H0578- TMA/RECRA

RECRA ENVIRONMENTAL INC.

Chemical and Environmental Measurement Information

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

0052642

Client : TNU-HANFORD B99-078
RFW# : 9910L420 & 9910L441
SDG/SAF #: H0578/B99-078

W.O. #: 10985-001-001-9999-00
Date Received: 10-19,20-99

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SEMIVOLATILE

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

Seven (7) soil samples were collected on 10-14-99.

The samples and their associated QC samples were extracted on 10-25-99 and analyzed according to criteria set forth in Recra OPs based on SW 846 Method 8270B for TCL Semivolatile target compounds on 10-28-99.

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. All matrix spike recoveries were within EPA QC limits.
6. All blank spike recoveries were within EPA QC limits.
7. The samples were spectrally searched for Butylated Hydroxytoluene and Tributylphosphate; however, they were not identified in the samples.

2000 Data Entry

for J. Michael Taylor
Vice President
Philadelphia Analytical Laboratory

01-17-00
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.

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: 11/12/99 18:37

RFW Batch Number: **9910L420** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 1a

	Cust ID:	B0WN11		B0WN12		B0WN13		B0WN14		B0WN14		B0WN14	
Sample Information	RFW#:	001		002		003		004		004 MS		004 MSD	
	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	%	78	%	83	%	79	%	76	%	80	%
	2-Fluorobiphenyl	88	%	91	%	96	%	90	%	86	%	76	%
	Terphenyl-d14	98	%	82	%	95	%	111	%	84	%	86	%
	Phenol-d5	68	%	59	%	66	%	68	%	64	%	57	%
	2-Fluorophenol	64	%	67	%	74	%	73	%	70	%	66	%
	2,4,6-Tribromophenol	88	%	60	%	76	%	78	%	87	%	80	%
Phenol		390	U	360	U	360	U	360	U	64	%	56	%
bis(2-Chloroethyl)ether		390	U	360	U	360	U	360	U	360	U	360	U
2-Chlorophenol		390	U	360	U	360	U	360	U	73	%	67	%
1,3-Dichlorobenzene		390	U	360	U	360	U	360	U	360	U	360	U
1,4-Dichlorobenzene		390	U	360	U	360	U	360	U	77	%	80	%
1,2-Dichlorobenzene		390	U	360	U	360	U	360	U	360	U	360	U
2-Methylphenol		390	U	360	U	360	U	360	U	360	U	360	U
2,2'-oxybis(1-Chloropropane)		390	U	360	U	360	U	360	U	360	U	360	U
4-Methylphenol		390	U	360	U	360	U	360	U	360	U	360	U
N-Nitroso-di-n-propylamine		390	U	360	U	360	U	360	U	74	%	64	%
Hexachloroethane		390	U	360	U	360	U	360	U	360	U	360	U
Nitrobenzene		390	U	360	U	360	U	360	U	360	U	360	U
Isophorone		390	U	360	U	360	U	360	U	360	U	360	U
2-Nitrophenol		390	U	360	U	360	U	360	U	360	U	360	U
2,4-Dimethylphenol		390	U	360	U	360	U	360	U	360	U	360	U
bis(2-Chloroethoxy)methane		390	U	360	U	360	U	360	U	360	U	360	U
2,4-Dichlorophenol		390	U	360	U	360	U	360	U	360	U	360	U
1,2,4-Trichlorobenzene		390	U	360	U	360	U	360	U	94	%	98	%
Naphthalene		390	U	360	U	360	U	360	U	360	U	360	U
4-Chloroaniline		390	U	360	U	360	U	360	U	360	U	360	U
Hexachlorobutadiene		390	U	360	U	360	U	360	U	360	U	360	U
4-Chloro-3-methylphenol		390	U	360	U	360	U	360	U	68	%	53	%
2-Methylnaphthalene		390	U	360	U	360	U	360	U	360	U	360	U
Hexachlorocyclopentadiene		390	U	360	U	360	U	360	U	360	U	360	U
2,4,6-Trichlorophenol		390	U	360	U	360	U	360	U	360	U	360	U
2,4,5-Trichlorophenol		980	U	900	U	890	U	900	U	900	U	900	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: **9910L420** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Page: 1b

Cust ID:	B0WN11		B0WN12		B0WN13		B0WN14		B0WN14		B0WN14	
RFW#:	001		002		003		004		004 MS		004 MSD	
2-Chloronaphthalene	390	U	360	U	360	U	360	U	360	U	360	U
2-Nitroaniline	980	U	900	U	890	U	900	U	900	U	900	U
Dimethylphthalate	390	U	360	U	360	U	360	U	360	U	360	U
Acenaphthylene	390	U	360	U	360	U	360	U	360	U	360	U
2,6-Dinitrotoluene	390	U	360	U	360	U	360	U	360	U	360	U
3-Nitroaniline	980	U	900	U	890	U	900	U	900	U	900	U
Acenaphthene	390	U	360	U	360	U	360	U	83	%	86	%
2,4-Dinitrophenol	980	U	900	U	890	U	900	U	900	U	900	U
4-Nitrophenol	980	U	900	U	890	U	900	U	71	%	65	%
Dibenzofuran	390	U	360	U	360	U	360	U	360	U	360	U
2,4-Dinitrotoluene	390	U	360	U	360	U	360	U	74	%	70	%
Diethylphthalate	390	U	360	U	360	U	360	U	360	U	360	U
4-Chlorophenyl-phenylether	390	U	360	U	360	U	360	U	360	U	360	U
Fluorene	390	U	360	U	360	U	360	U	360	U	360	U
4-Nitroaniline	980	U	900	U	890	U	900	U	900	U	900	U
4,6-Dinitro-2-methylphenol	980	U	900	U	890	U	900	U	900	U	900	U
N-Nitrosodiphenylamine (1)	390	U	360	U	360	U	360	U	360	U	360	U
4-Bromophenyl-phenylether	390	U	360	U	360	U	360	U	360	U	360	U
Hexachlorobenzene	390	U	360	U	360	U	360	U	360	U	360	U
Pentachlorophenol	980	U	900	U	890	U	900	U	88	%	82	%
Phenanthrene	390	U	360	U	360	U	360	U	360	U	360	U
Anthracene	390	U	360	U	360	U	360	U	360	U	360	U
Carbazole	390	U	360	U	360	U	360	U	360	U	360	U
Di-n-butylphthalate	390	U	360	U	360	U	21	J	47	J	69	J
Fluoranthene	390	U	360	U	360	U	360	U	360	U	360	U
Pyrene	390	U	360	U	360	U	360	U	86	%	86	%
Butylbenzylphthalate	390	U	360	U	360	U	360	U	360	U	360	U
3,3'-Dichlorobenzidine	390	U	360	U	360	U	360	U	360	U	360	U
Benzo(a)anthracene	390	U	360	U	360	U	360	U	360	U	360	U
Chrysene	390	U	360	U	360	U	360	U	360	U	360	U
bis(2-Ethylhexyl)phthalate	390	U	360	U	360	U	360	U	360	U	360	U
Di-n-octyl phthalate	390	U	360	U	360	U	360	U	360	U	360	U
Benzo(b)fluoranthene	390	U	360	U	360	U	360	U	360	U	360	U
Benzo(k)fluoranthene	390	U	360	U	360	U	360	U	360	U	360	U
Benzo(a)pyrene	390	U	360	U	360	U	360	U	360	U	360	U
Indeno(1,2,3-cd)pyrene	390	U	360	U	360	U	360	U	360	U	360	U
Dibenz(a,h)anthracene	390	U	360	U	360	U	360	U	360	U	360	U
Benzo(g,h,i)perylene	390	U	360	U	360	U	360	U	360	U	360	U

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

	Cust ID:	**SBLKFE**		**SBLKFE BS**	
Sample Information	RFW#:	**99LE1296-MB1**		**99LE1296-MB1**	
	Matrix:	SOIL		SOIL	
	D.F.:	1.00		1.00	
	Units:	UG/KG		UG/KG	
Surrogate Recovery	Nitrobenzene-d5	79	%	82	%
	2-Fluorobiphenyl	85	%	82	%
	Terphenyl-d14	100	%	85	%
	Phenol-d5	63	%	72	%
	2-Fluorophenol	67	%	75	%
	2,4,6-Tribromophenol	85	%	89	%
Phenol		330	U	73	%
bis(2-Chloroethyl)ether		330	U	330	U
2-Chlorophenol		330	U	76	%
1,3-Dichlorobenzene		330	U	330	U
1,4-Dichlorobenzene		330	U	76	%
1,2-Dichlorobenzene		330	U	330	U
2-Methylphenol		330	U	330	U
2,2'-oxybis(1-Chloropropane)		330	U	330	U
4-Methylphenol		330	U	330	U
N-Nitroso-di-n-propylamine		330	U	83	%
Hexachloroethane		330	U	330	U
Nitrobenzene		330	U	330	U
Isophorone		330	U	330	U
2-Nitrophenol		330	U	330	U
2,4-Dimethylphenol		330	U	330	U
bis(2-Chloroethoxy)methane		330	U	330	U
2,4-Dichlorophenol		330	U	330	U
1,2,4-Trichlorobenzene		330	U	84	%
Naphthalene		330	U	330	U
4-Chloroaniline		330	U	330	U
Hexachlorobutadiene		330	U	330	U
4-Chloro-3-methylphenol		330	U	78	%
2-Methylnaphthalene		330	U	330	U
Hexachlorocyclopentadiene		330	U	330	U
2,4,6-Trichlorophenol		330	U	330	U
2,4,5-Trichlorophenol		840	U	840	U

*= Outside of EPA CLP QC limits.

Cust ID:	SBLKFE		SBLKFE BS	
RFW#:	99LE1296-MB1		99LE1296-MB1	
2-Chloronaphthalene	330	U	330	U
2-Nitroaniline	840	U	840	U
Dimethylphthalate	330	U	330	U
Acenaphthylene	330	U	330	U
2,6-Dinitrotoluene	330	U	330	U
3-Nitroaniline	840	U	840	U
Acenaphthene	330	U	83	%
2,4-Dinitrophenol	840	U	840	U
4-Nitrophenol	840	U	84	%
Dibenzofuran	330	U	330	U
2,4-Dinitrotoluene	330	U	78	%
Diethylphthalate	330	U	330	U
4-Chlorophenyl-phenylether	330	U	330	U
Fluorene	330	U	330	U
4-Nitroaniline	840	U	840	U
4,6-Dinitro-2-methylphenol	840	U	840	U
N-Nitrosodiphenylamine (1)	330	U	330	U
4-Bromophenyl-phenylether	330	U	330	U
Hexachlorobenzene	330	U	330	U
Pentachlorophenol	840	U	80	%
Phenanthrene	330	U	330	U
Anthracene	330	U	330	U
Carbazole	330	U	330	U
Di-n-butylphthalate	330	U	330	U
Fluoranthene	330	U	330	U
Pyrene	330	U	86	%
Butylbenzylphthalate	330	U	330	U
3,3'-Dichlorobenzidine	330	U	330	U
Benzo(a)anthracene	330	U	330	U
Chrysene	330	U	330	U
bis(2-Ethylhexyl)phthalate	330	U	330	U
Di-n-octyl phthalate	330	U	330	U
Benzo(b)fluoranthene	330	U	330	U
Benzo(k)fluoranthene	330	U	330	U
Benzo(a)pyrene	330	U	330	U
Indeno(1,2,3-cd)pyrene	330	U	330	U
Dibenz(a,h)anthracene	330	U	330	U
Benzo(g,h,i)perylene	330	U	330	U

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

Recra LabNet - Lionville Laboratory

Semivolatiles by GC/MS, HSL List

RFW Batch Number: **9910L441** Client: **TNU-HANFORD B99-078** Work Order: 10985001001 Report Date: 11/17/99 14:59 Page: 1a

	Cust ID:	B0WN16		B0WN17		B0WN18		B0WN18		B0WN18		SBLKFE	
Sample Information	RFW#:	001		002		003		003 MS		003 MSD		99LE1296-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	87	%	88	%	88	%	88	%	88	%	79	%
	2-Fluorobiphenyl	99	%	91	%	99	%	89	%	97	%	85	%
	Terphenyl-d14	92	%	87	%	93	%	81	%	89	%	100	%
	Phenol-d5	68	%	70	%	68	%	55	%	63	%	63	%
	2-Fluorophenol	74	%	73	%	74	%	66	%	71	%	67	%
	2,4,6-Tribromophenol	64	%	69	%	61	%	73	%	76	%	85	%
Phenol		370	U	360	U	340	U	52	%	61	%	330	U
bis(2-Chloroethyl)ether		370	U	360	U	340	U	340	U	340	U	330	U
2-Chlorophenol		370	U	360	U	340	U	65	%	69	%	330	U
1,3-Dichlorobenzene		370	U	360	U	340	U	340	U	340	U	330	U
1,4-Dichlorobenzene		370	U	360	U	340	U	77	%	82	%	330	U
1,2-Dichlorobenzene		370	U	360	U	340	U	340	U	340	U	330	U
2-Methylphenol		370	U	360	U	340	U	340	U	340	U	330	U
2,2'-oxybis(1-Chloropropane)		370	U	360	U	340	U	340	U	340	U	330	U
4-Methylphenol		370	U	360	U	340	U	340	U	340	U	330	U
N-Nitroso-di-n-propylamine		370	U	360	U	340	U	64	%	74	%	330	U
Hexachloroethane		370	U	360	U	340	U	340	U	340	U	330	U
Nitrobenzene		370	U	360	U	340	U	340	U	340	U	330	U
Isophorone		370	U	360	U	340	U	340	U	340	U	330	U
2-Nitrophenol		370	U	360	U	340	U	340	U	340	U	330	U
2,4-Dimethylphenol		370	U	360	U	340	U	340	U	340	U	330	U
bis(2-Chloroethoxy)methane		370	U	360	U	340	U	340	U	340	U	330	U
2,4-Dichlorophenol		370	U	360	U	340	U	340	U	340	U	330	U
1,2,4-Trichlorobenzene		370	U	360	U	340	U	89	%	94	%	330	U
Naphthalene		370	U	360	U	340	U	340	U	340	U	330	U
4-Chloroaniline		370	U	360	U	340	U	340	U	340	U	330	U
Hexachlorobutadiene		370	U	360	U	340	U	340	U	340	U	330	U
4-Chloro-3-methylphenol		370	U	360	U	340	U	61	%	62	%	330	U
2-Methylnaphthalene		370	U	360	U	340	U	340	U	340	U	330	U
Hexachlorocyclopentadiene		370	U	360	U	340	U	340	U	340	U	330	U
2,4,6-Trichlorophenol		370	U	360	U	340	U	340	U	340	U	330	U
2,4,5-Trichlorophenol		920	U	890	U	860	U	860	U	860	U	840	U

*= Outside of EPA CLP QC limits.

RFW Batch Number: 9910L441 Client: TNU-HANFORD B99-078 Work Order: 10985001001 Page: 1b

Cust ID:	B0WN16		B0WN17		B0WN18		B0WN18		B0WN18		SBLKFE	
RFW#:	001		002		003		003 MS		003 MSD		99LE1296-MB1	
2-Chloronaphthalene	370	U	360	U	340	U	340	U	340	U	330	U
2-Nitroaniline	920	U	890	U	860	U	860	U	860	U	840	U
Dimethylphthalate	370	U	360	U	340	U	340	U	340	U	330	U
Acenaphthylene	370	U	360	U	340	U	340	U	340	U	330	U
2,6-Dinitrotoluene	370	U	360	U	340	U	340	U	340	U	330	U
3-Nitroaniline	920	U	890	U	860	U	860	U	860	U	840	U
Acenaphthene	370	U	360	U	340	U	82	%	90	%	330	U
2,4-Dinitrophenol	920	U	890	U	860	U	860	U	860	U	840	U
4-Nitrophenol	920	U	890	U	860	U	71	%	74	%	840	U
Dibenzofuran	370	U	360	U	340	U	340	U	340	U	330	U
2,4-Dinitrotoluene	370	U	360	U	340	U	67	%	72	%	330	U
Diethylphthalate	370	U	360	U	340	U	340	U	340	U	330	U
4-Chlorophenyl-phenylether	370	U	360	U	340	U	340	U	340	U	330	U
Fluorene	370	U	360	U	340	U	340	U	340	U	330	U
4-Nitroaniline	920	U	890	U	860	U	860	U	860	U	840	U
4,6-Dinitro-2-methylphenol	920	U	890	U	860	U	860	U	860	U	840	U
N-Nitrosodiphenylamine (1)	370	U	360	U	340	U	340	U	340	U	330	U
4-Bromophenyl-phenylether	370	U	360	U	340	U	340	U	340	U	330	U
Hexachlorobenzene	370	U	360	U	340	U	340	U	340	U	330	U
Pentachlorophenol	920	U	890	U	860	U	69	%	73	%	840	U
Phenanthrene	370	U	360	U	340	U	340	U	340	U	330	U
Anthracene	370	U	360	U	340	U	340	U	340	U	330	U
Carbazole	370	U	360	U	340	U	340	U	340	U	330	U
Di-n-butylphthalate	90	J	110	J	340	U	340	U	340	U	330	U
Fluoranthene	370	U	360	U	340	U	340	U	340	U	330	U
Pyrene	370	U	360	U	340	U	79	%	88	%	330	U
Butylbenzylphthalate	370	U	360	U	340	U	340	U	340	U	330	U
3,3'-Dichlorobenzidine	370	U	360	U	340	U	340	U	340	U	330	U
Benzo(a)anthracene	370	U	360	U	340	U	340	U	340	U	330	U
Chrysene	370	U	360	U	340	U	340	U	340	U	330	U
bis(2-Ethylhexyl)phthalate	370	U	83	J	340	U	340	U	340	U	330	U
Di-n-octyl phthalate	370	U	360	U	340	U	340	U	340	U	330	U
Benzo(b)fluoranthene	370	U	360	U	340	U	340	U	340	U	330	U
Benzo(k)fluoranthene	370	U	360	U	340	U	340	U	340	U	330	U
Benzo(a)pyrene	370	U	360	U	340	U	340	U	340	U	330	U
Indeno(1,2,3-cd)pyrene	370	U	360	U	340	U	340	U	340	U	330	U
Dibenz(a,h)anthracene	370	U	360	U	340	U	340	U	340	U	330	U
Benzo(g,h,i)perylene	370	U	360	U	340	U	340	U	340	U	330	U

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

Cust ID: **SBLKFE BS**

Sample Information	RFW#:	**99LE1296-MB1**
	Matrix:	SOIL
	D.F.:	1.00
	Units:	UG/KG

Surrogate Recovery	Nitrobenzene-d5	82	%
	2-Fluorobiphenyl	82	%
	Terphenyl-d14	85	%
	Phenol-d5	72	%
	2-Fluorophenol	75	%
	2,4,6-Tribromophenol	89	%

Phenol	73	%
bis(2-Chloroethyl)ether	330	U
2-Chlorophenol	76	%
1,3-Dichlorobenzene	330	U
1,4-Dichlorobenzene	76	%
1,2-Dichlorobenzene	330	U
2-Methylphenol	330	U
2,2'-oxybis(1-Chloropropane)	330	U
4-Methylphenol	330	U
N-Nitroso-di-n-propylamine	83	%
Hexachloroethane	330	U
Nitrobenzene	330	U
Isophorone	330	U
2-Nitrophenol	330	U
2,4-Dimethylphenol	330	U
bis(2-Chloroethoxy)methane	330	U
2,4-Dichlorophenol	330	U
1,2,4-Trichlorobenzene	84	%
Naphthalene	330	U
4-Chloroaniline	330	U
Hexachlorobutadiene	330	U
4-Chloro-3-methylphenol	78	%
2-Methylnaphthalene	330	U
Hexachlorocyclopentadiene	330	U
2,4,6-Trichlorophenol	330	U
2,4,5-Trichlorophenol	840	U

*= Outside of EPA CLP QC limits.

Cust ID: **SBLKFE BS**

RFW#: **99LE1296-MB1**

2-Chloronaphthalene	330	U
2-Nitroaniline	840	U
Dimethylphthalate	330	U
Acenaphthylene	330	U
2,6-Dinitrotoluene	330	U
3-Nitroaniline	840	U
Acenaphthene	83	%
2,4-Dinitrophenol	840	U
4-Nitrophenol	84	%
Dibenzofuran	330	U
2,4-Dinitrotoluene	78	%
Diethylphthalate	330	U
4-Chlorophenyl-phenylether	330	U
Fluorene	330	U
4-Nitroaniline	840	U
4,6-Dinitro-2-methylphenol	840	U
N-Nitrosodiphenylamine (1)	330	U
4-Bromophenyl-phenylether	330	U
Hexachlorobenzene	330	U
Pentachlorophenol	80	%
Phenanthrene	330	U
Anthracene	330	U
Carbazole	330	U
Di-n-butylphthalate	330	U
Fluoranthene	330	U
Pyrene	86	%
Butylbenzylphthalate	330	U
3,3'-Dichlorobenzidine	330	U
Benzo(a)anthracene	330	U
Chrysene	330	U
bis(2-Ethylhexyl)phthalate	330	U
Di-n-octyl phthalate	330	U
Benzo(b)fluoranthene	330	U
Benzo(k)fluoranthene	330	U
Benzo(a)pyrene	330	U
Indeno(1,2,3-cd)pyrene	330	U
Dibenz(a,h)anthracene	330	U
Benzo(g,h,i)perylene	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.

B0WN11

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L420-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102805

Level: (low/med) LOW Date Received: 10/19/99

% Moisture: 16 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	10.44	100	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WN12

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L420-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102806

Level: (low/med) LOW Date Received: 10/19/99

% Moisture: 8 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.

B0WN13

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L420-003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102807

Level: (low/med) LOW Date Received: 10/19/99

% Moisture: 6 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.

B0WN14

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L420-004

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102808

Level: (low/med) LOW Date Received: 10/19/99

% Moisture: 8 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.

SBLKFE

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 99LE1296-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102803

Level: (low/med) LOW Date Received: 10/25/99

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.

B0WN16

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L441-001

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102811

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 9 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

Injection Volume: 2.0(uL) Dilution Factor: 1.00

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

Number TICs found: 1

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	UNKNOWN	22.62	100	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WN17

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L441-002

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102812

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 6 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.	UNKNOWN	22.62	100	J
2.	UNKNOWN	24.58	90	J

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

CLIENT SAMPLE NO.

B0WN18

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 9910L441-003

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102813

Level: (low/med) LOW Date Received: 10/20/99

% Moisture: 3 decanted: (Y/N) __ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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.

SBLKFE

Lab Name: Recra.LabNet Work Order: 10985001001

Client: TNU-HANFORD B99-078

Matrix: (soil/water) SOIL Lab Sample ID: 99LE1296-MB1

Sample wt/vol: 30.0 (g/mL) G Lab File ID: D102803

Level: (low/med) LOW Date Received: 10/25/99

% Moisture: _____ decanted: (Y/N)__ Date Extracted: 10/25/99

Concentrated Extract Volume: 1000(uL) Date Analyzed: 10/28/99

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: 10/19/99 RFW LOT # :9910L420

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0WN11	001	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN12	002	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN13	003	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN14	004	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN14	004 MS	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN14	004 MSD	S	99LE1296	10/14/99	10/25/99	10/28/99
LAB QC:						
SBLKFE	MB1	S	99LE1296	N/A	10/25/99	10/28/99
SBLKFE	MB1 BS	S	99LE1296	N/A	10/25/99	10/28/99

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

DATE RECEIVED: 10/20/99 RFW LOT # :9910L441

CLIENT ID	RFW #	MTX	PREP #	COLLECTION	EXTR/PREP	ANALYSIS
B0WN16	001	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN17	002	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN18	003	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN18	003 MS	S	99LE1296	10/14/99	10/25/99	10/28/99
B0WN18	003 MSD	S	99LE1296	10/14/99	10/25/99	10/28/99
LAB QC:						
SBLKFE	MB1	S	99LE1296	N/A	10/25/99	10/28/99
SBLKFE	MB1 BS	S	99LE1296	N/A	10/25/99	10/28/99

RECRA LabNet Use Only
9910L420

Custody Transfer Record/Lab Work Request

Page 1 of 1

RECRA LabNet

A11 FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(8) metals

Client TNU 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 10/19/99 Date Due 11/18/99

Account #

Refrigerator #		1	2												
#/Type Container	Liquid														
	Solid	1AG	1AG				1AG		1AG				1AG		
Volume	Liquid												1		
	Solid	250	500				250		500				1LT		
Preservatives		—					—		—				—		
ANALYSES REQUESTED		ORGANIC				TPH	PH		INORG				IC Anions		
		VOA	BNA	~~Pest~~ PCB	~~Herb~~				Metal	CN					

RECRA LabNet Use Only

MATRIX CODES:	Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected	0624H 0625C	0625H 0DRO	0PCB			1PH		Met①	1CNTO			Ang①			
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	001	BOWN 11			S	10/14/99	0815	1	1	1			1		1	1			1			
	002	12					0834	1	1	1			1		1	1			1			
	003	13					0849	1	1	1			1		1	1			1			
	004	14					0858	1	1	1			1		1	1			1			

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

Special Instructions:

saf # B99-078

COMPOSITE WASTE

DATE/REVISIONS:

1. Run matrix QC
Met① = As, Ba, Be, Cd, Cr, Cu, Pb, Ni,
3. Se, Ag, V, Zn, Hg, 1CR6
Ang① = 1N3N2, 1CCL, 1CFL, 1CNO2, 1CNO3
5. 1CPO4, 1CSO4, 1SFD, 1NH3N
6.

Relinquished by	Received by	Date	Time
[signature]	[signature]	10/19/99	0915

Relinquished by	Received by	Date	Time
	ORIGINAL		
	REWRITTEN		

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

NOTES:

4235 7953 0521

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.
9910C420

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-078-138

Collector: Bowers/Trice	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: 200 B pond		SAF No.: B99-078
Ice Chest No.: ERC - 96-039	Field Logbook No.: EL-1511		Method of Shipment: FED EX
Shipped To: TMA/RECRA 10/10-14-99	Offsite Property No.: A990301		Bill of Lading/Air Bill No.: 4235 7953 0521
			COA: B20CW167C

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

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			
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			

cpm	Sample No.	Matrix *	Sample Date	Sample Time										
340	BOWN11	Soil	10-14-99	0815		X	X	X	X	X				
220	BOWN12	Soil	10-14-99	0834		X	X	X	X	X				
273	BOWN13	Soil	10-14-99	0849		X	X	X	X	X				
224	BOWN14	Soil	10-14-99	0858		X	X	X	X	X				

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By: Doug Bowers	Date/Time: 10-14-99/1105	Received By: Ref 1A	Date/Time: 10-14-99/1105
Relinquished By: Ref 1A	Date/Time: 10-18-99/1015	Received By: Doug Bowers	Date/Time: 10-18-99/1015
Relinquished By: Doug Bowers	Date/Time: 10-18-99/1015	Received By: Fed Ex	Date/Time:
Relinquished By: Fed Ex	Date/Time: 10/19/99 0915	Received By: [signature]	Date/Time: 10-19-99 0915
LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

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

use BOW8C1 as T-A.

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

1442

RECRA LabNet Use Only

9910L441

Custody Transfer Record/Lab Work Request

Page 1 of 1

RECRA LabNet

A11 FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

(8) metals

Client: TMU-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: 10-20-99 Date Due: 11/19/99

Account #:

Refrigerator #		1	2						2							
#/Type Container	Liquid															
	Solid	1PG	1PG						1PG		1PG	1PG				
Volume	Liquid															
	Solid	250	500						500		250	1000				
Preservatives		–	–						–		–	–				
ANALYSES REQUESTED →		ORGANIC							INORG							
		VOA	BNA	Pest/PCB	Herb				Metal	CN	Fe	Inorg				
RECRA LabNet Use Only		8260 24H	8270C	8270 25H	8081				Met①	ICN02	1 PH	Ang①				

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	8260 24H	8270C	8270 25H	8081				Met①	ICN02	1 PH	Ang①				
001	Bawn16			S	10-14-99	0907	✓	✓	X					✓	X	✓	✓				
002	Bawn17			⊥	⊥	0914	✓	✓	X					✓	X	✓	✓				
003	Bawn18					0924	✓	✓	X					✓	X	✓	✓				

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

Special Instructions:

Sef # B99-078

COMPOSITE WASTE

DATE/REVISIONS:

Met① = As, Ba, Be, Cd, Cr, Cu, Pb, Ni,
2. Se, Ag, V, Zn, Hg
Ang① = 3. 1N3N2, 1CCL, 1CFL, 1CSO4, 1CNO2,
4. 1CNO3, 1CPO4, 1SFD, 1NH3N, 1CR6
5.
6. Rerun matrix QC

Relinquished by	Received by	Date	Time
FedEx	TMurray	10-20-99	0930

Relinquished by	Received by	Date	Time
	ORIGINAL		
	REWRITTEN		

RECRA LabNet Use Only

Samples were:
1) Shipped ✓ or
Hand Delivered
Airbill # 4235795 30632
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. 5.0 °C

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

NOTES:

Bechtel Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

B99-078-139

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. ERC 96-030	**Field Logbook No.** EL-1511		**Method of Shipment** FED EX
Shipped To ~~TMA~~/RECRA BJD 10-14-99	**Offsite Property No.** A990301		**Bill of Lading/Air Bill No.** 4235 7953 0532
			COA B20CW1 671C

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

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	None	None	None	None	Cool 4C	None	Cool 4C	Cool 4C	Cool 4C	None
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
Volume	60mL	60mL	60mL	120mL	250mL	250mL	500mL	500mL	1000mL	1000mL
SAMPLE ANALYSIS	Isotopic Uranium	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.	See item (3) in Special Instructions

CPM	Sample No.	Matrix *	Sample Date	Sample Time										
242	BOWN16	Soil	10-14-99	0907					X	X	X	X	X	
260	BOWN17	soil	10-14-99	0914					X	X	X	X	X	
248	BOWN18	soil	10-14-99	0924					X	X	X	X	X	

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

Relinquished By	Date/Time	Received By	Date/Time
Doug ~~Bowers~~ Bowers BJD 10-14-99			
Doug Bowers	10-14-99/1105	Ref 1A	10-14-99/1105
Ref 1A	10-18-99/1015	Doug Bowers	10-18-99/1015
Doug Bowers	10-18-99/1015	Fed Ex	
Fed Ex	10-20-99 0930	T Murray	10-20-99 0930

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

Use BOW8C1 As TA

Matrix *
Soil
Water
Vapor
Other Solid
Other Liquid

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