

RECEIVED OCTOBER 28, 2008



Mr. Michael Neeley  
 CH2M Hill Plateau Remediation Company  
 P.O. Box 1600  
 Mail Stop - B6-06  
 Richland, WA 99352

**Subject: Contract No. 630  
 Analytical Data Package**

Dear Mr. Neely:

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

LvLI Batch #	0808L031
SDG #	H3831 /
SAF #	F06-027
Date Received	8/08/08
# Samples	17
Matrix	WATER
Volatiles	
Semivolatiles	
Pest/PCB	
DRO/GRO/KRO	
Herbicides	
GC Alcohol	
Metals	
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  
 (A Division of Eberline Analytical Corporation)

Orlette S. Johnson  
 Project Manager

r:\group\pm\orlette\hanford\data\fc\_1trs.doc

**RECEIVED**  
 FEB 19 2009  
 EDMC

Lionville Laboratory, Inc.  
 INORGANIC ANALYTICAL DATA PACKAGE FOR  
 FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
<b>B1WNW9</b>							
CHLORIDE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/12/08	1524
NITRATE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/12/08	1529
PHOSPHATE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/11/08	1640
SULFATE BY IC	001	W	08LIC057	08/06/08	08/09/08	08/12/08	
<b>B1WNX0</b>							
CHLORIDE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/12/08	
CHLORIDE BY IC	002 REP	W	08LICB64	08/06/08	09/04/08	09/05/08	
CHLORIDE BY IC	002 MS	W	08LICB64	08/06/08	09/04/08	09/05/08	
FLUORIDE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	002 REP	W	08LICA64	08/06/08	09/04/08	09/05/08	
FLUORIDE BY IC	002 MS	W	08LICA64	08/06/08	09/04/08	09/05/08	
NITRITE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/12/08	1546
NITRITE BY IC	002 REP	W	08LICA64	08/06/08	09/04/08	09/05/08	1113
NITRITE BY IC	002 MS	W	08LICA64	08/06/08	09/04/08	09/05/08	1131
NITRATE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/12/08	1546
NITRATE BY IC	002 REP	W	08LICA64	08/06/08	09/04/08	09/05/08	1113
NITRATE BY IC	002 MS	W	08LICA64	08/06/08	09/04/08	09/05/08	1131
PHOSPHATE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/11/08	1657
PHOSPHATE BY IC	002 REP	W	08LICD64	08/06/08	09/04/08	09/05/08	1113
PHOSPHATE BY IC	002 MS	W	08LICD64	08/06/08	09/04/08	09/05/08	1131
SULFATE BY IC	002	W	08LIC057	08/06/08	08/09/08	08/12/08	
SULFATE BY IC	002 REP	W	08LIC064	08/06/08	09/04/08	09/05/08	
SULFATE BY IC	002 MS	W	08LIC064	08/06/08	09/04/08	09/05/08	
<b>B1WNX1</b>							
CHLORIDE BY IC	003	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	003	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	003	W	08LIC057	08/06/08	08/09/08	08/12/08	1603
NITRATE BY IC	003	W	08LIC057	08/06/08	08/09/08	08/12/08	1603
PHOSPHATE BY IC	003	W	08LIC057	08/06/08	08/11/08	08/12/08	1607

Lionville Laboratory, Inc.  
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 FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
SULFATE BY IC	003	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNX2							
CHLORIDE BY IC	004	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	004	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	004	W	08LIC057	08/06/08	08/09/08	08/12/08	1621
NITRATE BY IC	004	W	08LIC057	08/06/08	08/09/08	08/12/08	1621
PHOSPHATE BY IC	004	W	08LICD64	08/06/08	09/04/08	09/05/08	1148
SULFATE BY IC	004	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNX3							
CHLORIDE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/12/08	1638
NITRATE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/12/08	1638
PHOSPHATE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/11/08	1824
SULFATE BY IC	005	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNX4							
CHLORIDE BY IC	006	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	006	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	006	W	08LIC057	08/06/08	08/09/08	08/12/08	1654
NITRATE BY IC	006	W	08LIC057	08/06/08	08/09/08	08/12/08	1656
PHOSPHATE BY IC	006	W	08LIC057	08/06/08	08/11/08	08/12/08	1656
SULFATE BY IC	006	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNX5							
CHLORIDE BY IC	007	W	08LIC057	08/06/08	08/09/08	08/11/08	
FLUORIDE BY IC	007	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	007	W	08LIC057	08/06/08	08/09/08	08/12/08	1713
NITRATE BY IC	007	W	08LIC057	08/06/08	08/09/08	08/12/08	1713
PHOSPHATE BY IC	007	W	08LICD64	08/06/08	09/04/08	09/05/08	1202
SULFATE BY IC	007	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNX6							
CHLORIDE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/11/08	

Lionville Laboratory, Inc.  
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 FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
FLUORIDE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/12/08	1905
NITRATE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/12/08	1905
PHOSPHATE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/11/08	1917
SULFATE BY IC	008	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNV9							
CHLORIDE BY IC	009	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	009	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	009	W	08LIC057	08/06/08	08/09/08	08/12/08	1833 <sup>10-10-08</sup>
NITRATE BY IC	009	W	08LIC057	08/06/08	08/09/08	08/12/08	1823
PHOSPHATE BY IC	009	W	08LIC057	08/06/08	08/11/08	08/12/08	1120
SULFATE BY IC	009	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW0							
CHLORIDE BY IC	010	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	010	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	010	W	08LIC057	08/06/08	08/09/08	08/12/08	1840
NITRATE BY IC	010	W	08LIC057	08/06/08	08/09/08	08/12/08	1840
PHOSPHATE BY IC	010	W	08LICD64	08/06/08	09/02/08	09/03/08	0313
SULFATE BY IC	010	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW1							
CHLORIDE BY IC	011	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	011	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	011	W	08LIC057	08/06/08	08/09/08	08/12/08	1858
NITRATE BY IC	011	W	08LIC057	08/06/08	08/09/08	08/12/08	1858
PHOSPHATE BY IC	011	W	08LIC057	08/06/08	08/11/08	08/12/08	1252
SULFATE BY IC	011	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW2							
CHLORIDE BY IC	012	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	012	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	012	W	08LIC057	08/06/08	08/09/08	08/12/08	145 <sup>10-10-08</sup> 1915

Lionville Laboratory, Inc.  
 INORGANIC ANALYTICAL DATA PACKAGE FOR  
 FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
NITRATE BY IC	012	W	08LIC057	08/06/08	08/09/08	08/12/08	1415 1915
PHOSPHATE BY IC	012	W	08LIC057	08/06/08	08/11/08	08/12/08	1309
SULFATE BY IC	012	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW4							
CHLORIDE BY IC	013	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	013	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	013	W	08LIC057	08/06/08	08/09/08	08/12/08	1932
NITRATE BY IC	013	W	08LIC057	08/06/08	08/09/08	08/12/08	1932
PHOSPHATE BY IC	013	W	08LIC057	08/06/08	08/11/08	08/12/08	1327
SULFATE BY IC	013	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW5							
CHLORIDE BY IC	014	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	014	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	014	W	08LIC057	08/06/08	08/09/08	08/12/08	1950
NITRATE BY IC	014	W	08LIC057	08/06/08	08/09/08	08/12/08	1950
PHOSPHATE BY IC	014	W	08LICD64	08/06/08	09/04/08	09/05/08	1232
SULFATE BY IC	014	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW6							
CHLORIDE BY IC	015	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	015	W	08LIC057	08/06/08	08/09/08	08/12/08	
NITRITE BY IC	015	W	08LIC057	08/06/08	08/09/08	08/12/08	2007
NITRATE BY IC	015	W	08LIC057	08/06/08	08/09/08	08/12/08	2007
PHOSPHATE BY IC	015	W	08LICD64	08/06/08	09/04/08	09/05/08	1241
SULFATE BY IC	015	W	08LIC057	08/06/08	08/09/08	08/12/08	
B1WNW7							
CHLORIDE BY IC	016	W	08LIC057	08/06/08	08/09/08	08/12/08	
FLUORIDE BY IC	016	W	08LICZ68	08/06/08	09/12/08	09/15/08	
NITRITE BY IC	016	W	08LICZ68	08/06/08	09/12/08	09/15/08	1413
NITRATE BY IC	016	W	08LICZ68	08/06/08	09/12/08	09/15/08	1413
PHOSPHATE BY IC	016	W	08LICD64	08/06/08	09/04/08	09/05/08	1256

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Lionville Laboratory, Inc.  
 INORGANIC ANALYTICAL DATA PACKAGE FOR  
 FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
SULFATE BY IC	016	W	08LICZ68	08/06/08	09/12/08	09/15/08
B1WNW8						
CHLORIDE BY IC	017	W	08LIC057	08/06/08	08/09/08	08/12/08
FLUORIDE BY IC	017	W	08LICZ68	08/06/08	09/12/08	09/15/08
NITRITE BY IC	017	W	08LICZ68	08/06/08	09/12/08	09/15/08
NITRATE BY IC	017	W	08LICZ68	08/06/08	09/12/08	09/15/08
PHOSPHATE BY IC	017	W	08LICD64	08/06/08	09/04/08	09/05/08
SULFATE BY IC	017	W	08LICZ68	08/06/08	09/12/08	09/15/08

ANALYSIS  
 RUNS FOR 0-23-08  
 TIME

1430  
 1430  
 1351

LAB QC:

CHLORIDE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
CHLORIDE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
FLUORIDE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
FLUORIDE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
NITRITE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
NITRITE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
NITRATE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
NITRATE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
PHOSPHATE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
PHOSPHATE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
SULFATE BY IC	MB1	W	08LIC057	N/A	08/09/08	08/09/08
SULFATE BY IC	MB1 BS	W	08LIC057	N/A	08/09/08	08/09/08
CHLORIDE BY IC	MB1	W	08LICB64	N/A	09/02/08	09/02/08
CHLORIDE BY IC	MB1 BS	W	08LICB64	N/A	09/02/08	09/02/08
FLUORIDE BY IC	MB1	W	08LICA64	N/A	09/02/08	09/02/08
FLUORIDE BY IC	MB1 BS	W	08LICA64	N/A	09/02/08	09/02/08
NITRITE BY IC	MB1	W	08LICA64	N/A	09/02/08	09/02/08
NITRITE BY IC	MB1 BS	W	08LICA64	N/A	09/02/08	09/02/08
NITRATE BY IC	MB1	W	08LICA64	N/A	09/02/08	09/02/08
NITRATE BY IC	MB1 BS	W	08LICA64	N/A	09/02/08	09/02/08
PHOSPHATE BY IC	MB1	W	08LICD64	N/A	09/02/08	09/02/08
PHOSPHATE BY IC	MB1 BS	W	08LICD64	N/A	09/02/08	09/02/08
SULFATE BY IC	MB1	W	08LIC064	N/A	09/02/08	09/02/08
SULFATE BY IC	MB1 BS	W	08LIC064	N/A	09/02/08	09/02/08
FLUORIDE BY IC	MB1	W	08LICZ68	N/A	09/12/08	09/12/08

Lionville Laboratory, Inc.  
INORGANIC ANALYTICAL DATA PACKAGE FOR  
FLRHANFORD F06-027 H3831

DATE RECEIVED: 08/08/08

LVL LOT # :0808L031

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
FLUORIDE BY IC	MB1 BS	W	08LICZ68	N/A	09/12/08	09/12/08
NITRITE BY IC	MB1	W	08LICZ68	N/A	09/12/08	09/12/08
NITRITE BY IC	MB1 BS	W	08LICZ68	N/A	09/12/08	09/12/08
NITRATE BY IC	MB1	W	08LICZ68	N/A	09/12/08	09/12/08
NITRATE BY IC	MB1 BS	W	08LICZ68	N/A	09/12/08	09/12/08
SULFATE BY IC	MB1	W	08LICZ68	N/A	09/12/08	09/12/08
SULFATE BY IC	MB1 BS	W	08LICZ68	N/A	09/12/08	09/12/08

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## Analytical Report

**Client:** FLR HANFORD F06-027 H3831  
**LVL#:** 0808L031

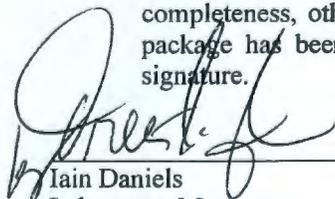
**W.O.#:** 11343-606-001-9999-00  
**Date Received:** 08-08-08

### INORGANIC NARRATIVE

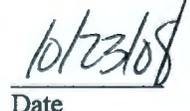
1. This narrative covers the analyses of 17 water samples.
2. The samples were prepared and analyzed in accordance with the method checked on the attached glossary. Elevated reporting limits are the result of the necessity to dilute the samples to diminish co-elution effects; prior to client determined action level of 25ppm for requested anions, the laboratory used a 2.5 ppm action level based upon observed matrix interferences and co-elution issues.

Lionville Lab (LvL) 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. LvL 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 with the exception of Nitrite, Nitrate and Phosphate and re-analysis of the following; Fluoride and Sulfate samples B1WNW7 and B1WNW8 and replicate and matrix spike analyses for Fluoride, Chloride and Sulfate sample B1WNX0 (see the sample chronology summary for analyses times for short hold samples).
4. The results presented in this report are derived from samples that met LvLI's sample acceptance policy with the exception of Nitrate, Nitrite and Phosphate samples as noted on the Sample Receipt Checklist.
5. The method blanks were within the method criteria.
6. The Laboratory Control Samples (LCS) were within the laboratory control limits with the exception of Phosphate that were above the 90-110% control limits at 117.6% and 110.6%; the associated Phosphate samples required 100 and 500 times dilutions or were below the 25 ppm action level.
7. The matrix spike recoveries were within the 75-125% control limits with the exception of Phosphate sample B1WNX0 at 126.4%.
8. The replicate analyses were within the 20% Relative Percent Difference (RPD) control limit.
9. 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



Date

njp\068-031

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 23 pages.

**Lionville Laboratory Incorporated**

**WET CHEMISTRY**

**METHODS GLOSSARY FOR WATER SAMPLE ANALYSIS**

	<u>EPA /600</u>	<u>SW846</u>	<u>OTHER</u>
Acidity	305.1		
___ Alkalinity ___ Bicarbonate ___ Carbonate	310.1		
BOD	405.1		___ 5210B (b)
Ion Chromatography:			
___ Bromide ___ Chloride ___ Fluoride	300.0	9056	
___ Nitrate ___ Nitrite ___ Phosphate	300.0	9056	
___ Sulfate ___ Formate ___ Acetate ___ Oxalate	300.0	9056	
Chloride	325.2	9251	
Chlorine, Residual	330.5 (mod)		
Cyanide, Amenable to Chlorination	335.2	9010B	
Cyanide, Total	335.2	9010B	___ 9014 ___ ILMO4.0 (e)
Cyanide, Weak Acid Dissociable			___ 412 (a) ___ 4500CN-I (b)
COD	410.4(mod)		___ 5220C (b)
Color	110.2		
Corrosivity by Coupon		1110(mod)	
Chromium VI		7196A	___ 3500Cr-D (b)
Fluoride	340.2		___ 4500-FC
Hardness, Calcium	215.2		
Hardness, Total	130.2		
Iodide			___ ASTM D19P202 (1)
Surfactant	425.1		
___ Nitrate-Nitrite ___ Nitrate ___ Nitrite	353.2		
Ammonia	350.3		
Total ___ Kjeldahl ___ Organic Nitrogen	351.3		
Total ___ Organic ___ Inorganic Carbon	415.1	9060	
Oil & Grease	413.1	9070	
___ pH ___ pH; paper	150.1	9040B	___ 9041A
Petroleum Hydrocarbons, Total Recoverable	418.1		
Phenol	420.1	420.2	___ 9065 ___ 9066
___ Ortho ___ Total Phosphate	365.2		___ 4500-P B ___ C
Salinity			___ 210A (a) ___ 2520 (b)
Settleable Solids	160.5		
Sulfide	376.1		9030B/9034 (acid soluble)
Reactive ___ Cyanide ___ Sulfide		Section 7.3	(___ 9014 ___ 9030B)
Silica	370.1		
Sulfite	377.1		
Sulfate	375.4	9038	
Specific Conductance	120.1	9050A	
Specific Gravity			___ D5057-90 ___ 213E (a)
Synthetic Precipitation Leach		1312	
Total ___ Dissolved ___ Suspended ___ Solids	160 ___ .1 ___ .2 ___ .3		
Total Organic Halides	450.1	9020B	
Turbidity	180.1		
Volatile Solids:			
___ Total ___ Dissolved ___ Suspended	160.4		
Other:		Method:	

## Lionville Laboratory Incorporated

### 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 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 08081031

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1WNW9	Chloride by IC	255	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	849	MG/L	25.0	100
		Sulfate by IC	5.8	MG/L	2.5	10.0
-002	B1WNXC	Chloride by IC	80.4	MG/L	2.5	10.0
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	655	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-003	B1WNX1	Chloride by IC	161	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	22.0	MG/L	2.5	10.0
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-004	B1WNX2	Chloride by IC	181	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	1500	MG/L	125	500
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-005	B1WNX3	Chloride by IC	206	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	736	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0

000000011

## Lionville Laboratory, Inc.

## INORGANICS DATA SUMMARY REPORT 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0808L031

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-006	B1WNX4	Chloride by IC	198	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	2.5	u MG/L	2.5	10.0
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-007	B1WNX5	Chloride by IC	282	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	3020	MG/L	125	500
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-008	B1WNX6	Chloride by IC	134	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	801	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-009	B1WNV9	Chloride by IC	247	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	681	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-010	B1WNV0	Chloride by IC	300	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	2370	MG/L	125	500
		Sulfate by IC	2.5	u MG/L	2.5	10.0

000000012

## Lionville Laboratory, Inc.

## INORGANICS DATA SUMMARY REPORT 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0808L031

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-011	B1WNW1	Chloride by IC	106	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	773	MG/L	25.0	100
		Sulfate by IC	4.6	MG/L	2.5	10.0
-012	B1WNW2	Chloride by IC	199	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	336	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-013	B1WNW4	Chloride by IC	140	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	616	MG/L	25.0	100
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-014	B1WNW5	Chloride by IC	203	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	1130	MG/L	125	500
		Sulfate by IC	2.5	u MG/L	2.5	10.0
-015	B1WNW6	Chloride by IC	179	MG/L	25.0	100
		Fluoride by IC	2.5	u MG/L	2.5	10.0
		Nitrite by IC	2.50	u MG/L	2.50	10.0
		Nitrate by IC	2.50	u MG/L	2.50	10.0
		Phosphate by IC	1920	MG/L	125	500
		Sulfate by IC	2.5	u MG/L	2.5	10.0

000000013

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 10/23/08

CLIENT: FLRHANFORD F06-027 H3831

LVL LOT #: 0808L031

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-----	-----	-----	-----	-----	-----	-----
-016	B1WNW7	Chloride by IC	186	MG/L	25.0	100
		Fluoride by IC	25.0	u MG/L	25.0	100
		Nitrite by IC	25.0	u MG/L	25.0	100
		Nitrate by IC	25.0	u MG/L	25.0	100
		Phosphate by IC	1430	MG/L	125	500
		Sulfate by IC	32.4	MG/L	25.0	100
-017	B1WNW8	Chloride by IC	175	MG/L	25.0	100
		Fluoride by IC	25.0	u MG/L	25.0	100
		Nitrite by IC	25.0	u MG/L	25.0	100
		Nitrate by IC	25.0	u MG/L	25.0	100
		Phosphate by IC	1550	MG/L	125	500
		Sulfate by IC	25.0	u MG/L	25.0	100

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0808L031

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
BLANK10	08LIC057-MB1	Chloride by IC	0.25	u MG/L	0.25	1.0
		Fluoride by IC	0.25	u MG/L	0.25	1.0
		Nitrite by IC	0.25	u MG/L	0.25	1.0
		Nitrate by IC	0.25	u MG/L	0.25	1.0
		Phosphate by IC	0.25	u MG/L	0.25	1.0
		Sulfate by IC	0.25	u MG/L	0.25	1.0
BLANK10	08LICB64-MB1	Chloride by IC	0.25	u MG/L	0.25	1.0
BLANK10	08LICA64-MB1	Fluoride by IC	0.25	u MG/L	0.25	1.0
		Nitrite by IC	0.25	u MG/L	0.25	1.0
		Nitrate by IC	0.25	u MG/L	0.25	1.0
BLANK10	08LICD64-MB1	Phosphate by IC	0.25	u MG/L	0.25	1.0
BLANK10	08LIC064-MB1	Sulfate by IC	0.25	u MG/L	0.25	1.0
BLANK10	08LICZ68-MB1	Fluoride by IC	0.25	u MG/L	0.25	1.0
		Nitrite by IC	0.25	u MG/L	0.25	1.0
		Nitrate by IC	0.25	u MG/L	0.25	1.0
		Sulfate by IC	0.25	u MG/L	0.25	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0808L031

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-002	B1WNX0	Chloride by IC	1200	80.4	1000	112.0	200
		Fluoride by IC	1090	0.00	1000	109.0	200
		Nitrite by IC	1160	2.50u	1000	116.5	200
		Nitrate by IC	1150	2.50u	1000	114.7	200
		Phosphate by IC	1920	655	1000	126.4	200
		Sulfate by IC	1200	2.5 u	1000	119.9	200
BLANK10	08LIC057-MB1	Chloride by IC	4.7	0.25u	5.0	94.6	1.0
		Fluoride by IC	4.9	0.25u	5.0	97.6	1.0
		Nitrite by IC	4.71	0.25u	5.00	94.2	1.0
		Nitrate by IC	4.96	0.25u	5.00	99.2	1.0
		Phosphate by IC	5.5	0.25u	5.0	110.6	1.0
		Sulfate by IC	4.9	0.25u	5.0	98.0	1.0
BLANK10	08LICB64-MB1	Chloride by IC	4.9	0.25u	5.0	98.2	1.0
BLANK10	08LICA64-MB1	Fluoride by IC	5.0	0.25u	5.0	100.2	1.0
		Nitrite by IC	4.94	0.25u	5.00	98.7	1.0
		Nitrate by IC	5.22	0.25u	5.00	104.4	1.0
BLANK10	08LICD64-MB1	Phosphate by IC	5.9	0.25u	5.0	117.6	1.0
BLANK10	08LIC064-MB1	Sulfate by IC	5.1	0.25u	5.0	102.0	1.0
BLANK10	08LICZ68-MB1	Fluoride by IC	4.9	0.25u	5.0	97.9	1.0
		Nitrite by IC	4.88	0.25u	5.00	97.6	1.0
		Nitrate by IC	5.00	0.25u	5.00	100.1	1.0
		Sulfate by IC	4.8	0.25u	5.0	96.9	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 10/23/08

CLIENT: FLRHANFORD F06-027 H3831  
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0808L031

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE RPD		DILUTION FACTOR (REP)
-002REP	B1WNX0	Chloride by IC	80.4	82.9	3.0	100
		Fluoride by IC	2.5 u	25.0 u	NC	100
		Nitrite by IC	2.50u	25.0 u	NC	100
		Nitrate by IC	2.50u	25.0 u	NC	100
		Phosphate by IC	655	696	6.0	100
		Sulfate by IC	2.5 u	25.0 u	NC	100

000000017





COLLECTOR

*M. W. ...*

SAMPLING LOCATION

100NR2 Syn.Apatite Post-Inj. #5/Day12

ICE CHEST NO.

*GRP-05-001*

SHIPPED TO

Lionville Laboratory Incorporated

MATRIX\*

- A=Air
- DL=Drum
- Liquids
- DS=Drum
- Solids
- L=Liquid
- O=Oil
- S=Soil
- SE=Sediment
- T=Tissue
- V=Vegetation
- W=Water
- WI=Wipe
- X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

COMPANY CONTACT

FABRE, RJ

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

FIELD LOGBOOK NO.

HNF-N-585-11

OFFSITE PROPERTY NO.

TELEPHONE NO.

373-2774

ACTUAL SAMPLE DEPTH

PROJECT COORDINATOR

TRENT, SJ

SAF NO.

F06-027

COA

122561ES20

BILL OF LADING/AIR BILL NO.

*7989 9227 8110*

PRICE CODE 7K

AIR QUALITY

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

DATA TURNAROUND  
15 Days / 45 Days

PRESERVATION

Cool-4C

TYPE OF CONTAINER

P

NO. OF CONTAINER(S)

1

VOLUME

500mL

SAMPLE ANALYSIS

SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1WNW9	WATER	<i>8/6/8</i>	<i>1620</i>										
B1WNX0	WATER	<i>8/6/8</i>	<i>1000</i>										
B1WNX1	WATER	<i>8/6/8</i>	<i>0930</i>										

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 (Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate)

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>S. Newell</i>	<i>8/6/8 1100</i>	<i>MO 413 Ref #2</i>	<i>8/6/08 1245</i>
<i>NO 413 REF #2</i>	<i>8/7/08 1000</i>	<i>Kevin Patterson</i>	<i>8/7/08 1000</i>
<i>Kevin Patterson</i>	<i>8/7/08 1530</i>	<i>Fluor Hanford</i>	
<i>Fed Ex</i>	<i>8-8-08 0945</i>	<i>FEDEX</i>	
		<i>Kevin Patterson</i>	<i>8-8-08 0945</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

000000020

COLLECTOR  
*Mooker*

SAMPLING LOCATION  
100-NR-2 Inj. #2-Post-Inj. Samples/Day38

ICE CHEST NO.  
*GRP-05-001*

SHIPPED TO  
Lionville Laboratory Incorporated

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations  
DL=Drum that may or may not be regulated for  
Liquids transportation per 49 CFR / IATA Dangerous  
DS=Drum Goods Regulations but are not releasable per  
Solids DOE Order 5400.5 (1990/1993)  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other

SPECIAL HANDLING AND/OR STORAGE

COMPANY CONTACT  
FABRE, RJ

TELEPHONE NO.  
373-2774

PROJECT COORDINATOR  
TRENT, SJ

PRICE CODE 7K

DATA  
TURNAROUND  
15 Days / 45  
Days

PROJECT DESIGNATION  
100-N Apatite Barrier Performance Monitoring

SAF NO.  
F06-027

AIR QUALITY

FIELD LOGBOOK NO.  
HNF-N-585-11

ACTUAL SAMPLE DEPTH

COA  
122561ES20

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.

BILL OF LADING/AIR BILL NO.  
*7989 9227 8110*

PRESERVATION Cool~4C

TYPE OF CONTAINER P

NO. OF CONTAINER(S) 1

VOLUME 500mL

SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1WNX2	WATER	8/6/8	0920	/									
B1WNX3	WATER		0955	/									
B1WNX4	WATER		0930	/									
B1WNX5	WATER		0840	/									
B1WNX6	WATER		0840	/									

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM *J. Mooker* DATE/TIME *8/6/8 1100*

RELINQUISHED BY/REMOVED FROM *MO413 REF# 2* DATE/TIME *8/6/8 0700*

RELINQUISHED BY/REMOVED FROM *Kevin Patterson* DATE/TIME *8/7/08 1330*

RELINQUISHED BY/REMOVED FROM *Fed Ex* DATE/TIME *8-8-08 0955*

RECEIVED BY/STORED IN *MO413 Ref #* DATE/TIME *8/6/8 1215*

RECEIVED BY/STORED IN *Kevin Patterson* DATE/TIME *8/6/8 0700*

RECEIVED BY/STORED IN *FEDEX* DATE/TIME

RECEIVED BY/STORED IN *Kevin Patterson* DATE/TIME *8-8-08 0955*

(1)IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME

RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME

LABORATORY SECTION RECEIVED BY TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD DISPOSED BY DATE/TIME

000000021

**COLLECTOR**  
*M. J. Fox*  
**SAMPLING LOCATION**  
 100NR2 Syn.Apatite Post-Trj. #5/Day12

**ICE CHEST NO.**  
 GRP-05-001

**SHIPPED TO**  
 Lionville Laboratory Incorporated

**COMPANY CONTACT**  
 FABRE, RJ  
**TELEPHONE NO.**  
 373-2774  
**PROJECT DESIGNATION**  
 100-N Apatite Barrier Performance Monitoring  
**FIELD LOGBOOK NO.**  
 HNF-N-585-11  
**OFFSITE PROPERTY NO.**

**PROJECT COORDINATOR**  
 TRENT, SJ  
**SAF NO.**  
 F06-027  
**COA**  
 122561ES20  
**BILL OF LADING/AIR BILL NO.**  
 7989 9227 8110

**PRICE CODE** 7K  
**AIR QUALITY**   
**METHOD OF SHIPMENT**  
 GOVERNMENT VEHICLE

**DATA TURNAROUND**  
 15 Days / 45 Days

**MATRIX\***  
 A=Air  
 DL=Drum  
 Liquids  
 DS=Drum  
 Solids  
 L=Liquid  
 O=Oil  
 S=Soll  
 SE=Sediment  
 T=Tissue  
 V=Vegetation  
 W=Water  
 WI=Wipe  
 X=Other

**POSSIBLE SAMPLE HAZARDS/ REMARKS**  
 Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL HANDLING AND/OR STORAGE**

**PRESERVATION** Cool-4C  
**TYPE OF CONTAINER** P  
**NO. OF CONTAINER(S)** 1  
**VOLUME** 500ml  
**SAMPLE ANALYSIS** SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1WNV9	WATER	8/6/8	0842
B1WNW0	WATER		0830
B1WNW1	WATER		0945
B1WNW2	WATER		1000
B1WNW3	WATER		

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM <i>J. M. Fox</i>	RECEIVED BY/STORED IN MO 413 Ref #2	8/6/08 1215
RELINQUISHED BY/REMOVED FROM MO 413 Ref #2	RECEIVED BY/STORED IN Kevin Patterson	8/6/08 0700
RELINQUISHED BY/REMOVED FROM Kevin Patterson	RECEIVED BY/STORED IN Fluor Hanford	8/6/08 1530
RELINQUISHED BY/REMOVED FROM Fluor Hanford	RECEIVED BY/STORED IN FEDEX	8-8-08 0955
RELINQUISHED BY/REMOVED FROM FEDEX	RECEIVED BY/STORED IN <i>[Signature]</i>	8-8-08 0955
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME

**SPECIAL INSTRUCTIONS**  
 (1)IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}  
 NOTE - SAMPLE B1WNW3 UNABLE TO TAKE LOW RIVER LEVELS -

**LABORATORY SECTION** RECEIVED BY  
**FINAL SAMPLE DISPOSITION** DISPOSAL METHOD

**TITLE** DATE/TIME  
**DISPOSED BY** DATE/TIME

000000022

COLLECTOR

*M. Miller*

SAMPLING LOCATION

100NR2 Syn.Apatite Post-Inj.#5/Day12

ICE CHEST NO.

*GRP-05-001*

SHIPPED TO

Lionville Laboratory Incorporated

COMPANY CONTACT

FABRE, RJ

TELEPHONE NO.

373-2774

PROJECT COORDINATOR

TRENT, SJ

PROJECT DESIGNATION

100-N Apatite Barrier Performance Monitoring

SAF NO.

F06-027

FIELD LOGBOOK NO.

HNF-N-585-11

ACTUAL SAMPLE DEPTH

COA

122561ES20

PRICE CODE

7K

AIR QUALITY

DATA  
TURNAROUND  
15 Days / 45  
Days

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

BILL OF LADING/AIR BILL NO.

*7989 9227 8110*

MATRIX\*  
A=Air  
DL=Drum  
L=Liquids  
DS=Drum  
S=Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other

**POSSIBLE SAMPLE HAZARDS/ REMARKS**  
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL HANDLING AND/OR STORAGE**

**PRESERVATION** Cool-4C

**TYPE OF CONTAINER** P

**NO. OF CONTAINER(S)** 1

**VOLUME** 500mL

**SAMPLE ANALYSIS** SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
✓ B1WNW4	WATER	8/6/8	0950
✓ B1WNW5	WATER		1005
✓ B1WNW6	WATER		1010
✓ B1WNW7	WATER		0855
✓ B1WNW8	WATER		0905

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM  
*S. Miller* DATE/TIME  
*8/6/8 1100*

RELINQUISHED BY/REMOVED FROM  
*MO413 REF#2* DATE/TIME  
*8/6/8 1000*

RELINQUISHED BY/REMOVED FROM  
*Kevin Patterson* DATE/TIME  
*8/6/8 150*

RELINQUISHED BY/REMOVED FROM  
*FEDER* DATE/TIME  
*8-8-08 0955*

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN  
*MO413 Ref #2*

RECEIVED BY/STORED IN  
*Kevin Patterson*

RECEIVED BY/STORED IN  
*Fluor Hanford*

RECEIVED BY/STORED IN  
*FEDER*

RECEIVED BY/STORED IN  
*[Signature]*

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}

RELINQUISHED BY/REMOVED FROM DATE/TIME

RELINQUISHED BY/REMOVED FROM DATE/TIME

RECEIVED BY/STORED IN DATE/TIME

RECEIVED BY/STORED IN DATE/TIME

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

000000025

Lionville Laboratory Incorporated  
**SAMPLE RECEIPT CHECKLIST (SRC)**

CLIENT: TNU HANFORD  
 Project/SAF/SOW/Release #: F06-027

Date: 8/8/08

LvLI Batch #: 0808L031

Sample Custodian: Peter Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1. Samples Hand Delivered or <u>Shipped?</u>	Carrier <u>FedEx</u>	Airbill # <u>79899227 8110</u>
2. Custody Seals on coolers or shipping containers intact, signed & dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No Seals
3. Outside of coolers or shipping containers are free from damage?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Comments:
4. All expected paperwork received (coc & other client specific information) sealed in plastic bag and easily accessible?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Samples received cooled or ambient?	Temp <u>2-2°</u> °C	Cooler # <u>GRP-05-001</u>
How was the temperature taken?	<input checked="" type="checkbox"/> IR <input type="checkbox"/> Temp. Blank	<input type="checkbox"/> Other (Specify):
Is the Temp. Criteria met for these samples? (Hg in soils @ 4°C)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6. Custody seals on sample containers intact, signed and dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> No Seals
7. COC (Client & LvLI) signed & dated?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
8. Sample containers are intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
9. All samples on COC received?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
All samples received on COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10. All sample label information matches COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
11. Samples properly preserved? (If #5 is no, then this is no.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>-003 -009 -017</u> <u>-004 -010</u> <u>-006 -011</u> <u>-007 -014</u> <u>-008</u> <input type="checkbox"/> N/A
12. Samples received within hold times? Short holds taken to wet lab?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>past hold NO<sub>2</sub> NO<sub>3</sub> PO<sub>4</sub></u>
13. VOA, TOC, TOX free of headspace?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A
14. QC stickers placed on bottles designated by client?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 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.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16. Project Manager contacted concerning any discrepancies?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> N/A
Person Contacted _____	Date _____	

