0076838

SAF-RC-074
100-D/DR Burial Grounds & Remaining Sites – Soil Quick Turn
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 4/7/08
INITIAL/DATE

COMMENTS:

SDG K1143 SAF RC-074

Rad only X Chem only Rad & Chem

X Complete Partial

Waste Sites: 100-D-30, SW pit stained soil

RECEIVED
APR 10 2008
EDMC

LIONVILLE LABORATORY INC.

4 April 2008

RECEIVED APR 2008

Joan Kessner
WC-Hanford
2620 Fermi Avenue
MSIN H9-03
Richland, WA 99354

Subject: Analytical Data Package

Dear Ms. Kessner:

Enclosed are the hard copy analytical reports for the batch number/fraction indicated (marked X) in the following table:

LvLI Batch #	0803L717
SDG #	K1143
SAF #	RC-074
Date Received	3/7/08
# Samples	3
Matrix	SOIL
Volatiles	
Semivolatiles	
Pest/PCB	
Glycols	
DRO/KRO/GRO	
GC Alcohols	
Herbicides	
Metals	X
Inorganics	X

The electronic data deliverable (EDD) will be emailed shortly. If you have any questions, please don't hesitate to contact me at (610) 280-3012.

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

r:\group\pm\orlette\tnu-hanford\data\b_ltrs.doc

208 Welsh Pool Road • Exton, PA 19341- 1313 • (610) 280-3000 • Fax (610) 280-3041

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

RECEIVED APR 2008

DATE RECEIVED: 03/07/08 LVL LOT # : 0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16DH8						
SILVER, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
SILVER, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
SILVER, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
ALUMINUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
ALUMINUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
ALUMINUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
ARSENIC, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
ARSENIC, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
ARSENIC, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
BORON, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
BORON, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
BORON, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
BARIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
BARIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
BARIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
BERYLLIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
BERYLLIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
BERYLLIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
BISMUTH, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
BISMUTH, TOTAL REP	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
BISMUTH, TOTAL SPIKE	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
CALCIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
CALCIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
CALCIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
CADMIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
CADMIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
CADMIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
COBALT, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
COBALT, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
COBALT, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
CHROMIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
CHROMIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
CHROMIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
COPPER, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
COPPER, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
COPPER, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
IRON, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
IRON, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
IRON, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
MERCURY, TOTAL	001	S	08C0045	03/05/08	03/11/08	03/11/08
MERCURY, TOTAL	001 REP	S	08C0045	03/05/08	03/11/08	03/11/08
MERCURY, TOTAL	001 MS	S	08C0045	03/05/08	03/11/08	03/11/08
POTASSIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
POTASSIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
POTASSIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
LITHIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
LITHIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
LITHIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
MAGNESIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
MAGNESIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
MAGNESIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
MANGANESE, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
MANGANESE, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
MANGANESE, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
MOLYBDENUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
MOLYBDENUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
MOLYBDENUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
SODIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
SODIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
SODIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
NICKEL, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
NICKEL, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
NICKEL, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
PHOSPHORUS, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/20/08
PHOSPHORUS, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/20/08
PHOSPHORUS, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/20/08
LEAD, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
LEAD, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
LEAD, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
ANTIMONY, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
ANTIMONY, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
ANTIMONY, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
SELENIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SELENIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
SELENIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
SILICON, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
SILICON, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
SILICON, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
TIN, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
TIN, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
TIN, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
STRONTIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
STRONTIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
STRONTIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
THALLIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
THALLIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
THALLIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
URANIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
URANIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
URANIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
VANADIUM, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
VANADIUM, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
VANADIUM, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
ZINC, TOTAL	001	S	08L0098	03/05/08	03/11/08	03/11/08
ZINC, TOTAL	001 REP	S	08L0098	03/05/08	03/11/08	03/11/08
ZINC, TOTAL	001 MS	S	08L0098	03/05/08	03/11/08	03/11/08
J16DH9						
TCLP	002	S	08LT0023	03/05/08	03/24/08	03/25/08
SILVER, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
ALUMINUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
ARSENIC, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
BORON, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
BARIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
BERYLLIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
BISMUTH, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
CALCIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
CADMIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
COBALT, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
CHROMIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
COPPER, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
IRON, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
MERCURY, TOTAL	002	S	08C0045	03/05/08	03/11/08	03/11/08
POTASSIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
LITHIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
MAGNESIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
MANGANESE, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
MOLYBDENUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
SODIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
NICKEL, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
PHOSPHORUS, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/20/08
LEAD, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
ANTIMONY, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
SELENIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
SILICON, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
TIN, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
STRONTIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
THALLIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
URANIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
VANADIUM, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
ZINC, TOTAL	002	S	08L0098	03/05/08	03/11/08	03/11/08
J16DJ0						
TCLP	003	S	08LT0023	03/05/08	03/24/08	03/25/08
SILVER, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
ALUMINUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
ARSENIC, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
BORON, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
BARIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
BERYLLIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
BISMUTH, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
CALCIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
CADMIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
COBALT, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
CHROMIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
COPPER, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
IRON, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MERCURY, TOTAL	003	S	08C0045	03/05/08	03/11/08	03/11/08
POTASSIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
LITHIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
MAGNESIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
MANGANESE, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
MOLYBDENUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
SODIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
NICKEL, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
PHOSPHORUS, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/20/08
LEAD, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
ANTIMONY, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
SELENIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
SILICON, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
TIN, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
STRONTIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
THALLIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
URANIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
VANADIUM, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
ZINC, TOTAL	003	S	08L0098	03/05/08	03/11/08	03/11/08
J16DH9						
SILVER, TCLP LEACHAT	004	W	08L0115	03/25/08	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	004	W	08L0115	03/25/08	03/26/08	03/27/08
Boron, TCLP	004	W	08L0115	03/25/08	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	004	W	08L0115	03/25/08	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	004	W	08L0115	03/25/08	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	004	W	08L0115	03/25/08	03/26/08	03/27/08
CADMIUM, TCLP LEACHA	004	W	08L0115	03/25/08	03/26/08	03/27/08
COBALT, TCLP LEACHAT	004	W	08L0115	03/25/08	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
COPPER, TCLP LEACHAT	004	W	08L0115	03/25/08	03/26/08	03/27/08
IRON, TCLP LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08
MERCURY, TCLP LEACHA	004	W	08C0052	03/25/08	03/25/08	03/26/08
MERCURY, TCLP LEACHA	004 REP	W	08C0052	03/25/08	03/25/08	03/26/08
MERCURY, TCLP LEACHA	004 MS	W	08C0052	03/25/08	03/25/08	03/26/08
POTASSIUM, LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
LITHIUM, TCLP LEACHA	004	W	08L0115	03/25/08	03/26/08	03/27/08
MAGNESIUM TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE, TCLP LEAC	004	W	08L0115	03/25/08	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	004	W	08L0115	03/25/08	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	004	W	08L0115	03/25/08	03/26/08	03/27/08
LEAD, TCLP LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08
ANTIMONY, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
SELENIUM, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
TIN, LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	004	W	08L0115	03/25/08	03/26/08	03/27/08
THALLIUM, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
URANIUM, LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08
VANADIUM, TCLP LEACH	004	W	08L0115	03/25/08	03/26/08	03/27/08
ZINC, TCLP LEACHATE	004	W	08L0115	03/25/08	03/26/08	03/27/08
J16DJ0						
SILVER, TCLP LEACHAT	005	W	08L0115	03/25/08	03/26/08	03/27/08
SILVER, TCLP LEACHAT	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
SILVER, TCLP LEACHAT	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	005	W	08L0115	03/25/08	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
Boron, TCLP	005	W	08L0115	03/25/08	03/26/08	03/27/08
Boron, TCLP	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
Boron, TCLP	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	005	W	08L0115	03/25/08	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	005	W	08L0115	03/25/08	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	005	W	08L0115	03/25/08	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08

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INORGANIC ANALYTICAL DATA PACKAGE FOR
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CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CADMIUM, TCLP LEACHA	005	W	08L0115	03/25/08	03/26/08	03/27/08
CADMIUM, TCLP LEACHA	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
CADMIUM, TCLP LEACHA	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
COBALT, TCLP LEACHAT	005	W	08L0115	03/25/08	03/26/08	03/27/08
COBALT, TCLP LEACHAT	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
COBALT, TCLP LEACHAT	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
COPPER, TCLP LEACHAT	005	W	08L0115	03/25/08	03/26/08	03/27/08
COPPER, TCLP LEACHAT	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
COPPER, TCLP LEACHAT	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
IRON, TCLP LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
IRON, TCLP LEACHATE	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
IRON, TCLP LEACHATE	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
MERCURY, TCLP LEACHA	005	W	08C0052	03/25/08	03/25/08	03/26/08
POTASSIUM, LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
POTASSIUM, TCLP LEAC	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
POTASSIUM, TCLP LEAC	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
LITHIUM, TCLP LEACHA	005	W	08L0115	03/25/08	03/26/08	03/27/08
LITHIUM, TCLP LEACHA	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
LITHIUM, TCLP LEACHA	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
MAGNESIUM TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE, TCLP LEAC	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE, TCLP LEAC	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE, TCLP LEAC	005	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
MANGANESE, TCLP LEAC	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	005	W	08L0115	03/25/08	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	005	W	08L0115	03/25/08	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
LEAD, TCLP LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
LEAD, TCLP LEACHATE	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
LEAD, TCLP LEACHATE	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
ANTIMONY, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08

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CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ANTIMONY, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
ANTIMONY, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
SELENIUM, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
SELENIUM, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
SELENIUM, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
TIN, LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
TIN, LEACHATE	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
TIN, LEACHATE	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	005	W	08L0115	03/25/08	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
THALLIUM, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
THALLIUM, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
THALLIUM, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
URANIUM, LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
URANIUM, LEACHATE	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
URANIUM, LEACHATE	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
VANADIUM, TCLP LEACH	005	W	08L0115	03/25/08	03/26/08	03/27/08
VANADIUM, TCLP LEACH	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
VANADIUM, TCLP LEACH	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08
ZINC, TCLP LEACHATE	005	W	08L0115	03/25/08	03/26/08	03/27/08
ZINC, TCLP LEACHATE	005 REP	W	08L0115	03/25/08	03/26/08	03/27/08
ZINC, TCLP LEACHATE	005 MS	W	08L0115	03/25/08	03/26/08	03/27/08

LAB QC:

SILVER LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
SILVER, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
ALUMINUM LABORTORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
ALUMINUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
ARSENIC LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
ARSENIC, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
BORON LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
BORON, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
BARIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
BARIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
BERYLLIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
BERYLLIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08

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BISMUTH, LCS	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
BISMUTH, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
CALCIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
CALCIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
CADMIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
CADMIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
COBALT LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
COBALT, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
CHROMIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
CHROMIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
COPPER LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
COPPER, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
IRON LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
IRON, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
MERCURY LABORATORY	LC1 BS	S	08C0045	N/A	03/11/08	03/11/08
MERCURY, TOTAL	MB1	S	08C0045	N/A	03/11/08	03/11/08
POTASSIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
POTASSIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
LITHIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
LITHIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
MAGNESIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
MAGNESIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
MANGANESE LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
MANGANESE, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
MOLYBDENUM LABORATOR	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
MOLYBDENUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
SODIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
SODIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
NICKEL LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
NICKEL, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
PHOSPHORUS LCS	LC1 BS	S	08L0098	N/A	03/11/08	03/20/08
PHOSPHORUS, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/20/08
LEAD LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
LEAD, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
ANTIMONY LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
ANTIMONY, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
SELENIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
SELENIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08

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SILICON LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
SILICON, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
TIN LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
TIN, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
STRONTIUM LCS STANDA	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
STRONTIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
THALLIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
THALLIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
URANIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
URANIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
VANADIUM LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
VANADIUM, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
ZINC LABORATORY	LC1 BS	S	08L0098	N/A	03/11/08	03/11/08
ZINC, TOTAL	MB1	S	08L0098	N/A	03/11/08	03/11/08
SILVER LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
SILVER, TCLP LEACHAT	MB1	W	08L0115	N/A	03/26/08	03/27/08
SILVER, TCLP LEACHAT	MB2	W	08L0115	N/A	03/26/08	03/27/08
ALUMINUM LABORTORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
ALUMINUM, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
ARSENIC LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	MB1	W	08L0115	N/A	03/26/08	03/27/08
ARSENIC, TCLP LEACHA	MB2	W	08L0115	N/A	03/26/08	03/27/08
BORON LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
Boron, TCLP	MB1	W	08L0115	N/A	03/26/08	03/27/08
Boron, TCLP	MB2	W	08L0115	N/A	03/26/08	03/27/08
BARIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	MB1	W	08L0115	N/A	03/26/08	03/27/08
BARIUM, TCLP LEACHAT	MB2	W	08L0115	N/A	03/26/08	03/27/08
BERYLLIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	MB1	W	08L0115	N/A	03/26/08	03/27/08
BERYLLIUM, TCLP LEAC	MB2	W	08L0115	N/A	03/26/08	03/27/08
CALCIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	MB1	W	08L0115	N/A	03/26/08	03/27/08
CALCIUM, TCLP LEACHA	MB2	W	08L0115	N/A	03/26/08	03/27/08
CADMIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
CADMIUM, TCLP LEACHA	MB1	W	08L0115	N/A	03/26/08	03/27/08
CADMIUM, TCLP LEACHA	MB2	W	08L0115	N/A	03/26/08	03/27/08

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COBALT LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
COBALT, TCLP LEACHAT	MB1	W	08L0115	N/A	03/26/08	03/27/08
COBALT, TCLP LEACHAT	MB2	W	08L0115	N/A	03/26/08	03/27/08
CHROMIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
CHROMIUM, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
COPPER LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
COPPER, TCLP LEACHAT	MB1	W	08L0115	N/A	03/26/08	03/27/08
COPPER, TCLP LEACHAT	MB2	W	08L0115	N/A	03/26/08	03/27/08
IRON LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
IRON, TCLP LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
IRON, TCLP LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08
MERCURY LABORATORY	LC1 BS	W	08C0052	N/A	03/25/08	03/26/08
MERCURY, TOTAL	MB1	W	08C0052	N/A	03/25/08	03/26/08
MERCURY, TCLP LEACHA	MB2	W	08C0052	N/A	03/25/08	03/26/08
MERCURY, TCLP LEACHA	MB3	W	08C0052	N/A	03/25/08	03/26/08
POTASSIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
POTASSIUM, LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
POTASSIUM, LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08
LITHIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
LITHIUM, TCLP LEACHA	MB1	W	08L0115	N/A	03/26/08	03/27/08
LITHIUM, TCLP LEACHA	MB2	W	08L0115	N/A	03/26/08	03/27/08
MAGNESIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
MAGNESIUM TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
MAGNESIUM TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
MANGANESE LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
MANGANESE, TCLP LEAC	MB1	W	08L0115	N/A	03/26/08	03/27/08
MANGANESE, TCLP LEAC	MB2	W	08L0115	N/A	03/26/08	03/27/08
MOLYBDENUM LABORATOR	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	MB1	W	08L0115	N/A	03/26/08	03/27/08
MOLYBDENUM, TCLP LEA	MB2	W	08L0115	N/A	03/26/08	03/27/08
NICKEL LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	MB1	W	08L0115	N/A	03/26/08	03/27/08
NICKEL, TCLP LEACHAT	MB2	W	08L0115	N/A	03/26/08	03/27/08
LEAD LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
LEAD, TCLP LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
LEAD, TCLP LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08
ANTIMONY LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
ANTIMONY, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
ANTIMONY, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
SELENIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
SELENIUM, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
SELENIUM, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
TIN LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
TIN, LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
TIN, LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08
STRONTIUM LCS STANDA	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	MB1	W	08L0115	N/A	03/26/08	03/27/08
STRONTIUM, TCLP LEAC	MB2	W	08L0115	N/A	03/26/08	03/27/08
THALLIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
THALLIUM, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
THALLIUM, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
URANIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
URANIUM, LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
URANIUM, LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08
VANADIUM LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
VANADIUM, TCLP LEACH	MB1	W	08L0115	N/A	03/26/08	03/27/08
VANADIUM, TCLP LEACH	MB2	W	08L0115	N/A	03/26/08	03/27/08
ZINC LABORATORY	LC1 BS	W	08L0115	N/A	03/26/08	03/27/08
ZINC, TCLP LEACHATE	MB1	W	08L0115	N/A	03/26/08	03/27/08
ZINC, TCLP LEACHATE	MB2	W	08L0115	N/A	03/26/08	03/27/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-074
LVL#: 0803L717
SDG/SAF#: K1143/RC-074

W.O.#: 11343-606-001-9999-00
Date Received: 03-07-08

METALS CASE NARRATIVE

The following is a summary of the QC results accompanying the sample results. Lionville Laboratory (LvLI) certifies that all test results meet the requirements of NELAC except as noted below.

All soil samples are reported on a dry weight basis unless requested by the client, required by the method, or noted otherwise.

1. This narrative covers the analyses of 3 soil samples and 2 TCLP leachate samples.

2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.

   The soil samples were reported with 3-fold dilutions, and the TCLP leachate samples with 6-fold dilutions, all for ICP metals, due to sample matrix.

3. All analyses were performed within the required holding times.

4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits (80-120% for Mercury).

5. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the LOQ).

6. All soil preparation/method blanks (MB) were within method criteria {less than the Limit of Quantitation (3-10X the LOD), or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

7. The TCLP leachate preparation/method blank 08L0115-MB2 was outside method criteria for 1 analyte. {less than the Limit of Quantitation (3-10X the LOD), MB value less than 5% of the RCRA limit, or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.

   a). The MB result for Lithium was greater than the Limit of Quantitation (LOQ) {3-10x the

The results presented in this report relate only to the analytical testing and conditions of the samples at receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 42 pages.

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(LOD) Limit of Detection} and all samples read less than 20 times the MB concentration. However, no corrective action criteria for MBs were provided in SW846 method 6010B. The sample results were reported herein "uncorrected" for the levels found in the MB.

8. All ICP Interference Check Standards were within control limits.

9. All laboratory control samples (LCS) were within the 80-120% control limits with the exception of 08L0098-LC1 for Silicon (35.8%). Refer to the Inorganics Laboratory Control Standards Report. Associated sample results may be biased low.

10. The matrix spike (MS) recoveries for 6 analytes were outside the 75-125% control limits. Refer to the Inorganics Accuracy Report.

11. For analytes where the ICP MS is out-of-control, a post-digestion MS (PDS) and serial dilution are performed. A PDS was prepared at meaningful concentration level for the following analytes:

Sample ID	Element	PDS Concentration (ppb)	PDS % Recovery
J16DH8	Aluminum	66,000	100.4
	Iron	66,000	103.8
	Manganese	3,000	112.5
	Phosphorous	6,000	106.6
	Antimony	300	107.6
	Silicon	300	82.1

12. The duplicate analyses for 9 soil analytes, and for 3 TCLP leachate analytes, were outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

13. The TCLP extract from sample J16DJ0 was selected for the matrix spike (MS) for this analytical batch. All MS recoveries were greater than 50% as per method criteria.

    The TCLP MS was spiked with the same MS solutions as the soil sample was spiked with, as opposed to the TCLP leachate spike normally used, so that all target analytes would be found in the spike mix.

14. For the purposes of this report, the data has been reported to the Limit of Detection (LOD). Values between the LOD and the Limit of Quantitation (LOQ) are acquired in a region of less-certain quantification.

15. LvLI is NELAP accredited by the state of Pennsylvania. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.

LvLI
LIONVILLE LABORATORY INC.

16. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

4/1/08
Date

jjw/m03-717

LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within t
Lot#: 08032717

Leaching Procedure: __1310 X1311 __1312 __Other:_____

CLP Metals __ Digestion and __ Analysis Methods: __ILM03.0 __ILM04.0

Metals Digestion Methods: __3005A X3010A __3015 __3020A X3050B __3051 __200.7 __SS17
__Other: _____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	X6010B		__200.7				__99
Antimony	X6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	X6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	X6010B		__200.7				__99
Beryllium	X6010B		__200.7				__99
Bismuth	X6010B [1]		__200.7 [1]			__1620	__99
Boron	X6010B		__200.7				__99
Cadmium	X6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	X6010B		__200.7				__99
Chromium	X6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	X6010B		__200.7				__99
Copper	X6010B	__7211 [5]	__200.7	__220.2			__99
Iron	X6010B		__200.7				__99
Lead	X6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	X6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	X6010B		__200.7				__99
Manganese	X6010B		__200.7				__99
Mercury	X7470A [3]	X7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	X6010B		__200.7				__99
Nickel	X6010B		__200.7				__99
Potassium	X6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	X6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	X6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	X6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	X6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	X6010B		__200.7				__99
Thallium	X6010B	__7841 [5]	__200.7	__279.2 __200.9			__99
Tin	X6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	X6010B [1]		__200.7 [1]			__1620	__99
Vanadium	X6010B		__200.7				__99
Zinc	X6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other: Phosphorous Method: 6010B

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LCS = Laboratory Control Sample.
NC = Not calculated.

ANALYTICAL METAL METHODS

1. Not included in the method element list.

2. Modified Hg: Hg1 and Hg2 require less total volume of digestate due to the autosampler analysis. Sample volumes and reagents for mercury determinations in water and soil have been proportionately scaled down to adapt to this semi-automated technique. The sample volume used for water analysis is 33 mL. For soils, approximately 0.3 grams of sample is taken to a final volume of 50 mL (including all reagents).

3. Flame AA.

4. Graphite Furnace AA.

L-WI-033/N-04/98

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J16DH8	Silver, Total	0.28 u	MG/KG	0.28	3.0
		Aluminum, Total	2670	MG/KG	11.0	3.0
		Arsenic, Total	1.4 u	MG/KG	1.4	3.0
		Boron, Total	1.4 u	MG/KG	1.4	3.0
		Barium, Total	35.7	MG/KG	0.28	3.0
		Beryllium, Total	0.14 u	MG/KG	0.14	3.0
		Bismuth, Total	1.7 u	MG/KG	1.7	3.0
		Calcium, Total	3890	MG/KG	11.0	3.0
		Cadmium, Total	0.14 u	MG/KG	0.14	3.0
		Cobalt, Total	7.8	MG/KG	0.55	3.0
		Chromium, Total	2.8	MG/KG	0.55	3.0
		Copper, Total	12.6	MG/KG	0.55	3.0
		Iron, Total	20500	MG/KG	12.4	3.0
		Mercury, Total	0.009u	MG/KG	0.009	1.0
		Potassium, Total	362	MG/KG	11.0	3.0
		Lithium, Total	2.4	MG/KG	0.11	3.0
		Magnesium, Total	3270	MG/KG	6.9	3.0
		Manganese, Total	243	MG/KG	0.11	3.0
		Molybdenum, Total	0.83 u	MG/KG	0.83	3.0
		Sodium, Total	139	MG/KG	5.5	3.0
		Nickel, Total	6.1	MG/KG	0.55	3.0
		Phosphorus, Total	1150	MG/KG	13.8	3.0
		Lead, Total	2.1	MG/KG	0.83	3.0
		Antimony, Total	0.83 u	MG/KG	0.83	3.0
		Selenium, Total	1.7 u	MG/KG	1.7	3.0
		Silicon, Total	240	MG/KG	11.0	3.0
		Tin, Total	1.9	MG/KG	1.7	3.0
		Strontium, Total	12.1	MG/KG	0.08	3.0
		Thallium, Total	1.7 u	MG/KG	1.7	3.0
		Uranium, Total	5.5 u	MG/KG	5.5	3.0
		Vanadium, Total	51.3	MG/KG	0.39	3.0
		Zinc, Total	33.5	MG/KG	1.7	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

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SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	J16DH9	Silver, Total	0.28	u	MG/KG	0.28	3.0
		Aluminum, Total	3260		MG/KG	11.2	3.0
		Arsenic, Total	1.4	u	MG/KG	1.4	3.0
		Boron, Total	1.4	u	MG/KG	1.4	3.0
		Barium, Total	52.5		MG/KG	0.28	3.0
		Beryllium, Total	0.14	u	MG/KG	0.14	3.0
		Bismuth, Total	1.7	u	MG/KG	1.7	3.0
		Calcium, Total	3680		MG/KG	11.2	3.0
		Cadmium, Total	0.14	u	MG/KG	0.14	3.0
		Cobalt, Total	6.3		MG/KG	0.56	3.0
		Chromium, Total	303		MG/KG	0.56	3.0
		Copper, Total	11.5		MG/KG	0.56	3.0
		Iron, Total	29100		MG/KG	12.6	3.0
		Mercury, Total	0.27		MG/KG	0.01	1.0
		Potassium, Total	663		MG/KG	11.2	3.0
		Lithium, Total	2.6		MG/KG	0.11	3.0
		Magnesium, Total	2910		MG/KG	7.0	3.0
		Manganese, Total	206		MG/KG	0.11	3.0
		Molybdenum, Total	0.84	u	MG/KG	0.84	3.0
		Sodium, Total	490		MG/KG	5.6	3.0
		Nickel, Total	4.9		MG/KG	0.56	3.0
		Phosphorus, Total	1130		MG/KG	14.0	3.0
		Lead, Total	2.9		MG/KG	0.84	3.0
		Antimony, Total	0.84	u	MG/KG	0.84	3.0
		Selenium, Total	1.7	u	MG/KG	1.7	3.0
		Silicon, Total	319		MG/KG	11.2	3.0
		Tin, Total	1.9		MG/KG	1.7	3.0
		Strontium, Total	30.8		MG/KG	0.08	3.0
		Thallium, Total	1.7	u	MG/KG	1.7	3.0
		Uranium, Total	5.6	u	MG/KG	5.6	3.0
		Vanadium, Total	78.6		MG/KG	0.39	3.0
		Zinc, Total	40.0		MG/KG	1.7	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	J16DJ0	Silver, Total	0.27 u	MG/KG	0.27	3.0
		Aluminum, Total	3450	MG/KG	10.8	3.0
		Arsenic, Total	1.8	MG/KG	1.3	3.0
		Boron, Total	1.3 u	MG/KG	1.3	3.0
		Barium, Total	63.4	MG/KG	0.27	3.0
		Beryllium, Total	0.13	MG/KG	0.13	3.0
		Bismuth, Total	1.6 u	MG/KG	1.6	3.0
		Calcium, Total	4460	MG/KG	10.8	3.0
		Cadmium, Total	0.13 u	MG/KG	0.13	3.0
		Cobalt, Total	7.8	MG/KG	0.54	3.0
		Chromium, Total	267	MG/KG	0.54	3.0
		Copper, Total	16.9	MG/KG	0.54	3.0
		Iron, Total	28200	MG/KG	12.1	3.0
		Mercury, Total	0.04	MG/KG	0.008	1.0
		Potassium, Total	489	MG/KG	10.8	3.0
		Lithium, Total	2.5	MG/KG	0.11	3.0
		Magnesium, Total	3720	MG/KG	6.7	3.0
		Manganese, Total	261	MG/KG	0.11	3.0
		Molybdenum, Total	0.81 u	MG/KG	0.81	3.0
		Sodium, Total	142	MG/KG	5.4	3.0
		Nickel, Total	7.5	MG/KG	0.54	3.0
		Phosphorus, Total	1640	MG/KG	13.5	3.0
		Lead, Total	2.1	MG/KG	0.81	3.0
		Antimony, Total	0.81 u	MG/KG	0.81	3.0
		Selenium, Total	1.6 u	MG/KG	1.6	3.0
		Silicon, Total	287	MG/KG	10.8	3.0
		Tin, Total	1.7	MG/KG	1.6	3.0
		Strontium, Total	22.9	MG/KG	0.08	3.0
		Thallium, Total	1.6 u	MG/KG	1.6	3.0
		Uranium, Total	5.4 u	MG/KG	5.4	3.0
		Vanadium, Total	71.5	MG/KG	0.38	3.0
		Zinc, Total	43.5	MG/KG	1.6	3.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	J16DH9	Silver, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Aluminum, TCLP Leachate	240	u	UG/L	240	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Boron, TCLP Leachate	42.3		UG/L	30.0	6.0
		Barium, TCLP Leachate	13.9		UG/L	6.0	6.0
		Beryllium,TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Calcium, TCLP Leachate	34500		UG/L	240	6.0
		Cadmium, TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Cobalt, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Chromium, TCLP Leachate	54.6		UG/L	12.0	6.0
		Copper, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Iron, TCLP Leachate	338		UG/L	270	6.0
		Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0
		Potassium,TCLP Leachate	2100		UG/L	240	6.0
		Lithium,TCLP Leachate	6.8		UG/L	2.4	6.0
		Magnesium,TCLP Leachate	1870		UG/L	150	6.0
		Manganese,TCLP Leachate	90.9		UG/L	2.4	6.0
		Molybdenum, TCLP Leacha	18.0	u	UG/L	18.0	6.0
		Nickel, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Lead, TCLP Leachate	44.0		UG/L	18.0	6.0
		Antimony, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Tin, Leachate	36.0	u	UG/L	36.0	6.0
		Strontium, TCLP Leachat	40.2		UG/L	1.8	6.0
		Thallium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Uranium, TCLP Leachate	120	u	UG/L	120	6.0
		Vanadium, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Zinc, TCLP Leachate	57.2		UG/L	36.0	6.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-005	J16DJ0	Silver, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Aluminum, TCLP Leachate	240	u	UG/L	240	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Boron, TCLP Leachate	30.7		UG/L	30.0	6.0
		Barium, TCLP Leachate	187		UG/L	6.0	6.0
		Beryllium,TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Calcium, TCLP Leachate	31300		UG/L	240	6.0
		Cadmium, TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Cobalt, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Chromium, TCLP Leachate	41.5		UG/L	12.0	6.0
		Copper, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Iron, TCLP Leachate	270	u	UG/L	270	6.0
		Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0
		Potassium,TCLP Leachate	2530		UG/L	240	6.0
		Lithium, TCLP Leachate	6.5		UG/L	2.4	6.0
		Magnesium,TCLP Leachate	1850		UG/L	150	6.0
		Manganese,TCLP Leachate	199		UG/L	2.4	6.0
		Molybdenum, TCLP Leacha	18.0	u	UG/L	18.0	6.0
		Nickel, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Lead, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Antimony, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Tin, Leachate	36.0	u	UG/L	36.0	6.0
		Strontium, TCLP Leachat	55.9		UG/L	1.8	6.0
		Thallium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Uranium, TCLP Leachate	120	u	UG/L	120	6.0
		Vanadium, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Zinc, TCLP Leachate	143		UG/L	36.0	6.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0098-MB1	Silver, Total	0.10 u	MG/KG	0.10	1.0
		Aluminum, Total	4.0 u	MG/KG	4.0	1.0
		Arsenic, Total	0.50 u	MG/KG	0.50	1.0
		Boron, Total	0.50 u	MG/KG	0.50	1.0
		Barium, Total	0.10 u	MG/KG	0.10	1.0
		Beryllium, Total	0.05 u	MG/KG	0.05	1.0
		Bismuth, Total	0.60 u	MG/KG	0.60	1.0
		Calcium, Total	10.1	MG/KG	4.0	1.0
		Cadmium, Total	0.05 u	MG/KG	0.05	1.0
		Cobalt, Total	0.20 u	MG/KG	0.20	1.0
		Chromium, Total	0.20 u	MG/KG	0.20	1.0
		Copper, Total	0.20 u	MG/KG	0.20	1.0
		Iron, Total	5.8	MG/KG	4.5	1.0
		Potassium, Total	4.0 u	MG/KG	4.0	1.0
		Lithium, Total	0.06	MG/KG	0.04	1.0
		Magnesium, Total	3.5	MG/KG	2.5	1.0
		Manganese, Total	0.05	MG/KG	0.04	1.0
		Molybdenum, Total	0.30 u	MG/KG	0.30	1.0
		Sodium, Total	7.7	MG/KG	2.0	1.0
		Nickel, Total	0.20 u	MG/KG	0.20	1.0
		Phosphorus, Total	5.0 u	MG/KG	5.0	1.0
		Lead, Total	0.30 u	MG/KG	0.30	1.0
		Antimony, Total	0.30 u	MG/KG	0.30	1.0
		Selenium, Total	0.60 u	MG/KG	0.60	1.0
		Silicon, Total	4.0 u	MG/KG	4.0	1.0
		Tin, Total	0.82	MG/KG	0.60	1.0
		Strontium, Total	0.07	MG/KG	0.03	1.0
		Thallium, Total	0.60 u	MG/KG	0.60	1.0
		Uranium, Total	2.0 u	MG/KG	2.0	1.0
		Vanadium, Total	0.14 u	MG/KG	0.14	1.0
		Zinc, Total	0.60 u	MG/KG	0.60	1.0
BLANK1	08C0045-MB1	Mercury, Total	0.01 u	MG/KG	0.01	1.0
BLANK1	08L0115-MB1	Silver, TCLP Leachate	1.0 u	UG/L	1.0	1.0
		Aluminum, TCLP Leachate	40.0 u	UG/L	40.0	1.0
		Arsenic, TCLP Leachate	5.0 u	UG/L	5.0	1.0
		Boron, TCLP Leachate	19.9	UG/L	5.0	1.0
		Barium, TCLP Leachate	1.0 u	UG/L	1.0	1.0
		Beryllium,TCLP Leachate	0.50 u	UG/L	0.50	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	08L0115-MB1	Calcium, TCLP Leachate	116		UG/L	40.0	1.0
		Cadmium, TCLP Leachate	0.50	u	UG/L	0.50	1.0
		Cobalt, TCLP Leachate	2.0	u	UG/L	2.0	1.0
		Chromium, TCLP Leachate	2.0	u	UG/L	2.0	1.0
		Copper, TCLP Leachate	3.4		UG/L	2.0	1.0
		Iron, TCLP Leachate	45.0	u	UG/L	45.0	1.0
		Potassium,TCLP Leachate	493	u	UG/L	493	1.0
		Lithium, TCLP Leachate	0.4	u	UG/L	0.4	1.0
		Magnesium,TCLP Leachate	41.7		UG/L	36.9	1.0
		Manganese,TCLP Leachate	0.42		UG/L	0.40	1.0
		Molybdenum, TCLP Leacha	3.0	u	UG/L	3.0	1.0
		Nickel, TCLP Leachate	2.0	u	UG/L	2.0	1.0
		Lead, TCLP Leachate	3.0	u	UG/L	3.0	1.0
		Antimony, TCLP Leachate	3.0	u	UG/L	3.0	1.0
		Selenium, TCLP Leachate	6.0	u	UG/L	6.0	1.0
		Tin, Leachate	6.0	u	UG/L	6.0	1.0
		Strontium, TCLP Leachat	0.98		UG/L	0.30	1.0
		Thallium, TCLP Leachate	6.0	u	UG/L	6.0	1.0
		Uranium, TCLP Leachate	20.0	u	UG/L	20.0	1.0
		Vanadium, TCLP Leachate	1.4	u	UG/L	1.4	1.0
		Zinc, TCLP Leachate	14.6		UG/L	6.0	1.0
BLANK2	08L0115-MB2	Silver, TCLP Leachate	7.7		UG/L	6.0	6.0
		Aluminum, TCLP Leachate	240	u	UG/L	240	6.0
		Arsenic, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Boron, TCLP Leachate	30.0	u	UG/L	30.0	6.0
		Barium, TCLP Leachate	6.0	u	UG/L	6.0	6.0
		Beryllium,TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Calcium, TCLP Leachate	240	u	UG/L	240	6.0
		Cadmium, TCLP Leachate	3.0	u	UG/L	3.0	6.0
		Cobalt, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Chromium, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Copper, TCLP Leachate	12.0	u	UG/L	12.0	6.0
		Iron, TCLP Leachate	270	u	UG/L	270	6.0
		Potassium,TCLP Leachate	2960	u	UG/L	2960	6.0
		Lithium, TCLP Leachate	3.6		UG/L	2.4	6.0
		Magnesium,TCLP Leachate	221	u	UG/L	221	6.0
		Manganese,TCLP Leachate	2.4	u	UG/L	2.4	6.0
		Molybdenum, TCLP Leacha	18.0	u	UG/L	18.0	6.0
		Nickel, TCLP Leachate	12.0	u	UG/L	12.0	6.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK2	08L0115-MB2	Lead, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Antimony, TCLP Leachate	18.0	u	UG/L	18.0	6.0
		Selenium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Tin, Leachate	36.0	u	UG/L	36.0	6.0
		Strontium, TCLP Leachat	1.8	u	UG/L	1.8	6.0
		Thallium, TCLP Leachate	36.0	u	UG/L	36.0	6.0
		Uranium, TCLP Leachate	120	u	UG/L	120	6.0
		Vanadium, TCLP Leachate	8.4	u	UG/L	8.4	6.0
		Zinc, TCLP Leachate	36.0	u	UG/L	36.0	6.0
BLANK1	08C0052-MB1	Mercury, Total	0.06	u	UG/L	0.06	1.0
BLANK2	08C0052-MB2	Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0
BLANK3	08C0052-MB3	Mercury, TCLP Leachate	0.06	u	UG/L	0.06	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	J16DH8	Silver, Total	4.3	0.28u	4.6	93.5	3.0
		Aluminum, Total	3340	2670	184	364.8*	3.0
		Arsenic, Total	174	1.4 u	184	94.6	3.0
		Boron, Total	88.6	1.4 u	92.0	96.3	3.0
		Barium, Total	224	35.7	184	102.2	3.0
		Beryllium, Total	4.5	0.14u	4.6	97.8	3.0
		Bismuth, Total	222	1.7 u	230	96.4	3.0
		Calcium, Total	6740	3890	2300	123.9	3.0
		Cadmium, Total	4.5	0.14u	4.6	97.8	3.0
		Cobalt, Total	52.2	7.8	46.0	96.5	3.0
		Chromium, Total	20.5	2.8	18.4	96.2	3.0
		Copper, Total	36.0	12.6	23.0	101.7	3.0
		Iron, Total	22300	20500	92.0	1922 *	3.0
		Mercury, Total	0.14	0.00u	0.16	92.3	1.0
		Potassium, Total	2420	362	2300	89.7	3.0
		Lithium, Total	93.2	2.4	92.0	98.7	3.0
		Magnesium, Total	5610	3270	2300	101.7	3.0
		Manganese, Total	301	243	46.0	125.7*	3.0
		Molybdenum, Total	84.4	0.83u	92.0	91.7	3.0
		Sodium, Total	2220	139	2300	90.7	3.0
		Nickel, Total	49.8	6.1	46.0	95.0	3.0
		Phosphorus, Total	1470	1150	230	139.7*	3.0
		Lead, Total	45.5	2.1	46.0	94.3	3.0
		Antimony, Total	28.5	0.83u	46.0	62.0	3.0
		Selenium, Total	151	1.7 u	184	82.2	3.0
		Silicon, Total	530	240	92.0	315.2	3.0
		Tin, Total	86.0	1.9	92.0	91.4	3.0
		Strontium, Total	106	12.1	92.0	101.6	3.0
		Thallium, Total	172	1.7 u	184	93.5	3.0
		Uranium, Total	212	5.5 u	230	92.2	3.0
		Vanadium, Total	101	51.3	46.0	107.4	3.0
		Zinc, Total	80.0	33.5	46.0	101.1	3.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143

LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-004	J16DH9	Mercury, TCLP Leachate	202	0.06u	200	101.1	50.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-005	J16DJ0	Silver, TCLP Leachate	61.2	6.0 u	50.0	122.4	6.0
		Aluminum, TCLP Leachat	1980	240 u	2000	99.1	6.0
		Arsenic, TCLP Leachate	1980	30.0 u	2000	98.9	6.0
		Boron, TCLP Leachate	1030	30.7	1000	100.3	6.0
		Barium, TCLP Leachate	2170	187	2000	98.9	6.0
		Beryllium, TCLP Leacha	49.6	3.0 u	50.0	99.2	6.0
		Calcium, TCLP Leachate	57000	31300	25000	102.6	6.0
		Cadmium, TCLP Leachate	52.2	3.0 u	50.0	104.4	6.0
		Cobalt, TCLP Leachate	509	12.0 u	500	101.8	6.0
		Chromium, TCLP Leachat	250	41.5	200	104.0	6.0
		Copper, TCLP Leachate	250	12.0 u	250	100.1	6.0
		Iron, TCLP Leachate	1160	270 u	1000	115.8	6.0
		Potassium,TCLP Leachat	33500	2530	25000	124.0	6.0
		Lithium, TCLP	1200	6.5	1000	119.8	6.0
		Magnesium, TCLP	28200	1850	25000	105.5	6.0
		Manganese, TCLP	707	199	500	101.5	6.0
		Molybdenum, Leachate	989	18.0 u	1000	98.9	6.0
		Nickel, TCLP Leachate	512	12.0 u	500	102.3	6.0
		Lead, TCLP Leachate	523	18.0 u	500	104.6	6.0
		Antimony, TCLP Leachat	454	18.0 u	500	90.8	6.0
		Selenium, TCLP Leachat	1740	36.0 u	2000	86.8	6.0
		Tin, Leachate	1040	36.0 u	1000	103.9	6.0
		Strontium, TCLP	1060	55.9	1000	100.2	6.0
		Thallium, TCLP Leachat	2000	36.0 u	2000	100.2	6.0
		Uranium, TCLP Leachate	2520	120 u	2500	100.9	6.0
		Vanadium, TCLP Leachat	498	8.4 u	500	99.5	6.0
		Zinc, TCLP Leachate	640	143	500	99.4	6.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	J16DH8	Silver, Total	0.28u	0.26u	NC	3.0
		Aluminum, Total	2670	2440	9.0	3.0
		Arsenic, Total	1.4 u	1.3 u	NC	3.0
		Boron, Total	1.4 u	1.3 u	NC	3.0
		Barium, Total	35.7	29.6	18.7	3.0
		Beryllium, Total	0.14u	0.13u	NC	3.0
		Bismuth, Total	1.7 u	1.6 u	NC	3.0
		Calcium, Total	3890	3150	20.8	3.0
		Cadmium, Total	0.14u	0.13u	NC	3.0
		Cobalt, Total	7.8	5.9	27.7	3.0
		Chromium, Total	2.8	2.6	7.4	3.0
		Copper, Total	12.6	10.8	15.4	3.0
		Iron, Total	20500	16100	24.1	3.0
		Mercury, Total	0.00u	0.01u	NC	1.0
		Potassium, Total	362	299	19.1	3.0
		Lithium, Total	2.4	2.1	13.3	3.0
		Magnesium, Total	3270	2780	16.1	3.0
		Manganese, Total	243	184	27.8	3.0
		Molybdenum, Total	0.83u	0.78u	NC	3.0
		Sodium, Total	139	134	3.4	3.0
		Nickel, Total	6.1	4.9	21.8	3.0
		Phosphorus, Total	1150	898	24.4	3.0
		Lead, Total	2.1	2.1	0.00	3.0
		Antimony, Total	0.83u	0.78u	NC	3.0
		Selenium, Total	1.7 u	1.6 u	NC	3.0
		Silicon, Total	240	188	24.6	3.0
		Tin, Total	1.9	1.6	17.1	3.0
		Strontium, Total	12.1	13.2	8.7	3.0
		Thallium, Total	1.7 u	1.6 u	NC	3.0
		Uranium, Total	5.5 u	5.2 u	NC	3.0
		Vanadium, Total	51.3	36.2	34.5	3.0
		Zinc, Total	33.5	25.8	26.0	3.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-004REP	J16DH9	Mercury, TCLP Leachate	0.06u	0.06u	NC	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-005REP	J16DJ0	Silver, TCLP Leachate	6.0 u	6.7	* ~~NC~~ 200	6.0
		Aluminum, Leachate	240 u	240 u	NC	6.0
		Arsenic, TCLP Leachate	30.0 u	30.0 u	NC	6.0
		Boron, TCLP Leachate	30.7	76.6	85.6	6.0
		Barium, TCLP Leachate	187	179	4.1	6.0
		Beryllium TCLP Leachate	3.0 u	3.0 u	NC	6.0
		Calcium, Total	31300	30000	4.5	6.0
		Cadmium, TCLP Leachate	3.0 u	3.0 u	NC	6.0
		Cobalt, Leachate	12.0 u	12.0 u	NC	6.0
		Chromium, TCLP Leachate	41.5	48.5	15.6	6.0
		Copper, Leachate	12.0 u	12.0 u	NC	6.0
		Iron, Leachate	270 u	270 u	NC	6.0
		Potassium, Leachate	2530	2730	7.4	6.0
		Lithium, TCLP	6.5	5.9	9.7	6.0
		Magnesium TCLP Leachate	1850	1790	3.6	6.0
		Manganese TCLP Leachate	199	191	4.4	6.0
		Molybdenum, Leachate	18.0 u	18.0 u	NC	6.0
		Nickel, Leachate	12.0 u	12.0 u	NC	6.0
		Lead, TCLP Leachate	18.0 u	28.6	* ~~NC~~ 200	6.0
		Antimony, Leachate	18.0 u	18.0 u	NC	6.0
		Selenium, TCLP Leachate	36.0 u	36.0 u	NC	6.0
		Tin, Leachate	36.0 u	36.0 u	NC	6.0
		Strontium TCLP Leachate	55.9	54.2	3.1	6.0
		Thallium, TCLP Leachate	36.0 u	36.0 u	NC	6.0
		Uranium, TCLP Leachate	120 u	120 u	NC	6.0
		Vanadium, TCLP Leachate	8.4 u	8.4 u	NC	6.0
		Zinc, Leachate	143	131	8.7	6.0

* corrected values
MW 3/31/08

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0098-LC1	Silver, LCS	47.5	50.0	MG/KG	95.0
		Aluminum, LCS	494	500	MG/KG	98.9
		Arsenic, LCS	944	1000	MG/KG	94.4
		Boron, LCS	466	500	MG/KG	93.2
		Barium, LCS	476	500	MG/KG	95.1
		Beryllium, LCS	24.3	25.0	MG/KG	97.2
		Bismuth, LCS	238	250	MG/KG	95.1
		Calcium, LCS	2470	2500	MG/KG	99.0
		Cadmium, LCS	24.0	25.0	MG/KG	96.0
		Cobalt, LCS	240	250	MG/KG	96.1
		Chromium, LCS	48.4	50.0	MG/KG	96.8
		Copper, LCS	123	125	MG/KG	98.2
		Iron, LCS	474	500	MG/KG	94.9
		Potassium, LCS	2210	2500	MG/KG	88.5
		Lithium, LCS	504	500	MG/KG	100.8
		Magnesium, LCS	2360	2500	MG/KG	94.3
		Manganese, LCS	74.5	75.0	MG/KG	99.3
		Molybdenum, LCS	466	500	MG/KG	93.1
		Sodium, LCS	2200	2500	MG/KG	87.8
		Nickel, LCS	193	200	MG/KG	96.6
		Phosphorus, LCS	229	250	MG/KG	91.6
		Lead, LCS	243	250	MG/KG	97.3
		Antimony, LCS	283	300	MG/KG	94.4
		Selenium, LCS	911	1000	MG/KG	91.1
		Silicon, LCS	179	500	MG/KG	35.8
		Tin, LCS	481	500	MG/KG	96.2
		Strontium, LCS	480	500	MG/KG	96.0
		Thallium, LCS	932	1000	MG/KG	93.2
		Uranium, LCS	240	250	MG/KG	95.9
		Vanadium, LCS	238	250	MG/KG	95.0
		Zinc, LCS	95.8	100	MG/KG	95.8
LCS1	08C0045-LC1	Mercury, LCS	4.4	4.7	MG/KG	93.2
LCS1	08L0115-LC1	Silver, LCS	502	500	UG/L	100.3
		Aluminum, LCS	5120	5000	UG/L	102.4
		Arsenic, LCS	9650	10000	UG/L	96.5
		Boron, LCS	5020	5000	UG/L	100.3
		Barium, LCS	5020	5000	UG/L	100.4
		Beryllium, LCS	245	250	UG/L	98.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 03/31/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	08L0115-LC1	Calcium, LCS	25000	25000	UG/L	99.8
		Cadmium, LCS	246	250	UG/L	98.3
		Cobalt, LCS	2520	2500	UG/L	100.6
		Chromium, LCS	497	500	UG/L	99.3
		Copper, LCS	1260	1250	UG/L	100.8
		Iron, LCS	5070	5000	UG/L	101.4
		Potassium, LCS	25500	25000	UG/L	101.8
		Lithium, LCS	5200	5000	UG/L	104.0
		Magnesium, LCS	24600	25000	UG/L	98.5
		Manganese, LCS	762	750	UG/L	101.6
		Molybdenum, LCS	4930	5000	UG/L	98.6
		Nickel, LCS	1990	2000	UG/L	99.3
		Lead, LCS	2580	2500	UG/L	103.1
		Antimony, LCS	2930	3000	UG/L	97.6
		Selenium, LCS	9340	10000	UG/L	93.4
		Tin, LCS	5030	5000	UG/L	100.6
		Strontium, LCS	5110	5000	UG/L	102.3
		Thallium, LCS	9900	10000	UG/L	99.0
		Uranium, LCS	2380	2500	UG/L	95.4
		Vanadium, LCS	2520	2500	UG/L	100.7
		Zinc, LCS	984	1000	UG/L	98.4
LCS1	08C0052-LC1	Mercury, LCS	5.1	5.0	UG/L	102.6

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 422

Analyst: TCB
Date 3/11/08
Start Time/Temp: 1020 | 92°
End Time/Temp: 1050 | 98°

Instrument ID HG3.1
Balance #: B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0045
Worksheet: HG031101
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes N/A No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	500			10mL	50mL	
0.2 µg/L	H5	0.100				
1.0	S	0.500				
2.0	A901	1.000				
5.0	F8	2.500				
10.0	L15	5.000				
ICV	503	0.125	2.5			
CCV	194	0.250	5.0			
ICB/CCB	CA					9.50L
MB1	1C			0.30		PBS145 100.00
LCS1	871	*	*	0.33		LCSS145
0803L716-001	2I			0.37		94.76
001R	OLN			0.33		
001S	HW	0.500	1.0	0.37		
0803L717-001	OF			0.33		97.89
001R	LV			0.31		
001S	C9	0.500	1.0	0.33		
002	1H/E			0.32		93.53
003	JC			0.37		96.03
0803L710-001	N2			0.31		95.70
001R	11A			0.36		
001S	P5	0.500	1.0	0.32		
002	M1			0.39		96.58
003	PT			0.38		95.64
004	95			0.38		95.51
005	C4D			0.30		97.03
006	UT			0.40		95.94

Standard:	ID	Prep Date/Time
ICAL/MS	RI 6072-75-07B	3/11/08 0825
ICV/CCV/LCS	US 6072-75-08A	

Reviewed By/Date: Andrew Maly

see book # 9348 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg *
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

ME-HgCVAA-Prep1007

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Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 0422

Analyst: CB
Date 31108
Start Time/Temp: see page 035
End Time/Temp:

Instrument ID HG3.1
Balance #: B29 /NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08L0045
Worksheet: HG031101
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? __ Yes NA No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
08032L710-007	NB			0.36	50mL	97.16
008	205			0.35		92.2
009	X3			0.35		97.36
010	AB			0.37		96.58
011	154			0.35		95.92
012	N60			0.33		96.14
013	N4			0.35		97.61

Tu 3/4/08

Standard:	ID	Prep Date/Time
ICAL/MS		
ICV/CCV/LCS	see page 035	

Reviewed By/Date: [signature]

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

ME-HgCVAA-Prep1007

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Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 422

Analyst: TLB
Date 3/25/08
Start Time/Temp: 1655 | 99°
End Time/Temp: 1855 | 96°

Instrument ID HG-3.1
Balance #: (N/A)
Pipette Calibration (Daily) Y ✓

Prep Batch: 08L0052
Worksheet: HG032601
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? ✓ Yes __ No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
Blank	WK			33mL	33mL	
0.2 µg/L	CT	0.0667				
1.0	B2	0.334				
2.0	K17	0.667				
5.0	297	1.667				
10.0	PC	3.334				
ICV	P18	0.0834	2.5			
CCV	522	0.167	5.0			
ICB/CCB	CM					
MB1	X0					PBW152
LCI	P0	0.167	5.0			LCSW152
0803L717-004	A4					
W4R	A1					
W4S	194	0.667	200			
0803L723-019	P3					
019S	E	0.667	200			
019T	TR	0.667	200			
020	AHA					
021	500					
0803L756-003	G12					R
~~TLB 3/25/08~~ 003R	5T					
004 ~~0035~~	3P					
004S	PF	0.667	200			
0803L761-019	222					
019S	1C	0.667	200			
019T	857	0.667	200			
020	X5					

Standard:	ID	Prep Date/Time
ICAL/MS	R1 6072-75-07B	3/25/08 1115
ICV/CCV/LCS	4S 6072-75-08A	

Reviewed By/Date: [signature] 3/31/08

see book # 9368 for std traceability information

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

Lionville Laboratory Incorporated

MERCURY PREPARATION

Logbook # 422

Analyst: EB
Date 3/25/08
Start Time/Temp:
End Time/Temp: See page 46

Instrument ID HG3.1
Balance #: NA
Pipette Calibration (Daily) Y ✓

Prep Batch: 08C0052
Worksheet: HG032601
SOP No. ME-HgCVAA, Rev. 02

pH < 2 for Liquids? ✓ Yes __ No (If no: designate affected samples in Comments column, and initiate an SDR)

NOTE: The Inital/Final Volume for water samples = 33mL, unless otherwise noted.
The Final volume for soil samples = 50mL, unless otherwise noted.

LvLI Batch #	Container Number	Spike Volume (mL)	Spike Conc. (µg/L)	Initial Wt. or Volume (g or mL)	Final Sample Volume (mL)	Comments, % Solids, etc.
0803L761-021	PT			33mL	33mL	
0803L783-004	8T					R
TEB 3/25/08 004R	CGR					
005 ~~0245~~	5H					
005S	7T7	0.667	200			
006	CB2					
0803L718-002	HR					
002R	27					
002S	DX	0.667	200			
08LT0022-LB1	WN					
08LT0023-LB1	JB					
0803L717-005	SE					

TEB 3/25/08

Standard:	ID	Prep Date/Time
ICAL/MS		
ICV/CCV/LCS	See page 46	

Reviewed By/Date: [signature] 3/31/08

see book # 9368 for std traceability informatic

Soil LCS =US Metals in soil No.3; True Value = 4.70 mg/Kg
Catalogue #1RM-021, Lot # E021

Water Matrix Spiking Solution Concentration = 0.1 µg/ml
Water LCS Spiking Concentration: 1.0 µg/ml

ME-HgCVAA-Prep1007

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Lionville Laboratory Incorporated

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0098
Date/Time Initiated: 3/11/08 1100
Date/Time Completed: 3/11/08 1430
Analyst(s): MW
Matrix: (Soil) Water Other:
Instr. Type: AA (CP)
Parameters: see backlog

(Digested) / Undigested (circle one)
Balance #: B20
Balance Cal Verif: (Y) NA
Hot Plate Temp: 90°

Method: SW (circle)
3005A
3010A
3015
3020A
7060A (As/Se)
7760A (Ag)
(3050B)
3051
CLP ILMO3.0
ILMO4.0

DW 200.7 (1994)
200.9
3113B
MCAWW 200.7 (1982)
200 (AA)
206.2 (As/Se)
SM 3030C (NC)
Other

TMW

COC Batch #	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/TC	Texture	Color/Appearance	Artifact	Turb
0803L716-001		1.16gm	100ml	<2	TO	coarse	brown/rocks	N/A	N/A
001R		1.25gm							
001S	1.0ml	1.16gm							
0803L717-001		1.11gm					black		
001R		1.18gm							
(A) 001S	1.0ml	1.11gm							
002		1.15gm					brown		
003		1.16gm					black/brown		
08L0098-MB1		1.0gm					filling chips		
(A) LC1	1.0ml	1.0gm							

MW 3/11/08

Spiking IDs:
MS #: 8100-04-01
02
03
8072-072-01
LCS #: 02
03
04
05

Reagent IDs:
HNO_3 E72071
HCL E40060
H_2O_2 E44A06
1:1 HNO_3 9781-070-06
1:1 HCL

File ID#: IC009801 IC009802

LIMS Transfer: (Y) N

Data Review By/Date: updated
RMP, 03/11/08

(A) also 0.25 ml each {6072-076-06 (Bi)
6072-076-07 (P-)
6072-078-01 (U-)

Lionville Laboratory Incorporated

Logbook #: 970

SAMPLE DIGESTION RECORD

SOP: L-SPI-3020 Rev. 00

Digestion Batch #: 08L0115
Date/Time Initiated: 3/26/08 1100
Date/Time Completed: 1440
Analyst(s): MW
Matrix: Soil Water Other: leachates
Instr. Type: AA ICP
Parameters: * HSL + B, Bi, Li, Mo, P, Si, Sr, Sn, U-
** RERA
Digested / Undigested (circle one)
Balance #: N/A
Balance Cal Verif: Y NA
Hot Plate Temp: 920

TMW

Method: SW (circle) 3005A, 3010A, 3015, 3020A, 7060A (As/Se), 7760A (Ag), 3050B, 3051, CLP ILMO3.0, ILMO4.0
DW 200.7 (1994), 200.9, 3113B
MCAWW 200.7 (1982), 200 (AA), 206.2 (As/Se)
SM 3030C (NC)
Other glass

COC Batch # (* Metals list only, ** RERA list only)	Spike Vol(s) (mL)	Initial Wt/Vol (g/mL)	Final Vol (mL)	pH <2	Type: To/So/TC	Texture	Color/Appearance	Artifact	Turb
08032717-004 *		100 ml	100 ml	<2	TC	N/A	clear/colorless	N/A	N/A
005									
005R									
005S	1.0 ml (*)								
08032756-003 **									
004									
004R									
004S	1.0 ml **								
08032783-004									
005									
005R									
005S	1.0 ml **								
006									
08LT0023-LB1 *									
08L0115-MB1									
LC1	1.0 ml (*)								

MW 3/26/08

Spiking IDs:
MS #: 8100-04-01, 02, 03, 6072-078-07
LCS #: 08, 09, 10, 11

Reagent IDs:
HNO_3 E46025 W.E.
HCL ~~E45049~~ MW 3/26/08
H_2O_2
1:1 HNO_3
1:1 HCL 6072-069-03

File ID#: IC011501, IC011502
LIMS Transfer: (Y) N Updated
Data Review By/Date: PMP, 03/28/08

(*) also 0.25 ml 6072-076-06 (Bi)
0.25 ml 6072-076-07 (P-)
0.25 ml 6072-078-01 (U-)

** (only) spiked with:
6072-73-03, 6072-73-05 } 1 ml each

L-SPI-3020-A-0601

Lionville Laboratory Use Only
0803L717

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000040

Client: TNU HANFORD SAF# RC-074
Est. Final Proj. Sampling Date:
Project#: 11343-606-001-9999-00
Project Contact/Phone#:
Lionville Laboratory Project Manager: O. JOHNSON
Sw846 Del STD TAT 15 day
Date Rec'd: 3-7-08 Date Due: 3-22-08

		A		B	C				
Refrigerator #		2		2	2				
#/Type Container	Liquid / Solid	1G		1G	1G		LEACHATE		
Volume		60		60	60				
Preservatives		–		–	–				
ANALYSES REQUESTED	ORGANIC: VOA, BNA, Pest/PCB, Herb	INORG: Metal	CN	IC Anions	Cr6				

MATRIX CODES: Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP Leachate, Wipe, Other, Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only: Met ①	pH IC ①	ICR6	40 ml Vial	RCRA	100 ml IC	
001	J16D H8			SOIL	3/5/08	0829	X	X	X				
002	↓ H9			↓	↓	0839	X	X	X				
003	↓ J0			↓	↓	0901	X	X	X				
004	↓ H9 TCLP of 002			↓	↓						X		
005	↓ J0 ↓ 003			↓	↓						X		

Special Instructions:
Run matrix QC
Met① = HSL + B, Bi, Li, Mo, P, Si, Sr, Sn, U

IC① = ICBR, ICCl, ICSO4, ICPO4, ICNO2, ICNO3, ICFL

Special Instructions:
3-12-08 1. Added pH to COC from client chain.
3-21-08 2. Add TCLP met to samples -002, -003 use remaining volume
↓ 3. from Bottles A, B, C -
4.
5.
6.

abchan

Relinquished by	Received by	Date	Time
[signature]	[signature]	3/5/08	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-074-060	Page 1 of 1
lector: D.W. Shea/Sub-contractor; Daniel Everhart S.E.C	Company Contact: D.W.Shea; Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code / Data Turnaround: 15 days
ject Designation: 00-D/DR Burial Grounds & Remaining Sites - Soil Quick Tu	Sampling Location: 100-D-30, SW pit stained soil	SAF No.: RC-074	
Chest No.: GPR-04-014 ~~AFS-08-001~~ MW 3/6/08	Field Logbook No.: EL-1607-3; COA: R00D302600	Method of Shipment: Fed Ex	
ipned To: EBERLINE SERVICES LIONVILLE	Offsite Property No.: See OPSC A080194	Bill of Lading/Air Bill No.	

OSSIBLE SAMPLE HAZARDS/REMARKS

+6

pecial Handling and/or Storage

Cool 4°C

Preservation	None	Cool 4C	Cool 4C								
Type of Container	G/P	G/P	G/P								
No. of Container(s)	1	1	1								
Volume	60mL	60mL	60mL								
SAMPLE ANALYSIS	See item (1) in Special Instructions.	Chromium Hex - 7196	IC Anions - 300.0; pH (Soil) - 9045								

Sample No.	Matrix *	Sample Date	Sample Time									
5DH8	SOIL	3/5/08	0829	✓	✓	✓						
5DH9	SOIL	↓	0839	✓	✓	✓						
5DJ0	SOIL	↓	0901	✓	✓	✓						

CHAIN OF POSSESSION	Sign/Print Names	
nquished By/Removed From: D. Everhart 3-5-08 1258	Received By/Stored In: DWShea DWSHEA 3/5/08 1258	
nquished By/Removed From: DWShea DWShea 3/5/08 1801	Received By/Stored In: Fridge 3A 3/5/08 1801	
nquished By/Removed From: 60/3A 3/6/08 0800	Received By/Stored In: MS MSTankovich 3/6/08 0800	
nquished By/Removed From: WC MSTankovich 3/6/08 1300	Received By/Stored In: Fed Ex	
nquished By/Removed From: Fed Ex 3-7-08 0935	Received By/Stored In: 3-7-08 0935	
nquished By/Removed From	Received By/Stored In	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Full List) {Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc} and Hg (CVAA) MWSheu 3/5/08

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *: S=Soil; SE=Sediment; SO=Solid; SL=Sludge; W=Water; O=Oil; A=Air; DS=Drum Solids; DL=Drum Liquids; T=Tissue; WI=Wipe; L=Liquid; V=Vegetation; X=Other

ABORATORY SECTION	Received By	Title	Date/Time
NAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

0000000041

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/AF/SOW/Release #: RC-074

Date: 3/7/08

LvLI Batch #: 0803L717

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 790463539349
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3°	°C	Cooler # GRP-03-014
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LvLI LIONVILLE LABORATORY INC.

SR-002-B.doc

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

RECEIVED APR 2008

DATE RECEIVED: 03/07/08 LVL LOT # :08031717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
J16DH8						
% SOLIDS	001	S	08L%S031	03/05/08	03/10/08	03/10/08
BROMIDE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
BROMIDE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
BROMIDE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
CHLORIDE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
CHLORIDE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
CHLORIDE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
FLUORIDE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
FLUORIDE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
FLUORIDE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRITE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRITE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRITE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRATE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRATE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRATE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
PHOSPHATE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
PHOSPHATE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
PHOSPHATE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
CHROMIUM VI	001	S	08LVI024	03/05/08	03/10/08	03/10/08
SULFATE BY IC	001	S	08LICS20	03/05/08	03/11/08	03/12/08
SULFATE BY IC	001 REP	S	08LICS20	03/05/08	03/11/08	03/12/08
SULFATE BY IC	001 MS	S	08LICS20	03/05/08	03/11/08	03/12/08
PH	001	S	08LPH014	03/05/08	03/14/08	03/14/08
PH	001 REP	S	08LPH014	03/05/08	03/14/08	03/14/08
J16DH9						
% SOLIDS	002	S	08L%S031	03/05/08	03/10/08	03/10/08
BROMIDE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
CHLORIDE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
FLUORIDE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRITE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRATE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
PHOSPHATE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
CHROMIUM VI	002	S	08LVI024	03/05/08	03/10/08	03/10/08
SULFATE BY IC	002	S	08LICS20	03/05/08	03/11/08	03/12/08
PH	002	S	08LPH014	03/05/08	03/14/08	03/14/08
J16DJ0						
% SOLIDS	003	S	08L%S031	03/05/08	03/10/08	03/10/08
% SOLIDS	003 REP	S	08L%S031	03/05/08	03/10/08	03/10/08
BROMIDE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
CHLORIDE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
FLUORIDE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRITE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
NITRATE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
PHOSPHATE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
CHROMIUM VI	003	S	08LVI024	03/05/08	03/10/08	03/10/08
CHROMIUM VI	003 REP	S	08LVI024	03/05/08	03/10/08	03/10/08
CHROMIUM VI	003 MS	S	08LVI024	03/05/08	03/10/08	03/10/08
CHROMIUM VI	003 MSD	S	08LVI024	03/05/08	03/10/08	03/10/08
SULFATE BY IC	003	S	08LICS20	03/05/08	03/11/08	03/12/08
PH	003	S	08LPH014	03/05/08	03/14/08	03/14/08

LAB QC:

BROMIDE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
BROMIDE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
CHLORIDE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
CHLORIDE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
FLUORIDE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
FLUORIDE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
NITRITE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
NITRITE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
NITRATE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
NITRATE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
PHOSPHATE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
PHOSPHATE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08
CHROMIUM VI	MB1	S	08LVI024	N/A	03/10/08	03/10/08
CHROMIUM VI	MB1 BS	S	08LVI024	N/A	03/10/08	03/10/08
CHROMIUM VI	MB1 BSD	S	08LVI024	N/A	03/10/08	03/10/08

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD RC-074 K1143

DATE RECEIVED: 03/07/08 LVL LOT # :0803L717

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SULFATE BY IC	MB1	S	08LICS20	N/A	03/11/08	03/11/08
SULFATE BY IC	MB1 BS	S	08LICS20	N/A	03/11/08	03/11/08

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD RC-074 K1143
LVL#: 0803L717

W.O.#: 11343-606-001-9999-00
Date Received: 03-07-08

INORGANIC NARRATIVE

1. This narrative covers the analyses of 3 soil samples.

2. The samples were prepared and analyzed in accordance with the methods checked on the attached glossary.

   LvLI is NELAP accredited by the State of Pennsylvania. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

3. Sample holding times as required by the method and/or contract were met.

4. The results presented in this report are derived from samples that met LvLI's sample acceptance policy.

5. The method blanks were within the method criteria.

6. The Laboratory Control Samples (LCS) were within the laboratory control limits.

7. The matrix spike recoveries were within the 75-125% control limits.

8. The replicate analyses were within the 20% RPD control limit with the exception of Chromium VI that was outside the control limit that may be attributed to sample inhomogeneity.

9. Results for soil samples are reported on a dry weight basis.

10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

3/19/08
Date

njp\i03-717

The results presented in this report relate to the analytical testing and conditions of the samples upon receipt and during storage. All pages of this report are integral parts of the analytical data. Therefore, this report should only be reproduced in its entirety of 13 pages.

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	ASTM	SW846	OTHER
% Ash	__ D2216-80		
% Moisture	__ D2216-80		__ ILMO4.0 (e)
% Solids	✓ D2216-80		__ ILMO4.0 (e)
% Volatile Solids	__ D2216-80		
ASTM Extraction in Water	__ D3987-81/85		
BTU	__ D240-87		
CEC		__ 9081	__ c
Chromium VI		✓ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		__ 1110(mod) __ 9045C	
Cyanide, Total		__ 9010B	__ ILMO4.0 (e)
Cyanide, Reactive		__ Section 7.3/9014	
Halides, Extractable Organic		__ 9020B	__ EPA 600/4/84-008
Halides, Total		__ 9020B	__ EPA 600/4/84-008
EP Toxicity		__ 1310A	
Flash Point		__ 1010	
Ignitability		__ 1010	
Oil & Grease		__ 9071A	
Carbon, Total Organic		__ 9060	__ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	__ D240-87(mod)	__ 5050	
Petroleum Hydrocarbons, Total Recoverable		__ 9071	__ EPA 418.1
pH, Soil		✓ 9045~~C~~ D [illegible] 7-19-08	
Sulfide, Reactive		__ Section 7.3/9030B	
Sulfide		__ 9030B(mod)	
Specific Gravity	__ D1429-76C/	__ D5057-90	
Sulfur, Total		__ 9056	
Synthetic Preparation Leach		__ 1312	
Paint Filter		__ 9095A	

Other: Bromide, Chloride, Fluoride, **Method:** EPA 300.0

Other: Nitrite, Nitrate, Phosphate, Sulfate **Method**

L-WI-034/B-01/01

METHOD REFERENCES AND DATA QUALIFIERS

DATA QUALIFIERS

U = Indicates that the parameter was not detected at or above the reported limit. The associated numerical value is the sample detection limit.

* = Indicates that the original sample result is greater than 4x the spike amount added.

ABBREVIATIONS

MB = Method or Preparation Blank.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
REP = Sample Replicate
LC = Laboratory Control Sample.
NC = Not calculated.

A suffix of -R, -S, or -T following these codes indicate a replicate, spike or sample duplicate analysis respectively.

ANALYTICAL WET CHEMISTRY METHODS

1. ASTM Standard Methods.

2. USEPA Methods for Chemical Analysis of Water and Wastes (USEPA 600/4-79-020).

3. Test Methods for Evaluating Solid Waste (USEPA SW-846).

a. Standard Methods for the Examination of Water and Waste, 16 ed, (1983).

b. Standard Methods for the Examination of Water and Waste, 17 ed, (1989)/18ed (1992).

c. Method of Soil Analysis, Part 1, Physical and Mineralogical Methods, 2nd ed, (1986).

d. Method of Soil Analysis, Part 2, Chemical and Microbiological Properties, Am. Soc. Agron., Madison, WI (1965).

e. USEPA Contract Laboratory Program, Statement of Work for Inorganic Analysis.

f. Code of Federal Regulations.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 03/14/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	J16DH8	% Solids	97.9	%	0.01	1.0
		Bromide by IC	2.5 u	MG/KG	2.5	1.0
		Chloride by IC	2.5 u	MG/KG	2.5	1.0
		Fluoride by IC	2.5 u	MG/KG	2.5	1.0
		Nitrite by IC	5.08 u	MG/KG	5.08	1.0
		Nitrate by IC	5.08 u	MG/KG	5.08	1.0
		Phosphate by IC	5.1 u	MG/KG	5.1	1.0
		Chromium VI	0.24	MG/KG	0.20	1.0
		Sulfate by IC	2.5 u	MG/KG	2.5	1.0
		pH	8.9	SOIL PH	0.01	1.0
-002	J16DH9	% Solids	93.5	%	0.01	1.0
		Bromide by IC	2.8 u	MG/KG	2.8	1.0
		Chloride by IC	2.8 u	MG/KG	2.8	1.0
		Fluoride by IC	4.7	MG/KG	2.8	1.0
		Nitrite by IC	5.61 u	MG/KG	5.61	1.0
		Nitrate by IC	5.61 u	MG/KG	5.61	1.0
		Phosphate by IC	5.6 u	MG/KG	5.6	1.0
		Chromium VI	0.31	MG/KG	0.21	1.0
		Sulfate by IC	45.3	MG/KG	2.8	1.0
		pH	7.2	SOIL PH	0.01	1.0
-003	J16DJ0	% Solids	96.0	%	0.01	1.0
		Bromide by IC	2.5 u	MG/KG	2.5	1.0
		Chloride by IC	2.5 u	MG/KG	2.5	1.0
		Fluoride by IC	2.5 u	MG/KG	2.5	1.0
		Nitrite by IC	5.05 u	MG/KG	5.05	1.0
		Nitrate by IC	5.05 u	MG/KG	5.05	1.0
		Phosphate by IC	5.0 u	MG/KG	5.0	1.0
		Chromium VI	0.22	MG/KG	0.21	1.0
		Sulfate by IC	136	MG/KG	25.2	10.0
		pH	7.1	SOIL PH	0.01	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/14/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	08LICS20-MB1	Bromide by IC	2.3	u	MG/KG	2.3	1.0
		Chloride by IC	2.3	u	MG/KG	2.3	1.0
		Fluoride by IC	2.3	u	MG/KG	2.3	1.0
		Nitrite by IC	4.54	u	MG/KG	4.54	1.0
		Nitrate by IC	4.54	u	MG/KG	4.54	1.0
		Phosphate by IC	4.5	u	MG/KG	4.5	1.0
		Sulfate by IC	2.3	u	MG/KG	2.3	1.0
BLANK10	08LVI024-MB1	Chromium VI	0.20	u	MG/KG	0.20	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 03/14/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	J16DH8	Bromide by IC	96.3	0.0	102	94.4	2.0
		Chloride by IC	97.4	2.0	102	93.4	2.0
		Fluoride by IC	99.0	0.0	102	97.0	2.0
		Nitrite by IC	97.6	5.08u	102	95.7	2.0
		Nitrate by IC	97.8	5.08u	102	95.8	2.0
		Phosphate by IC	108	5.1 u	102	105.6	2.0
		Sulfate by IC	104	2.5 u	102	101.9	2.0
-003	J16DJ0	Soluble Chromium VI	4.2	0.22	4.2	94.8	1.0
		Insoluble Chromium VI	1280	0.22	1230	103.6	100
BLANK10	08LICS20-MB1	Bromide by IC	57.6	2.3 u	60.0	95.9	1.0
		Chloride by IC	57.4	2.3 u	60.0	95.6	1.0
		Fluoride by IC	56.8	2.3 u	60.0	94.7	1.0
		Nitrite by IC	57.4	4.54u	60.0	95.7	1.0
		Nitrate by IC	56.4	4.54u	60.0	94.0	1.0
		Phosphate by IC	56.0	4.5 u	60.0	93.4	1.0
		Sulfate by IC	57.4	2.3 u	60.0	95.7	1.0
BLANK10	08LVI024-MB1	Soluble Chromium VI	4.0	0.20u	4.0	101.2	1.0
		Insoluble Chromium VI	1140	0.20u	1050	108.8	100

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 03/14/08

CLIENT: TNUHANFORD RC-074 K1143 LVL LOT #: 0803L717

WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	J16DH8	Bromide by IC	2.5 u	2.6 u	NC	1.0
		Chloride by IC	2.5 u	2.6 u	NC	1.0
		Fluoride by IC	2.5 u	2.6 u	NC	1.0
		Nitrite by IC	5.08u	5.12u	NC	1.0
		Nitrate by IC	5.08u	5.12u	NC	1.0
		Phosphate by IC	5.1 u	5.1 u	NC	1.0
		Sulfate by IC	2.5 u	2.6 u	NC	1.0
		pH	8.9	8.9	0.1	1.0
-003REP	J16DJ0	% Solids	96.0	95.3	0.79	1.0
		Chromium VI	0.22	0.21u	23.3	1.0

Lionville Laboratory Use Only

7803L717

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

Client: INU HANFORD SAF# RC-074

Est. Final Proj. Sampling Date:

Project#: 11343-606-001-9989-00

Project Contact/Phone#:

Lionville Laboratory Project Manager: O. JOHNSON

QC: SW846 Del: STD TAT: 15 day

Date Rec'd: 3-7-08 Date Due: 3-22-08

Refrigerator #									A 2		B 2	C 2				
#/Type Container	Liquid															
	Solid								1G		1G	1G				
Volume									60		60	60				
Preservatives									—		—	—				
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				Metal	CN	IC Anions	CR+6				
		Lionville Laboratory Use Only														
									Met①		IC①	ICR②				

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	Met①	IC①	ICR②
S- Soil	001	J16D H8			SOIL	3/5/08	0829	X	X	X
SE- Sediment	002	↓ H9			↓	↓	0839	X	X	X
SO- Solid	003	↓ J0			↓	↓	0901	X	X	X
SL- Sludge										
W- Water										
O- Oil										
A- Air										
DS- Drum Solids										
DL- Drum Liquids										
EP- EP/TCLP Leachate										
WI- Wipe										
O- Other										
F- Fish										

Special Instructions: Run matrix QC

Met① = HSL + B, Ba, Li, Mo, P, Si, Sr, Sn, U

IC① = ICBR, ICCL, ICSO4, ICPO4, ICNO2, ICNO3, ICFL

Special Instructions:

3-12-08 1. Added PH to COC from client chain.

2.

3.

4.

5.

6.

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	3/7/08	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

000000011

nville Laboratory Use Only

803L717

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

LVLI

000000012

nt TNU HANFORD SAF# RC-074

Final Proj. Sampling Date

ect# 11343-606-001-9999-00

ect Contact/Phone#

nville Laboratory Project Manager O-JOHNSON

SW846 Del STD TAT 15 day

e Rec'd 3-7-08 Date Due 3-22-08

		A		B	C				
Refrigerator #		2		2	2				
#/Type Container	Liquid / Solid	1G		1G	1G				
Volume		60		60	60				
Preservatives		—		—	—				
ANALYSES REQUESTED →	ORGANIC: VOA, BNA, Pest/PCB, Herb	INORG: Metal	CN	IC Br, Cl, NO2, NO3	ICP Fe, Mn				
Lionville Laboratory Use Only		MetO		ICO	ICP6				

RIX ES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected
Soil, Sediment, Solid, Sludge, Water, Oil, Air, Drum Solids, Drum Liquids, EP/TCLP Leachate, Wipe, Other, Fish	001	J16D H8			Soil	3/5/08	0829
	002	H9					0839
	003	J0					0901

ecial Instructions: Run matrix QC

MetO = HSL + B, Bi, Li, Mo, P, Si, Sr, Sn, U

ICO = ICBR, ICCL, ICSO4, ICPO4, ICNO2, ICNO3, ICFL

Special Instructions:

1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
		3/5/08	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
ORIGINAL REWRITTEN		COMPOSITE WASTE	

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-074-060	Page 1 of 1
Collector: D.W. Shea/Sub-contractor (Darrin Everhart S.E.C)	Company Contact: D.W.Shea; Telephone No.: 521-6014	Project Coordinator: KESSNER, JH	Price Code:
Project Designation: 100-D/DR Burial Grounds & Remaining Sites - Soil Quick Tu	Sampling Location: 100-D-30, SW pit stained soil	SAF No.: RC-074	Data Turnaround: 15 days
Ice Chest No.: GPR-04-014 ~~AFS-08-001~~ MA 3/6/08	Field Logbook No.: EL-1607-3; COA: R00D302600	Method of Shipment: Fed Ex	
Shipped To: EBERLINE SERVICES, LIONVILLE	Offsite Property No.: See OPSC A080194	Bill of Lading/Air Bill No.:	

POSSIBLE SAMPLE HAZARDS/REMARKS

Cr+6

Special Handling and/or Storage: Cool 4°C

Preservation	None	Cool 4C	Cool 4C								
Type of Container	G/P	G/P	G/P								
No. of Container(s)	1	1	1								
Volume	60mL	60mL	60mL								
SAMPLE ANALYSIS	See item (1) in Special Instructions	Chromium Hex - 7196	IC Anions - 300.0; pH (Soil) - 9045								

Sample No.	Matrix *	Sample Date	Sample Time										
6DH8	SOIL	3/5/08	0829	✓	✓	✓							
6DH9	SOIL		0839	✓	✓	✓							
6DJ0	SOIL		0901	✓	✓	✓							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Darrin T. Everhart	3-5-08 1258	Received By/Stored In: DWShea DWSHEA	3/5/08 1258
Relinquished By/Removed From: DWShea DWShea	3/5/08 1801	Received By/Stored In: Fridge 3A	3/5/08 1801
Relinquished By/Removed From: DCO/3A	3/6/08 0800	Received By/Stored In: MLS MLStankovich	3/6/08 0800
Relinquished By/Removed From: WC MLS MLStankovich	3/6/08 1500	Received By/Stored In: Fed Ex	
Relinquished By/Removed From: Fed Ex	3-7-08 0935	Received By/Stored In:	3-7-08 0935
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

(1) ICP Metals - 6010 (Full List) [Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silicon, Silver, Sodium, Strontium, Thallium, Tin, Uranium, Vanadium, Zinc] and Hg (CVAA) DWShea 3/5/08

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *
S-Soil
SE-Sediment
SD-Solid
SL-Sludge
W-Water
O-Oil
A-Air
DS-Drum Solids
DL-Drum Liquids
T-Tissue
WI-Wipe
L-Liquid
V-Vegetation
X-Other

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

CH-EE-011

000000813

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD

Project/AF/SOW/Release #: RC-074

Date: 3/7/08

LvLI Batch #: 0803L717

Sample Custodian: [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or Shipped?	Carrier Fed Ex		Airbill # 790463539349
2. Custody Seals on coolers or shipping containers intact, signed & dated?	☑ Yes	☐ No	☐ No Seals
3. Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	*Comments:*
4. All expected paperwork received (coc & other client specific information) sealed in plactic bag and easily accessible?	☑ Yes	☐ No	
5. Samples received cooled or ambient?	Temp 2.3°	°C	Cooler # GRP-03-014
How was the temperature taken?	☑ IR	☐ Temp. Blank	☐ Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	☑ Yes	☐ No	
6. Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7. COC (Client & LvLI) signed & dated?	☑ Yes	☐ No	
8. Sample containers are intact?	☑ Yes	☐ No	
9. All samples on COC received?	☑ Yes	☐ No	
All samples received on COC?	☑ Yes	☐ No	
10. All sample label information matches COC?	☑ Yes	☐ No	
11. Samples properly preserved? (If #5 is no, then this is no.)	☑ Yes	☐ No	
12. Samples received within hold times?	☑ Yes	☐ No	
Short holds taken to wet lab?	☐ Yes	☐ No	☑ N/A
13. VOA, TOC, TOX free of headspace?	☐ Yes	☐ No	☑ N/A
14. QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15. Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles that do not meet the policy, which is on the reverse of this page.)	☑ Yes	☐ No	
16. Project Manager contacted concerning any discrepancies?	☐ Yes	☐ No	☑ N/A

Person Contacted _____ Date _____

LVLI LIONVILLE LABORATORY INC.

SR-002-B.doc