Texas Custodial Trust

2301 West Paisano Drive • El Paso, Texas 79922

Appendix J-2
Data Usability Summary Reports:

J-2a: Data Gap Samples April/May/June 2011 Sampling Event

J-2b: Data Gap Samples July-September 2011 Sampling Event

J-2c: Data Gap Samples October-December 2011 Sampling Event

J-2d: Excavation Sampling Event October 2011 – November 2012

J-2e: American Canal Surface Water Sampling March 2012

J-2f: East Mountain Sampling Event July/August 2012

J-2g: Groundwater and Surface Water Sampling September/October 2010

J-2h: Groundwater and Surface Water Sampling February/March 2011

J-2i: Groundwater and Surface Water Sampling August/September 2011

J-2j: Groundwater and Surface Water Sampling February/March 2012

J-2k: Groundwater and Surface Water Sampling August 2012

J-2l: Dual-Nested Monitoring Well Clusters Groundwater Sampling March 2012

J-2m: Soil Sampling Event May 2012

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Data Usability Summary Data Gap Samples April/May/June 2011 Sampling Event

January 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the data gap samples collected during April, May, and June 2011 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance (RG)-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the data gap samples collected during April, May, and June 2011 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

Sixty-nine soil samples and eleven groundwater samples were collected at the former ASARCO Smelter during this sampling event. The samples were submitted to TestAmerica for analysis. Soil samples were submitted for the following analyses:

- total metals by USEPA Methods 6010 and 7471
- SPLP metals by USEPA Methods 1312, 6010, and 7470
- TCLP metals by USEPA Methods 1311, 6010, and 7470

Groundwater samples were submitted for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470

- total cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Methods 6010 and 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TSS) by USEPA Method 160.2
- anions (chloride, nitrate + nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2
- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

Additionally, three field quality assurance samples (i.e., field duplicates, QA split sample) were collected and analyzed as part of the sampling program. Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory reports submitted by TestAmerica and ALS:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, leachate blanks)
- laboratory control sample (LCS) recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) recovery and RPD
- duplicates (field duplicates, QA split sample)

- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the data gap samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received at the correct temperatures (4 ± 2 degrees Celsius) except for the following:

- Samples collected on May 31, June 1, June 2, and June 3, 2011 were received at 1.2 and 1.6 degrees Celsius.
- Samples collected on June 8, June 9, and June 10, 2011 were received at 1.0 and 1.4 degrees Celsius.
- Samples collected on June 13 and June 14, 2011 were received at 0.8 degrees Celsius.
- Samples collected on June 15 and June 16, 2011 were received at 1.7 degrees Celsius.
- The QA split sample collected on June 29, 2011 was received by ALS at 1.8 degrees Celsius.
- The sample collected on June 30, 2011 was received at 1.5 degrees Celsius.

The temperature outliers did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- The SPLP mercury and total mercury holding times were exceeded for samples BY-SB01-5-6, BY-SB01-15-20, BY-SB01-40-61, BY-SB02-5-6, BY-SB02-10-16, BY-SB02-30-31, BY-SB02-50-51, TP13-01S-3-050211, TP13-02S-9-050211, TP16-02S-5-042811, TP19-02S-5-042811, TP20-02S-11-042811, TP28-01S-6-050311, TP5-01S-3-050211, TP5-02S-9-050211, TPBY-01, TPBY2-02S-13-050411, TPBY3-01S-3-050411, and TPBY4-01S-9-050411. Data were qualified "J" and "UJ" to indicate a potential low bias.

- The TCLP mercury holding time was exceeded for samples EPH-SB01-10-11, FP-SB01-5-6, FP-SB01-20-21, and FP-SB01-45-46. Data were qualified "J" to indicate a potential low bias.

- The nitrate + nitrite holding time was exceeded for sample FP-01. Data were qualified "J" to indicate a potential low bias.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with prep batch 560-60240 had an antimony detection (1.372 milligrams per kilogram, or mg/kg). The total antimony results for samples AM-SS01-0-0.5, AM-SS02-0-0.5, AM-SS03-0-0.5, and AM-SS04-0-0.5 were qualified "UJ" to indicate a potential bias.

- The method blank associated with prep batch 560-60609 had detections of lead (0.00266 milligrams per liter, or mg/L) and zinc (0.01159 mg/L). The total and dissolved lead and total and dissolved zinc results for samples PBA-2 were qualified "UJ" to indicate a potential bias.

- The method blank associated with prep batch 560-60665 had a sodium detection (1.485 mg/L). Data qualification was not required because the sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with prep batch 560-61405 (analytical batch 560-61470) had a zinc detection (0.003812 mg/L). The dissolved zinc result for sample EPH-01 was qualified "UJ" to indicate a potential bias.

- The method blank associated with prep batch 560-64965 had a barium detection (0.00208 mg/L). Data qualification was not required because the barium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-60836 had a chloride detection (0.663 mg/L). Data qualification was not required because the chloride detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-60443 had a TOC detection (0.607 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-60643 had a TOC detection (0.66 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-61026 had a TOC detection (0.417 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-61499 had a TOC detection (0.393 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-61657 had a TOC detection (0.338 mg/L). Data qualification was not required because the TOC detections in the associated sample was greater than ten times the method blank concentration.

3.4.2. Leachate Blank Interference

Leachate blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The leachate blank associated with prep batch 560-62030 had detections of barium (0.02106 milligrams per liter, or mg/L) and chromium (0.00318 mg/L). The SPLP barium results for samples FP-SB01-5-6, FP-SB01-20-21, FP-SB01-45-46, and EPH-SB01-10-11; and the SPLP chromium results for samples EPH-SB01-10-11, FP-SB01-20-21, and FP-SB01-45-46 were qualified "UJ" to indicate a potential bias.

- The leachate blank associated with prep batch 560-63243 had detections of barium (0.03108 mg/L), chromium (0.00651 mg/L), iron (0.06999 mg/L), and zinc (0.0485 mg/L). The SPLP barium results for samples BY-SB01-5-6, BY-SB01-15-20, BY-SB02-30-31, TP13-01S-3-050211, TP28-01S-6-050311, TPBY-01, TPBY2-02S-13-050411, TPBY3-01S-3-050411, and TPBY4-01S-9-050411; the SPLP chromium results for samples BY-SB01-5-6, BY-SB01-15-20, BY-SB01-40-61, BY-SB02-5-6, BY-SB02-10-16, BY-SB02-30-31, TP13-01S-3-050211, TP28-01S-6-050311, TPBY-01, TPBY2-02S-13-050411, TPBY3-01S-3-050411, and TPBY4-01S-9-050411; the SPLP iron results for samples BY-SB01-5-6, BY-SB01-40-61, BY-SB02-5-6, BY-SB02-10-16, BY-SB02-30-31, TP13-01S-3-050211, TP28-01S-6-050311, TPBY2-02S-13-050411, TPBY3-01S-3-050411, and TPBY4-01S-9-050411; and the SPLP zinc results for samples BY-SB01-5-6, BY-SB02-5-6, BY-SB02-30-31, and TP28-01S-6-050311 were qualified "UJ" to indicate a potential bias.

- The leachate blank associated with prep batch 560-63294 had detections of arsenic (0.00466 mg/L), barium (0.1304 mg/L), chromium (0.03776 mg/L), copper (0.0228 mg/L), iron (0.3372 mg/L), lead (0.0177 mg/L), nickel (0.00762 mg/L), and zinc (0.1441 mg/L). The SPLP barium, SPLP chromium, SPLP copper, SPLP iron, SPLP lead, SPLP nickel, and SPLP zinc results for sample TP5-01S-3-050211 were qualified "UJ" to indicate a potential bias. Data qualification was not required for arsenic because the arsenic detection in the associated sample was greater than ten times the method blank concentration.

3.5. Laboratory Control Samples Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS percent recoveries and RPDs were within acceptance limits.

3.6. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.

- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for copper (-706 and 517 percent), lead (-522 and 345 percent), and zinc (-410 and 63 percent); the MS recoveries for arsenic (56 percent) and iron (64 percent); and the MSD recovery for barium (54 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-60250. Data qualification was not required because the detections for these analytes in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for barium (-5 and 281 percent), copper (-70 and 876 percent), iron (-45 and 392 percent), lead (-2 and 503 percent), thallium (77

and 73 percent), and zinc (2815 and 310 percent); the MSD recovery for arsenic (196 percent); and the RPDs for arsenic (32 percent), copper (37 percent), iron (31 percent), lead (45 percent), and zinc (52 percent) were outside acceptance limits (75 to 125 percent and 20 percent, respectively) for prep batch 560-60375. The total arsenic and total thallium results for samples PBA-SB03-2-4, PBA-SB04-3-5, PBA-SB05-17-19, PBA-SB06-15-17, PBA-SB06-28-30, PBA-SB06-33-35, PBA-SB09-20-22, and PBA-SB09-33-35 were qualified "J" and "UJ" to indicate a potential bias. Data qualification was not required for barium, copper, iron, lead, and zinc because the detections for these analytes in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for barium (-47 and -64 percent), copper (37 and 56 percent), iron (35 and 66 percent), lead (4 and 46 percent), and zinc (-11 and 143 percent); and the RPDs for lead (31 percent) and zinc (63 percent) were outside acceptance limits (75 to 125 percent and 20 percent, respectively) for prep batch 560-60591. The total copper, total iron, total lead, and total zinc results for samples PBA-SB02-23-25, PBA-SB02-43-45, PBA-SB12-28-30, PBA-SB12-32-34, and PBA-SB13-30-32 were qualified "J" to indicate a potential bias. Data qualification was not required for barium because the detections for this analyte in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for iron (20 and 50 percent), the MS recovery for barium (261 percent), and the RPD for thallium (23 percent) were outside acceptance limits (75 to 125 percent and 20 percent, respectively) for prep batch 560-60853. The total barium result for sample PBA-SB13-42-44 was qualified "J" to indicate a potential high bias. Data qualification was not required for iron because the detection for this analyte in the associated sample was greater than four times the matrix spike concentration; and for thallium because the MS and MSD recoveries were within acceptance limits.

- The MS and MSD recoveries for copper (78 and 79 percent) and zinc (79 and 78 percent), the MS recovery for nickel (79 percent), and the MSD recoveries for magnesium (79 percent) and sodium (65 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-60415. The total copper, dissolved copper, dissolved magnesium, total magnesium, dissolved nickel, total nickel, total zinc, and dissolved zinc results for samples PBA-5 and PBA-6 were qualified "J" to indicate a potential low bias. Data qualification was not required for sodium because the detections for this analyte in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for aluminum (190 and 195 percent) and the MS recovery for sodium (136 percent) were above acceptance limits (80 to 120

percent) for prep batch 560-60969. The total aluminum results for sample PBA-13 were qualified "J" to indicate a potential bias. Data qualification was not required for sodium because the detections for this analyte in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for aluminum (235 and -120 percent), antimony (6 and 7 percent), arsenic (55 and 13 percent), calcium (-248 and -1840 percent), chromium (72 and 58 percent), cobalt (71 and 62 percent), copper (60 and 47 percent), iron (-4 and -16 percent), manganese (71 and 51 percent), molybdenum (32 and 38 percent), nickel (64 and 38 percent), potassium (69 and 62 percent), selenium (70 and 65 percent), sodium (-15 and -173 percent), and zinc (51 and 27 percent); the MSD recoveries for barium (-196 percent), cadmium (74 percent), lead (78 percent), and magnesium (-250 percent); and the RPD for antimony (26 percent) were outside acceptance limits (80 to 120 percent and 20 percent, respectively) for prep batch 560-61549 (analytical batch 560-61605). The dissolved antimony, total antimony, dissolved arsenic, total arsenic, dissolved barium, total barium, dissolved cadmium, total cadmium, dissolved chromium, total chromium, dissolved cobalt, total cobalt, dissolved copper, total copper, dissolved iron, dissolved lead, total lead, dissolved manganese, total manganese, dissolved magnesium, dissolved molybdenum, total molybdenum, dissolved nickel, total nickel, dissolved potassium, total potassium, dissolved selenium, total selenium, dissolved zinc, and total zinc results for sample EPH-02 were qualified "J" and "UJ" to indicate a potential bias. Data qualification was not required for aluminum and calcium because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration; and for sodium because the analyte is not associated with the analytical batch.

- The MS and MSD recoveries for aluminum (188 and -228 percent), calcium (-23 and -1283 percent), iron (-13 and 15 percent), and magnesium (-15 and -235 percent) were outside acceptance limits (80 to 120 percent) for prep batch 560-61549 (analytical batch 560-61682). Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for sodium (-73 and -112 percent) were below acceptance limits (80 to 120 percent) for prep batch 560-61549 (analytical batch 560-61824). Data qualification was not required because the detection for this analyte in the associated sample was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for arsenic (161 and 178 percent), barium (127 and 127 percent), copper (-3561 and -988 percent), and lead (160 and 232 percent), molybdenum (372 and 414 percent), and zinc (330 and -732 percent); and the MS

recoveries for chromium (142 percent) and iron (233 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-62164. Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for antimony (-66 and -359 percent), arsenic (1748 and 3961 percent), barium (769 and 456 percent), cadmium (502 and 1948 percent), cobalt (201 and 131 percent), copper (3351 and 25620 percent), iron (544 and 622 percent), lead (13936 and 20811 percent), molybdenum (197 and 270 percent), selenium (143 and 220 percent), and zinc (-602 and -1068 percent); the MSD recoveries for chromium (-58 percent) and silver (200 percent); and the RPDs for cadmium (23 percent), chromium (38 percent), and copper (62 percent) are outside acceptance limits (75 to 125 percent and 20 percent, respectively) for prep batch 560-63282. The chromium, selenium, and silver results for samples BY-SB01-5-6, BY-SB01-15-20, BY-SB01-40-61, BY-SB02-5-6, BY-SB02-10-16, BY-SB02-30-31, BY-SB02-50-51, TP13-01S-3-050211, TP28-01S-6-050311, TP5-01S-3-050211, TPBY-01, TPBY2-02S-13-050411, TPBY3-01S-3-050411, and TPBY4-01S-9-050411 were qualified "J" to indicate a potential bias. Data qualification was not required for antimony, arsenic, barium, cadmium, cobalt, copper, iron, lead, molybdenum, and zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for SPLP copper (2776 and 2781 percent), SPLP molybdenum (121 and 122 percent), SPLP nickel (147 and 148 percent), and SPLP zinc (1733 and 1793 percent) were above acceptance limits (80 to 120 percent) for prep batch 560-62030. The SPLP molybdenum results for samples EPH-SB01-10-11, FP-SB01-5-6, FP-SB01-20-21, and FP-SB01-45-46 and the SPLP nickel results for samples EPH-SB01-10-11, FP-SB01-5-6, and FP-SB01-20-21 were qualified "J" to indicate a potential high bias. Data qualification was not required for SPLP copper and SPLP zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MSD recovery for sulfate (77 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-60836. The sulfate results for samples PBA-07, PBA-08, and PBA-10 were qualified "J" to indicate a potential low bias.

3.7. Duplicates

3.7.1. Field Duplicates

Two field duplicates were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD values between sample EPH-SB01-15-16 and field duplicate FD06282011 for total antimony (96 percent), total arsenic (163 percent), total barium (37 percent), total cadmium (92 percent), total cobalt (68 percent), total copper (89 percent), total lead (85 percent), total molybdenum (121 percent), total nickel (41 percent), and total zinc (105) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.
- The RPD values between sample FP-SB01-55-56 and field duplicate FD06292011 for total antimony (51 percent), total barium (56 percent), total cadmium (87 percent), total cobalt (45 percent), total copper (62 percent), total lead (66 percent), total manganese (41 percent), and total nickel (56 percent) were above the acceptance limit; and the difference between FP-SB01-55-56 and FD06292011 for total mercury exceeded the MQL. Data qualification for total antimony was not required because the difference between FP-SB01-55-56 and FD06292011 did not exceed the MQL. Data for all other analytes were qualified "J" to indicate a potential bias.

3.7.2. QA Split Samples

One QA split sample was collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were calculated and are presented in Table 3. The split sample was evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPD values between sample FP-SB01-55-56 and split sample QA06292011 for total antimony (54 percent), total chromium (37 percent), and total zinc (48 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.8. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Several total and dissolved metals had contractual compliances below 90 percent due to method blank interference, MS/MSD percent recovery outliers, high field duplicate and QA split RPDs, and holding time exceedances.

- Several SPLP and TCLP metals had contractual compliances below 90 percent due to leachate blank interference, MS/MSD percent recovery outliers, and holding time exceedances.

- Magnesium and sulfate had contractual compliances below 90 percent due to MS/MSD percent recovery outliers.

The results for the data gap sampling event conducted April, May, and June 2011 were considered usable for the intended purposes and the project DQOs have been met.

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
Soil Samples				
AM-SS01-0-0.5	560-26264-1	5/26/2011	N	Total Metals
AM-SS02-0-0.5	560-26264-2	5/26/2011	N	Total Metals
AM-SS03-0-0.5	560-26264-3	5/26/2011	N	Total Metals
AM-SS04-0-0.5	560-26264-4	5/26/2011	N	Total Metals
AM-SS05-0-0.5	560-26264-5	5/26/2011	N	Total Metals
AM-SS06-0-0.5	560-26264-6	5/26/2011	N	Total Metals
AM-SS07-0-0.5	560-26264-7	5/26/2011	N	Total Metals
AM-SS08-0-0.5	560-26264-8	5/26/2011	N	Total Metals
AM-SS09-0-0.5	560-26264-9	5/26/2011	N	Total Metals
AM-SS10-0-0.5	560-26264-10	5/26/2011	N	Total Metals
AM-SS11-0-0.5	560-26264-11	5/26/2011	N	Total Metals
AM-SS12-0-0.5	560-26264-12	5/26/2011	N	Total Metals
AM-SS13-0-0.5	560-26264-13	5/26/2011	N	Total Metals
AM-SS14-0-0.5	560-26264-14	5/26/2011	N	Total Metals
AM-SS15-0-0.5	560-26264-15	5/26/2011	N	Total Metals
AM-SS16-0-0.5	560-26264-16	5/26/2011	N	Total Metals
AM-SS17-0-0.5	560-26264-17	5/26/2011	N	Total Metals
AM-SS18-0-0.5	560-26264-18	5/26/2011	N	Total Metals
AM-SS19-0-0.5	560-26264-19	5/26/2011	N	Total Metals
BY-SB01-15-20	560-27641-9	6/24/2011	N	Total Metals, SPLP Metals
BY-SB01-40-61	560-27641-10	6/24/2011	N	Total Metals, SPLP Metals
BY-SB01-5-6	560-27641-8	6/24/2011	N	Total Metals, SPLP Metals
BY-SB02-10-16	560-27641-12	6/24/2011	N	Total Metals, SPLP Metals
BY-SB02-30-31	560-27641-13	6/24/2011	N	Total Metals, SPLP Metals
BY-SB02-50-51	560-27641-14	6/27/2011	N	Total Metals
BY-SB02-5-6	560-27641-11	6/24/2011	N	Total Metals, SPLP Metals
EPH-SB01-10-11	560-27131-8	6/28/2011	N	Total Metals[a], SPLP Metals, TCLP Metals
EPH-SB01-15-16	560-27131-9	6/28/2011	N	Total Metals
EPH-SB01-30-31	560-27131-11	6/28/2011	N	Total Metals
EPH-SB02-15-18	560-27131-14	6/28/2011	N	Total Metals
EPH-SB02-33-34	560-27131-15	6/28/2011	N	Total Metals
FD06282011	560-27131-10	6/28/2011	FD of EPH-SB01-15-16	Total Metals
FD06292011	560-27131-6	6/29/2011	FD of FP-SB01-55-56	Total Metals
FP-SB01-20-21	560-27131-2	6/29/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB01-45-46	560-27131-3	6/29/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB01-47-48	560-27131-4	6/29/2011	N	Total Metals
FP-SB01-55-56	560-27131-5	6/29/2011	N	Total Metals
FP-SB01-5-6	560-27131-1	6/29/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB01-70-71	560-27131-7	6/29/2011	N	Total Metals
PBA-SB02-23-25	560-26453-5	6/9/2011	N	Total Metals
PBA-SB02-43-45	560-26453-6	6/9/2011	N	Total Metals
PBA-SB03-2-4	560-26348-3	5/31/2011	N	Total Metals
PBA-SB04-3-5	560-26348-4	5/31/2011	N	Total Metals

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
PBA-SB05-17-19	560-26348-10	6/2/2011	N	Total Metals
PBA-SB06-15-17	560-26348-7	6/3/2011	N	Total Metals
PBA-SB06-28-30	560-26348-8	6/3/2011	N	Total Metals
PBA-SB06-33-35	560-26348-9	6/3/2011	N	Total Metals
PBA-SB07-15-16	560-26586-9	6/16/2011	N	Total Metals
PBA-SB08-19-20	560-26586-6	6/15/2011	N	Total Metals
PBA-SB08-24-25	560-26586-7	6/15/2011	N	Total Metals
PBA-SB08-34-35	560-26586-8	6/15/2011	N	Total Metals
PBA-SB09-20-22	560-26348-5	6/1/2011	N	Total Metals
PBA-SB09-33-35	560-26348-6	6/1/2011	N	Total Metals
PBA-SB10-15-17	560-26586-4	6/15/2011	N	Total Metals
PBA-SB10-32-34	560-26586-5	6/15/2011	N	Total Metals
PBA-SB12-28-30	560-26453-3	6/8/2011	N	Total Metals
PBA-SB12-32-34	560-26453-4	6/8/2011	N	Total Metals
PBA-SB13-30-32	560-26453-7	6/10/2011	N	Total Metals
PBA-SB13-42-44	560-26515-3	6/13/2011	N	Total Metals
QA06292011	1107595-1	6/29/2011	QA split of FP-SB01-55-56	Total Metals
TP13-01S-3-050211	560-27641-6	5/2/2011	N	Total Metals, SPLP Metals
TP13-02S-9-050211	560-28481-2	5/2/2011	N	Total Metals, SPLP Metals
TP16-02S-5-042811	560-28481-3	4/28/2011	N	Total Metals, SPLP Metals
TP19-02S-5-042811	560-28481-4	4/28/2011	N	Total Metals, SPLP Metals
TP20-02S-11-042811	560-28481-5	4/28/2011	N	Total Metals, SPLP Metals
TP28-01S-6-050311	560-27641-7	5/3/2011	N	Total Metals, SPLP Metals
TP5-01S-3-050211	560-27641-5	5/2/2011	N	Total Metals, SPLP Metals
TP5-02S-9-050211	560-28481-1	5/2/2011	N	Total Metals, SPLP Metals
TPBY-01	560-27641-1	5/4/2011	N	Total Metals, SPLP Metals
TPBY2-02S-13-050411	560-27641-2	5/4/2011	N	Total Metals, SPLP Metals
TPBY3-01S-3-050411	560-27641-3	5/4/2011	N	Total Metals, SPLP Metals
TPBY4-01S-9-050411	560-27641-4	5/4/2011	N	Total Metals, SPLP Metals
Water Samples				
EPH-01	560-26843-1	6/29/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EPH-02	560-26843-2	6/29/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FP-01	560-26885-1	6/30/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-2	560-26453-2	6/10/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-5	560-26348-1	6/3/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-6	560-26348-2	6/3/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-07	560-26586-3	6/16/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-08	560-26586-2	6/16/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-10	560-26586-1	6/16/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
PBA-12	560-26453-1	6/10/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity
PBA-13	560-26515-1	6/14/2011	N	Total and Dissolved Metals, Total and Dissolved Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Notes:
N = Normal sample
FD = Field Duplicate
Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, and zinc
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate + nitrite, sulfate, and sulfide
TDS = Total Dissolved Solids
TSS = Total Suspended Solids
TOC = Total Organic Carbon

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
Soil Samples						
AM-SS01-0-0.5	560-26264-1	Antimony, Total	<5.97	mg/Kg	UJ	Qualified due to method blank contamination
AM-SS01-0-0.5	560-26264-1	Mercury, Total	0.113	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS01-0-0.5	560-26264-1	Molybdenum, Total	1.68	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS01-0-0.5	560-26264-1	Selenium, Total	0.817	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS02-0-0.5	560-26264-2	Antimony, Total	<2.14	mg/Kg	UJ	Qualified due to method blank contamination
AM-SS02-0-0.5	560-26264-2	Mercury, Total	0.0639	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS02-0-0.5	560-26264-2	Molybdenum, Total	0.615	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS02-0-0.5	560-26264-2	Selenium, Total	0.372	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS02-0-0.5	560-26264-2	Silver, Total	0.191	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS03-0-0.5	560-26264-3	Antimony, Total	<3.2	mg/Kg	UJ	Qualified due to method blank contamination
AM-SS03-0-0.5	560-26264-3	Mercury, Total	0.0879	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS03-0-0.5	560-26264-3	Molybdenum, Total	0.728	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS03-0-0.5	560-26264-3	Selenium, Total	0.544	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS04-0-0.5	560-26264-4	Antimony, Total	<4.28	mg/Kg	UJ	Qualified due to method blank contamination
AM-SS04-0-0.5	560-26264-4	Mercury, Total	0.0201	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS04-0-0.5	560-26264-4	Molybdenum, Total	0.661	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS04-0-0.5	560-26264-4	Selenium, Total	0.477	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS04-0-0.5	560-26264-4	Silver, Total	0.279	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS08-0-0.5	560-26264-8	Mercury, Total	0.105	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS09-0-0.5	560-26264-9	Molybdenum, Total	1.53	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS10-0-0.5	560-26264-10	Mercury, Total	0.0204	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS11-0-0.5	560-26264-11	Molybdenum, Total	1.06	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS13-0-0.5	560-26264-13	Mercury, Total	0.0705	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS14-0-0.5	560-26264-14	Mercury, Total	0.0848	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS16-0-0.5	560-26264-16	Mercury, Total	0.0708	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
AM-SS19-0-0.5	560-26264-19	Mercury, Total	0.115	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-5-6	560-27641-8	Barium, SPLP	<0.215	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-5-6	560-27641-8	Chromium, SPLP	<0.0107	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-5-6	560-27641-8	Chromium, Total	18.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-5-6	560-27641-8	Iron, SPLP	<0.329	mg/L	UJ	Qualified due to leachate blank contamination

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BY-SB01-5-6	560-27641-8	Mercury, SPLP	0.000253	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB01-5-6	560-27641-8	Mercury, Total	0.767	mg/Kg	J	Qualified due to holding time exceedance
BY-SB01-5-6	560-27641-8	Selenium, SPLP	0.00848	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-5-6	560-27641-8	Selenium, Total	12.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-5-6	560-27641-8	Silver, Total	14.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-5-6	560-27641-8	Zinc, SPLP	<0.288	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-15-20	560-27641-9	Barium, SPLP	<0.175	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-15-20	560-27641-9	Chromium, SPLP	<0.0148	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-15-20	560-27641-9	Chromium, Total	46.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-15-20	560-27641-9	Cobalt, SPLP	0.00289	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-15-20	560-27641-9	Mercury, SPLP	0.00104	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB01-15-20	560-27641-9	Mercury, Total	1.07	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB01-15-20	560-27641-9	Nickel, SPLP	0.00584	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-15-20	560-27641-9	Selenium, Total	9.33	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-15-20	560-27641-9	Silver, Total	23.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-40-61	560-27641-10	Cadmium, SPLP	0.00184	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-40-61	560-27641-10	Chromium, SPLP	<0.0105	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-40-61	560-27641-10	Chromium, Total	86.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-40-61	560-27641-10	Cobalt, SPLP	0.00105	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB01-40-61	560-27641-10	Iron, SPLP	<0.382	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB01-40-61	560-27641-10	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
BY-SB01-40-61	560-27641-10	Mercury, Total	0.351	mg/Kg	J	Qualified due to holding time exceedance
BY-SB01-40-61	560-27641-10	Selenium, Total	59.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB01-40-61	560-27641-10	Silver, Total	40.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-5-6	560-27641-11	Cadmium, SPLP	0.00162	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB02-5-6	560-27641-11	Chromium, SPLP	<0.00662	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB02-5-6	560-27641-11	Chromium, Total	133	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-5-6	560-27641-11	Iron, SPLP	<0.128	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BY-SB02-5-6	560-27641-11	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
BY-SB02-5-6	560-27641-11	Mercury, Total	0.0715	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB02-5-6	560-27641-11	Selenium, Total	109	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-5-6	560-27641-11	Silver, Total	47.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-5-6	560-27641-11	Zinc, SPLP	<0.299	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB02-10-16	560-27641-12	Chromium, SPLP	<0.00737	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB02-10-16	560-27641-12	Chromium, Total	77.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-10-16	560-27641-12	Iron, SPLP	<0.403	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB02-10-16	560-27641-12	Mercury, SPLP	0.000131	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB02-10-16	560-27641-12	Mercury, Total	<0.012	mg/Kg	UJ	Qualified due to holding time exceedance
BY-SB02-10-16	560-27641-12	Selenium, Total	101	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-10-16	560-27641-12	Silver, Total	36.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-30-31	560-27641-13	Barium, SPLP	<0.101	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB02-30-31	560-27641-13	Chromium, SPLP	<0.00569	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Chromium, Total	28.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-30-31	560-27641-13	Cobalt, SPLP	0.00204	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Iron, SPLP	<0.0507	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Mercury, SPLP	0.000271	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Mercury, Total	0.0513	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Nickel, SPLP	0.00494	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB02-30-31	560-27641-13	Selenium, Total	18.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-30-31	560-27641-13	Silver, Total	12.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-30-31	560-27641-13	Zinc, SPLP	<0.428	mg/L	UJ	Qualified due to leachate blank contamination
BY-SB02-50-51	560-27641-14	Chromium, Total	12.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB02-50-51	560-27641-14	Mercury, Total	0.0263	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BY-SB02-50-51	560-27641-14	Molybdenum, Total	1.55	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB02-50-51	560-27641-14	Selenium, Total	5.73	mg/Kg	J	Qualified due to MS/MSD percent recovery
EPH-SB01-10-11	560-27131-8	Barium, SPLP	<0.17	mg/L	UJ	Qualified due to leachate blank contamination
EPH-SB01-10-11	560-27131-8	Chromium, SPLP	<0.00524	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Cobalt, SPLP	0.00422	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Mercury, SPLP	0.000156	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
EPH-SB01-10-11	560-27131-8	Mercury, Total	0.0369	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Molybdenum, SPLP	0.054	mg/L	J	Qualified due to MS/MSD recovery
EPH-SB01-10-11	560-27131-8	Molybdenum, TCLP	0.0068	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Nickel, SPLP	0.00889	mg/L	J	Qualified due to MS/MSD recovery; Estimated; Analyte detected between SDL and MQL
EPH-SB01-10-11	560-27131-8	Selenium, TCLP	0.00653	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-15-16	560-27131-9	Antimony, Total	2.96	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Arsenic, Total	26.1	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Barium, Total	179	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Cadmium, Total	3.49	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Cobalt, Total	5.69	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Copper, Total	80	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Lead, Total	107	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Molybdenum, Total	4.26	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Nickel, Total	8.68	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-15-16	560-27131-9	Selenium, Total	0.296	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-15-16	560-27131-9	Zinc, Total	159	mg/Kg	J	Qualified due to high field duplicate RPD
EPH-SB01-30-31	560-27131-11	Cadmium, Total	0.315	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-30-31	560-27131-11	Molybdenum, Total	1.67	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB01-30-31	560-27131-11	Silver, Total	0.321	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB02-15-18	560-27131-14	Antimony, Total	0.952	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB02-15-18	560-27131-14	Cadmium, Total	0.292	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB02-15-18	560-27131-14	Selenium, Total	0.395	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB02-33-34	560-27131-15	Antimony, Total	0.695	mg/Kg	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EPH-SB02-33-34	560-27131-15	Cadmium, Total	0.145	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
EPH-SB02-33-34	560-27131-15	Molybdenum, Total	0.598	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD06282011	560-27131-10	Antimony, Total	8.47	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Arsenic, Total	253	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Barium, Total	259	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Cadmium, Total	9.44	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Cobalt, Total	11.5	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Copper, Total	207	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Lead, Total	264	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Molybdenum, Total	17.4	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Nickel, Total	13.1	mg/Kg	J	Qualified due to high field duplicate RPD
FD06282011	560-27131-10	Silver, Total	0.486	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD06282011	560-27131-10	Zinc, Total	514	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Barium, Total	126	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Cadmium, Total	1.69	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Cobalt, Total	3.86	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Copper, Total	104	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Lead, Total	88.4	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Manganese, Total	217	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Mercury, Total	0.22	mg/Kg	J	Qualified due to field duplicate RPD outlier
FD06292011	560-27131-6	Molybdenum, Total	1.07	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD06292011	560-27131-6	Nickel, Total	6.17	mg/Kg	J	Qualified due to high field duplicate RPD
FD06292011	560-27131-6	Silver, Total	0.246	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-5-6	560-27131-1	Barium, SPLP	<0.0808	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB01-5-6	560-27131-1	Chromium, TCLP	0.00352	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-5-6	560-27131-1	Iron, SPLP	0.0668	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-5-6	560-27131-1	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB01-5-6	560-27131-1	Molybdenum, SPLP	0.0979	mg/L	J	Qualified due to MS/MSD recovery
FP-SB01-5-6	560-27131-1	Nickel, SPLP	0.284	mg/L	J	Qualified due to MS/MSD recovery
FP-SB01-5-6	560-27131-1	Selenium, SPLP	0.00591	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-20-21	560-27131-2	Arsenic, TCLP	0.00832	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-20-21	560-27131-2	Barium, SPLP	<0.0946	mg/L	UJ	Qualified due to leachate blank contamination

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB01-20-21	560-27131-2	Chromium, SPLP	<0.00611	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB01-20-21	560-27131-2	Chromium, TCLP	0.0052	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-20-21	560-27131-2	Iron, TCLP	0.141	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-20-21	560-27131-2	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB01-20-21	560-27131-2	Molybdenum, SPLP	0.074	mg/L	J	Qualified due to MS/MSD recovery
FP-SB01-20-21	560-27131-2	Nickel, SPLP	0.336	mg/L	J	Qualified due to MS/MSD recovery
FP-SB01-45-46	560-27131-3	Barium, SPLP	<0.169	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB01-45-46	560-27131-3	Cadmium, SPLP	0.00237	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Chromium, SPLP	<0.00632	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Chromium, TCLP	0.00406	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Iron, SPLP	0.197	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Iron, TCLP	0.125	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB01-45-46	560-27131-3	Mercury, Total	0.0369	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-45-46	560-27131-3	Molybdenum, SPLP	0.206	mg/L	J	Qualified due to MS/MSD recovery
FP-SB01-45-46	560-27131-3	Selenium, TCLP	0.00567	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-55-56	560-27131-5	Antimony, Total	2.81	mg/Kg	J	Qualified due to high QA split RPD
FP-SB01-55-56	560-27131-5	Barium, Total	71.2	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Cadmium, Total	0.669	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Chromium, Total	5.98	mg/Kg	J	Qualified due to high QA split RPD
FP-SB01-55-56	560-27131-5	Cobalt, Total	2.45	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Copper, Total	54.9	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Lead, Total	44.5	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Manganese, Total	143	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Mercury, Total	<0.0136	mg/Kg	UJ	Qualified due to field duplicate RPD outlier
FP-SB01-55-56	560-27131-5	Molybdenum, Total	1.42	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-55-56	560-27131-5	Nickel, Total	3.48	mg/Kg	J	Qualified due to high field duplicate RPD
FP-SB01-55-56	560-27131-5	Selenium, Total	0.607	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-55-56	560-27131-5	Zinc, Total	80	mg/Kg	J	Qualified due to high QA split RPD
FP-SB01-70-71	560-27131-7	Cadmium, Total	0.206	mg/Kg	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB01-70-71	560-27131-7	Molybdenum, Total	1.18	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB02-23-25	560-26453-5	Copper, Total	918	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-23-25	560-26453-5	Iron, Total	72300	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-23-25	560-26453-5	Lead, Total	5160	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-23-25	560-26453-5	Zinc, Total	5240	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-43-45	560-26453-6	Copper, Total	33.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-43-45	560-26453-6	Iron, Total	20400	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-43-45	560-26453-6	Lead, Total	25.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB02-43-45	560-26453-6	Mercury, Total	0.0761	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB02-43-45	560-26453-6	Molybdenum, Total	1.2	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB02-43-45	560-26453-6	Selenium, Total	0.339	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB02-43-45	560-26453-6	Silver, Total	0.283	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB02-43-45	560-26453-6	Zinc, Total	77.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB03-2-4	560-26348-3	Arsenic, Total	42.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB03-2-4	560-26348-3	Mercury, Total	0.0214	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB03-2-4	560-26348-3	Thallium, Total	<0.0116	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
PBA-SB04-3-5	560-26348-4	Arsenic, Total	36.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB04-3-5	560-26348-4	Silver, Total	0.19	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB04-3-5	560-26348-4	Thallium, Total	<0.103	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
PBA-SB05-17-19	560-26348-10	Arsenic, Total	188	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB05-17-19	560-26348-10	Mercury, Total	0.0587	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB05-17-19	560-26348-10	Selenium, Total	0.68	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB05-17-19	560-26348-10	Thallium, Total	5.45	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB06-15-17	560-26348-7	Arsenic, Total	37.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB06-15-17	560-26348-7	Mercury, Total	0.0937	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-15-17	560-26348-7	Selenium, Total	0.864	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-15-17	560-26348-7	Thallium, Total	1.19	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB06-28-30	560-26348-8	Antimony, Total	0.438	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-28-30	560-26348-8	Arsenic, Total	16.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB06-28-30	560-26348-8	Mercury, Total	0.0294	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-28-30	560-26348-8	Selenium, Total	0.291	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-28-30	560-26348-8	Thallium, Total	0.368	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
PBA-SB06-33-35	560-26348-9	Arsenic, Total	7.97	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB06-33-35	560-26348-9	Cadmium, Total	0.451	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-33-35	560-26348-9	Mercury, Total	0.111	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB06-33-35	560-26348-9	Thallium, Total	<0.136	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
PBA-SB07-15-16	560-26586-9	Antimony, Total	0.447	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB07-15-16	560-26586-9	Cadmium, Total	0.216	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB07-15-16	560-26586-9	Molybdenum, Total	0.285	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-19-20	560-26586-6	Antimony, Total	0.432	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-19-20	560-26586-6	Mercury, Total	0.131	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-19-20	560-26586-6	Molybdenum, Total	0.872	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-19-20	560-26586-6	Thallium, Total	0.773	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-24-25	560-26586-7	Antimony, Total	0.779	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-24-25	560-26586-7	Molybdenum, Total	0.282	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-24-25	560-26586-7	Thallium, Total	0.639	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-34-35	560-26586-8	Molybdenum, Total	0.343	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-34-35	560-26586-8	Selenium, Total	0.188	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB08-34-35	560-26586-8	Thallium, Total	0.493	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB09-20-22	560-26348-5	Arsenic, Total	4.99	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB09-20-22	560-26348-5	Cadmium, Total	0.452	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB09-20-22	560-26348-5	Selenium, Total	0.575	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB09-20-22	560-26348-5	Thallium, Total	<0.114	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
PBA-SB09-33-35	560-26348-6	Arsenic, Total	4.78	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB09-33-35	560-26348-6	Cadmium, Total	0.334	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB09-33-35	560-26348-6	Selenium, Total	0.786	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB09-33-35	560-26348-6	Thallium, Total	<0.133	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
PBA-SB10-15-17	560-26586-4	Antimony, Total	0.686	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB10-15-17	560-26586-4	Molybdenum, Total	0.581	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB10-15-17	560-26586-4	Thallium, Total	0.48	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB10-32-34	560-26586-5	Molybdenum, Total	1.39	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB10-32-34	560-26586-5	Thallium, Total	0.256	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Antimony, Total	1.26	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Cadmium, Total	0.474	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Copper, Total	13.3	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
PBA-SB12-28-30	560-26453-3	Iron, Total	6840	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-28-30	560-26453-3	Lead, Total	21.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-28-30	560-26453-3	Mercury, Total	0.0151	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Molybdenum, Total	1.86	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Selenium, Total	0.674	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-28-30	560-26453-3	Zinc, Total	34.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-32-34	560-26453-4	Copper, Total	126	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-32-34	560-26453-4	Iron, Total	20300	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-32-34	560-26453-4	Lead, Total	75.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB12-32-34	560-26453-4	Mercury, Total	0.0287	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-32-34	560-26453-4	Selenium, Total	0.321	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-32-34	560-26453-4	Silver, Total	0.158	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB12-32-34	560-26453-4	Zinc, Total	173	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-30-32	560-26453-7	Antimony, Total	0.775	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB13-30-32	560-26453-7	Copper, Total	18.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-30-32	560-26453-7	Iron, Total	9470	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-30-32	560-26453-7	Lead, Total	7.81	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-30-32	560-26453-7	Molybdenum, Total	0.825	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB13-30-32	560-26453-7	Zinc, Total	45.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-42-44	560-26515-3	Barium, Total	33.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
PBA-SB13-42-44	560-26515-3	Cadmium, Total	0.321	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB13-42-44	560-26515-3	Molybdenum, Total	0.673	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
PBA-SB13-42-44	560-26515-3	Thallium, Total	0.74	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
QA06292011	1107595-1	Antimony, Total	1.61	mg/Kg	J	Qualified due to high QA split RPD
QA06292011	1107595-1	Chromium, Total	4.13	mg/Kg	J	Qualified due to high QA split RPD
QA06292011	1107595-1	Silver, Total	0.175	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
QA06292011	1107595-1	Zinc, Total	47.9	mg/Kg	J	Qualified due to high QA split RPD
TP13-01S-3-050211	560-27641-6	Barium, SPLP	<0.229	mg/L	UJ	Qualified due to leachate blank contamination
TP13-01S-3-050211	560-27641-6	Chromium, SPLP	<0.00948	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TP13-01S-3-050211	560-27641-6	Chromium, Total	38.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP13-01S-3-050211	560-27641-6	Cobalt, SPLP	0.00158	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP13-01S-3-050211	560-27641-6	Iron, SPLP	<0.305	mg/L	UJ	Qualified due to leachate blank contamination

Table 2
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Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
TP13-01S-3-050211	560-27641-6	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP13-01S-3-050211	560-27641-6	Mercury, Total	0.425	mg/Kg	J	Qualified due to holding time exceedance
TP13-01S-3-050211	560-27641-6	Nickel, SPLP	0.0021	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP13-01S-3-050211	560-27641-6	Selenium, Total	16	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP13-01S-3-050211	560-27641-6	Silver, Total	7.63	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP13-02S-9-050211	560-28481-2	Cadmium, SPLP	0.00323	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP13-02S-9-050211	560-28481-2	Chromium, SPLP	0.00758	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP13-02S-9-050211	560-28481-2	Iron, SPLP	0.159	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP13-02S-9-050211	560-28481-2	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP13-02S-9-050211	560-28481-2	Mercury, Total	0.179	mg/Kg	J	Qualified due to holding time exceedance
TP16-02S-5-042811	560-28481-3	Cadmium, SPLP	0.00261	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP16-02S-5-042811	560-28481-3	Chromium, SPLP	0.00664	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP16-02S-5-042811	560-28481-3	Lead, SPLP	0.0086	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP16-02S-5-042811	560-28481-3	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP16-02S-5-042811	560-28481-3	Mercury, Total	0.0558	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
TP19-02S-5-042811	560-28481-4	Chromium, SPLP	0.00765	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP19-02S-5-042811	560-28481-4	Copper, SPLP	0.007	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP19-02S-5-042811	560-28481-4	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP19-02S-5-042811	560-28481-4	Mercury, Total	<0.0129	mg/Kg	UJ	Qualified due to holding time exceedance
TP19-02S-5-042811	560-28481-4	Selenium, Total	0.792	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
TP20-02S-11-042811	560-28481-5	Chromium, SPLP	0.00621	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP20-02S-11-042811	560-28481-5	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP20-02S-11-042811	560-28481-5	Mercury, Total	0.97	mg/Kg	J	Qualified due to holding time exceedance
TP20-02S-11-042811	560-28481-5	Selenium, SPLP	0.00929	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP28-01S-6-050311	560-27641-7	Barium, SPLP	<0.102	mg/L	UJ	Qualified due to leachate blank contamination
TP28-01S-6-050311	560-27641-7	Chromium, SPLP	<0.00667	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TP28-01S-6-050311	560-27641-7	Chromium, Total	28.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP28-01S-6-050311	560-27641-7	Iron, SPLP	<0.21	mg/L	UJ	Qualified due to leachate blank contamination
TP28-01S-6-050311	560-27641-7	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP28-01S-6-050311	560-27641-7	Mercury, Total	0.075	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
TP28-01S-6-050311	560-27641-7	Nickel, SPLP	0.00289	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP28-01S-6-050311	560-27641-7	Selenium, Total	3.27	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP28-01S-6-050311	560-27641-7	Silver, Total	5.62	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP28-01S-6-050311	560-27641-7	Zinc, SPLP	<0.25	mg/L	UJ	Qualified due to leachate blank contamination
TP5-01S-3-050211	560-27641-5	Barium, SPLP	<0.133	mg/L	UJ	Qualified due to leachate blank contamination
TP5-01S-3-050211	560-27641-5	Cadmium, SPLP	0.00435	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-01S-3-050211	560-27641-5	Chromium, SPLP	<0.00883	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TP5-01S-3-050211	560-27641-5	Chromium, Total	29.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP5-01S-3-050211	560-27641-5	Cobalt, SPLP	0.00268	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-01S-3-050211	560-27641-5	Copper, SPLP	<0.0818	mg/L	UJ	Qualified due to leachate blank contamination
TP5-01S-3-050211	560-27641-5	Iron, SPLP	<0.196	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TP5-01S-3-050211	560-27641-5	Lead, SPLP	<0.031	mg/L	UJ	Qualified due to leachate blank contamination
TP5-01S-3-050211	560-27641-5	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP5-01S-3-050211	560-27641-5	Mercury, Total	0.368	mg/Kg	J	Qualified due to holding time exceedance
TP5-01S-3-050211	560-27641-5	Nickel, SPLP	<0.00582	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TP5-01S-3-050211	560-27641-5	Selenium, Total	21.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP5-01S-3-050211	560-27641-5	Silver, Total	11.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
TP5-01S-3-050211	560-27641-5	Zinc, SPLP	<0.0909	mg/L	UJ	Qualified due to leachate blank contamination
TP5-02S-9-050211	560-28481-1	Antimony, SPLP	0.00646	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-02S-9-050211	560-28481-1	Cadmium, SPLP	0.0037	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-02S-9-050211	560-28481-1	Lead, SPLP	0.0083	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-02S-9-050211	560-28481-1	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TP5-02S-9-050211	560-28481-1	Mercury, Total	0.228	mg/Kg	J	Qualified due to holding time exceedance
TP5-02S-9-050211	560-28481-1	Selenium, SPLP	0.00445	mg/L	J	Estimated; Analyte detected between SDL and MQL
TP5-02S-9-050211	560-28481-1	Selenium, Total	0.668	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
TPBY-01	560-27641-1	Barium, SPLP	<0.276	mg/L	UJ	Qualified due to leachate blank contamination
TPBY-01	560-27641-1	Chromium, SPLP	<0.0132	mg/L	UJ	Qualified due to leachate blank contamination
TPBY-01	560-27641-1	Chromium, Total	68.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY-01	560-27641-1	Cobalt, SPLP	0.001	mg/L	J	Estimated; Analyte detected between SDL and MQL

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
TPBY-01	560-27641-1	Mercury, SPLP	0.000625	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
TPBY-01	560-27641-1	Mercury, Total	4.0	mg/Kg	J	Qualified due to holding time exceedance
TPBY-01	560-27641-1	Selenium, Total	55.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY-01	560-27641-1	Silver, Total	55.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY2-02S-13-050411	560-27641-2	Barium, SPLP	<0.132	mg/L	UJ	Qualified due to leachate blank contamination
TPBY2-02S-13-050411	560-27641-2	Chromium, SPLP	<0.0101	mg/L	UJ	Qualified due to leachate blank contamination
TPBY2-02S-13-050411	560-27641-2	Chromium, Total	10.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY2-02S-13-050411	560-27641-2	Iron, SPLP	<0.305	mg/L	UJ	Qualified due to leachate blank contamination
TPBY2-02S-13-050411	560-27641-2	Mercury, SPLP	0.000811	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
TPBY2-02S-13-050411	560-27641-2	Mercury, Total	1.9	mg/Kg	J	Qualified due to holding time exceedance
TPBY2-02S-13-050411	560-27641-2	Molybdenum, SPLP	0.0079	mg/L	J	Estimated; Analyte detected between SDL and MQL
TPBY2-02S-13-050411	560-27641-2	Nickel, SPLP	0.0065	mg/L	J	Estimated; Analyte detected between SDL and MQL
TPBY2-02S-13-050411	560-27641-2	Selenium, Total	12.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY2-02S-13-050411	560-27641-2	Silver, Total	43.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY3-01S-3-050411	560-27641-3	Barium, SPLP	<0.15	mg/L	UJ	Qualified due to leachate blank contamination
TPBY3-01S-3-050411	560-27641-3	Chromium, SPLP	<0.0129	mg/L	UJ	Qualified due to leachate blank contamination
TPBY3-01S-3-050411	560-27641-3	Chromium, Total	46.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY3-01S-3-050411	560-27641-3	Iron, SPLP	<0.327	mg/L	UJ	Qualified due to leachate blank contamination
TPBY3-01S-3-050411	560-27641-3	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
TPBY3-01S-3-050411	560-27641-3	Mercury, Total	4.17	mg/Kg	J	Qualified due to holding time exceedance
TPBY3-01S-3-050411	560-27641-3	Selenium, SPLP	0.00862	mg/L	J	Estimated; Analyte detected between SDL and MQL
TPBY3-01S-3-050411	560-27641-3	Selenium, Total	87.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY3-01S-3-050411	560-27641-3	Silver, Total	116	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY4-01S-9-050411	560-27641-4	Barium, SPLP	<0.0443	mg/L	UJ	Qualified due to leachate blank contamination
TPBY4-01S-9-050411	560-27641-4	Cadmium, SPLP	0.0009	mg/L	J	Estimated; Analyte detected between SDL and MQL
TPBY4-01S-9-050411	560-27641-4	Chromium, SPLP	<0.00182	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TPBY4-01S-9-050411	560-27641-4	Chromium, Total	8.0	mg/Kg	J	Qualified due to MS/MSD percent recovery
TPBY4-01S-9-050411	560-27641-4	Iron, SPLP	<0.076	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
TPBY4-01S-9-050411	560-27641-4	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
TPBY4-01S-9-050411	560-27641-4	Mercury, Total	0.0119	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
TPBY4-01S-9-050411	560-27641-4	Selenium, Total	0.648	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
TPBY4-01S-9-050411	560-27641-4	Silver, Total	0.536	mg/Kg	J	Qualified due to MS/MSD percent recovery
Water Samples						
EPH-01	560-26843-1	Chromium, Total	0.00356	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-01	560-26843-1	Cobalt, Total	0.00156	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-01	560-26843-1	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to method blank contamination
EPH-01	560-26843-1	Manganese, Dissolved	0.0345	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-01	560-26843-1	Nickel, Total	0.0029	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-01	560-26843-1	Zinc, Dissolved	<0.0102	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
EPH-01	560-26843-1	Sulfide	0.019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Antimony, Dissolved	0.00442	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Arsenic, Dissolved	0.896	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Arsenic, Total	1.76	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Barium, Dissolved	0.0712	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Barium, Total	7.16	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Cadmium, Total	0.00497	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Chromium, Dissolved	0.00545	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Chromium, Total	0.539	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Cobalt, Dissolved	0.00409	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Cobalt, Total	0.15	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Copper, Dissolved	0.0023	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Copper, Total	0.344	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Iron, Dissolved	4.25	mg/L	J	Qualified due to MS/MSD percent recovery

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EPH-02	560-26843-2	Lead, Dissolved	0.00338	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Lead, Total	0.297	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Magnesium, Dissolved	38.7	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Manganese, Dissolved	0.0674	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Manganese, Total	8.27	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Mercury, Total	0.000186	mg/L	J	Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Molybdenum, Dissolved	0.42	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Molybdenum, Total	0.167	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Nickel, Dissolved	0.0197	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Nickel, Total	0.939	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Potassium, Dissolved	12.3	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Potassium, Total	56.4	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Selenium, Dissolved	0.0757	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Selenium, Total	0.0728	mg/L	J	Qualified due to MS/MSD percent recovery
EPH-02	560-26843-2	Zinc, Dissolved	0.0133	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
EPH-02	560-26843-2	Zinc, Total	0.97	mg/L	J	Qualified due to MS/MSD percent recovery
FP-01	560-26885-1	Cadmium, Total	0.00137	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Chromium, Dissolved	0.00162	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Cobalt, Dissolved	0.00193	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Lead, Dissolved	0.00111	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Manganese, Dissolved	0.0389	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Mercury, Total	0.000132	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Zinc, Dissolved	0.00495	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-01	560-26885-1	Nitrate + Nitrite	7.9	mg/L	J	Qualified due to holding time exceedance
PBA-2	560-26453-2	Chromium, Total	0.00155	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Cobalt, Dissolved	0.00187	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Cobalt, Total	0.0015	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Copper, Dissolved	0.00595	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Lead, Dissolved	<0.00248	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Lead, Total	<0.0113	mg/L	UJ	Qualified due to method blank contamination

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PBA-2	560-26453-2	Sulfide	0.015	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-2	560-26453-2	Zinc, Dissolved	<0.0273	mg/L	UJ	Qualified due to method blank contamination
PBA-2	560-26453-2	Zinc, Total	<0.0428	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
PBA-5	560-26348-1	Cadmium, Dissolved	0.00146	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-5	560-26348-1	Copper, Dissolved	0.00667	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
PBA-5	560-26348-1	Copper, Total	0.0478	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Iron, Dissolved	0.157	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-5	560-26348-1	Lead, Dissolved	0.00236	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-5	560-26348-1	Magnesium, Dissolved	64.4	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Magnesium, Total	67	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Nickel, Dissolved	0.0181	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Nickel, Total	0.0172	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Zinc, Dissolved	0.0316	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-5	560-26348-1	Zinc, Total	0.107	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Antimony, Total	0.0028	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-6	560-26348-2	Copper, Dissolved	0.00504	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
PBA-6	560-26348-2	Copper, Total	0.487	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Magnesium, Dissolved	82.4	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Magnesium, Total	388	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Nickel, Dissolved	0.0138	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Nickel, Total	0.218	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Zinc, Dissolved	0.0402	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-6	560-26348-2	Zinc, Total	2.83	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-07	560-26586-3	Aluminum, Dissolved	0.0249	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-07	560-26586-3	Cobalt, Dissolved	0.00219	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-07	560-26586-3	Cobalt, Total	0.0028	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-07	560-26586-3	Copper, Dissolved	0.00207	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-07	560-26586-3	Iron, Dissolved	0.118	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-07	560-26586-3	Sulfate	1130	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-07	560-26586-3	Sulfide	0.018	mg/L	J	Estimated; Analyte detected between SDL and MQL

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PBA-07	560-26586-3	Zinc, Dissolved	0.0066	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-08	560-26586-2	Aluminum, Dissolved	0.0417	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-08	560-26586-2	Cobalt, Dissolved	0.00436	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-08	560-26586-2	Sulfate	1140	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-08	560-26586-2	Sulfide	0.02	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-08	560-26586-2	Zinc, Dissolved	0.0122	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-10	560-26586-1	Cadmium, Dissolved	0.00107	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-10	560-26586-1	Cobalt, Total	0.00419	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-10	560-26586-1	Copper, Dissolved	0.00262	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-10	560-26586-1	Iron, Dissolved	0.11	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-10	560-26586-1	Sulfate	1180	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-10	560-26586-1	Sulfide	0.031	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Chromium, Total	0.00265	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Cobalt, Dissolved	0.00262	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Iron, Dissolved	0.164	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Mercury, Dissolved	0.000234	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Mercury, Total	0.000164	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Nickel, Total	0.00328	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Sulfide	0.017	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-12	560-26453-1	Zinc, Total	0.00694	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Aluminum, Total	8.35	mg/L	J	Qualified due to MS/MSD percent recovery
PBA-13	560-26515-1	Cadmium, Dissolved	0.00117	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Cobalt, Dissolved	0.00397	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Copper, Dissolved	0.00429	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Iron, Dissolved	0.171	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Sulfide	0.03	mg/L	J	Estimated; Analyte detected between SDL and MQL
PBA-13	560-26515-1	Zinc, Dissolved	0.0159	mg/L	J	Estimated; Analyte detected between SDL and MQL

Notes:
"<" = Analyte not detected above listed reporting limit
J = Analyte was positively identified above the SDL; however, the result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter ; mg/Kg = micrograms per kilogram

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments

MS = Matrix Spike ; MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
EPH-SB01-15-16 / FD06282011	**Total Metals (mg/Kg)**					
	Antimony	2.96	8.47	**96**	NA	NC
	Arsenic	26.1	253	**163**	NA	NC
	Barium	179	259	**37**	NA	NC
	Cadmium	3.49	9.44	**92**	NA	NC
	Chromium	9.47	12.5	28	NA	NC
	Cobalt	5.69	11.5	**68**	NA	NC
	Copper	80	207	**89**	NA	NC
	Iron	10800	13200	20	NA	NC
	Lead	107	264	**85**	NA	NC
	Manganese	364	355	2.5	NA	NC
	Mercury	0.27	0.206	27	NA	NC
	Molybdenum	4.26	17.4	**121**	NA	NC
	Nickel	8.68	13.1	**41**	NA	NC
	Selenium	0.296 J	<0.278	NC	NA	NC
	Silver	<0.16	0.486 J	NC	NA	NC
	Zinc	159	514	**105**	NA	NC
FP-SB01-55-56 / FD06292011 / QA06292011	**Total Metals (mg/Kg)**					
	Antimony	2.81	4.72	51*	1.61	**54**
	Arsenic	18.5	21.0	13	14	28
	Barium	71.2	126	**56**	81	13
	Cadmium	0.669	1.69	**87**	0.766	14
	Chromium	5.98	8.10	30	4.13	**37**
	Cobalt	2.45	3.86	**45**	2.38	2.9
	Copper	54.9	104	**62**	47	16
	Iron	6640	9110	31	4880	31
	Lead	44.5	88.4	**66**	48	7.6
	Manganese	143	217	**41**	NA	NC
	Mercury	<0.0136	0.223	**NC**	0.0385	NC
	Molybdenum	1.42 J	1.07 J	NC	0.58	NC
	Nickel	3.48	6.17	**56**	3.48	<1
	Selenium	0.607 J	1.15	NC	1.32	NC
	Silver	<0.126	0.246 J	NC	0.175 J	NC
	Zinc	80	93	15	49.1	**48**

Notes:

Bold values indicate the sample result was qualified.

* Not qualified; result is less than 5 times MQL and the difference between sample and duplicate is less than the MQL

RPD = Relative Percent Difference; [(difference)/(average)]*100

mg/Kg = milligrams per kilogram

< = Not detected above SDL

NA = Not Analyzed

NC = Not Calculated; RPD values were not calculated for non-detect values

QA = Quality Assurance

MQL = Method Quantitation Limit

Table 4
Completeness Summary
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	83	74[a,b,c,d]	89	83	100
Arsenic	83	72[b,c]	87	83	100
Barium	83	77[b,c]	93	83	100
Cadmium	83	78[b,c]	94	83	100
Chromium	83	66[b,c]	80	83	100
Cobalt	76	71[b,c]	93	76	100
Copper	83	71[b,c]	86	83	100
Iron	83	78[b]	94	83	100
Lead	83	72[a,b,c]	87	83	100
Manganese	13	11[c]	85	13	100
Mercury	83	64[e]	77	83	100
Molybdenum	75	72[b,c]	96	75	100
Nickel	83	76[b,c]	92	83	100
Selenium	83	68[b]	82	83	100
Silver	83	70[b]	84	83	100
Thallium	26	7[b]	69	26	100
Zinc	83	70[a,b,c,d]	84	83	100
Dissolved Metals					
Antimony	11	10[b]	91	11	100
Barium	11	10[b]	91	11	100
Cadmium	11	10[b]	91	11	100
Chromium	11	10[b]	91	11	100
Cobalt	11	10[b]	91	11	100
Copper	11	8[b]	73	11	100
Iron	11	10[b]	91	11	100
Lead	11	7[b]	64	11	100
Mercury	11	11	100	11	100
Molybdenum	11	10[b]	91	11	100
Nickel	11	8[b]	73	11	100
Selenium	11	10[b]	91	11	100
Thallium	11	11	100	11	100
Zinc	11	5[a,b]	45	11	100
SPLP Metals					
Barium	22	8[f]	36	22	100
Chromium	22	6[f]	27	22	100
Copper	22	21[f]	95	22	100
Iron	22	11[f]	50	22	100
Lead	22	21[f]	95	22	100
Mercury	22	4[e]	18	22	100
Molybdenum	22	18[b]	82	22	100
Nickel	22	18[b,f]	82	22	100
Zinc	22	17[f]	77	22	100
All other analytes	132	132	100	132	100
TCLP Metals					
Mercury	4	0[e]	0	4	100
All other analytes	56	56	100	56	100

Table 4
Completeness Summary
Grab Soil/Water Samples - April/May/June 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Cations					
Aluminum	11	10[b]	91	11	100
Calcium	11	11	100	11	100
Magnesium	11	9[b]	82	11	100
Manganese	11	10[b]	91	11	100
Potassium	11	10[b]	91	11	100
Sodium	11	11	100	11	100
Dissolved Cations					
Aluminum	11	11	100	11	100
Calcium	11	11	100	11	100
Magnesium	11	8[b]	73	11	100
Manganese	11	10[b]	91	11	100
Potassium	11	10[b]	91	11	100
Sodium	11	11	100	11	100
Anions					
Chloride	11	11	100	11	100
Fluoride	11	11	100	11	100
Nitrate + Nitrite	11	10[e]	91	11	100
Sulfate	11	8[b]	73	11	100
Sulfide	11	11	100	11	100
General Chemistry					
All analytes	44	44	100	44	100
TOTALS	**2044**	**1767**	**86**	**2044**	**100**

Notes:

Data qualified as trace detections (between sample detection limit and method quantitation limit) are not counted as out of contractual compliance

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

[a] Results qualified due to method blank contamination

[b] Results qualified due to MS/MSD percent recovery outliers

[c] Results qualified due to high field duplicate RPD

[d] Results qualified due to high QA split RPD

[e] Results qualified due to holding time exceedance

[f] Results qualified due to leachate blank contamination

Texas Custodial Trust

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Data Usability Summary Data Gap Samples July-September 2011 Sampling Event

January 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the data gap samples collected during July, August, and September 2011 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance (RG)-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the data gap samples collected during July, August, and September 2011 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

Eighty-eight soil samples, one water sample, and six concrete samples were collected at the former ASARCO Smelter during this sampling event. The samples were submitted to TestAmerica for analysis. Soil samples were submitted for the following analyses:

- volatile organic compounds (VOCs) by USEPA Method 8260
- semivolatile organic compounds (SVOCs) by USEPA Method 8270
- nonhalogenated organic compounds (NHOCs) by USEPA Method 8015
- polychlorinated biphenyls (PCBs) by USEPA Method 8082
- organochlorine pesticides (OCPs) by USEPA Method 8081

- organophosphorous pesticides (OPPs) by USEPA Method 8141
- total metals by USEPA Methods 6010 and 7471

The water sample was submitted for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- total cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Methods 6010 and 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TSS) by USEPA Method 160.2
- anions (chloride, nitrate + nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2
- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

Concrete samples were submitted for the following analyses:

- total metals by USEPA Methods 6010 and 7471

Additionally, two field quality assurance samples (i.e., field duplicate and QA split sample) were collected and analyzed as part of the sampling program. Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory reports submitted by TestAmerica and ALS:

- chain-of-custody

- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, leachate blanks)
- surrogate recovery (for organic parameters)
- laboratory control sample (LCS) recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) recovery and RPD
- duplicates (field duplicate, QA split sample)
- trace detections
- other applicable QC parameters

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the data gap samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received at the correct temperatures (4 ± 2 degrees Celsius) except for the following:

- The water sample collected on September 8, 2011 was received at 1.4 degrees Celsius. The temperature outlier did not impact the sample results and data qualification was not required.

- The soil samples collected on September 29, 2011 were received at 8.8 degrees Celsius. Results were qualified "J" and "UJ" to indicate a potential low bias.

- The concrete samples collected on September 29, 2011 were received at ambient temperature. The temperature outliers did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- The OCP holding time was exceeded for samples BB-SB01-0.5, BB-SB01-1.5, BB-SB01-3.5, BB-SB01-5.0, BB-SB02-0.5, BB-SB02-1.5, BB-SB02-3.5, BB-SB02-5.0, BB-SB03-0.5, BB-SB03-1.5, BB-SB03-3.5, BB-SB03-5.0, UB-SB03-5.0, UB-SB04-0.5, and UB-SB04-1.5. Data were qualified "UJ" to indicate a potential low bias.

- The total mercury holding time was exceeded for sample FP-SB01-35-36. Data were qualified "J" to indicate a potential low bias.

- The SPLP mercury and TCLP mercury holding times were exceeded for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-35-37, FP-SB04-5-10, FP-SB04-23-25, FP-SB04-33-34, and FP-SB03-DUP. Data were qualified "J" and "UJ" to indicate a potential low bias.

- The pH holding time was exceeded for samples AP-SB01-0.5, AP-SB01-1.5, AP-SB01-3.5, AP-SB01-5.0, AP-SB02-0.5, AP-SB02-1.5, AP-SB02-3.5, and AP-SB02-5.0. Data were qualified "J" to indicate a potential low bias.

- The nitrate, nitrite, and nitrate + nitrite holding times were exceeded for sample BB-Tank. Data were qualified "UJ" to indicate a potential low bias.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-64725 had a trichloroethene detection (0.0004765 milligrams per kilogram, or mg/kg). Data qualification was not required because the analyte was not detected in the associated samples.

- The method blank associated with analytical batch 560-64775 had a trichloroethene detection (0.0007 mg/kg). Data qualification was not required because the analyte was not detected in the associated samples.

- The method blank associated with prep batch 560-62905 had a zinc detection (0.8045 mg/kg). Data qualification was not required because the total zinc detections in the associated soil samples were greater than ten times the method blank concentration.

- The method blank associated with prep batch 560-64706 had a mercury detection (0.03158 mg/kg). The total mercury result for sample WP-SS4C was qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch 54999 had a barium detection (0.0009149 mg/kg). Data qualification was not required because the SPLP barium detection in the associated soil sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch 55250 had detections of arsenic (0.1024 mg/kg) and chromium (0.1035 mg/kg). Data qualification was not required because the total arsenic and total chromium detections in the associated soil sample were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-64026 had a TOC detection (0.547 milligrams per liter, or mg/L). Data qualification was not required because the TOC detection in the associated water sample was greater than ten times the method blank concentration.

3.4.2. Leachate Blank Interference

Leachate blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The leachate blank associated with prep batch 560-63739 had detections of barium (0.01598 mg/L), chromium (0.0088 mg/L), iron (0.07678 mg/L), nickel (0.00324 mg/L), and zinc (0.0335 mg/L). The SPLP barium, SPLP chromium, TCLP chromium, and SPLP iron results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-

35-37, FP-SB04-5-10, FP-SB04-23-25, FP-SB04-33-34, and FP-SB03-DUP; the TCLP barium results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-35-37, FP-SB04-5-10, and FP-SB04-23-25; the TCLP iron results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, and FP-SB03-35-37; the SPLP nickel results for samples FP-SB02-5-6, FP-SB02-20-21, FP-SB03-23-25, and FP-SB04-5-10; the SPLP nickel results for samples FP-SB02-5-6, FP-SB02-20-21, FP-SB03-23-25, and FP-SB04-5-10; and the SPLP zinc results for samples FP-SB02-20-21 and FP-SB02-40-41 were qualified "UJ" to indicate a potential bias.

3.5. Surrogate Recovery

Surrogate recoveries for the organic analyses were within laboratory acceptance limits except for the following:

- The recovery of 4-bromofluorobenzene was below acceptance limits (61 to 130 percent) for samples BB-SB02-1.5 (23 percent), BB-SB02-3.5 (13 percent), BB-SB02-5.0 (35 percent), SS-VOC4-4 (57 percent), SS-VOC4-5 (50 percent), SS-VOC4-6 (43 percent), UB-SB02-0.5 (51 percent) and UB-SB03-0.5 (44 percent). All results for samples SS-VOC4-4, SS-VOC4-5, SS-VOC4-6, UB-SB02-0.5 and UB-SB03-0.5 were qualified "J" and "UJ" to indicate a potential low bias.

- The recovery of toluene-d8 was below acceptance limits (69 to 139 percent) for samples BB-SB02-1.5 (56 percent) and BB-SB02-3.5 (44 percent). The recovery of 1,2-dichloroethane-d4 was above acceptance limits (70 to 152 percent) for sample BB-SB02-5.0 (172 percent). All results for samples BB-SB02-1.5, BB-SB02-3.5, and BB-SB02-5.0 were qualified "J" and "UJ" to indicate a potential bias.

- The recovery of tetrachloro-m-xylene (137 percent) was above acceptance limits (32 to 132 percent) for sample PCB-01-0-06. Data were not qualified because the sample was diluted 1:10.

- The recovery of surrogate decachlorobiphenyl was outside acceptance limits (55 to 130 percent) for samples UB-SB01-0.5 (0.2 percent), UB-SB02-0.5 (298 percent), WP-SS1A (143 percent), WP-SS1B (134 percent), WP-SS2A (558 percent), WP-SS2B (556 percent), and WP-SS3A (156 percent). All results for sample UB-SB01-0.5 and the endrin result for sample WP-SS2A were qualified "UJ" to indicate a potential low bias. Data qualification was not required for samples UB-SB02-0.5, WP-SS1A, WP-SS1B, WP-SS2B, and WP-SS3A because all results are non-detect.

3.6. Laboratory Control Samples Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.
- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS percent recoveries and RPDs were within acceptance limits.

3.7. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.
- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".
- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.
- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.
- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for hexachlorocyclopentadiene (26 and 29 percent) were below acceptance limits (43 to 130 percent) for prep batch 560-62850. The hexachlorocyclopentadiene result for sample UB-SB01-0.5 was qualified "UJ" to indicate a potential low bias.

- The RPDs for acetone (58.5 percent) and ethyl acetate (75.4 percent) were above the acceptance limit (30 percent) for analytical batch 560-64775. Data qualification was not required because the MS, MSD, and LCS recoveries for these analytes were within acceptance limits.

- The MSD recovery for Aroclor 1016 (132 percent) and the MS and MSD recoveries for Aroclor 1260 (-331 and -300 percent) were outside acceptance limits (40 to 130 percent) for prep batch 560-62673. Data qualification was not required for Aroclor 1016 because the analyte was not detected in the associated sample; or for Aroclor 1260 because the detection for this analyte in the associated sample was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for antimony (524 and 456 percent), arsenic (1683 and 751 percent), barium (174 and 421 percent), cadmium (316 and 232 percent), copper (7607 and 6783 percent), iron (174 and 138 percent), lead (3407 and 2180 percent), and zinc (1309 and 1015 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-62905. The total barium and total iron results for samples UB-SB01-0.5, UB-SB01-1.5, UB-SB01-3.5, UB-SB01-5.0, UB-SB02-0.5, UB-SB02-1.5, UB-SB02-3.5, UB-SB02-5.0, UB-SB03-0.5, UB-SB03-1.5, and UB-SB03-3.5 were qualified "J" to indicate a potential bias. Data qualification was not required for the other analytes because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for antimony (-66 and -359 percent), arsenic (1748 and 3961 percent), barium (769 and 456 percent), cadmium (502 and 1948 percent), cobalt (201 and 131 percent), copper (3351 and 25620 percent), iron (544 and 622 percent), lead (13936 and 20811 percent), molybdenum (197 and 270 percent), selenium (143 and 220 percent), and zinc (-602 and -1068 percent); the MSD recovery for chromium (-58 percent) and silver (200 percent); and the RPD for cadmium (23 percent), chromium (38 percent), and copper (62 percent) were outside acceptance limits (75 to 125 percent and 20 percent, respectively) for prep batch 560-63282. The TCLP chromium and TCLP selenium results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-35-37, FP-SB04-5-10, FP-SB04-23-25,

FP-SB04-33-34, and FP-SB03-DUP were qualified "J" to indicate a potential bias. Data qualification was not required for TCLP antimony, TCLP arsenic, TCLP barium, TCLP cadmium, TCLP cobalt, TCLP copper, TCLP iron, TCLP lead, TCLP molybdenum, and TCLP zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration; or for TCLP silver because the analyte was not detected in the associated samples.

- The MS and MSD recoveries for antimony (361 and 217 percent), arsenic (748 and 469 percent), barium (229 and 220 percent), copper (-1544 and -1128 percent), iron (337 and -170 percent), lead (508 and 198 percent), molybdenum (261 and -27 percent), and zinc (-833 and -2716 percent); and the MSD recovery for chromium (5 percent), cobalt (71 percent), and nickel (69 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-63704. The total chromium and total nickel results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-35-37, FP-SB04-5-10, FP-SB04-23-25, FP-SB04-33-34, and FP-SB03-DUP were qualified "J" to indicate a potential low bias. Data qualification was not required for total antimony, total arsenic, total barium, total cobalt, total copper, total iron, total lead, total molybdenum, and total zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for copper (-75 and -31 percent) and zinc (-1820 and -128 percent); and the MS recovery for barium (-16 percent), iron (0.6 percent), and silver (12 percent) were outside acceptance limits (80 to 120 percent) for prep batch 560-63739. The SPLP barium, SPLP iron, and SPLP silver results for samples FP-SB01-35-36, FP-SB02-5-6, FP-SB02-20-21, FP-SB02-40-41, FP-SB03-8-10, FP-SB03-23-25, FP-SB03-35-37, FP-SB04-5-10, FP-SB04-23-25, FP-SB04-33-34, and FP-SB03-DUP were qualified "J" and "UJ" to indicate a potential low bias. Data qualification was not required for SPLP copper and SPLP zinc because the detection for these analytes in the associated sample was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for sodium (73 and 49 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-64024. Data qualification was not required for sodium because the detection for this analyte in the associated sample (BB-Tank) was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for antimony (345 and 577 percent), arsenic (-817 and -746 percent), barium (408 and 177 percent), cadmium (-482 and -575 percent), copper (1680 and -1934 percent), iron (399 and 287 percent), lead (-294

and -2724 percent), and zinc (2521 and 1530 percent); and the MSD recovery for molybdenum (49 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-64639. The total molybdenum results for samples WP-SS1A, WP-SS1B, WP-SS2A, WP-SS2B, WP-SS3A, WP-SS3B, WP-SS4A, WP-SS4B, WP-SS4C, and WP-SS5 were qualified "J" to indicate a potential low bias. Data qualification was not required for the other analytes because the detection for these analytes in the associated sample was greater than four times the matrix spike concentration.

- The MSD recovery for copper (70 percent) and iron (60 percent) were below acceptance limits (75 to 125 percent) for prep batch 560-64736. The total copper and total iron results for samples Concrete Pile 1A, Concrete Pile 1B, Concrete Pile 1C, Concrete Pile 1D, Concrete Pile 2A, and Concrete Pile 2B were qualified "J" to indicate a potential low bias.

3.8. Duplicates

3.8.1. Field Duplicates

One field duplicate was collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicate was evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPDs between sample FP-SB03-23-25 and field duplicate FP-SB03-DUP for SPLP antimony (44 percent), SPLP arsenic (48 percent), SPLP barium (39 percent), TCLP barium (166 percent), SPLP cadmium (75 percent), TCLP cadmium (46 percent), total chromium (39 percent), SPLP copper (161 percent), SPLP molybdenum (156 percent), total nickel (54 percent), and SPLP zinc (147 percent) were above the acceptance limit; and the difference between FP-SB03-23-25 and FP-SB03-DUP for TCLP chromium, SPLP cobalt, SPLP iron, TCLP iron, SPLP lead, SPLP nickel, and SPLP selenium exceeded the MQL. Data were qualified "J" to indicate a potential bias.

3.8.2. QA Split Samples

One QA split sample was collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were calculated and are presented in Table 3. The split sample was evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPDs between sample FP-SB03-23-25 and QA split FP-SB03-23-25QA for total antimony (60 percent), SPLP antimony (76 percent), total arsenic (89 percent), SPLP arsenic (106 percent), total barium (51 percent), total chromium (107 percent), total cobalt (81 percent), total copper (98 percent), SPLP copper (143 percent), total iron (93 percent), total lead (40 percent), total mercury (110 percent), total molybdenum (103 percent), SPLP molybdenum (65 percent), total nickel (81 percent), total selenium (41 percent), total silver (60 percent), total zinc (92 percent), and SPLP zinc (194 percent) were above the acceptance limit; and the difference between FP-SB03-23-25 and FP-SB03-23-25QA for total cadmium and SPLP cadmium exceeded the MQL. Data were qualified "J" to indicate a potential bias.

3.9. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

3.10. Other Applicable QC Parameters

Several results were qualified due to exceedances attributed to instrument calibration verification (ICV)/continuing calibration verification (CCV) standards and/or primary/secondary column RPDs, as follows:

- The RPD between the primary and secondary columns exceeded the acceptance limit (40 percent) for chlordane for sample UB-SB01-5.0. Data were qualified "J" to indicate a potential bias.

- The ICV/CCV standard exceeded acceptance limits for lead for samples BB-SB01-0.5, BB-SB01-1.5, BB-SB01-3.5, UB-SB01-1.5, UB-SB01-3.5, UB-SB01-5.0, UB-SB02-0.5, UB-SB02-1.5, UB-SB02-3.5, UB-SB02-5.0, UB-SB03-0.5, UB-SB03-1.5, UB-SB03-3.5, and UB-SB03-5.0. Data were qualified "J" to indicate a potential bias.

- The ICV/CCV standard exceeded acceptance limits for copper for samples BB-SB01-1.5, BB-SB01-3.5, UB-SB01-3.5, UB-SB01-5.0, UB-SB02-1.5, UB-SB02-3.5, UB-SB02-5.0, UB-SB03-1.5, UB-SB03-3.5, and UB-SB03-5.0. Data were qualified "J" to indicate a potential bias.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- All VOCs had contractual compliances below 90 percent due to surrogate recovery outliers and high laboratory receipt temperatures.

- All OCPs had contractual compliances below 90 percent due to surrogate recovery outliers, holding time exceedances, and a high primary/secondary column RPD.

- Several total metals had contractual compliances below 90 percent due MS/MSD percent recovery outliers, high field duplicate and QA split RPDs, ICV/CCV outliers, and holding time exceedances.

- Several SPLP and TCLP metals had contractual compliances below 90 percent due to leachate blank interference, MS/MSD percent recovery outliers, high field duplicate and QA split RPDs, and holding time exceedances.

- Nitrate, nitrite, nitrate + nitrite, and pH had contractual compliances below 90 percent due to holding time exceedances.

The results for the data gap sampling event conducted July, August, and September 2011 were considered usable for the intended purposes and the project DQOs have been met.

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
Soil Samples				
BB-SB01-0.5	560-27496-2	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB01-1.5	560-27496-3	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB01-3.5	560-27496-4	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB01-5.0	560-27496-5	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB02-0.5	560-27496-6	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB02-1.5	560-27496-7	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB02-3.5	560-27496-8	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB02-5.0	560-27496-9	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
PCB-01-0-06	560-27378-1	8/1/2011	N	PCBs
PCB-02-0-06	560-27378-2	8/1/2011	N	PCBs
UB-SB01-0.5	560-27495-1	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB01-1.5	560-27495-2	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB01-3.5	560-27495-3	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB01-5.0	560-27495-4	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB02-0.5	560-27495-5	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB02-1.5	560-27495-6	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB02-3.5	560-27495-7	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB02-5.0	560-27495-8	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB03-0.5	560-27495-9	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB03-1.5	560-27495-10	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB03-3.5	560-27495-11	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB03-5.0	560-27496-1	8/8/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
TSA-SB01-0.5	560-27523-1	8/9/2011	N	PCBs
TSA-SB01-1.5	560-27523-2	8/9/2011	N	PCBs
TSA-SB01-3.5	560-27523-3	8/9/2011	N	PCBs
TSA-SB01-5.0	560-27523-4	8/9/2011	N	PCBs
TSA-SB02-0.5	560-27523-5	8/9/2011	N	PCBs
TSA-SB02-1.5	560-27523-6	8/9/2011	N	PCBs
TSA-SB02-3.5	560-27523-7	8/9/2011	N	PCBs
TSA-SB02-5.0	560-27523-8	8/9/2011	N	PCBs
WWTP-SB01-5.0	560-27523-9	8/9/2011	N	Total Metals
WWTP-SB01-10	560-27523-10	8/9/2011	N	Total Metals
BB-SB03-0.5	560-27523-11	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB03-1.5	560-27523-12	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB03-3.5	560-27523-13	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SB03-5.0	560-27523-14	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB04-0.5	560-27523-15	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SB04-1.5	560-27523-16	8/9/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
AP-SB01-0.5	560-27523-17	8/9/2011	N	pH
AP-SB01-1.5	560-27523-18	8/9/2011	N	pH
AP-SB01-3.5	560-27523-19	8/9/2011	N	pH
AP-SB01-5.0	560-27523-20	8/9/2011	N	pH
AP-SB02-0.5	560-27523-21	8/9/2011	N	pH
AP-SB02-1.5	560-27523-22	8/9/2011	N	pH
AP-SB02-3.5	560-27523-23	8/9/2011	N	pH

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
AP-SB02-5.0	560-27523-24	8/9/2011	N	pH
FP-SB01-35-36	560-27892-1	6/29/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB02-5-6	560-27892-2	8/11/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB02-20-21	560-27892-3	8/11/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB02-40-41	560-27892-4	8/11/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB03-8-10	560-27892-5	8/15/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB03-23-25	560-27892-6	8/15/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB03-35-37	560-27892-7	8/15/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB04-5-10	560-27892-8	8/15/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB04-23-25	560-27892-9	8/16/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB04-33-34	560-27892-10	8/16/2011	N	Total Metals, SPLP Metals, TCLP Metals
FP-SB03-DUP	560-27892-11	8/15/2011	FD of FP-SB03-23-25	Total Metals, SPLP Metals, TCLP Metals
FP-SB03-23-25QA	1109124-01	8/15/2011	QA split of FP-SB03-23-25	Total Metals, SPLP Metals
WP-SS1A	560-28396-1	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS1B	560-28396-2	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS2A	560-28396-3	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS2B	560-28396-4	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS3A	560-28396-5	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS3B	560-28396-6	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS4A	560-28396-7	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS4B	560-28396-8	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS4C	560-28396-9	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
WP-SS5	560-28396-10	9/26/2011	N	SVOCs, OCPs, OPPs, Total Metals
SS-VOC1-1	560-28432-1	9/29/2011	N	VOCs
SS-VOC1-2	560-28432-2	9/29/2011	N	VOCs
SS-VOC2-1	560-28432-3	9/29/2011	N	VOCs
SS-VOC2-2	560-28432-4	9/29/2011	N	VOCs
SS-VOC3-3	560-28432-5	9/29/2011	N	VOCs
SS-VOC3-2	560-28432-6	9/29/2011	N	VOCs
SS-VOC3-1	560-28432-7	9/29/2011	N	VOCs
SS-VOC4-1	560-28432-8	9/29/2011	N	VOCs
SS-VOC4-2	560-28432-9	9/29/2011	N	VOCs
SS-VOC4-3	560-28432-10	9/29/2011	N	VOCs
SS-VOC4-4	560-28432-11	9/29/2011	N	VOCs
SS-VOC4-5	560-28432-12	9/29/2011	N	VOCs
SS-VOC4-6	560-28432-13	9/29/2011	N	VOCs
SS-VOC4-7	560-28432-14	9/29/2011	N	VOCs
SS-VOC4-8	560-28432-15	9/29/2011	N	VOCs
SS-VOC4-9	560-28432-16	9/29/2011	N	VOCs
SS-VOC5-1	560-28432-17	9/29/2011	N	VOCs
SS-VOC5-2	560-28432-18	9/29/2011	N	VOCs
SS-VOC5-3	560-28432-19	9/29/2011	N	VOCs
SS-VOC1-3	560-28432-20	9/29/2011	N	VOCs
Water Samples				
BB-Tank	560-28038-1	9/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
Concrete Samples				
Concrete Pile 1A	560-28434-1	9/29/2011	N	Total Metals
Concrete Pile 1B	560-28434-2	9/29/2011	N	Total Metals
Concrete Pile 1C	560-28434-3	9/29/2011	N	Total Metals
Concrete Pile 1D	560-28434-4	9/29/2011	N	Total Metals

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
Concrete Pile 2A	560-28434-5	9/29/2011	N	Total Metals
Concrete Pile 2B	560-28434-6	9/29/2011	N	Total Metals

Notes:
N = Normal sample
FD = Field Duplicate
QA = Quality Assurance
Dissolved metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc
Total metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, silver, and zinc
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate + nitrite, sulfate, and sulfide
NHOCs = Nonhalogenated Organic Compounds (n-butyl alcohol and methanol)
OCPs = Organochlorine Pesticides (chlordane and endrin)
OPPs = Organophosphorus Pesticides (methyl parathion)
PCBs = Polychlorinated Biphenyls
SVOCs = Semivolatile Organic Compounds (hexachlorocyclopentadiene)
TDS = Total Dissolved Solids
TSS = Total Suspended Solids
TOC = Total Organic Carbon
VOCs = Volatile Organic Compounds (1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, 1,2-dichlorobenzene, 4-methyl-2-pentanone, acetone, carbon tetrachloride, chlorobenzene, cyclohexanone, dichlorodifluoromethane, ethyl acetate, ethylbenzene, ethyl ether, methylene chloride, tetrachloroethene, trichloroethene, trichlorofluoromethane, xylenes)

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
Soil Samples						
AP-SB01-0.5	560-27523-17	pH	6.97	mg/Kg	J	Qualified due to holding time exceedance
AP-SB01-1.5	560-27523-18	pH	8.56	mg/Kg	J	Qualified due to holding time exceedance
AP-SB01-3.5	560-27523-19	pH	8.71	mg/Kg	J	Qualified due to holding time exceedance
AP-SB01-5.0	560-27523-20	pH	8.74	mg/Kg	J	Qualified due to holding time exceedance
AP-SB02-0.5	560-27523-21	pH	7.92	mg/Kg	J	Qualified due to holding time exceedance
AP-SB02-1.5	560-27523-22	pH	7.86	mg/Kg	J	Qualified due to holding time exceedance
AP-SB02-3.5	560-27523-23	pH	8.06	mg/Kg	J	Qualified due to holding time exceedance
AP-SB02-5.0	560-27523-24	pH	8.38	mg/Kg	J	Qualified due to holding time exceedance
BB-SB01-0.5	560-27496-2	Chlordane	<0.00399	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-0.5	560-27496-2	Endrin	<0.000177	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-0.5	560-27496-2	Lead, Total	6680	mg/Kg	J	Qualified due to ICV/CCV outliers
BB-SB01-1.5	560-27496-3	Xylenes, Total	0.000457	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-1.5	560-27496-3	Chlordane	<0.00206	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-1.5	560-27496-3	Endrin	<0.0000912	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-1.5	560-27496-3	Cadmium, Total	0.435	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-1.5	560-27496-3	Copper, Total	16.5	mg/Kg	J	Qualified due to ICV/CCV outliers
BB-SB01-1.5	560-27496-3	Lead, Total	9.72	mg/Kg	J	Qualified due to ICV/CCV outliers
BB-SB01-1.5	560-27496-3	Mercury, Total	0.0319	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-1.5	560-27496-3	Molybdenum, Total	0.317	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-3.5	560-27496-4	Xylenes, Total	0.000372	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-3.5	560-27496-4	Chlordane	<0.00207	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-3.5	560-27496-4	Endrin	<0.0000919	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-3.5	560-27496-4	Cadmium, Total	0.342	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-3.5	560-27496-4	Copper, Total	10.1	mg/Kg	J	Qualified due to ICV/CCV outliers
BB-SB01-3.5	560-27496-4	Lead, Total	6.02	mg/Kg	J	Qualified due to ICV/CCV outliers
BB-SB01-3.5	560-27496-4	Molybdenum, Total	0.242	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-5.0	560-27496-5	Xylenes, Total	0.000262	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-5.0	560-27496-5	Chlordane	<0.00226	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-5.0	560-27496-5	Endrin	<0.0001	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB01-5.0	560-27496-5	Cadmium, Total	0.445	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB01-5.0	560-27496-5	Molybdenum, Total	0.411	mg/Kg	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BB-SB01-5.0	560-27496-5	Selenium, Total	0.326	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-0.5	560-27496-6	Xylenes, Total	0.000394	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-0.5	560-27496-6	Chlordane	<0.0101	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-0.5	560-27496-6	Endrin	<0.00045	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-0.5	560-27496-6	Mercury, Total	0.0432	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-1.5	560-27496-7	1,1,1-Trichloroethane	<0.00119	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00114	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	1,1,2-Trichloroethane	<0.000852	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	1,2-Dichlorobenzene	<0.000426	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	4-Methyl-2-pentanone (MIBK)	<0.00158	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Acetone	<0.0123	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Carbon tetrachloride	<0.000869	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Chlorobenzene	<0.000392	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Cyclohexanone	<0.00169	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Dichlorodifluoromethane	<0.00124	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Methylene Chloride	<0.00852	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Ethyl acetate	<0.00204	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Ethyl ether	<0.00029	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Ethylbenzene	<0.000375	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Tetrachloroethene	<0.00126	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Trichloroethene	<0.000477	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Trichlorofluoromethane	<0.000852	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Xylenes, Total	<0.000613	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-1.5	560-27496-7	Chlordane	<0.00226	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-1.5	560-27496-7	Endrin	<0.0001	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-1.5	560-27496-7	Antimony, Total	2.51	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-1.5	560-27496-7	Molybdenum, Total	1.05	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-1.5	560-27496-7	Selenium, Total	0.6	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-3.5	560-27496-8	1,1,1-Trichloroethane	<0.000838	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000802	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	1,1,2-Trichloroethane	<0.000599	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	1,2-Dichlorobenzene	<0.000299	mg/Kg	UJ	Qualified due to low surrogate recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BB-SB02-3.5	560-27496-8	4-Methyl-2-pentanone (MIBK)	<0.00111	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Acetone	0.0181	mg/Kg	J	Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
BB-SB02-3.5	560-27496-8	Carbon tetrachloride	<0.000611	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Chlorobenzene	<0.000275	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Cyclohexanone	<0.00119	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Dichlorodifluoromethane	<0.000874	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Methylene Chloride	<0.00599	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Ethyl acetate	<0.00144	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Ethyl ether	<0.000204	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Ethylbenzene	<0.000263	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Tetrachloroethene	<0.000886	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Trichloroethene	<0.000335	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Trichlorofluoromethane	<0.000599	mg/Kg	UJ	Qualified due to low surrogate recovery
BB-SB02-3.5	560-27496-8	Xylenes, Total	<0.000431	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-3.5	560-27496-8	Chlordane	<0.00206	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-3.5	560-27496-8	Endrin	<0.0000913	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-3.5	560-27496-8	Selenium, Total	1.06	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB02-5.0	560-27496-9	1,1,1-Trichloroethane	<0.00117	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00112	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	1,1,2-Trichloroethane	<0.000837	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	1,2-Dichlorobenzene	<0.000418	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	4-Methyl-2-pentanone (MIBK)	<0.00156	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Acetone	<0.012	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Carbon tetrachloride	<0.000853	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Chlorobenzene	<0.000385	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Cyclohexanone	<0.00166	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Dichlorodifluoromethane	<0.00122	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Methylene Chloride	<0.00837	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Ethyl acetate	<0.00201	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Ethyl ether	<0.000284	mg/Kg	UJ	Qualified due to surrogate recovery outlier

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BB-SB02-5.0	560-27496-9	Ethylbenzene	0.000995	mg/Kg	J	Qualified due to surrogate recovery outlier; Estimated; Analyte detected between SDL and MQL
BB-SB02-5.0	560-27496-9	Tetrachloroethene	<0.00124	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Trichloroethene	<0.000469	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Trichlorofluoromethane	<0.000837	mg/Kg	UJ	Qualified due to surrogate recovery outlier
BB-SB02-5.0	560-27496-9	Xylenes, Total	0.00328	mg/Kg	J	Qualified due to surrogate recovery outlier; Estimated; Analyte detected between SDL and MQL
BB-SB02-5.0	560-27496-9	Chlordane	<0.00237	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB02-5.0	560-27496-9	Endrin	<0.000105	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-0.5	560-27523-11	Ethylbenzene	0.00035	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-0.5	560-27523-11	Xylenes, Total	0.000549	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-0.5	560-27523-11	Chlordane	<0.00398	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-0.5	560-27523-11	Endrin	<0.000177	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-1.5	560-27523-12	Dichlorodifluoromethane	0.000815	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-1.5	560-27523-12	Trichlorofluoromethane	0.00051	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-1.5	560-27523-12	Chlordane	<0.00206	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-1.5	560-27523-12	Endrin	<0.0000914	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-3.5	560-27523-13	Dichlorodifluoromethane	0.000914	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-3.5	560-27523-13	Trichlorofluoromethane	0.000922	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-3.5	560-27523-13	Chlordane	<0.00213	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-3.5	560-27523-13	Endrin	<0.0000944	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-3.5	560-27523-13	Antimony, Total	0.367	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-3.5	560-27523-13	Cadmium, Total	0.347	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-3.5	560-27523-13	Molybdenum, Total	0.349	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-3.5	560-27523-13	Selenium, Total	0.578	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-5.0	560-27523-14	Chlordane	<0.00218	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-5.0	560-27523-14	Endrin	<0.0000968	mg/Kg	UJ	Qualified due to holding time exceedance
BB-SB03-5.0	560-27523-14	Cadmium, Total	0.306	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-5.0	560-27523-14	Molybdenum, Total	0.493	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SB03-5.0	560-27523-14	Selenium, Total	0.529	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Barium, SPLP	<0.0702	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB01-35-36	560-27892-1	Barium, TCLP	<0.0313	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB01-35-36	560-27892-1	Chromium, Total	72.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB01-35-36	560-27892-1	Chromium, SPLP	<0.00728	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Chromium, TCLP	<0.00275	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Iron, SPLP	<0.589	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB01-35-36	560-27892-1	Iron, TCLP	<0.644	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB01-35-36	560-27892-1	Mercury, Total	0.0486	mg/Kg	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB01-35-36	560-27892-1	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Nickel, Total	63.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB01-35-36	560-27892-1	Selenium, TCLP	0.00614	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB01-35-36	560-27892-1	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Barium, SPLP	<0.0347	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Barium, TCLP	<0.0176	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB02-5-6	560-27892-2	Cadmium, SPLP	0.00355	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-5-6	560-27892-2	Chromium, Total	122	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Chromium, SPLP	<0.00311	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB02-5-6	560-27892-2	Chromium, TCLP	<0.00395	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-5-6	560-27892-2	Iron, SPLP	<0.702	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Iron, TCLP	<0.18	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB02-5-6	560-27892-2	Mercury, SPLP	0.000169	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB02-5-6	560-27892-2	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB02-5-6	560-27892-2	Nickel, Total	58.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Nickel, SPLP	<0.0218	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB02-5-6	560-27892-2	Selenium, SPLP	0.00442	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-5-6	560-27892-2	Selenium, TCLP	0.0103	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB02-5-6	560-27892-2	Silver, SPLP	0.00227	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Barium, SPLP	<0.0682	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB02-20-21	560-27892-3	Barium, TCLP	<0.0239	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB02-20-21	560-27892-3	Cadmium, SPLP	0.00047	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Chromium, Total	71	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-20-21	560-27892-3	Chromium, SPLP	<0.00609	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Chromium, TCLP	<0.00389	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Cobalt, SPLP	0.00128	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Iron, SPLP	<0.135	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Iron, TCLP	<0.0247	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Lead, SPLP	0.00463	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Mercury, SPLP	0.000275	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB02-20-21	560-27892-3	Nickel, Total	29.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-20-21	560-27892-3	Nickel, SPLP	<0.135	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB02-20-21	560-27892-3	Selenium, TCLP	0.0245	mg/L	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB02-20-21	560-27892-3	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB02-20-21	560-27892-3	Zinc, SPLP	<0.112	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB02-40-41	560-27892-4	Barium, SPLP	<0.0713	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB02-40-41	560-27892-4	Barium, TCLP	<0.012	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB02-40-41	560-27892-4	Chromium, Total	109	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-40-41	560-27892-4	Chromium, SPLP	<0.00278	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Chromium, TCLP	<0.0032	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Iron, SPLP	<0.0614	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Lead, SPLP	0.00419	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Mercury, Total	0.0139	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Mercury, SPLP	0.000191	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB02-40-41	560-27892-4	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB02-40-41	560-27892-4	Nickel, Total	34.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB02-40-41	560-27892-4	Selenium, TCLP	0.0864	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB02-40-41	560-27892-4	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB02-40-41	560-27892-4	Zinc, SPLP	<0.0771	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB03-8-10	560-27892-5	Barium, SPLP	<0.0673	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB03-8-10	560-27892-5	Barium, TCLP	<0.0123	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB03-8-10	560-27892-5	Chromium, Total	69.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB03-8-10	560-27892-5	Chromium, SPLP	<0.00223	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Chromium, TCLP	<0.00247	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB03-8-10	560-27892-5	Iron, SPLP	<0.113	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Mercury, Total	0.0291	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Mercury, SPLP	0.000175	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB03-8-10	560-27892-5	Molybdenum, SPLP	0.00827	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Molybdenum, TCLP	0.00752	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Nickel, Total	63.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB03-8-10	560-27892-5	Selenium, SPLP	0.00488	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-8-10	560-27892-5	Selenium, TCLP	0.0173	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB03-8-10	560-27892-5	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB03-23-25	560-27892-6	Antimony, Total	88.4	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Antimony, SPLP	0.138	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Arsenic, Total	811	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Arsenic, SPLP	0.038	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Barium, Total	405	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Barium, SPLP	<0.0594	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FP-SB03-23-25	560-27892-6	Barium, TCLP	<0.0196	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to high field duplicate RPD
FP-SB03-23-25	560-27892-6	Cadmium, Total	26.6	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Cadmium, SPLP	0.00515	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Cadmium, TCLP	0.138	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-23-25	560-27892-6	Chromium, Total	63.1	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB03-23-25	560-27892-6	Chromium, SPLP	<0.00375	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25	560-27892-6	Chromium, TCLP	<0.00185	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to high field duplicate RPD; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25	560-27892-6	Cobalt, Total	199	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Cobalt, SPLP	0.00242	mg/L	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25	560-27892-6	Copper, Total	7470	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Copper, SPLP	0.0519	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Iron, Total	251000	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Iron, SPLP	<0.0841	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25	560-27892-6	Iron, TCLP	<0.0503	mg/L	UJ	Qualified due to high field duplicate RPD
FP-SB03-23-25	560-27892-6	Lead, Total	1760	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Lead, SPLP	0.00807	mg/L	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25	560-27892-6	Mercury, Total	0.225	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB03-23-25	560-27892-6	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB03-23-25	560-27892-6	Molybdenum, Total	1470	mg/L	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Molybdenum, SPLP	0.236	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Nickel, Total	78.8	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Nickel, SPLP	<0.00851	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB03-23-25	560-27892-6	Selenium, Total	7.13	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Selenium, SPLP	0.015	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-23-25	560-27892-6	Selenium, TCLP	0.0185	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB03-23-25	560-27892-6	Silver, Total	8.37	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB03-23-25	560-27892-6	Zinc, Total	29300	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25	560-27892-6	Zinc, SPLP	0.435	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Antimony, Total	47.4	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Antimony, SPLP	0.062	mg/L	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Arsenic, Total	313	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Arsenic, SPLP	0.0116	mg/L	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Barium, Total	241	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Cadmium, Total	8.38	mg/Kg	J	Qualified due to high QA split RPD; Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25QA	1109124-01	Cadmium, SPLP	<0.0008	mg/L	UJ	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Chromium, Total	19.2	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Cobalt, Total	84.4	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Copper, Total	2570	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Copper, SPLP	0.00865	mg/L	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Iron, Total	91600	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Lead, Total	1170	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Lead, SPLP	0.00208	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25QA	1109124-01	Mercury, Total	0.065	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Molybdenum, Total	468	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Molybdenum, SPLP	0.12	mg/L	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Nickel, Total	33.4	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Nickel, SPLP	0.0015	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25QA	1109124-01	Selenium, Total	4.71	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Selenium, SPLP	0.00495	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-23-25QA	1109124-01	Silver, Total	4.49	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Zinc, Total	10800	mg/Kg	J	Qualified due to high QA split RPD
FP-SB03-23-25QA	1109124-01	Zinc, SPLP	0.00675	mg/L	J	Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB03-35-37	560-27892-7	Barium, SPLP	<0.0443	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB03-35-37	560-27892-7	Barium, TCLP	<0.0633	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB03-35-37	560-27892-7	Chromium, Total	39.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB03-35-37	560-27892-7	Chromium, SPLP	<0.00369	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB03-35-37	560-27892-7	Chromium, TCLP	<0.00219	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB03-35-37	560-27892-7	Iron, SPLP	<0.111	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB03-35-37	560-27892-7	Iron, TCLP	<0.228	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB03-35-37	560-27892-7	Mercury, Total	0.0276	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-35-37	560-27892-7	Mercury, SPLP	0.000145	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB03-35-37	560-27892-7	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB03-35-37	560-27892-7	Nickel, Total	39.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB03-35-37	560-27892-7	Selenium, TCLP	0.0161	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB03-35-37	560-27892-7	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB04-5-10	560-27892-8	Barium, SPLP	<0.0519	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB04-5-10	560-27892-8	Barium, TCLP	<0.129	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB04-5-10	560-27892-8	Chromium, Total	79.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-5-10	560-27892-8	Chromium, SPLP	<0.0519	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Chromium, TCLP	<0.00294	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Cobalt, SPLP	0.00491	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Iron, SPLP	<0.0726	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
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El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB04-5-10	560-27892-8	Lead, SPLP	0.00725	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Mercury, Total	0.114	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-5-10	560-27892-8	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-5-10	560-27892-8	Molybdenum, TCLP	0.00814	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Nickel, Total	59.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-5-10	560-27892-8	Nickel, SPLP	<0.0118	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB04-5-10	560-27892-8	Selenium, SPLP	0.00994	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-5-10	560-27892-8	Selenium, TCLP	0.012	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB04-5-10	560-27892-8	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB04-23-25	560-27892-9	Barium, SPLP	<0.0706	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB04-23-25	560-27892-9	Barium, TCLP	<0.13	mg/L	UJ	Qualified due to leachate blank contamination
FP-SB04-23-25	560-27892-9	Chromium, Total	47.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-23-25	560-27892-9	Chromium, SPLP	<0.00377	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB04-23-25	560-27892-9	Chromium, TCLP	<0.00266	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-23-25	560-27892-9	Iron, SPLP	<0.189	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-23-25	560-27892-9	Mercury, Total	0.0159	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-23-25	560-27892-9	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-23-25	560-27892-9	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-23-25	560-27892-9	Nickel, Total	58.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-23-25	560-27892-9	Selenium, TCLP	0.00872	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-23-25	560-27892-9	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB04-33-34	560-27892-10	Arsenic, SPLP	0.00883	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Arsenic, TCLP	0.00886	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Barium, SPLP	<0.107	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery

Table 2
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB04-33-34	560-27892-10	Chromium, Total	83.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-33-34	560-27892-10	Chromium, SPLP	<0.00577	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Chromium, TCLP	<0.0059	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Iron, SPLP	<0.387	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery
FP-SB04-33-34	560-27892-10	Mercury, SPLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-33-34	560-27892-10	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB04-33-34	560-27892-10	Molybdenum, TCLP	0.0046	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Nickel, Total	47.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
FP-SB04-33-34	560-27892-10	Selenium, SPLP	0.00694	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Selenium, TCLP	0.00991	mg/L	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
FP-SB04-33-34	560-27892-10	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB03-Dup	560-27892-11	Antimony, SPLP	0.088	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Arsenic, SPLP	0.0233	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Barium, SPLP	<0.0884	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Barium, TCLP	0.212	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Cadmium, SPLP	0.0114	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Cadmium, TCLP	0.0862	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Chromium, Total	42.4	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Chromium, SPLP	<0.00479	mg/L	UJ	Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
FP-SB03-Dup	560-27892-11	Chromium, TCLP	<0.0126	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to high field duplicate RPD; Qualified due to MS/MSD percent recovery
FP-SB03-Dup	560-27892-11	Cobalt, SPLP	0.0158	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Copper, SPLP	0.479	mg/L	J	Qualified due to high field duplicate RPD

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Qualified Analytical Results
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FP-SB03-Dup	560-27892-11	Iron, SPLP	<0.258	mg/L	UJ	Qualified due to leachate blank contamination; Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Iron, TCLP	2.4	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Lead, SPLP	0.0946	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Mercury, Total	0.0828	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-Dup	560-27892-11	Mercury, SPLP	0.000265	mg/L	J	Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
FP-SB03-Dup	560-27892-11	Mercury, TCLP	<0.00013	mg/L	UJ	Qualified due to holding time exceedance
FP-SB03-Dup	560-27892-11	Molybdenum, SPLP	0.0292	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Molybdenum, TCLP	0.00944	mg/L	J	Estimated; Analyte detected between SDL and MQL
FP-SB03-Dup	560-27892-11	Nickel, Total	45.4	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Nickel, SPLP	0.0363	mg/L	J	Qualified due to high field duplicate RPD
FP-SB03-Dup	560-27892-11	Selenium, SPLP	0.00711	mg/L	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
FP-SB03-Dup	560-27892-11	Selenium, TCLP	0.0142	mg/L	J	Qualified due to MS/MSD percent recovery
FP-SB03-Dup	560-27892-11	Silver, SPLP	<0.001	mg/L	UJ	Qualified due to MS/MSD percent recovery
FP-SB03-Dup	560-27892-11	Zinc, SPLP	2.83	mg/L	J	Qualified due to high field duplicate RPD
SS-VOC1-1	560-28432-1	1,1,1-Trichloroethane	<0.000729	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000698	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	1,1,2-Trichloroethane	<0.000521	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	1,2-Dichlorobenzene	<0.00026	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	4-Methyl-2-pentanone (MIBK)	<0.000969	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Acetone	0.0104	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-1	560-28432-1	Carbon tetrachloride	<0.000531	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Chlorobenzene	<0.00024	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Cyclohexanone	<0.00103	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Dichlorodifluoromethane	<0.00076	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Methylene Chloride	<0.00521	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Ethyl acetate	<0.00125	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Ethyl ether	<0.000177	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC1-1	560-28432-1	Ethylbenzene	<0.000229	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Tetrachloroethene	<0.000771	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Trichloroethene	<0.000292	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-1	560-28432-1	Trichlorofluoromethane	0.000886	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-1	560-28432-1	Xylenes, Total	0.000596	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-2	560-28432-2	1,1,1-Trichloroethane	<0.000687	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000658	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	1,1,2-Trichloroethane	<0.000491	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	1,2-Dichlorobenzene	0.000269	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-2	560-28432-2	4-Methyl-2-pentanone (MIBK)	<0.000913	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Acetone	<0.00707	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Carbon tetrachloride	<0.000501	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Chlorobenzene	<0.000226	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Cyclohexanone	<0.000972	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Dichlorodifluoromethane	<0.000716	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Methylene Chloride	<0.00491	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Ethyl acetate	<0.00118	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Ethyl ether	<0.000167	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Ethylbenzene	<0.000216	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Tetrachloroethene	<0.000726	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Trichloroethene	<0.000275	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-2	560-28432-2	Trichlorofluoromethane	0.00103	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-2	560-28432-2	Xylenes, Total	0.000568	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-1	560-28432-3	1,1,1-Trichloroethane	<0.000711	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00068	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	1,1,2-Trichloroethane	<0.000508	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	1,2-Dichlorobenzene	<0.000254	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	4-Methyl-2-pentanone (MIBK)	<0.000944	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC2-1	560-28432-3	Acetone	0.00746	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-1	560-28432-3	Carbon tetrachloride	<0.000518	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Chlorobenzene	<0.000233	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Cyclohexanone	<0.001	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Dichlorodifluoromethane	<0.000741	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Methylene Chloride	<0.00508	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Ethyl acetate	<0.00122	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Ethyl ether	<0.000173	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Ethylbenzene	<0.000223	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Tetrachloroethene	<0.000751	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Trichloroethene	<0.000284	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-1	560-28432-3	Trichlorofluoromethane	0.000934	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-1	560-28432-3	Xylenes, Total	0.000408	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-2	560-28432-4	1,1,1-Trichloroethane	<0.000803	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000768	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	1,1,2-Trichloroethane	<0.000573	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	1,2-Dichlorobenzene	<0.000287	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	4-Methyl-2-pentanone (MIBK)	<0.00107	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Acetone	0.0149	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-2	560-28432-4	Carbon tetrachloride	<0.000585	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Chlorobenzene	<0.000264	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Cyclohexanone	<0.00114	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Dichlorodifluoromethane	<0.000837	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Methylene Chloride	<0.00573	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Ethyl acetate	<0.00138	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Ethyl ether	<0.000195	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Ethylbenzene	<0.000252	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Tetrachloroethene	<0.000849	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC2-2	560-28432-4	Trichloroethene	<0.000321	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC2-2	560-28432-4	Trichlorofluoromethane	0.000827	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC2-2	560-28432-4	Xylenes, Total	0.000817	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-3	560-28432-5	1,1,1-Trichloroethane	<0.000766	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000733	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	1,1,2-Trichloroethane	<0.000547	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	1,2-Dichlorobenzene	<0.000274	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	4-Methyl-2-pentanone (MIBK)	<0.00102	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Acetone	0.00922	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-3	560-28432-5	Carbon tetrachloride	<0.000558	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Chlorobenzene	<0.000252	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Cyclohexanone	<0.00108	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Dichlorodifluoromethane	<0.000799	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Methylene Chloride	<0.00547	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Ethyl acetate	<0.00131	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Ethyl ether	<0.000186	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Ethylbenzene	<0.000241	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Tetrachloroethene	<0.00081	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Trichloroethene	<0.000306	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-3	560-28432-5	Trichlorofluoromethane	0.00167	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-3	560-28432-5	Xylenes, Total	0.00079	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-2	560-28432-6	1,1,1-Trichloroethane	<0.000943	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000903	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	1,1,2-Trichloroethane	<0.000674	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	1,2-Dichlorobenzene	<0.000337	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	4-Methyl-2-pentanone (MIBK)	<0.00125	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Acetone	0.0156	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-2	560-28432-6	Carbon tetrachloride	<0.000687	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
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El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC3-2	560-28432-6	Chlorobenzene	<0.00031	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Cyclohexanone	<0.00133	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Dichlorodifluoromethane	<0.000984	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Methylene Chloride	<0.00674	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Ethyl acetate	<0.00162	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Ethyl ether	<0.000229	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Ethylbenzene	<0.000296	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Tetrachloroethene	<0.000997	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Trichloroethene	<0.000377	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-2	560-28432-6	Trichlorofluoromethane	0.00214	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-2	560-28432-6	Xylenes, Total	0.000646	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-1	560-28432-7	1,1,1-Trichloroethane	<0.000752	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00072	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	1,1,2-Trichloroethane	<0.000537	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	1,2-Dichlorobenzene	<0.000269	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	4-Methyl-2-pentanone (MIBK)	<0.000999	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Acetone	0.0172	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC3-1	560-28432-7	Carbon tetrachloride	<0.000548	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Chlorobenzene	<0.000247	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Cyclohexanone	<0.00106	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Dichlorodifluoromethane	<0.000784	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Methylene Chloride	<0.00537	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Ethyl acetate	<0.00129	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Ethyl ether	<0.000183	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Ethylbenzene	<0.000236	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Tetrachloroethene	<0.000795	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Trichloroethene	<0.000301	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC3-1	560-28432-7	Trichlorofluoromethane	0.000988	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC3-1	560-28432-7	Xylenes, Total	0.000475	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-1	560-28432-8	1,1,1-Trichloroethane	<0.000807	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000773	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	1,1,2-Trichloroethane	<0.000577	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	1,2-Dichlorobenzene	<0.000288	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	4-Methyl-2-pentanone (MIBK)	<0.00107	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Acetone	<0.0083	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Carbon tetrachloride	<0.000588	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Chlorobenzene	<0.000265	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Cyclohexanone	<0.00114	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Dichlorodifluoromethane	<0.000842	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Methylene Chloride	<0.00577	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Ethyl acetate	<0.00138	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Ethyl ether	<0.000196	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Ethylbenzene	<0.000254	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Tetrachloroethene	<0.000854	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Trichloroethene	<0.000323	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-1	560-28432-8	Trichlorofluoromethane	0.000889	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-1	560-28432-8	Xylenes, Total	<0.000415	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	1,1,1-Trichloroethane	<0.000668	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000639	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	1,1,2-Trichloroethane	<0.000477	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	1,2-Dichlorobenzene	<0.000238	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	4-Methyl-2-pentanone (MIBK)	<0.000887	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Acetone	<0.00687	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Carbon tetrachloride	<0.000486	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Chlorobenzene	<0.000219	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Cyclohexanone	<0.000944	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Dichlorodifluoromethane	<0.000696	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Methylene Chloride	<0.00477	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Ethyl acetate	<0.00114	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-2	560-28432-9	Ethyl ether	<0.000162	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Ethylbenzene	<0.00021	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Tetrachloroethene	<0.000706	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Trichloroethene	<0.000267	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Trichlorofluoromethane	<0.000477	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-2	560-28432-9	Xylenes, Total	<0.000343	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	1,1,1-Trichloroethane	<0.00069	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00066	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	1,1,2-Trichloroethane	<0.000493	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	1,2-Dichlorobenzene	<0.000246	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	4-Methyl-2-pentanone (MIBK)	<0.000916	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Acetone	0.0102	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-3	560-28432-10	Carbon tetrachloride	<0.000502	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Chlorobenzene	<0.000227	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Cyclohexanone	<0.000975	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Dichlorodifluoromethane	<0.000719	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Methylene Chloride	<0.00493	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Ethyl acetate	<0.00118	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Ethyl ether	<0.000167	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Ethylbenzene	0.000225	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-3	560-28432-10	Tetrachloroethene	<0.000729	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Trichloroethene	<0.000276	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-3	560-28432-10	Trichlorofluoromethane	0.000873	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-3	560-28432-10	Xylenes, Total	0.00086	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-4	560-28432-11	1,1,1-Trichloroethane	<0.000918	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000879	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-4	560-28432-11	1,1,2-Trichloroethane	<0.000656	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	1,2-Dichlorobenzene	<0.000328	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	4-Methyl-2-pentanone (MIBK)	<0.00122	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Acetone	<0.00945	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Carbon tetrachloride	<0.000669	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Chlorobenzene	<0.000302	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Cyclohexanone	<0.0013	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Dichlorodifluoromethane	<0.000958	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Methylene Chloride	<0.00656	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Ethyl acetate	<0.00157	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Ethyl ether	<0.000223	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Ethylbenzene	0.000301	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
SS-VOC4-4	560-28432-11	Tetrachloroethene	<0.000971	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Trichloroethene	<0.000367	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-4	560-28432-11	Trichlorofluoromethane	0.00311	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-4	560-28432-11	Xylenes, Total	0.00114	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
SS-VOC4-5	560-28432-12	1,1,1-Trichloroethane	<0.000762	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00073	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	1,1,2-Trichloroethane	<0.000544	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	1,2-Dichlorobenzene	<0.000272	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	4-Methyl-2-pentanone (MIBK)	<0.00101	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Acetone	<0.00784	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Carbon tetrachloride	<0.000555	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Chlorobenzene	<0.00025	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Cyclohexanone	<0.00108	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Dichlorodifluoromethane	<0.000795	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Methylene Chloride	<0.00544	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Ethyl acetate	<0.00131	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Ethyl ether	<0.000185	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Ethylbenzene	<0.00024	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Tetrachloroethene	<0.000806	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-5	560-28432-12	Trichloroethene	<0.000305	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-5	560-28432-12	Trichlorofluoromethane	0.000774	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
SS-VOC4-5	560-28432-12	Xylenes, Total	<0.000392	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	1,1,1-Trichloroethane	<0.000792	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000758	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	1,1,2-Trichloroethane	<0.000566	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	1,2-Dichlorobenzene	<0.000283	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	4-Methyl-2-pentanone (MIBK)	<0.00105	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Acetone	0.00938	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
SS-VOC4-6	560-28432-13	Carbon tetrachloride	<0.000577	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Chlorobenzene	<0.00026	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Cyclohexanone	<0.00112	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Dichlorodifluoromethane	<0.000826	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Methylene Chloride	<0.00566	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Ethyl acetate	<0.00136	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-6	560-28432-13	Ethyl ether	<0.000192	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Ethylbenzene	<0.000249	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Tetrachloroethene	<0.000838	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Trichloroethene	<0.000317	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-6	560-28432-13	Trichlorofluoromethane	0.00169	mg/Kg	J	Qualified due to high receipt temperature; Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
SS-VOC4-6	560-28432-13	Xylenes, Total	<0.000407	mg/Kg	UJ	Qualified due to high receipt temperature; Qualified due to low surrogate recovery
SS-VOC4-7	560-28432-14	1,1,1-Trichloroethane	<0.000677	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000648	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	1,1,2-Trichloroethane	<0.000484	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	1,2-Dichlorobenzene	<0.000242	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	4-Methyl-2-pentanone (MIBK)	<0.000899	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Acetone	<0.00696	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Carbon tetrachloride	<0.000493	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Chlorobenzene	<0.000222	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Cyclohexanone	<0.000957	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Dichlorodifluoromethane	<0.000706	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Methylene Chloride	<0.00484	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Ethyl acetate	<0.00116	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Ethyl ether	<0.000164	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Ethylbenzene	<0.000213	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Tetrachloroethene	<0.000716	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Trichloroethene	<0.000271	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Trichlorofluoromethane	<0.000484	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-7	560-28432-14	Xylenes, Total	<0.000348	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	1,1,1-Trichloroethane	<0.000657	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000629	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-8	560-28432-15	1,1,2-Trichloroethane	<0.000469	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	1,2-Dichlorobenzene	<0.000235	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	4-Methyl-2-pentanone (MIBK)	<0.000873	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Acetone	<0.00676	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Carbon tetrachloride	<0.000479	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Chlorobenzene	<0.000216	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Cyclohexanone	<0.000929	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Dichlorodifluoromethane	<0.000685	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Methylene Chloride	<0.00469	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Ethyl acetate	<0.00113	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Ethyl ether	<0.00016	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Ethylbenzene	<0.000207	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Tetrachloroethene	<0.000695	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Trichloroethene	<0.000263	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-8	560-28432-15	Trichlorofluoromethane	0.000475	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-8	560-28432-15	Xylenes, Total	<0.000338	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	1,1,1-Trichloroethane	<0.000739	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000708	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	1,1,2-Trichloroethane	<0.000528	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	1,2-Dichlorobenzene	<0.000264	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	4-Methyl-2-pentanone (MIBK)	<0.000982	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Acetone	<0.00761	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Carbon tetrachloride	<0.000539	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Chlorobenzene	<0.000243	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Cyclohexanone	<0.00105	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Dichlorodifluoromethane	<0.000771	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Methylene Chloride	<0.00528	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Ethyl acetate	<0.00127	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Ethyl ether	<0.00018	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Ethylbenzene	<0.000232	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Tetrachloroethene	<0.000782	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC4-9	560-28432-16	Trichloroethene	<0.000296	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
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El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC4-9	560-28432-16	Trichlorofluoromethane	0.0015	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC4-9	560-28432-16	Xylenes, Total	0.000405	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-1	560-28432-17	1,1,1-Trichloroethane	<0.000636	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000608	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	1,1,2-Trichloroethane	<0.000454	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	1,2-Dichlorobenzene	<0.000227	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	4-Methyl-2-pentanone (MIBK)	<0.000844	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Acetone	0.0118	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-1	560-28432-17	Carbon tetrachloride	<0.000463	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Chlorobenzene	<0.000209	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Cyclohexanone	<0.000899	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Dichlorodifluoromethane	<0.000663	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Methylene Chloride	<0.00454	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Ethyl acetate	<0.00109	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Ethyl ether	<0.000154	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Ethylbenzene	<0.0002	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Tetrachloroethene	<0.000672	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Trichloroethene	<0.000254	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-1	560-28432-17	Trichlorofluoromethane	0.00142	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-1	560-28432-17	Xylenes, Total	0.000691	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-2	560-28432-18	1,1,1-Trichloroethane	<0.000578	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000553	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	1,1,2-Trichloroethane	<0.000413	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	1,2-Dichlorobenzene	<0.000206	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	4-Methyl-2-pentanone (MIBK)	<0.000768	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Acetone	<0.00594	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Carbon tetrachloride	<0.000421	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Chlorobenzene	<0.00019	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC5-2	560-28432-18	Cyclohexanone	<0.000817	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Dichlorodifluoromethane	<0.000602	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Methylene Chloride	<0.00413	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Ethyl acetate	<0.00099	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Ethyl ether	<0.00014	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Ethylbenzene	<0.000182	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Tetrachloroethene	<0.000611	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Trichloroethene	<0.000231	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-2	560-28432-18	Trichlorofluoromethane	0.000533	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-2	560-28432-18	Xylenes, Total	<0.000297	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	1,1,1-Trichloroethane	<0.00083	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000795	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	1,1,2-Trichloroethane	<0.000593	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	1,2-Dichlorobenzene	<0.000297	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	4-Methyl-2-pentanone (MIBK)	<0.0011	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Acetone	<0.00854	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Carbon tetrachloride	<0.000605	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Chlorobenzene	<0.000273	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Cyclohexanone	<0.00117	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Dichlorodifluoromethane	<0.000866	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Methylene Chloride	<0.00593	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Ethyl acetate	<0.00142	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Ethyl ether	<0.000202	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Ethylbenzene	<0.000261	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Tetrachloroethene	<0.000878	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Trichloroethene	<0.000332	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC5-3	560-28432-19	Trichlorofluoromethane	0.00152	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC5-3	560-28432-19	Xylenes, Total	<0.000427	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	1,1,1-Trichloroethane	<0.000736	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000704	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	1,1,2-Trichloroethane	<0.000525	mg/Kg	UJ	Qualified due to high receipt temperature

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SS-VOC1-3	560-28432-20	1,2-Dichlorobenzene	0.000344	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-3	560-28432-20	4-Methyl-2-pentanone (MIBK)	<0.000977	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Acetone	0.0239	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-3	560-28432-20	Carbon tetrachloride	<0.000536	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Chlorobenzene	<0.000242	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Cyclohexanone	<0.00104	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Dichlorodifluoromethane	<0.000767	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Methylene Chloride	<0.00525	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Ethyl acetate	<0.00126	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Ethyl ether	<0.000179	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Ethylbenzene	0.000263	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-3	560-28432-20	Tetrachloroethene	<0.000778	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Trichloroethene	<0.000294	mg/Kg	UJ	Qualified due to high receipt temperature
SS-VOC1-3	560-28432-20	Trichlorofluoromethane	0.00148	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
SS-VOC1-3	560-28432-20	Xylenes, Total	0.00103	mg/Kg	J	Qualified due to high receipt temperature; Estimated; Analyte detected between SDL and MQL
TSA-SB01-0.5	560-27523-1	Aroclor 1260	0.0299	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB01-0.5	560-27495-1	Hexachlorocyclopentadiene	<0.0986	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
UB-SB01-0.5	560-27495-1	Chlordane	<0.00189	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB01-0.5	560-27495-1	Endrin	<0.0000838	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB01-0.5	560-27495-1	Barium, Total	33.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-0.5	560-27495-1	Iron, Total	4740	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-1.5	560-27495-2	Barium, Total	108	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-1.5	560-27495-2	Iron, Total	8150	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-1.5	560-27495-2	Lead, Total	420	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB01-3.5	560-27495-3	Barium, Total	120	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-3.5	560-27495-3	Copper, Total	8.52	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB01-3.5	560-27495-3	Iron, Total	4660	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-3.5	560-27495-3	Lead, Total	5.53	mg/Kg	J	Qualfied due to ICV/CCV outliers

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
UB-SB01-3.5	560-27495-3	Molybdenum, Total	0.471	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB01-5.0	560-27495-4	Chlordane	0.00848	mg/Kg	J	Qualified due to high primary/secondary column RPD; Estimated; Analyte detected between SDL and MQL
UB-SB01-5.0	560-27495-4	Barium, Total	45.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-5.0	560-27495-4	Copper, Total	8.28	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB01-5.0	560-27495-4	Iron, Total	5570	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB01-5.0	560-27495-4	Lead, Total	5.44	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB01-5.0	560-27495-4	Molybdenum, Total	0.35	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-0.5	560-27495-5	1,1,1-Trichloroethane	<0.000732	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.0007	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	1,1,2-Trichloroethane	<0.000523	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	1,2-Dichlorobenzene	<0.000261	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	4-Methyl-2-pentanone (MIBK)	<0.000972	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Acetone	<0.00753	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Carbon tetrachloride	<0.000533	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Chlorobenzene	<0.00024	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Cyclohexanone	<0.00103	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Dichlorodifluoromethane	<0.000763	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Ethyl acetate	<0.00125	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Ethyl ether	<0.000178	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Ethylbenzene	<0.00023	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Methylene Chloride	<0.00523	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Tetrachloroethene	<0.000773	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Trichloroethene	<0.000293	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Trichlorofluoromethane	<0.000523	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Xylenes, Total	<0.000376	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB02-0.5	560-27495-5	Barium, Total	66.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-0.5	560-27495-5	Iron, Total	78900	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-0.5	560-27495-5	Lead, Total	18100	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-1.5	560-27495-6	Barium, Total	62.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-1.5	560-27495-6	Copper, Total	372	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-1.5	560-27495-6	Iron, Total	5290	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
UB-SB02-1.5	560-27495-6	Lead, Total	238	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-1.5	560-27495-6	Molybdenum, Total	1.75	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-1.5	560-27495-6	Selenium, Total	0.355	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-3.5	560-27495-7	Barium, Total	95.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-3.5	560-27495-7	Copper, Total	44.6	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-3.5	560-27495-7	Iron, Total	6300	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-3.5	560-27495-7	Lead, Total	13.6	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-3.5	560-27495-7	Molybdenum, Total	0.651	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-5.0	560-27495-8	Barium, Total	89.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-5.0	560-27495-8	Cadmium, Total	0.402	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-5.0	560-27495-8	Copper, Total	60.7	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-5.0	560-27495-8	Iron, Total	4550	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB02-5.0	560-27495-8	Lead, Total	10.5	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB02-5.0	560-27495-8	Mercury, Total	0.00915	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB02-5.0	560-27495-8	Molybdenum, Total	0.447	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-0.5	560-27495-9	1,1,1-Trichloroethane	<0.000857	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00082	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	1,1,2-Trichloroethane	<0.000612	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	1,2-Dichlorobenzene	<0.000306	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	4-Methyl-2-pentanone (MIBK)	<0.00114	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Acetone	<0.00881	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Carbon tetrachloride	<0.000624	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Chlorobenzene	<0.000282	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Cyclohexanone	<0.00121	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Dichlorodifluoromethane	<0.000894	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Ethyl acetate	<0.00147	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Ethyl ether	<0.000208	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Ethylbenzene	<0.000269	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Methylene Chloride	<0.00612	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Tetrachloroethene	<0.000906	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Trichloroethene	<0.000343	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Trichlorofluoromethane	<0.000612	mg/Kg	UJ	Qualified due to low surrogate recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
UB-SB03-0.5	560-27495-9	Xylenes, Total	<0.000441	mg/Kg	UJ	Qualified due to low surrogate recovery
UB-SB03-0.5	560-27495-9	Barium, Total	165	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-0.5	560-27495-9	Iron, Total	29400	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-0.5	560-27495-9	Lead, Total	10400	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB03-1.5	560-27495-10	Antimony, Total	0.292	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-1.5	560-27495-10	Barium, Total	36.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-1.5	560-27495-10	Copper, Total	38.3	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB03-1.5	560-27495-10	Iron, Total	4030	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-1.5	560-27495-10	Lead, Total	25	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB03-1.5	560-27495-10	Molybdenum, Total	0.301	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-1.5	560-27495-10	Silver, Total	0.128	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-3.5	560-27495-11	Barium, Total	39.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-3.5	560-27495-11	Cadmium, Total	0.242	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-3.5	560-27495-11	Copper, Total	7.37	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB03-3.5	560-27495-11	Iron, Total	4500	mg/Kg	J	Qualified due to MS/MSD percent recovery
UB-SB03-3.5	560-27495-11	Lead, Total	10.8	mg/Kg	J	Qualfied due to ICV/CCV outliers
UB-SB03-3.5	560-27495-11	Mercury, Total	0.0133	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-3.5	560-27495-11	Molybdenum, Total	0.182	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-5.0	560-27496-1	Xylenes, Total	0.0006	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-5.0	560-27496-1	Chlordane	<0.00191	mg/Kg	UJ	Qualified due to holding time exceedance
UB-SB03-5.0	560-27496-1	Endrin	<0.0000845	mg/Kg	UJ	Qualified due to holding time exceedance
UB-SB03-5.0	560-27496-1	Copper, Total	5.49	mg/Kg	J	Qualified due to ICV/CCV outliers
UB-SB03-5.0	560-27496-1	Cadmium, Total	0.222	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-5.0	560-27496-1	Lead, Total	15.8	mg/Kg	J	Qualified due to ICV/CCV outliers
UB-SB03-5.0	560-27496-1	Mercury, Total	0.0296	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB03-5.0	560-27496-1	Molybdenum, Total	0.171	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB04-0.5	560-27523-15	Chlordane	<0.0021	mg/Kg	UJ	Qualified due to holding time exceedance
UB-SB04-0.5	560-27523-15	Endrin	<0.0000928	mg/Kg	UJ	Qualified due to holding time exceedance
UB-SB04-0.5	560-27523-15	Molybdenum, Total	1.46	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SB04-1.5	560-27523-16	Chlordane	<0.00403	mg/Kg	UJ	Qualified due to holding time exceedance
UB-SB04-1.5	560-27523-16	Endrin	<0.000179	mg/Kg	UJ	Qualified due to holding time exceedance
WP-SS1A	560-28396-1	Molybdenum, Total	58.3	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
WP-SS1B	560-28396-2	Molybdenum, Total	66.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS2A	560-28396-3	Endrin	0.000421	mg/Kg	J	Qualified due to high surrogate recovery
WP-SS2A	560-28396-3	Molybdenum, Total	144	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS2B	560-28396-4	Molybdenum, Total	81.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS3A	560-28396-5	Molybdenum, Total	29.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS3B	560-28396-6	Molybdenum, Total	16.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS4A	560-28396-7	Molybdenum, Total	277	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS4B	560-28396-8	Molybdenum, Total	239	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS4C	560-28396-9	Mercury, Total	<0.137	mg/Kg	UJ	Qualified due to method blank contamination
WP-SS4C	560-28396-9	Molybdenum, Total	169	mg/Kg	J	Qualified due to MS/MSD percent recovery
WP-SS5	560-28396-10	Molybdenum, Total	72.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
WWTP-SB01-10	560-27523-10	Mercury, Total	0.0371	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Samples						
Concrete Pile 1A	560-28434-001	Antimony, Total	1.53	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 1A	560-28434-001	Cadmium, Total	0.441	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 1A	560-28434-001	Copper, Total	12.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1A	560-28434-001	Iron, Total	6360	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1A	560-28434-001	Molybdenum, Total	0.511	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 1B	560-28434-002	Copper, Total	23.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1B	560-28434-002	Iron, Total	6090	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1B	560-28434-002	Mercury, Total	0.092	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 1B	560-28434-002	Selenium, Total	0.801	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 1C	560-28434-003	Copper, Total	97.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1C	560-28434-003	Iron, Total	4890	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1D	560-28434-004	Copper, Total	30.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1D	560-28434-004	Iron, Total	4730	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 1D	560-28434-004	Silver, Total	0.119	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 2A	560-28434-005	Copper, Total	80.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 2A	560-28434-005	Iron, Total	5380	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 2A	560-28434-005	Silver, Total	0.31	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Concrete Pile 2B	560-28434-006	Copper, Total	151	mg/Kg	J	Qualified due to MS/MSD percent recovery
Concrete Pile 2B	560-28434-006	Iron, Total	5110	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
Water Samples						
BB-Tank	560-28038-1	Cobalt, Dissolved	0.0014	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Copper, Dissolved	0.00795	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Lead, Dissolved	0.00492	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Selenium, Dissolved	0.00395	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Thallium, Dissolved	0.000716	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Zinc, Dissolved	0.0123	mg/L	J	Estimated; Analyte detected between SDL and MQL
BB-Tank	560-28038-1	Nitrate	<0.206	mg/L	UJ	Qualified due to holding time exceedance
BB-Tank	560-28038-1	Nitrite	<0.4	mg/L	UJ	Qualified due to holding time exceedance
BB-Tank	560-28038-1	Nitrite + Nitrate	<0.4	mg/L	UJ	Qualified due to holding time exceedance

Notes:
"<" = Analyte not detected above listed reporting limit
J = Analyte was positively identified above the SDL; however, the result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter ; mg/Kg = micrograms per kilogram
MS = Matrix Spike ; MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
FP-SB03-23-25 / FP-SB03-DUP / FP-SB03-23-25QA	**Total Metals (mg/Kg)**					
	Antimony	88.4	89.4	1	47.4	**60**
	Arsenic	811	738	9	313	**89**
	Barium	405	333	20	241	**51**
	Cadmium	26.6	21.8	20	8.38 J	**NC**
	Chromium	63.1	42.4	**39**	19.2	**107**
	Cobalt	199	157	24	84.4	**81**
	Copper	7470	6100	20	2570	**98**
	Iron	251000	235000	7	91600	**93**
	Lead	1760	1820	3	1170	**40**
	Mercury	0.225	0.0828 J	NC	0.065	**110**
	Molybdenum	1470	1060	32	468	**103**
	Nickel	78.8	45.4	**54**	33.4	**81**
	Selenium	7.13	5.45	27	4.71	**41**
	Silver	8.37	8.84	5	4.49	**60**
	Zinc	29300	34000	15	10800	**92**
	SPLP Metals (mg/L)					
	Antimony	0.138	0.088	**44**	0.062	**76**
	Arsenic	0.038	0.0233	**48**	0.0116	**106**
	Barium	0.0594	0.0884	**39**	0.0674	13
	Cadmium	0.00515	0.0114	**76**	<0.0008	**NC**
	Chromium	0.00375 J	0.00479 J	NC	<0.0012	NC
	Cobalt	0.00242 J	0.0158	**NC**	<0.0008	NC
	Copper	0.0519	0.479	**161**	0.00865	**143**
	Iron	0.0841 J	0.258	**NC**	<0.078	NC
	Lead	0.00807 J	0.0946	**NC**	0.00208 J	NC
	Mercury	<0.00013	0.000265 J	NC	<0.000042	NC
	Molybdenum	0.236	0.0292	**156**	0.12	**65**
	Nickel	0.00851 J	0.0363	**NC**	0.0015 J	NC
	Selenium	0.015	0.00711 J	**NC**	0.00495 J	NC
	Silver	<0.001	<0.001	NC	<0.0008	NC
	Zinc	0.435	2.83	**147**	0.00675	**194**
	TCLP Metals (mg/L)					
	Antimony	0.213	0.189	12	NA	NC
	Arsenic	0.0377	0.0339	11	NA	NC
	Barium	0.0196	0.212	**166**	NA	NC
	Cadmium	0.138	0.0862	**46**	NA	NC
	Chromium	0.00185 J	0.0126	**NC**	NA	NC
	Cobalt	0.0443	0.0356	22	NA	NC
	Copper	6.39	7.07	10	NA	NC
	Iron	<0.0503	2.4	**NC**	NA	NC
	Lead	0.556	0.704	23	NA	NC
	Mercury	<0.00013	<0.00013	NC	NA	NC
	Molybdenum	0.0171	0.00944 J	NC	NA	NC
	Nickel	0.0694	0.0719	4	NA	NC
	Selenium	0.0185	0.0142	26	NA	NC
	Silver	<0.001	<0.001	NC	NA	NC
	Zinc	18.7	15.5	19	NA	NC

Notes:
Bold values indicate the sample result was qualified.
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/Kg = milligrams per kilogram
mg/L = milligrams per liter
< = Not detected above SDL
NA = Not Analyzed
NC = Not Calculated; RPD values were not calculated for non-detect values
QA = Quality Assurance
MQL = Method Quantitation Limit

Table 4
Completeness Summary
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Volatile Organic Compounds					
1,1,1-Trichloroethane	46	21[a,b]	46	46	100
1,1,2-Trichloro-1,2,2-trifluoroethane	46	21[a,b]	46	46	100
1,1,2-Trichloroethane	46	21[a,b]	46	46	100
1,2-Dichlorobenzene	46	21[a,b]	46	46	100
4-Methyl-2-pentanone (MIBK)	46	21[a,b]	46	46	100
Acetone	46	21[a,b]	46	46	100
Carbon tetrachloride	46	21[a,b]	46	46	100
Chlorobenzene	46	21[a,b]	46	46	100
Cyclohexanone	46	21[a,b]	46	46	100
Dichlorodifluoromethane	46	21[a,b]	46	46	100
Ethyl acetate	46	21[a,b]	46	46	100
Ethyl ether	46	21[a,b]	46	46	100
Ethylbenzene	46	21[a,b]	46	46	100
Methylene Chloride	46	21[a,b]	46	46	100
Tetrachloroethene	46	21[a,b]	46	46	100
Trichloroethene	46	21[a,b]	46	46	100
Trichlorofluoromethane	46	21[a,b]	46	46	100
Xylenes, Total	46	21[a,b]	46	46	100
Semivolatile Organic Compounds					
Hexachlorocyclopentadiene	36	35[c]	97	36	100
Nonhalogenated Organic Compounds					
Methanol	26	26	100	26	100
n-Butanol	26	26	100	26	100
Polychlorinated Biphenyls					
All analytes	90	90	100	90	100
Organochlorine Pesticides					
Chlordane	30	13[a,d,e]	43	30	100
Endrin	30	13[a,d]	43	30	100
Organophosphorus Pesticides					
Methyl parathion	36	36	100	36	100
Total Metals					
Antimony	57	55[g]	96	57	100
Arsenic	57	55[g]	96	57	100
Barium	57	44[c,g]	77	57	100
Cadmium	57	55[g]	96	57	100
Chromium	57	45[c,f,g]	79	57	100
Cobalt	57	55[g]	96	57	100
Copper	57	39[c,g,h]	68	57	100
Iron	57	38[c,g]	67	57	100
Lead	57	41[g,h]	72	57	100
Mercury	57	53[d,g,i]	93	57	100
Molybdenum	57	45[c,g]	79	57	100
Nickel	57	45[c,f,g]	79	57	100
Selenium	57	55[g]	96	57	100

Table 4
Completeness Summary
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Silver	57	55[g]	96	57	100
Zinc	57	55[g]	96	57	100
Dissolved Metals					
All analytes	15	15	100	15	100
SPLP Metals					
Antimony	12	9[f,g]	75	12	100
Arsenic	12	9[f,g]	75	12	100
Barium	12	1[c,f,j]	8	12	100
Cadmium	12	9[f,g]	75	12	100
Chromium	12	1[j]	8	12	100
Cobalt	12	10[f]	83	12	100
Copper	12	9[f,g]	75	12	100
Iron	12	1[c,f,j]	8	12	100
Lead	12	10[f]	83	12	100
Mercury	12	1[d]	8	12	100
Molybdenum	12	9[f,g]	75	12	100
Nickel	12	7[f,j]	58	12	100
Selenium	12	10[f]	83	12	100
Silver	12	1[c]	8	12	100
Zinc	12	7[f,g,j]	58	12	100
TCLP Metals					
Barium	11	1[f,j]	9	11	100
Cadmium	11	9[f]	82	11	100
Chromium	11	0[c,j]	0	11	100
Iron	11	5[f,j]	45	11	100
Mercury	11	0[d]	0	11	100
Selenium	11	0[c]	0	11	100
All other analytes	99	99	100	99	100
Total Cations					
All analytes	6	6	100	6	100
Anions					
Nitrate	1	0[d]	0	1	100
Nitrite	1	0[d]	0	1	100
Nitrate + Nitrite	1	0[d]	0	1	100
All other analytes	4	4	100	4	100
General Chemistry					
pH	8	0[d]	0	8	100
All other analytes	4	4	100	4	100
TOTALS	**2342**	**1589**	**68**	**2342**	**100**

Notes:

Data qualified as trace detections (between sample detection limit and method quantitation limit) are not counted as out of contractual compliance

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

Table 4
Completeness Summary
Grab Soil/Water Samples - July-September 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance

[a] Results qualified due to surrogate recovery outlier

[b] Results qualified due to high receipt temperature

[c] Results qualified due to MS/MSD percent recovery outliers

[d] Results qualified due to holding time exceedance

[e] Results qualified due to high primary/secondary column RPD

[f] Results qualified due to high field duplicate RPD

[g] Results qualified due to high QA split RPD

[h] Results qualified due to ICV/CCV outliers

[i] Results qualified due to method blank contamination

[j] Results qualified due to leachate blank contamination

Texas Custodial Trust

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Data Usability Summary Data Gap Samples October-December 2011 Sampling Event

February 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the data gap samples collected during October, November, and December 2011 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance (RG)-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the data gap samples collected during October, November, and December 2011 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

Seventy-seven soil samples and one grab groundwater sample were collected at the former ASARCO Smelter during this sampling event. The samples were submitted to TestAmerica for analysis. Soil samples were submitted for the following analyses:

- volatile organic compounds (VOCs) by USEPA Method 8260
- semivolatile organic compounds (SVOCs) by USEPA Method 8270
- total petroleum hydrocarbons (TPH) by TCEQ Method TX 1005
- nonhalogenated organic compounds (NHOCs) by USEPA Method 8015
- polychlorinated biphenyls (PCBs) by USEPA Method 8082

- organochlorine pesticides (OCPs) by USEPA Method 8081
- organophosphorous pesticides (OPPs) by USEPA Method 8141
- total metals by USEPA Methods 6010 and 7471

The water sample was submitted for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- total cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Methods 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TSS) by USEPA Method 160.2
- anions (chloride, nitrate + nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2
- sulfide by USEPA Method 376.2
- total alkalinity by Standard Method (SM) 2320

Additionally, two nineteen quality assurance samples (i.e., field duplicates, QA split samples, trip blanks) were collected and analyzed as part of the sampling program. Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory reports submitted by TestAmerica and ALS:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times

- blank contamination (method blanks, trip blank, common laboratory contaminant)
- surrogate recovery (for organic parameters)
- laboratory control sample (LCS) recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) recovery and RPD
- duplicates (field duplicates, QA split samples, laboratory duplicates)
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the data gap samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received at the correct temperatures (4 ± 2 degrees Celsius) except for the following:

- The samples collected on October 21, 2011 and October 24, 2011 were received by ALS at 0.7 degrees Celsius. The temperature outlier did not impact the sample results and data qualification was not required.

- The samples collected on November 19, 2011 were received by ALS at 1.5 degrees Celsius. The temperature outlier did not impact the sample results and data qualification was not required.

- The sample collected on December 2, 2011 was received by TestAmerica at 1.8 degrees Celsius. The temperature outlier did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-65624 had detections of arsenic (0.269 milligrams per kilogram, or mg/kg), copper (0.325 mg/kg), and lead (0.2265 mg/kg). Data qualification was not required because the total arsenic, total copper, and total lead detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with prep batch 560-67281 had a mercury detection (0.02983 mg/kg). The total mercury results for samples BY-SB03-7-12, BY-SB03-50-52, BY-SB03-60-62, BY-SB04-45-47, BY-SB05-35-37, BY-SB06-5-7, BY-SB06-20-22, BY-SB06-35-37, BY-SB06-50-52, BY-SB06-65-67, BY-SB07-5-7, BY-SB07-15-17, and BY-SB07-20-22 were qualified "UJ" to indicate a potential bias.

- The method blank associated with prep batch 560-67418 had a mercury detection (0.000301 mg/L). The SPLP mercury results for samples BY-SB03-25-27, BY-SB03-40-42, BY-SB04-0-2, BY-SB05-5-7, BY-SB05-35-37, BY-SB05-40-42, BY-SB06-5-7 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-67064 had a mercury detection (0.000141 milligrams per liter, or mg/L). The total mercury result for sample BY-04 was qualified "J" to indicate a potential bias. Data qualification was not required for dissolved mercury because the analyte was not detected in the associated sample.

- The method blank associated with ALS batch 56355 had a zinc detection (0.4635 mg/kg). Data qualification was not required because the total zinc detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch 56391 had an iron detection (10.8 mg/kg). Data qualification was not required because the total iron detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch 56542 had detections of lead (0.0518 mg/kg) and zinc (0.2631 mg/kg). Data qualification was not required because the total lead and total zinc detections in the associated sample were greater than ten times the method blank concentration.

3.4.2. Leachate Blank Interference

Leachate blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The leachate blank associated with prep batch 560-67376 had a selenium detection (0.00463 mg/L). The SPLP selenium results for samples BY-SB03-40-42, BY-SB05-20-22, and BY-SB06-5-7 were qualified "UJ" to indicate a potential bias.

- The leachate blank associated with prep batch 560-67418 had a mercury detection (0.000315 mg/L). The SPLP mercury results for samples BY-SB03-25-27, BY-SB03-40-42, BY-SB04-0-2, BY-SB05-5-7, BY-SB05-35-37, BY-SB05-40-42, BY-SB06-5-7 were qualified "UJ" to indicate a potential bias.

3.4.3. Common Laboratory Contaminants

Per USEPA guidelines, common laboratory contaminants for VOC analysis are acetone, 2-butanone (MEK), cyclohexane, and methylene chloride. Analytical results are qualified if the detected sample concentration is less than 10 times the method reporting limit. Common lab contaminant compounds were not detected in the samples associated with the monitoring events except for the following:

- Methylene chloride was detected in samples APA-SB01-5 (0.00587 mg/kg), APA-SB02-1.5 (0.00736 mg/kg), APA-SB02-5 (0.00908 mg/kg), BB-SS01QA (0.062 mg/kg), FD101911-1 (0.0118 mg/kg), FD101911-2 (0.00556 mg/kg), and UB-SS-Dup1 (0.00673 mg/kg). The methylene chloride results for samples APA-SB01-5, APA-SB02-1.5, APA-SB02-5, BB-SS01QA, FD101911-1, FD101911-2, and UB-SS-Dup1 were qualified "J" to indicate a potential high bias.

3.5. Surrogate Recovery

Surrogate recoveries for the organic analyses were within laboratory acceptance limits except for the following:

- The recovery of 4-bromofluorobenzene was below acceptance limits (61 to 130 percent) for sample APA-SB02-0.5 (50 percent). All results for sample APA-SB02-0.5 were qualified "J" and "UJ" to indicate a potential low bias.

- The recovery of decachlorobiphenyl was above acceptance limits (55 to 130 percent) for samples BB-SS01 (177 percent), UB-SS-Dup1 (208 percent), and the recovery of tetrachloro-m-xylene was above acceptance limits (69 to 125 percent) for UB-SS-Dup1 (177 percent). Data qualification was not required because all results are non-detect.

- The recovery of triphenylphosphate was above acceptance limits (69 to 130 percent) for samples APA-SB01-1.5 (180 and 194 percent), FD101911-2 (142 percent), and UB-SS02 (134 percent). Data qualification was not required because all results are non-detect.

3.6. Laboratory Control Samples Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS percent recoveries and RPDs were within acceptance limits.

3.7. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.

- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for hexachlorocyclopentadiene (10 and 8 percent) were below acceptance limits (43 to 130 percent) for prep batch 560-65571. The hexachlorocyclopentadiene result for sample APA-SB01-0.5 was qualified "UJ" to indicate a potential low bias.

- The MS and MSD recoveries for hexachlorocyclopentadiene (13 and 15 percent) were below acceptance limits (43 to 130 percent) for prep batch 560-65606. The hexachlorocyclopentadiene result for sample BB-SS01 was qualified "UJ" to indicate a potential low bias.

- The MS and MSD recoveries for C6-C35 (55 and 50 percent) were below acceptance limits (75 to 125 percent) for prep batch 560-65754. The TPH results for sample DDA-SB01-0.5 were qualified "J" and "UJ" to indicate a potential low bias.

- The MS and MSD recoveries for arsenic (2513 and 157 percent), barium (-127 and -239 percent), cadmium (198 and 139 percent), cobalt (70 and 24 percent), copper (8157 and -13979 percent), iron (-202 and -73 percent), lead (1577 and -278 percent), and nickel (284 and -10 percent); and the MSD recovery for antimony (1717 and 108 percent), molybdenum (65 and 102 percent), and silver (235 and 94 percent) were outside acceptance limits (75 to 125 percent) for prep

batch 560-65488. The total cobalt, total nickel, and total silver results for samples APA-SB01-0.5, APA-SB01-1.5, APA-SB01-3.5, APA-SB01-5, APA-SB02-0.5, APA-SB02-1.5, APA-SB02-3.5, APA-SB02-5, FD101911-1, and FD101911-2 were qualified "J" to indicate a potential bias. Data qualification was not required for total antimony, total arsenic, total barium, total cadmium, total copper, total iron, total lead, and total molybdenum because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for arsenic (1032 and 7610 percent), copper (-2902 and -1767 percent), lead (-903 and 820 percent), and zinc (829 and 7438 percent); the MS recoveries for cadmium (338 percent) and nickel (69 percent); and the MSD recovery for antimony (51 percent), barium (337 percent), iron (942 percent), and molybdenum (145 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-65619. The total cadmium, total molybdenum, and total nickel results for samples ZCP-SB01-5, ZCP-SB01-8.5, ZCP-SB02-0.5, ZCP-SB02-5, ZCP-SB04-0.5, ZCP-SB04-1.5, ZCP-SB04-3.5, ZCP-SB04-5, ZCP-SB05-0.5, ZCP-SB05-1.5, ZCP-SB05-3.5, ZCP-SB05-5, ZCP-SB01-15, ZCP-SB01-20, ZCP-SB03-0.5, ZCP-SB06-0.5, ZCP-SB06-1.5, ZCP-SB06-3.5, ZCP-SB06-5, FD102011-1, and FD102011-2 were qualified "J" to indicate a potential bias. Data qualification was not required for total antimony, total arsenic, total barium, total copper, total iron, total lead, and total zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for antimony (2327 and 2601 percent), arsenic (26007 and 33324 percent), barium (895 and 931 percent), cadmium (3692 and 4826 percent), chromium (372 and 532 percent), cobalt (371 and 286 percent), copper (86445 and 103282 percent), iron (2891 and 3470 percent), lead (41720 and 53001 percent), molybdenum (2354 and 2990 percent), nickel (451 and 521 percent), selenium (708 and 1004 percent), silver (449 and 501 percent), and zinc (22638 and 23025 percent) were above acceptance limits (75 to 125 percent) for prep batch 560-65624. Data qualification was not required for total antimony, total arsenic, total barium, total cadmium, total chromium, total cobalt, total copper, total iron, total lead, total molybdenum, total nickel, total selenium, total silver, and total zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for mercury (257 and 276 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-65687. The total mercury results for samples ZCP-SB01-5, ZCP-SB01-8.5, ZCP-SB02-0.5, ZCP-SB02-5, ZCP-SB04-0.5, ZCP-SB04-1.5, ZCP-SB04-3.5, ZCP-SB04-5, ZCP-SB05-0.5, ZCP-SB05-1.5, ZCP-SB05-3.5, ZCP-SB05-5, ZCP-SB01-15, ZCP-SB01-20, ZCP-SB03-0.5, ZCP-SB06-0.5, ZCP-SB06-1.5, ZCP-SB06-3.5, ZCP-

SB06-5, FD102011-1, and FD102011-2 were qualified "J" to indicate a potential high bias.

- The MS recovery for hexavalent chromium (79 percent) was below acceptance limits (80 to 120 percent) for analytical batch 219055. The hexavalent chromium results for samples ZCP-SB01-5, ZCP-SB01-8.5, ZCP-SB02-0.5, ZCP-SB02-5, ZCP-SB04-0.5, ZCP-SB04-1.5, ZCP-SB04-3.5, ZCP-SB04-5, ZCP-SB05-0.5, ZCP-SB05-1.5, ZCP-SB05-3.5, ZCP-SB05-5, ZCP-SB01-15, ZCP-SB01-20, ZCP-SB03-0.5, ZCP-SB06-0.5, ZCP-SB06-1.5, ZCP-SB06-3.5, ZCP-SB06-5, FD102011-1, and FD102011-2 were qualified "UJ" to indicate a potential low bias.

- The MS and MSD recoveries for arsenic (-37 and 175 percent), magnesium (57 and 72 percent), potassium (37 and 60 percent), and sodium (-133 and -30 percent); and the MS recovery for calcium (60 percent) and zinc (90 percent) were outside acceptance limits (80 to 120 percent) for prep batch 560-66980 (analysis batch 560-67180). Data qualification was not required for total arsenic, dissolved arsenic, and dissolved zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration; for the cations and total zinc because the analysis batch was not associated with the analytes.

- The MS and MSD recoveries for calcium (55 and 0.2 percent), magnesium (53 and 51 percent), potassium (48 and 24 percent), and sodium (-235 and -310 percent); the MS recovery for aluminum (123 percent) and arsenic (52 percent); and the MSD recovery for selenium (73 percent) were outside acceptance limits (80 to 120 percent) for prep batch 560-66980 (analysis batch 560-67415). The aluminum result for sample BY-04 was qualified "J" to indicate a potential high bias. Data qualification was not required for calcium, magnesium, potassium, and sodium because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration; and for dissolved aluminum, total arsenic, dissolved arsenic, total selenium, dissolved selenium, and dissolved zinc because the analysis batch was not associated with the analytes.

- The MS and MSD recoveries for mercury (38 and 41 percent) were below acceptance limits (75 to 125 percent) for prep batch 560-67281. The total mercury results for samples BY-SB03-7-12, BY-SB03-25-27, BY-SB03-40-42, BY-SB03-50-52, BY-SB03-60-62, BY-SB04-0-2, BY-SB04-5-7, BY-SB04-20-22, BY-SB04-45-47, BY-SB05-5-7, BY-SB05-20-22, BY-SB05-35-37, BY-SB05-40-42, BY-SB06-5-7, BY-SB06-20-22, BY-SB06-35-37, BY-SB06-50-52, BY-SB06-65-67, BY-SB07-5-7, BY-SB07-15-17, and BY-SB07-20-22 were qualified "J" and "UJ" to indicate a potential low bias.

- The MS and MSD recoveries for arsenic (-3 and -19 percent), barium (-104 and 98 percent), copper (-985 and -1749 percent), iron (-364 and -742 percent), lead (-544 and -2225 percent), molybdenum (68 and 28 percent), selenium (64 and 48 percent), and zinc (-37254 and -33797 percent); and the MS recovery for cobalt (48 percent) were outside acceptance limits (75 to 125 percent) for prep batch 560-67433. The total cobalt, total molybdenum, and total selenium results for samples BY-SB03-7-12, BY-SB03-50-52, BY-SB03-60-62, BY-SB04-0-2, BY-SB04-5-7, BY-SB04-20-22, BY-SB04-45-47, BY-SB05-5-7, BY-SB05-20-22, BY-SB05-35-37, BY-SB05-40-42, BY-SB06-5-7, BY-SB06-20-22, BY-SB06-35-37, BY-SB06-50-52, BY-SB06-65-67, BY-SB07-5-7, BY-SB07-15-17, and BY-SB07-20-22 were qualified "J" to indicate a potential low bias. Data qualification was not required for total arsenic, total barium, total copper, total iron, total lead, and total zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MSD recovery for barium (126 percent) was above acceptance limits (80 to 120 percent) for prep batch 560-67440. The SPLP barium results for samples BY-SB04-0-2, BY-SB03-7-12, BY-SB05-5-7, BY-SB05-20-22, BY-SB05-35-37, BY-SB05-40-42, BY-SB06-5-7, BY-SB06-20-22, BY-SB06-35-37, BY-SB06-50-52, BY-SB07-5-7, and BY-SB07-15-17 were qualified "J" to indicate a potential high bias.

- The MS and MSD recoveries for antimony (152 and 48.3 percent), arsenic (-132 and 310 percent), cadmium (251 and 406 percent), copper (570 and 33.3 percent), lead (1510 and 1380 percent), nickel (73.1 and 57.9 percent), silver (32.7 and 29.1 percent), and zinc (-7240 and 4210 percent); and the MSD recovery for barium (171 percent), chromium (152 percent), iron (157 percent), and selenium (74.4 percent) were outside acceptance limits (75 to 125 percent) for ALS batch 56391. The RPD for chromium (39.6 percent) was above the acceptance limit (25 percent). The total chromium, total nickel, and total silver results for QA split samples ZCP-SB01-8.5QA and ZCP-SB04-3.5QA were qualified "J" to indicate a potential bias. Data qualification was not required for total antimony, total arsenic, total barium, total cadmium, total copper, total iron, total lead, and total zinc because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

3.8. Duplicates

3.8.1. Field Duplicates

One field duplicate was collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicate was evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPDs between sample DDA-SB01-1.5 and field duplicate FD101911-4 for Over C12-C28 (81 percent), Over C28-C35 (102 percent), and TPH (C6-C35) (89 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample DDA-SB01-1.5 and field duplicate FD101911-4 for Aroclor 1260 exceeded the MQL. Data were qualified "J" and "UJ" to indicate a potential bias.

- The RPDs between sample APA-SB01-1.5 and field duplicate FD101911-1 for total antimony (184 percent), total arsenic (180 percent), total barium (109 percent), total cadmium (163 percent), total chromium (127 percent), total cobalt (168 percent), total copper (192 percent), total iron (156 percent), total lead (184 percent), total mercury (183 percent), total nickel (160 percent), total selenium (186 percent), total silver (188 percent), and total zinc (190 percent) were above the acceptance limit; and the difference between APA-SB01-1.5 and FD101911 for total molybdenum exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample APA-SB01-5 and field duplicate FD101911-2 for total antimony (36 percent), total cadmium (53 percent), total chromium (39 percent), total lead (58 percent), and total selenium (73 percent) were above the acceptance limit; and the difference between APA-SB01-1.5 and FD101911 for total mercury exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD between sample CON-SS02 and field duplicate CON-SS-Dup1 for total cobalt (95 percent) was above the acceptance limit; and the difference between CON-SS02 and CON-SS-Dup1 for total mercury exceeded the MQL. Data were qualified "J" and "UJ" to indicate a potential bias.

- The RPDs between sample LS-SB02-0.5 and field duplicate FD10211 for total total barium (87 percent), total cadmium (117 percent), total chromium (102

percent), total cobalt (98 percent), total iron (86 percent), total molybdenum (90 percent), total nickel (68 percent), and total silver (57 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample UB-SS01 and field duplicate UB-SS-Dup1 for total total antimony (42 percent), total cobalt (85 percent), total lead (103 percent), total mercury (162 percent), and total silver (36 percent) were above the acceptance limit; and the difference between UB-SS01 and UB-SS-Dup1 for total nickel exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample ZCP-SB02-5 and field duplicate FD102011-1 for total arsenic (42 percent), total barium (72 percent), total cadmium (39 percent), total copper (58 percent), total lead (98 percent), and total zinc (126 percent) were above the acceptance limit; and the difference between ZCP-SB02-5 and FD102011-1 for total cobalt, total molybdenum, and total silver exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample ZCP-SB04-0.5 and field duplicate FD102011-2 for total antimony (59 percent), total barium (72 percent), total cadmium (68 percent), total cobalt (41 percent), total iron (57 percent), and total lead (79 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.8.2. QA Split Samples

One QA split sample was collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were calculated and are presented in Table 3. The split sample was evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPDs between sample DDA-SB01-0.5 and QA split sample DDA-SB01-0.5 for Over C12-C28 (81 percent), Over C28-C35 (102 percent), and TPH (C6-C35) (89 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample DDA-SB02-0.5 and QA split sample DDA-SB02-0.5 for Over C12-C28 and TPH (C6-C35) exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample APA-SB01-1.5 and QA split sample APA-SB01-1.5 for total antimony (169 percent), total arsenic (157 percent), total barium (102 percent), total cadmium (147 percent), total chromium (112 percent), total cobalt (146 percent), total copper (180 percent), total iron (129 percent), total lead (114 percent), total mercury (170 percent), total molybdenum (167 percent), total nickel (150 percent), total selenium (182 percent), total silver (111 percent), and total zinc (158 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample BB-SS01 and QA split sample BB-SS01QA for total antimony (172 percent), total arsenic (158 percent), total barium (59 percent), total cadmium (80 percent), total chromium (146 percent), total cobalt (113 percent), total copper (41 percent), total iron (149 percent), total lead (143 percent), total mercury (130 percent), total molybdenum (159 percent), total nickel (57 percent), total selenium (151 percent), total silver (146 percent), and total zinc (91 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample CON-SS02 and QA split sample CON-SS02QA for total antimony (67 percent), total arsenic (38 percent), total cadmium (62 percent), total chromium (65 percent), total cobalt (75 percent), total copper (43 percent), total iron (59 percent), total lead (52 percent), total molybdenum (40 percent), total nickel (82 percent), total selenium (38 percent), total silver (43 percent), and total zinc (40 percent) were above the acceptance limit; and the difference between CON-SS02 and CON-SS02QA for total mercury exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample LS-SB01-0.5 and QA split sample LS-SB01-0.5QA for total antimony (70 percent), total arsenic (70 percent), total cadmium (64 percent), total chromium (62 percent), total cobalt (58 percent), total copper (109 percent), total iron (71 percent), total mercury (84 percent), total molybdenum (83 percent), and total zinc (42 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample ZCP-SB01-8.5 and QA split sample ZCP-SB01-8.5QA for total arsenic (36 percent), total barium (43 percent), total cadmium (126 percent), total chromium (44 percent), total copper (42 percent), total lead (114 percent), total mercury (62 percent), total molybdenum (84 percent), total nickel (55 percent), total selenium (94 percent), and total silver (125 percent)

were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample ZCP-SB04-3.5 and QA split sample ZCP-SB04-3.5QA for total antimony (127 percent), total arsenic (80 percent), total cadmium (93 percent), total cobalt (118 percent), total copper (105 percent), total iron (94 percent), total lead (95 percent), total molybdenum (109 percent), total silver (96 percent), and total zinc (77 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.8.3. Laboratory Duplicates

Laboratory duplicates are evaluated based on the acceptance limits set forth by the project laboratory's guidelines. Laboratory duplicates were performed at the appropriate frequencies for the following parameters: total metals. Laboratory duplicates were within acceptance limits except for the following:

- The RPDs for total antimony (31.4 percent) and total silver (48.3 percent) were above the acceptance limit (25 percent) for QA split sample ZCP-SB01-8.5QA. Data were qualified "J" to indicate a potential bias.

3.9. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Methylene chloride had a contractual compliance below 90 percent due to surrogate recovery outliers and common laboratory contaminant.

- Hexachlorocyclopentadiene had a contractual compliance below 90 percent due to MS/MSD percent recovery outliers.

- Three TPH ranges had contractual compliances below 90 percent due to MS/MSD percent recovery outliers and high field duplicate and QA split RPDs.

- Aroclor 1260 had a contractual compliance below 90 percent due to high field duplicate RPDs.

- Several total metals had contractual compliances below 90 percent due MS/MSD percent recovery outliers, high field duplicate and QA split RPDs, high laboratory duplicate RPDs, and method blank contamination.

- SPLP barium, mercury, and selenium had contractual compliances below 90 percent due to MS/MSD percent recovery outliers, method blank contamination, and leachate blank contamination.

The results for the data gap sampling event conducted October, November, and December 2011 were considered usable for the intended purposes and the project DQOs have been met.

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
Soil Samples				
APA-SB01-0.5	560-28776-1	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB01-1.5	560-28776-2	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB01-1.5QA	1110676-01	10/19/2011	QA split of APA-SB01-1.5	VOCs, SVOCs, NHOCs, Total Metals
APA-SB01-3.5	560-28776-3	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB01-5	560-28776-4	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB02-0.5	560-28776-5	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB02-1.5	560-28776-6	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB02-3.5	560-28776-7	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
APA-SB02-5	560-28776-8	10/19/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SS01	560-28876-14	10/24/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BB-SS01QA	1110797-03 / 1110926-01	10/24/2011	QA split of BB-SS01	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
BY-SB03-7-12	560-29630-20	11/29/2011	N	Total Metals, SPLP Metals
BY-SB03-25-27	560-29630-1	11/30/2011	N	Total Metals, SPLP Metals
BY-SB03-40-42	560-29630-2	11/30/2011	N	Total Metals, SPLP Metals
BY-SB03-50-52	560-29630-3	11/30/2011	N	Total Metals
BY-SB03-60-62	560-29630-21	11/30/2011	N	Total Metals
BY-SB04-0-2	560-29630-4	12/1/2011	N	Total Metals, SPLP Metals
BY-SB04-5-7	560-29630-5	12/1/2011	N	Total Metals
BY-SB04-20-22	560-29630-6	12/1/2011	N	Total Metals
BY-SB04-45-47	560-29630-7	12/1/2011	N	Total Metals
BY-SB05-5-7	560-29630-8	11/30/2011	N	Total Metals, SPLP Metals
BY-SB05-20-22	560-29630-9	11/30/2011	N	Total Metals, SPLP Metals
BY-SB05-35-37	560-29630-10	11/30/2011	N	Total Metals, SPLP Metals
BY-SB05-40-42	560-29630-11	11/30/2011	N	Total Metals, SPLP Metals
BY-SB06-5-7	560-29630-12	12/5/2011	N	Total Metals, SPLP Metals
BY-SB06-20-22	560-29630-13	12/5/2011	N	Total Metals, SPLP Metals
BY-SB06-35-37	560-29630-14	12/5/2011	N	Total Metals, SPLP Metals
BY-SB06-50-52	560-29630-15	12/5/2011	N	Total Metals, SPLP Metals
BY-SB06-65-67	560-29630-16	12/5/2011	N	Total Metals
BY-SB07-5-7	560-29630-17	12/1/2011	N	Total Metals, SPLP Metals
BY-SB07-15-17	560-29630-18	12/1/2011	N	Total Metals, SPLP Metals
BY-SB07-20-22	560-29630-19	12/1/2011	N	Total Metals
CON-SS01	560-28876-7	10/24/2011	N	Total Metals
CON-SS02	560-28876-8	10/24/2011	N	Total Metals
CON-SS02QA	1110797-02	10/24/2011	QA split of CON-SS02	Total Metals[a]
CON-SS03	560-28876-9	10/24/2011	N	Total Metals
CON-SS04	560-28876-11	10/24/2011	N	Total Metals
CON-SS05	560-28876-12	10/24/2011	N	Total Metals
CON-SS06	560-28876-13	10/24/2011	N	Total Metals
CON-SS-Dup1	560-28876-10	10/24/2011	FD of CON-SS02	Total Metals
DDA-SB01-0.5	560-28776-9	10/19/2011	N	PCBs, TPH

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
DDA-SB01-0.5QA	1110676-02	10/19/2011	QA split of DDA-SB01-0.5	TPH
DDA-SB01-1.5	560-28776-10	10/19/2011	N	PCBs, TPH
DDA-SB01-3.5	560-28776-11	10/19/2011	N	PCBs, TPH
DDA-SB01-5	560-28776-12	10/19/2011	N	PCBs, TPH
DDA-SB02-0.5	560-28776-13	10/19/2011	N	PCBs, TPH
DDA-SB02-0.5QA	1110676-03	10/19/2011	QA split of DDA-SB02-0.5	TPH
DDA-SB02-1.5	560-28776-14	10/19/2011	N	PCBs, TPH
DDA-SB02-3.5	560-28776-15	10/19/2011	N	PCBs, TPH
DDA-SB02-5	560-28776-16	10/19/2011	N	PCBs, TPH
DDA-SB03-0.5	560-28776-17	10/19/2011	N	PCBs, TPH
DDA-SB03-1.5	560-28776-18	10/19/2011	N	PCBs, TPH
DDA-SB03-3.5	560-28776-19	10/19/2011	N	PCBs, TPH
DDA-SB03-5	560-28776-20	10/19/2011	N	PCBs, TPH
FD101911-1	560-28776-21	10/19/2011	FD of APA-SB01-1.5	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
FD101911-2	560-28776-22	10/19/2011	FD of APA-SB01-5.0	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
FD101911-3	560-28776-23	10/19/2011	FD of DDA-SB01-0.5	PCBs, TPH
FD101911-4	560-28776-24	10/19/2011	FD of DDA-SB01-1.5	PCBs, TPH
FD102011-1	560-28813-20	10/20/2011	FD of ZCP-SB02-5.0	Total Metals, Chromium VI
FD102011-2	560-28813-21	10/20/2011	FD of ZCP-SB04-0.5	Total Metals, Chromium VI
FD102111	560-28876-6	10/21/2011	FD of LS-SB02-0.5	Total Metals
LS-SB01-0.5	560-28876-1	10/21/2011	N	Total Metals
LS-SB01-0.5QA	1110797-01	10/21/2011	QA split of LS-SB01-0.5	Total Metals
LS-SB01-1.5	560-28876-2	10/21/2011	N	Total Metals
LS-SB02-0.5	560-28876-3	10/21/2011	N	Total Metals
LS-SB03-0.5	560-28876-4	10/21/2011	N	Total Metals
LS-SB03-1.5	560-28876-5	10/21/2011	N	Total Metals
PBA-CS-01	560-29639-1	12/8/2011	N	TPH
PBA-CS-02	560-29639-2	12/8/2011	N	TPH
PBA-CS-03	560-29639-3	12/8/2011	N	TPH
UB-SS01	560-28876-16	10/24/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SS02	560-28876-15	10/24/2011	N	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
UB-SS-Dup1	560-28876-17	10/24/2011	FD of UB-SS01	VOCs, SVOCs, NHOCs, OCPs, OPPs, Total Metals
ZCP-SB01-15	560-28813-13	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB01-20	560-28813-14	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB01-5	560-28813-1	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB01-8.5	560-28813-2	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB01-8.5QA	1110697-01	10/20/2011	QA split of ZCP-SB01-8.5	Total Metals, Chromium VI
ZCP-SB02-0.5	560-28813-3	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB02-5	560-28813-4	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB03-0.5	560-28813-15	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB04-0.5	560-28813-5	10/20/2011	N	Total Metals, Chromium VI

Table 1
Sample and Analysis Schedule
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
ZCP-SB04-1.5	560-28813-6	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB04-3.5	560-28813-7	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB04-3.5QA	1110697-02	10/20/2011	QA split of ZCP-SB04-3.5	Total Metals, Chromium VI
ZCP-SB04-5	560-28813-8	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB05-0.5	560-28813-9	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB05-1.5	560-28813-10	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB05-3.5	560-28813-11	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB05-5	560-28813-12	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB06-0.5	560-28813-16	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB06-1.5	560-28813-17	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB06-3.5	560-28813-18	10/20/2011	N	Total Metals, Chromium VI
ZCP-SB06-5	560-28813-19	10/20/2011	N	Total Metals, Chromium VI
Water Samples				
Trip Blank	560-28776-25	10/19/2011	TB	VOCs
Trip Blank	1110797-04	10/24/2011	TB	VOCs, NHOCs
BY-04	560-29536-1	12/2/2011	N	Total and Dissolved Metals, Total Cations, Anions, TDS, TSS, Total Alkalinity

Notes:
N = Normal sample
FD = Field Duplicate
QA = Quality Assurance
Dissolved metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc
Total metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, silver, and zinc
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate + nitrite, sulfate, and sulfide
NHOCs = Nonhalogenated Organic Compounds
OCPs = Organochlorine Pesticides
OPPs = Organophosphorus Pesticides
PCBs = Polychlorinated Biphenyls
SVOCs = Semivolatile Organic Compounds
TDS = Total Dissolved Solids
TPH = Total Petroleum Hydrocarbons, using analysis TX 1005
TSS = Total Suspended Solids
VOCs = Volatile Organic Compounds

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
Soil Samples						
APA-SB01-0.5	560-28776-1	Hexachlorocyclopentadiene	<0.1	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
APA-SB01-0.5	560-28776-1	Cobalt, Total	49.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-0.5	560-28776-1	Nickel, Total	69.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-0.5	560-28776-1	Silver, Total	28.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-1.5	560-28776-2	Antimony, Total	132	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Arsenic, Total	885	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Barium, Total	181	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Cadmium, Total	162	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Chromium, Total	17.6	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Cobalt, Total	36	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Copper, Total	14500	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Iron, Total	37000	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Lead, Total	2900	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Mercury, Total	3.31	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Molybdenum, Total	115	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Nickel, Total	57.9	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Selenium, Total	59.2	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
APA-SB01-1.5	560-28776-2	Silver, Total	32.5	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5	560-28776-2	Zinc, Total	8010	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Antimony, Total	11.2	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Arsenic, Total	106	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Barium, Total	58.6	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Cadmium, Total	24.7	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Chromium, Total	4.94	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Cobalt, Total	5.65	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Copper, Total	743	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Iron, Total	7960	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Lead, Total	792	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Mercury, Total	0.265	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Molybdenum, Total	10.3	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Nickel, Total	8.2	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Selenium, Total	2.78	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Silver, Total	9.28	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-1.5QA	1110676-01	Zinc, Total	944	mg/Kg	J	Qualified due to high QA split RPD
APA-SB01-3.5	560-28776-3	Cobalt, Total	26.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-3.5	560-28776-3	Nickel, Total	32.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-3.5	560-28776-3	Silver, Total	15.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-5	560-28776-4	Methylene Chloride	0.00587	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
APA-SB01-5	560-28776-4	Antimony, Total	5.9	mg/Kg	J	Qualified due to high field duplicate RPD
APA-SB01-5	560-28776-4	Cadmium, Total	9.75	mg/Kg	J	Qualified due to high field duplicate RPD
APA-SB01-5	560-28776-4	Chromium, Total	3.62	mg/Kg	J	Qualified due to high field duplicate RPD
APA-SB01-5	560-28776-4	Cobalt, Total	3.26	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-5	560-28776-4	Lead, Total	117	mg/Kg	J	Qualified due to high field duplicate RPD
APA-SB01-5	560-28776-4	Mercury, Total	0.0474	mg/Kg	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
APA-SB01-5	560-28776-4	Nickel, Total	5.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB01-5	560-28776-4	Selenium, Total	1.8	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
APA-SB01-5	560-28776-4	Silver, Total	1.31	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-0.5	560-28776-5	1,1,1-Trichloroethane	<0.000763	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.00073	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	1,1,2-Trichloroethane	<0.000545	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	1,2-Dichlorobenzene	<0.000272	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	4-Methyl-2-pentanone (MIBK)	<0.00101	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Acetone	<0.00784	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Carbon tetrachloride	<0.000556	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Chlorobenzene	<0.000251	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Cyclohexane	<0.00108	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Dichlorodifluoromethane	<0.000795	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Ethyl acetate	<0.00131	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Ethyl ether	<0.000185	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Ethylbenzene	<0.00024	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Methylene Chloride	<0.00545	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Tetrachloroethene	<0.000806	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Trichloroethene	<0.000305	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Trichlorofluoromethane	<0.000545	mg/Kg	UJ	Qualified due to low surrogate recovery
APA-SB02-0.5	560-28776-5	Xylenes, Total	0.00165	mg/Kg	J	Qualified due to low surrogate recovery; Estimated; Analyte detected between SDL and MQL
APA-SB02-0.5	560-28776-5	Cobalt, Total	43	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-0.5	560-28776-5	Nickel, Total	36.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-0.5	560-28776-5	Silver, Total	19.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-1.5	560-28776-6	Methylene Chloride	0.00736	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
APA-SB02-1.5	560-28776-6	Antimony, Total	1.69	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-1.5	560-28776-6	Cobalt, Total	2.83	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-1.5	560-28776-6	Mercury, Total	0.0541	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-1.5	560-28776-6	Molybdenum, Total	1.14	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-1.5	560-28776-6	Nickel, Total	4.48	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-1.5	560-28776-6	Selenium, Total	0.452	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-1.5	560-28776-6	Silver, Total	0.256	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
APA-SB02-3.5	560-28776-7	Xylenes, Total	0.000536	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-3.5	560-28776-7	Antimony, Total	2.03	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-3.5	560-28776-7	Cobalt, Total	2.25	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-3.5	560-28776-7	Mercury, Total	0.0804	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-3.5	560-28776-7	Molybdenum, Total	0.934	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-3.5	560-28776-7	Nickel, Total	4.09	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-3.5	560-28776-7	Selenium, Total	0.83	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-3.5	560-28776-7	Silver, Total	0.736	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-5	560-28776-8	Methylene Chloride	0.00908	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
APA-SB02-5	560-28776-8	Xylenes, Total	0.000649	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
APA-SB02-5	560-28776-8	Cobalt, Total	4.52	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-5	560-28776-8	Nickel, Total	9.82	mg/Kg	J	Qualified due to MS/MSD percent recovery
APA-SB02-5	560-28776-8	Silver, Total	6.72	mg/Kg	J	Qualified due to MS/MSD percent recovery
BB-SS01	560-28876-14	Ethylbenzene	0.000454	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BB-SS01	560-28876-14	Hexachlorocyclopentadiene	<0.112	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
BB-SS01	560-28876-14	Antimony, Total	738	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Arsenic, Total	5690	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Barium, Total	247	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Cadmium, Total	327	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Chromium, Total	34.5	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Cobalt, Total	33	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Copper, Total	42000	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Iron, Total	90000	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Lead, Total	15700	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Mercury, Total	14.7	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Molybdenum, Total	476	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Nickel, Total	67.6	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Selenium, Total	101	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Silver, Total	185	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01	560-28876-14	Zinc, Total	7270	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Methylene Chloride	0.062	mg/Kg	J	Qualified due to common laboratory contaminant
BB-SS01QA	1110797-03	Antimony, Total	55.1	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Arsenic, Total	661	mg/Kg	J	Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BB-SS01QA	1110797-03	Barium, Total	134	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Cadmium, Total	140	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Chromium, Total	5.42	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Cobalt, Total	9.22	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Copper, Total	27700	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Iron, Total	13200	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Lead, Total	2590	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Mercury, Total	3.13	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Molybdenum, Total	54.9	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Nickel, Total	37.7	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Selenium, Total	14.1	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Silver, Total	29	mg/Kg	J	Qualified due to high QA split RPD
BB-SS01QA	1110797-03	Zinc, Total	2720	mg/Kg	J	Qualified due to high QA split RPD
BY-SB03-7-12	560-29630-20	Barium, SPLP	0.98	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB03-7-12	560-29630-20	Cadmium, SPLP	0.00141	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-7-12	560-29630-20	Chromium, SPLP	0.009	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-7-12	560-29630-20	Cobalt, Total	116	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-7-12	560-29630-20	Mercury, Total	<0.101	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB03-7-12	560-29630-20	Molybdenum, Total	193	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-7-12	560-29630-20	Selenium, Total	41.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-25-27	560-29630-1	Cadmium, SPLP	0.00277	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-25-27	560-29630-1	Chromium, SPLP	0.00734	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-25-27	560-29630-1	Mercury, SPLP	<0.00032	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB03-25-27	560-29630-1	Mercury, Total	0.33	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-40-42	560-29630-2	Chromium, SPLP	0.00863	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-40-42	560-29630-2	Chromium, Total	0.408	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-40-42	560-29630-2	Mercury, SPLP	<0.000431	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB03-40-42	560-29630-2	Mercury, Total	0.638	mg/Kg	J	Qualified due to MS/MSD percent recovery

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
BY-SB03-40-42	560-29630-2	Molybdenum, SPLP	0.00847	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-40-42	560-29630-2	Nickel, Total	1.19	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB03-40-42	560-29630-2	Selenium, SPLP	<0.0128	mg/Kg	UJ	Qualified due to leachate blank contamination
BY-SB03-50-52	560-29630-3	Cobalt, Total	37.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-50-52	560-29630-3	Mercury, Total	<0.171	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB03-50-52	560-29630-3	Molybdenum, Total	56.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-50-52	560-29630-3	Selenium, Total	20.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-60-62	560-29630-21	Cobalt, Total	4.13	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB03-60-62	560-29630-21	Mercury, Total	<0.124	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB03-60-62	560-29630-21	Molybdenum, Total	1.63	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB03-60-62	560-29630-21	Selenium, Total	2.48	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-0-2	560-29630-4	Barium, SPLP	0.128	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB04-0-2	560-29630-4	Cobalt, Total	36.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-0-2	560-29630-4	Iron, SPLP	0.0924	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB04-0-2	560-29630-4	Mercury, SPLP	<0.00034	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB04-0-2	560-29630-4	Mercury, Total	7.43	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-0-2	560-29630-4	Molybdenum, Total	108	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-0-2	560-29630-4	Selenium, Total	58.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-5-7	560-29630-5	Cobalt, Total	5.86	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-5-7	560-29630-5	Mercury, Total	0.547	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-5-7	560-29630-5	Molybdenum, Total	16.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-5-7	560-29630-5	Selenium, Total	18	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-20-22	560-29630-6	Cobalt, Total	4.45	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-20-22	560-29630-6	Mercury, Total	13.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-20-22	560-29630-6	Molybdenum, Total	0.939	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB04-20-22	560-29630-6	Selenium, Total	9.58	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB04-45-47	560-29630-7	Antimony, Total	0.899	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB04-45-47	560-29630-7	Cobalt, Total	3.14	mg/Kg	J	Qualified due to MS/MSD percent recovery

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BY-SB04-45-47	560-29630-7	Mercury, Total	<0.0399	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB04-45-47	560-29630-7	Molybdenum, Total	0.902	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB04-45-47	560-29630-7	Selenium, Total	0.744	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB05-5-7	560-29630-8	Barium, SPLP	0.339	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB05-5-7	560-29630-8	Cadmium, SPLP	0.00481	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-5-7	560-29630-8	Chromium, SPLP	0.00996	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-5-7	560-29630-8	Cobalt, Total	71.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-5-7	560-29630-8	Iron, SPLP	0.081	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-5-7	560-29630-8	Mercury, SPLP	<0.000421	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB05-5-7	560-29630-8	Mercury, Total	1.06	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-5-7	560-29630-8	Molybdenum, Total	171	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-5-7	560-29630-8	Selenium, Total	73.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-20-22	560-29630-9	Barium, SPLP	0.47	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB05-20-22	560-29630-9	Cadmium, SPLP	0.00365	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-20-22	560-29630-9	Cobalt, Total	55.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-20-22	560-29630-9	Mercury, Total	0.408	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-20-22	560-29630-9	Molybdenum, Total	121	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-20-22	560-29630-9	Selenium, SPLP	<0.0335	mg/Kg	UJ	Qualified due to leachate blank contamination
BY-SB05-20-22	560-29630-9	Selenium, Total	47.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-35-37	560-29630-10	Barium, SPLP	0.166	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB05-35-37	560-29630-10	Cadmium, SPLP	0.00202	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-35-37	560-29630-10	Cobalt, Total	25.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-35-37	560-29630-10	Mercury, SPLP	<0.000263	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB05-35-37	560-29630-10	Mercury, Total	<0.181	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB05-35-37	560-29630-10	Molybdenum, Total	159	mg/Kg	J	Qualified due to MS/MSD percent recovery

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BY-SB05-35-37	560-29630-10	Selenium, Total	24.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-40-42	560-29630-11	Barium, SPLP	0.129	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB05-40-42	560-29630-11	Cobalt, SPLP	0.0017	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB05-40-42	560-29630-11	Cobalt, Total	3.96	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-40-42	560-29630-11	Mercury, SPLP	<0.000394	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB05-40-42	560-29630-11	Mercury, Total	<0.0124	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
BY-SB05-40-42	560-29630-11	Molybdenum, Total	23.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB05-40-42	560-29630-11	Selenium, Total	7.56	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-5-7	560-29630-12	Barium, SPLP	0.15	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB06-5-7	560-29630-12	Chromium, SPLP	0.00991	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-5-7	560-29630-12	Cobalt, Total	13.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-5-7	560-29630-12	Mercury, SPLP	<0.000416	mg/L	UJ	Qualified due to method blank contamination; Qualified due to leachate blank contamination; Estimated; Analyte detected between SDL and MQL
BY-SB06-5-7	560-29630-12	Mercury, Total	<0.188	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB06-5-7	560-29630-12	Molybdenum, Total	43.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-5-7	560-29630-12	Selenium, SPLP	<0.0152	mg/Kg	UJ	Qualified due to leachate blank contamination
BY-SB06-5-7	560-29630-12	Selenium, Total	3.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-20-22	560-29630-13	Barium, SPLP	0.253	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB06-20-22	560-29630-13	Cadmium, SPLP	0.00079	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-20-22	560-29630-13	Cobalt, Total	55.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-20-22	560-29630-13	Lead, SPLP	0.00738	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-20-22	560-29630-13	Mercury, SPLP	0.000217	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-20-22	560-29630-13	Mercury, Total	<0.12	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB06-20-22	560-29630-13	Molybdenum, Total	125	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-20-22	560-29630-13	Selenium, Total	52.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-35-37	560-29630-14	Barium, SPLP	1.64	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB06-35-37	560-29630-14	Cobalt, SPLP	0.001	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-35-37	560-29630-14	Cobalt, Total	61.7	mg/Kg	J	Qualified due to MS/MSD percent recovery

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BY-SB06-35-37	560-29630-14	Mercury, Total	<0.00956	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB06-35-37	560-29630-14	Molybdenum, Total	133	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-35-37	560-29630-14	Selenium, Total	85.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-35-37	560-29630-14	Silver, SPLP	0.00107	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-50-52	560-29630-15	Barium, SPLP	1.22	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB06-50-52	560-29630-15	Cadmium, SPLP	0.00106	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-50-52	560-29630-15	Cobalt, SPLP	0.001	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-50-52	560-29630-15	Cobalt, Total	84.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-50-52	560-29630-15	Mercury, Total	<0.0474	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB06-50-52	560-29630-15	Molybdenum, Total	181	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-50-52	560-29630-15	Selenium, Total	57.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-50-52	560-29630-15	Silver, SPLP	0.00119	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB06-65-67	560-29630-16	Cobalt, Total	4.75	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-65-67	560-29630-16	Mercury, Total	<0.0364	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB06-65-67	560-29630-16	Molybdenum, Total	3.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-65-67	560-29630-16	Selenium, Total	2.0	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB06-65-67	560-29630-16	Silver, Total	0.421	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Barium, SPLP	0.239	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB07-5-7	560-29630-17	Cobalt, SPLP	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Cobalt, Total	54.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-5-7	560-29630-17	Mercury, SPLP	0.000173	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Mercury, Total	<0.26	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB07-5-7	560-29630-17	Molybdenum, SPLP	0.00896	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Molybdenum, Total	56.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-5-7	560-29630-17	Nickel, Total	0.746	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Selenium, SPLP	0.00819	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-5-7	560-29630-17	Selenium, Total	26.9	mg/Kg	J	Qualified due to MS/MSD percent recovery

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BY-SB07-15-17	560-29630-18	Barium, SPLP	0.285	mg/L	J	Qualified due to MS/MSD percent recovery
BY-SB07-15-17	560-29630-18	Cobalt, SPLP	0.00175	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-15-17	560-29630-18	Cobalt, Total	27.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-15-17	560-29630-18	Mercury, Total	<0.0178	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
BY-SB07-15-17	560-29630-18	Molybdenum, Total	108	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-15-17	560-29630-18	Selenium, Total	55	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-15-17	560-29630-18	Silver, SPLP	0.00156	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-SB07-20-22	560-29630-19	Cobalt, Total	4.49	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-20-22	560-29630-19	Mercury, Total	<0.153	mg/Kg	UJ	Qualified due to method blank contamination; Qualified due to MS/MSD percent recovery
BY-SB07-20-22	560-29630-19	Molybdenum, Total	9.38	mg/Kg	J	Qualified due to MS/MSD percent recovery
BY-SB07-20-22	560-29630-19	Selenium, Total	1.88	mg/Kg	J	Qualified due to MS/MSD percent recovery
CON-SS-Dup1	560-28876-10	Cobalt, Total	94.8	mg/Kg	J	Qualified due to high field duplicate RPD
CON-SS-Dup1	560-28876-10	Mercury, Total	4.47	mg/Kg	J	Qualified due to high field duplicate RPD
CON-SS02	560-28876-8	Antimony, Total	518	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Arsenic, Total	9140	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Cadmium, Total	1390	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Chromium, Total	84.4	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Cobalt, Total	33.6	mg/Kg	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
CON-SS02	560-28876-8	Copper, Total	37200	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Iron, Total	65300	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Lead, Total	13800	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Mercury, Total	<0.0103	mg/Kg	UJ	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
CON-SS02	560-28876-8	Molybdenum, Total	833	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Nickel, Total	109	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Selenium, Total	223	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Silver, Total	93.9	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02	560-28876-8	Zinc, Total	17500	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Antimony, Total	258	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Arsenic, Total	6250	mg/Kg	J	Qualified due to high QA split RPD

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CON-SS02QA	1110797-02	Cadmium, Total	735	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Chromium, Total	42.9	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Cobalt, Total	15.3	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Copper, Total	24100	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Iron, Total	35600	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Lead, Total	8110	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Mercury, Total	55	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Molybdenum, Total	553	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Nickel, Total	45.7	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Selenium, Total	152	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Silver, Total	60.7	mg/Kg	J	Qualified due to high QA split RPD
CON-SS02QA	1110797-02	Zinc, Total	11600	mg/Kg	J	Qualified due to high QA split RPD
CON-SS06	560-28876-13	Cobalt, Total	13.6	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB01-0.5	560-28776-9	C6-C12	<10.3	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
DDA-SB01-0.5	560-28776-9	Over C12-C28	144	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
DDA-SB01-0.5	560-28776-9	Over C28-C35	87.3	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
DDA-SB01-0.5	560-28776-9	Total Petroleum Hydrocarbons (C6-C35)	231	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
DDA-SB01-0.5	560-28776-9	Aroclor 1242	0.0299	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB01-0.5	560-28776-9	Aroclor 1254	0.0173	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB01-0.5QA	1110676-02	Over C12-C28	<15	mg/Kg	UJ	Qualified due to high QA split RPD
DDA-SB01-0.5QA	1110676-02	Over C28-C35	<15	mg/Kg	UJ	Qualified due to high QA split RPD
DDA-SB01-0.5QA	1110676-02	Total Petroleum Hydrocarbons (C6-C35)	<15	mg/Kg	UJ	Qualified due to high QA split RPD
DDA-SB01-1.5	560-28776-10	Over C12-C28	314	mg/Kg	J	Qualified due to high field duplicate RPD
DDA-SB01-1.5	560-28776-10	Over C28-C35	204	mg/Kg	J	Qualified due to high field duplicate RPD
DDA-SB01-1.5	560-28776-10	Total Petroleum Hydrocarbons (C6-C35)	518	mg/Kg	J	Qualified due to high field duplicate RPD
DDA-SB01-1.5	560-28776-10	Aroclor 1260	<0.00515	mg/Kg	UJ	Qualified due to high field duplicate RPD
DDA-SB02-0.5	560-28776-13	Over C12-C28	46.6	mg/Kg	J	Qualified due to high QA split RPD; Estimated; Analyte detected between SDL and MQL
DDA-SB02-0.5	560-28776-13	Over C28-C35	24.5	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB02-0.5	560-28776-13	Total Petroleum Hydrocarbons (C6-C35)	71.1	mg/Kg	J	Qualified due to high QA split RPD
DDA-SB02-0.5	560-28776-13	Aroclor 1254	0.0244	mg/Kg	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
DDA-SB02-0.5	560-28776-13	Aroclor 1260	0.0185	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB02-0.5QA	1110676-03	Over C12-C28	<16	mg/Kg	UJ	Qualified due to high QA split RPD
DDA-SB02-0.5QA	1110676-03	Total Petroleum Hydrocarbons (C6-C35)	<16	mg/Kg	UJ	Qualified due to high QA split RPD
DDA-SB03-0.5	560-28776-17	Aroclor 1254	0.0213	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-0.5	560-28776-17	Aroclor 1260	0.0162	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-1.5	560-28776-18	Aroclor 1254	0.0089	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-1.5	560-28776-18	Polychlorinated Biphenyls, Total	0.0133	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-3.5	560-28776-19	Aroclor 1242	0.0138	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-3.5	560-28776-19	Aroclor 1254	0.0243	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
DDA-SB03-3.5	560-28776-19	Aroclor 1260	0.0233	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-1	560-28776-21	Methylene Chloride	0.0118	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
FD101911-1	560-28776-21	Antimony, Total	5.38	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Arsenic, Total	47.7	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Barium, Total	53	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Cadmium, Total	16.5	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Chromium, Total	3.93	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Cobalt, Total	3.13	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Copper, Total	303	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Iron, Total	4610	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Lead, Total	120	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Mercury, Total	0.148	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Molybdenum, Total	2.09	mg/Kg	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
FD101911-1	560-28776-21	Nickel, Total	6.46	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Selenium, Total	2.1	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Silver, Total	0.997	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD101911-1	560-28776-21	Zinc, Total	197	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Methylene Chloride	0.00556	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
FD101911-2	560-28776-22	Antimony, Total	8.45	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD101911-2	560-28776-22	Cadmium, Total	16.8	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Chromium, Total	2.43	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Cobalt, Total	3.81	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD101911-2	560-28776-22	Lead, Total	212	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Mercury, Total	0.377	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Nickel, Total	6.87	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD101911-2	560-28776-22	Selenium, Total	3.88	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-2	560-28776-22	Silver, Total	1.81	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD101911-3	560-28776-23	Aroclor 1242	0.031	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-3	560-28776-23	Aroclor 1254	0.022	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-3	560-28776-23	Aroclor 1260	0.0226	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-4	560-28776-24	Over C12-C28	133	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-4	560-28776-24	Over C28-C35	66.4	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-4	560-28776-24	Total Petroleum Hydrocarbons (C6-C35)	199	mg/Kg	J	Qualified due to high field duplicate RPD
FD101911-4	560-28776-24	Aroclor 1242	0.0237	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-4	560-28776-24	Aroclor 1254	0.0265	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD101911-4	560-28776-24	Aroclor 1260	0.0346	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Arsenic, Total	86.8	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Barium, Total	125	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Cadmium, Total	38.1	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Chromium, Hexavalent	<0.332	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
FD102011-1	560-28813-20	Cobalt, Total	4.02	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Copper, Total	196	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Lead, Total	200	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Mercury, Total	0.844	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD102011-1	560-28813-20	Molybdenum, Total	2.3	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Nickel, Total	7.23	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD102011-1	560-28813-20	Silver, Total	1.23	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-1	560-28813-20	Zinc, Total	290	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Antimony, Total	105	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Barium, Total	938	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD102011-2	560-28813-21	Cadmium, Total	1000	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Chromium, Hexavalent	<0.302	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
FD102011-2	560-28813-21	Cobalt, Total	20.4	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Iron, Total	113000	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Lead, Total	6260	mg/Kg	J	Qualified due to high field duplicate RPD
FD102011-2	560-28813-21	Mercury, Total	0.284	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD102011-2	560-28813-21	Molybdenum, Total	236	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD102011-2	560-28813-21	Nickel, Total	5.99	mg/Kg	J	Qualified due to MS/MSD percent recovery
FD102111	560-28876-6	Barium, Total	804	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Cadmium, Total	34.8	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Chromium, Total	156	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Cobalt, Total	190	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Iron, Total	164000	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Molybdenum, Total	801	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Nickel, Total	71.3	mg/Kg	J	Qualified due to high field duplicate RPD
FD102111	560-28876-6	Selenium, Total	12.6	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
FD102111	560-28876-6	Silver, Total	11.3	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB01-0.5	560-28876-1	Antimony, Total	17.7	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Arsenic, Total	112	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Cadmium, Total	52.1	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Chromium, Total	10.8	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Cobalt, Total	6.47	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Copper, Total	895	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Iron, Total	13200	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Mercury, Total	1.65	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Molybdenum, Total	8.73	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5	560-28876-1	Zinc, Total	377	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Antimony, Total	8.54	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Arsenic, Total	53.8	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Cadmium, Total	26.7	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Chromium, Total	5.71	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Cobalt, Total	3.55	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Copper, Total	3050	mg/Kg	J	Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
LS-SB01-0.5QA	1110797-01	Iron, Total	6300	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Mercury, Total	0.677	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Molybdenum, Total	3.59	mg/Kg	J	Qualified due to high QA split RPD
LS-SB01-0.5QA	1110797-01	Zinc, Total	246	mg/Kg	J	Qualified due to high QA split RPD
LS-SB02-0.5	560-28876-3	Barium, Total	318	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Cadmium, Total	133	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Chromium, Total	50.3	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Cobalt, Total	64.7	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Iron, Total	65700	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Mercury, Total	0.0597	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
LS-SB02-0.5	560-28876-3	Molybdenum, Total	302	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Nickel, Total	35.3	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB02-0.5	560-28876-3	Silver, Total	20.4	mg/Kg	J	Qualified due to high field duplicate RPD
LS-SB03-0.5	560-28876-4	Molybdenum, Total	1.33	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS-Dup1	560-28876-17	Methylene Chloride	0.00673	mg/Kg	J	Qualified due to common laboratory contaminant; Estimated; Analyte detected between SDL and MQL
UB-SS-Dup1	560-28876-17	Ethylbenzene	0.000395	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS-Dup1	560-28876-17	Xylenes, Total	0.00114	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS-Dup1	560-28876-17	Antimony, Total	123	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS-Dup1	560-28876-17	Cobalt, Total	46.4	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS-Dup1	560-28876-17	Lead, Total	4730	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS-Dup1	560-28876-17	Mercury, Total	0.157	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS-Dup1	560-28876-17	Nickel, Total	173	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS-Dup1	560-28876-17	Selenium, Total	17	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS-Dup1	560-28876-17	Silver, Total	61	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS01	560-28876-16	Ethylbenzene	0.000746	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS01	560-28876-16	Xylenes, Total	0.00117	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS01	560-28876-16	Antimony, Total	79.9	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS01	560-28876-16	Cobalt, Total	18.7	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS01	560-28876-16	Lead, Total	1510	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS01	560-28876-16	Mercury, Total	1.51	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS01	560-28876-16	Nickel, Total	26.6	mg/Kg	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
UB-SS01	560-28876-16	Selenium, Total	10.1	mg/Kg	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
UB-SS01	560-28876-16	Silver, Total	42.4	mg/Kg	J	Qualified due to high field duplicate RPD
UB-SS02	560-28876-15	Ethylbenzene	0.000426	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Antimony, Total	11.8	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Chromium, Total	10.5	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Cobalt, Total	3.45	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Molybdenum, Total	7.99	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Nickel, Total	8.17	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
UB-SS02	560-28876-15	Silver, Total	2.37	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB01-5	560-28813-1	Cadmium, Total	84	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-5	560-28813-1	Chromium, Hexavalent	<0.284	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB01-5	560-28813-1	Mercury, Total	3.13	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-5	560-28813-1	Molybdenum, Total	12.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-5	560-28813-1	Nickel, Total	6.83	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-8.5	560-28813-2	Arsenic, Total	825	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Barium, Total	162	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Cadmium, Total	73	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Chromium, Hexavalent	<0.293	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB01-8.5	560-28813-2	Chromium, Total	3.93	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Copper, Total	379	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Lead, Total	730	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Mercury, Total	1.12	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Molybdenum, Total	3.86	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Nickel, Total	6.44	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Selenium, Total	5.56	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5	560-28813-2	Silver, Total	1.79	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Antimony, Total	50.7	mg/Kg	J	Qualified due to high laboratory duplicate RPD
ZCP-SB01-8.5QA	1110697-01	Arsenic, Total	1190	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Barium, Total	105	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Cadmium, Total	323	mg/Kg	J	Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
ZCP-SB01-8.5QA	1110697-01	Chromium, Total	6.12	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Copper, Total	580	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Lead, Total	2650	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Mercury, Total	2.12	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Molybdenum, Total	9.47	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Nickel, Total	11.3	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Selenium, Total	15.4	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB01-8.5QA	1110697-01	Silver, Total	7.73	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high laboratory duplicate RPD; Qualified due to high QA split RPD
ZCP-SB01-15	560-28813-13	Cadmium, Total	158	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-15	560-28813-13	Chromium, Hexavalent	<0.289	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB01-15	560-28813-13	Mercury, Total	0.288	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-15	560-28813-13	Molybdenum, Total	4.38	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-15	560-28813-13	Nickel, Total	9.06	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-20	560-28813-14	Cadmium, Total	70.6	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB01-20	560-28813-14	Chromium, Hexavalent	<0.292	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB01-20	560-28813-14	Mercury, Total	0.0716	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB01-20	560-28813-14	Molybdenum, Total	1.27	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB01-20	560-28813-14	Nickel, Total	7.71	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-0.5	560-28813-3	Cadmium, Total	47.5	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-0.5	560-28813-3	Chromium, Hexavalent	<0.292	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB02-0.5	560-28813-3	Mercury, Total	0.817	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-0.5	560-28813-3	Molybdenum, Total	2.64	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-0.5	560-28813-3	Nickel, Total	5.56	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-5	560-28813-4	Arsenic, Total	133	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Barium, Total	267	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Cadmium, Total	56.3	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Chromium, Hexavalent	<0.307	mg/Kg	UJ	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
ZCP-SB02-5	560-28813-4	Cobalt, Total	6.44	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Copper, Total	356	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Lead, Total	585	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Mercury, Total	0.852	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-5	560-28813-4	Molybdenum, Total	6.85	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Nickel, Total	7.38	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB02-5	560-28813-4	Silver, Total	2.69	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB02-5	560-28813-4	Zinc, Total	1270	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB03-0.5	560-28813-15	Cadmium, Total	50.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB03-0.5	560-28813-15	Chromium, Hexavalent	<0.299	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB03-0.5	560-28813-15	Mercury, Total	4.21	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB03-0.5	560-28813-15	Molybdenum, Total	2.85	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB03-0.5	560-28813-15	Nickel, Total	7.87	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-0.5	560-28813-5	Antimony, Total	57	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Barium, Total	1990	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Cadmium, Total	492	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Chromium, Hexavalent	<0.282	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB04-0.5	560-28813-5	Chromium, Total	7.97	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-0.5	560-28813-5	Cobalt, Total	30.9	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Iron, Total	204000	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Lead, Total	14400	mg/Kg	J	Qualified due to high field duplicate RPD
ZCP-SB04-0.5	560-28813-5	Mercury, Total	0.0312	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-0.5	560-28813-5	Molybdenum, Total	245	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-0.5	560-28813-5	Nickel, Total	4.85	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-0.5	560-28813-5	Selenium, Total	7.41	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-1.5	560-28813-6	Cadmium, Total	1490	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-1.5	560-28813-6	Chromium, Hexavalent	<0.282	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB04-1.5	560-28813-6	Chromium, Total	15.2	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-1.5	560-28813-6	Mercury, Total	0.494	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-1.5	560-28813-6	Molybdenum, Total	338	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
ZCP-SB04-1.5	560-28813-6	Nickel, Total	8.73	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-3.5	560-28813-7	Antimony, Total	60.5	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Arsenic, Total	1970	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Cadmium, Total	433	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Chromium, Hexavalent	<0.269	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB04-3.5	560-28813-7	Chromium, Total	8.94	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-3.5	560-28813-7	Cobalt, Total	25.1	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Copper, Total	2150	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Iron, Total	212000	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Lead, Total	13200	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Mercury, Total	0.167	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-3.5	560-28813-7	Molybdenum, Total	203	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Nickel, Total	3.55	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-3.5	560-28813-7	Selenium, Total	8.2	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-3.5	560-28813-7	Silver, Total	14.3	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5	560-28813-7	Zinc, Total	32300	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Antimony, Total	13.4	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Arsenic, Total	847	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Cadmium, Total	159	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Chromium, Total	5.86	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-3.5QA	1110697-02	Cobalt, Total	6.43	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Copper, Total	672	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Iron, Total	76600	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Lead, Total	4690	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Molybdenum, Total	60	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Nickel, Total	1.41	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-3.5QA	1110697-02	Silver, Total	5.05	mg/Kg	J	Qualified due to MS/MSD percent recovery; Qualified due to high QA split RPD
ZCP-SB04-3.5QA	1110697-02	Zinc, Total	14300	mg/Kg	J	Qualified due to high QA split RPD
ZCP-SB04-5	560-28813-8	Cadmium, Total	301	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
ZCP-SB04-5	560-28813-8	Chromium, Hexavalent	<0.294	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB04-5	560-28813-8	Chromium, Total	10.5	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB04-5	560-28813-8	Mercury, Total	0.0433	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-5	560-28813-8	Molybdenum, Total	156	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB04-5	560-28813-8	Nickel, Total	5.03	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB04-5	560-28813-8	Selenium, Total	7.33	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB05-0.5	560-28813-9	Cadmium, Total	175	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-0.5	560-28813-9	Chromium, Hexavalent	<0.289	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB05-0.5	560-28813-9	Chromium, Total	10	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
ZCP-SB05-0.5	560-28813-9	Mercury, Total	2.4	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-0.5	560-28813-9	Molybdenum, Total	89.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-0.5	560-28813-9	Nickel, Total	38.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-1.5	560-28813-10	Cadmium, Total	45.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-1.5	560-28813-10	Chromium, Hexavalent	<0.29	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB05-1.5	560-28813-10	Mercury, Total	0.0613	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB05-1.5	560-28813-10	Molybdenum, Total	136	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-1.5	560-28813-10	Nickel, Total	10.4	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB05-3.5	560-28813-11	Cadmium, Total	62.9	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-3.5	560-28813-11	Chromium, Hexavalent	<0.299	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB05-3.5	560-28813-11	Mercury, Total	2.04	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-3.5	560-28813-11	Molybdenum, Total	23.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-3.5	560-28813-11	Nickel, Total	18.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-5	560-28813-12	Cadmium, Total	70.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-5	560-28813-12	Chromium, Hexavalent	<0.302	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB05-5	560-28813-12	Mercury, Total	0.562	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-5	560-28813-12	Molybdenum, Total	73.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB05-5	560-28813-12	Nickel, Total	15.1	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-0.5	560-28813-16	Cadmium, Total	1530	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-0.5	560-28813-16	Chromium, Hexavalent	<0.284	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB06-0.5	560-28813-16	Mercury, Total	10.4	mg/Kg	J	Qualified due to MS/MSD percent recovery

Table 2
Qualified Analytical Results
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
ZCP-SB06-0.5	560-28813-16	Molybdenum, Total	83	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-0.5	560-28813-16	Nickel, Total	47.7	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-1.5	560-28813-17	Cadmium, Total	185	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-1.5	560-28813-17	Chromium, Hexavalent	<0.301	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB06-1.5	560-28813-17	Mercury, Total	2.14	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-1.5	560-28813-17	Molybdenum, Total	49.3	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-1.5	560-28813-17	Nickel, Total	4.03	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-3.5	560-28813-18	Cadmium, Total	377	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-3.5	560-28813-18	Chromium, Hexavalent	<0.289	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB06-3.5	560-28813-18	Mercury, Total	4.52	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-3.5	560-28813-18	Molybdenum, Total	57.2	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-3.5	560-28813-18	Nickel, Total	7.88	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-5	560-28813-19	Cadmium, Total	51.8	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-5	560-28813-19	Chromium, Hexavalent	<0.295	mg/Kg	UJ	Qualified due to MS/MSD percent recovery
ZCP-SB06-5	560-28813-19	Mercury, Total	0.233	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-5	560-28813-19	Molybdenum, Total	1.14	mg/Kg	J	Qualified due to MS/MSD percent recovery; Estimated; Analyte detected between SDL and MQL
ZCP-SB06-5	560-28813-19	Nickel, Total	5.93	mg/Kg	J	Qualified due to MS/MSD percent recovery
ZCP-SB06-5	560-28813-19	Silver, Total	0.375	mg/Kg	J	Estimated; Analyte detected between SDL and MQL
Water Samples						
BY-04	560-29536-1	Aluminum, Total	2.54	mg/L	J	Qualified due to MS/MSD percent recovery
BY-04	560-29536-1	Antimony, Total	0.00329	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-04	560-29536-1	Antimony, Dissolved	0.00252	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-04	560-29536-1	Chromium, Total	0.00314	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-04	560-29536-1	Copper, Dissolved	0.00363	mg/L	J	Estimated; Analyte detected between SDL and MQL
BY-04	560-29536-1	Mercury, Total	<0.000341	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL

Notes:

"<" = Analyte not detected above listed reporting limit

J = Analyte was positively identified above the SDL; however, the result is an estimated value

UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value

SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

mg/L = milligrams per liter ; mg/Kg = micrograms per kilogram

MS = Matrix Spike ; MSD = Matrix Spike Duplicate

QA = Quality Assurance

RPD = Relative Percent Difference

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
APA-SB01-1.5 / FD101911-1 / APA-SB01-1.5QA	**Volatile Organic Compounds (mg/kg)**					
	1,1,1-Trichloroethane	<0.000705	<0.00123	NC	<0.0018	NC
	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000675	<0.00118	NC	<0.0014	NC
	1,1,2-Trichloroethane	<0.000504	<0.000879	NC	<0.0021	NC
	1,2-Dichlorobenzene	<0.000252	<0.00044	NC	<0.00083	NC
	4-Methyl-2-pentanone (MIBK)	<0.000937	<0.00164	NC	<0.001	NC
	Acetone	<0.00725	<0.0127	NC	<0.0048	NC
	Carbon tetrachloride	<0.000514	<0.000897	NC	<0.0012	NC
	Chlorobenzene	<0.000232	<0.000404	NC	<0.00052	NC
	Cyclohexane	<0.000997	<0.00174	NC	<0.052	NC
	Dichlorodifluoromethane	<0.000735	<0.00128	NC	<0.0019	NC
	Ethyl acetate	<0.00121	<0.00211	NC	<0.01	NC
	Ethyl ether	<0.000171	<0.000299	NC	<0.0052	NC
	Ethylbenzene	<0.000222	<0.000387	NC	<0.00094	NC
	Methylene chloride	<0.00504	0.0118 J	NC	0.012	NC
	Tetrachloroethene	<0.000745	<0.0013	NC	<0.001	NC
	Trichloroethene	<0.000282	<0.000492	NC	<0.0017	NC
	Trichlorofluoromethane	<0.000504	<0.000879	NC	<0.00083	NC
	Xylenes, Total	<0.000363	<0.000633	NC	<0.0027	NC
	Semivolatile Organic Compounds (mg/kg)					
	Hexachlorocyclopentadiene	<0.101	<0.105	NC	<0.0017	NC
	Nonhalogenated Organic Compounds (mg/kg)					
	Methanol	<1.06	<1.09	NC	<1.0	NC
	n-Butanol	<0.388	<0.401	NC	<1.0	NC
	Organochlorine Pesticides (mg/kg)					
	Chlordane	<0.0192	<0.0193	NC	NA	NA
	Endrin	<0.000849	<0.000857	NC	NA	NA
	Organophosphorus Pesticides (mg/kg)					
	Methyl parathion	<0.00848	<0.0089	NC	NA	NA
	Total Metals (mg/kg)					
	Antimony	132	5.38	**184**	11.2	**169**
	Arsenic	885	47.7	**180**	106	**157**
	Barium	181	53	**109**	58.6	**102**
	Cadmium	162	16.5	**163**	24.7	**147**
	Chromium	17.6	3.93	**127**	4.94	**112**
	Cobalt	36	3.13	**168**	5.65	**146**
	Copper	14500	303	**192**	743	**180**
	Iron	37000	4610	**156**	7960	**129**
	Lead	2900	120	**184**	792	**114**
	Mercury	3.31	0.148	**183**	0.265	**170**
	Molybdenum	115	2.09 J	**NC**	10.3	**167**
	Nickel	57.9	6.46	**160**	8.2	**150**
	Selenium	59.2	2.1	**186**	2.78	**182**
	Silver	32.5	0.997	**188**	9.28	**111**
	Zinc	8010	197	**190**	944	**158**

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
APA-SB01-5 / FD101911-2	**Volatile Organic Compounds (mg/kg)**					
	1,1,1-Trichloroethane	<0.000753	<0.000754	NC	NA	NA
	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000721	<0.000722	NC	NA	NA
	1,1,2-Trichloroethane	<0.000538	<0.000539	NC	NA	NA
	1,2-Dichlorobenzene	<0.000269	<0.000269	NC	NA	NA
	4-Methyl-2-pentanone (MIBK)	<0.001	<0.001	NC	NA	NA
	Acetone	<0.00775	<0.00776	NC	NA	NA
	Carbon tetrachloride	<0.000549	<0.00055	NC	NA	NA
	Chlorobenzene	<0.000247	<0.000248	NC	NA	NA
	Cyclohexane	<0.00106	<0.00107	NC	NA	NA
	Dichlorodifluoromethane	<0.000785	<0.000787	NC	NA	NA
	Ethyl acetate	<0.00129	<0.00129	NC	NA	NA
	Ethyl ether	<0.000183	<0.000183	NC	NA	NA
	Ethylbenzene	<0.000237	<0.000237	NC	NA	NA
	Methylene chloride	0.00587 J	0.00556 J	NC	NA	NA
	Tetrachloroethene	<0.000796	<0.000797	NC	NA	NA
	Trichloroethene	<0.000301	<0.000302	NC	NA	NA
	Trichlorofluoromethane	<0.000538	<0.000539	NC	NA	NA
	Xylenes, Total	<0.000387	<0.000388	NC	NA	NA
	Semivolatile Organic Compounds (mg/kg)					
	Hexachlorocyclopentadiene	<0.101	<0.0996	NC	NA	NA
	Nonhalogenated Organic Compounds (mg/kg)					
	Methanol	<1.07	<1.18	NC	NA	NA
	n-Butanol	<0.392	<0.432	NC	NA	NA
	Organochlorine Pesticides (mg/kg)					
	Chlordane	<0.00189	<0.0191	NC	NA	NA
	Endrin	<0.0000839	<0.000847	NC	NA	NA
	Organophosphorus Pesticides (mg/kg)					
	Methyl parathion	<0.00869	<0.00852	NC	NA	NA
	Total Metals (mg/kg)					
	Antimony	5.9	8.45	**36**	NA	NA
	Arsenic	48.8	62.1	24	NA	NA
	Barium	80.3	62	26	NA	NA
	Cadmium	9.75	16.8	**53**	NA	NA
	Chromium	3.62	2.43	**39**	NA	NA
	Cobalt	3.26	3.81	16	NA	NA
	Copper	615	701	13	NA	NA
	Iron	4090	4390	7.1	NA	NA
	Lead	117	212	**58**	NA	NA
	Mercury	0.0474 J	0.377	**NC**	NA	NA
	Molybdenum	5.06	6.13	19	NA	NA
	Nickel	5.7	6.87	19	NA	NA
	Selenium	1.8	3.88	**73**	NA	NA
	Silver	1.31	1.81	32	NA	NA
	Zinc	343	390	13	NA	NA

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
BB-SS01 / BB-SS01QA	**Volatile Organic Compounds (mg/kg)**					
	1,1,1-Trichloroethane	<0.000712	NA	NA	<0.0019	NC
	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000682	NA	NA	<0.0014	NC
	1,1,2-Trichloroethane	<0.000509	NA	NA	<0.0022	NC
	1,2-Dichlorobenzene	<0.000254	NA	NA	<0.00087	NC
	4-Methyl-2-pentanone (MIBK)	<0.000946	NA	NA	<0.0011	NC
	Acetone	<0.00733	NA	NA	<0.005	NC
	Carbon tetrachloride	<0.000519	NA	NA	<0.0013	NC
	Chlorobenzene	<0.000234	NA	NA	<0.00055	NC
	Cyclohexanone	NA	NA	NA	<0.055	NC
	Dichlorodifluoromethane	<0.000743	NA	NA	<0.002	NC
	Ethyl acetate	<0.00122	NA	NA	<0.0011	NC
	Ethyl ether	<0.000173	NA	NA	<0.0055	NC
	Ethylbenzene	0.000454 J	NA	NA	<0.00098	NC
	Methylene chloride	<0.00509	NA	NA	0.062	NC
	Tetrachloroethene	<0.000753	NA	NA	<0.0011	NC
	Trichloroethene	<0.000285	NA	NA	<0.0017	NC
	Trichlorofluoromethane	<0.000509	NA	NA	<0.00087	NC
	Xylenes, Total	<0.000366	NA	NA	<0.0028	NC
	Semivolatile Organic Compounds (mg/kg)					
	Hexachlorocyclopentadiene	<0.112	NA	NA	<0.0087	NC
	Nonhalogenated Organic Compounds (mg/kg)					
	Methanol	<1.18	NA	NA	<1.1	NC
	n-Butanol	<0.432	NA	NA	<1.1	NC
	Organochlorine Pesticides (mg/kg)					
	Chlordane	<0.0424	NA	NA	<0.22	NC
	Endrin	<0.00188	NA	NA	<0.0065	NC
	Organophosphorus Pesticides (mg/kg)					
	Methyl parathion	<0.00953	NA	NA	<1.3	NC
	Total Metals (mg/kg)					
	Antimony	738	NA	NA	55.1	**172**
	Arsenic	5690	NA	NA	661	**158**
	Barium	247	NA	NA	134	**59**
	Cadmium	327	NA	NA	140	**80**
	Chromium	34.5	NA	NA	5.42	**146**
	Cobalt	33	NA	NA	9.22	**113**
	Copper	42000	NA	NA	27700	**41**
	Iron	90000	NA	NA	13200	**149**
	Lead	15700	NA	NA	2590	**143**
	Mercury	14.7	NA	NA	3.13	**130**
	Molybdenum	476	NA	NA	54.9	**159**
	Nickel	67.6	NA	NA	37.7	**57**
	Selenium	101	NA	NA	14.1	**151**
	Silver	185	NA	NA	29	**146**
	Zinc	7270	NA	NA	2720	**91**

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
CON-SS02 / CON-SS-Dup1 / CON-SS02QA	**Total Metals (mg/kg)**					
	Antimony	518	560	8	258	**67**
	Arsenic	9140	7310	22	6250	**38**
	Barium	179	223	22	127	34
	Cadmium	1390	992	33	735	**62**
	Chromium	84.4	97.1	14	42.9	**65**
	Cobalt	33.6	94.8	**95**	15.3	**75**
	Copper	37200	27100	31	24100	**43**
	Iron	65300	85500	27	35600	**59**
	Lead	13800	12600	9	8110	**52**
	Mercury	<0.0103	4.47	**NC**	55	**NC**
	Molybdenum	833	608	31	553	**40**
	Nickel	109	126	14	45.7	**82**
	Selenium	223	179	22	152	**38**
	Silver	93.9	103	9	60.7	**43**
	Zinc	17500	13700	24	11600	**40**
DDA-SB01-0.5 / FD101911-3 / DDA-SB01-0.5QA	**Polychlorinated Biphenyls (mg/kg)**					
	Aroclor 1016	<0.0051	<0.0052	NC	NA	NA
	Aroclor 1221	<0.0051	<0.0052	NC	NA	NA
	Aroclor 1232	<0.0051	<0.0052	NC	NA	NA
	Aroclor 1242	0.0299 J	0.031 J	NC	NA	NA
	Aroclor 1248	<0.0051	<0.0052	NC	NA	NA
	Aroclor 1254	0.0176 J	0.022 J	NC	NA	NA
	Aroclor 1260	0.0173 J	0.0226 J	NC	NA	NA
	Aroclor 1262	<0.0051	<0.0052	NC	NA	NA
	Aroclor 1268	<0.0051	<0.0052	NC	NA	NA
	Total Petroleum Hydrocarbons (mg/kg)					
	C6-C12	<10.3	<10.3	NC	<15	NC
	Over C12-C28	144	188	26	<15	**NC**
	Over C28-C35	87.3	111	24	<15	**NC**
	Total Petroleum Hydrocarbons (C6-C35)	231	299	26	<15	**NC**
DDA-SB01-1.5 / FD101911-4	**Polychlorinated Biphenyls (mg/kg)**					
	Aroclor 1016	<0.00515	<0.00522	NC	NA	NA
	Aroclor 1221	<0.00515	<0.00522	NC	NA	NA
	Aroclor 1232	<0.00515	<0.00522	NC	NA	NA
	Aroclor 1242	<0.00515	0.0237 J	NC	NA	NA
	Aroclor 1248	<0.00515	<0.00522	NC	NA	NA
	Aroclor 1254	<0.00515	0.0265 J	NC	NA	NA
	Aroclor 1260	<0.00515	0.0346	**NC**	NA	NA
	Aroclor 1262	<0.00515	<0.00522	NC	NA	NA
	Aroclor 1268	<0.00515	<0.00522	NC	NA	NA
	Polychlorinated biphenyls, Total	<0.00515	NA	NC	NA	NA
	Total Petroleum Hydrocarbons (mg/kg)					
	C6-C12	<10.3	<10.3	NC	NA	NA
	Over C12-C28	314	133	**81**	NA	NA
	Over C28-C35	204	66.4	**102**	NA	NA
	Total Petroleum Hydrocarbons (C6-C35)	518	199	**89**	NA	NA

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
DDA-SB02-0.5 / DDA-SB02-0.5QA	**Total Petroleum Hydrocarbons (mg/kg)**					
	C6-C12	<10.7	NA	NA	<16	NC
	Over C12-C28	46.6 J	NA	NA	<16	**NC**
	Over C28-C35	24.5 J	NA	NA	<16	NC
	Total Petroleum Hydrocarbons (C6-C35)	71.1	NA	NA	<16	**NC**
LS-SB01-0.5 / LS-SB01-0.5QA	**Total Metals (mg/kg)**					
	Antimony	17.7	NA	NA	8.54	**70**
	Arsenic	112	NA	NA	53.8	**70**
	Barium	174	NA	NA	141	21
	Cadmium	52.1	NA	NA	26.7	**64**
	Chromium	10.8	NA	NA	5.71	**62**
	Cobalt	6.47	NA	NA	3.55	**58**
	Copper	895	NA	NA	3050	**109**
	Iron	13200	NA	NA	6300	**71**
	Lead	550	NA	NA	405	30
	Mercury	1.65	NA	NA	0.677	**84**
	Molybdenum	8.73	NA	NA	3.59	**83**
	Nickel	10.3	NA	NA	7.75	28
	Selenium	4.5	NA	NA	5.62	22
	Silver	5.28	NA	NA	5.64	7
	Zinc	377	NA	NA	246	**42**
LS-SB02-0.5 / FD10211	**Total Metals (mg/kg)**					
	Antimony	128	147	14	NA	NA
	Arsenic	503	488	3.0	NA	NA
	Barium	318	804	**87**	NA	NA
	Cadmium	133	34.8	**117**	NA	NA
	Chromium	50.3	156	**102**	NA	NA
	Cobalt	64.7	190	**98**	NA	NA
	Copper	6750	6200	8.0	NA	NA
	Iron	65700	164000	**86**	NA	NA
	Lead	2520	2130	17	NA	NA
	Mercury	0.0597 J	<0.0118	NC	NA	NA
	Molybdenum	302	801	**90**	NA	NA
	Nickel	35.3	71.3	**68**	NA	NA
	Selenium	13.1	12.6 J	NC	NA	NA
	Silver	20.4	11.3	**57**	NA	NA
	Zinc	7500	10600	34	NA	NA

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
UB-SS01 / UB-SS-Dup1	**Volatile Organic Compounds (mg/kg)**					
	1,1,1-Trichloroethane	<0.000682	<0.000581	NC	NA	NA
	1,1,2-Trichloro-1,2,2-trifluoroethane	<0.000653	<0.000556	NC	NA	NA
	1,1,2-Trichloroethane	<0.000487	<0.000415	NC	NA	NA
	1,2-Dichlorobenzene	<0.000244	<0.000208	NC	NA	NA
	4-Methyl-2-pentanone (MIBK)	<0.000906	<0.000772	NC	NA	NA
	Acetone	<0.00702	<0.00598	NC	NA	NA
	Carbon tetrachloride	<0.000497	<0.000423	NC	NA	NA
	Chlorobenzene	<0.000224	<0.000191	NC	NA	NA
	Cyclohexanone	<0.00292	<0.00249	NC	NA	NA
	Dichlorodifluoromethane	<0.000711	<0.000606	NC	NA	NA
	Ethyl acetate	0.000746 J	<0.000996	NC	NA	NA
	Ethyl ether	<0.00487	<0.000141	NC	NA	NA
	Ethylbenzene	<0.000166	0.000395 J	NC	NA	NA
	Methylene chloride	<0.00117	0.00673 J	NC	NA	NA
	Tetrachloroethene	<0.000721	<0.000614	NC	NA	NA
	Trichloroethene	<0.000273	<0.000232	NC	NA	NA
	Trichlorofluoromethane	<0.000487	<0.000415	NC	NA	NA
	Xylenes, Total	0.00117 J	0.00114 J	NC	NA	NA
	Semivolatile Organic Compounds (mg/kg)					
	Hexachlorocyclopentadiene	<0.101	<0.103	NC	NA	NA
	Nonhalogenated Organic Compounds (mg/kg)					
	Methanol	<1.05	<1.07	NC	NA	NA
	n-Butanol	<0.386	<0.393	NC	NA	NA
	Organochlorine Pesticides (mg/kg)					
	Chlordane	<0.0379	<0.038	NC	NA	NA
	Endrin	<0.00168	<0.00168	NC	NA	NA
	Organophosphorus Pesticides (mg/kg)					
	Methyl parathion	<0.00847	<0.00867	NC	NA	NA
	Total Metals (mg/kg)					
	Antimony	79.9	123	**42**	NA	NA
	Arsenic	352	447	24	NA	NA
	Barium	187	195	4.2	NA	NA
	Cadmium	66	93.5	34	NA	NA
	Chromium	19.7	24.7	22	NA	NA
	Cobalt	18.7	46.4	**85**	NA	NA
	Copper	14600	19200	27	NA	NA
	Iron	37200	49400	28	NA	NA
	Lead	1510	4730	**103**	NA	NA
	Mercury	1.51	0.157	**162**	NA	NA
	Molybdenum	128	163	24	NA	NA
	Nickel	26.6 J	173	**NC**	NA	NA
	Selenium	10.1 J	17 J	NC	NA	NA
	Silver	42.4	61	**36**	NA	NA
	Zinc	2760	3440	22	NA	NA

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
ZCP-SB01-8.5 / ZCP-SB01-8.5QA	**Total Metals (mg/kg)**					
	Antimony	37.5	NA	NA	50.7	30
	Arsenic	825	NA	NA	1190	**36**
	Barium	162	NA	NA	105	**43**
	Cadmium	73	NA	NA	323	**126**
	Chromium	3.93	NA	NA	6.12	**44**
	Cobalt	4.22	NA	NA	5.39	24
	Copper	379	NA	NA	580	**42**
	Iron	8120	NA	NA	6960	15
	Lead	730	NA	NA	2650	**114**
	Mercury	1.12	NA	NA	2.12	**62**
	Molybdenum	3.86	NA	NA	9.47	**84**
	Nickel	6.44	NA	NA	11.3	**55**
	Selenium	5.56	NA	NA	15.4	**94**
	Silver	1.79	NA	NA	7.73	**125**
	Zinc	16200	NA	NA	11700	32
	Chromium, Hexavalent	<0.293	NA	NA	<0.73	NC
ZCP-SB02-5 / FD102011-1	**Total Metals (mg/kg)**					
	Antimony	13.1	11	17	NA	NA
	Arsenic	133	86.8	**42**	NA	NA
	Barium	267	125	**72**	NA	NA
	Cadmium	56.3	38.1	**39**	NA	NA
	Chromium	6.09	6.99	14	NA	NA
	Cobalt	6.44	4.02	**46**	NA	NA
	Copper	356	196	**58**	NA	NA
	Iron	11200	9950	12	NA	NA
	Lead	585	200	**98**	NA	NA
	Mercury	0.852	0.844	<1	NA	NA
	Molybdenum	6.85	2.3	**99**	NA	NA
	Nickel	7.38	7.23	2.1	NA	NA
	Selenium	2.35	1.73	30	NA	NA
	Silver	2.69	1.23	**74**	NA	NA
	Zinc	1270	290	**126**	NA	NA
	Chromium, Hexavalent	<0.307	<0.332	NC	NA	NA

Table 3
Field Duplicate/QA Split Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Sample ID/ Field Duplicate ID / QA Split ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)	QA Split Result	RPD (%)
ZCP-SB04-0.5 / FD102011-2	**Total Metals (mg/kg)**					
	Antimony	57	105	**59**	NA	NA
	Arsenic	2240	2230	<1	NA	NA
	Barium	1990	938	**72**	NA	NA
	Cadmium	492.0	1000	**68**	NA	NA
	Chromium	7.97 J	10.9	NC	NA	NA
	Cobalt	30.9	20.4	**41**	NA	NA
	Copper	2310	2760	18	NA	NA
	Iron	204000	113000	**57**	NA	NA
	Lead	14400	6260	**79**	NA	NA
	Mercury	0.0312 J	0.284	NC	NA	NA
	Molybdenum	245	236	3.7	NA	NA
	Nickel	4.85 J	5.99	NC	NA	NA
	Selenium	7.41 J	20.5	NC	NA	NA
	Silver	12.5	11.6	7.5	NA	NA
	Zinc	29600	22900	26	NA	NA
	Chromium, Hexavalent	<0.282	<0.302	NC	NA	NA
ZCP-SB04-3.5 / ZCP-SB04-3.5QA	**Total Metals (mg/kg)**					
	Antimony	60.5	NA	NA	13.4	**127**
	Arsenic	1970	NA	NA	847	**80**
	Barium	2170	NA	NA	1870	15
	Cadmium	433	NA	NA	159	**93**
	Chromium	8.94 J	NA	NA	5.86	NC
	Cobalt	25.1	NA	NA	6.43	**118**
	Copper	2150	NA	NA	672	**105**
	Iron	212000	NA	NA	76600	**94**
	Lead	13200	NA	NA	4690	**95**
	Mercury	0.167	NA	NA	0.129	26
	Molybdenum	203	NA	NA	60	**109**
	Nickel	3.55 J	NA	NA	1.41	NC
	Selenium	8.2 J	NA	NA	4.16	NC
	Silver	14.3	NA	NA	5.05	**96**
	Zinc	32300	NA	NA	14300	**77**
	Chromium, Hexavalent	<0.269	NA	NA	<0.71	NC

Notes:
Bold values indicate the sample result was qualified.
* not qualified since the difference between sample and duplicate is less than the MQL
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/Kg = milligrams per kilogram
mg/L = milligrams per liter
< = Not detected above SDL
NA = Not Analyzed
NC = Not Calculated; RPD values were not calculated for non-detect values
QA = Quality Assurance
MQL = Method Quantitation Limit

Table 4
Completeness Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Volatile Organic Compounds					
1,1,1-Trichloroethane	16	15[a]	94	16	100
1,1,2-Trichloro-1,2,2-trifluoroethane	16	15[a]	94	16	100
1,1,2-Trichloroethane	16	15[a]	94	16	100
1,2-Dichlorobenzene	16	15[a]	94	16	100
4-Methyl-2-pentanone (MIBK)	16	15[a]	94	16	100
Acetone	16	15[a]	94	16	100
Carbon tetrachloride	16	15[a]	94	16	100
Chlorobenzene	16	15[a]	94	16	100
Cyclohexanone	16	15[a]	94	16	100
Dichlorodifluoromethane	16	15[a]	94	16	100
Ethyl acetate	16	15[a]	94	16	100
Ethyl ether	16	15[a]	94	16	100
Ethylbenzene	16	16	100	16	100
Methylene Chloride	16	8[a,b]	50	16	100
Tetrachloroethene	16	15[a]	94	16	100
Trichloroethene	16	15[a]	94	16	100
Trichlorofluoromethane	16	15[a]	94	16	100
Xylenes, Total	16	15[a]	94	16	100
Methanol	16	16	100	16	100
n-Butanol	16	16	100	16	100
Semivolatile Organic Compounds					
Hexachlorocyclopentadiene	16	14[c]	88	16	100
Chlordane	15	15	100	15	100
Endrin	15	15	100	15	100
Methyl parathion	15	15	100	15	100
Total Petroleum Hydrocarbons					
C6-C12	19	18[c]	95	19	100
Over C12-C28	19	13[c,d,e]	68	19	100
Over C28-C35	19	15[c,d,e]	79	19	100
Total Petroleum Hydrocarbons (C6-C35)	19	13[c,d,e]	68	19	100
Polychlorinated Biphenyls					
Aroclor 1016	14	14	100	14	100
Aroclor 1221	14	14	100	14	100
Aroclor 1232	14	14	100	14	100
Aroclor 1242	14	14	100	14	100
Aroclor 1248	14	14	100	14	100
Aroclor 1254	14	14	100	14	100
Aroclor 1260	14	12[d]	86	14	100
Aroclor 1262	14	14	100	14	100
Aroclor 1268	14	14	100	14	100
Total and Dissolved Metals					
Aluminum	1	0[c]	0	1	100
Antimony	76	58[d,e,f]	76	76	100
Arsenic	76	61[d,e]	80	76	100
Barium	76	63[d,e]	83	76	100

Table 4
Completeness Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Cadmium	76	40[c,d,e]	53	76	100
Calcium	1	1	100	1	100
Chromium	76	60[c,d,e]	79	76	100
Cobalt	76	29[c,d,e]	38	76	100
Copper	76	61[d,e]	80	76	100
Iron	76	61[d,e]	80	76	100
Lead	76	57[d,e]	75	76	100
Magnesium	1	1	100	1	100
Manganese	1	1	100	1	100
Mercury	76	18[c,d,e,g]	24	76	100
Molybdenum	76	23[c,d,e]	30	76	100
Nickel	76	34[c,d,e]	45	76	100
Potassium	1	1	100	1	100
Selenium	76	46[c,d,e]	60	76	100
Silver	75	51[c,d,e,f]	68	75	100
Sodium	1	1	100	1	100
Thallium	1	1	100	1	100
Zinc	76	63[d,e]	83	76	100
Chromium VI	23	2[c]	9	23	100
SPLP Metals					
Antimony	14	14	100	14	100
Arsenic	14	14	100	14	100
Barium	14	2[c]	14	14	100
Cadmium	14	14	100	14	100
Chromium	14	14	100	14	100
Cobalt	14	14	100	14	100
Copper	14	14	100	14	100
Iron	14	14	100	14	100
Lead	14	14	100	14	100
Mercury	14	7[g,h]	50	14	100
Molybdenum	14	14	100	14	100
Nicke;	14	14	100	14	100
Selenium	14	11[g]	79	14	100
Silver	14	14	100	14	100
Zinc	14	14	100	14	100
Anions					
Chloride	1	1	100	1	100
Fluoride	1	1	100	1	100
Nitrate+Nitrite	1	1	100	1	100
Sulfate	1	1	100	1	100
Sulfide	1	1	100	1	100
General Chemistry					
Total Dissolved Solids	1	1	100	1	100
Total Suspended Solids	1	1	100	1	100
Alkalinity	1	1	100	1	100
TOTALS	**1970**	**1467**	**74**	**1970**	**100**

Table 4
Completeness Summary
Grab Soil/Water Samples - October-December 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance

Notes:

Data qualified as trace detections (between sample detection limit and method quantitation limit) are not counted as out of contractual compliance

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

[a] Results qualified due to surrogate recovery outlier

[b] Results qualified due to common laboratory contaminant

[c] Results qualified due to MS/MSD percent recovery outliers

[d] Results qualified due to high field duplicate RPD

[e] Results qualified due to high QA split RPD

[f] Results qualified due to high laboratory duplicate RPD

[g] Results qualified due to method blank contamination

[h] Results qualified due to leachate blank contamination

Texas Custodial Trust

2301 West Paisano Drive • El Paso, Texas 79922-1622

Data Usability Summary Excavation Sampling Event: October 2011 – November 2012

November 2013

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for soil samples collected during the period October 2011 to November 2012 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and quality control (QC) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is a National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

Analytical results for the soil samples collected during sampling events from October 2011 to November 2012 are considered valid and usable with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 116 soil samples were collected in the Excavation area at the former ASARCO Smelter during sampling events from October 2011 to November 2012. Additionally, three field quality control (QC) samples (i.e. field duplicates) were also collected and analyzed as part of the sampling events.

The samples were submitted to TestAmerica for the following analyses:

- Total metals by USEPA Method 6010B
- Total mercury by USEPA Method 7471A

The total metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenum, nickel, selenium, silver, and zinc.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

ARCADIS personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory report submitted by TestAmerica (560-29048-1, 560-29316-1, 560-31539-1, 560-31623-1, 560-31694-1, 560-33084-1, and 560-36021-1):

- Chain-of-Custody;
- Sample Preservation and Temperature Upon Laboratory Receipt;
- Holding Times;
- Blank Contamination (method blanks);
- Laboratory Control Sample (LCS) Percent Recovery and Relative Percent Difference (RPD);
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recovery and RPD;
- Duplicates (field duplicates); and
- Trace Detections.

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (MDL); however, the MDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the East Mountain soil samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received within the acceptable temperature range (4 ± 2 degrees Celsius) with the following exceptions:

- Samples collected on November 15, 16, and 17, 2011 were received at the project laboratory at 1.2 degrees Celsius. This temperature outlier did not impact sample results and did not result in data qualification.

- Samples collected on June 19, 2012 were received at the project laboratory at 1.9 degrees Celsius. This temperature outlier did not impact sample results and did not result in data qualification.

- Samples collected on November 1 and 2, 2012 were received at the project laboratory at 0.9 degrees Celsius. This temperature outlier did not impact sample results and did not result in data qualification.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 66028 had a detection of selenium at 0.237 milligrams per kilogram (mg/Kg). The selenium results in samples LFTP-A-1.0-1.5, LFTP-A-2.0-2.5, LFTP-A-3.0-3.5, LFTP-A-4.0-4.5, LFTP-D-1.0-1.5, LFTP-D-2.0-2.5, LFTP-D-3.0-3.5, LFTP-D-4.0-4.5, LFTP-E-0.5-1.0, LFTP-E-1.5-2.0, LFTP-E-2.5-3.0, LFTP-E-3.5-4.0, LFTP-B-2.0-2.5, LFTP-B-3.0-3.5, LFTP-B-4.0-4.5, and LFTP-B-5.0-5.5 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 71078 had a detection of arsenic at 0.1675 mg/Kg. Associated sample results did not require data qualification for arsenic because results were greater than 10 times the method blank detection.

- The method blank associated with analytical batch 71798 had detections of chromium at 0.2635 mg/Kg and selenium at 0.2515 mg/Kg. The selenium results in samples LF-EX-J6, LF-EX-K5, LF-EX-M3, LF-EX-L3, LF-EX-K4, and LF-EX-J5 were qualified "UJ" to indicate a potential bias. Associated sample results for chromium did not require data qualification because results were greater than 10 times the method blank detection.

- The method blank associated with analytical batch 71709 had detections of selenium at 0.3205 mg/Kg, barium at 0.4905 mg/Kg, and iron at 73.57 mg/Kg. Associated sample results for barium and iron did not require data qualification because results were greater than 10 times the method blank contamination. Associated sample results for selenium did not require data qualification because results were non-detect.

- The method blank associated with analytical batch 74775 had detections of arsenic at 0.2005 mg/Kg, barium at 0.5805 mg/Kg, chromium at 0.1640 mg/Kg, and zinc at 1.246 mg/Kg. The chromium results in samples LF-EX-F4-F, LF-EX-D4-F, LF-EX-C4-F, and LF-EX-B4-F were qualified "UJ" to indicate a potential bias. Associated sample results for arsenic, barium, and zinc did not require data qualification because results were greater than 10 times the method blank detection.

- The method blank associated with analytical batch 74823 had detections of lead at 0.1725 mg/Kg and selenium at 0.3465 mg/Kg. The selenium results in samples LF-EX-D3-F, LF-EX-E3-F, LF-EX-G3-F, LF-EX-I3-F, LF-EX-J4-F, LF-EX-I4-F, LF-EX-G4-F, LF-EX-F4-F, LF-EX-E4-F, LF-EX-D4-F, LF-EX-C4-F, LF-EX-C5-F, and LF-EX-F5-F were qualified "UJ" to indicate a potential bias. Associated sample results for lead did not require data qualification because results were greater than 10 times the method blank detection.

- The method blank associated with analytical batch 74709 had a detection of barium at 0.2205 mg/Kg. Associated sample results for barium did not require data qualification because results were greater than 10 times the method blank detection.

- The method blank associated with analytical batch 80515 had a detection of cadmium at 0.03870 mg/Kg and of lead at 0.2691 mg/Kg. The cadmium result in sample TP-1B-2-Native was qualified "UJ" to indicate a potential bias. Associated sample results for lead did not require data qualification because results were greater than 10 times the method blank detection.

3.5. Laboratory Control Samples / Laboratory Control Samples Duplicate Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.
- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified "J" and non-detect results were qualified "UJ."

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits.

3.6. Matrix Spike / Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.
- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".
- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.
- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.
- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits with the following exceptions:

- The analytical batch 66028 had MS and MSD recoveries that were outside of the acceptance limits for barium (11 and -73 percent), copper (68 and 46 percent), lead (52 and 59 percent), and zinc (-211 and -602 percent), and low MSD recovery for iron (69 percent). Copper and lead results for samples LFTP-A-1.0-1.5, LFTP-A-2.0-2.5, LFTP-A-3.0-3.5, LFTP-A-4.0-4.5, LFTP-D-1.0-1.5, LFTP-D-2.0-2.5, LFTP-D-3.0-3.5, LFTP-D-4.0-4.5, LFTP-E-0.5-1.0, LFTP-E-1.5-2.0, LFTP-E-2.5-3.0, LFTP-E-3.5-4.0, LFTP-B-2.0-2.5, LFTP-B-3.0-3.5, LFTP-B-4.0-4.5, LFTP-B-5.0-5.5, LFTP-C-1.0-1.5, and LFTP-C-3.0-3.5 were qualified "J" to indicate a potential bias. Data qualification was not required in associated samples for barium, iron, and zinc results because the original sample concentration was greater than four times the spiked concentration for these analytes.

- The analytical batch 66625 had MS and MSD recoveries that were outside of the acceptance limits for antimony (64 and 69 percent), iron (53 and 45 percent), lead (-65 and -119 percent), zinc (-438 and -954 percent), barium (150 and 141 percent), and high MS recovery rate for copper (167 percent). Antimony, copper and iron results for samples LF-EX-F3-2.0, LF-EX-C1-2.0, LF-EX-C3-2.0, and LF-EX-B2-2.0 were qualified "J" to indicate a potential bias. Data qualification was not required in associated samples for barium, lead, and zinc results because the original sample concentration was greater than four times the spiked concentration for these analytes.

- The analytical batch 71105 had a low MS recovery for mercury (66 percent) that was outside acceptance limits (75 to 125 percent). Mercury results for samples LF-EX-P3 and LF-EX-I6 were qualified "J" to indicate a potential bias.

- The analytical batch 71328 had MS and MSD recoveries that were outside of the acceptance limits for zinc (52 and 33 percent), low MS recovery for barium and lead (40 and 47 percent, respectively), high MS recovery for copper (426 percent) and high RPD value (64) for copper. Barium, copper, and lead results for sample LF-EX-B6 were qualified "J" to indicate a potential bias. Data qualification was not required for zinc because the original sample concentration was greater than four times the spiked concentration.

- The analytical batch 71668 had a high MS recovery for barium (143 percent) and low MSD recovery for antimony (74 percent). Antimony and barium results in samples LF-EX-A5, LF-EX-XA5, LF-EX-C6, LF-EX-C7, LF-EX-D6, LF-EX-E6, LF-EX-F6, LF-EX-F7, LF-EX-G6, and LF-EX-G7 were qualified "J" or "UJ" to indicate a potential bias.

- The analytical batch 80526 had MS and MSD recoveries outside acceptance limits for several analytes. Antimony, cobalt, and molybdenum results in samples TP-1-6, TP-1-1, TP-1B-1Native, TB-4B-1, TP-4B-1-Native, and TP-4B-2 were qualified "J" to indicate a potential bias. Data qualification was not required for arsenic, barium, copper, iron, lead, or zinc results in associated samples because the original sample concentration was greater than four times the spiked concentration for these analytes.

3.7. Duplicates

3.7.1. 3.7.1 Field Duplicates

Three field duplicates were collected and submitted for analyses during sampling events from October 2011 to November 2012. The RPD values between the field sample and its associated field duplicate are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the MQL, the RPD should be less than 35 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the analytical results of the field sample should not exceed the MQL.
- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate and sample RPDs were within acceptance limits except for the following:

- The RPD between sample LF-EX-N4 and the field duplicate FD032812 for lead (82.5 percent) and zinc (43.4 percent) were above the acceptance limits. Data were qualified "J" to indicate potential bias.
- The RPD between sample LF-EX-D1-F and the field duplicate LF-EX-DUP1-F for chromium (49 percent) was above the acceptance limits. Data were qualified "J" to indicate a potential bias.

3.8. Trace Detections

Several results were detected between the MDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total antimony, copper, mercury and molybdenum had contractual compliance below 90 percent due to MS and MSD recovery outliers.

- Total lead had contractual compliance at 82 percent due to high field duplicate RPD outliers and MS and MSD recovery outliers.

- Total cadmium and selenium had contractual compliance, at 77 percent and 39 percent respectively, due to method blank contamination.

The percent contractual compliance for Total Metals and Total Mercury was 83 percent. The results for the soil sampling events were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
LFTP-A-1.0-1.5	560-29048-1	10/31/2011	N	Total Metals and Total Mercury
LFTP-A-2.0-2.5	560-29048-2	10/31/2011	N	Total Metals and Total Mercury
LFTP-A-3.0-3.5	560-29048-3	10/31/2011	N	Total Metals and Total Mercury
LFTP-A-4.0-4.5	560-29048-4	10/31/2011	N	Total Metals and Total Mercury
LFTP-D-1.0-1.5	560-29048-5	10/31/2011	N	Total Metals and Total Mercury
LFTP-D-2.0-2.5	560-29048-6	10/31/2011	N	Total Metals and Total Mercury
LFTP-D-3.0-3.5	560-29048-7	10/31/2011	N	Total Metals and Total Mercury
LFTP-D-4.0-4.5	560-29048-8	10/31/2011	N	Total Metals and Total Mercury
LFTP-E-0.5-1.0	560-29048-9	10/31/2011	N	Total Metals and Total Mercury
LFTP-E-1.5-2.0	560-29048-10	10/31/2011	N	Total Metals and Total Mercury
LFTP-E-2.5-3.0	560-29048-11	10/31/2011	N	Total Metals and Total Mercury
LFTP-E-3.5-4.0	560-29048-12	10/31/2011	N	Total Metals and Total Mercury
LFTP-B-2.0-2.5	560-29048-13	10/31/2011	N	Total Metals and Total Mercury
LFTP-B-3.0-3.5	560-29048-14	10/31/2011	N	Total Metals and Total Mercury
LFTP-B-4.0-4.5	560-29048-15	10/31/2011	N	Total Metals and Total Mercury
LFTP-B-5.0-5.5	560-29048-16	10/31/2011	N	Total Metals and Total Mercury
LFTP-C-1.0-1.5	560-29048-17	10/31/2011	N	Total Metals and Total Mercury
LFTP-C-3.0-3.5	560-29048-18	10/31/2011	N	Total Metals and Total Mercury
LF-EX-F3-2.0	560-29316-1	11/15/2011	N	Total Metals and Total Mercury
LF-EX-C1-2.0	560-29316-2	11/15/2011	N	Total Metals and Total Mercury
LF-EX-C3-2.0	560-29316-3	11/15/2011	N	Total Metals and Total Mercury
LF-EX-B2-2.0	560-29316-4	11/15/2011	N	Total Metals and Total Mercury
LF-EX-L4	560-31694-32	2/29/2012	N	Total Metals and Total Mercury
LF-EX-K4	560-31694-33	2/29/2012	N	Total Metals and Total Mercury
LF-EX-J5	560-31694-34	2/29/2012	N	Total Metals and Total Mercury
LF-EX-I5	560-31694-26	3/1/2012	N	Total Metals and Total Mercury
LF-EX-J6	560-31694-27	3/1/2012	N	Total Metals and Total Mercury

Table 1
Sample and Analysis Schedule
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
LF-EX-K5	560-31694-28	3/1/2012	N	Total Metals and Total Mercury
LF-EX-L5	560-31694-29	3/1/2012	N	Total Metals and Total Mercury
LF-EX-M3	560-31694-30	3/1/2012	N	Total Metals and Total Mercury
LF-EX-L3	560-31694-31	3/1/2012	N	Total Metals and Total Mercury
LF-EX-K6	560-31694-14	3/28/2012	N	Total Metals and Total Mercury
LF-EX-N4	560-31694-15	3/28/2012	N	Total Metals and Total Mercury
LF-EX-N2	560-31694-16	3/28/2012	N	Total Metals and Total Mercury
LF-EX-K2	560-31694-17	3/28/2012	N	Total Metals and Total Mercury
LF-EX-O3	560-31694-18	3/28/2012	N	Total Metals and Total Mercury
LF-EX-O2	560-31694-19	3/28/2012	N	Total Metals and Total Mercury
LF-EX-O4	560-31694-20	3/28/2012	N	Total Metals and Total Mercury
LF-EX-N3	560-31694-21	3/28/2012	N	Total Metals and Total Mercury
LF-EX-M2	560-31694-22	3/28/2012	N	Total Metals and Total Mercury
LF-EX-L2	560-31694-23	3/28/2012	N	Total Metals and Total Mercury
LF-EX-M5	560-31694-24	3/28/2012	N	Total Metals and Total Mercury
FD032812	560-31694-25	3/28/2012	FD	Total Metals and Total Mercury
LF-EX-P3	560-31539-1	3/28/2012	N	Total Metals and Total Mercury
LF-EX-I6	560-31539-2	3/28/2012	N	Total Metals and Total Mercury
LF-EX-B6	560-31623-1	4/2/2012	N	Total Metals and Total Mercury
LF-EX-A5	560-31694-1	4/2/2012	N	Total Metals and Total Mercury
LF-EX-XA5	560-31694-2	4/2/2012	N	Total Metals and Total Mercury
LF-EX-C6	560-31694-3	4/2/2012	N	Total Metals and Total Mercury
LF-EX-C7	560-31694-4	4/2/2012	N	Total Metals and Total Mercury
LF-EX-D6	560-31694-5	4/2/2012	N	Total Metals and Total Mercury
LF-EX-E6	560-31694-6	4/2/2012	N	Total Metals and Total Mercury
LF-EX-F6	560-31694-7	4/2/2012	N	Total Metals and Total Mercury
LF-EX-F7	560-31694-8	4/2/2012	N	Total Metals and Total Mercury

Table 1
Sample and Analysis Schedule
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
LF-EX-G6	560-31694-9	4/2/2012	N	Total Metals and Total Mercury
LF-EX-A6	560-31694-10	4/3/2012	N	Total Metals and Total Mercury
LF-EX-G7	560-31694-11	4/3/2012	N	Total Metals and Total Mercury
LF-EX-J3	560-31694-12	4/3/2012	N	Total Metals and Total Mercury
LF-EX-K3	560-31694-13	4/3/2012	N	Total Metals and Total Mercury
LF-EX-A1-F	560-33084-1	6/19/2012	N	Total Metals and Total Mercury
LF-EX-B1-F	560-33084-2	6/19/2012	N	Total Metals and Total Mercury
LF-EX-C1-F	560-33084-3	6/19/2012	N	Total Metals and Total Mercury
LF-EX-D1-F	560-33084-4	6/19/2012	N	Total Metals and Total Mercury
LF-EX-E1-F	560-33084-5	6/19/2012	N	Total Metals and Total Mercury
LF-EX-F1-F	560-33084-6	6/19/2012	N	Total Metals and Total Mercury
LF-EX-G1-F	560-33084-7	6/19/2012	N	Total Metals and Total Mercury
LF-EX-I1-F	560-33084-8	6/19/2012	N	Total Metals and Total Mercury
LF-EX-J1-F	560-33084-9	6/19/2012	N	Total Metals and Total Mercury
LF-EX-J2-F	560-33084-10	6/19/2012	N	Total Metals and Total Mercury
LF-EX-I2-F	560-33084-11	6/19/2012	N	Total Metals and Total Mercury
LF-EX-G2-F	560-33084-12	6/19/2012	N	Total Metals and Total Mercury
LF-EX-F2-F	560-33084-13	6/19/2012	N	Total Metals and Total Mercury
LF-EX-E2-F	560-33084-14	6/19/2012	N	Total Metals and Total Mercury
LF-EX-D2-F	560-33084-15	6/19/2012	N	Total Metals and Total Mercury
LF-EX-C2-F	560-33084-16	6/19/2012	N	Total Metals and Total Mercury
LF-EX-B2-F	560-33084-17	6/19/2012	N	Total Metals and Total Mercury
LF-EX-A2-F	560-33084-18	6/19/2012	N	Total Metals and Total Mercury
LF-EX-B3-F	560-33084-19	6/19/2012	N	Total Metals and Total Mercury
LF-EX-C3-F	560-33084-20	6/19/2012	N	Total Metals and Total Mercury
LF-EX-D3-F	560-33084-21	6/19/2012	N	Total Metals and Total Mercury
LF-EX-E3-F	560-33084-22	6/19/2012	N	Total Metals and Total Mercury

Table 1
Sample and Analysis Schedule
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
LF-EX-G3-F	560-33084-23	6/19/2012	N	Total Metals and Total Mercury
LF-EX-I3-F	560-33084-24	6/19/2012	N	Total Metals and Total Mercury
LF-EX-J4-F	560-33084-25	6/19/2012	N	Total Metals and Total Mercury
LF-EX-I4-F	560-33084-26	6/19/2012	N	Total Metals and Total Mercury
LF-EX-G4-F	560-33084-27	6/19/2012	N	Total Metals and Total Mercury
LF-EX-F4-F	560-33084-28	6/19/2012	N	Total Metals and Total Mercury
LF-EX-E4-F	560-33084-29	6/19/2012	N	Total Metals and Total Mercury
LF-EX-D4-F	560-33084-30	6/19/2012	N	Total Metals and Total Mercury
LF-EX-C4-F	560-33084-31	6/19/2012	N	Total Metals and Total Mercury
LF-EX-B4-F	560-33084-32	6/19/2012	N	Total Metals and Total Mercury
LF-EX-C5-F	560-33084-33	6/19/2012	N	Total Metals and Total Mercury

Table 1
Sample and Analysis Schedule
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
LF-EX-D5-F	560-33084-34	6/19/2012	N	Total Metals and Total Mercury
LF-EX-E5-F	560-33084-35	6/19/2012	N	Total Metals and Total Mercury
LF-EX-F5-F	560-33084-36	6/19/2012	N	Total Metals and Total Mercury
LF-EX-G5-F	560-33084-37	6/19/2012	N	Total Metals and Total Mercury
LF-EX-DUP1-F	560-33084-38	6/19/2012	FD	Total Metals and Total Mercury
LF-EX-DUP2-F	560-33084-39	6/19/2012	FD	Total Metals and Total Mercury
TP3-1	560-36021-11	11/1/2012	N	Total Metals and Total Mercury
TP3-1-Native	560-36021-12	11/1/2012	N	Total Metals and Total Mercury
TP3-2	560-36021-13	11/1/2012	N	Total Metals and Total Mercury
TP3-2-Native	560-36021-14	11/1/2012	N	Total Metals and Total Mercury
TP3-3	560-36021-15	11/1/2012	N	Total Metals and Total Mercury
TP3-3-Native	560-36021-16	11/1/2012	N	Total Metals and Total Mercury
TP-1-1	560-36021-17	11/2/2012	N	Total Metals and Total Mercury
TP-1B-1Native	560-36021-18	11/1/2012	N	Total Metals and Total Mercury
TP-4B-1	560-36021-19	11/1/2012	N	Total Metals and Total Mercury
TP-4B-1-Native	560-36021-20	11/1/2012	N	Total Metals and Total Mercury
TP-4B-2	560-36021-21	11/1/2012	N	Total Metals and Total Mercury
TP-4B-2-Native	560-36021-1	11/1/2012	N	Total Metals and Total Mercury
TP-1-1-Native	560-36021-2	11/2/2012	N	Total Metals and Total Mercury
TP1-7	560-36021-3	11/2/2012	N	Total Metals and Total Mercury
TP1-1-8	560-36021-4	11/2/2012	N	Total Metals and Total Mercury
TP1-8-Native	560-36021-5	11/2/2012	N	Total Metals and Total Mercury
TP-1-6	560-36021-6	11/2/2012	N	Total Metals and Total Mercury
TP-1B-2-Native	560-36021-7	11/1/2012	N	Total Metals and Total Mercury
TP-1B-3-Native	560-36021-8	11/1/2012	N	Total Metals and Total Mercury
Other-1	560-36021-9	11/1/2012	N	Total Metals and Total Mercury
Other-2	560-36021-10	11/1/2012	N	Total Metals and Total Mercury

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LFTP-A-1.0-1.5	560-29048-1	Selenium	Total Metals	<1.73	mg/kg	UJ	Qualified due to method blank contamination
LFTP-A-1.0-1.5	560-29048-1	Copper	Total Metals	64.9	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-1.0-1.5	560-29048-1	Lead	Total Metals	57.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-1.5-2.0	560-29048-10	Cadmium	Total Metals	0.219	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-1.5-2.0	560-29048-10	Molybdenum	Total Metals	0.278	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-1.5-2.0	560-29048-10	Selenium	Total Metals	<0.428	mg/kg	UJ	Qualified due to method blank contamination
LFTP-E-1.5-2.0	560-29048-10	Copper	Total Metals	5.78	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-1.5-2.0	560-29048-10	Lead	Total Metals	3.21	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-2.5-3.0	560-29048-11	Molybdenum	Total Metals	1.82	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-2.5-3.0	560-29048-11	Mercury	Total Mercury	0.363	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-2.5-3.0	560-29048-11	Selenium	Total Metals	<0.853	mg/kg	UJ	Qualified due to method blank contamination
LFTP-E-2.5-3.0	560-29048-11	Copper	Total Metals	25.9	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-2.5-3.0	560-29048-11	Lead	Total Metals	16.7	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-3.5-4.0	560-29048-12	Molybdenum	Total Metals	1.04	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-3.5-4.0	560-29048-12	Mercury	Total Mercury	0.0348	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-E-3.5-4.0	560-29048-12	Selenium	Total Metals	<0.846	mg/kg	UJ	Qualified due to method blank contamination
LFTP-E-3.5-4.0	560-29048-12	Copper	Total Metals	13.7	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-3.5-4.0	560-29048-12	Lead	Total Metals	6.51	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-2.0-2.5	560-29048-13	Mercury	Total Mercury	0.0137	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-B-2.0-2.5	560-29048-13	Selenium	Total Metals	<0.747	mg/kg	UJ	Qualified due to method blank contamination
LFTP-B-2.0-2.5	560-29048-13	Copper	Total Metals	59.5	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-2.0-2.5	560-29048-13	Lead	Total Metals	22.3	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-3.0-3.5	560-29048-14	Mercury	Total Mercury	0.0173	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-B-3.0-3.5	560-29048-14	Selenium	Total Metals	<0.675	mg/kg	UJ	Qualified due to method blank contamination

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LFTP-B-3.0-3.5	560-29048-14	Copper	Total Metals	60.8	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-3.0-3.5	560-29048-14	Lead	Total Metals	17.8	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-4.0-4.5	560-29048-15	Silver	Total Metals	0.178	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-B-4.0-4.5	560-29048-15	Mercury	Total Mercury	0.0232	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-B-4.0-4.5	560-29048-15	Selenium	Total Metals	<0.809	mg/kg	UJ	Qualified due to method blank contamination
LFTP-B-4.0-4.5	560-29048-15	Copper	Total Metals	127	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-4.0-4.5	560-29048-15	Lead	Total Metals	41.4	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-5.0-5.5	560-29048-16	Mercury	Total Mercury	0.0215	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-B-5.0-5.5	560-29048-16	Selenium	Total Metals	<1.07	mg/kg	UJ	Qualified due to method blank contamination
LFTP-B-5.0-5.5	560-29048-16	Copper	Total Metals	43.3	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-B-5.0-5.5	560-29048-16	Lead	Total Metals	14.4	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-C-1.0-1.5	560-29048-17	Mercury	Total Mercury	0.0961	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-C-1.0-1.5	560-29048-17	Copper	Total Metals	303	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-C-1.0-1.5	560-29048-17	Lead	Total Metals	131	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-C-3.0-3.5	560-29048-18	Mercury	Total Mercury	0.0243	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-C-3.0-3.5	560-29048-18	Copper	Total Metals	253	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-C-3.0-3.5	560-29048-18	Lead	Total Metals	104	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-2.0-2.5	560-29048-2	Antimony	Total Metals	0.699	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-2.0-2.5	560-29048-2	Cadmium	Total Metals	0.205	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-2.0-2.5	560-29048-2	Molybdenum	Total Metals	0.2	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-2.0-2.5	560-29048-2	Mercury	Total Mercury	0.036	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-2.0-2.5	560-29048-2	Selenium	Total Metals	<0.677	mg/kg	UJ	Qualified due to method blank contamination
LFTP-A-2.0-2.5	560-29048-2	Copper	Total Metals	6.93	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-2.0-2.5	560-29048-2	Lead	Total Metals	3.12	mg/kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LFTP-A-3.0-3.5	560-29048-3	Antimony	Total Metals	0.744	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-3.0-3.5	560-29048-3	Cadmium	Total Metals	0.294	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-3.0-3.5	560-29048-3	Molybdenum	Total Metals	1.23	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-3.0-3.5	560-29048-3	Mercury	Total Mercury	0.0254	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-3.0-3.5	560-29048-3	Selenium	Total Metals	<0.649	mg/kg	UJ	Qualified due to method blank contamination
LFTP-A-3.0-3.5	560-29048-3	Copper	Total Metals	22.8	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-3.0-3.5	560-29048-3	Lead	Total Metals	30.4	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-4.0-4.5	560-29048-4	Antimony	Total Metals	0.65	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-4.0-4.5	560-29048-4	Cadmium	Total Metals	0.279	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-4.0-4.5	560-29048-4	Molybdenum	Total Metals	0.282	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-4.0-4.5	560-29048-4	Mercury	Total Mercury	0.0211	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-A-4.0-4.5	560-29048-4	Selenium	Total Metals	<0.674	mg/kg	UJ	Qualified due to method blank contamination
LFTP-A-4.0-4.5	560-29048-4	Copper	Total Metals	9.77	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-A-4.0-4.5	560-29048-4	Lead	Total Metals	5.53	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-1.0-1.5	560-29048-5	Cadmium	Total Metals	0.455	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-1.0-1.5	560-29048-5	Molybdenum	Total Metals	1.78	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-1.0-1.5	560-29048-5	Mercury	Total Mercury	0.0472	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-1.0-1.5	560-29048-5	Selenium	Total Metals	<2.23	mg/kg	UJ	Qualified due to method blank contamination
LFTP-D-1.0-1.5	560-29048-5	Copper	Total Metals	58.0	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-1.0-1.5	560-29048-5	Lead	Total Metals	14.5	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-2.0-2.5	560-29048-6	Antimony	Total Metals	0.324	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-2.0-2.5	560-29048-6	Cadmium	Total Metals	0.436	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-2.0-2.5	560-29048-6	Molybdenum	Total Metals	1.21	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-2.0-2.5	560-29048-6	Mercury	Total Mercury	0.025	mg/kg	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LFTP-D-2.0-2.5	560-29048-6	Selenium	Total Metals	<0.86	mg/kg	UJ	Qualified due to method blank contamination
LFTP-D-2.0-2.5	560-29048-6	Copper	Total Metals	18.0	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-2.0-2.5	560-29048-6	Lead	Total Metals	8.92	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-3.0-3.5	560-29048-7	Cadmium	Total Metals	0.284	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-3.0-3.5	560-29048-7	Molybdenum	Total Metals	1.16	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-3.0-3.5	560-29048-7	Mercury	Total Mercury	0.0142	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-3.0-3.5	560-29048-7	Selenium	Total Metals	<0.945	mg/kg	UJ	Qualified due to method blank contamination
LFTP-D-3.0-3.5	560-29048-7	Copper	Total Metals	8.93	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-3.0-3.5	560-29048-7	Lead	Total Metals	3.61	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-4.0-4.5	560-29048-8	Antimony	Total Metals	0.463	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-4.0-4.5	560-29048-8	Cadmium	Total Metals	0.354	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-4.0-4.5	560-29048-8	Molybdenum	Total Metals	1.72	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-4.0-4.5	560-29048-8	Mercury	Total Mercury	0.0243	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LFTP-D-4.0-4.5	560-29048-8	Selenium	Total Metals	<1.01	mg/kg	UJ	Qualified due to method blank contamination
LFTP-D-4.0-4.5	560-29048-8	Copper	Total Metals	11.5	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-D-4.0-4.5	560-29048-8	Lead	Total Metals	7.82	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-0.5-1.0	560-29048-9	Selenium	Total Metals	<1.33	mg/kg	UJ	Qualified due to method blank contamination
LFTP-E-0.5-1.0	560-29048-9	Copper	Total Metals	348	mg/kg	J	Qualified due to MS/MSD recovery outliers
LFTP-E-0.5-1.0	560-29048-9	Lead	Total Metals	107	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F3-2.0	560-29316-1	Silver	Total Metals	0.382	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F3-2.0	560-29316-1	Antimony	Total Metals	2.82	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F3-2.0	560-29316-1	Copper	Total Metals	53.8	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F3-2.0	560-29316-1	Iron	Total Metals	4150	mg/kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-C1-2.0	560-29316-2	Antimony	Total Metals	0.525	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery outliers
LF-EX-C1-2.0	560-29316-2	Cadmium	Total Metals	0.357	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C1-2.0	560-29316-2	Molybdenum	Total Metals	1.1	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C1-2.0	560-29316-2	Mercury	Total Mercury	0.0646	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C1-2.0	560-29316-2	Copper	Total Metals	24.2	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-C1-2.0	560-29316-2	Iron	Total Metals	3290	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-C3-2.0	560-29316-3	Antimony	Total Metals	1.59	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery outliers
LF-EX-C3-2.0	560-29316-3	Cadmium	Total Metals	0.445	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C3-2.0	560-29316-3	Molybdenum	Total Metals	1.16	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C3-2.0	560-29316-3	Selenium	Total Metals	0.73	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C3-2.0	560-29316-3	Copper	Total Metals	21.9	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-C3-2.0	560-29316-3	Iron	Total Metals	3010	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-B2-2.0	560-29316-4	Antimony	Total Metals	0.533	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery
LF-EX-B2-2.0	560-29316-4	Cadmium	Total Metals	0.483	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-2.0	560-29316-4	Molybdenum	Total Metals	2.2	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-2.0	560-29316-4	Selenium	Total Metals	0.571	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-2.0	560-29316-4	Mercury	Total Mercury	0.0314	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-2.0	560-29316-4	Copper	Total Metals	39.1	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-B2-2.0	560-29316-4	Iron	Total Metals	4320	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-P3	560-31539-1	Molybdenum	Total Metals	1.08	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-P3	560-31539-1	Mercury	Total Mercury	0.128	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-I6	560-31539-2	Molybdenum	Total Metals	0.329	mg/kg	J	Estimated: Analyte detected between MDL and MQL

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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-I6	560-31539-2	Selenium	Total Metals	0.503	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I6	560-31539-2	Mercury	Total Mercury	0.126	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-B6	560-31623-1	Selenium	Total Metals	0.183	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B6	560-31623-1	Mercury	Total Mercury	0.0368	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B6	560-31623-1	Barium	Total Metals	62.0	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-B6	560-31623-1	Lead	Total Metals	50.1	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-B6	560-31623-1	Copper	Total Metals	47.5	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-A5	560-31694-1	Cadmium	Total Metals	0.247	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A5	560-31694-1	Molybdenum	Total Metals	0.381	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A5	560-31694-1	Selenium	Total Metals	0.207	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A5	560-31694-1	Antimony	Total Metals	<0.236	mg/kg	UJ	Qualified due to MS/MSD recovery outliers
LF-EX-A5	560-31694-1	Barium	Total Metals	44.9	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-A6	560-31694-10	Arsenic	Total Metals	1.56	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A6	560-31694-10	Cadmium	Total Metals	0.178	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A6	560-31694-10	Copper	Total Metals	1.57	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G7	560-31694-11	Molybdenum	Total Metals	0.36	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G7	560-31694-11	Selenium	Total Metals	0.57	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G7	560-31694-11	Antimony	Total Metals	1.62	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery
LF-EX-G7	560-31694-11	Barium	Total Metals	66.8	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-J3	560-31694-12	Cadmium	Total Metals	0.357	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J3	560-31694-12	Molybdenum	Total Metals	0.500	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J3	560-31694-12	Selenium	Total Metals	0.679	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J3	560-31694-12	Mercury	Total Mercury	0.0176	mg/kg	J	Estimated: Analyte detected between MDL and MQL

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Qualified Analytical Results
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-K3	560-31694-13	Antimony	Total Metals	0.493	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K3	560-31694-13	Molybdenum	Total Metals	1.71	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K3	560-31694-13	Selenium	Total Metals	0.483	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K3	560-31694-13	Mercury	Total Mercury	0.0584	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K6	560-31694-14	Selenium	Total Metals	0.358	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K6	560-31694-14	Silver	Total Metals	0.140	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K6	560-31694-14	Mercury	Total Mercury	0.117	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N4	560-31694-15	Selenium	Total Metals	0.391	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N4	560-31694-15	Silver	Total Metals	0.149	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N4	560-31694-15	Mercury	Total Mercury	0.103	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N4	560-31694-15	Lead	Total Metals	96.2	mg/kg	J	Qualified due to high field duplicate RPD
LF-EX-N4	560-31694-15	Zinc	Total Metals	174	mg/kg	J	Qualified due to high field duplicate RPD
LF-EX-N2	560-31694-16	Antimony	Total Metals	1.75	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N2	560-31694-16	Selenium	Total Metals	0.270	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N2	560-31694-16	Silver	Total Metals	0.148	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K2	560-31694-17	Antimony	Total Metals	1.5	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K2	560-31694-17	Selenium	Total Metals	0.375	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K2	560-31694-17	Mercury	Total Mercury	0.151	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O3	560-31694-18	Cadmium	Total Metals	0.439	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O3	560-31694-18	Molybdenum	Total Metals	0.499	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O3	560-31694-18	Selenium	Total Metals	0.256	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O3	560-31694-18	Mercury	Total Mercury	0.0358	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O2	560-31694-19	Antimony	Total Metals	0.772	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O2	560-31694-19	Molybdenum	Total Metals	0.505	mg/kg	J	Estimated: Analyte detected between MDL and MQL

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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-O2	560-31694-19	Selenium	Total Metals	0.273	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O2	560-31694-19	Mercury	Total Mercury	0.0266	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-XA5	560-31694-2	Selenium	Total Metals	0.454	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-XA5	560-31694-2	Antimony	Total Metals	1.18	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery
LF-EX-XA5	560-31694-2	Mercury	Total Mercury	0.0256	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-XA5	560-31694-2	Barium	Total Metals	94.3	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-O4	560-31694-20	Cadmium	Total Metals	0.259	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-O4	560-31694-20	Molybdenum	Total Metals	0.395	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-N3	560-31694-21	Silver	Total Metals	0.202	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M2	560-31694-22	Antimony	Total Metals	1.04	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M2	560-31694-22	Selenium	Total Metals	0.402	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M2	560-31694-22	Silver	Total Metals	0.114	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M2	560-31694-22	Mercury	Total Mercury	0.0752	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L2	560-31694-23	Antimony	Total Metals	1.11	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L2	560-31694-23	Selenium	Total Metals	0.588	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L2	560-31694-23	Mercury	Total Mercury	0.104	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M5	560-31694-24	Selenium	Total Metals	0.268	mg/kg	J	Estimated: Analyte detected between MDL and MQL
FD032812	560-31694-25	Selenium	Total Metals	0.187	mg/kg	J	Estimated: Analyte detected between MDL and MQL
FD032812	560-31694-25	Mercury	Total Mercury	0.0964	mg/kg	J	Estimated: Analyte detected between MDL and MQL
FD032812	560-31694-25	Lead	Total Metals	40	mg/kg	J	Qualified due to high field duplicate RPD
FD032812	560-31694-25	Zinc	Total Metals	112	mg/kg	J	Qualified due to high field duplicate RPD
LF-EX-I5	560-31694-26	Antimony	Total Metals	1.64	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I5	560-31694-26	Molybdenum	Total Metals	0.976	mg/kg	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-J6	560-31694-27	Mercury	Total Mercury	0.147	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J6	560-31694-27	Selenium	Total Metals	<0.445	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-K5	560-31694-28	Molybdenum	Total Metals	0.813	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K5	560-31694-28	Selenium	Total Metals	<0.29	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-L5	560-31694-29	Molybdenum	Total Metals	1.10	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L5	560-31694-29	Mercury	Total Mercury	0.0777	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C6	560-31694-3	Molybdenum	Total Metals	0.97	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C6	560-31694-3	Selenium	Total Metals	0.174	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C6	560-31694-3	Mercury	Total Mercury	0.0715	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C6	560-31694-3	Antimony	Total Metals	1.02	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-C6	560-31694-3	Barium	Total Metals	62.4	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-M3	560-31694-30	Silver	Total Metals	0.301	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-M3	560-31694-30	Selenium	Total Metals	<0.581	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-L3	560-31694-31	Molybdenum	Total Metals	0.553	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L3	560-31694-31	Mercury	Total Mercury	0.130	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-L3	560-31694-31	Selenium	Total Metals	<0.261	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-L4	560-31694-32	Molybdenum	Total Metals	0.905	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K4	560-31694-33	Silver	Total Metals	0.248	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-K4	560-31694-33	Selenium	Total Metals	<0.499	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-J5	560-31694-34	Selenium	Total Metals	<0.444	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-C7	560-31694-4	Molybdenum	Total Metals	1.44	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C7	560-31694-4	Selenium	Total Metals	0.287	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C7	560-31694-4	Antimony	Total Metals	1.13	mg/kg	J	Estimated: Analyte detected between MDL and MQL and MS/MSD recovery

Table 2
Qualified Analytical Results
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-C7	560-31694-4	Barium	Total Metals	63.3	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-D6	560-31694-5	Selenium	Total Metals	0.270	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D6	560-31694-5	Silver	Total Metals	0.128	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D6	560-31694-5	Mercury	Total Mercury	0.139	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D6	560-31694-5	Antimony	Total Metals	2.54	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-D6	560-31694-5	Barium	Total Metals	87.0	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-E6	560-31694-6	Selenium	Total Metals	0.415	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E6	560-31694-6	Silver	Total Metals	0.165	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E6	560-31694-6	Mercury	Total Mercury	0.126	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E6	560-31694-6	Antimony	Total Metals	2.52	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-E6	560-31694-6	Barium	Total Metals	85.7	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F6	560-31694-7	Molybdenum	Total Metals	0.725	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F6	560-31694-7	Selenium	Total Metals	0.367	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F6	560-31694-7	Antimony	Total Metals	3.71	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F6	560-31694-7	Barium	Total Metals	78.5	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F7	560-31694-8	Selenium	Total Metals	0.670	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F7	560-31694-8	Silver	Total Metals	0.317	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F7	560-31694-8	Antimony	Total Metals	4.26	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-F7	560-31694-8	Barium	Total Metals	86.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-G6	560-31694-9	Molybdenum	Total Metals	0.582	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G6	560-31694-9	Selenium	Total Metals	0.462	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G6	560-31694-9	Mercury	Total Mercury	0.151	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G6	560-31694-9	Antimony	Total Metals	4.40	mg/kg	J	Qualified due to MS/MSD recovery outliers
LF-EX-G6	560-31694-9	Barium	Total Metals	78.2	mg/kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-A1-F	560-33084-1	Antimony	Total Metals	1.47	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A1-F	560-33084-1	Silver	Total Metals	0.321	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-A1-F	560-33084-1	Mercury	Total Mercury	0.0217	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J2-F	560-33084-10	Antimony	Total Metals	0.387	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J2-F	560-33084-10	Molybdenum	Total Metals	1.93	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J2-F	560-33084-10	Selenium	Total Metals	0.434	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J2-F	560-33084-10	Mercury	Total Mercury	0.0336	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I2-F	560-33084-11	Antimony	Total Metals	0.624	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G2-F	560-33084-12	Selenium	Total Metals	0.482	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G2-F	560-33084-12	Mercury	Total Mercury	0.0546	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F2-F	560-33084-13	Selenium	Total Metals	0.213	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F2-F	560-33084-13	Silver	Total Metals	0.206	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E2-F	560-33084-14	Mercury	Total Mercury	0.0169	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D2-F	560-33084-15	Mercury	Total Mercury	0.0603	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C2-F	560-33084-16	Molybdenum	Total Metals	1.06	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C2-F	560-33084-16	Mercury	Total Mercury	0.0397	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-F	560-33084-17	Molybdenum	Total Metals	1.26	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B2-F	560-33084-17	Mercury	Total Mercury	0.0259	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B3-F	560-33084-19	Antimony	Total Metals	0.438	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B3-F	560-33084-19	Silver	Total Metals	0.329	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B1-F	560-33084-2	Antimony	Total Metals	0.905	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B1-F	560-33084-2	Silver	Total Metals	0.149	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C3-F	560-33084-20	Cadmium	Total Metals	0.214	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C3-F	560-33084-20	Molybdenum	Total Metals	0.252	mg/kg	J	Estimated: Analyte detected between MDL and MQL

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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-C3-F	560-33084-20	Mercury	Total Mercury	0.0873	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D3-F	560-33084-21	Antimony	Total Metals	0.821	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D3-F	560-33084-21	Selenium	Total Metals	<0.883	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-E3-F	560-33084-22	Selenium	Total Metals	<0.691	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-G3-F	560-33084-23	Molybdenum	Total Metals	1.04	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G3-F	560-33084-23	Mercury	Total Mercury	0.0516	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G3-F	560-33084-23	Selenium	Total Metals	<0.311	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-I3-F	560-33084-24	Mercury	Total Mercury	0.0271	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I3-F	560-33084-24	Selenium	Total Metals	<1.02	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-J4-F	560-33084-25	Antimony	Total Metals	1.13	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J4-F	560-33084-25	Silver	Total Metals	0.125	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J4-F	560-33084-25	Mercury	Total Mercury	0.105	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J4-F	560-33084-25	Selenium	Total Metals	<0.802	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-I4-F	560-33084-26	Antimony	Total Metals	0.696	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I4-F	560-33084-26	Mercury	Total Mercury	0.0917	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I4-F	560-33084-26	Selenium	Total Metals	<0.370	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-G4-F	560-33084-27	Molybdenum	Total Metals	0.659	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G4-F	560-33084-27	Mercury	Total Mercury	0.046	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G4-F	560-33084-27	Selenium	Total Metals	<0.331	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-F4-F	560-33084-28	Cadmium	Total Metals	0.284	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F4-F	560-33084-28	Molybdenum	Total Metals	0.597	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F4-F	560-33084-28	Chromium	Total Metals	<0.674	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-F4-F	560-33084-28	Selenium	Total Metals	<0.181	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-E4-F	560-33084-29	Mercury	Total Mercury	0.113	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E4-F	560-33084-29	Selenium	Total Metals	<0.429	mg/kg	UJ	Qualified due to method blank contamination

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Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-C1-F	560-33084-3	Antimony	Total Metals	1.74	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C1-F	560-33084-3	Mercury	Total Mercury	0.117	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D4-F	560-33084-30	Molybdenum	Total Metals	1.32	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D4-F	560-33084-30	Mercury	Total Mercury	0.138	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D4-F	560-33084-30	Chromium	Total Metals	<1.42	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-D4-F	560-33084-30	Selenium	Total Metals	<0.361	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-C4-F	560-33084-31	Chromium	Total Metals	<1.00	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-C4-F	560-33084-31	Selenium	Total Metals	<0.430	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-B4-F	560-33084-32	Mercury	Total Mercury	0.0405	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-B4-F	560-33084-32	Chromium	Total Metals	<1.47	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-C5-F	560-33084-33	Mercury	Total Mercury	0.127	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-C5-F	560-33084-33	Selenium	Total Metals	<0.407	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-D5-F	560-33084-34	Cadmium	Total Metals	0.301	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D5-F	560-33084-34	Molybdenum	Total Metals	1.77	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D5-F	560-33084-34	Mercury	Total Mercury	0.0463	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E5-F	560-33084-35	Cadmium	Total Metals	0.373	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E5-F	560-33084-35	Molybdenum	Total Metals	1.31	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-E5-F	560-33084-35	Mercury	Total Mercury	0.02763	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F5-F	560-33084-36	Mercury	Total Mercury	0.102	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F5-F	560-33084-36	Selenium	Total Metals	<0.192	mg/kg	UJ	Qualified due to method blank contamination
LF-EX-G5-F	560-33084-37	Selenium	Total Metals	0.352	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G5-F	560-33084-37	Mercury	Total Mercury	0.065	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP1-F	560-33084-38	Antimony	Total Metals	0.838	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP1-F	560-33084-38	Selenium	Total Metals	0.523	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP1-F	560-33084-38	Chromium	Total Metals	2.91	mg/kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
LF-EX-DUP2-F	560-33084-39	Cadmium	Total Metals	0.427	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP2-F	560-33084-39	Molybdenum	Total Metals	1.77	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP2-F	560-33084-39	Selenium	Total Metals	0.317	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-DUP2-F	560-33084-39	Mercury	Total Mercury	0.0238	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D1-F	560-33084-4	Antimony	Total Metals	0.659	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D1-F	560-33084-4	Molybdenum	Total Metals	1.62	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D1-F	560-33084-4	Selenium	Total Metals	0.615	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-D1-F	560-33084-4	Chromium	Total Metals	1.77	mg/kg	J	Qualified due to high field duplicate RPD
LF-EX-E1-F	560-33084-5	Mercury	Total Mercury	0.116	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-F1-F	560-33084-6	Mercury	Total Mercury	0.0586	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G1-F	560-33084-7	Antimony	Total Metals	0.375	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G1-F	560-33084-7	Selenium	Total Metals	0.314	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-G1-F	560-33084-7	Mercury	Total Mercury	0.0202	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I1-F	560-33084-8	Antimony	Total Metals	1.27	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I1-F	560-33084-8	Selenium	Total Metals	0.698	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-I1-F	560-33084-8	Silver	Total Metals	0.221	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J1-F	560-33084-9	Antimony	Total Metals	0.702	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J1-F	560-33084-9	Cadmium	Total Metals	0.419	mg/kg	J	Estimated: Analyte detected between MDL and MQL
LF-EX-J1-F	560-33084-9	Molybdenum	Total Metals	0.895	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1-6	560-36021-6	Antimony	Total Metals	87.7	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-6	560-36021-6	Cobalt	Total Metals	27.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-6	560-36021-6	Molybdenum	Total Metals	38	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP-1B-2-Native	560-36021-7	Cadmium	Total Metals	<0.320	mg/kg	UJ	Qualified due to method blank contamination
TP1-1	560-36021-17	Antimony	Total Metals	18	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-1	560-36021-17	Cobalt	Total Metals	9.75	mg/kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
TP1-1	560-36021-17	Molybdenum	Total Metals	11.7	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-B-1-Native	560-36021-18	Antimony	Total Metals	0.46	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-B-1-Native	560-36021-18	Cobalt	Total Metals	1.53	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP1-B-1-Native	560-36021-18	Molybdenum	Total Metals	0.419	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1	560-36021-19	Antimony	Total Metals	57.1	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1	560-36021-19	Cobalt	Total Metals	5.77	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1	560-36021-19	Molybdenum	Total Metals	20.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1-Native	560-36021-20	Antimony	Total Metals	34.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1-Native	560-36021-20	Cobalt	Total Metals	3.58	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-1-Native	560-36021-20	Molybdenum	Total Metals	16.6	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-2	560-36021-21	Antimony	Total Metals	518	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-2	560-36021-21	Cobalt	Total Metals	34.3	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP4B-2	560-36021-21	Molybdenum	Total Metals	257	mg/kg	J	Qualified due to MS/MSD recovery outliers
TP-1-1	560-36021-17	Molybdenum	Total Metals	0.445	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-1	560-36021-17	Mercury	Total Mercury	0.0642	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-7	560-36021-3	Antimony	Total Metals	1	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-7	560-36021-3	Molybdenum	Total Metals	0.436	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-7	560-36021-3	Selenium	Total Metals	0.375	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-8	560-36021-4	Cadmium	Total Metals	0.462	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-8	560-36021-4	Selenium	Total Metals	0.28	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP-1-8	560-36021-4	Mercury	Total Mercury	0.084	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1-B2-Native	560-36021-7	Antimony	Total Metals	1.23	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1-B2-Native	560-36021-7	Cadmium	Total Metals	0.32	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1-B2-Native	560-36021-7	Molybdenum	Total Metals	0.332	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1-B2-Native	560-36021-7	Mercury	Total Mercury	0.0909	mg/kg	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID	Lab ID	Analyte	Analysis	Result	Units	Qualifier	Comments
TP3-2-Native	560-36021-14	Antimony	Total Metals	0.526	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP3-3-Native	560-36021-16	Mercury	Total Mercury	2.39	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP3-3-Native	560-36021-16	Antimony	Total Metals	0.451	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP3-3-Native	560-36021-16	Cadmium	Total Metals	0.424	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1B-1Native	560-36021-18	Antimony	Total Metals	0.46	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1B-1Native	560-36021-18	Cadmium	Total Metals	0.284	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1B-1Native	560-36021-18	Molybdenum	Total Metals	0.419	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1B-1Native	560-36021-18	Selenium	Total Metals	0.732	mg/kg	J	Estimated: Analyte detected between MDL and MQL
TP1B-1Native	560-36021-18	Mercury	Total Mercury	0.0423	mg/kg	J	Estimated: Analyte detected between MDL and MQL

Notes:
J = Indicates an estimated value; needs qualification
UJ = Indicates the analyte was analyzed for but not detected; below reporting limit
mg/kg = milligrams per kilogram

Table 3
Field Duplicate Summary
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Difference	Field Dup RPD (%)
LF-EX-D1-F/ LF-EX-DUP1-F	**Total Metals (mg/kg)**				
	Antimony	0.659 J	0.838 J	NC	NC
	Arsenic	23.1	25.7	NA	11
	Barium	211	160	NA	27
	Cadmium	0.967	0.674	NA	36
	Chromium	1.77	2.91	NA	**49**
	Cobalt	3.34	4.01	NA	18
	Copper	25.8	27.3	NA	6
	Iron	8460	10800	NA	24
	Lead	15.3	15.8	NA	3
	Mercury	<0.0161	<0.0104	NC	NC
	Molybdenum	1.62 J	3.03	NC	NC
	Nickel	2.9	3.41	NA	16
	Selenium	0.615 J	0.523 J	NC	NC
	Silver	<0.102	<0.107	NC	NC
	Zinc	54.5	63.2	NA	15
LF-EX-E5-F/ LF-EX-DUP2-F	**Total Metals (mg/kg)**				
	Antimony	<0.268	<0.284	NC	NC
	Arsenic	6.09	6.96	NA	13
	Barium	33.9	30.2	NA	12
	Cadmium	0.373 J	0.427 J	NC	NC
	Chromium	1.99	1.94	NA	3
	Cobalt	3.66	4.12	NA	12
	Copper	3.92	4.78	NA	20
	Iron	14500	14800	NA	2
	Lead	10.3	11.6	NA	12
	Mercury	0.0276 J	0.0238 J	NC	NC
	Molybdenum	1.31 J	1.77 J	NC	NC
	Nickel	6.44	5.88	NA	9
	Selenium	<0.199	0.317 J	NC	NC
	Silver	<0.111	<0.117	NC	NC
	Zinc	45.8	53.4	NA	15

Table 3
Field Duplicate Summary
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Difference	Field Dup RPD (%)
LF-EX-N4/ FD032812	**Total Metals (mg/kg)**				
	Antimony	3.42	2.49	NA	31
	Arsenic	25.3	22.7	NA	11
	Barium	139	132	NA	5.2
	Cadmium	0.814	0.767	NA	5.9
	Chromium	4.97	4.33	NA	13.8
	Cobalt	3.63	3.95	NA	8.4
	Copper	30.7	25.1	NA	20.1
	Iron	10400	8910	NA	15.4
	Lead	96.2	40	NA	**82.5**
	Mercury	0.103	0.0964 J	NC	NC
	Molybdenum	2.45	2.03	NA	18.8
	Nickel	4.09	4.07	NA	0.5
	Selenium	0.391 J	0.187 J	NC	NC
	Silver	0.149 J	<0.0909	NC	NC
	Zinc	174	112	NA	**43.4**

Notes:

< = Not detected

mg/Kg = milligrams per kilogram

MQL = method quantitation limit

NC = Not Calculated; RPD values were not calculated for non-detect or trace detect values

RPD = Relative Percent Difference; [(difference between results)/(average of results)]*100

RPD limit for soils is 35%; If results are less than 5* MQL, then data were qualified if difference > MQL

Table 4
Completeness Summary
Excavation Sampling Event October 2011 - November 2012
Former ASARCO Smelter
EL Paso, TX

Parameter	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	119	68[c]	57%	119	100
Arsenic	119	118	99%	119	100
Barium	119	108[c]	91%	119	100
Cadmium	119	92[b]	77%	119	100
Chromium	119	113[a,b]	95%	119	100
Cobalt	119	113[c]	95%	119	100
Copper	119	95[c]	80%	119	100
Iron	119	115[c]	97%	119	100
Lead	119	98[a,c]	82%	119	100
Mercury	119	50[c]	42%	119	100
Molybdenum	119	65[c]	55%	119	100
Nickel	119	119	100%	119	100
Selenium	119	46[b]	39%	119	100
Silver	119	119	100%	119	100
Zinc	119	117[a]	98%	119	100
TOTALS	**1785**	**1481**	**83%**	**1785**	**100**

Notes:

Total number of samples includes field samples and field duplicate samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples]*100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples]*100

[a] Results qualified due to high field duplicate RPD outliers

[b] Results qualified due to method blank contamination

[c] Results qualified due to MS/MSD percent recovery outliers

Texas Custodial Trust

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Data Usability Summary American Canal Surface Water Sampling March 2012

June 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the surface water samples collected from the American Canal during March 2012. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for

Inorganic Data Review (USEPA 540-R-04-004, October 2004), and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratories, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas and ALS, located in Houston, Texas. TestAmerica and ALs are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the surface water samples collected during the March 2012 sampling event are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 12 surface water samples were collected during the sampling event, including one field duplicate and one QA split sample. The samples were submitted to TestAmerica for the following analyses:

- Total and Dissolved Metals by USEPA Methods 6020 and 7470
- Cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020

The total and dissolved metals analyte list included: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc. Cations included aluminum, calcium, magnesium, manganese, potassium, and sodium.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt

- holding times
- blank contamination (method blanks)
- laboratory control spike (LCS) percent recovery
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and relative percent difference (RPD)
- laboratory duplicates
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the surface water samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples collected were received within the acceptable temperature range (4 $\pm$ 2 degrees Celsius).

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-71432 had a arsenic detection (0.0020322 milligrams per liter [mg/L]). Data qualification was not required because the arsenic concentrations in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 59998 had detections of total nickel (0.001559 mg/L) and zinc (0.004955 mg/L). The total nickel and zinc results for sample QA032812 were qualified "UJ" to indicate a potential bias.

3.5. Laboratory Control Samples Recovery

LCS and LCSD were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCSD, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCSD and the analyte was detected in the associated analytical batch, the analyte results were qualified "J."

- If the analyte recovery was below acceptance limits for LCS or LCSD, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCSD percent recoveries and RPDs were within acceptance limits with the following exception:

- .The LCS associated with analytical batch 71409 had low manganese recovery (76 percent, limit is 80 to 120 percent). The manganese results for samples AC-2012-1, AC-2012-5, AC-2012-10, and 10FD032812 were qualified "J" to indicate a potential low bias.

3.6. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J."

- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ."

- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS or MSD recoveries for dissolved arsenic (79 and 73 percent) and dissolved molybdenum (77 and 72 percent) were below acceptance limits (75 to 125 percent) for analytical batch 60000. Data qualification was not required because the sample results were greater than four times the amount spiked.

3.7. Duplicates

3.7.1. Laboratory Duplicates

Laboratory duplicates are evaluated based on the acceptance limits set forth by the project laboratory's guidelines. Laboratory duplicates were performed at the appropriate frequencies and were within acceptance limits with the following exception:

- The laboratory duplicate associated with analytical batch 60000 had a dissolved zinc RPD of 36 percent (limit is 25 percent). The dissolved zinc result for sample QA032812 was qualified "J" to indicate a potential bias.

3.7.2. Field Duplicate and QA Split Samples

One field duplicate and one QA split sample were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate/QA split sample and its associated sample were calculated and are presented in Table 3. The field duplicates and QA split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate and QA split samples RPDs were within acceptance limits except for the following:

- The RPDs between the field duplicate 10FD032812 and its associated sample AC-2012-1 were outside of acceptance limits for total antimony and dissolved antimony. Antimony results were qualified "J" to indicate a potential bias.
- The RPDs between QA split sample QA032812 and its associated sample AC-2012-1 were outside of acceptance limits for total antimony and dissolved antimony. Antimony results were qualified "J" to indicate a potential bias.

3.8. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 3 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total and dissolved antimony results were qualified due to high RPD values for field duplicates and QA split samples.

- Total nickel and zince results were qualified due to method blank contamination.

- Dissolved zinc results wer qualified due to low laboratory duplicate percent difference.

- Manganese results were qualified due to low LCS recovery.

The results for the surface water sampling event conducted on March 2012 are considered usable for the intended purposes and the project DQOs have been met.

Table 1
Sample and Analysis Schedule
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
AC-2012-1	560-3156-1	3/28/2012	N	Total and Dissolved Metals, Cations
AC-2012-2	560-3156-2	3/28/2012	N	Dissolved Metals
AC-2012-3	560-3156-3	3/28/2012	N	Dissolved Metals
AC-2012-4	560-3156-4	3/28/2012	N	Dissolved Metals
AC-2012-5	560-3156-5	3/28/2012	N	Total and Dissolved Metals, Cations
AC-2012-6	560-3156-6	3/28/2012	N	Dissolved Metals
AC-2012-7	560-3156-7	3/28/2012	N	Dissolved Metals
AC-2012-8	560-3156-8	3/28/2012	N	Dissolved Metals
AC-2012-9	560-3156-9	3/28/2012	N	Dissolved Metals
AC-2012-10	560-3156-10	3/28/2012	N	Total and Dissolved Metals, Cations
10FD032812	560-3156-11	3/28/2012	FD of AC-2012-1	Total and Dissolved Metals, Cations
QA032812	12031031-01	3/28/2012	QA split of AC-2012-1	Total and Dissolved Metals, Cations

Notes:

N = Normal sample
FD = Field duplicate
QA = Quality assuance split sample
Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel selenium, thallium, and zinc
Cations = aluminum, calcium, magnesium, manganese, potassium, and sodium

Table 2
Qualified Analytical Results
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
10FD032812	560-31556-11	Total Manganese	0.62	mg/L	J	Quaified due to low LCS recovery
AC-2012-1	560-31556-01	Total Manganese	0.597	mg/L	J	Quaified due to low LCS recovery
AC-2012-5	560-31556-05	Total Manganese	0.746	mg/L	J	Quaified due to low LCS recovery
AC-2012-10	560-31556-10	Total Manganese	0.362	mg/L	J	Quaified due to low LCS recovery
AC-2012-1	560-31556-01	Total Antimony	0.00135	mg/L	J	Qualified due to high field duplicate and QA split RPDs
10FD032812	560-31556-11	Total Antimony	0.00498	mg/L	J	Qualified due to high field duplicate RPD
AC-2012-1	560-31556-01	Total Copper	0.00218	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-1	560-31556-01	Total Zinc	0.00861	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-05	Total Copper	0.00419	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-05	Total Zinc	0.007	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-10	560-31556-10	Total Copper	0.00307	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-10	560-31556-10	Total Nickel	0.00334	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-10	560-31556-10	Total Zinc	0.00393	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Total Copper	0.00206	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Total Zinc	0.00862	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Dissolved Antimony	0.0104	mg/L	J	Qualified due to high field duplicate RPD
AC-2012-1	560-31556-01	Dissolved Antimony	0.0147	mg/L	J	Qualified due to high field duplicate and QA split RPDs
AC-2012-1	560-31556-01	Dissolved Copper	0.00315	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-1	560-31556-01	Dissolved Lead	0.000741	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-1	560-31556-01	Dissolved Zinc	0.00791	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-2	560-31556-02	Dissolved Copper	0.00535	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-2	560-31556-02	Dissolved Zinc	0.00944	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-3	560-31556-03	Dissolved Copper	0.00551	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-3	560-31556-03	Dissolved Lead	0.00135	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-3	560-31556-03	Dissolved Zinc	0.00993	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-4	560-31556-04	Dissolved Cobalt	0.0014	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-4	560-31556-04	Dissolved Copper	0.00407	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-4	560-31556-04	Dissolved Zinc	0.00729	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-05	Dissolved Copper	0.00906	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-04	Dissolved Iron	0.157	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-04	Dissolved Lead	0.00225	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-5	560-31556-04	Dissolved Zinc	0.00576	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-6	560-31556-06	Dissolved Cobalt	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-6	560-31556-06	Dissolved Zinc	0.00589	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-7	560-31556-07	Dissolved Cobalt	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-7	560-31556-07	Dissolved Zinc	0.00428	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
AC-2012-8	560-31556-08	Dissolved Cobalt	0.00151	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-8	560-31556-08	Dissolved Copper	0.00339	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-8	560-31556-08	Dissolved Zinc	0.00419	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-9	560-31556-09	Dissolved Nickel	0.00232	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-10	560-31556-10	Dissolved Lead	0.000789	mg/L	J	Estimated; Analyte detected between SDL and MQL
AC-2012-10	560-31556-10	Dissolved Nickel	0.00335	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Dissolved Copper	0.00345	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Dissolved Lead	0.000816	mg/L	J	Estimated; Analyte detected between SDL and MQL
10FD032812	560-31556-11	Dissolved Zinc	0.00906	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA032812	12031031-01	Total Nickel	<0.00793	mg/L	UJ	Qualified due to method blank contamination
QA032812	12031031-01	Total Zinc	<0.00777	mg/L	UJ	Qualified due to method blank contamination
QA032812	12031031-01	Total Antimony	0.00105	mg/L	UJ	Qualified due to high QA split RPD
QA032812	12031031-01	Dissolved Zinc	0.0106	mg/L	J	Qualified due to high lab duplicate percent difference
QA032812	12031031-01	Total Mercury	0.000045	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA032812	12031031-01	Dissolved Mercury	0.000058	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA032812	12031031-01	Total Copper	0.00209	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA032812	12031031-01	Dissolved Antimony	0.00155	mg/L	UJ	Qualified due to high QA split RPD

Notes:
mg/L = milligrams per liter ; mg/Kg = micrograms per kilogram
"<" = Analyte not detected above listed reporting limit
J = Analyte was positively identified above the SDL; however, the result is an estimated valu MS = Matrix Spike ; MSD = Matrix Spike Duplicate
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
SDL = Sample Detection Limit ; MQL = Method Quantitation Limit
QA = Quality Assurance
RPD = Relative Percent Difference

Table 3
Field Duplicate and QA Split RPD Summary
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
AC-2012-1 / 10FD032812 / QA032812	**Total Metals (mg/L)**					
	Antimony	0.0135	0.00498 J	**NC**	0.00105 J	**NC**
	Arsenic	0.523	0.548	4.7	0.475	10
	Barium	0.0456	0.0461	1.1	0.0417	8.9
	Cadmium	0.00337	0.00341	1.2	0.00366	8.3
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0008	NC
	Copper	0.00218 J	0.00206 J	NC	0.00209 J	NC
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	<0.000733	<0.000733	NC	<0.0007	NC
	Mercury	<0.00013	<0.00013	NC	0.000058 J	NC
	Molybdenum	0.334	0.335	<1.0	0.31	7.5
	Nickel	0.00925	0.00918	<1.0	0.00793	15
	Selenium	0.142	0.142	<1.0	0.142	<1.0
	Thallium	0.0183	0.0179	2.2	0.0178	NC
	Zinc	0.00861 J	0.00862 J	NC	0.00777	NC
	Dissolved Metals (mg/L)					
	Antimony	0.0147	0.0104	**34**	0.00155 J	**NC**
	Arsenic	0.502	0.561	11	0.522	3.9
	Barium	0.0456	0.0493	7.8	0.0454	<1.0
	Cadmium	0.00361	0.00406	12	0.00329	9.3
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0008	NC
	Copper	0.00315 J	0.00345 J	NC	0.00169 J	NC
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	0.000741 J	0.000816 J	NC	<0.0007	NC
	Mercury	<0.00013	<0.00013	NC	0.000045 J	NC
	Molybdenum	0.333	0.352	5.5	0.317	4.9
	Nickel	0.00892	0.00988	10	0.00947	6.0
	Selenium	0.135	0.146	7.8	0.158	16
	Thallium	0.0173	0.019	9.4	0.0197	13
	Zinc	0.00791 J	0.00906 J	NC	0.0106	NC
	Cations (mg/L)					
	Aluminum	<0.225	<0.225	NC	0.042	NC
	Calcium	184	193	4.8	158	15
	Magnesium	66.1	55	18	61.3	7.5
	Manganese	0.597	0.62	3.8	0.512	15
	Potassium	32	34	6.1	27.1	17
	Sodium	668	664	<1.0	766	14

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
Bolded values indicate field duplicate or QA split outliers
If results are less than five times the MQL, the difference between the results should be less than the MQL
"<" = Analyte not detected above listed reporting limit
J = Estimated value; detected between the SDL and MQL
NC = Not Calculated; RPD values were not calculated for non-detect values or trace values
NA = Not Analyzed
mg/L = milligrams per liter

Table 4
Completeness Summary
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals (mg/L)					
Antimony	5	2[a]	40	5	100
Arsenic	5	5	100	5	100
Barium	5	5	100	5	100
Cadmium	5	5	100	5	100
Chromium	5	5	100	5	100
Cobalt	5	5	100	5	100
Copper	5	5	100	5	100
Iron	5	5	100	5	100
Lead	5	5	100	5	100
Mercury	5	5	100	5	100
Molybdenum	5	5	100	5	100
Nickel	5	4[b]	80	5	100
Selenium	5	5	100	5	100
Thallium	5	5	100	5	100
Zinc	5	4[b]	80	5	100
Dissolved Metals (mg/L)					
Antimony	12	9[a]	75	12	100
Arsenic	12	12	100	12	100
Barium	12	12	100	12	100
Cadmium	12	12	100	12	100
Chromium	12	12	100	12	100
Cobalt	12	12	100	12	100
Copper	12	12	100	12	100
Iron	12	12	100	12	100
Lead	12	12	100	12	100
Mercury	12	12	100	12	100
Molybdenum	12	12	100	12	100
Nickel	12	12	100	12	100
Selenium	12	12	100	12	100
Thallium	12	12	100	12	100
Zinc	12	11[c]	92	12	100

Table 4
Completeness Summary
American Canal Surface Water Samples - March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Cations (mg/L)					
Aluminum	5	5	100	5	100
Calcium	5	5	100	5	100
Magnesium	5	5	100	5	100
Manganese	5	1[d]	20	5	100
Potassium	5	5	100	5	100
Sodium	5	5	100	5	100

Notes:

Total number of samples includes field samples, field duplicate samples, and QA splits

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

[a] = Results qualified due to high field duplicate or QA split RPDs

[b] = Results qualified due to method blank contamination

[c] = Result qualified due to low lab duplicate percent difference

[d] = Results qualified due to low LCS recovery

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Data Usability Summary East Mountain Sampling Event July/August 2012

November 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for soil samples collected during July and August 2012 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. ALS Environmental (ALS), located in Houston, Texas analyzed samples as the QA laboratory. Both TestAmerica and ALS are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

Analytical results for the soil samples collected during July and August 2012 are considered valid and usable; with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 74 soil samples were collected in the East Mountain area at the former ASARCO Smelter during the July and August 2012 sampling event. Additionally, nine field quality control (QC) samples (i.e. field duplicates and quality assurance [QA] splits) were also collected and analyzed as part of the July and August 2012 sampling event.

The samples were submitted to TestAmerica for the following analyses:

- Total metals by USEPA Method 6010B
- Synthetic Precipitation Leaching Procedure (SPLP) metals by USEPA Method 6010B
- Total mercury by USEPA Method 7471A

- SPLP mercury by USEPA Method 7470A

The total and SPLP metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenum, nickel, selenium, silver, and zinc.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

ARCADIS personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory report submitted by TestAmerica (560-34039-1, 560-34040-1, 560-34040-2, 560-33933-1, 560-33933-2, and 560-33933-3) and ALS Environmental (1208351-1 and 1208114):

- Chain-of-Custody;
- Sample Preservation and Temperature Upon Laboratory Receipt;
- Holding Times;
- Blank Contamination (method blanks);
- Laboratory Control Sample (LCS) Percent Recovery and Relative Percent Difference (RPD);
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Percent Recovery and RPD;
- Duplicates (field duplicates, lab duplicates, and QA split samples); and
- Trace Detections.

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (MDL); however, the MDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the East Mountain soil samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received within the acceptable temperature range (4 ± 2 degrees Celsius) with the following exception. Several coolers were received by the laboratories having lower temperatures (e.g., 1 degree Celsius). The lower temperature did not impact sample results and did not result in data qualification.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- Total mercury holding time was exceeded by 7 days for samples E140-9-0.5-1.0, E140-11-0.5-1.0, E140-41-0.5-1.0, E140-44-0.5-1.0, E140-35-0.5-1.0, E140-43-0.5-1.0, and E140-37-0.5-1.0. Results were qualified "J" and non-detects were qualified "UJ" to indicate potential low bias.

- Total mercury holding time was exceeded by 30 days for samples E140-28-0.5-1.0, E140-30-0.5-1.0, E140-40-0.5-1.0, and E140-24-0.5-1.0. Results were rejected and qualified "R" because the prep date was greater than 2 times the holding time.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 76741 had a detection of selenium at 0.240 milligrams per kilogram (mg/Kg). The selenium results in

samples E140-TP1-3.0-3.5, E140-TP2-11.0-11.5, and E140-TP3-4.5-5.0 were qualified "UJ" to indicate a potential bias. Sample E140-TP4-3.0-3.5 did not require data qualification because results were greater than 10 times the method blank contamination.

- The method blanks associated with analytical batch 76469 had detections of barium at 0.3755 mg/Kg, chromium at 0.3345 mg/Kg, copper at 0.250 mg/Kg, iron at 14.74 mg/Kg, and nickel at 0.4985 mg/Kg. The nickel results in samples E140-22-0-0.5, E140-23-0-0.5, E140-17-0-0.5, E140-1-0-0.5, and E140-10-0-0.5 were qualified "UJ" to indicate a potential bias. The chromium result for E140-10-0-0.5 was qualified "UJ" to indicate a potential bias. Associated sample results for chromium, and remaining analyses (copper and iron) did not require data qualification because results were greater than 10 times the method blank contamination.

- The method blank associated with analytical batch 63406 had detections of zinc at 0.3116 mg/Kg. Associated sample results did not require data qualification because results were greater than 10 times the method blank contamination.

- The method blank associated with analytical batch 63439 had detections of SPLP molybdenum at 0.001962 mg/L and SPLP zinc at 0.003716 mg/L. The zinc result in sample QA080612 was qualified "UJ" to indicate a potential bias. Associated samples results for molybdenum did not require data qualification because results were greater than 10 times the method blank contamination.

3.5. Laboratory Control Samples / Laboratory Control Samples Duplicate Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified "J" and non-detect results were qualified "UJ."

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits.

3.6. Matrix Spike / Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.

- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits with the following exceptions:

- The analytical batch 77100 had MS and MSD recoveries that were outside of the acceptance limits for antimony (52 and 56 percent), barium (60 and 61 percent), copper (280 and 251 percent), iron (270 and -73 percent), silver (60 and 60 percent), and zinc (237 and 195 percent). Data qualification "J" were required for low MS and MSD recoveries for antimony and silver in samples E140-24-0.0-0.5R, E140-30-0.0-0.5R, E140-40-0.0-0.5R, E140-42-0.0-0.5R, E140-38-0.0-0.5R, E140-16-0.0-0.5R, and E140-28-0.0-0.5R to indicate potential low bias. Data qualification was not required for barium, copper, iron, and zinc because the original sample concentration was greater than four times the spiked concentration for each analyte.

- The MSD recovery rate for total mercury in the analytical batch 76845 was low (73 percent). Data qualification "J" was required for samples E140-38-0.0-0.5R, E140-16-0.0-0.5R, and E140-28-0.0-0.5R to indicate potential low bias.

- The analytical batch 76522 had MS and MSD recoveries that were outside of acceptance limits for antimony (45 and 47 percent), barium (-58 percent), iron (460 and 318 percent), selenium (74 percent), and zinc (136 percent). Data were qualified "J" for associated samples with zinc detections and "J/UJ" for antimony in associated samples. The samples include E140-39-0-0.5, E140-32-0-0.5, E140-41-0-0.5, E140-44-0-0.5, E140-36-0-0.5, and E140-35-0-0.5. Data qualification was not required for barium and iron because original sample concentrations were greater than 4 times the spike concentration. Data qualification was not required for selenium because the MS recovery was within limits and the MSD recovery is one percent below limits (75 to125 percent).

- The analytical batch 77617 had MS and MSD recoveries that were outside of acceptance limits for antimony (58 and 57 percent), copper (-144 percent), lead (-152 and 72 percent), and zinc (-228 percent). Data were qualified "J" for antimony in samples: E140-9-0.5-1.0, E140-11-0.5-1.0, E140-41-0.5-1.0, E140-44-0.5-1.0, E140-35-0.5-1.0, E140-43-0.5-1.0, and E140-37-0.5-1.0 to indicate potential low bias. Data qualification was not required for copper, lead, and zinc because original sample concentrations were greater than 4 times the spike concentration.

- The analytical batch 77645 had MS or MSD recoveries outside of acceptance limits for barium (-45 percent) and iron (63 and 146 percent). Iron results were qualified "J" for the following samples: E140-9-0.5-1.0, E140-11-0.5-1.0, E140-41-0.5-1.0, E140-44-0.5-1.0, E140-35-0.5-1.0, E140-43-0.5-1.0, and E140-37-0.5-1.0 to indicate potential low bias. Data qualification was not required for barium because original sample concentrations were greater than 4 times the spike concentration.

- The MS and MSD recoveries for zinc in the analytical batch 78663 were low (-108 and 24percent). Data qualification was not required because original sample concentrations were greater than 4 times the spike concentration.

- The analytical batch 78635 had MS and MSD recoveries outside of acceptance limits for iron (73 percent), copper (-79 and 22 percent), and lead (56 and 126 percent). Data qualification was not required because original sample concentrations were greater than 4 times the spike concentration.

3.7. Field Duplicate/QA Split Sample Comparison

Six field duplicates and three QA split samples were collected and submitted for analyses during the July-August 2012 sampling event. The RPD values between the field sample and its associated field duplicate or QA split sample are presented in Table 3. The field duplicates and QA split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the MQL, the RPD should be less than 35 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the analytical results of the field sample and the field duplicate or QA split sample should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate and QA split sample RPDs were within acceptance limits except for the following:

- The RPD between sample E140-7-0-0.5 and the field duplicate DUP073012A for cadmium (36 percent), copper (42 percent), lead (45 percent), and zinc (51 percent) were above acceptance limits. Data were qualified "J" to indicate potential bias.

- The RPDs between sample E140-12-0-0.5 and split sample QA073112 for cadmium (88 percent), copper (103 percent), lead (60 percent), and zinc (65 percent) for total metal analyses was above the acceptance limit. Data were qualified "J" to indicate potential bias.

- The RPD between sample E140-33-0-0.5 and the field duplicate DUP073112C for barium (106 percent), iron (48 percent), lead (49 percent), and zinc (39 percent) for total metals analyses were above acceptance limits. Data were qualified "J" to indicate potential bias.

- The RPDs between sample E140-43-0-0.5 and split sample QA080112A for antimony (75 percent), barium (41 percent), and lead (42 percent) for total metal analyses was above the acceptance limit. Data were qualified "J" to indicate potential bias.

- The RPD between sample E140-TP12-7.0-7.5 and field duplicate FD080612A for copper (38 percent), zinc (83 percent), and SPLP barium (55 percent) for metals analyses were above the acceptance limits. Data were qualified "J" to indicate potential bias.

- The RPD between sample E140-TP8-2.5-3.0 and field duplicate FD080612B for barium (49 percent) and SPLP barium (66 percent) were above the acceptance limits. The RPDs between sample E140-TP8-2.5-3.0 and split sample QA080612 for barium (96 percent), selenium (NC), SPLP barium (93 percent), SPLP

chromium (NC), SPLP iron (NC), and SPLP zinc (NC) were above the acceptance limit. Data were qualified "J" to indicate potential bias.

3.8. Trace Detections

Several results were detected between the MDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total antimony and zinc had contractual compliance below 90 percent due to high field duplicate RPD outliers, MS and MSD percent recovery outliers, and high QA split sample RPD outliers.

- SPLP barium had contractual compliance at 78 percent due to high field duplicate RPD outliers and high QA split RPDs.

- SPLP chromium and iron had contractual compliances below 90 percent due to high QA split RPD outliers.

- SPLP zinc had contractual compliance at 88 percent due to method blank contamination and high QA split RPD outliers.

- Total mercury had contractual compliance of 83 percent and a technical compliance of 80 percent due to MS and MSD percent recovery outliers and holding time exceedances.

The percent contractual compliance for SPLP Metals and Total Metals was 94 percent. The results for the soil sampling event conducted in July/August 2012 were considered usable for the intended purposes.

Table 1
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
E140-TP1-3.0-3.5	560-34039-01	8/6/2012	N	Total Metals and SPLP Metals
E140-TP2-11.0-11.5	560-34039-02	8/6/2012	N	Total Metals and SPLP Metals
E140-TP3-4.5-5.0	560-34039-03	8/6/2012	N	Total Metals and SPLP Metals
E140-TP4-3.0-3.5	560-34039-04	8/6/2012	N	Total Metals and SPLP Metals
E140-TP5-3.0-3.5	560-34039-05	8/6/2012	N	Total Metals and SPLP Metals
E140-TP6-10.0-10.5	560-34039-06	8/6/2012	N	Total Metals and SPLP Metals
E140-TP7-3.5-4.0	560-34039-07	8/6/2012	N	Total Metals and SPLP Metals
E140-TP8-2.5-3.0	560-34039-08	8/6/2012	N	Total Metals and SPLP Metals
E140-TP9-5.5-6.5	560-34039-09	8/6/2012	N	Total Metals and SPLP Metals
E140-TP10-3.0-3.5	560-34039-10	8/6/2012	N	Total Metals and SPLP Metals
E140-TP11-3.0-3.5	560-34039-11	8/6/2012	N	Total Metals and SPLP Metals
E140-TP12-7.0-7.5	560-34039-12	8/6/2012	N	Total Metals and SPLP Metals
E140-TP13-7.5-8.0	560-34039-13	8/6/2012	N	Total Metals and SPLP Metals
E140-TP14-10.0-10.5	560-34039-14	8/6/2012	N	Total Metals and SPLP Metals
E140-TP15-7.5-8.0	560-34039-15	8/6/2012	N	Total Metals and SPLP Metals
FD080612A	560-34039-16	8/6/2012	FD of E140-TP12-7.0-7.5	Total Metals and SPLP Metals
FD080612B	560-34039-17	8/6/2012	FD of E140-TP8-2.5-3.0	Total Metals and SPLP Metals
E140-21-0.5-1.0R	560-34040-06	8/7/2012	N	Total Metals
E140-42-0.5-1.0R	560-34040-12	8/7/2012	N	Total Metals
E140-29-0.5-1.0R	560-34040-16	8/7/2012	N	Total Metals
E140-19-0-0.5	560-33933-03	7/30/2012	N	Total Metals
E140-22-0-0.5	560-33933-05	7/30/2012	N	Total Metals
E140-23-0-0.5	560-33933-07	7/30/2012	N	Total Metals
E140-17-0-0.5	560-33933-09	7/30/2012	N	Total Metals
E140-1-0-0.5	560-33933-11	7/30/2012	N	Total Metals

Table 1
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

E140-10-0-0.5	560-33933-13	7/30/2012	N	Total Metals
E140-9-0-0.5	560-33933-15	7/30/2012	N	Total Metals
E140-2-0-0.5	560-33933-17	7/30/2012	N	Total Metals
E140-3-0-0.5	560-33933-19	7/30/2012	N	Total Metals
E140-4-0-0.5	560-33933-21	7/30/2012	N	Total Metals
E140-8-0-0.5	560-33933-23	7/30/2012	N	Total Metals
E140-7-0-0.5	560-33933-25	7/30/2012	N	Total Metals
Dup-073012A	560-33933-27	7/30/2012	FD of E140-7-0-0.5	Total Metals
E140-11-0-0.5	560-33933-29	7/30/2012	N	Total Metals
E140-6-0-0.5	560-33933-33	7/30/2012	N	Total Metals
E140-15-0-0.5	560-33933-35	7/30/2012	N	Total Metals
E140-5-0-0.5	560-33933-37	7/30/2012	N	Total Metals
E140-14-0-0.5	560-33933-39	7/31/2012	N	Total Metals
E140-13-0-0.5	560-33933-41	7/31/2012	N	Total Metals
E140-12-0-0.5	560-33933-43	7/31/2012	N	Total Metals
E140-21-0-0.5	560-33933-45	7/31/2012	N	Total Metals
Dup-073112A	560-33933-47	7/31/2012	FD of E140-12-0-0.5	Total Metals
E140-29-0-0.5	560-33933-49	7/31/2012	N	Total Metals
E140-25-0-0.5	560-33933-53	7/31/2012	N	Total Metals
E140-26-0-0.5	560-33933-55	7/31/2012	N	Total Metals
E140-27-0-0.5	560-33933-57	7/31/2012	N	Total Metals
E140-31-0-0.5	560-33933-63	7/31/2012	N	Total Metals
E140-33-0-0.5	560-33933-64	7/31/2012	N	Total Metals
Dup-073112C	560-33933-66	7/31/2012	FD of E140-33-0-0.5	Total Metals
E140-39-0-0.5	560-33933-70	7/31/2012	N	Total Metals
E140-32-0-0.5	560-33933-72	7/31/2012	N	Total Metals

Table 1
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

E140-41-0-0.5	560-33933-74	7/31/2012	N	Total Metals
E140-44-0-0.5	560-33933-76	7/31/2012	N	Total Metals
E140-36-0-0.5	560-33933-78	7/31/2012	N	Total Metals
E140-35-0-0.5	560-33933-79	7/31/2012	N	Total Metals
E140-42-0-0.5	560-33933-81	8/1/2012	N	Total Metals
E140-43-0-0.5	560-33933-83	8/1/2012	N	Total Metals
Dup-080112A	560-33933-87	8/1/2012	FD of E140-43-0-0.5	Total Metals
E140-37-0-0.5	560-33933-89	8/1/2012	N	Total Metals
E140-34-0-0.5	560-33933-91	8/1/2012	N	Total Metals
E140-20-0.0-0.5R	560-34040-03	8/7/2012	N	Total Metals
E140-18-0.0-0.5R	560-34040-04	8/7/2012	N	Total Metals
E140-24-0.0-0.5R	560-34040-07	8/7/2012	N	Total Metals
E140-30-0.0-0.5R	560-34040-09	8/7/2012	N	Total Metals
E140-40-0.0-0.5R	560-34040-10	8/7/2012	N	Total Metals
E140-42-0.0-0.5R	560-34040-11	8/7/2012	N	Total Metals
E140-38-0.0-0.5R	560-34040-13	8/7/2012	N	Total Metals
E140-16-0.0-0.5R	560-34040-14	8/7/2012	N	Total Metals
E140-28-0.0-0.5R	560-34040-15	8/7/2012	N	Total Metals
E140-9-0.5-1.0	560-33933-16	7/30/2012	N	Total Metals
E140-11-0.5-1.0	560-33933-30	7/30/2012	N	Total Metals
E140-41-0.5-1.0	560-33933-75	7/31/2012	N	Total Metals
E140-44-0.5-1.0	560-33933-77	7/31/2012	N	Total Metals
E140-35-0.5-1.0	560-33933-80	7/31/2012	N	Total Metals
E140-43-0.5-1.0	560-33933-84	8/1/2012	N	Total Metals
E140-37-0.5-1.0	560-33933-90	8/1/2012	N	Total Metals
E140-28-0.5-1.0	560-33933-60	7/31/2012	N	Total Metals

Table 1
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

E140-30-0.5-1.0	560-33933-62	7/31/2012	N	Total Metals
E140-40-0.5-1.0	560-33933-69	7/31/2012	N	Total Metals
E140-24-0.5-1.0	560-33933-94	8/1/2012	N	Total Metals
QA073112	1208114-01	7/31/2012	QA of E140-12-0-0.5	Total Metals
QA080112A	1208114-03	8/1/2012	QA of E140-43-0-0.5	Total Metals
QA080612	1208351-01	8/6/2012	QA of E140-TP8-2.5-3.0	Total Metals and SPLP Metals

Notes:
N = Normal sample
FD = Field Duplicate
QA = Quality Assurance split sample
Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, silver, and zinc
SPLP = Synthetic Precipitation Leaching Procedure

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
QA073112	1208114-01	Total Cadmium	0.881	mg/Kg	J	Qualified due to QA split RPD outlier
QA073112	1208114-01	Total Copper	36.3	mg/Kg	J	Qualified due to QA split RPD outlier
QA073112	1208114-01	Total Lead	35.9	mg/Kg	J	Qualified due to QA split RPD outlier
QA073112	1208114-01	Total Molybdenum	0.347	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
QA073112	1208114-01	Total Silver	0.161	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
QA073112	1208114-01	Total Zinc	42	mg/Kg	J	Qualified due to QA split RPD outlier
QA080112A	1208114-03	Total Antimony	4.96	mg/Kg	J	Qualified due to QA split RPD outlier
QA080112A	1208114-03	Total Barium	100	mg/Kg	J	Qualified due to QA split RPD outlier
QA080112A	1208114-03	Total Lead	558	mg/Kg	J	Qualified due to QA split RPD outlier
QA080612	1208351-01	SPLP Barium	0.027	mg/L	J	Qualified due to QA split RPD outlier
QA080612	1208351-01	SPLP Chromium	0.0123	mg/L	J	Qualified due to QA split RPD outlier
QA080612	1208351-01	SPLP Cobalt	0.00289	mg/L	J	Estimated; Analyte detected between MDL and MQL
QA080612	1208351-01	SPLP Iron	9.96	mg/L	J	Qualified due to QA split RPD outlier
QA080612	1208351-01	SPLP Lead	0.00379	mg/L	J	Estimated; Analyte detected between MDL and MQL
QA080612	1208351-01	SPLP Zinc	<0.0327	mg/L	UJ	Qualified due to method blank contamination and QA split RPD outlier
QA080612	1208351-01	Total Barium	92.6	mg/Kg	J	Qualified due to QA split RPD outlier
QA080612	1208351-01	Total Cadmium	0.0855	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
QA080612	1208351-01	Total Mercury	0.00072	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
QA080612	1208351-01	Total Selenium	1.09	mg/Kg	J	Qualified due to QA split RPD outlier
E140-19-0-0.5	560-33933-03	Total Antimony	0.841	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-19-0-0.5	560-33933-03	Total Mercury	0.0416	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-19-0-0.5	560-33933-03	Total Molybdenum	0.688	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-19-0-0.5	560-33933-03	Total Selenium	0.433	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-22-0-0.5	560-33933-05	Total Antimony	1.48	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-22-0-0.5	560-33933-05	Total Molybdenum	0.825	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-22-0-0.5	560-33933-05	Total Nickel	<4.77	mg/Kg	UJ	Qualified due to method blank contamination
E140-23-0-0.5	560-33933-07	Total Antimony	0.784	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-23-0-0.5	560-33933-07	Total Molybdenum	0.528	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-23-0-0.5	560-33933-07	Total Nickel	<3.34	mg/Kg	UJ	Qualified due to method blank contamination
E140-23-0-0.5	560-33933-07	Total Selenium	0.716	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-17-0-0.5	560-33933-09	Total Antimony	1.44	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-17-0-0.5	560-33933-09	Total Molybdenum	0.378	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-17-0-0.5	560-33933-09	Total Nickel	<4.51	mg/Kg	UJ	Qualified due to method blank contamination
E140-1-0-0.5	560-33933-11	Total Arsenic	1.19	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-1-0-0.5	560-33933-11	Total Cadmium	0.348	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-1-0-0.5	560-33933-11	Total Mercury	0.0431	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-1-0-0.5	560-33933-11	Total Molybdenum	0.193	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-1-0-0.5	560-33933-11	Total Nickel	<3.19	mg/Kg	UJ	Qualified due to method blank contamination
E140-1-0-0.5	560-33933-11	Total Silver	0.160	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-10-0-0.5	560-33933-13	Total Antimony	0.984	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-10-0-0.5	560-33933-13	Total Chromium	<2.95	mg/Kg	UJ	Qualified due to method blank contamination
E140-10-0-0.5	560-33933-13	Total Molybdenum	0.369	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-10-0-0.5	560-33933-13	Total Nickel	<2.86	mg/Kg	UJ	Qualified due to method blank contamination
E140-10-0-0.5	560-33933-13	Total Selenium	0.666	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-10-0-0.5	560-33933-13	Total Silver	0.118	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-9-0.5-1.0	560-33933-16	Total Antimony	2.40	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-9-0.5-1.0	560-33933-16	Total Iron	5100	mg/Kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

E140-9-0.5-1.0	560-33933-16	Total Mercury	0.197	mg/Kg	J	Qualified due to holding time exceedances
E140-2-0-0.5	560-33933-17	Total Antimony	1.24	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-2-0-0.5	560-33933-17	Total Mercury	0.0856	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-2-0-0.5	560-33933-17	Total Molybdenum	1.08	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-3-0-0.5	560-33933-19	Total Antimony	0.544	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-3-0-0.5	560-33933-19	Total Mercury	0.0729	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-3-0-0.5	560-33933-19	Total Molybdenum	0.218	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-3-0-0.5	560-33933-19	Total Silver	0.237	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-4-0-0.5	560-33933-21	Total Cadmium	0.295	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-8-0-0.5	560-33933-23	Total Antimony	1.23	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-8-0-0.5	560-33933-23	Total Mercury	0.0716	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-8-0-0.5	560-33933-23	Total Molybdenum	0.119	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-7-0-0.5	560-33933-25	Total Antimony	1.18	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-7-0-0.5	560-33933-25	Total Cadmium	2.36	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-7-0-0.5	560-33933-25	Total Copper	78.1	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-7-0-0.5	560-33933-25	Total Lead	58.1	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-7-0-0.5	560-33933-25	Total Mercury	0.0806	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-7-0-0.5	560-33933-25	Total Molybdenum	0.526	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-7-0-0.5	560-33933-25	Total Silver	0.203	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-7-0-0.5	560-33933-25	Total Zinc	64.4	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-11-0-0.5	560-33933-29	Total Antimony	1.41	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-11-0-0.5	560-33933-29	Total Molybdenum	1.34	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-11-0.5-1.0	560-33933-30	Total Antimony	2.21	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-11-0.5-1.0	560-33933-30	Total Iron	3980	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-11-0.5-1.0	560-33933-30	Total Mercury	0.146	mg/Kg	J	Qualified due to holding time exceedances
E140-11-0.5-1.0	560-33933-30	Total Molybdenum	0.755	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-6-0-0.5	560-33933-33	Total Arsenic	1.43	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-6-0-0.5	560-33933-33	Total Cadmium	0.279	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-6-0-0.5	560-33933-33	Total Molybdenum	0.136	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-15-0-0.5	560-33933-35	Total Molybdenum	0.253	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-5-0-0.5	560-33933-37	Total Antimony	1.18	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-5-0-0.5	560-33933-37	Total Mercury	0.156	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-5-0-0.5	560-33933-37	Total Molybdenum	0.704	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-5-0-0.5	560-33933-37	Total Selenium	0.740	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-14-0-0.5	560-33933-39	Total Molybdenum	0.275	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-14-0-0.5	560-33933-39	Total Selenium	0.191	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-13-0-0.5	560-33933-41	Total Antimony	1.33	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-13-0-0.5	560-33933-41	Total Mercury	0.117	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-13-0-0.5	560-33933-41	Total Selenium	0.571	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-12-0-0.5	560-33933-42	Total Antimony	0.594	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-12-0-0.5	560-33933-43	Total Cadmium	2.27	mg/Kg	J	Qualified due to QA split RPD outlier
DUP073012A	560-33933-43	Total Cadmium	3.38	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-12-0-0.5	560-33933-43	Total Copper	114	mg/Kg	J	Qualified due to QA split RPD outlier
DUP073012A	560-33933-43	Total Copper	120	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-12-0-0.5	560-33933-43	Total Lead	66.7	mg/Kg	J	Qualified due to QA split RPD outlier
DUP073012A	560-33933-43	Total Lead	92.2	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-12-0-0.5	560-33933-43	Total Mercury	0.0864	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-12-0-0.5	560-33933-43	Total Molybdenum	0.925	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-12-0-0.5	560-33933-43	Total Silver	0.300	mg/Kg	J	Estimated; Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Former ASARCO Smelter
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E140-12-0-0.5	560-33933-42	Total Zinc	82.6	mg/Kg	J	Qualified due to QA split RPD outlier
DUP073012A	560-33933-42	Total Zinc	109	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-25-0-0.5	560-33933-53	Total Cadmium	0.414	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-26-0-0.5	560-33933-55	Total Antimony	1.34	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-26-0-0.5	560-33933-55	Total Mercury	0.136	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-26-0-0.5	560-33933-55	Total Selenium	0.685	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-27-0-0.5	560-33933-57	Total Antimony	0.313	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-27-0-0.5	560-33933-57	Total Cadmium	0.465	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-28-0.5-1.0	560-33933-60	Total Mercury	0.231	mg/Kg	R	Qualified due to holding time exceedances
E140-30-0.5-1.0	560-33933-62	Total Mercury	0.0225	mg/Kg	R	Qualified due to holding time exceedances
E140-30-0.5-1.0	560-33933-62	Total Molybdenum	0.283	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-30-0.5-1.0	560-33933-62	Total Selenium	0.555	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-31-0-0.5	560-33933-63	Total Antimony	0.361	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-31-0-0.5	560-33933-63	Total Molybdenum	0.281	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-33-0-0.5	560-33933-64	Total Barium	277	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-33-0-0.5	560-33933-64	Total Cadmium	0.331	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-33-0-0.5	560-33933-64	Total Iron	6410	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-33-0-0.5	560-33933-64	Total Lead	4.15	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-33-0-0.5	560-33933-64	Total Molybdenum	0.353	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-33-0-0.5	560-33933-64	Total Zinc	27.1	mg/Kg	J	Qualified due to field duplicate RPD outlier
DUP073112C	560-33933-66	Total Barium	85.5	mg/Kg	J	Qualified due to field duplicate RPD outlier
DUP073112C	560-33933-66	Total Iron	3910	mg/Kg	J	Qualified due to field duplicate RPD outlier
DUP073112C	560-33933-66	Total Lead	2.51	mg/Kg	J	Qualified due to field duplicate RPD outlier
DUP073112C	560-33933-66	Total Zinc	18.2	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-40-0.5-1.0	560-33933-69	Total Antimony	1.32	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-40-0.5-1.0	560-33933-69	Total Mercury	0.315	mg/Kg	R	Qualified due to holding time exceedances
E140-40-0.5-1.0	560-33933-69	Total Molybdenum	0.409	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-40-0.5-1.0	560-33933-69	Total Selenium	0.350	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-39-0-0.5	560-33933-70	Total Antimony	0.588	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-39-0-0.5	560-33933-70	Total Mercury	0.114	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-39-0-0.5	560-33933-70	Total Selenium	0.328	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-39-0-0.5	560-33933-70	Total Zinc	53.6	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-32-0-0.5	560-33933-72	Total Antimony	0.4444	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-32-0-0.5	560-33933-72	Total Selenium	0.309	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-32-0-0.5	560-33933-72	Total Zinc	47.7	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-41-0-0.5	560-33933-74	Total Antimony	0.918	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-41-0-0.5	560-33933-74	Total Molybdenum	0.890	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-41-0-0.5	560-33933-74	Total Selenium	0.600	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-41-0-0.5	560-33933-74	Total Silver	0.325	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-41-0-0.5	560-33933-74	Total Zinc	164	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-41-0.5-1.0	560-33933-75	Total Antimony	2.54	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-41-0.5-1.0	560-33933-75	Total Iron	7850	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-41-0.5-1.0	560-33933-75	Total Mercury	0.145	mg/Kg	J	Qualified due to holding time exceedances
E140-41-0.5-1.0	560-33933-75	Total Molybdenum	0.302	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-41-0.5-1.0	560-33933-75	Total Selenium	0.866	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-44-0-0.5	560-33933-76	Total Antimony	<0.250	mg/Kg	UJ	Qualified due to MS/MSD recovery outliers
E140-44-0-0.5	560-33933-76	Total Zinc	1800	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-44-0.5-1.0	560-33933-77	Total Antimony	17.6	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-44-0.5-1.0	560-33933-77	Total Iron	12500	mg/Kg	J	Qualified due to MS/MSD recovery outliers

Table 2
Qualified Analytical Results
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E140-44-0.5-1.0	560-33933-77	Total Mercury	1.82J	mg/Kg	UJ	Qualified due to holding time exceedances
E140-36-0-0.5	560-33933-78	Total Antimony	70.1	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-36-0-0.5	560-33933-78	Total Zinc	5860	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-35-0-0.5	560-33933-79	Total Antimony	80.8	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-35-0-0.5	560-33933-79	Total Mercury	0.0181	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-35-0.5-1.0	560-33933-80	Total Antimony	1.05	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-35-0.5-1.0	560-33933-80	Total Iron	6630	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-35-0.5-1.0	560-33933-80	Total Mercury	<0.200	mg/Kg	UJ	Qualified due to holding time exceedances
E140-35-0.5-1.0	560-33933-80	Total Selenium	0.613	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-43-0-0.5	560-33933-82	Total Antimony	2.26	mg/Kg	J	Qualified due to QA split RPD outlier
E140-43-0-0.5	560-33933-82	Total Barium	152	mg/Kg	J	Qualified due to QA split RPD outlier
E140-43-0-0.5	560-33933-83	Total Lead	365	mg/Kg	J	Qualified due to QA split RPD outlier
E140-43-0-0.5	560-33933-83	Total Mercury	0.0936	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-43-0-0.5	560-33933-83	Total Selenium	0.377	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-43-0.5-1.0	560-33933-84	Total Antimony	0.415	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-43-0.5-1.0	560-33933-84	Total Iron	6280	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-43-0.5-1.0	560-33933-84	Total Mercury	0.0378	mg/Kg	J	Qualified due to holding time exceedances
E140-43-0.5-1.0	560-33933-84	Total Molybdenum	0.348	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-43-0.5-1.0	560-33933-84	Total Silver	0.142	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-37-0.5-1.0	560-33933-90	Total Antimony	2.49	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-37-0.5-1.0	560-33933-90	Total Iron	10300	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-37-0.5-1.0	560-33933-90	Total Mercury	0.294	mg/Kg	J	Qualified due to holding time exceedances
E140-34-0-0.5	560-33933-91	Total Antimony	1.74	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-34-0-0.5	560-33933-91	Total Mercury	0.163	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-34-0-0.5	560-33933-91	Total Molybdenum	1.52	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-34-0-0.5	560-33933-91	Total Silver	0.319	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-24-0.5-1.0	560-33933-94	Total Mercury	0.0194	mg/Kg	R	Qualified due to holding time exceedances
E140-24-0.5-1.0	560-33933-94	Total Molybdenum	0.163	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-24-0.5-1.0	560-33933-94	Total Selenium	0.893	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP1-3.0-3.5	560-34039-1	SPLP Cadmium	0.00115	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP1-3.0-3.5	560-34039-1	SPLP Selenium	0.00987	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP1-3.0-3.5	560-34039-1	Total Antimony	1.27	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP1-3.0-3.5	560-34039-1	Total Mercury	0.184	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP1-3.0-3.5	560-34039-1	Total Selenium	<1.80	mg/Kg	UJ	Qualified due to method blank contamination
E140-TP10-3.0-3.5	560-34039-10	SPLP Cadmium	0.00367	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	SPLP Lead	0.00702	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	SPLP Molybdenum	0.00304	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	SPLP Selenium	0.00660	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	Total Antimony	1.05	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	Total Mercury	0.0337	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	Total Molybdenum	1.14	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP10-3.0-3.5	560-34039-10	Total Selenium	0.511	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	SPLP Cadmium	0.00356	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	SPLP Chromium	0.00112	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	Total Antimony	0.915	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	Total Mercury	0.0737	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	Total Molybdenum	0.373	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP11-3.0-3.5	560-34039-11	Total Silver	0.137	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	SPLP Barium	0.0429	mg/L	J	Qualified due to field duplicate RPD outlier

Table 2
Qualified Analytical Results
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E140-TP12-7.0-7.5	560-34039-12	SPLP Cadmium	0.00316	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	SPLP Lead	0.00693	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	SPLP Molybdenum	0.00987	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	SPLP Selenium	0.00875	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	SPLP Zinc	0.00871	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	Total Antimony	0.986	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP12-7.0-7.5	560-34039-12	Total Copper	56.7	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-TP12-7.0-7.5	560-34039-12	Total Zinc	54.3	mg/Kg	J	Qualified due to field duplicate RPD outlier
E140-TP13-7.5-8.0	560-34039-13	SPLP Cadmium	0.00290	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	SPLP Lead	0.00632	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	SPLP Molybdenum	0.00573	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	SPLP Zinc	0.0170	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	Total Antimony	0.498	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	Total Mercury	0.0247	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	Total Molybdenum	0.394	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP13-7.5-8.0	560-34039-13	Total Selenium	0.310	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	SPLP Cadmium	0.000890	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	SPLP Chromium	0.00193	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	SPLP Lead	0.00569	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	SPLP Zinc	0.0174	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	Total Antimony	0.929	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	Total Cadmium	0.474	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	Total Molybdenum	0.214	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	Total Selenium	0.493	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP14-10.0-10.5	560-34039-14	Total Silver	0.319	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Antimony	0.00568	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Cadmium	0.00129	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Chromium	0.00130	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Copper	0.00580	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Lead	0.00634	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	SPLP Zinc	0.0140	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	Total Antimony	0.640	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP15-7.5-8.0	560-34039-15	Total Selenium	0.189	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	SPLP Barium	0.0754	mg/L	J	Qualified due to field duplicate RPD outlier
FD080612A	560-34039-16	SPLP Cadmium	0.00467	mg/L	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	SPLP Chromium	0.00293	mg/L	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	SPLP Copper	0.00840	mg/L	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	SPLP Lead	0.00786	mg/L	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	Total Antimony	1.18	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
FD080612A	560-34039-16	Total Copper	83.3	mg/Kg	J	Qualified due to field duplicate RPD outlier
FD080612A	560-34039-16	Total Zinc	132	mg/Kg	J	Qualified due to field duplicate RPD outlier
FD080612B	560-34039-17	SPLP Barium	0.0375	mg/L	J	Qualified due to field duplicate RPD outlier
FD080612B	560-34039-17	SPLP Chromium	0.00281	mg/L	J	Estimated; Analyte detected between MDL and MQL
FD080612B	560-34039-17	SPLP Zinc	0.0256	mg/L	J	Qualified due to field duplicate RPD outlier
FD080612B	560-34039-17	Total Antimony	0.496	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
FD080612B	560-34039-17	Total Barium	160	mg/Kg	J	Qualified due to field duplicate RPD outlier
FD080612B	560-34039-17	Total Cadmium	0.405	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
FD080612B	560-34039-17	Total Molybdenum	1.87	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
FD080612B	560-34039-17	Total Selenium	0.831	mg/Kg	J	Estimated; Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
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E140-TP2-11.0-11.5	560-34039-2	SPLP Cadmium	0.000670	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	SPLP Chromium	0.00138	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	SPLP Iron	0.0657	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	SPLP Molybdenum	0.00900	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	SPLP Zinc	0.00914	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	Total Antimony	0.655	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	Total Mercury	0.112	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	Total Molybdenum	1.21	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP2-11.0-11.5	560-34039-2	Total Selenium	<1.83	mg/Kg	UJ	Qualified due to method blank contamination
E140-TP3-4.5-5.0	560-34039-3	SPLP Cadmium	0.000540	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP3-4.5-5.0	560-34039-3	SPLP Chromium	0.00119	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP3-4.5-5.0	560-34039-3	SPLP Zinc	0.0108	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP3-4.5-5.0	560-34039-3	Total Antimony	0.730	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP3-4.5-5.0	560-34039-3	Total Molybdenum	0.934	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP3-4.5-5.0	560-34039-3	Total Selenium	<0.860	mg/Kg	UJ	Qualified due to method blank contamination
E140-TP4-3.0-3.5	560-34039-4	SPLP Arsenic	0.00835	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP4-3.0-3.5	560-34039-4	SPLP Copper	0.00920	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP4-3.0-3.5	560-34039-4	SPLP Zinc	0.0120	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP4-3.0-3.5	560-34039-4	Total Cadmium	0.462	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	SPLP Cadmium	0.000470	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	SPLP Molybdenum	0.00904	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	SPLP Zinc	0.0148	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	Total Antimony	0.379	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	Total Cadmium	0.391	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP5-3.0-3.5	560-34039-5	Total Molybdenum	1.14	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP6-10.0-10.5	560-34039-6	SPLP Arsenic	0.00537	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP6-10.0-10.5	560-34039-6	SPLP Molybdenum	0.00262	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP6-10.0-10.5	560-34039-6	Total Mercury	0.0390	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP6-10.0-10.5	560-34039-6	Total Molybdenum	0.475	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP6-10.0-10.5	560-34039-6	Total Selenium	0.273	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP7-3.5-4.0	560-34039-7	Total Antimony	1.53	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	SPLP Arsenic	0.00616	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	SPLP Barium	0.0742	mg/L	J	Qualified due to field duplicate and QA split RPD outliers
E140-TP8-2.5-3.0	560-34039-8	SPLP Chromium	0.00122	mg/L	J	Qualified due to QA split RPD outlier
E140-TP8-2.5-3.0	560-34039-8	SPLP Copper	0.00660	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	SPLP Iron	0.0628	mg/L	J	Qualified due to QA split RPD outlier
E140-TP8-2.5-3.0	560-34039-8	SPLP Lead	0.00345	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	SPLP Zinc	0.00766	mg/L	J	Qualified due to field duplicate and QA split RPD outliers
E140-TP8-2.5-3.0	560-34039-8	Total Antimony	0.343	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	Total Barium	264	mg/Kg	J	Qualified due to field duplicate and QA split RPD outliers
E140-TP8-2.5-3.0	560-34039-8	Total Cadmium	0.393	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	Total Molybdenum	1.69	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP8-2.5-3.0	560-34039-8	Total Selenium	0.518 J	mg/Kg	J	Qualified due to QA split RPD outlier
E140-TP9-5.5-6.5	560-34039-9	SPLP Cadmium	0.00119	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP9-5.5-6.5	560-34039-9	SPLP Chromium	0.00158	mg/L	J	Estimated; Analyte detected between MDL and MQL
E140-TP9-5.5-6.5	560-34039-9	Total Antimony	1.58	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-TP9-5.5-6.5	560-34039-9	Total Mercury	0.0454	mg/Kg	J	Estimated; Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

E140-TP9-5.5-6.5	560-34039-9	Total Silver	0.144	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-20-0.0-0.5R	560-34040-03	Total Antimony	0.787	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-20-0.0-0.5R	560-34040-03	Total Mercury	0.0263	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-20-0.0-0.5R	560-34040-03	Total Molybdenum	0.513	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-20-0.0-0.5R	560-34040-03	Total Selenium	0.254	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-18-0.0-0.5R	560-34040-04	Total Antimony	0.902	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-18-0.0-0.5R	560-34040-04	Total Molybdenum	0.366	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-18-0.0-0.5R	560-34040-04	Total Selenium	0.855	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-21-0.5-1.0R	560-34040-06	Total Molybdenum	0.322	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-24-0.0-0.5R	560-34040-07	Total Antimony	4.53	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-24-0.0-0.5R	560-34040-07	Total Silver	1.63	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-30-0.0-0.5R	560-34040-09	Total Antimony	5.30	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-30-0.0-0.5R	560-34040-09	Total Mercury	0.137	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-30-0.0-0.5R	560-34040-09	Total Silver	2.03	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-40-0.0-0.5R	560-34040-10	Total Antimony	2.12	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-40-0.0-0.5R	560-34040-10	Total Molybdenum	1.94	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-40-0.0-0.5R	560-34040-10	Total Silver	1.48	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-42-0.0-0.5R	560-34040-11	Total Antimony	6.35	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-42-0.0-0.5R	560-34040-11	Total Silver	2.64	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-38-0.0-0.5R	560-34040-13	Total Antimony	2.29	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-38-0.0-0.5R	560-34040-13	Total Mercury	0.142	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-38-0.0-0.5R	560-34040-13	Total Molybdenum	0.784	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-38-0.0-0.5R	560-34040-13	Total Selenium	0.908	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-38-0.0-0.5R	560-34040-13	Total Silver	0.484	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-16-0.0-0.5R	560-34040-14	Total Antimony	1.44	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-16-0.0-0.5R	560-34040-14	Total Mercury	0.138	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-16-0.0-0.5R	560-34040-14	Total Molybdenum	0.573	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-16-0.0-0.5R	560-34040-14	Total Selenium	0.680	mg/Kg	J	Estimated; Analyte detected between MDL and MQL
E140-16-0.0-0.5R	560-34040-14	Total Silver	0.484	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-28-0.0-0.5R	560-34040-15	Total Antimony	19.3	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-28-0.0-0.5R	560-34040-15	Total Mercury	1.10	mg/Kg	J	Qualified due to MS/MSD recovery outliers
E140-28-0.0-0.5R	560-34040-15	Total Silver	8.48	mg/Kg	J	Qualified due to MS/MSD recovery outliers

Notes:

J = Indicates an estimated value; needs qualification

UJ = Indicates the analyte was analyzed for but not detected; below reporting limit

R = Quality control indicates the data is not usable

Table 3
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Field Dup RPD (%)	QA Split Result	QA RPD (%)
E140-7-0-0.5/ DUP073012A	**Total Metals (mg/Kg)**					
	Antimony	1.18 J	1.28 J	NC	--	--
	Arsenic	13.4	15.3	13	--	--
	Barium	123	124	<1.0	--	--
	Cadmium	2.36	3.38	**36**	--	--
	Chromium	4.68	4.95	5.6	--	--
	Cobalt	2.5	2.76	9.9	--	--
	Copper	78.1	120	**42**	--	--
	Iron	4670	5050	7.8	--	--
	Lead	58.1	92.2	**45**	--	--
	Molybdenum	0.526 J	1.26 J	NC	--	--
	Nickel	5.05	5.40	6.7	--	--
	Selenium	1.04	0.739 J	NC	--	--
	Silver	0.203 J	0.545	NC	--	--
	Zinc	64.4	109	**51**	--	--
	Mercury	0.0806 J	0.0871 J	NC	--	--
E140-12-0-0.5/ DUP073112A/ QA073112	**Total Metals (mg/Kg)**					
	Antimony	0.594 J	0.871 J	NC	0.738	NC
	Arsenic	13.4	14.5	7.9	16.9	23
	Barium	109	124	13	126	14
	Cadmium	2.27	2.83	22	0.881	**88**
	Chromium	6.05	6.33	4.5	5.63	7.2
	Cobalt	3.46	3.52	1.7	3.27	5.6
	Copper	114	82.8	32	36.3	**103**
	Iron	7100	7380	3.9	7170	1.0
	Lead	66.7	61.1	8.8	35.9	**60**
	Molybdenum	0.925 J	0.321 J	NC	0.347 J	NC
	Nickel	6.03	6.5	7.5	5.76	4.6
	Selenium	0.46 J	0.419 J	NC	0.966	NC
	Silver	0.3 J	0.225 J	NC	0.161 J	NC
	Zinc	82.6	58.9	33	42	**65**
	Mercury	0.0864 J	0.0804 J	NC	0.0609	NC

Table 3
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Field Dup RPD (%)	QA Split Result	QA RPD (%)
E140-33-0-0.5/ DUP073112C	**Total Metals (mg/Kg)**					
	Antimony	<0.211	<0.235	NC	--	--
	Arsenic	4.25	4.75	11	--	--
	Barium	277	85.5	**106**	--	--
	Cadmium	0.331 J	0.0431 J	NC	--	--
	Chromium	1.7	1.05	47	--	--
	Cobalt	3.83	2.43	45	--	--
	Copper	4.77	2.83	51	--	--
	Iron	6410	3910	**48**	--	--
	Lead	4.15	2.51	**49**	--	--
	Molybdenum	0.353 J	<0.11	NC	--	--
	Nickel	3.15	1.98	46	--	--
	Selenium	<0.156	<0.174	NC	--	--
	Silver	<0.0867	<0.0968	NC	--	--
	Zinc	27.1	18.2	**39**	--	--
	Mercury	<0.0141	<0.016	NC	--	--
E140-43-0-0.5/ DUP080112A/ QA080112A	**Total Metals (mg/Kg)**					
	Antimony	2.26	1.79	23	4.96	**75**
	Arsenic	54.4	45.5	18	63.9	16
	Barium	152	122	22	100	**41**
	Cadmium	14.6	15.2	4.0	17.8	20
	Chromium	6.66	6.92	3.8	6.44	3.4
	Cobalt	6.54	5.68	14	5.58	16
	Copper	1030	752	31	1000	3.0
	Iron	11500	12000	4.3	12700	9.9
	Lead	365	355	2.8	558	**42**
	Molybdenum	5.96	4.3	32	4.48	28
	Nickel	9.34	8.01	15	8.32	12
	Selenium	0.377 J	0.572 J	NC	1.79	NC
	Silver	2.45	1.41	54	2.28	7.2
	Zinc	385	402	4.3	486	23
	Mercury	0.0936 J	0.0691 J	NC	0.123	NC

Table 3
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Field Dup RPD (%)	QA Split Result	QA RPD (%)
E140-TP12-7.0-7.5/ FD080612A	**Total Metals (mg/Kg)**					
	Antimony	0.986 J	1.18 J	NC	--	--
	Arsenic	8.95	12.6	34	--	--
	Barium	65.6	52.8	22	--	--
	Cadmium	2.71	3.34	21	--	--
	Chromium	3.23	3.26	<1.0	--	--
	Cobalt	2.79	3.33	18	--	--
	Copper	56.7	83.3	**38**	--	--
	Iron	7190	8610	18	--	--
	Lead	84.9	86.4	1.8	--	--
	Molybdenum	5.98	6.4	6.8	--	--
	Nickel	3.0	4.01	28	--	--
	Selenium	1.37	1.34	2.2	--	--
	Silver	<0.108	<0.108	NC	--	--
	Zinc	54.3	132	**83**	--	--
	Mercury	<0.0141	<0.0129	NC	--	--
	SPLP Metals (mg/L)					
	Antimony	<0.00500	<0.00500	NC	--	--
	Arsenic	0.0401	0.0378	5.9	--	--
	Barium	0.0429	0.0754	**55**	--	--
	Cadmium	0.00316 J	0.00467 J	NC	--	--
	Chromium	<0.00110	0.00293 J	NC	--	--
	Cobalt	<0.00100	<0.00100	NC	--	--
	Copper	0.0127	0.0084 J	NC	--	--
	Iron	<0.0503	<0.0503	NC	--	--
	Lead	0.00693 J	0.00786 J	NC	--	--
	Molybdenum	0.00987 J	0.0792	NC	--	--
	Nickel	<0.00200	<0.00200	NC	--	--
	Selenium	0.00875 J	0.0102	NC	--	--
	Silver	<0.00100	<0.00100	NC	--	--
	Zinc	0.00871 J	0.0398	NC	--	--
	Mercury	<0.000130	<0.000130	NC	--	--

Table 3
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Field Dup RPD (%)	QA Split Result	QA RPD (%)
E140-TP8-2.5-3.0/ FD080612B/ QA080612	**Total Metals (mg/Kg)**					
	Antimony	0.343 J	0.496 J	NC	<0.21	NC
	Arsenic	4.38	4.34	<1.0	3.84	13
	Barium	264	160	**49**	92.6	**96**
	Cadmium	0.393 J	0.405 J	NC	0.0855 J	NC
	Chromium	7.06	7.15	1.3	7.59	7.2
	Cobalt	4.06	4.17	2.7	4.4	8
	Copper	6.22	6.44	3.5	6.31	1.4
	Iron	9000	9140	1.5	9280	3.1
	Lead	4.64	4.89	5.2	5.67	20
	Molybdenum	1.69 J	1.87 J	NC	1.61	NC
	Nickel	6.55	6.62	1.1	7.04	7.2
	Selenium	0.518 J	0.831 J	NC	1.09	**NC**
	Silver	<0.110	<0.115	NC	<0.083	NC
	Zinc	22.8	23.2	1.7	21.3	6.8
	Mercury	<0.0127	<0.0176	NC	0.000721 J	NC
	SPLP Metals (mg/L)					
	Antimony	<0.00500	<0.00500	NC	<0.0008	NC
	Arsenic	0.00616 J	<0.00350	NC	0.00891	NC
	Barium	0.0742	0.0375	**66**	0.027	**93**
	Cadmium	<0.000340	<0.000340	NC	<0.0008	NC
	Chromium	0.00122 J	0.00281 J	NC	0.0123	**NC**
	Cobalt	<0.00100	<0.00100	NC	0.00289 J	NC
	Copper	0.00660 J	<0.00450	NC	0.00587	NC
	Iron	0.0628 J	<0.0503	NC	9.96	**NC**
	Lead	0.00345 J	<0.00330	NC	0.00379 J	NC
	Molybdenum	0.0572	0.0607	5.9	0.0536	6.5
	Nickel	<0.00200	<0.00200	NC	0.0062	NC
	Selenium	0.0198	0.0212	6.8	0.0226	13
	Silver	<0.00100	<0.00100	NC	<0.0008	NC
	Zinc	0.00766 J	0.0256	**NC**	0.0327	**NC**
	Mercury	<0.000130	<0.000130	NC	<0.000042	NC

Notes:
RPD = Relative Percent Difference; [(difference between results)/(average of results)]*100
RPD limit for soils is 35%; If results are less than 5* MQL, then data were qualified if difference > MQL
MQL = method quantitation limit
mg/L = milligrams per liter
mg/Kg = milligrams per kilogram
< = Not detected

Table 3
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID/Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	Field Dup RPD (%)	QA Split Result	QA RPD (%)

NC = Not Calculated; RPD values were not calculated for non-detect or trace detect values

Table 4
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Parameter	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	90	68[d,f]	76	90	100
Arsenic	90	90	100	90	100
Barium	90	83[a,f]	92	90	100
Cadmium	90	86[a,f]	96	90	100
Chromium	90	89[b]	99	90	100
Cobalt	90	90	100	90	100
Copper	90	84[a,f]	93	90	100
Iron	90	81[a,d]	90	90	100
Lead	90	82[a,f]	91	90	100
Mercury	90	80[c,d]	89	86	80
Molybdenum	90	90	100	90	100
Nickel	90	85[b]	94	90	100
Selenium	90	85[b,f]	94	90	100
Silver	90	83[d]	92	90	100
Zinc	90	77[a,b,f]	86	90	100
Metals SPLP West					
Antimony	18	18	100	18	100
Arsenic	18	18	100	18	100
Barium	18	13[a,f]	72	18	100
Cadmium	18	18	100	18	100
Chromium	18	16[f]	89	18	100
Cobalt	18	18	100	18	100
Copper	18	18	100	18	100
Iron	18	16[f]	89	18	100
Lead	18	18	100	18	100
Mercury	18	18	100	18	100
Molybdenum	18	18	100	18	100
Nickel	18	18	100	18	100
Selenium	18	18	100	18	100
Silver	18	18	100	18	100
Zinc	18	15[a,b,f]	83	18	100
TOTALS	**1620**	**1521**	**94**	**1616**	**100**

Total number of samples includes field samples, field duplicate samples, and QA split samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples]*100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples]*100

*Trace Detections are not counted as being out of contractual compliance

[a] Results qualified due to high field duplicate RPD outliers

[b] Results qualified due to method blank contamination

[c] Results qualified due to holding time exceedance

[d] Results qualified due to MS/MSD percent recovery outliers

[e] Results qualified due to poor reproducibility within 1*RL

[f] Results qualified due to high QA split RPD

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Data Usability Summary Groundwater and Surface Water Sampling September/October 2010

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater and surface water samples collected during September and October 2010 at the former ASARCO Smelter located at El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/TRRP-13 Guidance (May 2010), United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004) and Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008), and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, Trace Analysis, Inc, located in El Paso, Texas. Trace Analysis laboratory is accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

2. Project Description

The data collected at the former ASARCO Smelter will be used to assess the groundwater and surface water conditions at the site. Twenty-eight groundwater samples and 11 surface water samples were collected at the former ASARCO Smelter during the September/October 2010 sampling event. Additionally, seven QC samples, including three field duplicates and four field blanks, were collected during the September/October 2010 sampling event.

Samples were submitted to Trace Analysis for following analyses:

- Total and Dissolved Metals by USEPA Method 6010C
- Anions by USEPA Method 300.0
- Sulfide by USEPA Method 4500-S2D
- Total Dissolved Solids (TDS) by USEPA Method 2540C
- Total Suspended Soils (TSS) by USEPA Method 2540D
- Total Organic Carbon (TOC) by USEPA Method 5310C

The metals analyte list included aluminum, arsenic, calcium, cadmium, chromium, copper, iron, potassium, magnesium, manganese, sodium, lead, antimony, and selenium. Anions included nitrate, nitrite, chloride, sulfate, and fluoride. Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following quality control parameters as contained in the TRRP-compliant laboratory reports submitted by the project laboratory (10092223, 10092322, 10093012, 10100123, and 10100513):

- chain-of-custody;
- sample preservation and temperature upon laboratory receipt
- holding times
- method blank contamination
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and relative percent difference (RPD)
- laboratory control spike/laboratory control spike duplicate (LCS/LCSD) percent recovery and RPD
- laboratory duplicate RPD
- field duplicate RPD
- field blank contamination

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established data quality objectives as defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate that the data is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively to fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater and surface water samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratory at the correct temperatures (4 $\pm$ 2 degrees Celsius) with the following exceptions:

- Samples collected September 21, 2010 were received at the laboratory at 16 degrees Celsius. The temperature outlier did not significantly impact the sample results; therefore, data qualification was not required.

- Samples collected October 4, 2010 were received at the laboratory at 10 degrees Celsius. The temperature outlier did not significantly impact the sample results; therefore, data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective USEPA methods with the following exceptions:

- Nitrate and nitrite results for samples EP-131, EP-77, EP-77 (Dup) and nitrite results for samples EP-68 and EP-75 were qualified due to holding time exceedances. These samples were received by the laboratory within analyte hold time, but were analyzed outside the required holding time due to equipment failure.

3.4. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks.

3.5. Matrix Spike (MS)/Matrix Spike Duplicate (MSD) Recovery and RPD

MS/MSD samples were performed at the required frequency and were evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J".
- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".
- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.
- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.
- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS/MSD percent recoveries and RPDs were within acceptance limits with the following exceptions:

- Sample EP-75 had high nitrate MS/MSD recoveries (160/160- percent). Data qualification was not required since the associated samples were non-detect for nitrate.
- Sample EP-122 had high MS/MSD percent recoveries for chloride and sulfate associated with the analytical batch 63879. Chloride and sulfate results for samples EP-122, EP-132, EP-135, and EP-122 (Dup) were qualified "J" to indicate a potential bias.
- Sample EP-81 had high MS/MSD percent recoveries for nitrite (111/112 percent), chloride (114/115 percent), and fluoride (111/112 percent). Data qualification was not required since the associated samples were non-detect for these analytes.
- Sample EP-120 had high sulfate MS/MSD percent recoveries (115/115 percent). Sulfate results for samples EP-78 and EP-120 were qualified "J" to indicate a potential bias.
- Sample EP-77 had high sulfate MS/MSD percent recoveries (121/122 percent). Sulfate results for samples EP-77 and EP-77 (Dup) were qualified "J" to indicate a potential bias.
- Sample EP-131 had high sulfate MS/MSD percent recoveries (123/123 percent). Sulfate result for sample EP-131 was qualified "J" to indicate a potential bias.

3.6. Laboratory Control Samples (LCS)/Laboratory Control Samples Duplicate (LCSD) Recovery and RPD

LCS and LCSD were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCSD, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the analyte was recovery above acceptance limits for the LCS or LCSD and the analyte was detected in the associated analytical batch, the analyte results were qualified "J".
- If the analyte recovery was below acceptance limits for LCS or LCSD, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS/LCSD percent recoveries and RPDs were within acceptance limits.

3.7. Laboratory Duplicate RPD

Laboratory duplicates were performed at the appropriate frequencies for TDS and TSS and RPDs were within acceptance limits

3.8. Field Duplicate RPD

Three field duplicate samples were collected and submitted for analyses during the September/October 2010 sampling event. The RPD values between the field sample and its associated field duplicate were calculated and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the SDL, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the SDL, then the difference between the analytical results of the field sample and the field duplicate should not exceed the SDL.

Field duplicate RPDs were within acceptance limits with the following exceptions:

- Total iron, total lead, total manganese, dissolved manganese, and TSS results in sample EP-77 and its associated field duplicate EP-77 (Dup) were qualified "J" due to high field duplicate RPD.
- Total iron results for sample EP-122 and its associated field duplicate EP-122 (Dup) were qualified "J" due to high field duplicate RPD.

- Total aluminum and total iron results for sample SEP-4 and its associated field duplicate SEP-4 (Dup) were qualified "J" due to high field duplicate RPD.

3.9. Field Blank Contamination

Target compounds were not detected in the field blanks with the following exceptions:

- The field blank, associated with samples collected September 21, 2010, had detections of total potassium, total sodium, dissolved calcium, dissolved sodium, and total suspended solids. Results for dissolved metals were not qualified since the associated samples had detections that were greater than 10 times that detected in the field blank. Total metals results for several samples (EP-68, EP-77 (Dup), EP-95, and EP-97) were qualified "J" to indicate a potential bias due to the field blank contamination. Total suspended solids results for samples EP-95, EP-78, EP-75, EP-68 were qualified "J" to indicate a potential bias.
- The field blank, associated with samples collected September 22, 2010, had detections of total cadmium, total iron, total potassium, total magnesium, total sodium, dissolved potassium, dissolved magnesium, dissolved sodium. Results for dissolved metals were not qualified since the associated samples had detections that were greater than 10 times that detected in the field blank. Total metals results for several samples (EP-51, EP-52, EP-54, and EP-49) were qualified "J" to indicate a potential bias due to the field blank contamination.
- The field blank, associated with samples collected September 29, 2010, had detections of total calcium, total iron, total potassium, total magnesium, and total sodium. Total metals results for several samples (EP-62, EP-52, EP-122, EP-122 (Dup), and EP-132) were qualified "J" to indicate a potential bias due to the field blank contamination.
- The field blank, associated with samples collected September 30, 2010, had detections of total copper, total iron, and dissolved sodium. Results for dissolved sodium were not qualified since the associated samples had detections that were greater than 10 times that detected in the field blank. Total metals results for several samples (EP-4, EP-6, EP-7, EP-81, EP-85, EP-114, and EP-133) were qualified "J" to indicate a potential bias due to the field blank contamination.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses all of which were achieved.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.
- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance.

The percent contractual compliance for each of the analyzed parameters was as follows:

- Total metals (aluminum, cadmium, copper, iron, lead, manganese, and potassium) had contractual compliances ranging from 64 to 95 percent due to high field duplicate RPDs and field blank contamination.
- Dissolved manganese results were in 95 percent contractual compliance due to high field duplicate RPDs.
- Chloride and sulfate results were in 90 and 78 percent contractual compliance, respectively, due to MS/MSD outliers.
- Nitrate and nitrite results were in 93 and 88 percent contractual compliance due to holding time exceedances.
- Total suspended solids were in 86 percent contractual compliance due to field blank contamination.

The results for the September/October 2010 monitoring event were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Sample ID	Field Code	Lab ID	Date Collected	Sample Type	Parameters
EP-4	ELP-0910-01	246422	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-6	ELP-0910-02	246423	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-7	ELP-0910-03	246424	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-12	ELP-0910-04	246630	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-13	ELP-0910-05	246631	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-49	ELP-0910-06	245580	9/22/2010	N	Total & Dissolved Metals, Anions, TDS, TSS, TOC
EP-51	ELP-0910-07	245577	9/22/2010	N	Total & Dissolved Metals, Anions, TDS, TSS, TOC
EP-52	ELP-0910-08	245578	9/22/2010	N	Total & Dissolved Metals, Anions, TDS, TSS, TOC
EP-54	ELP-0910-09	245579	9/22/2010	N	Total & Dissolved Metals, Anions, TDS, TSS, TOC
EP-58	ELP-0910-10	246632	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-62	ELP-0910-11	246257	9/29/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-68	ELP-0910-12	245402	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-75	ELP-0910-13	245401	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-77	ELP-0910-14	245403	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-78	ELP-0910-15	245400	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-81	ELP-0910-16	246420	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-85	ELP-0910-17	246419	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-95	ELP-0910-18	245397	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-97	ELP-0910-19	245398	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-114	ELP-0910-20	246425	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-116	ELP-0910-21	246426	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-119	ELP-0910-22	246256	9/29/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-120	ELP-0910-23	245399	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-122	ELP-0910-24	246258	9/29/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-131	ELP-0910-25	245405	9/21/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-132	ELP-0910-26	246260	9/29/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-133	ELP-0910-27	246421	9/30/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-135	ELP-0910-28	246261	9/29/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-77 (Dup)	ELP-0910-41	245404	9/21/2010	FD of EP-77	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
EP-122 (Dup)	ELP-0910-44	246259	9/29/2010	FD of EP-122	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Sample ID	Field Code	Lab ID	Date Collected	Sample Type	Parameters
SEP-1	ELP-0910-31	246627	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-2	ELP-0910-32	246622	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-3	ELP-0910-33	246628	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-4	ELP-0910-34	246618	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-6	ELP-0910-48	246629	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-7	ELP-0910-35	246626	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-9	ELP-0910-36	246625	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-10	ELP-0910-37	246624	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-11	ELP-0910-38	246623	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-12	ELP-0910-39	246621	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-13	ELP-0910-40	246620	10/4/2010	N	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
SEP-4 (Dup)	ELP-0910-47	246619	10/4/2010	FD of SEP-4	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
DI Blank	ELP-0910-42	245406	9/21/2010	FB	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
DI Blank	ELP-0910-43	245581	9/22/2010	FB	Total & Dissolved Metals, Anions, TDS, TSS, TOC
DI Blank	ELP-0910-45	246262	9/29/2010	FB	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC
DI Blank	ELP-0910-46	246427	9/30/2010	FB	Total & Dissolved Metals, Anions, Sulfide, TDS, TSS, TOC

Notes:
N = Normal Sample
FB = Field Blank
FD = Field Duplicate
Total & Dissolved Metals = aluminum, arsenic, calcium, cadmium, chromium, copper, iron, potassium, magnesium, manganese, sodium, lead, selenium, and antimony
Anions = nitrate, nitrite, chloride, sulfate, fluoride
TDS = Total dissolved solids
TSS = Total suspended solids
TOC = Total organic carbon
Samples EP-62, EP-119, EP-122, EP-132, EP-122 (Dup), and DI Blank (246262) were not analyzed for dissolved chromium
Samples EP-4, EP-6, EP-7, EP-81, EP-85, EP-114, EP-116, EP-133, and DI Blank (246427) were not analyzed for total calcium, potassium, magnesium, and sodium

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-4	246618	Total Aluminum	3.21	mg/L	J	Qualified due to high field duplicate RPD
SEP-4	246618	Total Iron	2.12	mg/L	J	Qualified due to high field duplicate RPD
SEP-4 (Dup)	246619	Total Aluminum	<0.0500	mg/L	UJ	Qualified due to high field duplicate RPD
SEP-4 (Dup)	246619	Total Iron	1.55	mg/L	J	Qualified due to high field duplicate RPD
EP-114	246425	Total Copper	<0.009	mg/L	UJ	Qualified due to field blank contamination
EP-120	245399	Sulfate	1050	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-122	246258	Chloride	256	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-122	246258	Sulfate	975	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-122	246258	Total Iron	<0.116	mg/L	UJ	Qualified due to field blank contamination and high field duplicate RPD
EP-122 (Dup)	246259	Chloride	257	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-122 (Dup)	246259	Sulfate	995	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-122 (Dup)	246259	Total Iron	<0.08	mg/L	UJ	Qualified due to field blank contamination and high field duplicate RPD
EP-131	245405	Nitrate	7.02	mg/L	J	Qualified due to holding time exceedance
EP-131	245405	Nitrite	<0.500	mg/L	UJ	Qualified due to holding time exceedance
EP-131	245405	Sulfate	1310	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-131	245405	Total Potassium	18.50	mg/L	J	Qualified due to field blank contamination
EP-132	246260	Chloride	260	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-132	246260	Sulfate	1280	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-132	246260	Total Iron	<0.725	mg/L	UJ	Qualified due to field blank contamination
EP-133	246421	Total Iron	<1.02	mg/L	UJ	Qualified due to field blank contamination
EP-135	246261	Chloride	972	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-135	246261	Sulfate	2690	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-135	246261	Total Potassium	<23.5	mg/L	UJ	Qualified due to field blank contamination
EP-4	246422	Total Copper	<0.016	mg/L	UJ	Qualified due to field blank contamination
EP-4	246422	Total Iron	<0.427	mg/L	UJ	Qualified due to field blank contamination
EP-49	245580	Total Cadmium	<0.152	mg/L	UJ	Qualified due to field blank contamination
EP-51	245577	Total Cadmium	<0.047	mg/L	UJ	Qualified due to field blank contamination
EP-52	245578	Total Cadmium	<0.155	mg/L	UJ	Qualified due to field blank contamination
EP-52	245578	Total Iron	<0.861	mg/L	UJ	Qualified due to field blank contamination
EP-52	245578	Total Potassium	<23.5	mg/L	UJ	Qualified due to field blank contamination

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-54	245579	Total Cadmium	<0.269	mg/L	UJ	Qualified due to field blank contamination
EP-54	245579	Total Iron	<0.638	mg/L	UJ	Qualified due to field blank contamination
EP-6	246423	Total Iron	<0.081	mg/L	UJ	Qualified due to field blank contamination
EP-62	246257	Total Iron	<0.287	mg/L	UJ	Qualified due to field blank contamination
EP-68	245402	Nitrite	<0.500	mg/L	UJ	Qualified due to holding time exceedance
EP-68	245402	Total Potassium	<17.9	mg/L	UJ	Qualified due to field blank contamination
EP-68	245402	Total Suspended Solids	<4.00	mg/L	UJ	Qualified due to field blank contamination
EP-7	246424	Total Iron	0.736	mg/L	J	Qualified due to field blank contamination
EP-75	245401	Nitrite	<2.50	mg/L	UJ	Qualified due to holding time exceedance
EP-75	245401	Total Suspended Solids	<3.5	mg/L	UJ	Qualified due to field blank contamination
EP-77	245403	Dissolved Manganese	<0.0025	mg/L	UJ	Qualified due to high field duplicate RPD
EP-77	245403	Nitrate	0.640	mg/L	J	Qualified due to holding time exceedance
EP-77	245403	Nitrite	<0.500	mg/L	UJ	Qualified due to holding time exceedance
EP-77	245403	Sulfate	1080	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-77	245403	Total Iron	4.59	mg/L	J	Qualified due to high field duplicate RPD
EP-77	245403	Total Lead	0.011	mg/L	J	Qualified due to high field duplicate RPD
EP-77	245403	Total Manganese	0.227	mg/L	J	Qualified due to high field duplicate RPD
EP-77	245403	Total Suspended Solids	263	mg/L	J	Qualified due to high field duplicate RPD
EP-77 (Dup)	245404	Dissolved Manganese	0.009	mg/L	J	Qualified due to high field duplicate RPD
EP-77 (Dup)	245404	Nitrate	0.620	mg/L	J	Qualified due to holding time exceedance
EP-77 (Dup)	245404	Nitrite	<0.500	mg/L	UJ	Qualified due to holding time exceedance
EP-77 (Dup)	245404	Sulfate	1110	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-77 (Dup)	245404	Total Iron	3.10	mg/L	J	Qualified due to high field duplicate RPD
EP-77 (Dup)	245404	Total Lead	<0.005	mg/L	UJ	Qualified due to high field duplicate RPD
EP-77 (Dup)	245404	Total Manganese	0.159	mg/L	J	Qualified due to high field duplicate RPD
EP-77 (Dup)	245404	Total Potassium	<18.4	mg/L	UJ	Qualified due to field blank contamination
EP-77 (Dup)	245404	Total Suspended Solids	356	mg/L	J	Qualified due to high field duplicate RPD
EP-78	245400	Sulfate	1050	mg/L	J	Qualified due to high MS/MSD percent recovery
EP-78	245400	Total Suspended Solids	<2.00	mg/L	UJ	Qualified due to field blank contamination
EP-81	246420	Total Copper	<0.029	mg/L	UJ	Qualified due to field blank contamination
EP-85	246419	Total Iron	<0.461	mg/L	UJ	Qualified due to field blank contamination
EP-95	245397	Total Potassium	<4.4	mg/L	UJ	Qualified due to field blank contamination

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-95	245397	Total Suspended Solids	<2	mg/L	UJ	Qualified due to field blank contamination
EP-97	245398	Total Potassium	<11.8	mg/L	UJ	Qualified due to field blank contamination

Notes:
J = Analyte was positively identified above the SDL; however, the result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
MS = Matrix Spike
MSD = Matrix Spike Duplicate
mg/L = milligrams per liter
RPD = Relative Percent Difference

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
EL Paso, TX

Sample ID/ Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)
EP-77 / DUP	**Total Metals (mg/L)**			
	Aluminum	5.04	3.94	24.5
	Antimony	<0.0500	<0.0500	NC
	Arsenic	1.39	1.32	5.17
	Cadmium	<0.00500	<0.00500	NC
	Calcium	104	101	2.93
	Chromium	<0.0100	<0.0100	NC
	Copper	0.017	0.014	19.4
	Iron	4.59	3.1	**38.8**
	Lead	0.011	<0.005	**75.0**
	Magnesium	28	28.5	1.77
	Manganese	0.227	0.159	**35.2**
	Potassium	19.4	18.4	5.29
	Selenium	0.055	0.058	5.31
	Sodium	459	456	<1.00
	Dissolved Metals (mg/L)			
	Aluminum	<0.0500	<0.0500	NC
	Antimony	<0.0200	<0.0200	NC
	Arsenic	1.37	1.28	6.79
	Cadmium	<0.00500	<0.00500	NC
	Calcium	94.2	92.7	1.61
	Chromium	<0.00100	<0.00100	NC
	Copper	<0.00500	0.005	NC
	Iron	<0.0100	<0.0100	NC
	Lead	<0.00500	<0.00500	NC
	Magnesium	23.9	24	<1.00
	Manganese	<0.0025	0.009	**119**
	Potasium	17.6	16.5	6.45
	Selenium	0.053	0.055	3.70
	Sodium	441	431	2.29
	Water Quality (mg/L)			
	Chloride	310	363	15.8
	Fluoride	3.92	3.92	<1.00
	Nitrate	0.64	0.62	3.17
	Nitrite	<0.5	<0.5	NC
	Sulfate	1080	1110	2.74
	Sulfide	<0.100	<0.100	NC
	Total Dissolved Solids	2140	2300	7.21
	Total Organic Carbon	3.24	3.14	3.13
	Total Suspended Solids	263	356	**30.0**
EP-122 / Dup	**Total Metals (mg/L)**			
	Aluminum	<0.0500	<0.0500	NC
	Antimony	0.059	0.056	5.22
	Arsenic	2.1	2.07	1.44
	Cadmium	<0.00500	<0.00500	NC
	Calcium	136	135	<1.00
	Chromium	<0.0100	<0.0100	NC
	Copper	0.009	0.006	40.0
	Iron	0.116	0.08	**36.7**
	Lead	<0.00500	<0.00500	NC
	Magnesium	54.9	54.6	<1.00
	Manganese	0.013	0.013	<1.00

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
EL Paso, TX

Sample ID/ Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)
EP-122 / Dup (cont.)	Potassium	77.1	76.7	<1.00
	Selenium	0.164	0.164	<1.00
	Sodium	622	610	1.95
	Dissolved Metals (mg/L)			
	Aluminum	<0.0500	<0.0500	NC
	Antimony	0.05	0.05	<1.00
	Arsenic	1.61	1.63	1.23
	Cadmium	<0.00500	<0.00500	NC
	Calcium	108	105	2.82
	Chromium	NA	NA	NA
	Copper	<0.00500	<0.00500	NC
	Iron	<0.010	<0.0100	NC
	Lead	<0.005000	<0.00500	NC
	Magnesium	43	41.5	3.55
	Manganese	0.008	0.007	13.3
	Potasium	57.8	56.3	2.63
	Selenium	0.134	0.134	<1.00
	Sodium	514	497	3.36
	Water Quality (mg/L)			
	Chloride	256	257	<1.00
	Fluoride	3.84	3.85	<1.00
	Nitrate	6.9	6.92	<1.00
	Nitrite	<0.5	<0.5	NC
	Sulfate	975	995	2.03
	Sulfide	<0.100	<0.100	NC
	Total Dissolved Solids	2150	2100	2.35
	Total Organic Carbon	2.77	2.67	3.68
	Total Suspended Solids	2	1.5	28.6
SEP-4 / Dup	**Total Metals (mg/L)**			
	Aluminum	3.21	<0.05	**194**
	Antimony	<0.0500	<0.0500	NC
	Arsenic	<0.0100	<0.0100	NC
	Cadmium	<0.00500	<0.00500	NC
	Calcium	99.3	82.6	18.4
	Chromium	<0.0100	<0.0100	NC
	Copper	0.006	0.005	18.2
	Iron	2.12	1.55	**31.1**
	Lead	<0.00500	<0.00500	NC
	Magnesium	27.6	24.6	11.5
	Manganese	0.143	0.138	3.56
	Potassium	13.8	13.7	<1.0
	Selenium	<0.0200	<0.0200	NC
	Sodium	255	210	19.4
	Dissolved Metals (mg/L)			
	Aluminum	<0.0500	<0.0500	NC

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
EL Paso, TX

Sample ID/ Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)
SEP-4 / Dup (cont.)	Antimony	<0.0500	<0.0500	NC
	Arsenic	<0.0100	<0.0100	NC
	Cadmium	<0.00500	<0.00500	NC
	Calcium	98.2	80.2	20.2
	Chromium	<0.0100	<0.0100	NC
	Copper	<0.00500	<0.00500	NC
	Iron	0.011	0.011	<1.00
	Lead	<0.00500	<0.00500	NC
	Magnesium	26.9	23	15.6
	Manganese	0.076	0.064	17.1
	Potasium	13.4	11.5	15.3
	Selenium	<0.0200	<0.0200	NC
	Sodium	253	208	19.5
	Water Quality (mg/L)			
	Chloride	172	169	1.76
	Fluoride	0.77	0.76	1.31
	Nitrate	0.62	0.62	<1.00
	Nitrite	<0.5	<0.5	NC
	Sulfate	335	330	1.50
	Sulfide	<0.100	<0.100	NC
	Total Disssolved Solids	1060	1100	3.70
	Total Organic Carbon	4.09	4.09	<1.00
	Total Suspended Solids	58	52	10.9

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/L = milligrams per liter
NA = Not Analyzed
NC = Not Calculated; RPD values were not calculated for non-detect values
Bold values indicate RPD outlier

Table 4
Completeness Summary
Groundwater and Surface Water Samples - September/October 2010
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Aluminum	42	40[a]	95	42	100
Cadmium	42	38[b]	90	42	100
Copper	42	39[b]	93	42	100
Iron	42	27[a,b]	64	42	100
Lead	42	40[a]	95	42	100
Manganese	42	40[a]	95	42	100
Potassium	42	35[b]	83	42	100
All other analytes	42	42	100	42	100
Dissolved Metals					
Manganese	42	40[a]	95	42	100
All other analytes	42	42	100	42	100
Water Quality Parameters					
Chloride	42	38[c]	90	42	100
Fluoride	42	42	100	42	100
Nitrate	42	39[d]	93	42	100
Nitrite	42	37[d]	88	42	100
Sulfate	42	33[c]	78	42	100
Sulfide	38	38	100	38	100
TDS	42	42	100	42	100
TOC	42	42	100	42	100
TSS	42	36[a,b]	86	42	100

Notes:
Total number of samples includes field samples as well as field duplicate samples
Percent Contractual Compliance = [Number of Contract Compliant Results/Total Number of Samples] * 100
Percent Technical Compliance = [Number of Usable Results/Total Number of Samples] * 100

[a] Results qualified due to high field duplicate RPD outliers

[b] Results qualified due to field blank contamination

[c] Results qualified due to MS/MSD percent recovery outliers

[d] Results qualified due to holding time exceedance

Texas Custodial Trust

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Data Usability Summary Groundwater and Surface Water Sampling February/March 2011

July 2011

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater and surface water samples collected during February and March 2011 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. ALS Environmental (ALS), located in Houston, Texas, analyzed samples as the QA laboratory. Both TestAmerica and ALS are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the groundwater and surface water samples collected during February and March 2011 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 31 groundwater samples and 11 surface water samples were collected during the sampling event. The samples were submitted to TestAmerica and ALS for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TDS) by USEPA Method 160.2
- anions (chloride, nitrate, nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2 or 300.0

- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

The total and dissolved metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc.

Fifteen field quality assurance samples (i.e., equipment rinsate blanks, field duplicates, and QA splits) were also collected and analyzed as part of the sampling program. Eight samples (EP-120, EP-12, EP-131, EP-132, EP-51, EP-58, EP-75, and EP-78) were collected using three different purge techniques: low-flow, no-flow (hydrosleeve), and three well volumes. These samples were part of a purge comparison study and the no-flow and low-flow samples were identified with the –HS and –LF suffixes.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, equipment rinsate blanks)
- surrogate recovery (for organic parameters)
- laboratory control sample (LCS) percent recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and RPD

- duplicates (field duplicates, QA split samples)
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater and surface water samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Several sample coolers were received at the slightly below the acceptance temperature limit of 4 ± 2 degrees Celsius. These temperature outliers ranged from 0.3 to 1.9 degrees Celsius. These outliers did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- The nitrate holding times were exceeded for samples EP-132, EP-132HS, and EP-132LF, which were collected on February 28, 2011. Results were qualified "J" to indicate a potential bias.

- The nitrate, nitrite, and nitrate + nitrite holding times were exceeded for samples EP-51HS and EP-51LF, which were collected on March 3, 2011. Results were qualified "J" and "UJ" to indicate a potential bias.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-57114 had a selenium detection (0.001619 milligrams per liter [mg/L]). Data qualification was not required because the dissolved selenium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57179 had detections of arsenic (0.002872 mg/L) and selenium (0.003755 mg/L). The total selenium results for samples EP-58, EP-58HS, and EP-58LF were qualified "UJ" to indicate a potential bias. Data qualification was not required for the total arsenic, dissolved arsenic, or dissolved selenium results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57773 had a lead detection (0.001538 mg/L). The total lead result for sample EP-51HS was qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57882 had a molybdenum detection (0.003346 mg/L). Data qualification was not required because the dissolved molybdenum detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57883 had a molybdenum detection (0.001409 mg/L). Data qualification was not required because dissolved molybdenum results are not associated with this batch.

- The method blank associated with analytical batch 560-57885 had detections of arsenic (0.004322 mg/L) and molybdenum (0.002287 mg/L). Data qualification was not required because dissolved arsenic and dissolved molybdenum results are not associated with this batch.

- The method blank associated with analytical batch 560-57926 (prep batch 560-57052) had a copper detection (0.001551 mg/L). The total copper results for

samples EP-12, EP-12HS, EP-12LF, and EP-77 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57926 (prep batch 560-57087) had detections of copper (0.005739 mg/L) and iron (0.1155 mg/L). The dissolved copper results for samples EP-71 and FD030311 were qualified "UJ" to indicate a potential bias. Data qualification was not required for the total iron results because the detections for this analyte in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57926 (prep batch 560-57398) had a molybdenum detection (0.001456 mg/L). Data qualification was not required because the dissolved molybdenum detections in the associated samples were greater than ten times the method blank concentration

- The method blank associated with analytical batch 560-57960 had a zinc detection (0.006409 mg/L). Data qualification was not required because the total zinc detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-58020 (prep batch 560-57276) had an arsenic detection (0.003716 mg/L). The total arsenic result for sample EP-6 was qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-58020 (prep batch 560-57290) had an arsenic detection (0.002664 mg/L). The dissolved arsenic result for sample EP-6 was qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-58020 (prep batch 560-57291) had an arsenic detection (0.002664 mg/L). The dissolved arsenic results for samples SEP-1, SEP-3, SEP-6, SEP-7, and SEP-9 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-58070 (prep batch 560-560-56986) had detections of arsenic (0.001795 mg/L) and molybdenum (0.001809 mg/L). Data qualification was not required because the dissolved arsenic detections in the associated samples were greater than ten times the method blank concentration, and dissolved molybdenum results are not associated with this batch.

- The method blank associated with analytical batch 560-58070 (prep batch 560-560-57389) had a molybdenum detection (0.003137 mg/L). The total molybdenum results for samples SEP-1, SEP-3, SEP-6, and SEP-7 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57130 had a potassium detection of 0.2563 mg/L. Data qualification was not required because the potassium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57201 (prep batch 560-57028) had a sodium detection of 0.068 mg/L. Data qualification was not required because the sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57201 (prep batch 560-56975) had detections of aluminum (0.01243 mg/L), potassium (0.1675 mg/L), and sodium (0.2147 mg/L). Data qualification was not required because the sodium detections in the associated samples were greater than ten times the method blank concentration, and aluminum and potassium results are not associated with this batch.

- The method blank associated with analytical batch 560-57326 had a potassium detection (0.4553 mg/L). The potassium result for sample EP-95 was qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57595 had a mercury detection (0.000163 mg/L). The total mercury results for samples EP-13, SEP-1, SEP-2, SEP-3, SEP-6, SEP-7, SEP-9, SEP-12, SEP-13 and FD030811 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57624 had a mercury detection (0.00016 mg/L). The dissolved mercury results for samples EP-13, EP-20, EP-114, SEP-3, SEP-6, SEP-9, SEP-10, SEP-11, and FD030811 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57768 had a mercury detection (0.000324 mg/L). The dissolved mercury result for sample EP-116 was qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-57338 had a chloride detection (0.445 mg/L). Data qualification was not required because the chloride detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-57572 had a TOC detection (1.454 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than five times the method blank concentration.

- The method blank associated with ALS batch 50634 had detections of barium (0.0007275 mg/L), cadmium (0.0006977 mg/L), copper (0.0009672 mg/L), lead (0.001022 mg/L), molybdenum (0.001287 mg/L), and zinc (0.003452 mg/L). The dissolved cadmium and dissolved zinc results for split samples QA030111 and QA030311, and the dissolved copper result for split sample QA030111 were qualified "UJ" to indicate a potential bias. Data qualification was not required for the total barium and total molybdenum results because the detections for these analytes in the associated samples were greater than ten times the method blank concentration; and dissolved lead was not detected in split sample QA030111.

- The method blank associated with ALS batch 50788 had a zinc detection (0.003802 mg/L). Data qualification was not required because the total zinc detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch 50927 had a zinc detection (0.00297 mg/L). The dissolved zinc results for split samples QA030711, QA030711-2, and QA030811 were qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch 50676 had an aluminum detection (0.006885 mg/L). The aluminum result for split sample QA030311 was qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch 50882 had detections of aluminum (0.006805 mg/L) and manganese (0.002377 mg/L). The aluminum and manganese results for split sample QA030711 were qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch 50928 had an aluminum detection (0.004728 mg/L). Data qualification was not required because the aluminum detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch R106866 had a sulfide detection (0.8 mg/L). The sulfide results for split samples QA030711-2 and QA030811 were qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch R106735 had a TOC detection (0.284 mg/L). The TOC result for split sample QA030311 was qualified "UJ" to indicate a potential bias.

3.4.2. Equipment Rinsate Blank Interference

Target compounds were not detected in the equipment rinsate blank with the following exceptions:

- The equipment rinsate blank ER030411 collected on March 4, 2011 contained low level detections of: total arsenic (0.00528 mg/L), total barium (0.00295 mg/L), total chromium (0.00421 mg/L), total copper (0.00836 mg/L), total iron (0.158 mg/L), total nickel (0.00317 mg/L), dissolved arsenic (0.00329 mg/L), dissolved barium (0.00264 mg/L), dissolved chromium (0.00336 mg/L), dissolved copper (0.00484 mg/L), dissolved iron (0.11 mg/L), dissolved molybdenum (0.00173 mg/L), dissolved nickel (0.00221 mg/L), dissolved thallium (0.00141 mg/L), dissolved zinc (0.00465 mg/L), aluminum (0.211 mg/L), calcium (0.571), magnesium (0.0746 mg/L), manganese (0.00505 mg/L), potassium (0.146 mg/L), and sodium (1.41 mg/L), chloride (0.619 mg/L), fluoride (0.0335 mg/L), nitrate (0.154 mg/L), sulfate (1.35 mg/L), TOC (1.54 mg/L), TDS (39 mg/L), and TSS (2.4 mg/L).

- The equipment rinsate blank ER030711 collected on March 7, 2011 contained low level detections of total arsenic (0.0274 mg/L), total barium (0.00102 mg/L), total chromium (0.00642 mg/L), total copper (0.00205 mg/L), total lead (0.00103 mg/L), total zinc (0.00853 mg/L), dissolved arsenic (0.0383 mg/L), dissolved chromium (0.00232 mg/L), dissolved copper (0.00536 mg/L), dissolved zinc (0.0217 mg/L), calcium (0.192 mg/L), magnesium (0.0395 mg/L), chloride (0.434 mg/L), nitrate (0.148 mg/L), sulfide (0.031 mg/L), and TOC (1.52 mg/L).

- The equipment rinsate blank ER030811 collected on March 8, 2011 contained detections of total barium (0.00258 mg/L), dissolved zinc (0.00501 mg/L), potassium (0.294 mg/L), sodium (1.02 mg/L), chloride (0.971 mg/L), fluoride (0.47 mg/L), sulfate (1.59 mg/L), sulfide (0.083 mg/L), total alkalinity (5.4 mg/L), TOC (1.3 mg/L), and TDS (32 mg/L).

- The equipment rinsate blank collected on March 15, 2011 contained detections of toluene (0.000292 mg/L). Data qualification was not required because the analyte was not detected in the associated samples.

Associated sample results were qualified "UJ to indicate a potential bias. Data qualification was not required if parameter results in the associated samples were greater than ten times the equipment rinsate blank concentration. The following samples were qualified based on equipment blank contamination:

- The total arsenic results for samples EP-68, EP-84, and EP-95; the total barium results for samples EP-49, EP-68, EP-95, and FD030411; the total chromium results for samples EP-49, EP-68, and FD030411; the total copper results for

samples EP-68 and EP-84; the total iron result for sample EP-68; and the total nickel results for samples EP-49, EP-68, and FD030411 were qualified "UJ" to indicate a potential bias. The dissolved arsenic results for samples EP-68, EP-84, and EP-95; the dissolved barium results for samples EP-49, EP-52, EP-54, EP-68, EP-95, and FD030411; the dissolved chromium results for samples EP-52 and EP-95; the dissolved copper results for samples EP-49, EP-68, EP-84, and FD030411; the dissolved iron result for sample EP-52; the dissolved molybdenum result for sample EP-84; the dissolved nickel results for samples EP-49, EP-68, and FD030411; the dissolved thallium results for samples EP-49, EP-52, EP-68, and FD030411; and the dissolved zinc results for samples EP-68 and EP-84 were qualified "UJ" to indicate a potential bias. The TSS results for samples EP-84 and EP-95 were qualified "UJ" to indicate a potential bias.

- The total arsenic results for samples EP-6 and EP-7; the total chromium results for samples EP-62, EP-85, EP-119, EP-133, EP-135, OBS-1, and FD030711; the total copper results for samples EP-4, EP-6, EP-7, EP-62, EP-81, EP-133, EP-135, OBS-1, and FD030711-2; the total lead results for samples EP-4, EP-6, EP-7, EP-133, EP-135, OBS-1, and FD030711-2; and the total zinc results for samples EP-4, EP-6, EP-7, EP-81, EP-133, EP-135, OBS-1, FD030711, and FD030711-2 were qualified "UJ" to indicate a potential bias. The dissolved arsenic results for samples EP-4 and EP-7; the dissolved chromium results for samples EP-85 and FD030711; the dissolved copper results for samples EP-4, EP-7, EP-81, EP-119, EP-122, EP-135, OBS-1, and FD030711; and the dissolved zinc results for samples EP-7, EP-81, EP-122, OBS-1, and FD030711-2 were qualified "UJ" to indicate a potential bias. The nitrate result for sample EP-6 and the sulfide results for samples EP-4, EP-6, EP-7, EP-62, EP-81, EP-85, EP-119, EP-122, EP-133, EP-135, OBS-1, FD030711, and FD030711-2 were qualified "UJ" to indicate a potential bias.

- The total barium result for sample EP-114 was qualified "UJ" to indicate a potential bias. The dissolved zinc results for samples EP-13, EP-20, SEP-1, SEP-2, SEP-3, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13 and FD030811 were qualified "UJ" to indicate a potential bias. The fluoride and sulfide results for samples EP-13, EP-20, EP-116, SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13 and FD030811; and the sulfide result for sample EP-114 were qualified "UJ" to indicate a potential bias. The TOC results for samples EP-116, SEP-3, and SEP-9 were qualified "UJ" to indicate a potential bias.

3.5. Surrogate Recovery

Surrogate percent recoveries were within acceptance limits.

3.6. Laboratory Control Sample Recovery and RPD

LCS and LCSD were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCSD, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the analyte recovery was above acceptance limits for the LCS or LCSD and the analyte was detected in the associated analytical batch, the analyte results were qualified "J".
- If the analyte recovery was below acceptance limits for LCS or LCSD, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCSD percent recoveries and RPDs were within acceptance limits.

3.7. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.
- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J".
- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".
- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.
- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.
- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MSD recovery for arsenic (70 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-57114. Data qualification was not required because dissolved arsenic results are not associated with this batch.

- The MS recoveries for arsenic (57 percent) and nickel (79 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57179. The total nickel results for samples EP-58, EP-58HS, EP-58LF, EP-132, EP-132HS, and EP-132LF; the dissolved arsenic results for sample EP-58HS; and the dissolved nickel results for samples EP-58HS, EP-58LF, EP-132HS, and EP-132LF were qualified "J" to indicate a potential bias. Data qualification was not required for total arsenic because no results are associated with this batch.

- The MS recovery for mercury (121 percent) was above acceptance limits (80 to 120 percent) for analytical batch 560-57327. The total mercury result for sample EP-71 was qualified "J" to indicate a potential bias.

- The MS recovery for arsenic (79 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-57341. The total arsenic results for samples EP-58HS, EP-132, EP-132HS, and EP-132LF were qualified "J" to indicate a potential bias.

- The MS and MSD recoveries for zinc (79 and 77 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57773. The total zinc result for sample EP-51HS was qualified "J" to indicate a potential bias.

- The MSD recovery for arsenic (150 percent) was above acceptance limits (80 to 120 percent) for analytical batch 560-57882. Data qualification was not required because the arsenic detections in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for copper (72 and 73 percent) and zinc (70 and 71 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57885. The dissolved copper results for samples EP-12, EP-12HS, EP-12LF, EP-51, and EP-51LF; and the dissolved zinc results for samples EP-12, EP-12HS, EP-12LF, EP-51, EP-51HS, and EP-51LF were qualified "J" and "UJ" to indicate a potential bias.

- The MS and MSD recoveries for calcium (65 and 48 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-57130. Data qualification was not required because the calcium detections in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for aluminum (123 and 122 percent), calcium (89 and 79 percent), potassium (76 and 73 percent), and sodium (65 and 28 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-57201 (prep batch 560-57028). Only sodium results are associated with this batch, and data qualification was not required because the sodium detections for this analyte in the associated samples were greater than four times the matrix spike concentration.

- The MSD recovery for sodium (39 percent) and the MS and MSD recoveries for aluminum (126 and 131 percent), calcium (5 and 65 percent), potassium (72 and 79 percent), and magnesium (41 and 78 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-57201 (prep batch 560-57052). The potassium results for samples EP-12, EP-12HS, EP-12LF, EP-51, EP-51HS, EP-51LF, EP-71, EP-77, and FD030311 were qualified "J" to indicate a potential bias. Data qualification was not required for calcium, magnesium, and sodium because the detections for these analytes in the associated samples were greater than four times the matrix spike concentration; and aluminum results are not associated with this batch.

- The MS recovery for chloride (123 percent) and the MS and MSD recoveries for sulfate (132 and 74 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-57338. The chloride results for samples EP-13, EP-20, EP-114, EP-116, SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13, and FD030811 were qualified "J" to indicate a potential bias. Data qualification was not required for sulfate because the detections for this analyte in the associated samples were greater than four times the matrix spike concentration.

- The MS recovery for sodium (132 percent) was above acceptance limits (80 to 120 percent) for analytical batch 560-57339. Data qualification was not required because the sodium detections in the associated samples were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for chloride (79 and 73 percent) and sulfate (47 and 39 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-57222 (for samples collected on February 28, 2011). The chloride and sulfate results for samples EP-58, EP-58HS, EP-58LF, EP-132, EP-132HS, and EP-132LF were qualified "J" to indicate a potential bias.

- The MS and MSD recoveries for chloride (63 and 54 percent) and sulfate (21 and -2 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57222 (for samples collected on March 7, 2011). Data qualification was not

required because the chloride and sulfate detections in the associated samples were greater than four times the matrix spike concentration.

- The MSD recovery for sulfate (79 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-57316. The sulfate results for samples EP-75, EP-75HS, EP-75LF, EP-120, EP-120LF, and FD030111 were qualified "J" to indicate a potential bias.

- The MS recovery for chloride (67 percent) and the MS and MSD recoveries for sulfate (52 and 22 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57338. The chloride and sulfate results for samples EP-131, EP-131HS, and EP-131LF were qualified "J" to indicate a potential bias.

- The MS recovery for sulfate (73 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-57625. The sulfate results for samples EP-4, EP-6, EP-7, EP-62, EP-81, EP-85, EP-119, EP-122, EP-135, and OBS-1 were qualified "J" to indicate a potential bias.

- The MS recovery for nitrate + nitrite (-1970 percent) and the MS and MSD recoveries for chloride (30.5 and 53 percent) and sulfate (1070 and 954 percent) were outside acceptance limits (80 to 120) for ALS batch R106347. Data qualification was not required because the detections for these analytes in the associated samples were greater than four times the matrix spike concentration.

- The MS recovery for nitrite (125 percent) was above acceptance limits (80 to 120) for ALS batch R106498. The nitrite result for split sample QA030711-2 was qualified "J" to indicate a potential bias.

- The MS and MSD recoveries for TOC (68 and 70 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-57650. The TOC results for samples EP-13, EP-20, EP-114, EP-116, SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13, and FD030811 were qualified "J" to indicate a potential bias.

3.8. Duplicates

3.8.1. Field Duplicates

Eight field duplicates were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD values between sample EP-120 and field duplicate FD030111 for total arsenic (44 percent), total molybdenum (74 percent), and total selenium (112 percent) were above the acceptance limit. The difference between sample EP-120 and FD030111 results for dissolved selenium exceeded the MQL. Data were qualified "UJ" or "J" to indicate a potential bias.

- The RPD values between sample EP-71 and field duplicate FD030311 for sulfate (42 percent), fluoride (113 percent), and TSS (73 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-49 and field duplicate FD030411 for sodium (122 percent) and TOC (45 percent) were above the acceptance limit. The difference between sample EP-49 and FD030411 aluminum results exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-85 and field duplicate FD030711 for total barium (176 percent), total molybdenum (69 percent), total thallium (163 percent), fluoride (134 percent), and TOC (42 percent) were above the acceptance limit. The difference between sample EP-85 and field duplicate FD030711 for dissolved zinc exceeded the MQL. The difference between sample EP-85 and FD030711 results for total antimony, total iron, total lead, and total nickel exceeded the MQL. Data were qualified "UJ" or "J" to indicate a potential bias.

- The RPD values between sample EP-133 and field duplicate FD030711-2 for TOC (48 percent) and TSS (40 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample SEP-4 and field duplicate FD030811for TOC (89 percent) and TSS (103 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.8.2. QA Split Samples

Seven QA split samples were collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were

calculated and are presented in Table 3. The split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPD values between sample EP-120 and split sample QA030111 for total arsenic (33 percent), total molybdenum (69 percent), total selenium (104 percent), fluoride (51 percent), and TOC (178 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-71 and split sample QA030311 for fluoride (127 percent) and TOC (180 percent) were above the acceptance limit. The difference between sample EP-71 and QA030311 results for aluminum and manganese exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-49 and split sample QA030411 for dissolved antimony (83 percent), dissolved arsenic (73 percent), dissolved copper (82 percent), dissolved molybdenum (79 percent), dissolved nickel (79 percent), dissolved selenium (50 percent), dissolved zinc (70 percent), sodium (120 percent), fluoride (151 percent), and TOC (175 percent) were above the acceptance limit. Also, the difference between sample EP-49 and split sample QA030411 for nitrate and nitrate + nitrite exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-85 and split sample QA030711 for total arsenic (38 percent), total barium (174 percent), total molybdenum (70 percent), total thallium (167 percent), total zinc (174 percent), fluoride (141 percent), and TOC (180 percent) were above the acceptance limit. The difference between sample EP-85 and QA030711 results for total antimony, total iron, total lead, and total nickel exceeded the MQL. Data were qualified "UJ" or "J" to indicate a potential bias.

- The RPD values between sample EP-133 and split sample QA030711-2 for TOC (168 percent) and TSS (63 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample SEP-4 and split sample QA030811 for total copper (60 percent), total iron (60 percent), aluminum (83 percent), sulfide (195 percent), and TOC (125 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.9. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Several total and dissolved metals had contractual compliances below 90 percent due to method blank and equipment rinsate interference, MS/MSD percent recovery outliers, and high field duplicate and QA split RPD outliers.

- Anions had contractual compliances below 90 percent due primarily to equipment rinsate interference, MS/MSD percent recovery outliers, and high QA split RPD outliers.

- TOC and TSS had contractual compliances of 57 and 87 percent, respectively, due to method blank and equipment rinsate interference, MS/MSD percent recovery outliers, and high field duplicate and QA split RPD outliers.

The results for the groundwater and surface water sampling event conducted February and March 2011 were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-114	560-24873-2	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-116	560-24873-3	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-119	560-24843-6	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-12	560-24792-6	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-120	560-24735-6	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-120HS	560-24735-4	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-120LF	560-24735-5	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-122	560-24843-5	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-12HS	560-24792-4	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-12LF	560-24792-5	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-13	560-24873-4	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-131	560-24764-3	3/2/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-131HS	560-24764-1	3/2/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-131LF	560-24764-2	3/2/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-132	560-24729-3	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-132HS	560-24729-1	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-132LF	560-24729-2	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-133	560-24843-12	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-135	560-24843-8	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-20	560-24873-1	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-4	560-24843-9	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-49	560-24816-7	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-51	560-24792-3	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-51HS	560-24792-1	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-51LF	560-24792-2	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-52	560-24816-5	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-54	560-24816-6	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-58	560-24729-6	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-58HS	560-24729-4	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-58LF	560-24729-5	2/28/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-6	560-24843-10	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-62	560-24843-7	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-68	560-24816-2	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-7	560-24843-11	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-71	560-24792-7	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-75	560-24735-9	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-75HS	560-24735-7	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-75LF	560-24735-8	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-77	560-24792-8	3/3/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78	560-24735-3	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78HS	560-24735-1	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78LF	560-24735-2	3/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-81	560-24843-3	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-84	560-24816-4	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-85	560-24843-2	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-95	560-24816-3	3/4/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
OBS-1	560-24843-4	3/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-1	560-24873-11	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-10	560-24873-10	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-11	560-24873-9	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-12	560-24873-7	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-13	560-24873-6	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-2	560-24873-8	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-3	560-24873-13	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-4	560-24873-5	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-6	560-24873-14	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-7	560-24873-12	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-9	560-24873-15	3/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
ER030411	560-24816-1	3/4/2011	ER	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
ER030711	560-24843-1	3/7/2011	ER	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
ER030811	560-24873-17	3/8/2011	ER	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030111	560-24735-10FD	3/1/2011	FD of EP-120	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030311	560-24792-9	3/3/2011	FD of EP-71	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030411	560-24816-8FD	3/4/2011	FD of EP-49	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030711	560-24843-13FD	3/7/2011	FD of EP-85	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030711-2	560-24843-14	3/7/2011	FD of EP-133	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
FD030811	560-24873-16	3/8/2011	FD of SEP-4	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030111	1103093-01	3/1/2011	QA of EP-120	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030311	1103148-01	3/3/2011	QA of EP-71	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030411	1103192-01	3/4/2011	QA of EP-49	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030711	1103221-01	3/7/2011	QA of EP-85	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030711-2	1103223-01	3/7/2011	QA of EP-133	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030811	1103272-01	3/8/2011	QA of SEP-4	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Notes:
N = Normal sample
ER = Equipment Rinsate
FD = Field Duplicate
Total and Dissolved Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate, nitrite, sulfate, and sulfide
TDS = Total Dissolved Solids
TSS = Total Suspended Solids
TOC = Total Organic Carbon

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-114	560-24873-2	Aluminum, Total	0.0314	mg/L	J	Qualified due to high field duplicate RPD
EP-114	560-24873-2	Barium, Total	<0.0253	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-114	560-24873-2	Chloride	354	mg/L	J	Qualified due to high MS percent recovery
EP-114	560-24873-2	Copper, Dissolved	0.00137	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-24873-2	Mercury, Dissolved	<0.000225	mg/L	UJ	Qualified due to method blank contamination
EP-114	560-24873-2	Sulfide	<0.032	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-114	560-24873-2	Total Organic Carbon	124	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-116	560-24873-3	Chloride	373	mg/L	J	Qualified due to high MS percent recovery
EP-116	560-24873-3	Fluoride	<3.5	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-116	560-24873-3	Mercury, Dissolved	<0.000152	mg/L	UJ	Qualified due to method blank contamination
EP-116	560-24873-3	Sulfide	<0.061	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-116	560-24873-3	Total Organic Carbon	<8.78	mg/L	UJ	Qualified due to equipment rinsate contamination and low MS/MSD percent recoveries
EP-119	560-24843-6	Chromium, Total	<0.00155	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-119	560-24843-6	Copper, Dissolved	<0.0017	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-119	560-24843-6	Iron, Total	0.177	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-24843-6	Mercury, Dissolved	0.000177	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-24843-6	Nickel, Dissolved	0.00223	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-24843-6	Nickel, Total	0.00292	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-24843-6	Sulfate	903	mg/L	J	Qualified due to low MS percent recovery
EP-119	560-24843-6	Sulfide	<0.046	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-12	560-24792-6	Chromium, Dissolved	0.00196	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Chromium, Total	0.00375	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Cobalt, Dissolved	0.00147	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Cobalt, Total	0.00141	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Copper, Dissolved	<0.00115	mg/L	UJ	Qualified due to low MS/MSD percent recoveries
EP-12	560-24792-6	Copper, Total	<0.00154	mg/L	UJ	Qualified due to method blank contamination
EP-12	560-24792-6	Lead, Total	0.00226	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Mercury, Dissolved	0.000134	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Potassium, Total	11.9	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12	560-24792-6	Sulfide	0.027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-24792-6	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to low MS/MSD percent recoveries
EP-12	560-24792-6	Zinc, Total	0.00402	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-120	560-24735-6	Arsenic, Total	0.376	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-120	560-24735-6	Chromium, Dissolved	0.00358	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Chromium, Total	0.00433	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Copper, Dissolved	0.00664	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Copper, Total	0.0072	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Fluoride	4.38	mg/L	J	Qualified due to high QA split RPD
EP-120	560-24735-6	Iron, Total	0.145	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Lead, Total	0.000965	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Manganese, Total	0.00965	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-24735-6	Molybdenum, Total	0.256	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-120	560-24735-6	Selenium, Total	0.101	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-120	560-24735-6	Sulfate	916	mg/L	J	Qualified due to low MSD percent recovery
EP-120	560-24735-6	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high field duplicate RPD
EP-120	560-24735-6	Total Organic Carbon	56.5	mg/L	J	Qualified due to high QA split RPD
EP-120HS	560-24735-4	Chromium, Dissolved	0.00365	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Chromium, Total	0.00391	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Iron, Total	0.239	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Lead, Total	0.00477	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Sulfide	0.021	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Zinc, Dissolved	0.013	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120HS	560-24735-4	Zinc, Total	0.0144	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120LF	560-24735-5	Chromium, Dissolved	0.00335	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120LF	560-24735-5	Chromium, Total	0.0045	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120LF	560-24735-5	Cobalt, Total	0.00215	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120LF	560-24735-5	Copper, Dissolved	0.00989	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120LF	560-24735-5	Sulfate	928	mg/L	J	Qualified due to low MSD percent recovery
EP-120LF	560-24735-5	Zinc, Dissolved	0.0155	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-24843-5	Copper, Dissolved	<0.00193	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-122	560-24843-5	Iron, Total	0.168	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-24843-5	Mercury, Dissolved	0.000131	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-122	560-24843-5	Nickel, Total	0.00299	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-24843-5	Sulfate	946	mg/L	J	Qualified due to low MS percent recovery
EP-122	560-24843-5	Sulfide	<0.053	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-122	560-24843-5	Zinc, Dissolved	<0.00399	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-12HS	560-24792-4	Chromium, Dissolved	0.00402	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12HS	560-24792-4	Chromium, Total	0.00445	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12HS	560-24792-4	Copper, Dissolved	0.00215	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12HS	560-24792-4	Copper, Total	<0.0049	mg/L	UJ	Qualified due to method blank contamination
EP-12HS	560-24792-4	Iron, Dissolved	0.241	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12HS	560-24792-4	Lead, Total	0.00279	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12HS	560-24792-4	Molybdenum, Dissolved	0.00471	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12HS	560-24792-4	Potassium, Total	11.3	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12HS	560-24792-4	Zinc, Dissolved	0.00762	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12HS	560-24792-4	Zinc, Total	0.00401	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12LF	560-24792-5	Copper, Dissolved	0.0016	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12LF	560-24792-5	Copper, Total	<0.00486	mg/L	UJ	Qualified due to method blank contamination
EP-12LF	560-24792-5	Lead, Total	0.00331	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12LF	560-24792-5	Nitrate	0.995	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12LF	560-24792-5	Potassium, Total	10.2	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12LF	560-24792-5	Zinc, Dissolved	0.0243	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-12LF	560-24792-5	Zinc, Total	0.00565	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-24873-4	Antimony, Dissolved	0.00167	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-24873-4	Chloride	628	mg/L	J	Qualified due to high MS percent recovery
EP-13	560-24873-4	Chromium, Total	0.00274	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-24873-4	Cobalt, Total	0.00147	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-24873-4	Fluoride	<1.65	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-13	560-24873-4	Mercury, Dissolved	<0.000528	mg/L	UJ	Qualified due to method blank contamination
EP-13	560-24873-4	Mercury, Total	<0.00024	mg/L	UJ	Qualified due to method blank contamination
EP-13	560-24873-4	Sulfide	<0.053	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-13	560-24873-4	Total Organic Carbon	43.9	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-13	560-24873-4	Zinc, Dissolved	<0.0177	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-131	560-24764-3	Aluminum, Total	0.448	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-131	560-24764-3	Antimony, Dissolved	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Antimony, Total	0.00222	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Cadmium, Dissolved	0.00159	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Chloride	290	mg/L	J	Qualified due to low MS percent recovery
EP-131	560-24764-3	Chromium, Dissolved	0.00153	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Chromium, Total	0.00386	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Cobalt, Dissolved	0.00352	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Cobalt, Total	0.00326	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Copper, Total	0.0021	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Iron, Total	0.247	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Lead, Total	0.00103	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Sulfate	1160	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-131	560-24764-3	Zinc, Dissolved	0.0109	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131	560-24764-3	Zinc, Total	0.0109	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Aluminum, Total	0.161	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Antimony, Dissolved	0.00171	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Antimony, Total	0.00182	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Chloride	324	mg/L	J	Qualified due to low MS percent recovery
EP-131HS	560-24764-1	Cobalt, Dissolved	0.00319	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Cobalt, Total	0.00293	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131HS	560-24764-1	Sulfate	1780	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-131LF	560-24764-2	Antimony, Dissolved	0.00193	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Antimony, Total	0.00166	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Cadmium, Total	0.000979	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Chloride	282	mg/L	J	Qualified due to low MS percent recovery
EP-131LF	560-24764-2	Chromium, Total	0.00203	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Cobalt, Dissolved	0.00319	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Cobalt, Total	0.00372	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Copper, Total	0.00823	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-131LF	560-24764-2	Sulfate	1150	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-131LF	560-24764-2	Zinc, Total	0.0128	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-24729-3	Aluminum, Total	0.0182	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-24729-3	Arsenic, Total	1.61	mg/L	J	Qualified due to low MS percent recovery

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-132	560-24729-3	Calcium, Total	159	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132	560-24729-3	Chloride	284	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132	560-24729-3	Copper, Dissolved	0.00158	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-24729-3	Nickel, Total	0.0197	mg/L	J	Qualified due to low MS percent recovery
EP-132	560-24729-3	Nitrate	9.14	mg/L	J	Qualified due to holding time exceedance
EP-132	560-24729-3	Sulfate	1260	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132	560-24729-3	Zinc, Dissolved	0.00512	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132HS	560-24729-1	Arsenic, Total	1.55	mg/L	J	Qualified due to low MS percent recovery
EP-132HS	560-24729-1	Calcium, Total	155	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132HS	560-24729-1	Chloride	268	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132HS	560-24729-1	Cobalt, Dissolved	0.00154	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132HS	560-24729-1	Copper, Total	0.00177	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132HS	560-24729-1	Nickel, Dissolved	0.0222	mg/L	J	Qualified due to low MS percent recovery
EP-132HS	560-24729-1	Nickel, Total	0.0371	mg/L	J	Qualified due to low MS percent recovery
EP-132HS	560-24729-1	Nitrate	5.83	mg/L	J	Qualified due to holding time exceedance
EP-132HS	560-24729-1	Sulfate	1100	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132HS	560-24729-1	Zinc, Total	0.0094	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132LF	560-24729-2	Arsenic, Total	1.55	mg/L	J	Qualified due to low MS percent recovery
EP-132LF	560-24729-2	Calcium, Total	153	mg/L	J	Qualified due to low MS/MSD recoveries
EP-132LF	560-24729-2	Chloride	314	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132LF	560-24729-2	Copper, Dissolved	0.00216	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132LF	560-24729-2	Lead, Total	0.00111	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132LF	560-24729-2	Mercury, Total	0.000172	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132LF	560-24729-2	Nickel, Dissolved	0.0193	mg/L	J	Qualified due to low MS percent recovery
EP-132LF	560-24729-2	Nickel, Total	0.0228	mg/L	J	Qualified due to low MS percent recovery
EP-132LF	560-24729-2	Nitrate	7.09	mg/L	J	Qualified due to holding time exceedance
EP-132LF	560-24729-2	Sulfate	1340	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-132LF	560-24729-2	Zinc, Dissolved	0.0067	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-24843-12	Antimony, Dissolved	0.00208	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-24843-12	Antimony, Total	0.00197	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-24843-12	Chromium, Total	<0.0021	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-24843-12	Copper, Total	<0.0026	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-24843-12	Lead, Total	<0.00159	mg/L	UJ	Qualified due to equipment rinsate contamination

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-133	560-24843-12	Mercury, Dissolved	0.00017	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-24843-12	Mercury, Total	0.000213	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-24843-12	Sulfide	<0.029	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-24843-12	Total Organic Carbon	40.2	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-133	560-24843-12	Total Suspended Solids	10.8	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-133	560-24843-12	Zinc, Total	<0.00676	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Chromium, Total	<0.0195	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Cobalt, Total	0.00408	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-24843-8	Copper, Dissolved	<0.00178	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Copper, Total	<0.00792	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Iron, Dissolved	0.163	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-24843-8	Lead, Total	<0.00546	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Mercury, Dissolved	0.00017	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-24843-8	Mercury, Total	0.000189	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-24843-8	Sulfate	3370	mg/L	J	Qualified due to low MS percent recovery
EP-135	560-24843-8	Sulfide	<0.286	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-135	560-24843-8	Zinc, Total	<0.0118	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-20	560-24873-1	Antimony, Total	0.00218	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-24873-1	Chloride	394	mg/L	J	Qualified due to high MS percent recovery
EP-20	560-24873-1	Chromium, Total	0.00174	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-24873-1	Cobalt, Total	0.00272	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-24873-1	Copper, Dissolved	0.00117	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-24873-1	Fluoride	<1.51	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-20	560-24873-1	Iron, Dissolved	0.167	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-24873-1	Mercury, Dissolved	<0.000249	mg/L	UJ	Qualified due to method blank contamination
EP-20	560-24873-1	Sulfide	<0.031	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-20	560-24873-1	Total Organic Carbon	35.2	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-20	560-24873-1	Zinc, Dissolved	<0.0206	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-24843-9	Aluminum, Total	0.0929	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-24843-9	Arsenic, Dissolved	<0.273	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-24843-9	Copper, Dissolved	<0.00182	mg/L	UJ	Qualified due to equipment rinsate contamination

Table 2
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Former ASARCO Smelter
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-4	560-24843-9	Copper, Total	<0.00554	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-24843-9	Iron, Total	0.147	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-24843-9	Lead, Dissolved	0.00154	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-24843-9	Lead, Total	<0.00202	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-24843-9	Mercury, Dissolved	0.000146	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-24843-9	Sulfate	684	mg/L	J	Qualified due to low MS percent recovery
EP-4	560-24843-9	Sulfide	<0.034	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-24843-9	Zinc, Total	<0.00959	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-49	560-24816-7	Aluminum, Total	<0.0752	mg/L	UJ	Qualified due to equipment rinsate contamination, high field duplicate RPD, and high QA split RPD
EP-49	560-24816-7	Antimony, Dissolved	1.5	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Arsenic, Dissolved	14.7	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Barium, Dissolved	<0.00428	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-49	560-24816-7	Barium, Total	<0.0107	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-49	560-24816-7	Chromium, Total	<0.0066	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-49	560-24816-7	Cobalt, Dissolved	0.00398	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-24816-7	Cobalt, Total	0.00424	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-24816-7	Copper, Dissolved	<0.0211	mg/L	UJ	Qualified due to equipment rinsate contamination and high QA split RPD
EP-49	560-24816-7	Fluoride	24.2	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Lead, Total	0.00302	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-24816-7	Mercury, Total	0.000205	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-24816-7	Molybdenum, Dissolved	2.16	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Nickel, Dissolved	<0.0151	mg/L	UJ	Qualified due to equipment rinsate contamination and high QA split RPD
EP-49	560-24816-7	Nickel, Total	<0.0166	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-49	560-24816-7	Nitrate	15.5	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Nitrate + Nitrite	15.5	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Selenium, Dissolved	0.569	mg/L	J	Qualified due to high QA split RPD
EP-49	560-24816-7	Sodium, Total	5620	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-49	560-24816-7	Thallium, Dissolved	<0.0118	mg/L	UJ	Qualified due to equipment rinsate contamination

Table 2
Qualified Analytical Results
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-49	560-24816-7	Total Organic Carbon	115	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-49	560-24816-7	Zinc, Dissolved	9.01	mg/L	J	Qualified due to high QA split RPD
EP-51	560-24792-3	Chromium, Dissolved	0.00348	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-24792-3	Copper, Dissolved	0.046	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51	560-24792-3	Lead, Dissolved	0.00119	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-24792-3	Potassium, Total	56.4	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51	560-24792-3	Sulfide	0.025	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-24792-3	Zinc, Dissolved	0.269	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51HS	560-24792-1	Aluminum, Total	0.0375	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51HS	560-24792-1	Cobalt, Total	0.00172	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51HS	560-24792-1	Iron, Total	0.182	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51HS	560-24792-1	Lead, Total	<0.00107	mg/L	UJ	Qualified due to method blank contamination
EP-51HS	560-24792-1	Nitrate	222	mg/L	J	Qualified due to holding time exceedance
EP-51HS	560-24792-1	Nitrate + Nitrite	222	mg/L	J	Qualified due to holding time exceedance
EP-51HS	560-24792-1	Nitrite	<5	mg/L	UJ	Qualified due to holding time exceedance
EP-51HS	560-24792-1	Potassium, Total	39.2	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51HS	560-24792-1	Zinc, Dissolved	0.165	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51HS	560-24792-1	Zinc, Total	0.16	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51LF	560-24792-2	Antimony, Dissolved	0.00182	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51LF	560-24792-2	Antimony, Total	0.00301	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51LF	560-24792-2	Arsenic, Dissolved	0.00393	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51LF	560-24792-2	Copper, Dissolved	0.0461	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51LF	560-24792-2	Lead, Dissolved	0.00166	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51LF	560-24792-2	Nitrate	163	mg/L	J	Qualified due to holding time exceedance
EP-51LF	560-24792-2	Nitrate + Nitrite	163	mg/L	J	Qualified due to holding time exceedance
EP-51LF	560-24792-2	Nitrite	<5	mg/L	UJ	Qualified due to holding time exceedance
EP-51LF	560-24792-2	Potassium, Total	49.2	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-51LF	560-24792-2	Zinc, Dissolved	0.119	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-52	560-24816-5	Aluminum, Total	<0.0508	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-52	560-24816-5	Barium, Dissolved	<0.0138	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-52	560-24816-5	Chromium, Dissolved	<0.0251	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-52	560-24816-5	Iron, Dissolved	<0.449	mg/L	UJ	Qualified due to equipment rinsate contamination

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-52	560-24816-5	Mercury, Dissolved	0.000412	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-24816-5	Mercury, Total	0.00171	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-24816-5	Thallium, Dissolved	<0.0132	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-54	560-24816-6	Aluminum, Total	<0.578	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-54	560-24816-6	Barium, Dissolved	<0.0152	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-54	560-24816-6	Mercury, Dissolved	0.000312	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Aluminum, Total	0.0624	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Antimony, Dissolved	0.00183	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Antimony, Total	0.00204	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Calcium, Total	452	mg/L	J	Qualified due to low MS/MSD recoveries
EP-58	560-24729-6	Chloride	588	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58	560-24729-6	Mercury, Dissolved	0.000396	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Mercury, Total	0.00042	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-24729-6	Nickel, Dissolved	0.131	mg/L	J	Qualified due to low MS percent recovery
EP-58	560-24729-6	Nickel, Total	0.128	mg/L	J	Qualified due to low MS percent recovery
EP-58	560-24729-6	Selenium, Total	<0.024	mg/L	UJ	Qualified due to method blank contamination
EP-58	560-24729-6	Sulfate	3270	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58	560-24729-6	Zinc, Dissolved	0.00375	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Arsenic, Dissolved	2.02	mg/L	J	Qualified due to low MS percent recovery
EP-58HS	560-24729-4	Arsenic, Total	2.35	mg/L	J	Qualified due to low MS percent recovery
EP-58HS	560-24729-4	Calcium, Total	371	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58HS	560-24729-4	Chloride	68.4	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58HS	560-24729-4	Cobalt, Dissolved	0.00464	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Lead, Total	0.000876	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Mercury, Dissolved	0.00036	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Mercury, Total	0.000331	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Nickel, Total	1.07	mg/L	J	Qualified due to low MS percent recovery
EP-58HS	560-24729-4	Selenium, Total	<0.0168	mg/L	UJ	Qualified due to method blank contamination
EP-58HS	560-24729-4	Sulfate	220	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58HS	560-24729-4	Zinc, Dissolved	0.0178	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58HS	560-24729-4	Zinc, Total	0.00876	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Antimony, Dissolved	0.00256	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Antimony, Total	0.00277	mg/L	J	Estimated; Analyte detected between SDL and MQL

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-58LF	560-24729-5	Cadmium, Total	0.00127	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Calcium, Total	455	mg/L	J	Qualified due to low MS/MSD recoveries
EP-58LF	560-24729-5	Chloride	554	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58LF	560-24729-5	Lead, Total	0.00147	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Mercury, Dissolved	0.000456	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Mercury, Total	0.000294	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Nickel, Dissolved	0.0976	mg/L	J	Qualified due to low MS percent recovery
EP-58LF	560-24729-5	Nickel, Total	0.109	mg/L	J	Qualified due to low MS percent recovery
EP-58LF	560-24729-5	Selenium, Total	<0.025	mg/L	UJ	Qualified due to method blank contamination
EP-58LF	560-24729-5	Sulfate	3090	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-58LF	560-24729-5	Sulfide	0.019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Zinc, Dissolved	0.00721	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58LF	560-24729-5	Zinc, Total	0.00387	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-24843-10	Aluminum, Total	0.0663	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-24843-10	Arsenic, Dissolved	<0.0129	mg/L	UJ	Qualified due to method blank contamination
EP-6	560-24843-10	Arsenic, Total	<0.0252	mg/L	UJ	Qualified due to method blank and equipment rinsate blank contamination
EP-6	560-24843-10	Copper, Total	<0.0106	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-24843-10	Lead, Total	<0.00516	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-24843-10	Mercury, Dissolved	0.000198	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-24843-10	Nitrate	<0.875	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-24843-10	Sulfate	1950	mg/L	J	Qualified due to low MS percent recovery
EP-6	560-24843-10	Sulfide	<0.027	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-24843-10	Zinc, Total	<0.0134	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-62	560-24843-7	Chromium, Total	<0.00332	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-62	560-24843-7	Copper, Total	<0.00122	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-62	560-24843-7	Mercury, Dissolved	0.000138	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Mercury, Total	0.000183	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Nickel, Dissolved	0.00329	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Nickel, Total	0.00458	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Nitrate	2.41	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Nitrate + Nitrite	2.41	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-24843-7	Sulfate	1200	mg/L	J	Qualified due to low MS percent recovery

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-62	560-24843-7	Sulfide	<0.034	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Aluminum, Total	<0.777	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Arsenic, Dissolved	<0.0072	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Arsenic, Total	<0.00865	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Barium, Dissolved	<0.014	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Barium, Total	<0.0207	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Chromium, Total	<0.00215	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Copper, Dissolved	<0.0016	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Copper, Total	<0.00158	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Iron, Total	<0.602	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Manganese, Total	<0.00823	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Nickel, Dissolved	<0.0043	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Nickel, Total	<0.0052	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Sulfide	0.029	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-24816-2	Thallium, Dissolved	<0.00138	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Zinc, Dissolved	<0.018	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-68	560-24816-2	Zinc, Total	0.0165	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Aluminum, Total	0.0697	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Arsenic, Dissolved	<0.0292	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Arsenic, Total	<0.0456	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Copper, Dissolved	<0.00498	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Copper, Total	<0.00606	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Iron, Dissolved	0.219	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Lead, Total	<0.00263	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Mercury, Dissolved	0.00017	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Nickel, Dissolved	0.00307	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Nickel, Total	0.00317	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Selenium, Dissolved	0.00169	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Selenium, Total	0.00138	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-24843-11	Sulfate	1070	mg/L	J	Qualified due to low MS percent recovery
EP-7	560-24843-11	Sulfide	<0.038	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Zinc, Dissolved	<0.0366	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-24843-11	Zinc, Total	<0.0473	mg/L	UJ	Qualified due to equipment rinsate contamination

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-71	560-24792-7	Aluminum, Total	0.131	mg/L	J	Qualified due to high QA split RPD
EP-71	560-24792-7	Cobalt, Dissolved	0.00152	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-24792-7	Cobalt, Total	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-24792-7	Copper, Dissolved	<0.00201	mg/L	UJ	Qualified due to method blank contamination
EP-71	560-24792-7	Fluoride	2.96	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-71	560-24792-7	Iron, Total	0.101	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-24792-7	Manganese, Total	0.0416	mg/L	J	Qualified due to high QA split RPD
EP-71	560-24792-7	Mercury, Dissolved	0.00041	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-24792-7	Mercury, Total	0.00036	mg/L	J	Qualified due to high MS percent recovery
EP-71	560-24792-7	Potassium, Total	18.7	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-71	560-24792-7	Sulfate	2340	mg/L	J	Qualified due to high field duplicate RPD
EP-71	560-24792-7	Total Organic Carbon	40.4	mg/L	J	Qualified due to high QA split RPD
EP-71	560-24792-7	Total Suspended Solids	8.2	mg/L	J	Qualified due to high field duplicate RPD
EP-71	560-24792-7	Zinc, Dissolved	0.00436	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-24792-7	Zinc, Total	0.00436	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Cobalt, Dissolved	0.00412	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Lead, Dissolved	0.000748	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Lead, Total	0.00464	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Mercury, Dissolved	0.000163	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Mercury, Total	0.000208	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-24735-9	Sulfate	10200	mg/L	J	Qualified due to low MSD percent recovery
EP-75	560-24735-9	Sulfide	0.045	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Copper, Dissolved	0.00811	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Copper, Total	0.00779	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Lead, Dissolved	0.000743	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Lead, Total	0.000939	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Mercury, Dissolved	0.000183	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Mercury, Total	0.00016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75HS	560-24735-7	Sulfate	10700	mg/L	J	Qualified due to low MSD percent recovery
EP-75HS	560-24735-7	Zinc, Total	0.0231	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Chromium, Total	0.00204	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Copper, Dissolved	0.00843	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-75LF	560-24735-8	Copper, Total	0.00995	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Lead, Dissolved	0.000765	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Lead, Total	0.00195	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Mercury, Dissolved	0.00018	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Mercury, Total	0.000136	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75LF	560-24735-8	Sulfate	9620	mg/L	J	Qualified due to low MSD percent recovery
EP-75LF	560-24735-8	Zinc, Dissolved	0.0233	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Antimony, Dissolved	0.00407	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Antimony, Total	0.00438	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Cobalt, Total	0.00173	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Copper, Dissolved	0.00249	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Copper, Total	<0.00504	mg/L	UJ	Qualified due to method blank contamination
EP-77	560-24792-8	Lead, Total	0.00128	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Nickel, Dissolved	0.00285	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Nitrate	1.12	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Nitrate + Nitrite	1.12	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-24792-8	Potassium, Total	22.5	mg/L	J	Qualified due to low MS/MSD percent recoveries
EP-77	560-24792-8	Zinc, Total	0.00373	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78HS	560-24735-1	Copper, Dissolved	0.00142	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78HS	560-24735-1	Zinc, Dissolved	0.00876	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Aluminum, Total	0.0214	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Copper, Total	0.00207	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Lead, Total	0.00154	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Manganese, Total	0.00301	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Zinc, Dissolved	0.00405	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78LF	560-24735-2	Zinc, Total	0.00737	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-24843-3	Antimony, Dissolved	0.00298	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-24843-3	Cadmium, Total	0.00107	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-24843-3	Copper, Dissolved	<0.00213	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-81	560-24843-3	Copper, Total	<0.0018	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-81	560-24843-3	Mercury, Dissolved	0.00014	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-24843-3	Mercury, Total	0.00018	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-24843-3	Nickel, Total	0.00404	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-81	560-24843-3	Sulfate	706	mg/L	J	Qualified due to low MS percent recovery
EP-81	560-24843-3	Sulfide	<0.237	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-81	560-24843-3	Zinc, Dissolved	<0.0153	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-81	560-24843-3	Zinc, Total	<0.0448	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Antimony, Dissolved	0.00295	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-24816-4	Antimony, Total	0.0037	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-24816-4	Arsenic, Dissolved	<0.0295	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Arsenic, Total	<0.0358	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Copper, Dissolved	<0.0126	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Copper, Total	<0.0171	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Manganese, Total	<0.00753	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Molybdenum, Dissolved	<0.00983	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Total Suspended Solids	<4.40	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Zinc, Dissolved	<0.0164	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-24816-4	Zinc, Total	0.0167	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85	560-24843-2	Antimony, Total	0.00274	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Arsenic, Total	0.949	ug/L	J	Qualified due to high QA split RPD
EP-85	560-24843-2	Barium, Total	0.581	ug/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Chromium, Dissolved	<0.00148	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-85	560-24843-2	Chromium, Total	<0.0489	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-85	560-24843-2	Fluoride	14.1	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Iron, Total	28	ug/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Lead, Total	0.0562	ug/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Molybdenum, Total	0.307	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Nickel, Total	0.0316	ug/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Sulfate	1300	mg/L	J	Qualified due to low MS percent recovery

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-85	560-24843-2	Sulfide	<0.04	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-85	560-24843-2	Thallium, Total	0.0014	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Total Organic Carbon	61.5	mg/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-85	560-24843-2	Zinc, Total	0.233	ug/L	J	Qualified due to high field duplicate RPD and high QA split RPD
EP-95	560-24816-3	Arsenic, Dissolved	<0.00831	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-95	560-24816-3	Arsenic, Total	<0.0101	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-95	560-24816-3	Barium, Dissolved	<0.0242	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-95	560-24816-3	Barium, Total	<0.0261	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-95	560-24816-3	Chromium, Dissolved	<0.0023	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-95	560-24816-3	Potassium, Total	<2.98	mg/L	UJ	Qualified due to method blank contamination
EP-95	560-24816-3	Sulfide	0.025	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-24816-3	Total Suspended Solids	<2.40	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030111	560-24735-10FD	Arsenic, Total	0.24	mg/L	J	Qualified due to high field duplicate RPD
FD030111	560-24735-10FD	Chromium, Dissolved	0.00377	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Copper, Dissolved	0.00776	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Copper, Total	0.00716	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Iron, Total	0.121	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Lead, Total	0.0013	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Manganese, Total	0.00957	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Molybdenum, Total	0.118	mg/L	J	Qualified due to high field duplicate RPD
FD030111	560-24735-10FD	Selenium, Total	0.0283	mg/L	J	Qualified due to high field duplicate RPD
FD030111	560-24735-10FD	Sulfate	881	mg/L	J	Qualified due to low MSD percent recovery
FD030111	560-24735-10FD	Thallium, Dissolved	0.00423	mg/L	J	Qualified due to high field duplicate outlier
FD030111	560-24735-10FD	Thallium, Total	0.000973	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030111	560-24735-10FD	Zinc, Total	0.0233	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Chromium, Total	0.00156	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Cobalt, Dissolved	0.00153	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Cobalt, Total	0.00173	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Copper, Dissolved	<0.00147	mg/L	UJ	Qualified due to method blank contamination
FD030311	560-24792-9	Fluoride	0.822	mg/L	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD030311	560-24792-9	Iron, Total	0.148	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Mercury, Dissolved	0.000445	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Mercury, Total	0.00033	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Potassium, Total	18.6	mg/L	J	Qualified due to low MS/MSD percent recoveries
FD030311	560-24792-9	Sulfate	3570	mg/L	J	Qualified due to high field duplicate RPD
FD030311	560-24792-9	Sulfide	0.018	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030311	560-24792-9	Total Suspended Solids	17.6	mg/L	J	Qualified due to high field duplicate RPD
FD030311	560-24792-9	Zinc, Total	0.00523	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Aluminum, Total	<0.172	mg/L	UJ	Qualified due to equipment rinsate contamination and high field duplicate RPD
FD030411	560-24816-8FD	Barium, Dissolved	<0.00464	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Barium, Total	<0.0107	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Chromium, Total	<0.00578	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Cobalt, Dissolved	0.00379	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Cobalt, Total	0.00403	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Copper, Dissolved	<0.0208	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Lead, Total	0.00387	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Mercury, Dissolved	0.000264	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Mercury, Total	0.000215	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030411	560-24816-8FD	Nickel, Dissolved	<0.0154	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Nickel, Total	<0.0183	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Sodium, Total	1360	mg/L	J	Qualified due to high field duplicate RPD
FD030411	560-24816-8FD	Thallium, Dissolved	<0.0115	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030411	560-24816-8FD	Total Organic Carbon	72.7	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Antimony, Total	0.041	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Barium, Total	0.0375	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Chromium, Dissolved	<0.00168	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711	560-24843-13FD	Chromium, Total	<0.00221	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711	560-24843-13FD	Copper, Dissolved	<0.00142	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711	560-24843-13FD	Fluoride	2.8	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Iron, Total	<0.101	mg/L	UJ	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Lead, Total	<0.000733	mg/L	UJ	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Mercury, Dissolved	0.000234	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
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El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD030711	560-24843-13FD	Mercury, Total	0.00019	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711	560-24843-13FD	Molybdenum, Total	0.628	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Sulfide	<0.053	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711	560-24843-13FD	Thallium, Total	0.0137	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Total Organic Carbon	40.3	mg/L	J	Qualified due to high field duplicate RPD
FD030711	560-24843-13FD	Zinc, Total	<0.00391	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711-2	560-24843-14	Aluminum, Total	0.0847	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711-2	560-24843-14	Antimony, Dissolved	0.00204	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711-2	560-24843-14	Antimony, Total	0.00162	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711-2	560-24843-14	Copper, Total	<0.00131	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711-2	560-24843-14	Lead, Total	<0.00133	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711-2	560-24843-14	Mercury, Dissolved	0.000138	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711-2	560-24843-14	Mercury, Total	0.000288	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030711-2	560-24843-14	Sulfide	<0.027	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711-2	560-24843-14	Total Organic Carbon	65.4	mg/L	J	Qualified due to high field duplicate RPD
FD030711-2	560-24843-14	Total Suspended Solids	7.2	mg/L	J	Qualified due to high field duplicate RPD
FD030711-2	560-24843-14	Zinc, Dissolved	<0.00433	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030711-2	560-24843-14	Zinc, Total	<0.00568	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030811	560-24873-16	Chloride	584	mg/L	J	Qualified due to high MS percent recovery
FD030811	560-24873-16	Copper, Dissolved	0.00259	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030811	560-24873-16	Fluoride	<1.45	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030811	560-24873-16	Lead, Dissolved	0.000967	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030811	560-24873-16	Mercury, Dissolved	<0.000222	mg/L	UJ	Qualified due to method blank contamination
FD030811	560-24873-16	Mercury, Total	<0.000235	mg/L	UJ	Qualified due to method blank contamination
FD030811	560-24873-16	Nickel, Dissolved	0.00281	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030811	560-24873-16	Nickel, Total	0.00388	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030811	560-24873-16	Nitrate + Nitrite	1.4	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030811	560-24873-16	Sulfide	<0.064	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030811	560-24873-16	Total Organic Carbon	14	mg/L	J	Qualified due to high field duplicate RPD and low MS/MSD percent recoveries
FD030811	560-24873-16	Total Suspended Solids	274	mg/L	J	Qualified due to high field duplicate RPD
FD030811	560-24873-16	Zinc, Dissolved	<0.00696	mg/L	UJ	Qualified due to equipment rinsate contamination
FD030811	560-24873-16	Zinc, Total	0.0188	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
OBS-1	560-24843-4	Aluminum, Total	0.0269	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Cadmium, Dissolved	0.000977	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Chromium, Total	<0.00356	mg/L	UJ	Qualified due to equipment rinsate contamination
OBS-1	560-24843-4	Copper, Dissolved	<0.00307	mg/L	UJ	Qualified due to equipment rinsate contamination and low MS/MSD percent recoveries
OBS-1	560-24843-4	Copper, Total	<0.0023	mg/L	UJ	Qualified due to equipment rinsate contamination
OBS-1	560-24843-4	Lead, Total	<0.000898	mg/L	UJ	Qualified due to equipment rinsate contamination
OBS-1	560-24843-4	Manganese, Total	0.00364	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Mercury, Dissolved	0.000159	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Nickel, Dissolved	0.00343	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Nickel, Total	0.00272	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-24843-4	Sulfate	1410	mg/L	J	Qualified due to low MS percent recovery
OBS-1	560-24843-4	Sulfide	<0.027	mg/L	UJ	Qualified due to equipment rinsate contamination
OBS-1	560-24843-4	Zinc, Dissolved	<0.0515	mg/L	UJ	Qualified due to equipment rinsate contamination
OBS-1	560-24843-4	Zinc, Total	<0.00576	mg/L	UJ	Qualified due to equipment rinsate contamination
QA030111	1103093-01	Arsenic, Total	0.269	mg/L	J	Qualified due to high QA split RPD
QA030111	1103093-01	Cadmium, Dissolved	<0.00274	mg/L	UJ	Qualified due to method blank contamination
QA030111	1103093-01	Chromium, Dissolved	0.0034	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Chromium, Total	0.00493	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Cobalt, Total	0.000894	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Copper, Dissolved	<0.00624	mg/L	UJ	Qualified due to method blank contamination
QA030111	1103093-01	Fluoride	2.59	mg/L	J	Qualified due to high QA split RPD
QA030111	1103093-01	Iron, Total	0.131	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Lead, Total	0.0023	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Mercury, Total	0.000053	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Molybdenum, Total	0.124	mg/L	J	Qualified due to high QA split RPD
QA030111	1103093-01	Nickel, Total	0.00176	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Selenium, Total	0.0317	mg/L	J	Qualified due to high QA split RPD
QA030111	1103093-01	Thallium, Total	0.00123	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030111	1103093-01	Total Organic Carbon	3.24	mg/L	J	Qualified due to high QA split RPD
QA030111	1103093-01	Zinc, Dissolved	<0.0248	mg/L	UJ	Qualified due to method blank contamination
QA030311	1103148-01	Aluminum, Total	<0.00403	mg/L	UJ	Qualified due to method blank contamination and high QA split RPD
QA030311	1103148-01	Cadmium, Dissolved	<0.000601	mg/L	UJ	Qualified due to method blank contamination

Table 2
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
QA030311	1103148-01	Chromium, Dissolved	0.000893	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030311	1103148-01	Chromium, Total	0.000922	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030311	1103148-01	Cobalt, Dissolved	0.00127	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030311	1103148-01	Cobalt, Total	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030311	1103148-01	Copper, Total	0.00178	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030311	1103148-01	Fluoride	0.658	mg/L	J	Qualified due to high QA split RPD
QA030311	1103148-01	Manganese, Total	0.00186	mg/L	J	Qualified due to high QA split RPD
QA030311	1103148-01	Total Organic Carbon	<2.18	mg/L	UJ	Qualified due to method blank contamination and high QA split RPD
QA030311	1103148-01	Zinc, Dissolved	<0.00505	mg/L	UJ	Qualified due to method blank contamination
QA030311	1103148-01	Zinc, Total	0.00357	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Aluminum, Total	0.114	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Antimony, Dissolved	0.623	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Arsenic, Dissolved	6.82	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Barium, Dissolved	0.00407	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Cobalt, Dissolved	0.00141	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Copper, Dissolved	0.00878	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Fluoride	3.36	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Lead, Dissolved	0.00117	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Lead, Total	0.00686	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Molybdenum, Dissolved	0.941	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Nickel, Dissolved	0.00654	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Nickel, Total	0.0165	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030411	1103192-01	Nitrate	<0.03	mg/L	UJ	Qualified due to high QA split RPD
QA030411	1103192-01	Nitrate + Nitrite	<0.03	mg/L	UJ	Qualified due to high QA split RPD
QA030411	1103192-01	Selenium, Dissolved	0.341	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Sodium, Total	1400	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Total Organic Carbon	7.63	mg/L	J	Qualified due to high QA split RPD
QA030411	1103192-01	Zinc, Dissolved	4.35	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Aluminum, Total	<0.0310	mg/L	UJ	Qualified due to method blank contamination
QA030711	1103221-01	Antimony, Total	0.0422	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Arsenic, Total	1.39	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Barium, Total	0.04	mg/L	J	Qualified due to high QA split RPD

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
QA030711	1103221-01	Chromium, Dissolved	0.00188	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Chromium, Total	0.00241	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Copper, Dissolved	0.00146	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Copper, Total	0.00187	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Fluoride	2.44	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Iron, Total	<0.036	mg/L	UJ	Qualified due to high QA split RPD
QA030711	1103221-01	Lead, Total	0.000691	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Manganese, Total	<0.00178	mg/L	UJ	Qualified due to method blank contamination
QA030711	1103221-01	Mercury, Dissolved	0.000059	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Mercury, Total	0.000092	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711	1103221-01	Molybdenum, Total	0.637	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Thallium, Total	0.0158	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Total Organic Carbon	3.27	mg/L	J	Qualified due to high QA split RPD
QA030711	1103221-01	Zinc, Dissolved	<0.00368	mg/L	UJ	Qualified due to method blank contamination
QA030711	1103221-01	Zinc, Total	0.0165	mg/L	J	Qualified due to high QA split RPD
QA030711-2	1103223-01	Antimony, Dissolved	0.00237	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Antimony, Total	0.0019	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Chromium, Total	0.00066	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Cobalt, Dissolved	0.00104	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Cobalt, Total	0.000813	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Copper, Dissolved	0.000585	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Copper, Total	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Lead, Dissolved	0.000449	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Lead, Total	0.00146	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Mercury, Dissolved	0.000128	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Mercury, Total	0.00012	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030711-2	1103223-01	Nitrite	0.449	mg/L	J	Qualified due to high MS/MSD percent recovery
QA030711-2	1103223-01	Sulfide	<1.0	mg/L	UJ	Qualified due to method blank contamination
QA030711-2	1103223-01	Total Organic Carbon	3.48	mg/L	J	Qualified due to high QA split RPD
QA030711-2	1103223-01	Total Suspended Solids	5.6	mg/L	J	Qualified due to high QA split RPD
QA030711-2	1103223-01	Zinc, Dissolved	<0.00683	mg/L	UJ	Qualified due to method blank contamination
QA030811	1103272-01	Aluminum, Total	0.95	mg/L	J	Qualified due to high QA split RPD

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
QA030811	1103272-01	Antimony, Dissolved	0.000967	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Antimony, Total	0.000732	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Chromium, Total	0.00081	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Copper, Dissolved	0.00232	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Copper, Total	0.00846	mg/L	J	Qualified due to high QA split RPD
QA030811	1103272-01	Iron, Total	0.925	mg/L	J	Qualified due to high QA split RPD
QA030811	1103272-01	Lead, Dissolved	0.000842	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Nickel, Dissolved	0.00382	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Nickel, Total	0.00354	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA030811	1103272-01	Sulfide	<5.8	mg/L	UJ	Qualified due to method blank contamination and high QA split RPD
QA030811	1103272-01	Total Organic Carbon	8.39	mg/L	J	Qualified due to high QA split RPD
QA030811	1103272-01	Zinc, Dissolved	<0.0068	mg/L	UJ	Qualified due to method blank contamination
SEP-1	560-24873-11	Arsenic, Dissolved	<0.00847	mg/L	UJ	Qualified due to method blank contamination
SEP-1	560-24873-11	Chloride	476	mg/L	J	Qualified due to high MS percent recovery
SEP-1	560-24873-11	Copper, Total	0.00532	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-24873-11	Fluoride	<0.83	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-1	560-24873-11	Lead, Total	0.00278	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-24873-11	Mercury, Total	<0.000292	mg/L	UJ	Qualified due to method blank contamination
SEP-1	560-24873-11	Molybdenum, Total	<0.0193	mg/L	UJ	Qualified due to method blank contamination
SEP-1	560-24873-11	Selenium, Total	0.00172	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-24873-11	Sulfide	<0.046	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-1	560-24873-11	Total Organic Carbon	27.4	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-1	560-24873-11	Zinc, Dissolved	<0.0234	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-10	560-24873-10	Chloride	380	mg/L	J	Qualified due to high MS percent recovery
SEP-10	560-24873-10	Cobalt, Dissolved	0.00148	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-24873-10	Copper, Total	0.00534	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-24873-10	Fluoride	<2.14	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-10	560-24873-10	Lead, Total	0.00179	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-24873-10	Mercury, Dissolved	<0.000186	mg/L	UJ	Qualified due to method blank contamination
SEP-10	560-24873-10	Nickel, Dissolved	0.00324	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-24873-10	Nickel, Total	0.00308	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-10	560-24873-10	Sulfide	<0.7	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-10	560-24873-10	Total Organic Carbon	32.5	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-10	560-24873-10	Zinc, Dissolved	<0.00542	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-10	560-24873-10	Zinc, Total	0.0088	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Chloride	621	mg/L	J	Qualified due to high MS percent recovery
SEP-11	560-24873-9	Cobalt, Dissolved	0.00138	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Copper, Total	0.00791	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Fluoride	<2.12	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-11	560-24873-9	Lead, Total	0.00339	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Mercury, Dissolved	<0.000219	mg/L	UJ	Qualified due to method blank contamination
SEP-11	560-24873-9	Nickel, Dissolved	0.00392	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Nickel, Total	0.0041	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-24873-9	Sulfide	<0.044	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-11	560-24873-9	Total Organic Carbon	37.5	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-11	560-24873-9	Zinc, Dissolved	<0.00743	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-11	560-24873-9	Zinc, Total	0.00736	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Antimony, Dissolved	0.00184	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Chloride	604	mg/L	J	Qualified due to high MS percent recovery
SEP-12	560-24873-7	Cobalt, Dissolved	0.00167	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Copper, Dissolved	0.00141	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Copper, Total	0.00877	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Fluoride	<1.85	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-12	560-24873-7	Mercury, Total	<0.000292	mg/L	UJ	Qualified due to method blank contamination
SEP-12	560-24873-7	Nickel, Dissolved	0.00416	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Nickel, Total	0.00412	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Nitrate + Nitrite	1.36	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Sulfide	<0.034	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-12	560-24873-7	Thallium, Dissolved	0.000882	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-24873-7	Total Organic Carbon	28.9	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-12	560-24873-7	Zinc, Dissolved	<0.00979	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-12	560-24873-7	Zinc, Total	0.0211	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Chloride	598	mg/L	J	Qualified due to high MS percent recovery

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-13	560-24873-6	Cobalt, Dissolved	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Copper, Dissolved	0.00345	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Copper, Total	0.00399	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Fluoride	<1.81	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-13	560-24873-6	Lead, Total	0.00406	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Mercury, Total	<0.000218	mg/L	UJ	Qualified due to method blank contamination
SEP-13	560-24873-6	Nickel, Dissolved	0.00347	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Nickel, Total	0.00341	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Nitrate + Nitrite	1.44	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-24873-6	Sulfide	<0.042	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-13	560-24873-6	Total Organic Carbon	28.8	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-13	560-24873-6	Zinc, Dissolved	<0.0247	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-13	560-24873-6	Zinc, Total	0.00873	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Antimony, Dissolved	0.00163	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Chloride	675	mg/L	J	Qualified due to high MS percent recovery
SEP-2	560-24873-8	Cobalt, Dissolved	0.00137	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Copper, Dissolved	0.00334	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Copper, Total	0.00981	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Fluoride	<2.12	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-2	560-24873-8	Lead, Dissolved	0.000903	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Mercury, Total	<0.000269	mg/L	UJ	Qualified due to method blank contamination
SEP-2	560-24873-8	Nitrate + Nitrite	1.5	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-24873-8	Sulfide	<0.046	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-2	560-24873-8	Total Organic Carbon	41.5	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-2	560-24873-8	Zinc, Dissolved	<0.011	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-2	560-24873-8	Zinc, Total	0.0106	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-24873-13	Arsenic, Dissolved	<0.0126	mg/L	UJ	Qualified due to method blank contamination
SEP-3	560-24873-13	Chloride	420	mg/L	J	Qualified due to high MS percent recovery
SEP-3	560-24873-13	Copper, Dissolved	0.00151	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-24873-13	Fluoride	<0.92	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-3	560-24873-13	Mercury, Dissolved	<0.00027	mg/L	UJ	Qualified due to method blank contamination
SEP-3	560-24873-13	Mercury, Total	<0.000296	mg/L	UJ	Qualified due to method blank contamination

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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-3	560-24873-13	Molybdenum, Total	<0.018	mg/L	UJ	Qualified due to method blank contamination
SEP-3	560-24873-13	Selenium, Dissolved	0.00296	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-24873-13	Selenium, Total	0.00335	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-24873-13	Sulfide	<0.034	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-3	560-24873-13	Total Organic Carbon	<11.8	mg/L	UJ	Qualified due to equipment rinsate contamination and low MS/MSD percent recoveries
SEP-3	560-24873-13	Zinc, Dissolved	<0.0288	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-4	560-24873-5	Aluminum, Total	2.3	mg/L	J	Qualified due to high QA split RPD
SEP-4	560-24873-5	Chloride	566	mg/L	J	Qualified due to high MS percent recovery
SEP-4	560-24873-5	Copper, Dissolved	0.00167	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-24873-5	Copper, Total	0.0157	mg/L	J	Qualified due to high QA split RPD
SEP-4	560-24873-5	Fluoride	<1.6	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-4	560-24873-5	Iron, Total	1.72	mg/L	J	Qualified due to high QA split RPD
SEP-4	560-24873-5	Nickel, Dissolved	0.00304	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-24873-5	Nickel, Total	0.00402	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-24873-5	Nitrate + Nitrite	1.48	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-24873-5	Sulfide	<0.078	mg/L	UJ	Qualified due to equipment rinsate contamination and high QA split RPD
SEP-4	560-24873-5	Total Organic Carbon	36.5	mg/L	J	Qualified due to high field duplicate RPD, high QA split RPD, and low MS/MSD percent recoveries
SEP-4	560-24873-5	Total Suspended Solids	88	mg/L	J	Qualified due to high field duplicate RPD
SEP-4	560-24873-5	Zinc, Total	0.0244	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Arsenic, Dissolved	<0.0116	mg/L	UJ	Qualified due to method blank contamination
SEP-6	560-24873-14	Chloride	425	mg/L	J	Qualified due to high MS percent recovery
SEP-6	560-24873-14	Copper, Dissolved	0.00154	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Copper, Total	0.00559	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Fluoride	<0.891	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-6	560-24873-14	Lead, Total	0.00274	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Mercury, Dissolved	<0.000172	mg/L	UJ	Qualified due to method blank contamination
SEP-6	560-24873-14	Mercury, Total	<0.000285	mg/L	UJ	Qualified due to method blank contamination
SEP-6	560-24873-14	Molybdenum, Total	<0.0173	mg/L	UJ	Qualified due to method blank contamination
SEP-6	560-24873-14	Selenium, Dissolved	0.0029	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Selenium, Total	0.00315	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-24873-14	Sulfide	<0.029	mg/L	UJ	Qualified due to equipment rinsate contamination

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El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-6	560-24873-14	Total Organic Carbon	23	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-6	560-24873-14	Zinc, Dissolved	<0.0306	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-7	560-24873-12	Arsenic, Dissolved	<0.00952	mg/L	UJ	Qualified due to method blank contamination
SEP-7	560-24873-12	Chloride	413	mg/L	J	Qualified due to high MS percent recovery
SEP-7	560-24873-12	Copper, Dissolved	0.00166	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-24873-12	Copper, Total	0.00177	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-24873-12	Fluoride	<1.03	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-7	560-24873-12	Lead, Total	0.00102	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-24873-12	Mercury, Total	<0.000138	mg/L	UJ	Qualified due to method blank contamination
SEP-7	560-24873-12	Molybdenum, Total	<0.0165	mg/L	UJ	Qualified due to method blank contamination
SEP-7	560-24873-12	Selenium, Total	0.0012	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-24873-12	Sulfide	<0.036	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-7	560-24873-12	Total Organic Carbon	27.8	mg/L	J	Qualified due to low MS/MSD percent recoveries
SEP-7	560-24873-12	Zinc, Dissolved	<0.0459	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-9	560-24873-15	Arsenic, Dissolved	<0.00642	mg/L	UJ	Qualified due to method blank contamination
SEP-9	560-24873-15	Chloride	358	mg/L	J	Qualified due to high MS percent recovery
SEP-9	560-24873-15	Copper, Total	0.00198	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-9	560-24873-15	Fluoride	<0.809	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-9	560-24873-15	Iron, Total	0.17	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-9	560-24873-15	Lead, Total	0.000788	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-9	560-24873-15	Mercury, Dissolved	<0.00021	mg/L	UJ	Qualified due to method blank contamination
SEP-9	560-24873-15	Mercury, Total	<0.000215	mg/L	UJ	Qualified due to method blank contamination
SEP-9	560-24873-15	Molybdenum, Total	<0.0123	mg/L	UJ	Qualified due to method blank contamination
SEP-9	560-24873-15	Selenium, Total	0.00119	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-9	560-24873-15	Sulfide	<0.032	mg/L	UJ	Qualified due to equipment rinsate contamination
SEP-9	560-24873-15	Total Organic Carbon	<10.6	mg/L	UJ	Qualified due to equipment rinsate contamination and low MS/MSD percent recoveries
SEP-9	560-24873-15	Zinc, Dissolved	<0.039	mg/L	UJ	Qualified due to equipment rinsate contamination

Notes:
"<" = Analyte not detected above listed reporting limit
J = Analyte was positively identified above the SDL; however, the result is an estimated value

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments

UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value

mg/L = milligrams per liter ; ug/L = micrograms per liter

MS = Matrix Spike ; MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-120 / FD030111 / QA030111	**Total Metals (mg/L)**					
	Antimony	0.115	0.115	<1	0.13	12
	Arsenic	0.376	0.24	**44**	0.269	**33**
	Barium	0.029	0.0278	4.2	0.0305	5.0
	Cadmium	0.00257	0.00259	<1	0.00244	5.2
	Chromium	0.00433 J	0.00538	NC	0.00493 J	NC
	Cobalt	<0.00136	<0.00136	NC	0.000894 J	NC
	Copper	0.0072 J	0.00716 J	NC	0.00941	NC
	Iron	0.145 J	0.121 J	NC	0.131 J	NC
	Lead	0.000965 J	0.0013 J	NC	0.0023 J	NC
	Mercury	<0.00013	<0.00013	NC	0.000053 J	NC
	Molybdenum	0.256	0.118	**74**	0.124	**69**
	Nickel	<0.00217	<0.00217	NC	0.00176 J	NC
	Selenium	0.101	0.0283	**112**	0.0317	**104**
	Thallium	0.0144	0.000973 J	NC	0.00123 J	NC
	Zinc	0.0266	0.0233 J	NC	0.0258	3.1
	Dissolved Metals (mg/L)					
	Antimony	0.125	0.124	<1	0.12	4.1
	Arsenic	0.287	0.25	14	0.246	15
	Barium	0.0301	0.0288	4.4	0.0272	10
	Cadmium	0.00246	0.00279	13	0.00274	11
	Chromium	0.00358 J	0.00377 J	NC	0.0034 J	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0005	NC
	Copper	0.00664 J	0.00776 J	NC	0.000624	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	<0.0004	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.113	0.142	23	0.116	2.6
	Nickel	<0.00217	<0.00217	NC	<0.0014	NC
	Selenium	0.0293	0.0334	13	0.0288	1.7
	Thallium	<0.000693	0.00423	**NC**	<0.0008	NC
	Zinc	0.0258	0.0255	1.2	0.0248	4.0
	Cations (mg/L)					
	Aluminum	0.254	0.231	9.5	0.266	4.6
	Calcium	88.1	88.4	<1	91.7	4.0
	Magnesium	54.5	54.3	<1	57.2	4.8
	Manganese	0.00965 J	0.00957 J	NC	0.0175	NC
	Potassium	21.2	26.2	21	19.3	9.4
	Sodium	671	674	<1	605	10
	Anions (mg/L)					
	Chloride	321	312	2.8	349	8.4
	Fluoride	4.38	4.71	7.3	2.59	**51**
	Nitrate as N	6.91	7.03	1.7	6.47	6.6
	Nitrate Nitrite as N	6.91	7.03	1.7	6.47	6.6
	Nitrite as N	<0.4	<0.4	NC	<0.03	NC
	Sulfate	916	881	3.9	1050	14
	Sulfide	<0.0131	<0.0131	NC	<0.5	NC
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	382	379	<1	396	3.6
	Total Dissolved Solids	2310	2390	3.4	2500	7.9
	Total Organic Carbon	56.5	66.4	16	3.24	**178**
	Total Suspended Solids	9.0	9.2	2.2	8.0	12

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-71 / FD030311 / QA030311	**Total Metals (mg/L)**					
	Antimony	<0.00161	<0.00161	NC	<0.0005	NC
	Arsenic	0.196	0.194	1.0	0.212	7.8
	Barium	0.016	0.0159	<1	0.0145	9.8
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	0.00156 J	NC	0.000922 J	NC
	Cobalt	0.00164 J	0.00173 J	NC	0.0016 J	NC
	Copper	<0.00115	<0.00115	NC	0.00178 J	NC
	Iron	0.101 J	0.148 J	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	<0.0004	NC
	Mercury	0.00036 J	0.00033 J	NC	0.00038	NC
	Molybdenum	0.165	0.159	3.7	0.159	3.7
	Nickel	0.0115	0.012	4.3	0.0133	15
	Selenium	0.252	0.248	1.6	0.278	9.8
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	0.00436 J	0.00523 J	NC	0.00357	NC
	Dissolved Metals (mg/L)					
	Antimony	<0.00161	<0.00161	NC	<0.0005	NC
	Arsenic	0.195	0.190	2.6	0.19	2.6
	Barium	0.0131	0.013	<1	0.0132	<1
	Cadmium	<0.000854	<0.000854	NC	0.000601 J	NC
	Chromium	<0.0014	<0.0014	NC	0.000893 J	NC
	Cobalt	0.00152 J	0.00153 J	NC	0.00127 J	NC
	Copper	0.00201 J	0.00147 J	NC	<0.005	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	<0.0004	NC
	Mercury	0.00041 J	0.000445 J	NC	0.000387	NC
	Molybdenum	0.164	0.157	4.4	0.151	8.3
	Nickel	0.0116	0.0109	6.2	0.0119	2.6
	Selenium	0.251	0.239	4.9	0.261	3.9
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	0.00436 J	<0.00355	NC	0.00505	NC
	Cations (mg/L)					
	Aluminum	0.131	0.163	22	0.00403 J	**NC**
	Calcium	340	343	<1	349	2.6
	Magnesium	186	185	<1	166	11
	Manganese	0.0416	0.0491	17	0.00186 J	**NC**
	Potassium	18.7	18.6	<1	18.8	<1
	Sodium	1070	1030	3.8	954	11
	Anions (mg/L)					
	Chloride	581	713	20	591	1.7
	Fluoride	2.96	0.822	**113**	0.658	**127**
	Nitrate as N	79.4	80.1	<1	68.5	15
	Nitrate Nitrite as N	79.4	80.1	<1	68.5	15
	Nitrite as N	<1	<1	NC	<3	NC
	Sulfate	2340	3570	**42**	2220	5.3
	Sulfide	<0.0131	0.018 J	NC	<0.5	NC
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	262	258	1.5	282	7.4
	Total Dissolved Solids	5500	5390	2.0	4920	11
	Total Organic Carbon	40.4	36.9	9.1	2.18	**180**
	Total Suspended Solids	8.2	17.6	**73**	9.2	11

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-49 / FD030411 / QA030411	**Total Metals (mg/L)**					
	Antimony	1.33	1.46	9.3	1.58	17
	Arsenic	22.8	24.2	6.0	27.1	17
	Barium	0.0107	0.0107	<1	0.0106	<1
	Cadmium	0.0698	0.0713	2.1	0.0718	2.8
	Chromium	0.0066	0.00578	13	<0.006	NC
	Cobalt	0.00424 J	0.00403 J	NC	<0.005	NC
	Copper	0.121	0.129	6.4	0.123	1.6
	Iron	8.18	7.98	2.5	7.51	8.5
	Lead	0.00302 J	0.00387 J	NC	0.00686 J	NC
	Mercury	0.000205 J	0.000215 J	NC	0.000856	NC
	Molybdenum	2.14	2.12	<1	2.12	<1
	Nickel	0.0166	0.0183	9.7	0.0165 J	NC
	Selenium	0.615	0.626	1.8	0.503	20
	Thallium	0.0157	0.0156	<1	0.0166	5.6
	Zinc	11.2	12.4	10	13.7	20
	Dissolved Metals (mg/L)					
	Antimony	1.5	1.41	6.2	0.623	**83**
	Arsenic	14.7	14.6	<1	6.82	**73**
	Barium	0.00428 J	0.00464 J	NC	0.00407 J	NC
	Cadmium	0.0533	0.0559	4.8	0.0537	<1
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	0.00398 J	0.00379 J	NC	0.00141 J	NC
	Copper	0.0211	0.0208	1.4	0.00878	**82**
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	0.00117 J	NC
	Mercury	<0.00013	0.000264 J	NC	0.000398	NC
	Molybdenum	2.16	2.21	2.3	0.941	**79**
	Nickel	0.0151	0.0154	2.0	0.00654	**79**
	Selenium	0.569	0.572	<1	0.341	**50**
	Thallium	0.0118	0.0115	2.6	0.0122	3.3
	Zinc	9.01	8.62	4.4	4.35	**70**
	Cations (mg/L)					
	Aluminum	0.0752 J	0.172	**NC**	0.114	**NC**
	Calcium	478	481	<1	522	8.8
	Magnesium	152	149	2.0	154	1.3
	Manganese	2.08	2.11	1.4	2.02	2.9
	Potassium	248	249	<1	210	17
	Sodium	5620	1360	**122**	1400	**120**
	Anions (mg/L)					
	Chloride	364	367	<1	393	7.7
	Fluoride	24.2	24.4	<1	3.36	**151**
	Nitrate as N	15.5	15.5	<1	<0.03	**NC**
	Nitrate Nitrite as N	15.5	15.5	<1	<0.03	**NC**
	Nitrite as N	<1	<1	NC	<0.03	NC
	Sulfate	3490	3530	1.1	3180	9.3
	Sulfide	<0.0131	<0.0131	NC	<0.5	NC
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	637	620	2.7	663	4.0
	Total Dissolved Solids	7380	7220	2.2	6850	7.4
	Total Organic Carbon	115	72.7	**45**	7.63	**175**
	Total Suspended Solids	56	52	7.4	50.7	9.9

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-85 / FD030711 / QA030711	**Total Metals (mg/L)**					
	Antimony	0.00274 J	0.041	**NC**	0.0422	**NC**
	Arsenic	0.949	1.18	22	1.39	**38**
	Barium	0.581	0.0375	**176**	0.04	**174**
	Cadmium	0.00316	<0.000854	NC	<0.0006	NC
	Chromium	0.0489	0.00221 J	NC	0.00241 J	NC
	Cobalt	0.012	<0.00136	NC	<0.0005	NC
	Copper	0.134	<0.00115	NC	0.00187 J	NC
	Iron	28	<0.101	**NC**	<0.036	**NC**
	Lead	0.0562	<0.000733	**NC**	0.000691 J	**NC**
	Mercury	<0.00013	0.00019 J	NC	0.000092 J	NC
	Molybdenum	0.307	0.628	**69**	0.637	**70**
	Nickel	0.0316	<0.00217	**NC**	<0.0014	**NC**
	Selenium	0.145	0.157	7.9	0.174	18
	Thallium	0.0014	0.0137	**163**	0.0158	**167**
	Zinc	0.233	0.00391 J	**NC**	0.0165	**174**
	Dissolved Metals (mg/L)					
	Antimony	0.0414	0.0433	4.5	0.0433	4.5
	Arsenic	1.28	1.29	<1	1.46	13
	Barium	0.0384	0.039	1.6	0.0424	9.9
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	0.00148 J	0.00168 J	NC	0.00188 J	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0005	NC
	Copper	<0.00115	0.00142 J	NC	0.00146 J	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	<0.0004	NC
	Mercury	<0.00013	0.000234 J	NC	0.000059 J	NC
	Molybdenum	0.616	0.64	3.8	0.637	3.4
	Nickel	<0.00217	<0.00217	NC	<0.0014	NC
	Selenium	0.184	0.165	11	0.194	5.3
	Thallium	0.014	0.013	7.4	0.0174	22
	Zinc	<0.00355	<0.00355	NC	0.00368 J	NC
	Cations (mg/L)					
	Aluminum	<0.0072	<0.0072	NC	0.031	NC
	Calcium	119	119	<1	148	22
	Magnesium	60.2	61.1	1.5	65.5	8.4
	Manganese	<0.0027	<0.0027	NC	0.00178 J	NC
	Potassium	32.9	34.2	3.9	30.8	6.6
	Sodium	673	698	3.6	741	9.6
	Anions (mg/L)					
	Chloride	361	304	17	266	30
	Fluoride	14.1	2.8	**134**	2.44	**141**
	Nitrate as N	8.12	7.94	2.2	9.84	19
	Nitrate Nitrite as N	8.12	7.94	2.2	9.84	19
	Nitrite as N	<1	<1	NC	<0.03	NC
	Sulfate	1300	1060	20	974	29
	Sulfide	0.04 J	0.053	NC	<0.5	NC
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	346	345	<1	367	5.9
	Total Dissolved Solids	2720	2760	1.5	2690	1.1
	Total Organic Carbon	61.5	40.3	**42**	3.27	**180**
	Total Suspended Solids	2.4	2.6	8.0	2.0	18

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-133 / FD030711-2 / QA030711-2	**Total Metals (mg/L)**					
	Antimony	0.00197 J	0.00162 J	NC	0.0019 J	NC
	Arsenic	2.2	2.25	2.2	2.42	9.5
	Barium	0.0334	0.0303	9.7	0.0358	6.9
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	0.0021 J	<0.0014	NC	0.00066 J	NC
	Cobalt	<0.00136	<0.00136	NC	0.000813 J	NC
	Copper	0.0026 J	0.00131 J	NC	0.0016 J	NC
	Iron	0.697	0.614	13	0.632	9.8
	Lead	0.00159 J	0.00133 J	NC	0.00146 J	NC
	Mercury	0.000213 J	0.000288 J	NC	0.00012 J	NC
	Molybdenum	0.261	0.249	4.7	0.282	7.7
	Nickel	0.0303	0.0284	6.5	0.0334	9.7
	Selenium	0.0876	0.0744	16	0.0954	8.5
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	0.00676 J	0.00568 J	NC	0.0101	NC
	Dissolved Metals (mg/L)					
	Antimony	0.00208 J	0.00204 J	NC	0.00237 J	NC
	Arsenic	2.19	2.22	1.4	2.36	7.5
	Barium	0.0285	0.03	5.1	0.0322	12
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	<0.00136	<0.00136	NC	0.00104 J	NC
	Copper	<0.00115	<0.00115	NC	0.000585 J	NC
	Iron	0.275	0.285	3.6	0.277	<1
	Lead	<0.000733	<0.000733	NC	0.000449 J	NC
	Mercury	0.00017 J	0.000138 J	NC	0.000128 J	NC
	Molybdenum	0.252	0.266	5.4	0.263	4.3
	Nickel	0.0296	0.03	1.3	0.033	11
	Selenium	0.0947	0.0913	3.7	0.121	24
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	<0.00355	0.00433 J	NC	0.00683	NC
	Cations (mg/L)					
	Aluminum	0.215	0.0847 J	NC	0.182	17
	Calcium	140	144	2.8	178	24
	Magnesium	40.4	41.5	2.7	50.2	22
	Manganese	0.33	0.35	5.9	0.333	<1
	Potassium	39.6	40.8	3.0	40.5	2.2
	Sodium	749	768	2.5	762	1.7
	Anions (mg/L)					
	Chloride	312	314	<1	287	8.3
	Fluoride	2.8	2.76	1.4	2.56	9.0
	Nitrate as N	<0.515	<0.515	NC	0.141	NC
	Nitrate Nitrite as N	<1	<1	NC	0.59	NC
	Nitrite as N	<1	<1	NC	0.449	NC
	Sulfate	1150	1120	2.6	1090	5.4
	Sulfide	0.029 J	0.027 J	NC	1.0	NC
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	382	380	<1	405	5.8
	Total Dissolved Solids	2840	2900	2.1	2910	2.4
	Total Organic Carbon	40.2	65.4	**48**	3.48	**168**
	Total Suspended Solids	10.8	7.2	**40**	5.6	**63**

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
SEP-4 / FD030811 / QA030811	**Total Metals (mg/L)**					
	Antimony	<0.00161	<0.00161	NC	0.000732 J	NC
	Arsenic	0.113	0.0994	13	0.108	4.5
	Barium	0.085	0.0774	9.4	0.0719	17
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	<0.0014	NC	0.00081 J	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0005	NC
	Copper	0.0157	0.0115	31	0.00846	**60**
	Iron	1.72	1.3	28	0.925	**60**
	Lead	0.0112	0.00843	28	0.00774	37
	Mercury	<0.00013	0.000235 J	NC	<0.000042	NC
	Molybdenum	0.124	0.113	9.3	0.11	12
	Nickel	0.00402 J	0.00388 J	NC	0.00354 J	NC
	Selenium	0.00762	0.00652	16	0.00656	15
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	0.0244 J	0.0188 J	NC	0.0274	NC
	Dissolved Metals (mg/L)					
	Antimony	<0.00161	<0.00161	NC	0.000967 J	NC
	Arsenic	0.101	0.0894	12	0.09	12
	Barium	0.0605	0.0621	2.6	0.0576	4.9
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0005	NC
	Copper	0.00167 J	0.00259 J	NC	0.00232 J	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	0.000967 J	NC	0.000842 J	NC
	Mercury	<0.00013	0.000222 J	NC	0.000314	NC
	Molybdenum	0.117	0.12	2.5	0.101	15
	Nickel	0.00304 J	0.00281 J	NC	0.00382 J	NC
	Selenium	0.00722	0.00583	21	0.0071	1.7
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	<0.00355	0.00696 J	NC	0.0068	NC
	Cations (mg/L)					
	Aluminum	2.3	2.1	9.1	0.95	**83**
	Calcium	125	129	3.1	143	13
	Magnesium	67.2	67.8	<1	70.4	4.7
	Manganese	0.633	0.642	1.4	0.593	6.5
	Potassium	25.9	25.5	1.6	21.7	18
	Sodium	760	754	<1	803	5.5
	Anions (mg/L)					
	Chloride	566	584	3.1	530	6.6
	Fluoride	1.6	1.45	9.8	1.51	5.8
	Nitrate as N	NA	NA	NC	0.382	NC
	Nitrate Nitrite as N	1.48 J	1.4 J	NC	0.52	NC
	Nitrite as N	NA	NA	NC	0.138	NC
	Sulfate	1010	1040	2.9	941	7.1
	Sulfide	0.078	0.064	20	5.8	**195**
	General Chemistry (mg/L)					
	Total Alkalinity as CaCO3	249	249	<1	256	2.8
	Total Dissolved Solids	2820	3010	6.5	2860	1.4
	Total Organic Carbon	36.5	14	**89**	8.39	**125**
	Total Suspended Solids	88	274	**103**	92.8	5.3

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
EL Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)

Notes:

RPD = Relative percent difference; [(difference)/(average)]*100

Bolded values indicate field duplciate or QA split outliers

If results are below five times the MQL, the difference between the results should be less than the MQL

"<" = Analyte not detected above listed reporting limit

J = Estimated value; detected between the SDL and MQL

NC = Not Calculated; RPD values were not calculated for non-detect values or trace values

NA = Not Analyzed

mg/L = milligrams per liter

QA = Quality assurance

SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 4
Completeness Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	70	67[d,e]	96	70	100
Arsenic	70	56[a,b,c,d,e]	80	70	100
Barium	70	62[b,d,e]	88	70	100
Cadmium	70	70	100	70	100
Chromium	70	60[b]	86	70	100
Cobalt	70	70	100	70	100
Copper	70	53[a,b,e]	76	70	100
Iron	70	64[b,d,e]	91	70	100
Lead	70	59[a,b,d,e]	84	70	100
Mercury	70	59[a,c]	84	70	100
Molybdenum	70	59[a,d,e]	84	70	100
Nickel	70	60[b,c,e]	86	70	100
Selenium	70	64[a,d,e]	91	70	100
Thallium	70	67[d,e]	96	70	100
Zinc	70	58[b,c,e]	83	70	100
Dissolved Metals					
Antimony	70	68[e]	97	70	100
Arsenic	70	56[a,b,c,e]	80	70	100
Barium	70	64[b]	91	70	100
Cadmium	70	68[a]	97	70	100
Chromium	70	66[b]	94	70	100
Cobalt	70	70	100	70	100
Copper	70	49[a,b,c,e]	70	70	100
Iron	70	69[b]	99	70	100
Lead	70	70	100	70	100
Mercury	70	60[a]	86	70	100
Molybdenum	70	67[b,e]	96	70	100
Nickel	70	62[b,c,e]	89	70	100
Selenium	70	68[e]	97	70	100
Thallium	70	64[b,d]	91	70	100
Zinc	70	37[a,b,c,e]	53	70	100
Cations					
Aluminum	70	58[a,b,d,e]	83	70	100
Calcium	70	64[c]	91	70	100
Magnesium	70	70	100	70	100
Manganese	70	65[a,b,e]	93	70	100
Potassium	70	60[a,c]	86	70	100
Sodium	70	67[d,e]	96	70	100
Anions					
Chloride	70	45[b,c]	64	70	100
Fluoride	70	45[b,d,e]	64	70	100
Nitrate	54	46[b,e,f]	85	54	100
Nitrate + Nitrite	70	66[e,f]	94	70	100
Nitrite	54	51[c,f]	94	54	100
Sulfate	70	43[c,d]	61	70	100
Sulfide	70	39[a,b,e]	56	70	100

Table 4
Completeness Summary
Groundwater and Surface Water Samples - February/March 2011
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
General Chemistry					
Total Alkalinity	70	70	100	70	100
Total Dissolved Solids	70	70	100	70	100
Total Organic Carbon	70	40[a,b,c,d,e]	57	70	100
Total Suspended Solids	70	61[b,d,e]	87	70	100
TOTALS	**3258**	**2826**	**87**	**3258**	**100**

Notes:

Total number of samples includes field samples, field duplicate samples, and QA splits

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

[a] Results qualified due to method blank contamination

[b] Results qualified due to equipment rinsate contamination

[c] Results qualified due to MS/MSD percent recovery outliers

[d] Results qualified due to high field duplicate RPD outliers

[e] Results qualified due to high QA split RPD outliers

[f] Results qualified due to holding time exceedance

Texas Custodial Trust

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Data Usability Summary Groundwater and Surface Water Sampling August/September 2011

January 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater and surface water samples collected during July, August, and September 2011 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-

13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. ALS Environmental (ALS), located in Houston, Texas, analyzed samples as the QA laboratory. Both TestAmerica and ALS are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the groundwater and surface water samples collected during August through September 2011 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 34 groundwater samples and 11 surface water samples were collected during the sampling event. The samples were submitted to TestAmerica and ALS for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TDS) by USEPA Method 160.2
- anions (chloride, nitrate, nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2 or 300.0
- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

The total and dissolved metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc.

Nine field quality assurance samples (i.e., equipment rinsate blanks, field duplicates, and quality assurance [QA] splits) were also collected and analyzed as part of the sampling program. The samples were collected using low-flow purge technique.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, equipment rinsate blanks)
- surrogate recovery (for organic parameters)
- laboratory control sample (LCS) percent recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and RPD
- duplicates (field duplicates, QA split samples)
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater and surface water samples was found to be complete. Chains-of-custody included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Several sample coolers were received at the slightly below the acceptance temperature limit of 4 ± 2 degrees Celsius. These temperature outliers ranged from 0.8 to 1.8 degrees Celsius. These outliers did not impact the sample results and data qualification was not required.

Additionally, three sample coolers were received above the acceptance temperature limit. The temperature outliers range from 8.1 to 13.8 degrees Celsius. The affected samples results were qualified "J" and "UJ" to indicate a potential low bias.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- The nitrate + nitrite holding times were exceeded for samples EP-85 and EP-78 (analytical batch 560-27314). Results were qualified "J" to indicate a potential bias.

- The nitrate and nitrate + nitrite holding times were exceeded for sample EP-135. Results were qualified "J" to indicate a potential bias.

- The nitrate, nitrite, and nitrate + nitrite holding times were exceeded for samples EP-4, EP-6, EP-7, EP-20, EP-133, SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13, and FD091211. Results were qualified "UJ" to indicate a potential bias.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-62670 had a TOC detection (0.585 milligrams per liter [mg/L]). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-62910 had a sodium detection (1.149 mg/L). Data qualification was not required because the total and dissolved sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-63797 had a TOC detection (0.295 mg/L). Data qualification was not required because the TOC detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-63914 had detections of barium (0.001454 mg/L) and molybdenum (0.001598 mg/L). The total barium result for sample EP-49 was qualified "UJ" to indicate a potential bias. Data qualification was not required for dissolved barium, total molybdenum, and dissolved molybdenum results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-63955 (prep batch 560-63849) had detections of aluminum (0.04746 mg/L), calcium (0.2356 mg/L), and iron (0.1078 mg/L). Data qualification was not required for the total aluminium, total calcium, and total iron results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-63955 (prep batch 560-63924) had detections of nickel (0.003375 mg/L), selenium (0.001502 mg/L), and zinc (0.1517 mg/L). The dissolved nickel results for EP-75 and EP-49 were qualified "UJ" to indicate a potential bias. Data qualification was not required for the total nickel, total selenium, dissolved selenium, total zinc, and dissolved zinc results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-63978 had a TOC detection (0.338 mg/L). The total organic carbon result for EP-71, FD090111, EP-68, and EP-81 were qualified "UJ" to indicate potential bias.

- The method blank associated with analytical batch 560-64024 had a nickel detection (0.003289 mg/L). Data qualification was not required for the total and dissolved nickel results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-64026 had a TOC detection (0.547 and 0.699 mg/L). The TOC result for EP-20, FD090911, MW-1, and MW-2, were qualified "UJ" to indicate potential bias.

- The method blank associated with analytical batch 560-64046 had an arsenic detection (0.001403 mg/L). The total arsenic result for EP-4 was qualified "UJ" to indicate potential bias. Data qualification was not required for the dissolved arsenic results because the detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-64092 (prep batch 560-63924) had an arsenic detection (0.001257 mg/L). Data qualification was not required for the dissolved arsenic results because the detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-64092 (prep batch 560-63949) had detections of molybdenum (0.001424 mg/L) and selenium (0.001642 mg/L). Data qualification was not required for the the total molybdenum, dissolved molybdenum, total selenium, and dissolved selenium results because the detections in the associated samples for these analytes were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-64149 had an arsenic detection (0.001693 mg/L). The total and dissolved arsenic results for SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-11, SEP-12, and SEP-13 were qualified "UJ" to indicate a potential bias.

- The method blank associated with analytical batch 560-64272 had a TOC detection (0.291 mg/L). Data qualification was not required for the TOC results because the detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with ALS batch 55221 had a selenium detection (0.001151 mg/L). Data qualification was not required because the total selenium

detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with ALS batch 55334 had detections of molybdenum (0.001685 mg/L), selenium (0.001088 mg/L), and zinc (0.003241 mg/L). The total zinc result for split sample QA090711 was qualified "UJ" to indicate a potential bias. Data qualification was not required for total molybdenum and total selenium results because the detections in the associated sample were greater than ten times the method blank concentration.

- The method blank associated with ALS batch 55337 had detections of barium (0.00161 mg/L), selenium (0.001325 mg/L), and zinc (0.003706 mg/L). The dissolved zinc result for split sample QA090711 and the total and dissolved zinc results for split sample QA090911 were qualified "UJ" to indicate a potential bias. Data qualification was not required for total barium, dissolved barium, total selenium, and dissolved selenium results because the detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with ALS batch 55452 had detections of copper (0.001668 mg/L) and selenium (0.001557 mg/L). The total copper and total selenium results for split sample QA091211 were qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch 55453 had a selenium detection (0.001793 mg/L). The dissolved selenium result for split sample QA091211 was qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch R115778 had a TOC detection (0.2369 mg/L). The TOC result for QA090111was qualified "UJ" to indicate a potential bias.

3.4.2. Equipment Rinsate Blank Interference

Target compounds were not detected in the equipment rinsate blank with the following exceptions:

- The equipment rinsate blank ER090811 collected on September 8, 2011 contained detections of total aluminum (0.105 mg/L), total arsenic (0.00579 mg/L), total barium (0.00166 mg/L), total chromium (0.00148 mg/L), total copper (0.00214 mg/L), total iron (0.104 mg/L), total nickel (0.0133 mg/L), total selenium (0.00169 mg/L), dissolved arsenic (0.315 mg/L), dissolved barium (0.0971 mg/L), dissolved iron (0.174 mg/L), dissolved molybdenum (0.0607 mg/L), dissolved selenium (0.00182 mg/L), calcium (0.253 mg/L), fluoride (0.0253 mg/L), sulfate (0.439 mg/L), and TOC (0.899 mg/L).

Associated sample results were qualified "UJ to indicate a potential bias. Data qualification was not required if parameter results in the associated samples were greater than ten times the equipment rinsate blank concentration. The following samples were qualified based on equipment blank contamination:

- The total arsenic results for samples EP-4, EP-6, and EP-7; the total chromium result for sample EP-133; the total copper result for sample EP-133; the total iron result for sample EP-7; the total nickel results for samples EP-4, EP-6, and EP-133; and the total selenium result for sample EP-6 were qualified "UJ" to indicate a potential bias.

- The dissolved arsenic results for samples EP-4, EP-6, EP-7, and EP-133; the dissolved barium results for samples EP-4, EP-6, EP-7, and EP-133; the dissolved iron results for sample EP-4, EP-7, and EP-133; the dissolved molybdenum results for sample EP-4, EP-6, EP-7, and EP-133; and the dissolved selenium results for samples EP-4 and EP-6 were qualified "UJ" to indicate a potential bias.

- The TOC result for sample EP-4 was qualified "UJ" to indicate a potential bias.

3.5. Surrogate Recovery

Surrogate percent recoveries were within acceptance limits.

3.6. Laboratory Control Sample Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J".

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits.

3.7. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J".

- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The RPD for sulfide (23 percent) was above the acceptance limit (20 percent) for sample EP-77 (analytical batch 560-64008). Data qualification was not required because the MS and MSD recoveries for sulfide were within acceptance limits (75 to 125 percent).

- The MS and MSD recoveries for chloride (73 and 76 percent) and sulfate (52 and 64 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-63972. The chloride and sulfate results for samples EP-62, EP-119, EP-58, EP-132, EP-135, and FD090711 were qualified "J" to indicate a potential low bias.

- The MS and MSD recoveries for sulfide (136 and 131 percent) were above acceptance limits (75 to 125 percent) for analytical batch 560-64008. The sulfide result for sample EP-135 was qualified "J" to indicate a potential high bias.

- The MS recovery for nitrite (121 percent) was above acceptance limits (80 to 120 percent) for analytical batch 560-64075. Data qualification was not required because the nitrite MSD and LCS recoveries were within acceptance limits.

- The MSD recovery for sodium (74 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-64149. Data qualification was not required because the sodium MS and LCS recoveries were within acceptance limits.

- The MSD recovery for nitrate (79 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-64104. Data qualification was not required because the nitrate MS and LCS recoveries were within acceptance limits.

- The MS and MSD recoveries for calcium (56 and 54 percent), magnesium (73.2 and 62.2 percent), and sodium (0 and 0 percent); the MS recovery for arsenic (134 percent); and the MSD recovery for potassium (87 and 76.8 percent) were outside acceptance limits (80 to 120 percent) for ALS batch 55334. The sodium result for split sample QA090911 was qualified "J" to indicate a potential low bias. Data qualification was not required for arsenic, calcium, magnesium, and potassium because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration..

- The MS and MSD recoveries for chloride (-42.1 and 1.23 percent), nitrate (130 and 134 percent), and sulfate (-278 and -133 percent); and the MSD recovery for nitrate + nitrite (122 percent) were outside acceptance limits (80 to 120 percent) for ALS batch R115854. The nitrate and nitrate + nitrite results for split sample QA090711 were qualified "J" to indicate a potential high bias. Data qualification was not required for chloride and sulfate because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for fluoride (133 and 138 percent) were above acceptance limits (80 to 120 percent) for ALS batch R115854. The fluoride result for sample QA090711 was qualified "J" to indicate a potential high bias.

- The MS recoveries for chloride (75.5 percent) and sulfate (34.4 percent) were below acceptance limits (80 to 120 percent) for ALS batch R116207. Data qualification was not required because the chloride and sulfate detections in the associated sample were greater than four times the matrix spike concentration.

3.8. Duplicates

3.8.1. Field Duplicates

Four field duplicates were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated

and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD values between sample EP-71 and field duplicate FD090111 for total aluminum (34 percent), total iron (33 percent), and total nickel (100 percent) were above the acceptance limit. The difference between EP-71 and FD090111 results for total copper exceeded the MQL. Data were qualified "J" to indicate a potential bias.
- The RPD value between sample EP-119 and field duplicate FD090711 for TOC (155 percent) was above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.8.2. QA Split Samples

Four QA split samples were collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were calculated and are presented in Table 3. The split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPD values between sample EP-71 and split sample QA090111 for total iron (41 percent) and TSS (42 percent) were above the acceptance limit. The difference between sample EP-71 and split sample QA090111 for sulfide exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample EP-119 and split sample QA090711 for TSS (51 percent) and TOC (182 percent) were above the acceptance limit. The difference between sample EP-119 and split sample QA090111 for sulfide exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample MW-1 and split sample QA090911 for TOC (80 percent) was above the acceptance limit. The difference between sample MW-1 and split sample QA090911 for sulfide exceeded the MQL. Data were qualified "J" to indicate a potential bias.

- The RPD values between sample SEP-2 and split sample QA091211 for TOC (75 percent) was above the acceptance limit. The difference between sample SEP-2 and split sample QA091211 for sulfide exceeded the MQL. Data were qualified "J" to indicate a potential bias.

3.9. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total metals had contractual compliances below 90 percent due to method blank and equipment rinsate interference, high field duplicate and QA split RPD outliers, and a high cooler temperature outlier.

- Dissolved metals had contractual compliances below 90 percent due to method blank and equipment rinsate interference and a high cooler temperature outlier.

- Cations had contractual compliances below 90 percent due to equipment rinsate interference, MS/MSD percent recovery outliers, and a high cooler temperature outlier.

- Anions had contractual compliances below 90 percent due to holding time exceedances, MS/MSD percent recovery outliers, high QA split RPD outliers, and a high cooler temperature outlier.

- Total alkalinity and TDS had contractual compliances of 77 percent due to a high cooler temperature outlier.

- TOC had a contractual compliance of 49 percent due to method blank and equipment rinsate interference, MS/MSD percent recovery outliers, a high QA split RPD outlier, and a high cooler temperature outlier.

- TSS had a contractual compliance of 70 percent due to high field duplicate and QA split RPD outliers and a high cooler temperature outlier.

The results for the groundwater and surface water sampling event conducted in July, August, and September 2011 were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August/September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-4	560-28040-001	9/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-6	560-28040-002	9/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-7	560-28040-003	9/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-12	560-27939-004	9/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-13	560-27939-005	9/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-20	560-28052-006	9/9/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-49	560-27915-003	8/31/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-51	560-27939-001	9/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-52	560-27915-004	8/31/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-54	560-27915-002	8/31/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-58	560-28008-003	9/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-62	560-28008-001	9/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-68	560-27993-002	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-71	560-27939-002	9/1/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-75	560-27915-001	8/31/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-77	560-27993-001	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78	560-27314-002	7/28/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78	560-27886-004	8/30/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-81	560-27993-004	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-84	560-27886-001	8/30/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-85	560-27314-001	7/28/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-85	560-27993-003	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August/September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-95	560-27886-002	8/30/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-114	560-28052-001	9/9/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-116	560-28052-002	9/9/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-119	560-28008-002	9/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-120	560-27886-003	8/30/2011	N	Total and Dissolved Metals*, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-122	560-27993-006	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-132	560-28008-004	9/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-133	560-28040-004	9/8/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-135	560-28008-005	9/7/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
MW-1	560-28052-003	9/9/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
MW-2	560-28052-005	9/9/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
OBS-1	560-27993-005	9/6/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-1	560-28113-002	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-2	560-28113-009	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-3	560-28113-004	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-4	560-28113-006	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-6	560-28113-005	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-7	560-28113-003	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-9	560-28113-001	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-10	560-28113-011	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-11	560-28113-010	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-12	560-28113-008	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August/September 2011
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
SEP-13	560-28113-007	9/12/2011	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
ER090811	560-28040-005	9/8/2011	ER	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD090111	560-27939-003	9/1/2011	FD of EP-71	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD090711	560-28008-006	9/7/2011	FD of EP-119	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD090911	560-28052-004	9/9/2011	FD of MW-1	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD091211	560-28113-012	9/12/2011	FD of SEP-2	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA090111	1109057-01	9/1/2011	QA of EP-71	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA090711	1109206-01	9/7/2011	QA of EP-119	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA090911	1109312-01	9/9/2011	QA of MW-1	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA091211	1109379-01	9/12/2011	QA of SEP-2	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Notes:
N = Normal sample
ER = Equipment Rinsate blank
FD = Field Duplicate
QA = Quality Assurance split sample
Total and Dissolved Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc
*Also analyzed for dissolved aluminum, dissolved calcium, dissolved magnesium, dissolved manganese, and dissolved potassium
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate, nitrite, sulfate, and sulfide
TDS = Total Dissolved Solids
TSS = Total Suspended Solids
TOC = Total Organic Carbon

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-4	560-28040-001	Arsenic, Dissolved	<0.304	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-28040-001	Arsenic, Total	<0.00394	mg/L	UJ	Qualified due to method blank contamination; Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Barium, Dissolved	<0.0877	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-28040-001	Copper, Dissolved	0.0023	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Iron, Dissolved	<0.191	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Molybdenum, Dissolved	<0.0562	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-28040-001	Nickel, Total	<0.00348	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Nitrate as N	<0.206	mg/L	UJ	Qualified due to holding time exceedance
EP-4	560-28040-001	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-4	560-28040-001	Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-4	560-28040-001	Selenium, Dissolved	<0.00187	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Sulfide	0.036	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-28040-001	Total Organic Carbon	<7.11	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Antimony, Dissolved	0.00487	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-28040-002	Antimony, Total	0.0047	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-28040-002	Arsenic, Dissolved	<0.0159	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Arsenic, Total	<0.0161	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Barium, Dissolved	<0.0328	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Cobalt, Dissolved	0.00208	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-28040-002	Cobalt, Total	0.00207	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-28040-002	Molybdenum, Dissolved	<0.159	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Nickel, Total	<0.00557	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-6	560-28040-002	Nitrate as N	<0.206	mg/L	UJ	Qualified due to holding time exceedance
EP-6	560-28040-002	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-6	560-28040-002	Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-6	560-28040-002	Selenium, Dissolved	<0.00187	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-6	560-28040-002	Selenium, Total	<0.00226	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-7	560-28040-003	Arsenic, Dissolved	<0.0491	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Arsenic, Total	<0.05	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Barium, Dissolved	<0.0451	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Iron, Dissolved	<0.595	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Iron, Total	<0.637	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Molybdenum, Dissolved	<0.0967	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-7	560-28040-003	Nitrate as N	<0.206	mg/L	UJ	Qualified due to holding time exceedance
EP-7	560-28040-003	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-7	560-28040-003	Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-12	560-27939-004	Lead, Total	0.00272	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-27939-004	Nitrate as N	0.52	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-27939-004	Zinc, Total	0.00385	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Antimony, Dissolved	0.00302	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Antimony, Total	0.00423	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Cobalt, Dissolved	0.00177	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Mercury, Dissolved	0.000312	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Mercury, Total	0.00016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Sulfate	80.1	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Sulfide	0.023	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-27939-005	Thallium, Dissolved	0.000865	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-28052-006	Copper, Total	0.00343	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-28052-006	Lead, Dissolved	0.0013	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-28052-006	Lead, Total	0.00293	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-28052-006	Nitrate as N	69.9	mg/L	J	Qualified due to holding time exceedance
EP-20	560-28052-006	Nitrate Nitrite as N	69.9	mg/L	J	Qualified due to holding time exceedance
EP-20	560-28052-006	Nitrite as N	<1	mg/L	UJ	Qualified due to holding time exceedance

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-20	560-28052-006	Total Organic Carbon	<3.97	mg/L	UJ	Qualified due to method blank contamination
EP-49	560-27915-003	Barium, Total	<0.00679	mg/L	UJ	Qualified due to method blank contamination
EP-49	560-27915-003	Cobalt, Dissolved	0.00385	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-27915-003	Cobalt, Total	0.00359	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-27915-003	Lead, Total	0.00121	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-27915-003	Mercury, Dissolved	0.000372	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-27915-003	Mercury, Total	0.000309	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-27915-003	Nickel, Dissolved	<0.017	mg/L	UJ	Qualified due to method blank contamination
EP-49	560-27915-003	Sulfide	0.035	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-27939-001	Antimony, Dissolved	0.00375	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-27939-001	Antimony, Total	0.00455	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-27939-001	Mercury, Dissolved	0.000234	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-27939-001	Mercury, Total	0.000164	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-27939-001	Sulfide	0.027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-27915-004	Iron, Dissolved	0.246	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-27915-004	Mercury, Dissolved	0.00142	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-27915-004	Mercury, Total	0.000625	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-27915-004	Sulfide	0.027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-27915-002	Chromium, Total	0.00497	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-27915-002	Lead, Total	0.00413	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-27915-002	Mercury, Dissolved	0.000293	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-27915-002	Mercury, Total	0.00019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Antimony, Dissolved	0.00219	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Antimony, Total	0.00224	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Chloride	685	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-58	560-28008-003	Copper, Dissolved	0.00202	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Lead, Dissolved	0.0011	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Sulfate	4200	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-58	560-28008-003	Zinc, Dissolved	0.00648	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-28008-003	Zinc, Total	0.00585	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Cadmium, Dissolved	0.00124	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Cadmium, Total	0.00098	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Chloride	300	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-62	560-28008-001	Copper, Dissolved	0.00258	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Copper, Total	0.00222	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Lead, Dissolved	0.000831	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Lead, Total	0.000799	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Nickel, Dissolved	0.00489	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Nickel, Total	0.0041	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Sulfate	1090	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-62	560-28008-001	Zinc, Dissolved	0.0236	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-28008-001	Zinc, Total	0.0196	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Arsenic, Dissolved	0.00385	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Chromium, Total	0.00488	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Copper, Total	0.00238	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Lead, Total	0.00102	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Mercury, Dissolved	0.00016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Total Organic Carbon	<2.55	mg/L	UJ	Qualified due to method blank contamination
EP-68	560-27993-002	Zinc, Dissolved	0.00691	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-27993-002	Zinc, Total	0.00754	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Aluminum	0.33	mg/L	J	Qualified due to high field duplicate RPD
EP-71	560-27939-002	Chromium, Total	0.00197	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Cobalt, Dissolved	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Cobalt, Total	0.00169	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Copper, Dissolved	0.00311	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Copper, Total	0.0043	mg/L	J	Qualified due to high field duplicate RPD; Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Iron, Total	0.375	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
EP-71	560-27939-002	Lead, Dissolved	0.00163	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-71	560-27939-002	Lead, Total	0.00288	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Manganese	0.0431	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Mercury, Dissolved	0.000502	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Mercury, Total	0.000381	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Nickel, Total	0.015	mg/L	J	Qualified due to high field duplicate RPD
EP-71	560-27939-002	Sulfide	0.024	mg/L	J	Qualified due to high QA split RPD; Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Total Organic Carbon	<3.11	mg/L	UJ	Qualified due to method blank contamination
EP-71	560-27939-002	Total Suspended Solids	15.4	mg/L	J	Qualified due to high QA split RPD
EP-71	560-27939-002	Zinc, Dissolved	0.00599	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-27939-002	Zinc, Total	0.00846	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-27915-001	Cadmium, Dissolved	0.00157	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-27915-001	Cadmium, Total	0.00158	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-27915-001	Copper, Total	0.0086	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-27915-001	Nickel, Dissolved	<0.0208	mg/L	UJ	Qualified due to method blank contamination
EP-75	560-27915-001	Sulfide	0.03	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-27915-001	Zinc, Dissolved	0.0229	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Antimony, Dissolved	0.00374	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Antimony, Total	0.00414	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Chromium, Total	0.00163	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Copper, Total	0.00229	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Iron, Total	0.171	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Lead, Dissolved	0.000749	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Lead, Total	0.00145	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Manganese	0.0189	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Mercury, Dissolved	0.000155	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Mercury, Total	0.000157	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Nickel, Dissolved	0.00318	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Nitrate as N	0.656	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Nitrate Nitrite as N	0.656	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Sulfide	0.029	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-27993-001	Zinc, Total	0.00498	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[b]	560-27886-004	Iron, Total	0.11	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[a]	560-27314-002	Lead, Total	0.00398	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[b]	560-27886-004	Lead, Total	0.00127	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[a]	560-27314-002	Manganese	0.0209	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[b]	560-27886-004	Nickel, Total	0.0049	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[a]	560-27314-002	Nitrate Nitrite as N	7.58	mg/L	J	Qualified due to holding time exceedance
EP-78[a]	560-27314-002	Sulfide	0.019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[b]	560-27886-004	Sulfide	0.018	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78[a]	560-27314-002	Zinc, Total	0.0207	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Antimony, Dissolved	0.00357	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Antimony, Total	0.00357	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Cadmium, Dissolved	0.00117	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Cadmium, Total	0.00124	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Chromium, Total	0.00169	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Copper, Dissolved	0.00256	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Copper, Total	0.004	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Iron, Total	0.11	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Lead, Total	0.000773	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Nickel, Dissolved	0.00275	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Nickel, Total	0.0036	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Total Organic Carbon	<2.71	mg/L	UJ	Qualified due to method blank contamination
EP-81	560-27993-004	Zinc, Dissolved	0.00724	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-27993-004	Zinc, Total	0.00874	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-27886-001	Antimony, Dissolved	0.00438	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-27886-001	Cobalt, Total	0.00355	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-27886-001	Mercury, Dissolved	0.000431	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-85[a]	560-27314-001	Aluminum, Dissolved	0.0284	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[a]	560-27314-001	Chromium, Dissolved	0.00219	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[b]	560-27993-003	Chromium, Dissolved	0.00152	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[b]	560-27993-003	Chromium, Total	0.00197	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[a]	560-27314-001	Copper, Total	0.00606	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[b]	560-27993-003	Mercury, Total	0.000132	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[a]	560-27314-001	Nickel, Total	0.00235	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[a]	560-27314-001	Nitrate Nitrite as N	8.78	mg/L	J	Qualified due to holding time exceedance
EP-85[a]	560-27314-001	Sulfide	0.024	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-85[a]	560-27314-001	Zinc, Dissolved	0.0062	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Chromium, Total	0.0039	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Cobalt, Dissolved	0.00178	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Copper, Dissolved	0.00633	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Copper, Total	0.00858	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Lead, Dissolved	0.00259	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Mercury, Dissolved	0.00015	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-27886-002	Nickel, Total	0.00251	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-28052-001	Aluminum, Total	0.0461	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-28052-001	Copper, Total	0.00794	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-28052-001	Lead, Total	0.00352	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-116	560-28052-002	Mercury, Dissolved	0.000691	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-28008-002	Chloride	301	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-119	560-28008-002	Nickel, Dissolved	0.00403	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-28008-002	Nickel, Total	0.00332	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-28008-002	Sulfate	1120	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-119	560-28008-002	Sulfide	<0.0131	mg/L	UJ	Qualified due to high QA split RPD
EP-119	560-28008-002	Total Organic Carbon	53.8	mg/L	J	Qualified due to high field duplicate RPD; Qualified due to high QA split RPD
EP-119	560-28008-002	Total Suspended Solids	5.2	mg/L	J	Qualified due to high QA split RPD
EP-120	560-27886-003	Chromium, Dissolved	0.00356	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Chromium, Total	0.00445	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Copper, Dissolved	0.00773	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Iron, Total	0.144	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Lead, Total	0.00295	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Mercury, Total	0.000142	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Zinc, Dissolved	0.0102	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-27886-003	Zinc, Total	0.0117	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-27993-006	Aluminum, Total	0.0487	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-27993-006	Mercury, Total	0.000211	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-122	560-27993-006	Nickel, Total	0.00258	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-28008-004	Chloride	268	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-132	560-28008-004	Lead, Dissolved	0.0017	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-28008-004	Manganese	0.0149	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-28008-004	Sulfate	1260	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-132	560-28008-004	Zinc, Total	0.00552	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Antimony, Total	0.00235	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Arsenic, Dissolved	<2.17	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Barium, Dissolved	<0.0311	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Chromium, Total	<0.00291	mg/L	UJ	Qualified due to equipment rinsate contamination; Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Cobalt, Dissolved	0.00241	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Cobalt, Total	0.00167	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Copper, Total	<0.0168	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Iron, Dissolved	<0.922	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Molybdenum, Dissolved	<0.265	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Nickel, Total	<0.0313	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-133	560-28040-004	Nitrate as N	<0.206	mg/L	UJ	Qualified due to holding time exceedance
EP-133	560-28040-004	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-133	560-28040-004	Nitrite as N	<0.4	mg/L	UJ	Qualified due to holding time exceedance
EP-133	560-28040-004	Zinc, Dissolved	0.00393	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-28040-004	Zinc, Total	0.0147	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-28008-005	Chloride	951	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-135	560-28008-005	Copper, Dissolved	0.00227	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-28008-005	Lead, Dissolved	0.00105	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-28008-005	Nitrate as N	54.2	mg/L	J	Qualified due to holding time exceedance
EP-135	560-28008-005	Nitrate Nitrite as N	54.2	mg/L	J	Qualified due to holding time exceedance
EP-135	560-28008-005	Sulfate	2970	mg/L	J	Qualified due to low MS/MSD percent recovery
EP-135	560-28008-005	Sulfide	0.02	mg/L	J	Qualfied due to high MS/MSD percent recovery
EP-135	560-28008-005	Zinc, Dissolved	0.00399	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Aluminum	0.234	mg/L	J	Qualified due to high field duplicate RPD
FD090111	560-27939-003	Chromium, Total	0.00166	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Cobalt, Dissolved	0.00174	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Cobalt, Total	0.00181	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Copper, Dissolved	0.00304	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Copper, Total	0.0756	mg/L	J	Qualified due to high field duplicate RPD
FD090111	560-27939-003	Iron, Total	0.269	mg/L	J	Qualified due to high field duplicate RPD
FD090111	560-27939-003	Lead, Dissolved	0.00208	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Lead, Total	0.00319	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Manganese	0.037	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Mercury, Dissolved	0.000351	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Mercury, Total	0.000306	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Nickel, Total	0.0448	mg/L	J	Qualified due to high field duplicate RPD
FD090111	560-27939-003	Sulfide	0.03	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Total Organic Carbon	<3.07	mg/L	UJ	Qualified due to method blank contamination
FD090111	560-27939-003	Zinc, Dissolved	0.006	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090111	560-27939-003	Zinc, Total	0.00791	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090711	560-28008-006	Chloride	299	mg/L	J	Qualified due to low MS/MSD percent recovery
FD090711	560-28008-006	Nickel, Dissolved	0.00387	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090711	560-28008-006	Nickel, Total	0.00333	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090711	560-28008-006	Sulfate	1310	mg/L	J	Qualified due to low MS/MSD percent recovery
FD090711	560-28008-006	Total Organic Carbon	6.76	mg/L	J	Qualified due to high field duplicate RPD
FD090711	560-28008-006	Zinc, Total	0.00368	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090911	560-28052-004	Total Organic Carbon	<4.36	mg/L	UJ	Qualified due to method blank contamination
FD091211	560-28113-012	Aluminum	9.62	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Arsenic, Dissolved	0.0111	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Arsenic, Total	0.0132	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Barium, Dissolved	0.0977	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Barium, Total	0.17	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Calcium	79.5	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Chloride	132	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Chromium, Total	0.00725	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Cobalt, Dissolved	0.00155	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Cobalt, Total	0.00282	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Copper, Dissolved	<0.002	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Copper, Total	0.00731	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Fluoride	0.719	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Iron, Dissolved	0.163	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Iron, Total	6.37	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier

Table 2
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Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD091211	560-28113-012	Lead, Total	0.00639	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Magnesium	20.2	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Manganese	0.266	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Molybdenum, Dissolved	0.0263	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Molybdenum, Total	0.0241	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Nickel, Total	0.00749	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
FD091211	560-28113-012	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
FD091211	560-28113-012	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
FD091211	560-28113-012	Potassium	10.7	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Selenium, Dissolved	0.00156	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Selenium, Total	0.00222	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
FD091211	560-28113-012	Sodium	153	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Sulfate	242	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Total Alkalinity as $CaCO_3$	175	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Total Dissolved Solids	746	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Total Organic Carbon	6.86	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Total Suspended Solids	326	mg/L	J	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
FD091211	560-28113-012	Zinc, Total	0.019	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
MW-1	560-28052-003	Sulfide	0.016	mg/L	J	Qualified due to high QA split RPD; Estimated; Analyte detected between SDL and MQL
MW-1	560-28052-003	Total Organic Carbon	<4.83	mg/L	UJ	Qualified due to method blank contamination; Qualified due to high QA split RPD
MW-2	560-28052-005	Lead, Total	0.000772	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-2	560-28052-005	Nitrate as N	0.516	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-2	560-28052-005	Nitrate Nitrite as N	0.516	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-2	560-28052-005	Total Organic Carbon	<4.07	mg/L	UJ	Qualified due to method blank contamination
OBS-1	560-27993-005	Cadmium, Dissolved	0.00106	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-27993-005	Cadmium, Total	0.00105	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-27993-005	Mercury, Dissolved	0.000144	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-27993-005	Mercury, Total	0.000153	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-27993-005	Nickel, Dissolved	0.0049	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Cadmium, Dissolved	0.00106	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Chromium, Dissolved	0.00204	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Chromium, Total	0.00132	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Cobalt, Dissolved	0.00186	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Cobalt, Total	0.00144	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Copper, Dissolved	0.00495	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Iron, Dissolved	0.0394	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Iron, Total	0.248	mg/L	J	Qualified due to high QA split RPD
QA090111	1109057-01	Lead, Dissolved	0.0017	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Lead, Total	0.00219	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Sulfide	11.8	mg/L	J	Qualified due to high QA split RPD
QA090111	1109057-01	Thallium, Dissolved	0.00138	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090111	1109057-01	Total Organic Carbon	<2.21	mg/L	UJ	Qualified due to method blank contamination
QA090111	1109057-01	Total Suspended Solids	23.6	mg/L	J	Qualified due to high QA split RPD
QA090711	1109206-01	Cadmium, Dissolved	0.000671	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
QA090711	1109206-01	Cobalt, Dissolved	0.000879	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Copper, Dissolved	0.000616	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Fluoride	3.16	mg/L	J	Qualified due to high MS/MSD percent recovery
QA090711	1109206-01	Lead, Dissolved	0.000421	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Nickel, Dissolved	0.00275	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Nickel, Total	0.00342	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Nitrate as N	4.63	mg/L	J	Qualified due to high MS/MSD percent recovery
QA090711	1109206-01	Nitrate Nitrite as N	4.67	mg/L	J	Qualified due to high MSD percent recovery
QA090711	1109206-01	Nitrite as N	0.039	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090711	1109206-01	Sulfide	35.2	mg/L	J	Qualified due to high QA split RPD
QA090711	1109206-01	Total Organic Carbon	2.47	mg/L	J	Qualified due to high QA split RPD
QA090711	1109206-01	Total Suspended Solids	8.8	mg/L	J	Qualified due to high QA split RPD
QA090711	1109206-01	Zinc, Dissolved	<0.00614	mg/L	UJ	Qualified due to method blank contamination
QA090711	1109206-01	Zinc, Total	<0.0066	mg/L	UJ	Qualified due to method blank contamination
QA090911	1109312-01	Copper, Total	0.00157	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090911	1109312-01	Nickel, Dissolved	0.00239	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090911	1109312-01	Nickel, Total	0.00144	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090911	1109312-01	Nitrite as N	0.033	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA090911	1109312-01	Sodium	404	mg/L	J	Qualified due to low MS/MSD percent recovery
QA090911	1109312-01	Sulfide	30.8	mg/L	J	Qualified due to high QA split RPD
QA090911	1109312-01	Total Organic Carbon	2.08	mg/L	J	Qualified due to high QA split RPD
QA090911	1109312-01	Zinc, Dissolved	<0.00765	mg/L	UJ	Qualified due to method blank contamination
QA090911	1109312-01	Zinc, Total	<0.00252	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Antimony, Dissolved	0.000546	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Cobalt, Total	0.0026	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Copper, Total	<0.00786	mg/L	UJ	Qualified due to method blank contamination
QA091211	1109379-01	Lead, Dissolved	0.000404	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Selenium, Dissolved	<0.00333	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Selenium, Total	<0.00334	mg/L	UJ	Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
QA091211	1109379-01	Sulfide	1.2	mg/L	J	Qualified due to high QA split RPD
QA091211	1109379-01	Total Organic Carbon	3.69	mg/L	J	Qualified due to high QA split RPD
QA091211	1109379-01	Zinc, Dissolved	0.00289	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Aluminum	9.36	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Arsenic, Dissolved	<0.00441	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Arsenic, Total	<0.00585	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-1	560-28113-002	Barium, Dissolved	0.0883	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Barium, Total	0.167	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Calcium	70.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Chloride	82.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Chromium, Total	0.00607	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Cobalt, Dissolved	0.00136	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Cobalt, Total	0.00259	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Copper, Dissolved	0.01680	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Copper, Total	0.00676	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Fluoride	0.638	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier

Table 2
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-1	560-28113-002	Iron, Total	5.85	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Lead, Total	0.00515	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Magnesium	15.7	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Manganese	0.252	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Mercury, Total	0.000152	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Molybdenum, Dissolved	0.00705	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Molybdenum, Total	0.00659	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Nickel, Total	0.00686	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-1	560-28113-002	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-1	560-28113-002	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-1	560-28113-002	Potassium	8.79	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Selenium, Dissolved	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Sodium	88.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Sulfate	129	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Total Alkalinity as $CaCO_3$	160	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Total Dissolved Solids	539	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Total Organic Carbon	7.73	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Total Suspended Solids	246	mg/L	J	Qualified due to high cooler temperature outlier
SEP-1	560-28113-002	Zinc, Dissolved	0.0243	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-1	560-28113-002	Zinc, Total	0.0202	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-2	560-28113-009	Aluminum	10.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Arsenic, Dissolved	<0.0117	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-2	560-28113-009	Arsenic, Total	<0.0137	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-2	560-28113-009	Barium, Dissolved	0.0968	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Barium, Total	0.176	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Calcium	79.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Chloride	125	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Chromium, Total	0.00633	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Cobalt, Total	0.00283	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-2	560-28113-009	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Copper, Total	0.0067	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-2	560-28113-009	Fluoride	0.725	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Iron, Total	6.25	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Lead, Total	0.00606	mg/L	J	Qualified due to high cooler temperature outlier

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SEP-2	560-28113-009	Magnesium	20.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Manganese	0.265	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Molybdenum, Dissolved	0.0274	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Molybdenum, Total	0.0255	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Nickel, Total	0.00768	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-2	560-28113-009	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-2	560-28113-009	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-2	560-28113-009	Potassium	10.9	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Selenium, Dissolved	0.00209	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-2	560-28113-009	Selenium, Total	0.00179	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-2	560-28113-009	Sodium	141	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Sulfate	231	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier; qualified due to high QA split RPD
SEP-2	560-28113-009	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Total Alkalinity as $CaCO_3$	175	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Total Dissolved Solids	724	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Total Organic Carbon	8.09	mg/L	J	Qualified due to high cooler temperature outlier; Qualified due to high QA split RPD
SEP-2	560-28113-009	Total Suspended Solids	312	mg/L	J	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-2	560-28113-009	Zinc, Total	0.0211	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-3	560-28113-004	Aluminum	10.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Arsenic, Dissolved	<0.00491	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
SEP-3	560-28113-004	Arsenic, Total	<0.00623	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-3	560-28113-004	Barium, Dissolved	0.0847	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Barium, Total	0.183	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Calcium	74.7	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Chloride	88.6	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Chromium, Total	0.00648	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Cobalt, Total	0.00299	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-3	560-28113-004	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Copper, Total	0.00798	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-3	560-28113-004	Fluoride	0.62	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Iron, Total	6.47	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Lead, Total	0.00591	mg/L	J	Qualified due to high cooler temperature outlier

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SEP-3	560-28113-004	Magnesium	16.5	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Manganese	0.276	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Mercury, Dissolved	0.000152	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-3	560-28113-004	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Molybdenum, Dissolved	0.0064	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Molybdenum, Total	0.00682	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Nickel, Total	0.00767	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-3	560-28113-004	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-3	560-28113-004	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-3	560-28113-004	Potassium	9.16	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Selenium, Dissolved	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Sodium	92.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Sulfate	141	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Total Alkalinity as $CaCO_3$	170	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Total Dissolved Solids	555	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Total Organic Carbon	7.33	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Total Suspended Solids	310	mg/L	J	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-3	560-28113-004	Zinc, Total	0.0218	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Aluminum	7.01	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Arsenic, Dissolved	<0.0137	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-4	560-28113-006	Arsenic, Total	<0.0142	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-4	560-28113-006	Barium, Dissolved	0.11	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Barium, Total	0.156	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Calcium	78.3	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Chloride	166	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Chromium, Total	0.00442	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Cobalt, Total	0.00191	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Copper, Total	0.00474	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Fluoride	0.763	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Iron, Total	4.33	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Lead, Total	0.00426	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Magnesium	22.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Manganese	0.2	mg/L	J	Qualified due to high cooler temperature outlier

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-4	560-28113-006	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Molybdenum, Dissolved	0.03	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Molybdenum, Total	0.0291	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Nickel, Total	0.00607	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-4	560-28113-006	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-4	560-28113-006	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-4	560-28113-006	Potassium	10.6	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Selenium, Dissolved	0.0015	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Selenium, Total	0.00185	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Sodium	196	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Sulfate	303	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Sulfide	0.015	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-4	560-28113-006	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Total Alkalinity as $CaCO_3$	180	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Total Dissolved Solids	948	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Total Organic Carbon	7.71	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Total Suspended Solids	184	mg/L	J	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-4	560-28113-006	Zinc, Total	0.0135	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-6	560-28113-005	Aluminum	9.72	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Arsenic, Dissolved	<0.00446	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
SEP-6	560-28113-005	Arsenic, Total	<0.00578	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-6	560-28113-005	Barium, Dissolved	0.086	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Barium, Total	0.171	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Calcium	70.6	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Chloride	88.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Chromium, Total	0.0062	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Cobalt, Total	0.00272	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-6	560-28113-005	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Copper, Total	0.00693	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-6	560-28113-005	Fluoride	0.603	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Iron, Total	6.09	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Lead, Total	0.00518	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Magnesium	15.8	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Manganese	0.258	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier

Table 2
Qualified Analytical Results
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-6	560-28113-005	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Molybdenum, Dissolved	0.0067	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Molybdenum, Total	0.00596	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Nickel, Total	0.00721	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-6	560-28113-005	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-6	560-28113-005	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-6	560-28113-005	Potassium	8.81	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Selenium, Dissolved	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Sodium	89.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Sulfate	140	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Total Alkalinity as $CaCO_3$	155	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Total Dissolved Solids	539	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Total Organic Carbon	9.16	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Total Suspended Solids	320	mg/L	J	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-6	560-28113-005	Zinc, Total	0.0209	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-7	560-28113-003	Aluminum	9.93	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Arsenic, Dissolved	<0.00455	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination; Estimated; Analyte detected between SDL and MQL
SEP-7	560-28113-003	Arsenic, Total	<0.00612	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-7	560-28113-003	Barium, Dissolved	0.0899	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Barium, Total	0.182	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Calcium	73	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Chloride	87.3	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Chromium, Total	0.00603	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Cobalt, Total	0.00296	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-7	560-28113-003	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Copper, Total	0.00729	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-7	560-28113-003	Fluoride	0.618	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Iron, Total	6.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Lead, Total	0.00571	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Magnesium	16.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Manganese	0.272	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Molybdenum, Dissolved	0.00717	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Molybdenum, Total	0.0074	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier

Table 2
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Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-7	560-28113-003	Nickel, Total	0.00724	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-7	560-28113-003	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-7	560-28113-003	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-7	560-28113-003	Potassium	8.97	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Selenium, Dissolved	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Sodium	90.7	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Sulfate	139	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Total Alkalinity as $CaCO_3$	158	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Total Dissolved Solids	554	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Total Organic Carbon	8.36	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Total Suspended Solids	336	mg/L	J	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-7	560-28113-003	Zinc, Total	0.0209	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Aluminum	9.5	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Arsenic, Dissolved	<0.00545	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-9	560-28113-001	Arsenic, Total	<0.00651	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-9	560-28113-001	Barium, Dissolved	0.0863	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Barium, Total	0.166	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Calcium	70.9	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Chloride	93.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Chromium, Total	0.00623	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Cobalt, Total	0.0029	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Copper, Total	0.0086	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Fluoride	0.665	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Iron, Total	5.96	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Lead, Total	0.00583	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Magnesium	15.7	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Manganese	0.254	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Molybdenum, Dissolved	0.00841	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Molybdenum, Total	0.00728	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Nickel, Total	0.00686	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Nitrate as N	<0.928	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-9	560-28113-001	Nitrate Nitrite as N	<0.928	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-9	560-28113-001	Potassium	8.97	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Selenium, Dissolved	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Sodium	94.8	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Sulfate	146	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Sulfide	0.037	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Thallium, Dissolved	0.00131	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Thallium, Total	0.000719	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-9	560-28113-001	Total Alkalinity as $CaCO_3$	172	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Total Dissolved Solids	600	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Total Organic Carbon	7.86	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Total Suspended Solids	288	mg/L	J	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-9	560-28113-001	Zinc, Total	0.0199	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Aluminum	8.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Arsenic, Dissolved	0.0124	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Arsenic, Total	0.0134	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Barium, Dissolved	0.0912	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Barium, Total	0.153	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Calcium	68.9	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Chloride	95.3	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Chromium, Dissolved	0.00229	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Chromium, Total	0.00693	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Cobalt, Total	0.00247	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Copper, Total	0.00553	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Fluoride	0.703	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Iron, Total	5.46	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Lead, Total	0.00441	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Magnesium	16.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Manganese	0.206	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Mercury, Dissolved	0.000197	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Molybdenum, Dissolved	0.0157	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Molybdenum, Total	0.0146	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Nickel, Total	0.00655	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-10	560-28113-011	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-10	560-28113-011	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-10	560-28113-011	Potassium	9.23	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Selenium, Dissolved	0.0018	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Selenium, Total	0.00186	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-10	560-28113-011	Sodium	116	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Sulfate	160	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Total Alkalinity as $CaCO_3$	160	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Total Dissolved Solids	601	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Total Organic Carbon	6.71	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Total Suspended Solids	230	mg/L	J	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-10	560-28113-011	Zinc, Total	0.0169	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-11	560-28113-010	Aluminum	8.27	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Arsenic, Dissolved	<0.0105	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-11	560-28113-010	Arsenic, Total	<0.013	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-11	560-28113-010	Barium, Dissolved	0.0959	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Barium, Total	0.154	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Calcium	73.9	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Chloride	125	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Chromium, Total	0.00504	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Cobalt, Total	0.00221	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-11	560-28113-010	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Copper, Total	0.00514	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-11	560-28113-010	Fluoride	0.719	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Iron, Total	5.2	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Lead, Total	0.00431	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-11	560-28113-010	Magnesium	19.6	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Manganese	0.213	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Molybdenum, Dissolved	0.028	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Molybdenum, Total	0.0279	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Nickel, Total	0.00607	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-11	560-28113-010	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-11	560-28113-010	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-11	560-28113-010	Potassium	10.7	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Selenium, Dissolved	0.00119	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-11	560-28113-010	Selenium, Total	<0.00108	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Sodium	142	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Sulfate	225	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Total Alkalinity as $CaCO_3$	170	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Total Dissolved Solids	748	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Total Organic Carbon	8.98	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Total Suspended Solids	216	mg/L	J	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-11	560-28113-010	Zinc, Total	0.0169	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Aluminum	11.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Arsenic, Dissolved	<0.0144	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-12	560-28113-008	Arsenic, Total	<0.0147	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-12	560-28113-008	Barium, Dissolved	0.1	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Barium, Total	0.193	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Calcium	82.8	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Chloride	132	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Chromium, Total	0.00701	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Cobalt, Dissolved	<0.00136	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Cobalt, Total	0.0032	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Copper, Total	0.00935	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Fluoride	0.718	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Iron, Total	7.04	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Lead, Total	0.007	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Magnesium	21	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Manganese	0.295	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Mercury, Dissolved	0.000201	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Molybdenum, Dissolved	0.0268	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Molybdenum, Total	0.0244	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Nickel, Total	0.00821	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-12	560-28113-008	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-12	560-28113-008	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-12	560-28113-008	Potassium	10.9	mg/L	J	Qualified due to high cooler temperature outlier

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-12	560-28113-008	Selenium, Dissolved	0.00198	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Selenium, Total	0.00196	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-12	560-28113-008	Sodium	151	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Sulfate	243	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Total Alkalinity as $CaCO_3$	169	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Total Dissolved Solids	782	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Total Organic Carbon	7.63	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Total Suspended Solids	222	mg/L	J	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-12	560-28113-008	Zinc, Total	0.0238	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-13	560-28113-007	Aluminum	11.5	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Antimony, Dissolved	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Antimony, Total	<0.00161	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Arsenic, Dissolved	<0.0148	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-13	560-28113-007	Arsenic, Total	<0.0167	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to method blank contamination
SEP-13	560-28113-007	Barium, Dissolved	0.102	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Barium, Total	0.21	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Cadmium, Dissolved	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Cadmium, Total	<0.000854	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Calcium	89.9	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Chloride	134	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Chromium, Dissolved	<0.0014	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Chromium, Total	0.00748	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Cobalt, Dissolved	0.0014	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-13	560-28113-007	Cobalt, Total	0.00328	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-13	560-28113-007	Copper, Total	0.0111	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Copper, Dissolved	<0.002	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Fluoride	0.742	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Iron, Dissolved	<0.101	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Iron, Total	7.45	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Lead, Dissolved	<0.000733	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Lead, Total	0.00872	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Magnesium	22.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Manganese	0.334	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Mercury, Dissolved	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Mercury, Total	<0.00013	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Molybdenum, Dissolved	0.028	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Molybdenum, Total	0.0259	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Nickel, Dissolved	<0.00217	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Nickel, Total	0.00934	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Nitrate as N	<0.206	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-13	560-28113-007	Nitrate Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-13	560-28113-007	Nitrite as N	<0.4	mg/L	UJ	Qualified due to high cooler temperature outlier; Qualified due to holding time exceedance
SEP-13	560-28113-007	Potassium	11.4	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Selenium, Dissolved	0.00156	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-13	560-28113-007	Selenium, Total	0.00187	mg/L	J	Qualified due to high cooler temperature outlier; Estimated; Analyte detected between SDL and MQL
SEP-13	560-28113-007	Sodium	152	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Sulfate	252	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Sulfide	<0.0131	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Thallium, Dissolved	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Thallium, Total	<0.000693	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Total Alkalinity as $CaCO_3$	171	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Total Dissolved Solids	791	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Total Organic Carbon	8.26	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Total Suspended Solids	266	mg/L	J	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Zinc, Dissolved	<0.00355	mg/L	UJ	Qualified due to high cooler temperature outlier
SEP-13	560-28113-007	Zinc, Total	0.0284	mg/L	J	Qualified due to high cooler temperature outlier

Notes:
a = first sample
b = second sample
"<" = Analyte not detected above listed reporting limit
J = The result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter ; ug/L = micrograms per liter
MS = Matrix Spike ; MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-71 / FD090111 / QA090111	**Total Metals (mg/L)**					
	Antimony	<0.00161	<0.00161	NC	<0.0008	NC
	Arsenic	0.131	0.134	2.3	0.129	1.5
	Barium	0.0201	0.017	17	0.0161	22
	Cadmium	<0.000854	<0.000854	NC	<0.0008	NC
	Chromium	0.00197 J	0.00166 J	NC	0.00132 J	NC
	Cobalt	0.00169 J	0.00181 J	NC	0.00144 J	NC
	Copper	0.0043 J	0.0756	**NC**	0.00824	NC
	Iron	0.375	0.269	**33**	0.248	**41**
	Lead	0.00288 J	0.00319 J	NC	0.00219 J	NC
	Mercury	0.000381 J	0.000306 J	NC	0.000283	NC
	Molybdenum	0.142	0.144	1.4	0.131	8.1
	Nickel	0.015	0.0448	**100**	0.015	<1
	Selenium	0.253	0.247	2.4	0.264	4.3
	Thallium	<0.000693	<0.000693	NC	<0.001	NC
	Zinc	0.00846 J	0.00791 J	NC	0.00838	NC
	Dissolved Metals (mg/L)					
	Antimony	<0.00161	<0.00161	NC	<0.0005	NC
	Arsenic	0.138	0.133	3.7	0.137	<1
	Barium	0.0123	0.0133	7.8	0.0116	6.0
	Cadmium	<0.000854	<0.000854	NC	0.00106 J	NC
	Chromium	<0.0014	<0.0014	NC	0.00204 J	NC
	Cobalt	0.0016 J	0.00174 J	NC	0.00186 J	NC
	Copper	0.00311 J	0.00304 J	NC	0.00495 J	NC
	Iron	<0.101	<0.101	NC	0.0394 J	NC
	Lead	0.00163 J	0.00208 J	NC	0.0017 J	NC
	Mercury	0.000502 J	0.000351 J	NC	0.000256	NC
	Molybdenum	0.144	0.148	2.7	0.128	12
	Nickel	0.0143	0.0141	1.4	0.0148	3.4
	Selenium	0.251	0.231	8.0	0.269	7.0
	Thallium	<0.000693	<0.000693	NC	0.00138 J	NC
	Zinc	0.00599 J	0.006 J	NC	0.00586	NC
	Cations (mg/L)					
	Aluminum	0.33	0.234	**34**	0.277	18
	Calcium	409	398	2.7	375	8.7
	Magnesium	176	172	2.3	162	8.3
	Manganese	0.0431 J	0.037 J	NC	0.032	NC
	Potassium	18.2	17.9	1.7	15.9	14
	Sodium	983	951	3.3	979	<1
	Anions (mg/L)					
	Chloride	458	410	11	496	8.0
	Fluoride	0.751	0.749	<1	0.63	18
	Nitrate as N	79.9	78.4	1.9	87	8.5
	Nitrate Nitrite as N	79.9	78.4	1.9	87	8.5
	Nitrite as N	<1	<1	NC	<0.03	NC
	Sulfate	2560	2240	13	2450	4.4
	Sulfide	0.024 J	0.03 J	NC	11.8	**NC**
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	261	265	1.5	288	10
	Total Dissolved Solids	5430	5900	8.3	5250	3.4
	Total Organic Carbon	3.11	3.07	1.0	2.21	34
	Total Suspended Solids	15.4	15	2.6	23.6	**42**

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-119 / FD090711 / QA090711	**Total Metals (mg/L)**					
	Antimony	0.00788	0.00796	1.0	0.00806	2.3
	Arsenic	1.5	1.54	2.6	1.52	1.3
	Barium	0.0244	0.0244	<1	0.0262	7.1
	Cadmium	<0.000854	<0.000854	NC	<0.0008	NC
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0008	NC
	Copper	<0.002	<0.002	NC	<0.0015	NC
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	<0.000733	<0.000733	NC	<0.0007	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.465	0.498	6.9	0.42	10
	Nickel	0.00332 J	0.00333 J	NC	0.00342 J	NC
	Selenium	0.147	0.146	<1	0.154	4.7
	Thallium	<0.000693	<0.000693	NC	<0.001	NC
	Zinc	<0.00355	0.00368 J	NC	0.0066	NC
	Dissolved Metals (mg/L)					
	Antimony	0.0087	0.00818	6.2	0.00816	6.4
	Arsenic	1.54	1.55	<1	1.5	2.6
	Barium	0.0257	0.026	1.2	0.0239	7.3
	Cadmium	<0.000854	<0.000854	NC	0.000671 J	NC
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	<0.00136	<0.00136	NC	0.000879 J	NC
	Copper	<0.002	<0.002	NC	0.000616 J	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	0.000421 J	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.468	0.475	2.0	0.442	5.7
	Nickel	0.00403 J	0.00387 J	NC	0.00275 J	NC
	Selenium	0.151	0.151	<1	0.146	3.4
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	<0.00355	<0.00355	NC	0.00614	NC
	Cations (mg/L)					
	Aluminum	<0.0225	<0.0225	NC	0.0549	NC
	Calcium	123	126	2.4	111	10
	Magnesium	59.7	59.9	<1	50.3	17
	Manganese	0.279	0.252	10	0.295	5.6
	Potassium	46.3	46.9	1.3	43.1	7.2
	Sodium	555	561	1.1	508	8.8
	Anions (mg/L)					
	Chloride	301	299	<1	282	6.5
	Fluoride	3.18	3.18	<1	3.16	<1
	Nitrate as N	3.55	3.75	6.0	4.63	26
	Nitrate Nitrite as N	3.55	3.75	6.0	4.67	27
	Nitrite as N	<0.4	<0.4	NC	0.039 J	NC
	Sulfate	1120	1310	16	999	11
	Sulfide	<0.0131	<0.0131	NC	35.2	**NC**
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	357	361	1.1	386	7.8
	Total Dissolved Solids	2500	2530	1.2	2350	6.2
	Total Organic Carbon	53.8	6.76	**155**	2.47	**182**
	Total Suspended Solids	5.2	<3	NC	8.8	**51**

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
MW-1 / FD090911 / QA090911	**Total Metals (mg/L)**					
	Antimony	0.00636	0.0062	2.5	0.00654	2.8
	Arsenic	1.21	1.22	<1	1.2	<1
	Barium	0.0337	0.033	2.1	0.0334	<1
	Cadmium	<0.000854	<0.000854	NC	<0.0008	NC
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0008	NC
	Copper	<0.002	<0.002	NC	0.00157 J	NC
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	<0.000733	<0.000733	NC	<0.0007	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.489	0.491	<1	0.432	12
	Nickel	<0.00217	<0.00217	NC	0.00144 J	NC
	Selenium	0.121	0.117	3.4	<0.116 UJ	NC
	Thallium	0.00178	<0.000693	NC	<0.001	NC
	Zinc	<0.00355	<0.00355	NC	0.00252 J	NC
	Dissolved Metals (mg/L)					
	Antimony	0.00629	0.00619	1.6	0.00647	2.8
	Arsenic	1.22	1.2	1.7	1.2	1.7
	Barium	0.0324	0.0321	<1	0.0326	<1
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	<0.00136	<0.00136	NC	<0.0005	NC
	Copper	<0.002	<0.002	NC	<0.0005	NC
	Iron	<0.101	<0.101	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	<0.0004	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.482	0.49	1.6	0.438	10
	Nickel	<0.00217	<0.00217	NC	0.00239 J	NC
	Selenium	0.122	0.115	5.9	<0.113 UJ	NC
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	<0.00355	<0.00355	NC	0.00765	NC
	Cations (mg/L)					
	Aluminum	<0.0225	<0.0225	NC	0.0107	NC
	Calcium	101	104	2.9	120	17
	Magnesium	46	46.9	1.9	45.1	2.0
	Manganese	0.139	0.133	4.4	0.133	4.4
	Potassium	37.8	39	3.1	34.9	8.0
	Sodium	406	406	<1	404	<1
	Anions (mg/L)					
	Chloride	219	216	1.4	206	6.1
	Fluoride	3.62	3.32	8.6	3.33	8.3
	Nitrate as N	2.89	2.88	<1	3.1	7.0
	Nitrate Nitrite as N	2.89	2.88	<1	3.13	8.0
	Nitrite as N	<0.4	<0.4	NC	0.033 J	NC
	Sulfate	847	841	<1	769	10
	Sulfide	0.016 J	<0.0131	NC	30.8	**NC**
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	301	296	1.7	328	8.6
	Total Dissolved Solids	1970	1950	1.0	1900	3.6
	Total Organic Carbon	4.83	4.36	10	2.08	**80**
	Total Suspended Solids	<3	<3	NC	2.0	NC

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
SEP-2 / FD091211 / QA091211	**Total Metals (mg/L)**					
	Antimony	<0.00161	<0.00161	NC	<0.0008	NC
	Arsenic	0.0137	0.0132	3.7	0.0137	<1
	Barium	0.176	0.17	4.0	0.174	1.1
	Cadmium	<0.000854	<0.000854	NC	<0.0008	NC
	Chromium	0.00633	0.00725	14	0.00733	15
	Cobalt	0.00283 J	0.00282 J	NC	0.0026 J	NC
	Copper	0.0067 J	0.00731 J	NC	0.00786	NC
	Iron	6.25	6.37	1.9	6.35	1.6
	Lead	0.00606	0.00639	5.3	0.00691	13
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.0255	0.0241	5.6	0.0267	4.6
	Nickel	0.00768	0.00749	2.5	0.00748	2.6
	Selenium	0.00179 J	0.00222 J	NC	0.00334 J	NC
	Thallium	<0.000693	<0.000693	NC	<0.001	NC
	Zinc	0.0211 J	0.019 J	NC	0.0319	NC
	Dissolved Metals (mg/L)					
	Antimony	<0.00161	<0.00161	NC	0.000546 J	NC
	Arsenic	0.0117	0.0111	5.3	0.0114	2.6
	Barium	0.0968	0.0977	<1	0.0984	1.6
	Cadmium	<0.000854	<0.000854	NC	<0.0006	NC
	Chromium	<0.0014	<0.0014	NC	<0.0006	NC
	Cobalt	<0.00136	0.00155 J	NC	<0.0005	NC
	Copper	<0.002	<0.002	NC	<0.0005	NC
	Iron	<0.101	0.163 J	NC	<0.036	NC
	Lead	<0.000733	<0.000733	NC	0.000404 J	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.0274	0.0263	4.1	0.022	22
	Nickel	<0.00217	<0.00217	NC	<0.0014	NC
	Selenium	0.00209 J	0.00156 J	NC	0.00333 J	NC
	Thallium	<0.000693	<0.000693	NC	<0.0008	NC
	Zinc	<0.00355	<0.00355	NC	0.00289 J	NC
	Cations (mg/L)					
	Aluminum	10.1	9.62	4.9	12	17
	Calcium	79.4	79.5	<1	69.2	14
	Magnesium	20.2	20.2	<1	17.3	16
	Manganese	0.265	0.266	<1	0.239	10
	Potassium	10.9	10.7	1.9	9.88	10
	Sodium	141	153	8.2	117	19
	Anions (mg/L)					
	Chloride	125	132	5.4	118	5.8
	Fluoride	0.725	0.719	<1	0.688	5.2
	Nitrate as N	<0.206	<0.206	NC	0.596	NC
	Nitrate Nitrite as N	<0.4	<0.4	NC	0.596	NC
	Nitrite as N	<0.4	<0.4	NC	<0.03	NC
	Sulfate	231	242	4.7	216	6.7
	Sulfide	<0.0131	<0.0131	NC	1.2	**NC**
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	175	175	<1	178	1.7
	Total Dissolved Solids	724	746	3.0	638	13
	Total Organic Carbon	8.09	6.86	17	3.69	**75**
	Total Suspended Solids	312	326	4.4	310	<1

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)

Notes:

RPD = Relative Percent Difference; [(difference)/(average)]*100

Bolded values indicate field duplicate or QA split outliers

If results are less than five times the MQL, the difference between the results should be less than the MQL

"<" = Analyte not detected above listed reporting limit

J = Estimated value; detected between the SDL and MQL

NC = Not Calculated; RPD values were not calculated for non-detect values or trace values

NA = Not Analyzed

mg/L = milligrams per liter

QA = Quality Assurance

SDL = Sample Detection Limit ; MQL = Method Quantitation Limit

Table 4
Completeness Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	53	41[a]	77	53	100
Arsenic	53	39[a,b,c]	74	53	100
Barium	53	40[a,b]	75	53	100
Cadmium	53	41[a]	77	53	100
Chromium	53	40[a,c]	75	53	100
Cobalt	53	41[a]	77	53	100
Copper	53	37[a,b,c,d]	70	53	100
Iron	53	37[a,c,d,e]	70	53	100
Lead	53	41[a]	77	53	100
Mercury	53	41[a]	77	53	100
Molybdenum	53	41[a]	77	53	100
Nickel	53	36[a,c,d]	68	53	100
Selenium	53	39[a,b,c]	74	53	100
Thallium	53	41[a]	77	53	100
Zinc	53	39[a,b]	74	53	100
Dissolved Metals					
Antimony	53	41[a]	77	53	100
Arsenic	53	37[a,b,c]	70	53	100
Barium	53	37[a,b]	70	53	100
Cadmium	53	41[a]	77	53	100
Chromium	53	41[a]	77	53	100
Cobalt	53	41[a]	77	53	100
Copper	53	41[a]	77	53	100
Iron	53	38[a,b]	72	53	100
Lead	53	41[a]	77	53	100
Mercury	53	41[a]	77	53	100
Molybdenum	53	37[a,b]	70	53	100
Nickel	53	39[a,c]	74	53	100
Selenium	53	38[a,b,c]	72	53	100
Thallium	53	41[a]	77	53	100
Zinc	53	39[a,c]	74	53	100
Cations					
Aluminum, Dissolved	6	6	100	6	100
Aluminum, Total	53	39[a,d]	74	53	100
Calcium, Dissolved	6	6	100	6	100
Calcium, Total	53	41[a]	77	53	100
Magnesium, Dissolved	6	6	100	6	100
Magnesium, Total	53	41[a]	77	53	100
Manganese, Dissolved	6	6	100	6	100
Manganese, Total	53	41[a]	77	53	100
Potassium, Dissolved	6	6	100	6	100
Potassium, Total	53	41[a]	77	53	100
Sodium	53	40[a,f]	75	53	100

Table 4
Completeness Summary
Groundwater and Surface Water Samples - August/September
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Anions					
Chloride	53	35[a,f]	66	53	100
Fluoride	53	40[a,f]	75	53	100
Nitrate as N	53	34[a,f,g]	64	53	100
Nitrate Nitrite as N	53	32[a,f,g]	60	53	100
Nitrite as N	53	36[a,g]	68	53	100
Sulfate	53	35[a,f]	66	53	100
Sulfide	53	34[a,e,f]	64	53	100
General Chemistry					
Total Alkalinity	53	41[a]	77	53	100
Total Dissolved Solids	53	41[a]	77	53	100
Total Organic Carbon	53	26[a,b,c,d,e]	49	53	100
Total Suspended Solids	53	37[a,e]	70	53	100
TOTALS	**2521**	**1851**	**73**	**2521**	**100**

Notes:

Total number of samples includes field samples, field duplicate samples, and QA split samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

[a] Results qualified due to high cooler temperature outlier

[b] Results qualified due to method blank contamination

[c] Results qualified due to equipment rinsate contamination

[d] Results qualified due to high field duplicate RPD outliers

[e] Results qualified due to high QA split RPD outliers

[f] Results qualified due to MS/MSD percent recovery outliers

[g] Results qualified due to holding time exceedance

Texas Custodial Trust

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Data Usability Summary Groundwater and Surface Water Sampling February/March 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater and surface water samples collected during February and March 2012 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ)

Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. ALS Environmental (ALS), located in Houston, Texas, analyzed samples as the QA laboratory. Both TestAmerica and ALS are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the groundwater and surface water samples collected during February and March 2012 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 48 groundwater samples were collected during the sampling event. The samples were submitted to TestAmerica and ALS for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TSS) by USEPA Method 160.2
- anions (chloride, nitrate, nitrite, and sulfate) by USEPA Method 300.0
- fluoride by USEPA Method 340.2 or 300.0
- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

The total and dissolved metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc.

Seven field quality assurance samples (i.e., equipment rinsate blank, field duplicates, and quality assurance [QA] splits) were also collected and analyzed as part of the sampling program. The samples were collected using low-flow purge technique.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, equipment rinsate blanks)
- surrogate recovery (for organic parameters)
- laboratory control sample (LCS) percent recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and RPD
- duplicates (field duplicates, QA split samples)
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater and surface water samples was found to be complete. Chains-of-custody included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Several sample coolers were received at the slightly below the acceptance temperature limit of 4 ± 2 degrees Celsius. These temperature outliers ranged from 1.0 to 1.5 degrees Celsius. These outliers did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods except for the following:

- The nitrate + nitrite holding time was exceeded for sample EP-13 by one day. Results were qualified "J" to indicate a potential bias.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-70030 had an arsenic detection (0.001847 milligrams per liter [mg/L]). Data qualification was not required because the arsenic detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-70075 had detections of arsenic (0.001774 mg/L) and sodium (0.8595 mg/L). Data qualification was not required because the arsenic and sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-70129 had a sodium detection (0.9865 mg/L). Data qualification was not required because the sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-70185 had a thallium detection (0.001085 mg/L). The total thallium and dissolved thallium results for EP-122 were qualified "UJ" to indicate potential bias.

- The method blank associated with ALS batch 59387 had an aluminum detection (0.006348 mg/L). Data qualification was not required because the aluminum detection in the associated sample was greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-70056 had a sulfide detection (0.02 mg/L). The sulfide result for EP-58, EP-62, EP-119, EP-132, EP-135, and FD022812 were qualified "UJ" to indicate potential bias.

- The method blank associated with ALS batch R124409 had detections of chloride (0.4 mg/L) and sulfate (0.301 mg/L). Data qualification was not required because the chloride and sulfate detections in the associated sample were greater than ten times the method blank concentration.

- The method blank associated with ALS batch R124724 had detections of chloride (0.361 mg/L) and sulfate (0.385 mg/L). Data qualification was not required because the chloride and sulfate detections in the associated sample were greater than ten times the method blank concentration.

- The method blank associated with ALS batch R124358 had a TOC detection (0.3403 mg/L). The TOC result for QA022812 was qualified "UJ" to indicate a potential bias.

- The method blank associated with ALS batch R124613 had a TOC detection (0.1052 mg/L). Data qualification was not required because the TOC detection in the associated sample was greater than ten times the method blank concentration.

3.4.2. Equipment Rinsate Blank Interference

Target compounds were not detected in the equipment rinsate blank with the following exceptions:

- The equipment rinsate blank ER030512 contained detections of total arsenic (0.00111 mg/L), dissolved arsenic (0.00137 mg/L), total copper (0.00779 mg/L), dissolved copper (0.0029 mg/L), chloride (0.798 mg/L), sulfate (2.31 mg/L), and sulfide (0.021 mg/L).

Associated sample results were qualified "UJ to indicate a potential bias. Data qualification was not required if parameter results in the associated samples were greater than ten times the equipment rinsate blank concentration. The following samples were qualified based on equipment blank contamination:

- The total arsenic and dissolved arsenic results for samples SEP-1 and SEP-9; the total copper results for samples SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13, and FD030512; and the dissolved copper results for samples SEP-1, SEP-3, SEP-6, SEP-9, SEP-12, and SEP-13 were qualified "UJ" to indicate a potential bias.

- The sulfide results for samples SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10,SEP-11, SEP-12, SEP-13, and FD030512 were qualified "UJ" to indicate a potential bias.

3.5. Surrogate Recovery

Surrogate percent recoveries were within acceptance limits.

3.6. Laboratory Control Sample Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J".

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits.

3.7. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J".

- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for selenium (162 and 226 percent) and the MSD recoveries for calcium (125 percent), molybdenum (149 percent), potassium (153 percent), and thallium (145 percent) were above acceptance limits (80 to 120 percent) for analytical batch 560-70030. Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for arsenic (-108 and 160 percent) and sodium (-58 and 630 percent); and the MSD recovery for magnesium (124 percent) were outside acceptance limits (80 to 120 percent) for analytical batch 560-70075. Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration; and for magnesium because the MS and LCS recoveries were within limits.

- The MSD recoveries for calcium (176 percent) and sodium (206 percent) were above acceptance limits (80 to 120 percent) for analytical batch 560-70378. Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for chloride (-22 and -30 percent) and sulfate (-328 and -451 percent) were below acceptance limits (80 to 120 percent) for analytical

batch 560-69914. Data qualification was not required for because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MSD recoveries for chloride (-61 percent) and sulfate (-197 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-69923. Data qualification was not required because the detections for these analytes in the associated sample were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for sulfate (79 and 76 percent) were below acceptance limits (80 to 120 percent) for analytical batch 560-70027. Data for sample EP-52 was qualified "J" to indicate a potential low bias.

3.8. Duplicates

3.8.1. Field Duplicates

Four field duplicates were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD between sample EP-119 and field duplicate FD022812 for TSS (81 percent) was above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPD between sample EP-85 and field duplicate FD030212 for sulfate (52 percent) was above the acceptance limits. Data were qualified "J" to indicate a potential bias.

3.8.2. QA Split Samples

Four QA split samples were collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were

calculated and are presented in Table 3. The split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.
- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.
- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPDs between sample EP-119 and split sample QA022812 for potassium (46 percent), sodium (42 percent), and total zinc (47 percent) were above the acceptance limit. The difference between sample EP-119 and split sample QA022812 for total copper exceeded the MQL. Data were qualified "J" to indicate a potential bias.
- The RPDs between sample SEP-2 and split sample QA030512 for aluminum (31 percent) and dissolved selenium (32 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

3.9. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total copper and dissolved copper had contractual compliances below 90 percent due to equipment rinsate interference and high QA split RPD outliers.

- Sulfate and sulfide had contractual compliances below 90 percent due to method blank and equipment rinsate interference, MS/MSD percent recovery outliers, and high field duplicate RPD outliers.

The results for the groundwater and surface water sampling event conducted in February and March 2012 were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-84	560-30890-001	2/22/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-95	560-30890-002	2/22/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-120	560-30890-003	2/22/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-78	560-30890-004	2/22/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-77	560-30890-005	2/22/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-75	560-30915-001	2/23/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-54	560-30915-002	2/23/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-49	560-30915-003	2/23/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-52	560-30915-004	2/23/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-51	560-30915-005	2/23/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD022312	560-30915-006	2/23/2012	FD of EP-51	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-13	560-30938-001	2/24/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-14	560-30938-002	2/24/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-12	560-30938-003	2/24/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EM-2	560-30938-004	2/24/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-71	560-30938-005	2/24/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-72	560-30964-001	2/27/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-68	560-30964-002	2/27/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-122	560-30964-003	2/27/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-132	560-30985-001	2/28/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-119	560-30985-002	2/28/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-135	560-30985-003	2/28/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

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Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
FD022812	560-30985-004	2/28/2012	FD of EP-119	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-62	560-30985-005	2/28/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-58	560-30985-006	2/28/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA022812	1202971-01	2/28/2012	QA of EP-119	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-7	560-31008-001	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-6	560-31008-002	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-4	560-31008-003	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-133	560-31008-004	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
MW-1	560-31008-005	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
MW-2	560-31008-006	2/29/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-85	560-31034-001	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-81	560-31034-002	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
OBS-1	560-31034-003	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030212	560-31034-004	3/1/2012	FD of EP-85	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-114	560-31034-005	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-116	560-31034-006	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-117	560-31034-007	3/1/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-20	560-31053-001	3/3/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
EP-35	560-31053-002	3/3/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-1	560-31084-001	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-2	560-31084-002	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
FD030512	560-31084-003	3/5/2012	FD of SEP-2	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
SEP-3	560-31084-004	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-4	560-31084-005	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-6	560-31084-006	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-7	560-31084-007	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-9	560-31084-008	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-10	560-31084-009	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-11	560-31084-010	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-12	560-31084-011	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
SEP-13	560-31084-012	3/5/2012	N	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
ER030512	560-31084-013	3/5/2012	ER	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity
QA030512	1203151-01	3/5/2012	QA of SEP-2	Total and Dissolved Metals, Cations, Anions, TDS, TSS, TOC, Total Alkalinity

Notes:
N = Normal sample
ER = Equipment Rinsate blank
FD = Field Duplicate
QA = Quality Assurance split sample
Total and Dissolved Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc
Cations = aluminum, calcium, magnesium, manganese, postassium, and sodium
Anions = chloride, fluoride, nitrate, nitrite, sulfate, and sulfide
TDS = Total Dissolved Solids
TSS = Total Suspended Solids
TOC = Total Organic Carbon

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-4	560-31008-003	Zinc, Total	0.00998	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-31008-002	Zinc, Total	0.00439	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-31008-001	Zinc, Total	0.0142	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-30938-003	Zinc, Total	0.00835	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-30985-006	Zinc, Total	0.00475	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-30964-002	Zinc, Total	0.0426	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-30964-001	Zinc, Total	0.485	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-31034-002	Zinc, Total	0.00831	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-30985-002	Zinc, Total	0.0536	mg/L	J	Qualified due to high QA split RPD
EP-122	560-30964-003	Zinc, Total	0.0625	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-31008-004	Zinc, Total	0.00809	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-135	560-30985-003	Zinc, Total	0.0199	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030212	560-31034-004	Zinc, Total	0.00544	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD030512	560-31084-003	Zinc, Total	0.0058	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA022812	1202971-01	Zinc, Total	0.0333	mg/L	J	Qualified due to high QA split RPD
SEP-2	560-31084-002	Zinc, Total	0.00546	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-31084-005	Zinc, Total	0.00571	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-31084-006	Zinc, Total	0.0248	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-31084-009	Zinc, Total	0.0052	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-31084-010	Zinc, Total	0.00481	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-31084-011	Zinc, Total	0.00586	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-31084-012	Zinc, Total	0.00766	mg/L	J	Estimated; Analyte detected between SDL and MQL

Notes:
"<" = Analyte not detected above listed reporting limit
J = The result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter; ug/L = micrograms per liter
MS = Matrix Spike; MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
SDL = Sample Detection Limit; MQL = Method Quantitation Limit

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-51 / FD022312	**Total Metals (mg/L)**					
	Antimony	0.00504	0.00486 J	NC	NA	NC
	Arsenic	0.0462 J	0.0418 J	NC	NA	NC
	Barium	0.0172	0.0176	2.3	NA	NC
	Cadmium	0.0191	0.0207	8.0	NA	NC
	Chromium	0.458	0.415	10	NA	NC
	Cobalt	0.0225	0.0206	8.8	NA	NC
	Copper	0.114	0.109	4.5	NA	NC
	Iron	7.19	6.65	7.8	NA	NC
	Lead	0.00896	0.00688	26	NA	NC
	Mercury	<0.00013	<0.00013	NC	NA	NC
	Molybdenum	0.0133	0.0133	<1	NA	NC
	Nickel	1.52	1.45	4.7	NA	NC
	Selenium	0.241	0.244	1.2	NA	NC
	Thallium	0.0023	0.00222	3.5	NA	NC
	Zinc	0.233	0.23	1.3	NA	NC
	Dissolved Metals (mg/L)					
	Antimony	0.00508	0.00498 J	NC	NA	NC
	Arsenic	0.0236 J	0.0268 J	NC	NA	NC
	Barium	0.0168	0.0169	0.6	NA	NC
	Cadmium	0.0205	0.0205	<1	NA	NC
	Chromium	0.257	0.256	<1	NA	NC
	Cobalt	0.0218	0.02	8.6	NA	NC
	Copper	0.0843	0.0854	1.3	NA	NC
	Iron	6.17	5.96	3.5	NA	NC
	Lead	0.00286 J	0.00275 J	NC	NA	NC
	Mercury	<0.00013	<0.00013	NC	NA	NC
	Molybdenum	0.0125	0.0115	8.3	NA	NC
	Nickel	1.84	1.79	2.8	NA	NC
	Selenium	0.254	0.254	<1	NA	NC
	Thallium	0.00244	0.00181	30	NA	NC
	Zinc	0.23	0.212	8.1	NA	NC
	Cations (mg/L)					
	Aluminum	<0.225	<0.225	NC	NA	NC
	Calcium	596	623	4.4	NA	NC
	Magnesium	505	512	1.4	NA	NC
	Manganese	0.94	0.95	1.1	NA	NC
	Potassium	40.5	42	3.6	NA	NC
	Sodium	1260	1220	3.2	NA	NC
	Anions (mg/L)					
	Chloride	3150	3430	8.5	NA	NC
	Fluoride	0.569	0.57	<1	NA	NC
	Nitrate Nitrite as N	97.8	98.2	<1	NA	NC
	Sulfate	2450	2430	<1	NA	NC
	Sulfide	<0.013	0.018 J	NC	NA	NC
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	171	178	4.0	NA	NC
	Total Dissolved Solids	9930	9760	1.7	NA	NC
	Total Organic Carbon	1.17	1.09	7.1	NA	NC
	Total Suspended Solids	22.3	19	16	NA	NC

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-119 / FD022812 / QA022812	**Total Metals (mg/L)**					
	Antimony	0.00914	0.00863	5.7	0.00831	10
	Arsenic	1.66	1.54	7.5	1.46	13
	Barium	0.0329	0.0343	4.2	0.0288	13
	Cadmium	<0.000854	<0.000854	NC	<0.00080	NC
	Chromium	<0.0014	<0.0014	NC	0.00150 J	NC
	Cobalt	<0.00136	<0.00136	NC	0.000803 J	NC
	Copper	0.0257	0.0237	8.1	0.0153	**51**
	Iron	<0.101	0.105 J	NC	<0.078	NC
	Lead	0.000812 J	0.00146 J	NC	<0.00070	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.528	0.488	7.9	0.414	24
	Nickel	0.00272 J	0.00277 J	NC	0.00378 J	NC
	Selenium	0.166	0.153	8.2	0.14	17
	Thallium	<0.000693	<0.000693	NC	<0.0010	NC
	Zinc	0.0536	0.0458	16	0.0333	**47**
	Dissolved Metals (mg/L)					
	Antimony	0.0093	0.00903	2.9	0.00831	11
	Arsenic	1.6	1.6	<1	1.65	3.1
	Barium	0.0316	0.0329	4.0	0.0288	9.3
	Cadmium	0.00176 J	0.00185 J	NC	<0.00080	NC
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	0.00265 J	NC
	Copper	0.0126	0.0128	1.6	0.0101	22
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	<0.000733	<0.000733	NC	<0.00070	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.499	0.502	<1	0.432	14
	Nickel	0.00251 J	0.0023 J	NC	0.00264 J	NC
	Selenium	0.149	0.152	2.0	0.178	18
	Thallium	<0.000693	<0.000693	NC	<0.0010	NC
	Zinc	0.0295	0.0295	<1	0.027	8.8
	Cations (mg/L)					
	Aluminum	0.0267 J	0.0604	NC	0.0451	NC
	Calcium	156	147	5.9	127	20
	Magnesium	63.1	59.4	6.0	52.3	19
	Manganese	0.166	0.186	11	0.137	19
	Potassium	71.2	69	3.1	44.6	**46**
	Sodium	747	726	2.9	489	**42**
	Anions (mg/L)					
	Chloride	349	327	6.5	303	14
	Fluoride	3.42	3.42	<1	3.37	1.5
	Nitrate Nitrite as N	5.25	5.21	<1	4.03	25
	Sulfate	1120	1060	5.5	1030	8.4
	Sulfide	0.018 J	0.028 J	NC	<0.50	NC
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	367	368	<1	395	7.3
	Total Dissolved Solids	2580	2580	<1	2510	2.8
	Total Organic Carbon	2.5	2.5	<1	2.84	13
	Total Suspended Solids	3.2	7.6	**81**	<2.00	NC

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
EP-85 / FD030212	**Total Metals (mg/L)**					
	Antimony	0.0422	0.0452	6.9	NA	NC
	Arsenic	1.25	1.41	12	NA	NC
	Barium	0.0352	0.037	5.0	NA	NC
	Cadmium	0.00168 J	0.00178 J	NC	NA	NC
	Chromium	0.00239 J	0.00248 J	NC	NA	NC
	Cobalt	<0.00136	<0.00136	NC	NA	NC
	Copper	<0.002	<0.002	NC	NA	NC
	Iron	<0.101	0.274	NC	NA	NC
	Lead	<0.000733	<0.000733	NC	NA	NC
	Mercury	<0.00013	<0.00013	NC	NA	NC
	Molybdenum	0.572	0.62	8.1	NA	NC
	Nickel	<0.00217	<0.00217	NC	NA	NC
	Selenium	0.132	0.135	2.2	NA	NC
	Thallium	0.00974	0.00966	<1	NA	NC
	Zinc	<0.00355	0.00544 J	NC	NA	NC
	Dissolved Metals (mg/L)					
	Antimony	0.0394	0.0408	3.5	NA	NC
	Arsenic	1.3	1.29	<1	NA	NC
	Barium	0.0315	0.0332	5.3	NA	NC
	Cadmium	<0.000854	<0.000854	NC	NA	NC
	Chromium	0.00302 J	0.00226 J	NC	NA	NC
	Cobalt	<0.00136	<0.00136	NC	NA	NC
	Copper	<0.002	<0.002	NC	NA	NC
	Iron	<0.101	<0.101	NC	NA	NC
	Lead	<0.000733	<0.000733	NC	NA	NC
	Mercury	<0.00013	<0.00013	NC	NA	NC
	Molybdenum	0.537	0.559	4.0	NA	NC
	Nickel	<0.00217	<0.00217	NC	NA	NC
	Selenium	0.13	0.13	<1	NA	NC
	Thallium	0.01	0.01	<1	NA	NC
	Zinc	<0.00355	<0.00355	NC	NA	NC
	Cations (mg/L)					
	Aluminum	<0.0225	<0.0225	NC	NA	NC
	Calcium	98.9	104	5.0	NA	NC
	Magnesium	47.9	50.3	4.9	NA	NC
	Manganese	<0.0116	<0.0116	NC	NA	NC
	Potassium	27.3	28.3	3.6	NA	NC
	Sodium	783	789	<1	NA	NC
	Anions (mg/L)					
	Chloride	314	310	1	NA	NC
	Fluoride	3.3	3.02	9	NA	NC
	Nitrate Nitrite as N	9.37	8.88	5	NA	NC
	Sulfate	632	1080	**52**	NA	NC
	Sulfide	<0.0131	0.018 J	NC	NA	NC
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	396	394	<1	NA	NC
	Total Dissolved Solids	2640	2660	<1	NA	NC
	Total Organic Carbon	2.37	2.22	6.5	NA	NC
	Total Suspended Solids	<3	<3	NC	NA	NC

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)
SEP-2 / FD030512 / QA030512	**Total Metals (mg/L)**					
	Antimony	<0.00161	<0.00161	NC	0.00152 J	NC
	Arsenic	0.167	0.168	<1	0.15	11
	Barium	0.0591	0.0623	5.3	0.051	15
	Cadmium	<0.000854	<0.000854	NC	<0.00080	NC
	Chromium	<0.0014	<0.0014	NC	0.00125 J	NC
	Cobalt	<0.00136	<0.00136	NC	0.00117 J	NC
	Copper	0.00488 J	0.00497 J	NC	0.00484 J	NC
	Iron	0.548	0.541	1.3	0.596	8.4
	Lead	0.00673	0.0074	9.5	0.00593	13
	Mercury	<0.00013	<0.00013	NC	0.0000760 J	NC
	Molybdenum	0.205	0.208	1.5	0.174	16
	Nickel	0.00383 J	0.00366 J	NC	0.00384 J	NC
	Selenium	0.0174	0.0193	10	0.0218	22
	Thallium	<0.000693	<0.000693	NC	<0.0010	NC
	Zinc	0.00546 J	0.0058 J	NC	0.00998	NC
	Dissolved Metals (mg/L)					
	Antimony	<0.00161	<0.00161	NC	0.00118 J	NC
	Arsenic	0.129	0.132	2.3	0.129	<1
	Barium	0.0553	0.0565	2.1	0.0471	16
	Cadmium	<0.000854	<0.000854	NC	<0.00080	NC
	Chromium	<0.0014	<0.0014	NC	<0.0012	NC
	Cobalt	<0.00136	<0.00136	NC	0.00169 J	NC
	Copper	<0.002	<0.002	NC	0.00188 J	NC
	Iron	<0.101	<0.101	NC	<0.078	NC
	Lead	0.000753 J	<0.000733	NC	<0.00070	NC
	Mercury	<0.00013	<0.00013	NC	<0.000042	NC
	Molybdenum	0.198	0.208	4.9	0.172	14
	Nickel	0.00328 J	0.00324 J	NC	0.0188	NC
	Selenium	0.00875	0.0098	11	0.0121	**32**
	Thallium	<0.000693	<0.000693	NC	<0.0010	NC
	Zinc	<0.00355	<0.00355	NC	0.00722	NC
	Cations (mg/L)					
	Aluminum	0.49	0.475	3.1	0.668	**31**
	Calcium	125	123	1.6	102	20
	Magnesium	75.7	73.6	2.8	66.6	13
	Manganese	0.372	0.372	<1	0.33	12
	Potassium	27.9	27.4	1.8	23.1	19
	Sodium	883	1060	18	789	11
	Anions (mg/L)					
	Chloride	749	744	<1	705	6.1
	Fluoride	2.16	2.16	<1	2	7.7
	Nitrate Nitrite as N	2.48 J	2.48 J	NC	0.521	NC
	Sulfate	1250	1230	1.6	1150	8.3
	Sulfide	0.023 J	0.018 J	NC	<0.50	NC
	General Chemistry (mg/L)					
	Total Alkalinity as $CaCO_3$	251	246	2.0	260	3.5
	Total Dissolved Solids	3360	3310	1.5	3340	<1
	Total Organic Carbon	6.55	6.92	5.5	6.21	5.3
	Total Suspended Solids	27.2	31.2	14	26.6	2.2

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	QA Split Result	RPD (%)

Notes:

RPD = Relative Percent Difference; [(difference)/(average)]*100

Bolded values indicate field duplicate or QA split outliers

If results are less than five times the MQL, the difference between the results should be less than the MQL

"<" = Analyte not detected above listed reporting limit

J = Estimated value; detected between the SDL and MQL

NC = Not Calculated; RPD values were not calculated for non-detect values or trace values

NA = Not Analyzed

mg/L = milligrams per liter

QA = Quality Assurance

SDL = Sample Detection Limit; MQL = Method Quantitation Limit

Table 4
Completeness Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	54	54	100	54	100
Arsenic	54	52[a]	96	54	100
Barium	54	54	100	54	100
Cadmium	54	54	100	54	100
Chromium	54	54	100	54	100
Cobalt	54	54	100	54	100
Copper	54	41[a,b]	76	54	100
Iron	54	54	100	54	100
Lead	54	54	100	54	100
Mercury	54	54	100	54	100
Molybdenum	54	54	100	54	100
Nickel	54	54	100	54	100
Selenium	54	54	100	54	100
Thallium	54	53[c]	98	54	100
Zinc	54	52[b]	96	54	100
Dissolved Metals					
Antimony	54	54	100	54	100
Arsenic	54	52[a]	96	54	100
Barium	54	54	100	54	100
Cadmium	54	54	100	54	100
Chromium	54	54	100	54	100
Cobalt	54	54	100	54	100
Copper	54	48[a]	89	54	100
Iron	54	54	100	54	100
Lead	54	54	100	54	100
Mercury	54	54	100	54	100
Molybdenum	54	54	100	54	100
Nickel	54	54	100	54	100
Selenium	54	52[b]	96	54	100
Thallium	54	53[c]	98	54	100
Zinc	54	54	100	54	100
Total Cations					
Aluminum	54	52[b]	96	54	100
Calcium	54	54	100	54	100
Magnesium	54	54	100	54	100
Manganese	54	54	100	54	100
Potassium	54	52[b]	96	54	100
Sodium	54	52[b]	96	54	100

Table 4
Completeness Summary
Groundwater and Surface Water Samples - February/March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Anions					
Chloride	54	54	100	54	100
Fluoride	54	54	100	54	100
Nitrate Nitrite as N	54	53[d]	98	54	100
Sulfate	54	51[e,f]	94	54	100
Sulfide	54	36[a,c]	67	54	100
General Chemistry					
Total Alkalinity	54	54	100	54	100
Total Dissolved Solids	54	54	100	54	100
Total Organic Carbon	54	53[c]	98	54	100
Total Suspended Solids	54	52[f]	96	54	100
TOTALS	**2430**	**2370**	**98**	**2430**	**100**

Notes:

Total number of samples includes field samples, field duplicate samples, and QA split samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

* Trace detections are not counted as being out of contractual compliance

[a] Results qualified due to equipment rinsate contamination

[b] Results qualified due to high QA split RPD outliers

[c] Results qualified due to method blank contamination

[d] Results qualified due to holding time exceedance

[e] Results qualified due to MS/MSD percent recovery outliers

[f] Results qualified due to high field duplicate RPD outliers

Texas Custodial Trust

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Data Usability Summary Groundwater and Surface Water Sampling August 2012

March 2013

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater and surface water samples collected during August 2012 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. ALS Environmental (ALS), located in Houston, Texas, analyzed samples as the QA laboratory. Both TestAmerica and ALS are National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the groundwater and surface water samples collected during August 2012 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 62 groundwater and surface water samples were collected during the sampling event. The samples were submitted to TestAmerica and ALS for the following analyses:

- total and dissolved metals by USEPA Methods 6020 and 7470
- cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020
- total dissolved solids (TDS) by USEPA Method 160.1
- total suspended solids (TSS) by USEPA Method 160.2
- anions (chloride, nitrate, nitrite, and sulfate) by USEPA Method 300.0

- fluoride by USEPA Method 340.2 or 300.0
- sulfide by USEPA Method 376.2
- total organic carbon (TOC) by USEPA Method 415.1
- total alkalinity by Standard Method (SM) 2320

The total and dissolved metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc.

Nine field quality control and assurance samples (i.e., equipment rinsate blank, field duplicates, and quality assurance [QA] splits) were also collected and analyzed as part of the sampling program. The samples were collected using low-flow purge technique.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks, equipment rinsate blanks)
- laboratory control sample (LCS) percent recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and RPD
- duplicates (field duplicates, QA split samples)
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater and surface water samples was found to be complete. Chains-of-custody included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Several sample coolers were received at the slightly below the acceptance temperature limit of 4 ± 2 degrees Celsius. These temperature outliers ranged from 0.8 to 1.2 degrees Celsius. These outliers did not impact the sample results and data qualification was not required.

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blanks associated with analytical batches 77291 and 77263 had molybdenum detections of 0.001437 and 0.004813 milligrams per liter (mg/L), respectively. Total molybdenum result for sample SEP-13 and dissolved

molybdenum results for SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, FD082312A, and EP-4 were qualified "UJ" to indicate a potential bias. Data qualification for other samples was not required because the molybdenum detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 77429 had a chloride detection (0.3520 mg/L). Data qualification was not required because the chloride detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 77356 had a barium detection (0.001344 mg/L). Data qualification was not required because the barium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 77487 had detections of arsenic (0.002598 mg/L), molybdenum (0.003433 mg/L), selenium (0.001664 mg/L), and zinc (0.008889 mg/L). Data was qualified "UJ" for the following results: total arsenic results for EP-95 and EP-68; total molybdenum results for EP-84; total zinc results for EP-84, EP-95, EP-120, EP-78, EP-75, EP-68, EP-72, EP-71, and EM-2; dissolved arsenic results for EP-95; and, dissolved zinc results for EP-84, EP-95, EP-120, EP-78, and EP-75. Data qualification for other sample results was not required because the detections in the associated sample was greater than ten times the method blank concentrations.

- The method blank associated with analytical batch 77414 had a calcium detection (0.2909 mg/L) and a zinc detection (0.004673 mg/L). Total zinc results for samples EP-132 and EP-62 and the dissolved zinc result for MW-10S were qualified "UJ" to indicate a potential bias. Data qualification for the other results was not required because the sample detections were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 77278 had a total organic carbon (TOC) detection (0.4940 mg/L). TOC results for EP-7, EP-133, EP-117, and OBS-1 were qualified "UJ" to indicate a potential bias. Data qualification for the other results was not required because sample detections were greater than ten times the method blank concentration.

- The method blank associated with the ALS analytical batch 63768 had detection of sodium (0.4764 mg/L). Data qualification was not required because the sodium detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with the ALS analytical batch R134067 had a chloride detection (0.321 mg/L). Data qualification was not required because the chloride detections in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with ALS analytical batch 63883 had detections of aluminum (0.004664 mg/L), barium (0.0009326 mg/L), and zinc (0.002883 mg/L). Data qualification was not required because the sample detections were greater than ten times the method blank concentration.

- The method blank associated with ALS analytical batch 63875 had a barium detection (0.000908 mg/L). Data qualification was not required because the sample detections were greater than ten times the method blank concentration.

3.4.2. Equipment Rinsate Blank Interference

Target compounds were not detected in the equipment rinsate blank with the following exceptions:

- The equipment rinsate blank ER090612 contained detections of total arsenic (0.00188 mg/L), total iron (0.102 mg/L), total molybdenum (0.00220 mg/L), total sodium (2.03 mg/L), dissolved arsenic (0.00174 mg/L), dissolved molybdenum (0.00194 mg/L), chloride (0.855 mg/L), sulfate (1.52 mg/L), fluoride (0.0302 mg/L), TOC (0.448 mg/L), and sulfide (0.0230 mg/L).

Data qualification was not required if parameter results in the associated samples were greater than ten times the equipment rinsate blank concentration. The following samples were qualified based on equipment blank contamination:

- Total iron results for samples EP-77, EP-35, EP-116, and EP-20 were qualified "UJ" to indicate a potential bias.

- TOC results for samples EP-77, EP-81, EP-20, and EP-35 were qualified "UJ" to indicate a potential bias.

- Sulfide results for samples EP-77, EP-81, EP-20, EP-116, FD090612, and EP-35 were qualified "UJ" to indicate a potential bias.

3.5. Laboratory Control Sample Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J".

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits with the following exception:

- The LCS associated with analytical batch 77260 had a low recovery for total sodium (71 percent; limits are 80 to 120 percent). Total sodium results for samples SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-10, and SEP-12 were qualified "J" to indicate a potential low bias.

3.6. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J".

- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for nitrate as N (0 percent) were below acceptance limits (80 to 120 percent) for the analytical batch 77780. Data qualification was not required because, according to the case narrative, the analyst forgot to spike the samples with nitrate as N, and recoveries for nitrate were within acceptance limits.

- The MS and MSD recoveries for chloride (75 and 70 percent) and sulfate (74 and 72 percent) were below acceptance limits (80 to 120 percent) for analytical batch 77281. Sulfate results for samples SEP-1, SEP-2, SEP-3, SEP-4, SEP-6, SEP-7, SEP-9, SEP-10, SEP-11, SEP-12, SEP-13, and FD082312A were qualified "J" to indicate a potential bias. Chloride results did not require data qualification because the original sample result was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for calcium (129 and 121 percent) and sodium (127 and 178 percent) and the MSD recovery for molubdenum (123 percent) were above acceptance limits (80 to 120 percent) for analytical batch 77689. Data qualification was not required for calcium and sodium because the original sample results were greater than four times the matrix spike concentrations. Total molybdenum result for sample FD082912 and dissolved molybdenum results for samples EP-68, EP-72, EP-71, EM-2, and FD082912 were qualified "J" to indicate a potential bias.

- The MS and MSD recoveries for sodium (72 and 38 percent) were below acceptance limits (80 to 120 percent) for analytical batch 78016. Data qualification was not required because the original sample result for sodium was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for sodium and potassium were above acceptance limits for the analytical batch 77514. Data qualification was not required for sodium because the original sample result was greater than four times the matrix spike concentration. Potassium was qualified "J" for samples MW-10S, MW-10D, EP-62, EP-119, EP-58, EP-132, EP-135, and FD082712 to indicate a potential high bias.

- The MS and MSD recoveries for sulfate were outside acceptance limits for the analytical batch 77429. Data qualification was not required because the original sample result was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for calcium (133 and 39 percent) and the MSD recovery for magnesium (76 percent) and sodium (-194 percent) were outside acceptance limits for the analytical batch 77341. Data qualification was not required because the original sample results for calcium, magnesium, and sodium were greater than four times the matrix spike concentration.

- The MS and MSD recoveries for sodium (500 and 225 percent) were outside acceptance limits for the analytical batch 77373. Data qualification was not required because the original sample result for sodium was greater than four times the matrix spike concentration.

- The MS and MSD recoveries for several analytes were outside acceptance limits for the analytical batch 63768. Data qualification was not required because the spiked sample was not project specific (i.e., batch QC).

- The MS and MSD recoveries for chloride (-74.8 and 32.5 percent) and the MSD recovery for nitrate (72.2 percent) were below acceptance limits (80 to 120 percent) for analytical batch R133782. The nitrate result for sample QA082312B was qualified "J" to indicate a potential bias. Data qualification was not required for the chloride results because the original sample result was greater than four times the matrix spike concentration.

3.7. Duplicates

3.7.1. Field Duplicates

Five field duplicates were collected during the sampling event and submitted for analysis. The RPDs between the field duplicate and its associated sample were calculated and are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD between sample EP-71 and field duplicate FD082912 for sulfate (30 percent) was above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample EP-71 and field duplicate FD082912 for aluminum (0.052) was above the acceptance limit (0.05). Data were qualified "J" to indicate a potential bias.

3.7.2. QA Split Samples

Three QA split samples were collected during the sampling event and submitted for analysis. The RPDs between the split sample and its associated field sample were calculated and are presented in Table 3. The QA split samples were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the method reporting limit, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the sample and the field duplicate should not exceed the MQL.

- QA split RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

QA split RPDs were within acceptance limits except for the following:

- The RPDs between sample SEP-9 and split sample QA082312A for total iron (35 percent) and fluoride (42 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample SEP-9 and spit sample QA08312A for nitrate-nitrite (0.691) and TOC (1.35) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample MW-9S and split sample QA082312B for nitrate-nitrite (0.79) was above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The RPDs between sample EP-71 and split sample QA082912 for dissolved molybdenum (31 percent) and fluoride (57 percent) were above the acceptance limit. Data were qualified "J" to indicate a potential bias.

- The difference between sample EP-71 and split sample QA082912 for aluminum (0.14) and sulfide (1.3) were above the acceptance limits. Data were qualified "J" to indicate a potential bias.

3.8. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- Total zinc and dissolved zinc had contractual compliances below 90 percent due to method blank contamination and high QA split RPD outliers.

- Dissolved molybdenum had a contractual compliance below 90 percent due to method blank contamination, high QA split RPD outlier, and MS/MSD outlier.

- Total sodium had a contractual compliance below 90 percent due to LCS outlier.

- Sulfide, sulfate, and total organic carbon had contractual compliances below 90 percent due to method blank contamination, equipment rinsate blank contamination, MS/MSD percent recovery outliers, high field duplicate RPD, and high QA split RPD outliers.

The results for the groundwater and surface water sampling event conducted in February and March 2012 were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
QA082312A	12081028-1	8/23/2012	QA of SEP-9	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
QA082312B	12081028-2	8/23/2012	QA of MW-9S	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
QA082912	12081282-1	8/29/2012	QA of EP-71	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-7	560-34353-1	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-6	560-34353-2	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-4	560-34353-3	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-133	560-34353-4	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-114	560-34353-5	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-117	560-34353-6	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
OBS-1	560-34353-7	8/22/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-1	560-34374-1	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-12	560-34374-10	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-13	560-34374-11	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
FD082312A	560-34374-12	8/23/2012	FD of SEP-9	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-2	560-34374-2	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-3	560-34374-3	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-4	560-34374-4	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-6	560-34374-5	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-7	560-34374-6	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-9	560-34374-7	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-10	560-34374-8	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
SEP-11	560-34374-9	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-1	560-34376-1	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-2	560-34376-2	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-9S	560-34376-3	8/23/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
FD082312B	560-34376-4	8/23/2012	FD of MW-9S	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
MW-9D	560-34392-1	8/24/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-11S	560-34392-2	8/24/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-11D	560-34392-3	8/24/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-122	560-34392-4	8/24/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-10S	560-34427-1	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
MW-10D	560-34427-2	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-119	560-34427-3	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-62	560-34427-4	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-58	560-34427-5	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-132	560-34427-6	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-135	560-34427-7	8/27/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
FD082712	560-34427-8	8/27/2012	FD of EP-132	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-84	560-34462-1	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-95	560-34462-2	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-120	560-34462-3	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-78	560-34462-4	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-75	560-34462-5	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-54	560-34462-6	8/28/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-68	560-34499-1	8/29/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-72	560-34499-2	8/29/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-71	560-34499-3	8/29/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EM-2	560-34499-4	8/29/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
FD082912	560-34499-5	8/29/2012	FD of EP-71	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-12	560-34623-1	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-14	560-34623-2	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-13	560-34623-3	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity

Table 1
Sample and Analysis Schedule
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
EP-51	560-34623-4	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-49	560-34623-5	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-52	560-34623-6	9/5/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-77	560-34662-1	9/6/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-81	560-34662-2	9/6/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
ER090612	560-34662-3	9/6/2012	ER	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-20	560-34662-4	9/6/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
FD090612	560-34662-5	9/6/2012	FD of EP-81	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-35	560-34662-6	9/6/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity
EP-116	560-34662-7	9/6/2012	N	Total Metals and Cations, Dissolved Metals, Anions, Fluoride, TDS, TSS, TOC, Sulfide, Alkalinity

Notes:
ER= Equipment rinsate blank
FD = Field Duplicate
N = Normal sample
QA= Quality assurance split sample
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TSS = Total Suspended Solids
Total Metals and Cations = aluminum, antimony, arsenic, barium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, mercury, molybdenenum, nickel, potassium, selenium, sodium, thallium, and zinc

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EM-2	560-34499-4	Antimony, Dissolved	0.00345	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Antimony, Total	0.00373	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Cadmium, Total	0.00104	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Chromium, Dissolved	0.00159	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Chromium, Total	0.00212	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Lead, Dissolved	0.00327	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Manganese, Total	0.0125	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Mercury, Total	0.00031	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Molybdenum, Dissolved	0.275	mg/L	J	Qualified due to MS/MSD recoveries
EM-2	560-34499-4	Sulfide	0.027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Zinc, Dissolved	0.00693	mg/L	J	Estimated; Analyte detected between SDL and MQL
EM-2	560-34499-4	Zinc, Total	<0.021	mg/L	UJ	Qualified due to method blank contamination
EM-2	560-34499-4	Zinc, Total	0.021	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-34353-5	Aluminum, Total	0.0448	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-34353-5	Copper, Total	0.00534	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-34353-5	Lead, Total	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-34353-5	Mercury, Total	0.000345	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-114	560-34353-5	Mercury, Dissolved	0.000258	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-116	560-34662-7	Iron, Total	<0.538	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-116	560-34662-7	Sulfide	<0.022	mg/L	J	Qualified due to equipment rinsate contamination
EP-116	560-34662-7	Sulfide	0.022	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Aluminum, Total	0.0383	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Chromium, Total	0.00358	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Copper, Total	0.00391	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Manganese, Total	0.0161	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Thallium, Total	0.00111	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Chromium, Dissolved	0.00343	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Copper, Dissolved	0.00271	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Lead, Dissolved	0.00183	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Thallium, Dissolved	0.00111	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-117	560-34353-6	Total Organic Carbon	<3.21	mg/L	UJ	Qualified due to method blank contamination
EP-119	560-34427-3	Nickel, Dissolved	0.00224	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-34427-3	Sulfide	0.032	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-119	560-34427-3	Potassium, Total	58.7	mg/L	J	Qualified due to MS/MSD recoveries
EP-12	560-34623-1	Cobalt, Dissolved	0.00171	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-34623-1	Copper, Total	0.00715	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-34623-1	Iron, Dissolved	0.103	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-34623-1	Lead, Total	0.0027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-34623-1	Molybdenum, Dissolved	0.00488	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-12	560-34623-1	Thallium, Total	0.00183	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Chromium, Dissolved	0.00321	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Chromium, Total	0.00489	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Manganese, Total	0.0188	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Sulfide	0.026	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Zinc, Dissolved	<0.0126	mg/L	UJ	Qualified due to method blank contamination
EP-120	560-34462-3	Zinc, Total	<0.0234	mg/L	UJ	Qualified due to method blank contamination
EP-120	560-34462-3	Zinc, Dissolved	0.0126	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-120	560-34462-3	Zinc, Total	0.0234	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Antimony, Dissolved	0.00222	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Antimony, Total	0.00323	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Chromium, Total	0.00194	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Cobalt, Dissolved	0.0016	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Copper, Dissolved	0.00359	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Lead, Dissolved	0.00425	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Nickel, Dissolved	0.00441	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Sulfide	0.023	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Zinc, Dissolved	0.00426	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-13	560-34623-3	Zinc, Total	0.0174	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-34427-6	Zinc, Total	<0.00577	mg/L	UJ	Qualified due to method blank contamination
EP-132	560-34427-6	Antimony, Total	0.00449	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-132	560-34427-6	Copper, Total	0.00266	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-34427-6	Lead, Total	0.00199	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-34427-6	Zinc, Total	0.00577	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-34427-6	Sulfide	0.048	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-132	560-34427-6	Potassium, Total	38.9	mg/L	J	Qualified due to MS/MSD recoveries
EP-133	560-34353-4	Cobalt, Total	0.00136	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Lead, Total	0.00865	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Thallium, Total	0.000851	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Zinc, Total	0.00584	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Antimony, Dissolved	0.00161	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Cobalt, Dissolved	0.00176	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Lead, Dissolved	0.000736	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Thallium, Dissolved	0.00178	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Zinc, Dissolved	0.00592	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-133	560-34353-4	Total Organic Carbon	<3.93	mg/L	UJ	Qualified due to method blank contamination
EP-135	560-34427-7	Potassium, Total	15.3	mg/L	J	Qualified due to MS/MSD recoveries
EP-14	560-34623-2	Antimony, Dissolved	0.00311	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-14	560-34623-2	Antimony, Total	0.00328	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-14	560-34623-2	Lead, Dissolved	0.0011	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-14	560-34623-2	Manganese, Total	0.0133	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-34662-4	Sulfide	0.02	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-34662-4	Iron, Total	<0.175	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-20	560-34662-4	Lead, Dissolved	0.000954	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-20	560-34662-4	Sulfide	<0.020	mg/L	J	Qualified due to equipment rinsate contamination
EP-20	560-34662-4	Total Organic Carbon	<2.63	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-20	560-34662-4	Iron, Total	0.175	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-35	560-34662-6	Sulfide	0.02	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-35	560-34662-6	Copper, Total	0.0024	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-35	560-34662-6	Iron, Total	<0.275	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-35	560-34662-6	Lead, Total	0.00164	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-35	560-34662-6	Sulfide	<0.020	mg/L	J	Qualified due to equipment rinsate contamination
EP-35	560-34662-6	Total Organic Carbon	<2.99	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-4	560-34353-3	Aluminum, Total	0.0421	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Antimony, Total	0.00202	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Lead, Total	0.00283	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Nickel, Total	0.00271	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Selenium, Total	0.0013	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Thallium, Total	0.0013	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Zinc, Total	0.0053	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Molybdenum, Dissolved	<0.0414	mg/L	UJ	Qualified due to method blank contamination
EP-4	560-34353-3	Antimony, Dissolved	0.00182	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Copper, Dissolved	0.00413	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Nickel, Dissolved	0.00226	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Selenium, Dissolved	0.00129	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-4	560-34353-3	Nitrate Nitrite as N	1.38	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Barium, Total	0.00382	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Chromium, Dissolved	0.00369	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Cobalt, Dissolved	0.0036	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Cobalt, Total	0.00447	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Lead, Dissolved	0.00201	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-49	560-34623-5	Sulfide	0.044	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-34623-4	Antimony, Dissolved	0.00397	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-34623-4	Antimony, Total	0.00423	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-34623-4	Lead, Total	0.00171	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-51	560-34623-4	Sulfide	0.015	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-34623-6	Chromium, Total	0.00321	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-34623-6	Mercury, Dissolved	0.00458	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-52	560-34623-6	Sulfide	0.014	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-34462-6	Aluminum, Total	0.0274	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-34462-6	Chromium, Dissolved	0.00166	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-54	560-34462-6	Lead, Total	0.00139	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-34462-6	Mercury, Dissolved	0.0002	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-34462-6	Mercury, Total	0.000222	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-54	560-34462-6	Sulfide	0.022	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-34427-5	Cobalt, Total	0.00394	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-34427-5	Antimony, Dissolved	0.00468	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-34427-5	Copper, Dissolved	0.00279	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-34427-5	Sulfide	0.036	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-58	560-34427-5	Potassium, Total	196	mg/L	J	Qualified due to MS/MSD recoveries
EP-6	560-34353-2	Antimony, Total	0.0039	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Cobalt, Total	0.00289	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Nickel, Total	0.0043	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Antimony, Dissolved	0.00368	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Cobalt, Dissolved	0.00341	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Nickel, Dissolved	0.00457	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-6	560-34353-2	Selenium, Dissolved	0.00172	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-34427-4	Zinc, Total	<0.0121	mg/L	UJ	Qualified due to method blank contamination
EP-62	560-34427-4	Nickel, Total	0.00364	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-34427-4	Zinc, Total	0.0121	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-34427-4	Nickel, Dissolved	0.00382	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-34427-4	Sulfide	0.022	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-62	560-34427-4	Potassium, Total	52.4	mg/L	J	Qualified due to MS/MSD recoveries
EP-68	560-34499-1	Arsenic, Dissolved	0.00228	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Arsenic, Total	<0.0115	mg/L	UJ	Qualified due to method blank contamination
EP-68	560-34499-1	Chromium, Total	0.00284	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Copper, Dissolved	0.00278	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Copper, Total	0.00507	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Iron, Total	0.16	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Molybdenum, Dissolved	0.214	mg/L	J	Qualified due to MS/MSD recoveries
EP-68	560-34499-1	Nickel, Dissolved	0.00441	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Sulfide	0.029	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Thallium, Dissolved	0.00188	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Zinc, Dissolved	0.0144	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-68	560-34499-1	Zinc, Total	<0.0149	mg/L	UJ	Qualified due to method blank contamination
EP-68	560-34499-1	Zinc, Total	0.0149	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Nickel, Total	0.00378	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Selenium, Total	0.00234	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Nickel, Dissolved	0.00356	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Selenium, Dissolved	0.00163	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Thallium, Dissolved	0.000815	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-7	560-34353-1	Total Organic Carbon	<4.35	mg/L	UJ	Qualified due to method blank contamination
EP-71	560-34499-3	Aluminum, Total	0.0771	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Cobalt, Dissolved	0.00162	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Copper, Total	0.00298	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Fluoride	1.04	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Manganese, Total	0.019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Molybdenum, Dissolved	0.171	mg/L	J	Qualified due to MS/MSD recoveries and high QA split RPD
EP-71	560-34499-3	Sulfide	0.029	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Zinc, Dissolved	0.00594	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Manganese, Total	0.019	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Molybdenum, Dissolved	1.71	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Mercury, Total	<0.000130	mg/L	UJ	Qualified due to high QA split RPD
EP-71	560-34499-3	Mercury, Dissolved	<0.000130	mg/L	UJ	Qualified due to high QA split RPD
EP-71	560-34499-3	Sulfide	0.029	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Zinc, Dissolved	0.00594	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Zinc, Total	0.00839	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-71	560-34499-3	Zinc, Total	<0.00839	mg/L	UJ	Qualified due to method blank contamination
EP-71	560-34499-3	Sulfate	1850	mg/L	J	Qualified due to high field duplicate RPD
EP-71	560-34499-3	Sulfate	1850	mg/L	J	Qualified due to high QA split RPD
EP-71	560-34499-3	Fluoride	1.04	mg/L	J	Qualified due to high QA split RPD

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
EP-71	560-34499-3	Chloride	374	mg/L	J	Qualified due to high QA split RPD
EP-72	560-34499-2	Cobalt, Total	0.00236	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Copper, Dissolved	0.00376	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Copper, Total	0.00536	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Molybdenum, Dissolved	0.334	mg/L	J	Qualified due to MS/MSD recoveries
EP-72	560-34499-2	Sulfide	0.027	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Lead, Total	0.000857	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Thallium, Dissolved	0.00134	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Thallium, Total	0.00122	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-72	560-34499-2	Zinc, Total	<0.0234	mg/L	UJ	Qualified due to method blank contamination
EP-72	560-34499-2	Zinc, Total	0.0234	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-34462-5	Copper, Dissolved	0.00984	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-34462-5	Lead, Dissolved	0.00134	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-34462-5	Lead, Total	0.00216	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-34462-5	Sulfide	0.031	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-75	560-34462-5	Zinc, Dissolved	<0.0278	mg/L	UJ	Qualified due to method blank contamination
EP-75	560-34462-5	Zinc, Total	<0.0286	mg/L	UJ	Qualified due to method blank contamination
EP-77	560-34662-1	Sulfide	0.019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Antimony, Dissolved	0.00361	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Antimony, Total	0.0039	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Chromium, Total	0.00255	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Copper, Total	0.00689	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Iron, Total	<0.270	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-77	560-34662-1	Lead, Total	0.00252	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Manganese, Total	0.0337	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Nickel, Total	0.00258	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Sulfide	<0.019	mg/L	J	Qualified due to equipment rinsate contamination
EP-77	560-34662-1	Total Organic Carbon	<3.00	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-77	560-34662-1	Zinc, Dissolved	0.00383	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-77	560-34662-1	Zinc, Total	0.00554	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78	560-34462-4	Copper, Total	0.0028	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78	560-34462-4	Lead, Total	0.000953	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78	560-34462-4	Sulfide	0.024	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78	560-34462-4	Zinc, Dissolved	<0.00596	mg/L	UJ	Qualified due to method blank contamination
EP-78	560-34462-4	Zinc, Total	<0.00931	mg/L	UJ	Qualified due to method blank contamination
EP-78	560-34462-4	Zinc, Total	0.00931	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-78	560-34462-4	Zinc, Dissolved	0.00596	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Sulfide	0.014	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Aluminum, Total	0.0268	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Antimony, Dissolved	0.00177	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Antimony, Total	0.00176	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Chromium, Dissolved	0.00471	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Lead, Total	0.00099	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-81	560-34662-2	Sulfide	<0.014	mg/L	J	Qualified due to equipment rinsate contamination
EP-81	560-34662-2	Total Organic Carbon	<1.22	mg/L	UJ	Qualified due to equipment rinsate contamination
EP-84	560-34462-1	Manganese, Total	0.0179	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-34462-1	Molybdenum, Total	<0.022	mg/L	UJ	Qualified due to method blank contamination
EP-84	560-34462-1	Sulfide	0.021	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-84	560-34462-1	Zinc, Dissolved	<0.028	mg/L	UJ	Qualified due to method blank contamination
EP-84	560-34462-1	Zinc, Total	<0.026	mg/L	UJ	Qualified due to method blank contamination
EP-95	560-34462-2	Arsenic, Total	<0.0099	mg/L	UJ	Qualified due to method blank contamination
EP-95	560-34462-2	Arsenic, Dissolved	<0.0123	mg/L	UJ	Qualified due to method blank contamination
EP-95	560-34462-2	Chromium, Dissolved	0.0019	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-34462-2	Copper, Dissolved	0.00981	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-34462-2	Lead, Total	0.00152	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-34462-2	Sulfide	0.024	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-34462-2	Thallium, Dissolved	0.000818	mg/L	J	Estimated; Analyte detected between SDL and MQL
EP-95	560-34462-2	Zinc, Dissolved	<0.0366	mg/L	UJ	Qualified due to method blank contamination
EP-95	560-34462-2	Zinc, Total	<0.0375	mg/L	UJ	Qualified due to method blank contamination
FD0802912	560-34499-5	Zinc, Total	<0.00707	mg/L	UJ	Qualified due to method blank contamination

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
FD082312A	560-34374-12	Cobalt, Total	0.00467	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082312A	560-34374-12	Molybdenum, Dissolved	<0.00850	mg/L	UJ	Qualified due to method blank contamination
FD082312A	560-34374-12	Sulfate	154	mg/L	J	Qualified due to low MS/MSD recoveries
FD082312B	560-34376-4	Antimony, Dissolved	0.0032	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082312B	560-34376-4	Antimony, Total	0.00356	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082312B	560-34376-4	Nickel, Dissolved	0.00352	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082312B	560-34376-4	Nickel, Total	0.00379	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Antimony, Total	0.00465	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Copper, Total	0.00329	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Antimony, Dissolved	0.00456	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Copper, Dissolved	0.00248	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Sulfide	0.022	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082712	560-34427-8	Potassium, Total	39.1	mg/L	J	Qualified due to MS/MSD recoveries
FD082912	560-34499-5	Aluminum, Total	0.0254	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Antimony, Dissolved	0.00195	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Chromium, Total	0.00154	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Cobalt, Dissolved	0.00165	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Cobalt, Total	0.00143	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Copper, Total	0.00221	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Manganese, Total	0.0258	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Mercury, Total	0.000139	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Molybdenum, Dissolved	0.168	mg/L	J	Qualified due to MS/MSD recoveries
FD082912	560-34499-5	Molybdenum, Total	0.166	mg/L	J	Qualified due to MS/MSD recoveries
FD082912	560-34499-5	Sulfide	0.025	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Zinc, Dissolved	0.00735	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD082912	560-34499-5	Zinc, Total	0.00707	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090612	560-34662-5	Antimony, Dissolved	0.00175	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090612	560-34662-5	Antimony, Total	0.00188	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090612	560-34662-5	Lead, Total	0.000883	mg/L	J	Estimated; Analyte detected between SDL and MQL
FD090612	560-34662-5	Sulfide	0.023	mg/L	J	Qualified due to equipment rinsate contamination
MW-1	560-34376-1	Nickel, Dissolved	0.00366	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-1	560-34376-1	Nickel, Total	0.00363	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-34427-2	Lead, Total	0.00102	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-34427-2	Manganese, Total	0.0198	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-34427-2	Thallium, Dissolved	0.000954	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-34427-2	Sulfide	0.037	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-34427-2	Potassium, Total	45.4	mg/L	J	Qualified due to MS/MSD recoveries
MW-10S	560-34427-1	Nickel, Total	0.00231	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-34427-1	Zinc, Dissolved	<0.0173	mg/L	UJ	Qualified due to method blank contamination
MW-10S	560-34427-1	Nickel, Dissolved	0.00246	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-34427-1	Zinc, Dissolved	0.0173	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-34427-1	Sulfide	0.032	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-34427-1	Potassium, Total	46.4	mg/L	J	Qualified due to MS/MSD recoveries
MW-11D	560-34392-3	Iron, Dissolved	0.17	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-34392-3	Iron, Total	0.168	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-34392-3	Nitrate Nitrite as N	0.455	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-34392-2	Nickel, Total	0.00234	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-34392-2	Nitrate Nitrite as N	0.335	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-2	560-34376-2	Nickel, Dissolved	0.00437	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-2	560-34376-2	Nickel, Total	0.00459	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9D	560-34392-1	Manganese, Total	0.0324	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9D	560-34392-1	Nickel, Dissolved	0.00242	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-34376-3	Antimony, Dissolved	0.00334	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-34376-3	Antimony, Total	0.0034	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-34376-3	Nickel, Dissolved	0.00348	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-34376-3	Nickel, Total	0.00349	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-34376-3	Nitrate Nitrite as N	2.12	mg/L	J	Qualified due to high QA split RPD
MW-9S	560-34376-3	Total Organic Carbon	2.02	mg/L	J	Qualified due to high QA split RPD
OBS-1	560-34353-7	Cadmium, Total	0.000944	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-34353-7	Nickel, Total	0.00289	mg/L	J	Estimated; Analyte detected between SDL and MQL

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
OBS-1	560-34353-7	Cadmium, Dissolved	0.000942	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-34353-7	Nickel, Dissolved	0.00279	mg/L	J	Estimated; Analyte detected between SDL and MQL
OBS-1	560-34353-7	Total Organic Carbon	<3.48	mg/L	UJ	Qualified due to method blank contamination
QA082312A	12081028-01	Fluoride	0.569	mg/L	J	Qualified due to high QA split RPD
QA082312A	12081028-01	Iron, Total	6.7	mg/L	J	Qualified due to high QA split RPD
QA082312A	12081028-01	Nitrate Nitrite as N	0.379	mg/L	J	Qualified due to high QA split RPD
QA082312A	12081028-01	Total Organic Carbon	4.56	mg/L	J	Qualified due to high QA split RPD
QA082312A	12081028-01	Cobalt, Total	0.00396	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312A	12081028-01	Selenium, Total	0.00145	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312A	12081028-01	Arsenic, Dissolved	0.00371	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312A	12081028-01	Cobalt, Dissolved	0.00101	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312A	12081028-01	Zinc, Dissolved	0.00282	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312A	12081028-01	Sulfide	0.64	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Antimony, Total	0.0042	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Nickel, Total	0.00173	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Zinc, Total	0.00329	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Antimony, Dissolved	0.00379	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Nickel, Dissolved	0.003	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-02	Total Suspended Solids	1.07	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082312B	12081028-01	Nitrate Nitrite as N	1.33	mg/L	J	Qualified due to low LCS recovery
QA082312B	12081028-02	Nitrate Nitrite as N	1.33	mg/L	J	Qualified due to high QA split RPD
QA082312B	12081028-02	Total Organic Carbon	2.76	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Chromium, Total	0.00258	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Cobalt, Total	0.00178	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Copper, Total	0.00542	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Iron, Total	0.205	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Cobalt, Dissolved	0.00123	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Copper, Dissolved	0.00227	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Fluoride	0.584	mg/L	J	Estimated; Analyte detected between SDL and MQL
QA082912	12081282-01	Sulfide	1.32	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Sulfate	2420	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Fluoride	0.584	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Chloride	504	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Mercury, Total	0.000254	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Mercury, Dissolved	0.000229	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Aluminum, Total	0.212	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Fluoride	0.584	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Manganese, Total	0.0336	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Molybdenum, Dissolved	0.125	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Sulfide	1.32	mg/L	J	Qualified due to high QA split RPD
QA082912	12081282-01	Zinc, Dissolved	0.012	mg/L	J	Qualified due to high QA split RPD
SEP-1	560-34374-1	Cobalt, Dissolved	0.00434	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-34374-1	Cobalt, Total	0.00486	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-1	560-34374-1	Sodium, Total	90.4	mg/L	J	Qualified due to low LCS recovery
SEP-1	560-34374-1	Molybdenum, Dissolved	<0.0101	mg/L	UJ	Qualified due to method blank contamination
SEP-1	560-34374-1	Sulfate	155	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-10	560-34374-8	Cobalt, Dissolved	0.00333	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-34374-8	Cobalt, Total	0.00417	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-10	560-34374-8	Sodium, Total	88.9	mg/L	J	Qualified due to low LCS recovery
SEP-10	560-34374-8	Molybdenum, Dissolved	<0.00855	mg/L	UJ	Qualified due to method blank contamination
SEP-10	560-34374-8	Sulfate	151	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-10	560-34374-8	Sulfide	0.02	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-34374-9	Cobalt, Dissolved	0.00442	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-34374-9	Cobalt, Total	0.0045	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-11	560-34374-9	Sodium, Total	89.9	mg/L	J	Qualified due to low LCS recovery
SEP-11	560-34374-9	Molybdenum, Dissolved	<0.00835	mg/L	UJ	Qualified due to method blank contamination
SEP-11	560-34374-9	Sulfate	153	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-12	560-34374-10	Cobalt, Dissolved	0.00453	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-34374-10	Cobalt, Total	0.0046	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-12	560-34374-10	Sodium, Total	90.8	mg/L	J	Qualified due to low LCS recovery

Table 2
Qualified Analytical Results
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
SEP-12	560-34374-10	Molybdenum, Dissolved	<0.00858	mg/L	UJ	Qualified due to method blank contamination
SEP-12	560-34374-10	Sulfate	153	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-13	560-34374-11	Chromium, Total	0.00175	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Cobalt, Dissolved	0.00448	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Cobalt, Total	0.0023	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Copper, Total	0.00613	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Molybdenum, Total	<0.00612	mg/L	UJ	Qualified due to method blank contamination
SEP-13	560-34374-11	Nickel, Total	0.00429	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Zinc, Total	0.00247	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-13	560-34374-11	Molybdenum, Dissolved	<0.00809	mg/L	UJ	Qualified due to method blank contamination
SEP-13	560-34374-11	Sulfate	149	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-2	560-34374-2	Cobalt, Dissolved	0.00332	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-34374-2	Cobalt, Total	0.00465	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-2	560-34374-2	Sodium, Total	96.8	mg/L	J	Qualified due to low LCS recovery
SEP-2	560-34374-2	Molybdenum, Dissolved	<0.00988	mg/L	UJ	Qualified due to method blank contamination
SEP-2	560-34374-2	Sulfate	155	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-3	560-34374-3	Cobalt, Total	0.004123	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-34374-3	Sodium, Total	96.8	mg/L	J	Qualified due to low LCS recovery
SEP-3	560-34374-3	Lead, Dissolved	0.00109	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-3	560-34374-3	Molybdenum, Dissolved	<0.00854	mg/L	UJ	Qualified due to method blank contamination
SEP-3	560-34374-3	Sulfate	155	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-4	560-34374-4	Cobalt, Dissolved	0.00419	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-34374-4	Cobalt, Total	0.00499	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-4	560-34374-4	Sodium, Total	90.1	mg/L	J	Qualified due to low LCS recovery
SEP-4	560-34374-4	Molybdenum, Dissolved	<0.00888	mg/L	UJ	Qualified due to method blank contamination
SEP-4	560-34374-4	Sulfate	149	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-6	560-34374-5	Cobalt, Dissolved	0.00302	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-34374-5	Cobalt, Total	0.00415	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-6	560-34374-5	Sodium, Total	96.6	mg/L	J	Qualified due to low LCS recovery
SEP-6	560-34374-5	Molybdenum, Dissolved	<0.00837	mg/L	UJ	Qualified due to method blank contamination
SEP-6	560-34374-5	Sulfate	157	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-7	560-34374-6	Cobalt, Dissolved	0.00389	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-34374-6	Cobalt, Total	0.00468	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-7	560-34374-6	Sodium, Total	91.9	mg/L	J	Qualified due to low LCS recovery
SEP-7	560-34374-6	Molybdenum, Dissolved	<0.00862	mg/L	UJ	Qualified due to method blank contamination
SEP-7	560-34374-6	Sulfate	153	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-9	560-34374-7	Cobalt, Dissolved	0.00381	mg/L	J	Estimated; Analyte detected between SDL and MQL
SEP-9	560-34374-7	Fluoride	0.872	mg/L	J	Qualified due to high QA split RPD
SEP-9	560-34374-7	Sodium, Total	94.1	mg/L	J	Qualified due to low LCS recovery
SEP-9	560-34374-7	Iron, Total	9.51	mg/L	J	Qualified due to high QA split RPD
SEP-9	560-34374-7	Molybdenum, Dissolved	<0.00815	mg/L	UJ	Qualified due to method blank contamination
SEP-9	560-34374-7	Nitrate Nitrite as N	1.07	mg/L	J	Qualified due to high QA split RPD
SEP-9	560-34374-7	Sulfate	153	mg/L	J	Qualified due to low MS/MSD recoveries
SEP-9	560-34374-7	Total Organic Carbon	3.2	mg/L	J	Qualified due to high QA split RPD

Notes:
"<" = Analyte not detected above listed reporting limit
J = The result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter; ug/L = micrograms per liter
MS = Matrix Spike; MSD = Matrix Spike Duplicate
RPD = Relative Percent Difference
SDL = Sample Detection Limit; MQL = Method Quantitation Limit

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference
SEP-9 / FD082312A / QA082312A	**Total Metals (mg/L)**							
	Antimony	<0.00161	<0.00161	NC	NC	<0.00080	NC	NC
	Arsenic	0.00865	0.00811	NA	0.0005	0.00664	NA	0.00201
	Barium	0.233	0.223	4.4	NA	0.21	10	NA
	Cadmium	<0.000854	<0.000854	NC	NC	<0.00080	NC	NC
	Chromium	0.0113	0.009	NA	0.0023	0.008	NA	0.00330
	Cobalt	0.00506	0.00467 J	NA	0.0004	0.00396 J	NA	0.00110
	Copper	0.0144	0.0118	NA	0.0026	0.00958	NA	0.00482
	Iron	9.51	8.1	16	NA	6.7	**35**	NA
	Lead	0.00975	0.00807	NA	0.0017	0.00942	NA	0.00033
	Mercury	<0.00013	<0.00013	NC	NC	<0.000042	NC	NC
	Molybdenum	0.00855	0.00786	NA	0.0007	0.00549	NA	0.00306
	Nickel	0.0134	0.0118	NA	0.0016	0.00892	NA	0.00448
	Selenium	<0.00108	<0.00108	NC	NC	0.00145 J	NC	NC
	Thallium	<0.000693	<0.000693	NC	NC	<0.0010	NC	NC
	Zinc	0.0376	0.0301	NA	0.0075	0.0335	NA	0.00410
	Dissolved Metals (mg/L)							
	Antimony	<0.00161	<0.00161	NC	NC	<0.00080	NC	NC
	Arsenic	0.00548	0.00585	NA	0.0004	0.00371 J	NA	0.00177
	Barium	0.0884	0.0928	4.9	NA	0.0815	8.1	NA
	Cadmium	<0.000854	<0.000854	NC	NC	<0.00080	NC	NC
	Chromium	<0.00140	<0.00140	NC	NC	<0.0012	NC	NC
	Cobalt	0.00381 J	<0.00136	NA	0.0025	0.00101 J	NA	0.00023
	Copper	<0.00200	<0.00200	NC	NC	<0.0015	NC	NC
	Iron	<0.101	<0.101	NC	NC	<0.078	NC	NC
	Lead	<0.000733	<0.000733	NC	NC	<0.0007	NC	NC
	Mercury	<0.00013	<0.00013	NC	NC	<0.000042	NC	NC
	Molybdenum	0.00815	0.0085	NA	0.0004	0.00663	NA	0.00152
	Nickel	<0.00217	<0.00217	NC	NC	<0.0012	NC	NC
	Selenium	<0.00108	<0.00108	NC	NC	<0.0010	NC	NC
	Thallium	<0.000693	<0.000693	NC	NC	<0.0010	NC	NC
	Zinc	<0.00355	<0.00355	NC	NC	0.00282 J	NC	NC
	Cations (mg/L)							
	Aluminum	14.9	12.1	21	NA	12.9	14	NA
	Calcium	111	103	7.5	NA	96.6	14	NA
	Magnesium	22.1	19.3	14	NA	17.7	22	NA
	Manganese	0.33	0.303	8.5	NA	0.314	5.0	NA
	Potassium	11.8	11.6	1.7	NA	10.2	15	NA
	Sodium	94.1	90.6	3.8	NA	113	18	NA
	Anions (mg/L)							
	Chloride	97.4	97.5	<1.0	NA	103	5.6	NA
	Fluoride	0.872	0.804	8.1	NA	0.569	**42.1**	NA
	Nitrate Nitrite as N	1.07	1.06	NA	0.01	0.379	NA	**0.691**
	Sulfate	153	154	<1.0	NA	148	3.3	NA
	Sulfide	<0.013	<0.0131	NC	NA	0.640 J	NC	NC
	General Chemistry (mg/L)							
	Total Alkalinity as $CaCO_3$	146	141	3.5	NA	160	9.2	NA
	Total Dissolved Solids	550	576	4.6	NA	564	2.5	NA
	Total Organic Carbon	3.21	3.08	NA	0.13	4.56	NA	**1.35**
	Total Suspended Solids	554	482	14	NA	582	4.9	NA

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference
MW-9S / FD082312B / QA082312B	**Total Metals (mg/L)**							
	Antimony	0.00340 J	0.00356 J	NA	0.0002	0.0042 J	NA	0.00080
	Arsenic	0.809	0.844	4.2	NA	0.835	3.2	NA
	Barium	0.026	0.0259	<1.0	NA	0.0253	2.7	NA
	Cadmium	<0.000854	<0.000854	NC	NC	<0.00080	NC	NC
	Chromium	<0.0014	<0.0014	NC	NC	<0.0012	NC	NC
	Cobalt	<0.00136	<0.00136	NC	NC	<0.00080	NC	NC
	Copper	<0.00200	<0.00200	NC	NC	<0.0015	NC	NC
	Iron	<0.101	<0.101	NC	NC	<0.050	NC	NC
	Lead	<0.000733	<0.000733	NC	NC	<0.00070	NC	NC
	Mercury	<0.00013	<0.00013	NC	NC	<0.000042	NC	NC
	Molybdenum	0.481	0.498	3.5	NA	0.438	9.4	NA
	Nickel	0.00349 J	0.00379 J	NA	0.0003	0.00173 J	NA	0.00176
	Selenium	0.0719	0.0757	5.1	NA	0.0793	9.8	NA
	Thallium	<0.000693	<0.000693	NC	NC	<0.0010	NC	NC
	Zinc	<0.00355	<0.00355	NC	NC	0.00329	NC	NC
	Dissolved Metals (mg/L)							
	Antimony	0.00334 J	0.00320 J	NA	0.0001	0.00379 J	NA	0.00045
	Arsenic	0.787	0.829	5.2	NA	0.832	5.6	NA
	Barium	0.0248	0.0259	NA	0.0011	0.0225	NA	0.00230
	Cadmium	<0.000854	<0.000854	NC	NC	<0.00080	NC	NC
	Chromium	<0.0014	<0.0014	NC	NC	<0.0012	NC	NC
	Cobalt	<0.00136	<0.00136	NC	NC	<0.00080	NC	NC
	Copper	<0.00200	<0.00200	NC	NC	<0.0015	NC	NC
	Iron	<0.101	<0.101	NC	NC	<0.078	NC	NC
	Lead	<0.000733	<0.000733	NC	NC	<0.00070	NC	NC
	Mercury	<0.00013	<0.00013	NC	NC	<0.000042	NC	NC
	Molybdenum	0.468	0.486	3.8	NA	0.415	12	NA
	Nickel	0.00348 J	0.00352 J	NA	0.00004	0.00300 J	NA	0.00048
	Selenium	0.0719	0.0734	2.1	NA	0.0737	2.5	NA
	Thallium	<0.000693	<0.000693	NC	NC	<0.0010	NC	NC
	Zinc	<0.00355	<0.00355	NC	NC	0.00607	NC	NC
	Cations (mg/L)							
	Aluminum	<0.0225	<0.0225	NC	NC	0.0271	NC	NC
	Calcium	141	145	2.8	NA	127	10.4	NA
	Magnesium	63.8	66.9	4.7	NA	58.3	9.0	NA
	Manganese	0.481	0.357	5.8	NA	0.333	1.2	NA
	Potassium	41.8	43.4	3.8	NA	41.9	0.2	NA
	Sodium	485	591	20	NA	505	4.0	NA
	Anions (mg/L)							
	Chloride	287	247	15	NA	320	10.9	NA
	Fluoride	2.95	3.21	8.4	NA	2.79	5.6	NA
	Nitrate Nitrite as N	2.12	2.12	NA	0.0	1.33	NA	**0.79**
	Sulfate	988	959	3.0	NA	947	4.2	NA
	Sulfide	<0.0131	<0.131	NC	NC	<0.50	NC	NC
	General Chemistry (mg/L)							
	Total Alkalinity as $CaCO_3$	318	305	4.2	NA	348	9.0	NA
	Total Dissolved Solids	2270	2190	3.6	NA	2110	7.3	NA
	Total Organic Carbon	2.02	2.13	NA	0.1	2.76	NA	0.74
	Total Suspended Solids	<3.0	<3.0	NC	NC	1.07 J	NC	NC
	Total Metals (mg/L)							
	Antimony	0.00449	0.00465	NA	0.0002	NA	NA	NA
	Arsenic	1.53	1.54	<1.0	NA	NA	NA	NA
	Barium	0.0235	0.0234	NA	0.0001	NA	NA	NA
	Cadmium	<0.000854	<0.000854	NC	NC	NA	NA	NA
	Chromium	<0.00140	<0.00140	NC	NC	NA	NA	NA
	Cobalt	<0.00136	<0.00136	NC	NC	NA	NA	NA
	Copper	0.00266	0.00329	NA	0.001	NA	NA	NA
	Iron	<0.101	<0.101	NC	NC	NA	NA	NA

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
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El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference
EP-132 / FD082712	Lead	0.00199	<0.000733	NC	NC	NA	NA	NA
	Mercury	<0.000130	<0.000130	NC	NC	NA	NA	NA
	Molybdenum	0.272	0.265	2.6	NA	NA	NA	NA
	Nickel	0.0262	0.0268	2.3	NA	NA	NA	NA
	Selenium	0.428	0.428	<1.0	NA	NA	NA	NA
	Thallium	<0.000693	<0.000693	NC	NC	NA	NA	NA
	Zinc	0.00577	<0.00355	NC	NC	NA	NA	NA
	Dissolved Metals (mg/L)							
	Antimony	0.00468	0.00456	NA	0.0001	NA	NA	NA
	Arsenic	1.57	1.52	3.2	NA	NA	NA	NA
	Barium	0.0222	0.0219	NA	0.0	NA	NA	NA
	Cadmium	<0.000854	<0.000854	NC	NC	NA	NA	NA
	Chromium	<0.00140	<0.00140	NC	NC	NA	NA	NA
	Cobalt	<0.00136	<0.00136	NC	NC	NA	NA	NA
	Copper	0.00279	0.00248	NA	0.0003	NA	NA	NA
	Iron	<0.101	<0.101	NC	NC	NA	NA	NA
	Lead	<0.000733	<0.000733	NC	NC	NA	NA	NA
	Mercury	<0.000130	<0.000130	NC	NC	NA	NA	NA
	Molybdenum	0.273	0.262	4.1	NA	NA	NA	NA
	Nickel	0.0269	0.0265	1.5	NA	NA	NA	NA
	Selenium	0.421	0.411	2.4	NA	NA	NA	NA
	Thallium	<0.000693	<0.000693	NC	NC	NA	NA	NA
	Zinc	<0.00355	<0.00355	NC	NC	NA	NA	NA
	Cations (mg/L)							
	Aluminum	<0.0225	<0.0225	NC	NC	NA	NA	NA
	Calcium	209	208	<1.0	NA	NA	NA	NA
	Magnesium	47.2	46.2	2.1	NA	NA	NA	NA
	Manganese	0.057	0.0595	NA	0.003	NA	NA	NA
	Potassium	38.9	39.1	<1.0	NA	NA	NA	NA
	Sodium	684	695	1.6	NA	NA	NA	NA
	Anions (mg/L)							
	Chloride	304	313	2.9	NA	NA	NA	NA
	Fluoride	3.76	4.13	9.4	NA	NA	NA	NA
	Nitrate Nitrite as N	8.54	8.45	1.1	NA	NA	NA	NA
	Sulfate	1410	1440	2.1	NA	NA	NA	NA
	Sulfide	0.048	0.022	NA	0.026	NA	NA	NA
	General Chemistry (mg/L)							
	Total Alkalinity as $CaCO_3$	368	373	1.3	NA	NA	NA	NA
	Total Dissolved Solids	3100	3290	5.9	NA	NA	NA	NA
	Total Organic Carbon	2.73	2.67	NA	0.1	NA	NA	NA
	Total Suspended Solids	<3.00	<3.00	NC	NC	NA	NA	NA

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
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Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference
EP-71 / FD082912 / QA082912	**Total Metals (mg/L)**							
	Antimony	<0.00161	<0.00161	NC	NC	<0.0016	NC	NC
	Arsenic	0.144	0.149	3.4	NA	0.127	12.5	NA
	Barium	0.0145	0.0137	NA	0.0008	0.016	9.8	0.0015
	Cadmium	<0.000854	<0.000854	NC	NC	<0.0016	NC	NC
	Chromium	<0.00140	0.00154 J	NC	NC	0.00258 J	NC	NC
	Cobalt	<0.00136	0.00143 J	NC	NC	0.00178 J	NC	NC
	Copper	0.00298 J	0.00221 J	NA	0.0008	0.00542 J	NC	0.00244
	Iron	<0.101	<0.101	NC	NC	0.205 J	NC	NC
	Lead	<0.000733	<0.000733	NC	NC	<0.0014	NC	NC
	Mercury	<0.00013	0.000139 J	NC	NC	0.000254	NC	NC
	Molybdenum	0.175	0.166	5.3	NA	0.141	21.5	NA
	Nickel	0.00962	0.0109	NA	0.0013	0.0111	NA	0.00148
	Selenium	0.24	0.253	5.3	NA	0.27	11.8	NA
	Thallium	<0.000693	<0.000693	NC	NC	<0.002	NC	NC
	Zinc	0.00839 J	0.00707 J	NA	0.0013	0.0128	NA	0.00441
	Dissolved Metals (mg/L)							
	Antimony	<0.00161	0.00195 J	NC	NC	<0.00080	NC	NC
	Arsenic	0.153	0.155	1.3	NA	0.127	18.6	NA
	Barium	0.0138	0.0129	NA	0.0009	0.0112	20.8	0.0026
	Cadmium	<0.000854	<0.000854	NC	NC	<0.00080	NC	NC
	Chromium	<0.00140	<0.00140	NC	NC	<0.0012	NC	NC
	Cobalt	0.00162 J	0.00165 J	NA	0.0000	0.00123 J	NC	0.00039
	Copper	<0.002	<0.002	NC	NC	0.00227 J	NC	NC
	Iron	<0.101	<0.101	NC	NC	<0.078	NC	NC
	Lead	<0.000733	<0.000733	NC	NC	<0.00070	NC	NC
	Mercury	<0.00013	<0.00013	NC	NC	0.000229	NC	NC
	Molybdenum	0.171	0.168	1.8	NA	0.125	**31.1**	NA
	Nickel	0.011	0.0109	NA	0.0001	0.00954	14.2	0.00146
	Selenium	0.253	0.258	2.0	NA	0.226	11.3	NA
	Thallium	<0.000693	<0.000693	NC	NC	<0.0010	NC	NC
	Zinc	0.00594 J	0.00735 J	NA	0.0014	0.012	NA	0.00606
	Cations (mg/L)							
	Aluminum	0.0771	0.0254 J	NA	0.1	0.212	NA	**0.1349**
	Calcium	392	394	<1.0	NA	418	6.4	NA
	Magnesium	185	191	3.2	NA	178	3.9	NA
	Manganese	0.0190 J	0.0258 J	NA	0.007	0.0336	NA	0.0146
	Potassium	18.7	18.6	<1.0	NA	20.3	8.2	NA
	Sodium	984	1030	4.6	NA	1250	23.8	NA
	Anions (mg/L)							
	Chloride	374	484	**26**	NA	504	29.6	NA
	Fluoride	1.04	1.03	1.0	NA	0.584 J	**56.2**	NA
	Nitrate Nitrite as N	73.2	73.1	<1.0	NA	76.3	4.1	NA
	Sulfate	1850	2510	**30**	NA	2420	26.7	NA
	Sulfide	0.0290 J	0.0250 J	NA	0	1.32	NA	**1.291**
	General Chemistry (mg/L)							
	Total Alkalinity as $CaCO_3$	268	265	1.1	NA	284	5.8	NA
	Total Dissolved Solids	5310	5200	2.1	NA	5280	0.6	NA
	Total Organic Carbon	1.77	1.88	NA	0.11	1.72	NA	0.05
	Total Suspended Solids	5.00	6.4	NA	1.4	5.3	5.8	0.3

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
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Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference
EP-81 / FD090612	**Total Metals (mg/L)**							
	Antimony	0.00176 J	0.00188 J	NA	0.00012	NA	NA	NA
	Arsenic	0.393	0.412	4.7	NA	NA	NA	NA
	Barium	0.0454	0.0481	5.8	NA	NA	NA	NA
	Cadmium	<0.000854	<0.000854	NC	NC	NA	NA	NA
	Chromium	0.00601	0.00532	NA	0.00069	NA	NA	NA
	Cobalt	<0.00136	<0.00136	NC	NC	NA	NA	NA
	Copper	0.162	0.178	9.4	NA	NA	NA	NA
	Iron	<0.101	<0.101	NC	NC	NA	NA	NA
	Lead	0.000990 J	0.000883 J	NA	0.000107	NA	NA	NA
	Mercury	<0.00013	<0.00013	NC	NC	NA	NA	NA
	Molybdenum	0.171	0.171	0.0	NA	NA	NA	NA
	Nickel	<0.00217	<0.00217	NC	NC	NA	NA	NA
	Selenium	0.116	0.117	0.9	NA	NA	NA	NA
	Thallium	<0.000693	<0.000693	NC	NC	NA	NA	NA
	Zinc	0.152	0.166	8.8	NA	NA	NA	NA
	Dissolved Metals (mg/L)							
	Antimony	0.00177 J	0.00175 J	NA	2E-05	NA	NA	NA
	Arsenic	0.435	0.433	0.5	NA	NA	NA	NA
	Barium	0.0439	0.0443	0.9	NA	NA	NA	NA
	Cadmium	<0.000854	<0.000854	NC	NC	NA	NA	NA
	Chromium	0.00471 J	0.00525	NA	0.00054	NA	NA	NA
	Cobalt	<0.00136	<0.00136	NC	NC	NA	NA	NA
	Copper	0.187	0.189	1.1	NA	NA	NA	NA
	Iron	<0.101	<0.101	NC	NC	NA	NA	NA
	Lead	<0.000733	<0.000733	NC	NC	NA	NA	NA
	Mercury	<0.00013	<0.00013	NC	NC	NA	NA	NA
	Molybdenum	0.176	0.175	0.6	NA	NA	NA	NA
	Nickel	<0.00217	<0.00217	NC	NC	NA	NA	NA
	Selenium	0.118	0.113	4.3	NA	NA	NA	NA
	Thallium	<0.000693	<0.000693	NC	NC	NA	NA	NA
	Zinc	0.172	0.175	NA	0.003	NA	NA	NA
	Cations (mg/L)							
	Aluminum	0.0268 J	<0.0225	NC	NC	NA	NA	NA
	Calcium	107	107	0.0	NA	NA	NA	NA
	Magnesium	49.6	48.9	1.4	NA	NA	NA	NA
	Manganese	<0.0116	<0.0116	NC	NC	NA	NA	NA
	Potassium	14.6	14.5	0.7	NA	NA	NA	NA
	Sodium	170	167	1.8	NA	NA	NA	NA
	Anions (mg/L)							
	Chloride	67.9	66	2.8	NA	NA	NA	NA
	Fluoride	2.4	2.41	0.4	NA	NA	NA	NA
	Nitrate Nitrite as N	5.35	5.3	0.9	NA	NA	NA	NA
	Sulfate	383	382	0.3	NA	NA	NA	NA
	Sulfide	0.0140 J	0.0230 J	NA	0.009	NA	NA	NA
	General Chemistry (mg/L)							
	Total Alkalinity as $CaCO_3$	367	385	4.8	NA	NA	NA	NA
	Total Dissolved Solids	1100	1070	2.8	NA	NA	NA	NA
	Total Organic Carbon	1.22	1.39	NA	0.17	NA	NA	NA
	Total Suspended Solids	<3.0	<3.0	NC	NC	NA	NA	NA

Table 3
Field Duplicate Summary
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Dup Result	RPD (%)	Difference	QA Split Result	QA RPD (%)	QA Difference

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
Bolded values indicate field duplicate or QA split outliers
If results are less than five times the MQL, the difference between the results should be less than the MQL
"<" = Analyte not detected above listed reporting limit
J = Estimated value; detected between the SDL and MQL
NC = Not Calculated; RPD values were not calculated for non-detect values or trace values
NA = Not Analyzed
mg/L = milligrams per liter
QA = Quality Assurance
SDL = Sample Detection Limit; MQL = Method Quantitation Limit

Table 4
Completeness Summary
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	62	62	100	62	100
Arsenic	62	60[a]	97	62	100
Barium	62	62	100	62	100
Cadmium	62	62	100	62	100
Chromium	62	62	100	62	100
Cobalt	62	62	100	62	100
Copper	62	62	100	62	100
Iron	62	56[b,c]	90	62	100
Lead	62	62	100	62	100
Mercury	62	60[b]	97	62	100
Molybdenum	62	59[a,d]	95	62	100
Nickel	62	62	100	62	100
Selenium	62	62	100	62	100
Thallium	62	62	100	62	100
Zinc	62	50[a]	81	62	100
Dissolved Metals					
Antimony	62	62	100	62	100
Arsenic	62	61[a]	98	62	100
Barium	62	62	100	62	100
Cadmium	62	62	100	62	100
Chromium	62	62	100	62	100
Cobalt	62	62	100	62	100
Copper	62	62	100	62	100
Iron	62	62	100	62	100
Lead	62	62	100	62	100
Mercury	62	60[b]	97	62	100
Molybdenum	62	42[a,b,d]	68	62	100
Nickel	62	62	100	62	100
Selenium	62	62	100	62	100
Thallium	62	62	100	62	100
Zinc	62	54[a,b]	87	62	100
Total Cations					
Aluminum	62	60[b]	97	62	100
Calcium	62	62	100	62	100
Magnesium	62	62	100	62	100
Manganese	62	60[b]	97	62	100
Potassium	62	54[d]	87	62	100
Sodium	62	52[f]	84	62	100

Table 4
Completeness Summary
Groundwater and Surface Water Samples - August 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance*	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Anions					
Chloride	62	60[b]	97	62	100
Fluoride	62	56[b]	90	62	100
Nitrate Nitrite as N	62	57[b,f]	92	62	100
Sulfate	62	47[b,d,e]	76	62	100
Sulfide	62	53[b,c]	85	62	100
General Chemistry					
Total Alkalinity	62	62	100	62	100
Total Dissolved Solids	62	62	100	62	100
Total Organic Carbon	62	50[a,b,c]	81	62	100
Total Suspended Solids	62	62	100	62	100
TOTALS	**2790**	**2663**	**95**	**2790**	**100**

Notes:

Total number of samples includes field samples, field duplicate samples, and QA split samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

* Trace detections are not counted as being out of contractual compliance

[a] Results qualified due to method blank contamination

[b] Results qualified due to high QA split RPD outliers

[c] Results qualified due to equipment rinsate blank contamination

[d] Results qualified due to MS/MSD recovery outliers

[e] Results qualified due to high field duplicate RPD

[f] Results qualified due to LCS recovery outliers

Texas Custodial Trust

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Data Usability Summary Dual-Nested Monitoring Well Clusters Groundwater Sampling March 2012

June 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for the groundwater samples collected during March 27, 2012 at the United States International Boundary and Water Commission (USIBWC) property. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review

(USEPA 540-R-04-004, October 2004), and the Superfund Organic Methods Data Review (USEPA 540-R-08-01, June 2008); and quality control (QC) and quality assurance (QA) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

The results for the groundwater samples collected during the March 2012 sampling event are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

A total of 6 groundwater samples were collected during the sampling event. The samples were submitted to TestAmerica for the following analyses:

- Total and Dissolved Metals by USEPA Methods 6020 and 7470
- Cations (aluminum, calcium, magnesium, manganese, potassium, and sodium) by USEPA Method 6010 or 6020
- Total Dissolved Solids (TDS) by USEPA Method 160.1
- Total Suspended Solids (TSS) by USEPA Method 160.2
- Anions (chloride, nitrate, nitrite, and sulfate) by USEPA Method 300.0
- Fluoride by USEPA Method 340.2
- Sulfide by USEPA Method 376.2
- Total Organic Carbon (TOC) by USEPA Method 415.1
- Total Alkalinity by Standard Method (SM) 2320B

The total and dissolved metals analyte list included: antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, mercury, molybdenum, nickel, selenium, thallium, and zinc.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

Malcolm Pirnie personnel performed a data usability review by evaluating the following QC parameters as contained in the analytical reports submitted by the project laboratories:

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks)
- laboratory control spike (LCS) percent recovery
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and relative percent difference (RPD)
- laboratory duplicates
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (SDL); however, the SDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the groundwater samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples collected were received within the acceptable temperature range (4 $\pm$ 2 degrees Celsius).

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 560-71388 had a arsenic detection (0.0020321 milligrams per liter [mg/L]). Data qualification was not required because the arsenic concentrations in the associated samples were greater than ten times the method blank concentration.

- The method blank associated with analytical batch 560-71236 had a total organic carbon detection (0.411 mg/L). The total organic carbon results for all samples (MW-9D, MW-9S, MW-10S, MW-10D, MW-11S, and MW-11D) were qualified "UJ" to indicate a potential bias.

3.5. Laboratory Control Samples Recovery

LCS and LCSD were performed at the required frequency and were evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCSD, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCSD and the analyte was detected in the associated analytical batch, the analyte results were qualified "J."

- If the analyte recovery was below acceptance limits for LCS or LCSD, the analyte results in the associated analytical batch were qualified ("UJ" for non-detects and "J" for detects).

LCS and LCSD percent recoveries and RPDs were within acceptance limits.

3.6. Matrix Spike/Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J."

- If the MS or MSD recovery for an analyte was below acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ."

- MS/MSD recovery outliers for inorganic parameters resulted in sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits except for the following:

- The MS and MSD recoveries for magnesium (69 and 73 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-71388. Data qualification was not required because dissolved magnesium was not analyzed.

- The MSD recovery for manganese (70 percent) was below acceptance limits (80 to 120 percent) for analytical batch 560-71388. Data qualification was not required because dissolved manganese was not analyzed.

3.7. Duplicates

3.7.1. Laboratory Duplicates

Laboratory duplicates are evaluated based on the acceptance limits set forth by the project laboratory's guidelines. Laboratory duplicates were performed at the appropriate frequencies for the following parameter: total suspended soilids. Laboratory duplicates were within acceptance limits.

3.8. Trace Detections

Several results were detected between the SDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 3 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- TOC had contractual compliance of zero percent due to method blank interference in all samples collected.

The results for the groundwater sampling event conducted on March 2012 are considered usable for the intended purposes and the project DQOs have been met.

Table 1
Sample and Analysis Schedule
Dual-Nested Well Clusters Installation - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
MW-9D	560-31502-1	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide
MW-9S	560-31502-2	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide
MW-10S	560-31502-3	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide
MW-10D	560-31502-4	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide
MW-11S	560-31502-5	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide
MW-11D	560-31502-6	3/27/2012	N	Total and Dissolved Metals, Anions, TDS, TSS, TOC, Alkalinity, and Sulfide

Notes:
N = Normal sample
TDS = Total Dissolved Solids
TOC = Total Organic Carbon
TSS = Total Suspended Soils

Table 2
Qualified Analytical Results
Dual-Nested Well Clusters Installation - March 2012
Former ASARCO Smelter
El Paso, TX

Sample ID	Laboratory ID	Analyte	Result	Units	Qualifier	Comments
MW-9D	560-31502-1	Dissolved Antimony	0.00216	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9D	560-31502-1	Dissolved Nickel	0.00228	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9D	560-31502-1	Dissolved Zinc	0.00441	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9D	560-31502-1	TOC	<3.33	mg/L	UJ	Qualified due to method blank contamination
MW-9D	560-31502-1	Total Antimony	0.00216	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Dissolved Cobalt	0.00155	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Dissolved Nickel	0.00364	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Dissolved Selenium	0.00208	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Dissolved Zinc	0.00768	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	TOC	<2.43	mg/L	UJ	Qualified due to method blank contamination
MW-9S	560-31502-2	Total Mercury	0.000205	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Total Nickel	0.00346	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Total Selenium	0.00216	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-9S	560-31502-2	Total Zinc	0.00357	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Dissolved Antimony	0.00218	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Dissolved Copper	0.00362	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Dissolved Lead	0.000811	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Dissolved Nickel	0.00239	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Dissolved Zinc	0.00561	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	TOC	<2.63	mg/L	UJ	Qualified due to method blank contamination
MW-10D	560-31502-4	Total Antimony	0.00225	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Cadmium	0.000863	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Copper	0.00327	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Lead	0.00101	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Manganese	0.0198	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Nickel	0.00238	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10D	560-31502-4	Total Zinc	0.00554	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Dissolved Antimony	0.00235	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Dissolved Cobalt	0.00148	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Dissolved Iron	0.125	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Dissolved Nickel	0.00223	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Dissolved Zinc	0.00475	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Sulfide	0.0140	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	TOC	<2.53	mg/L	UJ	Qualified due to method blank contamination
MW-10S	560-31502-3	Total Antimony	0.00205	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Total Lead	0.000981	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-10S	560-31502-3	Total Zinc	0.00713	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-31502-6	Total Aluminum	0.0251	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-31502-6	Dissolved Antimony	0.00286	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-31502-6	Nitrate + Nitrite	2.44	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11D	560-31502-6	TOC	<2.83	mg/L	UJ	Qualified due to method blank contamination
MW-11D	560-31502-6	Total Antimony	0.00260	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-31502-5	Dissolved Antimony	0.00263	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-31502-5	Dissolved Nickel	0.00264	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-31502-5	TOC	<2.72	mg/L	UJ	Qualified due to method blank contamination
MW-11S	560-31502-5	Total Antimony	0.00251	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-31502-5	Total Iron	0.133	mg/L	J	Estimated; Analyte detected between SDL and MQL
MW-11S	560-31502-5	Total Nickel	0.00260	mg/L	J	Estimated; Analyte detected between SDL and MQL

Notes:
"<" = Analyte not detected above listed reporting limit
J = The result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter
MQL = Method Quantitation Limit
SDL = Sample Detection Limit
TOC = Total organic carbon

Table 3
Completeness Summary
Dual-Nested Well Clusters Installation - March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals (mg/L)					
Antimony	6	6	100	6	100
Arsenic	6	6	100	6	100
Barium	6	6	100	6	100
Cadmium	6	6	100	6	100
Chromium	6	6	100	6	100
Cobalt	6	6	100	6	100
Copper	6	6	100	6	100
Iron	6	6	100	6	100
Lead	6	6	100	6	100
Mercury	6	6	100	6	100
Molybdenum	6	6	100	6	100
Nickel	6	6	100	6	100
Selenium	6	6	100	6	100
Thallium	6	6	100	6	100
Zinc	6	6	100	6	100
Dissolved Metals (mg/L)					
Antimony	6	6	100	6	100
Arsenic	6	6	100	6	100
Barium	6	6	100	6	100
Cadmium	6	6	100	6	100
Chromium	6	6	100	6	100
Cobalt	6	6	100	6	100
Copper	6	6	100	6	100
Iron	6	6	100	6	100
Lead	6	6	100	6	100
Mercury	6	6	100	6	100
Molybdenum	6	6	100	6	100
Nickel	6	6	100	6	100
Selenium	6	6	100	6	100
Thallium	6	6	100	6	100
Zinc	6	6	100	6	100

Table 3
Completeness Summary
Dual-Nested Well Clusters Installation - March 2012
Former ASARCO Smelter
El Paso, TX

Parameters	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Cations (mg/L)					
Aluminum	6	6	100	6	100
Calcium	6	6	100	6	100
Magnesium	6	6	100	6	100
Manganese	6	6	100	6	100
Potassium	6	6	100	6	100
Sodium	6	6	100	6	100
Anions (mg/L)					
Chloride	6	6	100	6	100
Nitrate Nitrite as N	6	6	100	6	100
Sulfate	6	6	100	6	100
General Chemesty (mg/L)					
Fluoride	6	6	100	6	100
Sulfide	6	6	100	6	100
Total Alkalinity as $CaCO_3$	6	6	100	6	100
Total Dissolved Solids	6	6	100	6	100
Total Organic Carbon	6	0[a]	0	6	100
Total Suspended Solids	6	6	100	6	100

Notes:

Total number of samples includes field samples, field duplicate samples, and QA splits

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

TPH = Total Petroleum Hydrocarbons

BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes

[a] = Results qualified due to method blank contamination

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Data Usability Summary Soil Sampling Event May 2012

October 2012

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1. Project Scope

This Data Usability Summary (DUS) presents the data review for soil samples collected during May 2012 at the former ASARCO Smelter located in El Paso, Texas. The data review was performed in accordance with the procedures presented in the Texas Commission on Environmental Quality (TCEQ) Regulatory Guidance RG-366/Texas Risk Reduction Program (TRRP)-13 Guidance (May 2010), the United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 540-R-04-004, October 2004), and quality control (QC) parameters set forth by the project laboratory, TestAmerica Laboratories, Inc. (TestAmerica), located in Corpus Christi, Texas. TestAmerica is National Environmental Laboratory Accreditation Conference (NELAC)-accredited under the Texas Laboratory Accreditation Program (TLAP) for the analytes, matrices, and methods associated with the project at the time the data were generated.

Analytical results for the soil samples collected during May 2012 are considered valid and usable, with data qualifiers described in this DUS, and met project data quality objectives (DQOs).

2. Project Description

The data collected at the former ASARCO Smelter will be used to assess the soil conditions along the embankment area. A total of 33 soil samples were collected at the former ASARCO Smelter during the May 2012 sampling event. Additionally, three QC samples (i.e. field duplicates), were also collected and analyzed as part of the May 2012 sampling event.

The samples were submitted to TestAmerica for the following analyses:

- Total metals by USEPA Method 6010B
- Synthetic Precipitation Leaching Procedure (SPLP) metals by USEPA Methods 1312 and 6010B
- Total mercury by USEPA Method 7471A
- SPLP mercury by USEPA Methods 1312 and 7470A

The total metals and SPLP metals analyte list included antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenum, nickel, selenium, silver, and zinc.

Table 1 presents a summary of the sample identifications, laboratory sample identifications, and requested analytical parameters.

3. Quality Control Activities

ARCADIS personnel performed a data usability review by evaluating the following QC parameters as contained in the laboratory report submitted by TestAmerica (560-32376-1):

- chain-of-custody
- sample preservation and temperature upon laboratory receipt
- holding times
- blank contamination (method blanks)
- laboratory control sample (LCS) percent recovery and relative percent difference (RPD)
- matrix spike/matrix spike duplicate (MS/MSD) percent recovery and RPD
- field duplicate RPDs
- trace detections

The data qualifiers used to qualify the analytical results associated with QC parameters outside of the established DQOs are defined below:

J The analyte was positively identified; however, the analytical result should be considered an estimated value.

UJ The analyte was not detected above the sample detection limit (MDL); however, the MDL is considered an estimated value.

R QC results indicate the analytical result is not usable.

Results qualified as "J" or "UJ" are of acceptable data quality and may be used to quantitatively fulfill the objectives of the analytical program, per USEPA guidelines.

Results that required qualification based on the data review are summarized in Table 2.

3.1. Chain-of-Custody

The chain-of-custody documentation associated with the SL soil samples was found to be complete. Chain-of-custodies included sample identifications, date and time of sample collection, requested parameters, and relinquished/received signatures.

3.2. Sample Preservation and Temperature upon Laboratory Receipt

Samples were received preserved and intact at the project laboratories. Samples were received within the acceptable temperature range (4 ± 2 degrees Celsius).

3.3. Holding Times

Samples were extracted and analyzed within the holding time limits as set forth by the respective TCEQ and USEPA methods.

3.4. Blank Contamination

3.4.1. Method Blank Interference

Method blanks were analyzed at the appropriate frequency as specified by the analytical method. Target compounds were not detected in the method blanks except for the following:

- The method blank associated with analytical batch 73226 had a detection of arsenic at 0.1800 milligrams per kilogram (mg/Kg). Data qualification was not required because the associated sample results were greater than 10 times the method blank contamination.

- The method blanks associated with analytical batch 73178 had detections of barium at 0.007620 milligrams per liter (mg/L), cobalt at 0.001260 mg/L, and zinc at 0.008200 mg/L. The cobalt results in samples SL-04-0-6, SL-06-0-6, SL-08-0-6, and SL-12-0-6 were qualified "UJ" to indicate a potential bias. The zinc results in samples SL-13-0-6 and SL-14-0-6 were qualified "UJ" to indicate a potential bias. The barium results in the associated samples did not require data qualification because results were greater than 10 times the method blank contamination.

- The method blanks associated with analytical batch 73247 had detections of barium at 0.005460 mg/L, chromium at 0.002770 mg/L, and zinc at 0.01687 mg/L. Associated sample results for barium, chromium, and zinc were qualified "UJ" for results that were less than 10 times the method blank contamination.

3.5. Laboratory Control Samples / Laboratory Control Samples Duplicate Recovery and RPD

LCS and LCS duplicates were performed at the required frequency and evaluated based on the following criteria:

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the analyte recovery was above acceptance limits for the LCS or LCS duplicate and the analyte was detected in the associated analytical batch, the analyte results were qualified "J" and non-detect values were not qualified.

- If the analyte recovery was below acceptance limits for the LCS or LCS duplicate, the analyte results in the associated analytical batch were qualified "J" and non-detect results were qualified "UJ."

LCS and LCS duplicate percent recoveries and RPDs were within acceptance limits.

3.6. Matrix Spike / Matrix Spike Duplicate Recovery and RPD

MS and MSD samples were performed at the required frequency and evaluated by the following criteria:

- If the MS or MSD recovery for an analyte was above acceptance limits, but the analyte was not detected in the associated analytical batch, then data qualification was not required.

- If the MS or MSD recovery for an analyte was above acceptance limits and the analyte was detected in the associated analytical batch, then the analyte results were qualified "J" and non-detect values were not qualified.

- If the MS or MSD recovery for an analyte was below the acceptance limits, then analyte results were qualified "J" and non-detect results were qualified "UJ".

- MS/MSD recovery outliers for inorganic parameters resulted in the sample qualification of the associated analytical batch.

- MS/MSD recovery outliers for organic parameters resulted in the data qualification of the unspiked sample.

- Results were not qualified based on non-project specific MS/MSD (i.e., batch QC) recoveries.

MS and MSD percent recoveries and RPDs were within acceptance limits with the following exceptions:

- The MS recovery for total mercury in the analytical batch 73250 was low (-555 percent) and the MSD recovery was high (365 percent). Data qualification was

not required because the original sample concentration was greater than four times the spiked concentration for total mercury.

- The MS and MSD recoveries for copper in the analytical batch 73409 were low (-15 and -25 percent). Data qualification was not required because the original sample concentration was greater than four times the spiked concentration for copper.

- The MS and MSD recoveries for copper in the analytical batch 73439 were low (-12 and -7 percent) and the MS and MSD recoveries for zinc were high (131 and 128 percent). Data qualification was not required because the original sample concentrations were greater than four times the spiked concentrations for copper and zinc.

3.7. Field Duplicate Comparison

Three field duplicates were collected and submitted for analyses during the May 2012 sampling event. The RPD values between the field sample and its associated field duplicate sample are presented in Table 3. The field duplicates were evaluated by the following criteria:

- If an analyte was detected at a concentration greater than five times the MQL, the RPD should be less than 30 percent.

- If an analyte was detected at a concentration that is less than five times the method quantitation limit (MQL), then the difference between the analytical results of the field sample and the field duplicate should not exceed the MQL.

- Duplicate RPDs are calculated by dividing the difference of the concentrations by the average of the concentrations.

Field duplicate RPDs were within acceptance limits except for the following:

- The RPD between sample SL-04-0-6 and field duplicate SL-DUP-01 for arsenic (81 percent), barium (98 percent), cadmium (61 percent), chromium (36 percent), copper (94 percent), iron (45 percent), lead (39 percent), molybdenum (43 percent), nickel (31 percent), selenium (33 percent), and zinc (45 percent) for total metals analyses were above acceptance limits. Data were qualified "J" to indicate a potential bias.

- The RPD between sample SL-04-0-6 and field duplicate SL-DUP-01 for SPLP arsenic (103 percent), SPLP cadmium (36 percent), SPLP copper (107 percent), and SPLP lead (126 percent) were above acceptance limits. Data were qualified

"J" to indicate a potential bias. The SPLP iron results for SL-04-0-6 and SL-DUP-01 were qualified "J" since their difference exceeded the MQL.

- The RPD between sample SL-19-0-6 and SL-DUP-02 for cobalt (65 percent), copper (49 percent), iron (106 percent), molybdenum (35 percent), selenium (87 percent), zinc (49 percent), and mercury (35 percent) for total metals analyses were above acceptance limits. Data were qualified "J" to indicate a potential bias.

- The RPD between sample SL-19-0-6 and SL-DUP-02 for SPLP arsenic (50 percent), SPLP barium (84 percent), SPLP cadmium (32 percent), and SPLP lead (98 percent) were above acceptance limits. Data were qualified "J" to indicate a potential bias.

- The RPD between sample SL-29-0-6 and SL-DUP-03 for antimony (35 percent), arsenic (43 percent), barium (44 percent), cadmium (67 percent), chromium (34 percent), cobalt (34 percent), copper (47 percent), lead (57 percent), selenium (73 percent), silver (62 percent), zinc (105 percent), and mercury (66 percent) for total metals analyses were above acceptance limits. Data were qualified "J" to indicate potential bias.

- The RPD between sample SL-29-0-6 and SL-DUP-03 for SPLP copper (60 percent) and SPLP lead (78 percent) were above acceptance limits. Data were qualified "J" to indicate potential bias.

3.8. Trace Detections

Several results were detected between the MDL and the MQL. These results were qualified "J" to indicate the concentration is an estimated value. Trace detections are not included in completeness calculations.

4. Completeness Summary

Completeness is a measure of the amount of valid data obtained compared to the total number of measurements planned. Completeness is evaluated qualitatively and quantitatively. The qualitative evaluation of completeness is determined as a function of the events contributing to the sampling event. This includes items such as samples arriving at the laboratory intact, properly preserved, and in sufficient quantity to perform the requested analyses, all of which were achieved for this sampling event.

The quantitative description of completeness is defined as the percentage of QC parameters that are acceptable.

- Contractual completeness is defined as the number of samples that have not been qualified for QC reasons divided by the number of requested sample results, multiplied by 100.

- Technical completeness is defined as the total number of usable results divided by the number of requested sample results, multiplied by 100.

The completeness goal for sample holding times is 100 percent; for all other QC parameters, the goal is 90 percent. Table 4 summarizes the technical and contractual compliance. Analytes not meeting compliance goals are described below:

- SPLP metals: barium, chromium, cobalt, and zinc had contractual compliances below 90 percent due to method blank interference.

The percent contractual compliance for SPLP Metals and Total Metals was 92 percent. The results for the soil sampling event conducted in May 2012 were considered usable for the intended purposes.

Table 1
Sample and Analysis Schedule
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
SL-00-0-6	560-32376-1	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-01-0-6	560-32376-2	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-02-0-6	560-32376-3	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-03-0-6	560-32376-4	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-04-0-6	560-32376-5	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-05-0-6	560-32376-6	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-06-0-6	560-32376-7	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-07-0-6	560-32376-8	5/8/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-08-0-6	560-32376-10	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-09-0-6	560-32376-11	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-10-0-6	560-32376-12	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-11-0-6	560-32376-13	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-12-0-6	560-32376-14	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-13-0-6	560-32376-15	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-14-0-6	560-32376-16	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-15-0-6	560-32376-17	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-16-0-6	560-32376-18	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-17-0-6	560-32376-19	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-18-0-6	560-32376-20	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-19-0-6	560-32376-21	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury

Table 1
Sample and Analysis Schedule
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Date Collected	Sample Type	Parameters
SL-20-0-6	560-32376-22	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-21-0-6	560-32376-23	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-22-0-6	560-32376-24	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-23-0-6	560-32376-25	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-24-0-6	560-32376-26	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-25-0-6	560-32376-27	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-26-0-6	560-32376-28	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-27-0-6	560-32376-29	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-28-0-6	560-32376-30	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-29-0-6	560-32376-31	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-30-0-6	560-32376-32	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-31-0-6	560-32376-33	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-32-0-6	560-32376-34	5/10/2012	N	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-DUP-01	560-32376-35	5/10/2012	FD of SL-04-0-6	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-DUP-02	560-32376-36	5/10/2012	FD of SL-19-0-6	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury
SL-DUP-03	560-32376-37	5/10/2012	FD of SL-29-0-6	Total Metals, SPLP Metals, Total Mercury, SPLP Mercury

Notes:
N = Normal sample
FD = Field Duplicate
Total Metals / SPLP Metals = antimony, arsenic, barium, cadmium, chromium, cobalt, copper, iron, lead, molybdenenum, nickel, selenium, silver, and zinc

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-00-0-6	560-32376-1	SPLP Cadmium	0.00113	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-00-0-6	560-32376-1	SPLP Copper	0.0091	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-01-0-6	560-32376-2	SPLP Chromium	0.00602	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-01-0-6	560-32376-2	Total Mercury	0.102	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-02-0-6	560-32376-3	SPLP Antimony	0.00565	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-02-0-6	560-32376-3	SPLP Arsenic	0.00439	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-02-0-6	560-32376-3	SPLP Chromium	0.00394	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-02-0-6	560-32376-3	SPLP Iron	0.0613	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-02-0-6	560-32376-3	SPLP Mercury	0.000214	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-03-0-6	560-32376-4	SPLP Arsenic	0.00864	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-03-0-6	560-32376-4	SPLP Chromium	0.00524	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-03-0-6	560-32376-4	SPLP Mercury	0.0012	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-04-0-6	560-32376-5	SPLP Arsenic	0.0423	mg/L	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Arsenic	193	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Barium	95.9	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Cadmium	48.3	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	SPLP Cadmium	0.451	mg/L	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	SPLP Chromium	0.00655	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-04-0-6	560-32376-5	Total Chromium	33.7	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	SPLP Cobalt	<0.0102	mg/L	UJ	Qualified due to method blank contamination
SL-04-0-6	560-32376-5	SPLP Copper	10.9	mg/L	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Copper	12400	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	SPLP Iron	0.448	mg/L	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Iron	119000	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	SPLP Lead	0.351	mg/L	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Lead	957	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Mercury	0.084	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-04-0-6	560-32376-5	Total Molybdenum	904	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Nickel	86	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-04-0-6	560-32376-5	Total Selenium	12.3	mg/Kg	J	Qualified due to high field duplicate RPD
SL-04-0-6	560-32376-5	Total Zinc	13900	mg/Kg	J	Qualified due to high field duplicate RPD
SL-05-0-6	560-32376-6	SPLP Chromium	0.00607	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-05-0-6	560-32376-6	SPLP Iron	0.0749	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-05-0-6	560-32376-6	Total Mercury	0.143	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-06-0-6	560-32376-7	SPLP Cadmium	0.00213	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-06-0-6	560-32376-7	SPLP Chromium	0.00465	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-06-0-6	560-32376-7	SPLP Cobalt	<0.00151	mg/L	UJ	Qualified due to method blank contamination
SL-06-0-6	560-32376-7	SPLP Iron	0.0782	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-06-0-6	560-32376-7	Total Mercury	0.0386	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-07-0-6	560-32376-8	SPLP Chromium	0.00626	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-07-0-6	560-32376-8	SPLP Iron	0.0655	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-07-0-6	560-32376-8	SPLP Mercury	0.000139	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-07-0-6	560-32376-8	Total Mercury	0.0746	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-08-0-6	560-32376-9	SPLP Chromium	0.00776	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-08-0-6	560-32376-9	SPLP Cobalt	<0.00852	mg/L	UJ	Qualified due to method blank contamination
SL-08-0-6	560-32376-9	SPLP Nickel	0.00566	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-09-0-6	560-32376-10	SPLP Chromium	0.00623	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-09-0-6	560-32376-10	SPLP Selenium	0.00547	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-10-0-6	560-32376-11	SPLP Nickel	0.00319	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-11-0-6	560-32376-12	SPLP Chromium	0.00653	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-11-0-6	560-32376-12	SPLP Molybdenum	0.00254	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-11-0-6	560-32376-12	SPLP Selenium	0.00692	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-12-0-6	560-32376-13	SPLP Chromium	0.00719	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-12-0-6	560-32376-13	SPLP Cobalt	<0.00891	mg/L	UJ	Qualified due to method blank contamination
SL-12-0-6	560-32376-13	SPLP Nickel	0.00716	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-13-0-6	560-32376-14	SPLP Chromium	0.00604	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-13-0-6	560-32376-14	SPLP Zinc	<0.0599	mg/L	UJ	Qualified due to method blank contamination
SL-14-0-6	560-32376-15	SPLP Chromium	0.00351	mg/L	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-14-0-6	560-32376-15	SPLP Mercury	0.00021	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-14-0-6	560-32376-15	SPLP Zinc	<0.0437	mg/L	UJ	Qualified due to method blank contamination
SL-15-0-6	560-32376-16	SPLP Chromium	<0.0015	mg/L	UJ	Qualified due to method blank contamination
SL-15-0-6	560-32376-16	Total Chromium	14.9	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-15-0-6	560-32376-16	SPLP Mercury	0.000292	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-15-0-6	560-32376-16	Total Selenium	10.3	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-16-0-6	560-32376-17	SPLP Chromium	<0.00136	mg/L	UJ	Qualified due to method blank contamination
SL-16-0-6	560-32376-17	SPLP Iron	0.105	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-16-0-6	560-32376-17	SPLP Mercury	0.000598	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-16-0-6	560-32376-17	SPLP Silver	0.00102	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-17-0-6	560-32376-18	SPLP Chromium	<0.00179	mg/L	UJ	Qualified due to method blank contamination
SL-18-0-6	560-32376-19	SPLP Chromium	<0.00153	mg/L	UJ	Qualified due to method blank contamination
SL-18-0-6	560-32376-19	SPLP Cobalt	0.00173	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-18-0-6	560-32376-19	SPLP Nickel	0.00852	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-18-0-6	560-32376-19	SPLP Silver	0.00181	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-18-0-6	560-32376-19	SPLP Zinc	<0.0883	mg/L	UJ	Qualified due to method blank contamination
SL-19-0-6	560-32376-20	SPLP Arsenic	0.0399	mg/L	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Barium	0.258	mg/L	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Cadmium	0.209	mg/L	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Chromium	<0.00169	mg/L	UJ	Qualified due to method blank contamination
SL-19-0-6	560-32376-20	Total Cobalt	30	mg/Kg	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	Total Copper	12400	mg/Kg	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Iron	0.102	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-19-0-6	560-32376-20	Total Iron	103000	mg/Kg	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Lead	1.14	mg/L	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	Total Mercury	4.56	mg/Kg	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	SPLP Molybdenum	0.00574	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-19-0-6	560-32376-20	Total Molybdenum	75.4	mg/Kg	J	Qualified due to high field duplicate RPD
SL-19-0-6	560-32376-20	Total Selenium	92.3	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-19-0-6	560-32376-20	Total Zinc	20500	mg/Kg	J	Qualified due to high field duplicate RPD
SL-20-0-6	560-32376-21	SPLP Barium	<0.0402	mg/L	UJ	Qualified due to method blank contamination
SL-20-0-6	560-32376-21	SPLP Chromium	<0.00194	mg/L	UJ	Qualified due to method blank contamination
SL-20-0-6	560-32376-21	SPLP Mercury	0.00076	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-21-0-6	560-32376-22	SPLP Antimony	0.00915	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-21-0-6	560-32376-22	SPLP Barium	<0.0505	mg/L	UJ	Qualified due to method blank contamination
SL-21-0-6	560-32376-22	SPLP Cadmium	0.0043	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-21-0-6	560-32376-22	SPLP Chromium	<0.00194	mg/L	UJ	Qualified due to method blank contamination
SL-21-0-6	560-32376-22	SPLP Molybdenum	0.00306	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-21-0-6	560-32376-22	SPLP Selenium	0.0056	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-21-0-6	560-32376-22	SPLP Zinc	<0.0307	mg/L	UJ	Qualified due to method blank contamination
SL-22-0-6	560-32376-23	Total Antimony	0.858	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Arsenic	0.00441	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Barium	<0.0357	mg/L	UJ	Qualified due to method blank contamination
SL-22-0-6	560-32376-23	SPLP Cadmium	0.00085	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Chromium	<0.00164	mg/L	UJ	Qualified due to method blank contamination
SL-22-0-6	560-32376-23	SPLP Lead	0.00692	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Mercury	0.000376	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	Total Mercury	0.0547	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	Total Molybdenum	0.497	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Selenium	0.00717	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	Total Selenium	0.611	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-22-0-6	560-32376-23	SPLP Zinc	<0.0151	mg/L	UJ	Qualified due to method blank contamination
SL-23-0-6	560-32376-24	Total Antimony	0.642	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	SPLP Barium	<0.0264	mg/L	UJ	Qualified due to method blank contamination
SL-23-0-6	560-32376-24	SPLP Cadmium	0.00057	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	SPLP Chromium	<0.0118	mg/L	UJ	Qualified due to method blank contamination
SL-23-0-6	560-32376-24	SPLP Copper	0.0083	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	SPLP Mercury	0.00017	mg/L	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-23-0-6	560-32376-24	Total Mercury	0.1	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	Total Molybdenum	0.504	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	SPLP Selenium	0.00466	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-23-0-6	560-32376-24	SPLP Zinc	<0.0239	mg/L	UJ	Qualified due to method blank contamination
SL-24-0-6	560-32376-25	SPLP Barium	<0.0531	mg/L	UJ	Qualified due to method blank contamination
SL-24-0-6	560-32376-25	SPLP Chromium	<0.00199	mg/L	UJ	Qualified due to method blank contamination
SL-24-0-6	560-32376-25	SPLP Iron	0.0506	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-24-0-6	560-32376-25	SPLP Mercury	0.000249	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-24-0-6	560-32376-25	SPLP Molybdenum	0.00428	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-24-0-6	560-32376-25	SPLP Selenium	0.00445	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-24-0-6	560-32376-25	SPLP Zinc	<0.0315	mg/L	UJ	Qualified due to method blank contamination
SL-25-0-6	560-32376-26	SPLP Cadmium	0.00226	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-25-0-6	560-32376-26	SPLP Chromium	<0.00143	mg/L	UJ	Qualified due to method blank contamination
SL-25-0-6	560-32376-26	SPLP Molybdenum	0.00393	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-25-0-6	560-32376-26	SPLP Selenium	0.00487	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-25-0-6	560-32376-26	SPLP Zinc	<0.0131	mg/L	UJ	Qualified due to method blank contamination
SL-26-0-6	560-32376-27	SPLP Antimony	0.00723	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	SPLP Barium	<0.0319	mg/L	UJ	Qualified due to method blank contamination
SL-26-0-6	560-32376-27	SPLP Cadmium	0.00283	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	SPLP Chromium	<0.00201	mg/L	UJ	Qualified due to method blank contamination
SL-26-0-6	560-32376-27	SPLP Iron	0.146	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	Total Mercury	0.113	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	Total Molybdenum	0.731	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	SPLP Selenium	0.0081	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	Total Selenium	0.221	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-26-0-6	560-32376-27	SPLP Zinc	<0.0154	mg/L	UJ	Qualified due to method blank contamination
SL-27-0-6	560-32376-28	Total Antimony	1.91	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	SPLP Barium	<0.0464	mg/L	UJ	Qualified due to method blank contamination
SL-27-0-6	560-32376-28	SPLP Cadmium	0.00058	mg/L	J	Estimated: Analyte detected between MDL and MQL

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-27-0-6	560-32376-28	SPLP Chromium	<0.00141	mg/L	UJ	Qualified due to method blank contamination
SL-27-0-6	560-32376-28	Total Mercury	0.0591	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	SPLP Molybdenum	0.0038	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	Total Molybdenum	1.26	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	Total Selenium	0.421	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	Total Silver	0.464	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-27-0-6	560-32376-28	SPLP Zinc	<0.0145	mg/L	UJ	Qualified due to method blank contamination
SL-28-0-6	560-32376-29	SPLP Antimony	0.00729	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	SPLP Barium	<0.0494	mg/L	UJ	Qualified due to method blank contamination
SL-28-0-6	560-32376-29	SPLP Cadmium	0.00302	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	SPLP Chromium	<0.00214	mg/L	UJ	Qualified due to method blank contamination
SL-28-0-6	560-32376-29	SPLP Molybdenum	0.00927	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	Total Molybdenum	1.7	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	SPLP Selenium	0.00681	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	Total Selenium	0.694	mg/Kg	J	Estimated: Analyte detected between MDL and MQL
SL-28-0-6	560-32376-29	SPLP Zinc	<0.0255	mg/L	UJ	Qualified due to method blank contamination
SL-29-0-6	560-32376-30	Total Antimony	13.4	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Arsenic	120	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Barium	140	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Cadmium	34	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	SPLP Chromium	<0.00154	mg/L	UJ	Qualified due to method blank contamination
SL-29-0-6	560-32376-30	Total Chromium	10.5	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Cobalt	13.5	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	SPLP Copper	0.151	mg/L	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Copper	2350	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	SPLP Iron	0.13	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-29-0-6	560-32376-30	SPLP Lead	0.119	mg/L	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Lead	1210	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Mercury	0.604	mg/Kg	J	Qualified due to high field duplicate RPD

Table 2
Qualified Analytical Results
Former ASARCO Smelter
El Paso, TX

Sample ID	Lab ID	Analyte	Result	Units	Qualifier	Comments
SL-29-0-6	560-32376-30	SPLP Selenium	0.00935	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-29-0-6	560-32376-30	Total Selenium	4.64	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	Total Silver	5.98	mg/Kg	J	Qualified due to high field duplicate RPD
SL-29-0-6	560-32376-30	SPLP Zinc	<0.0102	mg/L	UJ	Qualified due to method blank contamination
SL-29-0-6	560-32376-30	Total Zinc	4260	mg/Kg	J	Qualified due to high field duplicate RPD
SL-30-0-6	560-32376-31	SPLP Chromium	<0.00183	mg/L	UJ	Qualified due to method blank contamination
SL-30-0-6	560-32376-31	SPLP Iron	0.0642	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-30-0-6	560-32376-31	SPLP Zinc	<0.0780	mg/L	UJ	Qualified due to method blank contamination
SL-31-0-6	560-32376-32	SPLP Zinc	<0.0538	mg/L	UJ	Qualified due to method blank contamination
SL-32-0-6	560-32376-33	SPLP Chromium	<0.00157	mg/L	UJ	Qualified due to method blank contamination
SL-32-0-6	560-32376-33	SPLP Molybdenum	0.00301	mg/L	J	Estimated: Analyte detected between MDL and MQL
SL-32-0-6	560-32376-33	SPLP Zinc	<0.0797	mg/L	UJ	Qualified due to method blank contamination

Notes:
"<" = Analyte not detected above listed reporting limit
J = Analyte was positively identified above the SDL; however, the result is an estimated value
UJ = Analyte was not detected above the SDL; however, the SDL is considered an estimated value
mg/L = milligrams per liter ; mg/Kg = micrograms per kilogram
RPD = Relative Percent Difference
MDL = Method Detection Limit ; MQL = Method Quantitation Limit

Table 3
Field Duplicate Summary
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)
SL-04-0-6/ SL-DUP-01	**Total Metals (mg/Kg)**			
	Antimony	18.8	15.1	22
	Arsenic	193	82.0	**81**
	Barium	95.9	32.9	**98**
	Cadmium	48.3	25.7	**61**
	Chromium	33.7	23.5	**36**
	Cobalt	56.6	44.5	24
	Copper	12400	34600	**94**
	Iron	119000	188000	**45**
	Lead	957	645	**39**
	Molybdenum	904	582	**43**
	Nickel	86.0	118	**31**
	Selenium	12.3	17.2	**33**
	Silver	23.9	29.0	19
	Zinc	13900	8840	**45**
	Mercury	0.0840 J	0.0420 J	NC
	SPLP Metals (mg/L)			
	Antimony	0.0190	0.00915 J	NC
	Arsenic	0.0423	0.0135	**103**
	Barium	0.164	0.139	17
	Cadmium	0.451	0.315	**36**
	Chromium	0.00655 J	0.00147 J	NC
	Cobalt	0.0102	0.00900	13
	Copper	10.9	3.28	**107**
	Iron	0.448	0.0532 J	**NC**
	Lead	0.351	0.0800	**126**
	Molybdenum	<0.00250	0.00254 J	NC
	Nickel	0.0894	0.0768	15
	Selenium	<0.00420	<0.00420	NC
	Silver	<0.00100	<0.00100	NC
	Zinc	3.94	2.99	27
	Mercury	<0.000130	<0.000130	NC

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/L = milligrams per liter
mg/Kg = milligrams per kilogram
< = Not detected
NC = Not Calculated; RPD values were not calculated for non-detect or trace detect values
Bolded values = RPDs that required data qualification

Table 3
Field Duplicate Summary
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)
SL-19-0-6/ SL-DUP-02	**Total Metals (mg/Kg)**			
	Antimony	59.1	57	3.6
	Arsenic	471	374	23
	Barium	455	567	22
	Cadmium	131	98.8	28
	Chromium	15.2	12.1	23
	Cobalt	30	15.3	**65**
	Copper	12400	7530	**49**
	Iron	103000	337000	**106**
	Lead	6420	5790	10
	Molybdenum	75.4	53.1	**35**
	Nickel	21.6	16.7	26
	Selenium	92.3	36.4	**87**
	Silver	47	41	14
	Zinc	20500	33700	**49**
	Mercury	4.56	6.48	**35**
	SPLP Metals (mg/L)			
	Antimony	0.0328	0.0379	14
	Arsenic	0.0399	0.024	**50**
	Barium	0.258	0.634	**84**
	Cadmium	0.209	0.29	**32**
	Chromium	0.00169 J	<0.00110	NC
	Cobalt	0.0131	0.0138	5.2
	Copper	0.364	0.326	11
	Iron	0.102 J	<0.0503	NC
	Lead	1.14	0.392	**98**
	Molybdenum	0.00574 J	0.00786 J	NC
	Nickel	0.0342	0.0264	26
	Selenium	0.0291	0.028	3.9
	Silver	<0.00100	<0.00100	NC
	Zinc	0.751	0.872	15
	Mercury	<0.000130	<0.000130	NC

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/L = milligrams per liter
mg/Kg = milligrams per kilogram
< = Not detected
NC = Not Calculated; RPD values were not calculated for non-detect or trace detect values
Bolded values = RPDs that required data qualification

Table 3
Field Duplicate Summary
Former ASARCO Smelter
El Paso, TX

Sample ID / Field Duplicate ID	Analyte	Sample Result	Field Duplicate Result	RPD (%)
SL-29-0-6/ SL-DUP-03	**Total Metals (mg/Kg)**			
	Antimony	13.4	9.44	**35**
	Arsenic	120	77.3	**43**
	Barium	140	89.1	**44**
	Cadmium	34	17	**67**
	Chromium	10.5	7.42	**34**
	Cobalt	13.5	9.6	**34**
	Copper	2350	1460	**47**
	Iron	20600	15900	26
	Lead	1210	673	**57**
	Molybdenum	15.1	12	23
	Nickel	11	9.13	19
	Selenium	4.64	2.15	**73**
	Silver	5.98	3.15	**62**
	Zinc	4260	1320	**105**
	Mercury	0.604	0.303	**66**
	SPLP Metals (mg/L)			
	Antimony	0.0247	0.0162	42
	Arsenic	0.0957	0.0768	22
	Barium	0.0809	0.0969	18
	Cadmium	0.00833	0.00685	19
	Chromium	0.00154 J	0.00260 J	NC
	Cobalt	<0.00100	<0.00100	NC
	Copper	0.151	0.0814	**60**
	Iron	0.130 J	<0.0503	NC
	Lead	0.119	0.0522	**78**
	Molybdenum	0.0163	0.0106	42
	Nickel	<0.00200	<0.00200	NC
	Selenium	0.00935 J	0.0162	NC
	Silver	<0.00100	<0.00100	NC
	Zinc	0.102	0.0936	8.6
	Mercury	<0.000130	<0.000130	NC

Notes:
RPD = Relative Percent Difference; [(difference)/(average)]*100
mg/L = milligrams per liter
mg/Kg = milligrams per kilogram
< = Not detected
NC = Not Calculated; RPD values were not calculated for non-detect or trace detect values
Bolded values = RPDs that required data qualification

Table 4
Completeness Summary
Former ASARCO Smelter
El Paso, TX

Parameter	Total Number of Samples	Number in Contractual Compliance	Percent Contractual Compliance	Number of Usable Results	Percent Technical Compliance
Total Metals					
Antimony	33	32[a]	97	33	100
Arsenic	33	31[a]	94	33	100
Barium	33	31[a]	94	33	100
Cadmium	33	31[a]	94	33	100
Chromium	33	31[a]	94	33	100
Cobalt	33	31[a]	94	33	100
Copper	33	30[a]	91	33	100
Iron	33	31[a]	94	33	100
Lead	33	31[a]	94	33	100
Molybdenum	33	31[a]	94	33	100
Nickel	33	32[a]	97	33	100
Selenium	33	30[a]	91	33	100
Silver	33	32[a]	97	33	100
Zinc	33	30[a]	91	33	100
SPLP Metals					
Antimony	33	33	100	33	100
Arsenic	33	31[a]	94	33	100
Barium	33	24[a,b]	73	33	100
Cadmium	33	31[a]	94	33	100
Chromium	33	16[b]	49	33	100
Cobalt	33	29[b]	88	33	100
Copper	33	31[a]	94	33	100
Iron	33	33	100	33	100
Lead	33	30[a]	91	33	100
Molybdenum	33	33	100	33	100
Nickel	33	33	100	33	100
Selenium	33	33	100	33	100
Silver	33	33	100	33	100
Zinc	33	18[b]	55	33	100
Total Mercury					
Mercury	33	31[a]	94	33	100
SPLP Mercury					
Mercury	33	33	100	33	100
TOTALS	**990**	**906**	**92**	**990**	**100**

Notes:

Total number of samples includes field samples but not field duplicate samples

Percent Contractual Compliance = [Number of Contract Compliant Results / Total Number of Samples] * 100

Percent Technical Compliance = [Number of Usable Results / Total Number of Samples] * 100

* Trace detections are not counted as being out of contractual compliance

[a] Results qualified due to high field duplicate RPD outliers

[b] Results qualified due to method blank contamination