Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD I05-027 H3084

DATE RECEIVED: 03/16/05 LVL LOT # :0503L016

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS	ANALYSIS TIME
B1CB52							
BROMIDE BY IC	002	W	05LICC18	03/15/05	03/23/05	03/23/05	
BROMIDE BY IC	002 REP	W	05LICC18	03/15/05	03/23/05	03/23/05	
BROMIDE BY IC	002 MS	W	05LICC18	03/15/05	03/23/05	03/23/05	
CHLORIDE BY IC	002	W	05LICA18	03/15/05	03/23/05	03/23/05	
CHLORIDE BY IC	002 REP	W	05LICA18	03/15/05	03/23/05	03/23/05	
CHLORIDE BY IC	002 MS	W	05LICA18	03/15/05	03/23/05	03/23/05	
FLUORIDE BY IC	002	W	05LIC018	03/15/05	03/23/05	03/23/05	
FLUORIDE BY IC	002 REP	W	05LIC018	03/15/05	03/23/05	03/23/05	
FLUORIDE BY IC	002 MS	W	05LIC018	03/15/05	03/23/05	03/23/05	
NITRITE BY IC	002	W	05LICB18	03/15/05	03/23/05	03/23/05	1503
NITRITE BY IC	002 REP	W	05LICB18	03/15/05	03/23/05	03/23/05	1517
NITRITE BY IC	002 MS	W	05LICB18	03/15/05	03/23/05	03/23/05	1532
NITRATE BY IC	002	W	05LICA17	03/15/05	03/21/05	03/21/05	1312
NITRATE BY IC	002 REP	W	05LICA17	03/15/05	03/21/05	03/21/05	1326
NITRATE BY IC	002 MS	W	05LICA17	03/15/05	03/21/05	03/21/05	1341
PHOSPHATE BY IC	002	W	05LICD18	03/15/05	03/23/05	03/23/05	1503
PHOSPHATE BY IC	002 REP	W	05LICD18	03/15/05	03/23/05	03/23/05	1517
PHOSPHATE BY IC	002 MS	W	05LICD18	03/15/05	03/23/05	03/23/05	1538
SULFATE BY IC	002	W	05LICA17	03/15/05	03/21/05	03/21/05	
SULFATE BY IC	002 REP	W	05LICA17	03/15/05	03/21/05	03/21/05	
SULFATE BY IC	002 MS	W	05LICA17	03/15/05	03/21/05	03/21/05	

LAB QC:

BROMIDE BY IC	MB1	W	05LICC18	N/A	03/23/05	03/23/05	
BROMIDE BY IC	MB1 BS	W	05LICC18	N/A	03/23/05	03/23/05	
CHLORIDE BY IC	MB1	W	05LICA18	N/A	03/23/05	03/23/05	
CHLORIDE BY IC	MB1 BS	W	05LICA18	N/A	03/23/05	03/23/05	
FLUORIDE BY IC	MB1	W	05LIC018	N/A	03/23/05	03/23/05	
FLUORIDE BY IC	MB1 BS	W	05LIC018	N/A	03/23/05	03/23/05	
NITRITE BY IC	MB1	W	05LICB18	N/A	03/23/05	03/23/05	
NITRITE BY IC	MB1 BS	W	05LICB18	N/A	03/23/05	03/23/05	
NITRATE BY IC	MB1	W	05LICA17	N/A	03/21/05	03/21/05	
NITRATE BY IC	MB1 BS	W	05LICA17	N/A	03/21/05	03/21/05	
PHOSPHATE BY IC	MB1	W	05LICD18	N/A	03/23/05	03/23/05	

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PHOSPHATE BY IC	MB1 BS	W	05LICD18	N/A	03/23/05	03/23/05
SULFATE BY IC	MB1	W	05LICA17	N/A	03/21/05	03/21/05
SULFATE BY IC	MB1 BS	W	05LICA17	N/A	03/21/05	03/21/05

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD I05-027 H3084
LVL#: 0503L016

W.O.#: 11343-606-001-9999-00
Date Received: 03-16-05

INORGANIC NARRATIVE

1. This narrative covers the analyses of 1 water sample.

2. The sample was prepared and analyzed in accordance with the method checked on the attached glossary.

3. Sample holding times as required by the method and/or contract were met with the exception of Nitrite, Nitrate and Phosphate (see the sample chronology summary for analyses times for short hold samples).

4. The results presented in this report are derived from a sample 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 for Bromide, Chloride, Fluoride, Nitrite, Nitrate, Phosphate and Sulfate were within the 75-125% control limits.

8. The replicate analyses for Bromide, Chloride, Fluoride, Nitrite, Nitrate, Phosphate and Sulfate 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 Incorporated

4/29/05
Date

njp\i03-016

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:**	

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 04/05/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-002	B1CB52	Bromide by IC	0.25 u	MG/L	0.25	1.0
		Chloride by IC	8.6	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	29.9	MG/L	2.50	10.0
		Phosphate by IC	0.25 u	MG/L	0.25	1.0
		Sulfate by IC	33.2	MG/L	2.5	10.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/05/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016
WORK ORDER: 11343-606-001-9999-00

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK10	05LICC18-MB1	Bromide by IC	0.25 u	MG/L	0.25	1.0
BLANK10	05LICA18-MB1	Chloride by IC	0.25 u	MG/L	0.25	1.0
BLANK10	05LIC018-MB1	Fluoride by IC	0.25 u	MG/L	0.25	1.0
BLANK10	05LICB18-MB1	Nitrite by IC	0.25 u	MG/L	0.25	1.0
BLANK10	05LICA17-MB1	Nitrate by IC	0.25 u	MG/L	0.25	1.0
		Sulfate by IC	0.25 u	MG/L	0.25	1.0
BLANK10	05LICD18-MB1	Phosphate by IC	0.25 u	MG/L	0.25	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/05/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-002	B1CB52	Bromide by IC	8.4	0.00	10.0	84.3	2.0
		Chloride by IC	18.1	8.6	10.0	94.3	2.0
		Fluoride by IC	8.3	0.041	10.0	82.2	2.0
		Nitrite by IC	8.52	0.25u	10.0	85.2	2.0
		Nitrate by IC	130	29.9	100	99.7	20.0
		Phosphate by IC	8.3	0.25u	10.0	82.6	2.0
		Sulfate by IC	134	33.2	100	100.9	20.0
BLANK10	05LICC18-MB1	Bromide by IC	4.6	0.25u	5.0	92.5	1.0
BLANK10	05LICA18-MB1	Chloride by IC	4.6	0.25u	5.0	91.9	1.0
BLANK10	05LIC018-MB1	Fluoride by IC	4.7	0.25u	5.0	94.0	1.0
BLANK10	05LICB18-MB1	Nitrite by IC	4.73	0.25u	5.00	94.6	1.0
BLANK10	05LICA17-MB1	Nitrate by IC	4.76	0.25u	5.00	95.1	1.0
		Sulfate by IC	4.8	0.25u	5.0	96.5	1.0
BLANK10	05LICD18-MB1	Phosphate by IC	5.2	0.25u	5.0	104.0	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/05/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-002REP	B1CB52	Bromide by IC	0.25u	0.25u	NC	1.0
		Chloride by IC	8.6	8.7	0.83	1.0
		Fluoride by IC	0.25u	0.25u	NC	1.0
		Nitrite by IC	0.25u	0.25u	NC	1.0
		Nitrate by IC	29.9	31.6	5.6	10.0
		Phosphate by IC	0.25u	0.25u	NC	1.0
		Sulfate by IC	33.2	33.9	2.1	10.0

Lionville Laboratory Use Only

0503L016

REVISION

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU HANFORD SAF# I05-027

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: OJ

QC: Spec Del: Std TAT: ~~30 Days~~ 22 Days (spedited 05)

Date Rec'd: 3/16/05 Date Due: ~~4/15/05~~ 4/7/05 (sp 3/24/05)

		A	B
Refrigerator #		5	5
#/Type Container	Liquid	P	P
	Solid		
Volume	Liquid	500	500
	Solid		
Preservatives		HNO3	—

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN, IC (Anions)

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	METALS①	IC①
001	BICB51 (F)			W	3/15/05	0919	1	
002	BICB52			〃	〃	〃		1

Special Instructions: RUN MATRIX QC

METALS① = Al, Ag, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Sb, V, Zn (Soluble)

IC① = Cl, Br, FL, SO4, PO4, NO3, NO2

DATE/REVISIONS:

3/24/05 1. To be analyzed on the Polyscan. TAT = 22 days, due 4/7/05 per OJ

2.

3.

4.

5.

6.

Relinquished by	Received by	Date	Time
FQE	[signature]	3/16/05	1330

Relinquished by	Received by	Date	Time

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

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I05-027-21

Page 1 of 1

Collector DURATEK F. M. HALL	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. I05-027	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title CERCLA 100NR2 MARCH 2005	Logbook: DTS-SAWS-H91	**Ice Chest No.** 2205 **Temp.**
Shipped To (Lab) Lionville Laboratory Incorporated	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.** 791007584050
Protocol CERCLA	**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 "I05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CB51 (F)		W	3/15/05	0919	1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1CB52		W	↓	↓	1x500-mL P	IC Anions - 300.0	Cool 4C
B1CB52		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
DURATEK F. M. HALL			MAR 15 2005 1400	FEDEX			
Relinquished By			Date/Time	Received By			Date/Time
Fed Ex			3-16-05 1330				3-16-05 1330
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 Liqui	
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: TWU- HANFORD **Date:** 3-16-05

Purchase Order / Project# / (SAF#) SOW# / Release #: I05-027

LvLI Batch # : 0503L016 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier FedEx	Airbill# 7910 0758 4050	
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 3°	°C	Cooler # 2205
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~~ PH * NA	
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 not within policy. See reverse side for policy)	☑ Yes	~~☐ No~~ * Amb 4-13-05 ~~Acc #12~~	
16.	Project Manager contacted concerning discrepancies? name/date (or samples outside criteria)	☑ Yes	☐ No	☐ No Discrepancies

SR-002-B

Lionville Laboratory, Inc.
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TNUHANFORD I05-027 H3084

DATE RECEIVED: 03/16/05 LVL LOT # :0503L016

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1CB51						
SILVER, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
SILVER, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
SILVER, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
ALUMINUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
ALUMINUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
ALUMINUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
BARIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
BARIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
BARIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
BERYLLIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
BERYLLIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
BERYLLIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
CALCIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
CALCIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
CALCIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
CADMIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
CADMIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
CADMIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
COBALT, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
COBALT, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
COBALT, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
CHROMIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
CHROMIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
CHROMIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
COPPER, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
COPPER, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
COPPER, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
IRON, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
IRON, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
IRON, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
POTASSIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
POTASSIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
POTASSIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
MAGNESIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
MAGNESIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05

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TNUHANFORD I05-027 H3084

DATE RECEIVED: 03/16/05 LVL LOT # :0503L016

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MAGNESIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
MANGANESE, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
MANGANESE, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
MANGANESE, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
SODIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
SODIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
SODIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
NICKEL, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
NICKEL, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
NICKEL, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
ANTIMONY, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
ANTIMONY, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
ANTIMONY, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
VANADIUM, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
VANADIUM, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
VANADIUM, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05
ZINC, SOLUBLE	001	W	05L0179	03/15/05	04/05/05	04/05/05
ZINC, SOLUBLE	001 REP	W	05L0179	03/15/05	04/05/05	04/05/05
ZINC, SOLUBLE	001 MS	W	05L0179	03/15/05	04/05/05	04/05/05

LAB QC:

SILVER LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
SILVER, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
ALUMINUM LABORTORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
ALUMINUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
BARIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
BARIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
BERYLLIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
BERYLLIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
CALCIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
CALCIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
CADMIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
CADMIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
COBALT LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
COBALT, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
CHROMIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
CHROMIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05

Lionville Laboratory, Inc.
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD I05-027 H3084

DATE RECEIVED: 03/16/05 LVL LOT # :0503L016

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
COPPER LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
COPPER, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
IRON LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
IRON, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
POTASSIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
POTASSIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
MAGNESIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
MAGNESIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
MANGANESE LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
MANGANESE, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
SODIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
SODIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
NICKEL LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
NICKEL, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
ANTIMONY LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
ANTIMONY, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
VANADIUM LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
VANADIUM, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05
ZINC LABORATORY	LC1 BS	W	05L0179	N/A	04/05/05	04/05/05
ZINC, SOLUBLE	MB1	W	05L0179	N/A	04/05/05	04/05/05

LIONVILLE LABORATORY INC.

Analytical Report

Client: TNU-HANFORD I05-027
LVL#: 0503L016
SDG/SAF#: H3084/I05-027

W.O.#: 11343-606-001-9999-00
Date Received: 03-16-05

METALS CASE NARRATIVE

1. This narrative covers the analysis of 1 water sample.

2. The sample was prepared and analyzed in accordance with methods checked on the attached glossary.

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

4. Please refer to the Sample Receipt Check List for sample discrepancies in LvLI's sample acceptance policy.

5. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits.

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

7. The preparation/method blanks for 4 analytes were outside method criteria. {less than the Practical Quantitation Limit (3X the IDL), 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 results for Cadmium, Copper, Potassium, and Zinc were greater than the Practical Quantitation Limit (PQL) {3 x the (IDL) Instrument Detection Level} 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. Refer to the Inorganics Laboratory Control Standards Report.

10. All matrix spike (MS) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.

11. The duplicate analyses for 4 analytes were outside the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.

12. For the purposes of this report, the data has been reported to the Instrument Detection Limit (IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

13. 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

4/26/05
Date

gmb/m03-016

LVLI
LIONVILLE LABORATORY INC.

METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0503L016

Leaching Procedure: __1310 __1311 __1312 __Other:_____

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

Metals Digestion Methods: ✓3005A __3010A __3015 __3020A __3050B __3051 __200.7 __SS17
__Other:_____

Metals Analysis Methods

	SW846		EPA		STD MTD	EPA OSWR	USATHAMA
Aluminum	✓6010B		__200.7				__99
Antimony	✓6010B	__7041 [5]	__200.7	__204.2			__99
Arsenic	__6010B	__7060A [5]	__200.7	__206.2	__3113B		__99
Barium	✓6010B		__200.7				__99
Beryllium	✓6010B		__200.7				__99
Bismuth	__6010B [1]		__200.7 [1]			__1620	__99
Boron	__6010B		__200.7				__99
Cadmium	✓6010B	__7131A [5]	__200.7	__213.2			__99
Calcium	✓6010B		__200.7				__99
Chromium	✓6010B	__7191 [5]	__200.7	__218.2			__SS17
Cobalt	✓6010B		__200.7				__99
Copper	✓6010B	__7211 [5]	__200.7	__220.2			__99
Iron	✓6010B		__200.7				__99
Lead	__6010B	__7421 [5]	__200.7	__239.2	__3113B		__99
Lithium	__6010B	__7430 [4]	__200.7			__1620	__99
Magnesium	✓6010B		__200.7				__99
Manganese	✓6010B		__200.7				__99
Mercury	__7470A [3]	__7471A [3]	__245.1 [2]	__245.5 [2]			__99
Molybdenum	__6010B		__200.7				__99
Nickel	✓6010B		__200.7				__99
Potassium	✓6010B	__7610 [4]	__200.7	__258.1 [4]			__99
Rare Earths	__6010B [1]		__200.7 [1]			__1620	__99
Selenium	__6010B	__7740 [5]	__200.7	__270.2	__3113B		__99
Silicon	__6010B [1]		__200.7			__1620	__99
Silica	__6010B		__200.7			__1620	__99
Silver	✓6010B	__7761 [5]	__200.7	__272.2			__99
Sodium	✓6010B	__7770 [4]	__200.7	__273.1 [4]			__99
Strontium	__6010B		__200.7				__99
Thallium	__6010B	__7841 [5]	__200.7	__279.2	__200.9		__99
Tin	__6010B		__200.7				__99
Titanium	__6010B		__200.7				__99
Uranium	__6010B [1]		__200.7 [1]			__1620	__99
Vanadium	✓6010B		__200.7				__99
Zinc	✓6010B		__200.7				__99
Zirconium	__6010B [1]		__200.7 [1]			__1620	__99

Other:_____ Method:_____

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.

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 04/07/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1CB51	Silver, Soluble	5.3	u	UG/L	5.3	1.0
		Aluminum, Soluble	86.8		UG/L	20.8	1.0
		Barium, Soluble	22.4		UG/L	2.6	1.0
		Beryllium, Soluble	0.20	u	UG/L	0.20	1.0
		Calcium, Soluble	36100		UG/L	23.7	1.0
		Cadmium, Soluble	4.2		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	4.0		UG/L	2.3	1.0
		Iron, Soluble	98.5		UG/L	21.1	1.0
		Potassium, Soluble	2010		UG/L	428	1.0
		Magnesium, Soluble	6110		UG/L	38.1	1.0
		Manganese, Soluble	2.2	u	UG/L	2.2	1.0
		Sodium, Soluble	3220		UG/L	18.5	1.0
		Nickel, Soluble	18.0	u	UG/L	18.0	1.0
		Antimony, Soluble	22.9	u	UG/L	22.9	1.0
		Vanadium, Soluble	3.1	u	UG/L	3.1	1.0
		Zinc, Soluble	8.6		UG/L	1.4	1.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 04/07/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	RESULT		UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	05L0179-MB1	Silver, Soluble	1.0		UG/L	0.50	1.0
		Aluminum, Soluble	9.4	u	UG/L	9.4	1.0
		Barium, Soluble	1.1		UG/L	0.20	1.0
		Beryllium, Soluble	0.10	u	UG/L	0.10	1.0
		Calcium, Soluble	11.7		UG/L	7.8	1.0
		Cadmium, Soluble	2.6		UG/L	0.40	1.0
		Cobalt, Soluble	0.70	u	UG/L	0.70	1.0
		Chromium, Soluble	0.40	u	UG/L	0.40	1.0
		Copper, Soluble	1.8		UG/L	0.50	1.0
		Iron, Soluble	20.9		UG/L	8.4	1.0
		Potassium, Soluble	149		UG/L	8.4	1.0
		Magnesium, Soluble	11.9		UG/L	5.7	1.0
		Manganese, Soluble	0.20	u	UG/L	0.20	1.0
		Sodium, Soluble	113		UG/L	1.5	1.0
		Nickel, Soluble	1.0	u	UG/L	1.0	1.0
		Antimony, Soluble	2.2	u	UG/L	2.2	1.0
		Vanadium, Soluble	0.60	u	UG/L	0.60	1.0
		Zinc, Soluble	2.4		UG/L	0.50	1.0

Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 04/07/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR(SPK)
-001	B1CB51	Silver, Soluble	46.2	5.3 u	50.0	92.4	1.0
		Aluminum, Soluble	1890	86.8	2000	90.2	1.0
		Barium, Soluble	1900	22.4	2000	93.7	1.0
		Beryllium, Soluble	45.6	0.20u	50.0	91.2	1.0
		Calcium, Soluble	59800	36100	25000	94.9	1.0
		Cadmium, Soluble	51.4	4.2	50.0	94.4	1.0
		Cobalt, Soluble	467	6.4 u	500	93.5	1.0
		Chromium, Soluble	187	9.7 u	200	93.7	1.0
		Copper, Soluble	236	4.0	250	93.0	1.0
		Iron, Soluble	961	98.5	1000	86.2	1.0
		Potassium, Soluble	25400	2010	25000	93.8	1.0
		Magnesium, Soluble	29300	6110	25000	92.8	1.0
		Manganese, Soluble	461	2.2 u	500	92.2	1.0
		Sodium, Soluble	26400	3220	25000	92.8	1.0
		Nickel, Soluble	462	18.0 u	500	92.5	1.0
		Antimony, Soluble	458	22.9 u	500	91.6	1.0
		Vanadium, Soluble	452	3.1 u	500	90.4	1.0
		Zinc, Soluble	467	8.6	500	91.8	1.0

Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 04/07/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR(REP)
-001REP	B1CB51	Silver, Soluble	5.3 u	5.3 u	NC	1.0
		Aluminum, Soluble	86.8	54.0	46.6	1.0
		Barium, Soluble	22.4	21.7	3.2	1.0
		Beryllium, Soluble	0.20u	0.20u	NC	1.0
		Calcium, Soluble	36100	35600	1.4	1.0
		Cadmium, Soluble	4.2	4.3	2.4	1.0
		Cobalt, Soluble	6.4 u	6.4 u	NC	1.0
		Chromium, Soluble	9.7 u	12.9	NC	1.0
		Copper, Soluble	4.0	3.1	25.4	1.0
		Iron, Soluble	98.5	79.9	20.9	1.0
		Potassium, Soluble	2010	2020	0.40	1.0
		Magnesium, Soluble	6110	6020	1.4	1.0
		Manganese, Soluble	2.2 u	2.2 u	NC	1.0
		Sodium, Soluble	3220	3210	0.29	1.0
		Nickel, Soluble	18.0 u	18.0 u	NC	1.0
		Antimony, Soluble	22.9 u	22.9 u	NC	1.0
		Vanadium, Soluble	3.1 u	3.1 u	NC	1.0
		Zinc, Soluble	8.6	9.0	4.5	1.0

≤ 200 ugp 4/22/05

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 04/07/05

CLIENT: TNUHANFORD I05-027 H3084 LVL LOT #: 0503L016

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
LCS1	05L0179-LC1	Silver, LCS	491	500	UG/L	98.3
		Aluminum, LCS	5220	5000	UG/L	104.5
		Barium, LCS	5110	5000	UG/L	102.1
		Beryllium, LCS	242	250	UG/L	96.8
		Calcium, LCS	24700	25000	UG/L	98.9
		Cadmium, LCS	249	250	UG/L	99.7
		Cobalt, LCS	2530	2500	UG/L	101.3
		Chromium, LCS	505	500	UG/L	101.0
		Copper, LCS	1270	1250	UG/L	101.7
		Iron, LCS	5040	5000	UG/L	100.9
		Potassium, LCS	26000	25000	UG/L	103.8
		Magnesium, LCS	25200	25000	UG/L	100.8
		Manganese, LCS	747	750	UG/L	99.6
		Sodium, LCS	25600	25000	UG/L	102.5
		Nickel, LCS	2040	2000	UG/L	101.9
		Antimony, LCS	2910	3000	UG/L	96.9
		Vanadium, LCS	2460	2500	UG/L	98.5
		Zinc, LCS	1000	1000	UG/L	100.2

Lionville Laboratory Use Only

0503L016

REVISION

Custody Transfer Record/Lab Work Request

Page 1 of 1

See SRC

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client: TNU HANFORD SAF# I05-027

Est. Final Proj. Sampling Date:

Project #: 11343-606-001-9999-00

Project Contact/Phone #:

Lionville Laboratory Project Manager: OJ 5/24/05

QC: Spec Del: Std TAT: 30 Days 22 Days

Date Rec'd: 3/16/05 Date Due: 4/15/05 4/7/05 JP 3/24/05

		A	B
Refrigerator #		5	5
#/Type Container	Liquid	P	P
	Solid		
Volume	Liquid	500	500
	Solid		
Preservatives		HNO3	—

ANALYSES REQUESTED

ORGANIC				INORG		
VOA	BNA	Pest/PCB	Herb	Metal	CN	IC Anions

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	Lionville Laboratory Use Only: Metals①	IC①
001	B1CB51 (F)			W	3/15/05	0919	1	
002	B1CB52			1	1	1		1

Special Instructions: RUN MATRIX QC

METALS① = Al, Ag, Ba, Be, Ca, Cd, Co, Cr, (Soluble) Cu, Fe, K, Mg, Mn, Na, Ni, Sb, V, Zn

IC① = Cl, Br, F, SO4, PO4, NO3, NO2

DATE/REVISIONS:

3/24/05 1. To be analyzed on the Polyscan. TAT = 22 days, due 4/7/05 per OJ

2.

3.

4.

5.

6.

Relinquished by	Received by	Date	Time
FQEC	[signature]	3/16/05	1330

Relinquished by	Received by	Date	Time

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

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I05-027-21

Page 1 of 1

Collector DURATEK F. M. HALL	**Contact/Requester** DL STEWART	**Telephone No.** 509-376-5056 **MSIN** **FAX**
SAF No. I05-027	**Sampling Origin** HANFORD SITE	**Purchase Order/Charge Code**
Project Title CERCLA 100NR2, MARCH 2005	Logbook: DTS-SAWS-H91	**Ice Chest No.** 2205 **Temp.**
Shipped To (Lab) Lionville Laboratory Incorporated	**Method of Shipment** GOVT. VEHICLE	**Bill of Lading/Air Bill No.** 791007584050
Protocol CERCLA	**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 "I05" SAF's into one SDG, not to exceed SDG closure of 14 days.
Submit invoices & deliverables to DL Stewart, PNNL

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1CB51 (F)		W	3/15/05	0919	1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1CB52		W	↓	↓	1x500-mL P	IC Anions - 300.0	Cool 4C
B1CB52		W	↓	↓	1x20-mL P	Activity Scan	None

Relinquished By DURATEK F. M. HALL Print / Sign MAR 15 2005 Date/Time 1400	**Received By** FEDEX Print / Sign / Date/Time	**Matrix ***	
Relinquished By Fed Ex Date/Time 3-16-05 1330	**Received By** Date/Time 3-16-05 1330	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air	DS = Drum Solid, DL = Drum Liqui, T = Tissue, WI = Wine, L = Liquid, V = Vegetation, X = Other
Relinquished By Date/Time	**Received By** Date/Time		
Relinquished By Date/Time	**Received By** Date/Time		
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: TWU- HANFORD **Date:** 3-16-05

Purchase Order / Project# / (SAF#) SOW# / Release #: I05-007

LvLI Batch # : 0503L016 **Sample Custodian:** Victor Hernandez

NOTE: EXPLAIN ALL DISCREPANCIES

1.	Samples Hand Delivered or (Shipped)	Carrier Fed Ex	Airbill# 7910 0758 4050	
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° °C		Cooler # 2205
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 pH	
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 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