



13-Mar-2012

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

Tel: (602) 797-4699
Fax: (915) 533-9045

Re: El Paso Smelter

Work Order: **1203151**

Dear Marla,

ALS Environmental received 1 sample on 06-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 40.

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: 1203151

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>
1203151-01	QA030512	Water		3/5/2012 09:00	3/6/2012 09:05	<input type="checkbox"/>

Client: ARCADIS U.S., Inc.

Project: El Paso Smelter

Work Order: 1203151

Case Narrative

Batch 59387, Metals, Sample 1202987-01: MS/MSD performed on an unrelated sample.

Batch R124462, Anions, Sample 1202995-01: MS/MSD performed on an unrelated sample.

ALS Environmental

Date: 13-Mar-12

Client: ARCADIS U.S., Inc.
 Project: El Paso Smelter
 Sample ID: QA030512
 Collection Date: 3/5/2012 09:00 AM

Work Order: 1203151
 Lab ID: 1203151-01
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
DISSOLVED MERCURY			Method: SW7470		Prep: SW7470 / 3/8/12		Analyst: JCJ
Mercury		U	0.000042	0.000200	mg/L	1	3/8/2012 19:18
MERCURY			Method: SW7470		Prep: SW7470 / 3/8/12		Analyst: JCJ
Mercury	0.0000760	J	0.000042	0.000200	mg/L	1	3/8/2012 20:03
DISSOLVED METALS			Method: SW6020		Prep: SW3010A / 3/7/12		Analyst: IGF
Antimony	0.00118	J	0.00080	0.00500	mg/L	1	3/9/2012 03:20
Arsenic	0.129		0.0013	0.00500	mg/L	1	3/9/2012 03:20
Barium	0.0471		0.00090	0.00500	mg/L	1	3/9/2012 03:20
Cadmium		U	0.00080	0.00200	mg/L	1	3/9/2012 03:20
Chromium		U	0.0012	0.00500	mg/L	1	3/9/2012 03:20
Cobalt	0.00169	J	0.00080	0.00500	mg/L	1	3/9/2012 03:20
Copper	0.00188	J	0.0015	0.00500	mg/L	1	3/9/2012 03:20
Iron		U	0.078	0.200	mg/L	1	3/9/2012 03:20
Lead		U	0.00070	0.00500	mg/L	1	3/9/2012 03:20
Molybdenum	0.172		0.0015	0.00500	mg/L	1	3/9/2012 03:20
Nickel	0.0188		0.0012	0.00500	mg/L	1	3/9/2012 03:20
Selenium	0.0121		0.0010	0.00500	mg/L	1	3/9/2012 03:20
Silver		U	0.00080	0.00500	mg/L	1	3/9/2012 03:20
Thallium		U	0.0010	0.00200	mg/L	1	3/9/2012 03:20
Zinc	0.00722		0.0025	0.00500	mg/L	1	3/9/2012 03:20
METALS			Method: SW6020		Prep: SW3010A / 3/7/12		Analyst: ALR
Aluminum	0.668		0.0040	0.0100	mg/L	1	3/7/2012 19:43
Antimony	0.00152	J	0.00080	0.00500	mg/L	1	3/7/2012 19:43
Arsenic	0.150		0.0013	0.00500	mg/L	1	3/7/2012 19:43
Barium	0.0510		0.00090	0.00500	mg/L	1	3/7/2012 19:43
Cadmium		U	0.00080	0.00200	mg/L	1	3/7/2012 19:43
Calcium	102		0.086	0.500	mg/L	1	3/7/2012 19:43
Chromium	0.00125	J	0.0012	0.00500	mg/L	1	3/7/2012 19:43
Cobalt	0.00117	J	0.00080	0.00500	mg/L	1	3/7/2012 19:43
Copper	0.00484	J	0.0015	0.00500	mg/L	1	3/7/2012 19:43
Iron	0.596		0.078	0.200	mg/L	1	3/7/2012 19:43
Lead	0.00593		0.00070	0.00500	mg/L	1	3/7/2012 19:43
Magnesium	66.6		0.082	0.200	mg/L	1	3/7/2012 19:43
Manganese	0.330		0.0025	0.00500	mg/L	1	3/7/2012 19:43
Molybdenum	0.174		0.0015	0.00500	mg/L	1	3/7/2012 19:43
Nickel	0.00384	J	0.0012	0.00500	mg/L	1	3/7/2012 19:43
Potassium	23.1		0.084	0.200	mg/L	1	3/7/2012 19:43
Selenium	0.0218		0.0010	0.00500	mg/L	1	3/7/2012 19:43

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

ALS Environmental

Date: 13-Mar-12

Client: ARCADIS U.S., Inc.
 Project: El Paso Smelter
 Sample ID: QA030512
 Collection Date: 3/5/2012 09:00 AM

Work Order: 1203151
 Lab ID: 1203151-01
 Matrix: WATER

Analyses	Result	Qual	SDL	MLL	Units	Dilution Factor	Date Analyzed
Silver		U	0.00080	0.00500	mg/L	1	3/7/2012 19:43
Sodium	789		8.5	20.0	mg/L	100	3/8/2012 17:53
Thallium		U	0.0010	0.00200	mg/L	1	3/7/2012 19:43
Zinc	0.00998		0.0025	0.00500	mg/L	1	3/7/2012 19:43
ANIONS - EPA 300.0 (1993)			Method: E300			Analyst: JKP	
Chloride	705		10.0	25.0	mg/L	50	3/13/2012 01:24
Fluoride	2.00		0.0500	0.100	mg/L	1	3/6/2012 12:53
Nitrogen, Nitrate (As N)	0.521		0.0300	0.100	mg/L	1	3/6/2012 12:53
Nitrogen, Nitrite (As N)		U	0.0300	0.100	mg/L	1	3/6/2012 12:53
Sulfate	1,150		10.0	25.0	mg/L	50	3/13/2012 01:24
Nitrate/Nitrite (as N)	0.521		0.0300	0.100	mg/L	1	3/6/2012 12:53
Surr: Selenate (surr)	101			85-115	%REC	1	3/6/2012 12:53
Surr: Selenate (surr)	103			85-115	%REC	50	3/13/2012 01:24
ALKALINITY			Method: SM2320B			Analyst: RPM	
Alkalinity, Total (As CaCO3)	260		5.0	5.00	mg/L	1	3/12/2012 17:00
SULFIDE			Method: SM4500 S2-F			Analyst: JKP	
Sulfide		U	0.50	1.00	mg/L	1	3/9/2012 14:25
TOTAL DISSOLVED SOLIDS			Method: M2540C			Analyst: KAH	
Total Dissolved Solids (Residue, Filterable)	3,340		5.0	10.0	mg/L	1	3/7/2012 19:30
TOTAL ORGANIC CARBON - SM5310C			Method: SM5310C			Analyst: RPM	
Organic Carbon, Total	6.21		0.10	0.500	mg/L	1	3/10/2012 23:06
TOTAL SUSPENDED SOLIDS			Method: M2540D			Analyst: KAH	
Suspended Solids (Residue, Non-Filterable)	26.6		2.00	2.00	mg/L	1	3/7/2012 12:20

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

Work Order: 1203151
 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> 59387 <u>Test Name:</u> <u>Metals</u>						
1203151-01B	QA030512	Water	3/5/2012 9:00:00 AM		3/7/2012 04:00 PM	3/7/2012 07:43 PM
					3/7/2012 04:00 PM	3/8/2012 05:53 PM
<u>Batch ID</u> 59388 <u>Test Name:</u> <u>Dissolved Metals</u>						
1203151-01C	QA030512	Water	3/5/2012 9:00:00 AM		3/7/2012 04:00 PM	3/9/2012 03:20 AM
<u>Batch ID</u> 59410 <u>Test Name:</u> <u>Dissolved Mercury</u>						
1203151-01C	QA030512	Water	3/5/2012 9:00:00 AM		3/8/2012 02:00 PM	3/8/2012 07:18 PM
<u>Batch ID</u> 59424 <u>Test Name:</u> <u>Mercury</u>						
1203151-01B	QA030512	Water	3/5/2012 9:00:00 AM		3/8/2012 07:00 PM	3/8/2012 08:03 PM
<u>Batch ID</u> R124457 <u>Test Name:</u> <u>Total Suspended Solids</u>						
1203151-01F	QA030512	Water	3/5/2012 9:00:00 AM			3/7/2012 12:20 PM
<u>Batch ID</u> R124462 <u>Test Name:</u> <u>Anions - EPA 300.0 (1993)</u>						
1203151-01E	QA030512	Water	3/5/2012 9:00:00 AM			3/6/2012 12:53 PM
<u>Batch ID</u> R124511 <u>Test Name:</u> <u>Total Dissolved Solids</u>						
1203151-01E	QA030512	Water	3/5/2012 9:00:00 AM			3/7/2012 07:30 PM
<u>Batch ID</u> R124578 <u>Test Name:</u> <u>Sulfide</u>						
1203151-01D	QA030512	Water	3/5/2012 9:00:00 AM			3/9/2012 02:25 PM
<u>Batch ID</u> R124613 <u>Test Name:</u> <u>Total Organic Carbon - SM5310C</u>						
1203151-01A	QA030512	Water	3/5/2012 9:00:00 AM			3/10/2012 11:06 PM

Work Order: 1203151
 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
Batch ID <u>R124689</u> Test Name: <u>Alkalinity</u>						
1203151-01E	QA030512	Water	3/5/2012 9:00:00 AM			3/12/2012 05:00 PM
Batch ID <u>R124724</u> Test Name: <u>Anions - EPA 300.0 (1993)</u>						
1203151-01E	QA030512	Water	3/5/2012 9:00:00 AM			3/13/2012 01:24 AM

WorkOrder: 1203151
InstrumentID: Balance1
Test Code: TDS_W 2540C
Test Number: M2540C
Test Name: Total Dissolved Solids

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Total Dissolved Solids (Residue, Filterable)	TDS	4.0	5.0	10

WorkOrder: 1203151
InstrumentID: Balance1
Test Code: TSS_W 2540D
Test Number: M2540D
Test Name: Total Suspended Solids

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Suspended Solids (Residue, Non-Filterable)	TSS	2.10	2.00	2.00

WorkOrder: 1203151
InstrumentID: ICP7500
Test Code: ICP_TW
Test Number: SW6020
Test Name: Metals

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Aluminum	7429-90-5	0.0093	0.0040	0.010
A	Antimony	7440-36-0	0.0020	0.00080	0.0050
A	Arsenic	7440-38-2	0.0020	0.0013	0.0050
A	Barium	7440-39-3	0.0021	0.00090	0.0050
A	Cadmium	7440-43-9	0.0020	0.00080	0.0020
A	Calcium	7440-70-2	0.23	0.086	0.50
A	Chromium	7440-47-3	0.0020	0.0012	0.0050
A	Cobalt	7440-48-4	0.0019	0.00080	0.0050
A	Copper	7440-50-8	0.0020	0.0015	0.0050
A	Iron	7439-89-6	0.20	0.078	0.20
A	Lead	7439-92-1	0.0020	0.00070	0.0050
A	Magnesium	7439-95-4	0.16	0.082	0.20
A	Manganese	7439-96-5	0.0021	0.0025	0.0050
A	Molybdenum	7439-98-7	0.0022	0.0015	0.0050
A	Nickel	7440-02-0	0.0018	0.0012	0.0050
A	Potassium	7440-09-7	0.32	0.084	0.20
A	Selenium	7782-49-2	0.0021	0.0010	0.0050
A	Silver	7440-22-4	0.0018	0.00080	0.0050
A	Sodium	7440-23-5	0.23	0.085	0.20
A	Thallium	7440-28-0	0.0023	0.0010	0.0020
A	Zinc	7440-66-6	0.0026	0.0025	0.0050

WorkOrder: 1203151
InstrumentID: ICPMS04
Test Code: ICP_DISS
Test Number: SW6020
Test Name: Dissolved Metals

**METHOD DETECTION /
 REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Antimony	7440-36-0	0.0011	0.00080	0.0050
A	Arsenic	7440-38-2	0.0012	0.0013	0.0050
A	Barium	7440-39-3	0.0012	0.00090	0.0050
A	Cadmium	7440-43-9	0.0012	0.00080	0.0020
A	Chromium	7440-47-3	0.0015	0.0012	0.0050
A	Cobalt	7440-48-4	0.0011	0.00080	0.0050
A	Copper	7440-50-8	0.0014	0.0015	0.0050
A	Iron	7439-89-6	0.12	0.078	0.20
A	Lead	7439-92-1	0.0013	0.00070	0.0050
A	Molybdenum	7439-98-7	0.0011	0.0015	0.0050
A	Nickel	7440-02-0	0.0012	0.0012	0.0050
A	Selenium	7782-49-2	0.0014	0.0010	0.0050
A	Silver	7440-22-4	0.0011	0.00080	0.0050
A	Thallium	7440-28-0	0.00083	0.0010	0.0020
A	Zinc	7440-66-6	0.0065	0.0025	0.0050

WorkOrder: 1203151

InstrumentID: ICS3K2

Test Code: 300_W

Test Number: E300

Test Name: Anions - EPA 300.0 (1993)

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous

Units: mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Chloride	16887-00-6	0.389	0.200	0.500
A	Fluoride	16984-48-8	0.0192	0.0500	0.100
A	Nitrogen, Nitrate (As N)	14797-55-8	0.0510	0.0300	0.100
A	Nitrogen, Nitrite (As N)	14797-65-0	0.0330	0.0300	0.100
A	Sulfate	14808-79-8	1.00	0.200	0.500
M	Nitrate/Nitrite (as N)	ARC-NO3NO	0.0840	0.0300	0.100
S	Surr: Selenate (surr)	10102-23-5	0	0.100	0.100

WorkOrder: 1203151
InstrumentID: Mercury
Test Code: HG_DISS
Test Number: SW7470
Test Name: Dissolved Mercury

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Mercury	7439-97-6	0.000075	0.000042	0.00020

WorkOrder: 1203151
InstrumentID: Mercury
Test Code: HG_W
Test Number: SW7470
Test Name: Mercury

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Mercury	7439-97-6	0.000075	0.000042	0.00020

WorkOrder: 1203151
InstrumentID: TOC_02
Test Code: TOC_W 5310C
Test Number: SM5310C
Test Name: Total Organic Carbon - SM5310C

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Organic Carbon, Total	7440-44-0	0.11	0.10	0.50

WorkOrder: 1203151
InstrumentID: WetChem
Test Code: ALK_W 2320B
Test Number: SM2320B
Test Name: Alkalinity

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Alkalinity, Total (As CaCO3)	ALK	14	5.0	5.0

WorkOrder: 1203151
InstrumentID: WetChem
Test Code: SULFD_4500S F
Test Number: SM4500 S2-F
Test Name: Sulfide

**METHOD DETECTION /
REPORTING LIMITS**

Matrix: Aqueous **Units:** mg/L

Type	Analyte	CAS	DCS	MDL	Unadjusted MQL
A	Sulfide	18496-25-8	1.9	0.50	1.0

ALS Environmental

Date: 13-Mar-12

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59387** Instrument ID **ICP7500** Method: **SW6020**

MBLK Sample ID: **MBLKW6-030712-59387** Units: **mg/L** Analysis Date: **3/7/2012 06:18 PM**

Client ID: Run ID: **ICP7500_120307A** SeqNo: **2711193** Prep Date: **3/7/2012** DF: **1**

Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.006348	0.010								J
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								
Iron	U	0.20								
Lead	U	0.0050								
Magnesium	U	0.20								
Manganese	U	0.0050								
Molybdenum	U	0.0050								
Nickel	U	0.0050								
Potassium	U	0.20								
Selenium	U	0.0050								
Silver	U	0.0050								
Sodium	U	0.20								
Thallium	U	0.0020								
Zinc	U	0.0050								

MBLK Sample ID: **MBLKW6-030712-59387** Units: **mg/L** Analysis Date: **3/8/2012 02:44 PM**

Client ID: Run ID: **ICP7500_120308A** SeqNo: **2711735** Prep Date: **3/7/2012** DF: **1**

Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	U	0.0050								

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59387** Instrument ID **ICP7500** Method: **SW6020**

LCS		Sample ID: MLCSW6-030712-59387			Units: mg/L		Analysis Date: 3/7/2012 06:12 PM			
Client ID:		Run ID: ICP7500_120307A			SeqNo: 2711192		Prep Date: 3/7/2012		DF: 1	
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08438	0.010	0.1	0	84.4	80-120	0			
Antimony	0.04412	0.0050	0.05	0	88.2	80-120	0			
Arsenic	0.04531	0.0050	0.05	0	90.6	80-120	0			
Barium	0.0433	0.0050	0.05	0	86.6	80-120	0			
Cadmium	0.04336	0.0020	0.05	0	86.7	80-120	0			
Calcium	4.056	0.50	5	0	81.1	80-120	0			
Chromium	0.04209	0.0050	0.05	0	84.2	80-120	0			
Cobalt	0.04207	0.0050	0.05	0	84.1	80-120	0			
Iron	4.285	0.20	5	0	85.7	80-120	0			
Lead	0.04229	0.0050	0.05	0	84.6	80-120	0			
Magnesium	4.286	0.20	5	0	85.7	80-120	0			
Manganese	0.04266	0.0050	0.05	0	85.3	80-120	0			
Molybdenum	0.04268	0.0050	0.05	0	85.4	80-120	0			
Nickel	0.044	0.0050	0.05	0	88	80-120	0			
Potassium	4.214	0.20	5	0	84.3	80-120	0			
Selenium	0.0456	0.0050	0.05	0	91.2	80-120	0			
Silver	0.04413	0.0050	0.05	0	88.3	80-120	0			
Sodium	4.195	0.20	5	0	83.9	80-120	0			
Thallium	0.04208	0.0020	0.05	0	84.2	80-120	0			
Zinc	0.04567	0.0050	0.05	0	91.3	80-120	0			

LCS		Sample ID: MLCSW6-030712-59387			Units: mg/L		Analysis Date: 3/8/2012 02:38 PM			
Client ID:		Run ID: ICP7500_120308A			SeqNo: 2711734		Prep Date: 3/7/2012		DF: 1	
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Copper	0.04979	0.0050	0.05	0	99.6	80-120	0			

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

Client: ARCADIS U.S., Inc.
Work Order: 1203151
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59387** Instrument ID **ICP7500** Method: **SW6020**

MS Sample ID: **1202987-01AMS** Units: **mg/L** Analysis Date: **3/7/2012 06:54 PM**

Client ID: Run ID: **ICP7500_120307A** SeqNo: **2711199** Prep Date: **3/7/2012** DF: **1**

Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.0845	0.010	0.1	0.006043	78.5	80-120	0			S
Antimony	0.04485	0.0050	0.05	0.0002806	89.1	80-120	0			
Arsenic	0.04539	0.0050	0.05	0.0006337	89.5	80-120	0			
Barium	0.04089	0.0050	0.05	0.0007281	80.3	80-120	0			
Cadmium	0.04235	0.0020	0.05	-8.173E-06	84.7	80-120	0			
Calcium	4.021	0.50	5	0.2023	76.4	80-120	0			S
Chromium	0.04341	0.0050	0.05	0.0009216	85	80-120	0			
Cobalt	0.04221	0.0050	0.05	0.0005643	83.3	80-120	0			
Copper	0.04606	0.0050	0.05	0.001323	89.5	80-120	0			
Iron	4.335	0.20	5	0.02836	86.1	80-120	0			
Lead	0.04199	0.0050	0.05	-5.954E-06	84	80-120	0			
Magnesium	4.111	0.20	5	0.03221	81.6	80-120	0			
Manganese	0.0432	0.0050	0.05	0.000647	85.1	80-120	0			
Molybdenum	0.04181	0.0050	0.05	0.0004366	82.7	80-120	0			
Nickel	0.04443	0.0050	0.05	0.0004663	87.9	80-120	0			
Potassium	4.113	0.20	5	0.01259	82	80-120	0			
Selenium	0.04586	0.0050	0.05	-0.00004114	91.8	80-120	0			
Silver	0.0432	0.0050	0.05	-0.0001833	86.8	80-120	0			
Sodium	4.04	0.20	5	0.06579	79.5	80-120	0			S
Thallium	0.04196	0.0020	0.05	0.0009851	81.9	80-120	0			
Zinc	0.0504	0.0050	0.05	0.007377	86	80-120	0			

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59387 Instrument ID ICP7500 Method: SW6020

MSD Sample ID: 1202987-01AMSD Units: mg/L Analysis Date: 3/7/2012 07:00 PM

Client ID: Run ID: ICP7500_120307A SeqNo: 2711200 Prep Date: 3/7/2012 DF: 1

Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Aluminum	0.08703	0.010	0.1	0.006043	81	80-120	0.0845	2.95	15	
Antimony	0.04426	0.0050	0.05	0.0002806	88	80-120	0.04485	1.32	15	
Arsenic	0.04478	0.0050	0.05	0.0006337	88.3	80-120	0.04539	1.35	15	
Barium	0.04372	0.0050	0.05	0.0007281	86	80-120	0.04089	6.69	15	
Cadmium	0.04394	0.0020	0.05	-8.173E-06	87.9	80-120	0.04235	3.69	15	
Calcium	4.008	0.50	5	0.2023	76.1	80-120	4.021	0.324	15	S
Chromium	0.04218	0.0050	0.05	0.0009216	82.5	80-120	0.04341	2.87	15	
Cobalt	0.04158	0.0050	0.05	0.0005643	82	80-120	0.04221	1.5	15	
Copper	0.04424	0.0050	0.05	0.001323	85.8	80-120	0.04606	4.03	15	
Iron	4.25	0.20	5	0.02836	84.4	80-120	4.335	1.98	15	
Lead	0.04217	0.0050	0.05	-5.954E-06	84.4	80-120	0.04199	0.428	15	
Magnesium	4.259	0.20	5	0.03221	84.5	80-120	4.111	3.54	15	
Manganese	0.04245	0.0050	0.05	0.000647	83.6	80-120	0.0432	1.75	15	
Molybdenum	0.04167	0.0050	0.05	0.0004366	82.5	80-120	0.04181	0.335	15	
Nickel	0.04383	0.0050	0.05	0.0004663	86.7	80-120	0.04443	1.36	15	
Potassium	4.096	0.20	5	0.01259	81.7	80-120	4.113	0.414	15	
Selenium	0.04392	0.0050	0.05	-0.00004114	87.9	80-120	0.04586	4.32	15	
Silver	0.04405	0.0050	0.05	-0.0001833	88.5	80-120	0.0432	1.95	15	
Sodium	4.141	0.20	5	0.06579	81.5	80-120	4.04	2.47	15	
Thallium	0.04204	0.0020	0.05	0.0009851	82.1	80-120	0.04196	0.19	15	
Zinc	0.04984	0.0050	0.05	0.007377	84.9	80-120	0.0504	1.12	15	

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59387 Instrument ID ICP7500 Method: SW6020

DUP	Sample ID: 1202987-01ADUP	Units: mg/L					Analysis Date: 3/7/2012 06:42 PM				
Client ID:	Run ID: ICP7500_120307A	SeqNo: 2711197			Prep Date: 3/7/2012		DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Aluminum	0.004849	0.010	0	0	0	0-0	0.006043	0	25	J	
Antimony	U	0.0050	0	0	0	0-0	0.0002806	0	25		
Arsenic	U	0.0050	0	0	0	0-0	0.0006337	0	25		
Barium	U	0.0050	0	0	0	0-0	0.0007281	0	25		
Cadmium	U	0.0020	0	0	0	0-0	-8.173E-06	0	25		
Calcium	0.1705	0.50	0	0	0	0-0	0.2023	0	25	J	
Chromium	U	0.0050	0	0	0	0-0	0.0009216	0	25		
Cobalt	U	0.0050	0	0	0	0-0	0.0005643	0	25		
Copper	U	0.0050	0	0	0	0-0	0.001323	0	25		
Iron	U	0.20	0	0	0	0-0	0.02836	0	25		
Lead	U	0.0050	0	0	0	0-0	-5.954E-06	0	25		
Magnesium	U	0.20	0	0	0	0-0	0.03221	0	25		
Manganese	U	0.0050	0	0	0	0-0	0.000647	0	25		
Molybdenum	U	0.0050	0	0	0	0-0	0.0004366	0	25		
Nickel	U	0.0050	0	0	0	0-0	0.0004663	0	25		
Potassium	U	0.20	0	0	0	0-0	0.01259	0	25		
Selenium	U	0.0050	0	0	0	0-0	-0.0004114	0	25		
Silver	U	0.0050	0	0	0	0-0	-0.0001833	0	25		
Sodium	U	0.20	0	0	0	0-0	0.06579	0	25		
Thallium	U	0.0020	0	0	0	0-0	0.0009851	0	25		
Zinc	0.003581	0.0050	0	0	0	0-0	0.007377	0	25	J	

The following samples were analyzed in this batch: 1203151-01B

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

Client: ARCADIS U.S., Inc.
Work Order: 1203151
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59388** Instrument ID **ICPMS04** Method: **SW6020** **(Dissolve)**

MBLK Sample ID: **MBLKW7-030712-59388** Units: **mg/L** Analysis Date: **3/9/2012 10:38 AM**

Client ID: Run ID: **ICPMS04_120308A** SeqNo: **2712668** Prep Date: **3/7/2012** 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: **MLCSW7-030712-59388** Units: **mg/L** Analysis Date: **3/8/2012 10:52 PM**

Client ID: Run ID: **ICPMS04_120308A** SeqNo: **2712348** Prep Date: **3/7/2012** DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04588	0.0050	0.05	0	91.8	80-120	0			
Arsenic	0.04656	0.0050	0.05	0	93.1	80-120	0			
Barium	0.04667	0.0050	0.05	0	93.3	80-120	0			
Cadmium	0.04632	0.0020	0.05	0	92.6	80-120	0			
Chromium	0.04679	0.0050	0.05	0	93.6	80-120	0			
Cobalt	0.04714	0.0050	0.05	0	94.3	80-120	0			
Copper	0.04791	0.0050	0.05	0	95.8	80-120	0			
Iron	4.822	0.20	5	0	96.4	80-120	0			
Lead	0.04802	0.0050	0.05	0	96	80-120	0			
Molybdenum	0.04478	0.0050	0.05	0	89.6	80-120	0			
Nickel	0.04783	0.0050	0.05	0	95.7	80-120	0			
Selenium	0.04819	0.0050	0.05	0	96.4	80-120	0			
Silver	0.04579	0.0050	0.05	0	91.6	80-120	0			
Thallium	0.04518	0.0020	0.05	0	90.4	80-120	0			
Zinc	0.04923	0.0050	0.05	0	98.5	80-120	0			

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59388** Instrument ID **ICPMS04** Method: **SW6020** (Dissolve)

MS		Sample ID: 12021007-17BMS				Units: mg/L		Analysis Date: 3/8/2012 11:11 PM			
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712351		Prep Date: 3/7/2012		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Antimony	0.0437	0.0050	0.05	0.000223	87	75-125	0				
Arsenic	0.04904	0.0050	0.05	0.002274	93.5	75-125	0				
Barium	0.09222	0.0050	0.05	0.04369	97.1	75-125	0				
Cadmium	0.04522	0.0020	0.05	0.000017	90.4	75-125	0				
Chromium	0.0469	0.0050	0.05	0.002504	88.8	75-125	0				
Cobalt	0.05294	0.0050	0.05	0.00792	90	75-125	0				
Copper	0.04506	0.0050	0.05	0.000685	88.8	75-125	0				
Iron	4.58	0.20	5	0.01417	91.3	75-125	0				
Lead	0.04645	0.0050	0.05	0.000396	92.1	75-125	0				
Molybdenum	0.04343	0.0050	0.05	0.000461	85.9	75-125	0				
Nickel	0.07597	0.0050	0.05	0.0297	92.5	75-125	0				
Selenium	0.05124	0.0050	0.05	0.008427	85.6	75-125	0				
Silver	0.04122	0.0050	0.05	0.000036	82.4	75-125	0				
Thallium	0.04387	0.0020	0.05	0.000429	86.9	75-125	0				
Zinc	0.05173	0.0050	0.05	0.006926	89.6	75-125	0				

MS		Sample ID: 12021007-30BMS				Units: mg/L		Analysis Date: 3/9/2012 12:35 AM			
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712370		Prep Date: 3/7/2012		DF: 1	
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual	
Antimony	0.04872	0.0050	0.05	-0.000015	97.5	75-125	0				
Arsenic	0.04902	0.0050	0.05	0.000205	97.6	75-125	0				
Barium	0.1296	0.0050	0.05	0.07398	111	75-125	0				
Cadmium	0.0482	0.0020	0.05	0.000153	96.1	75-125	0				
Chromium	0.04782	0.0050	0.05	0.000628	94.4	75-125	0				
Cobalt	0.04762	0.0050	0.05	0.001415	92.4	75-125	0				
Copper	0.0476	0.0050	0.05	0.001601	92	75-125	0				
Iron	4.804	0.20	5	0.03249	95.4	75-125	0				
Lead	0.04796	0.0050	0.05	0.000039	95.9	75-125	0				
Molybdenum	0.046	0.0050	0.05	0.000159	91.7	75-125	0				
Nickel	0.05056	0.0050	0.05	0.006482	88.2	75-125	0				
Selenium	0.0451	0.0050	0.05	-0.001248	92.7	75-125	0				
Silver	0.04564	0.0050	0.05	-0.00001	91.3	75-125	0				
Thallium	0.04531	0.0020	0.05	-0.000104	90.8	75-125	0				
Zinc	0.05419	0.0050	0.05	0.00544	97.5	75-125	0				

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59388 Instrument ID ICPMS04 Method: SW6020 (Dissolve)

MSD		Sample ID: 12021007-17BMSD				Units: mg/L		Analysis Date: 3/8/2012 11:17 PM		
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712352		Prep Date: 3/7/2012		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.04653	0.0050	0.05	0.000223	92.6	75-125	0.0437	6.26	25	
Arsenic	0.05049	0.0050	0.05	0.002274	96.4	75-125	0.04904	2.92	25	
Barium	0.09636	0.0050	0.05	0.04369	105	75-125	0.09222	4.38	25	
Cadmium	0.04554	0.0020	0.05	0.000017	91	75-125	0.04522	0.703	25	
Chromium	0.0489	0.0050	0.05	0.002504	92.8	75-125	0.0469	4.18	25	
Cobalt	0.05513	0.0050	0.05	0.00792	94.4	75-125	0.05294	4.05	25	
Copper	0.04632	0.0050	0.05	0.000685	91.3	75-125	0.04506	2.76	25	
Iron	4.703	0.20	5	0.01417	93.8	75-125	4.58	2.65	25	
Lead	0.04587	0.0050	0.05	0.000396	90.9	75-125	0.04645	1.25	25	
Molybdenum	0.04419	0.0050	0.05	0.000461	87.5	75-125	0.04343	1.73	25	
Nickel	0.07645	0.0050	0.05	0.0297	93.5	75-125	0.07597	0.638	25	
Selenium	0.05634	0.0050	0.05	0.008427	95.8	75-125	0.05124	9.48	25	
Silver	0.0417	0.0050	0.05	0.000036	83.3	75-125	0.04122	1.16	25	
Thallium	0.0437	0.0020	0.05	0.000429	86.5	75-125	0.04387	0.393	25	
Zinc	0.05092	0.0050	0.05	0.006926	88	75-125	0.05173	1.58	25	

MSD		Sample ID: 12021007-30BMSD				Units: mg/L		Analysis Date: 3/9/2012 12:41 AM		
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712371		Prep Date: 3/7/2012		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	0.05016	0.0050	0.05	-0.000015	100	75-125	0.04872	2.91	25	
Arsenic	0.04989	0.0050	0.05	0.000205	99.4	75-125	0.04902	1.76	25	
Barium	0.135	0.0050	0.05	0.07398	122	75-125	0.1296	4.08	25	
Cadmium	0.04925	0.0020	0.05	0.000153	98.2	75-125	0.0482	2.17	25	
Chromium	0.04824	0.0050	0.05	0.000628	95.2	75-125	0.04782	0.889	25	
Cobalt	0.04891	0.0050	0.05	0.001415	95	75-125	0.04762	2.67	25	
Copper	0.04869	0.0050	0.05	0.001601	94.2	75-125	0.0476	2.27	25	
Iron	4.868	0.20	5	0.03249	96.7	75-125	4.804	1.32	25	
Molybdenum	0.04668	0.0050	0.05	0.000159	93	75-125	0.046	1.47	25	
Nickel	0.05204	0.0050	0.05	0.006482	91.1	75-125	0.05056	2.89	25	
Selenium	0.04783	0.0050	0.05	-0.001248	98.2	75-125	0.0451	5.88	25	
Silver	0.04663	0.0050	0.05	-0.00001	93.3	75-125	0.04564	2.15	25	
Thallium	0.0473	0.0020	0.05	-0.000104	94.8	75-125	0.04531	4.29	25	
Zinc	0.05705	0.0050	0.05	0.00544	103	75-125	0.05419	5.14	25	

MSD		Sample ID: 12021007-30BMSD				Units: mg/L		Analysis Date: 3/9/2012 10:44 AM		
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712669		Prep Date: 3/7/2012		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Lead	0.04574	0.0050	0.05	0.000039	91.4	75-125	0.04796	4.74	25	

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

Client: ARCADIS U.S., Inc.

Work Order: 1203151

Project: El Paso Smelter

QC BATCH REPORT

Batch ID: 59388

Instrument ID ICPMS04

Method: SW6020

(Dissolve)

DUP		Sample ID: 12021007-17BDUP				Units: mg/L		Analysis Date: 3/8/2012 11:05 PM		
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712350		Prep Date: 3/7/2012		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.0050	0	0	0	0-0	0.000223	0	25	
Arsenic	0.002251	0.0050	0	0	0	0-0	0.002274	0	25	J
Barium	0.04813	0.0050	0	0	0	0-0	0.04369	9.67	25	
Cadmium	U	0.0020	0	0	0	0-0	0.000017	0	25	
Chromium	0.002517	0.0050	0	0	0	0-0	0.002504	0	25	J
Cobalt	0.008533	0.0050	0	0	0	0-0	0.00792	7.45	25	
Copper	U	0.0050	0	0	0	0-0	0.000685	0	25	
Iron	U	0.20	0	0	0	0-0	0.01417	0	25	
Lead	U	0.0050	0	0	0	0-0	0.000396	0	25	
Molybdenum	U	0.0050	0	0	0	0-0	0.000461	0	25	
Nickel	0.03338	0.0050	0	0	0	0-0	0.0297	11.7	25	
Selenium	0.009269	0.0050	0	0	0	0-0	0.008427	9.52	25	
Silver	U	0.0050	0	0	0	0-0	0.000036	0	25	
Thallium	U	0.0020	0	0	0	0-0	0.000429	0	25	
Zinc	0.005882	0.0050	0	0	0	0-0	0.006926	16.3	25	

DUP		Sample ID: 12021007-30BDUP				Units: mg/L		Analysis Date: 3/9/2012 12:29 AM		
Client ID:		Run ID: ICPMS04_120308A				SeqNo: 2712369		Prep Date: 3/7/2012		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Antimony	U	0.0050	0	0	0	0-0	-0.000015	0	25	
Arsenic	U	0.0050	0	0	0	0-0	0.000205	0	25	
Barium	0.07707	0.0050	0	0	0	0-0	0.07398	4.09	25	
Cadmium	U	0.0020	0	0	0	0-0	0.000153	0	25	
Chromium	U	0.0050	0	0	0	0-0	0.000628	0	25	
Cobalt	0.001504	0.0050	0	0	0	0-0	0.001415	0	25	J
Copper	U	0.0050	0	0	0	0-0	0.001601	0	25	
Iron	U	0.20	0	0	0	0-0	0.03249	0	25	
Lead	U	0.0050	0	0	0	0-0	0.000039	0	25	
Molybdenum	U	0.0050	0	0	0	0-0	0.000159	0	25	
Nickel	0.006686	0.0050	0	0	0	0-0	0.006482	3.1	25	
Selenium	U	0.0050	0	0	0	0-0	-0.001248	0	25	
Silver	U	0.0050	0	0	0	0-0	-0.00001	0	25	
Thallium	U	0.0020	0	0	0	0-0	-0.000104	0	25	
Zinc	0.004923	0.0050	0	0	0	0-0	0.00544	0	25	J

The following samples were analyzed in this batch:

1203151-01C

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59410** Instrument ID **Mercury** Method: **SW7470** (Dissolve)

MBLK	Sample ID: GBLKW3-030812-59410					Units: mg/L	Analysis Date: 3/8/2012 07:14 PM			
Client ID:	Run ID: MERCURY_120308A			SeqNo: 2712542	Prep Date: 3/8/2012	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: GLCSW3-030812-59410					Units: mg/L	Analysis Date: 3/8/2012 07:16 PM			
Client ID:	Run ID: MERCURY_120308A			SeqNo: 2712543	Prep Date: 3/8/2012	DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00495	0.00020	0.005	0	99	80-120	0			

MS	Sample ID: 1203151-01CMS					Units: mg/L	Analysis Date: 3/8/2012 07:22 PM			
Client ID: QA030512	Run ID: MERCURY_120308A			SeqNo: 2712546	Prep Date: 3/8/2012	DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.0045	0.00020	0.005	0.000017	89.7	80-120	0			

MSD	Sample ID: 1203151-01CMSD					Units: mg/L	Analysis Date: 3/8/2012 07:26 PM			
Client ID: QA030512	Run ID: MERCURY_120308A			SeqNo: 2712547	Prep Date: 3/8/2012	DF: 1				
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00451	0.00020	0.005	0.000017	89.9	80-120	0.0045	0.222	20	

DUP	Sample ID: 1203151-01CDUP					Units: mg/L	Analysis Date: 3/8/2012 07:20 PM			
Client ID: QA030512	Run ID: MERCURY_120308A			SeqNo: 2712545	Prep Date: 3/8/2012	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	0.000017	0	20	

The following samples were analyzed in this batch: 1203151-01C

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **59424** Instrument ID **Mercury** Method: **SW7470**

MBLK	Sample ID: GBLKW5-030812-59424	Units: mg/L					Analysis Date: 3/8/2012 07:44 PM			
Client ID:	Run ID: MERCURY_120308A	SeqNo: 2712563	Prep Date: 3/8/2012	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: GLCSW5-030812-59424	Units: mg/L					Analysis Date: 3/8/2012 07:46 PM			
Client ID:	Run ID: MERCURY_120308A	SeqNo: 2712564	Prep Date: 3/8/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.005	0.00020	0.005	0	100	85-115	0			

MS	Sample ID: 1203252-02CMS	Units: mg/L					Analysis Date: 3/8/2012 07:55 PM			
Client ID:	Run ID: MERCURY_120308A	SeqNo: 2712567	Prep Date: 3/8/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00479	0.00020	0.005	0.000008	95.6	85-115	0			

MSD	Sample ID: 1203252-02CMSD	Units: mg/L					Analysis Date: 3/8/2012 07:57 PM			
Client ID:	Run ID: MERCURY_120308A	SeqNo: 2712568	Prep Date: 3/8/2012	DF: 1						
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Mercury	0.00463	0.00020	0.005	0.000008	92.4	85-115	0.00479	3.4	20	

DUP	Sample ID: 1203252-02CDUP	Units: mg/L					Analysis Date: 3/8/2012 07:50 PM			
Client ID:	Run ID: MERCURY_120308A	SeqNo: 2712566	Prep Date: 3/8/2012	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	0.000008	0	20	

The following samples were analyzed in this batch:

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124457** Instrument ID **Balance1** Method: **M2540D**

MBLK		Sample ID: WBLK-030712-R124457				Units: mg/L		Analysis Date: 3/7/2012 12:20 PM		
Client ID:		Run ID: BALANCE1_120307A				SeqNo: 2710444		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	U	2.0								

LCS		Sample ID: WLCS-030712-R124457				Units: mg/L		Analysis Date: 3/7/2012 12:20 PM		
Client ID:		Run ID: BALANCE1_120307A				SeqNo: 2710445		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	82.67	2.0	100	0	82.7	78-120	0			

DUP		Sample ID: 1203170-06ADUP				Units: mg/L		Analysis Date: 3/7/2012 12:20 PM		
Client ID:		Run ID: BALANCE1_120307A				SeqNo: 2710441		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	32.8	2.0	0	0	0	0-0	29.6	10.3	20	

DUP		Sample ID: 1203151-01FDUP				Units: mg/L		Analysis Date: 3/7/2012 12:20 PM		
Client ID: QA030512		Run ID: BALANCE1_120307A				SeqNo: 2710579		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Suspended Solids (Residue, Non-Fi	30.4	2.0	0	0	0	0-0	26.6	13.3	20	

The following samples were analyzed in this batch: 1203151-01F

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

Client: ARCADIS U.S., Inc.

Work Order: 1203151

Project: El Paso Smelter

QC BATCH REPORT

Batch ID: R124462 Instrument ID ICS3K2 Method: E300

MBLK		Sample ID: WBLKW2-030612-R124462			Units: mg/L			Analysis Date: 3/6/2012 09:23 AM		
Client ID:		Run ID: ICS3K2_120306A			SeqNo: 2710545			Prep Date:		DF: 1
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	U	0.10								
Nitrogen, Nitrate (As N)	U	0.10								
Nitrogen, Nitrite (As N)	U	0.10								
Nitrate/Nitrite (as N)	U	0.20								
Surr: Selenate (surr)	5.438	0.10	5	0	109	85-115	0			

LCS		Sample ID: WLCSW2-030612-R124462			Units: mg/L			Analysis Date: 3/6/2012 09:44 AM		
Client ID:		Run ID: ICS3K2_120306A			SeqNo: 2710546			Prep Date:		DF: 1
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	4.065	0.10	4	0	102	90-110	0			
Nitrogen, Nitrate (As N)	4.193	0.10	4	0	105	90-110	0			
Nitrogen, Nitrite (As N)	4.201	0.10	4	0	105	90-110	0			
Nitrate/Nitrite (as N)	8.394	0.20	8	0	105	90-110	0			
Surr: Selenate (surr)	5.362	0.10	5	0	107	85-115	0			

LCS D		Sample ID: WLCSDW2-030612-R124462			Units: mg/L			Analysis Date: 3/6/2012 10:06 AM		
Client ID:		Run ID: ICS3K2_120306A			SeqNo: 2710547			Prep Date:		DF: 1
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	4.044	0.10	4	0	101	90-110	4.065	0.518	20	
Nitrogen, Nitrate (As N)	4.185	0.10	4	0	105	90-110	4.193	0.191	20	
Nitrogen, Nitrite (As N)	4.156	0.10	4	0	104	90-110	4.201	1.08	20	
Nitrate/Nitrite (as N)	8.341	0.20	8	0	104	90-110	8.394	0.633	20	
Surr: Selenate (surr)	5.333	0.10	5	0	107	85-115	5.362	0.542	20	

MS		Sample ID: 1202995-01BMS			Units: mg/L			Analysis Date: 3/6/2012 10:49 AM		
Client ID:		Run ID: ICS3K2_120306A			SeqNo: 2710549			Prep Date:		DF: 1
Analyte	Result	MLQ	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	4.717	0.10	2	3.084	81.6	80-120	0			
Nitrogen, Nitrate (As N)	2.431	0.10	2	1.057	68.7	80-120	0			SH
Nitrogen, Nitrite (As N)	2.229	0.10	2	0	111	80-120	0			H
Nitrate/Nitrite (as N)	4.66	0.20	4	1.057	90.1	80-120	0			H
Surr: Selenate (surr)	5.257	0.10	5	0	105	85-115	0			

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

Client: ARCADIS U.S., Inc.
Work Order: 1203151
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124462** Instrument ID **ICS3K2** Method: **E300**

MSD Sample ID: **1202995-01BMSD** Units: **mg/L** Analysis Date: **3/6/2012 11:11 AM**

Client ID: Run ID: **ICS3K2_120306A** SeqNo: **2710550** Prep Date: DF: **1**

Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Fluoride	4.329	0.10	2	3.084	62.2	80-120	4.717	8.58	20	S
Nitrogen, Nitrate (As N)	2.681	0.10	2	1.057	81.2	80-120	2.431	9.78	20	H
Nitrogen, Nitrite (As N)	2.073	0.10	2	0	104	80-120	2.229	7.25	20	H
Nitrate/Nitrite (as N)	4.754	0.20	4	1.057	92.4	80-120	4.66	2	20	H
<i>Surr: Selenate (surr)</i>	4.695	0.10	5	0	93.9	85-115	5.257	11.3	20	

The following samples were analyzed in this batch:

1203151-01E

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124511** Instrument ID **BALANCE1** Method: **M2540C**

MBLK		Sample ID: WBLK-030712-R124511				Units: mg/L		Analysis Date: 3/7/2012 07:30 PM		
Client ID:		Run ID: BALANCE1_120307C				SeqNo: 2711630		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	U	10								

LCS		Sample ID: WLCS-030712-R124511				Units: mg/L		Analysis Date: 3/7/2012 07:30 PM		
Client ID:		Run ID: BALANCE1_120307C				SeqNo: 2711631		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	992	10	1000	0	99.2	85-115	0			

DUP		Sample ID: 1203143-01BDUP				Units: mg/L		Analysis Date: 3/7/2012 07:30 PM		
Client ID:		Run ID: BALANCE1_120307C				SeqNo: 2711612		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	504	10	0	0	0	0-0	486	3.64	20	

DUP		Sample ID: 1203202-01GDUP				Units: mg/L		Analysis Date: 3/7/2012 07:30 PM		
Client ID:		Run ID: BALANCE1_120307C				SeqNo: 2711629		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Total Dissolved Solids (Residue, Fil	894	10	0	0	0	0-0	898	0.446	20	

The following samples were analyzed in this batch: 1203151-01E

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

Client: ARCADIS U.S., Inc.
Work Order: 1203151
Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124578** Instrument ID **WetChem** Method: **SM4500 S2-F**

MBLK		Sample ID: WBLKW1-030912-R124578				Units: mg/L		Analysis Date: 3/9/2012 02:25 PM		
Client ID:		Run ID: WETCHEM_120309E				SeqNo: 2713338		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	U	1.0								

LCS		Sample ID: WLCSW1-030912-R124578				Units: mg/L		Analysis Date: 3/9/2012 02:25 PM		
Client ID:		Run ID: WETCHEM_120309E				SeqNo: 2713339		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	22.2	1.0	25	0	88.8	80-120	0			

LCSD		Sample ID: WLCSW1-030912-R124578				Units: mg/L		Analysis Date: 3/9/2012 02:25 PM		
Client ID:		Run ID: WETCHEM_120309E				SeqNo: 2713344		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Sulfide	21.6	1.0	25	0	86.4	80-120	22.2	2.74	20	

The following samples were analyzed in this batch:

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: R124613 Instrument ID TOC_02 Method: SM5310C

MBLK		Sample ID: WBLKW1-031012-R124613				Units: mg/L		Analysis Date: 3/10/2012 06:22 PM		
Client ID:		Run ID: TOC_02_120310B				SeqNo: 2714431		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	0.1052	0.50								J

LCS		Sample ID: WLCSW1-031012-R124613				Units: mg/L		Analysis Date: 3/10/2012 06:35 PM		
Client ID:		Run ID: TOC_02_120310B				SeqNo: 2714433		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.63	0.50	10	0	96.3	80-120	0			

LCSD		Sample ID: WLCSDW1-031012-R124613				Units: mg/L		Analysis Date: 3/10/2012 06:49 PM		
Client ID:		Run ID: TOC_02_120310B				SeqNo: 2714434		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	9.72	0.50	10	0	97.2	80-120	9.63	0.93	20	

MS		Sample ID: 1203188-01ZMS				Units: mg/L		Analysis Date: 3/10/2012 09:24 PM		
Client ID:		Run ID: TOC_02_120310B				SeqNo: 2714439		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	56.25	0.50	50	5.841	101	80-120	0			E

MSD		Sample ID: 1203188-01ZMSD				Units: mg/L		Analysis Date: 3/10/2012 09:38 PM		
Client ID:		Run ID: TOC_02_120310B				SeqNo: 2714440		Prep Date:		DF: 1
Analyte	Result	MQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Organic Carbon, Total	56.23	0.50	50	5.841	101	80-120	56.25	0.0356	20	E

The following samples were analyzed in this batch: 1203151-01A

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124689** Instrument ID **WetChem** Method: **SM2320B**

MBLK		Sample ID: WBLKW1-031312-R124689				Units: mg/L		Analysis Date: 3/12/2012 05:00 PM		
Client ID:		Run ID: WETCHEM_120312I				SeqNo: 2716051		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	U	5.0								

LCS		Sample ID: WLCSW1-031312-R124689				Units: mg/L		Analysis Date: 3/12/2012 05:00 PM		
Client ID:		Run ID: WETCHEM_120312I				SeqNo: 2716052		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	1031	5.0	1000	0	103	80-120	0			

DUP		Sample ID: 1203215-01DDUP				Units: mg/L		Analysis Date: 3/12/2012 05:00 PM		
Client ID:		Run ID: WETCHEM_120312I				SeqNo: 2716080		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Alkalinity, Total (As CaCO3)	736.5	5.0	0	0	0	0-0	732.8	0.494	20	

The following samples were analyzed in this batch: 1203151-01E

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

Client: ARCADIS U.S., Inc.
 Work Order: 1203151
 Project: El Paso Smelter

QC BATCH REPORT

Batch ID: **R124724** Instrument ID **ICS3K2** Method: **E300**

MBLK		Sample ID: WBLKW1-031212-R124724				Units: mg/L		Analysis Date: 3/12/2012 05:48 PM		
Client ID:		Run ID: ICS3K2_120312A				SeqNo: 2716631		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	0.361	0.50								J
Sulfate	0.385	0.50								J
<i>Surr: Selenate (surr)</i>	<i>5.431</i>	<i>0.10</i>	<i>5</i>	<i>0</i>	<i>109</i>	<i>85-115</i>	<i>0</i>			

LCS		Sample ID: WLCSW1-031212-R124724				Units: mg/L		Analysis Date: 3/12/2012 06:10 PM		
Client ID:		Run ID: ICS3K2_120312A				SeqNo: 2716632		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	18.54	0.50	20	0	92.7	90-110	0			
Sulfate	19.02	0.50	20	0	95.1	90-110	0			
<i>Surr: Selenate (surr)</i>	<i>5.394</i>	<i>0.10</i>	<i>5</i>	<i>0</i>	<i>108</i>	<i>85-115</i>	<i>0</i>			

LCSD		Sample ID: WLCSDW1-031212-R124724				Units: mg/L		Analysis Date: 3/12/2012 06:32 PM		
Client ID:		Run ID: ICS3K2_120312A				SeqNo: 2716633		Prep Date:		DF: 1
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	18.57	0.50	20	0	92.8	90-110	18.54	0.146	20	
Sulfate	18.96	0.50	20	0	94.8	90-110	19.02	0.305	20	
<i>Surr: Selenate (surr)</i>	<i>5.385</i>	<i>0.10</i>	<i>5</i>	<i>0</i>	<i>108</i>	<i>85-115</i>	<i>5.394</i>	<i>0.167</i>	<i>20</i>	

MS		Sample ID: 1203173-06CMS				Units: mg/L		Analysis Date: 3/12/2012 10:30 PM		
Client ID:		Run ID: ICS3K2_120312A				SeqNo: 2716644		Prep Date:		DF: 10
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	363.3	5.0	100	271	92.2	80-120	0			
Sulfate	398.5	5.0	100	313	85.5	80-120	0			
<i>Surr: Selenate (surr)</i>	<i>50.01</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>100</i>	<i>85-115</i>	<i>0</i>			

MSD		Sample ID: 1203173-06CMSD				Units: mg/L		Analysis Date: 3/12/2012 10:52 PM		
Client ID:		Run ID: ICS3K2_120312A				SeqNo: 2716645		Prep Date:		DF: 10
Analyte	Result	ML	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Chloride	365.8	5.0	100	271	94.8	80-120	363.3	0.691	20	
Sulfate	400.7	5.0	100	313	87.7	80-120	398.5	0.563	20	
<i>Surr: Selenate (surr)</i>	<i>50.41</i>	<i>1.0</i>	<i>50</i>	<i>0</i>	<i>101</i>	<i>85-115</i>	<i>50.01</i>	<i>0.791</i>	<i>20</i>	

The following samples were analyzed in this batch: 1203151-01E

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

Client: ARCADIS U.S., Inc.
Project: El Paso Smelter
WorkOrder: 1203151

**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: **06-Mar-12 09:05**

Work Order: **1203151**

Received by: **JBA**

Checklist completed by Raymond N Gambia 06-Mar-12
eSignature Date

Reviewed by: Lithany Agarwal 06-Mar-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: Received six bottles (COC indicates five).

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

CorrectiveAction:



Environmental

Chain of Custody Form

1203151

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

Project: El Paso Smelter

Client +1:
Event +1:
Form +1:

Page of
COC ID: 50989

ALS Project Manager:

Customer Information, Project Information, Sample Description, Matrix, Time, Date, Shipper, Turnaround Time, Results Due Date, Relinquished by, Logged by, Preservative Key, and a grid for results (A-J, 1-10).

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.

W.O.# 1203151

... The package can be returned for recipient's address.

Date: 3-5-12 FedEx Tracking Number: 898941670650

Sender's Name: D. Solon Phone: 915 603-1015

Company: ARCADIS

Address: 211 A. Florence St. STE 202
El Paso, TX ZIP: 79901

Our Internal Billing Reference: 06835001, W070

	ALS Environmental
	10450 Stancliff Rd., Suite 210
	Houston, Texas 77099
	Tel. +1 281 530 5656 Fax. +1 281 530 5687
Date:	3/5/12
Name:	D. Solon
Company:	ARCADIS

CUSTODY SEAL	
Date:	3/5/12
Name:	D. Solon
Company:	ARCADIS
Seal Broken By:	ASG
Date:	3/6/12