

0057638

H1750



Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B02-055 H1750

RFW LOT # :020418

CLIENT ID	RFW #	MTX	PREP #	COLLECTN DATE	REC	EXT/PREP	ANALYSIS
B14HT0	001	S	02LVH148	04/16/02	04/17/02	N/A	04/17/02
B14HT1	002	S	02LVH148	04/16/02	04/17/02	N/A	04/17/02
B14HT2	003	S	02LVH151	04/16/02	04/17/02	N/A	04/19/02
B14HT3	004	S	02LVH150	04/16/02	04/17/02	N/A	04/18/02
B14HT3	004 MS	S	02LVH150	04/16/02	04/17/02	N/A	04/18/02
B14HT3	004 MSD	S	02LVH150	04/16/02	04/17/02	N/A	04/18/02
B14HT4	005	S	02LVH148	04/16/02	04/17/02	N/A	04/17/02
B14HT5	006	S	02LVH148	04/16/02	04/17/02	N/A	04/17/02
B14HT6	007	S	02LVH148	04/16/02	04/17/02	N/A	04/18/02
B14HT7	008	S	02LVH148	04/16/02	04/17/02	N/A	04/18/02
B14HT8	009	S	02LVH150	04/16/02	04/17/02	N/A	04/18/02

LAB QC:

VBLKSO	MB1	S	02LVH148	N/A	N/A	N/A	04/17/02
VBLKSO	MB1 BS	S	02LVH148	N/A	N/A	N/A	04/17/02
VBLKSR	MB1	S	02LVH151	N/A	N/A	N/A	04/19/02
VBLKSP	MB1	S	02LVH150	N/A	N/A	N/A	04/18/02
VBLKSP	MB1 BS	S	02LVH150	N/A	N/A	N/A	04/18/02

RECEIVED
JUN 13 2002

EDMC



Client: TNU-HANFORD B02-055
LVL #: 0204L409
SDG/SAF #: H1750/B02-055

W.O. #: 11343-606-001-9999-00
Date Received: 04-17-2002

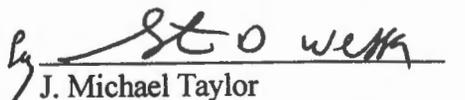
GC/MS VOLATILE

Nine (9) soil (encore) samples were collected on 04-16-2002.

The samples were prepared according to method 5035. The samples and their associated QC samples were analyzed according to criteria set forth in Lionville Laboratory OPs based on SW 846 Method 8260B for client specified volatile target compound Carbon Tetrachloride on 04-17,18,19-2002.

The following is a summary of the QC results accompanying these sample results and a description of any problems encountered during their analyses:

1. All results presented in this report are derived from samples that met LvLI's sample acceptance policy with the exception of some discrepancies, which have been recorded on the Sample Receipt Checklist (p.12).
2. The required analysis holding time was met.
3. All surrogate recoveries were within EPA QC limits.
4. The matrix spike recoveries were within EPA QC limits.
5. The blank spike recoveries were within EPA QC limits.
6. Internal standard area and retention time criteria were met.
7. The results for analyses have been reported as 'wet-weight' basis as per client instruction.
8. A low-level 1 ppb standard was analyzed before the sample analysis to demonstrate the low level detection of Carbon Tetrachloride.
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 data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."


J. Michael Taylor

President
Lionville Laboratory Incorporated

042202
Date

som\group\data\voa\tnu-hanford\0204-409.doc

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 1 2 pages.

GLOSSARY OF VOA DATA

DATA QUALIFIERS

- U** = Compound was analyzed for but not detected. The associated numerical value is the estimated sample quantitation limit which is included and corrected for dilution and percent moisture.
- J** = Indicates an estimated value. This flag is used under the following circumstances: 1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; or 2) when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. For example, if the limit of detection is 10 ug/L and a concentration of 3 ug/L is calculated, it is reported as 3J.
- B** = This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination. This flag is also used for a TIC as well as for a positively identified TCL compound.
- E** = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.
- D** = Identifies all compounds identified in an analysis at a secondary dilution factor.
- I** = Interference.
- NQ** = Result qualitatively confirmed but not able to quantify.
- N** = Indicates presumptive evidence of a compound. This flag is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It is applied to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the N code is not used.
- X** = This flag is used for a TIC compound which is quantified relative to a response factor generated from a daily calibration standard (rather than quantified relative to the closest internal standard).
- Y** = Additional qualifiers used as required are explained in the case narrative.

GLOSSARY OF VOA DATA

ABBREVIATIONS

- BS** = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spike solutions and carried through all the steps in the method. Spike recoveries are reported.
- BSD** = Indicates blank spike duplicate.
- MS** = Indicates matrix spike.
- MSD** = Indicates matrix spike duplicate.
- DL** = Suffix added to sample number to indicate that results are from a diluted analysis.
- NA** = Not Applicable.
- DF** = Dilution Factor.
- NR** = Not Required.
- SP, Z** = Indicates Spiked Compound.

TECHNICAL FLAGS FOR MANUAL INTEGRATION

Manual quantitation modifications or integrations are performed routinely to improve the data quality for a variety of technical reasons. Documentation of these modifications should be clear and concise. The following "flags" are used to indicate the technical reasons for quantitation modifications:

- MP** - Missed Peak: manually added peak not found by automatic quantitation program.
- PA** - Peak Assignment: quantitation report was changed to reflect correct peak assignment.
- RI** - Routine Integration: routine integrations are performed for some analytes that are consistently integrated improperly by the automatic integration programs. Examples are the dichlorobenzene isomers on the VOA packed column and benzo(b)fluoranthene/benzo(k)fluoranthene which are poorly resolved on the BNA column.
- SP** - Split Peak: the automatic integration improperly split the peak; a manual integration was performed to get the correct area.
- CB** - Coelution/Background: peak was manually integrated to eliminate contribution from coeluting compounds, background signal, or other interference.
- PI** - Proper Integration: a peak with poor or inconsistent integration (e.g., excessive tail) was properly integrated manually.

Lionville Laboratory, Inc.
 Volatiles By GC/MS, Special List

Report Date: 04/22/02 11:48

RFW Batch Number: 0204L409

Client: TNUHANFORD B02-055 H1750 Work Order: 11343606001 Page: 1a

	Cust ID:	B14HT0	B14HT1	B14HT2	B14HT3	B14HT3	B14HT3
Sample Information	RFW#:	001	002	003	004	004 MS	004 MSD
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	0.877	0.781	0.962	0.943	0.943	1.02
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate	1,2-Dichloroethane-d4	87 %	86 %	91 %	92 %	94 %	96 %
	Toluene-d8	100 %	101 %	100 %	98 %	96 %	95 %
Recovery	Bromofluorobenzene	84 %	84 %	81 %	83 %	85 %	86 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
	Carbon Tetrachloride	0.9 U	0.8 U	1 U	0.9 U	94 %	94 %

	Cust ID:	B14HT4	B14HT5	B14HT6	B14HT7	B14HT8	VBLKSO
Sample Information	RFW#:	005	006	007	008	009	02LVH148-MB1
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	D.F.:	1.04	0.943	1.02	0.962	1.04	1.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
Surrogate	1,2-Dichloroethane-d4	88 %	92 %	90 %	92 %	91 %	94 %
	Toluene-d8	97 %	99 %	99 %	99 %	101 %	97 %
Recovery	Bromofluorobenzene	80 %	84 %	74 %	79 %	73 %	85 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
	Carbon Tetrachloride	1 U	0.9 U	1 U	1 U	1 U	1 U

*= Outside of EPA CLP QC limits.

de



80

0204L409

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

A

Client <u>TNU Hanford B02-055</u>	Refrigerator # <u>1</u>
Est. Final Proj. Sampling Date _____	#/Type Container
Project # <u>11343-606-001-9999-00</u>	Liquid _____
Project Contact/Phone # _____	Solid <u>Agf</u>
Lionville Laboratory Project Manager _____ <u>OS</u>	Volume
QC <u>SPEC</u> Del <u>STD</u> TAT <u>3 days</u>	Liquid _____
	Solid <u>125</u>
	Preservatives _____
Date Rec'd <u>04/17/02</u> Date Due <u>4-20-02</u>	ANALYSES REQUESTED
	ORGANIC
	INORG
	VOA BNA Pest/PCB Herb Metal CN

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - EP/TCLP WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only														
			MS	MSD				0624x														
	001	B14HT0			S	04/16/02	0835	1														
	002	B14HT1					0930	1														
	003	B14HT2					0940	1														
	004	B14HT3					0955	1														
	005	B14HT4					1010	1														
	006	B14HT5					1025	1														
	007	B14HT6					1045	1														
	008	B14HT7					1105	1														
	009	B14HT8					1120	1														

Special Instructions: SAF # B02-055
Run Matrix QC
0624x - Carbon tetrachloride
Report As Received

DATE/REVISIONS:

- _____
- _____
- _____
- _____
- _____
- _____

Lionville Laboratory Use Only

Samples were: Shipped or Hand Delivered

Airbill # 790509185233

2) Ambient or Chilled

3) Received in Good Condition or N

4) Samples Properly Preserved or N

5) Received Within Holding Times or N

Tamper Resistant Seal was:

1) Present on Outer Package Y or N

2) Unbroken on Outer Package Y or N/A

3) Present on Sample Y or N

4) Unbroken on Sample Y or N

COC Record Present Upon Sample Rec't Y or N

Cooler Temp. 1.3 °C

Relinquished by	Received by	Date	Time
<u>fedex</u>	<u>JParry</u>	<u>04/17/02</u>	<u>0945</u>

Relinquished by _____ Received by _____ Date _____ Time _____

COMPOSITE WASTE ORIGINAL REWRITTEN

Discrepancies Between Samples Labels and COC Record? Y or N

NOTES:

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B02-055-2	Page 1 of 1
Collector Jeff Gale/Doug Bowers <i>IR. Thoren</i>		Company Contact Jand Borghese		Telephone No. 372-9442	Project Coordinator TRENT, SJ	Price Code 8I Data Turnaround business D
Project Designation 200 Area RCRA Drilling Waste Designation		Sampling Location 200 K East		SAF No. B02-055	Air Quality <input type="checkbox"/>	
Ice Chest No. <i>SHIPPING Jan 96.-001</i>		Field Logbook No. EFL1133-10	COA JRCRA14114		Method of Shipment Fed Ex	
Shipped To TMA/RECRA		Offsite Property No. <i>A0ZD110</i>			Bill of Lading/Air Bill No. <i>SEE OSRC</i>	

POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool 4C															
Possible carbon tetrachloride <i>< 2000pcu/g per Historical data</i> Special Handling and/or Storage Cool to 4C				Type of Container	aG															
				No. of Container(s)	1															
				Volume	125mL															
				SAMPLE ANALYSIS				VOA - 8260A (TCL) (Carbon tetrachloride)												
Sample No.	Matrix *	Sample Date	Sample Time																	
B14HT0	SOIL	4-16-02	0835	X																

CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix *			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		See COC comments and special instructions on SAF				S=Soil SB=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WS=Wipe L=Liquid V=Vegetation X=Other			
<i>R. Thoren</i>		4-16-02		<i>FEDER</i>											
<i>FEDER</i>		04/17/02 0945		<i>JERRY</i>		04/17/02 0945									
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					

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B02-055-3		Page 1 of 2		
Collector Jeff Gale/Doug Bowers / <i>R. Thoren</i>		Company Contact Jand Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ		Price Code 8I Data Turnaround business D		
Project Designation 200 Area RCRA Drilling Waste Designation		Sampling Location 200 K East		SAF No. B02-055		Air Quality <input type="checkbox"/>				
Ice Chest No. <i>Shipping Jan 46-001</i>		Field Logbook No. EFL1133-10		COA JRCRA14114		Method of Shipment Fed Ex				
Shipped To TMA/RECRE		Offsite Property No. <i>A020110</i>		Bill of Lading/Air Bill No. <i>SEE OSTR</i>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>Possible carbon tetrachloride</i> <i><2000ppb/g per Historical DATA</i> Special Handling and/or Storage <i>Cool to 4C</i>				Preservation Cool 4C						
				Type of Container aG						
				No. of Container(s) 1						
				Volume 125mL						
SAMPLE ANALYSIS				VOA - 8260A (TCL) (Carbon tetrachloride)						
				<i>Drum #</i>						
Sample No.	Matrix *	Sample Date	Sample Time							
B14HT1	SOIL	<i>4-16-02</i>	<i>0930</i>	<i>X</i>		<i>200W-01-0181</i>				
B14HT2	SOIL	<i>4-16-02</i>	<i>0940</i>	<i>X</i>		<i>200W-01-0144</i>				
B14HT3	SOIL	<i>4-16-02</i>	<i>0955</i>	<i>X</i>		<i>200W-01-0225</i>				
B14HT4	SOIL	<i>4-16-02</i>	<i>1010</i>	<i>X</i>		<i>200W-01-0316</i>				
B14HT5	SOIL	<i>4-16-02</i>	<i>1025</i>	<i>X</i>		<i>200W 01-0294</i>				
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *		
Relinquished By/Removed From <i>R. Thoren</i>		Date/Time <i>4-16-02 1430</i>		Received By/Stored In <i>FED EX</i>		*See COC special instructions and comments on SAF.				S=Soil SB=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>FED EX</i>		Date/Time <i>04/17/02 0945</i>		Received By/Stored In <i>J Perry</i>		Date/Time <i>04/17/02 0945</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
LABORATORY SECTION	Received By			Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposed Method			Disposed By			Date/Time			

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B02-055-3		Page 2 of 2		
Collector Jeff Gale/Doug Bowers <i>(R. Thoren)</i>		Company Contact Jand Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ		Price Code 8I Data Turnaround usiness D		
Project Designation 200 Area RCRA Drilling Waste Designation		Sampling Location 200 K East		SAF No. B02-055		Air Quality <input type="checkbox"/>				
Ice Chest No. <i>Shipping Jan 96-001</i>		Field Logbook No. EFL1133-10		COA JRCRA14114		Method of Shipment Fed Ex				
Shipped To TMA/RECRA		Offsite Property No. <i>A020110</i>				Bill of Lading/Air Bill No. <i>See BSPC</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>Possible carbon tetrachloride 42000 pCi/g per Historical data Special Handling and/or Storage Cool to 4C</i>					Preservation Cool 4C	Type of Container aG	No. of Container(s) 1	Volume 125mL		
SAMPLE ANALYSIS					VOA - 8260A (TCL) (Carbon tetrachloride)					
					<i>Drum #</i>					
Sample No.	Matrix *	Sample Date	Sample Time							
B14HT6	SOIL	4-16-02	1045	X					200W-01-0335	
B14HT7	SOIL	4-16-02	1105	X					200W-01-0235	
B14HT8	SOIL	4-16-02	1120	K					200W-01-0186	
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					
Relinquished By/Removed From <i>R. Thoren</i>		Date/Time <i>1430</i>		Received By/Store In <i>FED EX</i>		Date/Time <i>4-16-02</i>		*See COC special instructions and comments on SAF.		Matrix * S=Soil SB=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=WIPE L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>Fed Ex</i>		Date/Time <i>04/17/02 0945</i>		Received By/Store In <i>J.P. ...</i>		Date/Time <i>04/17/02 0945</i>				
Relinquished By/Removed From		Date/Time		Received By/Store In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Store In		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Store 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**

CLIENT: *TNU Hanford*

Purchase Order/Project:

DATE: *04/17/02*

SAF# / SOW# / Release #: *B02-055*

Laboratory SDG #: *0204L409*

NOTE: ALL ENTRIES MARKED "NO" MUST BE EXPLAINED IN THE COMMENT SECTION

- | | | | | |
|--|---|--|---|--|
| 1. Custody seals on coolers or shipping container intact, signed and dated? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> see Comment # <i>(1)</i> |
| 2. Outside of coolers or shipping containers are free from damage? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 3. Airbill # recorded? <i>7905 0918 5033</i> | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 4. All expected paperwork received (coc and other client specific: historical data, alpha/beta or other screening data as applicable)? (paperwork sealed in plastic bag and taped to inside lid) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> see Comment # <i>(2)</i> |
| 5. Sample containers are intact? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 6. Custody seals on sample containers intact, signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input checked="" type="checkbox"/> see Comment # <i>(3)</i> |
| 7. All samples on coc received? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 8. All sample label information matches coc? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 9. Laboratory QC samples designated on coc? (QC stickers placed on bottles?) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 10. Shipment meets LvLI Sample Acceptance Policy? (identify all bottles not within policy. See reverse side for policy) | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 11. Where applicable, bar code labels are affixed to coc? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 12. coc signed and dated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 13. coc faxed or emailed to client? | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |
| 14. Project Manager/Client contacted concerning discrepancies? (name/date) | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A | <input type="checkbox"/> see Comment # |

Cooler # / temp and Comments:

- (1) Tape only. Intact. Not signed/dated*
- (2) Not taped to inside of lid.*
- (3) Not signed/dated. Intact.*

*Shipping
van
AB-001
1.3°C*

Laboratory Sample Custodian:

Jerry 04/17/02

Laboratory Project Manager: