H0506 - TM +/ RECRA

0052708

RECRA ENVIRONMENTAL INC.

Chemical and Environmental Measurement Information

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

Client : TNU-HANFORD B99-078
RFW# : 9908L906
SDG/SAF #: H0506/B99-078

W.O. #: 10985-001-001-9999-00
Date Received: 08-27-99

RECEIVED MAR 20 2000 EDMC

SEMIVOLATILE

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

Eight (8) soil samples were collected on 08-25-99.

The samples and their associated QC samples were extracted on 09-07-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8270B for TCL Semivolatile target compounds on 09-23-99.

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. Sample B0W694 required 2-fold dilution due to high levels of both target and non-target compounds.
5. All surrogate recoveries were within EPA QC limits.
6. All matrix spike recoveries were within EPA QC limits.
7. One (1) of eleven (11) blank spike recoveries was outside EPA QC limits.
8. The samples were spectrally searched for Butylated Hydroxytoluene and Tributylphosphate; however, they were not identified in the sample.

FEB 2000 RECEIVED Data Log In

J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

01-27-00
Date

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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 26 pages.

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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.

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.

mmz\10-94\gloss.bna

Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

Report Date: 09/30/99 15:18

RFW Batch Number: **9908L906** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 1a

	Cust ID:	B0W6B0		B0W6B0		B0W6B0		B0W699		B0W697		B0W694	
Sample Information	RFW#:	001		001 MS		001 MSD		002		003		004	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	D.F.:	1.00		1.00		1.00		1.00		1.00		2.00	
	Units:	UG/KG		UG/KG		UG/KG		UG/KG		UG/KG		UG/KG	
Surrogate Recovery	Nitrobenzene-d5	90	%	75	%	95	%	99	%	86	%	77	%
	2-Fluorobiphenyl	89	%	74	%	89	%	96	%	84	%	79	%
	Terphenyl-d14	100	%	82	%	101	%	105	%	95	%	83	%
	Phenol-d5	81	%	68	%	85	%	86	%	79	%	68	%
	2-Fluorophenol	77	%	65	%	81	%	82	%	74	%	67	%
	2,4,6-Tribromophenol	83	%	67	%	78	%	78	%	75	%	66	%
Phenol		18	J	65	%	76	%	20	J	20	J	980	U
bis(2-Chloroethyl)ether		340	U	340	U	340	U	350	U	360	U	980	U
2-Chlorophenol		340	U	64	%	76	%	350	U	360	U	980	U
1,3-Dichlorobenzene		340	U	340	U	340	U	350	U	360	U	980	U
1,4-Dichlorobenzene		340	U	69	%	83	%	350	U	360	U	980	U
1,2-Dichlorobenzene		340	U	340	U	340	U	350	U	360	U	980	U
2-Methylphenol		340	U	340	U	340	U	350	U	360	U	980	U
2,2'-oxybis(1-Chloropropane)		340	U	340	U	340	U	350	U	360	U	980	U
4-Methylphenol		340	U	340	U	340	U	350	U	360	U	980	U
N-Nitroso-di-n-propylamine		340	U	87	%	100	%	350	U	360	U	980	U
Hexachloroethane		340	U	340	U	340	U	350	U	360	U	980	U
Nitrobenzene		340	U	340	U	340	U	350	U	360	U	980	U
Isophorone		340	U	340	U	340	U	350	U	360	U	980	U
2-Nitrophenol		340	U	340	U	340	U	350	U	360	U	980	U
2,4-Dimethylphenol		340	U	340	U	340	U	350	U	360	U	980	U
bis(2-Chloroethoxy)methane		340	U	340	U	340	U	350	U	360	U	980	U
2,4-Dichlorophenol		340	U	340	U	340	U	350	U	360	U	980	U
1,2,4-Trichlorobenzene		340	U	72	%	87	%	350	U	360	U	980	U
Naphthalene		340	U	340	U	340	U	350	U	360	U	980	U
4-Chloroaniline		340	U	340	U	340	U	350	U	360	U	980	U
Hexachlorobutadiene		340	U	340	U	340	U	350	U	360	U	980	U
4-Chloro-3-methylphenol		340	U	64	%	76	%	350	U	360	U	980	U
2-Methylnaphthalene		340	U	340	U	340	U	350	U	360	U	980	U
Hexachlorocyclopentadiene		340	U	340	U	340	U	350	U	360	U	980	U
2,4,6-Trichlorophenol		340	U	340	U	340	U	350	U	360	U	980	U
2,4,5-Trichlorophenol		860	U	860	U	860	U	870	U	900	U	2400	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9908L906 Client: TNU-HANFORD B99-078 Work Order: 10985001001 Page: 1b

Cust ID:	B0W6B0		B0W6B0		B0W6B0		B0W699		B0W697		B0W694	
RFW#:	001		001 MS		001 MSD		002		003		004	
2-Chloronaphthalene	340	U	340	U	340	U	350	U	360	U	980	U
2-Nitroaniline	860	U	860	U	860	U	870	U	900	U	2400	U
Dimethylphthalate	340	U	340	U	340	U	350	U	360	U	980	U
Acenaphthylene	340	U	340	U	340	U	350	U	360	U	980	U
2,6-Dinitrotoluene	340	U	340	U	340	U	350	U	360	U	980	U
3-Nitroaniline	860	U	860	U	860	U	870	U	900	U	2400	U
Acenaphthene	340	U	75	%	89	%	350	U	360	U	980	U
2,4-Dinitrophenol	860	U	860	U	860	U	870	U	900	U	2400	U
4-Nitrophenol	860	U	59	%	70	%	870	U	900	U	2400	U
Dibenzofuran	340	U	340	U	340	U	350	U	360	U	980	U
2,4-Dinitrotoluene	340	U	75	%	89	%	350	U	360	U	980	U
Diethylphthalate	340	U	340	U	340	U	350	U	360	U	980	U
4-Chlorophenyl-phenylether	340	U	340	U	340	U	350	U	360	U	980	U
Fluorene	340	U	340	U	340	U	350	U	360	U	980	U
4-Nitroaniline	860	U	860	U	860	U	870	U	900	U	2400	U
4,6-Dinitro-2-methylphenol	860	U	860	U	860	U	870	U	900	U	2400	U
N-Nitrosodiphenylamine (1)	340	U	340	U	340	U	350	U	360	U	980	U
4-Bromophenyl-phenylether	340	U	340	U	340	U	350	U	360	U	980	U
Hexachlorobenzene	340	U	340	U	340	U	350	U	360	U	980	U
Pentachlorophenol	860	U	64	%	79	%	870	U	900	U	2400	U
Phenanthrene	340	U	340	U	340	U	350	U	360	U	980	U
Anthracene	340	U	340	U	340	U	350	U	360	U	980	U
Carbazole	340	U	340	U	340	U	350	U	360	U	980	U
Di-n-butylphthalate	340	U	340	U	340	U	350	U	360	U	980	U
Fluoranthene	340	U	340	U	340	U	350	U	360	U	980	U
Pyrene	340	U	79	%	91	%	350	U	360	U	980	U
Butylbenzylphthalate	340	U	340	U	340	U	350	U	360	U	980	U
3,3'-Dichlorobenzidine	340	U	340	U	340	U	350	U	360	U	980	U
Benzo(a)anthracene	340	U	340	U	340	U	350	U	360	U	980	U
Chrysene	340	U	340	U	340	U	350	U	360	U	980	U
bis(2-Ethylhexyl)phthalate	340	U	340	U	340	U	350	U	360	U	980	U
Di-n-octyl phthalate	340	U	340	U	340	U	350	U	360	U	980	U
Benzo(b)fluoranthene	340	U	340	U	340	U	350	U	360	U	980	U
Benzo(k)fluoranthene	340	U	340	U	340	U	350	U	360	U	980	U
Benzo(a)pyrene	340	U	340	U	340	U	350	U	360	U	980	U
Indeno(1,2,3-cd)pyrene	340	U	340	U	340	U	350	U	360	U	980	U
Dibenz(a,h)anthracene	340	U	340	U	340	U	350	U	360	U	980	U
Benzo(g,h,i)perylene	340	U	340	U	340	U	350	U	360	U	980	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: 09/30/99 15:18

RFW Batch Number: **9908L906** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 2a

	Cust ID:	B0W692		B0W6B1		B0W693		B0W698		SBLKCP		SBLKCP BS	
Sample Information	RFW#:	005		006		007		008		99LE1086-MB1		99LE1086-MB1	
	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	88	%	91	%	89	%	88	%	99	%	95	%
	2-Fluorobiphenyl	86	%	88	%	86	%	80	%	100	%	91	%
	Terphenyl-d14	90	%	95	%	92	%	84	%	103	%	103	%
	Phenol-d5	79	%	82	%	80	%	74	%	84	%	86	%
	2-Fluorophenol	75	%	79	%	76	%	73	%	79	%	81	%
	2,4,6-Tribromophenol	80	%	72	%	68	%	73	%	77	%	83	%
Phenol		25	J	350	U	23	J	350	U	330	U	78	%
bis(2-Chloroethyl)ether		370	U	350	U	370	U	350	U	330	U	330	U
2-Chlorophenol		370	U	350	U	370	U	350	U	330	U	79	%
1,3-Dichlorobenzene		370	U	350	U	370	U	350	U	330	U	330	U
1,4-Dichlorobenzene		370	U	350	U	370	U	350	U	330	U	85	%
1,2-Dichlorobenzene		370	U	350	U	370	U	350	U	330	U	330	U
2-Methylphenol		370	U	350	U	370	U	350	U	330	U	330	U
2,2'-oxybis(1-Chloropropane)		370	U	350	U	370	U	350	U	330	U	330	U
4-Methylphenol		370	U	350	U	370	U	350	U	330	U	330	U
N-Nitroso-di-n-propylamine		370	U	350	U	370	U	350	U	330	U	102	%
Hexachloroethane		370	U	350	U	370	U	350	U	330	U	330	U
Nitrobenzene		370	U	350	U	370	U	350	U	330	U	330	U
Isophorone		370	U	350	U	370	U	350	U	330	U	330	U
2-Nitrophenol		370	U	350	U	370	U	350	U	330	U	330	U
2,4-Dimethylphenol		370	U	350	U	370	U	350	U	330	U	330	U
bis(2-Chloroethoxy)methane		370	U	350	U	370	U	350	U	330	U	330	U
2,4-Dichlorophenol		370	U	350	U	370	U	350	U	330	U	330	U
1,2,4-Trichlorobenzene		370	U	350	U	370	U	350	U	330	U	89	%
Naphthalene		370	U	350	U	370	U	350	U	330	U	330	U
4-Chloroaniline		370	U	350	U	370	U	350	U	330	U	330	U
Hexachlorobutadiene		370	U	350	U	370	U	350	U	330	U	330	U
4-Chloro-3-methylphenol		370	U	350	U	370	U	350	U	330	U	80	%
2-Methylnaphthalene		370	U	350	U	370	U	350	U	330	U	330	U
Hexachlorocyclopentadiene		370	U	350	U	370	U	350	U	330	U	330	U
2,4,6-Trichlorophenol		370	U	350	U	370	U	350	U	330	U	330	U
2,4,5-Trichlorophenol		920	U	870	U	920	U	860	U	840	U	840	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9908L906 Client: TNU-HANFORD B99-078 Work Order: 10985001001 Page: 2b

Cust ID:	B0W692		B0W6B1		B0W693		B0W698		SBLKCP		SBLKCP BS	
RFW#:	005		006		007		008		99LE1086-MB1		99LE1086-MB1	
2-Chloronaphthalene	370	U	350	U	370	U	350	U	330	U	330	U
2-Nitroaniline	920	U	870	U	920	U	860	U	840	U	840	U
Dimethylphthalate	370	U	350	U	370	U	350	U	330	U	330	U
Acenaphthylene	370	U	350	U	370	U	350	U	330	U	330	U
2,6-Dinitrotoluene	370	U	350	U	370	U	350	U	330	U	330	U
3-Nitroaniline	920	U	870	U	920	U	860	U	840	U	840	U
Acenaphthene	370	U	350	U	370	U	350	U	330	U	91	%
2,4-Dinitrophenol	920	U	870	U	920	U	860	U	840	U	840	U
4-Nitrophenol	920	U	870	U	920	U	860	U	840	U	70	%
Dibenzofuran	370	U	350	U	370	U	350	U	330	U	330	U
2,4-Dinitrotoluene	370	U	350	U	370	U	350	U	330	U	91 *	%
Diethylphthalate	370	U	350	U	370	U	350	U	330	U	330	U
4-Chlorophenyl-phenylether	370	U	350	U	370	U	350	U	330	U	330	U
Fluorene	370	U	350	U	370	U	350	U	330	U	330	U
4-Nitroaniline	920	U	870	U	920	U	860	U	840	U	840	U
4,6-Dinitro-2-methylphenol	920	U	870	U	920	U	860	U	840	U	840	U
N-Nitrosodiphenylamine (1)	370	U	350	U	370	U	350	U	330	U	330	U
4-Bromophenyl-phenylether	370	U	350	U	370	U	350	U	330	U	330	U
Hexachlorobenzene	370	U	350	U	370	U	350	U	330	U	330	U
Pentachlorophenol	920	U	870	U	920	U	860	U	840	U	79	%
Phenanthrene	370	U	350	U	370	U	350	U	330	U	330	U
Anthracene	370	U	350	U	370	U	350	U	330	U	330	U
Carbazole	370	U	350	U	370	U	350	U	330	U	330	U
Di-n-butylphthalate	23	J	350	U	370	U	350	U	330	U	330	U
Fluoranthene	370	U	350	U	370	U	350	U	330	U	330	U
Pyrene	370	U	350	U	370	U	350	U	330	U	94	%
Butylbenzylphthalate	370	U	350	U	370	U	350	U	330	U	330	U
3,3'-Dichlorobenzidine	370	U	350	U	370	U	350	U	330	U	330	U
Benzo(a)anthracene	370	U	350	U	370	U	350	U	330	U	330	U
Chrysene	370	U	350	U	370	U	350	U	330	U	330	U
bis(2-Ethylhexyl)phthalate	370	U	350	U	370	U	350	U	330	U	330	U
Di-n-octyl phthalate	370	U	350	U	370	U	350	U	330	U	330	U
Benzo(b)fluoranthene	370	U	350	U	370	U	350	U	330	U	330	U
Benzo(k)fluoranthene	370	U	350	U	370	U	350	U	330	U	330	U
Benzo(a)pyrene	370	U	350	U	370	U	350	U	330	U	330	U
Indeno(1,2,3-cd)pyrene	370	U	350	U	370	U	350	U	330	U	330	U
Dibenz(a,h)anthracene	370	U	350	U	370	U	350	U	330	U	330	U
Benzo(g,h,i)perylene	370	U	350	U	370	U	350	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.

B0W6B0

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092307

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 3 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.71	200	JAB
2.	ALDOL CONDENSATE	9.25	100	JAB
3.	DIETHYLBIPHENYL	20.34	80	J
4.	UNKNOWN	21.77	300	JB
5.	UNKNOWN	25.33	700	JB

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W699

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092310

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 4 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 6

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.71	300	JAB
2.	ALDOL CONDENSATE	9.24	200	JAB
3.	ALDOL CONDENSATE	10.02	100	JA
4.	DIETHYLBIPHENYL	20.34	90	J
5.	UNKNOWN	21.34	700	JB
6.	UNKNOWN	21.77	300	JB

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W697

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092311

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 8 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.70	300	JAB
2.	ALDOL CONDENSATE	9.23	200	JAB
3.	ALDOL CONDENSATE	10.02	100	JA
4.	DIETHYLBIPHENYL	20.33	80	J
5.	UNKNOWN	21.77	300	JB
6.	UNKNOWN	25.33	800	JB

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W694

Lab Name: Recra LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092312

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 32 decanted: (Y/N)__ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 2.00

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

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.71	300	JAB
2.	ALDOL CONDENSATE	9.24	600	JAB
3.	ALDOL CONDENSATE	10.02	300	JA
4.	UNKNOWN	21.76	400	JB
5.	UNKNOWN	25.34	800	JB
6.	ALKANE	30.17	200	J
7.	UNKNOWN	36.64	300	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W692

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-005

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092313

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 10 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 8 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.70	300	JAB
2.	ALDOL CONDENSATE	9.24	400	JAB
3.	ALDOL CONDENSATE	10.02	200	JA
4.	DIETHYLBIPHENYL	20.33	70	J
5.	UNKNOWN	21.76	400	JB
6.	UNKNOWN	23.23	400	J
7.	UNKNOWN	25.33	800	JB
8.	ALKANE	30.16	100	J

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W6B1

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-006

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092314

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 4 decanted: (Y/N) Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH:

Number TICs found: 7

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.70	300	JAB
2.	UNKNOWN	8.95	90	J
3.	ALDOL CONDENSATE	9.24	200	JAB
4.	ALDOL CONDENSATE	10.02	100	JA
5.	DIETHYLBIPHENYL	20.33	70	J
6.	UNKNOWN	21.77	300	JB
7.	UNKNOWN	25.33	700	JB

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W693

Lab Name: Recra LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-007

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092315

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 10 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 7 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.69	300	JAB
2.	ALDOL CONDENSATE	9.24	400	JAB
3.	ALDOL CONDENSATE	10.01	200	JA
4.	DIETHYLBIPHENYL	20.33	70	J
5.	UNKNOWN	21.76	300	JB
6.	UNKNOWN	25.33	600	JB
7.	ALKANE	30.16	100	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0W698

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9908L906-008

Sample wt/vol: 30.0 (g/mL) G Lab File ID: A092315

Level: (low/med) LOW Date Received: 08/27/99

% Moisture: 4 decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	7.78	200	JAB
2.	ALDOL CONDENSATE	8.35	90	JAB
3.	ALDOL CONDENSATE	9.13	90	JA
4.	DIETHYLBIPHENYL	19.57	90	J
5.	UNKNOWN	21.12	200	JB
6.	UNKNOWN	24.32	700	JB

1F
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

SBLKCP

Lab Name: Recra LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 99LE1086-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D092305

Level: (low/med) LOW Date Received: 09/07/99

% Moisture: _____ decanted: (Y/N) __ Date Extracted: 09/07/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 09/23/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	ALDOL CONDENSATE	8.71	200	JA
2.	ALDOL CONDENSATE	9.24	100	JA
3.	ORGANIC ACID	21.77	300	J
4.	UNKNOWN	25.33	500	J

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

DATE RECEIVED: 08/27/99 RFW LOT # :9908L906

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0W6B0	001	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W6B0	001 MS	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W6B0	001 MSD	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W699	002	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W697	003	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W694	004	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W692	005	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W6B1	006	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W693	007	S	99LE1086	08/25/99	09/07/99	09/23/99
B0W698	008	S	99LE1086	08/25/99	09/07/99	09/23/99

LAB QC:

SBLKCP	MB1	S	99LE1086	N/A	09/07/99	09/23/99
SBLKCP	MB1 BS	S	99LE1086	N/A	09/07/99	09/23/99

RECRA LabNet Use Only
9908L906

Custody Transfer Record/Lab Work Request

Page 1 of 1

All FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(8) ~~perrone wet lab~~ All

RECRA LabNet

Client: INU-Hanford B99-078
Est. Final Proj. Sampling Date:
Project #: 10985-001-001-9999-00
Project Contact/Phone #:
RECRA Project Manager: OJ
QC: Spec Del: std TAT: 30 day
Date Rec'd: 8/27/99 Date Due: 9/26/99
Account #:

Refrigerator #		1	6					6		6	6				
#/Type Container	Liquid														
	Solid	1g	1g					1g		1g	1g				
Volume	Liquid														
	Solid	250	500					500		250	ur				
Preservatives															
ANALYSES REQUESTED →		ORGANIC						INORG							
		VOA	BNA	Pest/PCB	Herb			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 (✓) MS	MSD	Matrix	Date Collected	Time Collected	RECRA LabNet Use Only: OC 24H	OC 25H	OPCB	~~8141/8~~ OGCSC	ODRO	metal	1 PH	Anions
001	B0W6B0			S	8/25/99	1103	X	X	X	X	X	X	X	X
2	99					1051								
3	97					1004								
4	94					0926								
5	~~B1~~ 92 8/27/99					0845								
6	~~93~~ B1					1118								
7	~~98~~ 93					0909								
8	98					1032								
						Run	matrix			QC				

BATCH WASTE

Special Instructions:

Saf # B99-078 9/21/99 Waste Code changed to Batch waste

~~8/20/99 IN3N2 generic~~

8/9/2/99

~~COMPOSITE WASTE~~

BATCH WASTE

DATE/REVISIONS:

Met (1) = As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se,
2. Ag, V, Zn, Hg, ICR6
Anion (1) = ~~IN3N2~~ IN3N2, ICCL, ICFL, ICNO2, ICNO3,
8/31/99
4. ICPO4, ICSO4, ISFD, INH3N, ICNTO
5. OGCSC = ethanol + propanol

*425379528750-4.2°C, *42357952 8749-5.1°C *4476545931-3.8°C

Relinquished by	Received by	Date	Time
FedEx	Jonson for DS	8/27/99	0930

Relinquished by	Received by	Date	Time
	ORIGINAL		
	REWRITTEN		

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't Y or N
Cooler Temp. * °C

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

7700L104

Bechtel Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	B99-078-87	Page 1 of 2

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock — Telephone No.: 372-9574	Project Coordinator: TRENT, SJ	Price Code: 8N — Data Turnaround: 45 Days
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 >15' bgs 22'-23'	SAF No.: B99-078	
Ice Chest No.: GWS 130	Field Logbook No.: EL-1511	Method of Shipment: Federal Express	
Shipped To: ~~IMA~~/RECRA 8.25.99	Offsite Property No.: A990230	Bill of Lading/Air Bill No.: 4235 7952 8749	
		COA: B20CW1-671C	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Sample No.	Matrix *	Sample Date	Sample Time	Preservation	Type of Container	No. of Container(s)	Volume	Isotopic Uranium	Neptunium-237	Nickel-63	Technetium-99	Tritium - H3	VOA - 8260A (TCL), VOA - 8260A (Add-On) (1-Propanol, Ethanol)	pH (Soil) - 9045	Semi-VOA - 8270A (TCL), TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions
				None	aG	1	60mL	None	None	None	None	None	Cool 4C	None	Cool 4C	None	Cool 4C
B0W6B0	Soil	8/25/99	11:03										X	X	X	X	X
																BOW5M1	

SAMPLE ANALYSIS

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Brent Porter	Date/Time: 8/25/99/1410	Received By: Peter JB	Date/Time: 8/25/99/1410
Relinquished By: RFG1B	Date/Time: 8/26/99 11:00	Received By: CTRICE/Chris	Date/Time: 8/26/99 11:00
Relinquished By: CTRICE/Chris	Date/Time: 8/26/99 14:00	Received By: FEDEX	Date/Time:
Relinquished By: FedEx	Date/Time: 8.27.99/0930	Received By: D Smith	Date/Time: 8.27.99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

COLLECTOR UNAVAILABLE TO SIGN COC

(1) ICP Metals - 6010A (Supertrace) (Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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; Total Cyanide - 9010

4235 7952 8750 4.2

4235 7952 8749 5.1

4476545 931 3.8

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	B99-078-86	Page 1 of 1

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock — Telephone No.: 372-9574	Project Coordinator: TRENT, SJ	Price Code: 8N — Data Turnaround: 45 Days
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 >15' bgs 20' - 21'	SAF No.: B99-078	
Ice Chest No.: GWS 130	Field Logbook No.: EL-1511	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: A990230	Bill of Lading/Air Bill No.: 4235 7952 8749	
		COA: B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS											
	Preservation	None	None	None	None	None	Cool 4C	None	Cool 4C	None	Cool 4C
	Type of Container	aG	aG	aG	aG	aG	aG	aG	aG	aG	aG
Special Handling and/or Storage	No. of Container(s)	1	1	1	1	1	1	1	1	1	1
	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	Semi-VOA - 8270A (TCL), TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions
Sample No.	Matrix * / Sample Date / Sample Time										
2 B0W699	Soil / 8/25/99 / 10:51						X	X	X	X	X
										Bowers	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	Brent Porter	8/25/99/1410	Received By: Peter JB	8/25/99/1410
Relinquished By: RFG JB		8/26/99 11:00	Received By: CTRICE/Chris	8/26/99 11:00
Relinquished By: CTRICE/Chris		8/26/99 14:00	Received By: FEDEX	
Relinquished By: Fed Ex		8-27-99/0930	Received By: D. Smith	8-27-99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

COLLECTOR UNAVAILABLE TO SIGN COC

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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

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	B99-078-84	Page 1 of 2

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 >15' bgs 15'-16'	SAF No.: B99-078	
Ice Chest No.: GWS 130	Field Logbook No.: EL-1511	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: A990230	Bill of Lading/Air Bill No.: 4235 7952 8749	
		COA: B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	None	None	None	None	Cool 4C	None	Cool 4C	None	Cool 4C
	Type of Container	aG	aG	aG	aG	aG	aG	aG	aG	aG	aG
Special Handling and/or Storage	No. of Container(s)	1	1	1	1	1	1	1	1	1	1
	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	Semi-VOA - 8270A (TCL), TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions
Sample No.	Matrix * / Sample Date / Sample Time										
23 B0W697	Soil / 8/25/99 / 10:04						X	X	X	X	X
										Dup	

CHAIN OF POSSESSION	Sign/Print Names	Relinquished By	Date/Time	Received By	Date/Time
		Brent Porter	8/25/99/1410	Peter JB	8/25/99/1610
		RFG 1B	8/26/99 11:00	CTRICE/Ctrice	8/26/99 11:00
		CTRICE/Ctrice	8/26/99 14:00	FEDEX	
		D. Fed Ex	8/27/99/0930	D. Smith	8/27/99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

COLLECTOR UNAVAILABLE TO SIGN COC

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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

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	B99-078-81	Page 1 of 1

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 <15' bgs 14'-15'		SAF No.: B99-078
Ice Chest No.: ETC6-96059	Field Logbook No.: EL-1511		Method of Shipment: Federal Express
Shipped To: ~~TMA~~/RECRA 8-25-99	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: N/A
			COA: B20CW1 671C

POSSIBLE SAMPLE HAZARDS/REMARKS											
	Preservation	None	None	Cool 4C	None	Cool 4C	None	Cool 4C	None		
	Type of Container	aG	aG	aG	aG	aG	aG	aG	aG		
Special Handling and/or Storage	No. of Container(s)	1	1	1	1	1	1	1	1		
	Volume	60mL	60mL	250mL	250mL	500mL	500mL	1000mL	1000mL		
SAMPLE ANALYSIS		Isotopic Uranium	Neptunium-237	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	pH (Soil) - 9045	Semi-VOA - 8270A (TCL), TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions	See item (3) in Special Instructions		
Sample No.	Matrix * / Sample Date / Sample Time										
B0W694	Soil / 8/25/99 / 09:26			X	X	X	X	X	X		

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Brent Porter	Date/Time: 8/25/99/1410	Received By: Peter JB	Date/Time: 8/25/99/1410
Relinquished By: Bof 1-B	Date/Time: 8-26-99 0800	Received By: R. Fahlberg / R. Fahlberg	Date/Time: 0800 8-26-99
Relinquished By: R. Fahlberg / R. Fahlberg	Date/Time: 1400 8-26-99	Received By: Fed Ex	Date/Time:
Relinquished By: Fed Ex	Date/Time: 8-27-99/0930	Received By: D. Smith	Date/Time: 8-27-99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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	B99-078-79	Page 1 of 1

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ
Price Code: 8N	Data Turnaround: 45 Days		
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 <15' bgs 10' - 11'	SAF No.: B99-078	
Ice Chest No.: ERC 96 059	Field Logbook No.: EL-1511	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA 8-25-99	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: N/A	
		COA: B20W1-671C	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Isotopic Uranium	Neptunium-237	VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Propanol, Ethanol)	pH (Soil) - 9045	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions	See item (3) in Special Instructions		
Preservation				None	None	Cool 4C	None	Cool 4C	None	Cool 4C	None		
Type of Container				aG	aG	aG	aG	aG	aG	aG	aG		
No. of Container(s)				1	1	1	1	1	1	1	1		
Volume				60mL	60mL	250mL	250mL	500mL	500mL	1000mL	1000mL		
25 B0W692	Soil	8/25/99	08:45			X	X	X	X	X		B0W5L9	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Brent Porter	Date/Time: 8/25/99/1410	Received By: Refer JB	Date/Time: 8/25/99/1410
Relinquished By: Ref JB	Date/Time: 8-26-99 0800	Received By: R. Fahlberg / R. Fahlberg	Date/Time: 0800 8-26-99
Relinquished By: R. Fahlberg / R. Fahlberg	Date/Time: 1400 8-26-99	Received By: FED Ex	Date/Time:
Relinquished By: Fed Ex	Date/Time: 8-27-99/0930	Received By: D. Amato	Date/Time: 8-27-99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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	B99-078-88	Page 1 of 21

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock	Telephone No.: 372-9574	Project Coordinator: TRENT, SJ	Price Code: 8N	Data Turnaround: 45 Days
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 >15' bgs 24'-25'		SAF No.: B99-078	
Ice Chest No.: EBC 96-051	Field Logbook No.: EL-1511		Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: ~~AF~~ A990230 RE 8-26-99		Bill of Lading/Air Bill No.: 4235 7952 8750	
			COA: B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	None	None	None	None	Cool 4C	None	Cool 4C	None	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	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions

Sample No.	Matrix *	Sample Date	Sample Time										
06 B0W6B1	Soil	8/25/99	11:18						X	X	X	X	X
											Bowers		

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	Brent Porter	8/25/99/1410	Refer TB	8/25/99/1410
Relinquished By	Ref TB	8-26-99 0800	R. Fahlberg / R. Fahlberg	8-26-99 0800
Relinquished By	R. Fahlberg / R. Fahlberg	8-26-99 1400	Fed Ex	
Relinquished By	Fed Ex	8-27-99/0930		8-27-99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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 not available 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	B99-078-80	Page 1 of 1

Collector Bowers/Porter/Nielson	Company Contact Chris Cearlock Telephone No. 372-9574	Project Coordinator TRENT, SJ	Price Code 8N Data Turnaround 45 Days
Project Designation 200 Area Source characterization - 200-CW-1 OU	Sampling Location GP-2 <15' bgs 12.5'-13.5'	SAF No. B99-078	
Ice Chest No. ERC-96-051	Field Logbook No. EL-1511	Method of Shipment Federal Express	
Shipped To ~~TMA~~/RECRA BJD 8-25-99	Offsite Property No. A 990230	Bill of Lading/Air Bill No. 4235 7952 8750	
		COA B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	None	Cool 4C	None	Cool 4C	None	Cool 4C	None		
	Type of Container	aG	aG	aG	aG	aG	aG	aG	aG		
	No. of Container(s)	1	1	1	1	1	1	1	1		
Special Handling and/or Storage	Volume	60mL	60mL	250mL	250mL	500mL	500mL	1000mL	1000mL		
SAMPLE ANALYSIS		Isotopic Uranium	Neptunium-237	VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Propanol, Ethanol}	pH (Soil) - 9045	Semi-VOA - 8270A (TCL); TPH-Diesel Range - WTPH-D; PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions	See item (3) in Special Instructions		

Sample No.	Matrix *	Sample Date	Sample Time										
07 B0W693	Soil	8/25/99	09:09			X	X	X	X	X		B0W3M0	

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Brent Porter	Date/Time: 8/25/99/1410	Received By: Refer JB	Date/Time: 8/25/99/1410
Relinquished By: Ref J-B	Date/Time: 8.26.99 0800	Received By: R.Fahlberg/R.Fahlberg	Date/Time: 8.26.99 0800
Relinquished By: R.Fahlberg/R.Fahlberg	Date/Time: 8.26.99 1400	Received By: Fed Ex	Date/Time:
Relinquished By: Fed Ex	Date/Time: 8.27.99/0930	Received By: [signature]	Date/Time: 8.27.99/0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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 not availible 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	B99-078-85	Page 1 of 21

Collector: Bowers/Porter/Nielson	Company Contact: Chris Cearlock — Telephone No.: 372-9574	Project Coordinator: TRENT, SJ	Price Code: 8N — Data Turnaround: 45 Days
Project Designation: 200 Area Source characterization - 200-CW-1 OU	Sampling Location: GP-2 >15' bgs 17.5 - 18.5	SAF No.: B99-078	
Ice Chest No.: ERC 96.051	Field Logbook No.: EL-1511	Method of Shipment: Federal Express	
Shipped To: ~~TMA~~/RECRA	Offsite Property No.: A990230	Bill of Lading/Air Bill No.: 4235 7952 8750	
		COA: B20CW1 + B20CW1 671C	

POSSIBLE SAMPLE HAZARDS/REMARKS	Preservation	None	None	None	None	None	Cool 4C	None	Cool 4C	None	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	Semi-VOA - 8270A (TCL), TPH-Diesel Range - WTPH-D, PCBs - 8082	See item (1) in Special Instructions	See item (2) in Special Instructions
Sample No.	Matrix * / Sample Date / Sample Time										
208 B0W698	Soil / 8/25/99 / 10:32						X	X	X	X	X
										Dow5M1	

CHAIN OF POSSESSION	Sign/Print Names	Date/Time	Received By	Date/Time
Relinquished By	Brent Porter	8/25/99 1440	Received By: Peter JB	8/25/99 1440
Relinquished By	Peter J. B	8-26-99 0800	Received By: R. Fahlberg / R. Fahlberg	8-26-99 0800
Relinquished By	R. Fahlberg / R. Fahlberg	8-26-99 1400	Received By: Fed Ex	
Relinquished By	Fed Ex	8-27-99 0930	Received By: D. Ignatow	8-27-99 0930

SPECIAL INSTRUCTIONS

See chain of custody comments on SAF B99-078.

(1) ICP Metals - 6010A (Supertrace) {Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Silver, 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 not available 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