

H 1021

0056612

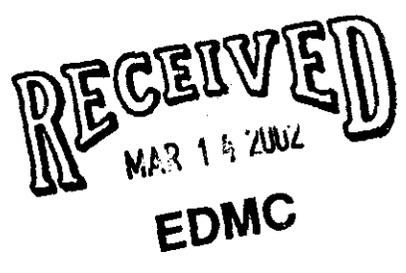
Lionville Laboratory, Inc.
VOA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B01-114 416 21



RFW LOT # : 01115458.7020

CLIENT ID	RFW #	MTX	PREP #	COLLECTN DATE	REC	EXT/PREP	ANALYSIS
B13F26	001	W	01LVX524	11/26/01	11/29/01	N/A	12/03/01
B13F27	002	W	01LVX524	11/27/01	11/29/01	N/A	12/03/01
B13F27	002 MS	W	01LVX524	11/27/01	11/29/01	N/A	12/03/01
B13F27	002 MSD	W	01LVX524	11/27/01	11/29/01	N/A	12/03/01
LAB QC:							
VBLKCU	MB1	W	01LVX524	N/A	N/A	N/A	12/03/01
VBLKCU	MB1 BS	W	01LVX524	N/A	N/A	N/A	12/03/01

12-13-01





Analytical Report

Client: TNU-HANFORD B01-114
LVL #: 0111L458
SDG/SAF #: H1621/B01-114

W.O. #: 11343-606-001-9999-00
Date Received: 11-29-01

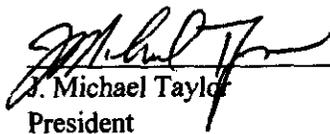
GC/MS VOLATILE

The set of samples consisted of two (2) water samples collected on 11-26,27-01.

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 target compounds on 12-03-01.

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

1. The cooler temperature upon receipt has been recorded on the chain-of-custody.
2. The required holding time for analysis was met.
3. Non-target compounds were not detected in the samples.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. All blank spike recoveries were within EPA QC limits.
7. Internal standard area and retention time criteria were met.
8. Manual integrations are performed according to OP L-QA-125 to produce quality data with the utmost integrity. All manual integrations are required to be technically valid and properly documented. Appropriate technical flags are defined in the glossary ("Technical Flags For Manual Integration"); hard copies of the integrations have been included with the quantitation data.
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

12/18/01
Date

pefigroup\data\voe\tzu-hanford\0111-361.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 11 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.

L-WI-035/e-mi-10/00

Lionville Laboratory, Inc.

Volatiles By GC/MS, Special List

Report Date: 12/12/01 16:02

RFW Batch Number: 0111L458

Client: TNUHANFORD B01-114 H1621 Work Order: 11343606001 Page: 1a

Sample Information	Cust ID:	B13F26	B13F27	B13F27	B13F27	B13F27	VBLKCU	VBLKCU BS
	RFW#:	001	002	002 MS	002 MSD	01LVX524-MB1	01LVX524-MB1	
	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER	
	D.F.:	1.00	1.00	1.00	1.00	1.00	1.00	
	Units:	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	
Surrogate	Toluene-d8	102 %	101 %	98 %	94 %	99 %	100 %	
Recovery	Bromofluorobenzene	110 %	112 %	107 %	104 %	112 %	110 %	
	1,2-Dichloroethane-d4	91 %	97 %	95 %	83 %	93 %	95 %	
		-----fl-----	-----fl-----	-----fl-----	-----fl-----	-----fl-----	-----fl-----	
	Chloromethane	10 U						
	Bromomethane	10 U						
	Vinyl Chloride	10 U						
	Chloroethane	10 U						
	Methylene Chloride	5 U	6	5 U	5 U	5 U	5 U	
	Acetone	10 U						
	Carbon Disulfide	5 U	5 U	5 U	5 U	5 U	5 U	
	1,1-Dichloroethene	5 U	5 U	76 %	77 %	5 U	77 %	
	1,1-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	
	1,2-Dichloroethene (total)	5 U	5 U	5 U	5 U	5 U	5 U	
	Chloroform	5 U	5 U	5 U	5 U	5 U	5 U	
	1,2-Dichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	
	2-Butanone	10 U						
	1,1,1-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	
	Carbon Tetrachloride	5 U	5 U	5 U	5 U	5 U	5 U	
	Bromodichloromethane	5 U	5 U	5 U	5 U	5 U	5 U	
	1,2-Dichloropropane	5 U	5 U	5 U	5 U	5 U	5 U	
	cis-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	
	Trichloroethene	5 U	5 U	96 %	98 %	5 U	95 %	
	Dibromochloromethane	5 U	5 U	5 U	5 U	5 U	5 U	
	1,1,2-Trichloroethane	5 U	5 U	5 U	5 U	5 U	5 U	
	Benzene	5 U	5 U	96 %	93 %	5 U	93 %	
	Trans-1,3-Dichloropropene	5 U	5 U	5 U	5 U	5 U	5 U	
	Bromoform	5 U	5 U	5 U	5 U	5 U	5 U	
	4-Methyl-2-pentanone	10 U						
	2-Hexanone	10 U						
	Tetrachloroethene	5 U	5 U	5 U	5 U	5 U	5 U	
	1,1,2,2-Tetrachloroethane	5 U	5 U	5 U	5 U	5 U	5 U	
	Toluene	5 U	5 U	96 %	98 %	5 U	96 %	

*= Outside of EPA CLP QC limits.

Cust ID: B13F26 B13F27 B13F27 B13F27 VBLKCU VBLKCU BS

RFW#: 001 002 002 MS 002 MSD 01LVX524-MB1 01LVX524-MB1

	001	002	002 MS	002 MSD	01LVX524-MB1	01LVX524-MB1
Chlorobenzene	5 U	5 U	96 %	96 %	5 U	96 %
Ethylbenzene	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	5 U	5 U	5 U	5 U	5 U	5 U
Xylene (total)	5 U	5 U	5 U	5 U	5 U	5 U
N-butylbenzene	5 U	5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.



FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

0111458

AC

Client <u>TMI-HANFORD</u> <u>B01-114</u>	Refrigerator # <u>1</u>
Est. Final Proj. Sampling Date _____	#Type Container Liquid <u>BAG</u>
Project # <u>11343-606-001-9999-00</u>	Solid _____
Project Contact/Phone # _____	Volume Liquid <u>40</u>
Lionville Laboratory Project Manager <u>OS</u>	Solid _____
QC <u>SPCC</u> Del <u>STD</u> TAT <u>30 day</u>	Preservatives <u>HEL</u>

Date Rec'd 11-29-01 Date Due 12-29-01

ANALYSES REQUESTED →

VOA	ORGANIC				Metal	INORG
	BNA	Pest/PCB	Herb	CN		

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 (✓)		Matrix	Date Collected	Time Collected	Lionville Laboratory Use Only										
			MS	MSD				C624 X										
	<u>001</u>	<u>B13 F 26</u>			<u>W</u>	<u>11/26/01</u>	<u>1615</u>	<u>3</u>										
	<u>002</u>	<u>L 27</u>			<u>L</u>	<u>11/27/01</u>	<u>1700</u>	<u>3</u>										

Special Instructions: SAF # B01-114
Run Matrix QC

DATE/REVISIONS:

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

Lionville Laboratory Use Only

Samples were: 1) Shipped <u>✓</u> or Hand Delivered _____ 2) Ambient or <u>Chilled</u> 3) Received in Good Condition <u>⊙</u> or N 4) Samples Properly Preserved <u>⊙</u> or N 5) Received Within Holding Times <u>⊙</u> or N	Temper Resistant Seal was: 1) Present on Outer Package <u>⊙</u> or N 2) Unbroken on Outer Package <u>⊙</u> or N 3) Present on Sample <u>⊙</u> or N 4) Unbroken on Sample <u>⊙</u> or N COC Record Present Upon Sample Rec't <u>⊙</u> or N Cooler Temp. <u>5.4</u> °C
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Relinquished by	Received by	Date	Time
<u>FW Ed</u>	<u>A. Henry</u>	<u>11/29/01</u>	<u>1315</u>

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:
4235 795A 9276

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B01-114-31	
Collector Renee Nielson	Company Contact Virginia Rohay	Telephone No. 372-9100	Project Coordinator TRENT, SJ	Price Code 7N	Data Turnaround 45 Days	
Project Designation PFP Well Installation Sampling and Analysis - Water		Sampling Location 200 West	SAF No. B01-114	Air Quality <input type="checkbox"/>		
Ice Chest No. ERC-01-014	Field Logbook No. EL-1362	COA T20ZP1D722	Method of Shipment Federal Express			
Shipped To TMA/RECRA		Offsite Property No. A020054	Bill of Lading/Air Bill No. 42357954-9276			

POSSIBLE SAMPLE HAZARDS/REMARKS NON RADIOACTIVE Samples did not originate in radiological controlled area. No total activity associated with sample/samples. Special Handling and/or Storage RT 11-28-01	Preservation	HCl to pH <7 Cool 4C																	
	Type of Container	uGs*																	
	No. of Container(s)	3																	
	Volume	40mL																	

SAMPLE ANALYSIS		VQA - E260A (TCL), VOA - E260A (Add-On) (n-Butylbenzene)																	
-----------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time																
B13F27	WATER	11/27/01	1700	X															

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By Renee Nielson / R Nielson	Date/Time 11/28/01	Received By STORED IN Ref # 2B	Date/Time 11/28/01	File to B13D42 RT 11-28-01 Samples stored in Ref. # 2B at the 3728 Shipping Facility on 11/28/01. Collector not available to relinquish samples on 11/28/01 for shipment. RT 11-28-01				p=Soil SB=Soil/Sediment SD=Solid S=Sludge W=Water O=Oil A=Air DB=Drum Bulb DL=Drum Liquid T=Truss W=wipe L=Liquid V=Vegetation X=Other	
Relinquished By R. Thoren	Date/Time 11-28-01	Received By R. Thoren	Date/Time 11-28-01						
Relinquished By Fed Ex	Date/Time 11/29/01	Received By Fed Ex	Date/Time 11/29/01						
Relinquished By	Date/Time	Received By	Date/Time						

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposed Method	Disposed By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 11/29/01 1315

SDG#: 01116458

Work Order Number: _____

SAF# B01-114

Shipping Container ID: _____

Chain of Custody # B01-114 - 30
31

- 1. Custody Seals on shipping container intact? Yes No
- 2. Custody Seals dated and signed? Yes No
- 3. Chain-of-Custody record present? Yes No
- 4. Cooler temperature 5.4
- 5. Vermiculite/packing materials is Wet Dry
- 6. Number of samples in shipping container: 6
- 7. Sample holding times exceeded? Yes No

<p>8. Samples have:</p> <p><input type="checkbox"/> tape</p> <p><input checked="" type="checkbox"/> custody seals</p>	<p><input type="checkbox"/> hazard labels</p> <p><input type="checkbox"/> appropriate sample labels</p>
<p>9. Samples are:</p> <p><input checked="" type="checkbox"/> in good condition</p> <p><input type="checkbox"/> broken</p>	<p><input type="checkbox"/> leaking</p> <p><input type="checkbox"/> have air bubbles</p>

10. Were any anomalies identified in sample receipt? Yes No

11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: Phil Manning
Labille Laboratory Assoc. Date: 11/29/01

Telephoned to: _____ On _____ By _____