



06-Apr-2012

Marla Miller
ARCADIS U.S., Inc.
211 N Florence Street
Suite 202
El Paso, TX 79901

Tel: (602) 797-4699
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Re: El Paso Smelter

Work Order: **12031031**

Dear Marla,

ALS Environmental received 1 sample on 29-Mar-2012 09:05 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested. Results are expressed as "as received" unless otherwise noted.

QC sample results for this data met EPA or laboratory specifications except as noted in the Case Narrative or as noted with qualifiers in the QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained by ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to call me.

Sincerely,

Electronically approved by: Yvan K. Ty

Bethany Agarwal
Project Manager



Certificate No: TX: T104704231-11-5

Client: ARCADIS U.S., Inc.
Project: El Paso Smelter
Work Order: 12031031

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
12031031-01	QA032812	Water		3/28/2012 08:30	3/29/2012 09:05	<input type="checkbox"/>

Client: ARCADIS U.S., Inc.
Project: El Paso Smelter
Work Order: 12031031

Case Narrative

Batch 59998, Metals, Sample 1203949-01: MS/MSD performed on an unrelated sample.

Batch 60000, Dissolved Metals, Sample QA032812: MSD recoveries outside control limits for Arsenic and Molybdenum due to possible matrix interference.

Batch 60000, Dissolved Metals, Sample QA032812: DUP RPD higher than control limits for Zinc.

ALS Environmental

Date: 06-Apr-12

Client: ARCADIS U.S., Inc.
 Project: El Paso Smelter
 Sample ID: QA032812
 Collection Date: 3/28/2012 08:30 AM

Work Order: 12031031
 Lab ID: 12031031-01
 Matrix: WATER

Analyses	Result	Qual	SDL	ML	Units	Dilution Factor	Date Analyzed
DISSOLVED MERCURY			Method: SW7470		Prep: SW7470 / 4/3/12		Analyst: JCJ
Mercury	0.0000450	J	0.000042	0.000200	mg/L	1	4/3/2012 16:17
MERCURY			Method: SW7470		Prep: SW7470 / 4/3/12		Analyst: JCJ
Mercury	0.0000580	J	0.000042	0.000200	mg/L	1	4/3/2012 15:20
DISSOLVED METALS			Method: SW6020		Prep: SW3010A / 4/2/12		Analyst: ALR
Antimony	0.00155	J	0.00080	0.00500	mg/L	1	4/3/2012 00:08
Arsenic	0.522		0.0013	0.00500	mg/L	1	4/3/2012 00:08
Barium	0.0454		0.00090	0.00500	mg/L	1	4/3/2012 00:08
Cadmium	0.00329		0.00080	0.00200	mg/L	1	4/3/2012 00:08
Chromium		U	0.0012	0.00500	mg/L	1	4/3/2012 00:08
Cobalt		U	0.00080	0.00500	mg/L	1	4/3/2012 00:08
Copper	0.00169	J	0.0015	0.00500	mg/L	1	4/3/2012 00:08
Iron		U	0.078	0.200	mg/L	1	4/3/2012 00:08
Lead		U	0.00070	0.00500	mg/L	1	4/3/2012 00:08
Molybdenum	0.317		0.0015	0.00500	mg/L	1	4/3/2012 00:08
Nickel	0.00947		0.0012	0.00500	mg/L	1	4/3/2012 00:08
Selenium	0.158		0.0010	0.00500	mg/L	1	4/3/2012 00:08
Silver		U	0.00080	0.00500	mg/L	1	4/3/2012 00:08
Thallium	0.0197		0.0010	0.00200	mg/L	1	4/3/2012 00:08
Zinc	0.0106		0.0025	0.00500	mg/L	1	4/3/2012 00:08
METALS			Method: SW6020		Prep: SW3010A / 4/2/12		Analyst: ALR
Aluminum	0.0420		0.0040	0.0100	mg/L	1	4/3/2012 15:12
Antimony	0.00105	J	0.00080	0.00500	mg/L	1	4/3/2012 15:12
Arsenic	0.475		0.0013	0.00500	mg/L	1	4/3/2012 15:12
Barium	0.0417		0.00090	0.00500	mg/L	1	4/3/2012 15:12
Cadmium	0.00366		0.00080	0.00200	mg/L	1	4/3/2012 15:12
Calcium	158		0.086	0.500	mg/L	1	4/3/2012 15:12
Chromium		U	0.0012	0.00500	mg/L	1	4/3/2012 15:12
Cobalt		U	0.00080	0.00500	mg/L	1	4/3/2012 15:12
Copper	0.00209	J	0.0015	0.00500	mg/L	1	4/3/2012 15:12
Iron		U	0.078	0.200	mg/L	1	4/3/2012 15:12
Lead		U	0.00070	0.00500	mg/L	1	4/3/2012 15:12
Magnesium	61.3		0.082	0.200	mg/L	1	4/3/2012 15:12
Manganese	0.512		0.0025	0.00500	mg/L	1	4/3/2012 15:12
Molybdenum	0.310		0.0015	0.00500	mg/L	1	4/3/2012 15:12
Nickel	0.00793		0.0012	0.00500	mg/L	1	4/3/2012 15:12
Potassium	27.1		0.084	0.200	mg/L	1	4/3/2012 15:12
Selenium	0.142		0.0010	0.00500	mg/L	1	4/3/2012 15:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

ALS Environmental

Date: 06-Apr-12

Client: ARCADIS U.S., Inc.
Project: El Paso Smelter
Sample ID: QA032812
Collection Date: 3/28/2012 08:30 AM

Work Order: 12031031
Lab ID: 12031031-01
Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
Silver		U	0.00080	0.00500	mg/L	1	4/3/2012 15:12
Sodium	766		8.5	20.0	mg/L	100	4/4/2012 17:19
Thallium	0.0178		0.0010	0.00200	mg/L	1	4/3/2012 15:12
Zinc	0.00777		0.0025	0.00500	mg/L	1	4/3/2012 15:12

Note: See Qualifiers Page for a list of qualifiers and their explanation.

Work Order: 12031031
 Client: ARCADIS U.S., Inc.
 Project: El Paso Smelter

DATES REPORT

Sample ID	Client Sample ID	Matrix	Collection Date	TCLP Date	Prep Date	Analysis Date
<u>Batch ID</u> 59998 <u>Test Name:</u> Metals						
12031031-01 A	QA032812	Water	3/28/2012 8:30:00 AM		4/2/2012 04:00 PM	4/3/2012 03:12 PM
					4/2/2012 04:00 PM	4/4/2012 05:19 PM
<u>Batch ID</u> 60000 <u>Test Name:</u> Dissolved Metals						
12031031-01B	QA032812	Water	3/28/2012 8:30:00 AM		4/2/2012 04:00 PM	4/3/2012 12:08 AM
<u>Batch ID</u> 60022 <u>Test Name:</u> Mercury						
12031031-01 A	QA032812	Water	3/28/2012 8:30:00 AM		4/3/2012 10:59 AM	4/3/2012 03:20 PM
<u>Batch ID</u> 60024 <u>Test Name:</u> Dissolved Mercury						
12031031-01B	QA032812	Water	3/28/2012 8:30:00 AM		4/3/2012 11:03 AM	4/3/2012 04:17 PM

ALS Environmental

Date: 06-Apr-12

Client: ARCADIS U.S., Inc.
Work Order: 12031031
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59998** Instrument ID **ICPMS03** Method: **SW6020**

MBLK Sample ID: **MBLKW3-040212-59998** Units: **mg/L** Analysis Date: **4/3/2012 03:03 PM**
 Client ID: Run ID: **ICPMS03_120403A** SeqNo: **2736127** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	U	0.010								
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.0020								
Calcium	U	0.50								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.20								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Molybdenum	U	0.0050								
Nickel	0.001559	0.0050								J
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	U	0.20								
Thallium	U	0.0020								
Zinc	0.004955	0.0050								J

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59998** Instrument ID **ICPMS03** Method: **SW6020**

LCS		Sample ID: MLCSW3-040212-59998			Units: mg/L		Analysis Date: 4/3/2012 03:07 PM			
Client ID:		Run ID: ICPMS03_120403A			SeqNo: 2736130		Prep Date: 4/2/2012		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0986	0.010	0.1	0	98.6	80-120	0			
Antimony	0.05023	0.0050	0.05	0	100	80-120	0			
Arsenic	0.0471	0.0050	0.05	0	94.2	80-120	0			
Barium	0.04924	0.0050	0.05	0	98.5	80-120	0			
Cadmium	0.04883	0.0020	0.05	0	97.7	80-120	0			
Calcium	4.424	0.50	5	0	88.5	80-120	0			
Chromium	0.0462	0.0050	0.05	0	92.4	80-120	0			
Cobalt	0.04634	0.0050	0.05	0	92.7	80-120	0			
Copper	0.0466	0.0050	0.05	0	93.2	80-120	0			
Iron	4.587	0.20	5	0	91.7	80-120	0			
Lead	0.04841	0.0050	0.05	0	96.8	80-120	0			
Magnesium	4.284	0.20	5	0	85.7	80-120	0			
Manganese	0.04565	0.0050	0.05	0	91.3	80-120	0			
Molybdenum	0.04911	0.0050	0.05	0	98.2	80-120	0			
Nickel	0.04792	0.0050	0.05	0	95.8	80-120	0			
Potassium	4.349	0.20	5	0	87	80-120	0			
Selenium	0.04801	0.0050	0.05	0	96	80-120	0			
Silver	0.05156	0.0050	0.05	0	103	80-120	0			
Sodium	4.14	0.20	5	0	82.8	80-120	0			
Thallium	0.04812	0.0020	0.05	0	96.2	80-120	0			
Zinc	0.05801	0.0050	0.05	0	116	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
Work Order: 12031031
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59998** Instrument ID **ICPMS03** Method: **SW6020**

MS		Sample ID: 1203949-01CMS			Units: mg/L		Analysis Date: 4/3/2012 03:29 PM			
Client ID:		Run ID: ICPMS03_120403A			SeqNo: 2736139		Prep Date: 4/2/2012		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1091	0.010	0.1	0.01835	90.8	80-120	0			
Antimony	0.05025	0.0050	0.05	-0.00009334	101	80-120	0			
Arsenic	0.05735	0.0050	0.05	0.01039	93.9	80-120	0			
Barium	0.1936	0.0050	0.05	0.1472	92.8	80-120	0			
Cadmium	0.04669	0.0020	0.05	-0.0001125	93.6	80-120	0			
Calcium	125.8	0.50	5	119.7	122	80-120	0			SO
Chromium	0.04491	0.0050	0.05	0.0001899	89.4	80-120	0			
Cobalt	0.04611	0.0050	0.05	0.001174	89.9	80-120	0			
Copper	0.04821	0.0050	0.05	0.002949	90.5	80-120	0			
Iron	6.081	0.20	5	1.539	90.8	80-120	0			
Lead	0.04767	0.0050	0.05	0.0004572	94.4	80-120	0			
Magnesium	26.5	0.20	5	22.02	89.6	80-120	0			O
Manganese	1.216	0.0050	0.05	1.162	108	80-120	0			O
Molybdenum	0.05014	0.0050	0.05	0.003332	93.6	80-120	0			
Nickel	0.04927	0.0050	0.05	0.003993	90.6	80-120	0			
Potassium	4.832	0.20	5	0.5118	86.4	80-120	0			
Selenium	0.048	0.0050	0.05	0.0005468	94.9	80-120	0			
Silver	0.04931	0.0050	0.05	-0.000145	98.9	80-120	0			
Sodium	99.72	0.20	5	95.07	93	80-120	0			O
Thallium	0.04694	0.0020	0.05	0.00001626	93.8	80-120	0			
Zinc	0.05728	0.0050	0.05	0.008789	97	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59998 Instrument ID ICPMS03 Method: SW6020

MSD Sample ID: 1203949-01CMSD Units: mg/L Analysis Date: 4/3/2012 03:35 PM

Client ID: Run ID: ICPMS03_120403A SeqNo: 2736142 Prep Date: 4/2/2012 DF: 1

Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.1087	0.010	0.1	0.01835	90.4	80-120	0.1091	0.367	15	
Antimony	0.05195	0.0050	0.05	-0.00009334	104	80-120	0.05025	3.33	15	
Arsenic	0.06125	0.0050	0.05	0.01039	102	80-120	0.05735	6.58	15	
Barium	0.2025	0.0050	0.05	0.1472	111	80-120	0.1936	4.49	15	
Cadmium	0.04867	0.0020	0.05	-0.0001125	97.6	80-120	0.04669	4.15	15	
Calcium	129	0.50	5	119.7	186	80-120	125.8	2.51	15	SO
Chromium	0.04537	0.0050	0.05	0.0001899	90.4	80-120	0.04491	1.02	15	
Cobalt	0.04755	0.0050	0.05	0.001174	92.8	80-120	0.04611	3.07	15	
Copper	0.04825	0.0050	0.05	0.002949	90.6	80-120	0.04821	0.0829	15	
Iron	6.201	0.20	5	1.539	93.2	80-120	6.081	1.95	15	
Lead	0.04873	0.0050	0.05	0.0004572	96.5	80-120	0.04767	2.2	15	
Magnesium	27.05	0.20	5	22.02	101	80-120	26.5	2.05	15	O
Manganese	1.253	0.0050	0.05	1.162	182	80-120	1.216	3	15	SO
Molybdenum	0.05181	0.0050	0.05	0.003332	97	80-120	0.05014	3.28	15	
Nickel	0.05037	0.0050	0.05	0.003993	92.8	80-120	0.04927	2.21	15	
Potassium	4.909	0.20	5	0.5118	87.9	80-120	4.832	1.58	15	
Selenium	0.05116	0.0050	0.05	0.0005468	101	80-120	0.048	6.37	15	
Silver	0.04941	0.0050	0.05	-0.000145	99.1	80-120	0.04931	0.203	15	
Sodium	101.1	0.20	5	95.07	121	80-120	99.72	1.37	15	SO
Thallium	0.04768	0.0020	0.05	0.00001626	95.3	80-120	0.04694	1.56	15	
Zinc	0.05833	0.0050	0.05	0.008789	99.1	80-120	0.05728	1.82	15	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59998 Instrument ID ICPMS03 Method: SW6020

DUP	Sample ID: 1203949-01CDUP	Units: mg/L					Analysis Date: 4/3/2012 03:20 PM			
Client ID:	Run ID: ICPMS03_120403A	SeqNo: 2736137			Prep Date: 4/2/2012		DF: 1			
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.01778	0.010	0	0	0	0-0	0.01835	3.16	25	
Antimony	U	0.0050	0	0	0	0-0	-0.00009334	0	25	
Arsenic	0.01086	0.0050	0	0	0	0-0	0.01039	4.42	25	
Barium	0.1456	0.0050	0	0	0	0-0	0.1472	1.09	25	
Cadmium	U	0.0020	0	0	0	0-0	-0.0001125	0	25	
Calcium	122.3	0.50	0	0	0	0-0	119.7	2.15	25	
Chromium	U	0.0050	0	0	0	0-0	0.0001899	0	25	
Cobalt	0.001165	0.0050	0	0	0	0-0	0.001174	0	25	J
Copper	0.003047	0.0050	0	0	0	0-0	0.002949	0	25	J
Iron	1.588	0.20	0	0	0	0-0	1.539	3.13	25	
Lead	U	0.0050	0	0	0	0-0	0.0004572	0	25	
Magnesium	21.94	0.20	0	0	0	0-0	22.02	0.364	25	
Manganese	1.184	0.0050	0	0	0	0-0	1.162	1.88	25	
Molybdenum	0.002299	0.0050	0	0	0	0-0	0.003332	0	25	J
Nickel	0.004026	0.0050	0	0	0	0-0	0.003993	0	25	J
Potassium	0.5007	0.20	0	0	0	0-0	0.5118	2.19	25	
Selenium	U	0.0050	0	0	0	0-0	0.0005468	0	25	
Silver	U	0.0050	0	0	0	0-0	-0.000145	0	25	
Sodium	93.96	0.20	0	0	0	0-0	95.07	1.17	25	
Thallium	U	0.0020	0	0	0	0-0	0.00001626	0	25	
Zinc	0.009871	0.0050	0	0	0	0-0	0.008789	11.6	25	

The following samples were analyzed in this batch: 12031031-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **60000** Instrument ID **ICPMS03** Method: **SW6020** (**Dissolve**)

MBLK Sample ID: **MBLKW5-040212-60000** Units: **mg/L** Analysis Date: **4/2/2012 11:59 PM**

Client ID: Run ID: **ICPMS03_120402A** SeqNo: **2735348** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.0050								
Arsenic	U	0.0050								
Barium	U	0.0050								
Cadmium	U	0.0020								
Chromium	U	0.0050								
Cobalt	U	0.0050								
Copper	U	0.0050								
Iron	U	0.20								
Lead	U	0.0050								
Molybdenum	U	0.0050								
Nickel	U	0.0050								
Selenium	U	0.0050								
Silver	U	0.0050								
Thallium	U	0.0020								
Zinc	U	0.0050								

LCS Sample ID: **MLCSW5-040212-60000** Units: **mg/L** Analysis Date: **4/3/2012 12:04 AM**

Client ID: Run ID: **ICPMS03_120402A** SeqNo: **2735349** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04975	0.0050	0.05	0	99.5	80-120	0			
Arsenic	0.05061	0.0050	0.05	0	101	80-120	0			
Barium	0.04943	0.0050	0.05	0	98.9	80-120	0			
Cadmium	0.04863	0.0020	0.05	0	97.3	80-120	0			
Chromium	0.0496	0.0050	0.05	0	99.2	80-120	0			
Cobalt	0.05053	0.0050	0.05	0	101	80-120	0			
Copper	0.05037	0.0050	0.05	0	101	80-120	0			
Iron	4.917	0.20	5	0	98.3	80-120	0			
Lead	0.05024	0.0050	0.05	0	100	80-120	0			
Molybdenum	0.04756	0.0050	0.05	0	95.1	80-120	0			
Nickel	0.05221	0.0050	0.05	0	104	80-120	0			
Selenium	0.05136	0.0050	0.05	0	103	80-120	0			
Silver	0.05029	0.0050	0.05	0	101	80-120	0			
Thallium	0.04979	0.0020	0.05	0	99.6	80-120	0			
Zinc	0.05309	0.0050	0.05	0	106	80-120	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **60000** Instrument ID **ICPMS03** Method: **SW6020** (Dissolve)

MS Sample ID: **12031031-01BMS** Units: **mg/L** Analysis Date: **4/3/2012 12:21 AM**
 Client ID: **QA032812** Run ID: **ICPMS03_120402A** SeqNo: **2735358** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04828	0.0050	0.05	0.001549	93.5	75-125	0			
Arsenic	0.5617	0.0050	0.05	0.522	79.4	75-125	0			O
Barium	0.09237	0.0050	0.05	0.04538	94	75-125	0			
Cadmium	0.04912	0.0020	0.05	0.003287	91.7	75-125	0			
Chromium	0.04731	0.0050	0.05	0.00008879	94.4	75-125	0			
Cobalt	0.0488	0.0050	0.05	0.0001737	97.3	75-125	0			
Copper	0.04817	0.0050	0.05	0.001689	93	75-125	0			
Iron	4.757	0.20	5	-0.03691	95.9	75-125	0			
Lead	0.04881	0.0050	0.05	0.0005903	96.4	75-125	0			
Molybdenum	0.3552	0.0050	0.05	0.3168	76.8	75-125	0			O
Nickel	0.05584	0.0050	0.05	0.009474	92.7	75-125	0			
Selenium	0.1982	0.0050	0.05	0.1577	81	75-125	0			
Silver	0.04466	0.0050	0.05	0.0001685	89	75-125	0			
Thallium	0.06743	0.0020	0.05	0.01974	95.4	75-125	0			
Zinc	0.0608	0.0050	0.05	0.01062	100	75-125	0			

MSD Sample ID: **12031031-01BMSD** Units: **mg/L** Analysis Date: **4/3/2012 12:25 AM**
 Client ID: **QA032812** Run ID: **ICPMS03_120402A** SeqNo: **2735360** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04786	0.0050	0.05	0.001549	92.6	75-125	0.04828	0.874	25	
Arsenic	0.5584	0.0050	0.05	0.522	72.8	75-125	0.5617	0.589	25	SO
Barium	0.09261	0.0050	0.05	0.04538	94.5	75-125	0.09237	0.259	25	
Cadmium	0.04988	0.0020	0.05	0.003287	93.2	75-125	0.04912	1.54	25	
Chromium	0.04824	0.0050	0.05	0.00008879	96.3	75-125	0.04731	1.95	25	
Cobalt	0.04826	0.0050	0.05	0.0001737	96.2	75-125	0.0488	1.11	25	
Copper	0.04833	0.0050	0.05	0.001689	93.3	75-125	0.04817	0.332	25	
Iron	4.745	0.20	5	-0.03691	95.6	75-125	4.757	0.253	25	
Lead	0.04852	0.0050	0.05	0.0005903	95.9	75-125	0.04881	0.596	25	
Molybdenum	0.353	0.0050	0.05	0.3168	72.4	75-125	0.3552	0.621	25	SO
Nickel	0.05691	0.0050	0.05	0.009474	94.9	75-125	0.05584	1.9	25	
Selenium	0.1994	0.0050	0.05	0.1577	83.4	75-125	0.1982	0.604	25	
Silver	0.04397	0.0050	0.05	0.0001685	87.6	75-125	0.04466	1.56	25	
Thallium	0.06682	0.0020	0.05	0.01974	94.2	75-125	0.06743	0.909	25	
Zinc	0.05673	0.0050	0.05	0.01062	92.2	75-125	0.0608	6.93	25	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **60000** Instrument ID **ICPMS03** Method: **SW6020** (**Dissolve**)

DUP Sample ID: **12031031-01BDUP** Units: **mg/L** Analysis Date: **4/3/2012 12:13 AM**
 Client ID: **QA032812** Run ID: **ICPMS03_120402A** SeqNo: **2735353** Prep Date: **4/2/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.001534	0.0050	0	0	0	0-0	0.001549	0	25	J
Arsenic	0.5097	0.0050	0	0	0	0-0	0.522	2.38	25	
Barium	0.04609	0.0050	0	0	0	0-0	0.04538	1.55	25	
Cadmium	0.003721	0.0020	0	0	0	0-0	0.003287	12.4	25	
Chromium	U	0.0050	0	0	0	0-0	0.00008879	0	25	
Cobalt	U	0.0050	0	0	0	0-0	0.0001737	0	25	
Copper	0.001802	0.0050	0	0	0	0-0	0.001689	0	25	J
Iron	U	0.20	0	0	0	0-0	-0.03691	0	25	
Lead	U	0.0050	0	0	0	0-0	0.0005903	0	25	
Molybdenum	0.3223	0.0050	0	0	0	0-0	0.3168	1.72	25	
Nickel	0.008369	0.0050	0	0	0	0-0	0.009474	12.4	25	
Selenium	0.15	0.0050	0	0	0	0-0	0.1577	5	25	
Silver	U	0.0050	0	0	0	0-0	0.0001685	0	25	
Thallium	0.01932	0.0020	0	0	0	0-0	0.01974	2.15	25	
Zinc	0.007369	0.0050	0	0	0	0-0	0.01062	36.1	25	R

The following samples were analyzed in this batch:

12031031-01B

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **60022** Instrument ID **Mercury** Method: **SW7470**

MBLK	Sample ID: GBLKW2-040312-60022	Units: mg/L					Analysis Date: 4/3/2012 02:20 PM			
Client ID:	Run ID: MERCURY_120403A	SeqNo: 2735947	Prep Date: 4/3/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020								

LCS	Sample ID: GLCSW2-040312-60022	Units: mg/L					Analysis Date: 4/3/2012 02:22 PM			
Client ID:	Run ID: MERCURY_120403A	SeqNo: 2735948	Prep Date: 4/3/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00533	0.00020	0.005	0	107	85-115	0			

MS	Sample ID: 12031052-04BMS	Units: mg/L					Analysis Date: 4/3/2012 02:30 PM			
Client ID:	Run ID: MERCURY_120403A	SeqNo: 2735951	Prep Date: 4/3/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00528	0.00020	0.005	-0.000009	106	85-115	0			

MSD	Sample ID: 12031052-04BMSD	Units: mg/L					Analysis Date: 4/3/2012 02:32 PM			
Client ID:	Run ID: MERCURY_120403A	SeqNo: 2735953	Prep Date: 4/3/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00531	0.00020	0.005	-0.000009	106	85-115	0.00528	0.567	20	

DUP	Sample ID: 12031052-04BDUP	Units: mg/L					Analysis Date: 4/3/2012 02:27 PM			
Client ID:	Run ID: MERCURY_120403A	SeqNo: 2735950	Prep Date: 4/3/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020	0	0	0	0-0	-0.000009	0	20	

The following samples were analyzed in this batch: 12031031-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
 Work Order: 12031031
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **60024** Instrument ID **Mercury** Method: **SW7470** (Dissolve)

MBLK	Sample ID: GBLKW4-040312-60024					Units: mg/L	Analysis Date: 4/3/2012 04:13 PM			
Client ID:		Run ID: MERCURY_120403A	SeqNo: 2736159	Prep Date: 4/3/2012	DF: 1					
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	U	0.00020								

LCS	Sample ID: GLCSW4-040312-60024					Units: mg/L	Analysis Date: 4/3/2012 04:15 PM			
Client ID:		Run ID: MERCURY_120403A	SeqNo: 2736162	Prep Date: 4/3/2012	DF: 1					
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00534	0.00020	0.005	0	107	80-120	0			

MS	Sample ID: 12031031-01BMS					Units: mg/L	Analysis Date: 4/3/2012 04:21 PM			
Client ID: QA032812		Run ID: MERCURY_120403A	SeqNo: 2736170	Prep Date: 4/3/2012	DF: 1					
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00532	0.00020	0.005	0.000045	106	80-120	0			

MSD	Sample ID: 12031031-01BMSD					Units: mg/L	Analysis Date: 4/3/2012 04:23 PM			
Client ID: QA032812		Run ID: MERCURY_120403A	SeqNo: 2736172	Prep Date: 4/3/2012	DF: 1					
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00532	0.00020	0.005	0.000045	106	80-120	0.00532	0	20	

DUP	Sample ID: 12031031-01BDUP					Units: mg/L	Analysis Date: 4/3/2012 04:19 PM			
Client ID: QA032812		Run ID: MERCURY_120403A	SeqNo: 2736168	Prep Date: 4/3/2012	DF: 1					
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.000044	0.00020	0	0	0	0-0	0.000045	0	20	J

The following samples were analyzed in this batch: 12031031-01B

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: ARCADIS U.S., Inc.
Project: El Paso Smelter
WorkOrder: 12031031

**QUALIFIERS,
ACRONYMS, UNITS**

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
M	Manually integrated, see raw data for justification
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DCS	Detectability Check Study
DUP	Method Duplicate
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SD	Serial Dilution
SDL	Sample Detection Limit
TRRP	Texas Risk Reduction Program

<u>Units Reported</u>	<u>Description</u>
mg/L	Milligrams per Liter

Sample Receipt Checklist

Client Name: **MALCOLM PIRNIE-EL PASO**

Date/Time Received: **29-Mar-12 09:05**

Work Order: **12031031**

Received by: **PMG**

Checklist completed by Raymond N Gambia 30-Mar-12
eSignature Date

Reviewed by: Bethany Agarwal 02-Apr-12
eSignature Date

Matrices: Water

Carrier name: FedEx

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time? Yes No
- Container/Temp Blank temperature in compliance? Yes No

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes No No VOA vials submitted

Water - pH acceptable upon receipt? Yes No N/A

pH adjusted? Yes No N/A

pH adjusted by:

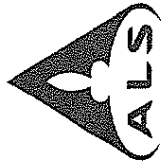
Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:



ALS Environmental
10450 Stanciff Rd., Suite 210
Houston, Texas 77099
Tel. +1 281 530 5656
Fax. +1 281 530 5887

Chain of Custody Form

Page 1 of 1
COC ID: 27518

12031031

MALCOLM PIRNIE-EL PASO: ARCADIS U.S., Inc.

Project: El Paso Smelter



ALS Project Manager:

Customer Information				Project Information			
Purchase Order	Project Name	El Paso Smelter	A	VOC (0200) Select			
Work Order	Project Number	6835001	B	TPH (TX1005)			
Company Name	Bill To Company	Malcolm Pirnie-Arcadis	C	SVOC (8270) Select			
Send Report To	Invoice Attn	Maria Miller-Acto payable	D	Pesticides, Chlorinated (8081)			
Address	Address	2111 N Florence Street Suite 202 #600	E	PCBs (8082)			
City/State/Zip	City/State/Zip	El Paso, TX 79901	F	Herbicides (8151)			
Phone	Phone	(95) 533-9025	G	Total Metals (60207000) Select			
Fax	Fax	(95) 533-9045	H	Hexavalent Chromium			
e-Mail Address	e-Mail Address		I	<i>DISS. METALS (site specific)</i> <i>TOTAL METALS (site specific)</i>			
No.	Sample Description	Date	J				
1	QA032812	3/28/12 830	A				
2			B				X
3			C				X
4			D				
5			E				
6			F				
7			G				
8			H				
9			I				
10			J				

Sampler(s) Please Print & Sign: _____

Shipment Method: **FED EX**

Required Turnaround Time: (Check Box)
 Std 10 WK Days
 5 WK Days
 2 WK Days
 24 Hour
 Other

Results Due Date: _____

Relinquished by: *Douglas M. J...* Date: 3/28/12 Time: 1520

Relinquished by: _____ Date: _____ Time: _____

Received by (Laboratory): *OK 3-29-12 - GOS*

Checked by (Laboratory): _____

Notes: 10 Day TAT

QC Package: (Check One Box Below)
 Level II Std QC
 Level III Std QC/Raw Data
 Level IV SW/846/CLP
 Other / EDD

TRRP Checklist: TRRP Level I, TRRP Level II, TRRP Level III, TRRP Level IV

Preservative Key: 1-HCl, 2-HNO₃, 3-H₂SO₄, 4-NaOH, 5-Na₂S₂O₃, 6-NaHSO₄, 7-Other, 8-4°C, 9-5035

Note: 1. Any changes must be made in writing once samples and COC Form have been submitted to ALS Environmental.
 2. Unless otherwise agreed in a formal contract, services provided by ALS Environmental are expressly limited to the terms and conditions stated on the reverse.
 3. The Chain of Custody is a legal document. All information must be completed accurately.