

Lionville Laboratory, Inc.  
 INORGANIC ANALYTICAL DATA PACKAGE FOR  
 TNU-HANFORD I07-006, H3467

DATE RECEIVED: 11/21/06

LVL LOT # :0611L400

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B1KYX5						
BROMIDE BY IC	002	W	06LICB96	11/20/06	11/27/06	11/28/06
BROMIDE BY IC	002 REP	W	06LICB96	11/20/06	11/27/06	11/28/06
BROMIDE BY IC	002 MS	W	06LICB96	11/20/06	11/27/06	11/28/06
CHLORIDE BY IC	002	W	06LICA95	11/20/06	11/24/06	11/24/06
CHLORIDE BY IC	002 REP	W	06LICA96	11/20/06	11/27/06	11/27/06
CHLORIDE BY IC	002 MS	W	06LICA96	11/20/06	11/27/06	11/27/06
FLUORIDE BY IC	002	W	06LIC096	11/20/06	11/27/06	11/27/06
FLUORIDE BY IC	002 REP	W	06LIC096	11/20/06	11/27/06	11/27/06
FLUORIDE BY IC	002 MS	W	06LIC096	11/20/06	11/27/06	11/27/06
NITRITE BY IC	002	W	06LICB96	11/20/06	11/27/06	11/28/06
NITRITE BY IC	002 REP	W	06LICB96	11/20/06	11/27/06	11/28/06
NITRITE BY IC	002 MS	W	06LICB96	11/20/06	11/27/06	11/28/06
NITRATE BY IC	002	W	06LICC95	11/20/06	11/24/06	11/24/06
NITRATE BY IC	002 REP	W	06LICC96	11/20/06	11/27/06	11/27/06
NITRATE BY IC	002 MS	W	06LICC96	11/20/06	11/27/06	11/27/06
PHOSPHATE BY IC	002	W	06LICC96	11/20/06	11/27/06	11/27/06
PHOSPHATE BY IC	002 REP	W	06LICC96	11/20/06	11/27/06	11/27/06
PHOSPHATE BY IC	002 MS	W	06LICC96	11/20/06	11/27/06	11/27/06
SULFATE BY IC	002	W	06LICD96	11/20/06	11/27/06	11/27/06
SULFATE BY IC	002 REP	W	06LICD96	11/20/06	11/27/06	11/27/06
SULFATE BY IC	002 MS	W	06LICD96	11/20/06	11/27/06	11/27/06

1410  
 1424  
 1438  
 1554  
 2124  
 2137  
 2151  
 2205  
 2219

LAB QC:

BROMIDE BY IC	MB1	W	06LICB96	N/A	11/27/06	11/27/06
BROMIDE BY IC	MB1 BS	W	06LICB96	N/A	11/27/06	11/27/06
CHLORIDE BY IC	MB1	W	06LICA95	N/A	11/24/06	11/24/06
CHLORIDE BY IC	MB1 BS	W	06LICA95	N/A	11/24/06	11/24/06
CHLORIDE BY IC	MB1	W	06LICA96	N/A	11/27/06	11/27/06
CHLORIDE BY IC	MB1 BS	W	06LICA96	N/A	11/27/06	11/27/06
FLUORIDE BY IC	MB1	W	06LIC096	N/A	11/27/06	11/27/06
FLUORIDE BY IC	MB1 BS	W	06LIC096	N/A	11/27/06	11/27/06
NITRITE BY IC	MB1	W	06LICB96	N/A	11/27/06	11/27/06
NITRITE BY IC	MB1 BS	W	06LICB96	N/A	11/27/06	11/27/06
NITRATE BY IC	MB1	W	06LICC95	N/A	11/24/06	11/24/06





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## Analytical Report

**Client:** TNU-HANFORD I07-006, H3467  
**LVL#:** 0611L400

**W.O.#:** 11343-606-001-9999-00  
**Date Received:** 11-21-06

### 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.

LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete list of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager. LvLI certifies that all test results meet the requirements of NELAC with any exception noted in the following statements.

Elevated reporting limit for Nitrite is the result of the necessity to dilute the sample to diminish co-elution effects.

3. Sample holding times as required by the method and/or contract were met with the exception of Nitrite, Phosphate and Nitrate (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 (MS) recoveries for Chloride, Fluoride, Nitrite, Nitrate and Sulfate were within the 75-125% control limits however MS recovery for Phosphate was below the control limit that may be attributed to matrix interference.

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

8. The replicate analyses for Bromide, Chloride, Fluoride, Nitrite, Nitrate, Phosphate and Sulfate were within the 20% Relative Percent Difference 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

1/8/07  
Date

njpl11-400



00000004

# 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		
<b>Other:</b>		<b>Method:</b>	

## 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 11/29/06

CLIENT: TNU-HANFORD I07-006  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0611L400

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
-002	B1KYX5	Bromide by IC	1.2	u MG/L	1.2	5.0
		Chloride by IC	33.6	MG/L	2.5	10.0
		Fluoride by IC	0.25	u MG/L	0.25	1.0
		Nitrite by IC	1.25	u MG/L	1.25	5.0
		Nitrate by IC	65.6	MG/L	2.50	10.0
		Phosphate by IC	0.25	u MG/L	0.25	1.0
		Sulfate by IC	139	MG/L	5.0	20.0

Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 11/29/06

CLIENT: TNU-HANFORD I07-006  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0611L400

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
BLANK10	06LICB96-MB1	Bromide by IC	0.25 u	MG/L	0.25	1.0
		Nitrite by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LICA95-MB1	Chloride by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LICA96-MB1	Chloride by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LIC096-MB1	Fluoride by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LICC95-MB1	Nitrate by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LICC96-MB1	Nitrate by IC	0.25 u	MG/L	0.25	1.0
		Phosphate by IC	0.25 u	MG/L	0.25	1.0
BLANK10	06LICD96-MB1	Sulfate by IC	0.25 u	MG/L	0.25	1.0



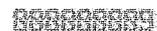
Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 11/29/06

CLIENT: TNU-HANFORD I07-006  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0611L400

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-002	B1KYX5	Bromide by IC	53.2	0.00	50.0	106.5	10.0
		Chloride by IC	138	33.6	100	104.4	20.0
		Fluoride by IC	9.8	0.066	10.0	97.7	1.0
		Nitrite by IC	56.7	1.25u	50.0	113.3	10.0
		Nitrate by IC	171	65.6	100	105.5	20.0
		Phosphate by IC	6.9	0.25u	10.0	68.8	2.0
		Sulfate by IC	339	139	200	99.6	40.0
BLANK10	06LICB96-MB1	Bromide by IC	5.0	0.25u	5.0	100.4	1.0
		Nitrite by IC	4.92	0.25u	5.00	98.4	1.0
BLANK10	06LICA95-MB1	Chloride by IC	4.8	0.25u	5.0	95.6	1.0
BLANK10	06LICA96-MB1	Chloride by IC	4.9	0.25u	5.0	97.2	1.0
BLANK10	06LIC096-MB1	Fluoride by IC	4.9	0.25u	5.0	99.0	1.0
BLANK10	06LICC95-MB1	Nitrate by IC	5.31	0.25u	5.00	106.2	1.0
BLANK10	06LICC96-MB1	Phosphate by IC	5.3	0.25u	5.0	105.9	1.0
BLANK10	06LICD96-MB1	Sulfate by IC	4.9	0.25u	5.0	98.3	1.0



Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 11/29/06

CLIENT: TNU-HANFORD I07-006  
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0611L400

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR (REP)
			RESULT	REPLICATE	RPD	
-002REP	B1KYX5	Bromide by IC	1.2 u	1.2 u	NC	5.0
		Chloride by IC	33.6	33.0	1.8	10.0
		Fluoride by IC	0.25u	0.25u	NC	1.0
		Nitrite by IC	1.25u	1.25u	NC	5.0
		Nitrate by IC	65.6	69.4	5.5	10.0
		Phosphate by IC	0.25u	0.25u	NC	1.0
		Sulfate by IC	139	139	0.17	20.0



Collector <b>Fluor Hanford</b> E.M. HALL	Contact/Requester Dot Stewart	Telephone No. 509-376-5056	MSIN FAX
SAF No. 107-006	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 100HR3IAM(1/2)-LOI NOVEMBER 2006	<b>HNF-N-506 4</b>	Ice Chest No. 9405-49	Temp.
Shipped To (Lab) Lionville Laboratory Incorporated	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No. 7990 4078 8473 <sup>as</sup>	
Protocol CERCLA	Priority: 45 Days	Offsite Property No.	

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)	<b>SPECIAL INSTRUCTIONS</b> Hold Time      Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days. WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.
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Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1KYX4 (F)		W	11-20-06	1328	1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1KYX5		W			1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1KYX5		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1KYX5		W			1x20-mL P	Activity Scan	None
<i>REP</i>							
11-20-06							

Relinquished By Fluor Hanford E.M. HALL	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time NOV 20 2006	Received By FED EX	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 11/21/06	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
Relinquished By <i>[Signature]</i>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 11/21/06 1330	Received By <i>[Signature]</i>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time 11/21/06 1330	
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	
Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time	

<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time
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21000000

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

CLIENT: TNU Hanford  
Project (SAP/SOW/Release #: TO 7-006)

Date: 11/21/06

LvLI Batch #: 0611L 400

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- |   |  |  |
|---|--|--|
| 1. Samples Hand Delivered or Shipped?   | Carrier <u>Fed Ex</u>  | Airbill # <u>79904078 8473</u>   |
| 2. Custody Seals on coolers-or shipping containers intact, signed & dated?  | <input checked="" type="checkbox"/> Yes  | <input type="checkbox"/> No<br><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<br>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>3.40</u> °C  | Cooler # <u>SAWS-49</u>  |
| How was the temperature taken?  | <input checked="" type="checkbox"/> IR   | <input type="checkbox"/> Temp. Blank<br><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<br><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?<br>All samples received on COC?   | <input checked="" type="checkbox"/> Yes<br><input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No<br><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  |
| 12. Samples received within hold times?<br>Short holds taken to wet lab?  | <input checked="" type="checkbox"/> Yes<br><input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No<br><input type="checkbox"/> No<br><input type="checkbox"/> N/A |
| 13. VOA, TOC, TOX free of headspace?  | <input type="checkbox"/> Yes   | <input type="checkbox"/> No<br><input checked="" type="checkbox"/> N/A                     |
| 14. QC stickers placed on bottles designated by client?   | <input type="checkbox"/> Yes   | <input type="checkbox"/> No<br><input checked="" 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?<br>Person Contacted _____   | <input type="checkbox"/> Yes   | <input type="checkbox"/> No<br><input checked="" type="checkbox"/> N/A                     |
|   | Date _____   |  |





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 INORGANIC ANALYTICAL DATA PACKAGE FOR  
 TNU-HANFORD I07-006

DATE RECEIVED: 11/21/06

LVL LOT # :0611L400

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
MAGNESIUM, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
MANGANESE, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
MANGANESE, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
MANGANESE, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
SODIUM, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
SODIUM, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
SODIUM, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
NICKEL, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
NICKEL, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
NICKEL, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
ANTIMONY, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
ANTIMONY, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
ANTIMONY, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
VANADIUM, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
VANADIUM, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
VANADIUM, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06
ZINC, SOLUBLE	001	W	06L0720	11/20/06	11/28/06	11/28/06
ZINC, SOLUBLE	001 REP	W	06L0720	11/20/06	11/28/06	11/28/06
ZINC, SOLUBLE	001 MS	W	06L0720	11/20/06	11/28/06	11/28/06

B1KYX5

SILVER, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
ALUMINUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
BARIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
BERYLLIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
CALCIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
CADMIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
COBALT, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
CHROMIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
COPPER, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
IRON, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
POTASSIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
MAGNESIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
MANGANESE, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
SODIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
NICKEL, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
ANTIMONY, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06

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LVL LOT # :0611L400

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
VANADIUM, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06
ZINC, TOTAL	002	W	06L0720	11/20/06	11/28/06	11/28/06

LAB QC:

SILVER LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
SILVER, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
ALUMINUM LABORTORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
ALUMINUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
BARIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
BARIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
BERYLLIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
BERYLLIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
CALCIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
CALCIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
CADMIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
CADMIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
COBALT LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
COBALT, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
CHROMIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
CHROMIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
COPPER LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
COPPER, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
IRON LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
IRON, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
POTASSIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
POTASSIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
MAGNESIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
MAGNESIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
MANGANESE LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
MANGANESE, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
SODIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
SODIUM, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
NICKEL LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
NICKEL, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
ANTIMONY LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06
ANTIMONY, TOTAL	MB1	W	06L0720	N/A	11/28/06	11/28/06
VANADIUM LABORATORY	LC1 BS	W	06L0720	N/A	11/28/06	11/28/06





Analytical Report

Client: TNU-HANFORD I07-006

W.O.#: 11343-606-001-9999-00

LVL#: 0611L400

Date Received: 11-21-06

SDG/SAF#: /I07-006 H3467

METALS CASE NARRATIVE

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

1. This narrative covers the analyses of 2 water samples.
2. The samples were prepared and analyzed in accordance with methods checked on the attached glossary.
3. All analyses were performed within the required holding times.
4. All Initial and Continuing Calibration Verifications (ICV/CCVs) were within the 90-110% control limits.
5. All Initial and Continuing Calibration Blanks (ICB/CCBs) were within control limits (less than the PQL).
6. All preparation/method blanks (MB) were within method criteria {less than the Practical Quantitation Limit (3X the IDL), or samples greater than 20X MB value}. Refer to the Inorganics Method Blank Data Summary.
7. All ICP Interference Check Standards were within control limits.
8. All laboratory control samples (LCS) were within the 80-120% control limits. Refer to the Inorganics Laboratory Control Standards Report.
9. All matrix spike (MS) recoveries were within the 75-125% control limits. Refer to the Inorganics Accuracy Report.
10. All duplicate analyses were within the 20% Relative Percent Difference (RPD) control limits. Refer to the Inorganics Precision Report.
11. For the purposes of this report, the data has been reported to the Instrument Detection Limit

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



(IDL). Values between the IDL and the Practical Quantitation Limit (PQL) are acquired in a region of less-certain quantification.

12. LvLI is NELAP accredited by the state of Pennsylvania and holds over 20 additional state accreditations. For a complete listing of accrediting authorities and the corresponding analytes/methods, please contact your Project Manager.
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  
jjw/ml1-400

12/7/06  
Date

# METALS METHOD GLOSSARY

The following methods are used as reference for the digestion and analysis of samples contained within this Lot#: 0611L400

Leaching Procedure:   1310  1311  1312  Other:\_\_\_\_\_

CLP Metals    Digestion and    Analysis Methods:   ILM03.0  ILM04.0

Metals Digestion Methods:   X3005A  3010A  3015  3020A  3050B  3051  200.7  SS17  
  Other: \_\_\_\_\_

## Metals Analysis Methods

	SW846	EPA	STD MTD	EPA OSWR	USATHAMA
Aluminum	<del>X</del> 6010B	200.7			99
Antimony	<del>X</del> 6010B 7041 <sup>5</sup>	200.7 204.2			99
Arsenic	6010B 7060A <sup>5</sup>	200.7 206.2	3113B		99
Barium	<del>X</del> 6010B	200.7			99
Beryllium	<del>X</del> 6010B	200.7			99
Bismuth	6010B <sup>1</sup>	200.7 <sup>1</sup>		1620	99
Boron	6010B	200.7			99
Cadmium	<del>X</del> 6010B 7131A <sup>5</sup>	200.7 213.2			99
Calcium	<del>X</del> 6010B	200.7			99
Chromium	<del>X</del> 6010B 7191 <sup>5</sup>	200.7 218.2			SS17
Cobalt	<del>X</del> 6010B	200.7			99
Copper	<del>X</del> 6010B 7211 <sup>5</sup>	200.7 220.2			99
Iron	<del>X</del> 6010B	200.7			99
Lead	6010B 7421 <sup>5</sup>	200.7 239.2	3113B		99
Lithium	6010B 7430 <sup>4</sup>	200.7		1620	99
Magnesium	<del>X</del> 6010B	200.7			99
Manganese	<del>X</del> 6010B	200.7			99
Mercury	7470A <sup>3</sup> 7471A <sup>3</sup>	245.1 <sup>2</sup> 245.5 <sup>2</sup>			99
Molybdenum	6010B	200.7			99
Nickel	<del>X</del> 6010B	200.7			99
Potassium	<del>X</del> 6010B 7610 <sup>4</sup>	200.7 258.1 <sup>4</sup>			99
Rare Earths	6010B <sup>1</sup>	200.7 <sup>1</sup>		1620	99
Selenium	6010B 7740 <sup>5</sup>	200.7 270.2	3113B		99
Silicon	6010B <sup>1</sup>	200.7		1620	99
Silica	6010B	200.7		1620	99
Silver	<del>X</del> 6010B 7761 <sup>5</sup>	200.7 272.2			99
Sodium	<del>X</del> 6010B 7770 <sup>4</sup>	200.7 273.1 <sup>4</sup>			99
Strontium	6010B	200.7			99
Thallium	6010B 7841 <sup>5</sup>	200.7 279.2 200.9			99
Tin	6010B	200.7			99
Titanium	6010B	200.7			99
Uranium	6010B <sup>1</sup>	200.7 <sup>1</sup>		1620	99
Vanadium	<del>X</del> 6010B	200.7			99
Zinc	<del>X</del> 6010B	200.7			99
Zirconium	6010B <sup>1</sup>	200.7 <sup>1</sup>		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.

L-WI-033/N-04/98

Lionville Laboratory, Inc.

INORGANICS DATA SUMMARY REPORT 12/05/06

CLIENT: TNU-HANFORD I07-006

LVL LOT #: 0611L400

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
=====	=====	=====	=====	=====	=====	=====
-001	B1KYX4	Silver, Soluble	0.50	u UG/L	0.50	1.0
		Aluminum, Soluble	55.9	UG/L	21.1	1.0
		Barium, Soluble	83.8	UG/L	0.10	1.0
		Beryllium, Soluble	0.15	UG/L	0.10	1.0
		Calcium, Soluble	92400	UG/L	12.5	1.0
		Cadmium, Soluble	0.30	u UG/L	0.30	1.0
		Cobalt, Soluble	0.72	UG/L	0.50	1.0
		Chromium, Soluble	1460	UG/L	1.2	1.0
		Copper, Soluble	0.70	u UG/L	0.70	1.0
		Iron, Soluble	36.2	UG/L	24.4	1.0
		Potassium, Soluble	4760	UG/L	21.2	1.0
		Magnesium, Soluble	21300	UG/L	4.6	1.0
		Manganese, Soluble	0.40	u UG/L	0.40	1.0
		Sodium, Soluble	10100	UG/L	2.5	1.0
		Nickel, Soluble	2.2	u UG/L	2.2	1.0
		Antimony, Soluble	2.5	u UG/L	2.5	1.0
		Vanadium, Soluble	7.3	UG/L	0.60	1.0
		Zinc, Soluble	202	UG/L	0.40	1.0
-002	B1KYX5	Silver, Total	0.50	u UG/L	0.50	1.0
		Aluminum, Total	80.1	UG/L	21.1	1.0
		Barium, Total	85.2	UG/L	0.10	1.0
		Beryllium, Total	0.24	UG/L	0.10	1.0
		Calcium, Total	91600	UG/L	12.5	1.0
		Cadmium, Total	0.30	u UG/L	0.30	1.0
		Cobalt, Total	0.53	UG/L	0.50	1.0
		Chromium, Total	1450	UG/L	1.2	1.0
		Copper, Total	0.70	u UG/L	0.70	1.0
		Iron, Total	92.4	UG/L	24.4	1.0
		Potassium, Total	4820	UG/L	21.2	1.0
		Magnesium, Total	21000	UG/L	4.6	1.0
		Manganese, Total	0.40	u UG/L	0.40	1.0
		Sodium, Total	10100	UG/L	2.5	1.0
		Nickel, Total	2.2	u UG/L	2.2	1.0
		Antimony, Total	2.5	u UG/L	2.5	1.0
		Vanadium, Total	7.1	UG/L	0.60	1.0
		Zinc, Total	202	UG/L	0.40	1.0



Lionville Laboratory, Inc.

INORGANICS METHOD BLANK DATA SUMMARY PAGE 12/05/06

CLIENT: TNU-HANFORD I07-006

LVL LOT #: 0611L400

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

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
BLANK1	06L0720-MB1	Silver, Total	0.50	u UG/L	0.50	1.0
		Aluminum, Total	51.8	UG/L	21.1	1.0
		Barium, Total	0.24	UG/L	0.10	1.0
		Beryllium, Total	0.15	UG/L	0.10	1.0
		Calcium, Total	22.4	UG/L	12.5	1.0
		Cadmium, Total	0.30	u UG/L	0.30	1.0
		Cobalt, Total	0.59	UG/L	0.50	1.0
		Chromium, Total	1.2	u UG/L	1.2	1.0
		Copper, Total	0.70	u UG/L	0.70	1.0
		Iron, Total	30.5	UG/L	24.4	1.0
		Potassium, Total	21.2	u UG/L	21.2	1.0
		Magnesium, Total	4.6	u UG/L	4.6	1.0
		Manganese, Total	0.40	u UG/L	0.40	1.0
		Sodium, Total	17.2	UG/L	2.5	1.0
		Nickel, Total	2.2	u UG/L	2.2	1.0
		Antimony, Total	2.5	u UG/L	2.5	1.0
		Vanadium, Total	0.60	u UG/L	0.60	1.0
		Zinc, Total	0.40	u UG/L	0.40	1.0



Lionville Laboratory, Inc.

INORGANICS ACCURACY REPORT 12/05/06

CLIENT: TNU-HANFORD I07-006

LVL LOT #: 0611L400

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-001	B1KYX4	Silver, Soluble	50.1	0.50u	50.0	100.2	1.0
		Aluminum, Soluble	2080	55.9	2000	101.0	1.0
		Barium, Soluble	2080	83.8	2000	99.6	1.0
		Beryllium, Soluble	50.8	0.15	50.0	101.3	1.0
		Calcium, Soluble	119000	92400	25000	106.6	1.0
		Cadmium, Soluble	50.6	0.30u	50.0	101.2	1.0
		Cobalt, Soluble	499	0.72	500	99.6	1.0
		Chromium, Soluble	1680	1460	200	108.2*	1.0
		Copper, Soluble	250	0.70u	250	100	1.0
		Iron, Soluble	1030	36.2	1000	99.8	1.0
		Potassium, Soluble	30800	4760	25000	104.1	1.0
		Magnesium, Soluble	47400	21300	25000	104.3	1.0
		Manganese, Soluble	517	0.40u	500	103.4	1.0
		Sodium, Soluble	34600	10100	25000	98.1	1.0
		Nickel, Soluble	501	2.2 u	500	100.3	1.0
		Antimony, Soluble	513	2.5 u	500	102.6	1.0
		Vanadium, Soluble	507	7.3	500	99.9	1.0
		Zinc, Soluble	710	202	500	101.5	1.0



Lionville Laboratory, Inc.

INORGANICS PRECISION REPORT 12/05/06

CLIENT: TNU-HANFORD I07-006

LVL LOT #: 0611L400

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

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR (REP)
			RESULT	REPLICATE	RPD	
-001REP	BIKXX4	Silver, Soluble	0.50u	0.50u	NC	1.0
		Aluminum, Soluble	55.9	56.3	0.71	1.0
		Barium, Soluble	83.8	83.2	0.72	1.0
		Beryllium, Soluble	0.15	0.15	0.00	1.0
		Calcium, Soluble	92400	92300	0.094	1.0
		Cadmium, Soluble	0.30u	0.30u	NC	1.0
		Cobalt, Soluble	0.72	0.63	13.3	1.0
		Chromium, Soluble	1460	1460	0.22	1.0
		Copper, Soluble	0.70u	0.70u	NC	1.0
		Iron, Soluble	36.2	35.6	1.7	1.0
		Potassium, Soluble	4760	4690	1.5	1.0
		Magnesium, Soluble	21300	21300	0.078	1.0
		Manganese, Soluble	0.40u	0.40u	NC	1.0
		Sodium, Soluble	10100	10000	0.74	1.0
		Nickel, Soluble	2.2 u	2.2 u	NC	1.0
		Antimony, Soluble	2.5 u	2.5 u	NC	1.0
		Vanadium, Soluble	7.3	7.2	1.4	1.0
		Zinc, Soluble	202	199	1.7	1.0

Lionville Laboratory, Inc.

INORGANICS LABORATORY CONTROL STANDARDS REPORT 12/05/06

CLIENT: TNU-HANFORD I07-006

LVL LOT #: 0611L400

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

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	SPIKED AMOUNT	UNITS	%RECOV
=====	=====	=====	=====	=====	=====	=====
LCS1	06L0720-LC1	Silver, LCS	504	500	UG/L	100.7
		Aluminum, LCS	5170	5000	UG/L	103.4
		Barium, LCS	5020	5000	UG/L	100.4
		Beryllium, LCS	253	250	UG/L	101.1
		Calcium, LCS	26000	25000	UG/L	104.1
		Cadmium, LCS	256	250	UG/L	102.2
		Cobalt, LCS	2500	2500	UG/L	100
		Chromium, LCS	505	500	UG/L	100.9
		Copper, LCS	1250	1250	UG/L	100.3
		Iron, LCS	5020	5000	UG/L	100.4
		Potassium, LCS	25100	25000	UG/L	100.3
		Magnesium, LCS	25500	25000	UG/L	101.9
		Manganese, LCS	771	750	UG/L	102.8
		Sodium, LCS	24500	25000	UG/L	98.1
		Nickel, LCS	2050	2000	UG/L	102.3
		Antimony, LCS	3080	3000	UG/L	102.6
		Vanadium, LCS	2500	2500	UG/L	99.9
		Zinc, LCS	1020	1000	UG/L	101.6



Collector <b>Fluor Hanford</b> <b>F.M. HALL</b>	Contact/Requester <b>Dot Stewart</b>	Telephone No. <b>MSIN FAX</b> <b>509-376-5056</b>
SAF No. <b>I07-006</b>	Sampling Origin <b>Hanford Site</b>	Purchase Order/Charge Code
Project Title <b>100HR3IAM(1/2)-LOI NOVEMBER 2006</b>	<b>NNF-N-506 4</b>	Ice Chest No. <b>94WS-49</b> Temp.
Shipped To (Lab) <b>Lionville Laboratory Incorporated</b>	Method of Shipment <b>Govt. Vehicle</b>	Bill of Lading/Air Bill No. <b>7990 4078 8473<sup>25</sup></b>
Protocol <b>CERCLA</b>	Priority: 45 Days	Offsite Property No.

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\* \*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

**SPECIAL INSTRUCTIONS** **Hold Time** **Total Activity Exemption: Yes  No**   
 All Labs except WSCF: Batch all PNNL samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.  
 WSCF: Batch all PNNL GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1KYX4 (F)		W	11-20-06	1328	1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1KYX5		W			1x500-mL G/P	ICP Metals - 6010A (TAL)	HNO3 to pH <2
B1KYX5		W			1x500-mL P	IC Anions - 300.0	Cool 4C
B1KYX5		W			1x20-mL P	Activity Scan	None
<i>Rel</i> 11-20-06							

Relinquished By <b>Fluor Hanford</b> <b>F.M. HALL</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>NOV 20 2006</b>	Received By <b>FED EX</b>	Print <i>[Signature]</i>	Sign <i>[Signature]</i>	Date/Time <b>NOV 20 2006</b>	<b>Matrix *</b> S = Soil                      DS = Drum Solid SF = Sediment              DL = Drum Liquid SO = Solid                    T = Tissue SL = Sludge                  WI = Wine W = Water                    L = Liquid O = Oil                        V = Vegetation A = Air                        X = Other
Relinquished By <i>[Signature]</i>			Date/Time <b>11/21/06 1320</b>	Received By <i>[Signature]</i>			Date/Time <b>11/21/06 1320</b>	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
<b>FINAL SAMPLE DISPOSITION</b>		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  
Project (SAF/SOW/Release #: IO 7-006)

Date: 11/21/06

LvLI Batch #: 0611L 400

Sample Custodian: [Signature]

NOTE: EXPLAIN ALL DISCREPANCIES

- |   |  |   |
|---|--|---|
| 1. Samples Hand Delivered or Shipped?   | Carrier <u>Fed Ex</u>  | Airbill # <u>79904078 8473</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>3.4°</u> °C  | Cooler # <u>SAWS-49</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 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?<br>All samples received on COC?   | <input type="checkbox"/> Yes <input type="checkbox"/> No<br><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  |   |
| 12. Samples received within hold times?<br>Short holds taken to wet lab?  | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A              |
| 13. VOA, TOC, TOX free of headspace?  | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input 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?<br>Person Contacted _____   | <input type="checkbox"/> Yes <input type="checkbox"/> No   | <input type="checkbox"/> N/A              |
|   | Date _____   |   |

