



Chemical and Environmental Measurement Information

**Recra LabNet Philadelphia
Analytical Report**

Client: TNU-HANFORD B99-093
RFW #: 0011L114
SDG/SAF #: H1118/B99-093

W.O. #: 10985-001-001-9999-00
Date Received: 11-02-2000

GC/MS VOLATILE

Eight (8) solid samples were collected on 10-31-2000.

The samples and their associated QC samples were analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8260B for client specified Volatile target compound Carbon Tetrachloride on 11-09,10-2000.

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 samples were analyzed within required holding time.
3. All samples required medium level and an additional dilution due to high levels of target compounds. Due to the programming limitations, the dilution factor on the summary report is not the true dilution factor.
4. All surrogate recoveries were within EPA QC limits.
5. All matrix spike recoveries were within EPA QC limits.
6. The blank spike recovery was within EPA QC limits.
7. Internal standard area and retention time criteria were met.
8. "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."

RECEIVED
MAR 28 2001
EDMC

by J. Michael Taylor
J. Michael Taylor
V.P./Laboratory General Manager
Lionville Laboratory

12-27-00
Date

som\group\data\voa\tnu-hanford-11-114.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.



H1118

Recre LabNet - Lionville Laboratory
VOA ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1118

DATE RECEIVED: 11/02/00

RFW LOT # :0011L114

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10M30	001	M1	SO 00LVX354	10/31/00	N/A	11/09/00
B10M31	002	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M32	003	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M32	003 MS	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M32	003 MSD	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M33	004	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M34	005	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M35	006	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M36	007	M1	SO 00LVX355	10/31/00	N/A	11/10/00
B10M37	008	M1	SO 00LVX354	10/31/00	N/A	11/09/00

LAB QC:

VBLKBS	MB1	S	00LVX354	N/A	N/A	11/09/00
VBLKBT	MB1	S	00LVX355	N/A	N/A	11/10/00
VBLKBT	MB1 BS	S	00LVX355	N/A	N/A	11/10/00



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.



Recra LabNet - Lionville Laboratory

Volatiles By GC/MS, Special List

Report Date: 12/08/00 16:33

RFW Batch Number: 0011L114

Client: TNUHANFORD B99-093 H1118 Work Order: 10985001001 Page: 1a

	Cust ID:	B10M30	B10M31	B10M32	B10M32	B10M32	B10M33
Sample Information	RFW#:	001	002	003	003 MS	003 MSD	004
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID
	D.F.:	1080	205	103	103	103	2.11
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Level:	MED	MED	MED	MED	MED	MED
Surrogate	1,2-Dichloroethane-d4	95 %	89 %	94 %	102 %	116 %	100 %
Recovery	Toluene-d8	104 %	104 %	110 %	104 %	112 %	108 %
	Bromofluorobenzene	91 %	91 %	96 %	98 %	106 %	95 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Carbon Tetrachloride		6200000	2200000	1300000	90 %	126 %	20000

	Cust ID:	B10M34	B10M35	B10M36	B10M37	VBLKBS	VBLKBT
Sample Information	RFW#:	005	006	007	008	00LVX354-MB1	00LVX355-MB1
	Matrix:	SOLID	SOLID	SOLID	SOLID	SOIL	SOIL
	D.F.:	216	20.5	52.6	1030	2.00	2.00
	Units:	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG	UG/KG
	Level:	MED	MED	MED	MED	MED	MED
Surrogate	1,2-Dichloroethane-d4	91 %	105 %	115 %	97 %	92 %	89 %
Recovery	Toluene-d8	106 %	108 %	111 %	107 %	104 %	101 %
	Bromofluorobenzene	94 %	99 %	101 %	93 %	92 %	90 %
=====fl=====fl=====fl=====fl=====fl=====fl=====fl=====							
Carbon Tetrachloride		3400000	220000	610000	0.10E+08	620 U	620 U

*= Outside of EPA CLP QC limits.



0011114

ALL FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client <u>TRU - Hanford 899-093</u>	Refrigerator # <u>1</u>
Est. Final Proj. Sampling Date _____	#/Type Container
Project # <u>10985-001-001-9999-00</u>	Liquid _____
Project Contact/Phone # _____	Solid <u>19T</u>
RECRA Project Manager <u>OS</u>	Volume
QC <u>Spec</u> Del <u>Std</u> TAT <u>30 day</u>	Liquid _____
Date Rec'd <u>11-2-00</u> Date Due <u>12-2-00</u>	Solid <u>20</u>
Account # _____	Preservatives _____
	ANALYSES REQUESTED →
	ORGANIC
	VOA BNA Pest/PCB Herb
	INORG
	Metal 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 (S)		Matrix	Date Collected	Time Collected	RECRA LabNet Use Only															
			MS	MSD				AL24X	TRANS														
	001	Biom30			SO	10-31-00	1222	✓															
	002	1					1232	✓															
	003	2					1242	✓															
	004	3					1252	✓															
	005	4					1303	✓															
	006	5					1311	✓															
	007	6					1320	✓															
	008	7					1330	✓															

Special Instructions: Saf 899-093
AL24X => See Client COC

DATE/REVISIONS:
1. Run Matrix QC
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only	
Samples were: 1) Shipped <input checked="" type="checkbox"/> or Hand Delivered _____	COC Tape was: 1) Present on Outer Package <input checked="" type="checkbox"/> or N
Airbill # <u>See below</u>	2) Unbroken on Outer Package <input checked="" type="checkbox"/> or N
2) Ambient or <u>Chilled</u>	3) Present on Sample <input checked="" type="checkbox"/> or N
3) Received in Good Condition <input checked="" type="checkbox"/> or N	4) Unbroken on Sample <input checked="" type="checkbox"/> or N
4) Labels Indicate Properly Preserved <input checked="" type="checkbox"/> or N	COC Record Present Upon Sample Rec'l <input checked="" type="checkbox"/> or N
5) Received Within Holding Times <input checked="" type="checkbox"/> or N	Cooler Temp. <u>5.7</u> c

Relinquished by	Received by	Date	Time
<u>FedEx</u>	<u>TRP/21</u>	<u>11-2-00</u>	<u>0945</u>

Relinquished by	Received by	Date	Time
COMPOSITE WASTE	ORIGINAL		

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:
4235 7954 0213

2

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			B99-093-18	Page 1 of 2
Collector TMOHANSEN / <u>Fahlberg</u>	Company Contact VJROHAY	Telephone No. 372-9100	Project Coordinator TRENT, SJ		Price Code 9N	Data Turnaround 45 Days
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W	SAF No. B99-093		Air Quality <input type="checkbox"/>	
Ice Chest No. <u>2RC00-004 (off)</u>	Field Logbook No. <u>10-300</u> EL-1516-1517-1	COA R20ZP2DP60	Method of Shipment FED EX			
Shipped To TMA (RECRA)	Offsite Property No. <u>A010003</u>	Bill of Lading/Air Bill No. <u>42357953-0213</u>				

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	Cool 4C																		
	Type of Container	aG																		
	No. of Container(s)	1																		
	Volume	250mL																		
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g																				
SAMPLE ANALYSIS			VOA - #260A (TCL) (Carbon tetrachloride); Moisture Content - D2216																	

Sample No.	Matrix *	Sample Date	Sample Time																		
B10M30	OTHER SOLID	10/31/00	1222	X																	
B10M31	OTHER SOLID	10/31/00	1232	X																	
B10M32	OTHER SOLID	10/31/00	1242	X																	
B10M33	OTHER SOLID	10/31/00	1252	X																	
B10M34	OTHER SOLID	10/31/00	1303	X																	

CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *			
Relinquished By		Date/Time		Received By		Date/Time		<p>•• Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found.</p> <p>•• Laboratory must include the % Moisture data as part of all hard copy reports.</p> <p>Samples stored in Ref. # <u>20</u> at the 3728 Shipping Facility on <u>10/31/00</u>. Collector of available to relinquish samples on <u>11/01/00</u> for shipment.</p> <p style="text-align: right;"><u>ZT</u> <u>11/01/00</u></p>			
<u>R. Fahlberg</u>		<u>10/31/00</u>		<u>Storval</u>		<u>10-31-00</u>					
<u>R. Fahlberg</u>		<u>1200</u>		<u>R. Thoren</u>		<u>11/01/00</u>					
<u>R. Thoren</u>		<u>11/01/00</u>		<u>F. E. O. Exp</u>							
<u>FedEx</u>		<u>11:200 0945</u>		<u>Thoppal</u>		<u>11:200 0945</u>					
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

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-18	Page 2 of 2	
Collector TMJOHANSEN / <i>Fchilbas</i>		Company Contact VIROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ		
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Price Code 9N Data Turnaround 45 Days		
Ice Chest No. <i>22000-004/10f1</i>		Field Logbook No. <i>RE 10-5000</i> EL-1516 1517.1		COA R20ZP2DP60		Method of Shipment FED EX		
Shipped To <u>TMA/RECRA</u>		Offsite Property No. <i>A0100003</i>		Bill of Lading/Air Bill No. <i>4235753-0213</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				Preservation		Cool 4C		
				Type of Container		aG		
				No. of Container(s)		1		
				Volume		250mL		
SAMPLE ANALYSIS				VOA - #260A (TCL) (Carbon tetrachloride); Moisture Content - D2216				
Sample No.		Matrix *	Sample Date	Sample Time				
B10M35		OTHER SOLID	10/31/00	1311	X			
B10M36		OTHER SOLID	10/31/00	1320	X			
B10M37		OTHER SOLID	10/31/00	1330	X			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS ** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found. ** Laboratory must include the % Moisture data as part of all hard copy reports. Samples stored in Ref. # <i>2C</i> at the 3728 Shipping Facility on <i>10/31/00</i> . Collector not available to relinquish samples on <i>11/01/00</i> for shipment.		
Relinquished By <i>R. Fell</i>		Date/Time <i>10/31/00</i>	Received By <i>Storved</i>		Date/Time <i>10/31/00</i>			
Relinquished By <i>R. Fell</i>		Date/Time <i>10/31/00</i>	Received By <i>R. Thoren</i>		Date/Time <i>12/00</i>			
Relinquished By <i>R. Thoren</i>		Date/Time <i>11/01/00</i>	Received By <i>R. Thoren</i>		Date/Time <i>11/01/00</i>			
Relinquished By <i>R. Thoren</i>		Date/Time <i>11/01/00</i>	Received By <i>FED EX</i>		Date/Time			
Relinquished By <i>FedEx</i>		Date/Time <i>11/200 0945</i>	Received By <i>Thoren</i>		Date/Time <i>11/200 0945</i>			
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		

SAMPLE PREP RECORD

Sheet no.: 1

Extract. Date: 11/09/00

Extraction Batch No: 00LVX354

Analyst: JL

Method: N/A

Test: 0624

Cleanup Date:

Analyst:

Client: TNUHANFORD B99-093 H1118

LIMS Report Date: 12/08/00

Solvent:

Adsorbent:

Sample No:	Client Name Client ID	pH	Initial Surr. WT/VOL	Surr. Spike Mult.	Final VOL	Final VOL	Split Mult.	GPC Y/N	% Solid	C/D FACTOR
0011L114-	TNUHANFORD B99-093 H1118									
001 X M1	B10M30	3.7	100.		10.0		50.0	N	63.27	213.6
008 X M1	B10M37	3.9	100.		10.0		50.0	N	76.54	167.5
00LVX354-MB1	X M1	4.0	100.		10.0		50.0	N	100.00	125.0

Comments:
Surrogate:
Spike:

Extracts Transferred	Relinquished By	Date Time	Received By	Date Time	Reason for Transfer
					12/11/00



Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1118

DATE RECEIVED: 11/02/00

RFW LOT # :0011L114

CLIENT ID /ANALYSIS	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B10M30						
% MOISTURE	001	SO	00L*S175	10/31/00	11/06/00	11/07/00
% MOISTURE	001 REP	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	001	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	001 REP	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M31						
% MOISTURE	002	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	002	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M32						
% MOISTURE	003	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	003	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M33						
% MOISTURE	004	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	004	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M34						
% MOISTURE	005	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	005	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M35						
% MOISTURE	006	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	006	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M36						
% MOISTURE	007	SO	00L*S175	10/31/00	11/06/00	11/07/00
% SOLIDS	007	SO	00L*S175	10/31/00	11/06/00	11/07/00
B10M37						
% MOISTURE	008	SO	00L*S175	10/31/00	11/06/00	11/07/00

01
DB 12/31/00

Recra LabNet - Lionville Laboratory
INORGANIC ANALYTICAL DATA PACKAGE FOR
TNUHANFORD B99-093 H1118

DATE RECEIVED: 11/02/00

RFW LOT # :0011L114

<u>CLIENT ID /ANALYSIS</u>	<u>RFW #</u>	<u>MTX</u>	<u>PREP #</u>	<u>COLLECTION</u>	<u>EXTR/PREP</u>	<u>ANALYSIS</u>
% SOLIDS	008	SO	00L*S175	10/31/00	11/06/00	11/07/00

02
07 11/12/00

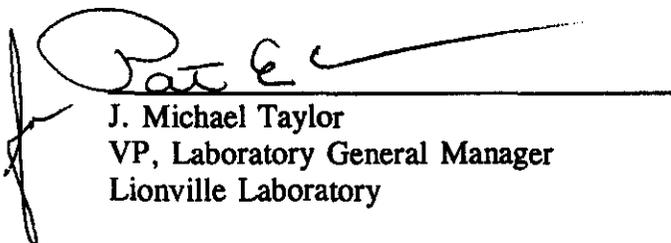
**Recra LabNet Philadelphia
Analytical Report**

Client : TNU-HANFORD B99-093 H1118
RFW# : 0011L114

W.O. # : 10985-001-001-9999-00
Date Received: 11-02-00

INORGANIC CASE NARRATIVE

1. This narrative covers the analyses of 2 solid samples.
2. The samples were prepared and analyzed in accordance with the method checked on the attached glossary.
3. Sample holding times as required by the method and/or contract were met.
4. The cooler temperature was recorded on the chain-of-custody.
5. The replicate analysis for Percent Solids was within the 20% Relative Percent Difference (RPD) control limit, however the replicate analysis for Percent Moisture which was outside the control limit.
6. 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
VP, Laboratory General Manager
Lionville Laboratory

12-17-00
Date

njp111-114

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 10 pages.

Recra LabNet Philadelphia

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	
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:	Method:		
Other:	Method:		

04
02 1
12/31/00

Recra LabNet Philadelphia
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.

Recre LabNet - Lionville

INORGANICS DATA SUMMARY REPORT 11/08/00

CLIENT: TNUHANFORD B99-093 H1118
 WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 0011L114

SAMPLE	SITE ID	ANALYTE	RESULT	UNITS	REPORTING LIMIT	DILUTION FACTOR
-001	B10M30	% Moisture	36.7	%	0.01	1.0
		% Solids	63.3	%	0.01	1.0
-002	B10M31	% Moisture	42.2	%	0.01	1.0
		% Solids	57.8	%	0.01	1.0
-003	B10M32	% Moisture	44.6	%	0.01	1.0
		% Solids	55.4	%	0.01	1.0
-004	B10M33	% Moisture	2.0	%	0.01	1.0
		% Solids	98.0	%	0.01	1.0
-005	B10M34	% Moisture	42.7	%	0.01	1.0
		% Solids	57.3	%	0.01	1.0
-006	B10M35	% Moisture	41.8	%	0.01	1.0
		% Solids	58.2	%	0.01	1.0
-007	B10M36	% Moisture	26.4	%	0.01	1.0
		% Solids	73.6	%	0.01	1.0
-008	B10M37	% Moisture	23.5	%	0.01	1.0
		% Solids	76.5	%	0.01	1.0

06
 04 11/11/00

Recra LabNet - Lionville

INORGANICS PRECISION REPORT 11/08/00

CLIENT: TNUHANFORD B99-093 H1118
WORK ORDER: 10985-001-001-9999-00

RECRA LOT #: 0011L114

SAMPLE	SITE ID	ANALYTE	INITIAL RESULT	REPLICATE	RPD	DILUTION FACTOR (REF)
-001REP	B10M30	% Moisture	36.7	24.0	42.0	1.0
		% Solids	63.3	76.0	18.3	1.0

07
05
12/20

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-18	Page 1 of 2
Collector TMJOHANSEN	<i>Fahlberg</i>	Company Contact VJROHAY	Telephone No. 372-9100	Project Coordinator TRENT, SJ	Price Code 9N	Data Turnaround 45 Days	
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093	Air Quality <input type="checkbox"/>		
Ice Chest No. <i>2RC00-004 (off)</i>		Field Logbook No. EL-1516-1517-1	<i>10-3000</i>	COA R20ZP2DP60	Method of Shipment FED EX		
Shipped To TMA (RECRE)		Offsite Property No. <i>A010003</i>		Bill of Lading/Air Bill No. <i>42357953-0213</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool AC		
				Type of Container	aG		
				No. of Container(s)	1		
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g				Volume	250mL		
SAMPLE ANALYSIS				VOA - B260A (TCL) (Carbon tetrachloride): Moisture Content - D2216			
Sample No.	Matrix *	Sample Date	Sample Time				
B10M30	OTHER SOLID	<i>10/31/00</i>	<i>1222</i>	<i>X</i>			
B10M31	OTHER SOLID	<i>10/31/00</i>	<i>1232</i>	<i>X</i>			
B10M32	OTHER SOLID	<i>10/31/00</i>	<i>1242</i>	<i>X</i>			
B10M33	OTHER SOLID	<i>10/31/00</i>	<i>1252</i>	<i>X</i>			
B10M34	OTHER SOLID	<i>10/31/00</i>	<i>1303</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			
Relinquished By		Date/Time		Received By		Date/Time	
<i>R. Zell</i>		<i>10/31/00</i>		<i>Stored</i>		<i>10/31/00</i>	
<i>R. Zell</i>		<i>10/31/00</i>		<i>Ref. 2-C</i>		<i>10/31/00</i>	
<i>R. Zell</i>		<i>10/31/00</i>		<i>R. Thoren</i>		<i>11/01/00</i>	
<i>R. Thoren</i>		<i>11/01/00</i>		<i>FED EX</i>			
<i>FED EX</i>		<i>11/01/00</i>		<i>Thoren</i>		<i>11/01/00</i>	
LABORATORY SECTION				Received By			
FINAL SAMPLE DISPOSITION				Disposal Method			
				Disposed By			
				Date/Time			

SPECIAL INSTRUCTIONS

** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found.

** Laboratory must include the % Moisture data as part of all hard copy reports.

Samples stored in Ref. # *2C* at the 3728 Shipping Facility on *10/31/00*. Collector available to relinquish samples on *11/01/00* for shipment.

ZT
11/01/00

- Matrix *
- S - Soil
 - SE - Sediment
 - SO - Solid
 - S - Sludge
 - W - Water
 - O - Oil
 - A - Air
 - DS - Dross Solids
 - DL - Dross Liquids
 - T - Tissue
 - WI - Wipe
 - L - Liquid
 - V - Vegetation
 - X - Other

ZT
11/01/00

Bechtel Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				B99-093-18	Page 2 of 2
Collector TMJOHANSEN <i>Echberg</i>		Company Contact VJROHAY		Telephone No. 372-9100		Project Coordinator TRENT, SJ	Price Code 9N Data Turnaround 45 Days
Project Designation 200-ZP-2 Passive Soil Vapor Extraction - Other Solid		Sampling Location 200W		SAF No. B99-093		Air Quality <input type="checkbox"/>	45 Days
Ice Chest No. <i>2PC00-004/10f1</i>		Field Logbook No. <i>RF 4-900</i> EL-4546 1517.1		COA R20ZP2DP60		Method of Shipment FED EX	
Shipped To TMA/RECRA		Offsite Property No. <i>A010003</i>		Bill of Lading/Air Bill No. <i>4235 AS3-0213</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation Cool 4C	Type of Container nG	No. of Container(s) 1	Volume 250mL		
Special Handling and/or Storage Sample originated in non radiological zone <2000pci/g		VOA - B260A (TCL) (Carbon tetrachloride); Moisture Content - D2216					
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				
B10M35	OTHER SOLID	10/31/00	1311	X			
B10M36	OTHER SOLID	10/31/00	1320	X			
B10M37	OTHER SOLID	10/31/00	1330	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By		Date/Time		Received By		Date/Time	
<i>RT Echberg</i>		<i>10/31/00</i>		<i>Stored in Ref. # 200</i>		<i>10/31/00</i>	
<i>Removed from site</i>		<i>1200</i>		<i>R. Thoren</i>		<i>1200</i>	
<i>RT 11/01/00</i>		<i>11/01/00</i>		<i>R. Thoren</i>		<i>11/01/00</i>	
<i>R. Thoren</i>		<i>1200</i>		<i>FED EX</i>			
<i>FED EX</i>		<i>11200 0945</i>		<i>Thoren</i>		<i>11200 0945</i>	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
LABORATORY SECTION				Received By			
FINAL SAMPLE DISPOSITION				Disposal Method			
				Disposed By			
				Date/Time			

SPECIAL INSTRUCTIONS

** Laboratory may use medium level preparation for VOA. They are to report any other halogenated compounds found.

** Laboratory must include the % Moisture data as part of all hard copy reports.

Samples stored in Ref. # *200* at the 3728 Shipping Facility on *10/31/00*.
Collector not available to relinquish samples on *11/01/00* for shipment.

RT 11/01/00

- Matrix *
- S - Soil
 - SE - Sediment
 - SO - Sludge
 - S - Sludge
 - W - Water
 - O - Oil
 - A - Air
 - DS - Drum Solids
 - DL - Drum Liquid
 - T - Tissue
 - WJ - Waste
 - L - Liquid
 - V - Vegetation
 - X - Other