TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

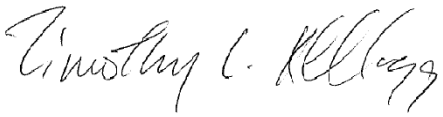
Job Number: 560-27939-1

SDG Number: September 1, 2011

Job Description: Former ASARCO Smelter Groundwater

For:
Malcolm Pirnie, Inc.
211 North Florence Street
Suite 202
El Paso, TX 79901

Attention: Ms. Marla Miller



Approved for release.
Timothy L. Kellogg
Project Manager II
9/19/2011 4:07 PM

Timothy L. Kellogg
Project Manager II
tim.kellogg@testamericainc.com
09/19/2011

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Corpus Christi
TRRP Data Package Cover Page

Job Number: 560-27939-1

Project Name/Number: Former ASARCO Smelter Groundwater

This Data Package consists of:

This signature page, the laboratory review checklist, and the following Reportable Data:

- ☒ R1 Field Chain-of-Custody Form
- ☒ R2 Sample Identification Cross-reference;
- ☒ R3 Test Reports (Analytical Data Sheets) for each environmental sample that includes:
  - a) Items consistent with NELAC Chapter 5
  - b) dilution factors,
  - c) preparation methods,
  - d) cleanup methods, and
  - e) if required for the project, tentatively identified compounds (TICs).
- ☒ R4 Surrogate Recovery Data including:
  - a) Calculated recovery (%R), and
  - b) The laboratory's surrogate QC limits.
- ☒ R5 Test Reports/Summary Forms for Blank Samples;
- ☒ R6 Test Reports/Summary Forms for Laboratory Control Samples (LCSs) including:
  - a) LCS spiking amounts,
  - b) Calculated %R for each analyte, and
  - d) The laboratory's LCS QC limits
- ☒ R7 Test Reports for Matrix Spike/Matrix Spike Duplicates (MS/MSDs) including:
  - a) Samples associated with the MS/MSD clearly identified,
  - b) MS/MSD spiking amounts,
  - c) Concentration of each MS/MSD analyte measured in the parent and spiked sample,
  - d) Calculated %Rs and relative percent differences (RPDs), and
  - e) The laboratory's MS/MSD QC limits
- ☒ R8 Laboratory analytical duplicates (if applicable) recovery and precision, including:
  - a) the amount of analyte measured in the duplicate,
  - b) the calculated RPD, and
  - c) the laboratory's QC limits for analytical duplicates.
- ☒ R9 List of method quantitation limit (MQL) and detectability check sample results for each analyte for each method and matrix;
- ☒ R10 Other problems or anomalies

The exception report for each "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist and for each analyte, matrix, and method for which the laboratory does not hold NELAC accreditation under the Texas Laboratory Accreditation Program.

Release Statement: "I am the laboratory manager, or his/her designee, and I am responsible for the release of this data package. This laboratory is NELAC accredited under Texas laboratory Accreditation Program for all the methods, analytes, and matrices reported in this data package except as noted in the Exception Reports. The data has been reviewed and are technically compliant with the requirements of the methods used, except where noted by the laboratory in the Exception Reports. By my signature below, I affirm, to the best of my knowledge, that all problems/anomalies observed by the laboratory have been identified in the Laboratory Review Checklist, and no information affecting the quality of the data has been knowingly withheld."

Timothy L. Kellogg
Name (printed)

Signature

9/19/2011
Date

Client Services Manager
Official Title (printed)

LRC Date: September 19, 2011	Laboratory Job Number: 560-27939-1
Reviewer Name: Timothy L. Kellogg	Project Name/Number: Former ASARCO Smelter Groundwater

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R1	**OI**	**CHAIN-OF-CUSTODY (C-O-C)**					
		1) Did all samples meet the laboratory's standard conditions of sample acceptability upon receipt?	X				
		2) Were all departures from standard conditions described in an exception report or case narrative?	X				
R2	**OI**	**SAMPLE AND QUALITY CONTROL (QC) IDENTIFICATION**					
		1) Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	X				
		2) Are all laboratory ID numbers cross-referenced to the corresponding QC data?	X				
R3	**OI**	**TEST REPORTS**					
		1) Were all samples prepared and analyzed within holding time?	X				
		2) Other than those results <MQL, were all other raw values bracketed by calibration standards?	X				
		3) Were calculations checked by a peer or supervisor?	X				
		4) Were all analyte identifications checked by a peer or supervisor?	X				
		5) Were sample quantitation limits reported for all analytes not detected?	X				
		6) Were all results for soil and sediment samples reported on a dry weight basis?			X		
		7) Were % moisture (or solids) reported for all soil and sediment samples?			X		
		8) were bulk soils/solids samples for volatile analysis extracted with methanol per SW846 Method 5035			X		
		9) If required for the project, TICs reported?			X		
R4	**O**	**SURROGATE RECOVERY DATA**					
		1) Were surrogates added prior to extraction?			X		
		2) Were surrogate percent recoveries in all samples within the laboratory QC limits?			X		
R5	**OI**	**TEST REPORTS/SUMMARY FORMS FOR BLANK SAMPLES**					
		1) Were appropriate type(s) of blanks analyzed?	X				
		2) Were blanks analyzed at the appropriate frequency?	X				
		3) Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		4) Were blank concentrations <MQL?	X				
R6	**OI**	**LABORATORY CONTROL SAMPLES (LCS)**					
		1) Were all COCs included in the LCS?	X				
		2) Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	X				
		3) Were LCSs analyzed at the required frequency?	X				
		4) Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	X				
		5) Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SDLs?	X				
		6) Was the LCSD RPD within QC limits?	X				
R7	**OI**	**MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) DATA**					
		1) Were the project/method specified analytes included in the MS and MSD?	X				
		2) Were MS/MSD analyzed at the appropriate frequency?	X				
		3) Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	X				
		4) Were MS/MSD RPDs within laboratory QC limits?	X				
R8	**OI**	**ANALYTICAL DUPLICATE DATA**					
		1) Were appropriate analytical duplicates analyzed for each matrix?	X				
		2) Were analytical duplicates analyzed at the appropriate frequency?	X				
		3) Were RPDs or relative standard deviations within the laboratory QC limits?	X				
R9	**OI**	**METHOD QUANTITATION LIMITS (MQLs)**					
		1) Are the MQLs for each method analyte listed and included in the laboratory data package?	X				
		2) Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	X				
		3) Are unadjusted MQLs and DCS included in the laboratory data package?	X				

LRC Date: September 19, 2011	Laboratory Job Number: 560-27939-1
Reviewer Name: Timothy L. Kellogg	Project Name/Number: Former ASARCO Smelter Groundwater

#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
R10	**OI**	**OTHER PROBLEMS/ANOMALIES**					
		1) Are all known problems/anomalies/special conditions noted in this LRC, ER, or case narrative?	X				
		2) Was applicable and available technology used to lower the SDL to minimize the matrix interference effects on the sample results?	X				
		3) Is the laboratory NELAC-accredited under Texas Laboratory Accreditation Program for the analytes, matrices and methods associated with this laboratory data package?	X				
S1	**OI**	**INITIAL CALIBRATION (ICAL)**					
		1) Were response factors and/or relative response factors for each analyte within the QC limits?	X				
		2) Were percent RSDs or correlation coefficient criteria met?	X				
		3) Was the number of standards recommended in the method used for all analytes?	X				
		4) Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		5) Are ICAL data available for all instruments used?	X				
		6) Has the initial calibration curve been verified using an appropriate second source standard?	X				
S2	**OI**	**INITIAL AND CONTINUING CALIBRATION VERIFICATION (ICV and CCV) AND CONTINUING CALIBRATION BLANK (CCB)**					
		1) Was the CCV analyzed at the method-required frequency?	X				
		2) Were percent differences for each analytes within the method-required QC limits?	X				
		3) Was the ICAL curve verified for each analyte?	X				
		4) Was the absolute value of the analyte concentration in the inorganic CCB <MDL?	X				
S3	**O**	**MASS SPECTRAL TUNING**					
		1) Was the appropriate compound for the method used for tuning?			X		
		2) Were ion abundance data within the method-required QC limits?			X		
S4	**O**	**INTERNAL STANDARDS (IS)**					
		1) Were IS area counts and retention times within the method-required QC limits?			X		
S5	**OI**	**RAW DATA (NELAC SECTION 5.5.10)**					
		1) Were the raw data (e.g. chromatograms, spectral data) reviewed by an analyst?	X				
		2) Were data associated with manual integrations flagged on the raw data?	X				
S6	**O**	**DUAL COLUMN CONFIRMATION**					
		1) Did dual column confirmation results meet the method-required QC?			X		
S7	**O**	**TENTATIVELY IDENTIFIED COMPOUNDS (TICs)**					
		1) If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	**I**	**INTERFERENCE CHECK SAMPLE (ICS) RESULTS**					
		1) Were percent recoveries within method QC limits?	X				
S9	**I**	**SERIAL DILUTIONS, POST DIGESTION SPIKES, AND METHOD OF STANDARD ADDITIONS**					
		1) Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	X				
S10	**OI**	**METHOD DETECTION LIMIT (MDL) STUDIES**					
		1) Was a MDL study performed for each reported analyte?	X				
		2) Is the MDL either adjusted or supported by the analysis of DCS?	X				
S11	**OI**	**PROFICIENCY TEST REPORTS**					
		1) Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	X				
S12	**OI**	**STANDARDS DOCUMENTATION**					
		1) Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	X				
S13	**OI**	**COMPOUND/ANALYTE IDENTIFICATION PROCEDURES**					
		1) Are the procedures for compound/analyte identification documented?	X				
S14	**OI**	**DEMONSTRATION OF ANALYST COMPETENCY (DOC)**					
		1) Was DOC conducted consistent with NELAC Chapter 5?	X				

LRC Date: September 19, 2011	Laboratory Job Number: 560-27939-1
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		2) Is documentation of the analyst's competency up-to-date and on file?	X				
#[1]	A[2]	Description	Yes	No	NA[3]	NR[4]	ER#[5]
S15	**OI**	**VERIFICATION/VALIDATION DOCUMENTATION FOR METHODS (NELAC CHAPTER 5)**					
		1) Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	**OI**	**LABORATORY STANDARD OPERATING PROCEDURES (SOPs)**					
		1) Are laboratory SOPs current and on file for each method performed?	X				

EXCEPTION REPORTS

ER#[5]	DESCRIPTION

1 Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
2 O = organic analyses; I = inorganic analyses (and general chemistry, when applicable)
3 NA = Not applicable
4 NR = Not reviewed
5 ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked)

METHOD SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Metals (ICP/MS)	TAL CC	SW846 6020	
Preparation, Total Metals	TAL CC		SW846 3010A
Metals (ICP/MS)	TAL CC	SW846 6020	
Preparation, Total Metals	TAL CC		SW846 3010A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL CC	SW846 7470A	
Preparation, Mercury	TAL CC		SW846 7470A
Mercury (CVAA)	TAL CC	SW846 7470A	
Preparation, Mercury	TAL CC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Solids, Total Dissolved (TDS)	TAL CC	MCAWW 160.1	
Solids, Total Suspended (TSS)	TAL CC	MCAWW 160.2	
Anions, Ion Chromatography	TAL CC	MCAWW 300.0	
Fluoride	TAL CC	MCAWW 340.2	
Sulfide	TAL CC	MCAWW 376.2	
TOC	TAL CC	MCAWW 415.1	
Alkalinity	TAL CC	SM SM 2320B	

Lab References:

TAL CC = TestAmerica Corpus Christi

Method References:

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

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

METHOD / ANALYST SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method	Analyst	Analyst ID
SW846 6020	Reyes, Eddie D	EDR
SW846 7470A	Mathewson, John E	JEM
MCAWW 160.1	Wade, Alex	AW
MCAWW 160.2	Bowen, Christine	CB
MCAWW 300.0	Zwierzykowski, Hanna M	HMZ
MCAWW 340.2	Zwierzykowski, Hanna M	HMZ
MCAWW 376.2	Bowen, Christine	CB
MCAWW 415.1	Zwierzykowski, Hanna M	HMZ
SM SM 2320B	Wade, Alex	AW

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
560-27939-1	EP-51	Water	09/01/2011 0820	09/02/2011 1019
560-27939-2	EP-71	Water	09/01/2011 0945	09/02/2011 1019
560-27939-3	FD090111	Water	09/01/2011 0000	09/02/2011 1019
560-27939-4	EP-12	Water	09/01/2011 1100	09/02/2011 1019
560-27939-5	EP-13	Water	09/01/2011 1325	09/02/2011 1019

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-51

Lab Sample ID: 560-27939-1
Client Matrix: Water

Date Sampled: 09/01/2011 08:20
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: SW846 3010A,Water,Dissolved												
Preparation, Total Metals		Complete							63924	09/08/2011 12:30		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							63924	09/08/2011 12:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00375	J		0.00161	0.00500	0.00161	mg/L	63955	09/09/2011 23:56	1	EDR
Arsenic	7440-38-2	0.00723			0.00109	0.00500	0.00109	mg/L	64024	09/12/2011 23:35	1	EDR
Barium	7440-39-3	0.0194			0.000810	0.00500	0.000810	mg/L	63955	09/09/2011 23:56	1	EDR
Cadmium	7440-43-9	0.0291			0.000854	0.00200	0.000854	mg/L	63955	09/09/2011 23:56	1	EDR
Chromium	7440-47-3	0.0718			0.00140	0.00500	0.00140	mg/L	63955	09/09/2011 23:56	1	EDR
Cobalt	7440-48-4	0.0199			0.00136	0.00500	0.00136	mg/L	63955	09/09/2011 23:56	1	EDR
Copper	7440-50-8	0.0992			0.00200	0.0100	0.00200	mg/L	63955	09/09/2011 23:56	1	EDR
Iron	7439-89-6	2.75			0.101	0.250	0.101	mg/L	63955	09/09/2011 23:56	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	63955	09/09/2011 23:56	1	EDR
Molybdenum	7439-98-7	0.0124			0.00140	0.00500	0.00140	mg/L	63955	09/09/2011 23:56	1	EDR
Nickel	7440-02-0	1.61			0.00217	0.00500	0.0217	mg/L	64024	09/13/2011 01:24	10	EDR
Selenium	7782-49-2	0.233			0.00108	0.00500	0.00108	mg/L	63955	09/09/2011 23:56	1	EDR
Thallium	7440-28-0	0.00204			0.000693	0.00100	0.000693	mg/L	63955	09/09/2011 23:56	1	EDR
Zinc	7440-66-6	0.204			0.00355	0.0250	0.00355	mg/L	64050	09/13/2011 17:28	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000234	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:45	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	11300			10.0	10.0	10.0	mg/L	63764	09/02/2011 13:30	1	AW
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	16.8			3.00	3.00	3.00	mg/L	63795	09/06/2011 09:25	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-51

Lab Sample ID: 560-27939-1
Client Matrix: Water

Date Sampled: 09/01/2011 08:20
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	4000			0.192	1.00	48.0	mg/L	63757	09/03/2011 04:22	250	HMZ
Nitrate as N	14797-55-8	124			0.103	0.500	1.03	mg/L	63757	09/02/2011 20:40	10	HMZ
Nitrate Nitrite as N	STL00217	124			0.200	0.500	2.00	mg/L	63757	09/02/2011 20:40	10	HMZ
Nitrite as N	14797-65-0	2.00	U		0.200	0.500	2.00	mg/L	63757	09/02/2011 20:40	10	HMZ
Sulfate	14808-79-8	2050			0.377	1.00	94.3	mg/L	63757	09/03/2011 04:22	250	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	0.482			0.0200	0.100	0.0200	mg/L	64020	09/12/2011 11:30	1	HMZ
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0270	J		0.0131	0.0500	0.0131	mg/L	63775	09/06/2011 10:15	1	CB
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	3.50		b	0.285	1.00	0.285	mg/L	63978	09/08/2011 14:20	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	187			5.00	5.00	5.00	mg/L	63876	09/07/2011 13:15	1	AW
Method: SW846 6020,Water												
Aluminum	7429-90-5	0.0532			0.0225	0.0500	0.0225	mg/L	63955	09/09/2011 23:49	1	EDR
Antimony	7440-36-0	0.00455	J		0.00161	0.00500	0.00161	mg/L	63955	09/09/2011 23:49	1	EDR
Arsenic	7440-38-2	0.0439			0.00109	0.00500	0.00109	mg/L	64024	09/12/2011 23:30	1	EDR
Barium	7440-39-3	0.0226			0.000810	0.00500	0.000810	mg/L	63955	09/09/2011 23:49	1	EDR
Cadmium	7440-43-9	0.0307			0.000854	0.00200	0.000854	mg/L	63955	09/09/2011 23:49	1	EDR
Calcium	7440-70-2	921			0.198	0.500	1.98	mg/L	64024	09/13/2011 00:57	10	EDR
Chromium	7440-47-3	0.635			0.00140	0.00500	0.00140	mg/L	63955	09/09/2011 23:49	1	EDR
Cobalt	7440-48-4	0.0213			0.00136	0.00500	0.00136	mg/L	63955	09/09/2011 23:49	1	EDR
Copper	7440-50-8	0.127			0.00200	0.0100	0.00200	mg/L	63955	09/09/2011 23:49	1	EDR
Iron	7439-89-6	5.21			0.101	0.250	0.101	mg/L	63955	09/09/2011 23:49	1	EDR
Lead	7439-92-1	0.00650			0.000733	0.00500	0.000733	mg/L	63955	09/09/2011 23:49	1	EDR
Magnesium	7439-95-4	747			0.113	0.500	1.13	mg/L	64024	09/13/2011 00:57	10	EDR
Manganese	7439-96-5	0.913			0.0116	0.0500	0.0116	mg/L	63955	09/09/2011 23:49	1	EDR
Molybdenum	7439-98-7	0.0161			0.00140	0.00500	0.00140	mg/L	63955	09/09/2011 23:49	1	EDR
Nickel	7440-02-0	1.74			0.00217	0.00500	0.0217	mg/L	64024	09/13/2011 00:57	10	EDR
Potassium	7440-09-7	50.8			0.407	1.00	0.407	mg/L	63955	09/09/2011 23:49	1	EDR
Selenium	7782-49-2	0.220			0.00108	0.00500	0.00108	mg/L	63955	09/09/2011 23:49	1	EDR
Sodium	7440-23-5	1610			0.727	1.00	14.5	mg/L	64024	09/13/2011 01:02	20	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-51

Lab Sample ID: 560-27939-1
Client Matrix: Water

Date Sampled: 09/01/2011 08:20
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Thallium	7440-28-0	0.00201			0.000693	0.00100	0.000693	mg/L	63955	09/09/2011 23:49	1	EDR
Zinc	7440-66-6	0.228			0.00355	0.0250	0.00355	mg/L	64050	09/13/2011 17:22	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000164	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:28	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-71

Lab Sample ID: 560-27939-2
Client Matrix: Water

Date Sampled: 09/01/2011 09:45
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: SW846 3010A,Water,Dissolved												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:12	1	EDR
Arsenic	7440-38-2	0.138			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:12	1	EDR
Barium	7440-39-3	0.0123			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:12	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:12	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:12	1	EDR
Cobalt	7440-48-4	0.00160	J		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:12	1	EDR
Copper	7440-50-8	0.00311	J		0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:12	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	64172	09/16/2011 14:11	1	EDR
Lead	7439-92-1	0.00163	J		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:12	1	EDR
Molybdenum	7439-98-7	0.144			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:12	1	EDR
Nickel	7440-02-0	0.0143			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:12	1	EDR
Selenium	7782-49-2	0.251			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:12	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:12	1	EDR
Zinc	7440-66-6	0.00599	J		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:12	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000502	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:47	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	5430			10.0	10.0	10.0	mg/L	63764	09/02/2011 13:30	1	AW
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	15.4			3.00	3.00	3.00	mg/L	63795	09/06/2011 09:25	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-71

Lab Sample ID: 560-27939-2
Client Matrix: Water

Date Sampled: 09/01/2011 09:45
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	458			0.192	1.00	9.60	mg/L	63757	09/03/2011 04:44	50	HMZ
Nitrate as N	14797-55-8	79.9			0.103	0.500	0.515	mg/L	63757	09/02/2011 22:52	5	HMZ
Nitrate Nitrite as N	STL00217	79.9			0.200	0.500	1.00	mg/L	63757	09/02/2011 22:52	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	63757	09/02/2011 22:52	5	HMZ
Sulfate	14808-79-8	2560			0.377	1.00	18.9	mg/L	63757	09/03/2011 04:44	50	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	0.751			0.0200	0.100	0.0200	mg/L	64020	09/12/2011 11:30	1	HMZ
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0240	J		0.0131	0.0500	0.0131	mg/L	63775	09/06/2011 10:15	1	CB
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	3.11		b	0.285	1.00	0.285	mg/L	63978	09/08/2011 14:20	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	261			5.00	5.00	5.00	mg/L	63876	09/07/2011 13:15	1	AW
Method: SW846 6020,Water												
Aluminum	7429-90-5	0.330			0.0225	0.0500	0.0225	mg/L	64092	09/14/2011 18:06	1	EDR
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:06	1	EDR
Arsenic	7440-38-2	0.131			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:06	1	EDR
Barium	7440-39-3	0.0201			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:06	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:06	1	EDR
Calcium	7440-70-2	409			0.198	0.500	0.198	mg/L	64092	09/14/2011 18:06	1	EDR
Chromium	7440-47-3	0.00197	J		0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:06	1	EDR
Cobalt	7440-48-4	0.00169	J		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:06	1	EDR
Copper	7440-50-8	0.00430	J		0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:06	1	EDR
Iron	7439-89-6	0.375			0.101	0.250	0.101	mg/L	64142	09/15/2011 18:35	1	EDR
Lead	7439-92-1	0.00288	J		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:06	1	EDR
Magnesium	7439-95-4	176			0.113	0.500	2.26	mg/L	64142	09/15/2011 22:48	20	EDR
Manganese	7439-96-5	0.0431	J		0.0116	0.0500	0.0116	mg/L	64092	09/14/2011 18:06	1	EDR
Molybdenum	7439-98-7	0.142			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:06	1	EDR
Nickel	7440-02-0	0.0150			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:06	1	EDR
Potassium	7440-09-7	18.2			0.407	1.00	0.407	mg/L	64092	09/14/2011 18:06	1	EDR
Selenium	7782-49-2	0.253			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:06	1	EDR
Sodium	7440-23-5	983			0.727	1.00	14.5	mg/L	64142	09/15/2011 22:48	20	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-71

Lab Sample ID: 560-27939-2
Client Matrix: Water

Date Sampled: 09/01/2011 09:45
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:06	1	EDR
Zinc	7440-66-6	0.00846	J		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:06	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000381	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:37	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: FD090111

Lab Sample ID: 560-27939-3
Client Matrix: Water

Date Sampled: 09/01/2011 00:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: SW846 3010A,Water,Dissolved												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:23	1	EDR
Arsenic	7440-38-2	0.133			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:23	1	EDR
Barium	7440-39-3	0.0133			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:23	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:23	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:23	1	EDR
Cobalt	7440-48-4	0.00174	J		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:23	1	EDR
Copper	7440-50-8	0.00304	J		0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:23	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	64172	09/16/2011 14:16	1	EDR
Lead	7439-92-1	0.00208	J		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:23	1	EDR
Molybdenum	7439-98-7	0.148			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:23	1	EDR
Nickel	7440-02-0	0.0141			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:23	1	EDR
Selenium	7782-49-2	0.231			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:23	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:23	1	EDR
Zinc	7440-66-6	0.00600	J		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:23	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000351	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:49	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	5900			10.0	10.0	10.0	mg/L	63764	09/02/2011 13:30	1	AW
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	15.0			3.00	3.00	3.00	mg/L	63795	09/06/2011 09:25	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: FD090111

Lab Sample ID: 560-27939-3
Client Matrix: Water

Date Sampled: 09/01/2011 00:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	410			0.192	1.00	9.60	mg/L	63757	09/03/2011 05:06	50	HMZ
Nitrate as N	14797-55-8	78.4			0.103	0.500	0.515	mg/L	63757	09/02/2011 23:14	5	HMZ
Nitrate Nitrite as N	STL00217	78.4			0.200	0.500	1.00	mg/L	63757	09/02/2011 23:14	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	63757	09/02/2011 23:14	5	HMZ
Sulfate	14808-79-8	2240			0.377	1.00	18.9	mg/L	63757	09/03/2011 05:06	50	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	0.749			0.0200	0.100	0.0200	mg/L	64020	09/12/2011 11:30	1	HMZ
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0300	J		0.0131	0.0500	0.0131	mg/L	63775	09/06/2011 10:15	1	CB
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	3.07		b	0.285	1.00	0.285	mg/L	63978	09/08/2011 14:20	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	265			5.00	5.00	5.00	mg/L	63876	09/07/2011 13:15	1	AW
Method: SW846 6020,Water												
Aluminum	7429-90-5	0.234			0.0225	0.0500	0.0225	mg/L	64092	09/14/2011 18:17	1	EDR
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:17	1	EDR
Arsenic	7440-38-2	0.134			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:17	1	EDR
Barium	7440-39-3	0.0170			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:17	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:17	1	EDR
Calcium	7440-70-2	398			0.198	0.500	0.198	mg/L	64092	09/14/2011 18:17	1	EDR
Chromium	7440-47-3	0.00166	J		0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:17	1	EDR
Cobalt	7440-48-4	0.00181	J		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:17	1	EDR
Copper	7440-50-8	0.0756			0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:17	1	EDR
Iron	7439-89-6	0.269			0.101	0.250	0.101	mg/L	64142	09/15/2011 18:40	1	EDR
Lead	7439-92-1	0.00319	J		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:17	1	EDR
Magnesium	7439-95-4	172			0.113	0.500	2.26	mg/L	64142	09/15/2011 22:53	20	EDR
Manganese	7439-96-5	0.0370	J		0.0116	0.0500	0.0116	mg/L	64092	09/14/2011 18:17	1	EDR
Molybdenum	7439-98-7	0.144			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:17	1	EDR
Nickel	7440-02-0	0.0448			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:17	1	EDR
Potassium	7440-09-7	17.9			0.407	1.00	0.407	mg/L	64092	09/14/2011 18:17	1	EDR
Selenium	7782-49-2	0.247			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:17	1	EDR
Sodium	7440-23-5	951			0.727	1.00	14.5	mg/L	64142	09/15/2011 22:53	20	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: FD090111

Lab Sample ID: 560-27939-3
Client Matrix: Water

Date Sampled: 09/01/2011 00:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:17	1	EDR
Zinc	7440-66-6	0.00791	J		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:17	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000306	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:39	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-12

Lab Sample ID: 560-27939-4
Client Matrix: Water

Date Sampled: 09/01/2011 11:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: SW846 3010A,Water,Dissolved												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:50	1	EDR
Arsenic	7440-38-2	0.511			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:50	1	EDR
Barium	7440-39-3	0.0521			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:50	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:50	1	EDR
Chromium	7440-47-3	0.00637			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:50	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:50	1	EDR
Copper	7440-50-8	0.00200	U		0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:50	1	EDR
Iron	7439-89-6	0.674			0.101	0.250	0.101	mg/L	64092	09/14/2011 18:50	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:50	1	EDR
Molybdenum	7439-98-7	0.00711			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:50	1	EDR
Nickel	7440-02-0	0.0138			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:50	1	EDR
Selenium	7782-49-2	0.0811			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:50	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:50	1	EDR
Zinc	7440-66-6	0.00355	U		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:50	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:51	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	2550			10.0	10.0	10.0	mg/L	63764	09/02/2011 13:30	1	AW
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	7.20			3.00	3.00	3.00	mg/L	63795	09/06/2011 09:25	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-12

Lab Sample ID: 560-27939-4
Client Matrix: Water

Date Sampled: 09/01/2011 11:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	184			0.192	1.00	0.960	mg/L	63757	09/02/2011 23:36	5	HMZ
Nitrate as N	14797-55-8	0.520	J		0.103	0.500	0.515	mg/L	63757	09/02/2011 23:36	5	HMZ
Nitrate Nitrite as N	STL00217	1.00	U		0.200	0.500	1.00	mg/L	63757	09/02/2011 23:36	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	63757	09/02/2011 23:36	5	HMZ
Sulfate	14808-79-8	563			0.377	1.00	18.9	mg/L	63757	09/03/2011 06:12	50	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	0.740			0.0200	0.100	0.0200	mg/L	64020	09/12/2011 11:30	1	HMZ
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	18.7			0.0131	0.0500	1.31	mg/L	63775	09/06/2011 10:15	100	CB
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	24.3		b	0.285	1.00	0.285	mg/L	63978	09/08/2011 14:20	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	1110			5.00	5.00	5.00	mg/L	63876	09/07/2011 13:15	1	AW
Method: SW846 6020,Water												
Aluminum	7429-90-5	0.0225	U		0.0225	0.0500	0.0225	mg/L	64092	09/14/2011 18:28	1	EDR
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:28	1	EDR
Arsenic	7440-38-2	0.490			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:28	1	EDR
Barium	7440-39-3	0.0522			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:28	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:28	1	EDR
Calcium	7440-70-2	143			0.198	0.500	0.198	mg/L	64092	09/14/2011 18:28	1	EDR
Chromium	7440-47-3	0.00723			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:28	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:28	1	EDR
Copper	7440-50-8	0.00200	U		0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:28	1	EDR
Iron	7439-89-6	2.33			0.101	0.250	0.101	mg/L	64142	09/15/2011 19:02	1	EDR
Lead	7439-92-1	0.00272	J		0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:28	1	EDR
Magnesium	7439-95-4	56.7			0.113	0.500	0.113	mg/L	64092	09/14/2011 18:28	1	EDR
Manganese	7439-96-5	0.237			0.0116	0.0500	0.0116	mg/L	64092	09/14/2011 18:28	1	EDR
Molybdenum	7439-98-7	0.00913			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:28	1	EDR
Nickel	7440-02-0	0.0141			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:28	1	EDR
Potassium	7440-09-7	8.77			0.407	1.00	0.407	mg/L	64092	09/14/2011 18:28	1	EDR
Selenium	7782-49-2	0.0926			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:28	1	EDR
Sodium	7440-23-5	631			0.727	1.00	7.27	mg/L	64142	09/15/2011 22:59	10	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-12

Lab Sample ID: 560-27939-4
Client Matrix: Water

Date Sampled: 09/01/2011 11:00
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:28	1	EDR
Zinc	7440-66-6	0.00385	J		0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:28	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:41	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-13

Lab Sample ID: 560-27939-5
Client Matrix: Water

Date Sampled: 09/01/2011 13:25
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: SW846 3010A,Water,Dissolved												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							63922	09/08/2011 12:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							64047	09/12/2011 08:30		JEM
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00302	J		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 19:01	1	EDR
Arsenic	7440-38-2	30.6			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 19:01	1	EDR
Barium	7440-39-3	0.0230			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 19:01	1	EDR
Cadmium	7440-43-9	0.566			0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 19:01	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 19:01	1	EDR
Cobalt	7440-48-4	0.00177	J		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 19:01	1	EDR
Copper	7440-50-8	0.0141			0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 19:01	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	64092	09/14/2011 19:01	1	EDR
Lead	7439-92-1	0.00809			0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 19:01	1	EDR
Molybdenum	7439-98-7	0.466			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 19:01	1	EDR
Nickel	7440-02-0	0.0206			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 19:01	1	EDR
Selenium	7782-49-2	5.73			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 19:01	1	EDR
Thallium	7440-28-0	0.000865	J		0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 19:01	1	EDR
Zinc	7440-66-6	0.0521			0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 19:01	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000312	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:53	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	8200			10.0	10.0	10.0	mg/L	63764	09/02/2011 13:30	1	AW
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	24.2			3.00	3.00	3.00	mg/L	63795	09/06/2011 09:25	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-13

Lab Sample ID: 560-27939-5
Client Matrix: Water

Date Sampled: 09/01/2011 13:25
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	493			0.192	1.00	1.92	mg/L	63757	09/02/2011 23:58	10	HMZ
Nitrate as N	14797-55-8	153			0.103	0.500	1.03	mg/L	63757	09/02/2011 23:58	10	HMZ
Nitrate Nitrite as N	STL00217	153			0.200	0.500	2.00	mg/L	63757	09/02/2011 23:58	10	HMZ
Nitrite as N	14797-65-0	2.00	U		0.200	0.500	2.00	mg/L	63757	09/02/2011 23:58	10	HMZ
Sulfate	14808-79-8	80.1	J		0.377	1.00	37.7	mg/L	63757	09/03/2011 06:34	100	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.73			0.0200	0.100	0.0200	mg/L	64020	09/12/2011 11:30	1	HMZ
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0230	J		0.0131	0.0500	0.0131	mg/L	63775	09/06/2011 10:15	1	CB
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	3.61		b	0.285	1.00	0.285	mg/L	63978	09/08/2011 14:20	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	350			5.00	5.00	5.00	mg/L	63876	09/07/2011 13:15	1	AW
Method: SW846 6020,Water												
Aluminum	7429-90-5	0.372			0.0225	0.0500	0.0225	mg/L	64092	09/14/2011 18:55	1	EDR
Antimony	7440-36-0	0.00423	J		0.00161	0.00500	0.00161	mg/L	64092	09/14/2011 18:55	1	EDR
Arsenic	7440-38-2	28.3			0.00109	0.00500	0.00109	mg/L	64092	09/14/2011 18:55	1	EDR
Barium	7440-39-3	0.0226			0.000810	0.00500	0.000810	mg/L	64092	09/14/2011 18:55	1	EDR
Cadmium	7440-43-9	0.731			0.000854	0.00200	0.000854	mg/L	64092	09/14/2011 18:55	1	EDR
Calcium	7440-70-2	351			0.198	0.500	0.198	mg/L	64092	09/14/2011 18:55	1	EDR
Chromium	7440-47-3	0.00835			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:55	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	64092	09/14/2011 18:55	1	EDR
Copper	7440-50-8	0.0547			0.00200	0.0100	0.00200	mg/L	64092	09/14/2011 18:55	1	EDR
Iron	7439-89-6	0.497			0.101	0.250	0.101	mg/L	64092	09/14/2011 18:55	1	EDR
Lead	7439-92-1	0.123			0.000733	0.00500	0.000733	mg/L	64092	09/14/2011 18:55	1	EDR
Magnesium	7439-95-4	44.3			0.113	0.500	0.113	mg/L	64092	09/14/2011 18:55	1	EDR
Manganese	7439-96-5	0.0706			0.0116	0.0500	0.0116	mg/L	64092	09/14/2011 18:55	1	EDR
Molybdenum	7439-98-7	0.443			0.00140	0.00500	0.00140	mg/L	64092	09/14/2011 18:55	1	EDR
Nickel	7440-02-0	0.0132			0.00217	0.00500	0.00217	mg/L	64092	09/14/2011 18:55	1	EDR
Potassium	7440-09-7	92.4			0.407	1.00	0.407	mg/L	64092	09/14/2011 18:55	1	EDR
Selenium	7782-49-2	5.47			0.00108	0.00500	0.00108	mg/L	64092	09/14/2011 18:55	1	EDR
Sodium	7440-23-5	1960			0.727	1.00	14.5	mg/L	64142	09/15/2011 19:08	20	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-27939-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Groundwater

Client Sample ID: EP-13

Lab Sample ID: 560-27939-5
Client Matrix: Water

Date Sampled: 09/01/2011 13:25
Date Received: 09/02/2011 10:19

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Thallium	7440-28-0	0.00131			0.000693	0.00100	0.000693	mg/L	64092	09/14/2011 18:55	1	EDR
Zinc	7440-66-6	0.0488			0.00355	0.0250	0.00355	mg/L	64092	09/14/2011 18:55	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000160	J		0.000130	0.00200	0.000130	mg/L	64021	09/12/2011 16:43	1	JEM

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Section	Qualifier	Description
Metals		
	U	Analyte was not detected at or above the SDL.
	J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
General Chemistry		
	U	Analyte was not detected at or above the SDL.
	J	Result is less than the MQL but greater than or equal to the SDL and the concentration is an estimated value.
	b	The compound was found in the blank and sample

QUALITY CONTROL RESULTS

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 560-63922					
LCS 560-63922/2-A	Lab Control Sample	T	Water	3010A	
MB 560-63922/1-A	Method Blank	T	Water	3010A	
560-27939-2	EP-71	D	Water	3010A	
560-27939-2	EP-71	T	Water	3010A	
560-27939-3	FD090111	D	Water	3010A	
560-27939-3	FD090111	T	Water	3010A	
560-27939-4	EP-12	D	Water	3010A	
560-27939-4	EP-12	T	Water	3010A	
560-27939-5	EP-13	D	Water	3010A	
560-27939-5	EP-13	T	Water	3010A	
Prep Batch: 560-63924					
LCS 560-63924/2-A	Lab Control Sample	T	Water	3010A	
MB 560-63924/1-A	Method Blank	T	Water	3010A	
560-27939-1	EP-51	D	Water	3010A	
560-27939-1	EP-51	T	Water	3010A	
Analysis Batch:560-63955					
LCS 560-63924/2-A	Lab Control Sample	T	Water	6020	560-63924
MB 560-63924/1-A	Method Blank	T	Water	6020	560-63924
560-27939-1	EP-51	D	Water	6020	560-63924
560-27939-1	EP-51	T	Water	6020	560-63924
Analysis Batch:560-64021					
LCS 560-64047/28-A	Lab Control Sample	T	Water	7470A	560-64047
LCS 560-64047/5-A	Lab Control Sample	T	Water	7470A	560-64047
MB 560-64047/27-A	Method Blank	T	Water	7470A	560-64047
MB 560-64047/4-A	Method Blank	T	Water	7470A	560-64047
560-27939-1	EP-51	D	Water	7470A	560-64047
560-27939-1	EP-51	T	Water	7470A	560-64047
560-27939-2	EP-71	D	Water	7470A	560-64047
560-27939-2	EP-71	T	Water	7470A	560-64047
560-27939-3	FD090111	D	Water	7470A	560-64047
560-27939-3	FD090111	T	Water	7470A	560-64047
560-27939-4	EP-12	D	Water	7470A	560-64047
560-27939-4	EP-12	T	Water	7470A	560-64047
560-27939-5	EP-13	D	Water	7470A	560-64047
560-27939-5	EP-13	T	Water	7470A	560-64047
Analysis Batch:560-64024					
LCS 560-63924/2-A	Lab Control Sample	T	Water	6020	560-63924
MB 560-63924/1-A	Method Blank	T	Water	6020	560-63924
560-27939-1	EP-51	D	Water	6020	560-63924
560-27939-1	EP-51	T	Water	6020	560-63924

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 560-64047					
LCS 560-64047/28-A	Lab Control Sample	T	Water	7470A	
LCS 560-64047/5-A	Lab Control Sample	T	Water	7470A	
MB 560-64047/27-A	Method Blank	T	Water	7470A	
MB 560-64047/4-A	Method Blank	T	Water	7470A	
560-27939-1	EP-51	D	Water	7470A	
560-27939-1	EP-51	T	Water	7470A	
560-27939-2	EP-71	D	Water	7470A	
560-27939-2	EP-71	T	Water	7470A	
560-27939-3	FD090111	D	Water	7470A	
560-27939-3	FD090111	T	Water	7470A	
560-27939-4	EP-12	D	Water	7470A	
560-27939-4	EP-12	T	Water	7470A	
560-27939-5	EP-13	D	Water	7470A	
560-27939-5	EP-13	T	Water	7470A	
Analysis Batch:560-64050					
LCS 560-63924/2-A	Lab Control Sample	T	Water	6020	560-63924
MB 560-63924/1-A	Method Blank	T	Water	6020	560-63924
560-27939-1	EP-51	D	Water	6020	560-63924
560-27939-1	EP-51	T	Water	6020	560-63924
Analysis Batch:560-64092					
LCS 560-63922/2-A	Lab Control Sample	T	Water	6020	560-63922
MB 560-63922/1-A	Method Blank	T	Water	6020	560-63922
560-27939-2	EP-71	D	Water	6020	560-63922
560-27939-2	EP-71	T	Water	6020	560-63922
560-27939-3	FD090111	D	Water	6020	560-63922
560-27939-3	FD090111	T	Water	6020	560-63922
560-27939-4	EP-12	D	Water	6020	560-63922
560-27939-4	EP-12	T	Water	6020	560-63922
560-27939-5	EP-13	D	Water	6020	560-63922
560-27939-5	EP-13	T	Water	6020	560-63922
Analysis Batch:560-64142					
LCS 560-63922/2-A	Lab Control Sample	T	Water	6020	560-63922
MB 560-63922/1-A	Method Blank	T	Water	6020	560-63922
560-27939-2	EP-71	T	Water	6020	560-63922
560-27939-3	FD090111	T	Water	6020	560-63922
560-27939-4	EP-12	T	Water	6020	560-63922
560-27939-5	EP-13	T	Water	6020	560-63922

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:560-64172					
LCS 560-63922/2-A	Lab Control Sample	T	Water	6020	560-63922
MB 560-63922/1-A	Method Blank	T	Water	6020	560-63922
560-27939-2	EP-71	D	Water	6020	560-63922
560-27939-3	FD090111	D	Water	6020	560-63922

Report Basis
D = Dissolved
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:560-63757					
LCS 560-63757/37	Lab Control Sample	T	Water	300.0	
LCS 560-63757/5	Lab Control Sample	T	Water	300.0	
MB 560-63757/36	Method Blank	T	Water	300.0	
MB 560-63757/4	Method Blank	T	Water	300.0	
560-27939-1	EP-51	T	Water	300.0	
560-27939-2	EP-71	T	Water	300.0	
560-27939-3	FD090111	T	Water	300.0	
560-27939-3MS	Matrix Spike	T	Water	300.0	
560-27939-3MSD	Matrix Spike Duplicate	T	Water	300.0	
560-27939-4	EP-12	T	Water	300.0	
560-27939-5	EP-13	T	Water	300.0	
Analysis Batch:560-63764					
LCS 560-63764/28	Lab Control Sample	T	Water	160.1	
MB 560-63764/1	Method Blank	T	Water	160.1	
MB 560-63764/27	Method Blank	T	Water	160.1	
560-27939-1	EP-51	T	Water	160.1	
560-27939-2	EP-71	T	Water	160.1	
560-27939-2DU	Duplicate	T	Water	160.1	
560-27939-2MS	Matrix Spike	T	Water	160.1	
560-27939-3	FD090111	T	Water	160.1	
560-27939-4	EP-12	T	Water	160.1	
560-27939-5	EP-13	T	Water	160.1	
Analysis Batch:560-63775					
LCS 560-63775/3	Lab Control Sample	T	Water	376.2	
MB 560-63775/4	Method Blank	T	Water	376.2	
560-27939-1	EP-51	T	Water	376.2	
560-27939-2	EP-71	T	Water	376.2	
560-27939-3	FD090111	T	Water	376.2	
560-27939-4	EP-12	T	Water	376.2	
560-27939-5	EP-13	T	Water	376.2	
Analysis Batch:560-63795					
LCS 560-63795/2	Lab Control Sample	T	Water	160.2	
MB 560-63795/1	Method Blank	T	Water	160.2	
560-27939-1	EP-51	T	Water	160.2	
560-27939-2	EP-71	T	Water	160.2	
560-27939-3	FD090111	T	Water	160.2	
560-27939-4	EP-12	T	Water	160.2	
560-27939-5	EP-13	T	Water	160.2	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:560-63876					
LCS 560-63876/1	Lab Control Sample	T	Water	SM 2320B	
LCS 560-63876/14	Lab Control Sample	T	Water	SM 2320B	
560-27939-1	EP-51	T	Water	SM 2320B	
560-27939-1MS	Matrix Spike	T	Water	SM 2320B	
560-27939-1MSD	Matrix Spike Duplicate	T	Water	SM 2320B	
560-27939-2	EP-71	T	Water	SM 2320B	
560-27939-3	FD090111	T	Water	SM 2320B	
560-27939-4	EP-12	T	Water	SM 2320B	
560-27939-5	EP-13	T	Water	SM 2320B	
Analysis Batch:560-63978					
LCS 560-63978/4	Lab Control Sample	T	Water	415.1	
MB 560-63978/3	Method Blank	T	Water	415.1	
560-27939-1	EP-51	T	Water	415.1	
560-27939-2	EP-71	T	Water	415.1	
560-27939-3	FD090111	T	Water	415.1	
560-27939-4	EP-12	T	Water	415.1	
560-27939-5	EP-13	T	Water	415.1	
Analysis Batch:560-64020					
LCS 560-64020/32	Lab Control Sample	T	Water	340.2	
LCS 560-64020/4	Lab Control Sample	T	Water	340.2	
MB 560-64020/3	Method Blank	T	Water	340.2	
MB 560-64020/31	Method Blank	T	Water	340.2	
560-27939-1	EP-51	T	Water	340.2	
560-27939-2	EP-71	T	Water	340.2	
560-27939-3	FD090111	T	Water	340.2	
560-27939-4	EP-12	T	Water	340.2	
560-27939-5	EP-13	T	Water	340.2	

Report Basis
T = Total

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63922/1-A	Analysis Batch:	560-64092	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	070SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/14/2011 1706	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	0.0225	U	0.0225	0.0500
Antimony	0.00161	U	0.00161	0.00500
Arsenic	0.00109	U	0.00109	0.00500
Barium	0.000810	U	0.000810	0.00500
Cadmium	0.000854	U	0.000854	0.00200
Calcium	0.198	U	0.198	0.500
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00200	U	0.00200	0.0100
Lead	0.000733	U	0.000733	0.00500
Magnesium	0.113	U	0.113	0.500
Manganese	0.0116	U	0.0116	0.0500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.00217	U	0.00217	0.00500
Potassium	0.407	U	0.407	1.00
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100
Zinc	0.00355	U	0.00355	0.0250

Method Blank - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63922/1-A	Analysis Batch:	560-64142	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	035SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/15/2011 1751	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	0.101	U	0.101	0.250
Magnesium	0.113	U	0.113	0.500
Sodium	0.727	U	0.727	1.00

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63922/1-A	Analysis Batch:	560-64172	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	041SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/16/2011 1321	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Iron	0.101	U	0.101	0.250

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63922/2-A	Analysis Batch:	560-64092	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	071SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/14/2011 1712	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4.00	3.892	97	80 - 120	
Antimony	0.400	0.3808	95	80 - 120	
Arsenic	0.400	0.3949	99	80 - 120	
Barium	0.400	0.3753	94	80 - 120	
Cadmium	0.400	0.3847	96	80 - 120	
Calcium	40.0	39.95	100	80 - 120	
Chromium	0.400	0.3978	99	80 - 120	
Cobalt	0.400	0.3913	98	80 - 120	
Copper	0.400	0.3855	96	80 - 120	
Lead	0.400	0.3865	97	80 - 120	
Magnesium	40.0	41.74	104	80 - 120	
Manganese	4.00	4.547	114	80 - 120	
Molybdenum	0.400	0.3815	95	80 - 120	
Nickel	0.400	0.3865	97	80 - 120	
Potassium	40.0	40.81	102	80 - 120	
Selenium	0.400	0.3757	94	80 - 120	
Thallium	0.200	0.1933	97	80 - 120	
Zinc	0.400	0.3871	97	80 - 120	

Lab Control Sample - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63922/2-A	Analysis Batch:	560-64142	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	036SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/15/2011 1756	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	40.0	35.69	89	80 - 120	
Magnesium	40.0	38.36	96	80 - 120	
Sodium	40.0	37.04	93	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63922

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63922/2-A	Analysis Batch:	560-64172	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63922	Lab File ID:	042SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/16/2011 1326	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Iron	40.0	37.88	95	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63924/1-A	Analysis Batch:	560-63955	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	115SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/09/2011 2130	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	0.0225	U	0.0225	0.0500
Antimony	0.00161	U	0.00161	0.00500
Barium	0.000810	U	0.000810	0.00500
Cadmium	0.000854	U	0.000854	0.00200
Calcium	0.198	U	0.198	0.500
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00200	U	0.00200	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Magnesium	0.113	U	0.113	0.500
Manganese	0.0116	U	0.0116	0.0500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.003375	J	0.00217	0.00500
Potassium	0.407	U	0.407	1.00
Selenium	0.001502	J	0.00108	0.00500
Sodium	0.727	U	0.727	1.00
Thallium	0.000693	U	0.000693	0.00100

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63924/1-A	Analysis Batch:	560-64024	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	068SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 2127	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	0.0225	U	0.0225	0.0500
Antimony	0.00161	U	0.00161	0.00500
Arsenic	0.00109	U	0.00109	0.00500
Barium	0.000810	U	0.000810	0.00500
Cadmium	0.000854	U	0.000854	0.00200
Calcium	0.198	U	0.198	0.500
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00200	U	0.00200	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Magnesium	0.113	U	0.113	0.500
Manganese	0.0116	U	0.0116	0.0500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.003289	J	0.00217	0.00500
Potassium	0.407	U	0.407	1.00
Selenium	0.00108	U	0.00108	0.00500
Sodium	0.727	U	0.727	1.00
Thallium	0.000693	U	0.000693	0.00100

Method Blank - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-63924/1-A	Analysis Batch:	560-64050	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	042SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/13/2011 1403	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Zinc	0.00355	U	0.00355	0.0250

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63924/2-A	Analysis Batch:	560-63955	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	116SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/09/2011 2136	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4.00	4.230	106	80 - 120	
Antimony	0.400	0.3450	86	80 - 120	
Barium	0.400	0.3942	99	80 - 120	
Cadmium	0.400	0.3720	93	80 - 120	
Calcium	40.0	40.62	102	80 - 120	
Chromium	0.400	0.3811	95	80 - 120	
Cobalt	0.400	0.3715	93	80 - 120	
Copper	0.400	0.3810	95	80 - 120	
Iron	40.0	37.35	93	80 - 120	
Lead	0.400	0.3972	99	80 - 120	
Magnesium	40.0	40.28	101	80 - 120	
Manganese	4.00	4.077	102	80 - 120	
Molybdenum	0.400	0.3977	99	80 - 120	
Nickel	0.400	0.3761	94	80 - 120	
Potassium	40.0	41.68	104	80 - 120	
Selenium	0.400	0.4101	103	80 - 120	
Sodium	40.0	39.46	99	80 - 120	
Thallium	0.200	0.1962	98	80 - 120	
Zinc	0.400	0.3614	90	80 - 120	

Lab Control Sample - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63924/2-A	Analysis Batch:	560-64024	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	072SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 2149	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4.00	3.622	91	80 - 120	
Antimony	0.400	0.3733	93	80 - 120	
Arsenic	0.400	0.3221	81	80 - 120	
Barium	0.400	0.3873	97	80 - 120	
Cadmium	0.400	0.3845	96	80 - 120	
Calcium	40.0	38.63	97	80 - 120	
Chromium	0.400	0.3864	97	80 - 120	
Cobalt	0.400	0.3821	96	80 - 120	
Copper	0.400	0.3704	93	80 - 120	
Iron	40.0	38.06	95	80 - 120	
Lead	0.400	0.3906	98	80 - 120	
Magnesium	40.0	38.25	96	80 - 120	
Manganese	4.00	4.077	102	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63924/2-A	Analysis Batch:	560-64024	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	072SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 2149	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Molybdenum	0.400	0.3796	95	80 - 120	
Nickel	0.400	0.3731	93	80 - 120	
Potassium	40.0	37.64	94	80 - 120	
Selenium	0.400	0.3837	96	80 - 120	
Sodium	40.0	38.52	96	80 - 120	
Thallium	0.200	0.2030	102	80 - 120	

Lab Control Sample - Batch: 560-63924

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-63924/2-A	Analysis Batch:	560-64050	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-63924	Lab File ID:	043SMPL.D#.raw
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/13/2011 1409	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/08/2011 1230				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Zinc	0.400	0.3463	87	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-64047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 560-64047/4-A	Analysis Batch:	560-64021	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-64047	Lab File ID:	110912W.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 1541	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/12/2011 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Method Blank - Batch: 560-64047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 560-64047/27-A	Analysis Batch:	560-64021	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-64047	Lab File ID:	110912W.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 1702	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/12/2011 0830				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-64047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 560-64047/5-A	Analysis Batch:	560-64021	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-64047	Lab File ID:	110912W.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 1557	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/12/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.005040	101	80 - 120	

Lab Control Sample - Batch: 560-64047

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 560-64047/28-A	Analysis Batch:	560-64021	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-64047	Lab File ID:	110912W.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	09/12/2011 1704	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	09/12/2011 0830				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.005110	102	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63764

Method: 160.1
Preparation: N/A

Lab Sample ID:	MB 560-63764/1	Analysis Batch:	560-63764	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1330	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids	10.0	U	10.0	10.0

Method Blank - Batch: 560-63764

Method: 160.1
Preparation: N/A

Lab Sample ID:	MB 560-63764/27	Analysis Batch:	560-63764	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1330	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Dissolved Solids	10.0	U	10.0	10.0

Lab Control Sample - Batch: 560-63764

Method: 160.1
Preparation: N/A

Lab Sample ID:	LCS 560-63764/28	Analysis Batch:	560-63764	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1330	Units:	mg/L	Final Weight/Volume:	25 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Dissolved Solids	2250	2196	98	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Matrix Spike - Batch: 560-63764

Method: 160.1
Preparation: N/A

Lab Sample ID:	560-27939-2	Analysis Batch:	560-63764	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1330	Units:	mg/L	Final Weight/Volume:	10 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Total Dissolved Solids	5430	2250	8100	119	75 - 125	

Duplicate - Batch: 560-63764

Method: 160.1
Preparation: N/A

Lab Sample ID:	560-27939-2	Analysis Batch:	560-63764	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1330	Units:	mg/L	Final Weight/Volume:	20 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids	5430	5525	2	20	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63795

Method: 160.2
Preparation: N/A

Lab Sample ID:	MB 560-63795/1	Analysis Batch:	560-63795	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/06/2011 0925	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	RL	RL
Total Suspended Solids	3.00	U	3.00	3.00

Lab Control Sample - Batch: 560-63795

Method: 160.2
Preparation: N/A

Lab Sample ID:	LCS 560-63795/2	Analysis Batch:	560-63795	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/06/2011 0925	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Suspended Solids	200	202.5	101	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63757

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 560-63757/4	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1024	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	0.192	U	0.192	1.00
Nitrate Nitrite as N	0.200	U	0.200	0.500
Sulfate	0.377	U	0.377	1.00
Nitrite as N	0.200	U	0.200	0.500
Nitrate as N	0.103	U	0.103	0.500

Method Blank - Batch: 560-63757

Method: 300.0
Preparation: N/A

Lab Sample ID:	MB 560-63757/36	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 2208	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Chloride	0.192	U	0.192	1.00
Nitrate Nitrite as N	0.200	U	0.200	0.500
Sulfate	0.377	U	0.377	1.00
Nitrite as N	0.200	U	0.200	0.500
Nitrate as N	0.103	U	0.103	0.500

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63757

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 560-63757/5	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 1046	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	9.866	99	90 - 110	
Nitrate Nitrite as N	10.0	9.621	96	90 - 110	
Sulfate	20.0	19.77	99	90 - 110	
Nitrite as N	5.00	4.801	96	90 - 110	
Nitrate as N	5.00	4.820	96	90 - 110	

Lab Control Sample - Batch: 560-63757

Method: 300.0
Preparation: N/A

Lab Sample ID:	LCS 560-63757/37	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/02/2011 2230	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	9.934	99	90 - 110	
Nitrate Nitrite as N	10.0	9.643	96	90 - 110	
Sulfate	20.0	19.74	99	90 - 110	
Nitrite as N	5.00	4.818	96	90 - 110	
Nitrate as N	5.00	4.825	97	90 - 110	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-63757

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	560-27939-3	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/03/2011 0528			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	560-27939-3	Analysis Batch:	560-63757	Instrument ID:	ICMetro
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	090211.csv
Dilution:	50	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	09/03/2011 0550			Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	101	104	80 - 120	2	20		
Sulfate	102	108	80 - 120	2	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-63757

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	560-27939-3	Units:	mg/L	MSD Lab Sample ID:	560-27939-3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	50			Dilution:	50
Analysis Date:	09/03/2011 0528			Analysis Date:	09/03/2011 0550
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chloride	410	500	500	914.1	930.7
Sulfate	2240	1000	1000	3264	3324

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-64020

Method: 340.2
Preparation: N/A

Lab Sample ID:	MB 560-64020/31	Analysis Batch:	560-64020	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/12/2011 1130	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Fluoride	0.0200	U	0.0200	0.100

Method Blank - Batch: 560-64020

Method: 340.2
Preparation: N/A

Lab Sample ID:	MB 560-64020/3	Analysis Batch:	560-64020	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/12/2011 1130	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Fluoride	0.0200	U	0.0200	0.100

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-64020

Method: 340.2
Preparation: N/A

Lab Sample ID:	LCS 560-64020/32	Analysis Batch:	560-64020	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/12/2011 1130	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Fluoride	0.800	0.7910	99	85 - 115	

Lab Control Sample - Batch: 560-64020

Method: 340.2
Preparation: N/A

Lab Sample ID:	LCS 560-64020/4	Analysis Batch:	560-64020	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/12/2011 1130	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Fluoride	0.800	0.8030	100	85 - 115	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63775

Method: 376.2
Preparation: N/A

Lab Sample ID:	MB 560-63775/4	Analysis Batch:	560-63775	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/06/2011 1015	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Sulfide	0.0131	U	0.0131	0.0500

Lab Control Sample - Batch: 560-63775

Method: 376.2
Preparation: N/A

Lab Sample ID:	LCS 560-63775/3	Analysis Batch:	560-63775	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/06/2011 1015	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide	0.505	0.5300	105	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Method Blank - Batch: 560-63978

Method: 415.1
Preparation: N/A

Lab Sample ID:	MB 560-63978/3	Analysis Batch:	560-63978	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/08/2011 1420	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Organic Carbon	0.3380	J	0.285	1.00

Lab Control Sample - Batch: 560-63978

Method: 415.1
Preparation: N/A

Lab Sample ID:	LCS 560-63978/4	Analysis Batch:	560-63978	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/08/2011 1420	Units:	mg/L	Final Weight/Volume:	1.0 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	100	99.45	99	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Lab Control Sample - Batch: 560-63876

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	LCS 560-63876/1	Analysis Batch:	560-63876	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/07/2011 1315	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity as CaCO3	100	95.80	96	85 - 115	

Lab Control Sample - Batch: 560-63876

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	LCS 560-63876/14	Analysis Batch:	560-63876	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/07/2011 1315	Units:	mg/L	Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity as CaCO3	100	99.40	99	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-63876

Method: SM 2320B
Preparation: N/A

MS Lab Sample ID:	560-27939-1	Analysis Batch:	560-63876	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/07/2011 1315			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	560-27939-1	Analysis Batch:	560-63876	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.0 mL
Analysis Date:	09/07/2011 1315			Final Weight/Volume:	50 mL
Prep Date:	N/A				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Total Alkalinity as CaCO3	98	113	75 - 125	5	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
Sdg Number: September 1, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-63876

Method: SM 2320B
Preparation: N/A

MS Lab Sample ID:	560-27939-1	Units: mg/L	MSD Lab Sample ID:	560-27939-1	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Analysis Date:	09/07/2011 1315		Analysis Date:	09/07/2011 1315	
Prep Date:	N/A		Prep Date:	N/A	
Leach Date:	N/A		Leach Date:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Total Alkalinity as CaCO3	187	100	100	285.0	299.6

Method Detection Limit (MDL) & Detectability Check Standard (DCS) Studies

Method: 200.8/ 6020 water

2nd quarter 2010 DCS (April-June 2011), Job 560-25405-1

Water Extraction: 50 ml to 50 ml ; Prep factor = 1

	Analyte	MDL ug/L	2Q2011 DCS Run Date	Water Spike Range ug/L		2Q 2011 DCS Spike ug/L	2Q2011 DCS Measured Value ug/L	MDL Used in TALS ug/L	RL ug/L	Analyte
				Min	Max					
Ag	Silver	0.941	04/19/11	0.9	2.8	2.0	1.91	0.941	5	Silver
Al	Aluminum	22.522	04/19/11	22.5	67.6	50.0	28.00	22.5	50	Aluminum
As	Arsenic	1.095	04/26/11	1.1	3.3	2.0	2.08	1.09	5	Arsenic
B	Boron	69.974	04/19/11	70.0	209.9	100.0	104.0	70.0	100	Boron
Ba	Barium	0.810	04/26/11	0.8	2.4	2.0	2.02	0.810	5	Barium
Be	Beryllium	1.235	04/26/11	1.2	3.7	2.0	2.43	1.24	4	Beryllium
Ca	Calcium	198.381	04/19/11	198.4	595.1	200.0	138.0	198	500	Calcium
Cd	Cadmium	0.854	04/19/11	0.9	2.6	2.0	1.90	0.854	2	Cadmium
Co	Cobalt	1.356	04/19/11	1.4	4.1	2.0	1.96	1.36	5	Cobalt
Cr	Chromium	1.401	04/19/11	1.4	4.2	2.0	1.87	1.40	5	Chromium
Cu	Copper	2.000	04/19/11	2.0	6.0	5.0	2.64	2.00	10	Copper
Fe	Iron	100.754	04/19/11	100.8	302.3	200	208	101	250	Iron
K	Potassium	406.784	04/19/11	406.8	1220.4	500.0	513.00	407	1000	Potassium
Li	Lithium	2.255	04/19/11	2.3	6.8	5.0	5.14	2.26	5	Lithium
Mg	Magnesium	113.074	04/19/11	113.1	339.2	200.0	177.00	113	500	Magnesium
Mn	Manganese	11.596	04/19/11	11.6	34.8	20.0	19.10	11.6	50	Manganese
Mo	Molybdenum	1.403	04/19/11	1.4	4.2	2.0	2.27	1.40	5	Molybdenum
Na	Sodium	726.889	04/26/11	726.9	2180.7	1000.0	1370.00	727	1000	Sodium
Ni	Nickel	2.167	04/19/11	2.2	6.5	5.0	4.63	2.17	5	Nickel
P	Phosphorus	18.148	04/19/11	18.1	54.4	50.0	52.4	18.1	100	Phosphorus
Pb	Lead	0.733	04/19/11	0.7	2.2	2.0	1.83	0.733	5	Lead
Sb	Antimony	1.609	04/26/11	1.6	4.8	2.0	1.82	1.61	5	Antimony
Se	Selenium	1.078	04/26/11	1.1	3.2	2.0	1.88	1.08	5	Selenium
Si	Silicon	62.800	04/19/11	62.8	188.4	100.0	76.20	62.8	200	Silicon
Sn	Tin	5.079	04/19/11	5.1	15.2	10.0	9.00	5.08	25	Tin
Sr	Strontium	0.768	04/19/11	0.8	2.3	2.0	1.79	0.768	5	Strontium
Ti	Titanium	1.527	04/19/11	1.5	4.6	2.0	2.56	1.53	5	Titanium
Tl	Thallium	0.693	04/19/11	0.7	2.1	1.0	1.26	0.693	1	Thallium
U	Uranium	0.940	04/19/11	0.9	2.8	2.0	1.94	0.940	5	Uranium
V	Vanadium	1.442	04/19/11	1.4	4.3	2.0	2.81	1.44	5	Vanadium
Zn	Zinc	3.554	04/26/11	3.6	10.7	5.0	4.43	3.55	25	Zinc

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MDL-DCS Studies

2nd quarter 2011 DCS (April - Jun 2011), Job 560-25406-1

CVAA Metals

Matrix: Water

Method: 7470A Mercury - Water

Analyst: JM

Mercury water prep factor =1 (50mL water to 50 ml FV)

Parameter	Matrix	Method	Inst. ID	Calc MDL w/PrepFactor mg/L	DCS Run Date	DCS Spike Conc mg/L Water	2Q2011 DCS Measured mg/L	%REC	Alter. DCS Conc mg/L	Actual Alter. DCS Results	Low Cal std ug/L	MDL Used in TALS mg/L Water	RL mg/L Water
Mercury (CVAA)	Water	7470A/245.2	CVAA	0.00013	04/26/11	0.0002	0.00024	119.5%			0.2 ug/L	**0.00013 mg/L**	**0.002 mg/L**

Method Detection Limit (MDL) & Detectability Check Standard (DCS) Studies

DCS 2Q2010 (Apr - Jun 2011); Job#25412-2 (water)

Wet Chemistry tests ; Matrix: Water

Parameter	Matrix	Method	Current MDL mg/L	Spike Range mg/L		2Q2011 DCS Date Analyzed	DCS Spike Conc (mg/L)	2Q2011 DCS Measured Value (mg/L)	Alt. DCS Spike Conc (mg/L)	Alt.DCS Measured Value mg/L	MDL Used in TALS mg/L	RL Used in TALS mg/L
				Min Range (1XMDL)	Max Range (3XMDL)							
Bromide by IC	Water	300.0/9056	0.315	0.315	0.945	05/05/11	0.50	1.010			0.315	1.00
Chloride by IC	Water	300.0/9056	0.192	0.192	0.577	05/05/11	0.50	1.120			0.192	1.00
Fluoride by IC	Water	300.0/9056	0.200	0.200	0.600	05/05/11	0.50	1.050			0.200	0.50
Nitrate as N by IC	Water	300.0/9056	0.103	0.103	0.310	05/05/11	0.20	0.537			0.103	0.50
Nitrate-Nitrite as N by IC	Water	300.0/9056	0.200	0.200	0.600	05/05/11	0.40	0.914			0.200	0.50
Nitrite as N by IC	Water	300.0/9056	0.200	0.200	0.600	05/05/11	0.20	0.377			0.2000	0.50
o-phosphate as P by IC	Water	300.0/9056	0.2307	0.231	0.692	05/05/11	0.20	0.156			0.231	0.50
Sulfate by IC	Water	300.0/9056	0.377	0.377	1.132	05/05/11	1.00	2.030			0.377	1.00

Note: DCS Spike Concentration should be within 2-3 times the MDL value.

DCS analyzes at 0.2, 0.5 and 1 (sulfate)

Method Detection Limit (MDL) & Detectability Check Standard (DCS) Studies

DCS 2Q2010 (April-June 2011); Job#25412-1&2 (water)

Wet Chemistry tests ; Matrix: Water

Parameter	Matrix	Method	Current MDL mg/L	Spike Range mg/L		2Q2011 DCS Date Analyzed	DCS Spike Conc (mg/L)	2Q2011 DCS Measured Value (mg/L)	Alt. DCS Spike Conc (mg/L)	Alt.DCS Measured Value mg/L	MDL Used in TALS mg/L	RL Used in TALS mg/L
				Min Range (1XMDL)	Max Range (3XMDL)							
Alkalinity	Water	2320B/310.1	1.290	1.290	3.870	04/18/11	3.0	4.000			1.290	5.00
Ammonia (as nitrogen) by SEAL	Water	350.1/SM450NH3 G	0.0446	0.045	0.134	04/18/11	0.10	0.061			0.045	0.20
COD (Chemical Oxygen Demand)	Water	Hach 8000	3.1107	3.111	9.332	04/18/11	10.0	9.490	20.00	20.7	3.111	40.00
Cyanide (SEAL#1)	Water	335.3/9012/4500 CN E	0.0082	0.008	0.024	04/27/11	0.0100	0.011			0.008	0.02
Ferrous Iron	Water	3500-Fe	0.0217	0.022	0.065	04/20/11	0.05	0.118			0.022	0.20
Fluoride	Water	340.2/SM4500F C	0.020	0.020	0.060	04/13/11	0.05	0.053			0.020	0.10
Nitrite (as nitrogen)	Water	354.1/SM4500NO2B	0.0020	0.002	0.006	04/25/11	0.0050	0.005			0.002	0.0100
o-phosphate as P by Spect	Water	365.3	0.0141	0.014	0.042	04/26/11	0.03	0.031			0.014	0.03
Oil and Grease	Water	1664A	1.0369	1.037	3.111	04/20/11	2.00	2.300			1.037	5.00
Residual chlorine	Water	330.4/SM4500CL F	0.0766	0.077	0.230	04/21/11	0.10	0.150			0.077	0.20
Sulfide by 376.2	Water	376.2/SM4500S2D	0.0131	0.013	0.039	04/14/11	0.03	0.065			0.013	0.05
Sulfite 377.1/SM4500SO3	Water	377.1/SM4500SO3	1.130	1.130	3.390	04/13/11	2.00	4.500			1.130	2.00
Surfactants(MBAS)	Water	425.1/SM 5540C	0.0360	0.036	0.108	04/20/11	0.05	0.054			0.036	0.10
TOC (total organic carbon)	Water	415.1/5310B/9060	0.2845	0.285	0.854		0.50				0.285	1.00

Note: DCS Spike Concentration should be within 2-3 times the MDL value.

Corpus Christi
1733 North Padre Island Drive

Corpus Christi, TX 78408
phone 361.289.2673 fax 361.289.2471

Chain of Custody Record

IR# 1.6/2.0C on Seal

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TestAmerica Laboratories, Inc.

Client Contact	Task Manager: ALICIA FOGG	Site Contact: Douglas Solon	Date: 9-01-11	COC No:
MALCOLM PIRNIE	Tel/Fax: 915-747-3907	Lab Contact: TIM KELLOGG	Carrier: FEDEX	1 of 1 COCs
4646 E. VAN BUREN STREET, SUITE 400	Analysis Turnaround Time			Job No. Loc: 560 27939
PHOENIX, AZ	Calendar (C) or Work Days (W) C			SDG No.
(602) 241-1770 Phone	TAT if different from Below			
(602) 231-0131 FAX	[X] 2 weeks			
Project Name: FORMER ASARCO SMELTER SITE	[ ] 1 week			
Site: FORMER ASARCO SMELTER SITE	[ ] 2 days			
P O # 06835001.W080	[ ] 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample (SEE NOTE)	TOTAL & DISSOLVED METALS (6020): Sb, As, Ba, Cd, Cr, Co, Cu, Fe, Pb, Mo, Ni, Se, Tl, Zn, Ag	TOTAL & DISSOLVED Hg (7470)	TOTAL CATIONS (6010): Al, Ca, Mg, K, Na, Mn	ANIONS (300.0): Chloride, Sulfate, Nitrate/Nitrite	FLUORIDE (340.2)	TDS (160.1)	TSS (160.2)	TOC (415.1)	TEMPERATURE	SULFIDE	ALKALINITY	TPH	BTEX	SPLP	TOTAL As, Cd, Cr, Cu, Fe, Pb, Se, Zn, Sb, Ba, Co, Hg, Mo, Ni, Ag	TCLP			Sample Specific Notes:
EP-51	9/1/11	0820	G	W	5		X	X	X	X	X	X	X	X		X	X								
EP-71	9/1/11	0945	G	W	5		X	X	X	X	X	X	X	X		X	X								
FD090111	9/1/11		G	W	5		X	X	X	X	X	X	X	X		X	X								
EP-12	9/1/11	1100	G	W	5		X	X	X	X	X	X	X	X		X	X								
EP-13	9/1/11	1325	G	W	5		X	X	X	X	X	X	X	X		X	X								

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

Possible Hazard Identification
[X] *Non-Hazard* [ ] *Flammable* [ ] *Skin Irritant* [ ] *Poison B* [ ] *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
[ ] *Return To Client* [ ] *Disposal By Lab* [ ] *Archive For* _____ *Months*

Special Instructions/QC Requirements & Comments: SAMPLE FOR DISSOVLED METALS IS FIELD FILTERED. PLEASE EMAIL WORK ORDER AUTHORIZATIONS TO GARETT.FERGUSON@ARCADIS-US.COM FOR CONFIRMATION AND RESULTS TO MARLA MILLER AT MARLA.MILLER@ARCADIS-US.COM. PROJECT SPECIFIC QC REQUIRED.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Doulas Solon Douglas Solon	MALCOLM PIRNIE	9/1/11 1530	Alicia J Magee	TACC	090211 1019
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Fed Ex 8768 2279 1441

09/19/2011

Login Sample Receipt Checklist

Client: Malcolm Pirnie, Inc.

Job Number: 560-27939-1
SDG Number: September 1, 2011

Login Number: 27939
List Source: TestAmerica Corpus Christi
List Number: 1
Creator: Padilla, Erica

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