0069805

SAF-B03-018
ERDF Groundwater Well Samples
FINAL DATA PACKAGE

MAIL COMPLETE COPY OF DATA PACKAGE TO:

Jim Rugg	H9-03	____NB 5/15/06_ INITIAL/DATE
Rich Weiss	H9-01	____NB 5/15/06_ INITIAL/DATE
Jeanette Duncan	H9-02	____NB 5/15/06_ INITIAL/DATE

COMMENTS:

SDG __H3095___ SAF-B03-018

Rad only X Chem only Rad & Chem

X Complete Partial

Metals only: Add-on Arsenic, Lead, Selenium

RECEIVED
JUN 12 2006
EDMC

JUN 2005

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B03-018 H3095

DATE RECEIVED: 03/24/05 LVL LOT # :0503L066

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
B1CCY4							
ALKALINITY	002	W	05LAK014	03/23/05	04/06/05	04/06/05	
ALKALINITY	002 REP	W	05LAK014	03/23/05	04/06/05	04/06/05	
BROMIDE BY IC	002	W	05LIC019	03/23/05	03/24/05	03/24/05	
BROMIDE BY IC	002 REP	W	05LIC019	03/23/05	03/24/05	03/24/05	
BROMIDE BY IC	002 MS	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	002	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	002 REP	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	002 MS	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	002	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	002 REP	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	002 MS	W	05LIC019	03/23/05	03/24/05	03/24/05	
NITRITE BY IC	002	W	05LIC019	03/23/05	03/24/05	03/24/05	1739
NITRITE BY IC	002 REP	W	05LIC019	03/23/05	03/24/05	03/24/05	1852
NITRITE BY IC	002 MS	W	05LIC019	03/23/05	03/24/05	03/24/05	1935
NITRATE BY IC	002	W	05LIC019	03/23/05	03/24/05	03/24/05	1754
NITRATE BY IC	002 REP	W	05LIC019	03/23/05	03/24/05	03/24/05	1906
NITRATE BY IC	002 MS	W	05LIC019	03/23/05	03/24/05	03/24/05	1949
PHOSPHATE BY IC	002	W	05LICD20	03/23/05	04/04/05	04/04/05	1601
PHOSPHATE BY IC	002 REP	W	05LICD20	03/23/05	04/04/05	04/04/05	1615
PHOSPHATE BY IC	002 MS	W	05LICD20	03/23/05	04/04/05	04/04/05	1629
SULFATE BY IC	002	W	05LICA19	03/23/05	03/24/05	03/24/05	
SULFATE BY IC	002 REP	W	05LICA19	03/23/05	03/24/05	03/24/05	
SULFATE BY IC	002 MS	W	05LICA19	03/23/05	03/24/05	03/24/05	
NITRATE NITRITE	002	W	05LN3023	03/23/05	04/15/05	04/15/05	
TOTAL DISSOLVED SOLI	002	W	05LSSA36	03/23/05	03/25/05	03/25/05	
TOTAL ORGANIC HALIDE	002	W	05LX002	03/23/05	04/08/05	04/08/05	
TOTAL ORGANIC HALIDE	002 REP	W	05LX002	03/23/05	04/08/05	04/08/05	
B1CCY7							
ALKALINITY	004	W	05LAK014	03/23/05	04/06/05	04/06/05	
BROMIDE BY IC	004	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	004	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	004	W	05LIC019	03/23/05	03/24/05	03/24/05	
NITRITE BY IC	004	W	05LIC019	03/23/05	03/24/05	03/24/05	2018

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B03-018 H3095

DATE RECEIVED: 03/24/05 LVL LOT # :0503L066

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
NITRATE BY IC	004	W	05LIC019	03/23/05	03/24/05	03/24/05	2032
PHOSPHATE BY IC	004	W	05LICD20	03/23/05	04/04/05	04/04/05	1713
SULFATE BY IC	004	W	05LICA19	03/23/05	03/24/05	03/24/05	
NITRATE NITRITE	004	W	05LN3023	03/23/05	04/15/05	04/15/05	
TOTAL DISSOLVED SOLI	004	W	05LSSA36	03/23/05	03/25/05	03/25/05	
TOTAL ORGANIC HALIDE	004	W	05LX002	03/23/05	04/08/05	04/08/05	
B1CD08							
ALKALINITY	007	W	05LAK014	03/23/05	04/06/05	04/06/05	
BROMIDE BY IC	007	W	05LICB20	03/23/05	04/04/05	04/04/05	
CHLORIDE BY IC	007	W	05LICA20	03/23/05	04/04/05	04/04/05	
FLUORIDE BY IC	007	W	05LIC020	03/23/05	04/04/05	04/04/05	
NITRITE BY IC	007	W	05LICB20	03/23/05	04/04/05	04/04/05	1727
NITRATE BY IC	007	W	05LICC20	03/23/05	04/04/05	04/04/05	1727
PHOSPHATE BY IC	007	W	05LICD20	03/23/05	04/04/05	04/04/05	1727
SULFATE BY IC	007	W	05LICE20	03/23/05	04/04/05	04/04/05	
NITRATE NITRITE	007	W	05LN3023	03/23/05	04/15/05	04/15/05	
NITRATE NITRITE	007 REP	W	05LN3023	03/23/05	04/15/05	04/15/05	
NITRATE NITRITE	007 MS	W	05LN3023	03/23/05	04/15/05	04/15/05	
TOTAL DISSOLVED SOLI	007	W	05LSSA36	03/23/05	03/25/05	03/25/05	
TOTAL ORGANIC HALIDE	007	W	05LX002	03/23/05	04/08/05	04/08/05	
TOTAL ORGANIC HALIDE	007 MS	W	05LX002	03/23/05	04/08/05	04/08/05	
B1CD05							
ALKALINITY	009	W	05LAK014	03/23/05	04/06/05	04/06/05	
BROMIDE BY IC	009	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	009	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	009	W	05LIC019	03/23/05	03/24/05	03/24/05	
NITRITE BY IC	009	W	05LIC019	03/23/05	03/24/05	03/24/05	~~1742~~ 2213
NITRATE BY IC	009	W	05LIC019	03/23/05	03/24/05	03/24/05	~~1742~~ 2228
PHOSPHATE BY IC	009	W	05LICD20	03/23/05	04/04/05	04/04/05	1742
SULFATE BY IC	009	W	05LICA19	03/23/05	03/24/05	03/24/05	
NITRATE NITRITE	009	W	05LN3023	03/23/05	04/15/05	04/15/05	
TOTAL DISSOLVED SOLI	009	W	05LSSA36	03/23/05	03/25/05	03/25/05	
TOTAL ORGANIC HALIDE	009	W	05LX002	03/23/05	04/08/05	04/13/05	
B1CD13							
ALKALINITY	012	W	05LAK014	03/23/05	04/06/05	04/06/05	

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B03-018 H3095

DATE RECEIVED: 03/24/05 LVL LOT # :0503L066

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
BROMIDE BY IC	012	W	05LIC019	03/23/05	03/24/05	03/24/05	
CHLORIDE BY IC	012	W	05LIC019	03/23/05	03/24/05	03/24/05	
FLUORIDE BY IC	012	W	05LIC019	03/23/05	03/24/05	03/24/05	
NITRITE BY IC	012	W	05LIC019	03/23/05	03/24/05	03/24/05	2257
NITRATE BY IC	012	W	05LIC019	03/23/05	03/24/05	03/24/05	2311
PHOSPHATE BY IC	012	W	05LICD20	03/23/05	04/04/05	04/04/05	1756
SULFATE BY IC	012	W	05LICA19	03/23/05	03/24/05	03/24/05	
NITRATE NITRITE	012	W	05LN3023	03/23/05	04/15/05	04/15/05	
TOTAL DISSOLVED SOLI	012	W	05LSSA36	03/23/05	03/25/05	03/25/05	
TOTAL ORGANIC HALIDE	012	W	05LX002	03/23/05	04/08/05	04/13/05	

LAB QC:

ALKALINITY	MB1	W	05LAK014	N/A	04/06/05	04/06/05
ALKALINITY	MB1 BS	W	05LAK014	N/A	04/06/05	04/06/05
ALKALINITY	MB1 BSD	W	05LAK014	N/A	04/06/05	04/06/05
BROMIDE BY IC	MB1	W	05LIC019	N/A	03/24/05	03/24/05
BROMIDE BY IC	MB1 BS	W	05LIC019	N/A	03/24/05	03/24/05
CHLORIDE BY IC	MB1	W	05LIC019	N/A	03/24/05	03/24/05
CHLORIDE BY IC	MB1 BS	W	05LIC019	N/A	03/24/05	03/24/05
FLUORIDE BY IC	MB1	W	05LIC019	N/A	03/24/05	03/24/05
FLUORIDE BY IC	MB1 BS	W	05LIC019	N/A	03/24/05	03/24/05
NITRITE BY IC	MB1	W	05LIC019	N/A	03/24/05	03/24/05
NITRITE BY IC	MB1 BS	W	05LIC019	N/A	03/24/05	03/24/05
NITRATE BY IC	MB1	W	05LIC019	N/A	03/24/05	03/24/05
NITRATE BY IC	MB1 BS	W	05LIC019	N/A	03/24/05	03/24/05
PHOSPHATE BY IC	MB1	W	05LICD20	N/A	04/04/05	04/04/05
PHOSPHATE BY IC	MB1 BS	W	05LICD20	N/A	04/04/05	04/04/05
SULFATE BY IC	MB1	W	05LICA19	N/A	03/24/05	03/24/05
SULFATE BY IC	MB1 BS	W	05LICA19	N/A	03/24/05	03/24/05
NITRATE NITRITE	MB1	W	05LN3023	N/A	04/15/05	04/15/05
NITRATE NITRITE	MB1 BS	W	05LN3023	N/A	04/15/05	04/15/05
TOTAL DISSOLVED SOLI	MB1	W	05LSSA36	N/A	03/25/05	03/25/05
TOTAL DISSOLVED SOLI	MB1 BS	W	05LSSA36	N/A	03/25/05	03/25/05
TOTAL DISSOLVED SOLI	MB1 BSD	W	05LSSA36	N/A	03/25/05	03/25/05
TOTAL ORGANIC HALIDE	MB1	W	05LX002	N/A	04/08/05	04/08/05
TOTAL ORGANIC HALIDE	MB1 BS	W	05LX002	N/A	04/08/05	04/08/05
BROMIDE BY IC	MB1	W	05LICB20	N/A	04/04/05	04/04/05

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B03-018 H3095

DATE RECEIVED: 03/24/05 LVL LOT # :0503L066

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BROMIDE BY IC	MB1 BS	W	05LICB20	N/A	04/04/05	04/04/05
CHLORIDE BY IC	MB1	W	05LICA20	N/A	04/04/05	04/04/05
CHLORIDE BY IC	MB1 BS	W	05LICA20	N/A	04/04/05	04/04/05
FLUORIDE BY IC	MB1	W	05LIC020	N/A	04/04/05	04/04/05
FLUORIDE BY IC	MB1 BS	W	05LIC020	N/A	04/04/05	04/04/05
NITRITE BY IC	MB1	W	05LICB20	N/A	04/04/05	04/04/05
NITRITE BY IC	MB1 BS	W	05LICB20	N/A	04/04/05	04/04/05
NITRATE BY IC	MB1	W	05LICC20	N/A	04/04/05	04/04/05
NITRATE BY IC	MB1 BS	W	05LICC20	N/A	04/04/05	04/04/05
SULFATE BY IC	MB1	W	05LICE20	N/A	04/04/05	04/04/05
SULFATE BY IC	MB1 BS	W	05LICE20	N/A	04/04/05	04/04/05

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD B03-018 H3095
LVL#: 0503L066

W.O.#: 11343-606-001-9999-00
Date Received: 03-24-05

INORGANIC NARRATIVE

1. This narrative covers the analyses of 5 water samples.

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

3. Sample holding times as required by the method and/or contract were met with the exception of Phosphate samples and Nitrite and Nitrate sample B1CD08 that were analyzed past hold (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 Total Organic Halides (TOX) samples B1CD08, B1CD05 and B1CD13 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. The duplicate LCS for Alkalinity and Total Dissolved Solids (TDS) were within the 20% Relative Percent Difference (RDP) control limit.

7. The matrix spike (MS) recoveries for Bromide, Chloride, Fluoride, Nitrite, Nitrate, Phosphate, Sulfate and TOX were within the 75-125% control limits however MS recovery for Nitrate Nitrite was above the control limit at 132.3% that may be attributed to sample inhomogeneity.

8. The replicate analyses for Alkalinity, Bromide, Chloride, Fluoride, Nitrite, Nitrate. Phosphate, Sulfate, TOX and Nitrate Nitrite were within the 20% RPD control limit. Replicate analysis for associated with this LvLI batch for TDS is found in LvLI batch 0503L080.

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 Incorporated

5/4/05
Date

njp\i03-066

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 25 pages.

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

Lionville Laboratory Incorporated

WET CHEMISTRY

METHODS GLOSSARY FOR WATER SAMPLE ANALYSIS

	EPA /600	SW846	OTHER
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	
Chorine, 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:**	

L-WI-034/A-01/01

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 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1CCY3	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	20.8	u	UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34.0	1.0
		Barium, Soluble	39.3		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	41900		UG/L	23.7	1.0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	6.4	u	UG/L	6.4	1.0
		Chromium, Soluble	15.9		UG/L	9.7	1.0
		Copper, Soluble	2.3	u	UG/L	2.3	1.0
		Iron, Soluble	57.9		UG/L	21.1	1.0
		Potassium, Soluble	5360		UG/L	428	1.0
		Magnesium, Soluble	12200		UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	19800		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1.0
		Vanadium, Soluble	25.8		UG/L	3.1	1.0
		Zinc, Soluble	29.6		UG/L	1.4	1.0

Lionville Laboratory, Inc

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B1CCY4	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	20.8	u	UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	41.1		UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	42500		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	15.6		UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	80.1		UG/L	21.1	1.0
		Potassium, Total	5760		UG/L	428	1.0
		Magnesium, Total	12300		UG/L	38.1	1.0
		Manganese, Total	6.9		UG/L	2.2	1.0
		Sodium, Total	19400		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	26.6		UG/L	3.1	1.0
		Zinc, Total	6.9		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-003	B1CCY6	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	20.8	u	UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34.0	1.0
		Barium, Soluble	39.5		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	42400		UG/L	23.7	1.0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	7.6		UG/L	6.4	1.0
		Chromium, Soluble	17.1		UG/L	9.7	1.0
		Copper, Soluble	2.6		UG/L	2.3	1.0
		Iron, Soluble	21.1	u	UG/L	21.1	1.0
		Potassium, Soluble	5780		UG/L	428	1.0
		Magnesium, Soluble	12400		UG/L	38.1	1.0
		Manganese, Soluble	5.3		UG/L	2.2	1.0
		Sodium, Soluble	20200		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1.0
		Vanadium, Soluble	27.4		UG/L	3.1	1.0
		Zinc, Soluble	5.6		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-004	B1CCY7	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	53.9		UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	39.4		UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	41800		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	18.0		UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	126		UG/L	21.1	1.0
		Potassium, Total	6130		UG/L	428	1.0
		Magnesium, Total	12200		UG/L	38.1	1.0
		Manganese, Total	8.5		UG/L	2.2	1.0
		Sodium, Total	19600		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	25.3		UG/L	3.1	1.0
		Zinc, Total	12.5		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-006	B1CD07	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	30.3		UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34.0	1.0
		Barium, Soluble	2.6	u	UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	49.9		UG/L	23.7	1.0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	6.4	u	UG/L	6.4	1.0
		Chromium, Soluble	9.7	u	UG/L	9.7	1.0
		Copper, Soluble	2.3	u	UG/L	2.3	1.0
		Iron, Soluble	21.1	u	UG/L	21.1	1.0
		Potassium, Soluble	428	u	UG/L	428	1.0
		Magnesium, Soluble	38.1	u	UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	116		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1.0
		Vanadium, Soluble	3.1	u	UG/L	3.1	1.0
		Zinc, Soluble	12.5		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-007	B1CD08	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	24.7		UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	2.6	u	UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	60.9		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	9.7	u	UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	37.8		UG/L	21.1	1.0
		Potassium, Total	428	u	UG/L	428	1.0
		Magnesium, Total	53.1		UG/L	38.1	1.0
		Manganese, Total	2.2	u	UG/L	2.2	1.0
		Sodium, Total	89.2		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	3.1	u	UG/L	3.1	1.0
		Zinc, Total	10.9		UG/L	1.4	1.0

Lionville Laboratory, Inc

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-008	B1CD04	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	39.9		UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34.0	1.0
		Barium, Soluble	60.4		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	51400		UG/L	23.7	1.0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	6.4	u	UG/L	6.4	1.0
		Chromium, Soluble	9.7	u	UG/L	9.7	1.0
		Copper, Soluble	2.3	u	UG/L	2.3	1.0
		Iron, Soluble	29.8		UG/L	21.1	1.0
		Potassium, Soluble	4930		UG/L	428	1.0
		Magnesium, Soluble	16000		UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	18000		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1.0
		Vanadium, Soluble	25.9		UG/L	3.1	1.0
		Zinc, Soluble	3.8		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-009	B1CD05	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	32.1		UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	63.7		UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	53800		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	31.9		UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	149		UG/L	21.1	1.0
		Potassium, Total	5390		UG/L	428	1.0
		Magnesium, Total	16600		UG/L	38.1	1.0
		Manganese, Total	3.4		UG/L	2.2	1.0
		Sodium, Total	18700		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	27.1		UG/L	3.1	1.0
		Zinc, Total	14.1		UG/L	1.4	1.0

Lionville Laboratory, Inc

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095

LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-010	B1CCY9	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	20.8	u	UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34.0	1.0
		Barium, Soluble	56.4		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	51200		UG/L	23.7	1.0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	6.4	u	UG/L	6.4	1.0
		Chromium, Soluble	9.7	u	UG/L	9.7	1.0
		Copper, Soluble	2.3	u	UG/L	2.3	1.0
		Iron, Soluble	23.6		UG/L	21.1	1.0
		Potassium, Soluble	5740		UG/L	428	1.0
		Magnesium, Soluble	15800		UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	21300		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1.0
		Vanadium, Soluble	25.1		UG/L	3.1	1.0
		Zinc, Soluble	316		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-012	B1CD13	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	86.5		UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	57.7		UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	50600		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	9.7	u	UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	391		UG/L	21.1	1.0
		Potassium, Total	5440		UG/L	428	1.0
		Magnesium, Total	15500		UG/L	38.1	1.0
		Manganese, Total	5.3		UG/L	2.2	1.0
		Sodium, Total	21000		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	25.8		UG/L	3.1	1.0
		Zinc, Total	344		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	05L0210-MB1	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	20.8	u	UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	2.6	u	UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	23.7	u	UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	9.7	u	UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	21.1	u	UG/L	21.1	1.0
		Potassium, Total	428	u	UG/L	428	1.0
		Magnesium, Total	38.1	u	UG/L	38.1	1.0
		Manganese, Total	2.2	u	UG/L	2.2	1.0
		Sodium, Total	57.2		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	3.1	u	UG/L	3.1	1.0
		Zinc, Total	3.0		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	B1CCY4	Silver, Total	53.5	5.3 u	50.0	107.0	1.0
		Aluminum, Total	2110	20.8 u	2000	105.6	1.0
		Arsenic, Total	2100	34.0 u	2000	105.1	1.0
		Barium, Total	2090	41.1	2000	102.3	1.0
		Beryllium, Total	48.1	0.20u	50.0	96.2	1.0
		Calcium, Total	70700	42500	25000	113.0	1.0
		Cadmium, Total	52.4	4.1 u	50.0	104.8	1.0
		Cobalt, Total	523	6.4 u	500	104.6	1.0
		Chromium, Total	230	15.6	200	107.2	1.0
		Copper, Total	253	2.3 u	250	101.1	1.0
		Iron, Total	1150	80.1	1000	106.5	1.0
		Potassium, Total	31000	5760	25000	100.9	1.0
		Magnesium, Total	37900	12300	25000	102.5	1.0
		Manganese, Total	526	6.9	500	103.8	1.0
		Sodium, Total	44500	19400	25000	100.4	1.0
		Nickel, Total	518	18.0 u	500	103.6	1.0
		Lead, Total	538	24.7 u	500	107.6	1.0
		Antimony, Total	514	22.9 u	500	102.8	1.0
		Selenium, Total	2060	48.5 u	2000	102.8	1.0
		Vanadium, Total	533	26.6	500	101.2	1.0
		Zinc, Total	526	6.9	500	103.8	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	B1CCY4	Silver, Total	5.3 u	5.3 u	NC	1.0
		Aluminum, Total	20.8 u	20.8 u	NC	1.0
		Arsenic, Total	34.0 u	34.0 u	NC	1.0
		Barium, Total	41.1	39.0	5.2	1.0
		Beryllium, Total	0.20u	0.20u	NC	1.0
		Calcium, Total	42500	41700	1.8	1.0
		Cadmium, Total	4.1 u	4.1 u	NC	1.0
		Cobalt, Total	6.4 u	6.4 u	NC	1.0
		Chromium, Total	15.6	15.9	1.9	1.0
		Copper, Total	2.3 u	2.3 u	NC	1.0
		Iron, Total	80.1	113	34.1	1.0
		Potassium, Total	5760	5830	1.3	1.0
		Magnesium, Total	12300	12200	0.59	1.0
		Manganese, Total	6.9	6.6	4.4	1.0
		Sodium, Total	19400	19300	0.53	1.0
		Nickel, Total	18.0 u	18.0 u	NC	1.0
		Lead, Total	24.7 u	24.7 u	NC	1.0
		Antimony, Total	22.9 u	22.9 u	NC	1.0
		Selenium, Total	48.5 u	48.5 u	NC	1.0
		Vanadium, Total	26.6	26.8	0.75	1.0
		Zinc, Total	6.9	12.5	57.7	1.0

Lionville Laboratory, Inc

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L066

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	05L0210-LC1	Silver, LCS	483	500	UG/L	96.6
		Aluminum, LCS	5040	5000	UG/L	100.8
		Arsenic, LCS	9900	10000	UG/L	99.0
		Barium, LCS	4980	5000	UG/L	99.6
		Beryllium, LCS	240	250	UG/L	96.2
		Calcium, LCS	24300	25000	UG/L	97.1
		Cadmium, LCS	249	250	UG/L	99.4
		Cobalt, LCS	2480	2500	UG/L	99.1
		Chromium, LCS	496	500	UG/L	99.3
		Copper, LCS	1220	1250	UG/L	98.0
		Iron, LCS	4920	5000	UG/L	98.5
		Potassium, LCS	24900	25000	UG/L	99.7
		Magnesium, LCS	24300	25000	UG/L	97.2
		Manganese, LCS	730	750	UG/L	97.3
		Sodium, LCS	24700	25000	UG/L	98.9
		Nickel, LCS	2010	2000	UG/L	100.4
		Lead, LCS	2410	2500	UG/L	96.2
		Antimony, LCS	2890	3000	UG/L	96.5
		Selenium, LCS	10000	10000	UG/L	100
		Vanadium, LCS	2390	2500	UG/L	95.6
		Zinc, LCS	979	1000	UG/L	97.9

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1CD10(F)	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	20.8	u	UG/L	20.8	1.0
		Arsenic, Soluble	34.0	u	UG/L	34 0	1.0
		Barium, Soluble	61.6		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1 0
		Calcium, Soluble	61100		UG/L	23.7	1 0
		Cadmium, Soluble	4.1	u	UG/L	4.1	1.0
		Cobalt, Soluble	6.4	u	UG/L	6.4	1 0
		Chromium, Soluble	9.7	u	UG/L	9.7	1.0
		Copper, Soluble	2.3	u	UG/L	2.3	1.0
		Iron, Soluble	56.4		UG/L	21 1	1.0
		Potassium, Soluble	5480		UG/L	428	1.0
		Magnesium, Soluble	18500		UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	18600		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Lead, Soluble	24.7	u	UG/L	24.7	1 0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Selenium, Soluble	48.5	u	UG/L	48.5	1 0
		Vanadium, Soluble	23.3		UG/L	3.1	1.0
		Zinc, Soluble	15.4		UG/L	1.4	1.0

Lionville Laboratory, Inc

INORGANICS DATA SUMMARY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B1CD11	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	61.8		UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	63.0		UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	58400		UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	18.3		UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	264		UG/L	21.1	1.0
		Potassium, Total	5720		UG/L	428	1.0
		Magnesium, Total	18300		UG/L	38.1	1.0
		Manganese, Total	4.2		UG/L	2.2	1.0
		Sodium, Total	18600		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	23.5		UG/L	3.1	1.0
		Zinc, Total	29.6		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	05L0210-MB1	Silver, Total	5.3	u	UG/L	5.3	1.0
		Aluminum, Total	20.8	u	UG/L	20.8	1.0
		Arsenic, Total	34.0	u	UG/L	34.0	1.0
		Barium, Total	2.6	u	UG/L	2.6	1.0
		Beryllium, Total	0.20	u	UG/L	0.20	1.0
		Calcium, Total	23.7	u	UG/L	23.7	1.0
		Cadmium, Total	4.1	u	UG/L	4.1	1.0
		Cobalt, Total	6.4	u	UG/L	6.4	1.0
		Chromium, Total	9.7	u	UG/L	9.7	1.0
		Copper, Total	2.3	u	UG/L	2.3	1.0
		Iron, Total	21.1	u	UG/L	21.1	1.0
		Potassium, Total	428	u	UG/L	428	1.0
		Magnesium, Total	38.1	u	UG/L	38.1	1.0
		Manganese, Total	2.2	u	UG/L	2.2	1.0
		Sodium, Total	57.2		UG/L	18.5	1.0
		Nickel, Total	18.0	u	UG/L	18.0	1.0
		Lead, Total	24.7	u	UG/L	24.7	1.0
		Antimony, Total	22.9	u	UG/L	22.9	1.0
		Selenium, Total	48.5	u	UG/L	48.5	1.0
		Vanadium, Total	3.1	u	UG/L	3.1	1.0
		Zinc, Total	3.0		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B1CD10(F)	Silver, Soluble	41.9	5 3 u	50 0	83.8	1.0
		Aluminum, Soluble	1850	20.8 u	2000	92.7	1.0
		Arsenic, Soluble	1890	34.0 u	2000	94.3	1.0
		Barium, Soluble	1920	61.6	2000	93.2	1 0
		Beryllium, Soluble	45.2	0.20u	50.0	90.4	1.0
		Calcium, Soluble	80600	61100	25000	78.1	1.0
		Cadmium, Soluble	42.9	4 1 u	50 0	85.8	1.0
		Cobalt, Soluble	463	6 4 u	500	92.6	1.0
		Chromium, Soluble	190	9.7 u	200	95.0	1.0
		Copper, Soluble	227	2.3 u	250	90.9	1.0
		Iron, Soluble	959	56.4	1000	90.2	1.0
		Potassium, Soluble	28200	5480	25000	90.8	1.0
		Magnesium, Soluble	41000	18500	25000	89.9	1.0
		Manganese, Soluble	463	2.2 u	500	92.7	1.0
		Sodium, Soluble	41100	18600	25000	90.0	1.0
		Nickel, Soluble	462	18.0 u	500	92.3	1.0
		Lead, Soluble	425	24.7 u	500	84.9	1.0
		Antimony, Soluble	454	22.9 u	500	90.7	1.0
		Selenium, Soluble	1830	48.5 u	2000	91.6	1 0
		Vanadium, Soluble	469	23.3	500	89 2	1.0
		Zinc, Soluble	471	15 4	500	91.0	1 0

Lionville Laboratory, Inc

INORGANICS PRECISION REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095 LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B1CD10(F)	Silver, Soluble	5.3 u	5.3 u	NC	1.0
		Aluminum, Soluble	20.8 u	20.8 u	NC	1.0
		Arsenic, Soluble	34.0 u	34.0 u	NC	1.0
		Barium, Soluble	61.6	61.5	0.16	1.0
		Beryllium, Soluble	0.20u	0.20u	NC	1.0
		Calcium, Soluble	61100	58200	4.8	1.0
		Cadmium, Soluble	4.1 u	4.1 u	NC	1.0
		Cobalt, Soluble	6.4 u	6.4 u	NC	1.0
		Chromium, Soluble	9.7 u	9.7 u	NC	1.0
		Copper, Soluble	2.3 u	2.3 u	NC	1.0
		Iron, Soluble	56.4	35.6	45.2	1.0
		Potassium, Soluble	5480	5510	0.53	1.0
		Magnesium, Soluble	18500	18200	1.8	1.0
		Manganese, Soluble	2.2 u	2.2 u	NC	1.0
		Sodium, Soluble	18600	18500	0.30	1.0
		Nickel, Soluble	18.0 u	18.0 u	NC	1.0
		Lead, Soluble	24.7 u	24.7 u	NC	1.0
		Antimony, Soluble	22.9 u	22.9 u	NC	1.0
		Selenium, Soluble	48.5 u	48.5 u	NC	1.0
		Vanadium, Soluble	23.3	22.3	4.4	1.0
		Zinc, Soluble	15.4	16.1	4.4	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/18/06

CLIENT: TNUHANFORD B03-018 H3095

LVL LOT #: 0503L080

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	05L0210-LC1	Silver, LCS	483	500	UG/L	96.6
		Aluminum, LCS	5040	5000	UG/L	100.8
		Arsenic, LCS	9900	10000	UG/L	99.0
		Barium, LCS	4980	5000	UG/L	99.6
		Beryllium, LCS	240	250	UG/L	96.2
		Calcium, LCS	24300	25000	UG/L	97.1
		Cadmium, LCS	249	250	UG/L	99.4
		Cobalt, LCS	2480	2500	UG/L	99.1
		Chromium, LCS	496	500	UG/L	99.3
		Copper, LCS	1220	1250	UG/L	98.0
		Iron, LCS	4920	5000	UG/L	98.5
		Potassium, LCS	24900	25000	UG/L	99.7
		Magnesium, LCS	24300	25000	UG/L	97.2
		Manganese, LCS	730	750	UG/L	97.3
		Sodium, LCS	24700	25000	UG/L	98.9
		Nickel, LCS	2010	2000	UG/L	100.4
		Lead, LCS	2410	2500	UG/L	96.2
		Antimony, LCS	2890	3000	UG/L	96.5
		Selenium, LCS	10000	10000	UG/L	100
		Vanadium, LCS	2390	2500	UG/L	95.6
		Zinc, LCS	979	1000	UG/L	97.9

Lionville Laboratory Use Only

0503L066

Custody Transfer Record/Lab Work Request

See SRC

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU - HANFORD - SAFE B3-01

Est. Final Proj. Sampling Date:

Project #: 14343-005-002-0990-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: [illegible]

QC: SPW Del: SEL TAT: 30 Day

Date Rec'd: 3/24/05 Date Due: 4/23/05

Refrigerator #		AC						D		E		F	G	H	I								
		1						1		5		5	5	5	5								
#/Type Container	Liquid	6						6		6		6	6	6	6								
	Solid																						
Volume	Liquid	60						500		500		500	500	500	500								
	Solid																						
Preservatives		Hcl						HSO4		HNO3		—	—	—	HZSO4								
								TOX				TDS	IC Anions	ALK	NH3								
ANALYSES REQUESTED →		ORGANIC								INORG													
		VOA	BNA	Pest/ PCB	Herb					TRC Metal	CN												

Lionville Laboratory Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0Ga24H					ITOX	METOSO	METOTO		ITDS	ICO	IALKL	IN3N2		
001	B1CCY3 (F)			W	3/23/05	1031															
002	4						3					1		1		1	1	1	1		
003	6 (F)													X	03/24/05						
004	7						3					1		1		1	1	1	1		
005	B1CD15					0745	3														
006	B1CD07 (F)			W	3/23/05	0745							1	X	03/24/05						
007	B1CD08						3					1		1		1	1	1	1		
008	B1CD04 (F)					0909							1	X	03/24/05						
009	B1CD05						3					1		1		1	1	1	1		
010	B1CCY9 (F)					1027							1	X	03/24/05						

Special Instructions:

MET(1) = AL, Ag, Ba, Be, Cd, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Sb, V, Zn

IC(1) = CL, Fl, SO4, PO4, NO3, NO2, Br

EDD) RUN MATRIX QC

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	3/24/05	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time
"COMPOSITE WASTE"	ORIGINAL REWRITTEN		

Lionville Laboratory Use Only

0503L066

Custody Transfer Record/Lab Work Request

LVLI

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: [illegible]
Est. Final Proj. Sampling Date: [illegible]
Project #: [illegible]
Project Contact/Phone #: [illegible]
Lionville Laboratory Project Manager: [illegible]
QC: Del TAT

Date Rec'd: _____ Date Due: _____

		A-C					D		E		F	G	H	I		
Refrigerator #		1					1		5		5	5	5	5		
#/Type Container	Liquid / Solid	G					G		P		P	P	P	P		
Volume	Liquid / Solid	4L					500		500		500	500	500	500		
Preservatives		HCl					H2SO4		HNO3		—	—	—	H2SO4		
ANALYSES REQUESTED		ORGANIC: VOA	BNA	Pest/PCB	Herb		TOX		INORG: Tot Metal Id	CN	TDS	IC Anions	ALK	NO2 NO3		

Lionville Laboratory Use Only

MATRIX CODES: S - Soil; SE - Sediment; SD - Solid; SL - Sludge; W - Water; O - Oil; A - Air; DS - Drum Solids; DL - Drum Liquids; L - EP/TCLP Leachate; WI - Wipe; X - Other; F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0624H					TTOX		METO TO		ITDS	ICO	IALKL	IN3N2		
011	[illegible]			[illegible]	[illegible]	0745	[illegible]					[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		
012	B1GD-13			[illegible]	[illegible]	1220	[illegible]					[illegible]		[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		

Special Instructions:

METO = Al, Ag, Ba, Be, Cd, Ca, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Sb, V, Zn

ICO = Cl, Fl, SO4, PO4, NO3, NO2, Br

DATE/REVISIONS:

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

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	3/24/05	0935

Relinquished by	Received by	Date	Time

Relinquished by	Received by	Date	Time

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # B03-018-100
		Page 1 of 1

Collector R.T. SICKLE	Contact/Requester JH KESSNER	Telephone No. 509-375-4688 MSIN FAX
SAF No. B03-018	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ERDF Groundwater Well Samples	DTS-SAWS-H89	Ice Chest No. SAW 135 Temp.
Shipped To (Lab) Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No. 7904-6602-0450
Protocol GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CCY3 (F)		W	3-23-05	1031	1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CCY4		W			1x500-mL G/P	TDS - 160.1	Cool 4C
B1CCY4		W			3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CCY4		W			1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CCY4		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1CCY4		W			1x250-mL G/P	Alkalinity - 310.1	Cool 4C
B1CCY4		W			1x500-mL G/P	NO2/NO3 - 353.2	H2SO4 to pH <2 Cool 4C
B1CCY4		W			1x20-mL P	Activity Scan	None
B1CCY4		W			1x500-mL aGs*	TOX - 9020	H2SO4 to pH <2 Cool 4C

Relinquished By	Date/Time	Received By	Date/Time
Print R.T. SICKLE Sign	1410 MAR 23 2005	Print Fed Ex Sign	
Relinquished By Fed Ex	3-24-05 0935	Received By	3-24-05 0935
Relinquished By		Received By	
Relinquished By		Received By	

Matrix *

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

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # B03-018-101

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: JH KESSNER	Telephone No.: 509-375-4688 MSIN FAX
SAF No.: B03-018	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: ERDF Groundwater Well Samples	DTS-SAWS-1189	Ice Chest No.: 54W6-115 Temp.
Shipped To (Lab): Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No.: 7904 6602 0450
Protocol: GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CCY6 (F)		W	3-23-05	1031	1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CCY7		W			1x500-mL G/P	TDS - 160.1	Cool 4C
B1CCY7		W			3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CCY7		W			1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CCY7		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1CCY7		W			1x250-mL G/P	Alkalinity - 310.1	Cool 4C
B1CCY7		W			1x500-mL G/P	NO2/NO3 - 353.2	H2SO4 to pH <2 Cool 4C
B1CCY7		W			1x20-mL P	Activity Scan	None
B1CCY7		W			1x500-mL aGs*	TOX - 9020	H2SO4 to pH <2 Cool 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005 1400	Fed Ex			
Relinquished By: Fed Ex			3-24-05 0935	Received By			3-24-05 0935
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SR = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # B03-018-108

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: JH KESSNER	Telephone No.: 509-375-4688 MSIN FAX
SAF No.: B03-018	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: ERDF Groundwater Well Samples	DTS - SAWJ - 489	Ice Chest No.: SAWJ-115 Temp.
Shipped To (Lab): Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No.: 7904660204 52
Protocol: GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
" "

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CD15		W	3-23-05	0745	3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CD15		W	↓	0745	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005	Fed Ex			
Fed Ex			3/24/05 0935	[illegible]			3-24-05 0935

Matrix *

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

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

PAGE 03
DURATEK INC
3721435
03/23/2005 08:18

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # B03-018-105

Collector R.T. SICKLE	Contact/Requester JH KESSNER	Telephone No. 509-375-4688 MSIN FAX
SAF No. B03-018	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ERDF Groundwater Well Samples	DTS-SAWS 489	Ice Chest No. SMC 526 Temp.
Shipped To (Lab) Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No. 7909 5794 9706
Protocol GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CD07 (F)		W	3-23-05	0745	1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD08		W			1x500-mL G/P	TDS - 160.1	Cool 4C
B1CD08		W			3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CD08		W			1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD08		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1CD08		W			1x250-mL G/P	Alkalinity - 310.1	Cool 4C
B1CD08		W			1x500-mL G/P	NO2/NO3 - 353.2	H2SO4 to pH <2 Cool 4C
B1CD08		W			1x20-mL P	Activity Scan	None
B1CD08		W			1x500-mL aGs*	TOX - 9020	H2SO4 to pH <2 Cool 4C

Relinquished By	Date/Time	Received By	Date/Time
Print R.T. SICKLE Sign	MAR 23 2005 1400	Print Fed Ex Sign	
Relinquished By	3-24-05 0935	Received By	3-24-05 0935
Relinquished By		Received By	
Relinquished By		Received By	

Matrix *

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

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # B03-018-104

Page 1 of 1

Collector R.T. SICKLE	Contact/Requester JH KESSNER	Telephone No. 509-375-4688 MSIN FAX
SAF No. B03-018	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ERDF Groundwater Well Samples	DTS-SAW3-1189	Ice Chest No. SMC-526 Temp.
Shipped To (Lab) Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No. 7909 5794 9706
Protocol GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CD04 (F)		W	3-23-05	0909	1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD05		W			1x500-mL G/P	TDS - 160.1	Cool 4C
B1CD05		W			3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CD05		W			1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD05		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1CD05		W			1x250-mL G/P	Alkalinity - 310.1	Cool 4C
B1CD05		W			1x500-mL G/P	NO2/NO3 - 353.2	H2SO4 to pH <2 Cool 4C
B1CD05		W			1x20-mL P	Activity Scan	None
B1CD05		W			1x500-mL aGs*	TOX - 9020	H2SO4 to pH <2 Cool 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005 1400	Fed Ex			
Relinquished By			3-24-05 0935	Received By			3-24-05 0935
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION

Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # B03-018-107

Page 1 of 1

Collector: R.T. SICKLE	Contact/Requester: JH KESSNER	Telephone No.: 509-375-4688 MSIN FAX
SAF No.: B03-018	Sampling Origin: HANFORD SITE	Purchase Order/Charge Code
Project Title: ERDF Groundwater Well Samples	DTS - SAWS - H&S	Ice Chest No.: SML-526 Temp.
Shipped To (Lab): Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No.: 7909579497 06
Protocol: GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CD14		W	3-23-05	0745	3x40-mL #Gs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CD14		W	↓	0745	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005 1400	Fed Ex			
Fed Ex			3-24-05 0935				3-24-05 0935

Matrix *

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

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process) | Disposed By | Date/Time

PNNL	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # B03-018-102
		Page 1 of 1

Collector R.T. SICKLE	Contact/Requester JH KESSNER	Telephone No. 509-375-4688 MSIN FAX
SAF No. B03-018	Sampling Origin HANFORD SITE	Purchase Order/Charge Code
Project Title ERDF Groundwater Well Samples	DTI-SAWS-1489	Ice Chest No. 5mc 526 Temp.
Shipped To (Lab) Lionville Laboratory Incorporated	Method of Shipment	Bill of Lading/Air Bill No. 7909 5794 9706
Protocol GPP	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Batch all PNNL GW samples submitted under this SAF into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to JH Kessner (fax 509-372-9609)

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CCY9 (F)		W	3-23-05	1227	1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD13		W			1x500-mL G/P	TDS - 160.1	Cool 4C
B1CD13		W			3x40-mL aGs*	VOA - 8260B (TCL)	HCl or H2SO4 to pH <2 Cool 4C
B1CD13		W			1x500-mL G/P	ICP Metals - 6010B (TAL)	HNO3 to pH <2
B1CD13		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1CD13		W			1x250-mL G/P	Alkalinity - 310.1	Cool 4C
B1CD13		W			1x500-mL G/P	NO2/NO3 - 353.2	H2SO4 to pH <2 Cool 4C
B1CD13		W			1x20-mL P	Activity Scan	None
B1CD13		W			1x500-mL aGs*	TOX - 9020	H2SO4 to pH <2 Cool 4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R.T. SICKLE			MAR 23 2005 1400	Fed Ex			
Relinquished By			Date/Time	Received By			Date/Time
Fed Ex			3-24-05 0935				3-24-05 0935
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil		DS	= Drum Solid	
SE	= Sediment		DL	= Drum Liquid	
SO	= Solid		T	= Tissue	
SL	= Sludge		WI	= Wine	
W	= Water		L	= Liquid	
O	= Oil		V	= Vegetation	
A	= Air		X	= Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

Lionville Laboratory Incorporated

SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU HANFORD **Date:** 3/24/05

Purchase Order / Project# /
SAF# / SOW# / Release #: B03-018

LvLI Batch # : 0503L066 **Sample Custodian:** [illegible]

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or Shipped	Carrier Fed Ex	Airbill# 7904660204 50 7909 5794 9706	
2.	Custody seals on coolers or shipping container intact, signed and dated?	☑ Yes	☐ No	☐ No Seals Comments
3.	Outside of coolers or shipping containers are free from damage?	☑ Yes	☐ No	
4.	All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible?	☑ Yes	☐ No	
5.	Samples received cooled or ambient?	Temp 2.1 3.9 °C	Cooler # SAW5-115 SMAC 726	
6.	Custody seals on sample containers intact, signed and dated?	☑ Yes	☐ No	☐ No Seals
7.	coc signed and dated?	☑ Yes	☐ No	
8.	Sample containers are intact?	☑ Yes	☐ No	
9.	All samples on coc received? All samples received on coc?	☑ Yes	☐ No	
10.	All sample label information matches coc?	☑ Yes	☐ No	
11.	Samples properly preserved?	☑ Yes	☐ No	
12.	Samples received within hold times? Short holds taken to wet lab?	☑ Yes	☐ No	
13.	VOA, TOC, TOX free of headspace?	☐ Yes	☑ No	☐ N/A # 007,009,012 air Bubble
14.	QC stickers placed on bottles designated by client?	☐ Yes	☐ No	☑ N/A
15.	Shipment meets LvLI Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy)	☑ Yes	☐ No	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☑ Yes	☐ No	☐ No Discrepancies

SR-002-B

05