H0682-TMA/RECRA

RECRA LabNet

a division of Recra Environmental, Inc.

Virtual Laboratories Everywhere

0052645

Recra LabNet Philadelphia
Analytical Report

Client: TNU HANFORD B99-085
RFW #: 9912L923
SDG/SAF#: H0682 /B99-085

W.O. #: #: 10985-001-001-9999-00
Date Received: 12-04-99

RECEIVED
FEB 2 8 2000
EDMC

GC SCAN

One (1) water sample was collected on 12-02-99.

The sample and it's associated QC samples were prepared on 12-15-99 and analyzed by methodology based on EPA Method 8015B for Ethanol and 1-Propanol on 12-16-99.

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 method specified holding time of 7 days was exceeded. A copy of the Sample Discrepancy Report (SDR) has been enclosed.

3. All initial calibrations associated with this data set were within acceptance criteria.

4. All continuing calibration standards analyzed prior to the sample extracts were within acceptance criteria.

5. Surrogates were not used for this analysis.

6. All blank spike recoveries were within advisory control limits of 50%-150%.

7. All matrix spike recoveries were within advisory control limits of 50%-150%.

JAN 2000
RECEIVED
Data
Log In

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

12-21-99
Date

r:\share\lc\gcscan\12-923.doc

GLOSSARY OF OGCSC DATA

DATA QUALIFIERS

U = Indicates that the compound was analyzed for but not detected. The minimum detection limit for the sample (not the method detection limit) is reported with the U (e.g., 10U).

J = Indicates an estimated value. This flag is used in cases where a target analyte is detected at a level less than the lower quantification level. If the limit of quantification 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.

E = Indicates that the compound was detected beyond the calibration range and was subsequently analyzed at a dilution.

I = Interference.

ABBREVIATIONS

BS = Indicates blank spike in which reagent grade water is spiked with the CLP matrix spiking 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 = Indicates that recoveries were not obtained because the extract had to be diluted for analysis.

NA = Not Applicable.

DF = Dilution Factor.

NR = Not Required.

SP = Indicates spiked compound.

Recra LabNet Philadelphia Sample Discrepancy Report (SDR) SDR #: 99LCC70

Initiator: S. Roy | RFW Batch: 9912896, 923 | Parameter: OC/SC
Date: 12/17/99 | Samples: cc1 001 | Matrix: water
Client: TRW | Method: SW846/MCAWW/CLP/ | Prep Batch: 99LCC167

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)

Hold time exceeded for water extraction, collected on the 2nd and extracted on the 15th

2. Known or Probable Cause(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: [signature] 12/18/99

__ 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: [signature] 12-21-99 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
__	X Initiator	__	__ Metals: Doughty
__	X Lab Manager: M. Taylor	__	__ Inorganic: Perrone
__	X Project Mgr: Stone/Carey/Schrenkel/Johnson	__	__ GC/LC: Schnell
__	X Section Mgr: Wesson/Daniels	__	__ MS: Taylor
__	X QA (file): Racioppi	__	__ Log-in: Janson
__	__ Data Management: Feldman	__	__ Admin: Soos
__	__ Sample Prep: Doughty/Kauffman	__	__ Other: _____

Recra LabNet - Lionville Laboratory

GC SCAN

Report Date: 12/17/99 10:25

RFW Batch Number: **9912L923** Client: **TNU-HANFORD B99-085** Work Order: **10985-001-001-9999-00** Page: 1

	Cust ID:	B0X3V9	B0X3V9	B0X3V9	BLK	BLK BS
Sample Information	RFW#:	001	001 MS	001 MSD	99LLC187-MB1	99LLC187-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	mg/L	mg/L	mg/L	mg/L	mg/L
n-Propyl Alcohol		5.0 U	98 %	98 %	5.0 U	95 %
Ethanol		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U

CK 12/17/99

12/17/99

U= Analyzed, not detected. J= Present below detection limit. B= Present in blank. NR= Not requested. NS= Not spiked.
%= Percent recovery. D= Diluted out. I= Interference. NA= Not Applicable. *= Outside of Advisory limits.

Recra LabNet - Lionville Laboratory
GCSC ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-085

DATE RECEIVED: 12/04/99 RFW LOT # :9912L923

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0X3V9	001	W	99LLC187	12/02/99	12/15/99	12/16/99
B0X3V9	001 MS	W	99LLC187	12/02/99	12/15/99	12/16/99
B0X3V9	001 MSD	W	99LLC187	12/02/99	12/15/99	12/16/99
LAB QC:						
BLK	MB1	W	99LLC187	N/A	12/15/99	12/16/99
BLK	MB1 BS	W	99LLC187	N/A	12/15/99	12/16/99

12.20.99

RECRA LabNet Use Only

99/2L923

Custody Transfer Record/Lab Work Request

Page 1 of 1

RECRA LabNet

All FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Client TNU-HANFORD B99-085

Est. Final Proj. Sampling Date

Project # 10985-001-001-9999-00

Project Contact/Phone #

RECRA Project Manager QT

QC Appr Del Std TAT 30 days

Date Rec'd 12/4/99 Date Due 1/3/00

Account #

Refrigerator # 1

#/Type Container: Liquid 3AG; Solid

Volume: Liquid 40; Solid

Preservatives: HCl

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

RECRA LabNet Use Only: 08240 08250

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 (✓) MS	MSD	Matrix	Date Collected	Time Collected	08240	08250
001	Box 3V9	X	X	W	12-2-99	0515	3	

Special Instructions:

Saf # B99-085

COMPOSITE WASTE

DATE/REVISIONS:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

RECRA LabNet Use Only

Samples were: 1) Shipped ___ or Hand Delivered ___

Airbill # FedEx

2) Ambient or (Chilled)

3) Received in Good Condition (Y) or N

4) Labels Indicate Properly Preserved (Y) or N

5) Received Within Holding Times (Y) or N

COC Tape was: 1) Present on Outer Package (Y) or N; 2) Unbroken on Outer Package (Y) or N; 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. 4.3 °C

Discrepancies Between Samples Labels and COC Record? Y or (N)

NOTES: * 423579532465

Relinquished by	Received by	Date	Time
Fed Ex	[signature]	12-4-99	1200

Relinquished by	Received by	Date	Time
	ORIGINAL		
	REWRITTEN		

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-085-14	Page 1 of 1

Collector	Company Contact / Telephone No.	Project Coordinator	Price Code / Data Turnaround
Bowers/Fahlberg	C Cearlock 372-9574	TRENT, SJ	7N / 45 Days

Project Designation	Sampling Location	SAF No.	Air Quality
200 Area Source characterization - 200-CW-1 OU - QC Sam	200 East	B99-085	☐

Ice Chest No.	Field Logbook No.	COA	Method of Shipment
SML 443	EL1511-1	B20CW1671C	Fed EX

Shipped To	Offsite Property No.	Bill of Lading/Air Bill No.
TMA/RECRA	A0000055	42357953 2465

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	ZnAc+NaOH to pH >9 Cool	Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HNO3 to pH <2	HCl to pH <2 Cool 4C	HNO3 to pH <2			
Type of Container	P	P	P	aG	P	aGs*	P			
No. of Container(s)	1	1	1	2	2	3	3			
Volume	500mL	1000mL	1000mL	1000mL	1000mL	40mL	500mL			
SAMPLE ANALYSIS	Sulfides - 9030	See item (1) in Special Instructions.	NO2/NO3 - 353.1; Ammonia - 350.3	Semi-VOA - 8270A (TCL)	Gross Alpha; Gross Beta	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	See item (2) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time										
B0X3V9	Water	12-2-99	0515						X				
~~B0X3W0~~	~~Water~~ 2nd	12-3-99											

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By	Date/Time	Received By	Date/Time
Doug Bowers	12-2-99/1530	Bob 2C	12-2-99/1530
Bob 2C	12-3-99/0700	R. Thoren	12-3-99/0700
R. Thoren	12-3-99/1430	FED EX	
FedEx	12-4-99 1000	[illegible]	12-4-99 1000

SPECIAL INSTRUCTIONS

(1) *IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}*; pH (Water) - 9040
(2) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; *ICP Metals - 6010A (Supertrace Add-On) {Copper, Nickel, Vanadium, Zinc}*

Sample originates in non-Radiologically Controlled area no TA Req. < 2000 pCi/g

Matrix *

S=Soil
SE=Sediment
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

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

BHI-EE-011 (10/99)

RECRA
ENVIRONMENTAL
INC.

Chemical and Environmental Measurement Information

Recra LabNet Philadelphia
Analytical Report

Client: TNU-HANFORD B99-085
RFW #: 9912L923
SDG/SAF #: H0682/B99-085

W.O. #: 10985-001-001-9999-00
Date Received: 12-04-99

GC/MS VOLATILE

One (1) water sample was collected on 12-02-99.

The sample and its 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 compounds on 12-10-99.

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 sample.

4. One (1) of fifteen (15) surrogate recoveries was outside EPA QC limits. The surrogate recovery of Bromofluorobenzene was slightly low in 99LVII637-MB1 BS; however, there was no significant impact on the data.

5. All matrix spike recoveries were within EPA QC limits.

6. All blank spike recoveries were within EPA QC limits.

7. The method blank contained the common laboratory contaminants Methylene Chloride and Acetone at levels less than 2x the CRQL.

8. The samples were analyzed with a standard, which had expired for the gas compounds; however, upon comparison with a newly prepared standard (prepared on 12-14-99) indicated that the gas recoveries were within criteria; consequently, there were no significant impact on the data. A copy of the Corrective Action Documentation has been enclosed.

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

01-19-00
Date

JAN 2000
RECEIVED
Data
Log In

som\group\data\voa\tnu12923.doc

208 Welsh Pool Road • Lionville, PA 19341-1333 • (610) 280-3000 • Fax (610) 280-3041

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.

Recra LabNet Philadelphia

CORRECTIVE ACTION DOCUMENTATION

AUDIT REPORT # AR99-035

INSTRUCTIONS: 1) **ORIGINATOR** complete **PERSON RESPONSIBLE FOR RESPONSE** and **DESCRIPTION OF PROBLEM** blocks.
2) Originator forward form to **PERSON RESPONSIBLE FOR RESPONSE**.
3) Develop/plan a **SEQUENCE OF CORRECTIVE ACTION** and obtain **INITIAL CA APPROVAL** sign-off from supervisor.
4) Forward original form to QA for sign-off and **FOLLOW-UP ACTION**. This allows all pertinent action to be documented on the original form. On completion of the corrective action, the form is signed off by QA, distributed, and the original archived with the QA records.

DATE/ORIGINATOR MARIE SCHNEIDER 12/14/99

PAGE 1 OF 1

PERSON RESPONSIBLE FOR RESPONSE (corrective action plan and implementation of corrective action plan):

MARIE SCHNEIDER

12/14

DISTRIBUTION:
__ LABORATORY MANAGER
__ INORGANIC MANAGER
__ GC/MS MANAGER
__ GC/EXTR MANAGER
__ QA MANAGER
__ QA REPORT FILE
__
__

DESCRIPTION OF PROBLEM and when identified: Samples analyzed from 12/10 → 12/13/99 ran on calibrations which used an expired std (gases only). The std (8109-006-02) expired on 12/9/99.

CAUSE OF PROBLEM if known or suspected: Replacement std was prepped, but was no good (8109-012-01) (prepped incorrectly)

SEQUENCE OF CORRECTIVE ACTION (CA) planned (signature/date): 12/14/99

The replacement std (8109-012-01) was prepped on 12/9/99; prior to "old" std's expiration. When this std was checked, it did not meet criteria (bad prep). A 2nd replacement std (8109-013-01) was prepped on 12/13/99 - it did meet criteria.

The expired std (gases only) were checked against the "new" std, and met criteria, confirming the validity of the "expired" std.

ATTACHED - Form 7; logpage noting affected batches

INITIAL CA APPROVAL: Supervisor signature/date: 12-14-99
QA signature/date:

DESCRIPTION OF QA FOLLOW-UP ACTION (include signature/date): 12/28/99

FINAL CA APPROVED (QA signature/date):

RFW 21-21-006/C-05/97

Recra LabNet - Lionville Laboratory

Volatiles by GC/MS, HSL List — Report Date: 01/19/00 11:30

RFW Batch Number: **9912L923** Client: **TNU-HANFORD B99-085** Work Order: 10985001001 Page: 1a

	Cust ID:	B0X3V9	B0X3V9	B0X3V9	VBLKGW	VBLKGW BS
Sample Information	RFW#:	001	001 MS	001 MSD	99LVH637-MB1	99LVH637-MB1
	Matrix:	WATER	WATER	WATER	WATER	WATER
	D.F.:	1.00	1.00	1.00	1.00	1.00
	Units:	UG/L	UG/L	UG/L	UG/L	UG/L
Surrogate Recovery	Toluene-d8	102 %	101 %	101 %	101 %	92 %
	Bromofluorobenzene	92 %	93 %	93 %	97 %	83 * %
	1,2-Dichloroethane-d4	92 %	96 %	89 %	95 %	82 %
Chloromethane		10 U	3 J	1 J	10 U	10 U
Bromomethane		10 U	10 U	10 U	10 U	10 U
Vinyl Chloride		10 U	10 U	10 U	10 U	10 U
Chloroethane		10 U	10 U	10 U	10 U	10 U
Methylene Chloride		17 B	16 B	21 B	10	17 B
Acetone		10 U	10 U	10 U	7 J	4 BJ
Carbon Disulfide		5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene		5 U	89 %	94 %	5 U	89 %
1,1-Dichloroethane		5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)		5 U	5 U	5 U	5 U	5 U
Chloroform		5 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane		5 U	5 U	5 U	5 U	5 U
2-Butanone		10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane		5 U	5 U	5 U	5 U	5 U
Carbon Tetrachloride		5 U	5 U	5 U	5 U	5 U
Bromodichloromethane		5 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane		5 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U
Trichloroethene		5 U	86 %	85 %	5 U	82 %
Dibromochloromethane		5 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane		5 U	5 U	5 U	5 U	5 U
Benzene		5 U	100 %	97 %	5 U	95 %
Trans-1,3-Dichloropropene		5 U	5 U	5 U	5 U	5 U
Bromoform		5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone		10 U	10 U	10 U	10 U	10 U
2-Hexanone		10 U	10 U	10 U	10 U	10 U
Tetrachloroethene		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
Toluene		5 U	98 %	96 %	5 U	94 %

*= Outside of EPA CLP QC limits.

1-19-00

RFW Batch Number: 9912L923 Client: TNU-HANFORD B99-085 Work Order: 10985001001 Page: 1b

	Cust ID:	B0X3V9	B0X3V9	B0X3V9	VBLKGW	VBLKGW BS
	RFW#:	001	001 MS	001 MSD	99LVH637-MB1	99LVH637-MB1
Chlorobenzene		5 U	97 %	94 %	5 U	91 %
Ethylbenzene		5 U	5 U	5 U	5 U	5 U
Styrene		5 U	5 U	5 U	5 U	5 U
Xylene (total)		5 U	5 U	5 U	5 U	5 U

*= Outside of EPA CLP QC limits.

06

Recra LabNet - Lionville Laboratory
VOA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-085

DATE RECEIVED: 12/04/99 RFW LOT # :9912L923

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0X3V9	001	W	99LVH637	12/02/99	N/A	12/10/99
B0X3V9	001 MS	W	99LVH637	12/02/99	N/A	12/10/99
B0X3V9	001 MSD	W	99LVH637	12/02/99	N/A	12/10/99
LAB QC:						
VBLKGW	MB1	W	99LVH637	N/A	N/A	12/10/99
VBLKGW	MB1 BS	W	99LVH637	N/A	N/A	12/10/99

DJ 01-19-00

RECRA LabNet Use Only
9912L923

A11

Custody Transfer Record/Lab Work Request

Page 1 of 1

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

RECRA LabNet

Client: TNU-HANFORD B99-085
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: QT
QC: Appl Del: std TAT: 30 day
Date Rec'd: 12/4/99 Date Due: 1/3/00
Account #:

Refrigerator #	1
#/Type Container – Liquid	3AG
#/Type Container – Solid	
Volume – Liquid	40
Volume – Solid	
Preservatives	Hd

ANALYSES REQUESTED → ORGANIC: VOA, BNA, Pest/PCB, Herb; INORG: Metal, CN

RECRA LabNet Use Only

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	MS	MSD	Matrix	Date Collected	Time Collected	0024H 0SC5C (VOA)
001	BOX3V9	X	X	W	12-2-99	0515	3

Special Instructions:
Saf # B99-085

COMPOSITE WASTE

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

Relinquished by	Received by	Date	Time
[signature]	[signature]	12-4-99	1000

Relinquished by	Received by	Date	Time
	ORIGINAL REWRITTEN		

Discrepancies Between Samples Labels and COC Record? Y or (N)
NOTES: *4235 7953 2465

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered —
Airbill # See Below
2) Ambient or (Chilled)
3) Received in Good Condition (Y) or N
4) Labels Indicate Properly Preserved (Y) or N
5) Received Within Holding Times (Y) or N

COC Tape was:
1) Present on Outer Package (Y) or N
2) Unbroken on Outer Package (Y) or N
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. 4.3 °C

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		B99-085-14	Page 1 of 1
Collector Bowers/Fahlberg	Company Contact C Cearlock	Telephone No. 372-9574	Project Coordinator TRENT, SJ	Price Code 7N Air Quality ☐	Data Turnaround 45 Days
Project Designation 200 Area Source characterization - 200-CW-1 OU - QC Sam	Sampling Location 200 East		SAF No. B99-085		
Ice Chest No. SMC 443	Field Logbook No. EL1511-1	COA B20CW1671C	Method of Shipment Fed EX		
Shipped To TMA/RECRA	Offsite Property No. A0000055		Bill of Lading/Air Bill No. 42357953 2465		

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	ZnAc+NaOH to pH >9 Cool	Cool 4C	H2SO4 to pH <2 Cool 4C	Cool 4C	HNO3 to pH <2	HCl to pH <2 Cool 4C	HNO3 to pH <2			
	Type of Container	P	P	P	aG	P	aGs*	P			
	No. of Container(s)	1	1	1	2	2	3	3			
Special Handling and/or Storage	Volume	500mL	1000mL	1000mL	1000mL	1000mL	40mL	500mL			
SAMPLE ANALYSIS		Sulfides - 9030	See item (1) in Special Instructions.	NO2/NO3 - 353.1; Ammonia - 350.3	Semi-VOA - 8270A (TCL)	Gross Alpha; Gross Beta	VOA - 8260A (TCL), VOA - 8260A (Add-On) (1-Propanol, Ethanol)	See item (2) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time										
B0X3V9	Water	12-2-99	0515						X				
~~B0X3W0~~	~~Water~~ RAM	~~12-3-99~~											

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By (Doug Bowers)	Date/Time 12-2-99/1730	Received By	Date/Time
Relinquished By	Date/Time 12-3-99/0700	Received By	Date/Time 12-3-99/0700
Relinquished By	Date/Time 12-3-99/1430	Received By FED EX	Date/Time
Relinquished By	Date/Time 12-4-99 1000	Received By	Date/Time 12-4-99 1000
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

SPECIAL INSTRUCTIONS

(1) IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}; pH (Water) - 9040
(2) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Copper, Nickel, Vanadium, Zinc}

Sample originates in non-Radiologically Controled area no TA Req. < 2000 pCi/g

Matrix *
S=Soil
SE=Sediment
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

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

BHI-EE-011 (10/99)