GROUNDWATER PERFORMANCE MONITORING REPORT

December 2009 Sampling

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

Prepared For:
Metalico Aluminum Recovery, Inc.
6223 Thompson Road
East Syracuse, New York

Prepared By:
Barton & Loguidice, P.C.
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Barton & Loguidice, P.C.
Engineers · Environmental Scientists · Planners · Landscape Architects

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March 10, 2010

Stephen C. Condon, Senior Engineering Geologist
New York State Department of Environmental Conservation
Bureau of Hazardous Waste & Radiation Management, 9th Floor
Division of Solid & Hazardous Materials
625 Broadway
Albany, New York 12233-7258

Re: *Former Roth Bros. Smelting Corp. Site*
6223 Thompson Road, DeWitt, New York
Consent Order C7-0001-94-10

Dear Mr. Condon:

Enclosed please find a copy of the CAMU Groundwater Performance Monitoring Report for the December 2009 semi-annual monitoring event. Barton & Loguidice (B&L) prepared the report. The B&L technical contact is John Benson and you may contact Mr. Benson directly if you have any questions regarding the report or any of the attached data.

Sincerely yours,

Dennis Flanagan
Director of Operations
Metalico Aluminum Recovery, Inc.

Enclosure
cc: Mary Jane Peachey, NYSDEC Region 7 (w/enclosure)
Margaret Sheen, Esq. (w/enclosure)
Wabash Alloys, L.L.C. (c/o Doreen Simmons, Esq.) (w/enclosure)
Thompson Corners, LLC (c/o Philip Gitlen, Esq.) (w/enclosure)
John Benson, Barton & Loguidice (w/o enclosure)

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1.0 INTRODUCTION

This report presents the results of the December 2009 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, a local engineering firm, 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.

Samples were collected from eight monitoring wells on December 16, 2009 by personnel from Barton & Loguidice, P.C. All samples collected were submitted to and analyzed by Upstate Laboratories Inc. (ULI), in East Syracuse, New York.

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 locations of the wells 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 commenced. This report addresses the data generated from the December 2009 groundwater 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	B107	B108
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.
- 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.

All of the required CAMU wells were sampled in December 2009. Monitoring locations B107 and B108 were sampled during the June 2009 monitoring event.

2.2 Groundwater Monitoring Work

This section sets forth the field and laboratory procedures that were followed during this groundwater sampling 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 water level data for the six (6) prior groundwater sampling events.

The 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 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 after purging and immediately prior to sample collection. The specific conductivity meter was not functioning when MW-8R was sampled. Specific conductivity for this location was performed at the laboratory by ULI.

Purging of the monitoring wells was conducted using a low-flow peristaltic pump with new non-dedicated tubing at each location. Purging was performed until a minimum of three (3) well volumes were removed or until the well went dry. Groundwater samples were collected after purging and recharge, also utilizing the low-flow peristaltic pump. Collected samples were then placed into clean coolers and kept on ice at 4°C until delivered to the lab.

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

(c) Groundwater Monitoring Results

Table 3 provides an historical summary of the analytical data for this project, including the results of the December 2009 groundwater monitoring. Appendix B contains the analytical laboratory reports prepared by Upstate Laboratories, Inc. (NYSDOH Laboratory I.D. # 10170). Data are highlighted, as appropriate, to indicate detected concentrations that exceed the following NYSDEC Class GA Groundwater Standards:

Parameter	Class GA Standard
pH	6.5 – 8.5 Std. Units
Lead	0.025 mg/l
Arsenic	0.025 mg/l
Barium	1.00 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 December 2009 sampling event indicate that the groundwater quality conditions at the CAMU have remained consistent since the last monitoring event and appear to directly correspond with historical groundwater quality data. The following sections summarize the analytical data collected during this sampling event:

pH – There were no pH exceedances noted for the December 2009 monitoring event.

PCBs – PCB Aroclor 1254 was detected at monitoring location MW-8R. This exceedance is consistent with historical data range values. There were no other PCB detections reported.

During the June 2009 monitoring event, duplicate analysis was performed at MW-8R and the location exhibited a relative percent difference (RPD) of 146% for Aroclor 1254. This sample comparison was substantially outside RPD standard limits. The difference was suspected to be a result of surface contamination that entered the well or laboratory error.

In response to the June RPD standard limit exceedance during the December 2009 sampling event, a clear plastic bailer was utilized to visually inspect the groundwater for any surface contaminants that may have entered the well; none were identified. The well was then purged dry and sampled according to standard sampling procedures. Duplicate analysis was again performed at MW-8R during the December 2009 monitoring event and the location did not exhibit any RPD values above the established 20% RPD criteria. It should be noted that this well is located upgradient of the CAMU.

Total & Dissolved Lead – Monitoring well B-402R exhibited a total lead concentration of 0.030 mg/l for the December 2009 monitoring event. This value exceeded the GA standard of 0.025 mg/l. Dissolved lead for this well was not detected (<0.003 mg/l). The total lead exceedance is consistent with historical values at this location. No other lead concentrations were recorded above the GA standard.

Total & Dissolved Barium – Sampling was not required.

Total & Dissolved Arsenic – Sampling was not required.

DECEMBER, 2009
GROUNDWATER CONTOUR MAP

ONONDOGA COUNTY, NEW YORK

METALICO ALUMINUM RECOVERY, INC.
FACILITY NO. 7102372
EAST SYRACUSE

N

MIDLER PARK DRIVE

JOHN & M. SUSAN SCHNOD
BOOK 3178 OF DEEDS, PAGE 336

G & R PROPERTIES, LLC
BOOK 4277 OF DEEDS, PAGE 134

ONONDAGA SUBDIVISION CO., INC.
BOOK 1089 OF DEEDS, PAGE 525

CONSOLIDATED RAIL CORPORATION

NIAGARA MOHAWK POWER CORPORATION

B-281
(419.28)

MW-8R
(411.92)

B-401
(408.48)

B-291
(403.95)

B-403
(408.11)

B-290
(409.71)

B-404
(407.56)

B-402R
(406.64)

B-108
(--)

B-107
(--)

SCRAP METAL STORAGE

MAIN BUILDING

CAMU AREA

CONCRETE

PROPANE STORAGE BUILDING

PLANT NO. 1
EXISTING BUILDING

350'± PROPOSED LANDSCAPE EASEMENT

PARCEL NO. 2
METALICO SYRACUSE REALTY, Inc.

AREA = 22.405± ACRES

PARCEL NO. 3
WILBUR ALUMINUM ALLOYS

AREA = 0.605± ACRE

ROTH BROTHERS

WRE PROPERTIES, LLC
BOOK 4331 OF DEEDS, PAGE 287

RUPP RENTAL & SALES CORP.
BOOK 3224 OF DEEDS, PAGE 67

CNY SANDTRAP, LLC
BOOK 4836 OF DEEDS, PAGE 304

LEGEND:

- PROPERTY LINE
- 408 GROUNDWATER CONTOUR
- PAVED CAMU AREA
- GROUNWATER MONITORING WELL

125' 0 125'
1"=125'

Barton Loguidice, P.C.

Date	DECEMBER, 2009
Scale	1" = 125'
Figure Number	1
Project Number	1206.002

Plotted: Mar 04, 2010 - 12:50PM SYR By: jgs
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Table 1
Ground Water Monitoring Schedule

Sampling Frequency	Parameter	Analytical Method	MDL	Well Location
Annually (June)	Arsenic (Total and Dissolved)	EPA Method 6010	4 ug/L	B281 B291
	Barium (Total and Dissolved)	EPA Method 6010	2 ug/L	B107 B108 B281
Semi-Annual (June and December)	Lead (Total and Dissolved)	EPA Method 6010	3 ug/L	B281 B290 B291 B401 B402R B403 B404 MW-8R
	PCB's	EPA Method 8082	0.050 ug/L	B281 B290 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

Monitoring Well	B107		B108		B281		B290		B291	
WELL DEPTH (FT):	-		9.85		13.03		10.26		12.54	
REFERNCE ELEVATION:	410.61		411.80		423.39		414.61		410.86	
DATE	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL
16-Dec-09	NS	NS	NS	NS	419.28	4.11	409.71	4.90	403.95	6.91
29-Jun-09	409.00	1.61	409.95	1.85	413.75	9.64	409.50	5.11	403.53	7.33
18-Dec-08	NS	NS	NS	NS	419.31	4.08	409.63	4.98	404.43	6.43
05-Jun-08	408.93	1.68	409.01	2.79	417.18	6.21	404.35	10.26	403.72	7.14
31-Dec-07	NS	NS	408.95	2.85	416.66	6.73	409.77	4.84	404.73	6.13
29-Jun-07	408.95	1.66	408.95	2.85	416.44	6.95	410.38	4.23	401.96	8.90
19-Dec-06	NS	NS	NS	NS	420.25	3.14	409.57	5.04	404.43	6.43

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

Monitoring Well	B401		B402R		B403		B404		8R	
WELL DEPTH (FT):	13.03		12.24		11.26		16.14		10.00	
REFERNCE ELEVATION:	413.54		409.44		411.05		410.77		415.30	
DATE	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL	ELEVATION	SWL
16-Dec-09	408.48	5.06	406.64	2.80	408.11	2.94	407.56	3.21	411.92	3.38
29-Jun-09	406.84	6.70	406.46	2.98	408.05	3.00	406.66	4.11	412.72	2.58
18-Dec-08	408.39	5.15	406.81	2.63	407.91	3.14	406.92	3.85	412.59	2.71
05-Jun-08	404.62	8.92	405.56	3.88	407.42	3.63	405.42	5.35	411.88	3.42
31-Dec-07	408.33	5.21	406.97	2.47	408.08	2.97	407.27	3.50	412.45	2.85
29-Jun-07	404.83	8.71	405.32	4.12	407.20	3.85	404.27	6.50	411.93	3.37
19-Dec-06	407.30	6.24	405.47	3.97	408.01	3.04	406.76	4.01	412.00	3.30

[redacted] Table [redacted]

ROTH BROS. SMELTING CORP.
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table
(Arsenic & Barium)

		Arsenic (Total)	Arsenic (Dissolved)	Barium (Total)	Barium (Dissolved)
Units		mg/l	mg/l	mg/l	mg/l
Class GA Standard		0.025	0.025	1.0	1.0
B107	Jun-00	-	-	<0.30	<0.30
	Sep-02	-	-	0.31	0.34
	Dec-03	-	-	0.40	0.40
	Mar-04	-	-	0.50	0.30
	Jun-05	-	-	0.34	0.34
	Jun-07	-	-	0.71	0.65
	Dec-07	-	-	NS	NS
	Jun-08	-	-	0.80	0.81
	Jun-09	-	-	**1.07**	0.97
B108	Sep-02	-	-	0.73	0.78
	Dec-03	-	-	0.40	1.0
	Mar-04	-	-	0.50	0.40
	Jun-05	-	-	0.73	0.70
	Jun-07	-	-	**1.30**	0.49
	Dec-07	-	-	**1.34**	0.30
	Jun-08	-	-	**2.80**	0.56
	Jun-09	-	-	0.29	0.30
B291	Jun-02	0.012	<0.010	-	-
	Sep-02	<0.010	<0.010	-	-
	Dec-03	0.012	<0.010	-	-
	Mar-04	0.020	0.016	-	-
	Jun-05	<0.010	<0.010	-	-
	Jun-07	<0.010	<0.010	-	-
	Dec-07	<0.010	<0.010	-	-
	Jun-08	<0.010	<0.010	-	-
	Jun-09	<0.010	<0.010	-	-
B281	Jun-02	**0.037**	0.017	-	-
	Sep-02	0.023	<0.010	<0.03	<0.03
	Dec-03	0.017	<0.001	<0.30	<0.30
	Mar-04	**0.031**	0.017	<0.30	<0.30
	Jun-05	0.016	0.011	<0.30	<0.30
	Jun-07	**0.028**	<0.010	<0.30	<0.30
	Dec-07	**0.064**	<0.010	<0.50	<0.50
	Jun-08	**0.050**	<0.010	<0.50	<0.50
	Jun-09	**0.035**	<0.010	<0.50	<0.50

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

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	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	-	-
	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

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table - (Monitoring Well B107)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B107	Jun-00	-	-	7.46	1046	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	**0.10**	-	-
	Jul-00	-	-	7.57	916	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Aug-00	-	-	7.81	920	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	-	-	7.34	980	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Oct-00	-	-	7.68	834	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Nov-00	-	-	7.87	640	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Feb-01	-	-	7.71	608	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Apr-01	-	-	7.82	960	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	May-01	-	-	7.63	1107	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-02	-	-	7.44	947	-	-	-	-	-	-	-	-	-
	Dec-03	-	-	**8.62**	644	-	-	-	-	-	-	-	-	-
	Mar-04	-	-	7.81	543	-	-	-	-	-	-	-	-	-
	Jun-05	-	-	7.65	623	-	-	-	-	-	-	-	-	-
	Jun-07	-	-	7.68	482	-	-	-	-	-	-	-	-	-
	Dec-07	Not Sampled - Could Not Locate Well				-	-	-	-	-	-	-	-	-
	Jun-08	-	-	8.35	674	-	-	-	-	-	-	-	-	-
	Dec-08	Sampling Not Required			-	-	-	-	-	-	-	-	-	-
	Jun-09	-	-	7.2	9800	-	-	-	-	-	-	-	-	-
	Dec-09	Sampling Not Required			-	-	-	-	-	-	-	-	-	-

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B108)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B108	Jul-00	-	-	7.21	2620	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Aug-00	-	-	7.33	2750	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	0.002	0.001	7.27	2510	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Oct-00	-	-	7.26	2520	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Nov-00	-	-	7.00	2210	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	0.004	< 0.001	7.22	2180	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jan-01	-	-	7.19	2176	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Feb-01		-	7.74	2110	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	< 0.001	< 0.001	7.01	2100	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Apr-01	-	-	6.98	2350	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	May-01	-	-	7.01	1680	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-02	-	-	7.08	254	-	-	-	-	-	-	-	-	-
	Dec-03	-	-	8.52	1663	-	-	-	-	-	-	-	-	-
	Mar-04	-	-	7.55	1546	-	-	-	-	-	-	-	-	-
	Jun-05	-	-	7.44	1919	-	-	-	-	-	-	-	-	-
	Jun-07	-	-	7.22	1012	-	-	-	-	-	-	-	-	-
	Dec-07	-	-	8.21	394	-	-	-	-	-	-	-	-	-
	Jun-08	-	-	7.82	224	-	-	-	-	-	-	-	-	-
	Dec-08	Sampling Not Required			-	-	-	-	-	-	-	-	-	-
	Jun-09	-	-	7.10	1200	-	-	-	-	-	-	-	-	-
	Dec-09	Sampling Not Required			-	-	-	-	-	-	-	-	-	-

Metallco Aluminum Recovery, Inc.; Syracuse Facility

Table 3

ROTH BROS. SMELTING CORP.

Groundwater Performance Monitoring

Historical Laboratory Analytical Summary Table (Monitoring Well B281)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B281	Jun-98	< 0.002	< 0.002	6.53	2690	-	-	-	-	-	-	-	-	-
	1999	< 0.010	< 0.010	7.47	3120	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	-	-
	Jun-00	< 0.001	< 0.001	6.72	2630	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	< 0.001	< 0.001	7.02	2560	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	< 0.001	< 0.001	7.28	1956	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	< 0.001	< 0.001	7.24	2020	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	< 0.001	< 0.001	-	-	-	-	-	-	-	-	-	-	-
	Sep-02	< 0.001	< 0.001	6.86	3000	-	-	-	-	-	-	-	-	-
	Dec-02	< 0.001	-	7.03	2060	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	< 0.001	< 0.001	7.27	1063	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	0.001	< 0.001	7.32	3010	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	< 0.010	< 0.001	7.29	3170	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-03	0.002	0.001	7.27	2170	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	< 0.001	< 0.001	7.18	2230	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	< 0.001	0.001	7.47	2940	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	< 0.001	< 0.001	7.03	2990	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	0.004	< 0.001	7.39	1969	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	< 0.001	< 0.001	7.48	3000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	< 0.001	< 0.001	7.33	2170	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	0.001	< 0.001	7.19	2430	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	0.010	< 0.003	7.46	2780	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	0.009	0.024	7.17	2430	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	< 0.003	< 0.003	7.32	778	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	< 0.003	< 0.003	8.71	321	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	< 0.003	< 0.003	8.04	249	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	< 0.003	< 0.003	7.10	2215	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	7.10	1700	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	< 0.003	< 0.003	7.00	3900	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B290)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B290	Jun-98	**41.900**	< 0.020	6.94	2180	-	-	-	-	-	-	-	-	-
	1999	< 0.010	**0.720**	7.24	2370	-	-	-	-	-	-	-	-	-
	Jun-00	**0.045**	< 0.001	6.87	2410	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	**0.050**	< 0.001	7.42	2120	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	**0.092**	< 0.001	7.01	1784	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	0.007	< 0.001	7.01	1693	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	**0.048**	< 0.001	-	-	-	-	-	-	-	-	-	-	-
	Sep-02	0.008	< 0.001	6.93	2130	-	-	-	-	-	-	-	-	-
	Dec-02	**0.042**	-	7.13	1707	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	0.002	< 0.001	7.38	1451	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	**0.059**	< 0.001	7.37	2420	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	0.021	< 0.001	7.17	2240	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-03	0.008	0.002	8.08	1322	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	< 0.001	< 0.001	7.49	1590	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	0.001	< 0.001	7.45	1711	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	0.008	< 0.001	7.24	2410	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	< 0.001	0.003	7.41	1822	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	0.013	< 0.001	7.52	2450	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	0.012	< 0.001	7.68	1663	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	0.002	< 0.001	7.17	2600	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	0.023	< 0.003	7.67	1676	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	0.006	< 0.003	7.26	2430	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	0.016	0.004	8.10	701	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	0.019	< 0.003	8.47	1431	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	0.020	< 0.003	8.27	234	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	0.015	< 0.003	7.74	1786	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	7.20	5400	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	< 0.003	< 0.003	7.50	3600	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B291)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B291	Sep-00	0.007	0.001	7.31	877	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	0.001	0.001	7.24	848	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	0.003	< 0.001	7.01	752	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	< 0.001	< 0.001	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-02	0.002	< 0.001	7.4	1134	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	0.002	< 0.001	7.37	800	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	0.003	0.001	7.38	1213	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	< 0.001	< 0.001	7.21	898	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-03	0.008	0.002	**8.81**	804	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	0.002	< 0.001	7.31	860	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	0.001	< 0.001	7.53	1167	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	0.003	< 0.001	7.21	746	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	0.001	0.001	7.10	958	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	< 0.001	< 0.001	7.18	996	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	0.002	0.001	7.36	813	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	0.002	< 0.001	7.23	971	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	< 0.003	< 0.003	7.09	856	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	< 0.003	< 0.003	6.87	968	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	0.010	0.005	7.58	478	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	< 0.003	< 0.003	**8.62**	650	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	< 0.003	< 0.003	8.21	876	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	< 0.003	< 0.003	8.09	592	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	6.90	950	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	< 0.003	< 0.003	7.30	1130	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B401)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units			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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B401	Jun-98	0.012	< 0.002	-	-	-	-	-	-	-	-	-	-	-
	1999	0.061	< 0.010	6.69	1510	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-00	0.044	0.003	6.78	1275	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	0.350	0.002	7.29	1159	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	0.059	0.007	7.44	1180	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	0.033	< 0.001	7.26	810	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	0.210	< 0.001	-	-	-	-	-	-	-	-	-	-	-
	Sep-02	0.060	0.002	7.48	644	-	-	-	-	-	-	-	-	-
	Dec-02	0.013	-	7.27	925	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	0.024	< 0.001	7.32	781	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	0.010	0.003	7.66	1109	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	0.010	0.001	7.15	1126	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-03	0.021	0.002	8.37	791	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	0.004	< 0.001	7.48	785	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	**0.031**	< 0.001	7.49	1053	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	0.005	< 0.001	7.11	1030	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	0.002	< 0.001	7.21	937	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	0.003	< 0.001	7.36	1038	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	0.003	0.001	7.83	814	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	0.007	< 0.001	7.18	1066	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	**0.042**	< 0.003	7.46	986	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	0.011	< 0.003	**6.39**	502	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	0.008	0.003	7.46	441	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	< 0.003	< 0.003	8.32	691	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	0.017	< 0.003	8.08	930	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	< 0.003	< 0.003	7.90	693	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	6.90	1110	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	< 0.003	< 0.003	7.30	1520	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B402R)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B402R	Dec-05	**0.260**	0.001	7.73	3060	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	**1.20**	< 0.05	-	-
	Jun-06	0.003	< 0.003	8.37	2960	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	**0.048**	< 0.003	**8.61**	2680	**0.10**	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	**0.150**	0.010	8.11	1658	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	**0.042**	< 0.003	8.13	1470	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	**0.033**	< 0.003	7.33	273	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	**0.149**	< 0.003	8.27	1893	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	7.90	3000	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	**0.030**	< 0.003	8.20	2280	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B403)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B403	Jun-98	**0.284**	< 0.002	7.21	1280	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	1999	**0.240**	0.010	7.36	710	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**0.17**	< 0.01	-	-
	Jun-00	0.010	0.004	7.35	402	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	0.007	0.003	8.41	520	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	0.002	0.002	8.12	970	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	0.004	0.003	7.54	415	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	< 0.001	< 0.001	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-02	0.005	< 0.001	7.11	456	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-02	0.003	-	7.52	201	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	0.002	< 0.001	7.97	200	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	0.002	< 0.001	8.03	536	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	0.002	< 0.001	7.61	351	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	0.004	0.001	8.41	235	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	0.003	0.002	7.44	296	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	0.001	0.002	7.65	681	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	0.001	< 0.001	7.23	662	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	< 0.001	< 0.001	7.52	613	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	< 0.001	< 0.001	7.82	1156	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	0.003	0.002	7.64	1135	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	0.002	0.001	7.18	1372	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	< 0.003	< 0.003	7.36	1479	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	< 0.003	< 0.003	7.85	1719	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	< 0.003	0.005	8.41	822	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	< 0.003	< 0.003	**8.61**	913	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	< 0.003	< 0.003	8.25	1121	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	< 0.003	< 0.003	7.81	771	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	7.40	1160	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00
	Dec-09	< 0.003	< 0.003	7.20	1280	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

Table 3
ROTH BROS. SMELTING CORP.
Corrective Action Management Unit (CAMU)
Groundwater Performance Monitoring
Historical Laboratory Analytical Summary Table (Monitoring Well B404)

		Total Lead	Dissolved Lead	pH	Specific Conductivity	Aroclors								
						1016	1221	1232	1242	1248	1254	1260	1262	1268
Units		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	6.5-8.5	NA	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
B404	Jun-98	0.007	0.003	**10.55**	2380	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	1999	< 0.010	< 0.010	6.72	1740	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**0.17**	< 0.01	-	-
	Jun-00	0.004	0.002	6.97	1573	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-00	0.002	0.002	7.32	1114	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-00	0.003	< 0.001	7.47	589	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-01	0.003	0.003	7.54	610	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-02	< 0.001	< 0.001	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-02	0.003	< 0.001	7.09	731	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-02	0.003	-	7.33	374	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-03	< 0.001	< 0.001	7.61	272	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-03	0.002	< 0.001	7.63	544	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-03	0.001	< 0.001	7.26	526	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-03	0.004	0.002	**9.83**	297	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-04	0.001	0.002	8.14	286	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-04	0.001	< 0.001	**8.55**	516	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Sep-04	0.002	0.001	7.43	559	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-04	< 0.001	< 0.001	7.66	348	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Mar-05	< 0.001	< 0.001	7.28	512	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-05	0.003	< 0.001	7.56	367	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-05	< 0.001	< 0.001	7.14	512	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-06	< 0.003	< 0.003	7.46	523	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-06	< 0.003	< 0.003	6.89	474	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Jun-07	0.006	0.004	7.24	365	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-07	< 0.003	< 0.003	7.24	365	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-08	0.009	< 0.003	8.07	618	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	-	-
	Dec-08	< 0.003	< 0.003	7.08	539	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	< 1.00	-	-
	Jun-09	< 0.003	< 0.003	6.90	600	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00
	Dec-09	< 0.003	< 0.003	7.30	610	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10	< 1.10

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FIELD SAMPLING DATA SHEET

SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**B-281**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, snow, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	4.11
Measured Well Depth (feet)*:	13.03
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	1.43

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 13:50

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 4.29
Actual Volume of Water Purged (gallons): 4.30

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

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **14:10** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Cloudy** Sediment: **None**
Odor: **Septic**

Field Measured Parameters

pH (Standard Units)	7.0	Sp. Conductivity (umhos/cm)	3900
Temperature (F)	41.4	Eh-Redox Potential (mV)	19
Turbidity (NTUs)	49.76	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

Rev. 4/09 (MPS)

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FIELD SAMPLING DATA SHEET

SITE:	Metalico - Thompson Road	**SAMPLE LOCATION:**	B-290
CLIENT:	Metalico Aluminum Recovery, Inc.	**JOB #:**	1206.001
Weather Conditions:	Overcast, snow, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	4.9
Measured Well Depth (feet)*:	10.26
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	0.86

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 13:20

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 2.58
Actual Volume of Water Purged (gallons): 1.25

Did well purge dry? No [ ] Yes [X]
Did well recover? No [ ] Yes [X] Recovery Time: 10 mins

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **13:36** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Light orange** Sediment: **None**
Odor: **None**

Field Measured Parameters

pH (Standard Units)	7.5	Sp. Conductivity (umhos/cm)	3600
Temperature (F)	42.6	Eh-Redox Potential (mV)	41
Turbidity (NTUs)	135.1	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - Total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:
Heavy orange color at beginning of purge.

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FIELD SAMPLING DATA SHEET

SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**B-291**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	6.91
Measured Well Depth (feet)*:	12.54
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	0.9

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 10:10

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 2.70
Actual Volume of Water Purged (gallons): 2.70

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

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **10:25** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Clear** Sediment: **None**
Odor: **None**

Field Measured Parameters

pH (Standard Units)	7.3	Sp. Conductivity (umhos/cm)	1130
Temperature (F)	39.1	Eh-Redox Potential (mV)	64
Turbidity (NTUs)	24.58	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

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FIELD SAMPLING DATA SHEET

SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**B-401**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, snow, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	5.06
Measured Well Depth (feet)*:	13.03
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	1.28

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 9:35

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 3.84
Actual Volume of Water Purged (gallons): 1.50

Did well purge dry?	No [ ]	Yes [X]		
Did well recover?	No [ ]	Yes [X]	Recovery Time:	10 mins

SAMPLING METHOD

Equipment:

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

Sampled by: **DJM/MPS** Time: **9:50** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Clear** Sediment: **None**
Odor: **None**

Field Measured Parameters

pH (Standard Units)	7.3	Sp. Conductivity (umhos/cm)	1520
Temperature (F)	47.9	Eh-Redox Potential (mV)	-4
Turbidity (NTUs)	8.53	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

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FIELD SAMPLING DATA SHEET

SITE:	**Metallco - Thompson Road**	**SAMPLE LOCATION:**	**B-402R**
CLIENT:	**Metallco Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	2.80
Measured Well Depth (feet)*:	12.24
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	1.51

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 11:00

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 4.53
Actual Volume of Water Purged (gallons): 2.50

Did well purge dry?	No	[ ]	Yes	[X]	
Did well recover?	No	[ ]	Yes	[X]	Recovery Time: 1:10

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **12:20** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Slight haze** Sediment: **Trace fines**
Odor: **Slightly septic**

Field Measured Parameters

pH (Standard Units)	8.2	Sp. Conductivity (umhos/cm)	-
Temperature (F)	45.6	Eh-Redox Potential (mV)	41
Turbidity (NTUs)	51.47	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:
Conductivity meter not functioning.

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Barton & Loguidice, P.C.

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FIELD SAMPLING DATA SHEET

SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**B-403**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	2.94
Measured Well Depth (feet)*:	11.26
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	1.33

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 11:25

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 3.99
Actual Volume of Water Purged (gallons): 1.33

Did well purge dry?	No	[ ]	Yes	[X]	
Did well recover?	No	[ ]	Yes	[X]	Recovery Time: 15 mins

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **11:50** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Clear** Sediment: **None**
Odor: **None**

Field Measured Parameters

pH (Standard Units)	7.2	Sp. Conductivity (umhos/cm)	1280
Temperature (F)	42.3	Eh-Redox Potential (mV)	14
Turbidity (NTUs)	7.37	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

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FIELD SAMPLING DATA SHEET

SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**B-404**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	3.21
Measured Well Depth (feet)*:	16.14
Well Casing Diameter (inches):	2
Calculated Volume in Well Casing (gallons):	2.07

*depth from measuring point

Measuring Point: Riser
Measured by: DMJ/MPS
Date: 12/16/09
Time: 10:35

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 6.21
Actual Volume of Water Purged (gallons): 6.50

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

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **10:50** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Clear** Sediment: **Fines/rust at initial purge**
Odor: **None**

Field Measured Parameters

pH (Standard Units)	7.3	Sp. Conductivity (umhos/cm)	610
Temperature (F)	44.1	Eh-Redox Potential (mV)	101
Turbidity (NTUs)	6.63	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

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FIELD SAMPLING DATA SHEET

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SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**MW-8R / Dupe**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, snow, wind	Temperature:	25 F

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

WATER LEVEL DATA

Static Water Level (feet)*:	3.38
Measured Well Depth (feet)*:	10.00
Well Casing Diameter (inches):	2
Calculated Volume In Well Casing (gallons):	1.06

*depth from measuring point

Measuring Point: Riser
Measured by: MPS
Date: 12/16/09
Time: 12:45

PURGING METHOD

Equipment:

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

Calculated Volume Of Water To Be Purged (gallons): 3.18
Actual Volume of Water Purged (gallons): 3.25

Did well purge dry? No [ ] Yes [X]
Did well recover? No [ ] Yes [X] Recovery Time: 5 mins

SAMPLING METHOD

Equipment:

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

Sampled by: **DMJ/MPS** Time: **13:05** Date: **12/16/09**

SAMPLING DATA

Sample Appearance

Color: **Grey** Sediment: **Fines**
Odor: **Chemical**

Field Measured Parameters

pH (Standard Units)	7.1	Sp. Conductivity (umhos/cm)	-
Temperature (F)	-	Eh-Redox Potential (mV)	-83
Turbidity (NTUs)	98.59	Dissolved Oxygen (mg/L)	-

Samples Collected (Number/Type):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:
Well started to go dry when bailer was used. Purged first two gallons with bailer. No surface contamination or floaters were present. The water was clear with no visible sheen. Completed purge with pump. Black fines were persent in bottom of well. Stones in bottom of well. Conductivity meter not functioning.

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Barton & Loguidice, P.C.

FIELD SAMPLING DATA SHEET

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SITE:	**Metalico - Thompson Road**	**SAMPLE LOCATION:**	**Instrument Blank**
CLIENT:	**Metalico Aluminum Recovery, Inc.**	**JOB #:**	**1206.001**
Weather Conditions:	Overcast, snow, wind	Temperature:	25 F

SAMPLE TYPE: Groundwater [X] 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):	

*depth from measuring point

Measuring Point: _____
Measured by: _____
Date: _____
Time: _____

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 [X] Foot Valve [ ] Peristaltic Pump [X]
Dedicated [ ] Bladder Pump [ ]

Sampled by: **DMJ/MPS** Time: **10:00** Date: **12/16/09**

SAMPLING DATA

Sample Appearance
Color: **Clear** Sediment: **None**
Odor: **None**

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):
Three bottles - total and dissolved lead, PCBs

Samples Delivered to: ULI Time: 14:28 Date: 12/16/09

COMMENTS:

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Upstate Laboratories, Inc.

Chain of Custody Record

6034 Corporate Drive E. Syracuse New York 13057
Phone (315) 437 0255 Fax (315) 437 1209

Client: METALICO

Project # / Project Name: SEMI-ANNUAL METALICO WELLS

Client Contact: John Benson (B&L) Phone #: 437-5200

Location (city/state) Address: SYRACUSE, NY

Sample ID	Date	Time	Matrix	GRAB OR COMP	ULI Internal Use Only	Number of Containers	1	2	3	4	5	6	7	8	9	10	Remarks: ASP CAT B
MW-8R	12/16/09	13:05	WATER	GRAB		3	X	X	X	X							
B281	"	14:10	WATER	GRAB			X	X	X	X							MS/MSD
B290		13:30	WATER	GRAB			X	X	X	X							*Specific Conductivity
B291		10:25	WATER	GRAB			X	X	X	X							meter did not function
B401		09:50	WATER	GRAB			X	X	X	X							properly in Field-
B402R		12:20	WATER	GRAB			X	X	X	X							lab needs to run
B403		11:50	WATER	GRAB			X	X	X	X							this analysis*
B404		10:50	WATER	GRAB			X	X	X	X							
DUPE		—	WATER	GRAB			X	X	X	X							
EQUIPMENT BLANK	↓	10:00	WATER	GRAB		↓	X	X	X	X							
FILTER BLANK			WATER														

	Parameter and Method	Sample bottle: Type	Size	Preservative
1	T-PB*	PLASTIC	500 ML	HNO3
2	D-PB*	PLASTIC	500 ML	HNO3
3	PCB (EPA 8082)	GLASS	1000 ML	NONE
4	~~T-AS;BA;PB*~~ LAB - Specific Conductivity	PLASTIC	500 ML	HNO3
5	~~D-AS;BA;PB*~~	PLASTIC	500 ML	HNO3
6	~~T-BA~~	PLASTIC	500 ML	HNO3
7	~~D-BA~~	PLASTIC	500 ML	HNO3
8	~~T-AS;PB*~~	PLASTIC	500 ML	HNO3
9	~~D-AS;PB*~~	PLASTIC	500 ML	HNO3
10	~~FIELD PH;COND~~	N/A	N/A	N/A

Sampled by (Print): Derik M. Sorday / Matt Straub

Company: Burton & Lagonica, P.L.

Name of Courier:

Relinquished by:(sign)	Date	Time	Received by: (sign)
Relinquished by:(sign)	Date	Time	Received by: (sign)
Relinquished by:(sign)	Date	Time	Recd for Lab by:
[signature]	12/16/09	1498	[signature]

Syracuse | Rochester | Buffalo | Albany | Binghamton | Fair Lawn (NJ)

Upstate Laboratories, Inc.

Shipping: 6034 Corporate Dr. * E. Syracuse, NY 13057-1017 * (315) 437-0255 * Fax (315) 437-1209
Mailing: Box 169 * Syracuse, NY 13206
Albany (518) 459-3134 * Binghamton (607) 724-0478 * Buffalo (716) 972-0371
Rochester (866) 437-0255 * New Jersey (908) 581-4285

Mr. Dennis R. Flanagan, General Manager
Metalico Syracuse, Inc.
PO Box 88
E. Syracuse, NY 13057

January 18, 2010

RE: Analytical Report:
Semi-Annual Metalico Wells

Order No.: U0912378

Dear Mr. Flanagan:

Upstate Laboratories, Inc. received 10 samples on 12/16/2009 for the analyses presented in the following report.

All analytical results relate to the samples as received by the laboratory.

All analytical data conforms to standard approved methodologies and quality control. Our quality control narrative will be included should any anomalies occur.

We have included the Chain of Custody Record as part of your report. You may need to reference this form for a more detailed explanation of your samples. Samples will be disposed of approximately one month from final report date.

Should you have any questions, please feel free to give us a call.

Thank you for your patronage.

Sincerely,
UPSTATE LABORATORIES, INC.

Anthony J. Scala
President/CEO

Enclosures: report, invoice

cc:
J. Benson, Barton & Loguidice, PC: ASP-B Pkg.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND
ANALYTICAL REQUIREMENT SUMMARY

Upstate Laboratories Inc
6034 Corporate Drive
East Syracuse, New York 13057

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		VOA GC/MS Method #	BNA GC/MS Method #	Pest PCBs Method #	Herb Method #	Metals and Cyanide	Wet Chemistry (Other)
MW-8R	U0912378-001	-	-	8082	-	T-Pb & D-Pb	SC
B281	U0912378-002	-	-	8082	-	T-Pb & D-Pb	SC
B281 MS	U0912378-002MS	-	-	8082	-	T-Pb & D-Pb	SC
B281 MSD	U0912378-002MSD	-	-	8082	-	-	-
B281 DUPE	U0912378-002DP	-	-	-	-	T-Pb & D-Pb	SC
B290	U0912378-003	-	-	8082	-	T-Pb & D-Pb	SC
B291	U0912378-004	-	-	8082	-	T-Pb & D-Pb	SC
B401	U0912378-005	-	-	8082	-	T-Pb & D-Pb	SC
B402R	U0912378-006	-	-	8082	-	T-Pb & D-Pb	SC
B403	U0912378-007	-	-	8082	-	T-Pb & D-Pb	SC
B404	U0912378-008	-	-	8082	-	T-Pb & D-Pb	SC
DUPE	U0912378-009	-	-	8082	-	T-Pb & D-Pb	SC
EQUIPMENT BLANK	U0912378-010	-	-	8082	-	T-Pb & D-Pb	SC

Narrative

1.0 Summary

This report presents the sample test results and quality control results for eight water sample locations collected from the Semi-Annual Metalico Wells Project. The samples were analyzed for parameters listed in Section 3.0, below.

This report is divided into two packages and four volumes. The Sample Data Summary Package (Volume 1) presents a summary of the test results and quality control data. This abbreviated format is useful to engineers and environmental scientists. The Sample Data Package (Volumes 2-4) is a comprehensive report containing instrument raw data. It is formatted for validation by an independent third party.

2.0 Chain of Custody

The samples were collected by Barton & Loguidice, PC personnel on December 16, 2009, and hand delivered to Upstate Laboratories, Inc., Syracuse, New York. The Chain of Custody documentation are copied in Volumes 1 and 2.

3.0 Methodology

The analyses were performed using test methods developed by the USEPA and reorganized by the NYSDEC in the Analytical Services Protocol (ASP). The specific method numbers are:

Parameter	Method	Reference
PCB (Aroclors)	8082	(1)
Lead	200.7	(1)
Specific Conductivity	120.1	(1)

(1) New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP), 7/05 Revision

4.0 Quality Control

Quality control data includes method blanks, reference samples, matrix spikes, matrix spike duplicates, duplicates, and surrogate recoveries. The association of QC data with sample data is made through the use of the Test Code and the Analysis Date found on both the final report pages and the QC summary pages.

5.0 Internal Validation

PCB (Aroclors)

Holding Time	: Criteria were satisfied.
Calibration	: Criteria were satisfied.
Method Blanks	: Criteria were satisfied.
Reference Sample	: Criteria were satisfied.
MS/MSD	: Criteria were satisfied.
Surrogates	: Criteria were satisfied.

The total number of pages in this Data Package is: _____.

Metals Data

Holding Time	: Criteria were satisfied.
Calibration	: Criteria were satisfied.
Method Blanks	: Criteria were satisfied.
Reference Sample	: Criteria were satisfied.
Matrix Spike	: Criteria were satisfied.
Duplicates	: Criteria were satisfied.

Wet Chemistry Data

Holding Time	: Criteria were satisfied.
Calibration	: Criteria were satisfied.
Method Blanks	: Criteria were satisfied.
Reference Sample	: Criteria were satisfied.
Matrix Spike	: Criteria were satisfied.
Duplicates	: Criteria were satisfied.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and/or in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Approved Anthony J. Scala

Anthony J. Scala, Director

QCMET004B

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	MW-8R
Lab Order:	U0912378	**Collection Date:**	12/16/2009 1:05:00 PM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-001	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**	**(SW3510B)**		Analyst: **EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	6.9	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**	**(E200.7)**		Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 5:24:58 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**	**(E200.7)**		Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 2:56:43 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: **NJS**
Specific Conductance	~~10100~~ 1010 Corrected HAS	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B281
Lab Order:	U0912378	**Collection Date:**	12/16/2009 2:10:00 PM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-002	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**	**(SW3510B)**		**Analyst: EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**	**(E200.7)**		**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 5:34:41 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**	**(E200.7)**		**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 3:06:23 PM
SPECIFIC CONDUCTANCE			**120.1**			**Analyst: NJS**
Specific Conductance	1380	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B290
Lab Order:	U0912378	**Collection Date:**	12/16/2009 1:30:00 PM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-003	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**		**(SW3510B)**	Analyst: **EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 6:22:43 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 3:34:30 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: **NJS**
Specific Conductance	2860	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B291
Lab Order:	U0912378	**Collection Date:**	12/16/2009 10:25:00 AM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-004	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**	**(SW3510B)**		**Analyst: EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**	**(E200.7)**		**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 6:32:13 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**	**(E200.7)**		**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 3:44:00 PM
SPECIFIC CONDUCTANCE			**120.1**			**Analyst: NJS**
Specific Conductance	894	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B401
Lab Order:	U0912378	**Collection Date:**	12/16/2009 9:50:00 AM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-005	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**		**(SW3510B)**	Analyst: **EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 6:41:47 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 3:53:35 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: **NJS**
Specific Conductance	1270	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B402R
Lab Order:	U0912378	**Collection Date:**	12/16/2009 12:20:00 PM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-006	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**		**(SW3510B)**	Analyst: EA
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**		**(E200.7)**	Analyst: ALW
Lead	30.4	3.00		µg/L	1	1/15/2010 6:51:33 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**		**(E200.7)**	Analyst: ALW
Lead	ND	3.00		µg/L	1	1/15/2010 4:03:28 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: NJS
Specific Conductance	2280	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B403
Lab Order:	U0912378	**Collection Date:**	12/16/2009 11:50:00 AM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-007	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**		**(SW3510B)**	**Analyst: EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**		**(E200.7)**	**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 7:01:12 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**		**(E200.7)**	**Analyst: ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 4:07:57 PM
SPECIFIC CONDUCTANCE			**120.1**			**Analyst: NJS**
Specific Conductance	1030	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	B404
Lab Order:	U0912378	**Collection Date:**	12/16/2009 10:50:00 AM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-008	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**	**(SW3510B)**		Analyst: EA
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**	**(E200.7)**		Analyst: ALW
Lead	ND	3.00		µg/L	1	1/15/2010 7:10:48 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**	**(E200.7)**		Analyst: ALW
Lead	ND	3.00		µg/L	1	1/15/2010 4:12:33 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: NJS
Specific Conductance	459	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	Dupe
Lab Order:	U0912378	**Collection Date:**	12/16/2009
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-009	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**	**(SW3510B)**		Analyst: **EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	8.0	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**	**(E200.7)**		Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 7:20:31 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**	**(E200.7)**		Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 4:36:40 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: **NJS**
Specific Conductance	9700	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Upstate Laboratories, Inc.

Analytical Report

Date: *18-Jan-10*

CLIENT:	Metalico Syracuse, Inc.	**Client Sample ID:**	Equipment Blank
Lab Order:	U0912378	**Collection Date:**	12/16/2009 10:00:00 AM
Project:	Semi-Annual Metalico Wells		
Lab ID:	U0912378-010	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYLS IN WASTEWATER			**8082_ASPW**		**(SW3510B)**	Analyst: **EA**
Aroclor 1016	ND	1.1		µg/L	1	1/5/2010
Aroclor 1221	ND	1.1		µg/L	1	1/5/2010
Aroclor 1232	ND	1.1		µg/L	1	1/5/2010
Aroclor 1242	ND	1.1		µg/L	1	1/5/2010
Aroclor 1248	ND	1.1		µg/L	1	1/5/2010
Aroclor 1254	ND	1.1		µg/L	1	1/5/2010
Aroclor 1260	ND	1.1		µg/L	1	1/5/2010
ICP METALS, TOTAL ASP			**200.7WTASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 7:34:57 PM
ICP METALS, DISSOLVED ASP			**200.7WDASP**		**(E200.7)**	Analyst: **ALW**
Lead	ND	3.00		µg/L	1	1/15/2010 4:58:04 PM
SPECIFIC CONDUCTANCE			**120.1**			Analyst: **NJS**
Specific Conductance	3740	2.00		µmhos/cm25C	1	12/20/2009

Approved By: AB **Date:** 1-18-10

Qualifiers:

*	Low Level	**	Value exceeds Maximum Contaminant Value
B	Analyte detected in the associated Method Blank	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	S	Spike Recovery outside accepted recovery limits

Data Validation Report

Metalico Aluminum Recovery, Inc.

East Syracuse, New York

SAMPLED DECEMBER 2009

Barton & Loguidice, P.C.
Engineers • Environmental Scientists • Planners • Landscape Architects

290 Elwood Davis Road
Box 3107
Syracuse, New York 13220

Data Validation Report

Metalico Aluminum Recovery, Inc.

East Syracuse, New York.

Prepared By:

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290 Elwood Davis Road, Box 3107
Syracuse, New York 13220

Sampled December 2009

Project No: 1206.002

EXECUTIVE SUMMARY

This report addresses data quality for groundwater collected on December 16, 2009 at the Metalico Aluminum Recovery, Inc. facility located in, East Syracuse, New York. The samples were analyzed for polychlorinated biphenyls (PCBs) and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Barton and Loguidice, P.C. of Syracuse, New York. Analytical services were provided by Upstate Laboratories, Inc. (ULI) located in East Syracuse, New York.

The inorganics analyses data have been determined to be usable for qualitative and quantitative purposes without qualification.

The PCB analyses data have been determined to be usable for qualitative and quantitative purposes without qualification.

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Appendices

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for groundwater collected on December 16, 2009 at the Metalico Aluminum Recovery, Inc. facility located in, East Syracuse, New York The samples were analyzed polychlorinated biphenyls (PCBs) and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Barton and Loguidice, P.C. of Syracuse, New York. Analytical services were provided by Upstate Laboratories, Inc. (ULI) located in East Syracuse, New York. The quantity and types of samples that were submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Sample Identification	
		Client ID	Laboratory ID
U0912378	12/18/08	MW-8R	U0912378-001
		B281	U0812421-002
		B290	U0812421-003
		B291	U0812421-004
		B401	U0812421-005
		B402R	U0812421-006
		B403	U0812421-007
		DUPE	U0812421-009
		EQUIPMENT BLANK	U0812421-010

1.2 Analytical Methods

Water samples were analyzed for polychlorinated biphenyls (PCBs) and inorganics (Metals) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2000 update). Laboratory analyses were provided by Upstate Laboratories, Inc. located in East Syracuse, New York.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC September 1989, 12/91 Revisions.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, USEPA-540/R-94/013, February 1994.
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, USEPA-540/R-94/012, February 1994.

Evaluation of Metals Data for the Contract Laboratory Program (CLP), SOP NO. HW-2, Revision #11, USEPA Region II, January 1992.

CLP Organics Data Review and Preliminary Review, SOP No. HW-6 Revision #8, USEPA Region II, January 1992.

1.3.1 Inorganic Parameters

The validation of inorganics for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

1. Holding Times
2. Calibration
   a. Initial Calibration Verification
   b. Continuing Calibration Verification
3. Blank Analysis
4. ICP Interference Check Sample Analysis (ICP only)
5. Matrix Spike Analysis
6. Laboratory Duplicate Analysis
7. Laboratory Control Sample Analysis
8. ICP Serial Dilution Analysis (ICP only)
9. Furnace Atomic Absorption Analysis
10. Method of Standard Addition Results
11. Field Blanks
12. Element Quantification and Reported Detection Limits
13. Document Completeness
14. Overall Data Assessment

1.3.2 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

PCB Analyses

1. Holding Times
2. Instrument Performance
   a. Standards Retention Time Windows
   b. DCBP Retention Time Shift
   c. Baseline Stability
   d. Chromatographic Resolution
3. Calibration
   a. Initial Calibration
   b. Analytical Sequence Verification
   c. Continuing Calibration Verification
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike/Matrix Spike Duplicate Analysis
7. Reference Standard Analysis

8. Compound Identification and Quantification
9. Documentation Completeness
10. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U — Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.

J — Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.

UJ — Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

R — Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative or quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklists are presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Inorganics Analysis

Data validation was performed for seven water samples, one duplicate, and one equipment blank sample for total and dissolved inorganic lead. The QA/QC parameters presented in Section 1.3.1 of this report were found to be within specified limits without qualification.

Overall Data Assessment

Overall, the laboratory performed inorganics analyses in accordance with the requirements specified in the methods listed in Section 1.2 of this report. These data were determined to be usable for qualitative and quantitative purposes without additional qualification.

2.2 PCB Analyses

Data validation was performed for seven water samples, one duplicate, and one equipment blank sample for total PCBs. The QA/QC parameters presented in Section 1.3.2 of this report were found to be within specified limits without qualification.

Overall Data Assessment

Overall, the laboratory performed PCB analyses in accordance with the requirements specified in the method listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes without additional qualification.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability which was calculated separately for each type of analysis is tabulated below.

Table 16: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
Inorganic parameters	100 %	None resulting in the rejection of data.
PCB	100 %	None resulting in the rejection of data.

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, none of the data were qualified for precision criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recoveries, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program none of the analytical data were qualified for accuracy criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the data required qualification for representativeness criteria deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The overall percent usability or completeness of the data was 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

Table of Contents

Data Validation Checklist - Part A: PCB Analysis

		YES	NO	N/A
1.0	**Traffic Reports and Laboratory Narrative**			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		X	
2.0	**Holding Times**			
2.1	Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded?		X	
3.0	**System Monitoring Compound (SMC) Recovery (Form II)**			
3.1	Are the PEST/PCB Surrogate Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Soil			X
3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Soil			X
3.3	Were outliers marked correctly with an asterisk?			X
3.4	Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or method blank? (60-150%)		X	
3.5	Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A?	X		
3.6	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	**Matrix Spikes (Form III)**			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	X		
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?	X		
	a. Low Water	X		
	b. Soil			X
4.3	How many PEST/PCB spike recoveries are outside QC limits?			
	Water 0 out of 12 Soils NA out of 12			
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?			
	Water 0 out of 6 Soils NA out of 6			
5.0	**Blanks (Form IV)**			
5.1	Is the Method Blank Summary (Form IV) present?	X		

Data Validation Checklist - Part A: PCB Analysis

		YES	NO	N/A
5.2	Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent?	X		
5.3	Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs?	X		
6.0	**Contamination**			
6.1	Do any method/instrument/reagent blanks have positive results PEST/PCBs?		X	
6.2	Do any field/rinse blanks have positive PEST/PCB results?		X	
6.3	Are there field/rinse/equipment blanks associated with every sample?	X		
7.0	**Calibration and GC Performance**			
7.1	Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?			
	a. Peak resolution check	X		
	b. Performance evaluation mixtures	X		
	c. Aroclor 1016/1260	X		
	d. Aroclors 1221, 1232, 1242, 1248, 1254	X		
	e. Toxaphene	X		
	f. Low points individual mixtures A & B	X		
	g. Med points individual mixtures A & B	X		
	h. High points individual mixtures A & B	X		
	I. Instrument blanks	X		
7.2	Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence?	X		
7.3	Are there any transcription/calculation errors between raw data and Forms VI?		X	
7.4	Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence?	X		
7.5	Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns?	X		
7.6	Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns?	X		
7.7	Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns?	X		

Data Validation Checklist - Part A: PCB Analysis

		YES	NO	N/A
7.8	Has the individual %breakdown exceeded 20.0% on either column.		X	
	- for 4,4' - DDT?			X
	- for endrin?			X
	Has the combined %breakdown for 4,4' - DDT/Endrin exceeded 30.0% on either column?			X
7.9	Are the relative percent difference (RPD) values for all PEM analytes <25.0%?	X		
7.10	Have all samples been injected within a 12 hr. Period beginning with the injection of an Instrument Blank?	X		
7.11	Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed?	X		
7.12	Are there any transcription/calculation errors between raw data and Form VII - Pest-2?		X	
7.13	Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence?	X		
7.14	Are the RPD values for all verification calibration standard compounds <25.0%?	X		
8.0	**Analytical Sequence Check (Form VIII-PEST)**			
8.1	Is Form VIII present and complete for each column and each period of analyses?	X		
8.2	Was the proper analytical sequence followed for each initial calibration and subsequent analyses?	X		
9.0	**Cleanup Efficiency Verification (Form IX)**			
9.1	Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used?			X
9.2	Are all samples listed on the Pesticide Florisil Cartridge Check Form?			X
9.3	If GPC Cleanup was performed, is Form IX - Pest-2 present?		X	
9.4	Are percent recoveries (%R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:			X
	80-120% for florisil cartridge check?			X
	80-110% for GPC calibration?			X
10.0	**Pesticide/PCB Identification**			
10.1	Is Form X complete for every sample in which a pesticide or PCB was detected?			X
10.2	Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, 9B, 10A?		X	
10.3	Are retention times (RT) of the sample compounds within the established windows for both analyses?			X
10.4	Is the percent difference (%D) calculated for the positive sample results on the two GC columns < 25.0%?			X
10.5	Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives?		X	

Data Validation Checklist - Part A: PCB Analysis

		YES	NO	N/A
11.0	**Compound Quantitation and Reported Detection Limits**			
11.1	Are there any transcription/calculation errors in Form I results?		X	
11.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, %moisture?	X		
12.0	**Chromatogram Quality**			
12.1	Were baselines stable?	X		
12.2	Were any electropositive displacement (negative peaks) or unusual peaks seen?		X	
13.0	**Field Duplicates**			
13.1	Were any field duplicates submitted for PEST/PCB analysis?	X		

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
1.0	**Form I to IX**			
1.1	Are all the Form I through Form IX labeled with:			
	Laboratory Name?	X		
	Case/SAS No.?		X	
	EPA sample No.?		X	
	SDG No.?	X		
	Contract No.?	X		
	Correct units?	X		
	Matrix?	X		
1.2	Do any computer/transcription errors exceed 10% of reported values on Forms I-IX for:			
	A. All analytes analyzed by ICP?		X	
	B. All analytes analyzed by GFAA?			X
	C. All analytes analyzed by AA Flame?			X
	D. Mercury?			X
	E. Cyanide?			X
2.0	**Raw Data**			
2.1	Digestion Log for flame AA/ICP (Form XIII) present?	X		
2.2	Digestion Log for furnace AA (Form XIII) present?			X
2.3	Distillation Log for mercury (Form XIII) present?			X
2.4	Distillation Log for cyanides (Form XIII) present?			X
2.5	Are pH values (pH<2 for all metals, pH>12 for cyanide) present?	X		
2.6	Percent solids calculation dates present on sample preparation logs/bench sheets?			X
2.7	Are preparation dates present on sample preparation logs/bench sheets?	X		
2.8	Measurement read out record present?			
	A. ICP	X		
	B. Flame AA			X
	C. Furnace AA			X
	D. Mercury			X
	E. Cyanides			X
2.9	Are all raw data to support all sample analyses and QC operations present?	X		
3.0	**Holding Times**			
3.1	A. Mercury analysis (28 days) .....exceeded?			X
	B. Cyanide distillation (14 days) .....exceeded?			X
	C. Other Metals analysis (6 months) .....exceeded?		X	

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
3.2	Is pH of aqueous samples for:			
	A. Metals Analysis >2?		X	
	B. Cyanides Analysis <12?			X
4.0	**Form I (Final Data)**			
4.1	Are all Forms I's present and complete?	X		
4.2	Are correct units (ug/l for waters and mg/kg for soils) indicated on Form I's?	X		
4.3	Are soil sample results for each parameter corrected for percent solids?			X
4.4	Are all "less than IDL" values properly coded with "U"?	X		
4.5	Are the correct concentration qualifiers used with final data?	X		
4.6	Are EPA sample #s and corresponding laboratory sample ID #s the same as on the Cover Page, Form I's and in the raw data?	X		
4.7	Was a brief physical description of samples given on Form I's?	X		
4.8	Was the dilution of any sample diluted beyond the requirements of the contract noted on Form I or Form XIV?		X	
5.0	**Calibration**			
5.1	Is record of at least 2 point calibration present for ICP analysis?	X		
5.2	Is record of 5 point calibration present for Hg analysis?			X
5.3	Is record of 4 point calibration present for:			X
	Flame AA?			X
	Furnace AA?			X
	Cyanides?			X
5.4	Is one calibration standard at the CRDL level for all AA (except Hg) and cyanides analyses?	X		
5.5	Is correlation coefficient less than 0.995 for:			
	Mercury Analysis?			X
	Cyanide Analysis?			X
	Atomic Absorption Analysis?			X
5.6	In the instance where less than 4 standards are measured in absorbance (or peak area, peak height, etc.) Mode, are remaining standards analyzed in concentration mode immediately after calibration within +/- 10% of the true values?			X
6.0	***Form II A (Initial and Continuing Calibration Verification)***			
6.1	Present and complete for every metal and cyanide?	X		
6.2	Present and complete for AA ICP when both are used for the same analyte?			X
6.3	Are all calibration standards (initial and continuing) within control limits:			
	Metals - 90 - 110 %R	X		
	Hg - 80 - 120 %R			X
	Cyanides - 85 - 115 %R			X

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
6.4	Was continuing calibration performed every 10 samples or every 2 hours?	X		
6.5	Was ICV for cyanides distilled?			X
7.0	**Form II B (CRDL Standards for AA and ICP)**			
7.1	Was a CRDL standard (CRA) analyzed after initial calibration for all AA metals (except Hg)?	X		
7.2	Was a mid range calibration verification standard distilled and analyzed foe cyanide analysis?			X
7.3	Was a 2xCRDL (or 2xIDL when IDL>CRDL) analyzed (CRI) for each ICP run?	X		
7.4	Was CRI analyzed after ICV/ICB and before the final CCV/CCB, and twice every eight hours of ICP run?	X		
7.5	Are CRA and CRI standards within control limits: Metals 70 – 130 %R?	X		
7.6	Is mid-range standard within control limits: Cyanide 70 - 130 %R?			X
8.0	**Form III (Initial and Continuing Calibration Blanks)**			
8.1	Present and complete?	X		
8.2	For both AA and ICP when both are used for the same analyte?			X
8.3	Was an initial calibration blank analyzed?	X		
8.4	Was a continuing calibration blank analyzed after every 10 samples or every 2 hours (which ever is more frequent)?	X		
8.5	Are all calibration blanks (when IDL<CRDL) less than or equal to the Contract Required Detection Limits (CRDLs)?	X		
8.6	Are all calibration blanks less than two times Instrument Detection Limit (when IDL>CRDL)?			X
9.0	**Form III (Preparation Blank)**			
9.1	Was one preparation blank analyzed for:			
	each Sample Delivery Group?	X		
9.2	Is concentration of preparation blank value greater than the CRDL when IDL is less than or equal to CRDL?		X	
9.3	If yes, is the concentration of the sample with the least concentrated analyte less than 10 times the preparation blank?			X
9.4	Is concentration of preparation blank value (Form III) less than two times IDL, when IDL is greater than CRDL?			X
9.5	Is concentration of preparation blank below the negative CRDL?		X	
10.0	**Form IV (Interference Check Sample)**			
10.1	Present and Complete?	X		
10.2	Are all Interference Check Sample results inside the control limits (+/- 20%)?	X		
10.3	If no, is concentration of Al, Ca, Fe, or Mg lower than the respective concentration in ICS?			X

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
11.0	**Form V A (Spiked Sample recovery - Pre-Digestion/Pre-Distillation**			
11.1	Present and complete for:			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		
	For both AA and ICP when both are used for the same analyte?			X
11.2	Was field blank used for spiked sample?		X	
11.3	Are all recoveries within control limits?	X		
11.4	If no, is sample concentration greater than or equal to four times spike concentration?			X
12.0	**Form VI (Lab Duplicates)**			
12.1	Present and complete for :			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		
	both AA and ICP when both are used for the same analyte?			X
12.2	Was field blank used for duplicate analysis?		X	
12.3	Are all values within control limits (RPD 20% or difference </= +/-CRDL)?	X		
12.4	If no, are all results outside the control limits flagged with an * on Form I's and VI?			X
13.0	**Field Duplicates**			
13.1	Were field duplicates analyzed?	X		
13.2	Aqueous			
	Is any RPD greater than 50% where sample and duplicate are both greater than or equal to 5 times CRDL?		X	
	Is any difference between sample and duplicate greater than CRDL where sample and/or duplicate is less than 5 times CRDL?		X	
13.3	Soil/Sediment			
	Is any RPD (where sample and duplicate are both greater than 5 times CRDL): >100%?			X
	Is any difference between sample and duplicate (where sample and/or duplicate is less than 5x CRDL): >2x CRDL?			X
14.0	**Form VII (Laboratory Control Sample)**			
14.1	Was one LCS prepared and analyzed for:			
	each SDG?	X		
	each batch samples digested/distilled?	X		
	both AA and ICP when both are used for the same analyte?			X

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
14.2	**Aqueous LCS**			
	Is any LCS recovery:			
	less than 50%?		X	
	between 50% and 79%?		X	
	between 121% and 150%?		X	
	greater than 150%?		X	
14.3	**Solid LCS**			
	Is LCS "Found" value higher than the control limits on Form VII?			X
	Is LCS "Found" value lower than the control limits on Form VII?			X
15.0	**Form IX (ICP Serial Dilution)**			
15.1	Was serial dilution analysis performed for:			
	each SDG?	X		
	each matrix type?	X		
	each concentration range (i.e., low, medium, high)?	X		
15.2	Was field blank(s) used for Serial Dilution Analysis?		X	
15.3	Are results outside control limit flagged with an "E" on Form I's and Form IX when initial concentration on Form IX is equal to 50 times IDL or greater?			X
15.4	Are any %difference values:			
	>10%		X	
	>/=100%		X	
16.0	**Furnace Atomic Absorbtion (AA) QC Analysis**			
16.1	Are duplicate injections present in furnace raw data for each sample analyzed by GFAA?			X
16.2	Do the duplicate injection readings agree within 20% Relative Standard Deviation (RSD) or Coefficient of Variation (CV) for concentration greater than CRDL?			X
16.3	Was a dilution analyzed for sample with analytical spike recovery less than 40%?			X
16.4	Is analytical spike recovery outside the control limits (85 - 115%) for any sample?			X
17.0	**Form VIII (Method of Standard Addition Results)**			
17.1	Present?			X
17.2	If no, is any Form I result coded with "S" or a "+"?			X
17.3	Is coefficient of correlation for MSA less than 0.990 for any sample?			X
17.4	Was MSA required for any sample but not performed?			X
17.5	Is coefficient of correlation for MSA less than 0.995?			X
17.6	Are MSA calculations outside the linear range of the calibration curve generated at the beginning of the analytical run?			X
17.7	Was proper Quantitation procedure followed correctly as outlined in the SOW on page E-23?			X

Data Validation Checklist - Part B: Metals Analyses

No:	Parameter	YES	NO	N/A
18.0	**Dissolved/Total or Inorganic/Total Analytes**			
18.1	Were any analyses performed for dissolved as well as total analytes on the same sample(s)?	X		
18.2	Were any analyses performed for inorganic as well as total (organic and inorganic) analytes on the same sample(s)?	X		
18.3	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 10%?		X	
18.4	Is the concentration of any dissolved (or inorganic) analyte greater than its total concentration by more than 50%?		X	
19.0	**Form I (Field Blank)**			
19.1	Is field blank concentration less than CRDL (or 2 x IDL when IDL>CRDL) for all parameters of associated aqueous and soil samples?	X		
19.2	If no, was field blank value already rejected due to other QC criteria?			X
20.0	***Form X, XI, XII (Verification of Instrumental Parameters)***			
20.1	Is verification report present for:			
	Instrument Detection Limits (quarterly)?	X		
	ICP Interelement Correction Factors (annually)?	X		
	ICP Linear Ranges (quarterly)?	X		
21.0	**Form X (Instrument Detection Limits)**			
21.1	Are IDLs present for:			
	all the analytes?	X		
	all the instruments used?	X		
	For both AA and ICP when both are used for the same analyte?			X
21.2	Is IDL greater than CRDL for any analytes?		X	
21.3	If yes, is the concentration on Form I of the sample analyzed on the instrument whose IDL exceeds CRDL, greater than 5 x IDL?			X
22.0	**Form XI (Linear Ranges)**			
22.1	Was any sample result higher than the high linear range of ICP?		X	
22.2	Was any sample result higher than the highest calibration standard for non-ICP parameters?		X	
22.3	If yes for any of the above, was the sample diluted to obtain the result on Form I?			X
23.0	**Percent Solids of Sediments**			
23.1	Are percent solids in sediment(s):			
	<50%?			X
	<10%?			X