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

**Lab Sample ID: MB 480-314901/1-A**  
**Matrix: Water**  
**Analysis Batch: 315472**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 314901**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead, Dissolved	ND		0.010	0.0030	mg/L		08/08/16 08:39	08/10/16 20:02	1

**Lab Sample ID: LCS 480-314901/2-A**  
**Matrix: Water**  
**Analysis Batch: 315309**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 314901**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	0.0500	0.0491		mg/L		98	80 - 120
Aluminum	10.0	9.20		mg/L		92	80 - 120
Arsenic, Dissolved	0.200	0.192		mg/L		96	80 - 120
Barium	0.200	0.202		mg/L		101	80 - 120
Beryllium	0.200	0.194		mg/L		97	80 - 120
Calcium	10.0	9.47		mg/L		95	80 - 120
Cadmium	0.200	0.195		mg/L		98	80 - 120
Cobalt	0.200	0.187		mg/L		93	80 - 120
Chromium	0.200	0.205		mg/L		102	80 - 120
Copper	0.200	0.193		mg/L		96	80 - 120
Iron	10.0	9.90		mg/L		99	80 - 120
Potassium	10.0	9.74		mg/L		97	80 - 120
Lithium	0.200	0.192		mg/L		96	80 - 120
Magnesium	10.0	9.89		mg/L		99	80 - 120
Manganese	0.200	0.203		mg/L		102	80 - 120
Molybdenum	0.200	0.190		mg/L		95	80 - 120
Sodium	10.0	9.72		mg/L		97	80 - 120
Nickel	0.200	0.189		mg/L		95	80 - 120
Lead, Dissolved	0.200	0.195		mg/L		97	80 - 120
Antimony	0.200	0.188		mg/L		94	80 - 120
Selenium	0.200	0.186		mg/L		93	80 - 120
Thallium	0.200	0.195		mg/L		98	80 - 120
Tin	0.200	0.185		mg/L		92	80 - 120
Titanium	0.200	0.190		mg/L		95	80 - 120
Zinc	0.200	0.215		mg/L		107	80 - 120
Vanadium	0.200	0.193		mg/L		97	80 - 120
SiO2	21.4	20.58		mg/L		96	80 - 120

**Lab Sample ID: LCS 480-314901/2-A**  
**Matrix: Water**  
**Analysis Batch: 315546**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 314901**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	0.200	0.219		mg/L		110	80 - 120

# QC Association Summary

Client: Barton & Loguidice, D.P.C.  
 Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## GC Semi VOA

### Prep Batch: 315051

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Total/NA	Water	3510C	
480-104160-2	B-403	Total/NA	Water	3510C	
480-104160-3	MW-8R	Total/NA	Water	3510C	
MB 480-315051/1-A	Method Blank	Total/NA	Water	3510C	
LCS 480-315051/2-A	Lab Control Sample	Total/NA	Water	3510C	

### Analysis Batch: 315211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Total/NA	Water	8082A	315051
480-104160-2	B-403	Total/NA	Water	8082A	315051
480-104160-3	MW-8R	Total/NA	Water	8082A	315051
MB 480-315051/1-A	Method Blank	Total/NA	Water	8082A	315051
LCS 480-315051/2-A	Lab Control Sample	Total/NA	Water	8082A	315051

## Metals

### Prep Batch: 314898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Total/NA	Water	3005A	
480-104160-2	B-403	Total/NA	Water	3005A	
480-104160-3	MW-8R	Total/NA	Water	3005A	
MB 480-314898/1-A	Method Blank	Total/NA	Water	3005A	
LCS 480-314898/2-A	Lab Control Sample	Total/NA	Water	3005A	

### Prep Batch: 314901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Dissolved	Water	3005A	
480-104160-2	B-403	Dissolved	Water	3005A	
480-104160-3	MW-8R	Dissolved	Water	3005A	
MB 480-314901/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 480-314901/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

### Analysis Batch: 315309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Dissolved	Water	6010C	314901
480-104160-2	B-403	Dissolved	Water	6010C	314901
480-104160-3	MW-8R	Dissolved	Water	6010C	314901
LCS 480-314901/2-A	Lab Control Sample	Total Recoverable	Water	6010C	314901

### Analysis Batch: 315311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-104160-1	B-402R	Total/NA	Water	6010C	314898
480-104160-2	B-403	Total/NA	Water	6010C	314898
480-104160-3	MW-8R	Total/NA	Water	6010C	314898
MB 480-314898/1-A	Method Blank	Total/NA	Water	6010C	314898
LCS 480-314898/2-A	Lab Control Sample	Total/NA	Water	6010C	314898

### Analysis Batch: 315472

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-314901/1-A	Method Blank	Total Recoverable	Water	6010C	314901

TestAmerica Buffalo

# QC Association Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## Metals (Continued)

### Analysis Batch: 315546

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 480-314901/2-A	Lab Control Sample	Total Recoverable	Water	6010C	314901

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# Lab Chronicle

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

**Client Sample ID: B-402R**

**Date Collected: 08/04/16 08:15**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			315051	08/09/16 07:49	CPH	TAL BUF
Total/NA	Analysis	8082A		1	315211	08/10/16 03:10	KS	TAL BUF
Dissolved	Prep	3005A			314901	08/08/16 08:39	RMZ	TAL BUF
Dissolved	Analysis	6010C		1	315309	08/10/16 03:28	AMH	TAL BUF
Total/NA	Prep	3005A			314898	08/08/16 08:18	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	315311	08/09/16 23:21	AMH	TAL BUF

**Client Sample ID: B-403**

**Date Collected: 08/04/16 07:45**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			315051	08/09/16 07:49	CPH	TAL BUF
Total/NA	Analysis	8082A		1	315211	08/10/16 03:26	KS	TAL BUF
Dissolved	Prep	3005A			314901	08/08/16 08:39	RMZ	TAL BUF
Dissolved	Analysis	6010C		1	315309	08/10/16 03:31	AMH	TAL BUF
Total/NA	Prep	3005A			314898	08/08/16 08:18	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	315311	08/09/16 23:25	AMH	TAL BUF

**Client Sample ID: MW-8R**

**Date Collected: 08/04/16 08:50**

**Date Received: 08/05/16 01:00**

**Lab Sample ID: 480-104160-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			315051	08/09/16 07:49	CPH	TAL BUF
Total/NA	Analysis	8082A		10	315211	08/10/16 03:42	KS	TAL BUF
Dissolved	Prep	3005A			314901	08/08/16 08:39	RMZ	TAL BUF
Dissolved	Analysis	6010C		1	315309	08/10/16 03:35	AMH	TAL BUF
Total/NA	Prep	3005A			314898	08/08/16 08:18	RMZ	TAL BUF
Total/NA	Analysis	6010C		1	315311	08/09/16 23:28	AMH	TAL BUF

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Certification Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

## Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17

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# Method Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL BUF
6010C	Metals (ICP)	SW846	TAL BUF

**Protocol References:**

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

**Laboratory References:**

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



# Sample Summary

Client: Barton & Loguidice, D.P.C.  
Project/Site: Metalico CAMU Monitoring Wells

TestAmerica Job ID: 480-104160-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-104160-1	B-402R	Water	08/04/16 08:15	08/05/16 01:00
480-104160-2	B-403	Water	08/04/16 07:45	08/05/16 01:00
480-104160-3	MW-8R	Water	08/04/16 08:50	08/05/16 01:00

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## Login Sample Receipt Checklist

Client: Barton & Loguidice, D.P.C.

Job Number: 480-104160-1

**Login Number: 104160**

**List Number: 1**

**Creator: Williams, Christopher S**

**List Source: TestAmerica Buffalo**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	B AND L
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	