DATA VERIFICATION OF THE SOIL SAMPLES COLLECTED AT THE ARCO YERINGTON MINE SITE BETWEEN OCTOBER 5 AND 30, 2008

Laboratory: TestAmerica-Irvine
Field Duplicates Sample: OU4-LEP-04A-SC and OU4-LEP-04A-SC-FD, OU4-LEP-04B-SC and OU4-LEP-04B-SC-FD, OU4-UEP-44A-SC and OU4-UEP-44A-SC-FD, OU4-UEP-44B-SC and OU4-UEP-44B-SC, OU4-UEP-47A-SC and OU4-UEP-47A-SC-FD, OU4-UEP-47B-SC and OU4-UEP-47B-SC-FD, OU4-UEP-47C-SC and OU4-UEP-47C-SC-FD, OU4-LEP-30A-SC and OU4-LEP-30A-SC-FD, OU4-LEP-30B-SC and OU4-LEP-30B-SC-FD, OU4-LEP-30C-SC and OU4-LEP-30C-SC-FD
Equipment Blank: OU4-EQ-03
Parameters & Methods: Metals (6010B, 6020, 7471A)
Samples:

Field Sample Identification	Date Sample Collected	SDG
OU4-LEP-04A-SC	10/7/08	IRJ0868
OU4-LEP-04B-SC	10/7/08	IRJ0868
OU4-LEP-04A-SC-FD	10/7/08	IRJ0868
OU4-LEP-04B-SC-FD	10/7/08	IRJ0868
OU4-LEP-03A-SC	10/6/08	IRJ0868
OU4-LEP-03B-SC	10/6/08	IRJ0868
OU4-LEP-02A-SC	10/6/08	IRJ0868
OU4-LEP-02B-SC	10/6/08	IRJ0868
OU4-LEP-01A-SC	10/5/08	IRJ0868
OU4-LEP-01B-SC	10/5/08	IRJ0868
OU4-UEP-07A-SC	10/8/08	IRJ0895
OU4-UEP-07B-SC	10/8/08	IRJ0895
OU4-LEP-05A-SC	10/7/08	IRJ0895
OU4-LEP-05B-SC	10/7/08	IRJ0895
OU4-FEP-49A-SC	10/9/08	IRJ1207
OU4-FEP-49B-SC	10/9/08	IRJ1207
OU4-FEP-49C-SC	10/9/08	IRJ1207
OU4-FEP-50A-SC	10/9/08	IRJ1207
OU4-FEP-50B-SC	10/9/08	IRJ1207
OU4-FEP-50C-SC	10/9/08	IRJ1207
OU4-FEP-48A-SC	10/9/08	IRJ1207
OU4-FEP-48B-SC	10/9/08	IRJ1207

Field Sample Identification	Date Sample Collected	SDG
OU4-FEP-48C-SC	10/9/08	IRJ1207
OU4-FEP-48D-SC	10/9/08	IRJ1207
OU4-FEP-52A-SC	10/9/08	IRJ1207
OU4-FEP-52B-SC	10/9/08	IRJ1207
OU4-FEP-52C-SC	10/9/08	IRJ1207
OU4-FEP-51A-SC	10/9/08	IRJ1207
OU4-FEP-51B-SC	10/9/08	IRJ1207
OU4-FEP-12A-SC	10/13/08	IRJ1483
OU4-FEP-12B-SC	10/13/08	IRJ1483
OU4-UEP-6A-SC	10/14/08	IRJ1695
OU4-UEP-6B-SC	10/14/08	IRJ1695
OU4-UEP-9A-SC	10/14/08	IRJ1695
OU4-UEP-9B-SC	10/14/08	IRJ1695
OU4-UEP-44A-SC	10/16/08	IRJ1929
OU4-UEP-44B-SC	10/16/08	IRJ1929
OU4-UEP-44A-SC-FD	10/16/08	IRJ1929
OU4-UEP-44B-SC-FD	10/16/08	IRJ1929
OU4-UEP-45A-SC	10/16/08	IRJ1929
OU4-UEP-45B-SC	10/16/08	IRJ1929
OU4-UEP-46A-SC	10/16/08	IRJ1929
OU4-UEP-46B-SC	10/16/08	IRJ1929
OU4-UEP-47A-SC	10/16/08	IRJ1929
OU4-UEP-47B-SC	10/16/08	IRJ1929
OU4-UEP-47C-SC	10/16/08	IRJ1929
OU4-UEP-47A-SC-FD	10/16/08	IRJ1929
OU4-UEP-47B-SC-FD	10/16/08	IRJ1929
OU4-UEP-47C-SC-FD	10/16/08	IRJ1929
OU4-UEP-42A-SC	10/16/08	IRJ1929
OU4-UEP-42B-SC	10/16/08	IRJ1929
OU4-UEP-42C-SC	10/16/08	IRJ1929
OU4-UEP-41A-SC	10/16/08	IRJ1929
OU4-UEP-41B-SC	10/16/08	IRJ1929
OU4-UEP-41C-SC	10/16/08	IRJ1929

Field Sample Identification	Date Sample Collected	SDG
OU4-UEP-35A-SC	10/16/08	IRJ1929
OU4-UEP-35B-SC	10/16/08	IRJ1929
OU4-LEP-29A-SC	10/17/08	IRJ2058
OU4-LEP-29B-SC	10/17/08	IRJ2058
OU4-LEP-29C-SC	10/17/08	IRJ2058
OU4-LEP-30A-SC	10/17/08	IRJ2058
OU4-LEP-30B-SC	10/17/08	IRJ2058
OU4-LEP-30C-SC	10/17/08	IRJ2058
OU4-LEP-30A-SC-FD	10/17/08	IRJ2058
OU4-LEP-30B-SC-FD	10/17/08	IRJ2058
OU4-LEP-30C-SC-FD	10/17/08	IRJ2058
OU4-LEP-31A-SC	10/17/08	IRJ2058
OU4-LEP-31B-SC	10/17/08	IRJ2058
OU4-LEP-31C-SC	10/17/08	IRJ2058
OU4-LEP-32A-SC	10/17/08	IRJ2058
OU4-LEP-32B-SC	10/17/08	IRJ2058
OU4-LEP-32C-SC	10/17/08	IRJ2058
OU4-UEP-34A-SC	10/17/08	IRJ2058
OU4-UEP-34B-SC	10/17/08	IRJ2058
OU4-FEP-57A-SC	10/17/08	IRJ2058
OU4-FEP-57B-SC	10/17/08	IRJ2058
OU4-FEP-58A-SC	10/17/08	IRJ2058
OU4-FEP-58B-SC	10/17/08	IRJ2058
OU4-FEP-59A-SC	10/17/08	IRJ2058
OU4-FEP-59B-SC	10/17/08	IRJ2058
OU4-FEP-60A-SC	10/17/08	IRJ2058
OU4-FEP-60B-SC	10/17/08	IRJ2058
OU4-UEP-33A-SC	10/18/08	IRJ2058
OU4-UEP-33B-SC	10/18/08	IRJ2058
OU4-FEP-53A-SC	10/18/08	IRJ2058
OU4-FEP-53B-SC	10/18/08	IRJ2058
OU4-FEP-54A-SC	10/18/08	IRJ2058
OU4-FEP-54B-SC	10/18/08	IRJ2058

Field Sample Identification	Date Sample Collected	SDG
OU4-FEP-55A-SC	10/18/08	IRJ2058
OU4-FEP-55B-SC	10/18/08	IRJ2058
OU4-FEP-56A-SC	10/18/08	IRJ2058
OU4-FEP-56B-SC	10/18/08	IRJ2058
OU4-LEP-18A-SC	10/18/08	IRJ2058
OU4-LEP-18B-SC	10/18/08	IRJ2058
OU4-LEP-22A-SC	10/18/08	IRJ2058
OU4-LEP-22B-SC	10/18/08	IRJ2058
OU4-LEP-23A-SC	10/18/08	IRJ2058
OU4-LEP-23B-SC	10/18/08	IRJ2058
OU4-LEP-27A-SC	10/18/08	IRJ2058
OU4-LEP-27B-SC	10/18/08	IRJ2058
OU4-LEP-28A-SC	10/18/08	IRJ2058
OU4-LEP-28B-SC	10/18/08	IRJ2058
OU4-LEP-20A-SC	10/19/08	IRJ2058
OU4-LEP-20B-SC	10/19/08	IRJ2058
OU4-LEP-21A-SC	10/19/08	IRJ2058
OU4-LEP-21B-SC	10/19/08	IRJ2058
OU4-LEP-25A-SC	10/19/08	IRJ2058
OU4-LEP-25B-SC	10/19/08	IRJ2058
OU4-LEP-24A-SC	10/19/08	IRJ2058
OU4-FEP-14A-SC	10/29/08	IRJ3048
OU4-FEP-14B-SC	10/29/08	IRJ3048
OU4-FEP-14C-SC	10/29/08	IRJ3048
OU4-FEP-15A-SC	10/29/08	IRJ3048
OU4-FEP-15B-SC	10/29/08	IRJ3048
OU4-FEP-16A-SC	10/28/08	IRJ3048
OU4-FEP-16B-SC	10/28/08	IRJ3048
OU4-FEP-17A-SC	10/28/08	IRJ3048
OU4-LEP-24B-SC	10/30/08	IRK0240

Items Reviewed
Holding Times
Chain-of-Custody and Case Narratives
Blank Results
MS/MSD Results
LCS Results
Field and Laboratory Duplicate Results

Qualifiers Summary Table

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier	Reason(s) for Qualification
mercury	IRJ0868 IRJ0895	All samples OU4-UEP-07B-SC, OU4-LEP-05A-SC, and OU4-LEP-05B-SC	UJ	2 – Method Blank Contamination
molybdenum	IRJ0868	OU4-LEP-03B-SC	UJ	2 – Method Blank Contamination
antimony	IRJ3048	OU4-FEP-14B-SC, OU4-FEP-15A-SC, and OU4-FEP-16B-SC	UJ	2 – Method Blank Contamination
silicon	IRJ1929	OU4-UEP-44A-SC and OU4-UEP-44B-SC	J/UR	4L – Very Low MS/MSD Recoveries
antimony, potassium, and sodium	IRJ0868	All samples	J	4L – Low MS/MSD Recoveries
silicon, arsenic, beryllium, and zinc	IRJ0895	All samples	J/UJ	4L – Low MS/MSD Recoveries
antimony	IRJ0895 IRJ1207 IRJ1483 IRJ1695	OU4-UEP-07A-SC, OU4-UEP-07B-SC, and OU4-LEP-05A-SC All samples All samples All samples	J	4L – Low MS/MSD Recoveries
mercury	IRJ1207	OU4-FEP-49A-SC, OU4-FEP-49B-SC, and OU4-FEP-49C-SC	J	4L – Low MS/MSD Recoveries
arsenic and copper	IRJ1207	OU4-FEP-51B-SC	J	4L – Low MS/MSD Recoveries
arsenic, barium, boron, copper, manganese, selenium, and silicon	IRJ1483 IRJ1695	All samples All samples	J/UJ	4L – Low MS/MSD Recoveries

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier	Reason(s) for Qualification
manganese, silicon, arsenic, beryllium, cadmium, chromium, cobalt, copper, molybdenum, nickel, selenium, silver, and zinc	IRJ1929	All samples except OU4-UEP-44A-SC and OU4-UEP-44B-SC	J/UJ	4L – Low MS/MSD Recoveries
antimony, boron, manganese, arsenic, barium, beryllium, chromium, cobalt, molybdenum, nickel, selenium, thallium, vanadium, and zinc	IRJ1929	OU4-UEP-44A-SC and OU4-UEP-44B-SC	J/UJ	4L – Low MS/MSD Recoveries
antimony and silicon	IRJ2058	OU4-FEP-58B-SC, OU4-FEP-59A-SC, OU4-FEP-59B-SC, OU4-FEP-60A-SC, OU4-FEP-60B-SC, OU4-UEP-33A-SC, OU4-UEP-33B-SC, OU4-FEP-53A-SC, OU4-FEP-53B-SC, OU4-FEP-54A-SC, OU4-FEP-54B-SC, OU4-FEP-55A-SC, OU4-FEP-55B-SC, OU4-FEP-56A-SC, OU4-FEP-56B-SC, OU4-LEP-18A-SC, OU4-LEP-18B-SC, OU4-LEP-22A-SC, OU4-LEP-22B-SC, and OU4-LEP-23A-SC	J/UJ	4L – Low MS/MSD Recoveries
beryllium, boron, chromium, cobalt, nickel, selenium, silicon, vanadium, and zinc	IRJ2058	OU4-LEP-29A-SC, OU4-LEP-29B-SC, OU4-LEP-29C-SC, OU4-LEP-30A-SC, OU4-LEP-30B-SC, OU4-LEP-30C-SC, OU4-LEP-30A-SC-FD, OU4-LEP-30B-SC-FD, OU4-LEP-30C-SC-FD, OU4-LEP-31A-SC, OU4-LEP-31B-SC, OU4-LEP-31C-SC, OU4-LEP-32A-SC, OU4-LEP-32B-SC, OU4-LEP-32C-SC, OU4-UEP-34A-SC, OU4-UEP-34B-SC, OU4-FEP-57A-SC, OU4-FEP-57B-SC, and OU4-FEP-58A-SC	J/UJ	4L – Low MS/MSD Recoveries
antimony, arsenic, barium, boron, molybdenum, silicon, vanadium, and zinc	IRJ2058	OU4-LEP-23B-SC, OU4-LEP-27A-SC, OU4-LEP-27B-SC, OU4-LEP-28A-SC, OU4-LEP-28B-SC, OU4-LEP-20A-SC, OU4-LEP-20B-SC, OU4-LEP-21A-SC, OU4-LEP-21B-SC, OU4-LEP-25A-SC, OU4-LEP-25B-SC, and OU4-LEP-24A-SC	J/UJ	4L – Low MS/MSD Recoveries
silicon	IRJ1207 IRJ3048 IRK0240	All samples All samples OU4-LEP-24B-SC	J	4L – Low MS/MSD Recoveries

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier	Reason(s) for Qualification
copper	IRJ0868	All samples	J	4 – Low and High MS/MSD Recoveries 5 – MS/MSD Imprecision
potassium	IRJ1207	OU4-FEP-51B-SC	J	4 – Low and High MS/MSD Recoveries
copper	IRJ0895	All samples	J	4H – High MS Recovery
manganese, sodium, and potassium	IRJ1207	All samples except OU4-FEP-51B-SC	J	4H – High MS Recovery
mercury	IRJ1207	OU4-FEP-48B-SC and OU4-FEP-48C-SC	J	4H – High MS/MSD Recoveries
zinc	IRJ2058	OU4-FEP-58B-SC, OU4-FEP-59A-SC, OU4-FEP-59B-SC, OU4-FEP-60A-SC, OU4-FEP-60B-SC, OU4-UEP-33A-SC, OU4-UEP-33B-SC, OU4-FEP-53A-SC, OU4-FEP-53B-SC, OU4-FEP-54B-SC, OU4-FEP-55A-SC, OU4-FEP-55B-SC, OU4-FEP-56A-SC, OU4-FEP-56B-SC, OU4-LEP-18A-SC, OU4-LEP-18B-SC, OU4-LEP-22A-SC, OU4-LEP-22B-SC, and OU4-LEP-23A-SC	J	4H – High MS/MSD Recoveries 5 – MS/MSD Imprecision
zinc	IRK0240	OU4-LEP-24B-SC	J	4H – High MSD Recovery
silicon	IRJ1929	OU4-UEP-44A-SC	J	5 – MS/MSD Imprecision
aluminum, boron, calcium, magnesium, iron, and manganese	IRJ1929	OU4-UEP-44A-SC and OU4-UEP-44B-SC	J	5 – MS/MSD Imprecision
calcium	IRJ2058	OU4-LEP-23B-SC, OU4-LEP-27A-SC, OU4-LEP-27B-SC, OU4-LEP-28A-SC, OU4-LEP-28B-SC, OU4-LEP-20A-SC, OU4-LEP-20B-SC, OU4-LEP-21A-SC, OU4-LEP-21B-SC, OU4-LEP-25A-SC, OU4-LEP-25B-SC, and OU4-LEP-24A-SC	J	5 – MS/MSD Imprecision
silicon	IRJ1929 IRJ2058	OU4-UEP-44B-SC-FD OU4-LEP-30A-SC and OU4-LEP-30A-SC-FD	J	8 – Field Duplicate Imprecision
arsenic and nickel	IRJ1929	OU4-UEP-47B-SC and OU4-UEP-47B-SC-FD	J	8 – Field Duplicate Imprecision
arsenic, calcium, and manganese	IRJ1929	OU4-UEP-47C-SC and OU4-UEP-47C-SC-FD	J	8 – Field Duplicate Imprecision

Analyte(s)	SDG(s)	Sample(s)	Validation Qualifier	Reason(s) for Qualification
mercury	IRJ2058	OU4-LEP-30B-SC and OU4-LEP-30B-SC-FD	J	8 – Field Duplicate Imprecision
arsenic, calcium, copper, and potassium	IRJ2058	OU4-LEP-30C-SC and OU4-LEP-30C-SC-FD	J	8 – Field Duplicate Imprecision

Quantitation of Results: Based on standard project reporting requirements, all positive results reported at concentrations greater than the method detection limit but less than the reporting limit were qualified as estimated and have been flagged "J" on the data tables. (Valid Reason Code: T)

Data Validator: Thomas H. Weinmann
Senior Reviewer: Konstadina Vlahogiani
Principal In-Charge: Rock J. Vitale
Report No: Verification_Report_208_OU4_soil_metals
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