



Mr. Steve Trent
Fluor Hanford Inc.
825 Jadwin Ave.
Richland, WA 99352

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

Dear Mr. Trent:

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

LvLI Batch #	0502L794
SDG #	H3026
SAF #	F04-019
Date Received	2-11-05
# Samples	1
Matrix	Soil
Volatiles	
Semivolatiles	
Pest/PCB	
DRO/GRO/KRO	
Herbicides	
GC Alcohol	
Metals	
Inorganics	X



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

Sincerely,
Lionville Laboratory Incorporated

Orlette S. Johnson
Project Manager

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

Lionville Laboratory, Inc.
 INORGANIC ANALYTICAL DATA PACKAGE FOR
 TNUHANFORD F04-019 H3026

DATE RECEIVED: 02/11/05

LVL LOT # :0502L794

CLIENT ID /ANALYSIS	LVL #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BIB3R3						
% SOLIDS	001	S	05L%S021	02/02/05	02/15/05	02/15/05
% SOLIDS	001 REP	S	05L%S021	02/02/05	02/15/05	02/15/05
CHROMIUM VI	001	S	05LVI013	02/02/05	02/15/05	02/15/05
CHROMIUM VI	001 REP	S	05LVI013	02/02/05	02/15/05	02/15/05
CHROMIUM VI	001 MS	S	05LVI013	02/02/05	02/15/05	02/15/05
CHROMIUM VI	001 MSD	S	05LVI013	02/02/05	02/15/05	02/15/05
NITRATE NITRITE	001	S	05LN3011	02/02/05	03/04/05	03/04/05
NITRATE NITRITE	001 REP	S	05LN3011	02/02/05	03/04/05	03/04/05
NITRATE NITRITE	001 MS	S	05LN3011	02/02/05	03/04/05	03/04/05
OIL & GREASE BY GRAV	001	S	05LOG008	02/02/05	02/16/05	02/17/05
OIL AND GREASE BY GR	001 REP	S	05LOG008	02/02/05	02/16/05	02/17/05
OIL AND GREASE BY GR	001 MS	S	05LOG008	02/02/05	02/16/05	02/17/05

LAB QC:

CHROMIUM VI	MB1	S	05LVI013	N/A	02/15/05	02/15/05
CHROMIUM VI	MB1 BS	S	05LVI013	N/A	02/15/05	02/15/05
CHROMIUM VI	MB1 BSD	S	05LVI013	N/A	02/15/05	02/15/05
NITRATE NITRITE	MB1	S	05LN3011	N/A	03/04/05	03/04/05
NITRATE NITRITE	MB1 BS	S	05LN3011	N/A	03/04/05	03/04/05
OIL & GREASE BY GRAV	MB1	S	05LOG008	N/A	02/16/05	02/17/05
OIL AND GREASE BY GR	MB1 BS	S	05LOG008	N/A	02/16/05	02/17/05
OIL AND GREASE BY GR	MB1 BSD	S	05LOG008	N/A	02/16/05	02/17/05

NA yr 315-05





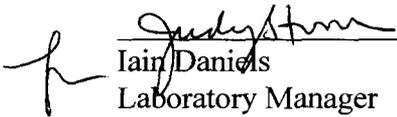
Analytical Report

Client: TNU-HANFORD F04-019 H3026
LVL#: 0502L794

W.O.#: 11343-606-001-9999-00
Date Received: 02-11-05

INORGANIC NARRATIVE

1. This narrative covers the analyses of 1 soil sample.
2. The sample was prepared and analyzed in accordance with the methods indicated on the attached glossary.
3. Sample holding times as required by the method and/or contract were met.
4. The results presented in this report are derived from samples that met LvLI's sample acceptance policy.
5. The method blanks were within the method criteria.
6. The Laboratory Control Samples (LCS) were within the laboratory control limits.
7. The matrix spike recoveries for Chromium VI, Nitrate Nitrite and Oil and Grease were within the 75-125% control limits.
8. The replicate analyses for Percent Solids, Chromium VI, Nitrate Nitrite and Oil and Grease were within the 20% Relative Percent Difference (RPD) control limit.
9. Results for solid samples are reported on a dry weight basis.
10. I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard copy package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.


Iain Daniels
Laboratory Manager
Lionville Laboratory Incorporated

3/16/05
Date

njp02-794

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 11 pages.

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WET CHEMISTRY

METHODS GLOSSARY FOR SOIL/SOLIDS SAMPLE ANALYSIS

	<u>ASTM</u>	<u>SW846</u>	<u>OTHER</u>
% Ash	___ D2216-80		
% Moisture	___ D2216-80		___ ILMO4.0 (e)
% Solids	✓ D2216-80		___ ILMO4.0 (e)
% Volatile Solids	___ D2216-80		
ASTM Extraction in Water	___ D3987-81/85		
BTU	___ D240-87		
CEC		___ 9081	___ c
Chromium VI		✓ 3060A/7196A	
Corrosivity ___ by coupon ___ by pH		___ 1110(mod) ___ 9045C	
Cyanide, Total		___ 9010B	___ ILMO4.0 (e)
Cyanide, Reactive		___ Section 7.3/9014	
Halides, Extractable Organic		___ 9020B	___ EPA 600/4/84-008
Halides, Total		___ 9020B	___ EPA 600/4/84-008
EP Toxicity		___ 1310A	
Flash Point		___ 1010	
Ignitability		___ 1010	
Oil & Grease		✓ 9071A(mod.)	✓ 413.1(mod.)
Carbon, Total Organic		___ 9060	___ Lloyd Kahn (mod)
Oxygen Bomb Prep for Anions	___ D240-87(mod)	___ 5050	
Petroleum Hydrocarbons, Total Recoverable		___ 9071	___ EPA 418.1
pH, Soil		___ 9045C	
Sulfide, Reactive		___ Section 7.3/9030B	
Sulfide		___ 9030B(mod)	
Specific Gravity	___ D1429-76C/	___ D5057-90	
Sulfur, Total		___ 9056	
Synthetic Preparation Leach		___ 1312	
Paint Filter		___ 9095A	
Other: <i>Nitrate/Nitrite</i>		Method: <i>EPA 353.2(mod.)</i>	
Other:		Method	

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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.

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INORGANICS DATA SUMMARY REPORT 03/08/05

CLIENT: TNUHANFORD F04-019 H3026
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0502L794

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B1B3R3	% Solids	94.8	%	0.01	1.0
		Chromium VI	0.21 u	MG/KG	0.21	1.0
		Nitrate Nitrite	66.4	MG/KG	2.1	10.0
		Oil & Grease Gravimetri	842	MG/KG	696	1.0

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INORGANICS METHOD BLANK DATA SUMMARY PAGE 03/08/05

CLIENT: TNUHANFORD F04-019 H3026
WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0502L794

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-----	-----	-----	-----	-----	-----	-----
BLANK10	05LVI013-MB1	Chromium VI	0.20 u	MG/KG	0.20	1.0
BLANK10	05LN3011-MB1	Nitrate Nitrite	0.20 u	MG/KG	0.20	1.0
BLANK10	05LOG008-MB1	Oil & Grease Gravimetri	667	u MG/KG	667	1.0

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INORGANICS ACCURACY REPORT 03/08/05

CLIENT: TNUHANFORD F04-019 H3026
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0502L794

SAMPLE	SITE ID	ANALYTE	SPIKED SAMPLE	INITIAL RESULT	SPIKED AMOUNT	%RECOV	DILUTION FACTOR (SPK)
-----	-----	-----	-----	-----	-----	-----	-----
-001	B1B3R3	Soluble Chromium VI	4.0	021u	4.2	92.0	1.0
		Insoluble Chromium VI	1250	021u	1170	107.0	100
		Nitrate Nitrite	175	66.4	103	104.8	20.0
		Oil & Grease Gravimetr	6460	842	7000	80.2	1.0
BLANK10	05LVI013-MB1	Soluble Chromium VI	4.0	0.20u	4.0	100.3	1.0
		Insoluble Chromium VI	1180	0.20u	1110	105.8	100
BLANK10	05LN3011-MB1	Nitrate Nitrite	5.0	0.20u	5.0	99.0	1.0
BLANK10	05LOG008-MB1	Oil & Grease Gravimetr	6280	667 u	6710	93.6	1.0

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INORGANICS PRECISION REPORT 03/08/05

CLIENT: TNUHANFORD F04-019 H3026
 WORK ORDER: 11343-606-001-9999-00

LVL LOT #: 0502L794

SAMPLE	SITE ID	ANALYTE	INITIAL			DILUTION FACTOR (REP)
			RESULT	REPLICATE	RPD	
-001REP	B1B3R3	% Solids	94.8	97.5	2.9	1.0
		Chromium VI	0.21u	0.33	NC	1.0
		Nitrate Nitrite	66.4	68.0	2.4	10.0
		Oil & Grease Gravimetri	842	751	11.5	1.0

COLLECTOR Pope/Pfister/Hughes/Wiberg	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION 216-T-33; 12.5ft - 15ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Waste Management		SAF NO. F04-019	AIR QUALITY <input type="checkbox"/>	

ICE CHEST NO. GRP-03-008	FIELD LOGBOOK NO. HNF-N-386 1	COA 119144ES10	METHOD OF SHIPMENT Federal Express		
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SHIPPED TO ms 8-10-04 Eberline Services Becca	OFFSITE PROPERTY NO. Zu PTK 14851	BILL OF LADING/AIR BILL NO. Zu PTK 14851
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MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION		NO. OF CONTAINER(S)	VOLUME	SPECIAL HANDLING AND/OR STORAGE Radioactive Tle To: B1B3R2	SPECIAL ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
		TYPE OF CONTAINER	COOLING						
		TYPE OF CONTAINER	COOLING						
		TYPE OF CONTAINER	COOLING						
		aG	None	1	120mL				
		aG	None	1	60mL				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1B3R3	SOIL	2-2-05	1300	X									

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The laboratory is to achieve a detection limit of 50.0 pCi/g for Carbon-14. (1) NO2/NO3 - 353.2; Oil & Grease - 413.1; Chromium Hex - 7196; (2) Iodine-129; Carbon-14; Nickel-63; Technetium-99; Isotopic Thorium (Thorium-228, Thorium-232); Tritium - H3;	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

Lionville Laboratory Incorporated
SAMPLE RECEIPT CHECKLIST (SRC)

CLIENT: TNU Hamford
 Purchase Order / Project# /
 SAF# / SOW# / Release #: F04-019
 LVL Batch #: 0502L794

Date: 2-11-05

Sample Custodian: D. Smith

NOTE: EXPLAIN ALL DISCREPANCIES

- | | | |
|---|---|--|
| 1. Samples Hand Delivered or <u>Shipped</u> | Carrier <u>FedEx</u> | Airbill# <u>7909 1550 4059</u> |
| 2. Custody seals on coolers or shipping container intact, signed and dated? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> No Seals Comments |
| 3. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 4. All expected paperwork received (coc and other client specific information) sealed in plastic bag and easily accessible? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 5. Samples received <u>cooled</u> or ambient? | Temp <u>1.7</u> °C | Cooler # <u>GRP-03-008</u> |
| 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 signed and 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? All samples received on coc? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 10. All sample label information matches coc? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 11. Samples properly preserved? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 12. Samples received within hold times? Short holds taken to wet lab? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 13. VOA, TOC, TOX free of headspace? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A |
| 14. QC stickers placed on bottles designated by client? | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 15. Shipment meets LVL Sample Acceptance Policy? (Identify all bottles not within policy. See reverse side for policy) | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| 16. Project Manager contacted concerning discrepancies? name/date (or samples outside criteria) | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input checked="" type="checkbox"/> No Discrepancies |