H0559-TMA/RECRA

RECRA ENVIRONMENTAL INC.

0052637

Chemical and Environmental Measurement Information

Recra LabNet Philadelphia
Analytical Report
****REVISION****

Client : TNU-HANFORD B99-078
RFW# : 9910L305
SDG/SAF #: H0559/B99-078

W.O. #: 10985-001-001-9999-00
Date Received: 10-07-99

JAN 2000 RECEIVED Data Log In

SEMIVOLATILE

This narrative was corrected to add the TIC search for Tributylphosphate.

Seven (7) soil samples were collected on 10-05-99.

The samples and their associated QC samples were extracted on 10-12-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8270B for TCL Semivolatile target compounds on 10-14,15-99.

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

1. The cooler temperatures upon receipt have been recorded on the chain-of-custody.
2. The required holding times for extraction and analysis were met.
3. Non-target compounds were detected in the samples.
4. All surrogate recoveries were within EPA QC limits.
5. One (1) of twenty-two (22) matrix spike recoveries was outside EPA QC limits.
6. One (1) of eleven (11) blank spike recoveries was outside EPA QC limits.
7. The samples were spectrally searched for Butylated Hydroxytoluene and Tributylphosphate; however, they were not identified in the samples.

RECEIVED FEB 28 2000 EDMC

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

01-17-00
Date

som\gorup\data\bna\tnu10305.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 19 pages.

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

GLOSSARY OF BNA 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.
A	=	Indicates that a TIC is a suspected aldol-condensation product.
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.

mmz\10-94\gloss.bna

GLOSSARY OF BNA 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.

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Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 11/02/99 11:52

RFW Batch Number: **9910L305** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 1a

	Cust ID:	B0WKX1		B0WKX2		B0WKX3		B0WKX4		B0WKX5		B0WKX6	
Sample Information	RFW#:	001		002		003		004		005		006	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00		1.00		1.00	
	Units:	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Surrogate Recovery	Nitrobenzene-d5	84	%	82	%	78	%	83	%	86	%	82	%
	2-Fluorobiphenyl	74	%	79	%	67	%	74	%	82	%	83	%
	Terphenyl-d14	73	%	78	%	66	%	76	%	85	%	85	%
	Phenol-d5	74	%	78	%	71	%	72	%	81	%	80	%
	2-Fluorophenol	68	%	68	%	62	%	61	%	71	%	73	%
	2,4,6-Tribromophenol	84	%	81	%	82	%	71	%	84	%	79	%
			fl		fl		fl		fl		fl		fl
Phenol		350	U	350	U	350	U	360	U	350	U	350	U
bis(2-Chloroethyl)ether		350	U	350	U	350	U	360	U	350	U	350	U
2-Chlorophenol		350	U	350	U	350	U	360	U	350	U	350	U
1,3-Dichlorobenzene		350	U	350	U	350	U	360	U	350	U	350	U
1,4-Dichlorobenzene		350	U	350	U	350	U	360	U	350	U	350	U
1,2-Dichlorobenzene		350	U	350	U	350	U	360	U	350	U	350	U
2-Methylphenol		350	U	350	U	350	U	360	U	350	U	350	U
2,2'-oxybis(1-Chloropropane)		350	U	350	U	350	U	360	U	350	U	350	U
4-Methylphenol		350	U	350	U	350	U	360	U	350	U	350	U
N-Nitroso-di-n-propylamine		350	U	350	U	350	U	360	U	350	U	350	U
Hexachloroethane		350	U	350	U	350	U	360	U	350	U	350	U
Nitrobenzene		350	U	350	U	350	U	360	U	350	U	350	U
Isophorone		350	U	350	U	350	U	360	U	350	U	350	U
2-Nitrophenol		350	U	350	U	350	U	360	U	350	U	350	U
2,4-Dimethylphenol		350	U	350	U	350	U	360	U	350	U	350	U
bis(2-Chloroethoxy)methane		350	U	350	U	350	U	360	U	350	U	350	U
2,4-Dichlorophenol		350	U	350	U	350	U	360	U	350	U	350	U
1,2,4-Trichlorobenzene		350	U	350	U	350	U	360	U	350	U	350	U
Naphthalene		350	U	350	U	350	U	360	U	350	U	350	U
4-Chloroaniline		350	U	350	U	350	U	360	U	350	U	350	U
Hexachlorobutadiene		350	U	350	U	350	U	360	U	350	U	350	U
4-Chloro-3-methylphenol		350	U	350	U	350	U	360	U	350	U	350	U
2-Methylnaphthalene		350	U	350	U	350	U	360	U	350	U	350	U
Hexachlorocyclopentadiene		350	U	350	U	350	U	360	U	350	U	350	U
2,4,6-Trichlorophenol		350	U	350	U	350	U	360	U	350	U	350	U
2,4,5-Trichlorophenol		860	U	860	U	870	U	900	U	880	U	880	U

*= Outside of EPA CLP QC limits.

Cust ID:	B0WKX1		B0WKX2		B0WKX3		B0WKX4		B0WKX5		B0WKX6	
RFW#:	001		002		003		004		005		006	
2-Chloronaphthalene	350	U	350	U	350	U	360	U	350	U	350	U
2-Nitroaniline	860	U	860	U	870	U	900	U	880	U	880	U
Dimethylphthalate	350	U	350	U	350	U	360	U	350	U	350	U
Acenaphthylene	350	U	350	U	350	U	360	U	350	U	350	U
2,6-Dinitrotoluene	350	U	350	U	350	U	360	U	350	U	350	U
3-Nitroaniline	860	U	860	U	870	U	900	U	880	U	880	U
Acenaphthene	350	U	350	U	350	U	360	U	350	U	350	U
2,4-Dinitrophenol	860	U	860	U	870	U	900	U	880	U	880	U
4-Nitrophenol	860	U	860	U	870	U	900	U	880	U	880	U
Dibenzofuran	350	U	350	U	350	U	360	U	350	U	350	U
2,4-Dinitrotoluene	350	U	350	U	350	U	360	U	350	U	350	U
Diethylphthalate	350	U	350	U	350	U	360	U	350	U	350	U
4-Chlorophenyl-phenylether	350	U	350	U	350	U	360	U	350	U	350	U
Fluorene	350	U	350	U	350	U	360	U	350	U	350	U
4-Nitroaniline	860	U	860	U	870	U	900	U	880	U	880	U
4,6-Dinitro-2-methylphenol	860	U	860	U	870	U	900	U	880	U	880	U
N-Nitrosodiphenylamine (1)	350	U	350	U	350	U	360	U	350	U	350	U
4-Bromophenyl-phenylether	350	U	350	U	350	U	360	U	350	U	350	U
Hexachlorobenzene	350	U	350	U	350	U	360	U	350	U	350	U
Pentachlorophenol	860	U	860	U	870	U	900	U	880	U	880	U
Phenanthrene	350	U	350	U	350	U	360	U	350	U	350	U
Anthracene	350	U	350	U	350	U	360	U	350	U	350	U
Carbazole	350	U	350	U	350	U	360	U	350	U	350	U
Di-n-butylphthalate	350	U	350	U	350	U	360	U	350	U	350	U
Fluoranthene	350	U	350	U	350	U	360	U	350	U	350	U
Pyrene	350	U	350	U	350	U	360	U	350	U	350	U
Butylbenzylphthalate	350	U	350	U	350	U	360	U	350	U	350	U
3,3'-Dichlorobenzidine	350	U	350	U	350	U	360	U	350	U	350	U
Benzo(a)anthracene	350	U	350	U	350	U	360	U	350	U	350	U
Chrysene	350	U	350	U	350	U	360	U	350	U	350	U
bis(2-Ethylhexyl)phthalate	350	U	350	U	350	U	360	U	350	U	350	U
Di-n-octyl phthalate	350	U	350	U	350	U	360	U	350	U	350	U
Benzo(b)fluoranthene	350	U	350	U	350	U	360	U	350	U	350	U
Benzo(k)fluoranthene	350	U	350	U	350	U	360	U	350	U	350	U
Benzo(a)pyrene	350	U	350	U	350	U	360	U	350	U	350	U
Indeno(1,2,3-cd)pyrene	350	U	350	U	350	U	360	U	350	U	350	U
Dibenz(a,h)anthracene	350	U	350	U	350	U	360	U	350	U	350	U
Benzo(g,h,i)perylene	350	U	350	U	350	U	360	U	350	U	350	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 11/02/99 11:52

RFW Batch Number: **9910L305** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 2a

	Cust ID:	B0WKX7		B0WKX7		B0WKX7		SBLKEN		SBLKEN BS	
Sample Information	RFW#:	007		007 MS		007 MSD		99LE1243-MB1		99LE1243-MB1	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00		1.00	
	Units:	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Surrogate Recovery	Nitrobenzene-d5	87	%	85	%	89	%	86	%	88	%
	2-Fluorobiphenyl	79	%	81	%	69	%	86	%	89	%
	Terphenyl-d14	79	%	76	%	65	%	98	%	101	%
	Phenol-d5	82	%	70	%	71	%	84	%	88	%
	2-Fluorophenol	71	%	68	%	71	%	85	%	87	%
	2,4,6-Tribromophenol	81	%	82	%	92	%	83	%	95	%
Phenol		340	U	66	%	62	%	330	U	83	%
bis(2-Chloroethyl)ether		340	U	340	U	340	U	330	U	330	U
2-Chlorophenol		340	U	66	%	62	%	330	U	88	%
1,3-Dichlorobenzene		340	U	340	U	340	U	330	U	330	U
1,4-Dichlorobenzene		340	U	78	%	74	%	330	U	87	%
1,2-Dichlorobenzene		340	U	340	U	340	U	330	U	330	U
2-Methylphenol		340	U	340	U	340	U	330	U	330	U
2,2'-oxybis(1-Chloropropane)		340	U	340	U	340	U	330	U	330	U
4-Methylphenol		340	U	340	U	340	U	330	U	330	U
N-Nitroso-di-n-propylamine		340	U	97	%	109	%	330	U	98	%
Hexachloroethane		340	U	340	U	340	U	330	U	330	U
Nitrobenzene		340	U	340	U	340	U	330	U	330	U
Isophorone		340	U	340	U	340	U	330	U	330	U
2-Nitrophenol		340	U	340	U	340	U	330	U	330	U
2,4-Dimethylphenol		340	U	340	U	340	U	330	U	330	U
bis(2-Chloroethoxy)methane		340	U	340	U	340	U	330	U	330	U
2,4-Dichlorophenol		340	U	340	U	340	U	330	U	330	U
1,2,4-Trichlorobenzene		340	U	90	%	83	%	330	U	92	%
Naphthalene		340	U	340	U	340	U	330	U	330	U
4-Chloroaniline		340	U	340	U	340	U	330	U	330	U
Hexachlorobutadiene		340	U	340	U	340	U	330	U	330	U
4-Chloro-3-methylphenol		340	U	75	%	79	%	330	U	87	%
2-Methylnaphthalene		340	U	340	U	340	U	330	U	330	U
Hexachlorocyclopentadiene		340	U	340	U	340	U	330	U	330	U
2,4,6-Trichlorophenol		340	U	340	U	340	U	330	U	330	U
2,4,5-Trichlorophenol		860	U	860	U	860	U	840	U	840	U

*= Outside of EPA CLP QC limits.

Cust ID:	B0WKX7		B0WKX7		B0WKX7		SBLKEN		SBLKEN BS	
RFW#:	007		007 MS		007 MSD		99LE1243-MB1		99LE1243-MB1	
2-Chloronaphthalene	340	U	340	U	340	U	330	U	330	U
2-Nitroaniline	860	U	860	U	860	U	840	U	840	U
Dimethylphthalate	340	U	340	U	340	U	330	U	330	U
Acenaphthylene	340	U	340	U	340	U	330	U	330	U
2,6-Dinitrotoluene	340	U	340	U	340	U	330	U	330	U
3-Nitroaniline	860	U	860	U	860	U	840	U	840	U
Acenaphthene	340	U	86	%	75	%	330	U	89	%
2,4-Dinitrophenol	860	U	860	U	860	U	840	U	840	U
4-Nitrophenol	860	U	53	%	103	%	840	U	62	%
Dibenzofuran	340	U	340	U	340	U	330	U	330	U
2,4-Dinitrotoluene	340	U	83	%	95 *	%	330	U	93 *	%
Diethylphthalate	340	U	340	U	340	U	330	U	330	U
4-Chlorophenyl-phenylether	340	U	340	U	340	U	330	U	330	U
Fluorene	340	U	340	U	340	U	330	U	330	U
4-Nitroaniline	860	U	860	U	860	U	840	U	840	U
4,6-Dinitro-2-methylphenol	860	U	860	U	860	U	840	U	840	U
N-Nitrosodiphenylamine (1)	340	U	340	U	340	U	330	U	330	U
4-Bromophenyl-phenylether	340	U	340	U	340	U	330	U	330	U
Hexachlorobenzene	340	U	340	U	340	U	330	U	330	U
Pentachlorophenol	860	U	81	%	84	%	840	U	86	%
Phenanthrene	340	U	340	U	340	U	330	U	330	U
Anthracene	340	U	340	U	340	U	330	U	330	U
Carbazole	340	U	340	U	340	U	330	U	330	U
Di-n-butylphthalate	340	U	340	U	340	U	330	U	330	U
Fluoranthene	340	U	340	U	340	U	330	U	330	U
Pyrene	340	U	84	%	67	%	330	U	99	%
Butylbenzylphthalate	340	U	340	U	340	U	330	U	330	U
3,3'-Dichlorobenzidine	340	U	340	U	340	U	330	U	330	U
Benzo(a)anthracene	340	U	340	U	340	U	330	U	330	U
Chrysene	340	U	340	U	340	U	330	U	330	U
bis(2-Ethylhexyl)phthalate	340	U	340	U	340	U	330	U	330	U
Di-n-octyl phthalate	340	U	340	U	340	U	330	U	330	U
Benzo(b)fluoranthene	340	U	340	U	340	U	330	U	330	U
Benzo(k)fluoranthene	340	U	340	U	340	U	330	U	330	U
Benzo(a)pyrene	340	U	340	U	340	U	330	U	330	U
Indeno(1,2,3-cd)pyrene	340	U	340	U	340	U	330	U	330	U
Dibenz(a,h)anthracene	340	U	340	U	340	U	330	U	330	U
Benzo(g,h,i)perylene	340	U	340	U	340	U	330	U	330	U

(1) - Cannot be separated from Diphenylamine. *= Outside of EPA CLP QC limits.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX1

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L305-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A101405

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 4 decanted: (Y/N) __ Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 2

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.589	90	JA
2.	ALKANE	27.19	70	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX2

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L305-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A101406

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 4 decanted: (Y/N) __ Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX3

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L305-003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A101407

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 4 decanted: (Y/N) Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

FORM 1 SV-TIC 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX4

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L305-004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A101408

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 8 decanted: (Y/N) __ Date Extracted: 10/12/99

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 10/14/99

Injection Volume: 2.0 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX5

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL

Lab Sample ID: 9910L305-005

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: A101409

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: 5 decanted: (Y/N)

Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 10/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.80	80	J
2.	UNKNOWN	13.65	200	J
3.	UNKNOWN	15.98	200	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX6

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L305-006

Sample wt/vol: 30.1 (g/mL) G Lab File ID: A101410

Level: (low/med) LOW Date Received: 10/07/99

% Moisture: 6 decanted: (Y/N) __ Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/14/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	7.80	100	J
2.	UNKNOWN	13.65	100	J
3.	UNKNOWN	15.98	80	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WKX7

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL

Lab Sample ID: 9910L305-007

Sample wt/vol: 30.0 (g/mL) G

Lab File ID: A101411

Level: (low/med) LOW

Date Received: 10/07/99

% Moisture: 3 decanted: (Y/N)__

Date Extracted: 10/12/99

Concentrated Extract Volume: 1000(uL)

Date Analyzed: 10/14/99

Injection Volume: 2.0(uL)

Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: _____

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				

Recra LabNet - Lionville Laboratory
BNA ANALYTICAL DATA PACKAGE FOR
TNU-HANFORD B99-078

DATE RECEIVED: 10/07/99 RFW LOT # :9910L305

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0WKX1	001	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX2	002	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX3	003	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX4	004	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX5	005	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX6	006	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX7	007	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX7	007 MS	S	99LE1243	10/05/99	10/12/99	10/14/99
B0WKX7	007 MSD	S	99LE1243	10/05/99	10/12/99	10/15/99

LAB QC:

SBLKEN	MB1	S	99LE1243	N/A	10/12/99	10/15/99
SBLKEN	MB1 BS	S	99LE1243	N/A	10/12/99	10/15/99

RECRA LabNet Use Only: 9910C305

Custody Transfer Record/Lab Work Request

Page 1 of 1

RECRA LabNet

All FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(8) metals

Client: TRU-Hanford B99-078
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: Orlette Johnson
QC: Spec Del: Std TAT: 30 day
Date Rec'd: 10-7-99 Date Due: 11/6/99
Account #:

Refrigerator #		1	2							2							
#/Type Container	Liquid																
	Solid	1AG	1AG							1AG		1AG	1AG				
Volume	Liquid																
	Solid	250mL	500mL							500mL	w/preserve	250mL	500mL				
Preservatives		–	–							–		–	–	–			
ANALYSES REQUESTED	ORGANIC: VOA	BNA	Pest/PCB	Herb						INORG: Metal	CN	pH	NO3 NO2	IC anions			

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	8024H 8015C	8025H	8080 8082				Met(1)	ICN/TD	IPH	IN3N2	Ang(1)				
001	BOWKX1			S	10-5-99	0745	✓	✓	✓				✓	✓	✓	✓	–				
002	BOWKX2					0755	✓	✓	✓				✓	✓	✓	✓	–				
003	BOWKX3					0810	✓	✓	✓				✓	✓	✓	✓	–				
004	BOWKX4					0820	✓	✓	✓				✓	✓	✓	✓	–				
005	BOWKX5					0833	✓	✓	✓				✓	✓	✓	✓	–				
006	BOWKX6					0850	✓	✓	✓				✓	✓	✓	✓	–				
007	BOWKX7					0913	✓	✓	✓				✓	✓	✓	✓	–				

11/3/99
SB and TL added to all metals samples per client

Special Instructions:

SAF# B99-078

COMPOSITE WASTE

*423579530153 - 3.1°C
423579530142 - 2.7°C

DATE/REVISIONS:

1. Run matrix QC
2. Ang(1) = ICCL, ICFL, ICNO2, ICNO3, ICPO4,
3. ICSO4, ISFD, INH3N
4. Met(1) = As, Ba, Cd, Cr, Pb, Se, Ag, Be,
5. Cu, Ni, V, Zn, Hg, ICR6
6.

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or Hand Delivered ___
Airbill # *
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'd (Y) or N
Cooler Temp. * ___ °C

Relinquished by	Received by	Date	Time
Fed Ex	T Murray	10-7-99	0945

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	B99-078-135	Page 1 of 1

Collector Bowers/Trice	**Company Contact** Chris Cearlock	**Telephone No.** 372-9574	**Project Coordinator** TRENT, SJ
Project Designation 200 Area Source characterization - 200-CW-1 OU	**Sampling Location** 200 B pond		**SAF No.** B99-078
Ice Chest No. Shipping Van 96-006, Shipping Van 96-002	**Field Logbook No.** EL-1511		**Method of Shipment** Fed Ex
Shipped To TMA/RECRA ATB 10-5-99	**Offsite Property No.** A99028 7		**Bill of Lading/Air Bill No.** 4235795301533.1 4235795301422.7
			COA B20CW167/C

Price Code 8N **Data Turnaround** 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	Cool 4C	None	Cool 4C	Cool 4C	Cool 4C	None			
	Type of Container	aG	aG	aG	aG	aG	aG	aG			
	No. of Container(s)	1	1	1	1	1	1	1			
Special Handling and/or Storage	Volume	60mL	250mL	250mL	500mL	500mL	1000mL	1000mL			
SAMPLE ANALYSIS		Isotopic Uranium	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol)	pH (Soil) - 9045	See item (1) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (2) in Special Instructions.	See item (3) in Special Instructions.			

Sample No.	Matrix *	Sample Date	Sample Time										
BOWKX1	Soil	10-5-99	0745		X	X	X	X	X				BOW8C1
BOWKX2	Soil	10-5-99	0755		X	X	X	X	X				
BOWKX3	Soil	10-5-99	0810		X	X	X	X	X				
BOWKX4	Soil	10-5-99	0820		X	X	X	X	X				
BOWKX5	Soil	10-5-99	0833		X	X	X	X	X				

CHAIN OF POSSESSION — *Sign/Print Names*

Relinquished By	Date/Time	Received By	Date/Time
Trice	10/5/99 1330	Rel. #1B	10/5/99 1330
Rel 1B	10/6/99 1230	Kneeneker/R. Nielson	10/6/99 1230
Kneeneker/R. Nielson	10/6/99 1430	Fed Ex	
Fed Ex	10-7-99 0945	TMurray	10-7-99 0945

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, *Selenium, Silver*}; *ICP Metals - 6010A (Supertrace Add-On)* {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196
(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, *Sulfate*}; *Sulfides* - 9030; *Ammonia* - 350.3; *Total Cyanide* - 9010
(3) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Americium-241}; Strontium-89,90 -- Total Sr; Total Uranium {Uranium}; Isotopic Plutonium; Isotopic Thorium {Thorium-232}; Americium-241

COLLECTOR UNAVAILABLE TO SIGN COC

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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	B99-078-136	Page 1 of 2 RJN 10/6/99

Collector: Bowers/Trice	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: 200 B pond		SAF No.: B99-078
Ice Chest No.: Shipping Van 96-006	Field Logbook No.: EL-1511		Method of Shipment: Fed Ex
Shipped To: TMA/RECRA RECRA	Offsite Property No.: A990287		Bill of Lading/Air Bill No.: 423579530142
			COA: B20CW1 671C

Price Code: 8N

Data Turnaround: 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS													
		Preservation	None	None	None	None	None	Cool 4C	None	Cool 4C	Cool 4C	Cool 4C
		Type of Container	aG	aG	aG	aG	aG	aG	aG	aG	aG	aG
		No. of Container(s)	1	1	1	1	1	1	1	1	1	1
Special Handling and/or Storage		Volume	60mL	60mL	60mL	60mL	120mL	250mL	250mL	500mL	500mL	1000mL
SAMPLE ANALYSIS			Isotopic Uranium	Neptunium-237	Nickel-63	Technetium-99	Tritium - H3	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	pH (Soil) - 9045	See item (1) in Special Instructions.	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (2) in Special Instructions
Sample No.	Matrix *	Sample Date	Sample Time									
BOW KX6	Soil	10/5/99	0850					X	X	X	X	X BOW 8C1
BOW KX7	Soil	10/5/99	0913					X	X	X	X	X BOW 8C1

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Chris	Date/Time: 10/5/99 1330	Received By: Ref IB	Date/Time: 10/5/99 1330
Relinquished By: Ref IB	Date/Time: 10/6/99	Received By: [signature] / R. Nielson	Date/Time: 10/6/99 1230
Relinquished By: [signature] / R. Nielson	Date/Time: 10/6/99 1430	Received By: Fed Ex	Date/Time:
Relinquished By: Fed Ex	Date/Time: 10-7-99 0945	Received By: T Murray	Date/Time: 10-7-99 0945

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Cadmium, Chromium, Lead, Selenium, Silver}; ICP Metals - 6010A (Supertrace Add-On) {Beryllium, Copper, Nickel, Vanadium, Zinc}; Mercury - 7471 - (CV); Chromium Hex - 7196

(2) NO2/NO3 - 353.1; IC Anions - 300.0 {Chloride, Fluoride, Nitrate, Nitrite, Phosphate, Sulfate}; Sulfides - 9030; Ammonia - 350.3; Total Cyanide - 9010

COLLECTOR UNAVAILABLE TO SIGN COC

Matrix *: Soil, Water, Vapor, Other Solid, Other Liquid

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