



0053033

Chemical and Environmental Measurement Information  
Recra LabNet Philadelphia  
Analytical Report

Client: TNU-HANFORD B00-039  
RFW #: 0003L634  
SDG/SAF #: H0773/B00-039

W.O. #: 10985-001-001-9999-00  
Date Received: 03-03-2000

GC/MS VOLATILE-TCLP

One (1) leachate sample was generated on 03-09-2000 from a soil sample collected on 03-01-2000.

The sample and its associated QC samples were analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8260A for TCLP Volatile target compounds on 03-14-2000.

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 the analysis was met.
3. The sample and its associated matrix spike samples were analyzed at five-fold dilution due to the leachate matrix.
4. All surrogate recoveries were within EPA QC limits.
5. One (1) of twenty (20) matrix spike recoveries was outside EPA QC limits.
6. One (1) of ten (10) blank spike recoveries was outside EPA QC limits.

RECEIVED  
APR 25 2000  
EDMC



*J. Michael Taylor*  
J. Michael Taylor  
Vice President  
Philadelphia Analytical Laboratory

03-24-00  
Date

som\group\data\voa\tnu-hanford-03t634.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 13 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.



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- 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.



Initiator: W. Wagner RFW Batch: 0003L634 Parameter: \_\_\_\_\_  
 Date: 3-16-00 Samples: 006 MSD, BS Matrix: Lichato  
 Client: TNU Hanford Method: SW846/MCAVVV/CLPI Prep Batch: \_\_\_\_\_

**1. Reason for SDR**

a. COC Discrepancy  Tech Profile Error  Client Request  Sampler Error on C-O-C  
 Transcription Error  Wrong Test Code  Other \_\_\_\_\_

b. General Discrepancy  
 Missing Sample/Extract  Container Broken  Wrong Sample Pulled  Label ID's Illegible  
 Hold Time Exceeded  Insufficient Sample  Preservation Wrong  Received Past Hold  
 Improper Bottle Type  Not Amenable to Analysis

Note: Verified by [Log-In] or [Prep Group] (circle)...signature/date: \_\_\_\_\_

c. QC Problem (Include all relevant specific results; attach data if necessary).  
*The MSD and Blank Spike had high recoveries for 2-Butanone.*

**2. Known or Probable Causes(s)**

**3. Discussion and Proposed Action** Other Description: \_\_\_\_\_

Re-log  
 Entire Batch  
 Following Samples: \_\_\_\_\_  
 Re-leach  
 Re-extract  
 Re-digest  
 Revise EDD  
 Change Test Code to \_\_\_\_\_  
 Place On/Take Off Hold (circle)

**4. Project Manager Instructions...**signature/date: \_\_\_\_\_

Concur with Proposed Action  
 Disagree with Proposed Action; See Instruction  
 Include in Case Narrative  
 Client Contacted:  
 Date/Person \_\_\_\_\_  
 Add  
 Cancel

**5. Final Action...**signature/date: STO WEN 03-17-00 Other Explanation: \_\_\_\_\_

Verified re-[log][leach][extract][digest][analysis] (circle)  
 Included in Case Narrative  
 Hard Copy COC Revised  
 Electronic COC Revised  
 EDD Corrections Completed

When Final Action has been recorded, forward original to QA Specialist for distribution and filing.

Route	Distribution of Completed SDR	Route	Distribution of Completed SDR
<input checked="" type="checkbox"/>	Initiator	<input type="checkbox"/>	Metals: Doughty
<input checked="" type="checkbox"/>	Lab Manager: M. Taylor	<input type="checkbox"/>	Inorganic: Perrone
<input checked="" type="checkbox"/>	Project Mgr: Stone/Carey/Schrenkel/Johnson	<input type="checkbox"/>	GC/LC: Schnell
<input checked="" type="checkbox"/>	Section Mgr: Wesson/Daniels	<input type="checkbox"/>	MS: Taylor
<input checked="" type="checkbox"/>	QA (file): Racioppi	<input type="checkbox"/>	Log-in: Janson
<input type="checkbox"/>	Data Management: Feldman	<input type="checkbox"/>	Admin: Soos
<input type="checkbox"/>	Sample Prep: Doughty/Kauffman	<input type="checkbox"/>	Other: _____

Recra LabNet - Lionville Laboratory

Volatiles by GC/MS, TCLP Leachate

Report Date: 03/16/00 13:02

05

RFW Batch Number: 0003L634

Client: TNU-HANFORD B00-039

Work Order: 10985001001 Page: 1a

	Cust ID:	B0XP62	B0XP62	B0XP62	VBLKQI	VBLKQI BS	LCHBLK
Sample	RFW#:	006	006 MS	006 MSD	00LVH110-MB1	00LVH110-MB1	00LTV011-LB1
Information	Matrix:	WATER	WATER	WATER	WATER	WATER	WATER
	D.F.:	5.00	5.00	5.00	1.00	1.00	5.00
	Units:	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
	Toluene-d8	107 %	101 %	101 %	100 %	99 %	107 %
Surrogate	Bromofluorobenzene	104 %	101 %	102 %	99 %	102 %	106 %
Recovery	1,2-Dichloroethane-d4	105 %	101 %	107 %	97 %	101 %	106 %
		=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====	=====fl=====
	Vinyl Chloride	0.050 U	119 %	115 %	0.010 U	118 %	0.050 U
	1,1-Dichloroethene	0.025 U	100 %	97 %	0.005 U	103 %	0.025 U
	Chloroform	0.025 U	100 %	98 %	0.005 U	101 %	0.025 U
	1,2-Dichloroethane	0.025 U	104 %	108 %	0.005 U	103 %	0.025 U
	2-Butanone	0.050 U	115 %	203 * %	0.010 U	197 * %	0.050 U
	Carbon Tetrachloride	0.025 J	103 %	96 %	0.005 U	102 %	0.025 U
	Trichloroethene	0.025 U	96 %	95 %	0.005 U	97 %	0.025 U
	Benzene	0.025 U	103 %	102 %	0.005 U	104 %	0.025 U
	Tetrachloroethene	0.025 U	99 %	97 %	0.005 U	97 %	0.025 U
	Chlorobenzene	0.025 U	100 %	102 %	0.005 U	101 %	0.025 U

\*= Outside of EPA CLP QC limits.

Recra LabNet - Lionville Laboratory  
VOA ANALYTICAL DATA PACKAGE FOR  
TNU-HANFORD B00-039

DATE RECEIVED: 03/03/00

RFW LOT # :0003L634

CLIENT ID	RFW #	MTX	PREP #	LEACH DATE	EXTR/PREP	ANALYSIS
BOXP62	006	W	00LVH110	03/09/00	N/A	03/14/00
BOXP62	006 MS	W	00LVH110	03/09/00	N/A	03/14/00
BOXP62	006 MSD	W	00LVH110	03/09/00	N/A	03/14/00

LAB QC:

VBLKQI	MB1	W	00LVH110	N/A	N/A	03/14/00
VBLKQI	MB1 BS	W	00LVH110	N/A	N/A	03/14/00
00LTV011-LB1	LB1	W	00LVH110	N/A	N/A	03/14/00

*03-16-00*

## **ADDENDUM**

This report provides Toxicity Characteristics Leaching Procedure (TCLP) information. Listed on the next page, the client identification on the ITCL labchron, "TCLP" represents the non-volatile leachate fraction and "TCLP LEACHATE" represents the Zero Headspace Extraction (ZHE) volatile leachate fraction. The "EXTR/PREP DATE" is the date the leachate preparation was initiated; the "ANALYSIS DATE" is the date the leachates were completed.



Recra LabNet - Lionville Laboratory  
INORGANIC ANALYTICAL DATA PACKAGE FOR  
TNU-HANFORD B00-039

RFW LOT # :0003L634

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTN DATE	REC	EXT/PREP	ANALYSIS
BOXP62							
TCLP LEACHATE	005	SO	00LTV011	03/01/00	03/03/00	03/08/00	03/09/00



00036634

Client <u>W. H. ...</u>	Refrigerator #	1																		
Est. Final Proj. Sampling Date	#/Type Container	Liquid																		
Project # <u>...</u>	Solid	1 PCapsule	1 PCapsule																	
Project Contact/Phone #	Liquid																			
RECRA Project Manager	Solid	250	250																	
QC <u>...</u> Del <u>...</u> TAT <u>7 days</u>	Preservatives																			
Date Rec'd	Date Due	ANALYSES REQUESTED →										ORGANIC					INORG			
Account #		VOA	BNA	Pest/PCB	Herb	TCLP	Voc													

MATRIX CODES: S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum DL - Drum L - EP/TCLP Leachate WI - Wipe X - Other F - Fish	Lab ID	Client ID/Description	Matrix QC Chosen (✓)		Matrix	Date Collected	Time Collected	RECRA LabNet Use Only													
			MS	MSD				VOA	BNA	Pest/PCB	Herb	TCLP	Voc	Metal	CN						
		Box 156			SO	7/100	1247	X													
		Box 157			I	I	L	X													
		Box 160			I	I	1255	X													
		Box 157			I	I	1242	X													
		Box 162			I	I	L						X								
		Box 162 mixed COS			L	**	-													X	

Special Instructions:	DATE/REVISIONS:	1. _____
		2. _____
		3. _____
		4. _____
		5. _____
		6. _____

**COMPOSITE WASTE**

RECRA LabNet Use Only	
Samples were: 1) Shipped <input checked="" type="checkbox"/> or Hand Delivered _____	COC Tape was: 1) Present on Outer Package Y or N
Airbill # _____	2) Unbroken on Outer Package Y or N
2) Ambient or Chilled _____	3) Present on Sample (Y or N)
3) Received in Good Condition Y or N	4) Unbroken on Sample (Y) or N
4) Labels Indicate Properly Preserved (Y or N)	COC Record Present Upon Sample Rec't Y or N
5) Received Within Holding Times Y or N	Cooler Temp. <u>32</u> °C

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time

**ORIGINAL REWRITTEN**

Discrepancies Between Samples Labels and COC Record? Y or N  
NOTES:

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-039-2		Page 1 of 1		
Collector Fahlberg		Company Contact Jane Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ		Price Code 9B Data Turnaround 7 Days		
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1		SAF No. B00-039		Air Quality <input type="checkbox"/>				
Ice Chest No. <i>SMISS2</i>		Field Logbook No. <i>EL1424</i>		COA HGWMRA4114		Method of Shipment Federal Express				
Shipped To TMA/RECRA <i>Rearc</i>		Offsite Property No. <i>10000134</i>		Bill of Lading/Air Bill No. <i>42357953 4230</i>						
POSSIBLE SAMPLE HAZARDS/REMARKS			Preservation		Cool 4C					
			Type of Container		Zip Loc Bag					
			No. of Container(s)		1					
			Special Handling and/or Storage		Volume		250mL			
SAMPLE ANALYSIS				VOA - E260A (TCL) (Carbon tetrachloride) <i>See note #1</i>						
Sample No.	Matrix *	Sample Date	Sample Time							
B0XP58	Other Solid	3.1.00	1247	X						
B0XP59	Other Solid	3.1.00	1247	X						
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS		Matrix *
Relinquished By <i>R. Thoren</i>		Date/Time <i>3.1.00/1430</i>		Received By <i>R. Thoren</i>		Date/Time <i>3.1.00/1430</i>		Close SDG upon receipt of samples  <i>#1) Analyze for CCl4 only</i> <i>#2) Sample originated in non-rad area no activity scan available</i>		S=Soil SE=Settlement SO=Solid S=Sludge W=Water O=Oil A=Air DS=Drawn Solids DL=Drawn Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By <i>R. Thoren</i>		Date/Time <i>3.20.00/1430</i>		Received By <i>F. DENY</i>		Date/Time				
Relinquished By <i>ted ex</i>		Date/Time <i>3.30.00/0920</i>		Received By <i>D. Vind</i>		Date/Time <i>3.30.00/0920</i>				
Relinquished By		Date/Time		Received By		Date/Time				
Relinquished By		Date/Time		Received By		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				B00-039-4		Page 1 of 1														
Collector Fahlberg		Company Contact Jane Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ		Price Code 9B Data Turnaround 7 Days														
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1		SAF No. B00-039		Air Quality <input type="checkbox"/>																
Ice Chest No. Sm1552		Field Logbook No. FL1424		COA HGWMRA4114		Method of Shipment Federal Express																
Shipped To TMA/RECRA Rocr		Offsite Property No. A000134		Bill of Lading/Air Bill No. 42357953 4230																		
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage				Preservation	Cool 4C																	
				Type of Container	Zip Loc Bag																	
				No. of Container(s)	1																	
				Volume	250mL																	
SAMPLE ANALYSIS				VOA - 1260A (TCL) (Carbon tetrachloride) See note #1																		
Sample No.	Matrix *	Sample Date	Sample Time																			
B0XP60	Other Solid	3.1.00	1255	X																		
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS								Matrix *						
Relinquished By		Date/Time		Received By		Date/Time		Close SDG upon receipt of samples #1) Analyze for CCl4 only #2) Sample originated from a non-rad area. No activity report required  3728								S=Soil SB=Soilment SO=Solid S=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Time WJ=Wipe L=Liquid V=Vegetation X=Other						
R. Thoren		3.1.00		R. Thoren		3.1.00/1430																
R. Thoren		3.2.00/1430		FED EX																		
R. Thoren		3.3.00/0920		D. J. ...		3.3.00/0920																
Relinquished By		Date/Time		Received By		Date/Time																
Relinquished By		Date/Time		Received By		Date/Time																
Relinquished By		Date/Time		Received By		Date/Time																
LABORATORY SECTION		Received By		Title				Date/Time														
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time														

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>			B00-039-1	Page 1 of 1
Collector Fahlberg	Company Contact Jane Borghese	Telephone No. 372-9442	Project Coordinator TRENT, SJ		Price Code 9B	Data Turnaround 7 Days
Project Designation Analysis of Millipore Filters at 299-W15-31A		Sampling Location 200-ZP-1	SAF No. B00-039		Air Quality <input type="checkbox"/>	
Ice Chest No. <b>Sml 552</b>	Field Logbook No. <b>EL 1424</b>	COA HGWMRA4114	Method of Shipment Federal Express			
Shipped To <b>RMA/RECRA</b> <b>3-1-00</b>	Offsite Property No. <b>A000134</b>		Bill of Lading/Air Bill No. <b>42357953 4230</b>			

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>	Preservation	Cool 4C																		
	Type of Container	Zip Loc Bag																		
	No. of Container(s)	1																		
	Special Handling and/or Storage	Volume	250mL																	
<b>SAMPLE ANALYSIS</b>		VOA - 8260A (TCL) (Carbon tetrachloride)																		
Sample No.	Matrix *	Sample Date	Sample Time																	
BOXP57	Other Solid	3-1-00	1242	X																

<b>CHAIN OF POSSESSION</b>				<b>SPECIAL INSTRUCTIONS</b>				Matrix * S=Soil SE=Soil/soil SO=Solid S=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other												
Relinquished By <b>R. Thoren</b>	Date/Time <b>3-1-00</b>	Received By <b>R. Thoren</b>	Date/Time <b>3-1-00/1415</b>	Close SDG upon receipt of samples <b>Sample originated in non-RAD Controlled area. &lt; 2000 pCi/g. NO TA Required</b>																
Relinquished By <b>R. Thoren</b>	Date/Time <b>3-3-00/1430</b>	Received By <b>FEDEX</b>	Date/Time																	
Relinquished By <b>FEDEX</b>	Date/Time <b>3-3-00/0920</b>	Received By <b>D. Johnson</b>	Date/Time <b>3-3-00/0920</b>																	
Relinquished By	Date/Time	Received By	Date/Time																	
Relinquished By	Date/Time	Received By	Date/Time																	
Relinquished By	Date/Time	Received By	Date/Time																	

<b>LABORATORY SECTION</b>	Received By	Title	Date/Time
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method	Disposed By	Date/Time

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>			B00-039-6	Page 1 of 1
Collector Fahlberg	Company Contact Jane Borghese	Telephone No. 372-9442	Project Coordinator TRENT, SJ		Price Code 9B	Data Turnaround 7 Days
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1	SAF No. B00-039		Air Quality <input type="checkbox"/>	
Ice Chest No. SM1552	Field Logbook No. EL 1424	COA HGWMA4114	Method of Shipment Federal Express			
Shipped To FMA/RECRA RF 3.1.0	Offsite Property No. A 000134		Bill of Lading/Air Bill No. 42357953 4230			

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None																
	Type of Container	Zip Loc Bag																
	No. of Container(s)	1																
	Special Handling and/or Storage	Volume	125g															
SAMPLE ANALYSIS		TCLP VOA -- 1311/8260A																
Sample No.	Matrix *	Sample Date	Sample Time															
BOXP62	Other Solid	3.1.00	1242	X														

<b>CHAIN OF POSSESSION</b>				<b>SPECIAL INSTRUCTIONS</b>				Matrix * S=Soil SE=Sediment SO=Solid S=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other
Sign/Print Names				Close SDG upon receipt of samples				
Relinquished By R. Free	Date/Time 1415	Received By R. Thoren	Date/Time 3.1.00/1415	Sample originated in non-RAD Controlled area. < 2000 pCi/g. NO TA REQUIRED				
Relinquished By R. Fahlberg	Date/Time 3.1.00	Received By R. Thoren	Date/Time 3.1.00/1415					
Relinquished By R. Thoren	Date/Time 3.200/1450	Received By F. D. E. K.	Date/Time 3.200/1450					
Relinquished By F. D. E. K.	Date/Time 3.3.00/0920	Received By D. J. H. I. T.	Date/Time 3.300/0920					
Relinquished By	Date/Time	Received By	Date/Time					
Relinquished By	Date/Time	Received By	Date/Time	(2-B)				
Relinquished By	Date/Time	Received By	Date/Time					

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

**Recra LabNet Philadelphia  
Analytical Report**

**Client:** TNU-HANFORD B00-039  
**RFW #:** 0003L634  
**SDG/SAF #:** H0773/B00-039

**W.O. #:** 10985-001-001-9999-00  
**Date Received:** 03-03-2000

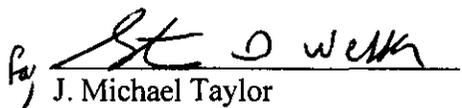
**GC/MS VOLATILE**

Four (4) spent 'in-line' filters were collected on 03-01-2000. The samples were logged as solid to accommodate LIMS.

The samples and their associated QC samples were analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8260A for the client specified Volatile target compound Carbon Tetrachloride on 03-08-2000.

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 the analysis was met.
3. These samples were prepared by eluting 10mL Methanol through the filter and analyzing an aliquot of the collected (eluted) methanol. The results were reported in total ng per filter.
4. All surrogate recoveries were within EPA QC limits. The surrogates were added to the extract prior to purging.
5. There was insufficient sample volume to perform matrix spike analysis.

  
J. Michael Taylor  
Vice President  
Philadelphia Analytical Laboratory

03-30-00  
Date



son\group\data\voa\tnu-hanford-03-634.doc

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- 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

<b>BS</b>	=	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.
<b>BSD</b>	=	Indicates blank spike duplicate.
<b>MS</b>	=	Indicates matrix spike.
<b>MSD</b>	=	Indicates matrix spike duplicate.
<b>DL</b>	=	Suffix added to sample number to indicate that results are from a diluted analysis.
<b>NA</b>	=	Not Applicable.
<b>DF</b>	=	Dilution Factor.
<b>NR</b>	=	Not Required.
<b>SP, Z</b>	=	Indicates Spiked Compound.



Recra LabNet - Lionville Laboratory

Volatiles By GC/MS, Special List

Report Date: 03/28/00 12:17

RFW Batch Number: 0003L634

Client: TNU-HANFORD B00-039

Work Order: 10985001001 Page: 1a

04

	Cust ID:	B0XP58	B0XP59	B0XP60	B0XP57	VBLKQF
Sample	RFW#:	001	002	003	004	00LVN122-MB1
Information	Matrix:	FILTER	FILTER	FILTER	FILTER	FILTER
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	total ng				
<hr/>						
	1,2-Dichloroethane-d4	89 %	95 %	96 %	97 %	96 %
Surrogate	Toluene-d8	108 %	102 %	106 %	103 %	99 %
Recovery	Bromofluorobenzene	90 %	91 %	92 %	95 %	98 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====						
	Carbon Tetrachloride	1500 J	2100 J	4000 U	2000 J	2800 U

\*= Outside of EPA CLP QC limits.

Recra LabNet - Lionville Laboratory  
VOA ANALYTICAL DATA PACKAGE FOR  
TNU-HANFORD B00-039

DATE RECEIVED: 03/03/00

RFW LOT # :0003L634

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
BOXP58	001	SO	00LVN122	03/01/00	N/A	03/08/00
BOXP59	002	SO	00LVN122	03/01/00	N/A	03/08/00
BOXP60	003	SO	00LVN122	03/01/00	N/A	03/08/00
BOXP57	004	SO	00LVN122	03/01/00	N/A	03/08/00

LAB QC:

VBLKQF	MB1	SO	00LVN122	N/A	N/A	03/08/00
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Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					B00-039-2	Page 1 of 1			
Collector Fahlberg		Company Contact Jane Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ		Price Code <b>9B</b>	Data Turnaround <b>7 Days</b>		
Project Designation Analysis of Millipore Filters at 299-W15-31A		Sampling Location 200-ZP-1		SAF No. B00-039		Air Quality <input type="checkbox"/>					
Ice Chest No. <b>SM11552</b>		Field Logbook No. <b>EL1424</b>		COA HIGWMRA4114		Method of Shipment Federal Express					
Shipped To TMA/RECRA <b>Reara</b>		Offsite Property No. <b>4000134</b>		Bill of Lading/Air Bill No. <b>42357953 4530</b>							
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage				Preservation		Cool 4C					
				Type of Container		Zip Loc Bag					
				No. of Container(s)		1					
				Volume		250mL					
SAMPLE ANALYSIS				VOA - 8260A (TCL) (Carbon tetrachloride) <b>See note #1</b>							
Sample No.		Matrix *	Sample Date	Sample Time							
BOXP58		Other Solid	3.1.00	1247	X						
BOXP59		Other Solid	3.1.00	1247	X						
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS					
Relinquished By <b>R. Fahlberg</b>		Date/Time <b>3.1.00</b>		Received By <b>R. Thoren</b>		Date/Time <b>3.1.00/1430</b>		Close SDG upon receipt of samples  #1) Analyze for CCl4 only #2) Sample originated in non-rad area no activity scan available  <b>3728</b>		Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By <b>R. Fahlberg</b>		Date/Time <b>3.1.00/1430</b>		Received By <b>F. Koenig</b>		Date/Time <b>3.1.00/1430</b>					
Relinquished By <b>Steve E.</b>		Date/Time <b>3.3.00/0920</b>		Received By <b>D. Y. [unclear]</b>		Date/Time <b>3.3.00/0920</b>					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time					

**COO2L634 temp 3.2°**

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B00-039-4	Page 1 of 1
Collector Fahlberg	Company Contact Jane Borghese	Telephone No. 372-9442	Project Coordinator Trent, SJ		Price Code 9B	Data Turnaround 7 Days	
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1	SAF No. B00-039		Air Quality <input type="checkbox"/>		
Ice Chest No. SM155-2	Field Logbook No. F.L. 1424	COA HGWMA4114	Method of Shipment Federal Express				
Shipped To TMA/RECRA Rocrac	Offsite Property No. A0000134	Bill of Lading/Air Bill No. 42357953 4230					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation Cool 4C					
Special Handling and/or Storage		Type of Container Zip Loc Bag					
		No. of Container(s) 1					
		Volume 250mL					
SAMPLE ANALYSIS		VOA - 8260A (TCL) (Carbon tetrachloride) See note #1					
Sample No.	Matrix *	Sample Date	Sample Time				
B0XP60	Other Solid	3.1.00	1255	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By P. G. ...	Date/Time 1/4/30	Received By R. Thoren	Date/Time 3.1.00/1430	Close SDG upon receipt of samples 1) Analyze for CCl4 only 2) Sample originated from a non-rad area. No activity report required 3728			
Relinquished By R. Thoren	Date/Time 3.2.00/1430	Received By FED EX	Date/Time				
Relinquished By Heidi E.	Date/Time 3.3.00/0920	Received By D. ...	Date/Time 3.3.00/0920				
Relinquished By	Date/Time	Received By	Date/Time				
Relinquished By	Date/Time	Received By	Date/Time				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				B00-039-1	Page 1 of 1	
Collector Fahlberg		Company Contact Jane Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ	Price Code <b>9B</b>	Data Turnaround <b>7 Days</b>
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1		SAF No. B00-039		Air Quality <input type="checkbox"/>		
Ice Chest No. <b>SMI 552</b>		Field Logbook No. <b>EL 1424</b>		COA HGWMRA4114		Method of Shipment Federal Express		
Shipped To <b>R</b> TMA/RECRA <b>3-1-00</b>		Offsite Property No. <b>A-000134</b>		Bill of Lading/Air Bill No. <b>42357953 4230</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage		Preservation	Cool 4C					
		Type of Container	Zip Loc Bag					
		No. of Container(s)	1					
		Volume	250mL					
SAMPLE ANALYSIS			VOA - 8260A (TCL) (Carbon tetrachloride)					
Sample No.	Matrix *	Sample Date	Sample Time					
B0XP57	Other Solid	3-1-00	1242	X				
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS Close SDG upon receipt of samples  Sample originated in non-RAID Controlled area. < 2000 pd/g. 110 TA Required  <div style="text-align: right; border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">2-B</div>				Matrix *
Relinquished By	Date/Time	Received By	Date/Time					S=Soil SE=Soilment SO=Solid S=Straggle W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
<i>R. Fahlberg</i>	3-1-00	<i>R. Thornton</i>	3-1-00/1415					
<i>R. Thornton</i>	3-2-00/1430	<i>EE DEN</i>						
<i>Dee Ex</i>	3-3-00/0920	<i>[Signature]</i>	3-3-00/0930					
LABORATORY SECTION	Received By	Title	Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time					

<b>Bechtel Hanford Inc.</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				B00-039-6	Page 1 of 1		
Collector Fahlberg		Company Contact Jane Borghese		Telephone No. 372-9442		Project Coordinator TRENT, SJ			
Project Designation Analysis of Milipore Filters at 299-W15-31A		Sampling Location 200-ZP-1		SAF No. B00-039		Price Code 9B Data Turnaround 7 Days			
Ice Chest No. SM1552		Field Logbook No. EL1424		COA HGWMRA4114		Method of Shipment Federal Express			
Shipped To FMA/RECRA RF 3-1-00		Offsite Property No. A000134		Bill of Lading/Air Bill No. 42352953 4280					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation		None					
		Type of Container		Zip Loc Bag					
		No. of Container(s)		1					
		Volume		125g					
Special Handling and/or Storage				TCLP VOA -- 1311/8260A					
SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time						
B0XP62	Other Solid	3-1-00	1242	X					
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *			
Sign/Print Names				Close SDG upon receipt of samples		<p>Sample originated in non-RAD Controlled area &lt; 2000 pCi/g. NO TA REQUIRED</p> <p style="text-align: center; border: 1px solid black; border-radius: 50%; padding: 5px;">2-B</p>			
Relinquished By R. Fahlberg		Date/Time 3-1-00		Received By R. Thoren				Date/Time 3-1-00/1415	
Relinquished By R. Thoren		Date/Time 3-200/1410		Received By F. DEK				Date/Time	
Relinquished By R. Thoren		Date/Time 3-3-00/0920		Received By D. Thoren				Date/Time 3-3-00/0920	
Relinquished By		Date/Time		Received By				Date/Time	
Relinquished By		Date/Time		Received By				Date/Time	
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			