ANALYTICAL REPORT

Job Number: 560-24792-1

SDG Number: March 3, 2011

Job Description: Former ASARCO Smelter Site

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
3/31/2011 11:07 AM

Timothy L. Kellogg
Project Manager II
tim.kellogg@testamericainc.com
03/31/2011

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Corpus Christi
TRRP Data Package Cover Page

Job Number: 560-24792-1

Project Name/Number: Former ASARCO Smelter Site 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		3/31/2011
Name (printed)	Signature	Date

Client Services Manager
Official Title (printed)

LRC Date: March 31, 2011	Laboratory Job Number: 560-24792-1
Reviewer Name: Timothy L. Kellogg	Project Name/Number: Former ASARCO Smelter Site 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
		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			1
		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: March 31, 2011	Laboratory Job Number: 560-24792-1
Reviewer Name: Timothy L. Kellogg	Project Name/Number: Former ASARCO Smelter Site 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: March 31, 2011	Laboratory Job Number: 560-24792-1
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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	EPA Method 7470A (QC Batch #560-57327) It was noted that the matrix spike (MS) recover for 560-24792-1 was outside of the control limits. The laboratory control standard (LCS) and the matrix spike duplicate (MSD) recoveries were acceptable, therefore the data was reported. EPA Method 6020 (QC Batch #560-57773 & 560-57885) It was noted that some of the matrix spike and matrix spike duplicate (MS/MSD) recoveries for 560-24792-1 were outside of the control limits. Matrix interferences inherent to the samples are suspected to be the cause of the recoveries. EPA Method 6010B (QC Batch #560-57130 & 560-57210) It was noted that the matrix spike and matrix spike duplicate (MS/MSD) recoveries for 560-24792-1 were outside of the control limits. Matrix interferences inherent to the samples are suspected to be the cause of the recoveries.
2	EPA Method 300.0 (QC Batch #560-57107) Please note that samples 560-24792-1 and -2 were received with approximately half of the holding time remaining. The initial analysis was performed within the method holding time but due to necessary dilutions, the re-analysis of these samples was performed after the holding time had expired. The reported values should be considered to be estimated and used at the client's discretion.

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: 560-24792-1
Sdg Number: March 3, 2011

Description	Lab Location	Method	Preparation Method
Matrix Water			
Metals (ICP)	TAL CC	SW846 6010B	
Preparation, Total Metals	TAL CC		SW846 3010A
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: 560-24792-1
Sdg Number: March 3, 2011

Method	Analyst	Analyst ID
SW846 6010B	Mathewson, John E	JEM
SW846 6020	Reyes, Eddie D	EDR
SW846 7470A	Mathewson, John E	JEM
MCAWW 160.1	Orchard, Luke	LO
MCAWW 160.2	Bowen, Christine	CB
MCAWW 300.0	Mathewson, John E	JEM
MCAWW 300.0	Zwierzykowski, Hanna M	HMZ
MCAWW 340.2	Gonzalez, Sonia	SG
MCAWW 376.2	Zwierzykowski, Hanna M	HMZ
MCAWW 415.1	Zwierzykowski, Hanna M	HMZ
SM SM 2320B	Rickert, Melissa	MR

SAMPLE SUMMARY

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
560-24792-1	EP-51HS	Water	03/03/2011 0725	03/04/2011 0935
560-24792-2	EP-51LF	Water	03/03/2011 0915	03/04/2011 0935
560-24792-3	EP-51	Water	03/03/2011 1005	03/04/2011 0935
560-24792-4	EP-12HS	Water	03/03/2011 1045	03/04/2011 0935
560-24792-5	EP-12LF	Water	03/03/2011 1150	03/04/2011 0935
560-24792-6	EP-12	Water	03/03/2011 1305	03/04/2011 0935
560-24792-7	EP-71	Water	03/03/2011 1455	03/04/2011 0935
560-24792-8	EP-77	Water	03/03/2011 1650	03/04/2011 0935
560-24792-9	FD030311	Water	03/03/2011 0000	03/04/2011 0935

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51HS

Lab Sample ID: 560-24792-1
Client Matrix: Water

Date Sampled: 03/03/2011 07:25
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00752			0.00161	0.00500	0.00161	mg/L	57254	03/09/2011 18:36	1	EDR
Arsenic	7440-38-2	0.104			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 22:46	1	EDR
Barium	7440-39-3	0.0202			0.000810	0.00500	0.000810	mg/L	57254	03/09/2011 18:36	1	EDR
Cadmium	7440-43-9	0.00503			0.000854	0.00200	0.000854	mg/L	57254	03/09/2011 18:36	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	57254	03/09/2011 18:36	1	EDR
Cobalt	7440-48-4	0.00564			0.00136	0.00500	0.00136	mg/L	57254	03/09/2011 18:36	1	EDR
Copper	7440-50-8	0.0243			0.00115	0.0100	0.00115	mg/L	57254	03/09/2011 18:36	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	57254	03/09/2011 18:36	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57254	03/09/2011 18:36	1	EDR
Molybdenum	7439-98-7	0.0175			0.00140	0.00500	0.00140	mg/L	57254	03/09/2011 18:36	1	EDR
Nickel	7440-02-0	0.264			0.00217	0.00500	0.00217	mg/L	57254	03/09/2011 18:36	1	EDR
Selenium	7782-49-2	0.306			0.00108	0.00500	0.00108	mg/L	57254	03/09/2011 18:36	1	EDR
Thallium	7440-28-0	0.00224			0.000693	0.00100	0.000693	mg/L	57254	03/09/2011 18:36	1	EDR
Zinc	7440-66-6	0.165			0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 04:32	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:33	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	7000			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	9.00			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

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Job Number: 560-24792-1
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SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51HS

Lab Sample ID: 560-24792-1
Client Matrix: Water

Date Sampled: 03/03/2011 07:25
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	2180			0.192	1.00	38.4	mg/L	57542	03/15/2011 16:44	200	JEM
Nitrate as N	14797-55-8	222		H	0.103	0.500	2.58	mg/L	57107	03/06/2011 00:32	25	HMZ
Nitrate Nitrite as N	STL00217	222		H	0.200	0.500	5.00	mg/L	57107	03/06/2011 00:32	25	HMZ
Nitrite as N	14797-65-0	5.00	U	H	0.200	0.500	5.00	mg/L	57107	03/06/2011 00:32	25	HMZ
Sulfate	14808-79-8	1860			0.377	1.00	9.42	mg/L	57107	03/06/2011 00:32	25	HMZ
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.53			0.0200	0.100	0.0200	mg/L	57419	03/15/2011 08:00	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0131	U		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	17.0		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	106			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.0375	J		0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:37	1	JEM
Calcium	7440-70-2	497			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:37	1	JEM
Magnesium	7439-95-4	450			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:37	1	JEM
Manganese	7439-96-5	0.0275			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:37	1	JEM
Potassium	7440-09-7	39.2			0.117	0.500	2.34	mg/L	57201	03/08/2011 15:55	20	JEM
Sodium	7440-23-5	1200			0.0466	1.00	0.932	mg/L	57201	03/08/2011 15:55	20	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00829			0.00161	0.00500	0.00161	mg/L	57733	03/22/2011 23:12	1	EDR
Arsenic	7440-38-2	0.230			0.00109	0.00500	0.00109	mg/L	57733	03/22/2011 23:12	1	EDR
Barium	7440-39-3	0.0222			0.000810	0.00500	0.000810	mg/L	57733	03/22/2011 23:12	1	EDR
Cadmium	7440-43-9	0.00426			0.000854	0.00200	0.000854	mg/L	57733	03/22/2011 23:12	1	EDR
Chromium	7440-47-3	0.00917			0.00140	0.00500	0.00140	mg/L	57733	03/22/2011 23:12	1	EDR
Cobalt	7440-48-4	0.00172	J		0.00136	0.00500	0.00136	mg/L	57733	03/22/2011 23:12	1	EDR
Copper	7440-50-8	0.0294			0.00115	0.0100	0.00115	mg/L	57733	03/22/2011 23:12	1	EDR
Iron	7439-89-6	0.182	J		0.101	0.250	0.101	mg/L	57733	03/22/2011 23:12	1	EDR
Lead	7439-92-1	0.00107	J	b	0.000733	0.00500	0.000733	mg/L	57773	03/23/2011 14:50	1	EDR
Molybdenum	7439-98-7	0.0162			0.00140	0.00500	0.00140	mg/L	57733	03/22/2011 23:12	1	EDR
Nickel	7440-02-0	0.0900			0.00217	0.00500	0.00217	mg/L	57733	03/22/2011 23:12	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51HS

Lab Sample ID: 560-24792-1
Client Matrix: Water

Date Sampled: 03/03/2011 07:25
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.324			0.00108	0.00500	0.00108	mg/L	57733	03/22/2011 23:12	1	EDR
Thallium	7440-28-0	0.00195			0.000693	0.00100	0.000693	mg/L	57733	03/22/2011 23:12	1	EDR
Zinc	7440-66-6	0.160			0.00355	0.0250	0.00355	mg/L	57773	03/23/2011 14:50	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:06	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51LF

Lab Sample ID: 560-24792-2
Client Matrix: Water

Date Sampled: 03/03/2011 09:15
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00182	J		0.00161	0.00500	0.00161	mg/L	57885	03/28/2011 04:54	1	EDR
Arsenic	7440-38-2	0.00393	J		0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:24	1	EDR
Barium	7440-39-3	0.0168			0.000810	0.00500	0.000810	mg/L	57885	03/28/2011 04:54	1	EDR
Cadmium	7440-43-9	0.0279			0.000854	0.00200	0.000854	mg/L	57885	03/28/2011 04:54	1	EDR
Chromium	7440-47-3	0.0402			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 04:54	1	EDR
Cobalt	7440-48-4	0.0291			0.00136	0.00500	0.00136	mg/L	57885	03/28/2011 04:54	1	EDR
Copper	7440-50-8	0.0461			0.00115	0.0100	0.00115	mg/L	57885	03/28/2011 04:54	1	EDR
Iron	7439-89-6	2.20			0.101	0.250	0.101	mg/L	57885	03/28/2011 04:54	1	EDR
Lead	7439-92-1	0.00166	J		0.000733	0.00500	0.000733	mg/L	57885	03/28/2011 04:54	1	EDR
Molybdenum	7439-98-7	0.00799			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 04:54	1	EDR
Nickel	7440-02-0	2.83			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:24	1	EDR
Selenium	7782-49-2	0.231			0.00108	0.00500	0.00108	mg/L	57885	03/28/2011 04:54	1	EDR
Thallium	7440-28-0	0.00242			0.000693	0.00100	0.000693	mg/L	57885	03/28/2011 04:54	1	EDR
Zinc	7440-66-6	0.119			0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 04:54	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:35	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	9770			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	54.0			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51LF

Lab Sample ID: 560-24792-2
Client Matrix: Water

Date Sampled: 03/03/2011 09:15
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	3210			0.192	1.00	38.4	mg/L	57542	03/15/2011 17:05	200	JEM
Nitrate as N	14797-55-8	163		H	0.103	0.500	2.58	mg/L	57107	03/06/2011 00:53	25	HMZ
Nitrate Nitrite as N	STL00217	163		H	0.200	0.500	5.00	mg/L	57107	03/06/2011 00:53	25	HMZ
Nitrite as N	14797-65-0	5.00	U	H	0.200	0.500	5.00	mg/L	57107	03/06/2011 00:53	25	HMZ
Sulfate	14808-79-8	1880			0.377	1.00	75.4	mg/L	57542	03/15/2011 17:05	200	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.46			0.0200	0.100	0.0200	mg/L	57419	03/15/2011 08:00	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0131	U		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	37.2		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	166			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.165			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:44	1	JEM
Calcium	7440-70-2	693			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:44	1	JEM
Magnesium	7439-95-4	613			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:44	1	JEM
Manganese	7439-96-5	1.14			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:44	1	JEM
Potassium	7440-09-7	49.2			0.117	0.500	2.34	mg/L	57201	03/08/2011 16:02	20	JEM
Sodium	7440-23-5	1520			0.0466	1.00	0.932	mg/L	57201	03/08/2011 16:02	20	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00301	J		0.00161	0.00500	0.00161	mg/L	57960	03/29/2011 23:36	1	EDR
Arsenic	7440-38-2	0.0660			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 02:35	1	EDR
Barium	7440-39-3	0.0212			0.000810	0.00500	0.000810	mg/L	57960	03/29/2011 23:36	1	EDR
Cadmium	7440-43-9	0.0293			0.000854	0.00200	0.000854	mg/L	57960	03/29/2011 23:36	1	EDR
Chromium	7440-47-3	1.54			0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 02:35	1	EDR
Cobalt	7440-48-4	0.0284			0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 02:35	1	EDR
Copper	7440-50-8	0.0825		b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 02:35	1	EDR
Iron	7439-89-6	5.39			0.101	0.250	0.101	mg/L	57926	03/29/2011 02:35	1	EDR
Lead	7439-92-1	0.0125			0.000733	0.00500	0.000733	mg/L	57960	03/29/2011 23:36	1	EDR
Molybdenum	7439-98-7	0.0211			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 09:50	1	EDR
Nickel	7440-02-0	2.74			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 02:35	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51LF

Lab Sample ID: 560-24792-2
Client Matrix: Water

Date Sampled: 03/03/2011 09:15
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.220			0.00108	0.00500	0.00108	mg/L	57960	03/29/2011 23:36	1	EDR
Thallium	7440-28-0	0.00242			0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 09:50	1	EDR
Zinc	7440-66-6	0.158			0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 02:35	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:16	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51

Lab Sample ID: 560-24792-3
Client Matrix: Water

Date Sampled: 03/03/2011 10:05
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00593			0.00161	0.00500	0.00161	mg/L	57885	03/28/2011 04:59	1	EDR
Arsenic	7440-38-2	0.0446			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:29	1	EDR
Barium	7440-39-3	0.0199			0.000810	0.00500	0.000810	mg/L	57885	03/28/2011 04:59	1	EDR
Cadmium	7440-43-9	0.0317			0.000854	0.00200	0.000854	mg/L	57885	03/28/2011 04:59	1	EDR
Chromium	7440-47-3	0.00348	J		0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 04:59	1	EDR
Cobalt	7440-48-4	0.00934			0.00136	0.00500	0.00136	mg/L	57885	03/28/2011 04:59	1	EDR
Copper	7440-50-8	0.0460			0.00115	0.0100	0.00115	mg/L	57885	03/28/2011 04:59	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	57885	03/28/2011 04:59	1	EDR
Lead	7439-92-1	0.00119	J		0.000733	0.00500	0.000733	mg/L	57885	03/28/2011 04:59	1	EDR
Molybdenum	7439-98-7	0.00627			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 04:59	1	EDR
Nickel	7440-02-0	0.337			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:29	1	EDR
Selenium	7782-49-2	0.175			0.00108	0.00500	0.00108	mg/L	57885	03/28/2011 04:59	1	EDR
Thallium	7440-28-0	0.00288			0.000693	0.00100	0.000693	mg/L	57885	03/28/2011 04:59	1	EDR
Zinc	7440-66-6	0.269			0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 04:59	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:37	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	11300			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	74.8			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51

Lab Sample ID: 560-24792-3
Client Matrix: Water

Date Sampled: 03/03/2011 10:05
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	5660			0.192	1.00	38.4	mg/L	57542	03/15/2011 17:26	200	JEM
Nitrate as N	14797-55-8	123			0.103	0.500	0.515	mg/L	57194	03/04/2011 18:10	5	HMZ
Nitrate Nitrite as N	STL00217	123			0.200	0.500	1.00	mg/L	57194	03/04/2011 18:10	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 18:10	5	HMZ
Sulfate	14808-79-8	4590			0.377	1.00	75.4	mg/L	57542	03/15/2011 17:26	200	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.01			0.0200	0.100	0.0200	mg/L	57419	03/15/2011 08:00	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0250	J		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	38.3		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	228			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.912			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:47	1	JEM
Calcium	7440-70-2	843			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:47	1	JEM
Magnesium	7439-95-4	732			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:47	1	JEM
Manganese	7439-96-5	1.68			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:47	1	JEM
Potassium	7440-09-7	56.4			0.117	0.500	2.34	mg/L	57201	03/08/2011 16:21	20	JEM
Sodium	7440-23-5	1760			0.0466	1.00	0.932	mg/L	57201	03/08/2011 16:21	20	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00838			0.00161	0.00500	0.00161	mg/L	57960	03/29/2011 23:42	1	EDR
Arsenic	7440-38-2	0.152			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 02:45	1	EDR
Barium	7440-39-3	0.0234			0.000810	0.00500	0.000810	mg/L	57960	03/29/2011 23:42	1	EDR
Cadmium	7440-43-9	0.0315			0.000854	0.00200	0.000854	mg/L	57960	03/29/2011 23:42	1	EDR
Chromium	7440-47-3	0.211			0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 02:45	1	EDR
Cobalt	7440-48-4	0.00936			0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 02:45	1	EDR
Copper	7440-50-8	0.171		b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 02:45	1	EDR
Iron	7439-89-6	2.13			0.101	0.250	0.101	mg/L	57926	03/29/2011 02:45	1	EDR
Lead	7439-92-1	0.0191			0.000733	0.00500	0.000733	mg/L	57960	03/29/2011 23:42	1	EDR
Molybdenum	7439-98-7	0.00739			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 09:56	1	EDR
Nickel	7440-02-0	0.314			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 02:45	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-51

Lab Sample ID: 560-24792-3
Client Matrix: Water

Date Sampled: 03/03/2011 10:05
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.164			0.00108	0.00500	0.00108	mg/L	57960	03/29/2011 23:42	1	EDR
Thallium	7440-28-0	0.00287			0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 09:56	1	EDR
Zinc	7440-66-6	0.397			0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 02:45	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:19	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12HS

Lab Sample ID: 560-24792-4
Client Matrix: Water

Date Sampled: 03/03/2011 10:45
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57885	03/28/2011 05:05	1	EDR
Arsenic	7440-38-2	0.116			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:35	1	EDR
Barium	7440-39-3	0.0812			0.000810	0.00500	0.000810	mg/L	57885	03/28/2011 05:05	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57885	03/28/2011 05:05	1	EDR
Chromium	7440-47-3	0.00402	J		0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:05	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	57885	03/28/2011 05:05	1	EDR
Copper	7440-50-8	0.00215	J		0.00115	0.0100	0.00115	mg/L	57885	03/28/2011 05:05	1	EDR
Iron	7439-89-6	0.241	J		0.101	0.250	0.101	mg/L	57885	03/28/2011 05:05	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57885	03/28/2011 05:05	1	EDR
Molybdenum	7439-98-7	0.00471	J		0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:05	1	EDR
Nickel	7440-02-0	0.00861			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:35	1	EDR
Selenium	7782-49-2	0.222			0.00108	0.00500	0.00108	mg/L	57885	03/28/2011 05:05	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57885	03/28/2011 05:05	1	EDR
Zinc	7440-66-6	0.00762	J		0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 05:05	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:39	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	2630			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	21.0			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12HS

Lab Sample ID: 560-24792-4
Client Matrix: Water

Date Sampled: 03/03/2011 10:45
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	119			0.192	1.00	0.960	mg/L	57194	03/04/2011 18:31	5	HMZ
Nitrate as N	14797-55-8	0.515	U		0.103	0.500	0.515	mg/L	57194	03/04/2011 18:31	5	HMZ
Nitrate Nitrite as N	STL00217	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 18:31	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 18:31	5	HMZ
Sulfate	14808-79-8	2890			0.377	1.00	18.8	mg/L	57542	03/15/2011 17:47	50	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.86			0.0200	0.100	0.0200	mg/L	57419	03/15/2011 08:00	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.269			0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	126		b	0.285	1.00	1.42	mg/L	57572	03/16/2011 17:38	5	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	813			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.00720	U		0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:54	1	JEM
Calcium	7440-70-2	161			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:54	1	JEM
Magnesium	7439-95-4	61.2			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:54	1	JEM
Manganese	7439-96-5	0.112			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:54	1	JEM
Potassium	7440-09-7	11.3			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:24	10	JEM
Sodium	7440-23-5	669			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:24	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57960	03/29/2011 23:48	1	EDR
Arsenic	7440-38-2	0.184			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 02:55	1	EDR
Barium	7440-39-3	0.0949			0.000810	0.00500	0.000810	mg/L	57960	03/29/2011 23:48	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57960	03/29/2011 23:48	1	EDR
Chromium	7440-47-3	0.00445	J		0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 02:55	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 02:55	1	EDR
Copper	7440-50-8	0.00490	J	b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 02:55	1	EDR
Iron	7439-89-6	1.08			0.101	0.250	0.101	mg/L	57926	03/29/2011 02:55	1	EDR
Lead	7439-92-1	0.00279	J		0.000733	0.00500	0.000733	mg/L	57960	03/29/2011 23:48	1	EDR
Molybdenum	7439-98-7	0.00789			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:02	1	EDR
Nickel	7440-02-0	0.00752			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 02:55	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12HS

Lab Sample ID: 560-24792-4
Client Matrix: Water

Date Sampled: 03/03/2011 10:45
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.336			0.00108	0.00500	0.00108	mg/L	57960	03/29/2011 23:48	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:02	1	EDR
Zinc	7440-66-6	0.00401	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 02:55	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:21	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12LF

Lab Sample ID: 560-24792-5
Client Matrix: Water

Date Sampled: 03/03/2011 11:50
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57885	03/28/2011 05:11	1	EDR
Arsenic	7440-38-2	0.417			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:40	1	EDR
Barium	7440-39-3	0.0577			0.000810	0.00500	0.000810	mg/L	57885	03/28/2011 05:11	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57885	03/28/2011 05:11	1	EDR
Chromium	7440-47-3	0.00650			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:11	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	57885	03/28/2011 05:11	1	EDR
Copper	7440-50-8	0.00160	J		0.00115	0.0100	0.00115	mg/L	57885	03/28/2011 05:11	1	EDR
Iron	7439-89-6	1.88			0.101	0.250	0.101	mg/L	57885	03/28/2011 05:11	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57885	03/28/2011 05:11	1	EDR
Molybdenum	7439-98-7	0.00720			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:11	1	EDR
Nickel	7440-02-0	0.00862			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:40	1	EDR
Selenium	7782-49-2	0.184			0.00108	0.00500	0.00108	mg/L	57885	03/28/2011 05:11	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57885	03/28/2011 05:11	1	EDR
Zinc	7440-66-6	0.0243	J		0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 05:11	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:41	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	4900			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	25.0			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12LF

Lab Sample ID: 560-24792-5
Client Matrix: Water

Date Sampled: 03/03/2011 11:50
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	133			0.192	1.00	0.960	mg/L	57194	03/04/2011 18:52	5	HMZ
Nitrate as N	14797-55-8	0.995	J		0.103	0.500	0.515	mg/L	57194	03/04/2011 18:52	5	HMZ
Nitrate Nitrite as N	STL00217	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 18:52	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 18:52	5	HMZ
Sulfate	14808-79-8	473			0.377	1.00	9.42	mg/L	57542	03/15/2011 18:08	25	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	1.96			0.0200	0.100	0.0200	mg/L	57419	03/15/2011 08:00	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.814			0.0131	0.0500	0.0262	mg/L	57232	03/07/2011 13:50	2	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	93.0		b	0.285	1.00	1.42	mg/L	57572	03/16/2011 17:38	5	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	842			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.118			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:57	1	JEM
Calcium	7440-70-2	162			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:57	1	JEM
Magnesium	7439-95-4	60.3			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:57	1	JEM
Manganese	7439-96-5	0.204			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:57	1	JEM
Potassium	7440-09-7	10.2			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:26	10	JEM
Sodium	7440-23-5	666			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:26	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57960	03/29/2011 23:54	1	EDR
Arsenic	7440-38-2	0.510			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 03:05	1	EDR
Barium	7440-39-3	0.0802			0.000810	0.00500	0.000810	mg/L	57960	03/29/2011 23:54	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57960	03/29/2011 23:54	1	EDR
Chromium	7440-47-3	0.00802			0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 03:05	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 03:05	1	EDR
Copper	7440-50-8	0.00486	J	b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 03:05	1	EDR
Iron	7439-89-6	4.30			0.101	0.250	0.101	mg/L	57926	03/29/2011 03:05	1	EDR
Lead	7439-92-1	0.00331	J		0.000733	0.00500	0.000733	mg/L	57960	03/29/2011 23:54	1	EDR
Molybdenum	7439-98-7	0.00944			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:07	1	EDR
Nickel	7440-02-0	0.00926			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 03:05	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12LF

Lab Sample ID: 560-24792-5
Client Matrix: Water

Date Sampled: 03/03/2011 11:50
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.351			0.00108	0.00500	0.00108	mg/L	57960	03/29/2011 23:54	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:07	1	EDR
Zinc	7440-66-6	0.00565	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 03:05	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:24	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12

Lab Sample ID: 560-24792-6
Client Matrix: Water

Date Sampled: 03/03/2011 13:05
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57885	03/28/2011 05:16	1	EDR
Arsenic	7440-38-2	0.765			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:46	1	EDR
Barium	7440-39-3	0.0596			0.000810	0.00500	0.000810	mg/L	57885	03/28/2011 05:16	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57885	03/28/2011 05:16	1	EDR
Chromium	7440-47-3	0.00196	J		0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:16	1	EDR
Cobalt	7440-48-4	0.00147	J		0.00136	0.00500	0.00136	mg/L	57885	03/28/2011 05:16	1	EDR
Copper	7440-50-8	0.00115	U		0.00115	0.0100	0.00115	mg/L	57885	03/28/2011 05:16	1	EDR
Iron	7439-89-6	2.95			0.101	0.250	0.101	mg/L	57885	03/28/2011 05:16	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57885	03/28/2011 05:16	1	EDR
Molybdenum	7439-98-7	0.0187			0.00140	0.00500	0.00140	mg/L	57885	03/28/2011 05:16	1	EDR
Nickel	7440-02-0	0.0195			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:46	1	EDR
Selenium	7782-49-2	0.169			0.00108	0.00500	0.00108	mg/L	57885	03/28/2011 05:16	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57885	03/28/2011 05:16	1	EDR
Zinc	7440-66-6	0.00355	U		0.00355	0.0250	0.00355	mg/L	57885	03/28/2011 05:16	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000134	J		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:43	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	3130			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	22.0			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12

Lab Sample ID: 560-24792-6
Client Matrix: Water

Date Sampled: 03/03/2011 13:05
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	255			0.192	1.00	9.60	mg/L	57542	03/15/2011 18:29	50	JEM
Nitrate as N	14797-55-8	24.6			0.103	0.500	0.515	mg/L	57194	03/04/2011 19:13	5	HMZ
Nitrate Nitrite as N	STL00217	24.6			0.200	0.500	1.00	mg/L	57194	03/04/2011 19:13	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 19:13	5	HMZ
Sulfate	14808-79-8	1120			0.377	1.00	18.8	mg/L	57542	03/15/2011 18:29	50	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	2.94			0.0200	0.100	0.0400	mg/L	57419	03/15/2011 08:00	2	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0270	J		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	120		b	0.285	1.00	1.42	mg/L	57572	03/16/2011 17:38	5	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	825			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.00720	U		0.00720	0.100	0.00720	mg/L	57130	03/07/2011 17:59	1	JEM
Calcium	7440-70-2	197			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 17:59	1	JEM
Magnesium	7439-95-4	73.9			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 17:59	1	JEM
Manganese	7439-96-5	0.541			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 17:59	1	JEM
Potassium	7440-09-7	11.9			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:28	10	JEM
Sodium	7440-23-5	741			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:28	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57960	03/30/2011 00:16	1	EDR
Arsenic	7440-38-2	0.856			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 03:16	1	EDR
Barium	7440-39-3	0.0588			0.000810	0.00500	0.000810	mg/L	57960	03/30/2011 00:16	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57960	03/30/2011 00:16	1	EDR
Chromium	7440-47-3	0.00375	J		0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 03:16	1	EDR
Cobalt	7440-48-4	0.00141	J		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 03:16	1	EDR
Copper	7440-50-8	0.00154	J	b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 03:16	1	EDR
Iron	7439-89-6	3.28			0.101	0.250	0.101	mg/L	57926	03/29/2011 03:16	1	EDR
Lead	7439-92-1	0.00226	J		0.000733	0.00500	0.000733	mg/L	57960	03/30/2011 00:16	1	EDR
Molybdenum	7439-98-7	0.0207			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:12	1	EDR
Nickel	7440-02-0	0.0209			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 03:16	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-12

Lab Sample ID: 560-24792-6
Client Matrix: Water

Date Sampled: 03/03/2011 13:05
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.196			0.00108	0.00500	0.00108	mg/L	57960	03/30/2011 00:16	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:12	1	EDR
Zinc	7440-66-6	0.00402	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 03:16	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:27	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-71

Lab Sample ID: 560-24792-7
Client Matrix: Water

Date Sampled: 03/03/2011 14:55
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57926	03/28/2011 23:51	1	EDR
Arsenic	7440-38-2	0.195			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:51	1	EDR
Barium	7440-39-3	0.0131			0.000810	0.00500	0.000810	mg/L	57926	03/28/2011 23:51	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57926	03/28/2011 23:51	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	57926	03/28/2011 23:51	1	EDR
Cobalt	7440-48-4	0.00152	J		0.00136	0.00500	0.00136	mg/L	57926	03/28/2011 23:51	1	EDR
Copper	7440-50-8	0.00201	J		0.00115	0.0100	0.00115	mg/L	57926	03/28/2011 23:51	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	57926	03/28/2011 23:51	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57926	03/28/2011 23:51	1	EDR
Molybdenum	7439-98-7	0.164			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 08:29	1	EDR
Nickel	7440-02-0	0.0116			0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:51	1	EDR
Selenium	7782-49-2	0.251			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 08:29	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 08:29	1	EDR
Zinc	7440-66-6	0.00436	J		0.00355	0.0250	0.00355	mg/L	57926	03/28/2011 23:51	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000410	J		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:45	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	5500			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	8.20			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-71

Lab Sample ID: 560-24792-7
Client Matrix: Water

Date Sampled: 03/03/2011 14:55
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	581			0.192	1.00	3.84	mg/L	57542	03/15/2011 15:41	20	JEM
Nitrate as N	14797-55-8	79.4			0.103	0.500	0.515	mg/L	57194	03/04/2011 19:34	5	HMZ
Nitrate Nitrite as N	STL00217	79.4			0.200	0.500	1.00	mg/L	57194	03/04/2011 19:34	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 19:34	5	HMZ
Sulfate	14808-79-8	2340			0.377	1.00	75.4	mg/L	57542	03/16/2011 10:07	200	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	2.96			0.0200	0.100	0.0400	mg/L	57419	03/15/2011 08:00	2	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0131	U		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	40.4		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	262			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.131			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 18:01	1	JEM
Calcium	7440-70-2	340			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 18:01	1	JEM
Magnesium	7439-95-4	186			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 18:01	1	JEM
Manganese	7439-96-5	0.0416			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 18:01	1	JEM
Potassium	7440-09-7	18.7			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:31	10	JEM
Sodium	7440-23-5	1070			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:31	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57979	03/30/2011 10:18	1	EDR
Arsenic	7440-38-2	0.196			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 03:24	1	EDR
Barium	7440-39-3	0.0160			0.000810	0.00500	0.000810	mg/L	57979	03/30/2011 10:18	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57979	03/30/2011 10:18	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 03:24	1	EDR
Cobalt	7440-48-4	0.00164	J		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 03:24	1	EDR
Copper	7440-50-8	0.00115	U		0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 03:24	1	EDR
Iron	7439-89-6	0.101	J		0.101	0.250	0.101	mg/L	57926	03/29/2011 03:24	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57979	03/30/2011 10:18	1	EDR
Molybdenum	7439-98-7	0.165			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:18	1	EDR
Nickel	7440-02-0	0.0115			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 03:24	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-71

Lab Sample ID: 560-24792-7
Client Matrix: Water

Date Sampled: 03/03/2011 14:55
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.252			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 10:18	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:18	1	EDR
Zinc	7440-66-6	0.00436	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 03:24	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000360	J		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:29	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-77

Lab Sample ID: 560-24792-8
Client Matrix: Water

Date Sampled: 03/03/2011 16:50
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00407	J		0.00161	0.00500	0.00161	mg/L	57926	03/28/2011 23:56	1	EDR
Arsenic	7440-38-2	2.41			0.00109	0.00500	0.00109	mg/L	57926	03/28/2011 23:56	1	EDR
Barium	7440-39-3	0.0327			0.000810	0.00500	0.000810	mg/L	57926	03/28/2011 23:56	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57926	03/28/2011 23:56	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	57926	03/28/2011 23:56	1	EDR
Cobalt	7440-48-4	0.00136	U		0.00136	0.00500	0.00136	mg/L	57926	03/28/2011 23:56	1	EDR
Copper	7440-50-8	0.00249	J		0.00115	0.0100	0.00115	mg/L	57926	03/28/2011 23:56	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	57926	03/28/2011 23:56	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57926	03/28/2011 23:56	1	EDR
Molybdenum	7439-98-7	0.213			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 08:35	1	EDR
Nickel	7440-02-0	0.00285	J		0.00217	0.00500	0.00217	mg/L	57926	03/28/2011 23:56	1	EDR
Selenium	7782-49-2	0.0784			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 08:35	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 08:35	1	EDR
Zinc	7440-66-6	0.00355	U		0.00355	0.0250	0.00355	mg/L	57926	03/28/2011 23:56	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:47	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	2410			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	21.6			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-77

Lab Sample ID: 560-24792-8
Client Matrix: Water

Date Sampled: 03/03/2011 16:50
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	345			0.192	1.00	9.60	mg/L	57542	03/16/2011 08:51	50	JEM
Nitrate as N	14797-55-8	1.12	J		0.103	0.500	0.515	mg/L	57194	03/04/2011 19:55	5	HMZ
Nitrate Nitrite as N	STL00217	1.12	J		0.200	0.500	1.00	mg/L	57194	03/04/2011 19:55	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 19:55	5	HMZ
Sulfate	14808-79-8	958			0.377	1.00	18.8	mg/L	57542	03/16/2011 08:51	50	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	18.0			0.0200	0.100	0.200	mg/L	57419	03/15/2011 08:00	10	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0131	U		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	43.8		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	283			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.836			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 18:04	1	JEM
Calcium	7440-70-2	104			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 18:04	1	JEM
Magnesium	7439-95-4	28.1			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 18:04	1	JEM
Manganese	7439-96-5	0.0378			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 18:04	1	JEM
Potassium	7440-09-7	22.5			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:33	10	JEM
Sodium	7440-23-5	698			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:33	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00438	J		0.00161	0.00500	0.00161	mg/L	57979	03/30/2011 10:40	1	EDR
Arsenic	7440-38-2	2.54			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 03:35	1	EDR
Barium	7440-39-3	0.0484			0.000810	0.00500	0.000810	mg/L	57979	03/30/2011 10:40	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57979	03/30/2011 10:40	1	EDR
Chromium	7440-47-3	0.0646			0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 03:35	1	EDR
Cobalt	7440-48-4	0.00173	J		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 03:35	1	EDR
Copper	7440-50-8	0.00504	J	b	0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 03:35	1	EDR
Iron	7439-89-6	0.871			0.101	0.250	0.101	mg/L	57926	03/29/2011 03:35	1	EDR
Lead	7439-92-1	0.00128	J		0.000733	0.00500	0.000733	mg/L	57979	03/30/2011 10:40	1	EDR
Molybdenum	7439-98-7	0.228			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:40	1	EDR
Nickel	7440-02-0	0.0435			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 03:35	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: EP-77

Lab Sample ID: 560-24792-8
Client Matrix: Water

Date Sampled: 03/03/2011 16:50
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.0766			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 10:40	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:40	1	EDR
Zinc	7440-66-6	0.00373	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 03:35	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000130	U		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:32	1	JEM

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: FD030311

Lab Sample ID: 560-24792-9
Client Matrix: Water

Date Sampled: 03/03/2011 00:00
Date Received: 03/04/2011 09:35

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							57087	03/07/2011 09:00		JH
Method: SW846 7470A,Water,Dissolved												
Preparation, Mercury		Complete							57509	03/17/2011 07:00		JEM
Method: SW846 3010A,Water												
Preparation, Total Metals		Complete							57052	03/04/2011 13:30		JH
Method: SW846 7470A,Water												
Preparation, Mercury		Complete							57313	03/10/2011 10:00		RP
Method: SW846 6020,Water,Dissolved												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57926	03/29/2011 00:02	1	EDR
Arsenic	7440-38-2	0.190			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 00:02	1	EDR
Barium	7440-39-3	0.0130			0.000810	0.00500	0.000810	mg/L	57926	03/29/2011 00:02	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57926	03/29/2011 00:02	1	EDR
Chromium	7440-47-3	0.00140	U		0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 00:02	1	EDR
Cobalt	7440-48-4	0.00153	J		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 00:02	1	EDR
Copper	7440-50-8	0.00147	J		0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 00:02	1	EDR
Iron	7439-89-6	0.101	U		0.101	0.250	0.101	mg/L	57926	03/29/2011 00:02	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57926	03/29/2011 00:02	1	EDR
Molybdenum	7439-98-7	0.157			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 08:40	1	EDR
Nickel	7440-02-0	0.0109			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 00:02	1	EDR
Selenium	7782-49-2	0.239			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 08:40	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 08:40	1	EDR
Zinc	7440-66-6	0.00355	U		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 00:02	1	EDR
Method: SW846 7470A,Water,Dissolved												
Mercury	7439-97-6	0.000445	J		0.000130	0.00200	0.000130	mg/L	57545	03/17/2011 10:56	1	JEM
Method: MCAWW 160.1,Water												
Total Dissolved Solids	STL00242	5390			10.0	10.0	10.0	mg/L	57293	03/09/2011 15:30	1	LO
Method: MCAWW 160.2,Water												
Total Suspended Solids	STL00161	17.6			1.00	1.00	1.00	mg/L	57189	03/07/2011 09:15	1	CB
Method: MCAWW 300.0,Water												

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: FD030311

Lab Sample ID: 560-24792-9
Client Matrix: Water

Date Sampled: 03/03/2011 00:00
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Chloride	16887-00-6	713			0.192	1.00	19.2	mg/L	57542	03/16/2011 10:28	100	JEM
Nitrate as N	14797-55-8	80.1			0.103	0.500	0.515	mg/L	57194	03/04/2011 21:19	5	HMZ
Nitrate Nitrite as N	STL00217	80.1			0.200	0.500	1.00	mg/L	57194	03/04/2011 21:19	5	HMZ
Nitrite as N	14797-65-0	1.00	U		0.200	0.500	1.00	mg/L	57194	03/04/2011 21:19	5	HMZ
Sulfate	14808-79-8	3570			0.377	1.00	37.7	mg/L	57542	03/16/2011 10:28	100	JEM
Method: MCAWW 340.2,Water												
Fluoride	16984-48-8	0.822			0.0200	0.100	0.0200	mg/L	57560	03/17/2011 09:15	1	SG
Method: MCAWW 376.2,Water												
Sulfide	18496-25-8	0.0180	J		0.0131	0.0500	0.0131	mg/L	57232	03/07/2011 13:50	1	HMZ
Method: MCAWW 415.1,Water												
Total Organic Carbon	7440-44-0	36.9		b	0.285	1.00	0.285	mg/L	57572	03/16/2011 17:38	1	HMZ
Method: SM SM 2320B,Water												
Total Alkalinity as CaCO3	STL00171	258			5.00	5.00	5.00	mg/L	57520	03/16/2011 15:45	1	MR
Method: SW846 6010B,Water												
Aluminum	7429-90-5	0.163			0.00720	0.100	0.00720	mg/L	57130	03/07/2011 18:06	1	JEM
Calcium	7440-70-2	343			0.0937	0.200	0.0937	mg/L	57130	03/07/2011 18:06	1	JEM
Magnesium	7439-95-4	185			0.0200	0.200	0.0200	mg/L	57130	03/07/2011 18:06	1	JEM
Manganese	7439-96-5	0.0491			0.00270	0.0100	0.00270	mg/L	57130	03/07/2011 18:06	1	JEM
Potassium	7440-09-7	18.6			0.117	0.500	1.17	mg/L	57201	03/08/2011 16:35	10	JEM
Sodium	7440-23-5	1030			0.0466	1.00	0.466	mg/L	57201	03/08/2011 16:35	10	JEM
Method: SW846 6020,Water												
Antimony	7440-36-0	0.00161	U		0.00161	0.00500	0.00161	mg/L	57979	03/30/2011 10:46	1	EDR
Arsenic	7440-38-2	0.194			0.00109	0.00500	0.00109	mg/L	57926	03/29/2011 03:44	1	EDR
Barium	7440-39-3	0.0159			0.000810	0.00500	0.000810	mg/L	57979	03/30/2011 10:46	1	EDR
Cadmium	7440-43-9	0.000854	U		0.000854	0.00200	0.000854	mg/L	57979	03/30/2011 10:46	1	EDR
Chromium	7440-47-3	0.00156	J		0.00140	0.00500	0.00140	mg/L	57926	03/29/2011 03:44	1	EDR
Cobalt	7440-48-4	0.00173	J		0.00136	0.00500	0.00136	mg/L	57926	03/29/2011 03:44	1	EDR
Copper	7440-50-8	0.00115	U		0.00115	0.0100	0.00115	mg/L	57926	03/29/2011 03:44	1	EDR
Iron	7439-89-6	0.148	J		0.101	0.250	0.101	mg/L	57926	03/29/2011 03:44	1	EDR
Lead	7439-92-1	0.000733	U		0.000733	0.00500	0.000733	mg/L	57979	03/30/2011 10:46	1	EDR
Molybdenum	7439-98-7	0.159			0.00140	0.00500	0.00140	mg/L	57979	03/30/2011 10:46	1	EDR
Nickel	7440-02-0	0.0120			0.00217	0.00500	0.00217	mg/L	57926	03/29/2011 03:44	1	EDR

Malcolm Pirnie, Inc.
ATTN: Ms. Marla Miller

Job Number: 560-24792-1
Project: Former ASARCO Smelter Site
SDG Number: Former ASARCO Smelter Site

Client Sample ID: FD030311

Lab Sample ID: 560-24792-9
Client Matrix: Water

Date Sampled: 03/03/2011 00:00
Date Received: 03/04/2011 09:35

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Selenium	7782-49-2	0.248			0.00108	0.00500	0.00108	mg/L	57979	03/30/2011 10:46	1	EDR
Thallium	7440-28-0	0.000693	U		0.000693	0.00100	0.000693	mg/L	57979	03/30/2011 10:46	1	EDR
Zinc	7440-66-6	0.00523	J		0.00355	0.0250	0.00355	mg/L	57926	03/29/2011 03:44	1	EDR
Method: SW846 7470A,Water												
Mercury	7439-97-6	0.000330	J		0.000130	0.00200	0.000130	mg/L	57327	03/11/2011 09:34	1	JEM

DATA REPORTING QUALIFIERS

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Section	Qualifier	Description
Metals		
	U	Analyte was not detected at or above the SDL.
	N	MS, MSD: Spike recovery exceeds upper or lower control limits.
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	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
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.
	H	Sample was prepped or analyzed beyond the specified holding time
	b	The compound was found in the blank and sample

QUALITY CONTROL RESULTS

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57052

Method: 6010B
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 1732
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57130
Prep Batch: 560-57052
Units: mg/L

Instrument ID: MTS6500
Lab File ID: 110307a.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Aluminum	0.00720	U	0.00720	0.100
Calcium	0.0937	U	0.0937	0.200
Magnesium	0.0200	U	0.0200	0.200
Manganese	0.00270	U	0.00270	0.0100

Method Blank - Batch: 560-57052

Method: 6010B
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/08/2011 1551
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57201
Prep Batch: 560-57052
Units: mg/L

Instrument ID: MTS6500
Lab File ID: 110308a.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Aluminum	0.00720	U	0.00720	0.100
Calcium	0.0937	U	0.0937	0.200
Potassium	0.117	U	0.117	0.500
Magnesium	0.0200	U	0.0200	0.200
Sodium	0.0466	U	0.0466	1.00

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57052

Method: 6010B
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 1735
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57130
Prep Batch: 560-57052
Units: mg/L

Instrument ID: MTS6500
Lab File ID: 110307a.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4.00	3.701	93	80 - 120	
Calcium	40.0	36.48	91	80 - 120	
Magnesium	40.0	37.68	94	80 - 120	
Manganese	4.00	3.968	99	80 - 120	

Lab Control Sample - Batch: 560-57052

Method: 6010B
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/08/2011 1553
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57201
Prep Batch: 560-57052
Units: mg/L

Instrument ID: MTS6500
Lab File ID: 110308a.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	4.00	3.788	95	80 - 120	
Calcium	40.0	39.92	100	80 - 120	
Potassium	40.0	32.43	81	80 - 120	
Magnesium	40.0	38.63	97	80 - 120	
Sodium	40.0	42.32	106	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6010B
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57130	Instrument ID:	MTS6500
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	110307a.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/07/2011 1740			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57130	Instrument ID:	MTS6500
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	110307a.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/07/2011 1742			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	84	81	80 - 120	3	20		
Calcium	65	48	80 - 120	1	20	4	4
Potassium	89	86	80 - 120	2	20		
Magnesium	79	73	80 - 120	0	20	4	4
Manganese	102	101	80 - 120	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6010B
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57201	Instrument ID:	MTS6500
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	110308a.asc
Dilution:	20			Initial Weight/Volume:	50 mL
Date Analyzed:	03/08/2011 1558			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57201	Instrument ID:	MTS6500
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	110308a.asc
Dilution:	20			Initial Weight/Volume:	50 mL
Date Analyzed:	03/08/2011 1600			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Aluminum	126	131	80 - 120	4	20	N	N
Calcium	5	65	80 - 120	4	20	4	4
Potassium	72	79	80 - 120	4	20	N	N
Magnesium	41	78	80 - 120	3	20	4	4
Sodium	-89	39	80 - 120	4	20	4	4

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6010B
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID: 560-24792-1
Client Matrix:	Water		Client Matrix: Water
Dilution:	1.0		Dilution: 1.0
Date Analyzed:	03/07/2011 1740		Date Analyzed: 03/07/2011 1742
Date Prepared:	03/04/2011 1330		Date Prepared: 03/04/2011 1330

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Aluminum	0.0375	J	4.00	4.00	3.384		3.277	
Calcium	497		40.0	40.0	522.6	4	515.6	4
Potassium	46.1		40.0	40.0	81.68		80.44	
Magnesium	450		40.0	40.0	481.4	4	479.1	4
Manganese	0.0275		4.00	4.00	4.110		4.061	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6010B
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID: 560-24792-1
Client Matrix:	Water		Client Matrix: Water
Dilution:	20		Dilution: 20
Date Analyzed:	03/08/2011 1558		Date Analyzed: 03/08/2011 1600
Date Prepared:	03/04/2011 1330		Date Prepared: 03/04/2011 1330

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Aluminum	0.144	U	4.00	4.00	5.033	N	5.249	N
Calcium	561		40.0	40.0	562.6	4	586.4	4
Potassium	39.2		40.0	40.0	67.81	N	70.65	N
Magnesium	455		40.0	40.0	471.6	4	486.2	4
Sodium	1200		40.0	40.0	1160	4	1211	4

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/22/2011 2245
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57733
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 061SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
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
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00115	U	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.00217	U	0.00217	0.00500
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100

Method Blank - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/23/2011 1423
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57773
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 055SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Lead	0.001538	J	0.000733	0.00500
Zinc	0.00355	U	0.00355	0.0250

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/29/2011 0116
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57926
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 178SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Antimony	0.00161	U	0.00161	0.00500
Arsenic	0.00109	U	0.00109	0.00500
Barium	0.000810	U	0.000810	0.00500
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.001551	J	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Nickel	0.00217	U	0.00217	0.00500
Zinc	0.00355	U	0.00355	0.0250

Method Blank - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: MB 560-57052/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/29/2011 2303
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57960
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 144SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
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
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00115	U	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.00217	U	0.00217	0.00500
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100
Zinc	0.006409	J	0.00355	0.0250

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-57052/1-A	Analysis Batch:	560-57979	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	083SMPL.D#.raw
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/30/2011 0902			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

Analyte	Result	Qual	MDL	RL
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
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00115	U	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.00217	U	0.00217	0.00500
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100
Zinc	0.00355	U	0.00355	0.0250

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/22/2011 2307
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57733
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 065SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.4586	115	80 - 120	
Arsenic	0.400	0.4712	118	80 - 120	
Barium	0.400	0.4043	101	80 - 120	
Cadmium	0.400	0.3957	99	80 - 120	
Chromium	0.400	0.4037	101	80 - 120	
Cobalt	0.400	0.4130	103	80 - 120	
Copper	0.400	0.3819	95	80 - 120	
Iron	40.0	38.27	96	80 - 120	
Molybdenum	0.400	0.3889	97	80 - 120	
Nickel	0.400	0.3703	93	80 - 120	
Selenium	0.400	0.3988	100	80 - 120	
Thallium	0.200	0.1900	95	80 - 120	

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/23/2011 1445
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57773
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 059SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Lead	0.400	0.3975	99	80 - 120	
Zinc	0.400	0.3774	94	80 - 120	

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/29/2011 0126
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57926
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 179SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.3628	91	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/29/2011 0126
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57926
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 179SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.400	0.4320	108	80 - 120	
Barium	0.400	0.3680	92	80 - 120	
Chromium	0.400	0.3725	93	80 - 120	
Cobalt	0.400	0.3761	94	80 - 120	
Copper	0.400	0.3729	93	80 - 120	
Iron	40.0	38.19	95	80 - 120	
Nickel	0.400	0.3726	93	80 - 120	
Zinc	0.400	0.3767	94	80 - 120	

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/29/2011 2308
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57960
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 145SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.3839	96	80 - 120	
Arsenic	0.400	0.4380	110	80 - 120	
Barium	0.400	0.3900	98	80 - 120	
Cadmium	0.400	0.3781	95	80 - 120	
Chromium	0.400	0.4005	100	80 - 120	
Cobalt	0.400	0.4019	100	80 - 120	
Copper	0.400	0.4066	102	80 - 120	
Iron	40.0	40.01	100	80 - 120	
Lead	0.400	0.3837	96	80 - 120	
Molybdenum	0.400	0.3732	93	80 - 120	
Nickel	0.400	0.4049	101	80 - 120	
Selenium	0.400	0.3819	95	80 - 120	
Thallium	0.200	0.1904	95	80 - 120	
Zinc	0.400	0.4046	101	80 - 120	

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57052

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57052/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2011 0907
Date Prepared: 03/04/2011 1330

Analysis Batch: 560-57979
Prep Batch: 560-57052
Units: mg/L

Instrument ID: Micpms
Lab File ID: 084SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.3978	99	80 - 120	
Arsenic	0.400	0.4034	101	80 - 120	
Barium	0.400	0.4026	101	80 - 120	
Cadmium	0.400	0.3992	100	80 - 120	
Chromium	0.400	0.4072	102	80 - 120	
Cobalt	0.400	0.4064	102	80 - 120	
Copper	0.400	0.3994	100	80 - 120	
Iron	40.0	40.47	101	80 - 120	
Lead	0.400	0.4020	100	80 - 120	
Molybdenum	0.400	0.4055	101	80 - 120	
Nickel	0.400	0.4011	100	80 - 120	
Selenium	0.400	0.3935	98	80 - 120	
Thallium	0.200	0.1977	99	80 - 120	
Zinc	0.400	0.3906	98	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57733	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	067SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/22/2011 2317			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57733	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	068SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/22/2011 2323			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	113	114	80 - 120	0	20		
Arsenic	117	114	80 - 120	2	20		
Barium	103	101	80 - 120	1	20		
Cadmium	94	93	80 - 120	1	20		
Chromium	100	96	80 - 120	4	20		
Cobalt	99	96	80 - 120	2	20		
Copper	86	86	80 - 120	0	20		
Iron	94	90	80 - 120	5	20		
Molybdenum	104	103	80 - 120	1	20		
Nickel	86	83	80 - 120	2	20		
Selenium	105	98	80 - 120	4	20		
Thallium	89	88	80 - 120	1	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Analysis Batch: 560-57773	Instrument ID: Micpms
Client Matrix:	Water	Prep Batch: 560-57052	Lab File ID: 061SMPL.D#.raw
Dilution:	1.0		Initial Weight/Volume: 50 mL
Date Analyzed:	03/23/2011 1455		Final Weight/Volume: 50 mL
Date Prepared:	03/04/2011 1330		

MSD Lab Sample ID:	560-24792-1	Analysis Batch: 560-57773	Instrument ID: Micpms
Client Matrix:	Water	Prep Batch: 560-57052	Lab File ID: 062SMPL.D#.raw
Dilution:	1.0		Initial Weight/Volume: 50 mL
Date Analyzed:	03/23/2011 1501		Final Weight/Volume: 50 mL
Date Prepared:	03/04/2011 1330		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Lead	103	101	80 - 120	2	20		
Zinc	79	77	80 - 120	2	20	N	N

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57960	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	147SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/29/2011 2319			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57960	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57052	Lab File ID:	148SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/29/2011 2324			Final Weight/Volume:	50 mL
Date Prepared:	03/04/2011 1330				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	112	109	80 - 120	3	20		
Arsenic	107	106	80 - 120	1	20		
Barium	104	102	80 - 120	3	20		
Cadmium	91	90	80 - 120	1	20		
Chromium	103	100	80 - 120	3	20		
Cobalt	105	103	80 - 120	2	20		
Copper	92	90	80 - 120	2	20		
Iron	99	98	80 - 120	2	20		
Lead	101	98	80 - 120	2	20		
Molybdenum	99	98	80 - 120	1	20		
Nickel	91	90	80 - 120	1	20		
Selenium	92	96	80 - 120	2	20		
Thallium	91	90	80 - 120	2	20		
Zinc	88	85	80 - 120	2	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/22/2011 2317		Date Analyzed:	03/22/2011 2323
Date Prepared:	03/04/2011 1330		Date Prepared:	03/04/2011 1330

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony	0.00829		0.400	0.400	0.4619	0.4632
Arsenic	0.230		0.400	0.400	0.6984	0.6849
Barium	0.0222		0.400	0.400	0.4327	0.4265
Cadmium	0.00426		0.400	0.400	0.3793	0.3759
Chromium	0.00917		0.400	0.400	0.4102	0.3936
Cobalt	0.00172	J	0.400	0.400	0.3962	0.3867
Copper	0.0294		0.400	0.400	0.3719	0.3717
Iron	0.182	J	40.0	40.0	37.89	36.17
Molybdenum	0.0162		0.400	0.400	0.4308	0.4272
Nickel	0.0900		0.400	0.400	0.4321	0.4231
Selenium	0.324		0.400	0.400	0.7424	0.7157
Thallium	0.00195		0.200	0.200	0.1807	0.1782

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/23/2011 1455		Date Analyzed:	03/23/2011 1501
Date Prepared:	03/04/2011 1330		Date Prepared:	03/04/2011 1330

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Lead	0.00107	J	0.400	0.400	0.4132		0.4032	
Zinc	0.160		0.400	0.400	0.4766	N	0.4664	N

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57052

Method: 6020
Preparation: 3010A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/29/2011 2319		Date Analyzed:	03/29/2011 2324
Date Prepared:	03/04/2011 1330		Date Prepared:	03/04/2011 1330

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony	0.00856		0.400	0.400	0.4553	0.4438
Arsenic	0.208		0.400	0.400	0.6365	0.6310
Barium	0.0226		0.400	0.400	0.4404	0.4293
Cadmium	0.00280		0.400	0.400	0.3667	0.3628
Chromium	0.00922		0.400	0.400	0.4229	0.4093
Cobalt	0.00170	J	0.400	0.400	0.4203	0.4136
Copper	0.0303		0.400	0.400	0.3977	0.3883
Iron	0.183	J	40.0	40.0	39.94	39.27
Lead	0.00148	J	0.400	0.400	0.4037	0.3950
Molybdenum	0.0155		0.400	0.400	0.4096	0.4060
Nickel	0.0958		0.400	0.400	0.4603	0.4551
Selenium	0.308		0.400	0.400	0.6780	0.6939
Thallium	0.00245		0.200	0.200	0.1853	0.1820
Zinc	0.173		0.400	0.400	0.5255	0.5150

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-57087/1-A	Analysis Batch:	560-57254	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	052SMPL.D#.raw
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/09/2011 1825			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

Analyte	Result	Qual	MDL	RL
Antimony	0.00161	U	0.00161	0.00500
Barium	0.000810	U	0.000810	0.00500
Cadmium	0.000854	U	0.000854	0.00200
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00115	U	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Molybdenum	0.00140	U	0.00140	0.00500
Nickel	0.00217	U	0.00217	0.00500
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100

Method Blank - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-57087/1-A	Analysis Batch:	560-57885	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	212SMPL.D#.raw
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/28/2011 0404			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

Analyte	Result	Qual	MDL	RL
Antimony	0.00161	U	0.00161	0.00500
Barium	0.000810	U	0.000810	0.00500
Cadmium	0.000854	U	0.000854	0.00200
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.00115	U	0.00115	0.0100
Iron	0.101	U	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Molybdenum	0.00140	U	0.00140	0.00500
Selenium	0.00108	U	0.00108	0.00500
Thallium	0.000693	U	0.000693	0.00100

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID:	MB 560-57087/1-A	Analysis Batch:	560-57926	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	152SMPL.D#.raw
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/28/2011 2235			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

Analyte	Result	Qual	MDL	RL
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
Chromium	0.00140	U	0.00140	0.00500
Cobalt	0.00136	U	0.00136	0.00500
Copper	0.005739	J	0.00115	0.0100
Iron	0.1155	J	0.101	0.250
Lead	0.000733	U	0.000733	0.00500
Nickel	0.00217	U	0.00217	0.00500
Zinc	0.00355	U	0.00355	0.0250

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57087/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/09/2011 1831
Date Prepared: 03/07/2011 0900

Analysis Batch: 560-57254
Prep Batch: 560-57087
Units: mg/L

Instrument ID: Micpms
Lab File ID: 053SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.4402	110	80 - 120	
Barium	0.400	0.4024	101	80 - 120	
Cadmium	0.400	0.3898	97	80 - 120	
Chromium	0.400	0.4083	102	80 - 120	
Cobalt	0.400	0.4379	109	80 - 120	
Copper	0.400	0.4061	102	80 - 120	
Iron	40.0	40.08	100	80 - 120	
Lead	0.400	0.4052	101	80 - 120	
Molybdenum	0.400	0.3814	95	80 - 120	
Nickel	0.400	0.3953	99	80 - 120	
Selenium	0.400	0.3775	94	80 - 120	
Thallium	0.200	0.1990	100	80 - 120	

Lab Control Sample - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID: LCS 560-57087/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/28/2011 0427
Date Prepared: 03/07/2011 0900

Analysis Batch: 560-57885
Prep Batch: 560-57087
Units: mg/L

Instrument ID: Micpms
Lab File ID: 216SMPL.D#.raw
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Antimony	0.400	0.3809	95	80 - 120	
Barium	0.400	0.4079	102	80 - 120	
Cadmium	0.400	0.3798	95	80 - 120	
Chromium	0.400	0.3888	97	80 - 120	
Cobalt	0.400	0.3944	99	80 - 120	
Copper	0.400	0.3851	96	80 - 120	
Iron	40.0	38.94	97	80 - 120	
Lead	0.400	0.4087	102	80 - 120	
Molybdenum	0.400	0.4160	104	80 - 120	
Selenium	0.400	0.4057	101	80 - 120	
Thallium	0.200	0.2009	100	80 - 120	

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57087

Method: 6020
Preparation: 3010A

Lab Sample ID:	LCS 560-57087/2-A	Analysis Batch:	560-57926	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	153SMPL.D#.raw
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/28/2011 2240			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	0.400	0.4281	107	80 - 120	
Nickel	0.400	0.3860	96	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57254	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	055SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/09/2011 1842			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57254	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	056SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/09/2011 1847			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	107	110	80 - 120	2	20		
Barium	100	102	80 - 120	3	20		
Cadmium	90	93	80 - 120	3	20		
Chromium	95	94	80 - 120	1	20		
Cobalt	100	97	80 - 120	2	20		
Copper	88	86	80 - 120	2	20		
Iron	90	87	80 - 120	3	20		
Lead	102	102	80 - 120	0	20		
Molybdenum	99	102	80 - 120	2	20		
Nickel	84	81	80 - 120	2	20		
Selenium	97	97	80 - 120	0	20		
Thallium	90	91	80 - 120	1	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Analysis Batch:	560-57885	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	218SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/28/2011 0438			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

MSD Lab Sample ID:	560-24792-1	Analysis Batch:	560-57885	Instrument ID:	Micpms
Client Matrix:	Water	Prep Batch:	560-57087	Lab File ID:	219SMPL.D#.raw
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	03/28/2011 0443			Final Weight/Volume:	50 mL
Date Prepared:	03/07/2011 0900				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	103	103	80 - 120	1	20		
Barium	100	102	80 - 120	2	20		
Cadmium	87	87	80 - 120	0	20		
Chromium	93	93	80 - 120	0	20		
Cobalt	95	96	80 - 120	1	20		
Copper	72	73	80 - 120	1	20	N	N
Iron	89	89	80 - 120	0	20		
Lead	99	100	80 - 120	1	20		
Molybdenum	102	101	80 - 120	1	20		
Selenium	95	94	80 - 120	1	20		
Thallium	92	92	80 - 120	0	20		
Zinc	70	71	80 - 120	1	20	N	N

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Analysis Batch: 560-57926	Instrument ID: Micpms
Client Matrix:	Water	Prep Batch: 560-57087	Lab File ID: 155SMPL.D#.raw
Dilution:	1.0		Initial Weight/Volume: 50 mL
Date Analyzed:	03/28/2011 2251		Final Weight/Volume: 50 mL
Date Prepared:	03/07/2011 0900		

MSD Lab Sample ID:	560-24792-1	Analysis Batch: 560-57926	Instrument ID: Micpms
Client Matrix:	Water	Prep Batch: 560-57087	Lab File ID: 159SMPL.D#.raw
Dilution:	1.0		Initial Weight/Volume: 50 mL
Date Analyzed:	03/28/2011 2313		Final Weight/Volume: 50 mL
Date Prepared:	03/07/2011 0900		

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	101	97	80 - 120	3	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/09/2011 1842		Date Analyzed:	03/09/2011 1847
Date Prepared:	03/07/2011 0900		Date Prepared:	03/07/2011 0900

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Antimony	0.00752		0.400	0.400	0.4366	0.4470
Barium	0.0202		0.400	0.400	0.4184	0.4294
Cadmium	0.00503		0.400	0.400	0.3634	0.3756
Chromium	0.00140	U	0.400	0.400	0.3814	0.3770
Cobalt	0.00564		0.400	0.400	0.4047	0.3954
Copper	0.0243		0.400	0.400	0.3780	0.3697
Iron	0.101	U	40.0	40.0	35.80	34.73
Lead	0.000733	U	0.400	0.400	0.4085	0.4078
Molybdenum	0.0175		0.400	0.400	0.4134	0.4237
Nickel	0.264		0.400	0.400	0.6003	0.5865
Selenium	0.306		0.400	0.400	0.6934	0.6951
Thallium	0.00224		0.200	0.200	0.1832	0.1851

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/28/2011 0438		Date Analyzed:	03/28/2011 0443
Date Prepared:	03/07/2011 0900		Date Prepared:	03/07/2011 0900

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Antimony	0.00680		0.400	0.400	0.4172		0.4197	
Barium	0.0207		0.400	0.400	0.4202		0.4282	
Cadmium	0.00472		0.400	0.400	0.3524		0.3539	
Chromium	0.00140	U	0.400	0.400	0.3729		0.3713	
Cobalt	0.00511		0.400	0.400	0.3862		0.3897	
Copper	0.0727		0.400	0.400	0.3616	N	0.3640	N
Iron	0.101	U	40.0	40.0	35.53		35.43	
Lead	0.00419	J	0.400	0.400	0.4002		0.4056	
Molybdenum	0.0172		0.400	0.400	0.4244		0.4193	
Selenium	0.319		0.400	0.400	0.7000		0.6945	
Thallium	0.00241		0.200	0.200	0.1873		0.1870	
Zinc	0.165		0.400	0.400	0.4437	N	0.4495	N

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57087

Method: 6020
Preparation: 3010A
Dissolved

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/28/2011 2251		Date Analyzed:	03/28/2011 2313
Date Prepared:	03/07/2011 0900		Date Prepared:	03/07/2011 0900

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	0.104	0.400	0.400	0.5095	0.4938

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57313

Method: 7470A
Preparation: 7470A

Lab Sample ID: MB 560-57313/4-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 0859
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313
Units: mg/L

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Method Blank - Batch: 560-57313

Method: 7470A
Preparation: 7470A

Lab Sample ID: MB 560-57313/28-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 1020
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313
Units: mg/L

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57313

Method: 7470A
Preparation: 7470A

Lab Sample ID: LCS 560-57313/5-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 0901
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313
Units: mg/L

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.005560	111	80 - 120	

Lab Control Sample - Batch: 560-57313

Method: 7470A
Preparation: 7470A

Lab Sample ID: LCS 560-57313/29-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 1041
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313
Units: mg/L

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.005630	113	80 - 120	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57313

Method: 7470A
Preparation: 7470A

MS Lab Sample ID: 560-24792-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 0909
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 560-24792-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/11/2011 0911
Date Prepared: 03/10/2011 1000

Analysis Batch: 560-57327
Prep Batch: 560-57313

Instrument ID: Mhg1
Lab File ID: 031011W.PRN
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	121	115	80 - 120	5	20	N	

Quality Control Results

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57313

Method: 7470A
Preparation: 7470A

MS Lab Sample ID:	560-24792-1	Units: mg/L	MSD Lab Sample ID:	560-24792-1
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/11/2011 0909		Date Analyzed:	03/11/2011 0911
Date Prepared:	03/10/2011 1000		Date Prepared:	03/10/2011 1000

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual
Mercury	0.000130	U	0.00500	0.00500	0.006050	N	0.005750

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57509

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 560-57509/4-A	Analysis Batch:	560-57545	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-57509	Lab File ID:	031711W.PRN
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/17/2011 1015			Final Weight/Volume:	50 mL
Date Prepared:	03/17/2011 0700				

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Method Blank - Batch: 560-57509

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 560-57509/30-A	Analysis Batch:	560-57545	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-57509	Lab File ID:	031711W.PRN
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/17/2011 1126			Final Weight/Volume:	50 mL
Date Prepared:	03/17/2011 0700				

Analyte	Result	Qual	MDL	RL
Mercury	0.000130	U	0.000130	0.00200

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57509

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 560-57509/5-A	Analysis Batch:	560-57545	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-57509	Lab File ID:	031711W.PRN
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/17/2011 1017			Final Weight/Volume:	50 mL
Date Prepared:	03/17/2011 0700				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.005260	105	80 - 120	

Lab Control Sample - Batch: 560-57509

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 560-57509/31-A	Analysis Batch:	560-57545	Instrument ID:	Mhg1
Client Matrix:	Water	Prep Batch:	560-57509	Lab File ID:	031711W.PRN
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	50 mL
Date Analyzed:	03/17/2011 1128			Final Weight/Volume:	50 mL
Date Prepared:	03/17/2011 0700				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.004940	99	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57293

Method: 160.1
Preparation: N/A

Lab Sample ID: MB 560-57293/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/09/2011 1530
Date Prepared: N/A

Analysis Batch: 560-57293
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 100 mL

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

Lab Control Sample - Batch: 560-57293

Method: 160.1
Preparation: N/A

Lab Sample ID: LCS 560-57293/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/09/2011 1530
Date Prepared: N/A

Analysis Batch: 560-57293
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 25 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Dissolved Solids	2250	2056	91	85 - 115	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57189

Method: 160.2
Preparation: N/A

Lab Sample ID: MB 560-57189/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 0915
Date Prepared: N/A

Analysis Batch: 560-57189
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Total Suspended Solids	1.00	U	1.00	1.00

Duplicate - Batch: 560-57189

Method: 160.2
Preparation: N/A

Lab Sample ID: 560-24792-9
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 0915
Date Prepared: N/A

Analysis Batch: 560-57189
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	17.6	18.00	2	20	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57107

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 560-57107/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/05/2011 2021
Date Prepared: N/A

Analysis Batch: 560-57107
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 030511a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

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

Lab Control Sample - Batch: 560-57107

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 560-57107/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/05/2011 2041
Date Prepared: N/A

Analysis Batch: 560-57107
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 030511a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	9.252	93	90 - 110	
Sulfate	20.0	19.56	98	90 - 110	
Nitrite as N	5.00	4.813	96	90 - 110	
Nitrate as N	5.00	4.816	96	90 - 110	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57194

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 560-57194/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2011 1522
Date Prepared: N/A

Analysis Batch: 560-57194
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 030411b.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

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

Lab Control Sample - Batch: 560-57194

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 560-57194/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/04/2011 1543
Date Prepared: N/A

Analysis Batch: 560-57194
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 030411b.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	9.259	93	90 - 110	
Sulfate	20.0	19.50	98	90 - 110	
Nitrite as N	5.00	4.872	97	90 - 110	
Nitrate as N	5.00	4.800	96	90 - 110	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57542

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 560-57542/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 1026
Date Prepared: N/A

Analysis Batch: 560-57542
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 031511a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

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

Lab Control Sample - Batch: 560-57542

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 560-57542/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 1108
Date Prepared: N/A

Analysis Batch: 560-57542
Prep Batch: N/A
Units: mg/L

Instrument ID: ICMetro
Lab File ID: 031511a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chloride	10.0	10.56	106	90 - 110	
Sulfate	20.0	21.38	107	90 - 110	
Nitrite as N	5.00	5.267	105	90 - 110	
Nitrate as N	5.00	5.231	105	90 - 110	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57419

Method: 340.2
Preparation: N/A

Lab Sample ID: MB 560-57419/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 0800
Date Prepared: N/A

Analysis Batch: 560-57419
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Fluoride	0.0200	U	0.0200	0.100

Lab Control Sample - Batch: 560-57419

Method: 340.2
Preparation: N/A

Lab Sample ID: LCS 560-57419/30
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 0800
Date Prepared: N/A

Analysis Batch: 560-57419
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

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

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57419

Method: 340.2
Preparation: N/A

MS Lab Sample ID: 560-24792-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 0800
Date Prepared: N/A

Analysis Batch: 560-57419
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 560-24792-2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/15/2011 0800
Date Prepared: N/A

Analysis Batch: 560-57419
Prep Batch: N/A

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Fluoride	104	98	75 - 125	2	20		

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 560-57419

Method: 340.2
Preparation: N/A

MS Lab Sample ID:	560-24792-2	Units: mg/L	MSD Lab Sample ID:	560-24792-2
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	03/15/2011 0800		Date Analyzed:	03/15/2011 0800
Date Prepared:	N/A		Date Prepared:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Fluoride	1.46	0.500	0.500	1.980	1.950

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57560

Method: 340.2
Preparation: N/A

Lab Sample ID: MB 560-57560/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2011 0915
Date Prepared: N/A

Analysis Batch: 560-57560
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Fluoride	0.0200	U	0.0200	0.100

Lab Control Sample - Batch: 560-57560

Method: 340.2
Preparation: N/A

Lab Sample ID: LCS 560-57560/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/17/2011 0915
Date Prepared: N/A

Analysis Batch: 560-57560
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Fluoride	0.800	0.7850	98	85 - 115	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57232

Method: 376.2
Preparation: N/A

Lab Sample ID: MB 560-57232/33
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 1350
Date Prepared: N/A

Analysis Batch: 560-57232
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Sulfide	0.0131	U	0.0131	0.0500

Lab Control Sample - Batch: 560-57232

Method: 376.2
Preparation: N/A

Lab Sample ID: LCS 560-57232/34
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/07/2011 1350
Date Prepared: N/A

Analysis Batch: 560-57232
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfide	0.515	0.5180	101	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Method Blank - Batch: 560-57572

Method: 415.1
Preparation: N/A

Lab Sample ID: MB 560-57572/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2011 1738
Date Prepared: N/A

Analysis Batch: 560-57572
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Total Organic Carbon	1.454		0.285	1.00

Lab Control Sample - Batch: 560-57572

Method: 415.1
Preparation: N/A

Lab Sample ID: LCS 560-57572/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2011 1738
Date Prepared: N/A

Analysis Batch: 560-57572
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Organic Carbon	100	96.82	97	80 - 120	

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
Sdg Number: March 3, 2011

Lab Control Sample - Batch: 560-57520

Method: SM 2320B
Preparation: N/A

Lab Sample ID: LCS 560-57520/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2011 1545
Date Prepared: N/A

Analysis Batch: 560-57520
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity as CaCO3	100	96.00	96	85 - 115	

Lab Control Sample - Batch: 560-57520

Method: SM 2320B
Preparation: N/A

Lab Sample ID: LCS 560-57520/27
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/16/2011 1545
Date Prepared: N/A

Analysis Batch: 560-57520
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Total Alkalinity as CaCO3	100	96.60	97	85 - 115	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Corpus Christi

Method: 200.7/ 6010 **Method Detection Limit (MDL) & Detectability Check Standard (DCS) Studies**

Matrix: Water **1st quarter 2010 DCS (Jan - Mar 2011), Job 560-24686-1**

Instrument: MTS6500 **Water Digestion based on 50ml initial Volume to 50ml Final Volume; Water Prep Factor = 1**

Analyte	Analyte	MDL Date Run	MDL mg/L	1Q2011 DCS Run Date	Water Spiked Range mg/L Min	Water Spiked Range mg/L Max	1Q 2011 DCS Spike mg/L	1Q2011 DCS Measured Value mg/L	MDL in TALS mg/L	6010 RL mg/L	Analyte
Al	Aluminum	12/06/10	0.0072	03/09/11	0.007	0.022	0.010	0.0198	0.0072	0.100	Al
Sb	Antimony	12/06/10	0.0050	03/09/11	0.0050	0.0150	0.005	0.0022	0.0050	0.010	Sb
As	Arsenic	12/06/10	0.0020	03/09/11	0.002	0.006	0.005	0.0039	0.0020	0.010	As
Ba	Barium	12/06/10	0.0010	03/09/11	0.001	0.003	0.002	0.0028	0.0010	0.010	Ba
Be	Beryllium	12/06/10	0.0004	03/09/11	0.0004	0.001	0.0010	0.0009	0.0004	0.004	Be
Bi	Bismuth	12/06/10	0.0025	03/09/11	0.003	0.008	0.005	0.0046	0.0025	0.020	Bi
B	Boron	12/06/10	0.0023	03/09/11	0.002	0.007	0.0050	0.0034	0.0023	0.050	B
Cd	Cadmium	12/06/10	0.0003	03/09/11	0.0003	0.001	0.0010	0.00093	0.00034	0.005	Cd
Ca	Calcium	12/06/10	0.0937	03/09/11	0.094	0.281	0.200	0.1950	0.0937	0.200	Ca
Cr	Chromium	12/06/10	0.0010	03/09/11	0.001	0.003	0.002	0.0015	0.0010	0.010	Cr
Co	Cobalt	12/06/10	0.0010	03/09/11	0.001	0.003	0.002	0.0015	0.0010	0.005	Co
Cu	Copper	12/06/10	0.0045	03/09/11	0.005	0.014	0.005	0.0047	0.0045	0.010	Cu
Fe	Iron	12/06/10	0.0250	03/09/11	0.025	0.075	0.050	0.0589	0.0250	0.200	Fe
Pb	Lead	12/06/10	0.0033	03/09/11	0.003	0.010	0.005	0.0051	0.0033	0.010	Pb
Li	Lithium	12/06/10	0.0028	03/09/11	0.003	0.008	0.004	0.0035	0.0028	0.020	Li
Mg	Magnesium	12/06/10	0.0200	03/09/11	0.020	0.060	0.040	0.0417	0.0200	0.200	Mg
Mn	Manganese	12/06/10	0.0027	03/21/11	0.003	0.008	0.005	0.0178	0.0027	0.025	Mn
Mo	Molybdenum	12/06/10	0.0025	03/09/11	0.003	0.008	0.0020	0.0013	0.0025	0.010	Mo
Ni	Nickel	12/06/10	0.0020	03/09/11	0.002	0.006	0.005	0.0054	0.0020	0.010	Ni
P	Phosphorus	12/06/10	0.0100	03/09/11	0.010	0.030	0.020	0.0180	0.0100	0.500	P
K	Potassium	12/06/10	0.1170	03/09/11	0.117	0.351	0.200	0.2040	0.1170	0.500	K
Se	Selenium	12/06/10	0.0024	03/09/11	0.002	0.007	0.005	0.0032	0.0024	0.010	Se
SiO2	Silica, SiO2	12/06/10							0.0523	0.429	SiO2
Si	Silicon	12/06/10	0.0244	03/09/11	0.024	0.073	0.050	0.0617	0.0244	0.200	Si
Ag	Silver	12/06/10	0.0007	03/09/11	0.001	0.002	0.001	0.0013	0.0007	0.005	Ag
Na	Sodium	12/06/10	0.0466	03/21/11	0.047	0.140	0.100	0.0480	0.0466	1.000	Na
Sr	Strontium	12/06/10	0.0006	03/09/11	0.001	0.002	0.001	0.0013	0.0006	0.005	Sr
Tl	Thallium	12/06/10	0.0015	03/09/11	0.002	0.005	0.002	0.0025	0.0015	0.005	Tl
Sn	Tin	12/06/10	0.0100	03/09/11	0.010	0.030	0.010	0.0104	0.0100	0.040	Sn
Ti	Titanium	12/06/10	0.0009	03/09/11	0.001	0.003	0.002	0.0020	0.0009	0.005	Ti
U	Uranium	12/06/10		03/09/11	0.000	0.000			0.0000		U
V	Vanadium	12/06/10	0.0007	03/09/11	0.001	0.002	0.001	0.0013	0.0007	0.005	V
Zn	Zinc	12/06/10	0.0050	03/09/11	0.005	0.015	0.005	0.0045	0.0050	0.020	Zn

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Corpus Christi

MDL-DCS Studies

1st quarter 2011 DCS (Jan - Marc2011), Job 560-23828-2

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*	*1Q2011 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	01/19/11	0.0002	0.00016	79.5%			0.2 ug/L	**0.00013 mg/L**	**0.002 mg/L**

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Corpus Christi

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

DCS 4Q2010 (Oct-Dec 2010); Job#22389 (water)

Wet Chemistry tests ; Matrix: Water

Parameter	Matrix	Method	Current MDL mg/L	Spike Range mg/L Min Range (1XMDL)	Spike Range mg/L Max Range (3XMDL)	2010Q4 DCS Date Analyzed	DCS Spike Conc (mg/L)	2010Q4 DCS Measured Value (mg/L)	Alt. DCS Spike Conc (mg/L)	Alt.DCS Measured Value mg/L
Alkalinity	Water	2320B/310.1	1.290	1.290	3.870	10/27/10	3.0	5.000		
Ammonia (as nitrogen) by SEAL	Water	350.1/SM450NH3 G	0.0446	0.045	0.134	10/13/10	0.10	0.095		
Bromide by IC	Water	300.0/9056	0.315	0.315	0.945	11/17/10	0.50	0.586		
Chloride by IC	Water	300.0/9056	0.192	0.192	0.577	11/17/10	0.50	0.533		
COD (Chemical Oxygen Demand)	Water	Hach 8000	3.1107	3.111	9.332		10.0			
Ferrous Iron	Water	3500-Fe	0.0217	0.022	0.065	10/07/10	0.05	0.076		
Fluoride	Water	340.2/SM4500F C	0.020	0.020	0.060	10/05/10	0.05	0.048		
Fluoride by IC	Water	300.0/9056	0.033	0.033	0.100	11/17/10	0.10	0.040		
Nitrate as N by IC	Water	300.0/9056	0.103	0.103	0.310	11/17/10	0.20	0.330		
Nitrate-Nitrite as N by IC	Water	300.0/9056	0.200	0.200	0.600	11/17/10	0.40	0.460		
Nitrite (as nitrogen)	Water	354.1/SM4500NO2B	0.0020	0.002	0.006	11/18/10	0.0040	0.005		
Nitrite as N by IC	Water	300.0/9056	0.200	0.200	0.600	11/17/10	0.20	0.130		
o-phosphate as P by IC	Water	300.0/9056	0.2307	0.231	0.692	11/17/10	0.200	0.539		
o-phosphate as P by Spect	Water	365.3	0.0141	0.014	0.042	10/28/10	0.03	0.032		
Oil and Grease	Water	1664A	1.0369	1.037	3.111	10/26/10	2.00	4.900		
Residual chlorine	Water	330.4/SM4500CL F	0.0766	0.077	0.230	11/10/10	0.10	0.100		
Sulfate by IC	Water	300.0/9056	0.377	0.377	1.132	11/17/10	1.00	1.100		
Sulfide by 376.2	Water	376.2/SM4500S2D	0.0131	0.013	0.039	10/04/10	0.03	0.031		
Sulfite 377.1/SM4500SO3	Water	377.1/SM4500SO3	1.130	1.130	3.390	11/01/10	2.00	4.500		
Surfactants(MBAS)	Water	425.1/SM 5540C	0.0360	0.036	0.108	10/06/10	0.05	0.058		
TOC (total organic carbon)	Water	415.1/5310B/9060	0.2845	0.285	0.854	10/07/10	0.50	0.396		

Corpus Christi
1733 North Padre Island Drive

Corpus Christi, TX 78408
phone 361.289.2673 fax 361.289.2471

Chain of Custody Record

1.4C
1.3C
IR4
Seal

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TestAmerica Laboratories, Inc.

Client Contact	Task Manager: ALICIA FOGG	Site Contact: GARETT FERGUSON	Date: 3-3-11 8939402236 75	COC No:
MALCOLM PIRNIE	Tel/Fax: 915-747-3907	Lab Contact: TIM KELLOGG	Carrier: FEDEX 7955 3628 3080	1 of 1 COCs
4646 E. VAN BUREN STREET, SUITE 400	Analysis Turnaround Time			Job No. 24792
PHOENIX, AZ	Calendar (C) or Work Days (W) C			
(602) 241-1770 Phone	TAT if different from Below			SDG No.
(602) 231-0131 FAX	[X] 2 weeks			
Project Name: FORMER ASARCO SMELTER SITE	[ ] 1 week			
Site: FORMER ASARCO SMELTER SITE	[ ] 2 days			
P O # 06835001.0004	[ ] 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	TOTAL & DISSOLVED Hg (7470)	TOTAL CATIONS (6010): Al, Ca, Mg, K, Na	ANIONS (300.0): Chloride, Sulfate, Nitrate/Nitrite	FLUORIDE (340.2)	TDS (160.1)	TSS (160.2)	TOC (415.1)	TEMPERATURE	SULFIDE	ALKALINITY	Sample Specific Notes:
EP-51HS	3-3-11	0725	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-51LF	3-3-11	0915	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-51	3-3-11	1005	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-12HS	3-3-11	1045	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-12LF	3-3-11	1150	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-12	3-3-11	1305	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-71	3-3-11	1455	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
EP-77	3-3-11	1650	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
FD030311	3-3-11	-	G	W	5	X	X	X	X	X	X	X	X	X		X	X	
TEMP BLANK	3-3-11	1800	G	W	1										X			
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____							1,4	1,4	1,4	1	1	1	1	1.3	1	1,6	1	

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.

2 COOLERS

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
GARETT FERGUSON	MALCOLM PIRNIE	3-3-11 1800	Alice J Mayer	TACC	030411 0935
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Malcolm Pirnie, Inc.

Job Number: 560-24792-1
SDG Number: March 3, 2011

Login Number: 24792
List Number: 1
Creator: Magee, Alice J.

List Source: TestAmerica Corpus Christi

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	1.4, 1.3C	IR4
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?	False		
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.	N/A		
If necessary, staff have been informed of any short hold time or quick TAT needs	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		